

C.2



MNH23795M

NUCLEAR WASTE
MANAGEMENT
LIBRARY

CONTRACTOR REPORT

SAND86-7109
Unlimited Release
UC-70

SANDIA NATIONAL LABORATORIES
WIPP Library
4100 National Parks Hwy, MS-1395
Carlsbad, NM 88220

WIPP Hydrology Program Waste Isolation Pilot Plant Southeastern New Mexico Hydrologic Data Report #3

Intra Technologies, Inc.
6850 Austin Center Blvd., Suite 300
Austin, TX 78731

Prepared by Sandia National Laboratories Albuquerque, New Mexico 87185
and Livermore, California 94550 for the United States Department of Energy
under Contract DE-AC04-76DP00789

Printed June 1986

Issued by Sandia National Laboratories, operated for the United States Department of Energy by Sandia Corporation.

NOTICE: This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, nor any of their contractors, subcontractors, or their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. *Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government, any agency thereof or any of their contractors or subcontractors. The views and opinions expressed herein do not necessarily state or reflect those of the United States Government, any agency thereof or any of their contractors or subcontractors.*

Printed in the United States of America
Available from
National Technical Information Service
U.S. Department of Commerce
5285 Port Royal Road
Springfield, VA 22161

NTIS price codes
Printed copy: A29
Microfiche copy: A01

SAND86-7109

WIPP HYDROLOGY PROGRAM
WASTE ISOLATION PILOT PLANT
SOUTHEASTERN NEW MEXICO

HYDROLOGIC DATA REPORT #3

Prepared for

SANDIA NATIONAL LABORATORIES
ALBUQUERQUE, NEW MEXICO

By

INTERA TECHNOLOGIES, INC.
6850 AUSTIN CENTER BLVD., SUITE 300
AUSTIN, TEXAS 78731

June 17, 1986

TABLE OF CONTENTS

	<u>PAGE</u>
LIST OF FIGURES	xii
LIST OF TABLES	xxv
FOREWORD	xxxvii
SUMMARY	xxxviii

PART A. H-3 MULTIPAD PUMPING TEST

1.0 INTRODUCTION	A-1
1.1 Purpose	A-1
1.2 Scope	A-1
2.0 TEST EQUIPMENT	A-2
2.1 Surface Equipment	A-3
2.1.1 Data-Acquisition Systems (DAS's)	A-3
2.1.2 Water-Level Measurement Devices	A-4
2.1.3 Discharge-Measurement and Flow- Regulation Devices	A-5
2.1.4 Water-Quality Measurement Devices	A-6
2.1.5 Barometer	A-7
2.2 Downhole Equipment	A-8
2.2.1 Pump	A-8
2.2.2 Packer Feed-Through Assembly	A-8
2.2.3 Druck Transducers	A-9

3.0 TEST PREPARATION A-10

3.1 Baseline Data Collection A-11

3.1.1 H-3 Hydropad A-11

3.1.2 Observation Wells A-12

3.1.3 Pressure Transducers in the Shafts A-13

3.2 Equipment Installation A-13

3.2.1 Surface Equipment A-14

3.2.2 Downhole Equipment A-14

3.3 Workover Activity A-15

3.4 H-3 Hydropad Preparation A-16

3.5 Equipment Performance A-17

4.0 TEST RESULTS A-18

4.1 Pumping Rate A-18

4.2 Fluid-Pressure Responses to the H-3 Multipad
Pumping Test A-19

4.3 Water-level Responses at Observation Wells A-23

4.4 Pressure Response in the Waste-Handling Shaft A-26

4.5 Water-Quality Data A-27

4.6 Barometric-Pressure Data A-28

5.0 REFERENCES A-29

APPENDIX 1.0 Configuration of Test Equipment for Wells Equipped
with Data-Acquisition Systems

APPENDIX 2.0 Tabulated Pumping-Rate Data for Pumping Well H-3b2

APPENDIX 3.0 Test Description and Pressure Records for Data-
Acquisition Systems During the H-3 Multipad Test

APPENDIX 4.0 Tabulated Pressure Data From the Waste-Handling
Shaft

APPENDIX 5.0 Tabulated Water-Quality Data for the H-3 Multipad Test

APPENDIX 6.0 Tabulated Barometric-Pressure Data for the H-3 Multipad Test October 15, 1985 through April 12, 1986

PART B. CALCULATED WATER-LEVEL DATA FROM PUMPING DURING ANISOTROPY AND TRACER TESTS AT THE H-3 HYDROPAD, APRIL 18 TO JUNE 12, 1984

	<u>PAGE</u>
1.0 INTRODUCTION	B-1
1.1 Objectives	B-1
1.2 Configuration of the H-3 Hydropad	B-1
2.0 TEST EQUIPMENT	B-2
2.1 Data-Acquisition System (DAS)	B-2
2.2 Downhole Transducers	B-3
2.3 Downhole Assembly	B-3
2.4 Discharge-Measurement and Flow-Regulation System	B-4
2.5 Water-Level Measurement Devices	B-5
2.6 Water-Quality Measurement Devices	B-5
3.0 TESTING HISTORY	B-5
3.1 Pretest Pumping Periods	B-6
3.2 Anisotropy Testing	B-6
3.3 Convergent-Flow Tracer Test	B-7
3.4 Equipment Performance	B-7
4.0 TEST RESULTS	B-8
4.1 Calculated Water-Level Responses at the H-3 Hydropad	B-8

	<u>PAGE</u>
4.2	Water-Level Responses at Observation Wells B-9
4.3	Water-Quality Data B-10
5.0	REFERENCES B-10

APPENDIX 1.0 Test Configuration for the H-3 Hydropad

APPENDIX 2.0 Tabulated Pumping-Rate Data for the Pumping Well H-3b3

APPENDIX 3.0 Test Description and Tabulated Water-level Data Calculated for the Wells at the H-3 Hydropad

APPENDIX 4.0 Tabulated Water-Level Data for Observation Wells H-1 (Culebra), H-3b1, H-3b2, and DOE-1

APPENDIX 5.0 Tabulated Water-Quality Data

**PART C. PUMPING TEST AT THE H-8 HYDROPAD CONDUCTED
DECEMBER 6-18, 1985**

	<u>PAGE</u>
1.0	INTRODUCTION C-1
1.1	Objectives C-1
1.2	Configuration of the H-8 Hydropad and the Poker Trap Observation Well C-2
2.0	TEST EQUIPMENT C-3
2.1	Data Acquisition System (DAS) C-3
2.2	Druck Transducers C-4
2.3	Downhole Assembly C-4
2.3.1	Submersible Pump C-4
2.3.2	Packer Feed-Through Assembly C-4

PAGE

2.3.3	Discharge-Measurement System	C-4
2.4	Water-Level Measurement Devices	C-5
2.5	Water-Quality Measurement Devices	C-6
2.6	Barometric-Pressure Measurement	C-7
3.0	TEST HISTORY	C-7
3.1	Test Preparation	C-7
3.1.1	Pump and Flow-Rate Checks	C-8
3.1.2	Water-Level Measurements	C-8
3.1.3	Water-Quality Measurements	C-9
3.1.4	Barometric-Pressure Measurements	C-9
3.2	Pumping Period	C-9
3.3	Recovery Period	C-10
3.4	Packer/Transducer Performance	C-10
4.0	TEST RESULTS	C-11
4.1	Fluid-Pressure Response at Pumping Well H-8b	C-11
4.2	Water-Level Responses at Observation Wells	C-13
4.3	Water-Quality Data	C-13
4.4	Barometric-Pressure Data	C-14
5.0	REFERENCES	C-14

APPENDIX 1.0 Test Configuration for the H-8 Hydropad

APPENDIX 2.0 Tabulated Pumping-Rate Data for Pumping Well H-8b

APPENDIX 3.0 Test Description and Tabulated Pressure Data for
the Wells at the H-8 Hydropad

APPENDIX 4.0 Tabulated Water-Level Data Collected for
Observation Wells H-8a, H-8c, and the Poker Trap
Well during the H-8 Pumping Test

APPENDIX 5.0 Tabulated Water-Quality Data for the H-8 Pumping
Test

**PART D. PUMPING TEST AT THE H-7 HYDROPAD CONDUCTED
FEBRUARY 18-24, 1986**

	<u>PAGE</u>
1.0 INTRODUCTION	D-1
1.1 Objectives	D-1
1.2 Configuration of the H-7 Hydropad	D-2
2.0 TEST EQUIPMENT	D-3
2.1 Data-Acquisition System (DAS)	D-3
2.2 Druck Transducers	D-4
2.3 Downhole Assembly	D-4
2.3.1 Submersible Pump	D-4
2.3.2 Packer Feed-Through Assembly	D-4
2.3.3 Discharge Measurement System	D-5
2.4 Water-Level Measurement Devices	D-7
2.5 Water-Quality Measurement Devices	D-7
2.6 Barometric-Pressure Measurement	D-7
3.0 TEST HISTORY	D-8
3.1 Test Preparation	D-8
3.1.1 Pump and Flow-Rate Checks	D-8
3.1.2 Water-Level Measurements	D-10
3.1.3 Water-Quality Measurements	D-10
3.1.4 Barometric-Pressure Measurements	D-10
3.2 Pumping Period	D-11

3.3 Recovery Period D-11

3.4 Equipment Performance D-11

4.0 TEST RESULTS D-12

4.1 Fluid-Pressure Response at Pumping Well H-7b D-12

4.2 Fluid-Pressure Responses in Observation Wells D-13

4.3 Water-Quality Data D-13

4.4 Barometric-Pressure Data D-14

5.0 REFERENCES D-14

APPENDIX 1.0 Test Configuration for the H-7 Hydropad

APPENDIX 2.0 Tabulated Pumping-Rate Data for the Pumping Well
H-7b

APPENDIX 3.0 Test Description and Tabulated Pressure Data for
the Wells at the H-7 Hydropad

APPENDIX 4.0 Tabulated Water-Level Data for the Annulus Above
the Packer in Well H-7b

APPENDIX 5.0 Tabulated Water-Quality Data for the H-7 Pumping
Test

**PART E. HYDROLOGIC TESTING TESTS CONDUCTED AT
WELL DOE-2 DURING 1984 AND 1985**

	<u>PAGE</u>
1.0 INTRODUCTION	E-1
1.1 Objectives	E-1
1.2 Test Methods	E-2
1.3 Well Configuration	E-3
2.0 TEST EQUIPMENT	E-3
2.1 Data-Acquisition Systems (DAS)	E-3
2.1.1 United States Geological Survey DAS	E-3
2.1.2 Sandia National Laboratories DAS	E-4
2.1.3 Baker Production Technology DAS	E-4
2.2 Downhole Transducers	E-5
2.3 Downhole Assemblies	E-6
2.3.1 Packer Systems	E-6
2.3.1.1 Single-Packer Systems	E-6
2.3.1.2 Double-Packer Systems	E-8
2.3.2 Submersible Pump	E-9
2.4 Pumping-Rate Measurement Systems	E-9
2.5 Water-Level Measurements	E-10
2.6 Water-Quality Measurements	E-10
3.0 TEST HISTORY	E-11
3.1 Testing Sequences	E-11
3.1.1 Phase I	E-11
3.1.2 Phase Ia	E-12
3.1.3 Phase II	E-12
3.1.4 Phase III	E-13
3.2 Equipment Performance	E-14
3.2.1 Phase I	E-14
3.2.2 Phase Ia	E-14
3.2.3 Phase II and Phase III	E-15

4.0 TEST RESULTS E-15

4.1 Hydrologic Testing E-15

4.1.1 Phase I, Dewey Lake Red Beds E-15

4.1.2 Phase I, Rustler Formation E-16

4.1.3 Phase Ia, Culebra Pumping Test E-16

4.1.4 Phase II, Salado Formation E-17

4.1.5 Phase III, Bell Canyon Formation E-17

4.2 Water-Quality Data E-18

5.0 REFERENCES E-19

APPENDIX 1.0 Well Configuration Data for DOE-2 Open-Hole Well Testing 1984 to 1985

APPENDIX 2.0 Tabulated Pumping Rate Data for the DOE-2 Culebra Pumping Test

APPENDIX 3.0 Tabulated Pressure Data for Hydraulic Tests Conducted at Well DOE-2 During 1984 and 1985

PART F. WATER-LEVEL MEASUREMENTS FOR OBSERVATION WELLS AT AND NEAR THE WIPP SITE FOR THE PERIOD NOVEMBER 1985 TO APRIL 1986

1.0 INTRODUCTION F-1

1.1 General F-1

1.2 Measurement Factors F-2

1.3 Data-Acquisition Systems F-3

1.4 Water-Level Measuring Devices F-3

2.0 WATER-LEVEL DATA F-3

 2.1 Magenta Dolomite F-3

 2.2 Culebra Dolomite F-4

 2.3 Other Water-Level Measurements (Rustler-
 Salado Contact, Bell Canyon Formation, and
 Salado-Castile Formations) F-4

3.0 REFERENCES..... F-4

APPENDIX 1.0 Tabulated Water-Level Data for Observation Wells

LIST OF FIGURES

PART A. H-3 MULTIPAD PUMPING TEST

- Figure 1.1 Location of the Waste Isolation Pilot Plant (WIPP) site and the observation-well network in the Culebra dolomite for the H-3 multipad test.
- Figure 1.2 Plan view of the wells at the H-3 hydropad.
- Figure 2.1 Schematic diagram of the Data-Acquisition Systems (DAS's).
- Figure 2.2 Flow-regulation and discharge-measurement system.
- Figure 2.3 Details of the downhole pump and packer feed-through assembly.
- Figure 2.4 Transducer calibration using Heise gage and DAS.
- Figure 3.1 Well construction details for the H-3 hydropad.
- Figure 3.2 Fluid-pressure responses in wells H-3b1, H-3b2, and H-3b3 during the step-drawdown test and recovery conducted from June 20, 1985 to July 8, 1985 at the H-3 hydropad.
- Figure 3.3 Configurations of the test equipment in the wells at the H-3 hydropad during the H-3 multipad pumping test.
- Figure 3.4 Configuration of the test equipment in observation well H-2c during the H-3 multipad pumping test.
- Figure 3.5 Configuration of the test equipment in observation well H-4b during the H-3 multipad pumping test.

- Figure 3.6 Configuration of the test equipment in observation well H-11b3 during the H-3 multipad pumping test.
- Figure 3.7 Configuration of the test equipment in observation well DOE-1 during the H-3 multipad pumping test.
- Figure 3.8 Pre-workover water levels and depth soundings in wells WIPP-18, WIPP-19, WIPP-21, and WIPP-22.
- Figure 4.1 Precision-totalizer, turbine-flow-meter, and calibrated-standpipe pumping rates of water produced from the pumping well H-3b2 during the H-3 multipad pumping test, 10:00 October 15 to 10:00 December 16, 1985.
- Figure 4.2 Fluid-pressure responses in wells H-3b1, H-3b2, and H-3b3 during the H-3 multipad pumping test at the H-3 hydropad.
- Figure 4.3 Fluid-pressure responses in observation well H-2c during the H-3 multipad pumping test.
- Figure 4.4 Fluid-pressure response in observation well H-4b during the H-3 multipad pumping test.
- Figure 4.5 Fluid-pressure response in observation well H-11b3 during the H-3 multipad pumping test.
- Figure 4.6 Water levels measured in observation wells H-11b1 and H-11b2 during the H-3 multipad pumping test.
- Figure 4.7 Fluid-pressure response in observation well DOE-1 during the H-3 multipad pumping test.

- Figure 4.8 Water levels measured in observation well H-1
Culebra during the H-3 multipad pumping test.
- Figure 4.9 Water levels measured in observation well H-2b2
during the H-3 multipad pumping test.
- Figure 4.10 Water levels measured in observation well WIPP-21
during the H-3 multipad pumping test.
- Figure 4.11 Water levels measured in observation well WIPP-22
during the H-3 multipad pumping test.
- Figure 4.12 Water levels measured in observation well WIPP-19
during the H-3 multipad pumping test.
- Figure 4.13 Water levels measured in observation well P-17
during the H-3 multipad pumping test.
- Figure 4.14 Water levels measured in observation well P-14
during the H-3 multipad pumping test.
- Figure 4.15 Water levels measured in observation well H-6b
during the H-3 multipad pumping test.
- Figure 4.16 Water levels measured in observation well H-5b
during the H-3 multipad pumping test.
- Figure 4.17 Water levels measured in observation well H-12
during the H-3 multipad pumping test.
- Figure 4.18 Water levels measured in observation well P-15
during the H-3 multipad pumping test.
- Figure 4.19 Water levels measured in observation well P-18
during the H-3 multipad pumping test.

- Figure 4.20 Water levels measured in observation well WIPP-18 during the H-3 multipad pumping test.
- Figure 4.21 Water levels measured in observation well H-1 Magenta during the H-3 multipad pumping test.
- Figure 4.22 Water levels measured in observation well H-2b1 during the H-3 multipad pumping test.
- Figure 4.23 Fluid pressure in the Culebra dolomite, measured in the Waste-Handling Shaft before and during the H-3 multipad pumping test.
- Figure 4.24 Electrolytic conductivity and specific gravity of water produced during the H-3 multipad pumping test.
- Figure 4.25 Barometric pressure measured at the H-3 hydropad during the H-3 multipad pumping test.

PART B. CALCULATED WATER-LEVEL DATA FROM PUMPING DURING ANISOTROPY AND TRACER TESTS AT THE H-3 HYDROPAD, APRIL 18 TO JUNE 12, 1984

- Figure 1.1 Location of the H-3 test site relative to the WIPP site observation-well network.
- Figure 2.1 Configuration of downhole equipment and surface tracer-injection system for the anisotropy and convergent-flow tracer tests at the H-3 hydropad April 18 to June 12, 1984.
- Figure 3.1 Schematic representation of the history of the anisotropy and convergent-flow tracer testing at the H-3 Hydropad, April 18 to June 12, 1984.

- Figure 4.1 DAS-Calculated water-level responses for wells H-3b1, H-3b2, and H-3b3 (the pumping well) during the anisotropy and convergent-flow tracer tests at the H-3 hydropad, April 18 to June 12, 1984.
- Figure 4.2 Pumping rate during the pumping of H-3b3 during the anisotropy and convergent-flow tracer testing at the H-3 hydropad, April 18 to June 12, 1984.
- Figure 4.3 Water levels measured in observation wells H-1 (Culebra), H-3b1, H-3b2, and DOE-1 during anisotropy and convergent-flow tracer testing at the H-3 hydropad, April 18 to June 12, 1984.

PART C. PUMPING TEST AT THE H-8 HYDROPAD, CONDUCTED
DECEMBER 6-18, 1985

- Figure 1.1 Site location map.
- Figure 1.2 Plan view of the wells at the H-8 hydropad.
- Figure 1.3 Well construction details for the H-8 hydropad.
- Figure 1.4 Pump and packer configuration in pumping well H-8b.
- Figure 2.1 Flow-regulation and discharge-measurement system.
- Figure 4.1 Linear-linear plot of pressure measurements in pumping well H-8b during the pretest, pumping, and recovery periods of the H-8 pumping test.
- Figure 4.2 Plot of measured pumping rate versus time during pumping from H-8b.

<u>PART B.</u>	CALCULATED WATER-LEVEL DATA FROM PUMPING DURING ANISOTROPY AND TRACER TESTS AT THE H-3 HYDROPAD, APRIL 18 TO JUNE 12, 1984
TABLE 3-1	PUMP PERIODS OF OPERATION DURING PRETEST PERIOD, ANISOTROPY-TEST PERIOD, AND CONVERGENT-FLOW TRACER-TEST PERIOD.
TABLE 3-2	DAS PERIODS OF OPERATION DURING PRETEST PERIOD ANISOTROPY TEST PERIOD, AND CONVERGENT-FLOW TRACER TEST PERIOD.
TABLE A1-1	CONFIGURATION OF DOWNHOLE TEST EQUIPMENT FOR THE H-3 HYDROPAD, APRIL 18 TO JUNE 12, 1984.
TABLE A2-1	TABULATED PUMPING RATES FOR ANISOTROPY AND CONVERGENT-FLOW TRACER TESTS AT THE H-3 HYDROPAD, APRIL 18 TO JUNE 12, 1984.
TABLE A3-1	TABULATED WATER-LEVEL DATA CALCULATED FOR THE WELLS AT THE H-3 HYDROPAD DURING ANISOTROPY AND CONVERGENT-FLOW TRACER TESTS, APRIL 18 TO JUNE 12, 1984.
TABLE A4-1	WATER-LEVEL MEASUREMENTS IN OBSERVATION WELL H-1 (Culebra) DURING THE H-3 ANISOTROPY AND TRACER TESTS.
TABLE A4-2	WATER-LEVEL MEASUREMENTS IN OBSERVATION WELL H-3b1 DURING THE H-3 ANISOTROPY AND TRACER TESTS.
TABLE A4-3	WATER-LEVEL MEASUREMENTS IN OBSERVATION WELL H-3b2 DURING THE H-3 ANISOTROPY AND TRACER TESTS.
TABLE A4-4	WATER-LEVEL MEASUREMENTS IN OBSERVATION WELL DOE-1 DURING THE H-3 ANISOTROPY AND TRACER TESTS.

- Figure 4.1 Fluid-pressure responses in wells H-7b (the pumping well), H-7b2, and H-7c during the H-7 pumping test, February 18 to 24, 1986.
- Figure 4.2 Pumping rates during the H-7 pumping test, February 18 to 24, 1986. Rates calculated using Hays totalizing flow meter, cutthroat flume, and 55-gallon drum.
- Figure 4.3 Electrolytic conductivity and specific gravity of water produced from well H-7b during the H-7 pumping test.
- Figure 4.4 Barometric pressure measured at the H-3 hydropad during the H-7b pumping test.

PART E. HYDROLOGIC TESTING TESTS CONDUCTED AT
WELL DOE-2 DURING 1984 AND 1985

- Figure 1.1 Site location map showing DOE-2 in relation to other wells at the WIPP site.
- Figure 1.2 Schematic illustration of single- and double-packer test configurations.
- Figure 2.1 United States Geological Survey Data-Acquisition System.
- Figure 2.2 Baker Production Technology Data-Acquisition System.
- Figure 2.3 Test equipment for the constant-head borehole-infiltration test on the lower Dewey Lake Red Beds.

- Figure 2.4 Well configuration for the pumping test of the Culebra dolomite.
- Figure 2.5 Baski double-packer system.
- Figure 2.6 Baker Production Technology hydrological test tool.
- Figure 2.7 Discharge-measurement system during the DOE-2 pumping test.
- Figure 4.1 Linear-linear sequence plot of drill-stem and slug testing of the Forty-niner Member of the Rustler Formation in well DOE-2.
- Figure 4.2 Linear-linear sequence plot of drill-stem and slug testing of the Magenta Dolomite Member of the Rustler Formation in well DOE-2.
- Figure 4.3 Linear-linear sequence plot of drill-stem testing of the Tamarisk Member of the Rustler Formation in well DOE-2.
- Figure 4.4 Linear-linear sequence plot of drill-stem and slug testing in the Culebra Dolomite Member of the Rustler Formation in well DOE-2.
- Figure 4.5 Linear-linear sequence plot of slug testing in the Rustler-Salado contact zone in well DOE-2.
- Figure 4.6 Fluid-pressure response of the Culebra dolomite in well DOE-2 during pretest and pumping test periods from February 14 to March 13, 1985.
- Figure 4.7 Plot of pumping rate versus time during the pumping test at well DOE-2, February 19-March 12, 1985.

- Figure 4.8 Fluid-pressure response of the Culebra dolomite in well H-6b during the pumping test at DOE-2, February 19 to March 12, 1985.
- Figure 4.9 Fluid-pressure response of the Culebra dolomite in well H-5b during the pumping test at DOE-2, February 19 to March 12, 1985.
- Figure 4.10 Linear-linear sequence plot of drill-stem testing of Marker Beds 138 and 139 of the Salado Formation in well DOE-2.
- Figure 4.11 Linear-linear sequence plot of pulse testing of the Salado Formation in well DOE-2.
- Figure 4.12 Linear-linear sequence plot of drill-stem testing and slug testing of the Ramsey sandstone of the Bell Canyon Formation in well DOE-2.
- Figure 4.13 Linear-linear sequence plot of drill-stem testing and slug testing in the Olds sandstone of the Bell Canyon Formation in well DOE-2.
- Figure 4.14 Linear-linear sequence plot of drill-stem testing and slug testing in the Hays sandstone of the Bell Canyon Formation in well DOE-2.

PART F. WATER-LEVEL MEASUREMENTS FOR OBSERVATION WELLS AT AND NEAR THE WIPP SITE FOR THE PERIOD NOVEMBER 1985 TO APRIL 1986

- Figure 1.1 WIPP site location and observation-well network.
- Figure 2.1 Water-level measurements at well H-1, Magenta, November 1985 through April 1986.

- Figure 2.2 Water-level measurements at well H-2b1, Magenta, November 1985 through April 1986.
- Figure 2.3 Water-level measurements at well H-8a, Magenta, November 1985 through April 1986.
- Figure 2.4 Water-level measurements at well H-10a, Magenta, November 1985 through April 1986.
- Figure 2.5 Water-level measurements at well H-1, Culebra, November 1985 through April 1986.
- Figure 2.6 Water-level measurements at well H-2b2, Culebra, November 1985 through April 1986.
- Figure 2.7 Water-level measurements at well H-4a, Culebra, November 1985 through April 1986.
- Figure 2.8 Water-level measurements at well H-4b, Culebra, November 1985 through April 1986.
- Figure 2.9 Water-level measurements at well H-5a, Culebra, November 1985 through April 1986.
- Figure 2.10 Water-level measurements at well H-5b, Culebra, November 1985 through April 1986.
- Figure 2.11 Water-level measurements at well H-5c, Culebra, November 1985 through April 1986.
- Figure 2.12 Water-level measurements at well H-6a, Culebra, November 1985 through April 1986.
- Figure 2.13 Water-level measurements at well H-6b, Culebra, November 1985 through April 1986.

- Figure 2.14 Water-level measurements at well H-6c, Culebra, November 1985 through April 1986.
- Figure 2.15 Water-level measurements at well H-7b, Culebra, November 1985 through April 1986.
- Figure 2.16 Water-level measurements at well H-7b2, Culebra, November 1985 through April 1986.
- Figure 2.17 Water-level measurements at well H-7c, Culebra, November 1985 through April 1986.
- Figure 2.18 Water-level measurements at well H-8b, Culebra, November 1985 through April 1986.
- Figure 2.19 Water-level measurements at well H-9a, Culebra, November 1985 through April 1986.
- Figure 2.20 Water-level measurements at well H-9b, Culebra, November 1985 through April 1986.
- Figure 2.21 Water-level measurements at well H-9c, Culebra, November 1985 through April 1986.
- Figure 2.22 Water-level measurements at well H-11b1, Culebra, November 1985 through April 1986.
- Figure 2.23 Water-level measurements at well H-11b2, Culebra, November 1985 through April 1986.
- Figure 2.24 Water-level measurements at well H-12, Culebra, November 1985 through April 1986.
- Figure 2.25 Water-level measurements at well P-14, Culebra, November 1985 through April 1986.

- Figure 2.26 Water-level measurements at well P-15, Culebra, November 1985 through April 1986.
- Figure 2.27 Water-level measurements at well P-17, Culebra, November 1985 through April 1986.
- Figure 2.28 Water-level measurements at well P-18, Culebra, November 1985 through April 1986.
- Figure 2.29 Water-level measurements at well WIPP-12, Culebra, November 1985 through April 1986.
- Figure 2.30 Water-level measurements at well WIPP-13, Culebra, November 1985 through April 1986.
- Figure 2.31 Water-level measurements at well WIPP-18, Culebra, November 1985 through April 1986.
- Figure 2.32 Water-level measurements at well WIPP-19, Culebra, November 1985 through April 1986.
- Figure 2.33 Water-level measurements at well WIPP-21, Culebra, November 1985 through April 1986.
- Figure 2.34 Water-level measurements at well WIPP-22, Culebra, November 1985 through April 1986.
- Figure 2.35 Water-level measurements at well WIPP-25, Culebra, November 1985 through April 1986.
- Figure 2.36 Water-level measurements at well WIPP-26, Culebra, November 1985 through April 1986.
- Figure 2.37 Water-level measurements at well WIPP-27, Culebra, November 1985 through April 1986.

- Figure 2.38 Water-level measurements at well WIPP-28, Culebra, November 1985 through April 1986.
- Figure 2.39 Water-level measurements at well WIPP-29, Culebra, November 1985 through April 1986.
- Figure 2.40 Water-level measurements at well WIPP-30, Culebra, November 1985 through April 1986.
- Figure 2.41 Water-level measurements at well H-8c, Rustler-Salado contact, November through April 1986.
- Figure 2.42 Water-level measurements at well DOE-2, Bell Canyon Formation, January to November 1985.
- Figure 2.43 Water-level measurements at well Cabin Baby-1, Bell Canyon Formation, November 1985 through April 1986.
- Figure 2.44 Water-level measurements at well AEC-8, Bell Canyon Formation, March through April 1986.

LIST OF TABLES

PART A. H-3 MULTIPAD PUMPING TEST

- TABLE 3-1 LIST OF WELLS, OPEN TO THE CULEBRA DOLOMITE, MONITORED DURING THE H-3 MULTIPAD TEST, INCLUDING INDICATION OF MEASUREMENT FREQUENCY.
- TABLE 4-1 TIME OF WATER-LEVEL OR FLUID-PRESSURE RESPONSE AND DISTANCE FROM THE PUMPING WELL FOR OBSERVATION WELLS RESPONDING TO THE H-3 MULTIPAD PUMPING TEST.
- TABLE A1-1 CONFIGURATION OF DOWNHOLE TEST EQUIPMENT FOR THE H-3 HYDROPAD.
- TABLE A1-2 CONFIGURATION OF DOWNHOLE TEST EQUIPMENT FOR THE H-2c OBSERVATION WELL.
- TABLE A1-3 CONFIGURATION OF DOWNHOLE TEST EQUIPMENT FOR THE H-4b OBSERVATION WELL.
- TABLE A1-4 CONFIGURATION OF DOWNHOLE TEST EQUIPMENT FOR THE H-11b3 OBSERVATION WELL.
- TABLE A1-5 CONFIGURATION OF DOWNHOLE TEST EQUIPMENT FOR THE DOE-1 OBSERVATION WELL.
- TABLE A2-1 PUMPING-RATE DATA FROM THE PRECISION TOTALIZING FLOW METER DURING THE H-3 MULTIPAD PUMPING TEST
- TABLE A2-2 PUMPING-RATE DATA FROM THE FT-12 STANDARD TURBINE FLOW METER DURING THE H-3 MULTIPAD PUMPING TEST.

- TABLE A2-3 PUMPING RATES CALCULATED WITH THE SIX-INCH CALIBRATED STANDPIPE DURING THE H-3 MULTIPAD PUMPING TEST.
- TABLE A3-1 TABULATED PRESSURE DATA FROM THE H-3 MULTIPAD PUMPING TEST RECORDED AT THE H-3 HYDROPAD.
- TABLE A3-2 TABULATED PRESSURE DATA FROM THE H-3 MULTIPAD PUMPING TEST RECORDED AT OBSERVATION WELL H-2c.
- TABLE A3-3 TABULATED PRESSURE DATA FROM THE H-3 MULTIPAD PUMPING TEST RECORDED AT OBSERVATION WELL H-4b.
- TABLE A3-4 TABULATED PRESSURE DATA FROM THE H-3 MULTIPAD PUMPING TEST RECORDED AT OBSERVATION WELL H-11b3.
- TABLE A3-5 TABULATED PRESSURE DATA FROM THE H-3 MULTIPAD PUMPING TEST RECORDED AT OBSERVATION WELL DOE-1.
- TABLE A4-1 FLUID-PRESSURE DATA IN THE CULEBRA DOLOMITE AT THE WASTE-HANDLING SHAFT (TRANSDUCERS 31X-PE-00 207 AND 31X-PE-00 208).
- TABLE A5-1 ELECTROLYTIC CONDUCTIVITY, SPECIFIC GRAVITY, AND TEMPERATURE OF WATER PRODUCED DURING THE H-3 MULTIPAD PUMPING TEST.
- TABLE A6-1 BAROMETRIC PRESSURE MEASURED AT THE H-3 HYDROPAD DURING THE H-3 MULTIPAD PUMPING TEST.

PART B.

PRESSURE DATA FROM PUMPING ASSOCIATED WITH ANISOTROPY AND TRACER TESTS AT THE H-3 HYDROPAD, APRIL 18 TO JUNE 12, 1984

- TABLE 3-1 PUMP PERIODS OF OPERATION DURING PRETEST PERIOD, ANISOTROPY-TEST PERIOD, AND CONVERGENT-FLOW TRACER-TEST PERIOD.
- TABLE 3-2 DAS PERIODS OF OPERATION DURING PRETEST PERIOD ANISOTROPY TEST PERIOD, AND CONVERGENT-FLOW TRACER TEST PERIOD.
- TABLE A1-1 CONFIGURATION OF DOWNHOLE TEST EQUIPMENT FOR THE H-3 HYDROPAD, APRIL 18 TO JUNE 12, 1984.
- TABLE A2-1 TABULATED PUMPING RATES FOR ANISOTROPY AND CONVERGENT-FLOW TRACER TESTS AT THE H-3 HYDROPAD, APRIL 18 TO JUNE 12, 1984.
- TABLE A3-1 TABULATED PRESSURE DATA RECORDED AT THE H-3 HYDROPAD DURING ANISOTROPY AND CONVERGENT FLOW TRACER TESTS, APRIL 18 TO JUNE 12, 1984.
- TABLE A4-1 WATER-LEVEL MEASUREMENTS IN OBSERVATION WELL H-1 (Culebra) DURING THE H-3 ANISOTROPY AND TRACER TESTS.
- TABLE A4-2 WATER-LEVEL MEASUREMENTS IN OBSERVATION WELL H-3b1 DURING THE H-3 ANISOTROPY AND TRACER TESTS.
- TABLE A4-3 WATER-LEVEL MEASUREMENTS IN OBSERVATION WELL H-3b2 DURING THE H-3 ANISOTROPY AND TRACER TESTS.
- TABLE A4-4 WATER-LEVEL MEASUREMENTS IN OBSERVATION WELL DOE-1 DURING THE H-3 ANISOTROPY AND TRACER TESTS.

TABLE A5-1 WATER-QUALITY DATA COLLECTED DURING H-3 ANISOTROPY AND CONVERGENT-FLOW TRACER TESTS.

PART C. PUMPING TEST AT THE H-8 HYDROPAD, CONDUCTED DECEMBER 6-18, 1985

TABLE A1-1 TEST CONFIGURATION FOR THE H-8 HYDROPAD.

TABLE A2-1 ANNOTATED SUMMARY OF PUMPING RATES FOR THE H-8 PUMPING TEST.

TABLE A3-1 PRESSURE RECORDS FROM THE H-8 PUMPING TEST RECORDED AT THE H-8 HYDROPAD.

TABLE A4-1 WATER-LEVEL MEASUREMENTS FOR OBSERVATION WELL H-8a DURING THE H-8 PUMPING TEST.

TABLE A4-2 WATER-LEVEL MEASUREMENTS FOR OBSERVATION WELL H-8c DURING THE H-8 PUMPING TEST.

TABLE A4-3 WATER-LEVEL MEASUREMENTS FOR THE POKER TRAP OBSERVATION WELL DURING THE H-8 PUMPING TEST.

TABLE A5-1 ELECTROLYTIC CONDUCTIVITY, TEMPERATURE, AND SPECIFIC GRAVITY OF WATER PRODUCED DURING THE H-8 PUMPING TEST.

PART D. PUMPING TEST AT THE H-7 HYDROPAD CONDUCTED FEBRUARY 18-24, 1986

TABLE A1-1 CONFIGURATION OF DOWNHOLE TEST EQUIPMENT FOR THE H-7 HYDROPAD, JANUARY 21 TO FEBRUARY 25, 1986.

TABLE A2-1 ANNOTATED SUMMARY OF PUMPING RATES FOR THE H-7 PUMPING TEST, USING THE HAYS TOTALIZING FLOW METER.

TABLE A2-2 PUMPING RATE DURING THE H-7 PUMPING TEST, AS ESTIMATED BY THE CUTTHROAT FLUME.

TABLE A2-3 PUMPING RATE DURING THE H-7 PUMPING TEST, AS ESTIMATED BY THE TIMED FILLING OF A 55-GALLON DRUM.

TABLE A3-1 PRESSURE RECORDS FROM THE H-7 PUMPING TEST, RECORDED AT THE H-7 HYDROPAD.

TABLE A4-1 WATER-LEVEL MEASUREMENTS IN THE ANNULUS ABOVE THE PACKER IN WELL H-7b.

TABLE A5-1 ELECTROLYTIC CONDUCTIVITY, TEMPERATURE, AND SPECIFIC GRAVITY OF WATER PRODUCED DURING THE H-7 PUMPING TEST.

PART E. HYDROLOGIC TESTING CONDUCTED AT WELL DOE-2 DURING 1984 AND 1985

TABLE A1-1 WELL CONFIGURATION DATA FOR THE OPEN-HOLE TESTING PROGRAM DURING THE DRILLING OF WELL DOE-2, SEPTEMBER 1984 THROUGH JULY 1985.

TABLE A1-2 CONFIGURATION OF DOWNHOLE TEST EQUIPMENT FOR WELL DOE-2 DURING THE CULEBRA PUMPING TEST, FEBRUARY 19 TO MARCH 12, 1985.

- TABLE A1-3 CONFIGURATION OF DOWNHOLE TEST EQUIPMENT FOR THE OBSERVATION WELLS H-5b AND H-6b DURING THE CULEBRA PUMPING TEST IN WELL DOE-2, FEBRUARY 19 TO MARCH 12, 1985.
- TABLE A2-1 TABULATED PUMPING RATES FOR THE DOE-2 (CULEBRA) PUMPING TEST, 824 TO 846 FEET BELOW LAND SURFACE, FEBRUARY 19 TO MARCH 13, 1985.
- TABLE A3-1 TABULATED PRESSURE DATA FOR THE CONSTANT-HEAD BOREHOLE-INFILTRATION TEST OF THE DEWEY LAKE RED BEDS, 539 TO 641 FEET BELOW LAND SURFACE, SEPTEMBER 14, 1984.
- TABLE A3-2 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF THE FORTY-NINER MEMBER OF THE RUSTLER FORMATION, 664 TO 686 FEET BELOW LAND SURFACE, OCTOBER 15 TO 16, 1984.
- TABLE A3-3 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF THE MAGENTA DOLOMITE MEMBER OF THE RUSTLER FORMATION, 700-722 FEET BELOW LAND SURFACE, OCTOBER 13 TO 15, 1984.
- TABLE A3-4 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF THE TAMARISK MEMBER OF THE RUSTLER FORMATION, 796-817 FEET BELOW LAND SURFACE, OCTOBER 12 TO 13, 1984.
- TABLE A3-5 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF THE CULEBRA DOLOMITE MEMBER OF THE RUSTLER FORMATION, 824 TO 846 FEET BELOW LAND SURFACE, OCTOBER 12, 1984.

- TABLE A3-6 TABULATED PRESSURE DATA FOR THE DOE-2 PUMPING TEST OF THE CULEBRA DOLOMITE MEMBER OF THE RUSTLER FORMATION, FEBRUARY 19 TO MARCH 13, 1985.
- TABLE A3-7 TABULATED PRESSURE DATA FOR OBSERVATION WELL H-5b, DURING THE DOE-2 (CULEBRA) PUMPING TEST, FEBRUARY 19 TO MARCH 13, 1985.
- TABLE A3-8 TABULATED PRESSURE DATA FOR OBSERVATION WELL H-6b DURING THE DOE-2 (CULEBRA) PUMPING TEST, FEBRUARY 19 TO MARCH 13, 1985.
- TABLE A3-9 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF THE RUSTLER-SALADO CONTACT ZONE, 945 TO 967 FEET BELOW LAND SURFACE, OCTOBER 11 TO 12, 1984.
- TABLE A3-10 TABULATED PRESSURE DATA FOR DRILL-STEM TESTING OF MARKER BEDS 138 AND 139 OF THE SALADO FORMATION, 2195 TO 2309 FEET BELOW LAND SURFACE, MAY 19 TO 20, 1985.
- TABLE A3-11 TABULATED PRESSURE DATA FOR PULSE TESTING OF THE SALADO FORMATION, 1040 TO 3095 FEET BELOW LAND SURFACE, MAY 21 TO 22, 1985.
- TABLE A3-12 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF THE RAMSEY SANDSTONE OF THE BELL CANYON FORMATION, 4138 TO 4180 FEET BELOW LAND SURFACE, JULY 12 TO 14, 1985.
- TABLE A3-13 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF THE OLDS SANDSTONE OF THE BELL CANYON FORMATION, 4177 TO 4218 FEET BELOW LAND SURFACE, JULY 26 TO 29, 1985.

TABLE A3-14 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF THE HAYS SANDSTONE OF THE BELL CANYON FORMATION, 4220 TO 4325 FEET BELOW LAND SURFACE, JULY 18 TO 19, 1985.

PART F. WATER-LEVEL MEASUREMENTS FOR OBSERVATION WELLS AT AND NEAR THE WIPP SITE FOR THE PERIOD NOVEMBER 1985 TO APRIL 1986

TABLE 1-1 MEASURING POINT ELEVATIONS ACCORDING TO OCTOBER 1984 SATELLITE SURVEY.

TABLE 1-2 HYDRAULIC TESTING, WATER-QUALITY SAMPLING, AND WELL-RECOMPLETION OPERATIONS IN THE OBSERVATION-WELL NETWORK DURING THE PERIOD NOVEMBER 1985 THROUGH APRIL 1986.

TABLE A1-1 WATER-LEVEL MEASUREMENTS FOR THE CULEBRA DOLOMITE IN WELL H-1.

TABLE A1-2 WATER-LEVEL MEASUREMENTS FOR THE MAGENTA DOLOMITE IN WELL H-1.

TABLE A1-3 WATER-LEVEL MEASUREMENTS FOR THE MAGENTA DOLOMITE IN WELL H-2b1.

TABLE A1-4 WATER-LEVEL MEASUREMENTS FOR THE CULEBRA DOLOMITE IN WELL H-2b2.

TABLE A1-5 WATER-LEVEL MEASUREMENTS FOR THE CULEBRA DOLOMITE IN WELL H-4a.

TABLE A1-6 WATER-LEVEL MEASUREMENTS FOR THE CULEBRA DOLOMITE IN WELL H-4b.

TABLE A1-7	WATER-LEVEL MEASUREMENTS FOR THE CULEBRA DOLOMITE IN WELL H-5a.
TABLE A1-8	WATER-LEVEL MEASUREMENTS FOR THE CULEBRA DOLOMITE IN WELL H-5b.
TABLE A1-9	WATER-LEVEL MEASUREMENTS FOR THE CULEBRA DOLOMITE IN WELL H-5c.
TABLE A1-10	WATER-LEVEL MEASUREMENTS FOR THE CULEBRA DOLOMITE IN WELL H-6a.
TABLE A1-11	WATER-LEVEL MEASUREMENTS FOR THE CULEBRA DOLOMITE IN WELL H-6b.
TABLE A1-12	WATER-LEVEL MEASUREMENTS FOR THE CULEBRA DOLOMITE IN WELL H-6c.
TABLE A1-13	WATER-LEVEL MEASUREMENTS FOR THE CULEBRA DOLOMITE IN WELL H-7b.
TABLE A1-14	WATER-LEVEL MEASUREMENTS FOR THE CULEBRA DOLOMITE IN WELL H-7b2.
TABLE A1-15	WATER-LEVEL MEASUREMENTS FOR THE CULEBRA DOLOMITE IN WELL H-7c.
TABLE A1-16	WATER-LEVEL MEASUREMENTS FOR THE MAGENTA DOLOMITE IN WELL H-8a.
TABLE A1-17	WATER-LEVEL MEASUREMENTS FOR THE CULEBRA DOLOMITE IN WELL H-8b.
TABLE A1-18	WATER-LEVEL MEASUREMENTS FOR THE RUSTLER-SALADO CONTACT IN WELL H-8c.

- TABLE A1-19 WATER-LEVEL MEASUREMENTS FOR THE CULEBRA
DOLOMITE IN WELL H-9a.
- TABLE A1-20 WATER-LEVEL MEASUREMENTS FOR THE CULEBRA
DOLOMITE IN WELL H-9b.
- TABLE A1-21 WATER-LEVEL MEASUREMENTS FOR THE CULEBRA
DOLOMITE IN WELL H-9c.
- TABLE A1-22 WATER-LEVEL MEASUREMENTS FOR THE MAGENTA
DOLOMITE IN WELL H-10a.
- TABLE A1-23 WATER-LEVEL MEASUREMENTS FOR THE CULEBRA
DOLOMITE IN WELL H-11b1.
- TABLE A1-24 WATER-LEVEL MEASUREMENTS FOR THE CULEBRA
DOLOMITE IN WELL H-11b2.
- TABLE A1-25 WATER-LEVEL MEASUREMENTS FOR THE CULEBRA
DOLOMITE IN WELL H-12.
- TABLE A1-26 WATER-LEVEL MEASUREMENTS FOR THE BELL CANYON
FORMATION IN WELL DOE-2.
- TABLE A1-27 WATER-LEVEL MEASUREMENTS FOR THE CULEBRA
DOLOMITE IN WELL P-14.
- TABLE A1-28 WATER-LEVEL MEASUREMENTS FOR THE CULEBRA
DOLOMITE IN WELL P-15.
- TABLE A1-29 WATER-LEVEL MEASUREMENTS FOR THE CULEBRA
DOLOMITE IN WELL P-17.
- TABLE A1-30 WATER-LEVEL MEASUREMENTS FOR THE CULEBRA
DOLOMITE IN WELL P-18.

- TABLE A1-31 WATER-LEVEL MEASUREMENTS FOR THE CULEBRA DOLOMITE IN WELL WIPP-12.
- TABLE A1-32 WATER-LEVEL MEASUREMENTS FOR THE CULEBRA DOLOMITE IN WELL WIPP-13.
- TABLE A1-33 WATER-LEVEL MEASUREMENTS FOR THE CULEBRA DOLOMITE IN WELL WIPP-18.
- TABLE A1-34 WATER-LEVEL MEASUREMENTS FOR THE CULEBRA DOLOMITE IN WELL WIPP-19.
- TABLE A1-35 WATER-LEVEL MEASUREMENTS FOR THE CULEBRA DOLOMITE IN WELL WIPP-21.
- TABLE A1-36 WATER-LEVEL MEASUREMENTS FOR THE CULEBRA DOLOMITE IN WELL WIPP-22.
- TABLE A1-37 WATER-LEVEL MEASUREMENTS FOR THE CULEBRA DOLOMITE IN WELL WIPP-25.
- TABLE A1-38 WATER-LEVEL MEASUREMENTS FOR THE CULEBRA DOLOMITE IN WELL WIPP-26.
- TABLE A1-39 WATER-LEVEL MEASUREMENTS FOR THE CULEBRA DOLOMITE IN WELL WIPP-27.
- TABLE A1-40 WATER-LEVEL MEASUREMENTS FOR THE CULEBRA DOLOMITE IN WELL WIPP-28.
- TABLE A1-41 WATER-LEVEL MEASUREMENTS FOR THE CULEBRA DOLOMITE IN WELL WIPP-29.
- TABLE A1-42 WATER-LEVEL MEASUREMENTS FOR THE CULEBRA DOLOMITE IN WELL WIPP-30.

TABLE A1-43 WATER-LEVEL MEASUREMENTS FOR THE BELL CANYON
FORMATION IN WELL CABIN BABY-1.

TABLE A1-44 WATER-LEVEL MEASUREMENTS FOR THE BELL CANYON
FORMATION IN WELL AEC-8.

Foreword

Hydrologic Data Report #3, the third of a series of basic data reports, contains hydrologic data for aquifer tests and water-level measurements conducted at the Waste Isolation Pilot Plant (WIPP) site over the period 1984 through April 1986. The purpose of these reports is to disseminate basic hydrologic data to interested parties in a timely manner, often before data interpretation has been performed. Data interpretation will be presented in a separate series of reports. Performance of the field investigations was carried out under the direction of Sandia National Laboratories, Albuquerque, New Mexico. This report includes both recent data collected by INTERA Technologies, Inc. of Austin, Texas, the present Sandia field support sub-contractor, and data previously collected by Hydro Geo Chem, Inc. of Tucson, Arizona, the previous field support sub-contractor.

Hydrologic Data Report #3 contains reports on three aquifer tests conducted by INTERA (Parts A, C, and D), a description of aquifer and convergent-flow tracer testing conducted in 1984 by Hydro Geo Chem, (Part B), and a report on drillstem, pulse, slug, and pump testing conducted by Sandia National Laboratories in 1984 and 1985 at the DOE-2 borehole (Part E). Part F has been produced by INTERA from 1985 and 1986 water-level data collected by INTERA.

The report is organized into six parts with sub-sections internally numbered without letter designations. The pages in each part are numbered consecutively with the letter prefixes A through F. The table of contents should be consulted for overall organizational details and content. For ease of reading, all Figures and Tables are grouped together at the end of the corresponding part, prior to the Appendixes.

Summary

Hydrologic Data Report #3 contains basic hydrologic data for aquifer tests and water-level measurements performed at the Waste Isolation Pilot Plant (WIPP) site in southeastern New Mexico over the period 1984 through 1986. This report is organized into six parts denoted A, B, C, D, E, and F. Part A contains hydrologic data obtained during the H-3 multipad pumping test of the Culebra dolomite October 15, 1985 through April 12, 1986. The test included a 62-day pumping period during which fluid-pressure data were collected using automated Data-Acquisition Systems at the H-3 hydropad and observation wells DOE-1, H-11b3, H-2c, and H-4b. Additionally, frequent water-level measurements were performed at 18 other observation wells in the Culebra and Magenta dolomites. Part A contains appendixes which tabulate fluid-pressure, pumping-rate, and barometric-pressure data collected during the test. Illustrations include plots of water levels and transducer responses during the drawdown and recovery periods.

Part B is an account of anisotropy and convergent-flow tracer testing conducted from April to June 1984 at the H-3 hydropad. Part B provides a description of test equipment, a short history of the testing, and plots of the data. Appendixes present tabulated pressure, water-quality, and observation-well data.

Part C contains a description of a six-day aquifer test conducted in the Culebra dolomite at the H-8 hydropad in December 1985. The test consisted of 72 hours of pumping at approximately six gallons per minute, followed by a 72-hour recovery period. Part C describes the test equipment and test history, and appendixes present tabulated fluid-pressure, water-quality, and observation-well data.

Part D contains a description of a six-day aquifer test conducted in the Culebra dolomite at the H-7 hydropad in February, 1986. The test consisted of 72 hours of pumping at

approximately 81.5 gallons per minute, followed by a 72-hour recovery period. Part D describes test equipment and test history, and appendixes present tabulated water-quality and observation-well data.

Part E reports basic data collected during open-hole testing conducted by Sandia National Laboratories during the drilling of well DOE-2 from August 1984 through July 1985. Hydrologic testing was performed in four phases; three phases of drillstem, pulse, and slug testing of the Rustler, Salado, and Bell Canyon Formations, and a pumping test of the Culebra Dolomite Member of the Rustler Formation. Part E contains a review of the four types of downhole equipment used in the testing and a recapitulation of the testing history. Appendixes include tabulated fluid-pressure data collected during all testing phases.

Part F presents November 1985 through April 1986 water-level data collected from wells in the observation-well network at and near the WIPP site, including plots obtained from the water-level data for the Magenta, the Culebra, the Rustler-Salado contact zone, the Bell Canyon Formation, and the Salado/Castile Formations. Tabulations of the water levels are presented in the appendix to Part F.

PART A. H-3 MULTIPAD PUMPING TEST

1.0 INTRODUCTION

1.1 Purpose

The H-3 multipad pumping test was designed to provide a data base with which to help evaluate the large-scale regional hydrology of the Culebra Dolomite Member of the Rustler Formation over the southern part of the Waste Isolation Pilot Plant (WIPP) site (Figure 1.1). The test was intended to augment previous testing and provide a data base to aid in examining large-scale heterogeneities in the Culebra dolomite. The test was conducted by INTERA Technologies, Inc., who have been contracted by Sandia National Laboratories to participate in the hydrogeologic characterization of the WIPP site, in accordance with the Consultation and Cooperation Agreement between the U.S. Department of Energy and the State of New Mexico. The test also provided data to assist in the planning of the multipad pumping test scheduled for the northern part of the WIPP site. The basic data included in this report will be the basis of a future interpretive report on the H-3 multipad test which will provide estimates and evaluations of the regional distribution of hydraulic parameters of the Culebra dolomite.

1.2 Scope

The H-3 multipad pumping test, centered at the H-3 hydropad (Figure 1.1), consisted of a 62-day constant-rate pumping period followed by a 117-day recovery period. The test began on October 15, 1985 and H-3b2 was pumped continuously

at about 4.8 gallons per minute until December 16, 1985. The recovery period was terminated on April 12, 1986, when the Data-Acquisition System was turned off.

During the test, the fluid-pressure and water-level responses in the Culebra and Magenta Dolomite Members of the Rustler Formation were monitored at a large number of observation wells in the vicinity of the WIPP site (Figure 1.1). The H-3 hydropad, with pumping well H-3b2 and observation wells H-3b1 and H-3b3 (Figure 1.2), was instrumented with an automated Data-Acquisition System, which monitored the downhole fluid pressures, the pumping rate, and the barometric pressure during the test. Automated Data-Acquisition Systems were also installed at observation wells DOE-1, H-11b3, H-4b, and H-2c (Figure 1.1). Other observation wells were monitored with electric water-level sounders at measurement frequencies designed to detect pressure responses due to pumping at H-3b2. Additional data were also provided by pressure transducers installed in the concrete liner of the Waste-Handling Shaft at the WIPP site. These transducers monitor the Culebra dolomite behind the shaft casing.

This data summary describes the surface and downhole equipment, test history, and test results. Appendixes include tabulations of basic data covering fluid-pressure responses, water-production rates, quality of the water produced during the test, and barometric pressure.

2.0 TEST EQUIPMENT

The equipment used for the H-3 multipad test consisted of automated Data-Acquisition Systems (DAS's) to collect, process, and store fluid-pressure data from wells at the H-3 hydropad and observation wells H-2c,

H-4b, H-11b3, and DOE-1; a downhole submersible pump in pumping well H-3b2; packer feed-through assemblies to isolate the Culebra test intervals in the pumping well H-3b2, and in observation wells H-3b1, H-3b3, H-4b, H-2c, H-11b3, and DOE-1; discharge-measurement and flow-regulation systems for the pumping well H-3b2; Iron-Horse, Solinst, and Powers electric water-level sounders; and a barometer to monitor atmospheric pressure at the H-3 hydropad. Details of the test equipment are given in the following sections.

2.1 Surface Equipment

2.1.1 Data-Acquisition Systems (DAS's)

Automated DAS's were installed at the H-3, H-2, H-4, and H-11 hydropads and at observation well DOE-1. The DAS consists of a downhole pressure transducer, an excitation input to access the transducer, a digital voltmeter to read the return signal from the transducer, and a micro-computer control the system and to process the data. Two types of micro-computer control systems were used during the H-3 test. As shown on Figure 2.1, an HP-9845B micro-computer with floppy disc drive was used at H-3, H-11, and DOE-1, and an HP-85 micro-computer was used at H-2 and H-4. The micro-computers collect and process input signals and store them on floppy disks (HP-9845) and magnetic cassettes (HP-85). Using additional software and transducer calibration information, the stored data can be retrieved, printed, and plotted as corrected voltage, or units appropriate to the signal. The DAS can initiate measurements of return signals at specified time intervals or on command. For the H-3 test, signals were measured at time intervals ranging from 5 seconds to 12 hours during continuous operation. During the last two weeks of the

test, the DAS's were operated twice a week for periods of four to eight hours because the observed rate of change of pressure did not warrant a greater frequency of data collection.

The primary signal output monitored with the DAS's during the H-3 test was that from the Druck downhole pressure transducers, which responded to changes in water level above the transducers or to changes in the fluid pressure in test intervals isolated by downhole packers. In addition, at the H-3 hydropad, a Flow Technology FT-12 analog-output turbine flow meter and a barometer were linked to the micro-computer, and their signal outputs were accessed by the DAS at the same times as the four downhole pressure transducers.

The primary components of the DAS are described in detail in Hydrologic Data Report #1 (Hydro Geo Chem, 1985) and Hydrologic Data Report #2 (INTERA Technologies and Hydro Geo Chem, 1985).

2.1.2 Water-level Measurement Devices

Water-level measurements during the H-3 multipad test were performed with the Iron Horse, Solinst, and Powers electric water-level sounders. The measurements were manually recorded and entered onto the digital data base for retrieval and plotting. The tabulated water-level data in the data base (Part F, Appendix 1.0; Part C, Hydrologic Data Report #2, INTERA Technologies, and Hydro Geo Chem, 1985) indicate the water-level sounder used for each measurement. The function and use of the electric water-level sounders are described in detail in Hydrologic Data Report #2 (INTERA Technologies and Hydro Geo Chem, 1985).

2.1.3 Discharge-Measurement and Flow-Regulation Devices

Figure 2.2 illustrates the various discharge-measurement and flow-regulation devices used to measure and control the water produced from pumping well H-3b2 during the H-3 test. As shown on the figure, the discharge was measured with two in-line flow meters, and with a 6-inch calibrated standpipe. One flow meter was the Flow Technology FT-12 standard turbine flow meter with transducer for instantaneous discharge measurements to be recorded by the DAS at the H-3 hydropad. The FT-12 was calibrated by the manufacturer before delivery and its performance was compared to other flow-measurement devices during preliminary pumping at well H-3b2.

The discharge was also measured by the Precision totalizing flow meter. This meter measures the total volume of fluid passing through the meter's orifice. The pumping rate is calculated from the difference in the meter's dial reading (to the nearest 0.1 gallons) at the beginning and end of a time period, thereby providing an average rate of flow. Pumping-rate data were calculated for every minute during the first half hour of this test, then half-hourly and hourly for much of the remainder of the pumping period. Data collected during the latter part of the test, using time periods of up to 12 hours, provided long-term averages.

Pumping rates obtained with both flow meters were compared to the timed filling of a six-inch diameter, calibrated standpipe. The standpipe was secured to the side of the water-storage frac tank and equipped with an outside manometer tube to observe the rise in water level as the standpipe was filled. The standpipe was calibrated in

gallons and most flow measurements were made by measuring the time required to add ten gallons to the standpipe.

One problem was encountered in obtaining measurements with the FT-12 flow meter. The meter was theoretically temperature compensated, but early measurements revealed a cyclic variation in pumping rate recorded by the DAS. It was determined that daily temperature variations were affecting the FT-12's transducer. The meter was then enclosed in an ice-filled styrofoam container during the remainder of the pumping period of the test. Using this procedure, the daily fluctuations in the FT-12 recorded pumping-rate response were reduced or eliminated.

Flow regulation was maintained through the use of an adjustable, one-inch ball valve placed upstream of the FT-12 and Precision flow meters, and a fixed-orifice, one-inch Dole valve (with 5/8-inch orifice) downstream of the flow meters. These two in-line devices exerted sufficient back-pressure on the pump to provide a stable, regulated, and relatively constant pumping rate throughout the test.

2.1.4 Water-Quality Measurement Devices

Electrolytic conductivity, specific gravity, and temperature of the water pumped from the Culebra were measured throughout the H-3 multipad test. The electrolytic conductivity was measured with a standard conductivity-bridge Labline Lectro Mho-Meter, which provided stable and consistent measurements throughout the test. To perform the measurements, about 10 milliliters of sample water were placed in a plastic measuring cell with the appropriate cell constant for the ionic strength of the water being measured. After a period of temperature stabilization, the temperature of

the water in the cell was measured and the electrolytic conductivity was measured by adjusting a sensing meter to the null point. The measurements are then adjusted to 25^o Celsius, standard conditions.

Specific gravity of the discharge was measured with a Cole Parmer calibrated hydrometer with a specific gravity range of 1.0000 to 1.0700. The specific gravity was measured in a 1000 milliliter graduated cylinder filled with the sample fluid. The fluid temperature was measured with a mercury thermometer and the hydrometer was placed in the cylinder. The hydrometer was allowed to stabilize for several minutes and the specific gravity was read at the point where the top of the meniscus on the wall of the hydrometer met the hydrometer scale.

Temperature was measured with a laboratory-standard mercury thermometer graduated in degrees Celsius. The fluid temperature was measured in a one-gallon container in the on-site trailer immediately after sample collection.

2.1.5 Barometer

The barometric pressure was measured at the H-3 hydropad throughout the period of the H-3 multipad pumping test. The pressure was measured with a Weathertronics Model 7105-A analog-output barometer. This barometer has a linear response over the 700 to 1,100 millibar range, is temperature compensated, and produces a millivolt signal which can be read by the DAS. The barometer was in continuous operation during the late-pretest, pumping, and recovery periods of the H-3 multipad test. The barometer sensor was wired to the DAS and its signal was accessed at the same time as that of the pressure transducers and flow

meter and recorded as millivolts on floppy disc. The barometer was calibrated before the start of the test and observed to be within specifications.

2.2 Downhole Equipment

2.2.1 Pump

The pump used for the H-3 multipad pumping test was a 3-horsepower Red Jacket 32B pump. The pump was installed on September 9, 1985 and checked for electrical continuity and phase polarity. The pumping rate was controlled by a combination of a back-pressure ball valve upstream of the flow meters and a variable-orifice Dole Valve downstream of the flow meters. The pump performed consistently throughout the pumping period with only two minor periods of reduced discharge rate during the first week of the test. The discharge fluctuations are described under Section 4.1 and were probably related to a buildup of debris in the pump or electrical supply problems. During the remainder of the pumping period, the pump did not exhibit any malfunctions or difficulties.

2.2.2 Packer Feed-Through Assembly

Inflatable packers were used to isolate the test intervals measured by transducers during the H-3 test. In all wells except DOE-1, compressed air or nitrogen was used to inflate the packers. A feed-through assembly was used to enable the transducers in these wells to access the test intervals (Figure 2.3). In well DOE-1, a Lynes fluid-inflatable Production-Injection Packer (PIP) with feed-through assembly was used to isolate the test interval. The DAS records from all wells do not display any fluctuations in fluid pressure in the test intervals indicative of loss of packer inflation pressure.

During the test a problem was encountered with the Baski mini-packer in observation well H-3bl. The mini-packer was installed in the 2-3/8-inch tubing which has access to the Culebra test interval through the PIP which separates the perforated Magenta dolomite and Culebra dolomite intervals. Both the original mini-packer (installed October 3, 1985) and the replacement mini-packer (installed December 13, 1985) developed pressure leaks, which required that compressed gas be continually added to the packer to maintain the packer's seal against the tubing wall. On February 2, 1986 both packers were tested at the surface and determined to have leaks from internal fittings in the packer mandrel and not in the synthetic-rubber inflation section of the packer. The packers were repaired and one of the mini-packers was re-installed on February 11, 1986. The pressure leakage and removal of the mini-packers did not appear to affect the recovery response. The mini-packer developed another leak on April 6, and was replaced once again on April 7 just prior to the end of the test.

2.2.3 Druck Transducers

Nine Druck downhole pressure transducers were initially installed for the H-3 multipad test. Each transducer utilizes a 10-volt D.C. excitation as input, and returns a 0- to 100-millivolt signal output. All transducers are calibrated prior to use relative to a Heise pressure gage, traceable to nationally recognized standards. The calibration system, shown in Figure 2.4, determines a sensitivity coefficient, expressed as pressure (psi) per millivolt, describing the relationship, usually linear, between the hydrostatic pressure exerted on the transducer diaphragm and the corresponding millivolt-signal output.

All transducers were recalibrated at the end of the test. Pretest and posttest calibration data are presented in Tables A1-1 to A1-5, Appendix 1.0.

Three days before the end of the pumping period of the H-3 test, the response signal of the transducer measuring the pressure in Culebra observation well H-3b1 became erratic. The transducer was removed from H-3b1 and replaced with another transducer before the beginning of the recovery period. During a post-removal calibration check, it appeared that the original transducer had lost its signal response at the low fluid pressures being monitored. The replacement transducer was set at a lower position in the tubing to allow pressures of a larger magnitude to be monitored during the pressure decline expected to continue to the end of the pumping period. The replacement transducer was damaged as it was being removed from the well after the end of the test, making posttest calibration impossible.

The transducer installed in well H-4b was removed after 7.5 weeks of the recovery period. The well had shown no response to the pumping at H-3b2. This transducer was recalibrated and made available for back-up use for the remainder of the test.

3.0 TEST PREPARATION

The H-3 multipad pumping test began October 15, 1985 (Julian Day 288) with a pumping period of 62 days. The recovery period was extended longer than the pumping period because the fluid pressure in the pumping well, and the pressures and water levels in many observation wells did not recover to near pre-pumping pressures and water levels after 62 days. The test was terminated

when the H-3 DAS was turned off on April 12, 1986 (Julian Day 102), making the recovery period 117 days long. All wells in the observation-well network continued to be measured at one- to two-week intervals following the test, allowing recovery to continue to be monitored at some locations. However, water-quality sampling operations at the H-3 hydropad and other locations will limit the applicability of this very late-time data to the recovery analysis. The following sections describe baseline data collection at the H-3 hydropad, in key observation wells, and in the Waste-Handling Shaft, installation of downhole equipment, workover activity at a group of observation wells immediately north of the center of the WIPP site, and preparation of the H-3 hydropad.

3.1 Baseline Data Collection

3.1.1 H-3 Hydropad

The H-3 hydropad consists of three wells currently completed to the Culebra Dolomite Member of the Rustler Formation. Well H-3b1 was drilled to the Rustler-Salado contact zone in 1976, subsequently cased, and perforated to the Rustler-Salado contact, and the Magenta and Culebra dolomites (Mercer and Orr, 1979). A bridge plug and inflatable Production-Injection Packer (PIP) separated the three stratigraphic parts of the Rustler Formation in well H-3b1 during the test. Wells H-3b2 and H-3b3 were drilled and completed to the Culebra dolomite in 1983 (Hydrologic Data Report #1, Hydro Geo Chem, 1985). Figure 3.1 shows construction details of the wells at the H-3 hydropad.

From June 20 to July 8, 1985, a step-drawdown test was conducted in H-3b2 to develop this well and provide

information for the design pumping rate of the multipad test. To collect pretest baseline pressure data, the H-3 hydropad was instrumented with downhole transducers in wells H-3b2 and H-3b3 in June, and in well H-3b1 in July and September. Figure 3.2 is a plot of the fluid pressure responses of H-3b1, H-3b2, and H-3b3 during the pumping and recovery periods of the step-drawdown test, and their recovery prior to the start of the H-3 multipad test. Figure 3.2 shows that the fluid pressures in the wells had not completely recovered from the step-drawdown testing, but that the rate of change of the recovery was low at the start of the multipad test (see also Section 4.2 and Figure 4.2).

The placement of all transducers in the H-3 hydropad wells was accompanied by water-level measurements to allow estimation of water-level elevations and formation pressures using the pressure-transducer records and the density of the borehole fluids. Table A1-1, Appendix 1.0 summarizes the dates of installation, calibration data, transducer installation depths, and depths to water for the transducers at the H-3 hydropad. Figure 3.3 shows the configuration of downhole test equipment for the H-3 multipad pumping test.

3.1.2 Observation Wells

The planning of the start of the H-3 multipad test prompted a number of changes in the WIPP site water-level monitoring program. Monitoring frequency on all wells within the WIPP boundary (see Figure 1.1) was increased to at least semi-monthly. Wells closer to the H-3 hydropad were measured either weekly with water-level sounders, or were instrumented with downhole pressure transducers and automated Data-Acquisition Systems with the capability of

daily, or more frequent downhole measurements of fluid pressure (see Section 2.1.1). Table 3-1 is a list of the monitored observation wells and their scheduled measurement frequencies, prior to and during the H-3 multipad test. Hydrographs for the period January to November 1985 for all observation wells at and near the WIPP site are found in Hydrologic Data Report #2 (INTERA Technologies, Inc. and Hydro Geo Chem, 1985).

Six wells north of the center of the WIPP site were recompleted to the Culebra dolomite just prior to the beginning of the multipad test. The recompleted wells are WIPP-12, WIPP-13, WIPP-18, WIPP-19, WIPP-21, AND WIPP-22 (see Figure 1.1). These wells were measured frequently following perforation of the Culebra, with the WIPP-21 well being initially the most frequently monitored of these wells, with increases in measurement frequency in the other wells as the formation fluid-pressure influence from the pumping at the H-3 hydropad became more widespread. Section 3.3 describes, in more detail, the workover activity on these additional observation wells.

3.1.3 Pressure Transducers in the Shafts

The Waste-Handling Shaft and the Construction and Salt-Handling (C & SH) Shaft have pressure transducers installed in the Culebra dolomite. These transducers have been monitored at irregular intervals since 1982 in the C & SH shaft and regularly in both shafts since 1984 and provide a record of the influence on Culebra formation pressure of drainage from the Culebra into the shafts. The influence of such activities as shaft grouting and sealing can also be inferred from the transducer records. Section 4.4. discusses in detail the shaft response during the H-3 multipad test.

3.2 Equipment Installation

3.2.1 Surface Equipment

The surface equipment installed for the H-3 multipad test consisted primarily of electric generators, air-conditioned trailers, and DAS equipment. H-2 and H-3 were fully instrumented in June and August respectively, H-11b3 and DOE-1 were instrumented in July, and H-4 was instrumented in mid-September. The H-3 hydropad was also instrumented with a recording barometer and a turbine-flow transducer flow meter. These instruments were installed during the two weeks prior to the start of the test and both were connected to the DAS to provide measurements at the same frequency as the downhole transducers.

Observation wells H-1 and P-14 had storage boxes containing Solinst water-level sounders (Section 2.1.2) mounted to the wellhead to allow rapid and frequent measurements.

3.2.2 Downhole Equipment

Downhole pressure transducers and packers were installed in the pumping well and in all observation wells equipped with DAS equipment, namely, H-2c, H-3b1, H-3b2, H-3b3, H-4b, H-11b3, and DOE-1. Details of the downhole equipment were discussed in Section 2.2. Appendix 1.0 contains tabulations of placement depths of downhole equipment. Figures 3.3 through 3.7 illustrate the configuration of each well equipped with a downhole system. All depth measurements are from top of casing, unless otherwise noted, and the top of casing elevations are from the 1985 Satellite Survey contained in Hydrologic Data Report #1 (Hydro Geo Chem, 1985).

3.3 Workover Activity

Workover activity in six wells north of the WIPP shaft complex was begun in mid-September, 1985. Four wells, WIPP-18, WIPP-19, WIPP-21, and WIPP-22 (see Figure 1.1) had been left open, uncased, and filled with brine or brine mud since they were drilled in 1978 (Sandia National Laboratories and U. S. Geological Survey, 1980a, 1980b, 1980c, and 1980d). Figure 3.8 shows the pre-workover water levels and depth to the top of infill material which, presumably, had filled parts of these wells since 1978. The workover activity consisted of: 1) the cleaning and reaming of these wells to a diameter of 7-7/8 inches with ten-pound per gallon salt-brine as a drilling fluid; 2) fully cementing 5 $\frac{1}{2}$ -inch casing to the top of the Salado Formation leaving a cement plug in the bottom of the casing; 3) filling the casing with the ten-pound per gallon salt-brine; and 4) shot-perforating the Culebra dolomite interval. After perforation, the water levels in these wells were measured as they recovered to formation-pressure conditions and responded to the pumping at the H-3 hydropad (see Section 4.3).

WIPP-12 was drilled in late 1978 to investigate the Salado and Castile formations (Sandia National Laboratories and D'Appolonia Consulting Engineers, 1982b). WIPP-13 was drilled to the upper part of the Salado Formation in 1978 and left filled with salt-based mud (Sandia National Laboratories and U. S. Geological Survey, 1979). In 1979, WIPP-13 was cased and deepened to the Castile Formation (Sandia National Laboratories and D'Appolonia Consulting Engineers, 1982a). The Rustler Formation in WIPP-12 and WIPP-13 was cemented behind casing and has been unavailable for hydrologic testing since that time. In September, 1985,

bridge plugs were set in the 9-5/8-inch casing below the Culebra dolomite, and the boreholes were filled with ten-pound per gallon salt-brine. In October, 1985, both wells were shot-perforated across the Culebra dolomite and monitored as they recovered to formation-pressure conditions.

3.4 H-3 Hydropad Preparation

Prior to the H-3 multipad test, a 21,000-gallon frac tank was placed on the H-3 hydropad. Water produced from well H-3b2 during the test was pumped into the frac tank and the water was regularly pumped from the tank by a local brine hauler and taken to a licensed disposal area off the WIPP site.

A back-up 40-kilowatt generator was brought to the H-3 hydropad prior to the test to serve as a standby source of power in the event of failure of the primary generator, and was used to allow essentially continuous pump operation during regularly scheduled generator maintenance.

Other preparatory work on the H-3 hydropad involved securing all transducer, flow-meter, and electrical cables from damage due to vehicles, animals, or weather, lighting the hydropad for night-shift personnel, and insuring that the reserve waste-water pit was sealed and of sufficient size to handle any possible overflow from the frac tank and the periodic discharge of 10 to 15 gallons of formation water from the calibrated standpipe used for pumping-rate measurements.

Two short pump and pumping-rate checks were conducted during the week preceding the start of the H-3 multipad test.

These tests served to test the flow-regulation system, fill

the discharge line, and adjust the pumping rate to the design rate. The test also served to provide information on the relative correspondence of pumping rates obtained from the three discharge-measurement devices. The first test was conducted on October 11 (Julian Day 284) and consisted of 15- and 10-minute pumping periods from 1500 to 1600 hours. A second 15-minute test was conducted on October 13 (Julian Day 286). The fluid pressure in the pumping well before these tests was 98.13 psi and the pressure recovered to 98.25 psi before the start of the multipad test. These short-duration tests also affected fluid pressures in H-3b1 and H-3b2. The pressures in both wells recovered to the pretest pressures prior to the start of the multipad test. After the tests were completed, the flow meters were removed, inspected for any damage, and returned to the discharge line. The discharge line was then filled with water, using the fill pipe shown in Figure 2.2, to ensure stable flow from the start of pumping, and to minimize the risk of damage to the flow meters.

3.5 Equipment Performance

The overall equipment performance for the 179-day test period was excellent. The long continuous DAS operating periods caused periodic problems with the electric generators, but these problems did not interfere with the data collection. Two transducers failed during the test, both installed with the mini-packer in well H-3b1. In each case, the failed transducer was quickly replaced allowing continuation of data collection.

The DAS systems were operated approximately twice-a-week during the latter part of the test. The data during this time are more erratic than those collected during continuous operation. The reason for the lack of consistency is not

well understood but may be related to warm-up of the DAS equipment, or transducer instability during very short operational periods.

The Iron Horse water-level sounder was found to be operating erratically from January 16 to 20, 1986. Data during these periods appears as anomalous high points on the water-level plots in Section F. The Iron Horse water-level sounder was repaired on January 21 and performed very consistently during the remainder of the test.

Several minor problems were encountered with the packers and the FT-12 analog flow-meter. These problems are discussed under the appropriate headings in Section 2.0 TEST EQUIPMENT.

4.0 TEST RESULTS

4.1 Pumping Rate

The pumping rate variation over the entire 62 days of the H-3 multipad pumping test was less than ± 0.5 gallons per minute (gpm). Figure 4.1 is a plot of the pumping rates calculated from Precision totalizer flow-meter readings and from the FT-12 turbine-flow transducer output and from calculations with the calibrated standpipe. The largest pumping-rate fluctuations occurred during the first 5 days of the test as drawdown increased rapidly and the back-pressure valve had to be adjusted to a position of less pressure to allow the pumping rate to keep within design limits. Two of the early fluctuations, on October 16 and on October 17 were the result of apparent reductions in pump efficiency. These difficulties did not recur after the first week of the test.

The pumping rate calculated from the totalizer flow meter was approximately 4.8 gpm throughout the majority of the test, while the pumping rate observed by the FT-12 flow meter was between 5.0 and 5.1 gpm during most of the test. Figure 4.1 also displays the earlier-described daily-temperature effect on the pumping rates monitored by the FT-12. The pumping rates calculated from the timed filling of the calibrated standpipe averaged 4.85 gpm over the entire test.

Tables A2-1 to A2-3, Appendix 2.0, present tabulations of pumping-rate data from the three measurement devices.

4.2 Fluid-Pressure Responses to the H-3 Multipad Pumping Test

Fluid-pressure responses were monitored throughout 90% of the test by continuously operated Data-Acquisition Systems installed at the H-3, H-2, and H-11 hydropads, and at well DOE-1. Near the end of the recovery period, the DAS's were operated intermittently as a fuel- and cost-saving measure. The quality of the data is clearly poorer during this time period as shown on the plots discussed below. The cause of this data-quality degradation is unknown but may be related to equipment warmup or to electrical-system instabilities caused by the daily shut-downs. The use of such intermittent operation of the DAS's is now under review. All data recorded by the DAS's was recorded on floppy disc or magnetic cassette and is stored at the WIPP site. An abridged tabulation is presented in this report. The abridged data sets contain more frequent observations during the early portions of pumping and recovery response, with only once-a-day data presented at later stages of the pumping and recovery periods.

Following are descriptions of the responses recorded by the DAS's during the H-3 test:

H-3 Hydropad: Pumping of well H-3b2 was started at 09:00 MST on October 15, 1985, Julian Day 288 and continued until 09:00 MST on December 16 (Julian Day 350), a total of 62 days. Recovery was monitored until April 12, 1986 (Julian Day 102) a total of 117 days. Figure 4.2 is a plot of the fluid-pressure responses monitored with the DAS at the H-3 hydropad during the entire H-3 multipad test. The plot shows the very fast reaction of the pumping well H-3b2 and the Culebra observation wells H-3b3 and H-3b1 to the beginning and end of pumping and to flow-rate adjustments. The two pretest variations shown during the week before the start of the multipad test are due to testing of the pump and pumping rate (Section 3.4). The fluid pressure recovered quickly after the pretest pumping and the overall reduction of the formation fluid pressure at the H-3 hydropad due to the pretest pumping at well H-3b2, was negligible.

Figure 4.2 also shows the fluid pressure of the Magenta dolomite, as measured in the annulus of observation well H-3b1 during the H-3 multipad test. No significant pressure variations were observed in the Magenta dolomite during the test indicating that no direct hydraulic communication was observed between the Magenta and the Culebra at the H-3 hydropad. An abridged, annotated tabulation of fluid-pressure responses at the H-3 hydropad is found in Table A3-1, Appendix 3.0.

H-2c: Figure 4.3 shows the fluid pressure response monitored with the DAS at the H-2c observation well. Figure 4.3 shows that H-2c was recovering from a previous hydraulic stress when the H-3 multipad test began. This

hydraulic stress may have been related to shaft sealing operations at the WIPP main construction facility or to other hydrologic testing activity early in 1985. Fluid-pressure drawdown at H-2c began on the 17th day of the H-3 multipad pumping test, Julian Day 305. The total pressure decline at H-2c was approximately 3 psi. DAS monitoring was terminated on April 2 to allow the beginning of water-quality sampling as part of the regional water-gravity sampling program. An abridged tabulation of the fluid-pressure response at H-2c is found in Table A3-2, Appendix 3.0.

H-4b: Figure 4.4 shows the fluid-pressure response monitored with the DAS at the H-4b observation well. Figure 4.4 shows that no fluid-pressure response was noted at H-4b due to the H-3 multipad test. The peaks in the response are due to electrical surges during the test. These surges were caused by power outages due to generator and line-conditioner malfunctions, and the shutting down of the generator during periodic maintenance. The pressure response also shows a daily fluctuation which may be due either to electronic noise or temperature fluctuation affecting the surface portion of the transducer cable. Because no response to the pumping at H-3b2 was observed at H-4b as of February 6, 1986, the DAS was removed and the transducer taken from the well to serve as a back-up transducer for other wells for the remainder of the test. The water-level continued to be monitored at the H-4a and H-4b observation wells with the Iron Horse water-level sounder (see Section F for water-level plots and tabulated water-level data for H-4a and H-4b). An abridged tabulation of the fluid-pressure response observed in H-4b is found in Table A3-3, Appendix 3.0.

H-11b3: Figure 4.5 shows that fluid pressure observed with the DAS at the H-11b3 observation well began to respond to pumping at the H-3 hydropad on the fourth day of pumping. H-11b3 was the second well observed to show a fluid-pressure decline in response to the H-3 multipad test. Figure 4.5 also shows that H-11b3 was recovering from the previous pumping tests conducted at the H-11 hydropad during May and June, 1985, and to the H-3b2 step-drawdown test from June 20 to July 8, 1985. Fluid-pressure recovery began at H-11b3 approximately four days after the pump was turned off at H-3b2 (Figure 4.5). The total pressure decline observed at H-11b3 was 3.1 psi. H-11b3 appeared to recover to a pressure greater than that observed prior to the test. The recovery trend was noted with both the original 250-psi transducer and a replacement 100-psi transducer installed in H-11b3 on April 2, prior to the end of recovery. The original transducer was removed because it was needed for other WIPP-site testing. Posttest calibration indicated a normal pressure response (Table A1-4, Appendix 1.0). The transducer-monitored higher fluid-pressure recovery was not corroborated by the water-level measurements in H-11b1 and H-11b2 (Figure 4.6) or by the posttest water levels measured in H-11b3 on April 25. The transducer calibrations will be reviewed in an attempt to explain this apparent discrepancy. An abridged tabulation of the fluid-pressure response observed in H-11b3 is presented in Table A3-4, Appendix 3.0.

DOE-1: Figure 4.7 shows the fluid-pressure response observed with the DAS at the DOE-1 observation well. The DOE-1 well was the first observation well to respond to the H-3 multipad pumping test. The response began on the third day of the test (Julian Day 291). At the time the well began to respond, it was recovering from an earlier test activity (February 19 to March 12, 1985) at DOE-1, and from

the H-3b2 step-drawdown test, June 20 to July 8, 1985. Recovery at DOE-1 began three days after the pump in H-3b2 was turned off. The total observed fluid-pressure drawdown at DOE-1 was 6.8 psi. An abridged tabulation of the fluid-pressure response in DOE-1 is presented in Table A3-5, Appendix 3.0.

4.3 Water-Level Responses at Observation Wells

Figures 4.6 and 4.8 to 4.12 are plots of water levels measured in observation wells during the H-3 multipad test. Seven of the wells displayed a definite water-level response to the pumping at the H-3 hydropad: H-11b1 and H-11b2, H-1 Culebra, H-2b2, WIPP-21, WIPP-22, and WIPP-19 (Figures 4.6 and 4.8 to 4.12, respectively). At three wells, P-17, P-14, and H-6b (Figures 4.13, 4.14, 4.15), water-level plots indicate a slight lowering of the water level at approximately Julian Days 323, 335, and 334, respectively. These wells are approximately two (P-17) to three miles (P-14 and H-6b) from the H-3 hydropad. These trends could reflect a true response to pumping at H-3b2 or result from other unknown pressure impulses or long-term water-level trends.

Water-level responses due to the H-3 multipad pumping test were not noted at other wells at and near the WIPP site: namely at wells H-5b, H-12, P-15, P-18, and WIPP-18 (Figures 4.16, 4.17, 4.18, 4.19, and 4.20).

Water-level measurements were also performed in two Magenta dolomite wells during the H-3 multipad pumping test. Wells H-1 Magenta and H-2b1 showed essentially no response to the pumping of H-3b2 (Figures 4.21 and 4.22), confirming the observation made at H-3b1 that no direct communication was observed between the Magenta and Culebra dolomites in the

vicinity of the multipad test.

H-11 Hydropad: The water-level response in observation wells H-11b1 and H-11b2 (Figure 4.6) was similar to that observed by the downhole pressure transducer in H-11b3 (Figure 4.5). The time of initial response to pumping and recovery was similar but the magnitude was different. Water-level measurements in H-11b1 show a total drawdown of 9.3 feet as opposed to 3.1 psi in H-11b3. The pressure decline indicated by the transducer is equivalent to 6.5 feet of water assuming a specific gravity of 1.09 (specific gravity of formation fluid reported in Westinghouse, 1985). In addition, the observation wells recovered to water levels less than the pretest values, whereas a higher posttest pressure was observed in H-11b3, as discussed in Section 4.2.

H-1 Culebra: The water-level response at the H-1 Culebra well (Figure 4.8) shows that a water-level decline in response to the H-3 multipad pumping test began approximately on Julian Day 309, 21 days after the start of the H-3 test. Until that time, H-1 Culebra water levels had displayed a steady recovery from a previous event, possibly shaft sealing activity at the WIPP site. Total drawdown observed at the H-1 Culebra well was 23.8 feet.

H-2b2: The water-level response observed in observation well H-2b2 (Figure 4.9) is similar to that monitored with the DAS at H-2c. Drawdown begins at approximately Julian Day 313, about 25 days after the start of pumping and 8.7 feet of drawdown was observed at H-2b2.

WIPP-21: The water-level response observed in observation well WIPP-21 (Figure 4.10) has four segments. After perforation of the well on October 6, 1985, the water level

quickly dropped to about 426 feet, from which depth it began to slowly rise. The source of this recovery could potentially be similar to that discussed for H-1 Culebra and the H-2 hydropads, i.e., a possible response to shaft sealing operations or it could be a response to the pre-casing reaming and cleaning, an operation involving pumping from the four wells being recompleted. This recovery trend continued until Julian Day 304, when drawdown begins, 18 days after pumping started at H-3b2. The observed drawdown continued for about 32 days, when the drawdown curve displays a much steeper decline which continues for about eighteen days. The drawdown curve then flattens and approaches the recovery segment. Recovery began at approximately Julian Day 13, 1986, and the total observed drawdown was 32.0 feet.

WIPP-22: The water-level response observed in WIPP-22 (Figure 4.11) is similar to that observed in WIPP-21, although the magnitude of response is much less. Drawdown response at WIPP-22 begins on approximately Julian Day 310 and the WIPP-22 water-level response steepens as in WIPP-21, with the steeper part of the curve extending from approximately Julian Day 343 to Julian Day 3, 1986. Approximately 11.6 feet of drawdown were observed in WIPP-22.

WIPP-19: Observation well WIPP-19 (Figure 4.12) shows a similar response to WIPP-21 and WIPP-22, but with less definition than observed in those water-level plots. Total WIPP-19 drawdown was 6.2 feet.

It is worth noting that in observing the response of the observation wells to the pumping at the H-3 hydropad, the distance of the wells from the H-3 hydropad does not correlate to their time of response to the pumping. Table

4-1 shows the individual wells, their approximate distance from the H-3 hydropad, and the approximate time, in days, to the start of drawdown and recovery responses.

Complete tabulations of water-level measurements for observation wells measured in conjunction with the H-3 multipad pumping test are found in Part F, Appendix 1.0 and in Part C, Hydrologic Data Report #2 (INTERA Technologies, Inc. and Hydro Geo Chem, 1985).

4.4 Pressure Response in the Waste-Handling Shaft

SRI Corporation instrumented the Culebra dolomite in the Waste-Handling Shaft (near the location of the well ERDA-9 shown on Figure 1.1) with two transducers which measure the fluid pressure behind the shaft's concrete liner. Transducers were installed at a number of horizons in the Rustler Formation in September 1984 and are monitored at the surface with an electronic data logger (U.S. DOE, 1985). These transducers are set in the concrete liner with access to the formation through a pipe sleeve in the liner, and a three-inch borehole extending a minimum of six-inches into the formation. Because inspection of the pipe-sleeve sealing couplings is not possible, the absolute accuracy of the measurements is uncertain. The piezometers are reported to be accurate to ± 5 psi. Because of the method of installation, communication of the pipe sleeve with a micro-annulus between the concrete liner and the formation, or a crack in the concrete liner cannot be excluded (J. Gallerani, Bechtel Co., personal communication February, 1986). Transducers PE-00207 and PE-00208 are installed at elevation 2092 feet above sea level (fasl) (717 feet from land surface), in the Culebra dolomite which is present from 706.5 to 728.5 feet below ground surface in the Waste-Handling Shaft (Holt and Powers, 1984).

Figure 4.23 is a plot of the data collected from these two transducers before and during the H-3 multipad pumping test. (The cause of the difference in the magnitude of the pressure measured by the two transducers is uncertain, and is currently under evaluation.) The plot shows that before the H-3 multipad pumping test, the Culebra dolomite at the Waste-Handling Shaft location was undergoing recovery, possibly as a result of shaft-sealing operations in 1985. There is also a depression in the pressure plot between Julian Day 250 and Julian Day 270 indicating a fluid-pressure disturbance. The major WIPP-site activity during this time was the workover activity at WIPP wells 18, 19, 21, and 22. The plot shows a period of recovery to this pressure disturbance followed by a sharp drop in fluid pressure, apparently in response to pumping at the H-3 hydropad. The data show that recovery from the pumping period began on or before Julian Day 13, 1986, twenty-eight days after the pump was turned off. The total pressure decline indicated by the transducers was approximately 57 psi. Well WIPP-21, located a short distance north of the shaft, began recovery on Julian Day 12, 1986. While the shaft transducers showed an apparently very large drawdown during the H-3 test, the recovery response has also been large. A tabulation of transducer-measured pressures for the Waste-Handling Shaft is found in Table A4-1, Appendix 4.0.

4.5 Water-Quality Data

Figure 4.24 is a plot of the electrolytic conductivity and specific gravity of the water produced from well H-3b2 during the H-3 multipad pumping test. The electrolytic conductivity data show that the water pumped from H-3b2 is saline, and that the salinity decreased only slightly during

the test. The scatter of the data may reflect slight variability in the content of the water produced, or inconsistency in the measuring equipment due to a frayed measuring-cell cable. A complete tabulation of electrolytic-conductivity, specific-gravity, and temperature data is presented in Table A5-1, Appendix 5.0.

4.6 Barometric-Pressure Data

Figure 4.25 is a plot of barometric-pressure data versus time during the H-3 multipad pumping test. The data were recorded with the DAS and cover the time period from one week before the start of pumping through the recovery period. The data are considered to represent regional barometric-pressure fluctuations affecting all the wells influenced by pumping at the H-3 hydropad. Table A6-1 Appendix 6.0 is a complete tabulation of barometric-pressure data collected during the H-3 pumping test.

5.0 REFERENCES

- Holt, R.M., and Powers, D.W., 1984. Geotechnical Activities in the Waste Handling Shaft, Waste Isolation Pilot Plant (WIPP) Project, Southeastern New Mexico: U.S. Department of Energy, Waste Isolation Pilot Plant, WTSD-TME-038.
- Hydro Geo Chem, Inc., 1985. Hydrologic Data Report #1. Sandia National Laboratories, Contractor Report SAND85-7206, 710 p.
- INTERA Technologies, Inc., and Hydro Geo Chem, Inc., 1985. Hydrologic Data Report #2. Sandia National Laboratories, Sandia Report, SAND85-7263.
- Mercer, J.W., and B.R. Orr, 1979. Interim Data Report on the Geohydrology of the Proposed Waste Isolation Pilot Plant Site, Southeast New Mexico. U.S. Geological Survey Water-Resources Investigations 79-98, 178 pp.
- Sandia National Laboratories and D'Appolonia Consulting Engineers, 1982a. Basic Data Report for Deepening of Drillhole WIPP 13 (Waste Isolation Pilot Plant-WIPP). Sandia Report SAND82-1880, 54 p., Appendixes.
- Sandia National Laboratories and D'Appolonia Consulting Engineers, 1982b. Basic Data Report for Drillhole WIPP 12 (Waste Isolation Pilot Plant- WIPP). Sandia Report SAND82-2336, 62 p., Appendixes.
- Sandia National Laboratories and United States Geological Survey, 1979. Basic Data Report for Drillhole WIPP 13 (Waste Isolation Pilot Plant-WIPP). Sandia Report SAND79-0273, 16 p., Appendixes.

Sandia National Laboratories and United States Geological Survey, 1980a. Basic Data Report for Drillhole WIPP 18 (Waste Isolation Pilot Plant-WIPP). Sandia Report SAND79-0275, 18 p., Appendixes.

Sandia National Laboratories and United States Geological Survey, 1980b. Basic Data for Drillhole WIPP 19 (Waste Isolation Pilot Plant-WIPP). Sandia Report SAND79-0276, 27 p., Appendixes.

Sandia National Laboratories and United States Geological Survey, 1980c. Basic Data Report for Drillhole WIPP 21 (Waste Isolation Pilot Plant-WIPP). Sandia Report SAND79-0277, 18 p., Appendixes.

Sandia National Laboratories and United States Geological Survey, 1980d. Basic Data Report for Drillhole WIPP 22 (Waste Isolation Pilot Plant-WIPP) Sandia Report SAND79-0278, 21 p., Appendixes.

U.S. Department of Energy, 1985. Quarterly Geotechnical Field Data Report. prepared by Bechtel National Inc., WIPP-DOE-218, September 1985.

Westinghouse Electric Corp., 1985. Ecological Monitoring Program at the Waste Isolation Pilot Plant, Second Semiannual Report. DOE/WIPP-85-002, 128 pp.

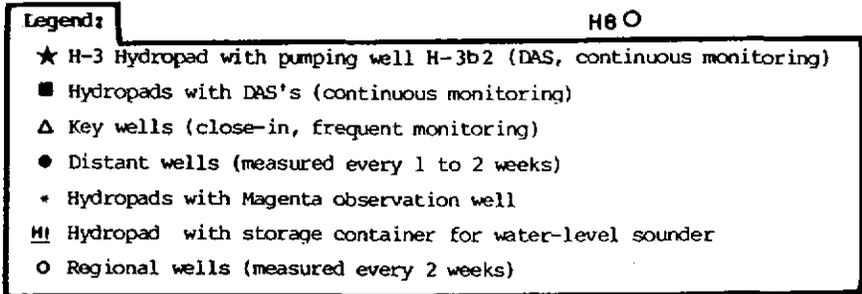
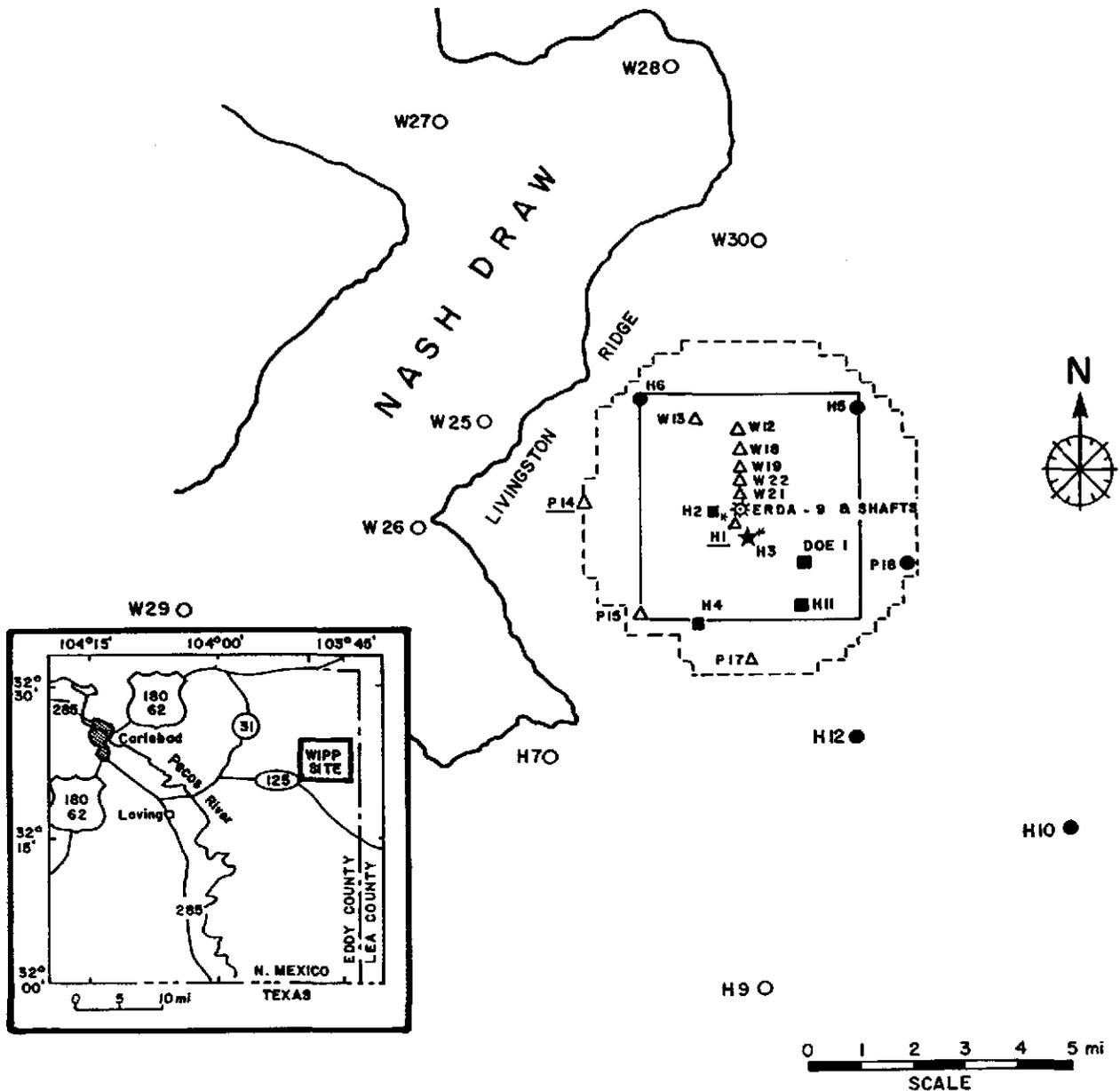
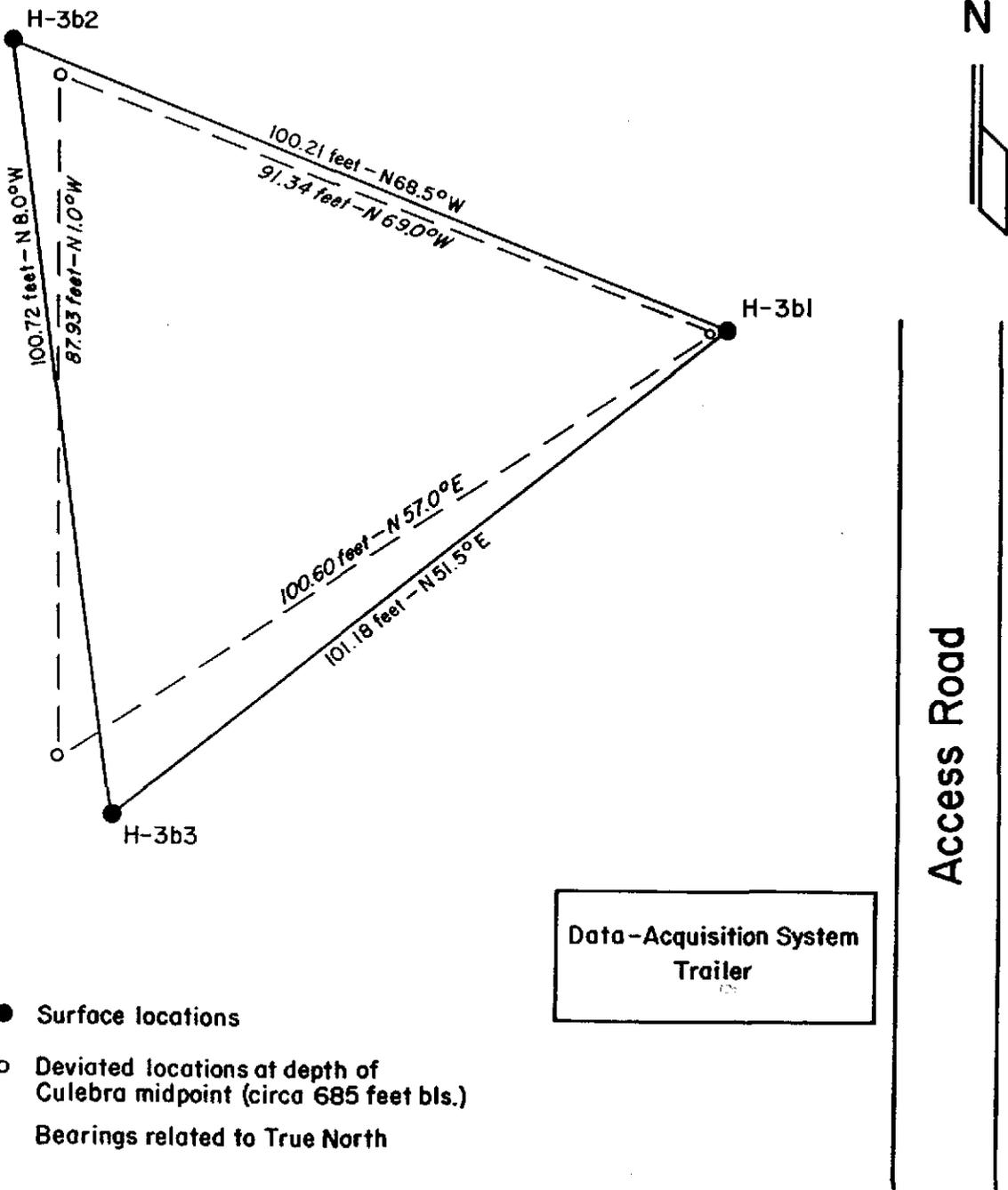


Figure 1.1 Location of the Waste Isolation Pilot Plant (WIPP) site and the observation well network in the Culebra dolomite for the H-3 multipad test.

H-3 Hydropad



- Surface locations
 - Deviated locations at depth of Culebra midpoint (circa 685 feet bls.)
- Bearings related to True North

Figure 1.2 Plan view of the wells at the H-3 hydropad.

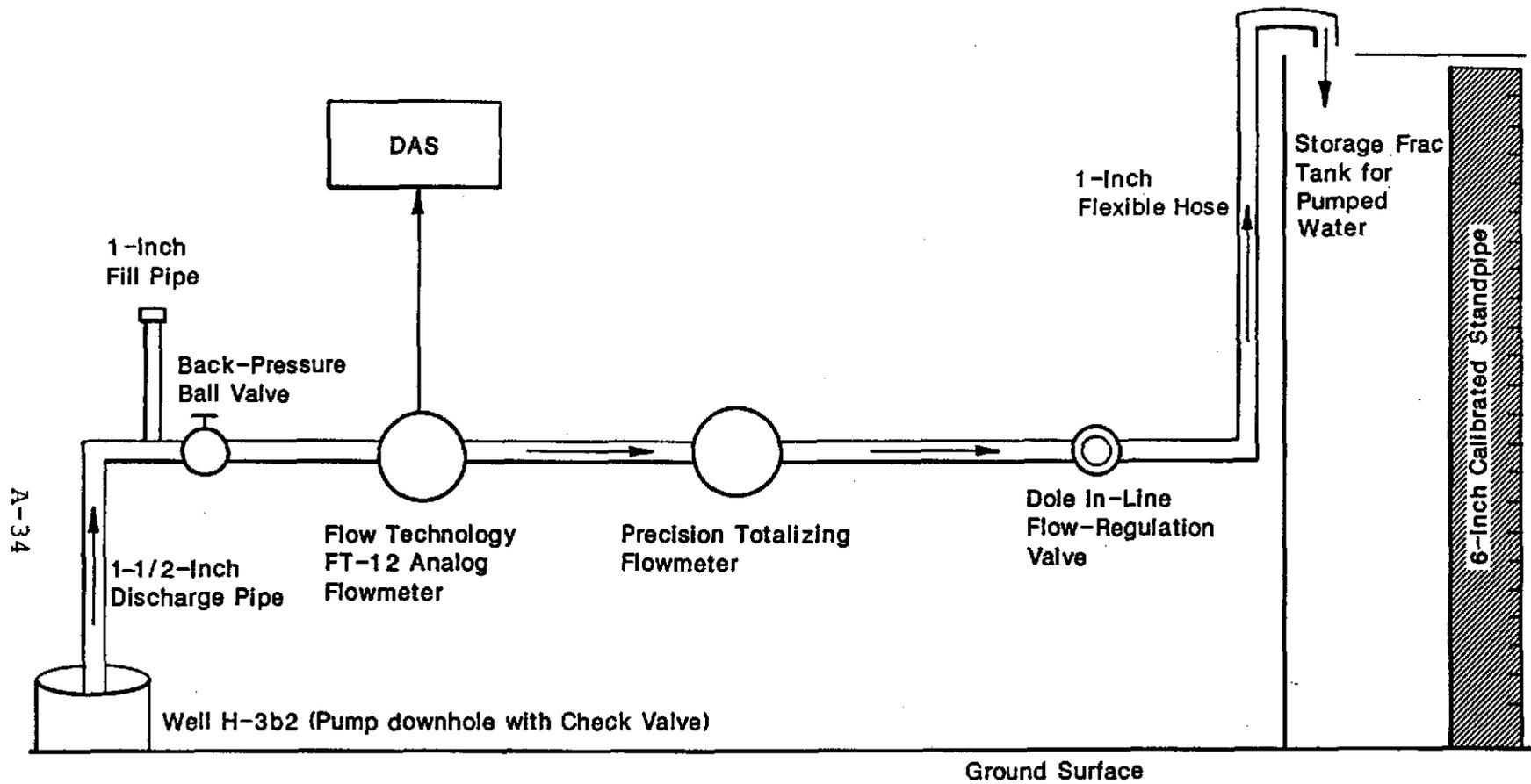


Figure 2.2 Flow-regulation and discharge-measurement system.

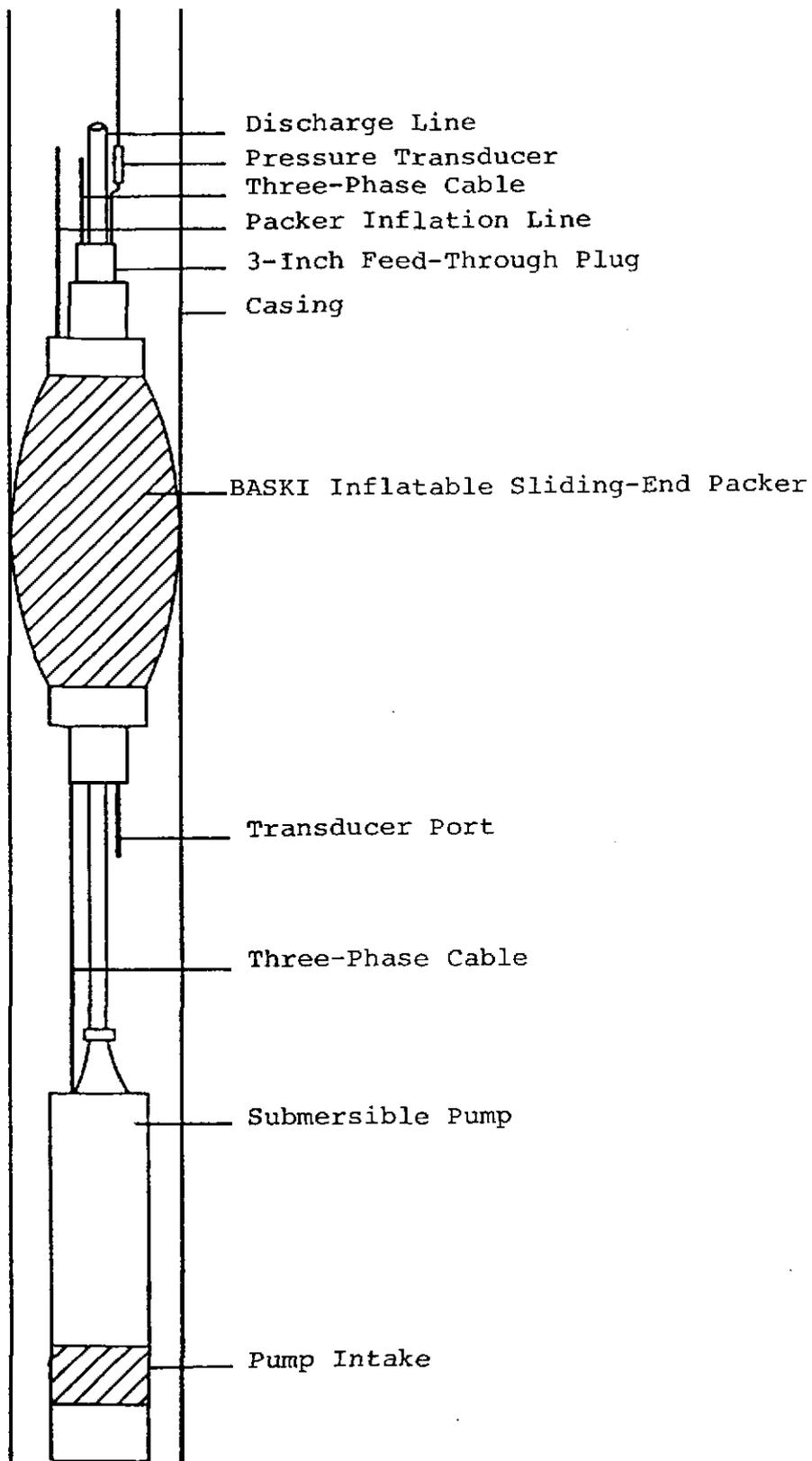


Figure 2.3 Details of the downhole pump and packer feed-through assembly.

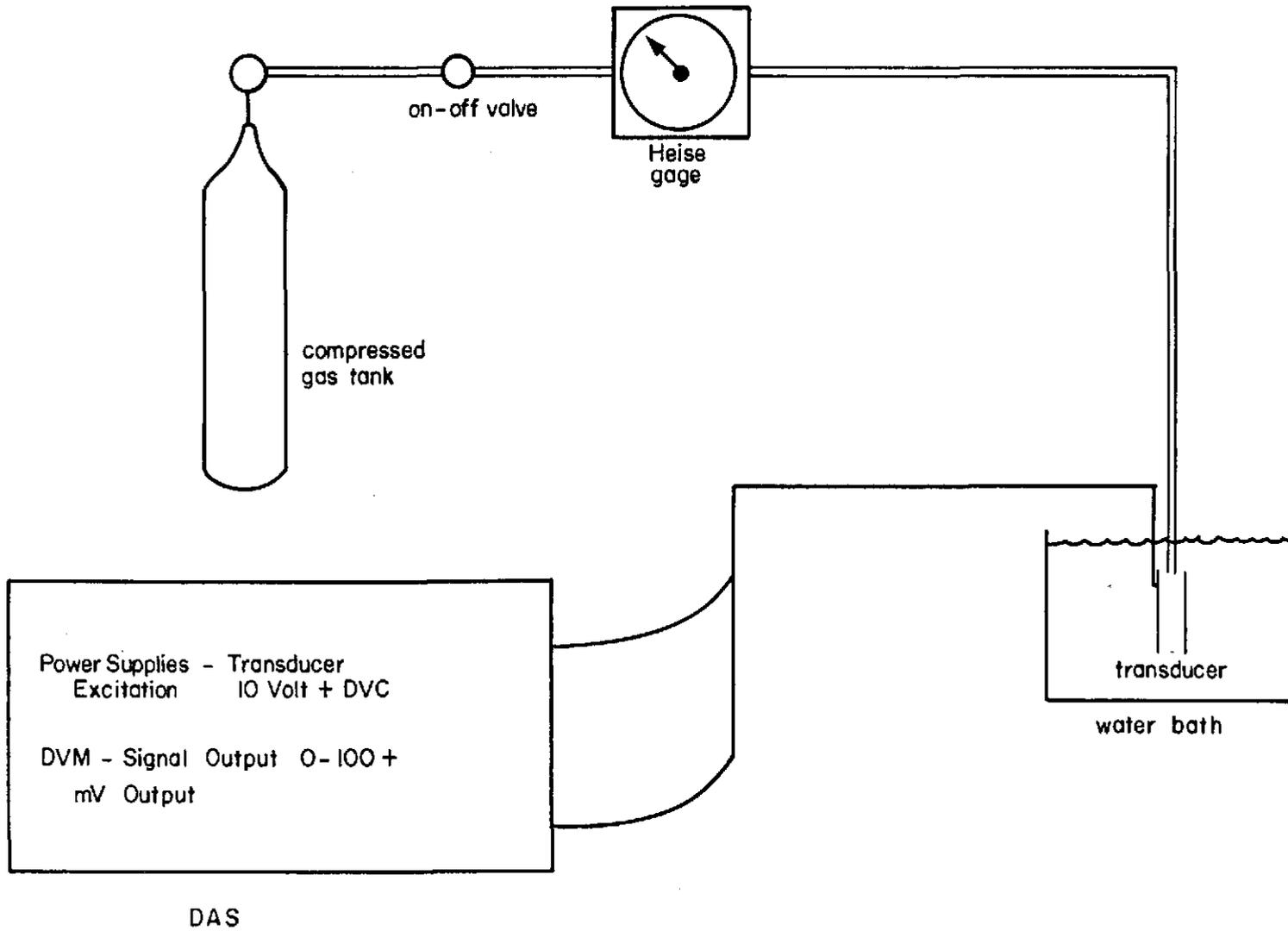
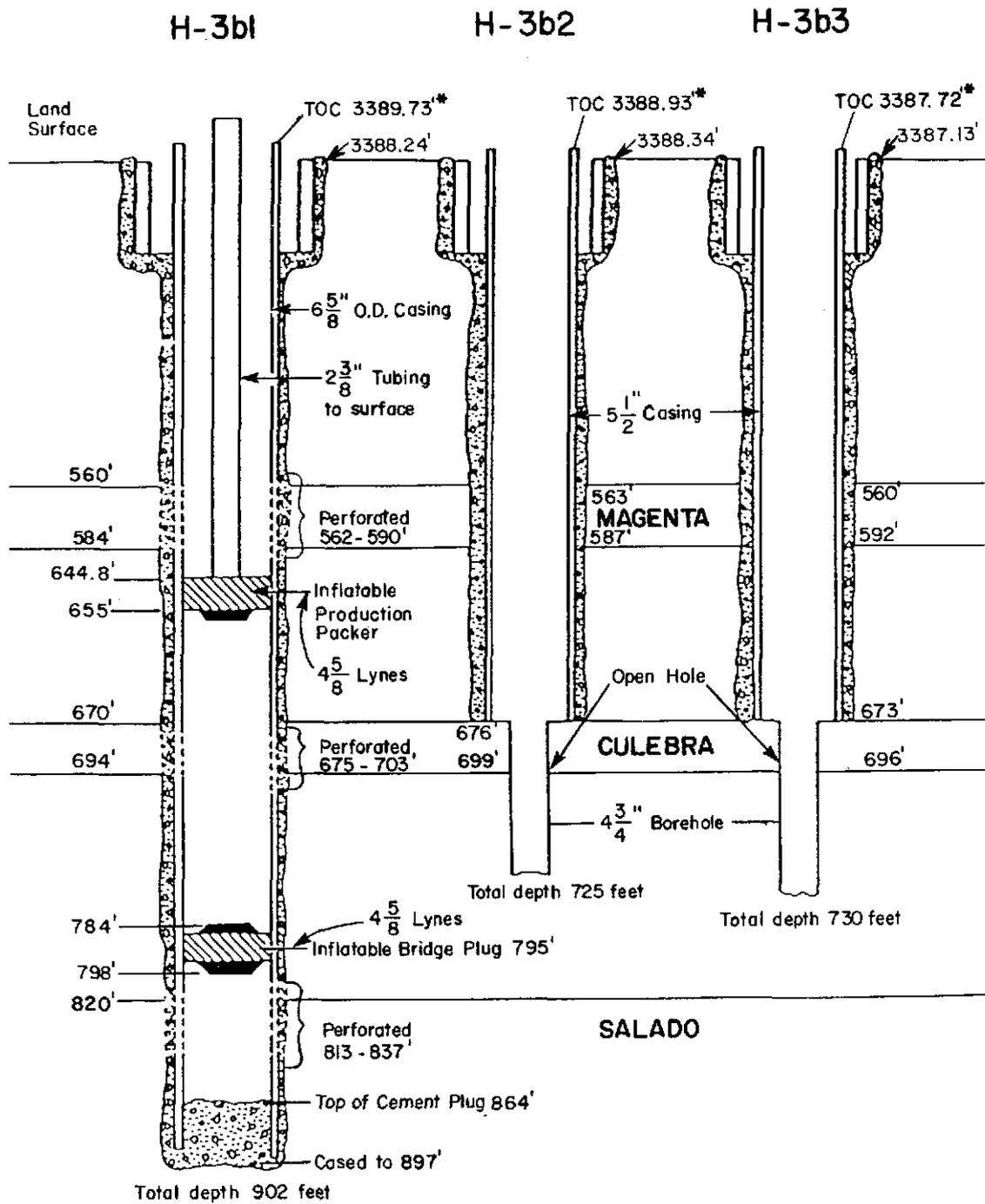


Figure 2.4 Transducer calibration using Heise gage and DAS.



* Above sea level (Satellite Survey, Hydro Geo Chem, 1985)
 Depths in feet below land surface

Figure 3.1 Well construction details for the H-3 hydropad.

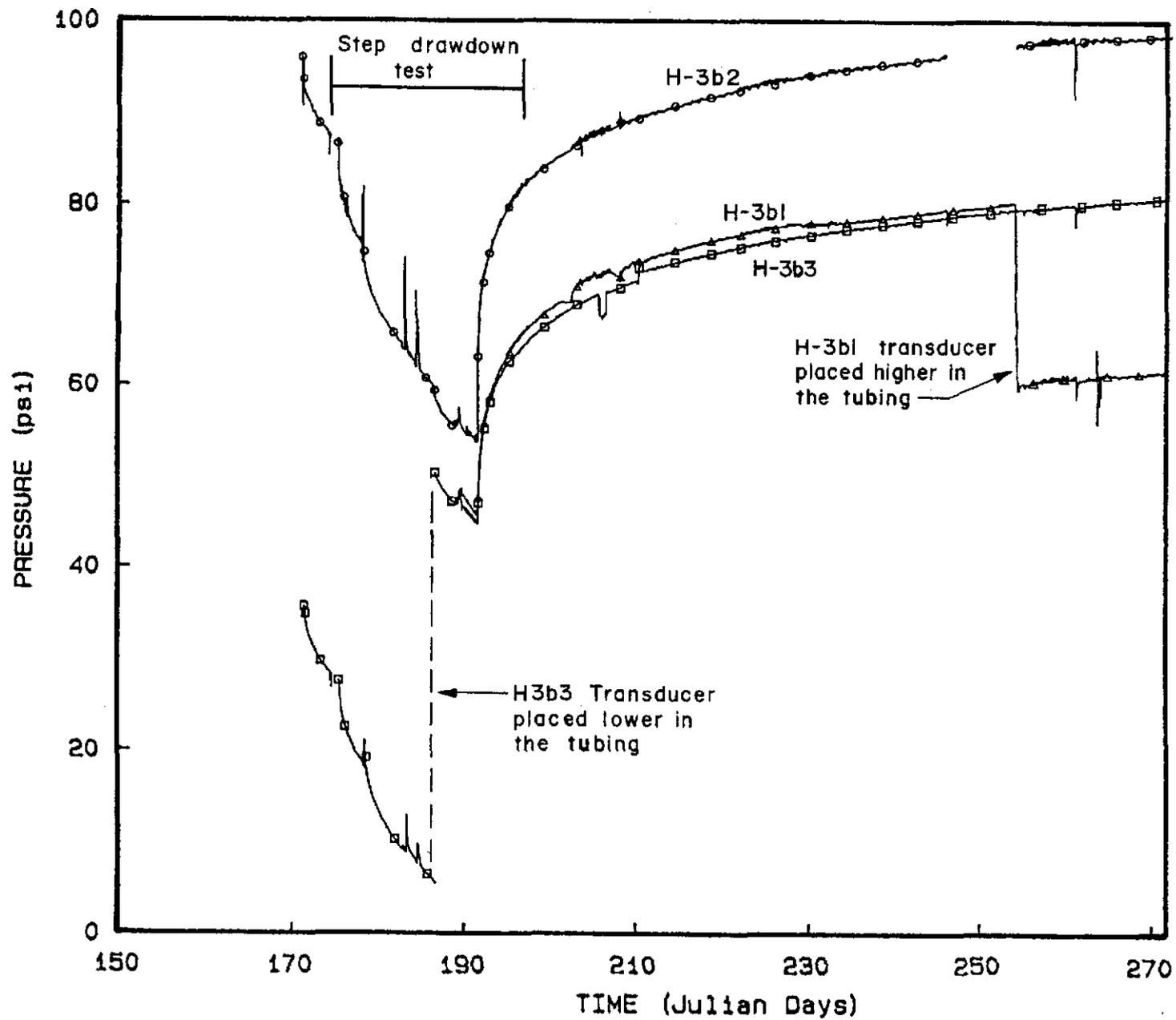


Figure 3.2 Fluid-pressure responses in wells H-3b1, H-3b2, and H-3b3 during the step-drawdown test and recovery conducted from June 20, 1985 to July 8, 1985 at the H-3 hydrograd.

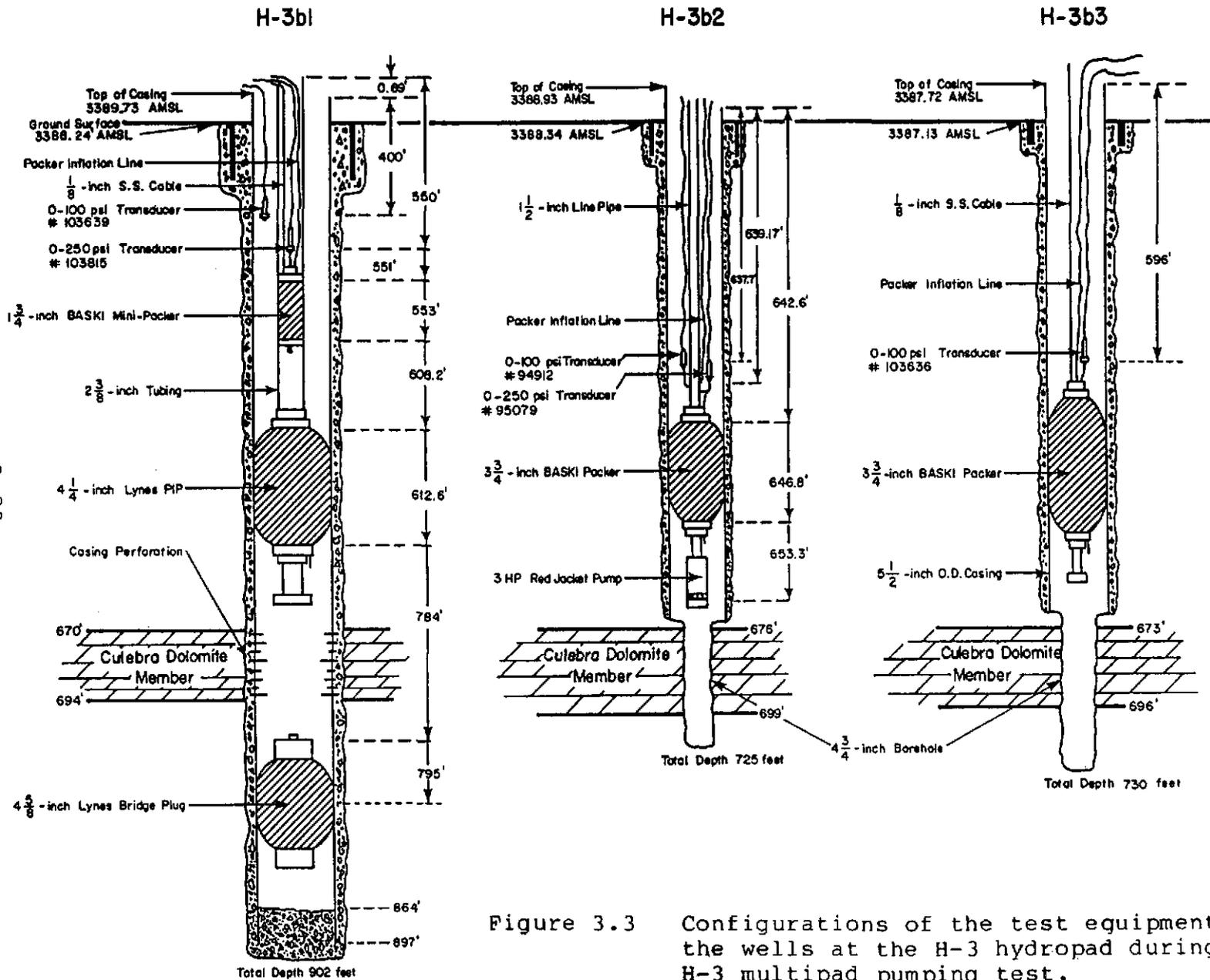


Figure 3.3 Configurations of the test equipment in the wells at the H-3 hydropad during the H-3 multipad pumping test.

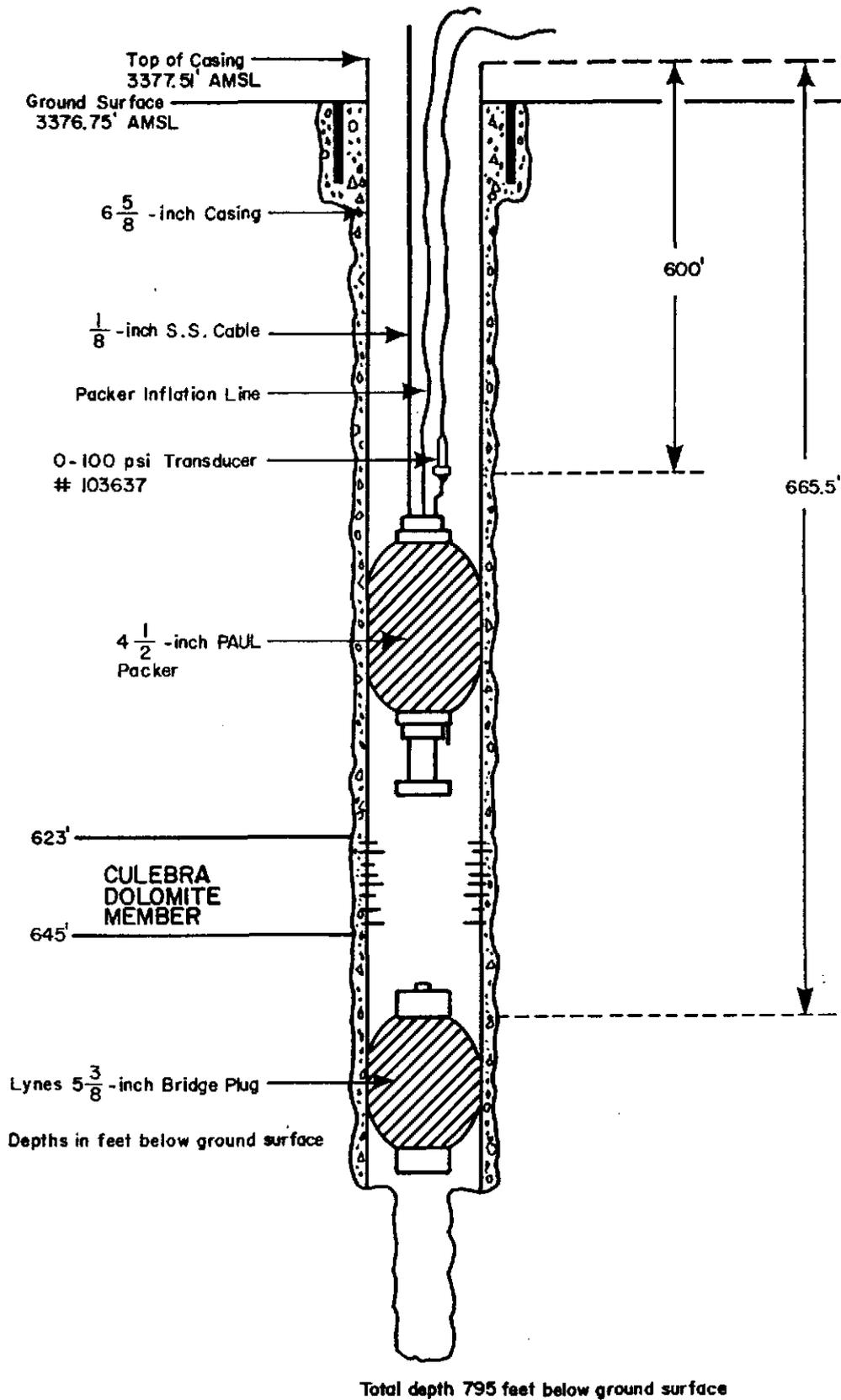


Figure 3.4 Configuration of the test equipment in observation well H-2c during the H-3 multipad pumping test.

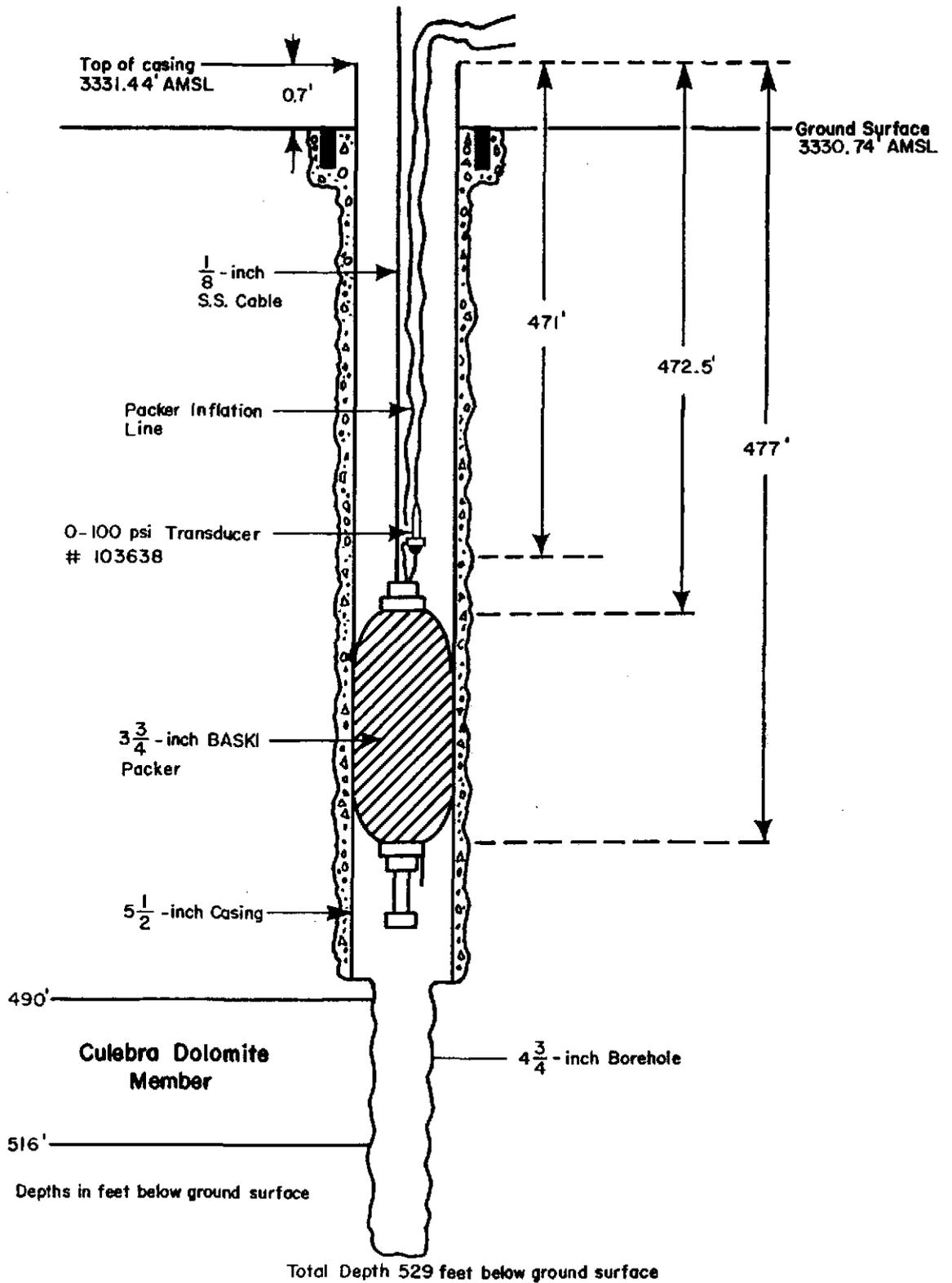


Figure 3.5 Configuration of the test equipment in observation well H-4b during the H-3 multipad pumping test.

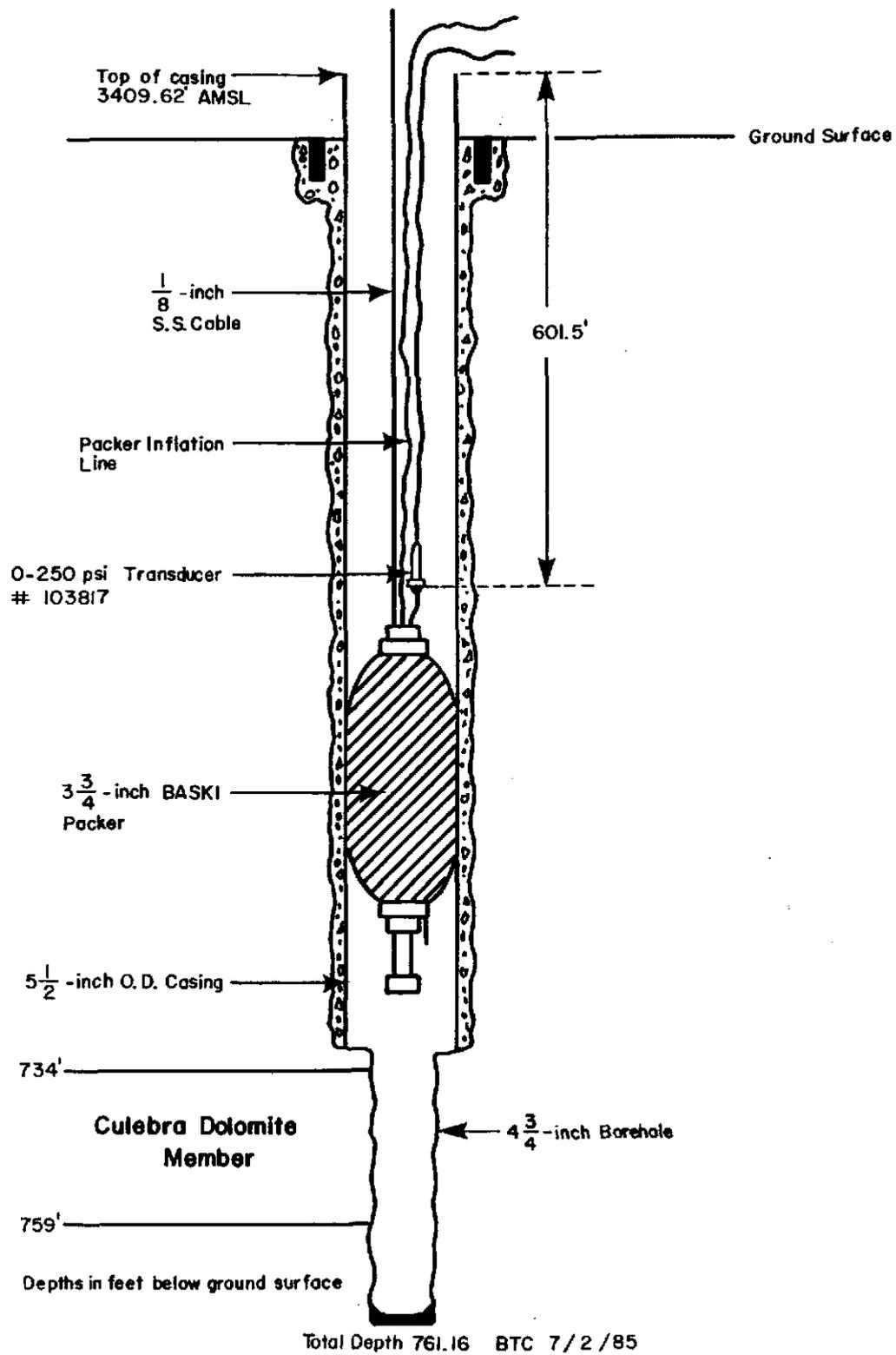


Figure 3.6 Configuration of the test equipment in observation well H-11b3 during the H-3 multipad pumping test.

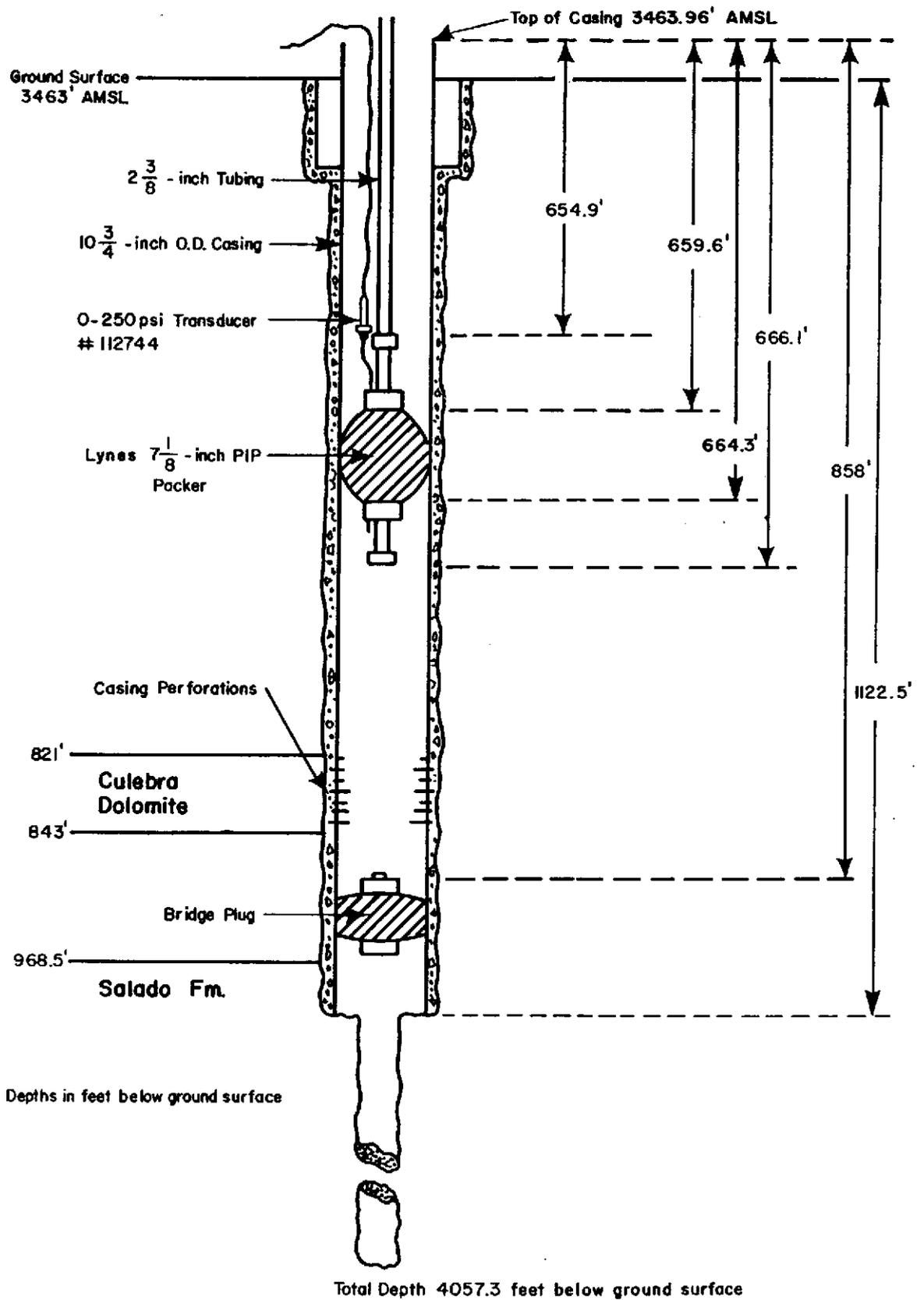


Figure 3.7 Configuration of the test equipment in observation well DOE-1 during the H-3 multipad pumping test.

NORTH

SOUTH

WIPP-18 WIPP-19 WIPP-22 WIPP-21

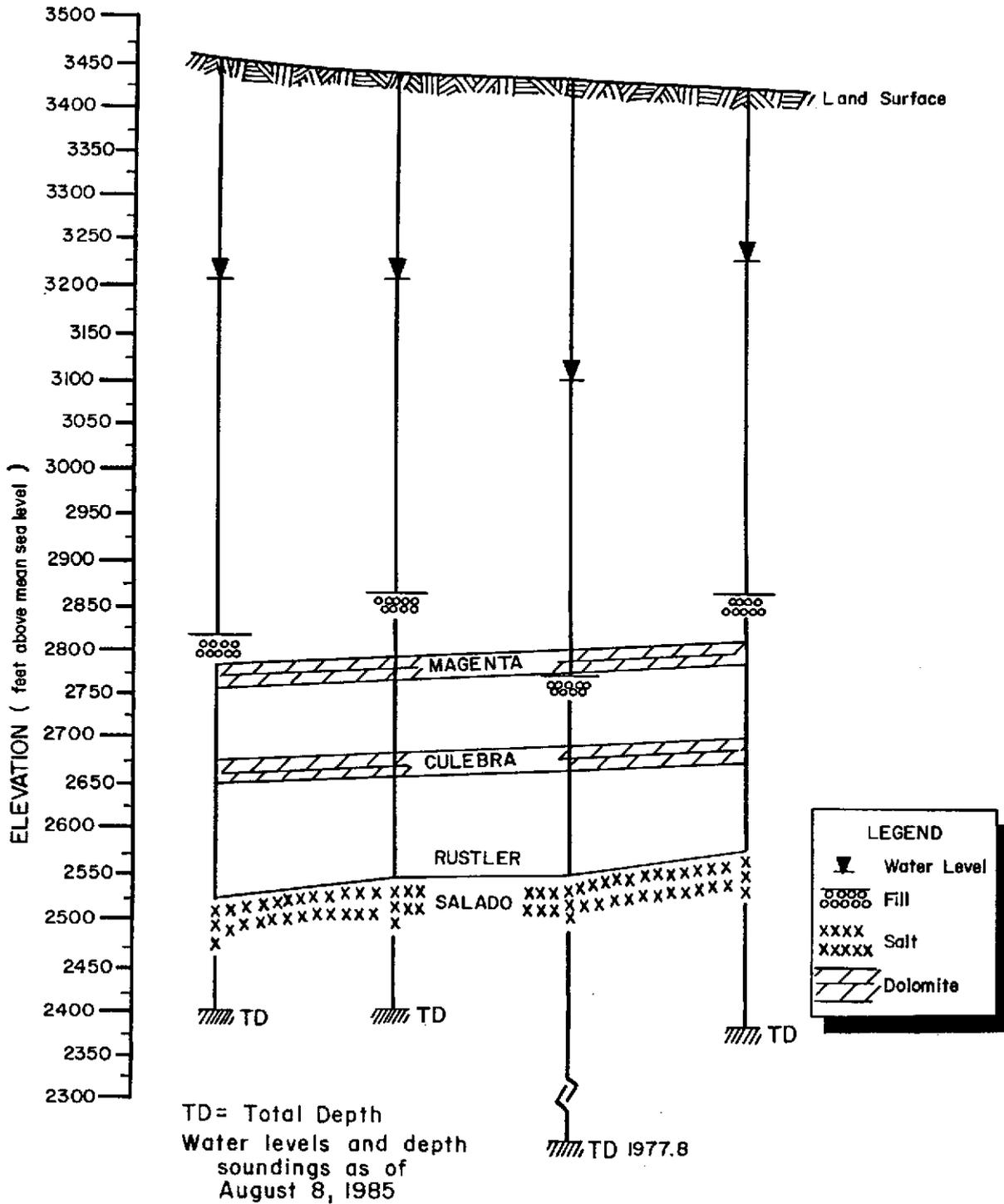


Figure 3.8 Pre-workover water levels and depth soundings in wells WIPP-18, WIPP-19, WIPP-21, and WIPP-22.

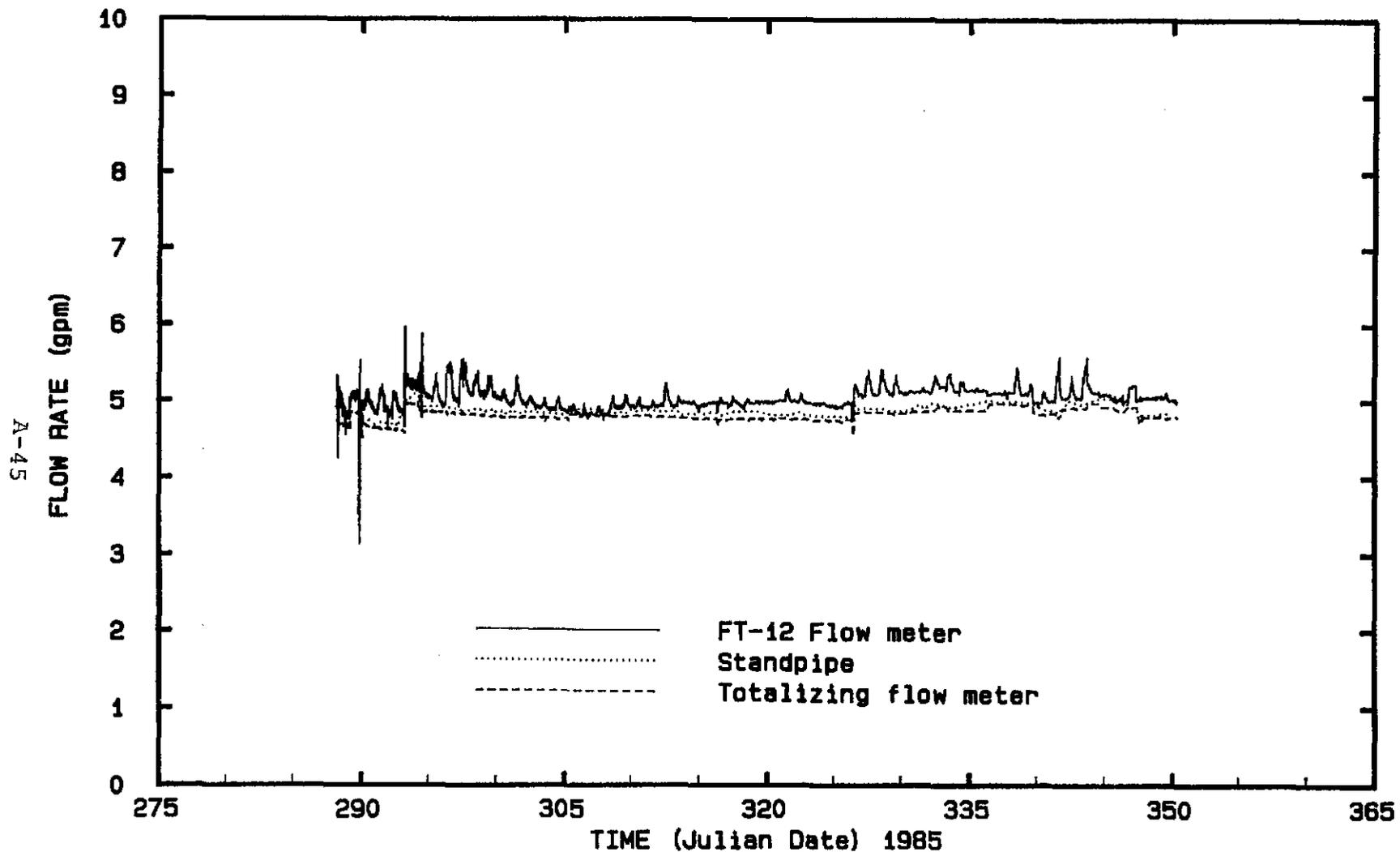


Figure 4.1 Precision-totalizer, turbine-flow-meter, and calibrated-standpipe pumping rates of water produced from the pumping well H-3b2 during the H-3 multipad pumping test, 10:00 October 15 to 10:00 December 16, 1985.

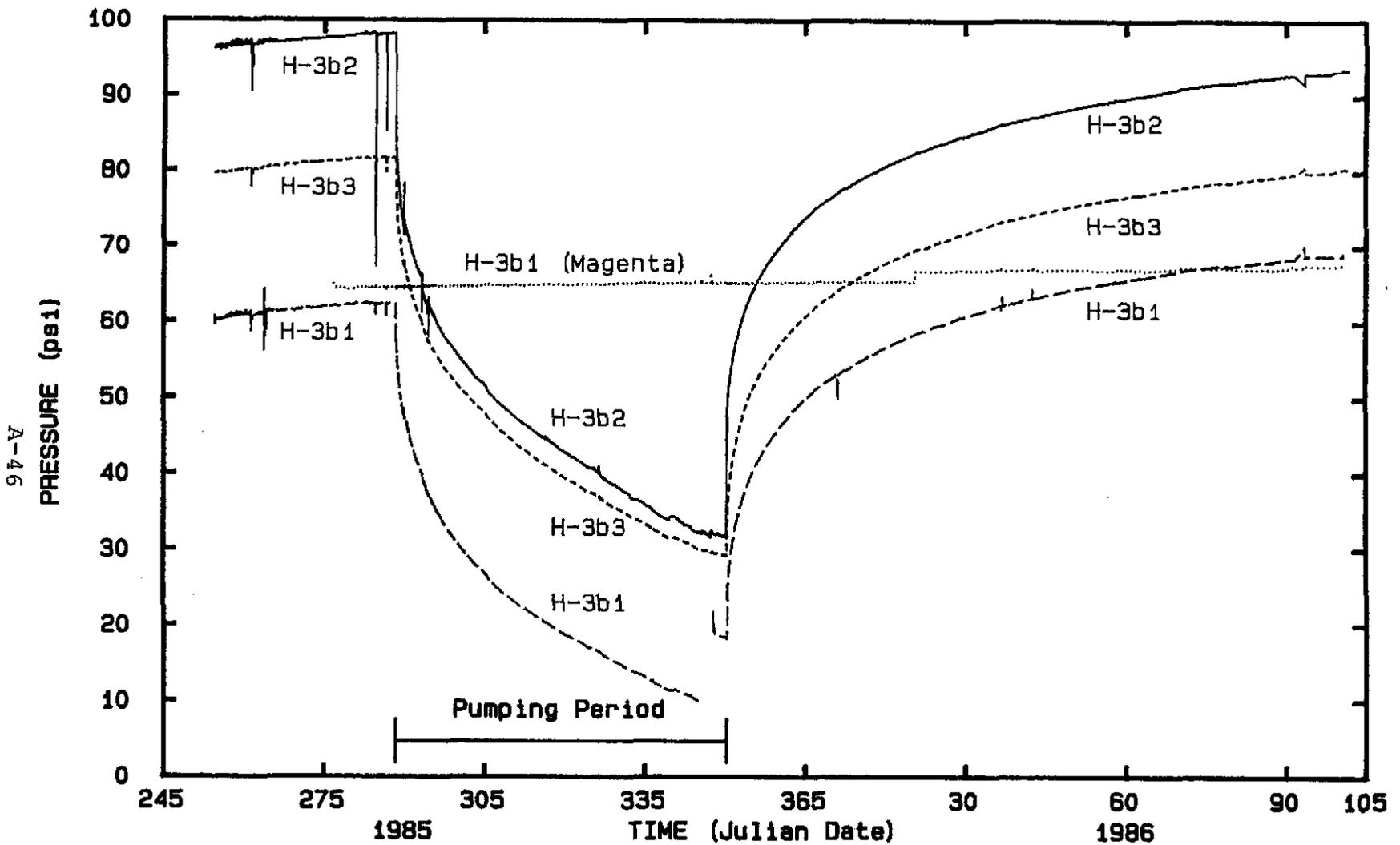


Figure 4.2 Fluid-pressure responses in wells H-3b1, H-3b2, and H-3b3 during the H-3 multipad pumping test at the H-3 hydrograd.

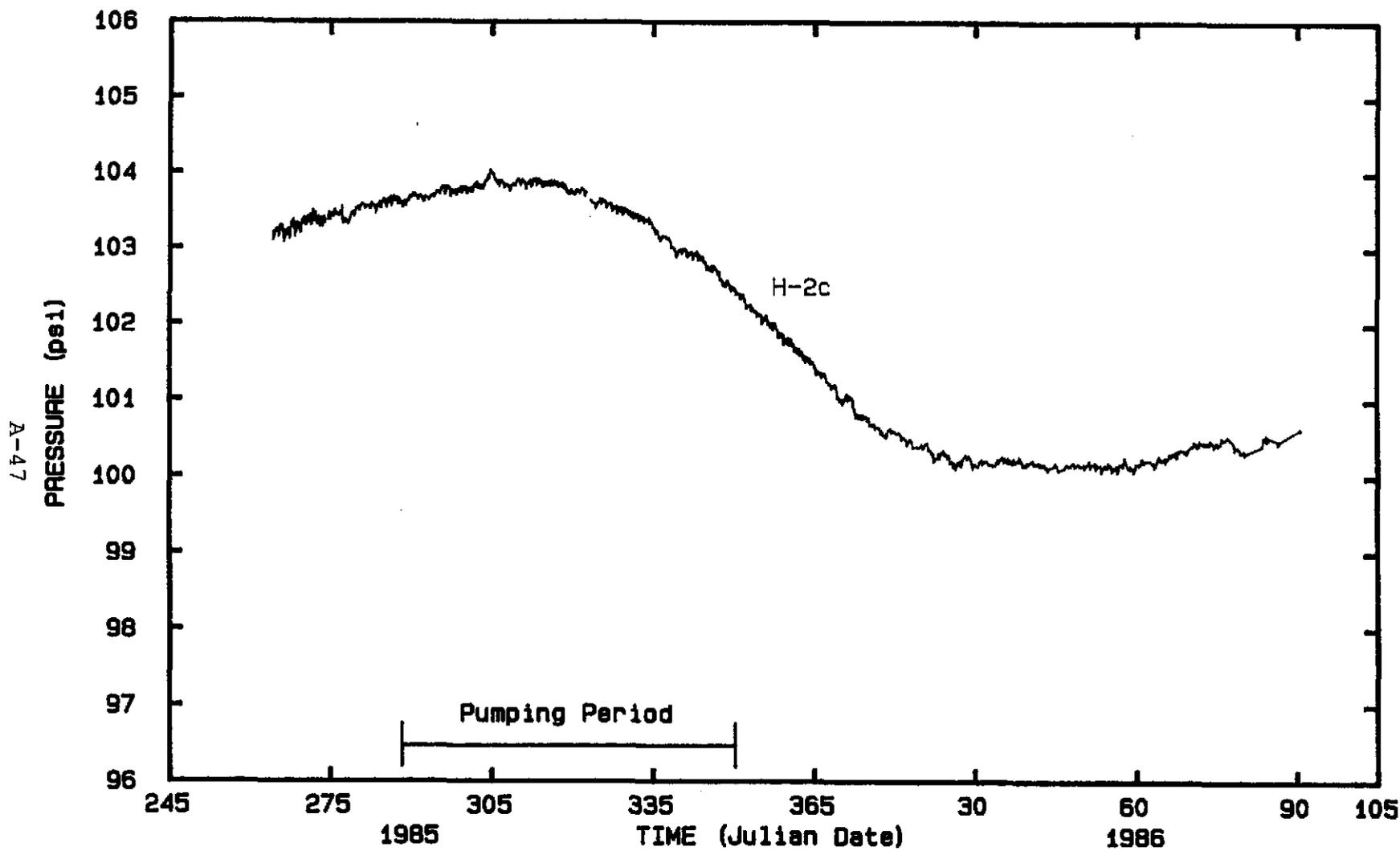


Figure 4.3 Fluid-pressure responses in observation well H-2c during the H-3 multipad pumping test.

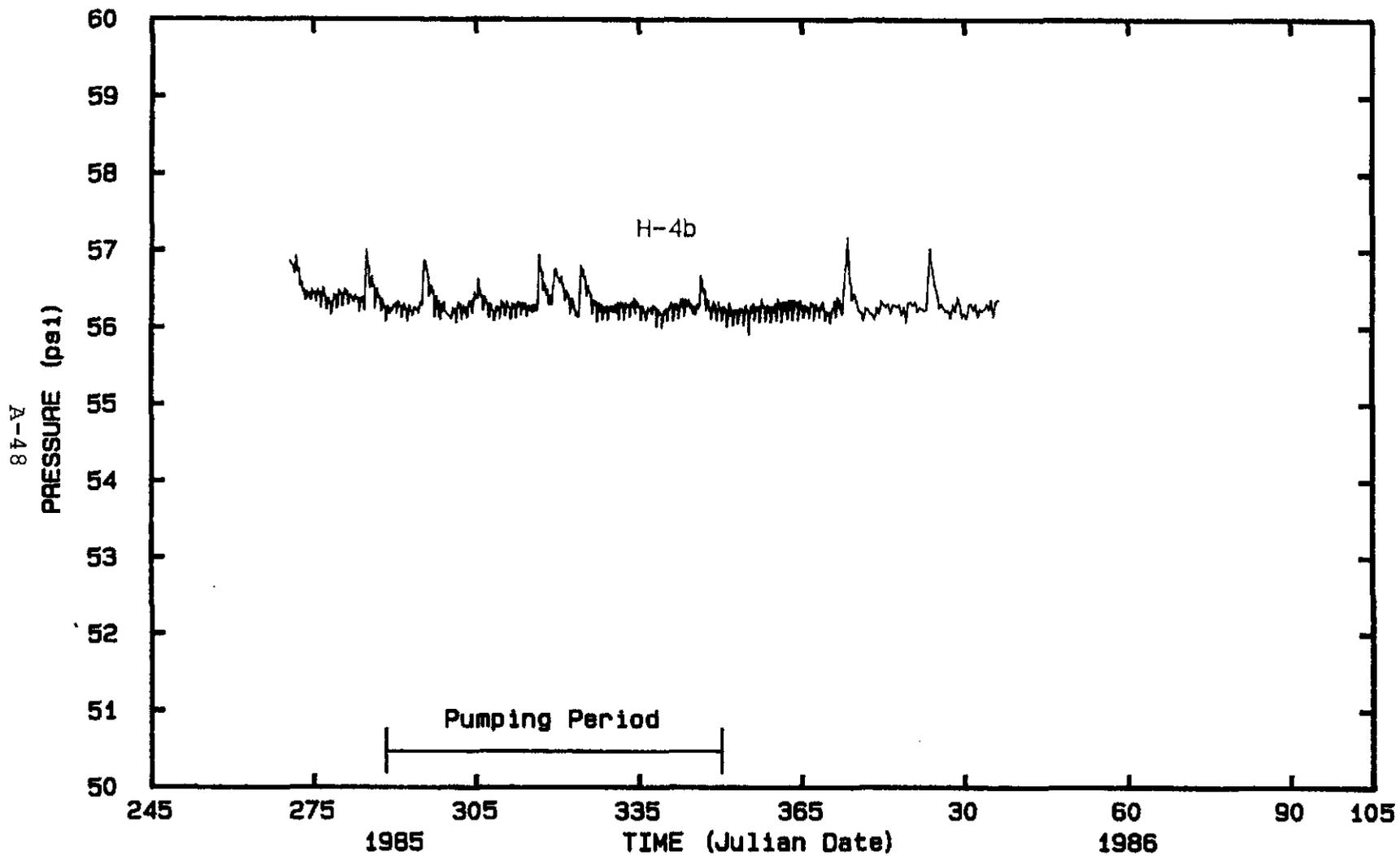


Figure 4.4 Fluid-pressure response in observation well H-4b during the H-3 multipad pumping test.

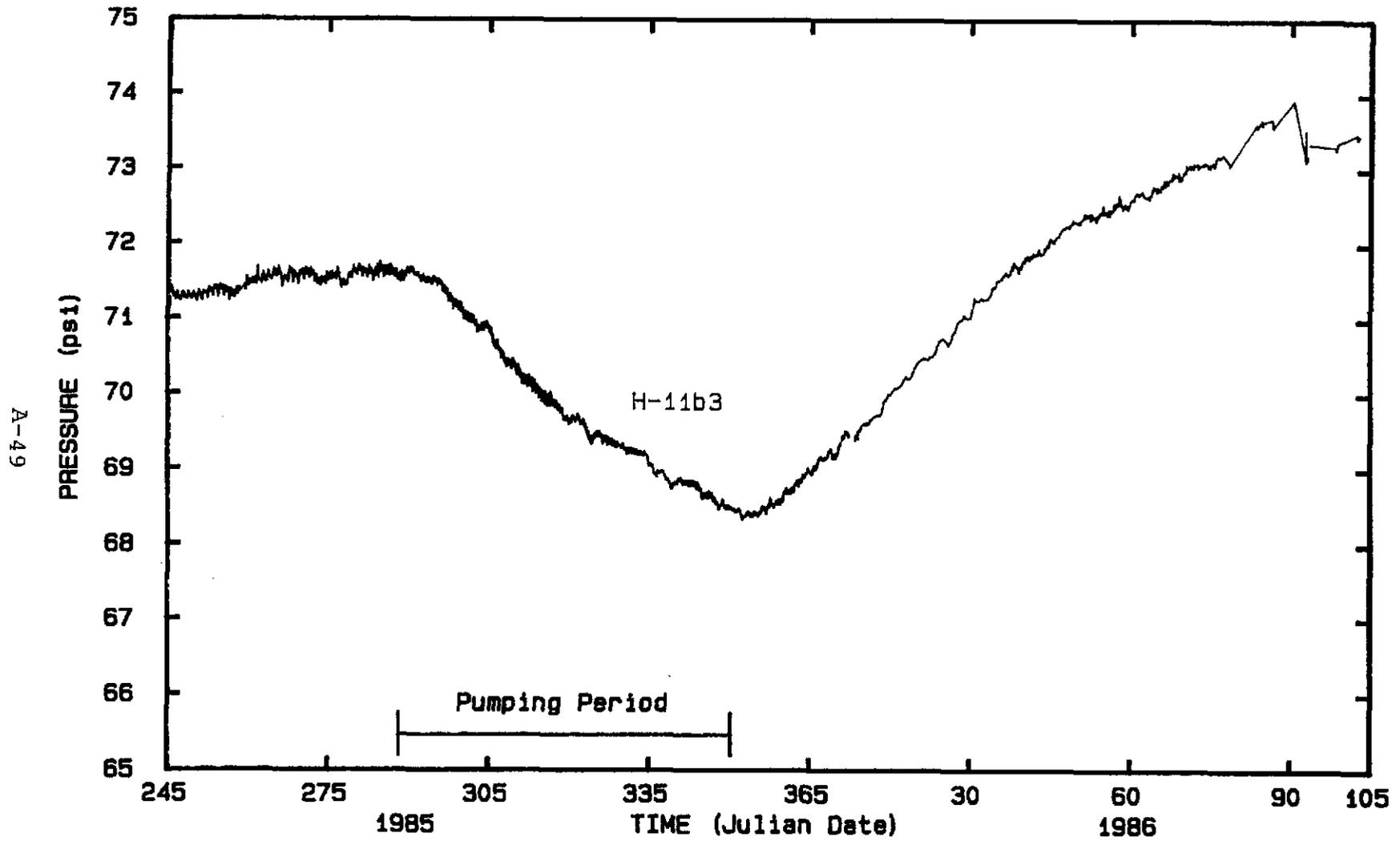


Figure 4.5 Fluid-pressure response in observation well H-11b3 during the H-3 multipad pumping test.

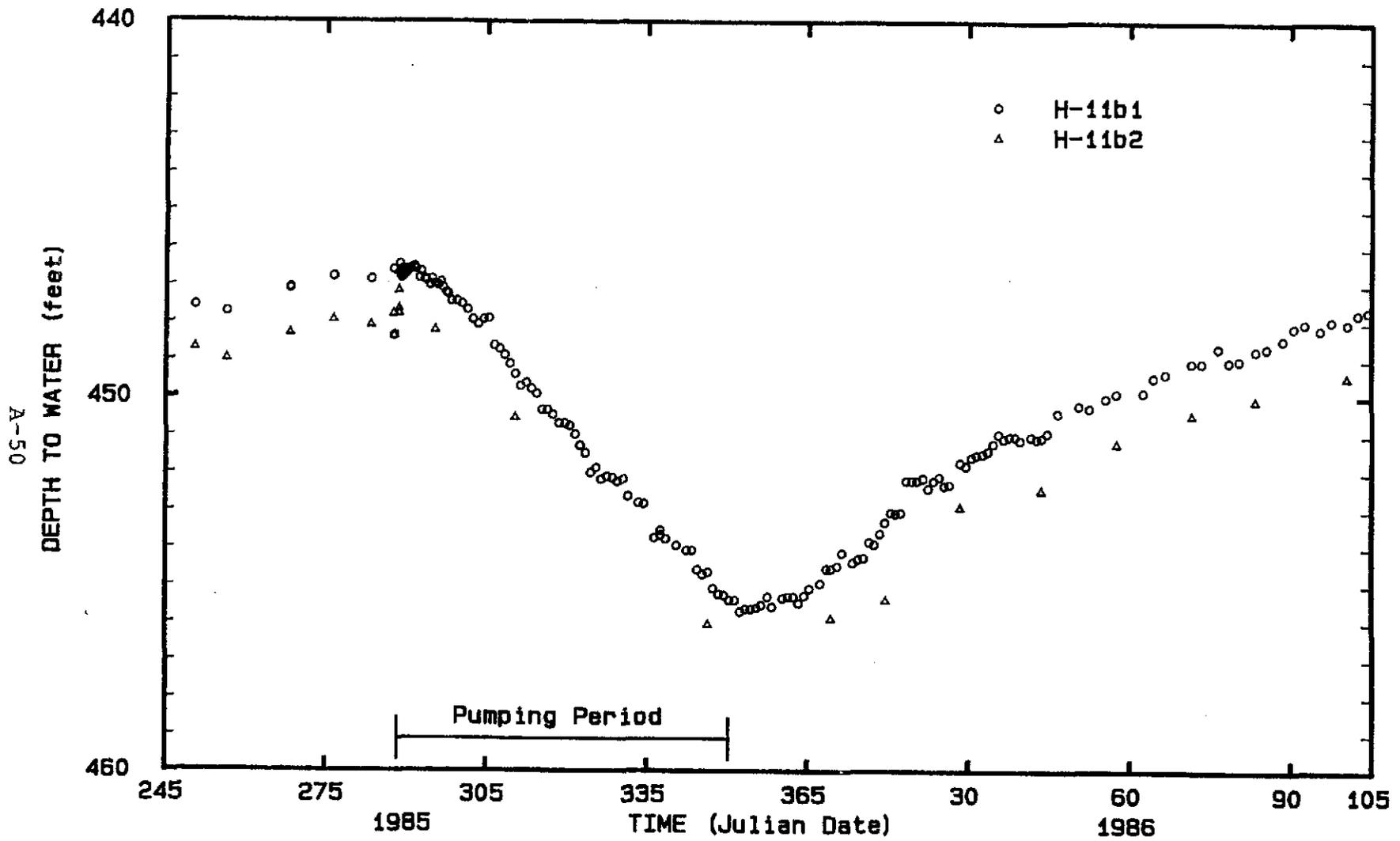


Figure 4.6 Water levels measured in observation wells H-11b1 and H-11b2 during the H-3 multipad pumping test.

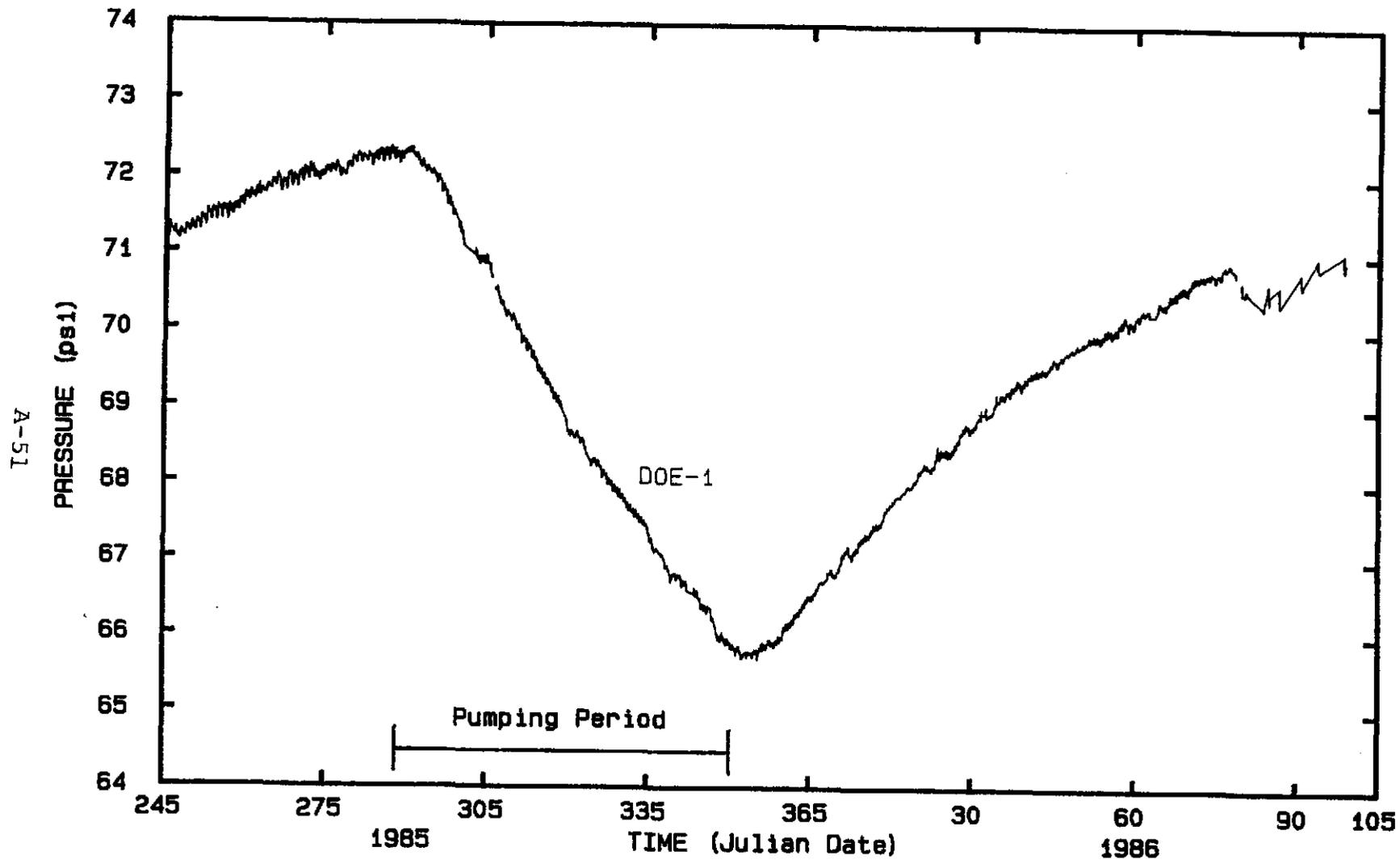


Figure 4.7 Fluid-pressure response in observation well DOE-1 during the H-3 multipad pumping test.

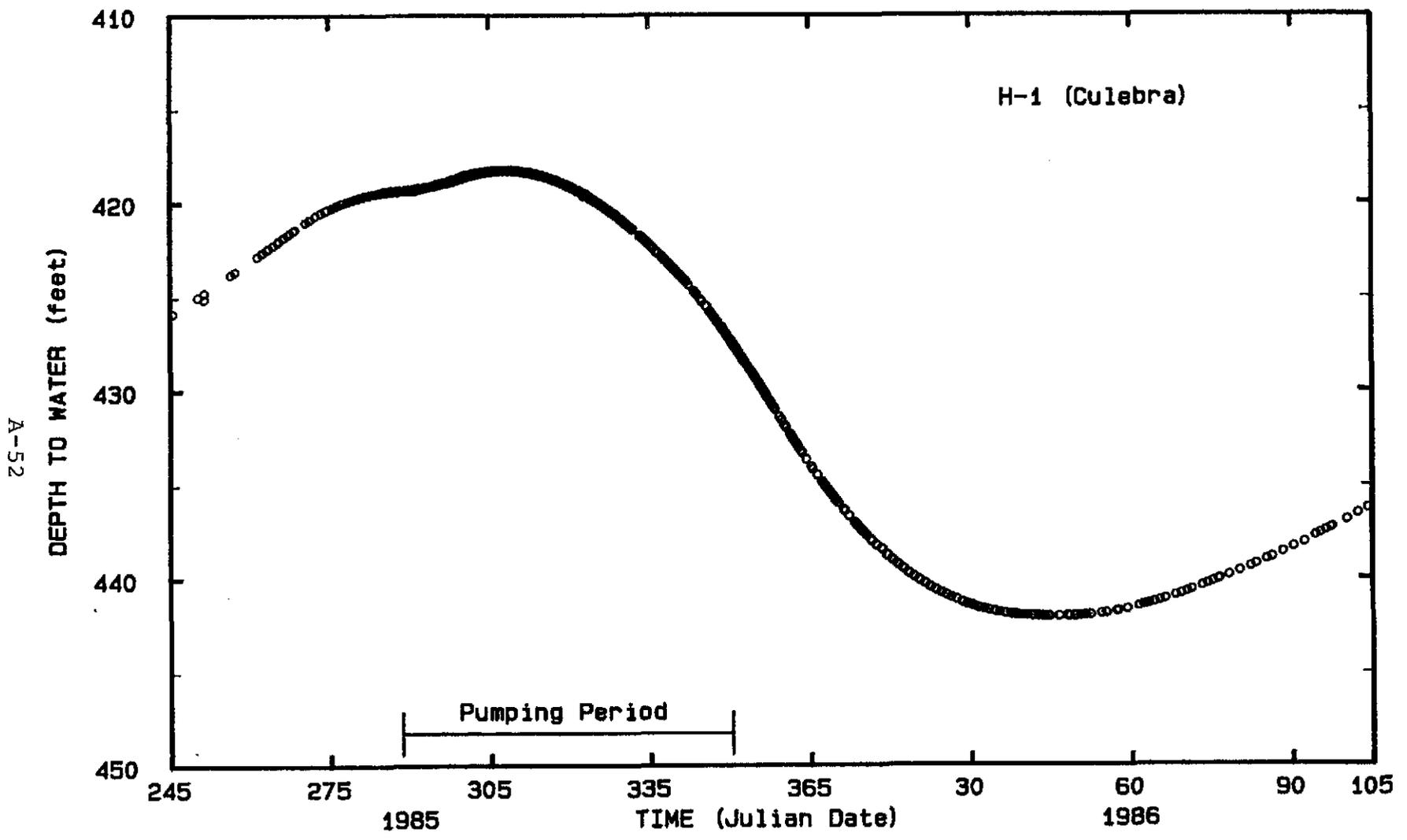


Figure 4.8 Water levels measured in observation well H-1 Culebra during the H-3 multipad pumping test.

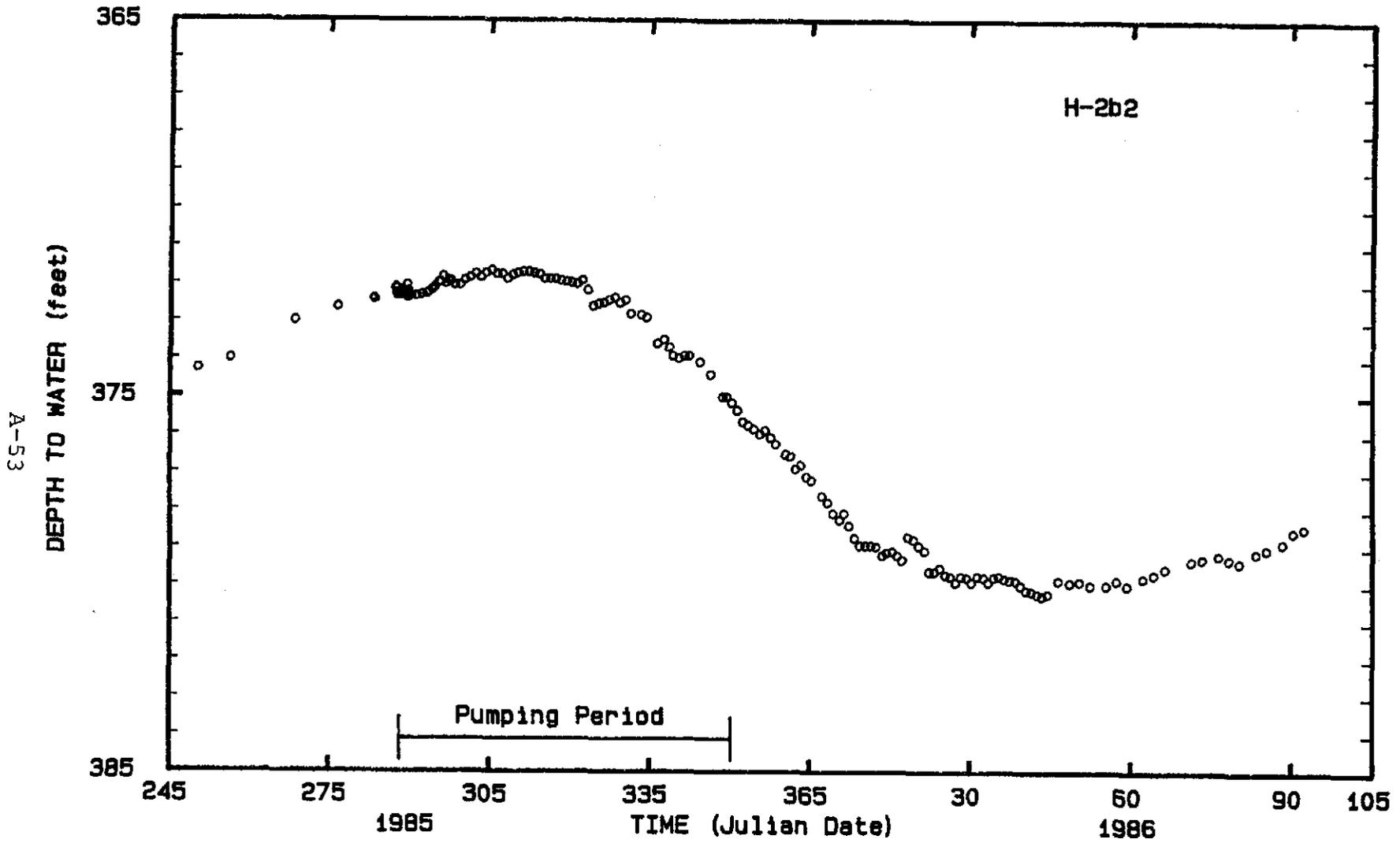


Figure 4.9 Water levels measured in observation well H-2b2 during the H-3 multipad pumping test.

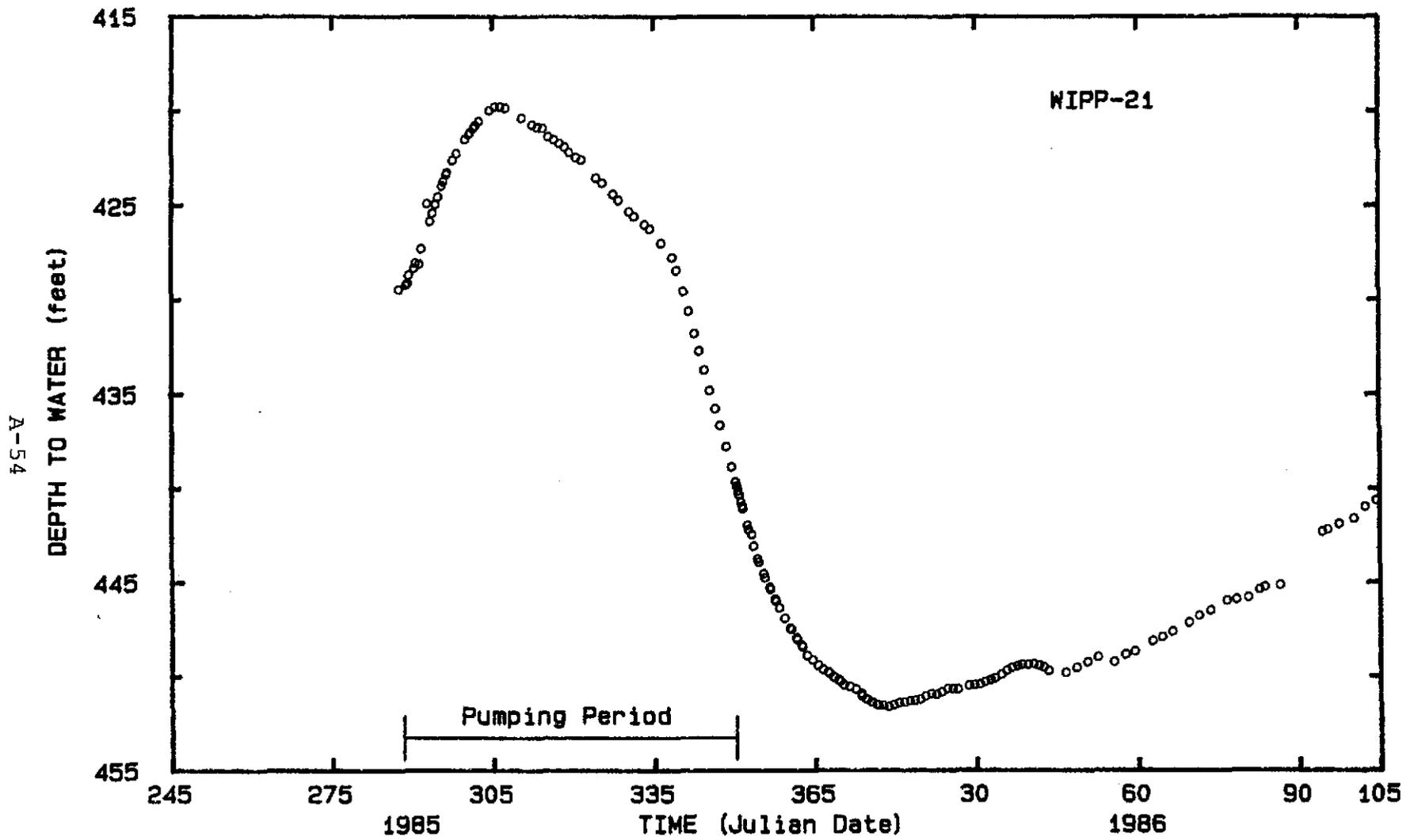


Figure 4.10 Water levels measured in observation well WIPP-21 during the H-3 multipad pumping test.

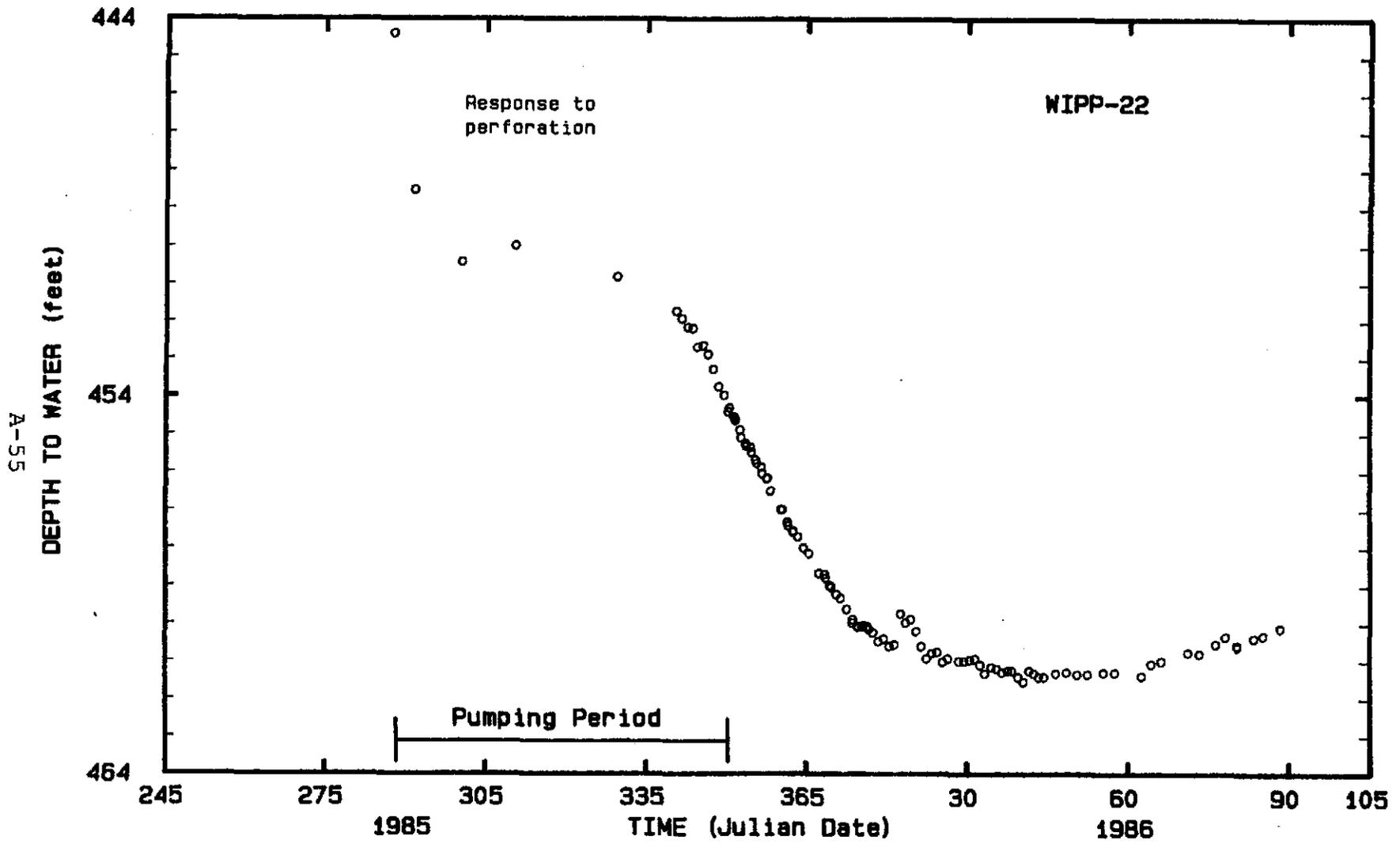


Figure 4.11 Water levels measured in observation well WIPP-22 during the H-3 multipad pumping test.

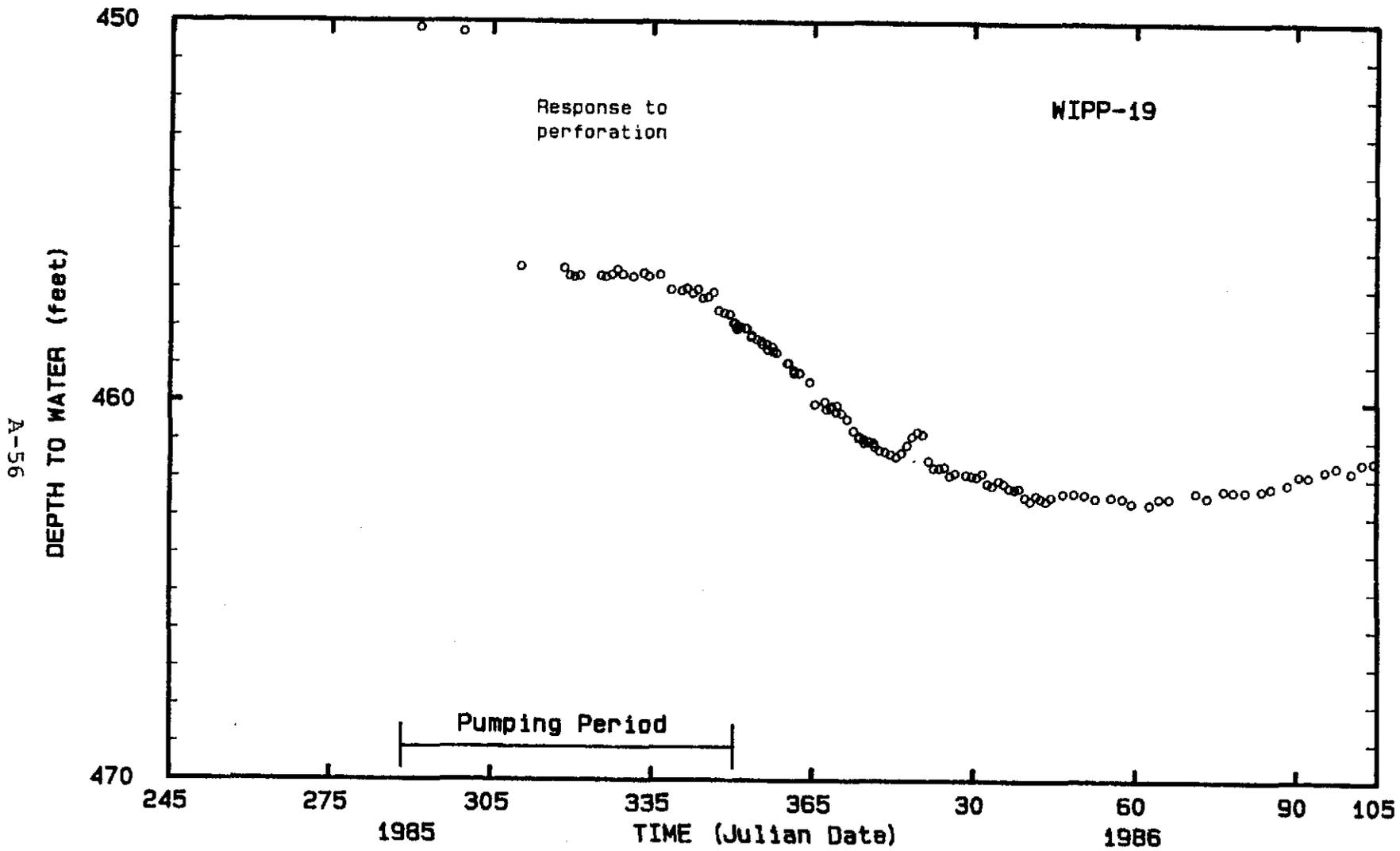


Figure 4.12 Water levels measured in observation well WIPP-19 during the H-3 multipad pumping test.

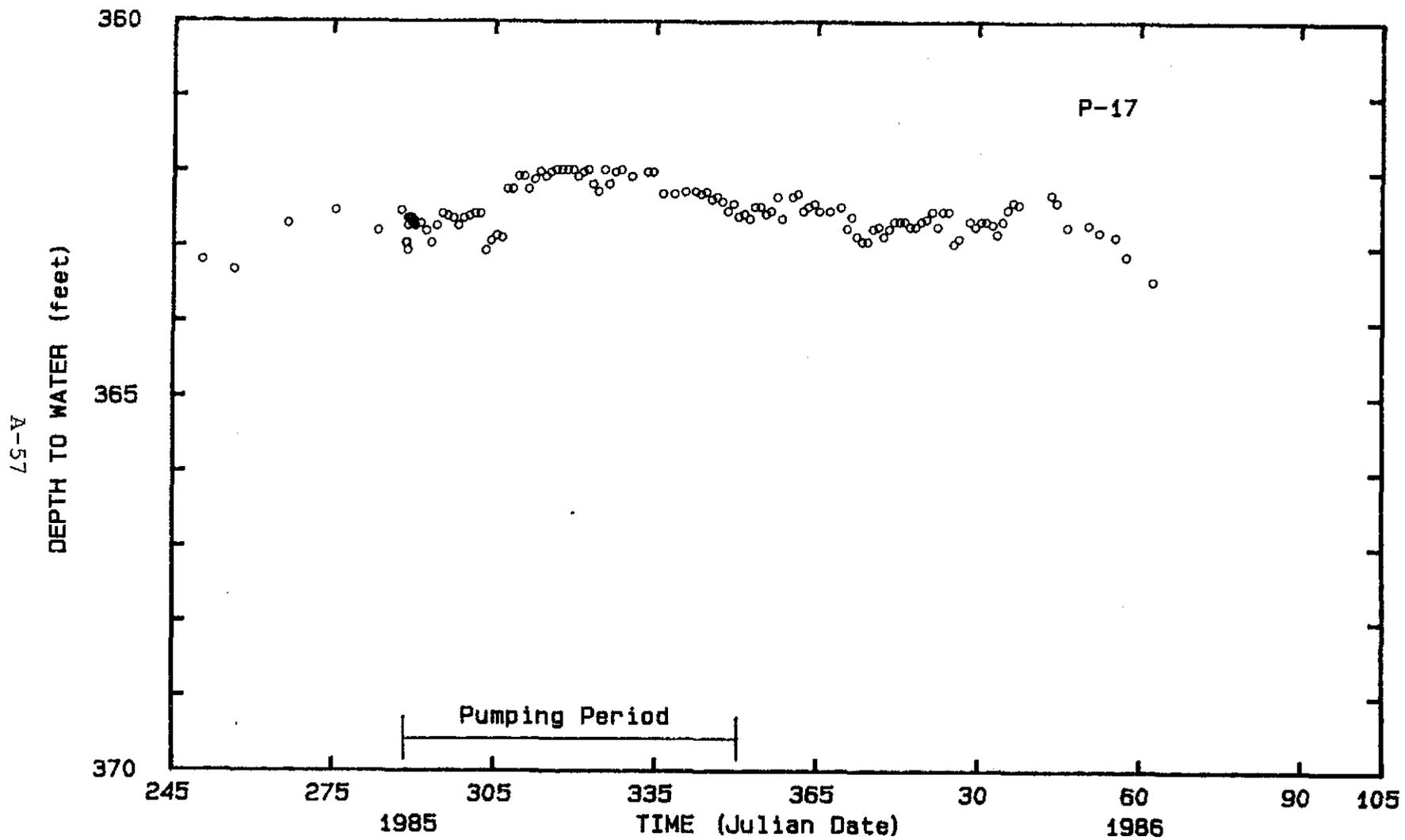


Figure 4.13 Water levels measured in observation well P-17 during the H-3 multipad pumping test.

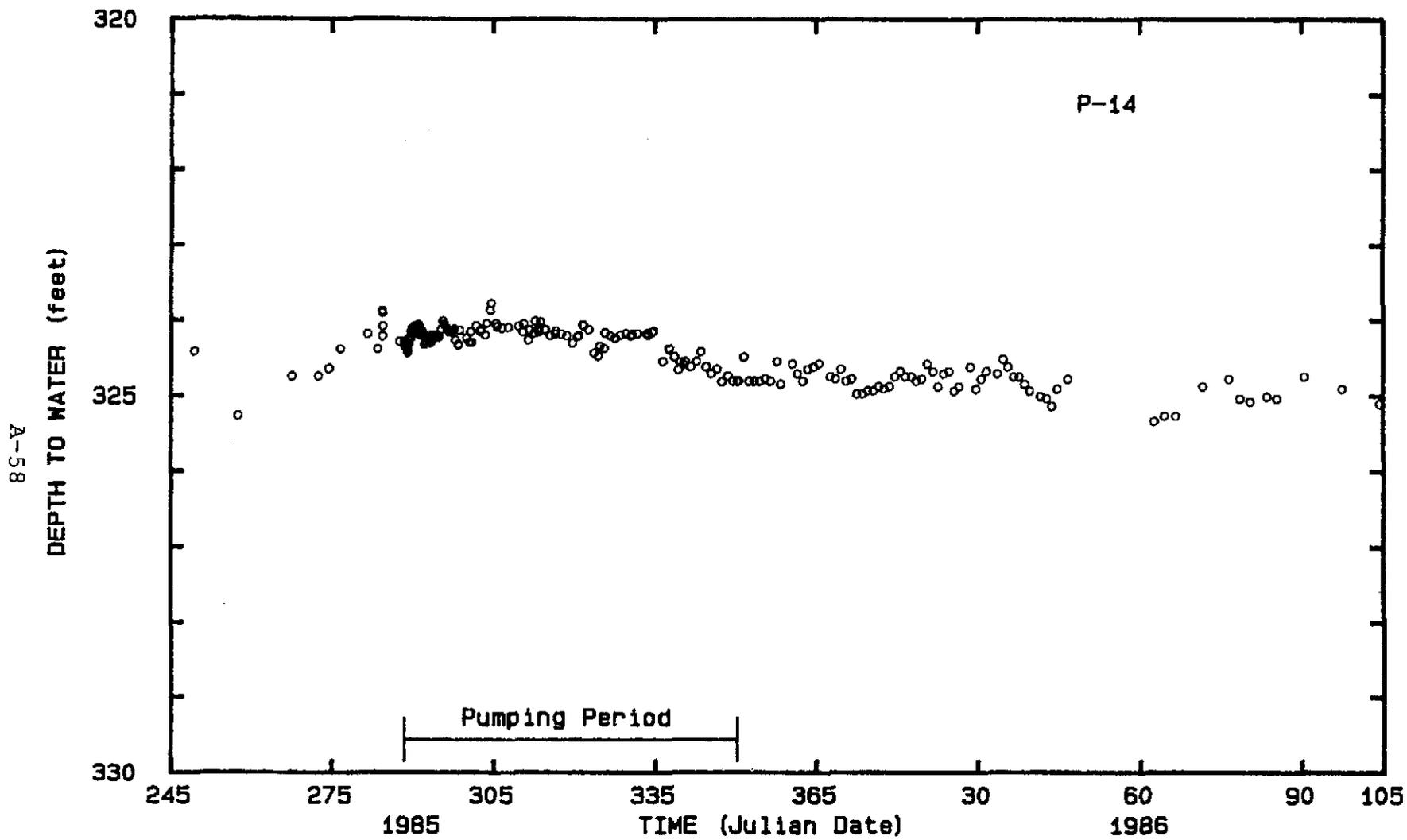


Figure 4.14 Water levels measured in observation well P-14 during the H-3 multipad pumping test.

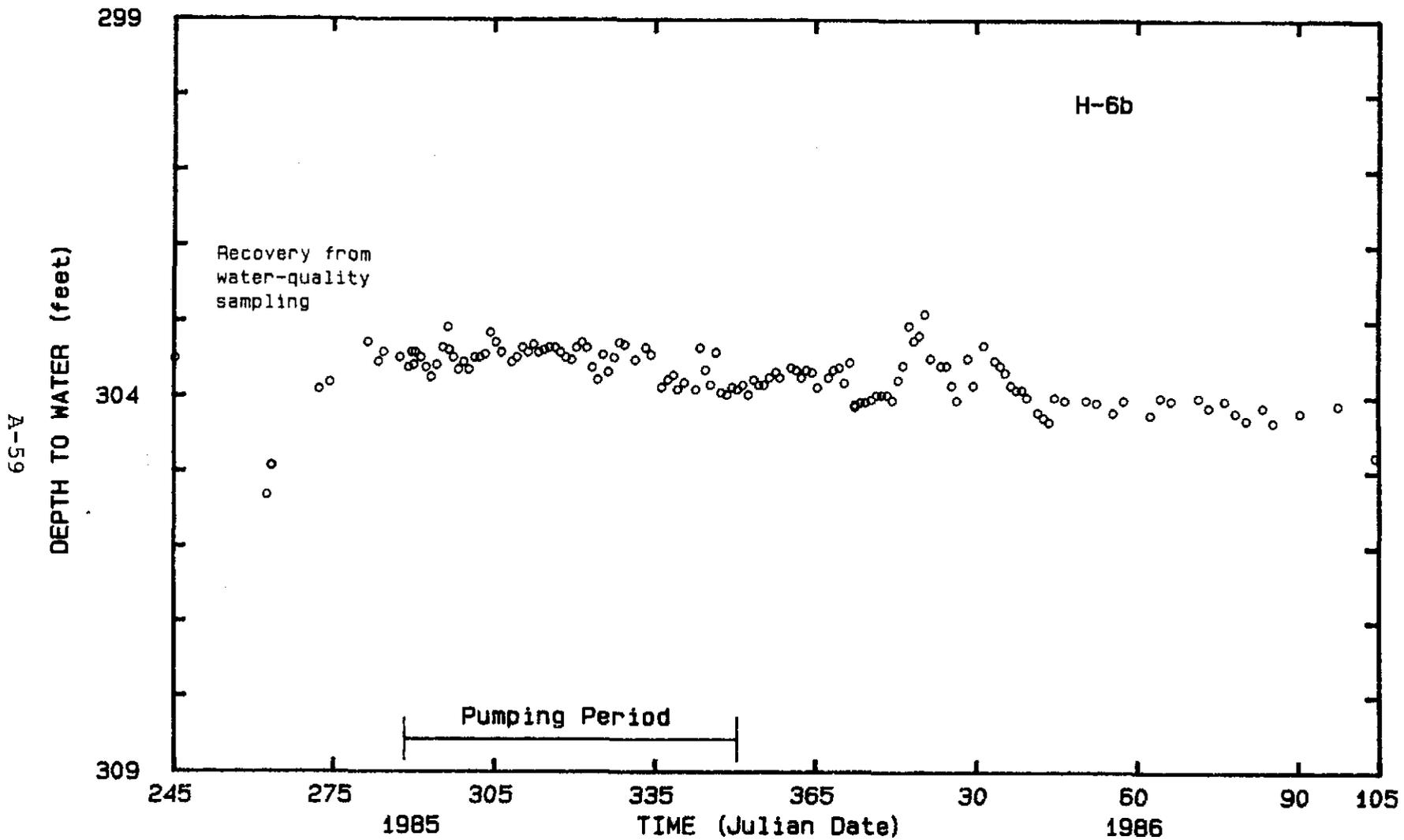


Figure 4.15 Water levels measured in observation well H-6b during the H-3 multipad pumping test.

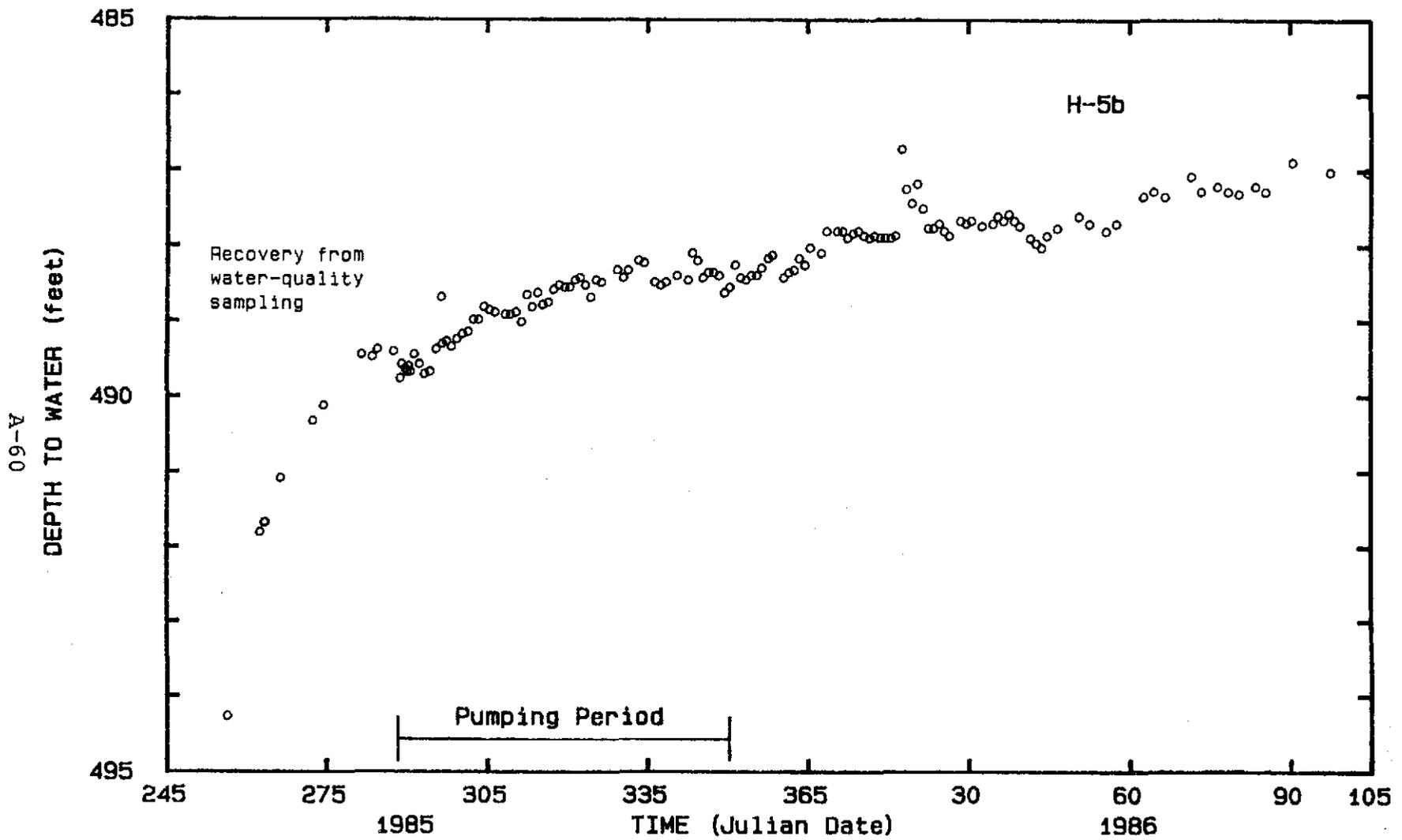


Figure 4.16 Water levels measured in observation well H-5b during the H-3 multipad pumping test.

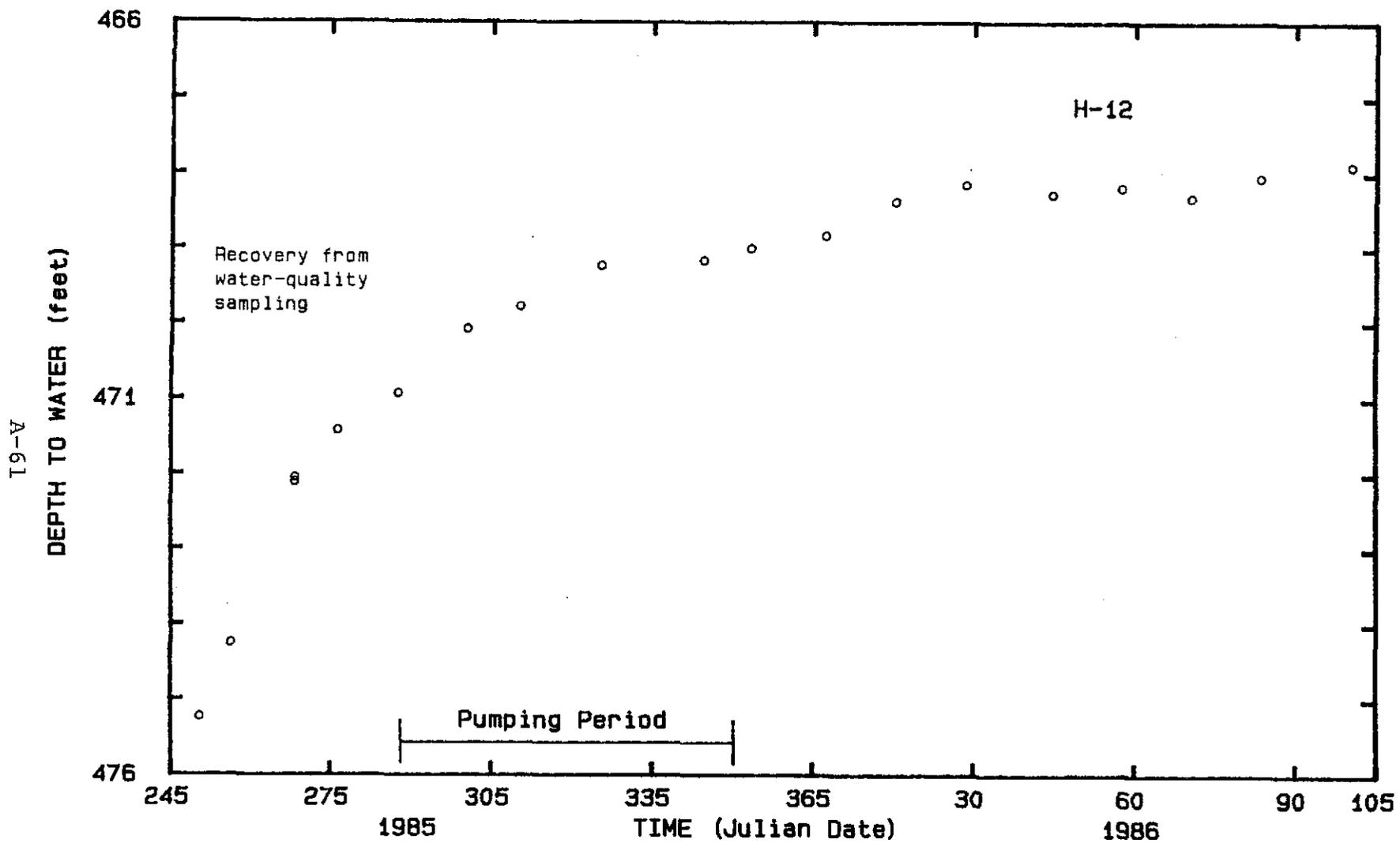


Figure 4.17 Water levels measured in observation well H-12 during the H-3 multipad pumping test.

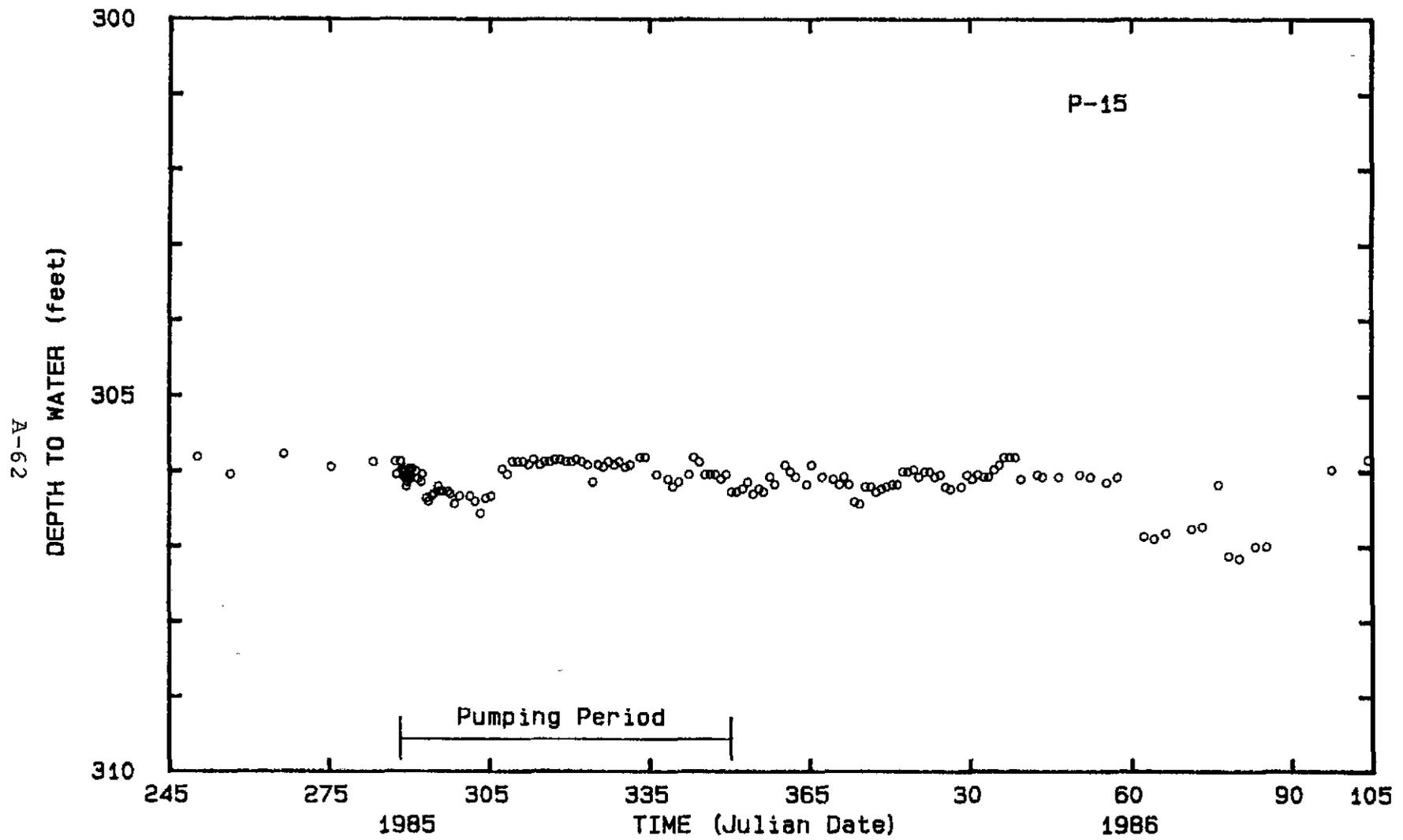


Figure 4.18 Water levels measured in observation well P-15 during the H-3 multipad pumping test.

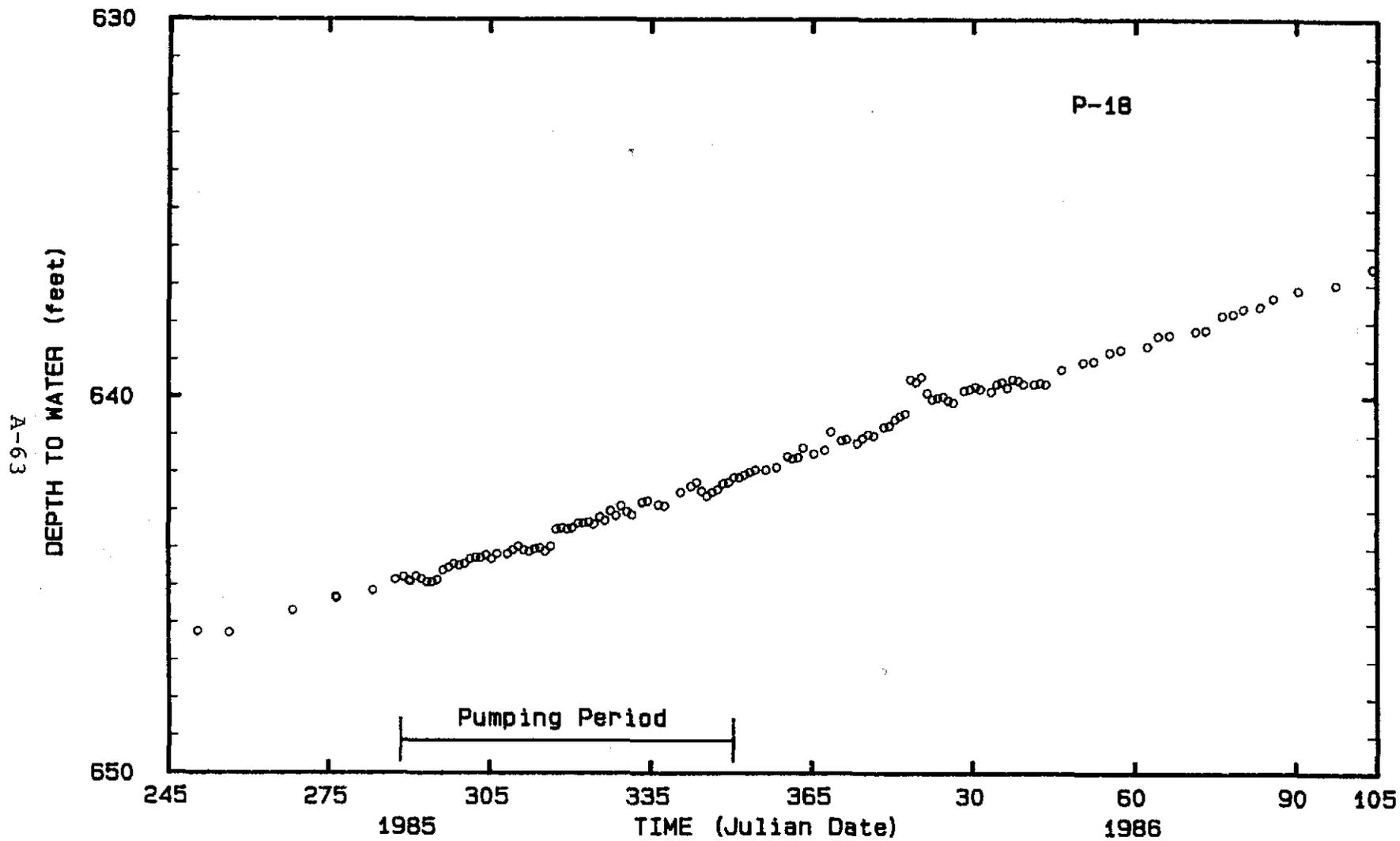


Figure 4.19 Water levels measured in observation well P-18 during the H-3 multipad pumping test.

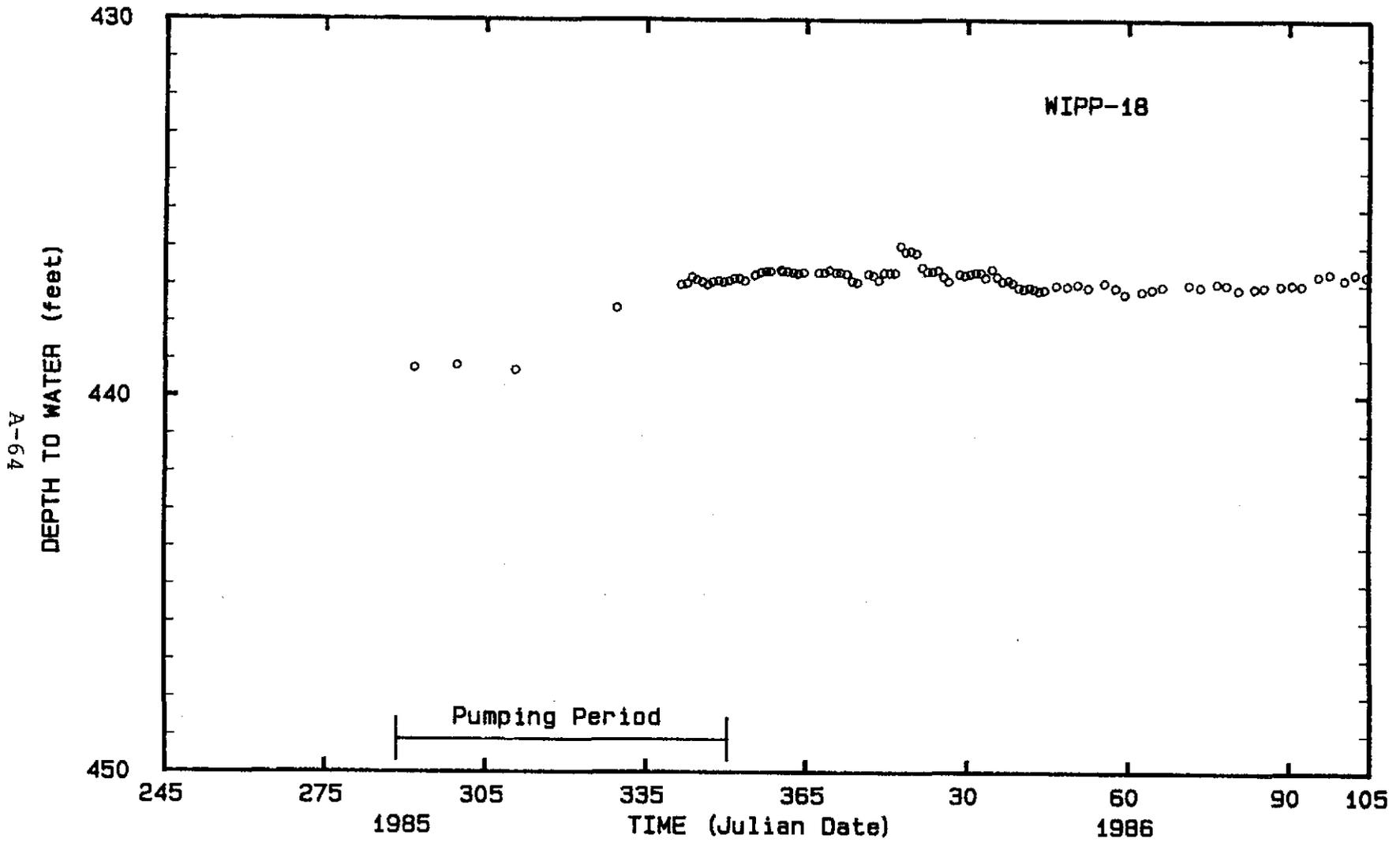


Figure 4.20 Water levels measured in observation well WIPP-18 during the H-3 multipad pumping test.

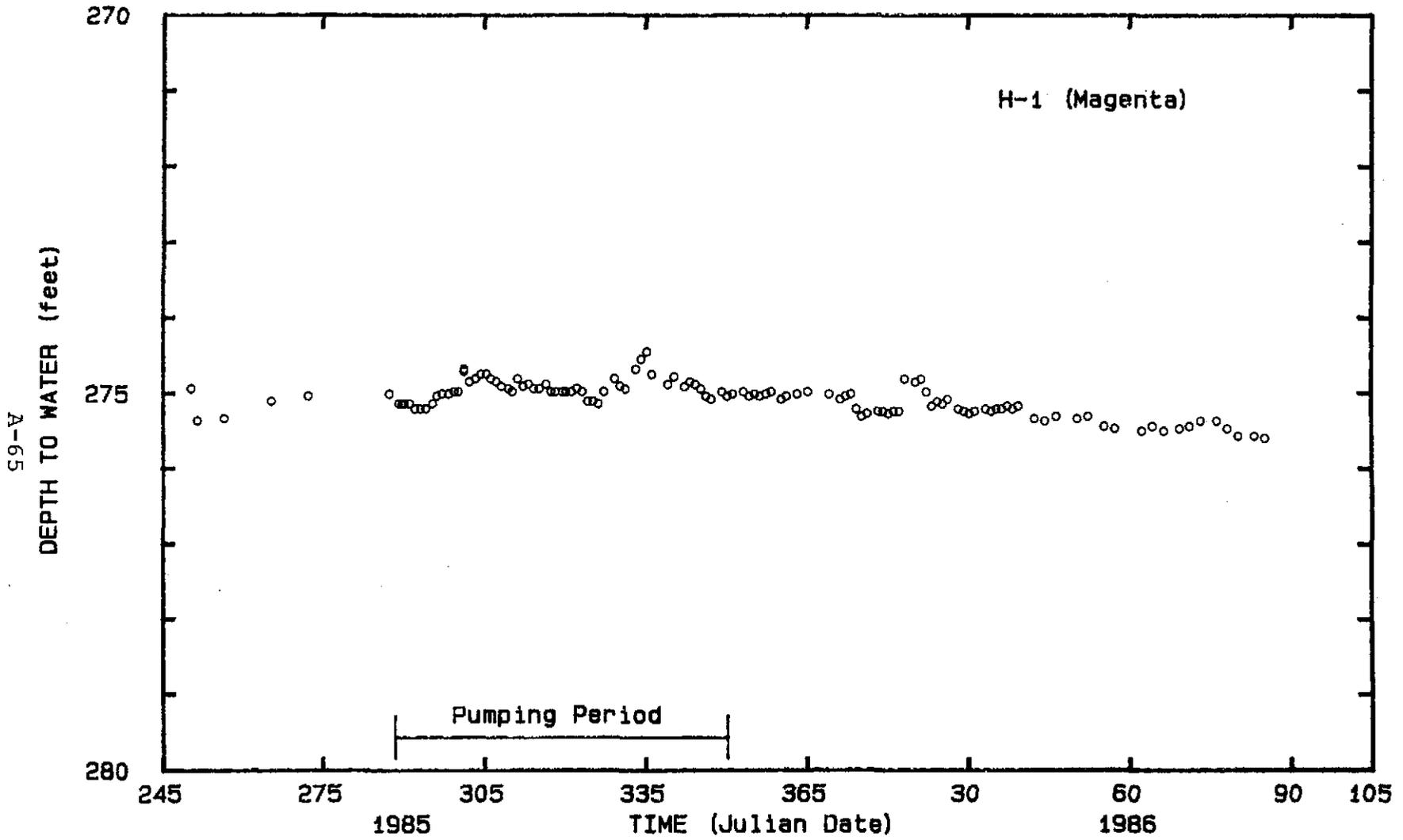


Figure 4.21 Water levels measured in observation well H-1 Magenta during the H-3 multipad pumping test.

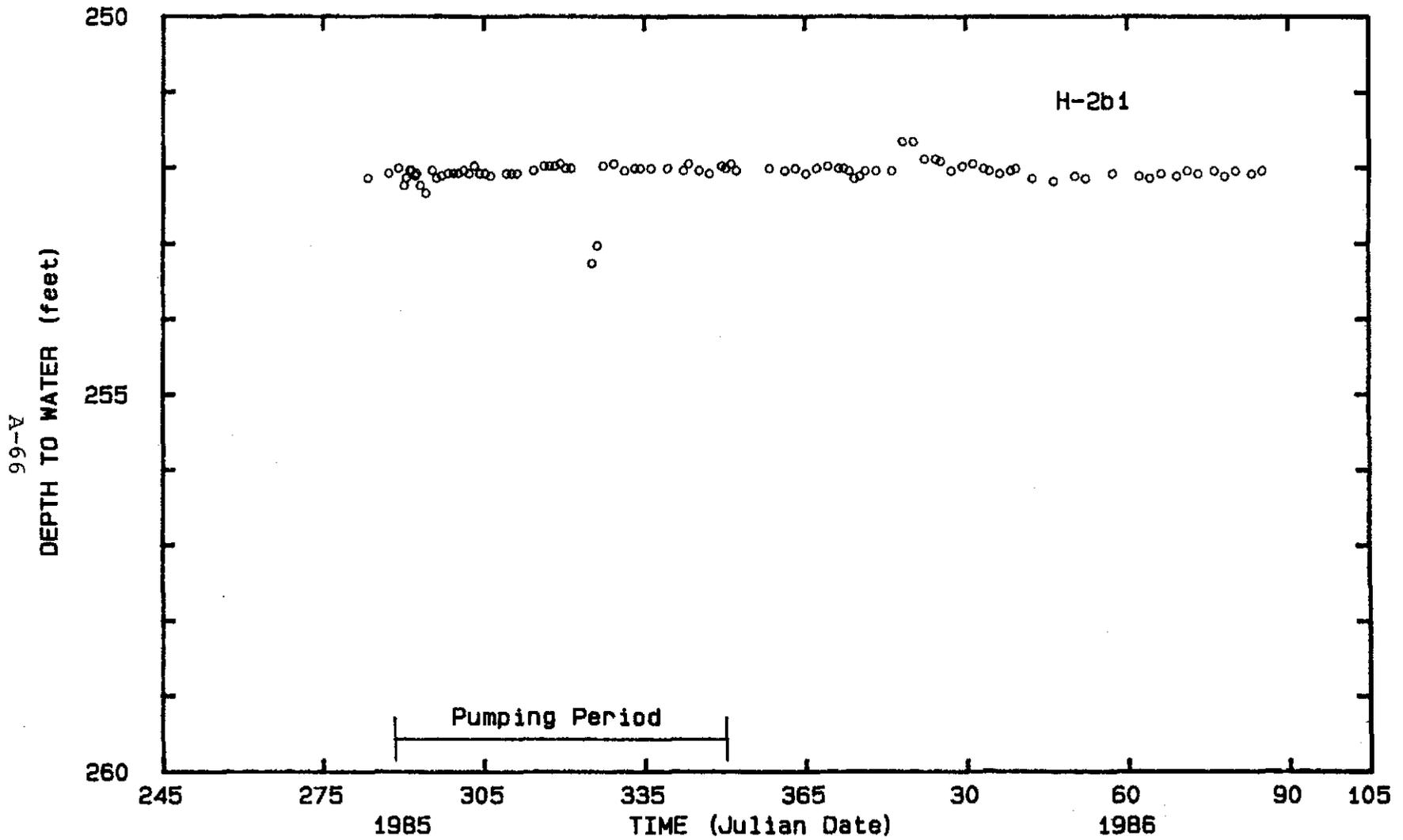


Figure 4.22 Water levels measured in observation well H-2b1 during the H-3 multipad pumping test.

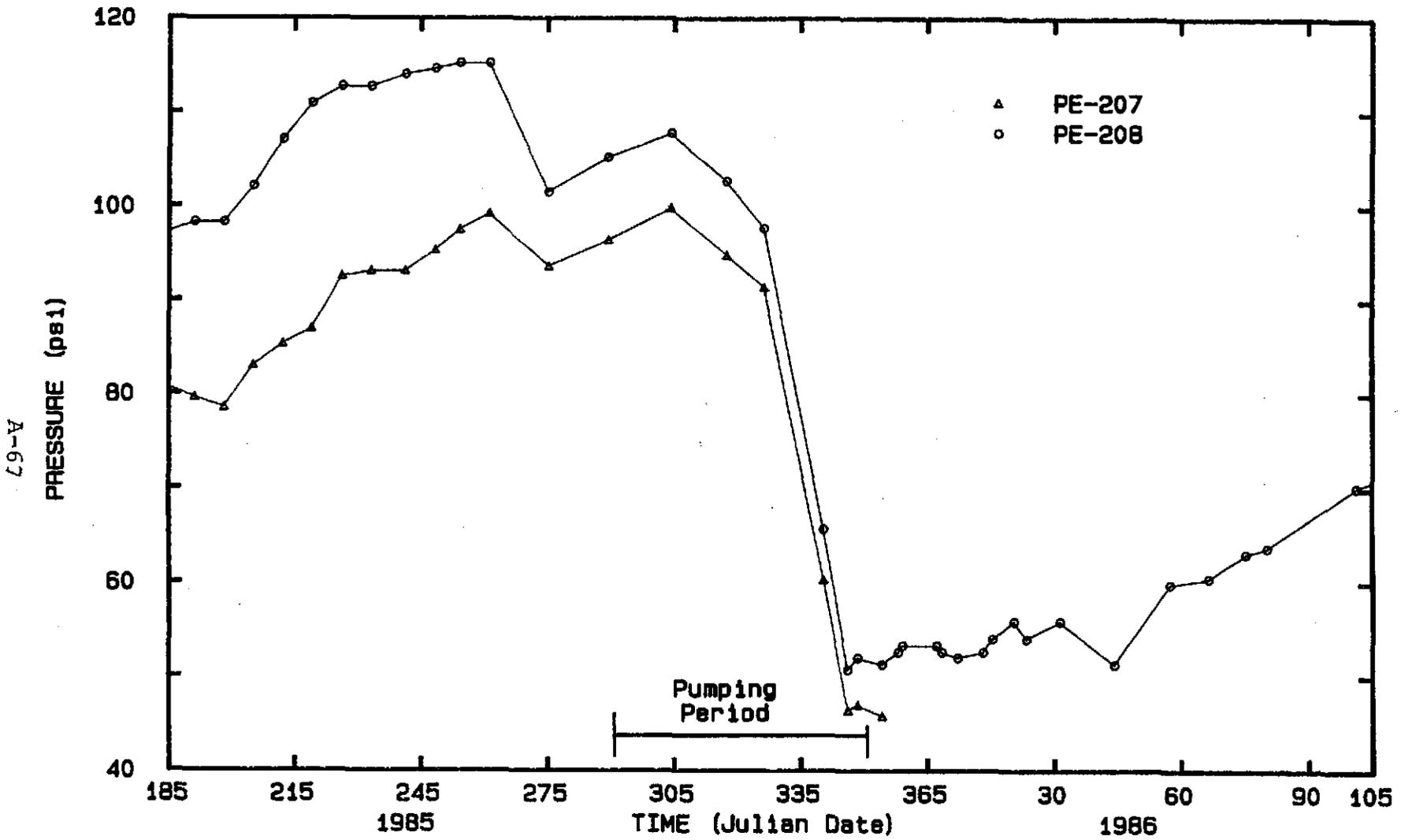


Figure 4.23 Fluid pressure in the Culebra dolomite, measured in the Waste-Handling Shaft before and during the H-3 multipad pumping test.

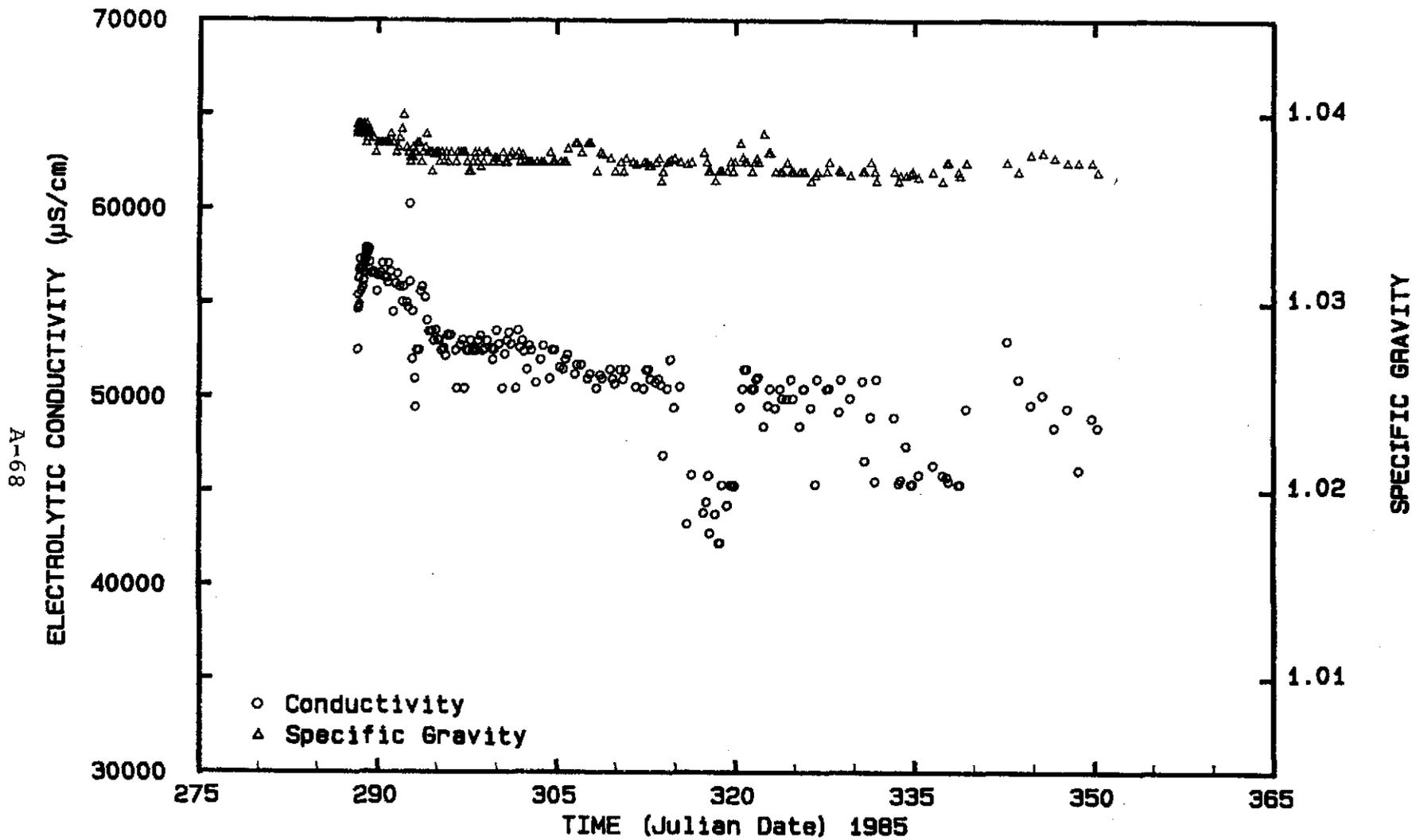


Figure 4.24 Electrolytic conductivity and specific gravity of water produced during the H-3 multipad pumping test.

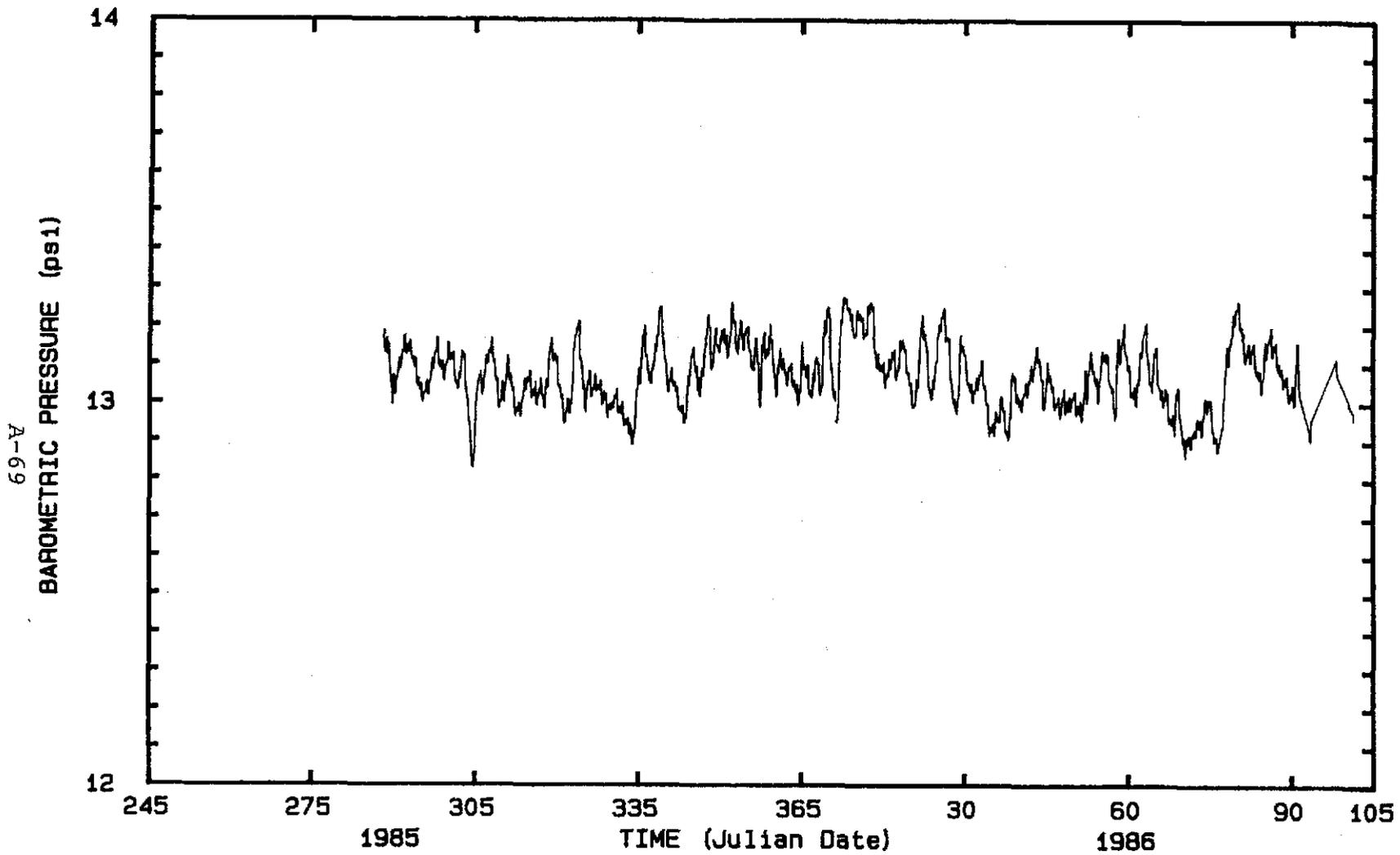


Figure 4.25 Barometric pressure measured at the H-3 hydropad during the H-3 multipad pumping test.

TABLE 3-1 LIST OF WELLS, OPEN TO THE CULEBRA DOLOMITE,
 MONITORED DURING THE H-3 MULTIPAD TEST,
 INCLUDING INDICATION OF MEASUREMENT FREQUENCY.

Key Wells (Continuous Monitoring with DAS):

H-2c	--	HP-85
H-3B1	--	HP-9845
H-3b1 (Magenta)	--	HP-9845
H-3b2	--	HP-9845
H-3b3	--	HP-9845
H-4b	--	HP-85
H-11b3	--	HP-9845
DOE-1	--	HP-9845

Key Wells (Close-in; Frequent Monitoring):

H-1 Solinst meter in wellhead storage containers
 H-1 (Magenta)
 H-2b2
 H-2b1 (Magenta)
 H-4c
 P-15
 P-17
 P-14 Solinst Meter in wellhead storage container
 WIPP-19
 WIPP-21
 WIPP-22

Distant Wells (monitoring once or twice per week):

H-5b	H-12
H-6b	P-18
H-10	WIPP-12
H-11b1	WIPP-13
H-11b2	

Regional Wells (monitoring every 2 weeks):

H-7b1	WIPP-25
H-7b2	WIPP-26
H-7c	WIPP-27
H-8b	WIPP-28
H-9a	WIPP-29
H-9b	WIPP-30
H-9c	

TABLE 4-1 TIME OF WATER-LEVEL OR FLUID-PRESSURE RESPONSE AND DISTANCE FROM THE PUMPING WELL FOR OBSERVATION WELLS RESPONDING TO THE H-3 MULTIPAD PUMPING TEST.

OBSERVATION WELL	ESTIMATED TIME IN DAYS FROM START OR END OF PUMPING		APPROXIMATE DISTANCE FROM H-3b2 (feet)
	Drawdown Response	Recovery Response (End Pumping @ 62 days)	
H-3b1	0	0	100
H-3b3	0	0	100
DOE-1	3	4	5,270
H-11b3	4	4	8,005
Waste-Handling Shaft	16-29	28	3,840
WIPP-21	18	28	4,715
H-1 Culebra	21	62	2,675
WIPP-22	24	72	5,705
H-2b2	<25	70	4,165
H-2c	26	71	4,185
WIPP-19	26	79	6,150
H-6b	35 (??)	105 (??)	16,820
P-17	47 (?)	Sampling	11,345
P-14	47 (?)	Sampling	15,390
WIPP-18	No Response		7,460
H-4b	No Response		9,050

APPENDIX 1.0

CONFIGURATION OF TEST EQUIPMENT FOR WELLS EQUIPPED
WITH DATA-ACQUISITION SYSTEMS

TABLE A1-1 CONFIGURATION OF DOWNHOLE TEST EQUIPMENT FOR THE H-3 HYDROPAD

Unit tested: Culebra Pumping well no.: H-3b2 Intake depth (BTC):
 Type of test: H-3 multipad pumping Observation well no.: H-3b1, H-3b1 (Mag), H-3b3 654.3 ft.
 Test data file no.: H30075, H30085, Pump type: Red Jacket 3-Horsepower
H30095, H30105 32-B
H30115, H30125

Well No.	Transducers				Init. Water Level (ft. BTC)	Top of Casing (ft. a.m.s.l.)	Land Surface Elevation (ft. a.m.s.l.)	Water Level (ft. a.m.s.l.)
	Ser. No.	Depth (ft. BTC)	Calibration Date	Sensitivity Coefficient (mV/psi)				
H-3b2	A-73 95079	639.17	09/06/85	2.5108	426.35	3388.93	3388.49	2962.26
			06/05/86	2.5198				
H-3b1	103815	550.0	07/08/85	2.1735	490.55	3389.73	3388.49	2899.18
			12/13/85	Defective Transducer				
H-3b1	131264	572.5	12/13/85	1.0140	530.95	3389.73	3388.49	2858.78
			04/15/86	Defective Transducer				
H-3b1 (Mag)	103639	400.7	09/25/85	1.0056		3389.73	3388.49	
			06/05/86	(7)				
H-3b3	103636	596.0	06/17/85	1.0000	483.86	3387.72	3388.49	2903.86
			06/05/86	0.9984				

- NOTE:**
- 1) BTC = Below Top of Casing
 - 2) a.m.s.l. = above mean sea level
 - 3) Calibration information shows pretest and posttest calibration dates and calculated sensitivity coefficients for those calibrations
 - 4) Initial water level were measured at the times of installation
 - 5) Top of casing elevation from Satellite Survey, Hydro Geo Chem, 1985
 - 6) Land surface elevation determined by direct measurement from Top Of Casing
 - 7) Corrosion noted after removal from H-3b1 (Mag), could not be recalibrated.

TABLE A1-2 CONFIGURATION OF DOWNHOLE TEST EQUIPMENT
FOR THE H-2c OBSERVATION WELL

Unit tested: Culebra Pumping well no.: H-3b2 Intake depth (BTC):
 Type of test: H-3 multipad pumping Observation well no.: H-2c
 Test data file no.: H200 25, H200 35, Pump type: Red Jacket 3-Horsepower
H200 45, H200 55 32 B
H200 65, H200 75

Well No.	A-74 Ser. No.	Transducers			Init. Water Level (ft. BTC)	Top of Casing (ft. a.m.s.l.)	Land Surface Elevation (ft. a.m.s.l.)	Water Level (ft. a.m.s.l.)
		Depth (ft. BTC)	Calibration Date	Sensitivity Coefficient (mV/psi)				
H-2c	103637	600.0	04/26/86 04/15/86	1.0020 1.0025	376.18	3377.51	3376.75	3001.33

- NOTE:
- 1) BTC = Below Top of Casing
 - 2) a.m.s.l. = above mean sea level
 - 3) Calibration information shows pretest and posttest calibration dates and calculated sensitivity coefficients for those calibrations
 - 4) Initial water level was measured August 11, 1985
 - 5) Top of casing elevation from Satellite Survey, Hydro Geo Chem, 1985
 - 6) Land surface elevation determined by direct measurement from Top Of Casing

TABLE A1-3 CONFIGURATION OF DOWNHOLE TEST EQUIPMENT
FOR THE H-4b OBSERVATION WELL

Unit tested: Culebra Pumping well no.: H-3b2 Intake depth (BTC): _____
 Type of test: H-3 multipad pumping Observation well no.: H-4a _____
 Test data file no.: H40015, H40025, Pump type: Red Jacket 3-Horsepower
H40035, H40045 32 B
H40055

Well No.	A-75 Ser. No.	Transducers			Init. Water Level (ft. BTC)	Top of Casing (ft. a.m.s.l.)	Land Surface Elevation (ft. a.m.s.l.)	Water Level (ft. a.m.s.l.)
		Depth (ft. BTC)	Calibration Date	Sensitivity Coefficient (mV/psi)				
H-4b	103638	471.0	09/25/85 02/11/86	1.0059 1.0014	342.15	3331.44	3330.74	2989.29

- NOTE:**
- 1) BTC = Below Top of Casing
 - 2) a.m.s.l. = above mean sea level
 - 3) Calibration information shows pretest and posttest calibration dates and calculated sensitivity coefficients for those calibrations
 - 4) Initial water level was measured September 23, 1985
 - 5) Top of casing elevation from Satellite Survey, Hydro Geo Chem, 1985
 - 6) Land surface elevation determined by direct measurement from Top Of Casing

TABLE A1-4 CONFIGURATION OF DOWNHOLE TEST EQUIPMENT
FOR THE H-11b3 OBSERVATION WELL

Unit tested: Culebra Pumping well no.: H-3b2 Intake depth (BTC): _____
 Type of test: H-3 multipad pumping Observation well no.: H-11b3 _____
 Test data file no.: H11125, H11135, Pump type: Red Jacket 3-Horsepower
H11145, H11155 32 B
H11165

Well No.	A-76 Ser. No.	Transducers			Init. Water Level (ft. BTC)	Top of Casing (ft. a.m.s.l.)	Land Surface Elevation (ft. a.m.s.l.)	Water Level (a.m.s.l.)
		Depth (ft. BTC)	Calibration Date	Sensitivity (ft. Coefficient (mV/psi))				
H-11b3	103817	601.5	06/26/85 04/02/86	2.1833 2.1707	451.45	3409.62	3408	2958.17
H-11b3	94911	601.5	01/02/86 04/15/86	1.0024 1.0035	--	3409.62	3408	--

- NOTE:**
- 1) BTC = Below Top of Casing
 - 2) a.m.s.l. = above mean sea level
 - 3) Calibration information shows pretest and posttest calibration dates and calculated sensitivity coefficients for those calibrations
 - 4) Initial water level was measured August 2, 1985
 - 5) Top of casing elevation from Satellite Survey, Hydro Geo Chem, 1985
 - 6) Land surface elevation determined by direct measurement from Top Of Casing

TABLE A1-5 CONFIGURATION OF DOWNHOLE TEST EQUIPMENT
FOR THE DOE-1 OBSERVATION WELL

Unit tested: Culebra Pumping well no.: H-3b2 Intake depth (BTC):
 Type of test: H-3 multipad pumping Observation well no.: DOE-1
 Test data file no.: D100 65, D100 75, Pump type: Red Jacket 3-Horsepower
D100 85, D100 95, D10 105, D10 115 32 B
D10 125, D10 135, D10 145, D10 155

Well No.	A-77 Ser. No.	Transducers			Init. Water Level (ft. BTC)	Top of Casing (ft. a.m.s.l.)	Land Surface Elevation (ft. a.m.s.l.)	Water Level (ft. a.m.s.l.)
		Depth (ft. BTC)	Calibration Date	Sensitivity Coefficient (mV/psi)				
DOE-1	112744	654.9	05/30/85 04/16/86	2.1756 2.1775	506.94	3463.96	3463	2957.02

- NOTE:**
- 1) BTC = Below Top of Casing
 - 2) a.m.s.l. = above mean sea level
 - 3) Calibration information shows pretest and posttest calibration dates and calculated sensitivity coefficients for those calibrations
 - 4) Initial water level was measured August 2, 1985
 - 5) Top of casing elevation from Satellite Survey, Hydro Geo Chem, 1985
 - 6) Land surface elevation determined by direct measurement from Top Of Casing

APPENDIX 2.0

TABULATED PUMPING-RATE DATA FOR
PUMPING WELL H-3b2

TABLE A2-1
PUMPING-RATE DATA FROM THE
PRECISION TOTALIZING FLOW METER
DURING THE H-3 MULTIPAD PUMPING TEST

DAY	HR	MN	TIME FROM START OF PUMPING (hours)	METER READING (gallons)	CUMULATIVE VOLUME PUMPED (gallons)	AVERAGE FLOW RATE (gpm)	COMMENTS
288	9	0	0.00	87498.30	0.00	0.00	PUMP ON
288	9	1	0.02	87503.30	5.00	5.00	
288	9	2	0.03	87508.00	9.70	4.70	
288	9	3	0.05	87513.00	14.70	5.00	
288	9	4	0.07	87517.90	19.60	4.90	
288	9	5	0.08	87523.00	24.70	5.10	
288	9	10	0.17	87547.85	49.55	4.95	
288	9	15	0.25	87572.80	74.50	5.05	
288	9	20	0.33	87596.65	98.35	4.60	
288	9	30	0.50	87643.70	145.40	4.80	
288	10	0	1.00	87784.75	286.45	4.70	
288	11	0	2.00	88066.20	567.90	4.68	
288	12	3	3.05	88361.15	862.85	4.69	
288	18	7	9.12	90066.80	2568.50	4.68	
288	23	57	14.95	91699.90	4201.60	4.66	
289	5	57	20.95	93371.85	5873.55	4.64	
289	12	0	27.00	95119.85	7621.55	4.85	
289	18	2	33.03	96874.80	9376.50	4.84	
290	0	4	39.07	98562.30	11064.00	3.14	
290	0	37	39.62	98672.15	11173.85	3.95	
290	0	40	39.67	98686.35	11188.05	4.92	
290	0	41	39.68	98691.75	11193.45	5.40	
290	1	0	40.00	98782.70	11284.40	4.80	
290	2	15	41.25	99138.40	11640.10	4.74	
290	6	0	45.00	100203.35	12705.05	4.71	
290	12	0	51.00	101892.50	14394.20	4.67	
290	17	57	56.95	103555.92	16057.62	4.65	
291	0	0	63.00	105243.55	17745.25	4.65	
291	12	0	75.00	108585.10	21086.80	4.64	
292	12	1	99.02	115250.10	27751.80	4.61	
293	12	0	123.00	121970.45	34472.15	4.95	
294	12	0	147.00	129126.65	41628.35	5.05	
294	13	0	148.00	129430.05	41931.75	5.06	
294	14	0	149.00	129727.15	42228.85	4.95	FLOW ADJUST
294	14	30	149.50	129872.90	42374.60	4.86	13:30
294	18	0	153.00	130891.60	43393.30	4.86	
295	0	0	159.00	132640.30	45142.00	4.86	
295	12	0	171.00	136134.35	48636.05	4.85	
296	12	0	195.00	143113.80	55615.50	4.84	
297	12	0	219.00	150077.45	62579.15	4.82	
298	12	0	243.00	157021.60	69523.30	4.82	
299	11	0	266.00	163654.70	76156.40	4.79	

TABLE A2-1 (continued)
PUMPING-RATE DATA FROM THE
PRECISION TOTALIZING FLOW METER
DURING THE H-3 MULTIPAD PUMPING TEST

DAY	HR	MN	TIME FROM START OF PUMPING (hours)	METER READING (gallons)	CUMULATIVE VOLUME PUMPED (gallons)	AVERAGE FLOW RATE (gpm)	COMMENTS
300	12	0	291.00	170846.00	83347.70	4.79	
301	12	0	315.00	177738.60	90240.30	4.78	
302	12	0	339.00	184625.35	97127.05	4.78	
303	12	0	363.00	191509.70	104011.40	4.77	
304	11	20	386.33	198194.50	110696.20	4.77	
305	12	41	411.68	205452.70	117954.40	4.83	
306	12	0	435.00	212213.75	124715.45	4.83	
307	12	10	459.17	219201.80	131703.50	4.81	
308	12	0	483.00	226076.35	138578.05	4.80	
309	12	35	507.58	233154.75	145656.45	4.79	
310	13	0	532.00	240193.30	152695.00	4.81	
311	11	0	554.00	246535.40	159037.10	4.80	
312	11	40	578.67	253629.05	166130.75	4.78	
313	12	15	603.25	260682.50	173184.20	4.77	
314	11	47	626.78	267433.90	179935.60	4.78	
315	13	4	652.07	274673.55	187175.25	4.78	
316	12	36	675.60	281395.35	193897.05	4.75	
317	12	1	699.02	288082.30	200584.00	4.76	
318	12	0	723.00	294943.65	207445.35	4.77	
319	11	0	746.00	301527.20	214028.90	4.77	
320	12	20	771.33	308772.55	221274.25	4.76	
321	12	0	795.00	315551.05	228052.75	4.76	
322	12	0	819.00	322419.20	234920.90	4.77	
323	13	0	844.00	329554.55	242056.25	4.74	
324	12	0	867.00	336114.55	248616.25	4.75	
325	10	17	889.28	342456.95	254958.65	4.74	
326	9	32	912.53	349077.15	261578.85	4.63	FLOW ADJUST
326	13	1	916.02	350032.30	262534.00	4.87	12:55
326	18	0	921.00	351481.50	263983.20	4.85	
327	12	30	939.50	356878.10	269379.80	4.85	
328	15	0	966.00	364592.20	277093.90	4.85	
329	12	52	987.87	370939.55	283441.25	4.82	
330	11	56	1010.93	377643.75	290145.45	4.85	
331	9	32	1032.53	383950.60	296452.30	4.87	
332	8	30	1055.50	390654.95	303156.65	4.87	
333	12	48	1083.80	399021.55	311523.25	4.88	
334	13	55	1108.92	406377.65	318879.35	4.88	
335	9	0	1128.00	411973.45	324475.15	4.89	
336	12	6	1155.10	419916.30	332418.00	4.96	
337	8	57	1175.95	426137.45	338639.15	4.98	
338	14	40	1205.67	434992.80	347494.50	4.95	
339	8	30	1223.50	440290.07	352791.77	4.95	

TABLE A2-1 (continued)
PUMPING-RATE DATA FROM THE
PRECISION TOTALIZING FLOW METER
DURING THE H-3 MULTIPAD PUMPING TEST

DAY	HR	MN	TIME FROM START OF PUMPING (hours)	METER READING (gallons)	CUMULATIVE VOLUME PUMPED (gallons)	AVERAGE FLOW RATE (gpm)	COMMENTS
340	12	19	1251.32	448417.20	360918.90	4.84	
341	10	44	1273.73	454922.40	367424.10	4.85	
342	8	24	1295.40	461286.50	373788.20	4.91	
343	8	2	1319.03	468265.30	380767.00	4.92	
344	16	0	1351.00	477782.75	390284.45	4.98	
345	17	10	1376.17	485228.90	397730.60	4.93	
346	9	38	1392.63	490040.50	402542.20	4.86	
347	10	0	1417.00	497246.55	409748.25	4.93	
348	11	15	1442.25	504496.60	416998.30	4.79	
349	12	5	1467.08	511650.61	424152.31	4.80	
350	9	0	1488.00	517668.55	430170.25	4.80	PUMP OFF

TABLE A2-2
PUMPING-RATE DATA FROM THE FT-12 STANDARD TURBINE
FLOW METER DURING THE H-3 MULTIPAD PUMPING TEST

TIME Julian Date DAY:HR:MIN:SEC	FLOW RATE (gpm)	COMMENTS
288: 9: 0: 5	5.23	File H30105
288: 9: 1: 0	5.18	Pump on 9:00
288: 9: 2: 0	5.27	
288: 9: 3: 0	5.23	
288: 9: 4: 0	5.26	
288: 9: 5: 0	5.26	
288: 9:10: 0	5.27	
288: 9:15: 0	5.18	
288: 9:20: 0	4.94	
288: 9:30: 0	4.94	
288:10: 0: 0	4.96	
288:10:57:40	5.00	
288:12: 0: 0	5.08	
288:14: 0: 0	5.11	
288:15:59: 0	5.05	
288:20: 1: 0	4.92	
289: 0: 1: 0	4.84	
289: 4: 1: 0	4.83	
289: 8: 6: 0	5.01	
289:12: 0:47	5.06	
289:16: 1: 1	5.05	
289:20: 0: 0	5.14	
290: 0: 2: 0	3.51	
290: 1: 0: 0	4.92	
290: 2: 1: 0	4.96	
290: 4: 3: 0	4.99	
290: 8: 3:44	4.88	
290:12:11: 9	5.08	
290:16: 4:11	5.12	
290:20: 5: 0	4.94	
291: 0: 1: 0	4.87	
291: 4: 1: 0	4.86	
291: 8: 0: 0	4.85	
291:12:11: 0	5.14	
291:20: 0: 0	4.85	
292: 4: 0: 0	4.83	
292:12: 5: 0	5.08	
292:20: 0: 0	4.91	
293: 4: 0: 0	4.85	
293: 7:30: 0	5.27	
293: 8: 0: 0	5.17	
293:12: 0: 0	5.31	
294: 0: 0: 0	5.23	FLOW ADJUST
294:12:10:15	5.32	294:13:30

TABLE A2-2 (continued)
 PUMPING-RATE DATA FROM THE FT-12 STANDARD TURBINE
 FLOW METER DURING THE H-3 MULTIPAD PUMPING TEST

TIME Julian Date DAY:HR:MIN:SEC	FLOW RATE (gpm)	COMMENTS
295:12:11: 0	5.12	
295:12:41: 0	5.15	
296: 7:30: 0	4.98	End H30105
296: 8: 0: 0	5.04	Start H30115
296:12:19: 2	5.38	
297:12: 0: 0	5.37	
298:12: 0: 0	5.26	
299:12:15: 0	5.12	
300:12:15: 0	5.08	
301:12: 0: 0	5.14	
302:12:14: 0	5.04	
303:12:10: 0	4.94	
304:11:46: 0	4.94	
305:12:15: 0	4.92	
306:12: 3: 0	4.89	
307:12: 0: 0	4.88	
308:12: 0: 0	4.94	
309:12:15: 0	4.97	
310:12:10: 0	5.00	
311:12:40:17	4.91	
312:12: 0: 0	5.03	
313:12: 0: 0	4.99	
314:12: 0: 0	4.96	
315:12:34:45	4.96	
316:12: 5: 0	4.98	
317:12: 0: 0	4.95	
318:12:50: 0	4.99	
319:12:25: 0	4.96	
320:12:16: 0	4.98	
321:12:15: 0	5.13	
322:12:15: 0	5.02	
323:12: 0: 0	4.96	
324:12: 0: 0	4.94	
325:12:50: 0	4.92	
326:12:32: 0	4.90	FLOW ADJUST
327:12: 0: 0	5.32	326:12:55
328:12: 0: 0	5.28	
329:12: 0: 4	5.23	
330:12:49: 0	5.10	
331:12:50: 0	5.14	
332:12:50: 0	5.34	
333:12:50: 0	5.36	
334:12:50: 0	5.21	
335:12:50: 0	5.14	

TABLE A2-2 (continued)
 PUMPING-RATE DATA FROM THE FT-12 STANDARD TURBINE
 FLOW METER DURING THE H-3 MULTIPAD PUMPING TEST

TIME Julian Date DAY:HR:MIN:SEC	FLOW RATE (gpm)	COMMENTS
336:12: 6: 0	5.09	
337:12:52:38	5.09	
338:12: 0: 0	5.32	
339:12:30: 0	5.18	
340:12:16: 0	5.11	
341:12:16: 0	5.31	
342:12:19: 0	5.16	
343:12:39:41	5.42	
344:12:45: 0	5.12	
345:11:52: 0	5.08	
346:12: 0: 0	5.00	
347:10:42: 0	5.02	
347:14:50:38	5.03	End H30115
347:14:57: 0	5.03	Start H30125
348:12:38:25	5.04	
349:12: 4: 0	5.06	
350: 8:59:55	5.01	Pump Off 9:00

TABLE A2-3
PUMPING RATES CALCULATED WITH THE SIX-INCH CALIBRATED
STANDPIPE DURING THE H-3 MULTIPAD PUMPING TEST

DAY	HR	MIN	DISCHARGE VOLUME (gallons)	FLOW RATE (gpm)	COMMENTS
288	9	10	10	5.03	PUMP ON 9:00
288	9	11	16	5.00	
288	9	20	10	4.75	
288	9	21	16	4.73	
288	9	39	10	4.76	
288	9	40	16	4.76	
288	10	0	10	4.75	
288	10	1	16	4.72	
288	10	44	10	4.73	
288	10	45	16	4.71	
288	11	38	10	4.73	
288	11	39	16	4.70	
289	4	42	10	4.69	
289	6	54	16	4.90	
289	7	25	10	4.92	
289	7	26	16	4.87	
290	15	52	10	4.74	
290	15	53	16	4.66	
291	14	4	10	4.72	
291	14	5	5	4.71	
292	8	40	10	4.69	
292	15	59	5	4.70	
292	16	22	5	4.67	
292	16	23	10	4.68	
292	16	24	16	4.62	
293	11	30	10	5.04	
293	16	2	5	5.03	
293	16	3	10	5.03	
293	16	4	16	5.03	
294	9	2	10	5.14	
294	9	57	10	4.89	
294	17	32	10	4.92	FLOW ADJ 13:30
295	10	10	10	4.92	
296	10	50	10	4.91	
296	17	5	10	4.91	
297	10	11	5	4.87	
297	10	12	10	4.89	
297	10	13	16	4.85	
298	10	25	10	4.89	
298	14	25	10	4.87	
298	23	45	10	4.89	
299	6	16	10	4.86	
299	18	7	5	4.88	
299	18	8	10	4.86	
299	18	9	16	4.85	
300	7	30	10	4.86	

TABLE A2-3 (continued)
PUMPING RATES CALCULATED WITH THE SIX-INCH CALIBRATED
STANDPIPE DURING THE H-3 MULTIPAD PUMPING TEST

DAY	HR	MIN	DISCHARGE VOLUME (gallons)	FLOW RATE (gpm)	COMMENTS
300	11	20	10	4.86	
300	18	6	5	4.83	
300	18	7	10	4.84	
300	18	8	16	4.82	
301	7	30	10	4.88	
301	12	5	10	4.84	
301	20	5	5	4.83	
301	20	6	10	4.85	
301	20	7	16	4.85	
302	6	30	10	4.85	
302	13	30	10	4.85	
303	8	19	10	4.84	
304	11	40	10	4.82	
304	17	5	10	4.82	
304	21	30	10	4.82	
305	7	30	10	4.83	
305	17	25	10	4.89	
305	21	30	10	4.90	
306	16	4	10	4.89	
306	23	10	10	4.90	
307	15	40	10	4.88	
307	21	34	10	4.88	
308	9	38	10	4.86	
308	16	45	10	4.85	
308	20	12	10	4.84	
309	10	5	10	4.86	
309	15	25	10	4.84	
309	22	2	10	4.89	
310	9	5	10	4.86	
310	20	2	10	4.90	
311	9	0	10	4.88	
311	23	52	10	4.87	
312	8	30	10	4.85	
312	16	15	10	4.87	
313	8	20	10	4.87	
313	14	30	10	4.85	
313	17	20	10	4.81	
314	8	40	10	4.83	
314	15	45	10	4.83	
314	23	55	10	4.88	
315	7	50	10	4.83	
315	23	55	9	4.85	
316	8	44	10	4.84	
316	15	50	10	4.81	
317	9	10	10	4.86	
318	8	36	10	4.87	

TABLE A2-3 (continued)
PUMPING RATES CALCULATED WITH THE SIX-INCH CALIBRATED
STANDPIPE DURING THE H-3 MULTIPAD PUMPING TEST

DAY	HR	MIN	DISCHARGE VOLUME (gallons)	FLOW RATE (gpm)	COMMENTS
319	8	36	9	4.86	
319	15	15	10	4.85	
320	10	30	10	4.81	
320	17	12	10	4.82	
321	10	52	10	4.82	
321	16	48	10	4.81	
322	10	5	10	4.86	
322	17	12	10	4.82	
323	11	40	10	4.80	
323	18	10	10	4.80	
325	10	20	10	4.80	
325	16	15	10	4.79	
326	8	34	10	4.80	FLOW ADJ 12:55
326	13	36	10	4.96	
326	17	18	10	4.90	
327	8	38	10	4.91	
327	12	34	10	4.90	
328	16	20	10	4.90	
329	9	18	10	4.86	
329	16	10	10	4.87	
330	8	55	10	4.87	
330	17	10	10	4.90	
331	9	35	10	4.96	
331	16	50	10	4.90	
332	8	34	10	4.98	
333	8	26	10	4.93	
333	18	14	10	4.92	
334	8	9	10	4.94	
334	17	45	10	4.96	
335	9	8	10	4.97	
336	12	29	10	5.02	
337	9	2	10	4.98	
337	17	15	10	5.00	
338	16	45	10	5.00	
339	17	0	10	4.97	
340	17	52	10	4.88	
341	10	46	10	4.88	
341	16	8	10	4.77	
342	8	30	10	5.02	
342	16	21	10	4.99	
343	7	54	10	4.96	
344	16	5	10	5.05	
345	17	20	10	5.04	
346	9	55	10	5.01	
347	18	55	10	4.83	
348	17	2	10	4.82	

TABLE A2-3 (continued)
 PUMPING RATES CALCULATED WITH THE SIX-INCH CALIBRATED
 STANDPIPE DURING THE H-3 MULTIPAD PUMPING TEST

DAY	HR	MIN	DISCHARGE VOLUME (gallons)	FLOW RATE (gpm)	COMMENTS
349	9	30	10	4.85	
349	20	30	10	4.84	
350	8	25	10	4.86	PUMP OFF 9:00

APPENDIX 3.0

TEST DESCRIPTION AND PRESSURE RECORDS FOR
DATA-ACQUISITION SYSTEMS DURING THE
H-3 MULTIPAD TEST

WELL TEST DESCRIPTION

* * * * *

Location: WIPP
 Well Site: H-3
 Type of test: LONG TERM PUMPING, MULTIPAD
 Type of pump: RED JACKET 3 HP 32BC
 Unit tested: CULEBRA
 Pumping Well: H-3b2
 Observation Wells: H-3b1, H-3b3, H-1, H-2b2, H-2C,
 H-4b, H-6b, H-5b, H-11b1, H-11b2,
 H-11b3, DOE-1, P-14, P-15, P-17,
 WIPP-18, WIPP-19, WIPP-21, WIPP-22

Year of test: 1985-1986

Start of available data:	085	254	13	40	0
End of available data:	086	101	12	40	0
Start of test:	085	288	10	09	0

Transducer Data	(Serial #	/ Sensitivity	/ Channels)
H-3b2	95079	2.5108	3, 25
H-3b1	103815	2.5175	4, 26
H-3b1	131264	1.0140	4, 26
H-3b1 (Magenta)	103639	1.0056	6, 27
H-3b3	103636	1.0000	5, 28
H-2c	103637	1.0020	P1
H-4b	103638	1.0059	P1
H-11b3	103817	2.1833	3, 16

Available data files: H30075, H30085, H30095, H30105,
 H30115, H30125, H30135, H30145,
 H30155, H20025, H20035, H20045,
 H20055, H20065, H20075, H20085,
 H40015, H40025, H40035, H40045,
 H40055, H40065, H11125, H11135,
 H11145, H11155, H11165, H11176,
 H11186, D10065, D10075, D10095,
 D10105, D10115, D10125, D10135,
 D10145, D10155, D10165, D10175,
 D10016

TABLE A3-1
 TABULATED PRESSURE DATA FROM THE H-3 MULTIPAD PUMPING TEST,
 RECORDED AT THE H-3 HYDROPAD

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi)				COMMENTS
	H-3b2 Culebra	H-3b3 Culebra	H-3b1 Culebra	H-3b1 Magenta	
254:13:40: 0	96.32	79.69	60.80		Start H30075
255:12: 6: 0	96.39	79.64	60.31		
256:12: 6: 0	96.09	79.68	60.34		
257:12: 6: 0	96.99	79.81	60.97		
258:12: 6: 0	96.48	79.90	60.61		
259:12: 6: 0	96.77	80.00	60.93		
260:12:13: 0	96.80	80.13	61.03		
261:11:13: 0	96.95	80.25	61.02		
261:11:30:42	90.65	77.95	58.72		PUMP CHECK
261:12:40:34	96.05	79.53	60.18		
261:15:19: 0	96.49	79.94	60.56		End H30075
261:15:24:30	96.51	79.94	60.56		Start H30085
262:12:20: 0	96.62	80.18	60.85		
263:12:20: 0	96.75	80.32	60.92		
263:22:20: 0	97.28	80.39	64.30		
263:22:50: 0	97.27	80.44	55.87		
264: 4:20: 0	97.11	80.44	59.69		
264:12: 2: 0	97.03	80.48	61.27		
265:12: 2: 0	97.06	80.55	61.36		
266:12: 2: 0	96.87	80.52	61.20		
267:12: 2: 0	96.93	80.63	61.30		
268:12: 2: 0	97.04	80.70	61.38		
269:12: 4: 1	97.09	80.76	61.41		
270:12: 4: 1	97.19	80.90	61.54		
271:12: 0: 0	97.28	80.96	61.62		
272:12: 0: 0	97.35	81.02	61.69		
273:18:22:57	97.49	81.13	61.81		End H30085
273:18:38:34	97.50	81.14	61.79		Start H30095
274:12: 3: 0	97.50	81.14	61.89		
275:12: 3: 0	97.56	81.25	61.99		
276:12: 3: 0	97.61	81.28	62.03		
277:12: 9: 0	97.54	81.23	61.98	64.36	
278:12: 9: 0	97.66	81.30	62.05	64.30	
279:12: 9: 0	97.75	81.45	62.18	64.25	
280:12: 0:20	97.92	81.53	62.30	64.28	
281: 9: 0:20	97.95	81.57	62.32	64.41	
282:12: 5: 0	98.18	81.62	62.42	64.55	
283:12: 6: 1	98.02	81.60	62.31	64.43	
284:13:46:11	98.17	81.72	62.40	64.59	
284:14:59:59	98.13	81.74	62.30	64.36	
284:15: 0: 8	67.43	81.23	62.09	64.35	
284:15: 0:10	87.37	81.20	62.07	64.36	
284:15:14:59	95.66	79.97	60.86	64.50	
284:15:46: 1	97.68	81.33	62.03	64.52	

TABLE A3-1 (continued)
 TABULATED PRESSURE DATA FROM THE H-3 MULTIPAD PUMPING TEST,
 RECORDED AT THE H-3 HYDROPAD

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi)				COMMENTS
	H-3b2 Culebra	H-3b3 Culebra	H-3b1 Culebra	H-3b1 Magenta	
284:15:46:15	87.86	81.26	62.01	64.37	
284:15:54:16	86.20	79.94	60.91	64.55	
284:15:54:30	96.43	80.21	61.01	64.55	
285:12:28: 0	97.98	81.62	62.26	64.41	
286:12: 6: 0	98.05	81.70	62.34	64.39	
286:14:29:50	98.18	81.75	62.37	64.43	
286:14:30: 0	87.49	81.64	62.36	64.15	
286:14:45:50	85.34	79.84	60.73	64.45	
286:14:46: 0	96.07	79.94	60.76	64.44	
287:12: 3: 0	98.09	81.69	62.34	64.44	
288: 8:10:27	98.25	81.76	62.30	64.57	End H30095
288: 8:15:45	98.23	81.76	62.31	64.57	Start H30105
288: 8:30: 0	98.24	81.75	62.31	64.56	
288: 8:45: 0	98.23	81.75	62.28	64.56	
288: 8:59: 0	98.23	81.75	62.25	64.51	
288: 8:59:55	98.24	81.74	62.25	64.52	
288: 9: 0: 0	87.51	81.65	62.22	64.31	PUMP ON
288: 9: 0: 5	87.16	81.53	62.13	64.31	
288: 9: 0:10	87.22	81.46	62.06	64.32	
288: 9: 0:15	87.18	81.40	61.99	64.32	
288: 9: 0:30	87.00	81.26	61.88	64.31	
288: 9: 1: 0	86.78	81.09	61.70	64.31	
288: 9: 2: 0	86.53	80.87	61.48	64.33	
288: 9: 3: 0	86.34	80.71	61.31	64.33	
288: 9: 4: 0	86.24	80.59	61.20	64.35	
288: 9: 5: 0	86.00	80.49	61.08	64.37	
288: 9:10: 0	85.66	80.13	60.73	64.49	
288: 9:15: 0	85.50	79.86	60.47	64.54	
288: 9:20: 0	86.08	79.69	60.30	64.55	
288: 9:25: 0	85.96	79.52	60.13	64.55	
288: 9:30: 0	85.75	79.36	59.96	64.54	
288: 9:45: 0	85.24	78.92	59.53	64.54	
288:10: 0: 0	84.94	78.55	59.17	64.53	
288:10:30: 0	84.30	77.93	58.56	64.53	
288:11:15: 0	83.56	77.17	57.79	64.48	
288:12: 0: 0	82.85	76.53	57.17	64.41	
288:13: 0: 0	82.21	75.88	57.64	64.41	
288:14: 0: 0	81.68	75.32	56.07	64.48	
288:16: 4: 0	80.73	74.38	55.11	64.46	
288:18: 1: 0	79.96	73.64	54.36	64.49	
288:20: 1: 0	79.30	72.95	53.87	64.58	
288:22: 1: 0	78.65	72.32	53.01	64.57	
289: 0: 1: 0	78.03	71.75	52.47	64.56	
289: 4: 1: 0	77.10	70.83	51.46	64.53	

TABLE A3-1 (continued)
 TABULATED PRESSURE DATA FROM THE H-3 MULTIPAD PUMPING TEST,
 RECORDED AT THE H-3 HYDROPAD

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi)				COMMENTS
	H-3b2 Culebra	H-3b3 Culebra	H-3b1 Culebra	H-3b1 Magenta	
289: 8: 6: 0	75.52	69.85	50.48	64.55	
289:12: 0:47	74.57	68.94	49.62	64.55	
289:16: 1: 1	73.91	68.23	48.89	64.57	
289:20: 0: 0	73.21	67.61	48.23	64.58	
289:23:12: 0	72.57	67.07	47.62	64.52	
289:23:22: 0	77.21	67.16	47.64	64.54	
290: 0:36: 0	78.35	67.94	48.60	64.65	
290: 0:36:30	74.94	67.94	48.62	64.66	
290: 0:39: 0	74.63	67.72	48.43	64.64	
290: 0:39:30	71.62	67.62	48.35	64.65	
290: 0:40: 0	71.59	67.58	48.30	64.65	
290: 1: 0: 0	73.50	67.38	48.06	64.64	
290: 2: 1: 0	72.93	67.11	47.61	64.59	
290: 4: 3: 0	72.73	66.78	47.40	64.68	
290: 8: 5: 0	72.25	66.23	46.80	64.64	
290:12:11: 9	71.58	65.71	46.17	64.48	
290:16: 4:11	71.24	65.31	45.77	64.57	
290:20: 5: 0	71.10	64.88	45.51	64.72	
291: 0: 1: 0	70.42	64.45	44.90	64.69	
291: 6: 0: 0	69.63	63.84	44.14	64.66	
291:12:11: 0	69.06	63.25	43.51	64.55	
291:18: 0: 0	68.59	62.80	43.05	64.67	
292: 0: 0: 0	67.95	62.27	42.44	64.62	
292: 6: 5: 0	67.43	61.79	41.94	64.64	
292:12: 5: 0	67.02	61.34	41.47	64.52	
292:18: 0: 0	66.65	60.97	41.08	64.66	
293: 0: 0: 0	66.13	60.53	40.59	64.62	
293:12: 0: 0	63.92	59.31	39.37	64.64	
294: 0: 0: 0	62.81	58.30	38.30	64.70	
294:12:10:15	61.36	57.33	37.14	64.66	
294:13:29:10	61.21	57.24	37.05	64.57	
294:13:29:20	62.21	57.23	37.04	64.58	
294:13:29:30	63.24	57.27	37.03	64.58	
294:13:31:10	62.16	57.30	37.07	64.56	
294:13:31:20	58.07	57.30	37.06	64.57	
294:13:31:50	61.92	57.27	37.05	64.58	
294:13:35: 0	61.87	57.26	37.02	64.59	
294:16:14: 0	61.99	57.27	37.05	64.69	
295: 0:14: 0	61.62	56.87	36.68	64.75	
295:12:11: 0	60.84	56.22	35.88	64.64	
296: 0:15: 0	60.04	55.64	35.21	64.74	
296: 7:30: 0	59.51	55.22	34.74	64.68	End H30105
296: 8: 0: 0	59.48	55.19	34.67	64.63	Start H30115
296:12:19: 2	59.35	55.00	34.49	64.63	

TABLE A3-1 (continued)
 TABULATED PRESSURE DATA FROM THE H-3 MULTIPAD PUMPING TEST,
 RECORDED AT THE H-3 HYDROPAD

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi)				COMMENTS
	H-3b2 Culebra	H-3b3 Culebra	H-3b1 Culebra	H-3b1 Magenta	
297:12: 0: 0	58.10	53.90	33.25	64.64	
298:12: 0: 0	57.00	52.90	32.13	64.64	
299:12:15: 0	56.12	52.05	31.17	64.62	
300:12:15: 0	55.16	51.18	30.20	64.62	
301:12: 0: 0	54.31	50.43	29.38	64.64	
302:12:14: 0	53.53	49.72	28.57	64.69	
303:12:10: 0	52.66	48.94	27.76	64.68	
305:12:15: 0	51.13	47.54	26.39	65.01	
306:12: 3: 0	50.19	46.67	25.52	64.78	
307:12: 0: 0	49.49	45.96	24.82	64.74	
308:12: 0: 0	48.88	45.29	24.18	64.72	
309:12:15: 0	48.34	44.78	23.70	64.74	
310:12:10: 0	47.58	44.14	23.12	64.77	
312:12: 0: 0	46.46	43.04	22.08	64.75	
313:12: 0: 0	46.02	42.56	21.65	64.85	
314:12: 0: 0	45.42	41.98	21.12	64.86	
315:12:34:45	44.87	41.51	20.65	64.88	
316:12: 5: 0	44.74	41.11	20.30	64.89	
317:12: 0: 0	44.07	40.60	19.81	64.88	
318:12:50: 0	43.54	40.12	19.39	64.89	
319:12:25: 0	43.02	39.61	18.88	64.87	
320:12:16: 0	42.63	39.24	18.53	64.84	
321:12:15: 0	42.18	38.87	18.24	64.89	
322:12:15: 0	41.76	38.46	17.87	64.95	
323:12: 0: 0	41.31	37.99	17.43	64.99	
324:12: 0: 0	40.83	37.59	17.02	64.91	
325:12:50: 0	40.74	37.38	16.86	64.91	
326:12:32: 0	41.02	37.14	16.53	64.92	
327:12: 0: 0	39.26	36.31	15.86	64.93	
328:12: 0: 0	38.82	35.88	15.46	64.95	
329:12: 0: 4	38.48	35.55	15.17	64.98	
330:12:49: 0	38.06	35.16	14.81	65.08	
331:12:50: 0	37.53	34.73	14.38	65.04	
332:12:50: 0	36.79	34.29	13.98	65.06	
333:12:50: 0	36.60	33.93	13.66	65.07	
334:12:50: 0	36.27	33.62	13.39	65.15	
335:12:50: 0	35.78	33.17	12.95	65.10	
336:12: 6: 0	35.18	32.77	12.54	65.10	
337:12:52:38	34.71	32.33	12.13	65.11	
338:12: 0: 0	34.27	31.92	11.76	65.05	
339:12:30: 0	33.94	31.56	11.41	65.03	
340:12:16: 0	34.35	31.63	11.49	65.08	
341:12:16: 0	33.85	31.35	11.24	65.06	
342:12:19: 0	33.26	30.98	10.91	65.08	

TABLE A3-1 (continued)
 TABULATED PRESSURE DATA FROM THE H-3 MULTIPAD PUMPING TEST,
 RECORDED AT THE H-3 HYDROPAD

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi)				COMMENTS
	H-3b2 Culebra	H-3b3 Culebra	H-3b1 Culebra	H-3b1 Magenta	
343:12:39:41	33.07	30.74	10.69	65.13	
344:12:45: 0	32.26	30.23	10.15	65.28	Changed
346:12: 0: 0	32.15	29.89		65.25	Transducers
347:14:50:38	32.53	29.75		65.21	End H30115
347:14:57: 0	32.53	29.74	21.77	65.21	Start H30125
348:12:38:25	32.10	29.56	18.73	65.12	
349:12: 4: 0	31.90	29.37	18.46	65.13	
350: 8: 7: 0	31.69	29.23	18.30	65.20	
350: 8:59:55	31.64	29.22	18.28	65.15	
350: 9: 0: 0	41.37	29.26	18.29	65.15	PUMP OFF
350: 9: 0: 5	42.16	29.37	18.36	65.15	
350: 9: 0: 9	42.31	29.45	18.41	65.14	
350: 9: 0:14	42.39	29.51	18.48	65.15	
350: 9: 0:29	42.57	29.65	18.59	65.15	
350: 9: 1: 4	42.78	29.85	18.79	65.15	
350: 9: 2: 0	42.96	30.04	18.99	65.15	
350: 9: 3: 0	43.15	30.19	19.13	65.16	
350: 9: 4: 0	43.24	30.30	19.25	65.15	
350: 9: 5: 0	43.34	30.40	19.35	65.16	
350: 9:10: 0	43.72	30.75	19.69	65.16	
350: 9:15: 0	43.95	31.00	19.95	65.17	
350: 9:20: 0	44.17	31.21	20.14	65.17	
350: 9:25: 0	44.39	31.39	20.34	65.16	
350: 9:30: 0	44.55	31.56	20.51	65.17	
350: 9:45: 0	45.01	31.99	20.95	65.18	
350:10: 0: 0	45.40	32.37	21.32	65.19	
350:10:30: 0	46.00	32.99	21.91	65.17	
350:11: 0: 0	46.51	33.50	22.45	65.17	
350:12: 0: 0	47.36	34.34	23.29	65.15	
350:13: 0: 0	48.05	35.04	23.99	65.15	
350:14: 0: 0	48.66	35.64	24.59	65.15	
350:16: 0: 0	49.65	36.64	25.62	65.21	
350:18: 0: 0	50.50	37.46	26.46	65.25	
350:20: 0: 0	51.19	38.15	27.16	65.26	
350:22: 0: 0	51.79	38.78	27.77	65.24	
351: 0: 0: 0	52.37	39.34	28.34	65.26	
351: 4: 0: 0	53.32	40.32	29.34	65.25	
351: 8: 0: 0	54.12	41.18	30.20	65.18	
351:12: 4: 0	54.88	41.98	31.02	65.11	
351:16:10: 0	55.66	42.74	31.79	65.17	
351:20:11:47	56.37	43.41	32.48	65.26	
352: 0:11:47	56.94	43.98	33.06	65.27	
352: 6:11:47	57.68	44.74	33.84	65.26	
352:12:11:47	58.31	45.46	34.55	65.11	

TABLE A3-1 (continued)
 TABULATED PRESSURE DATA FROM THE H-3 MULTIPAD PUMPING TEST,
 RECORDED AT THE H-3 HYDROPAD

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi)				COMMENTS
	H-3b2 Culebra	H-3b3 Culebra	H-3b1 Culebra	H-3b1 Magenta	
352:18:19: 0	59.19	46.22	35.32	65.24	
353: 0: 4: 0	59.80	46.85	35.94	65.21	
353: 6: 4: 0	60.41	47.47	36.57	65.22	
353:12: 1: 0	60.89	48.03	37.10	65.09	
353:18: 1: 0	61.52	48.56	37.68	65.25	
354: 0: 1: 0	62.00	49.03	38.16	65.24	
354:12:11: 0	62.86	49.99	39.10	65.12	
355: 0:11: 0	63.83	50.84	39.96	65.25	
355:12:20: 0	64.50	51.63	40.72	65.10	
356: 0:20: 0	65.38	52.42	41.54	65.24	
356:12:20: 0	65.99	53.10	42.20	65.14	
357: 0:20: 0	66.64	53.68	42.81	65.23	
357:12: 0: 5	67.16	54.33	43.41	65.12	
358:12: 0: 5	68.25	55.37	44.48	65.19	
359:12: 0: 5	69.24	56.36	45.47	65.18	
360:12: 1: 0	70.24	57.37	46.47	65.17	
361:12: 1: 0	71.06	58.18	47.28	65.20	
362:12: 1: 0	71.87	58.99	48.10	65.18	
363:12: 1: 0	72.59	59.73	48.82	65.19	
364:12:28: 0	73.34	60.48	49.57	65.20	
365:12:28: 0	74.05	61.08	50.16	65.25	
1:12:28: 0	74.68	61.73	50.82	65.24	
2:12: 8: 0	75.32	62.32	51.41	65.26	
3:12: 5: 0	75.88	62.90	51.97	65.30	
4:12: 5: 0	76.31	63.33	52.40	65.29	
5:12: 5: 0	76.83	63.86	52.91	65.24	
6:11: 6: 0	0.00	64.39	53.27	65.25	End H30125
6:14:12:14	77.45	64.51	53.41	65.25	Start H30135
7:12:23: 0	77.77	64.81	53.72	65.42	
8:12:23: 0	78.13	65.17	54.07	65.29	
9:12: 4: 0	78.55	65.64	54.54	65.27	
10:12: 4: 0	78.97	66.04	54.93	65.26	
11:12: 4: 0	79.34	66.45	55.34	65.24	
12:12:18: 0	79.70	66.81	55.70	65.27	
13:12: 0: 0	80.08	67.22	56.07	65.24	
14:12: 0: 0	80.51	67.65	56.52	65.31	
15:12: 0: 0	80.84	67.99	56.87	65.30	
16:12: 0: 0	81.16	68.32	57.20	65.35	
17:12: 0: 0	81.46	68.63	57.50	65.31	
18:12: 0: 0	81.77	68.92	57.80	65.36	
19:12:30: 0	82.07	69.25	58.12	65.33	
20:12: 0: 0	82.42	69.56	58.44	65.34	
21:12: 0: 0	82.71	69.74	58.73	66.80	
22:12: 0: 0	82.88	69.88	58.89	66.77	

TABLE A3-1 (continued)
 TABULATED PRESSURE DATA FROM THE H-3 MULTIPAD PUMPING TEST,
 RECORDED AT THE H-3 HYDROPAD

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi)				COMMENTS
	H-3b2 Culebra	H-3b3 Culebra	H-3b1 Culebra	H-3b1 Magenta	
23:13: 8: 0	83.23	70.24	59.24	66.72	
24:13:15:59	83.52	70.54	59.56	66.79	
25:13:15:59	83.68	70.68	59.70	66.81	
26:11:36: 0	83.88	70.89	59.88	66.75	
27:12:43: 0	84.18	71.20	60.20	66.74	
28:12:43: 0	84.47	71.52	60.52	66.77	
29:11:23: 0	84.61	71.64	60.66	66.86	
30:11:23: 0	84.86	71.90	60.90	66.78	
31:11:23: 0	85.16	72.18	61.18	66.83	
32:11:23: 0	85.34	72.38	61.37	66.85	
33:11: 9: 0	85.59	72.59	61.57	66.89	
34:11: 6: 0	85.85	72.85	61.82	66.90	
35:11: 6: 0	86.02	73.08	62.05	66.92	
36:11: 6: 0	86.23	73.26	62.25	66.95	
37:12:41: 0	86.42	73.47	62.36	66.97	
38:12:41: 0	86.60	73.65	62.65	66.98	
39:12:41: 0	86.73	73.77	62.76	66.97	
40:12:41: 0	86.99	74.00	62.95	67.02	
41:11:59: 0	87.08	74.13	63.08	67.00	
42:13:18: 5	87.35	74.41	64.46	67.15	
43:13: 0: 0	87.40	74.43	63.33	66.95	
44:10:47: 0	87.53	74.58	63.51	66.82	
45:12:29: 0	87.69	74.73	63.66	66.90	
46:11:57: 0	87.86	74.92	63.85	66.87	
47:12: 0: 0	88.09	75.12	64.06	66.96	
48:12: 0: 0	88.20	75.25	64.20	66.94	
49:12: 0: 0	88.39	75.40	64.36	66.96	
50:12: 0: 0	88.52	75.54	64.49	66.94	
51:12: 0: 0	88.69	75.70	64.65	66.96	
52:12:20: 0	88.80	75.79	64.73	66.99	
53:12:20: 0	88.87	75.87	64.80	66.93	
54:11:24: 0	89.04	76.04	64.97	66.92	
55:11:24: 0	89.13	76.11	65.04	66.94	
56:11:24: 0	89.25	76.24	65.17	66.90	
57:10: 7:29	89.47	76.46	65.39	66.97	End H30135
57:10:33: 1	89.48	76.45	65.37	66.97	Start H30145
57:12:57: 0	89.50	76.48	65.37	66.98	
58:10:57: 0	89.56	76.51	65.44	67.04	
59:12:27: 0	89.63	76.61	65.53	66.96	
60:12:27: 0	89.83	76.78	65.71	66.92	
61:14:24:35	90.03	76.97	65.91	66.97	
62:10:36: 0	90.12	77.02	65.97	67.06	End H30145
62:12:43: 0	90.12	77.01	65.97	67.03	Start H30155
63:12: 6:22	90.16	77.07	66.01	66.95	

TABLE A3-1 (continued)
 TABULATED PRESSURE DATA FROM THE H-3 MULTIPAD PUMPING TEST,
 RECORDED AT THE H-3 HYDROPAD

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi)				COMMENTS
	H-3b2 Culebra	H-3b3 Culebra	H-3b1 Culebra	H-3b1 Magenta	
64:11:55:11	90.35	77.27	66.21	66.96	
65:11:55:11	90.42	77.32	66.26	66.98	
66:11:50: 0	90.60	77.52	66.46	67.06	
67:11:50: 0	90.70	77.61	66.54	67.00	
68:11:50: 0	90.83	77.74	66.68	67.04	
69:11:50: 0	90.95	77.81	66.76	67.10	
70:11:54: 0	91.18	78.01	66.96	67.22	
71:11:54: 0	91.26	78.11	67.05	67.30	
72:11:35: 0	91.33	78.18	67.11	67.28	
73:12:58: 0	91.49	78.30	67.23	67.30	
74:12:58: 0	91.48	78.32	67.26	67.21	
75:12:58: 0	91.58	78.42	67.37	67.17	
76:12:58: 0	91.80	78.61	67.54	67.24	
77:12:42: 0	91.89	78.69	67.64	67.32	
78:11:43: 0	91.82	78.64	67.56	67.27	
79:11:43: 0	91.84	78.63	67.52	67.16	
80:12:38: 0	91.91	78.72	67.60	67.08	
81:12:38: 0	92.05	78.85	67.74	67.08	
82:11:30: 0	92.11	78.93	67.80	67.10	
83:11:30: 0	92.20	79.00	67.86	67.10	
84:11:30: 0	92.34	79.12	67.96	67.14	
85:11:30: 0	92.39	79.15	67.98	67.18	
86:11:30: 0	92.45	79.21	68.02	67.14	
87:11:30: 0	92.55	79.32	68.12	67.13	
88:11:30: 0	92.70	79.47	68.28	67.18	
89:11:30: 0	92.77	79.55	68.35	67.18	
90:11:49:42	92.82	79.70	68.49	67.19	
93:12:12: 3	93.02	80.29	68.87	67.81	
98:11:22:54	93.31	80.19	69.05	67.67	
100:17:46:52	93.69	80.67	68.95	67.85	
101:12:40: 0	93.78	80.62		67.78	End H30155

TABLE A3-2
 TABULATED PRESSURE DATA FROM THE H-3 MULTIPAD
 PUMPING TEST, RECORDED AT OBSERVATION WELL H-2c

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi) H-2c	COMMENTS
264: 8:33:18	103.14	File H20025
264:12:20: 0	103.17	
265:12:20: 0	103.21	
266:12:20: 0	103.13	
267:12:20: 0	103.18	
268:12:20: 0	103.18	
269:12:20: 0	103.23	
270:12: 0: 2	103.31	
271:12:11: 0	103.33	
272:12:11: 0	103.34	
273:12:11: 0	103.31	
273:23:41: 0	103.37	End H20025
274:14:15:58	103.40	Start H20035
275:12:19: 0	103.41	
276:13:10: 2	103.44	
277:12:12: 0	103.33	
278:12:12: 0	103.34	
279:12:12: 0	103.46	
280:12:12: 0	103.52	
281:12:12: 0	103.52	
282:12:12: 0	103.53	
283:12:12: 0	103.49	
284:11:12: 1	103.53	
285:12:24: 0	103.56	
286:12:24: 0	103.59	
287:12:19: 0	103.57	
288: 7:49:35	103.61	End H20035
288: 7:59: 0	103.60	Start H20045
288: 9: 0: 0	103.57	PUMP ON
288:12: 0: 0	103.54	
289:12:10: 0	103.62	
290:12:45: 0	103.68	
291:12:45: 0	103.67	
292:12:17: 0	103.65	
293:12:17: 0	103.67	
294:12:25: 0	103.72	
295:12:25: 0	103.75	
296:12: 8: 0	103.76	
297:12:15: 0	103.73	
298: 8:45: 0	103.72	End H20045
298: 9: 5: 0	103.72	Start H20055
298:12: 5: 0	103.72	
299:12: 5: 1	103.75	
300:12: 5: 0	103.73	

TABLE A3-2 (continued)
 TABULATED PRESSURE DATA FROM THE H-3 MULTIPAD
 PUMPING TEST, RECORDED AT OBSERVATION WELL H-2c

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi) H-2c	COMMENTS
301:12: 5: 1	103.77	
302:12: 5: 0	103.80	
303:12: 4: 0	103.81	
304:12:44: 0	103.95	
305:12: 2: 0	103.94	
306:12: 2: 0	103.87	
307:12: 2: 0	103.83	
308:12:59:48	103.79	
309:12:59:48	103.87	
310:12:46: 0	103.88	
311:12:46: 0	103.84	
312:12:46: 0	103.87	
313:12:46: 0	103.89	
314:12:46: 0	103.84	
315:12:46: 0	103.85	
316:13:39: 0	103.88	
317: 0:39: 0	103.83	
317:12:35: 1	103.81	
318: 0:30: 1	103.81	
318:12:30: 0	103.81	
319: 0:30: 0	103.74	
319:12:30: 0	103.73	
320:12:30: 0	103.72	
321:12:30: 0	103.76	
322:12:30: 1	103.74	
322:14:30: 1	103.74	End H20055
323:10: 0: 1	103.64	Start H20065
323:12: 0: 1	103.64	
324:12: 0: 1	103.57	
325:12: 0: 1	103.62	
326:12: 6: 0	103.56	
327:12: 6: 0	103.51	
328:12: 6: 0	103.49	
329:12: 6: 0	103.47	
330:12: 6: 0	103.46	
331:12: 6: 1	103.40	
332:12: 3: 0	103.38	
333:12: 3: 0	103.36	
334:12:31: 0	103.36	
335:12:31: 0	103.20	
336:12:13: 0	103.12	
337:12:13: 0	103.15	
338:12:13: 0	103.03	
339:12:13: 0	102.92	

TABLE A3-2 (continued)
 TABULATED PRESSURE DATA FROM THE H-3 MULTIPAD
 PUMPING TEST, RECORDED AT OBSERVATION WELL H-2c

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi) H-2c	COMMENTS
340:12:13: 0	102.97	
341:12:13: 0	102.92	
342:12:13: 0	102.90	
343:12:13: 0	102.87	
344:12:13: 0	102.82	
345:12:13: 0	102.72	
346:12:55: 0	102.72	
347:12:55: 0	102.59	
348:12:55: 0	102.52	
349:12:55: 0	102.45	
350: 7:55: 0	102.43	End H20065
350: 8:46: 9	102.41	Start H20075
350: 9: 6: 9	102.41	PUMP OFF
350:12:23:18	102.40	
351:12:23:18	102.34	
352:12:23:18	102.22	
353:12:23:18	102.20	
354:12:23:18	102.12	
355:12:23:18	102.05	
356:12:23:18	102.03	
357:12:50: 0	101.98	
358:12:50: 0	101.86	
359:12:50: 0	101.77	
360:12:50: 0	101.76	
361:12:50: 0	101.65	
362:12:50: 0	101.61	
363:12:50: 0	101.52	
364:12:50: 0	101.48	
365:12:50: 0	101.36	
1:12:50: 0	101.33	
2:12: 3: 1	101.26	
3:12:39: 0	101.19	
4:12:39: 0	101.05	
5:12:39: 1	101.00	
6:12:39: 0	101.03	
7:12:39: 0	100.89	
8: 4:39: 1	100.82	End H20075
8:10:39: 1	100.77	Start H20086
8:12:39: 0	100.79	
9:14:38: 1	100.79	
10:10:38: 0	100.68	
11:11:38: 0	100.63	
12:12:38: 0	100.57	
13:11:15: 0	100.52	

TABLE A3-2 (continued)
 TABULATED PRESSURE DATA FROM THE H-3 MULTIPAD
 PUMPING TEST, RECORDED AT OBSERVATION WELL H-2c

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi) H-2c	COMMENTS
14:12:15: 0	100.58	
15:13:15: 0	100.56	
16:14:15: 1	100.50	
17:10:15: 0	100.42	
18:11:15: 0	100.39	
19:12:15: 0	100.38	
20:13:15: 0	100.40	
21:14:15: 0	100.36	
22:10:15: 0	100.20	
23:12:18: 0	100.27	
24:13:18: 1	100.28	
25:14:18: 0	100.19	
26:10:18: 0	100.11	
27:11:18: 0	100.15	
28:12:18: 1	100.23	
29:13:18: 0	100.11	
30:14:18: 1	100.14	
31:10:18: 1	100.17	
32:13:58: 1	100.17	
33: 9:58: 1	100.15	
34:12:14: 0	100.21	
35:13:14: 1	100.25	
36:14:14: 0	100.23	
37:10:20: 0	100.18	
38:11:20: 0	100.20	
39:12:20: 0	100.14	
40:13:20: 0	100.20	
41:10:19: 1	100.17	
42:11:19: 1	100.14	
43:12:19: 0	100.09	
44:12: 1: 1	100.14	
45:13: 1: 1	100.08	
46:12:11: 0	100.12	
47:10:38: 1	100.14	
48:11:38: 1	100.14	
49:12:38: 1	100.14	
50:13:38: 1	100.15	
51:14:38: 1	100.17	
52:10:38: 1	100.11	
53:11:38: 1	100.07	
54:12:38: 1	100.12	
55:10:18:58	100.07	
56:11:18:58	100.06	
57:12:18:58	100.14	

TABLE A3-2 (continued)
 TABULATED PRESSURE DATA FROM THE H-3 MULTIPAD
 PUMPING TEST, RECORDED AT OBSERVATION WELL H-2c

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi) H-2c	COMMENTS
58:10: 8: 0	100.13	
59:11: 8: 0	100.07	
60:12: 8: 0	100.15	
61:11:23: 1	100.19	
62:13:21: 0	100.23	
63:14:21: 0	100.17	
64:10:21: 0	100.23	
65:11:21: 0	100.19	
66:10:57: 0	100.27	
67:11:57: 0	100.27	
68:15:51: 0	100.37	
69:11:51: 0	100.31	
70:12:51: 0	100.41	
71:13:51: 0	100.41	
72: 9:51: 0	100.45	
73:10:51: 0	100.44	
74:11:51: 0	100.41	
75:16: 0: 0	100.45	
76:12: 6: 0	100.50	
77:13: 6: 0	100.51	
78:11: 1: 0	100.40	
79:12: 1: 0	100.33	
80:13: 1: 0	100.33	
83:12:30: 0	100.44	
84:12:30: 0	100.49	
86:12:51: 0	100.45	
90:12:40: 0	100.63	

TABLE A3-3
 TABULATED PRESSURE DATA FROM THE H-3 MULTIPAD
 PUMPING TEST, RECORDED AT OBSERVATION WELL H-4b

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi) H-4b	COMMENTS
270:13:50: 0		Start H40015
270:14:15:34	56.85	
273:12: 5: 0	56.38	
274:12: 5: 0	56.37	
275:12:35: 0	56.35	
276:12:35: 0	56.34	
277:12:35: 0	56.24	
278:12:35: 0	56.24	
279:12:35: 0	56.30	
280:12:35: 0	56.34	
281:12:35: 0	56.33	
282:12:35: 0	56.37	
283:12:35: 0	56.26	
284:11:35: 0	56.24	
286:11:27: 0	56.34	
287:12: 4: 0	56.23	
288: 6:56: 0	56.27	End H40015
288: 7: 8:30	56.26	Start H40025
288: 9: 0: 0	56.22	PUMP ON
288:12: 0: 0	56.09	
289:12: 0: 0	56.22	
290:12:25: 0	56.27	
291:12:25: 0	56.19	
292:12:25: 0	56.17	
293:12:25: 0	56.22	
294:12: 0: 0	56.26	
295: 2: 0: 0	56.30	
296:12:10: 0	56.47	
297:12:31: 1	56.32	
298:12:31: 1	56.12	
299: 7:31: 1	56.22	
300:12:45: 1	56.13	
301:12:45: 1	56.18	
302:12: 9: 0	56.17	End H40025
302:13:15: 0	56.21	Start H40035
303:12:17: 0	56.16	
304:12: 5: 0	56.26	
305: 9: 5: 0	56.38	
306:12: 1: 0	56.28	
307:12: 1: 0	56.15	
308:12:15: 0	56.13	
309:12:15: 0	56.17	
310:12:15: 0	56.18	
311:12:37: 0	56.16	

TABLE A3-3 (continued)
 TABULATED PRESSURE DATA FROM THE H-3 MULTIPAD
 PUMPING TEST, RECORDED AT OBSERVATION WELL H-4b

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi) H-4b	COMMENTS
312:12:37: 0	56.18	
313:12:30: 0	56.25	
314:12:30: 0	56.20	
315:12:30: 0	56.20	
316: 9:30: 0	56.23	
318:12: 5: 0	56.30	
321:12: 5: 0	56.37	
322:12: 5: 0	56.26	
323:12: 5: 0	56.16	
324: 1: 5: 0	56.16	
325:12:12: 0	56.45	
326:12:12: 0	56.25	
327:12: 9: 0	56.15	
328:12: 9: 0	56.17	
329:12: 9: 0	56.17	
330:12: 9: 0	56.21	
331:10:42:30	56.12	End H40035
331:10:55: 0	56.13	Start H40045
331:12:55: 0	56.19	
332:12:55: 0	56.21	
333:12:55: 0	56.21	
334:12:55: 0	56.28	
335:12:55: 0	56.14	
336:12:55: 0	56.14	
337:12:55: 0	56.21	
338:12:55: 0	56.15	
339:12:55: 0	56.09	
340:12:55: 0	56.22	
341:12:55: 0	56.17	
342:12:55: 0	56.21	
343:12:55: 0	56.23	
344:12:55: 0	56.28	
345:12:55: 0	56.22	
346: 7:55: 0	56.28	
347:12:51: 0	56.30	
348:12:51: 0	56.18	
349:12:51: 0	56.11	
349:16:51: 0	56.24	End H40045
349:18:57:44	56.32	Start H40055
350: 9:12:28	56.10	PUMP OFF
350:12:11:35	56.12	
351:12:11:35	56.11	
352:12:11:35	56.05	
353:12:11:35	56.10	

TABLE A3-3 (continued)
 TABULATED PRESSURE DATA FROM THE H-3 MULTIPAD
 PUMPING TEST, RECORDED AT OBSERVATION WELL H-4b

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi) H-4b	COMMENTS
354:12:11:35	56.10	
355:12:11:35	56.09	
356:12:11:35	56.17	
357:12:11:35	56.13	
358:12:11:35	56.15	
359:12:11:35	56.13	
360:12:11:35	56.19	
361:12:11:35	56.16	
362:12:11:35	56.17	
363:12:11:35	56.14	
364:12:24: 1	56.19	
365: 8:24: 1	56.22	End H40055
365: 9: 4:59	56.18	Start H40065
365:12: 5: 0	56.17	
1:12:47: 0	56.19	
2:12:26: 0	56.18	
3:12:18: 1	56.23	
4:12:18: 0	56.13	
5:12:18: 0	56.14	
6:12:18: 0	56.24	
7:12:18: 1	56.20	
9: 8:42:51	56.37	
10:14:42:51	56.22	
11:10:42:51	56.11	
12:16:42:51	56.19	
13:12:42:51	56.12	
14: 8:42:51	56.20	
15:14:42:51	56.28	
16:10:42:51	56.20	
17:16:42:51	56.28	
18:12:42:51	56.17	
19: 8:42:51	56.08	
20:14:42:51	56.29	
21:10:42:51	56.22	
22:16:42:51	56.23	
23: 2:42:51	56.24	
25:10: 5: 1	56.27	
26:16: 5: 1	56.22	
27:12: 5: 1	56.14	
28: 8: 5: 1	56.22	
29:14: 5: 1	56.14	
30:10: 5: 1	56.13	
31:16: 5: 1	56.23	
32:12: 5: 1	56.15	

TABLE A3-3 (continued)
TABULATED PRESSURE DATA FROM THE H-3 MULTIPAD
PUMPING TEST, RECORDED AT OBSERVATION WELL H-4b

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi) H-4b	COMMENTS
33: 8: 5: 1	56.23	
34:12:43: 1	56.24	
35: 8:43: 0	56.15	
36: 4:43: 1	56.37	End H40065

TABLE A3-4
 TABULATED PRESSURE DATA FROM THE H-3 MULTIPAD
 PUMPING TEST, RECORDED AT OBSERVATION WELL H-11b3

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi) H-11b3	COMMENTS
245:18:29:23	71.38	File H11125
246:12:29:23	71.26	
247:10:54: 3	71.25	
248:12:18: 0	71.27	
249:12:18: 0	71.26	
250:12:18: 0	71.27	
251:12:18: 0	71.23	
252:12:18: 0	71.28	
253:12:18: 0	71.31	
254:12:18: 0	71.30	
255:12:18: 0	71.29	
256:12:18: 0	71.23	
257:12:18: 0	71.33	
258:12:24:18	71.36	
259:12: 0: 0	71.37	
260:12:23: 0	71.46	
261:12:23: 0	71.48	
262:12:24: 0	71.49	
263:12:24: 0	71.53	
264:12:24: 0	71.56	
265:12:24: 0	71.58	
266:12:24: 0	71.44	
267:12:24: 0	71.48	
268:12:24: 0	71.48	
269:12: 0: 0	71.49	
269:12:30: 0	71.46	
270: 8:30: 0	71.60	End H11125
270: 8:46: 0	71.57	Start H11135
270:12:16: 0	71.55	
271:12:16: 0	71.56	
272:12:16: 0	71.48	
273:12:16: 0	71.43	
274:12:16: 0	71.50	
275:12: 0: 0	71.55	
276:12: 0: 0	71.59	
277:12: 0: 0	71.42	
278:12: 0: 0	71.49	
279:12: 0: 0	71.59	
280:12: 0: 0	71.59	
281:12: 0: 0	71.59	
282:12:26: 0	71.57	
283:12: 3: 0	71.50	
284:12: 3: 0	71.54	
285:12: 4: 0	71.56	

TABLE A3-4 (continued)
 TABULATED PRESSURE DATA FROM THE H-3 MULTIPAD
 PUMPING TEST, RECORDED AT OBSERVATION WELL H-11b3

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi) H-11b3	COMMENTS
286:12: 3: 0	71.58	
287:12: 3: 0	71.56	
288: 6:15: 0	71.56	End H11135
288: 6:42:16	71.60	Start H11145
288: 9: 0: 0	71.57	PUMP ON
288:12: 0: 0	71.49	
289: 0: 0: 0	71.51	
289:12: 0: 0	71.58	
290: 0: 6: 0	71.61	
290:12:40: 0	71.63	
291: 0:40: 0	71.60	
291:12:40: 0	71.58	
292: 0:40: 0	71.56	
292:12:28: 0	71.50	
293: 0:28: 0	71.53	
293:12:28: 0	71.51	
294: 0:28: 0	71.50	
294:12:20:34	71.51	
295: 0:22: 0	71.52	
295:12:10: 0	71.47	
296: 0:14: 4	71.48	
296:12:14: 4	71.40	
297: 0:14: 4	71.38	
297:12:14: 4	71.25	
298: 0:14: 4	71.23	
298:12:14: 4	71.18	
299:12:14: 4	71.15	
300:12: 4: 0	71.03	
301:12: 4: 0	70.97	
302:12: 4: 0	70.93	
303:12: 1: 0	70.85	
304:12:27: 0	70.89	
305:13: 7:42	70.81	
306:12:10: 0	70.67	
307:12:10: 0	70.51	
308:12:10: 0	70.41	
309:12:10: 0	70.44	
310:12:16: 0	70.27	
311:12:10: 0	70.21	
312:12:10: 0	70.10	
313:12:10: 0	70.14	
314:12:10: 0	70.03	
315:12:27:35	69.93	
316:10:38: 4	69.83	

TABLE A3-4 (continued)
 TABULATED PRESSURE DATA FROM THE H-3 MULTIPAD
 PUMPING TEST, RECORDED AT OBSERVATION WELL H-11b3

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi) H-11b3	COMMENTS
317:12:40: 0	69.85	
318:12:50: 1	69.75	
319:12:20: 0	69.66	
320:12:21: 0	69.66	
321:12:46: 0	69.67	
322:12:45: 0	69.64	
323:12:54: 0	69.48	
324:12: 9: 0	69.41	
324:16: 9: 0	69.45	End H11145
324:18:55:56	69.43	Start H11155
325:12:53: 0	69.48	
326:12:45: 1	69.42	
327:12:45: 1	69.36	
328:12:45: 1	69.32	
329: 8:45: 1	69.30	
330:12: 1:40	69.26	
331:12: 1:40	69.22	
332:12: 1:40	69.21	
333:12: 1:40	69.18	
334:12:26: 0	69.20	
335:12:26: 0	69.03	
336:12:29: 0	68.89	
337:12:34:59	68.98	
338:12:34:59	68.87	
339:12:34:59	68.78	
340:12:34:59	68.85	
341:12:34:59	68.84	
342:12:34:59	68.80	
343:12:34:59	68.80	
344:12:35: 0	68.72	
345:12:34:59	68.65	
346:12:35: 0	68.62	
347:12:35: 1	68.54	
348:12:35: 0	68.53	
349:12:35: 0	68.47	
350: 5:35: 0	68.50	End H11155
350: 8: 1:19	68.49	Start H11165
350: 9: 1:19	68.46	PUMP OFF
350:12:28:45	68.47	
351:12:28:45	68.45	
352: 0:28:45	68.45	
352:12:28:45	68.36	
353: 0:28:45	68.39	
353:12:28:45	68.44	

TABLE A3-4 (continued)
 TABULATED PRESSURE DATA FROM THE H-3 MULTIPAD
 PUMPING TEST, RECORDED AT OBSERVATION WELL H-11b3

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi) H-11b3	COMMENTS
354: 0:28:45	68.42	
354:12:28:45	68.42	
355: 0:28:45	68.41	
355:12:28:45	68.40	
356: 0:28:45	68.46	
356:12:28:45	68.48	
357: 0:28:45	68.44	
357:12:10: 0	68.50	
358: 0:10: 0	68.53	
358:12:10: 0	68.52	
359: 0:10: 0	68.54	
359:12:10: 0	68.55	
360: 0:10: 0	68.60	
360:12:10: 0	68.70	
361:12:10: 0	68.69	
362:12:10: 0	68.79	
363:12:10: 0	68.83	
364:12:10: 0	68.94	
365:12:10: 0	68.94	
1:12:10: 0	69.05	
2:12:50: 0	69.15	
3:12:58: 0	69.19	
4:11:58: 1	69.18	
5:12:58: 0	69.29	
6:11:58: 0	69.44	
7: 7:58: 0	69.44	End H11165
8:12:24: 0	69.39	Start H11176
9: 9: 4: 0	69.51	
10:15: 4: 0	69.59	
11:12:26: 0	69.66	
12: 8:26: 1	69.71	
13:12: 1: 0	69.76	
14: 8: 1: 0	69.94	
15:14: 1: 0	70.04	
16:10: 1: 0	70.08	
17:16: 1: 0	70.19	
18:12: 1: 0	70.20	
19: 8: 1: 0	70.29	
20:14: 1: 0	70.45	
21:10: 1: 0	70.49	
22:16: 1: 0	70.51	
23:12: 1: 0	70.57	
24: 8:38: 1	70.71	
25:14:38: 1	70.72	

TABLE A3-4 (continued)
 TABULATED PRESSURE DATA FROM THE H-3 MULTIPAD
 PUMPING TEST, RECORDED AT OBSERVATION WELL H-11b3

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi) H-11b3	COMMENTS
26:10:38: 1	70.72	
27:16:38: 1	70.96	
28:12:38: 1	71.00	
29: 8:38: 1	71.02	
30: 4:38: 0	71.03	
31:15:47: 1	71.26	
32:11:47: 1	71.26	
33:17:47: 1	71.34	
34:13:32: 1	71.44	
35: 9:32: 1	71.53	
36:15:32: 1	71.63	
37:11:32: 1	71.62	
38:14:17: 1	71.72	
39:10:17: 0	71.69	
40:11:17: 1	71.80	
41:12:17: 1	71.83	
42:13:17: 0	71.87	
43:14:17: 0	71.89	
44:12:43: 0	71.98	
45:13:43: 0	72.03	
46:14:43: 0	72.16	
47:10:43: 0	72.21	
48:11:43: 0	72.23	
49:12:43: 0	72.30	
50:13:43: 0	72.33	
51:14:43: 0	72.42	
52:10:43: 0	72.34	
53:11:43: 0	72.32	
54:12:43: 0	72.43	
55:13:43: 0	72.40	
56:14:43: 0	72.47	
57:10:43: 0	72.54	
58:10:56: 0	72.49	
59:11:56: 0	72.49	
60:12:56: 0	72.60	
61:13:56: 0	72.67	
62: 9:56: 0	72.67	
63:10:56: 0	72.62	
64:11:56: 0	72.76	
65:12:56: 0	72.73	
66:11:42: 0	72.79	
67:12:42: 0	72.87	
68:13:42: 0	72.93	
69:14:42: 0	72.95	

TABLE A3-4 (continued)
 TABULATED PRESSURE DATA FROM THE H-3 MULTIPAD
 PUMPING TEST, RECORDED AT OBSERVATION WELL H-11b3

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi) H-11b3	COMMENTS
70:10:42: 1	73.02	
71:11:42: 0	73.03	
72:12:42: 0	73.03	
73:13:42: 0	73.07	
74:14:42: 1	73.04	
75:10:42: 0	73.06	
76:11:42: 0	73.17	
77:12:42: 0	73.18	
78: 8:42: 0	73.07	
83:12: 0: 0	73.58	
84:12: 5: 0	73.64	
86:12:13: 1	73.62	
90:12: 0: 0	73.93	
92:16:49:30	73.14	
92:23:38: 1	73.19	End H11176
93:13: 6:43	73.35	Start H11186
98:12:50: 0	73.28	
102:12:22: 1	73.43	
102:16:22: 1	73.47	End H11186

TABLE A3-5
 TABULATED PRESSURE DATA FROM THE H-3 MULTIPAD
 PUMPING TEST, RECORDED AT OBSERVATION WELL DOE-1

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi) DOE-1	COMMENTS
255: 9:28: 0	71.47	Start D10065
255:12: 0: 0	71.42	
256:12: 0: 0	71.41	
257:12: 0: 0	71.50	
258:12: 2: 0	71.54	
259:12: 2: 0	71.59	
260:12: 2: 0	71.67	
261:12: 2: 0	71.70	
262:12: 2: 0	71.75	
263:12: 2: 0	71.77	
264:12: 2: 0	71.86	
265:12: 2: 0	71.87	
266:12: 2: 0	71.79	
267:12: 2: 0	71.83	
268:12: 2: 0	71.85	
269:12: 2: 0	71.86	
270:12: 2: 0	71.92	
271:12: 0: 0	71.95	
272:12: 0: 0	71.99	
273:12: 0: 0	71.95	
274:12:20: 0	72.01	
275:12:20: 0	72.04	
276:12:20: 0	72.05	
277:12:20: 0	71.98	
278:12:20: 0	72.01	
279:12:20: 0	72.11	
280:12:20: 0	72.18	
281:12:20: 0	72.19	
282:12:20: 0	72.21	
283:12:16:10	72.14	
284:12: 0: 0	72.20	
285:12: 0: 0	72.18	
286:12: 0: 0	72.20	
287:12: 5: 0	72.22	
288: 7:27:46	72.29	End D10065
288: 7:33:55	72.29	Start D10075
288: 9: 0: 0	72.25	PUMP ON
288:12: 4: 0	72.16	
289: 0: 5: 0	72.22	
289:12: 0: 0	72.28	
290: 0: 0: 0	72.30	
290:12: 5: 0	72.30	
291: 0:49: 0	72.29	
291:12:26: 0	72.24	

TABLE A3-5 (continued)
 TABULATED PRESSURE DATA FROM THE H-3 MULTIPAD
 PUMPING TEST, RECORDED AT OBSERVATION WELL DOE-1

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi) DOE-1	COMMENTS
292: 0: 6: 0	72.21	
292:12: 8: 0	72.13	
293:12: 0: 0	72.08	
294:12: 6: 0	72.04	
295:12: 6: 0	71.95	
296:12: 6: 0	71.81	
297:12: 6: 0	71.64	
298:12: 5: 0	71.49	
299:12:22: 9	71.40	
300:12: 0: 0	71.11	
302:11: 1:28	70.98	End D10075
302:11: 5: 0	70.98	Start D10085
302:12:13: 0	70.97	
303:12:13: 0	70.86	
304:12:13: 0	70.86	
305:12:40: 0	70.76	
305:19:40: 0	70.68	End D10085
306:10:13: 2	70.54	Start D10095
306:12:23: 0	70.52	
307:12:13: 0	70.33	
308:12:23: 0	70.18	
309:12: 0: 0	70.12	
310:12: 5: 0	70.01	
311:12: 5: 0	69.84	
312:12: 0: 0	69.73	
313:12: 0: 0	69.66	
314:12: 0: 0	69.48	
315:12:10: 0	69.37	
316:13:39:42	69.30	
317:12:40: 0	69.10	
318:12:20: 0	69.01	
319:18:43:55	68.83	
320:12:20: 0	68.61	
321:12:47: 0	68.61	
322:12:35: 0	68.56	
323:12:37: 0	68.39	
324:12:40: 0	68.26	
325:12: 0: 0	68.24	
326: 9: 1:43	68.10	End D10095
326: 9:12: 0	68.10	Start D10105
326:12:11: 0	68.11	
327:12:11: 0	68.00	
328:12:11: 0	67.90	
329:12:35: 0	67.84	

TABLE A3-5 (continued)
 TABULATED PRESSURE DATA FROM THE H-3 MULTIPAD
 PUMPING TEST, RECORDED AT OBSERVATION WELL DOE-1

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi) DOE-1	COMMENTS
330:12: 9:59	67.75	
331:12: 0: 0	67.64	
332:12:56: 0	67.57	
333:12:56: 0	67.50	
334:12:40: 0	67.44	
335:12:35: 0	67.22	
336: 8:35: 0	67.10	End D10105
336:15:44:25	67.14	Start D10115
337:10:58:17	67.08	End D10115
337:11: 7:36	67.08	Start D10125
337:12:13: 0	67.08	
338:12:13: 0	66.89	
339:12:32: 0	66.76	
340:12: 1: 0	66.78	
341:12: 1: 0	66.67	
342:10: 1: 0	66.59	
343:11:40: 0	66.55	
344:12:56: 0	66.48	
345:12:56: 0	66.34	
346: 8:56: 0	66.35	End D10125
346:16:56: 0	66.36	Start D10135
347: 3:58: 0	66.23	End D10135
347:20:51: 5	66.02	Start D10145
348:12:30: 0	65.94	
349:12: 0: 0	65.88	
349:16: 0: 0	65.92	End D10145
349:17:52:24	65.94	Start D10155
350: 9: 0: 0	65.85	PUMP OFF
350:12: 0: 0	65.84	
351: 0: 2: 0	65.84	
351:12: 4: 0	65.80	
352: 9:38: 0	65.71	End D10155
352:10:10: 0	65.71	Start D10165
352:12:12: 0	65.71	
353: 0:12: 0	65.77	
353:12:12: 0	65.76	
354: 0:12: 0	65.76	
354:12:12: 0	65.76	
355: 0:12: 0	65.79	
355:12: 6: 0	65.75	
356: 0: 6: 0	65.84	
356:12: 6: 0	65.84	
357:12:10: 0	65.89	
358:12:10: 0	65.87	

TABLE A3-5 (continued)
 TABULATED PRESSURE DATA FROM THE H-3 MULTIPAD
 PUMPING TEST, RECORDED AT OBSERVATION WELL DOE-1

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi) DOE-1	COMMENTS
359:12:10: 0	65.92	
360:12:10: 0	66.08	
361:12:10: 0	66.12	
362:12:10: 0	66.25	
363:12:10: 0	66.33	
364:12:10: 0	66.45	
365:12:10: 0	66.49	
1:12:10: 0	66.61	
2:12:10: 0	66.71	
3:12:21: 0	66.82	
4:12:21: 0	66.80	
5:12:21: 0	66.89	
6:12: 5: 0	67.08	
7:12:18: 0	67.08	
8:12:38: 0	67.13	
9:12:49: 0	67.25	
10:12:49: 0	67.29	
11:12:49: 0	67.40	
12:12:49: 0	67.43	
13:12:37: 0	67.56	
14:12:37: 0	67.70	
15:12:37: 0	67.79	
16:12:37: 0	67.84	
17:12:37: 0	67.91	
18:12:37: 0	67.96	
19:12:37: 0	68.05	
20:12:37: 0	68.17	
21:12:37: 0	68.23	
22:12:37: 0	68.21	
23: 8:37: 0	68.32	
24:12:12: 0	68.39	
25:12:12: 0	68.37	
25:14:12: 0	68.41	End D10165
25:16: 7:23	68.44	Start D10175
26:12:12: 0	68.43	
27:12:12: 0	68.56	
28:12:12: 0	68.71	
29:11:55: 0	68.69	
30:11:55: 0	68.76	
31:11:55: 0	68.87	
32:12:56:47	69.03	
33:12:47: 0	68.93	
34:11:42: 0	69.19	
35:11:42: 0	69.14	

TABLE A3-5 (continued)
 TABULATED PRESSURE DATA FROM THE H-3 MULTIPAD
 PUMPING TEST, RECORDED AT OBSERVATION WELL DOE-1

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi) DOE-1	COMMENTS
36:11:42: 0	69.20	
37:11:42: 0	69.24	
38:11:42: 0	69.32	
39:11:42: 0	69.31	
40:11:42: 0	69.40	
41:11:32: 5	69.44	
42:11:32: 5	69.46	
43:11:32: 5	69.47	
44:11:24: 0	69.58	
45:11:24: 0	69.57	
46:11:24: 0	69.66	
47:11:35: 0	69.73	
48:11:35: 0	69.76	
49:11:35: 0	69.80	
50:11:35: 0	69.84	
51:11:35: 0	69.89	
52:11:35: 0	69.90	
53:11:35: 0	69.87	
54:11:35: 0	69.96	
55:11:35: 0	69.94	
56:11:35: 0	69.98	
57:12:54: 8	70.08	
58:12:55: 0	70.04	
59:12:44: 0	70.07	
60:12:44: 0	70.18	
61:12:44: 0	70.25	
62: 9:34: 1	70.24	
63:12:17:30	70.24	
64:11: 5: 0	70.36	
65:11: 5: 0	70.33	
66:12:22: 0	70.46	
67:12:51: 0	70.47	
68:12:51: 0	70.54	
69:12:51: 0	70.52	
70:11: 0: 0	70.67	
71:11: 0: 0	70.69	
72:11:53: 0	70.71	
73:12:40: 0	70.74	
74:12:40: 0	70.70	
75:11:30: 0	70.74	
76:11:30: 0	70.84	
77:12:27: 0	70.87	
78: 8:27: 0	70.78	End D10175
79: 9:50: 0	70.69	Start D10016

TABLE A3-5 (continued)
TABULATED PRESSURE DATA FROM THE H-3 MULTIPAD
PUMPING TEST, RECORDED AT OBSERVATION WELL DOE-1

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi) DOE-1	COMMENTS
79:12: 5: 0	70.54	
80:12:53: 0	70.56	
83:12: 0:36	70.34	
84:11: 5: 0	70.45	
86:12: 4: 0	70.38	
90:12:30:10	70.69	
93:12: 0:27	71.01	
98:12:20: 0	70.86	
98:16:20: 0	70.95	End D10016

APPENDIX 4.0

TABULATED PRESSURE DATA FROM THE
WASTE-HANDLING SHAFT

TABLE A4-1
 FLUID-PRESSURE DATA IN THE CULEBRA DOLOMITE AT THE WASTE-
 HANDLING SHAFT (TRANSDUCERS 31X-PE-00207 AND 31X-PE-00208)

DATE	JULIAN DATE				PRESSURE (psi)		COMMENTS
	DAY	HR	MIN	SEC	PE-207	PE-208	
10/22/84	296	12	45	0	69.1	88.9	
10/31/84	305	9	45	0	68.6	88.4	
11/08/84	313	9	15	0		80.5	
11/14/84	319	8	40	0		86.5	
11/19/84	324	8	45	0		86.0	
11/27/84	332	13	30	0		86.5	
12/05/84	340	10	0	0	69.1	86.5	
12/12/84	347	11	42	9	72.5	88.9	
12/19/84	352	15	17	49	74.6	91.5	
12/26/84	359	9	3	57	76.9	92.7	
01/02/85	2	12	0	0	79.9	95.8	
01/13/85	13	9	5	0	80.4	95.3	
01/23/85	23	9	7	41	79.7	95.3	
01/30/85	30	9	7	41	80.3	96.5	
02/06/85	37	9	7	39	80.8	96.5	
02/13/85	44	9	7	48	81.4	97.2	
02/20/85	51	12	30	54	82.0	97.8	
02/27/85	58	9	3	29	81.4	93.4	
03/06/85	65	9	2	47	79.2	88.9	
03/13/85	72	13	19	25	80.3	90.2	
03/20/85	79	9	2	45	75.2	83.2	
03/27/85	86	9	2	49	74.6	85.7	
04/03/85	93	9	2	45	75.2	85.1	
04/10/85	100	10	54	45	76.9	86.4	
04/17/85	107	9	2	46	76.9	89.6	
04/25/85	115	9	2	43	77.5	91.5	
05/02/85	122	9	14	26	78.6	92.7	
05/09/85	129	9	2	47	76.3	94.6	
05/16/85	136	9	2	42	79.2	95.3	
05/23/85	143	9	2	43	82.5	95.6	
05/29/85	149	13	41	57	79.7	96.5	
06/05/85	156	10	54	47	82.0	97.8	
06/12/85	163	9	23	57	77.5	94.6	
06/27/85	178	12	18	57	78.0	95.3	
07/03/85	184	9	56	16	80.9	97.2	
07/10/85	191	9	15	54	79.7	98.4	
07/17/85	198	9	15	58	78.6	98.4	
07/24/85	205	9	27	39	83.1	102.2	
07/31/85	212	9	36	3	85.4	107.2	
08/07/85	219	9	15	56	87.0	111.0	
08/14/85	226	10	18	40	92.6	112.8	
08/21/85	233	9	15	54	93.2	112.8	
08/29/85	241	9	15	33	93.2	114.1	
09/05/85	248	12	46	31	95.4	114.7	
09/11/85	254	9	15	57	97.6	115.3	

TABLE A4-1 (continued)
 FLUID-PRESSURE DATA IN THE CULEBRA DOLOMITE AT THE WASTE-
 HANDLING SHAFT (TRANSDUCERS 31X-PE-00207 AND 31X-PE-00208)

DATE	JULIAN DATE				PRESSURE (psi)		COMMENTS
	DAY	HR	MIN	SEC	PE-207	PE-208	
09/18/85	261	9	15	57	99.3	115.3	
10/02/85	275	9	15	57	93.7	101.6	
10/16/85	289	11	55	43	96.5	105.3	
10/31/85	304	8	26	20	99.9	107.9	
11/13/85	317	12	14	33	94.9	102.8	
11/22/85	326	9	4	57	91.5	97.8	
12/06/85	340	12	57	4	60.4	65.8	
12/18/85	346	8	22	6	46.5	50.8	
12/20/85	348	15	42	5	47.1	52.1	
12/26/85	354	10	51	54	45.9	51.4	PE-207 breaks
12/30/85	358	7	52	29		52.7	down
12/31/85	359	7	33	13		53.4	
01/02/86	2	7	42	43		53.4	
01/03/86	3	15	32	55		52.7	
01/07/86	7	7	47	44		52.1	
01/13/86	13	7	36	8		52.7	
01/15/86	15	8	32	16		54.1	
01/20/86	20	10	56	58		56.0	
01/23/86	23	9	37	14		54.1	
01/31/86	31	8	4	2		56.0	
02/13/86	44	8	4	17		51.4	
02/26/86	57	9	5	22		59.9	
03/07/86	66	13	39	3		60.6	
03/16/86	75	9	5	39		63.2	
03/21/86	80	10	30	18		63.8	
04/11/86	101	11	50	31		70.3	
04/18/86	108	14	21	14		71.6	
04/28/86	118	14	51	2		74.2	

APPENDIX 5.0

TABULATED WATER-QUALITY DATA FOR
THE H-3 MULTIPAD TEST

TABLE A5-1
 ELECTROLYTIC CONDUCTIVITY, SPECIFIC GRAVITY, AND TEMPERATURE
 OF WATER PRODUCED DURING THE H-3 MULTIPAD PUMPING TEST

TIME Julian Date DAY:HR:MIN	TEMPERATURE (deg. C)	SPECIFIC GRAVITY	ELECTROLYTIC CONDUCTIVITY (μ S/cm)	COMMENTS
288:09:15	21.00	0.00000	48900	PUMP ON 9:00
288:09:23	22.00	1.03900		
288:09:32	21.50	1.03950	51500	
288:09:45	21.90	1.03925	51950	
288:09:59	22.00	1.03910	52000	
288:10:59	21.80	1.03925	52500	
288:12:01	22.10	1.03950	52300	
288:13:04	21.50	1.03950	53000	
288:14:00	22.00	1.03950	54000	
288:15:05	22.00	1.03950	54500	
288:17:05	23.00	1.03900	54000	
288:19:05	22.00	1.03900	54000	
288:20:02	23.00	1.03900	54200	
288:21:58	22.50	1.03950	54000	
288:23:00	22.30	1.03925	54200	
288:23:58	23.00	1.03900	55500	
289:00:58	23.00	1.03900	55750	
289:01:56	23.25	1.03850	55900	
289:02:58	22.75	1.03900	55950	
289:03:58	22.50	1.03950	55500	
289:04:59	23.00	1.03875	56000	
289:05:58	22.50	1.03900	55500	
289:07:04	23.00	1.03900	56000	
289:08:01	23.00	1.03875	56200	
289:10:05	23.00	1.03900	55500	
289:12:53	23.50	1.03900	55500	
289:17:05	23.00	1.03875	55000	
289:21:04	23.00	1.03800	54900	
290:01:14	23.00	1.03850	54000	
290:04:13	23.00	1.03850	54800	
290:08:15	23.50	1.03850	55500	
290:12:10	23.50	1.03850	56000	
290:16:12	23.25	1.03850	55000	
290:20:01	23.50	1.03850	55250	
290:22:45	23.50	1.03850	55000	
291:00:01	23.50	1.03850	56000	
291:04:35	23.00	1.03900	55000	
291:08:10	24.00	1.03850	54000	
291:14:10	24.00	1.03800	55500	
291:18:11	23.00	1.03825	54900	
291:22:03	23.00	1.03875	54250	
292:03:04	23.50	1.03925	54000	
292:06:10	23.00	1.04000	54250	
292:11:05	24.00	1.03825	54500	

TABLE A5-1 (continued)
 ELECTROLYTIC CONDUCTIVITY, SPECIFIC GRAVITY, AND TEMPERATURE
 OF WATER PRODUCED DURING THE H-3 MULTIPAD PUMPING TEST

TIME Julian Date DAY:HR:MIN	TEMPERATURE (deg. C)	SPECIFIC GRAVITY	ELECTROLYTIC CONDUCTIVITY (μ S/cm)	COMMENTS
292:14:10	24.00	1.03800	54250	
292:18:05	23.00	1.03775	58500	
292:19:06	23.00	1.03750	54500	
292:23:14	23.00	1.03775	50500	
292:23:28	23.50	1.03825	53500	
293:04:42	23.50	1.03800	50000	
293:05:55	24.00	1.03800	49000	
293:08:25	23.50	1.03850	51500	
293:12:20	24.00	1.03850	52000	
293:16:40	23.00	1.03750	54000	
293:19:52	23.00	1.03800	54250	
294:00:31	23.50	1.03825	54250	
294:04:34	23.00	1.03900	52500	
294:08:35	24.00	1.03800	53000	
294:12:40	24.00	1.03800	53000	
294:14:08	24.00	1.03700	53000	
294:18:12	24.00	1.03790	52500	
294:22:14	23.00	1.03800	52000	
295:02:40	23.00	1.03800	51500	
295:05:31	23.50	1.03750	52000	
295:09:40	24.00	1.03800	52000	
295:14:05	24.00	1.03750	52100	
295:18:06	23.80	1.03800	51500	
295:22:05	23.00	1.03750	51750	
296:04:04	23.00	1.03800	51750	
296:14:31	24.00	1.03750	52000	
296:17:15	24.00	1.03800	50000	
296:23:31	23.50	1.03800	51750	
297:04:01	23.00	1.03800	51500	
297:08:33	23.50	1.03800	49500	
297:12:24	24.00	1.03750	52000	
297:16:06	24.00	1.03700	52000	
297:20:07	23.50	1.03700	52000	
298:00:06	24.00	1.03750	52000	
298:04:15	24.00	1.03800	52100	
298:09:20	24.00	1.03750	52000	
298:12:16	23.50	1.03800	52000	
298:16:05	23.50	1.03725	52250	
298:21:17	24.00	1.03750	52000	
299:01:12	24.00	1.03800	52100	
299:05:27	23.50	1.03800	52000	
299:15:04	24.00	1.03750	52100	
299:17:08	23.50	1.03750	51000	
299:20:04	23.75	1.03775	51800	

TABLE A5-1 (continued)
 ELECTROLYTIC CONDUCTIVITY, SPECIFIC GRAVITY, AND TEMPERATURE
 OF WATER PRODUCED DURING THE H-3 MULTIPAD PUMPING TEST

TIME Julian Date DAY:HR:MIN	TEMPERATURE (deg. C)	SPECIFIC GRAVITY	ELECTROLYTIC CONDUCTIVITY (μ S/cm)	COMMENTS
300:00:17	23.00	1.03770	52000	
300:04:41	23.50	1.03750	51800	
300:12:25	24.00	1.03800	50000	
300:17:03	24.00	1.03750	51800	
300:21:08	23.50	1.03750	52000	
301:01:12	23.10	1.03780	52000	
301:05:23	23.50	1.03800	51800	
301:15:35	24.00	1.03780	50000	
301:19:25	23.00	1.03800	52000	
301:23:13	23.75	1.03750	51900	
302:03:39	23.50	1.03790	52000	
302:07:45	23.00	1.03750	50900	
302:13:53	24.00	1.03750	51000	
302:18:13	24.00	1.03750	52250	
302:22:20	24.00	1.03750	52000	
303:08:27	23.50	1.03750	49800	
303;17:15	23.50	1.03750	51000	
303;22:15	24.00	1.03750	52250	
304:11;40	22.50	1.03800	49000	
304:16:44	23.00	1.03750	51000	
304:21:08	23.50	1.03750	51500	
305:08:05	23.00	1.03750	50100	
305:15:00	23.00	1.03750	50000	
305:19:15	23.00	1.03750	50500	
305:23:20	23.25	1.03820	51000	
306:14:20	23.75	1.03850	50500	
306:18:25	23.75	1.03850	51000	
306:26:45	23.75	1.03800	51000	
307:15:55	23.50	1.03850	50000	
307:20:16	23.75	1.03850	50500	
308:09:40	24.00	1.03700	50000	
308:16:39	23.50	1.03800	50200	
308:20:50	23.50	1.03790	50000	
309:12:50	23.50	1.03770	50500	
309:18:06	23.50	1.37000	50000	
309:22:11	23.75	1.03700	50000	
310:09:15	23.50	1.03750	50500	
310:15:05	24.00	1.03700	50500	
310:20:06	23.00	1.03770	50000	
311:09:35	24.00	1.03750		
311:17:03	23.50	1.03740	49600	
312:08:40	24.00	1.03750	50000	
312:14:04	23.50	1.03750	50500	
312:18:03	23.00	1.03730	50000	

TABLE A5-1 (continued)
 ELECTROLYTIC CONDUCTIVITY, SPECIFIC GRAVITY, AND TEMPERATURE
 OF WATER PRODUCED DURING THE H-3 MULTIPAD PUMPING TEST

TIME Julian Date DAY:HR:MIN	TEMPERATURE (deg. C)	SPECIFIC GRAVITY	ELECTROLYTIC CONDUCTIVITY (μ S/cm)	COMMENTS
312:22:03	23.50	1.03730	50000	
313:08:45	23.75	1.03750	50100	
313:14:35	23.50	1.03770	50000	
313:20:01	24.00	1.03650	50200	
313:23:05	23.50	1.03700	46000	
314:08:30	24.00	1.03750	50000	
314:14:30	23.50	1.03760	51000	
314:22:05	23.00	1.03770	48000	
315:09:55	23.80	1.03750	49900	
316:00:02	23.00	1.03740	42000	
316:08:56	23.50	1.03750	45000	
317:09:18	23.50	1.03800	43000	
317:15:15	24.00	1.03750	44000	
317:19:00	23.00	1.03700	44500	
317:22:20	23.00	1.03700	41500	
318:08:46	23.00	1.03650	42500	
318:16:17	23.00	1.03700	41000	
318:18:50	23.00	1.03700	41000	
318:22:00	23.00	1.03700	44000	
319:08:42	22.50	1.03700	42500	
319:15:15	23.00	1.03750	44000	
319:20:05	23.00	1.03700	44000	
319:23:05	22.50	1.03750	43500	
320:10:25	24.00	1.03850	49000	
320:15:30	24.00	1.03775	50000	
320:19:10	23.00	1.03750	50000	
320:23:03	23.00	1.03750	50000	
321:10:10	24.00	1.03700	50000	
321:15:10	24.00	1.03750	50000	
321:19:25	23.50	1.03770	50000	
321:22:38	23.50	1.03750	50100	
322:10:10	24.00	1.03900	48000	
322:18:39	24.00	1.03800	49100	
322:22:41	24.00	1.03800	50000	
323:09:05	23.00	1.03700	48000	
323:19:03	24.00	1.03700	50000	
323:23:03	23.50	1.03700	49000	
324:08:30	21.50	1.03750	47000	
324:17:03	23.50	1.03700	50000	
324:21:00	23.50	1.03700	49000	
325:10:30	24.50	1.03700	48500	
325:17:35	23.50	1.03700	49500	
325:19:33	23.50	1.03700	49500	
326:08:42	24.00	1.03650	49000	

TABLE A5-1 (continued)
 ELECTROLYTIC CONDUCTIVITY, SPECIFIC GRAVITY, AND TEMPERATURE
 OF WATER PRODUCED DURING THE H-3 MULTIPAD PUMPING TEST

TIME Julian Date DAY:HR:MIN	TEMPERATURE (deg. C)	SPECIFIC GRAVITY	ELECTROLYTIC CONDUCTIVITY (μ S/cm)	COMMENTS
326:17:04	23.50	1.03680	44500	
326:21:00	23.50	1.03700	50000	
327:16:30	24.00	1.03700	50000	
327:21:35	23.50	1.03750	49500	
328:17:43	23.50	1.03710	48300	
328:21:05	23.50	1.03700	50000	
329:16:15	24.00	1.03680	49500	
330:17:05	23.50	1.03700	49900	
330:21:00	23.80	1.03700	46000	
331:09:40	24.00	1.03750	48500	
331:17:45	23.00	1.03700	44200	
331:21:00	23.50	1.03650	50000	
333:08:38	23.50	1.03700	48000	
333:17:38	24.00	1.03650	45000	
333:21:00	23.80	1.03680	45000	
334:08:16	23.50	1.03680	46500	
334:17:33	23.50	1.03690	44500	
334:21:00	23.50	1.03700	44500	
335:09:15	23.50	1.03670	45000	
336:13:30	23.50	1.03700	45500	
337:09:09	23.50	1.03650	45000	
337:17:21	22.50	1.03750	44000	
337:21:00	23.00	1.03750	44200	
338:16:49	23.50	1.03700	44500	
338:20:03	23.50	1.03680	44500	
339:08:42	22.00	1.03750	47000	
342:17:59	23.50	1.03750	52000	
343:17:21	23.50	1.03700	50000	
344:17:40	21.00	1.03790	46200	
345:17:14	22.00	1.03800	47700	
346:16:57	23.00	1.03775	47000	
347:18:55	23.00	1.03750	48000	
348:17:05	23.00	1.03750	44800	
349:20:30	23.00	1.03750	47500	
350:08:30	23.00	1.03700	47000	PUMP OFF 9:00

APPENDIX 6.0

TABULATED BAROMETRIC-PRESSURE DATA FOR THE
H-3 MULTIPAD TEST OCTOBER 15, 1985
THROUGH APRIL 12, 1986

TABLE A6-1
 BAROMETRIC PRESSURE MEASURED AT THE H-3 HYDROPAD
 DURING THE H-3 MULTIPAD PUMPING TEST

TIME Julian Date DAY:HR:MIN:SEC	BAROMETRIC PRESSURE (psi)	COMMENTS
288: 8:15:45	13.19	File H30105
288:12: 0: 0	13.17	Start of
289:12: 0:47	13.12	Barometric
290:12:11: 9	13.05	Data
291:12:11: 0	13.10	
292:12:20: 0	13.15	
293:12: 0: 0	13.13	
294:12:10:15	13.09	
295:12:11: 0	13.02	
296: 7:30: 0	13.05	End H30105
296: 8: 0: 0	13.05	Start H30115
296:12:19: 2	13.03	
297:12: 0: 0	13.10	
298:12: 0: 0	13.14	
299:12:15: 0	13.08	
300:12:15: 0	13.13	
301:12: 0: 0	13.09	
302:12:14: 0	13.06	
303:12:10: 0	13.07	
304:13: 7:41	12.86	
305:12:15: 0	13.00	
306:12: 3: 0	13.05	
307:12: 0: 0	13.11	
308:12: 0: 0	13.14	
309:12:15: 0	13.02	
310:12:10: 0	13.03	
311:12:40:17	13.08	
312:12: 0: 0	13.00	
313:12: 0: 0	12.98	
314:12: 0: 0	13.04	
315:12:34:45	13.04	
316:12: 5: 0	13.02	
317:12: 0: 0	13.04	
318:12:50: 0	13.04	
319:12:25: 0	13.14	
320:12:16: 0	13.08	
321:12:15: 0	12.97	
322:12:15: 0	12.98	
323:12: 0: 0	13.14	
324:12: 0: 0	13.16	
325:12:50: 0	12.99	
326:12:32: 0	13.04	
327:12: 0: 0	13.05	
328:12: 0: 0	13.02	

TABLE A6-1 (continued)
 BAROMETRIC PRESSURE MEASURED AT THE H-3 HYDROPAD
 DURING THE H-3 MULTIPAD PUMPING TEST

TIME Julian Date DAY:HR:MIN:SEC	BAROMETRIC PRESSURE (psi)	COMMENTS
329:12: 0: 4	12.99	
330:12:49: 0	12.99	
331:12:50: 0	12.99	
332:12:50: 0	12.96	
333:12:50: 0	12.93	
334:12:50: 0	12.92	
335:12:50: 0	13.06	
336:12: 6: 0	13.16	
337:12:52:38	13.06	
338:12: 0: 0	13.14	
339:12:30: 0	13.21	
340:12:16: 0	13.06	
341:12:16: 0	13.07	
342:12:19: 0	13.00	
343:12:39:41	12.96	
344:12:45: 0	13.05	
345:11:52: 0	13.12	
346:12: 0: 0	13.03	
347:10:42: 0	13.14	
347:14:50:38	13.15	End H30115
347:14:57: 0	13.15	Start H30125
348:12:38:25	13.13	
349:12: 4: 0	13.17	
350:12: 0: 0	13.17	
351:12: 4: 0	13.15	
352:12:11:47	13.24	
353:12: 1: 0	13.14	
354:12:11: 0	13.15	
355:12:20: 0	13.16	
356:12:20: 0	13.09	
357:12: 0: 5	13.04	
358:12: 0: 5	13.15	
359:12: 0: 5	13.18	
360:12: 1: 0	13.04	
361:12: 1: 0	13.11	
362:12: 1: 0	13.05	
363:12: 1: 0	13.07	
364:12:28: 0	13.01	
365:12:28: 0	13.12	
1:12:28: 0	13.05	
2:12: 8: 0	13.06	
3:12: 5: 0	13.06	
4:12: 5: 0	13.19	
5:12: 5: 0	13.16	

TABLE A6-1 (continued)
 BAROMETRIC PRESSURE MEASURED AT THE H-3 HYDROPAD
 DURING THE H-3 MULTIPAD PUMPING TEST

TIME Julian Date DAY:HR:MIN:SEC	BAROMETRIC PRESSURE (psi)	COMMENTS
6:11: 6: 0	13.01	End H30125
6:14:12:14	0.00	Start H30135
6:14:20:41	12.95	
7:12:23: 0	13.21	
8:12:23: 0	13.25	
9:12: 4: 0	13.21	
10:12: 4: 0	13.23	
11:12: 4: 0	13.19	
12:12:18: 0	13.24	
13:12: 0: 0	13.20	
14:12: 0: 0	13.10	
15:12: 0: 0	13.08	
16:12: 0: 0	13.10	
17:12: 0: 0	13.11	
18:12: 0: 0	13.16	
19:12:30: 0	13.10	
20:12: 0: 0	13.03	
21:12: 0: 0	13.05	
22:12: 0: 0	13.20	
23:13: 8: 0	13.08	
24:13:15:59	13.04	
25:13:15:59	13.20	
26:13:36: 0	13.19	
27:12:43: 0	13.10	
28:12:43: 0	12.98	
29:13:23: 0	13.15	
30:13:23: 0	13.07	
31:13:23: 0	13.01	
32:13:23: 0	13.04	
33:13: 9: 0	13.07	
34:13: 6: 0	12.94	
35:13: 6: 0	12.92	
36:13: 6: 0	12.95	
37:12:41: 0	12.95	
38:12:41: 0	12.96	
39:12:41: 0	13.03	
40:12:41: 0	12.99	
41:13:59: 0	13.03	
42:13:18: 5	13.07	
43:13: 0: 0	13.13	
44:14: 4:40	12.99	
45:12:29: 0	13.08	
46:13:57: 0	13.00	
47:12: 0: 0	13.00	

TABLE A6-1 (continued)
 BAROMETRIC PRESSURE MEASURED AT THE H-3 HYDROPAD
 DURING THE H-3 MULTIPAD PUMPING TEST

TIME Julian Date DAY:HR:MIN:SEC	BAROMETRIC PRESSURE (psi)	COMMENTS
48:12: 0: 0	13.02	
49:12: 0: 0	13.01	
50:12: 0: 0	13.01	
51:12: 0: 0	12.99	
52:12:20: 0	13.05	
53:12:20: 0	13.12	
54:13:24: 0	13.02	
55:13:24: 0	13.12	
56:13:24: 0	13.08	
57:10: 7:29	13.04	End H30135
57:10:33: 1	13.04	Start H30145
57:12:57: 0	13.00	
58:10:57: 0	13.17	
59:12:27: 0	13.17	
60:12:27: 0	13.06	
61:14:24:35	13.00	
62:10:36: 0	13.14	End H30145
62:12:43: 0	0.00	Start H30155
62:12:53:16	13.13	
63:12: 6:22	13.19	
64:13:55:11	13.03	
65:13:55:11	13.08	
66:13:50: 0	12.99	
67:13:50: 0	12.97	
68:13:50: 0	12.93	
69:13:50: 0	12.98	
70:13:54: 0	12.87	
71:13:54: 0	12.89	
72:13:35: 0	12.92	
73:12:58: 0	12.94	
74:12:58: 0	13.00	
75:12:58: 0	12.97	
76:12:58: 0	12.88	
77:12:42: 0	12.95	
78:13:43: 0	13.11	
79:13:43: 0	13.21	
80:12:38: 0	13.23	
81:12:38: 0	13.15	
82:13:30: 0	13.13	
83:13:30: 0	13.11	
84:13:30: 0	13.05	
85:13:30: 0	13.14	
86:13:30: 0	13.15	
87:13:30: 0	13.11	

TABLE A6-1 (continued)
 BAROMETRIC PRESSURE MEASURED AT THE H-3 HYDROPAD
 DURING THE H-3 MULTIPAD PUMPING TEST

TIME Julian Date DAY:HR:MIN:SEC	BAROMETRIC PRESSURE (psi)	COMMENTS
88:13:30: 0	13.05	
89:13:30: 0	13.03	
90:13:50: 3	13.01	
91:13:51:22	13.07	
93:12:10:41	12.92	
98:13:22:54	13.09	
100:17:46:52	13.01	
101:12:35: 6	12.98	
101:12:40: 0	12.96	End H30155

**PART B. CALCULATED WATER-LEVEL DATA FROM PUMPING DURING
ANISOTROPY AND TRACER TESTS AT THE H-3 HYDROPAD,
APRIL 18 TO JUNE 12, 1984**

1.0 INTRODUCTION

Pumping and tracer tests were conducted at the H-3 hydropad in the south-central part of the WIPP site (Figure 1.1) from April 18 to June 12, 1984 by Hydro Geo Chem, Inc., under contract to Sandia National Laboratories. The pumping was intended to develop test well H-3b3 and to provide information about physical anisotropy in the Culebra Dolomite Member of the Rustler Formation. H-3b3 then became the withdrawal well for a convergent-flow tracer test with two different tracers injected into the Culebra at the two other wells on the H-3 hydropad, H-3b1 and H-3b2.

1.1 Objectives

The principal objective of the pumping and tracer testing at the H-3 hydropad was to provide data on the directional variability in hydraulic properties of the Culebra dolomite. A secondary objective was to stimulate well H-3b3 with a well-development effort designed to improve the productivity and efficiency of the well.

1.2 Configuration of the H-3 Hydropad

The H-3 hydropad is located approximately one mile south of the center of the WIPP site (Figure 1.1). The hydropad consists of three wells, H-3b1, H-3b2, and H-3b3, completed to the Rustler Formation and arranged in an approximately equilateral triangle with 100-foot sides as illustrated in

Part A, Figure 1.2. Well construction details at the H-3 hydropad are described in Part A, Section 3.1.1 and Figure 3.1. In the construction phase of well H-3b1, a bridge plug was set 795 feet (center of packer element) below land surface to separate the Culebra and Rustler-Salado contact zone, and a Production-Injection Packer was set at 652 feet below land surface to separate waters from the Magenta and Culebra dolomites. Wells H-3b2 and H-3b3 were drilled and completed to the Culebra dolomite in 1983 and early 1984 (Hydro Geo Chem, 1985). Table A1-1, Appendix 1.0 summarizes the dates of installation, calibration data, transducer installation depths, and depths to water for the transducers used in the anisotropy and tracer testing.

2.0 TEST EQUIPMENT

2.1 Data-Acquisition System (DAS)

An HP-9845B controlled DAS was used during the hydraulic-testing and tracer-injection sequence at the H-3 hydropad. The system is similar to that used in other tests at the WIPP site (see Part A, Section 2.1.1). The DAS utilized downhole pressure transducers in H-3b1, H-3b2, and the pumping well, H-3b3, to record a calculated depth to water for the Culebra intervals in each of the wells. During the test, the DAS software calculated an equivalent depth to water from the transducers' millivolt signals using the following information: the depth to water (measured with the Iron Horse water-level sounder) and the transducers' millivolt signals at the start of data-acquisition; the transducers' sensitivity coefficients; and an assumed borehole-fluid density of 1.0 grams per cubic centimeter (Hydro Geo Chem, 1985). The depth-to-water versus time data were recorded on floppy disc by the DAS.

2.2 Downhole Transducers

Fluid pressure was measured in each borehole with Druck PDCR-10 pressure transducers. These transducers have been used successfully for much of the WIPP-site hydrologic testing. The transducers were installed using a variety of methods (Figure 2.1). For H-3b3, the transducer, and its associated electric cable, was strapped to the discharge pipe and accessed the test intervals by utilizing nylon tubing passing through the packer feed-through assembly described in the next section. In H-3b2, the transducer was lowered into the open hole on the transducer cable for the anisotropy test and later strapped to the packer tubing, as described for H-3b3, for the tracer test. In H-3b1 the transducer was lowered on the transducer cable into the 2-3/8-inch tubing accessing the Culebra interval through the upper PIP packer in the borehole.

The transducers were calibrated before the test. Transducer function and calibration procedures are described in detail in Part A, Section 2.2.3, and the calibration data are presented in Table A1-1, Appendix 1.0.

2.3 Downhole Assembly

The anisotropy and tracer-testing was performed with downhole assemblies used during much of the WIPP-site testing. Figure 2.1 shows the configuration of the three H-3 hydropad wells during the anisotropy- and tracer-testing sequence. In the pumping well, H-3b3, a submersible Red Jacket 32B pump was installed below a Baski air-inflatable sliding-end packer, with the discharge line extending through the packer and then to the surface. A feed-through plug attached to the packer accommodates the inflation line to the packer and the transducer access tube

to the test interval. The pump, packer, and feed-through assembly are described and illustrated in Part A, Section 2.2.2.

A packer and feed-through plug were also used in the H-3b2 tracer-addition well during the tracer test. The packer system also served to help isolate the injection hose and tubing from the wellbore fluid above the test interval as shown in Figure 2.1. The tracer-injection hose was lowered as far as possible in the Culebra-access tubing in H-3b1 (Figure 2.1). The tracer-injection system will be described fully in a future interpretive report on the convergent-flow tracer test.

2.4 Discharge-Measurement and Flow-Regulation System

Pumping discharge rate was measured with a Precision totalizing flowmeter as described in Part A, Section 2.1.3. The pumping rate was regulated with a one-inch ball valve mounted on the discharge line. This valve could apply backpressure to the pump and keep the pumping rate below the maximum rate, thus allowing pumping rate to be maintained with increased pumping lift by releasing a portion of the backpressure on the pump.

The totalizing flow meter is used to measure pumping rate by recording the total volume passing the meter over specified time intervals. The flow calculated is therefore an average pumping rate over the time of the measurement. During the H-3 anisotropy and tracer tests, the calculated pumping rates from the flow meter data were checked by timing the filling of a calibrated container.

2.5 Water-Level Measurement Devices

Water levels were measured at nearby observation wells H-1, DOE-1, H-11b1, H-11b2, and H-11b3 during the anisotropy and tracer tests at the H-3 hydropad. As a means of checking the transducer results, water levels in wells H-3b1 and H-3b2 were also measured in the tubing attached to the isolation packer.

All measurements were made with the Iron Horse electric water-level sounder. (See equipment details in INTERA Technologies and Hydro Geo Chem, 1985, Part B, Section 2.3.)

2.6 Water-Quality Measurement Devices

The electrolytic conductivity and specific gravity of the fluid produced from the H-3b2 borehole were measured periodically during the anisotropy test and the convergent-flow tracer test. The electrolytic conductivity was measured with a Labline Electro Mho-Meter conductivity-bridge, and the specific gravity was measured with a Cole Parmer calibrated hydrometer with specific-gravity range of 1.0000 to 1.0700. A description of the function and use of these instruments is found in Part A, Section 2.1.4. The temperature of the sample was also measured at the time of the conductivity and specific-gravity measurements with a laboratory-grade mercury thermometer.

3.0 TESTING HISTORY

The complete sequence of pretest pumping, anisotropy testing, and the convergent-flow tracer test was completed from April 18 to June 12, 1984. The pump was operated at three pumping rates during this time and periodic measurements of the pumping rate were recorded

in the Field Log Book for the H-3 hydropad. Table A2-1, Appendix 2.0 contains an annotated tabulation of these pumping-rate data.

The testing conducted over the April 18 to June 12 time period had a number of different functional elements with periods of time when parts of the system were not operating. Figure 3.1 is a graphical representation of time (expressed as both calendar and Julian days) versus activity during the testing period. The figure shows the periods of DAS and pump operation, and the testing periods with average pumping rates. This figure should be referred to during the following discussion of the history of testing activities.

3.1 Pretest Pumping Periods

Three pretest pumping periods preceded the anisotropy and tracer tests. On April 18, 1984, H-3b3 was pumped for two one-hour periods at 6.5 gallons per minute (gpm) to assess well and pump performance and to help develop the well. The pumping well was operated again on May 19 at 6.5 gpm for thirteen hours. However, the excessive lift encountered during the pumping period prevented maintenance of a constant flow rate, as the back-pressure valve was completely open and thus unable to further regulate flow. The pump was turned off and H-3b3 was allowed to recover to near-static conditions before re-starting the test at a lower pumping rate.

3.2 Anisotropy Testing

The anisotropy test was formally begun at 10:30 on April 23, 1984 at a pumping rate of 4.0 gpm. The pump was operated at 4.0 gpm until 14:50 on May 7, 1984, when it was determined

that the pumping rate should be lowered in order to prepare for the convergent-flow tracer test portion of the test under regulated flow conditions. The pumping rate was then reduced to 3.0 gpm and allowed to stabilize until May 9, 1984.

3.3 Convergent-Flow Tracer Test

Injection of the tracers began in H-3b2 at 12:45 and in H-3b1 at 13:55 on May 9, 1984. The pump was operated continuously at 3.0 gpm until 12:04 on June 12, 1984 except for three stopages: on May 16, when the pump stopped as a result of an electrical failure; on June 4 to replace the pump; and on June 8 and 9 to install the equipment needed for water-quality sampling. The convergent-flow tracer test was continued until peak tracer concentrations were established. The well was then prepared for water-quality sampling.

3.4 Equipment Performance

The major equipment difficulties occurred on April 27 when the Precision totalizing flow meter became unreadable, and on May 16 when an electrical problem (possibly due to a severe storm) caused a major malfunction in the Data-Acquisition System and the electrical generator at the H-3 hydropad.

The flow-meter problem was due to a leak in the housing which caused condensation in the meter, making it unreadable. The problem was quickly rectified by replacing the meter.

While the electrical shut down on May 16 caused the pump to stop for only 10 minutes, the DAS was seriously damaged.

During that time, the generator was changed and the DAS was shut down for repairs. The problem appears to have started with a severe rainstorm which caused water leakage into the DAS container. It is possible that the resulting short circuits damaged the generator and then the pump. Repair and reconfiguration of the DAS lasted eight days, following which the DAS was only operated intermittently for the remainder of the convergent-flow tracer test. The intermittent times of operation averaged about one hour every other day.

The pump motor burned out sometime between June 3 and June 4 as indicated by a strongly decreased pumping rate. The pump would not restart after it was turned off for a checkout. The pump was removed, replaced, and restarted eight hours later. The pump was operated successfully for the remainder of the test with the exception of two short periods on June 8th and June 9th when the pump was turned off for 4.5 and 0.25 hours, respectively, to install a water chemistry monitoring system in preparation for water-quality sampling.

Tables 3-1 and 3-2 present brief summaries of the test showing the times when the pump was turned off and on and the times when the DAS was collecting data.

4.0 TEST RESULTS

4.1 Calculated Water-Level Responses at the H-3 Hydropad

Figure 4.1 shows the calculated depth to water in pumping well H-3b3, and observation wells H-3b2 and H-3b1 as recorded by the Data-Acquisition System. The figure shows the pretest pumping periods, the anisotropy test period, and the convergent-flow tracer test period. The plot shows that the DAS was turned off for a significant period of time because of the electrical problems discussed in Section 3.4. From Day 146 to Day 164 the

DAS was operated only intermittently, and data points from those times of operation are joined to form a smooth curve. Table A3-1, Appendix 3.0 is an abridged tabulation of the DAS-recorded depth to water (calculated from the transducers' millivolt signals) versus time data for the pretest anisotropy test, and convergent-flow tracer test at the H-3 hydropad.

Figure 4.2 shows the pumping rates calculated using the Precision Flow meter for the anisotropy and tracer test periods. A complete tabulation of the pumping-rate data is presented in Table A2-1, Appendix 2.0

4.2 Water-level Responses at Observation Wells

Figure 4.3 shows the water-level responses of nearby Culebra observation wells H-1 and DOE-1 during the anisotropy and convergent-flow tracer test pumping periods. Also included are the manually measured H-3b1 and H-3b2 water levels, which correspond closely to the DAS record of Figure 4.1. The plot shows that DOE-1 responded within several days to the start and end of pumping at the H-3 hydropad, and that H-1 had a delayed response to the pumping activity. The approximate distances from the H-3 hydropad to these observation wells are 2,700 feet to H-1 and 5,270 feet to DOE-1.

Tables A4-1 through A4-4, Appendix 4.0 contain tabulations of the water levels measured with the Iron Horse water-level sounder in observation wells H-1, H-3b1, H-3b2, and DOE-1, respectively. Because of workover activity at the H-11 hydropad during the testing periods, data from the H-11 observation wells are not applicable during this time period.

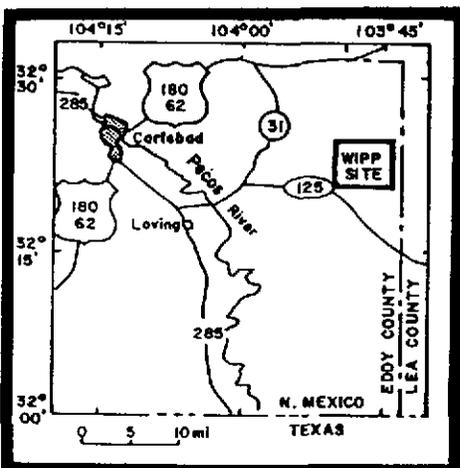
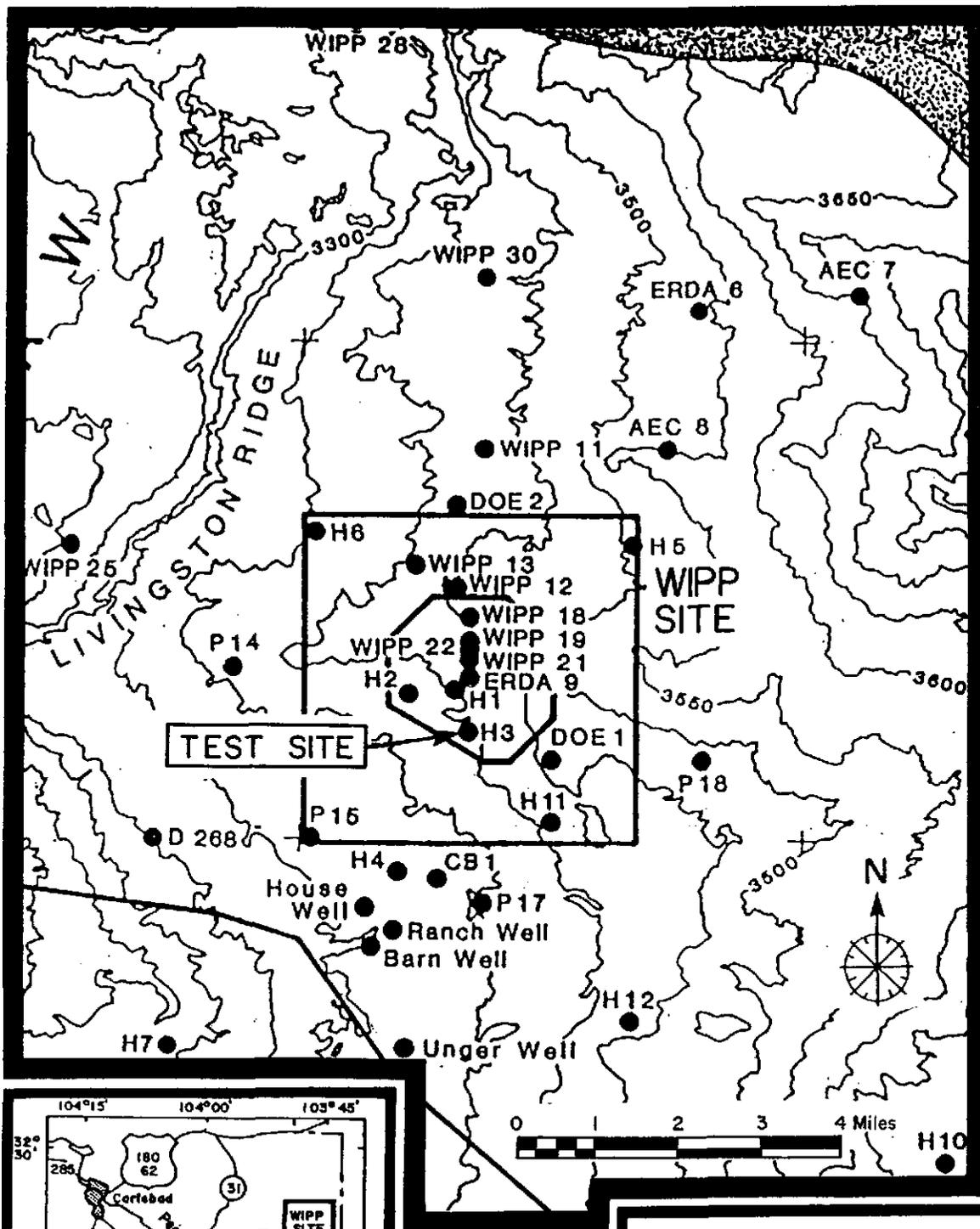
4.3 Water-Quality Data

The electrolytic conductivity and specific gravity of the water produced during the H-3 anisotropy test and the convergent-flow tracer test were measured using the equipment described in Section 2.6. These data are tabulated in Table A5-1, Appendix 5.0. During the tests, the electrolytic conductivity ranged from 5.7×10^4 to 7.0×10^4 $\mu\text{S}/\text{cm}$ and the specific gravity stabilized at about 1.033 during the tracer test.

5.0 REFERENCES

Hydro Geo Chem, Inc., 1985. Hydrologic Data Report #1. Sandia National Laboratories, Contractor Report SAND 85-7206, 710 pp.

INTERA Technologies, Inc., and Hydro Geo Chem, Inc., 1985. Hydrologic Data Report #2. Sandia National Laboratories, Sandia Report, SAND 85-7263.



NOTE: THIS MAP ILLUSTRATES THE PRINCIPAL FEATURES OF THE WIPP SITE AND VICINITY. CONTOURS SHOW APPROXIMATE RELIEF.
CONTOUR INTERVAL IS 50 FEET

Figure 1.1 Location of the H-3 test site relative to the WIPP site observation-well network.

B-12

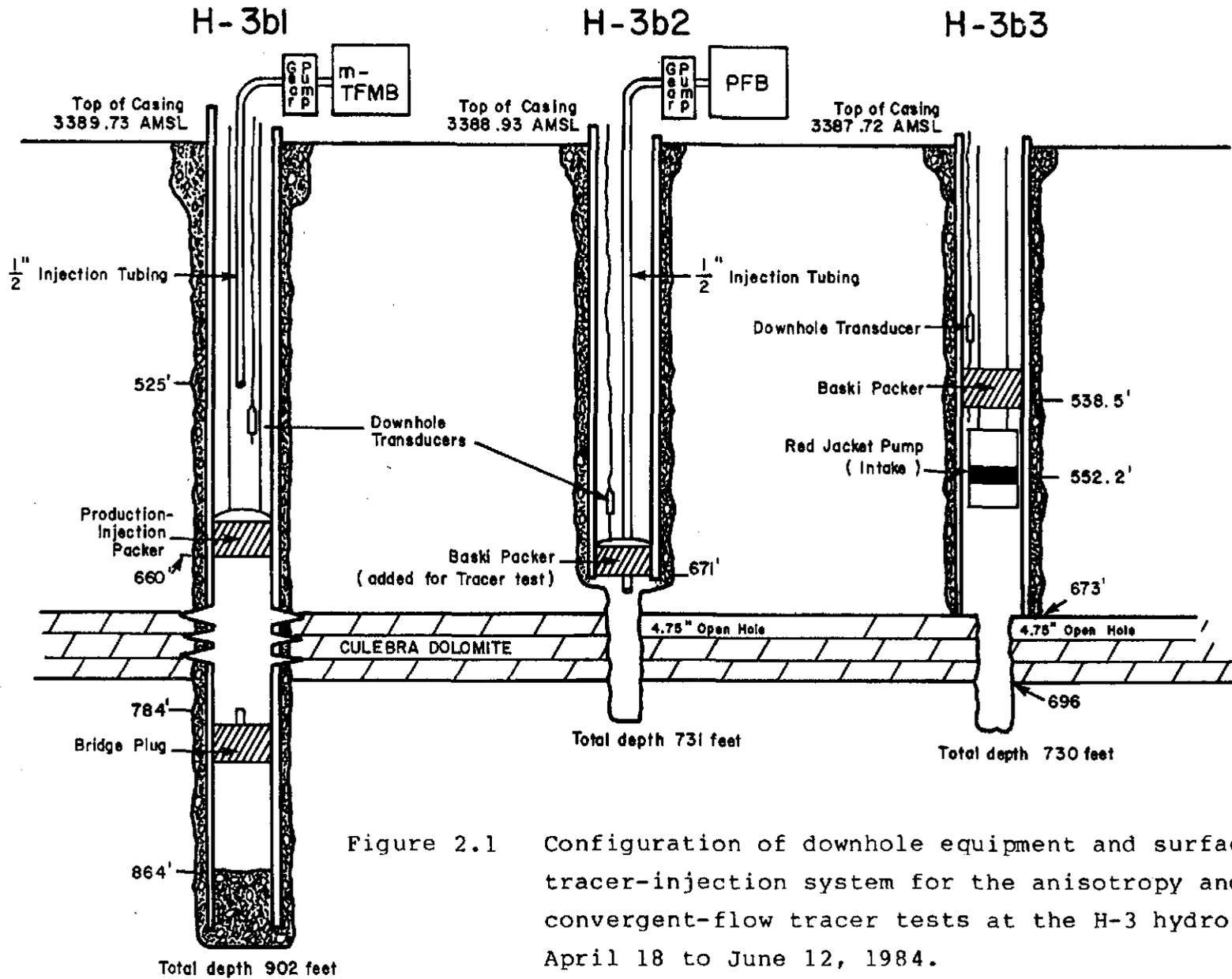


Figure 2.1 Configuration of downhole equipment and surface tracer-injection system for the anisotropy and convergent-flow tracer tests at the H-3 hydropad April 18 to June 12, 1984.

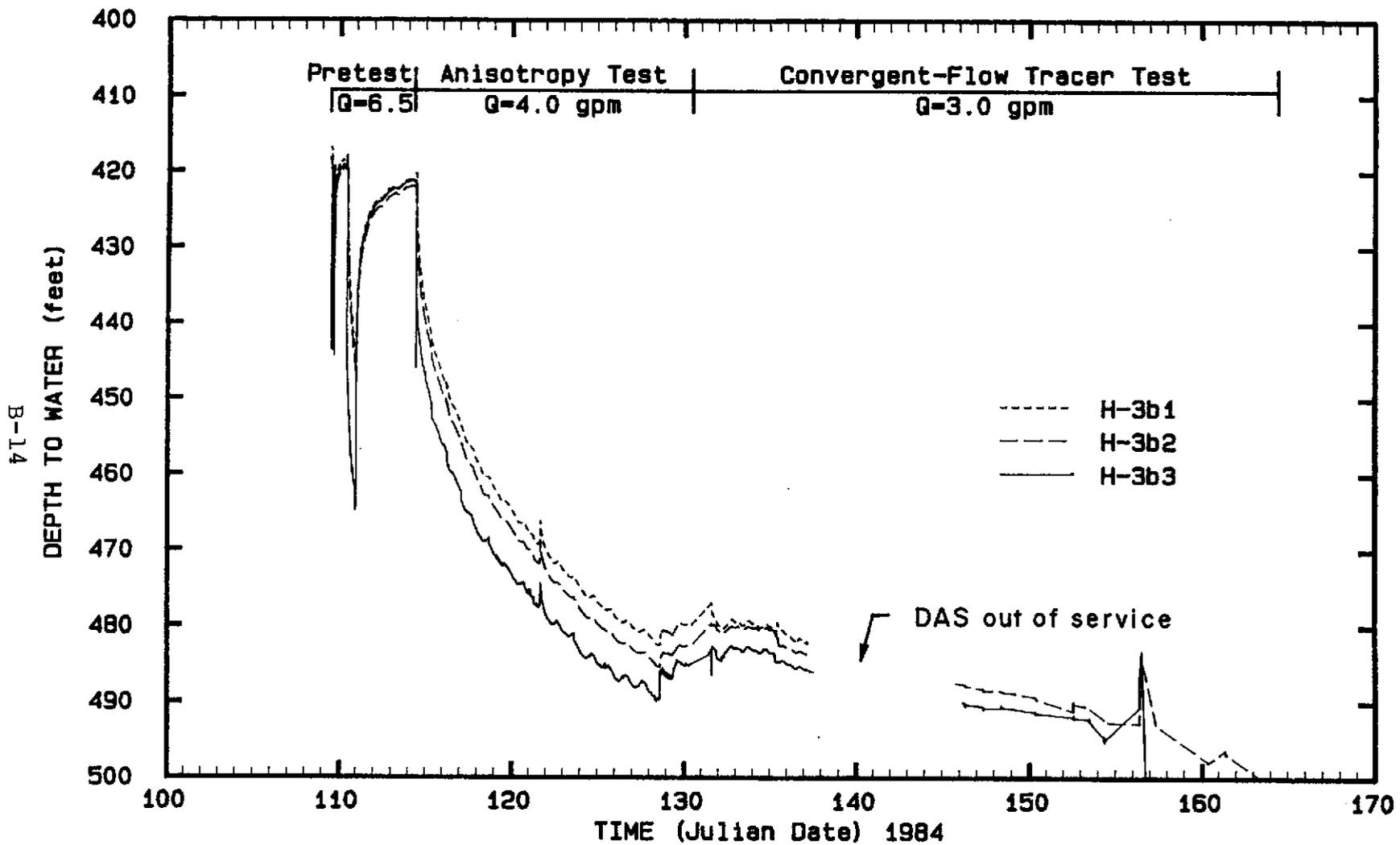


Figure 4.1 DAS-calculated water-level responses at wells H-3b1, H-3b2, and H-3b3 (the pumping well) during the anisotropy and convergent-flow tracer testing at the H-3 hydropad, April 18 to June 12, 1984.

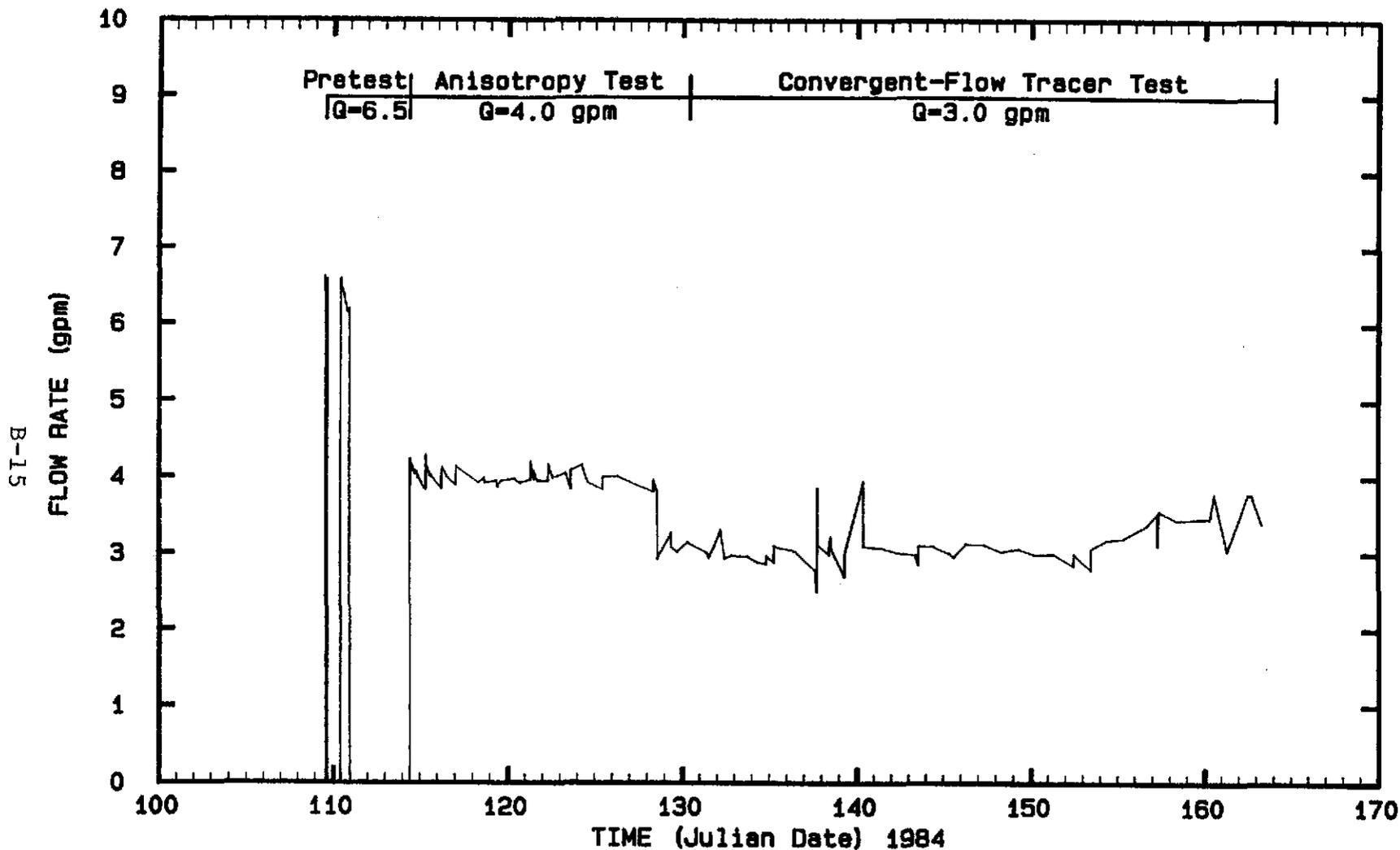


Figure 4.2 Pumping rate during the pumping of H-3b3 during the anisotropy and convergent-flow tracer testing at the H-3 hydropad, April 18 to June 12, 1984.

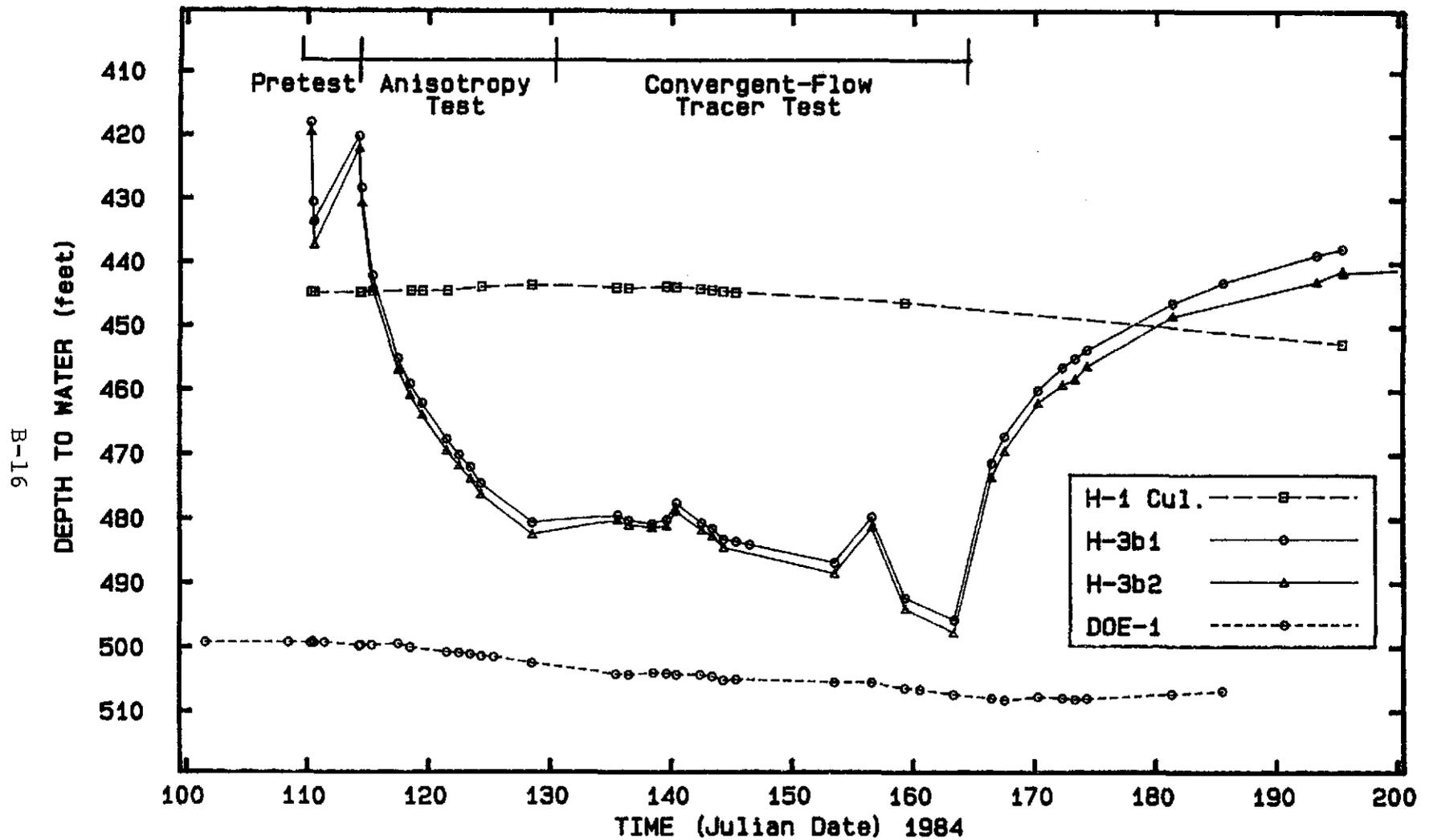


Figure 4.3 Water levels measured in observation wells H-1 (Culebra), H-3b1, H-3b2, and DOE-1 during anisotropy and convergent-flow tracer testing at the H-3 hydropad, April 18 to June 12, 1984.

TABLE 3-1 PUMP PERIODS OF OPERATION DURING PRETEST PERIOD,
ANISOTROPY TEST PERIOD, AND
CONVERGENT-FLOW TRACER TEST PERIOD

Pump Activity	Julian Date	Pumping Rate (gpm)	Comments
---------------	-------------	-----------------------	----------

PRETEST PERIOD-

Pump on	109:13:05	6.5	Well Development
Pump off	109:14:05		
Pump on	109:16:30	6.5	Well Development
Pump off	109:17:30		
Pump on	110:11:00	6.5	Attempt to Start Test,
Pump off	110:24:00		Pumping Rate too high

ANISOTROPY TEST PERIOD

Pump on	114:10:30	4.0	Begin Test
	128:14:50	3.0	Adjust Flow Rate

TRACER TEST PERIOD

	130:12:45		Begin Injection in H-3b2
	130:13:55		Begin Injection in H-3b1
Pump off	137:18:10		Electrical System Failure
Pump on	137:18:20	3.0	
Pump off	156:09:00		Pump Failure
Pump on	156:17:00	3.0	
Pump off	160:09:25		Install water-chemistry monitoring system
Pump on	160:14:00	3.0	
Pump off	161:10:15		Repair water-chemistry monitoring system
Pump on	161:10:30	3.0	
Pump off	164:12:04		End of testing.

TOTAL PRODUCTION DURING ALL PUMPING PERIODS - 233917 gallons

TABLE 3-2 DAS Periods of Operation During Pretest Period
Anisotropy Test Period, and
Convergent-Flow Tracer Test Period.

DAS Record

<u>Julian Date</u>	<u>Comment</u>
109:11:19	DAS started
118:13:00	DAS turned off during sampling line assembly
118:16:30	DAS restarted
137:10:30	DAS off due to electrical system short circuit during rain storm.
145:13:15 to 145:03:30	After repair of the DAS, the system was operated intermittently for the remainder of the tracer-test period.
146:07:20 to 146:08:20	
147:08:04 to 147:09:04	
148:08:54 to 148:09:25	
150:08:16 to 150:09:20	
152:12:50 to 152:14:03	
153:10:44 to 153:11:46	
154:07:53 to 154:08:51	
156:09:00 to 156:12:46	
156:18:07 to 156:08:16	
157:07:21 to 157:08:08	
160:08:03 to 160:08:37	
161:07:56 to 161:10:13	
163:12:54 to 163:13:03	

APPENDIX 1.0

TEST CONFIGURATION FOR THE H-3 HYDROPAD

APPENDIX 2.0

TABULATED PUMPING-RATE DATA FOR
THE PUMPING WELL H-3b3

TABLE A2-1
 TABULATED PUMPING RATES FOR ANISOTROPY AND
 CONVERGENT-FLOW TRACER TESTS AT THE H-3
 HYDROPAD, APRIL 18 TO JUNE 12, 1984

DAY	HR	MIN	PUMPING RATE (gpm)	COMMENTS
109	13	10	6.64	PUMP ON 13:05
109	13	34	6.46	
109	14	3	6.43	PUMP OFF 14:05
109	16	40	6.61	PUMP ON 16:30
109	17	0	6.31	
109	17	28	6.14	PUMP OFF 17:30
110	11	10	6.61	PUMP ON 11:00
110	12	1	6.51	
110	16	0	6.38	
110	20	0	6.16	
110	23	8	6.21	PUMP OFF 24:00
114	10	33	4.20	PUMP ON 10:30
114	10	34	4.13	
114	10	36	4.15	
114	10	37	4.08	
114	10	39	4.10	
114	10	42	4.06	
114	10	42	3.96	
114	10	43	4.06	
114	10	44	4.03	
114	10	46	4.03	
114	10	48	3.99	
114	10	49	4.04	
114	10	52	4.00	
114	10	54	3.99	
114	10	55	3.97	
114	10	56	3.98	
114	10	57	3.99	
114	10	59	4.00	
114	11	0	4.00	
114	11	4	3.97	
114	11	5	3.93	
114	11	7	3.93	
114	11	8	3.92	
114	11	9	3.91	
114	11	11	3.89	
114	11	14	4.24	
114	11	15	4.23	
114	11	18	4.24	
114	11	20	4.24	
114	11	25	4.23	
114	11	27	4.21	
114	11	30	4.20	
114	11	32	4.20	
114	11	35	4.20	
114	11	38	4.19	
114	11	41	4.19	

TABLE A2-1 (continued)
 TABULATED PUMPING RATES FOR ANISOTROPY AND
 CONVERGENT-FLOW TRACER TESTS AT THE H-3
 HYDROPAD, APRIL 18 TO JUNE 12, 1984

DAY	HR	MIN	PUMPING RATE (gpm)	COMMENTS
114	11	44	4.18	
114	11	49	4.18	
114	11	52	4.19	
114	11	58	4.20	
114	12	11	4.18	
114	12	21	4.19	
114	12	40	4.14	
114	13	0	4.15	
114	13	10	4.17	
114	13	20	4.15	
114	13	40	4.15	
114	14	1	4.15	
114	14	20	4.14	
114	14	40	4.15	
114	15	2	4.08	
114	15	22	4.09	
114	15	40	4.10	
114	16	0	4.08	
114	16	21	4.08	
114	16	40	4.07	
114	16	52	4.05	
114	17	0	4.07	
114	17	30	4.09	
114	18	0	4.04	
114	18	30	4.05	
114	19	0	4.05	
114	19	30	4.08	
114	20	0	4.05	
114	20	30	4.07	
114	21	0	4.04	
114	21	30	3.99	
114	22	0	4.02	
114	22	30	4.01	
114	23	0	3.99	
114	23	30	3.98	
114	24	0	3.97	
115	2	24	3.93	
115	6	2	3.86	
115	7	54	3.87	
115	8	33	3.84	
115	8	42	3.96	
115	8	48	3.93	
115	8	56	4.27	
115	9	4	4.29	
115	9	7	3.89	
115	9	12	4.19	
115	10	50	4.12	

TABLE A2-1 (continued)
 TABULATED PUMPING RATES FOR ANISOTROPY AND
 CONVERGENT-FLOW TRACER TESTS AT THE H-3
 HYDROPAD, APRIL 18 TO JUNE 12, 1984

DAY	HR	MIN	PUMPING RATE (gpm)	COMMENTS
115	11	19	4.10	
115	12	30	4.07	
115	13	15	4.07	
115	13	40	4.02	
115	14	0	4.06	
115	14	30	4.05	
115	15	30	4.01	
115	16	0	4.03	
116	6	6	3.85	
116	6	15	4.10	
116	7	30	4.13	
116	10	30	4.07	
116	12	0	4.04	
116	13	0	4.01	
116	14	0	4.00	
117	1	43	3.90	
117	1	54	4.15	
118	8	49	3.93	
118	16	30	4.00	
118	17	2	3.93	
119	9	3	3.96	
119	10	58	3.87	
119	11	19	3.91	
119	16	0	3.96	
120	9	52	3.99	
120	18	2	3.92	
120	18	15	3.94	
121	8	9	3.97	
121	8	16	4.21	
121	12	46	3.97	
121	12	50	4.08	
121	17	48	3.95	
122	8	25	3.96	
122	8	25	4.18	
122	14	50	4.00	
123	8	14	4.06	
123	15	16	3.85	
123	15	23	4.10	
124	6	35	4.17	
124	14	51	3.94	
125	11	31	3.84	
125	11	40	4.01	
126	8	0	4.02	
128	9	20	3.81	
128	9	40	3.97	
128	14	44	3.81	
128	14	50	3.00	REDUCED FLOW RATE

TABLE A2-1 (continued)
 TABULATED PUMPING RATES FOR ANISOTROPY AND
 CONVERGENT-FLOW TRACER TESTS AT THE H-3
 HYDROPAD, APRIL 18 TO JUNE 12, 1984

DAY	HR	MIN	PUMPING RATE (gpm)	COMMENTS
128	14	51	2.93	
128	14	56	2.95	
129	9	48	3.28	
129	10	10	3.09	
129	17	52	3.03	
130	7	42	3.16	
131	9	42	3.02	
131	13	18	2.95	
131	15	0	3.00	
131	19	45	3.09	
132	5	0	3.31	
132	5	0	3.32	
132	11	3	2.94	
132	12	33	2.95	
132	20	32	2.99	
133	8	5	2.97	
133	18	15	2.97	
134	6	20	2.90	
134	20	10	2.87	
134	20	54	2.98	
135	6	48	2.89	
135	6	56	3.12	
135	7	37	3.10	
136	6	92	3.05	
136	12	9	3.03	
137	15	8	2.79	
137	16	30	2.73	
137	18	1	2.50	
137	18	20	3.87	
137	18	30	3.48	
137	18	40	3.13	
138	10	39	2.99	
138	10	44	3.11	
138	13	6	3.23	
138	13	20	3.08	
139	8	8	2.70	
139	8	14	3.02	
140	9	50	3.96	
140	10	8	3.10	
141	11	35	3.08	
142	10	9	3.02	
143	9	23	2.99	
143	14	9	2.86	
143	14	12	3.11	
144	10	38	3.11	
145	8	46	3.01	
145	15	15	2.96	

TABLE A2-1 (continued)
 TABULATED PUMPING RATES FOR ANISOTROPY AND
 CONVERGENT-FLOW TRACER TESTS AT THE H-3
 HYDROPAD, APRIL 18 TO JUNE 12, 1984

DAY	HR	MIN	PUMPING RATE (gpm)	COMMENTS
146	7	23	3.14	
147	8	15	3.13	
148	8	54	3.03	
149	8	0	3.08	
150	7	43	2.99	
151	8	42	3.01	
152	11	57	2.85	
152	12	3	3.01	
153	11	46	2.80	
153	11	55	3.08	
154	7	43	3.19	
155	8	47	3.22	
156	9	0	0.00	PUMP OFF
156	18	0	3.40	PUMP ON 17:00
157	7	25	3.55	
157	7	28	3.12	
157	9	31	3.58	
158	10	3	3.45	
159	9	50	3.47	
160	8	10	3.48	
160	14	0	3.80	
161	8	18	3.05	
162	12	40	3.79	
162	18	4	3.79	
163	8	10	3.41	PUMP OFF 164:12:04

APPENDIX 3.0

TEST DESCRIPTION AND
TABULATED WATER-LEVEL DATA CALCULATED
FOR THE WELLS AT THE H-3 HYDROPAD

WELL TEST DESCRIPTION

Location: WIPP
Well Site: H-3
Type of test: ANISOTROPY (PUMPING), CONVERGENT-FLOW
TRACER
Type of pump: RED JACKET 3-HP, 32B
Unit tested: CULEBRA
Pumping Well: H-3b3
Observation Wells: H-3b1, H-3b2, H-1, DOE-1
Year of test: 1984
Start of available data: 109 13 05
End of available data: 163 0 43
Start of test: 114 10 30
Transducer Data (Serial # / Sensitivity / Channels)
Pumping Interval 94911 1.00879 3, 22
H-3b1 95078 2.51793 5, 24
H-3b2 94910 1.00746 7, 26
Available data files: HY318, HY319, HY320
HY321, HY323

TABLE A3-1
 TABULATED WATER-LEVEL DATA CALCULATED FOR THE WELLS AT THE H-3
 HYDROPAD DURING ANISOTROPY AND CONVERGENT-FLOW TRACER TESTS
 APRIL 18 TO JUNE 12, 1984

TIME Julian Date DAY:HR:MIN:SEC	DEPTH TO WATER (feet)			COMMENTS
	H-3b3	H-3b2	H-3b1	
109:11:19: 0	418.11	418.40	416.76	Start HY319
109:12: 0: 0	418.15	418.45	416.81	
109:12:59:30	418.18	418.49	416.89	
109:13: 0: 0	418.66	418.47	416.90	PUMP ON
109:13: 0:30	419.80	418.55	417.12	PUMP OFF
109:13: 1: 0	419.07	418.64	417.17	
109:13: 2: 0	418.49	418.70	417.11	
109:13: 3: 0	418.34	418.69	417.06	
109:13: 4: 0	418.30	418.65	417.03	
109:13: 5: 0	418.53	418.63	417.01	PUMP ON
109:13: 5:30	423.01	418.72	417.32	
109:13: 6: 0	426.01	418.93	417.71	
109:13: 7: 0	428.45	419.46	418.26	
109:13: 8: 0	429.49	419.94	418.64	
109:13: 9: 0	431.21	420.38	418.99	
109:13:10: 0	432.52	420.77	419.31	
109:13:15: 0	435.74	422.17	420.52	
109:13:20: 0	438.88	423.19	421.44	
109:13:25: 0	440.68	424.03	422.22	
109:13:30: 0	441.53	424.72	422.83	
109:13:35: 0	441.81	425.25	423.37	
109:13:45: 0	442.51	426.16	424.25	
109:13:55:59	442.92	426.98	425.09	
109:14: 5: 0	443.61	427.63	425.73	PUMP OFF
109:14: 6: 0	438.67	427.65	425.70	
109:14: 7: 0	433.49	427.50	425.42	
109:14: 8: 0	429.84	427.21	425.03	
109:14: 9: 0	427.48	426.85	424.63	
109:14:10: 0	426.09	426.44	424.25	
109:14:15: 0	424.20	424.86	423.01	
109:14:20: 0	423.57	424.14	422.39	
109:14:30: 0	422.79	423.35	421.67	
109:14:40: 0	422.30	422.87	421.22	
109:14:50: 0	421.95	422.50	420.86	
109:15: 0: 0	421.65	422.21	420.60	
109:15:30: 0	420.99	421.57	420.00	
109:16: 0: 0	420.53	421.09	419.56	
109:16:30: 0	420.18	420.72	419.22	PUMP ON
109:16:30:30	424.01	420.79	419.45	
109:16:31: 0	426.82	420.96	419.75	
109:16:32: 0	430.85	421.42	420.31	
109:16:33: 0	433.65	421.92	420.76	
109:16:34: 0	434.64	422.39	421.15	

TABLE A3-1 (continued)
 TABULATED WATER-LEVEL DATA CALCULATED FOR THE WELLS AT THE H-3
 HYDROPAD DURING ANISOTROPY AND CONVERGENT-FLOW TRACER TESTS
 APRIL 18 TO JUNE 12, 1984

TIME Julian Date DAY:HR:MIN:SEC	DEPTH TO WATER (feet)			COMMENTS
	H-3b3	H-3b2	H-3b1	
109:16:35: 0	436.28	422.81	421.49	
109:16:40: 0	440.21	424.36	422.81	
109:16:45: 0	441.58	425.34	423.64	
109:16:50: 0	442.16	426.04	424.28	
109:17: 0: 0	442.94	427.10	425.30	
109:17:10: 0	443.61	427.95	426.12	
109:17:20: 0	443.79	428.64	426.81	
109:17:30: 0	444.25	429.25	427.40	PUMP OFF
109:17:30:30	442.82	429.27	427.44	
109:17:31: 0	439.66	429.26	427.34	
109:17:32: 0	434.60	429.11	427.07	
109:17:33: 0	431.06	428.81	426.70	
109:17:34: 0	428.79	428.43	426.30	
109:17:35: 0	427.48	428.01	425.91	
109:17:40: 0	425.67	426.45	424.67	
109:17:45: 0	424.97	425.70	424.02	
109:18: 0: 0	423.89	424.56	423.00	
109:19: 0: 0	422.01	422.66	421.17	
109:20: 0: 0	421.10	421.70	420.24	
109:21: 0: 0	420.57	421.13	419.69	
109:22: 0: 0	420.23	420.75	419.38	
110: 0: 0: 0	419.80	420.30	418.96	
110: 2: 0: 0	419.46	419.93	418.67	
110: 4: 0: 0	419.33	419.79	418.57	
110: 8: 0: 0	419.19	419.62	418.45	
110: 9:32:12	419.20	419.66	418.53	End HY319
110: 9:16: 0	419.20	419.54	418.01	Start HY320
110:10: 0: 0	419.15	419.51	417.96	
110:10:59:30	419.10	419.50	418.00	
110:11: 0: 0	434.52	419.51	418.04	PUMP ON
110:11: 0:30	439.93	419.83	418.95	
110:11: 1: 0	440.48	420.24	419.45	
110:11: 2: 0	441.06	421.01	420.07	
110:11: 3: 0	441.40	421.65	420.51	
110:11: 4: 0	441.60	422.17	420.86	
110:11: 5: 0	441.44	422.60	421.17	
110:11:10: 0	442.39	423.95	422.29	
110:11:15: 0	441.82	424.73	423.01	
110:11:20: 1	442.48	425.34	423.61	
110:11:25: 1	443.94	425.87	424.14	
110:11:30: 1	444.76	426.52	424.73	
110:11:40: 1	445.76	427.52	425.71	
110:11:50: 0	446.63	428.39	426.57	

TABLE A3-1 (continued)
 TABULATED WATER-LEVEL DATA CALCULATED FOR THE WELLS AT THE H-3
 HYDROPAD DURING ANISOTROPY AND CONVERGENT-FLOW TRACER TESTS
 APRIL 18 TO JUNE 12, 1984

TIME Julian Date DAY:HR:MIN:SEC	DEPTH TO WATER (feet)			COMMENTS
	H-3b3	H-3b2	H-3b1	
110:12: 0: 0	447.52	429.15	427.31	
110:12:30: 0	449.07	431.03	429.17	
110:13: 0:48	449.89	432.61	430.73	
110:13:30: 0	451.04	433.87	431.98	
110:14: 0: 7	451.94	434.98	433.07	
110:15: 0: 7	454.62	437.09	435.14	
110:16: 0: 7	455.78	438.79	436.80	
110:17: 0: 7	457.84	440.42	438.43	
110:18: 0: 7	458.76	441.79	439.80	
110:19: 0: 7	459.79	442.95	441.01	
110:20: 0: 7	460.02	443.92	442.02	
110:22: 0: 7	461.50	445.82	443.93	
110:23:59:30	464.26	447.85	446.02	
111: 0: 0: 0	444.88	447.84	446.01	PUMP OFF
111: 0: 1: 0	444.89	447.20	444.74	
111: 0: 2: 0	444.33	446.49	444.14	
111: 0: 3: 0	443.92	445.89	443.73	
111: 0: 4: 0	443.58	445.42	443.40	
111: 0: 5: 0	443.31	445.02	443.12	
111: 0:10: 0	442.30	443.77	442.10	
111: 0:15: 0	441.60	442.98	441.37	
111: 0:20: 0	441.02	442.38	440.81	
111: 0:25: 0	440.54	441.86	440.32	
111: 0:30: 0	440.10	441.41	439.86	
111: 0:40: 0	439.35	440.62	439.10	
111: 0:50: 0	438.71	439.94	438.43	
111: 1: 0: 0	438.12	439.34	437.85	
111: 1:30: 0	436.64	437.80	436.36	
111: 2: 0: 0	435.44	436.54	435.13	
111: 2:30: 0	434.49	435.57	434.15	
111: 3: 0: 0	433.71	434.75	433.34	
111: 4: 0: 0	432.35	433.33	431.96	
111: 5: 0: 0	431.30	432.24	430.88	
111: 6: 0: 0	430.51	431.43	430.05	
111: 7: 0: 0	429.92	430.81	429.46	
111: 8: 0: 0	429.34	430.24	428.92	
111:10: 0: 0	428.35	429.24	427.91	
111:12: 0: 0	427.52	428.42	427.11	
111:14: 0:38	426.85	427.73	426.42	
111:16: 5: 0	426.21	427.05	425.77	
111:20: 5: 0	425.25	426.00	424.80	
112: 0: 5: 0	424.56	425.28	424.14	
112: 4: 5: 0	424.12	424.83	423.76	

TABLE A3-1 (continued)
 TABULATED WATER-LEVEL DATA CALCULATED FOR THE WELLS AT THE H-3
 HYDROPAD DURING ANISOTROPY AND CONVERGENT-FLOW TRACER TESTS
 APRIL 18 TO JUNE 12, 1984

TIME Julian Date DAY:HR:MIN:SEC	DEPTH TO WATER (feet)			COMMENTS
	H-3b3	H-3b2	H-3b1	
112: 8: 5: 0	423.91	424.65	423.59	
112:12: 5: 0	423.59	424.40	423.33	
112:18: 5: 0	422.86	423.56	422.54	
113: 0: 5: 0	422.39	423.11	422.15	
113: 6: 5: 0	422.13	422.82	421.88	
113:12: 5: 0	422.06	422.88	421.97	
113:18: 5: 0	421.53	422.26	421.33	
114: 0: 5: 0	421.26	421.95	421.09	
114: 6: 5: 0	421.10	421.80	420.94	
114: 8:10: 0	421.31	422.06	421.17	End HY320
114: 8:51: 0	421.24	422.07	420.20	Start HY321
114:10:30: 0	421.19	422.07	420.17	PUMP ON
114:10:30:20	445.93	422.25	420.87	
114:10:30:40	428.77	422.49	421.10	
114:10:31: 0	428.86	422.64	421.12	
114:10:32: 0	431.84	423.02	421.34	
114:10:33: 0	432.05	423.39	421.68	
114:10:34: 0	432.20	423.70	421.90	
114:10:35: 0	432.33	423.95	422.09	
114:10:40: 0	432.80	424.77	422.76	
114:10:50: 0	433.65	425.72	423.65	
114:11: 0: 0	434.29	426.39	424.30	
114:11:15: 0	436.10	427.27	425.18	
114:11:30: 0	436.73	428.12	425.98	
114:11:45: 0	437.26	428.77	426.63	
114:12: 0: 0	437.78	429.38	427.25	
114:12:30: 0	438.67	430.39	428.24	
114:13: 0: 0	439.35	431.25	429.09	
114:14: 0: 0	440.76	432.72	430.49	
114:15: 0:12	441.56	433.89	431.68	
114:16: 0: 0	442.36	434.83	432.63	
114:18: 0: 0	443.95	436.46	434.21	
114:20: 0: 0	445.29	437.81	435.57	
114:22: 0: 0	446.23	439.07	436.88	
115: 0: 0: 0	446.89	440.11	437.91	
115: 4: 0: 0	448.80	441.98	439.80	
115: 8: 0: 0	450.60	443.92	441.75	
115:12: 9:21	453.23	445.98	443.75	
115:18: 0: 0	454.27	447.54	445.27	
116: 0: 0: 0	456.13	449.34	447.09	
116: 6: 0: 0	457.14	450.71	448.47	
116:12: 0: 0	459.75	452.98	450.67	
116:18: 0: 0	460.65	453.97	451.66	

TABLE A3-1 (continued)
 TABULATED WATER-LEVEL DATA CALCULATED FOR THE WELLS AT THE H-3
 HYDROPAD DURING ANISOTROPY AND CONVERGENT-FLOW TRACER TESTS
 APRIL 18 TO JUNE 12, 1984

TIME Julian Date DAY:HR:MIN:SEC	DEPTH TO WATER (feet)			COMMENTS
	H-3b3	H-3b2	H-3b1	
117: 0: 0: 0	462.01	455.37	453.07	
117: 6: 0: 0	464.29	457.11	454.78	
117:12: 0:23	465.10	458.43	456.05	
118: 0: 0:23	467.36	460.60	458.24	
118:12: 0:23	468.68	462.73	460.27	
118:16:30: 0	468.46	462.86	460.36	
118:18: 0: 0	469.22	463.12	460.56	
119: 0: 0: 0	470.35	464.22	461.76	
119:12: 0: 0	471.92	465.96	463.60	
120: 0: 0: 0	473.08	467.08	464.56	
120:12: 0: 0	474.51	468.84	466.38	
121: 0: 0: 0	475.35	469.90	467.32	
121:12: 0: 0	477.40	471.55	469.10	
122: 0: 0: 0	478.57	472.51	469.87	
122:11:59:59	479.67	474.28	471.76	
122:23:59:59	480.69	475.19	472.54	
123:12:15:48	481.12	476.21	473.56	
124: 0: 0: 0	483.36	477.73	474.94	
124:12:18:32	483.82	478.95	476.24	
125: 0:18:32	484.89	479.64	476.82	
125:12:18:32	485.28	480.58	477.89	
126: 0:18:32	486.77	481.48	478.60	
126:12:50: 0	486.55	482.22	479.44	
127: 0:50: 0	487.76	482.92	480.03	
127:11:50: 0	487.43	483.44	480.64	
128: 0:50: 0	488.62	484.15	481.28	
128:11:51:56	489.43	485.20	482.39	
128:14:45:18	489.48	485.28	482.37	
128:14:50:58	486.46	485.01	482.05	FLOW REDUCED
128:14:55: 4	486.28	484.81	481.88	
128:15: 0: 0	486.07	484.65	481.75	
128:15:30: 0	486.06	484.27	481.37	
128:16: 0: 0	485.96	484.04	481.13	
128:17: 0: 0	485.71	483.76	480.82	
128:18: 0: 0	485.77	483.56	480.62	
128:21: 0: 0	486.26	483.45	480.52	
129: 0: 0: 0	486.33	483.50	480.63	
129: 6: 0: 0	486.78	483.70	480.91	
129:10:27: 6	485.56	483.35	480.67	End HY321
129:10:33:18	485.55	483.33	480.64	Start HY323
129:12:37: 2	485.01	482.95	480.24	
129:18: 3: 0	484.62	482.47	479.56	
130: 0: 3: 0	485.04	482.55	479.75	

TABLE A3-1 (continued)
 TABULATED WATER-LEVEL DATA CALCULATED FOR THE WELLS AT THE H-3
 HYDROPAD DURING ANISOTROPY AND CONVERGENT-FLOW TRACER TESTS
 APRIL 18 TO JUNE 12, 1984

TIME Julian Date DAY:HR:MIN:SEC	DEPTH TO WATER (feet)			COMMENTS
	H-3b3	H-3b2	H-3b1	
130: 6: 3: 0	485.12	482.60	479.81	
131:17:59: 9	482.88	479.81	478.69	
132: 0: 0: 8	484.30	480.53	479.77	
132: 6: 0: 7	483.84	480.74	480.03	
132:12: 0: 7	483.12	480.43	479.75	
132:18: 0: 8	482.63	480.00	479.10	
133: 0: 0: 7	482.82	480.06	479.35	
133:12: 0: 7	483.04	480.32	479.78	
134: 0: 0: 8	483.06	480.19	479.57	
134:12: 0: 8	483.31	480.49	480.07	
135: 0: 0: 7	483.41	480.41	480.05	
135: 6:30: 7	483.64	480.57	480.37	
135: 7: 0: 7	484.46	480.75	480.55	FLOW INCREASE
135: 7:30: 7	484.59	480.90	480.75	
135:12: 3:42	484.69	482.27	480.06	
136: 0: 0: 0	484.90	482.80	481.17	
136:12: 0: 0	485.53	483.35	482.07	
137: 0: 0: 0	485.48	483.50	481.96	
137: 8: 0: 0	485.83	483.75	482.17	
146: 8:20: 0	490.15	487.81		
147: 9: 0: 0	490.76	488.37		
148: 9: 0: 0	490.65	488.47		
150: 9: 0: 0	491.45	489.46		
152:13: 0: 0	491.74	489.94		
153:11: 0: 1	492.24	490.63		
154: 8:30: 1	494.80	492.46		
156: 9: 0:49	490.47	492.76		PUMP PULLED
156: 9: 4:49	490.43	492.52		
156: 9:10:11	488.89	491.99		
156: 9:15:11	488.43	491.42		
156: 9:20:11	488.07	491.04		
156: 9:30:11	487.46	490.42		
156: 9:45:11	486.78	489.70		
156:10: 0:11	486.25	489.12		
156:10:30:11	485.39	488.22		
156:11: 0:11	484.73	487.46		
156:12:20: 9	483.19	485.65		
156:18: 7:41	500.65	486.41		PUMP ON 17:00
157: 8: 0: 0	508.56	492.79		
160: 8:30:45	510.08	497.88		
161: 8: 0:34	509.30	496.23		
163:13: 0:43	514.40	500.17		

APPENDIX 4.0

TABULATED WATER-LEVEL DATA FOR OBSERVATION WELLS
H-1 (CULEBRA), H-3b1, H-3b2, AND DOE-1

TABLE A4-1
 WATER-LEVEL MEASUREMENTS IN
 OBSERVATION WELL H-1 (Culebra) DURING
 THE H-3 ANISOTROPY AND TRACER TESTS

DAY	HR	MIN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	DEVICE
110	9	17	04/19/84	444.72	135.55	STEEL TAPE
110	16	0	04/19/84	444.72	135.55	STEEL TAPE
114	9	0	04/23/84	444.67	135.54	STEEL TAPE
114	12	35	04/23/84	444.67	135.54	STEEL TAPE
115	10	3	04/24/84	444.53	135.49	STEEL TAPE
118	14	12	04/27/84	444.40	135.45	STEEL TAPE
119	13	16	04/28/84	444.45	135.47	STEEL TAPE
121	14	26	04/30/84	444.40	135.45	STEEL TAPE
124	9	44	05/03/84	443.82	135.28	IRON HORSE
128	13	29	05/07/84	443.53	135.19	IRON HORSE
135	12	36	05/14/84	443.92	135.31	IRON HORSE
136	12	41	05/15/84	444.03	135.34	IRON HORSE
139	15	58	05/18/84	443.76	135.26	IRON HORSE
140	11	22	05/19/84	443.85	135.29	IRON HORSE
142	11	26	05/21/84	444.09	135.36	IRON HORSE
143	10	2	05/22/84	444.28	135.42	IRON HORSE
144	8	43	05/23/84	444.51	135.49	IRON HORSE
145	9	47	05/24/84	444.67	135.54	IRON HORSE
159	7	24	06/07/84	446.26	136.02	IRON HORSE
195	12	0	07/13/84	452.62	137.96	IRON HORSE

TABLE A4-2
 WATER-LEVEL MEASUREMENTS IN
 OBSERVATION WELL H-3b1 DURING THE
 H-3 ANISOTROPY AND TRACER TESTS

DAY	HR	MIN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	DEVICE
110	8	27	04/19/84	417.98	127.40	IRON HORSE
110	13	17	04/19/84	430.51	131.22	IRON HORSE
110	15	12	04/19/84	433.60	132.16	IRON HORSE
114	8	0	04/23/84	420.14	128.06	IRON HORSE
114	12	44	04/23/84	428.28	130.54	IRON HORSE
115	10	14	04/24/84	442.06	134.74	IRON HORSE
117	14	3	04/26/84	455.09	138.71	IRON HORSE
118	13	9	04/27/84	459.06	139.92	IRON HORSE
119	13	25	04/28/84	462.07	140.84	IRON HORSE
121	13	35	04/30/84	467.62	142.53	IRON HORSE
122	13	37	05/01/84	470.05	143.27	IRON HORSE
123	12	11	05/02/84	471.95	143.85	IRON HORSE
124	8	46	05/03/84	474.48	144.62	IRON HORSE
128	14	10	05/07/84	480.58	146.48	IRON HORSE
135	15	3	05/14/84	479.40	146.12	IRON HORSE
136	13	17	05/15/84	480.22	146.37	IRON HORSE
138	11	16	05/17/84	480.77	146.54	IRON HORSE
139	16	12	05/18/84	480.15	146.35	IRON HORSE
140	12	0	05/19/84	477.53	145.55	IRON HORSE
142	14	38	05/21/84	480.64	146.50	IRON HORSE
143	11	44	05/22/84	481.50	146.76	IRON HORSE
144	9	51	05/23/84	483.20	147.28	IRON HORSE
145	10	52	05/24/84	483.53	147.38	IRON HORSE
146	13	26	05/25/84	483.99	147.52	IRON HORSE
153	13	35	06/01/84	486.84	148.39	IRON HORSE
156	15	37	06/04/84	479.72	146.22	IRON HORSE
159	8	53	06/07/84	492.26	150.04	IRON HORSE
163	9	9	06/11/84	495.73	151.10	IRON HORSE
166	12	27	06/14/84	471.26	143.64	IRON HORSE
167	14	5	06/15/84	467.13	142.38	IRON HORSE
170	8	32	06/18/84	459.97	140.20	IRON HORSE
172	8	53	06/20/84	456.43	139.12	IRON HORSE
173	9	43	06/21/84	454.99	138.68	IRON HORSE
174	8	53	06/22/84	453.61	138.26	IRON HORSE
181	10	18	06/29/84	446.26	136.02	IRON HORSE
185	14	55	07/03/84	442.98	135.02	IRON HORSE
193	8	45	07/11/84	438.65	133.70	IRON HORSE
195	12	34	07/13/84	437.66	133.40	IRON HORSE

TABLE A4-3
 WATER-LEVEL MEASUREMENTS IN
 OBSERVATION WELL H-3b2 DURING THE
 H-3 ANISOTROPY AND TRACER TESTS

DAY	HR	MIN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	DEVICE
110	8	35	04/19/84	419.52	127.87	IRON HORSE
110	13	40	04/19/84	433.40	132.10	IRON HORSE
110	15	25	04/19/84	437.27	133.28	IRON HORSE
114	8	10	04/23/84	422.05	128.64	IRON HORSE
114	12	55	04/23/84	430.58	131.24	IRON HORSE
115	10	26	04/24/84	444.06	135.35	IRON HORSE
117	14	12	04/26/84	456.86	139.25	IRON HORSE
118	13	19	04/27/84	460.83	140.46	IRON HORSE
119	13	37	04/28/84	463.91	141.40	IRON HORSE
121	13	46	04/30/84	469.39	143.07	IRON HORSE
122	13	52	05/01/84	471.72	143.78	IRON HORSE
123	12	28	05/02/84	473.75	144.40	IRON HORSE
124	9	0	05/03/84	476.18	145.14	IRON HORSE
128	14	24	05/07/84	482.45	147.05	IRON HORSE
135	15	19	05/14/84	480.15	146.35	IRON HORSE
136	13	29	05/15/84	480.97	146.60	IRON HORSE
138	11	34	05/17/84	481.36	146.72	IRON HORSE
139	16	21	05/18/84	481.10	146.64	IRON HORSE
140	12	11	05/19/84	478.77	145.93	IRON HORSE
142	14	44	05/21/84	481.79	146.85	IRON HORSE
143	11	43	05/22/84	482.68	147.12	IRON HORSE
144	10	3	05/23/84	484.45	147.66	IRON HORSE
153	13	45	06/01/84	488.52	148.90	IRON HORSE
156	15	49	06/04/84	481.30	146.70	IRON HORSE
159	9	8	06/07/84	494.00	150.57	IRON HORSE
163	9	17	06/11/84	497.70	151.70	IRON HORSE
166	12	36	06/14/84	473.46	144.31	IRON HORSE
167	14	13	06/15/84	469.42	143.08	IRON HORSE
170	8	44	06/18/84	461.94	140.80	IRON HORSE
172	9	3	06/20/84	459.09	139.93	IRON HORSE
173	9	51	06/21/84	458.23	139.67	IRON HORSE
174	9	5	06/22/84	456.23	139.06	IRON HORSE
181	10	26	06/29/84	448.29	136.64	IRON HORSE
193	8	50	07/11/84	442.85	134.98	IRON HORSE
195	12	46	07/13/84	441.08	134.44	IRON HORSE
195	13	0	07/13/84	441.47	134.56	IRON HORSE

TABLE A4-4
 WATER-LEVEL MEASUREMENTS IN
 OBSERVATION WELL DOE-1 DURING THE
 H-3 ANISOTROPY AND TRACER TESTS

DAY	HR	MIN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	DEVICE
101	16	32	04/10/84	499.18	152.15	IRON HORSE
108	14	10	04/17/84	499.21	152.16	IRON HORSE
110	8	55	04/19/84	499.31	152.19	IRON HORSE
110	14	5	04/19/84	499.08	152.12	IRON HORSE
110	15	44	04/19/84	499.21	152.16	IRON HORSE
111	12	45	04/20/84	499.18	152.15	IRON HORSE
114	8	45	04/23/84	499.74	152.32	IRON HORSE
114	12	7	04/23/84	499.61	152.28	IRON HORSE
115	9	42	04/24/84	499.61	152.28	IRON HORSE
117	13	46	04/26/84	499.41	152.22	IRON HORSE
118	13	40	04/27/84	500.00	152.40	IRON HORSE
121	13	17	04/30/84	500.75	152.63	IRON HORSE
122	13	20	05/01/84	500.85	152.66	IRON HORSE
123	11	52	05/02/84	501.05	152.72	IRON HORSE
124	9	24	05/03/84	501.35	152.81	IRON HORSE
125	10	6	05/04/84	501.51	152.86	IRON HORSE
128	13	48	05/07/84	502.46	153.15	IRON HORSE
135	11	20	05/14/84	504.17	153.67	IRON HORSE
136	12	59	05/15/84	504.27	153.70	IRON HORSE
138	13	42	05/17/84	503.97	153.61	IRON HORSE
139	15	44	05/18/84	504.07	153.64	IRON HORSE
140	11	38	05/19/84	504.27	153.70	IRON HORSE
142	11	45	05/21/84	504.27	153.70	IRON HORSE
143	11	14	05/22/84	504.53	153.78	IRON HORSE
144	9	12	05/23/84	505.15	153.97	IRON HORSE
145	10	26	05/24/84	504.99	153.92	IRON HORSE
153	13	21	06/01/84	505.45	154.06	IRON HORSE
156	15	24	06/04/84	505.48	154.07	IRON HORSE
159	8	34	06/07/84	506.36	154.34	IRON HORSE
160	14	30	06/08/84	506.56	154.40	IRON HORSE
163	8	50	06/11/84	507.32	154.63	IRON HORSE
166	12	9	06/14/84	507.87	154.80	IRON HORSE
167	13	51	06/15/84	508.20	154.90	IRON HORSE
170	8	19	06/18/84	507.64	154.73	IRON HORSE
172	8	24	06/20/84	507.87	154.80	IRON HORSE
173	9	24	06/21/84	508.07	154.86	IRON HORSE
174	8	43	06/22/84	507.94	154.82	IRON HORSE
181	9	30	06/29/84	507.15	154.58	IRON HORSE
185	14	38	07/03/84	506.69	154.44	IRON HORSE

APPENDIX 5.0

TABULATED WATER-QUALITY DATA

Table A5-1 Water-Quality Data Collected During H-3 Anisotropy and Convergent-flow Tracer Tests.

	Date	Julian Date	Time	Electrolytic Conductivity ($\mu\text{S}/\text{cm}$)	Specific Gravity
PRETEST	4/19	110	11:38	6.1×10^4	1.042
	4/19	110	12:35	7×10^4	1.04
ANISOTROPY TEST	4/23	114	18:05	7×10^4	1.039
	4/23	114	19:40	7×10^4	1.038
	4/23	114	22:30	7×10^4	1.038
	4/24	115	09:16	6.75×10^4	1.036
	4/24	115	13:35	6.95×10^4	1.036
	4/25	116	00:08	6.8×10^4	1.036
	4/25	116	06:24	6.95×10^4	1.036
	4/25	116	13:00	6.9×10^4	1.037
	4/27	118	08:55	6.75×10^4	1.035
	4/27	118	13:00	6.51×10^4	1.034
	4/28	119	09:30	6.5×10^4	1.039
	4/28	119	12:12	6.51×10^4	1.040
	4/28	119	16:11	6.6×10^4	1.040
	4/29	120	09:52	--	1.041
	4/29	120	18:02	--	1.041
	5/1	122	15:00	--	1.040
	5/7	128	13:01	6.4×10^4	1.036
5/9	130	07:50	6.25×10^4	1.036	
TRACER TEST	5/10	131	20:30	6.25×10^4	1.036
	5/11	132	10:53	6.5×10^4	1.034
	5/13	134	06:39	6.6×10^4	1.035
	5/13	134	20:15	6.55×10^4	1.034
	5/14	135	07:30	6.6×10^4	1.035
	5/15	136	07:00	6.5×10^4	1.036
	5/15	136	13:35	6.5×10^4	1.034
	5/17	138	13:13	6.4×10^4	1.034
	5/18	139	09:42	6.25×10^4	1.032
	5/19	140	09:53	6.0×10^4	1.032
	5/20	141	11:35	--	1.032
	5/21	142	10:13	6.75×10^4	1.032
	5/22	143	09:30	6.8×10^4	1.032
	5/25	146	08:04	--	1.034
	5/26	147	08:30	6.4×10^4	1.034
	5/27	148	09:10		1.034
	5/29	150	07:45	6.1×10^4	1.034
	5/30	151	07:50	5.7×10^4	1.034
	5/31	152	13:32		1.032
	6/1	153	11:58	6.6×10^4	1.032
	6/2	154	08:18		1.034
6/3	155	08:58	6.5×10^4	1.032	
6/6	156	10:09	6.8×10^4	1.032	
6/12	164	11:58	7.0×10^4	1.034	



**PART C. PUMPING TEST AT THE H-8 HYDROPAD, CONDUCTED
DECEMBER 6-18, 1985**

1.0 INTRODUCTION

A hydraulic pumping test was conducted at the H-8 hydropad, approximately nine and one-half miles south of the WIPP site, December 6 to 18, 1985 (Figure 1.1). This report presents a compilation of the hydrologic data collected during that test. The following sections describe the test objectives, well configurations, test equipment, and test history. Section 4.0 contains descriptions and graphical representations of the test results. The Appendixes present details of well configurations, tabulated data from the pumping and observation wells at the H-8 hydropad, tabulated data from the Poker Trap observation well, tabulated water-quality data, and tabulated barometric-pressure data.

1.1 Objectives

The objective of the H-8 pumping test was to evaluate the transmissivity and, if possible, the storativity of the Culebra Dolomite Member of the Rustler Formation at the H-8 hydropad. The test is one of a series of tests designed to provide data on the areal variability of the hydraulic parameters of the Culebra at and near the WIPP site. The test also provided data pertaining to the question of whether or not a hydraulic connection exists between the Culebra and the Magenta members of the Rustler Formation, and between the Culebra and the Rustler-Salado contact.

1.2 Configuration of the H-8 Hydropad and the Poker Trap Observation Well

The H-8 hydropad is located approximately nine and one-half miles south of the southwest corner of the WIPP site (Figure 1.1). The hydropad consists of three wells (Figure 1.2) completed in different parts of the Rustler Formation as shown on Figure 1.3. All measurements on Figure 1.2 are ground-surface distances. Well H-8a is completed in the Magenta Member of the Rustler Formation; well H-8b is completed in the Culebra dolomite; and well H-8c is completed in the Rustler-Salado contact zone (Figure 1.3).

The Poker Trap stock well was used as an additional observation well during the test. The Poker Trap well was reported to be completed in the Culebra (Local rancher A. Felts, personal communication, October, 1985). The well had not been geophysically logged and drillers logs were not available. An attempt to sound the bottom of the well was made on November 27, 1985 and bottom was reached at 547 feet, 73 feet above the reported depth of the well, and approximately 35 feet above the projected level of the Culebra. The Poker Trap well is normally served by a windmill pump. This pump was removed on November 27, 1985 and an air-line gage to measure water level was installed on December 6, 1985. The windmill pump was in operation prior to its removal from the well in preparation for the H-8 pumping test.

A Baski 5-5/8-inch sliding-end air-inflatable packer with a feed-through assembly for pressure-transducer and sampling access to the test interval was installed in H-8b, the pumping well, on December 4, 1985 (Figure 1.4). The packer/transducer assembly allowed continuous monitoring of the fluid pressure in the H-8b test interval during the pumping and recovery periods of the test. An additional transducer was installed above the

packer in well H-8b (Figure 1.4) to monitor the annular space (the annulus) between the 7-inch (O.D.) casing and the 1 1/2 inch discharge line. The annulus transducer served to monitor packer performance and check for leaks in the packer and the discharge line. Observation wells H-8a and H-8c were monitored with both the Solinst and Iron Horse electric water-level sounders (Section 2.4).

2.0 TEST EQUIPMENT

The equipment for the H-8 pumping test consisted of a Data Acquisition System (DAS) to collect, process, and store data from well H-8b; a submersible pump installed in pumping well H-8b; a packer with a feed-through assembly to isolate the Culebra test interval in the pumping well H-8b; discharge-measurement and flow-regulation systems; an Iron Horse electric water-level sounder; and an air-line gage to measure water level. Details of the test equipment are given in the following sections.

2.1 Data-Acquisition System (DAS)

Data collection was performed with an HP-9845B-controlled DAS similar to that used in other tests at the WIPP site as described in Part A, Section 2.1.1. Downhole pressure transducers monitored the fluid pressure in the Culebra test interval of the pumping well, H-8b, and in the H-8b annulus above the packer. Table A1-1, Appendix 1.0 summarizes the details of the equipment installation and transducer depths in well H-8b (see also Figure 1.4).

The primary components of the DAS are described in detail in Hydrologic Data Report #2 (INTERA Technologies and Hydro Geo Chem, 1985).

2.2 Druck Transducers

Two Druck PDCR 10 pressure transducers, rated 0 to 100 psi, were calibrated and used for the H-8 pumping test. The transducers and their calibration are described and illustrated in Part A, Section 2.2.3. All the transducers were recalibrated at the end of the test. Pretest and posttest calibration data are presented in Table A1-1, Appendix 1.0.

2.3 Downhole Assembly

2.3.1 Submersible Pump

The pump used for the H-8 pumping test was a 3-horsepower Red Jacket 32BC. The pump has a proven track record in WIPP site testing and was able to sustain the design pumping rate with a minimum of head loss.

2.3.2 Packer Feed-Through Assembly

The packer feed-through assembly used for the H-8 test consisted of a Baski 5-5/8-inch diameter sliding-end packer, an inflation line, a discharge pipe, a transducer, check valves, and a feed-through plug (see Figure 2.3, Part A, Section 2.2.2). The packer feed-through assembly is designed to isolate the test interval from the fluid column in the casing above the formation, thereby minimizing the effects of wellbore storage in large-diameter wells completed in low-permeability formations.

2.3.3 Discharge-Measurement System

Figure 2.1 is a schematic diagram of the discharge measurement system used during the H-8 test. The system utilized two means of measuring flow rate and two flow-

regulation devices. In addition, the discharge line was equipped with a fill pipe which allowed complete filling of the surface discharge pipe including the part with flow meter and flow-regulation valve. Coupled with the pump's check valve, the filling of the discharge line insured that regulated flow conditions were in effect from the moment the pump was turned on. Thus, average pumping-rate data correspond to all drawdown data collected during the test, including the early-time data.

Discharge was measured with a Precision totalizing flow meter which recorded total production volume and provided data for time-averaged discharge measurements, and with a twelve-foot high, six-inch diameter, calibrated standpipe used to make timed volume measurements. Correlation between the two flow-rate measuring devices was established prior to the test. Comparison of the flow rate measured by the Precision totalizing flow meter and the standpipe showed that the standpipe measurement was 1.03 times the Precision totalizer value.

Flow regulation was maintained through the use of an adjustable, one-inch ball valve placed upstream of the Precision flow meter, and a fixed-orifice, one-inch Dole valve (with 5/8-inch orifice) downstream of the Precision totalizer. These two in-line devices exerted sufficient back-pressure on the pump to provide a regulated and relatively constant flow rate.

2.4 Water-level Measurement Devices

Water-level measurements in observation wells H-8a and H-8c were performed with the Solinst electric water-level sounder and with the Iron Horse electric water-level sounder. The water level in the Poker Trap well was measured primarily

with an air-line gage supplemented with measurements made with the Iron Horse. The function and use of the Iron Horse and Solinst electric water-level sounders is described in detail in Hydrologic Data Report #2 (INTERA Technologies and Hydro Geo Chem, 1985).

The air-line gage consists of a small-diameter tube extending from the well head to below the water level. The tubing is extended below the water level a distance greater than the expected drawdown in the well. The tubing must be installed straight and must be air-tight. The top of the tubing has a tee connection which is connected to a source of compressed nitrogen and to a pressure gage. The compressed gas is used to purge the tubing of water. When the pressure gage reads a maximum value, this pressure can be related to the submerged depth of the tubing. The length of submerged tubing is subtracted from the total length of tubing to determine the depth to water in the well.

2.5 Water-Quality Measurement Devices

The H-8 pumping test included measurement of electrolytic conductivity, specific gravity and temperature of the water produced during the test. The electrolytic conductivity was measured with a standard, temperature-compensated, conductivity-bridge apparatus. The conductivity meter was a Labline Lectro Mho-Meter, which provided stable and consistent measurements throughout the test, and the specific gravity was measured with a calibrated hydrometer. The model used was a Cole Parmer hydrometer with a specific gravity range of 1.0000 to 1.0700. A description of the function of this equipment and the measurement techniques utilized are found in Part A, Section 2.1.4.

2.6 Barometric-Pressure Measurement

The barometric pressure was measured at the H-3 hydropad during the H-8 pumping test. The pressure was measured approximately every hour with a Weathertronics Model 7105-A analog-output barometer. The barometer is described in Part A, Section 2.1.5. The barometer was in continuous operation during the pretest, pumping, and recovery periods of the H-8 pumping test.

3.0 TEST HISTORY

The H-8 pumping test began December 6, 1985 (Julian Day 340). The test consisted of a three-day pumping period and a nine-day recovery period. The recovery period was extended beyond three days because the water level in the pumping well had not recovered to the pre-pumping water level after the designed three-day recovery period. The following sections describe the test preparations, and operations during the pumping and recovery periods.

3.1 Test Preparation

The pump, packer, and transducers used for the H-8 test were installed on November 26, 1985 (Julian Day 330) (see Figure 1.4). Immediately prior to packer and transducer installation, the H-8b water level was measured with the Solinst meter to establish a correspondence between water-level sounder measurements and pressure measurements made by the transducers. After installation, the phase polarity of the pump was checked and the DAS was activated and checked. Details of the equipment installation depths and water-level measurement are found in Table A1-1, Appendix 1.0.

3.1.1 Pump and Flow-Rate Checks

The pump was operated three separate times prior to the start of the H-8 test at 10:00 December 6, 1985. The purpose of these exercises was to establish and set the optimum flow rate of the pump, an operation which also served to completely fill the discharge line; and to check the Precision flow meter and establish its correlation with the standpipe.

The following is a summary of these preliminary pumping periods (see Table A3-1, Appendix 3.0 for pressure-response records during these pumping periods).

Sequence	Calendar Date	Julian Day	Time	Pressure (psi)
1 Pump On	Nov. 27	331	0923	48.5
Pump Off	Nov. 27	331	0929	42.8
2 Pump On	Nov. 27	331	1455	48.4
Pump Off	Nov. 27	331	1655	39.8
3 Pump On	Dec. 5	339	1600	48.25
Pump Off	Dec. 5	339	1635	45.8

3.1.2 Water-Level Measurements

Water levels in the pumping well and observation wells had been measured about twice a month for 6 months prior to the start of the H-8 test. Three days prior to the start of the test, daily measurements were initiated at these wells.

On December 5 the air-line gage was set in the Poker Trap well and maintained until December 10. Daily water-level measurements using the Iron Horse were made at the Poker Trap well from December 10 to December 17.

3.1.3 Water-Quality Measurements

Electrolytic conductivity, temperature, and density of the discharge were measured every three to four hours during the test. The sample point was the end of the flexible discharge line, where it discharged into the waste-water frac tank. Samples were collected with a plastic container, which was rinsed with the discharge water several times before the samples were collected.

Table A5-1, Appendix 5.0, is a tabulation of the electrolytic conductivity, temperature, and density data.

3.1.4 Barometric-Pressure Measurements

The barometric pressure was measured approximately hourly at the H-3 hydropad during the pretest, pumping, and recovery periods of the test. The analog barometer's millivolt signal was read during each scan initiated by the DAS at the H-3 hydropad. The data are recorded on floppy disc along with other data from the H-3 multipad test. The data were retrieved and printed out as Table A6-1, Appendix 6.0, Part A.

3.2 Pumping Period

The H-8 test pumping period began on December 6 at 10:00:00 (Julian Day 340). The pump operated successfully throughout the 3-day test period, with a flow rate of 6.1 to 6.2 gallons per minute. On December 7 (Julian Day 341), the flow rate

dropped below 6.1 gallons per minute and a flow-rate adjustment was made from 17:30 to 17:35 hours. The pump was turned off at 10:00:00 December 9 (Julian Day 343). During the test, 26,573 gallons were produced from the Culebra. All water produced was stored in a 21,000-gallon frac tank at the site and periodically removed for disposal by a local brine hauler.

Table A2-1, Appendix 2.0, provides a compilation of pumping-rate data for the H-8 test.

3.3 Recovery Period

Recovery of the H-8 test began on December 9 at 10:00:00 hours (Julian Day 343). On December 12 (Julian Day 346), the pressure at the pumping well had recovered 75% of the drawdown produced during pumping. The recovery period was therefore extended until December 18 (Julian Day 352), at which time the pressure recovery was 93% of the drawdown produced during pumping.

3.4 Packer/Transducer Performance

The record of the annulus transducer throughout the H-8 test shows that there was no leakage from the discharge line during the pumping period, and that no leakage around the packer occurred during either the pumping or recovery periods.

The transducers performed very well throughout the entire H-8 test and only a few erratic readings were noted.

4.0 TEST RESULTS

4.1 Fluid-Pressure Response at Pumping Well H-8b

Figure 4.1 is a linear-linear plot displaying the pressure response of well H-8b during the pretest, pumping, and recovery periods. Also shown is the pressure record of the annulus transducer, which indicates that no disturbances, due to leakage or loss of packer pressure, occurred during both the pumping and recovery periods of the test.

The pretest period shown on Figure 4.1 included three brief pumping periods before the actual pumping test. These pumping periods were used to check pump performance and to perform the necessary adjustments on the back-pressure ball valve in order to ensure the test would be conducted with the designed pumping rate. These pumping periods are also discussed in Section 3.1.1, which also includes a tabulation of the start- and end-times and the pressures recorded at those times. The pretest activities are summarized as follows:

November 26 (Julian Day 330)

1. The pump and packer were installed, and the packer was inflated.

November 27 (Julian Day 331)

1. The DAS was activated and recorded an initial test-interval fluid pressure of 48.5 pounds per square inch (psi).
2. The pump was operated for six minutes (09:23 to 09:29) to check phase polarity and system integrity. Fluid pressure dropped to 42.8 psi.

3. Fluid pressure recovered to 48.4 psi at 14:55, when the pump was again turned on for a two-hour period (14:55 to 16:55) to establish that the system would operate at the designed pumping rate. Fluid pressure dropped to 39.8 psi.

December 5 (Julian Day 339)

1. Fluid pressure had recovered to 48.25 psi at 16:00 when the pump was turned on for thirty-five minutes to recheck all parts of the discharge-control and measurement system. Fluid pressure dropped to 45.8 psi.

December 6 (Julian Day 340)

1. Fluid pressure recovered to 48.1 psi immediately prior to the start of the test at 10:00.

Figure 4.1 shows the pretest pressure conditions existing prior to the test. Because all pretest activity is documented, pretest history can be incorporated into test analysis. An abridged, annotated tabulation of pressure (calculated from the transducer's millivolt signal) versus time data for the entire H-8 pumping test is found in Table A3-1, Appendix 3.0.

Figure 4.2 is a plot of the Precision totalizing flow-meter flow-rate data for the pumping period. The flow rates were calculated as average flow over time periods ranging from 30 minutes to a few hours. Table A2-1, Appendix 2.0 provides a complete, annotated tabulation of the pumping-rate data. One pumping-rate adjustment was made during the test on Julian Day 341, corresponding to the abrupt change noted on the pressure-response curve (Figure 4.1) and the pumping-rate curve (Figure 4.2).

4.2 Water-Level Responses at Observation Wells

Figures 4.3, 4.4, and 4.5 are linear-linear plots of water level versus time for wells H-8a, H-8c, and the Poker Trap well, respectively. Wells H-8a and H-8c showed no response to pumping throughout the test, and the measured water level in H-8c does not significantly differ from pretest water levels. In H-8a, however, the Magenta water level shows a rising trend during the test as the well continued its recovery from a water-quality sampling exercise conducted in November 1985. The water levels measured in the Poker Trap well showed no significant trend throughout the H-8 test period.

The air-line gage data for the Poker Trap well indicated a water level rise of 2.3 feet during the times of the test. However, because these data are not corroborated by direct Iron-Horse water-level measurements, they are considered not representative of the true water levels. The observed rise in pressure may have been caused by stretch in the plastic tubing used for the gage, thus increasing the length of the plastic tubing and therefore the pressure necessary to purge the tubing before obtaining the pressure reading. In the future, the air-line method will utilize a solid small-diameter tubing, rather than a flexible tubing.

Tables A4-1, A4-2, and A4-3, Appendix 4.0, are tabulations of the water levels measured during the H-8 pumping test in wells H-8a, H-8c, and the Poker Trap well, respectively.

4.3 Water-Quality Data

Figure 4.6 is a plot of the electrolytic conductivity and specific gravity of water produced during the H-8 pumping test. The water produced had a temperature of 23 to 24° C measured at ground surface. The initial electrolytic-

conductivity measurement was 3,350 micro-siemens per centimeter ($\mu\text{S}/\text{cm}$), the highest value measured during the test. Throughout the remainder of the test, the electrolytic conductivity was generally between 2,750 and 2,900 $\mu\text{S}/\text{cm}$. All electrolytic conductivity measurements are temperature compensated to a standard temperature of 25^o C.

The specific gravity of the water produced during the H-8 pumping test was very consistent throughout the test, and the value was generally 1.0020.

Table A5-1, Appendix 5.0, provides a complete tabulation of the electrolytic conductivity, temperature, and specific gravity data.

4.4 Barometric-Pressure Data

Figure 4.7 is a plot of barometric pressure versus time during the H-8 pumping test. The data were recorded at the H-3 hydropad as part of the H-3 multipad test. H-8 is approximately 11.5 miles south-southwest of H-3, but the data are considered to represent the regional fluctuations affecting both sites during the time the H-8 test was conducted.

5.0 REFERENCES

Hydro Geo Chem, Inc., 1985. Hydrologic Data Report #1. Sandia National Laboratories, Contractor Report SAND 85-7206, 710 p.

INTERA Technologies, Inc., and Hydro Geo Chem, Inc., 1985. Hydrologic Data Report #2. Sandia National Laboratories, Contractor Report, SAND 85-7263, 478 p.

Wells, J.G., and Drellack, S.L., Jr., 1982. Geologic and well-construction data for the H-8 borehole complex near the proposed Waste Isolation Pilot Plant site, southeastern New Mexico. U.S. Geological Survey, Water-Resources Investigations 82-4118, 42 p.

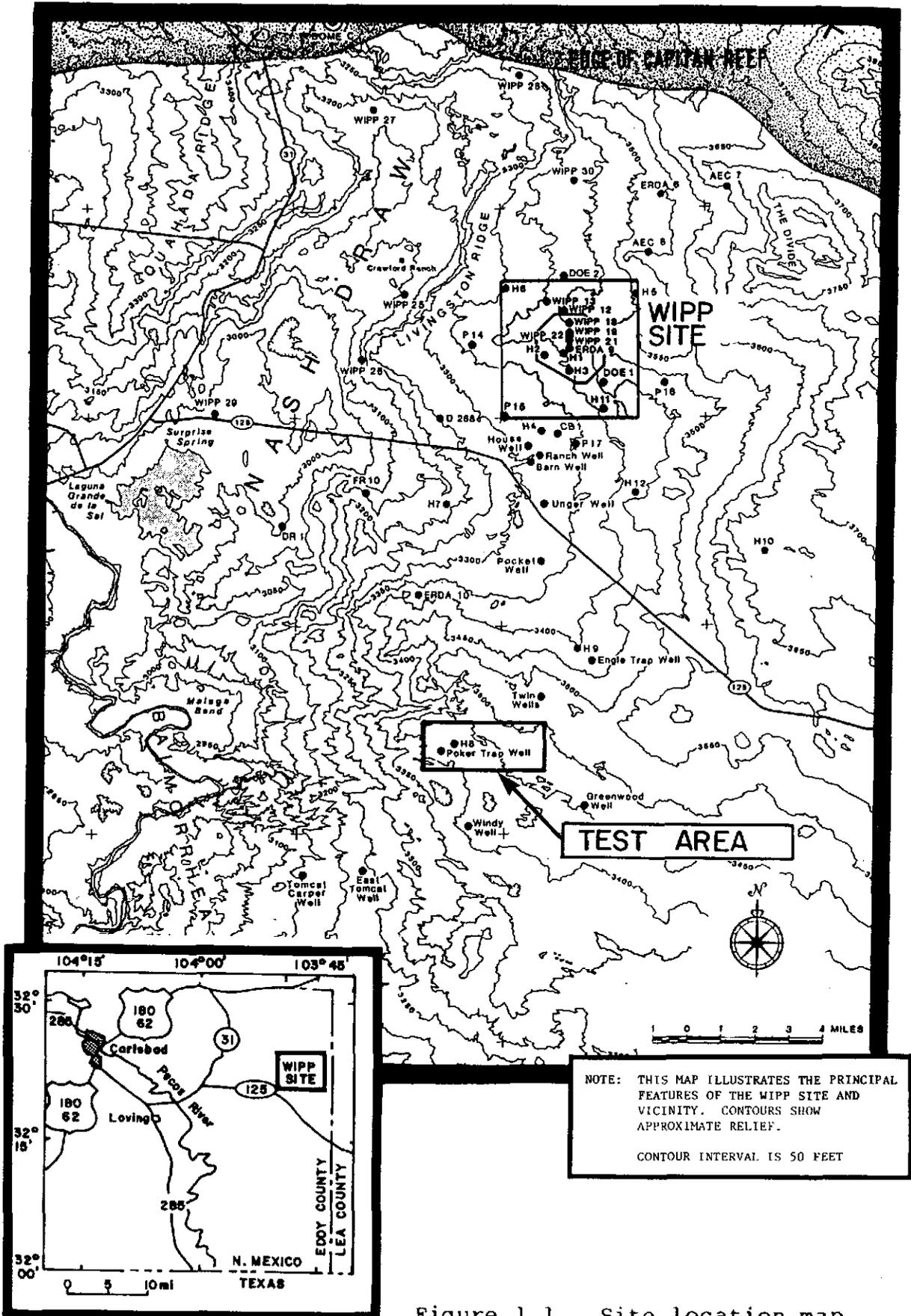


Figure 1.1 Site location map.

H-8 Hydropad

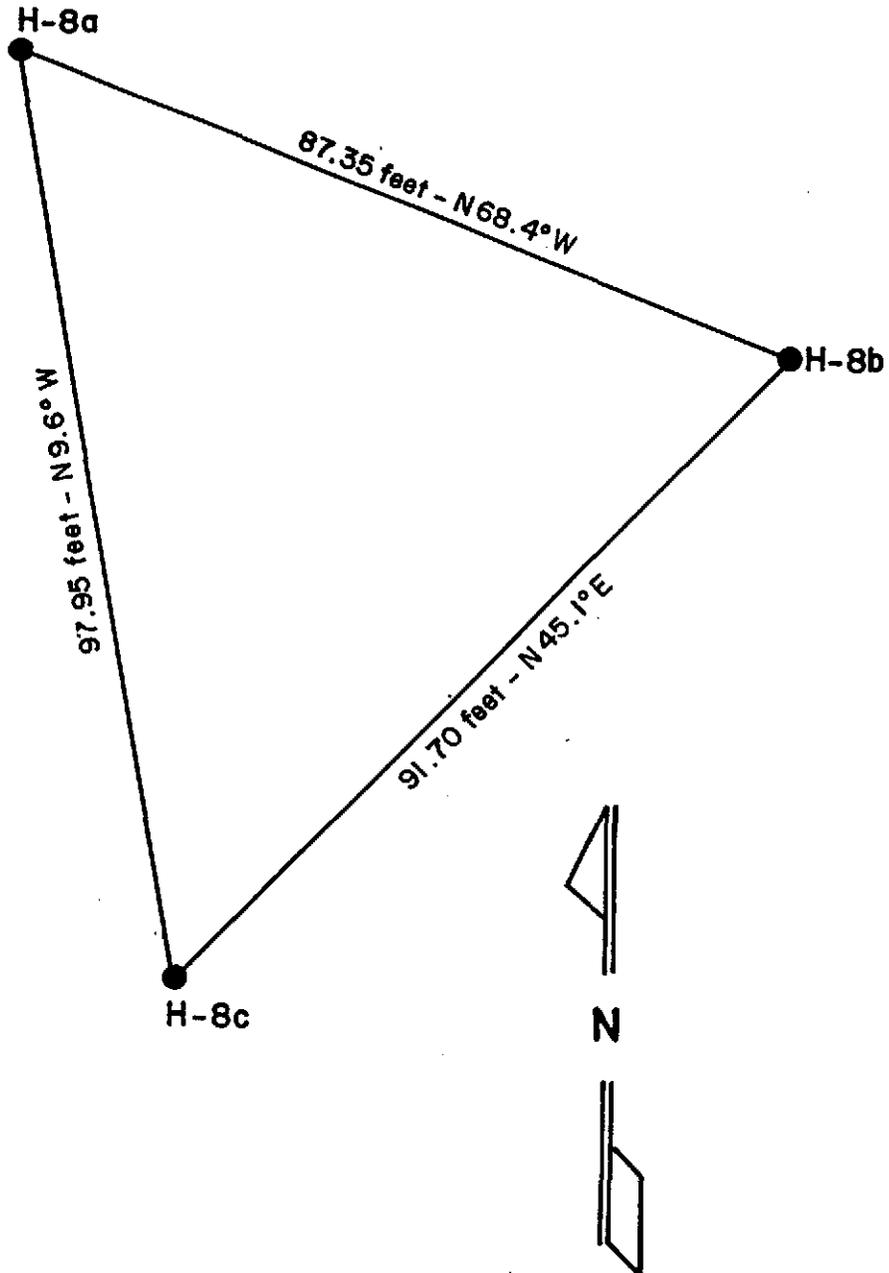


Figure 1.2 Plan view of the wells at the H-8 hydropad.

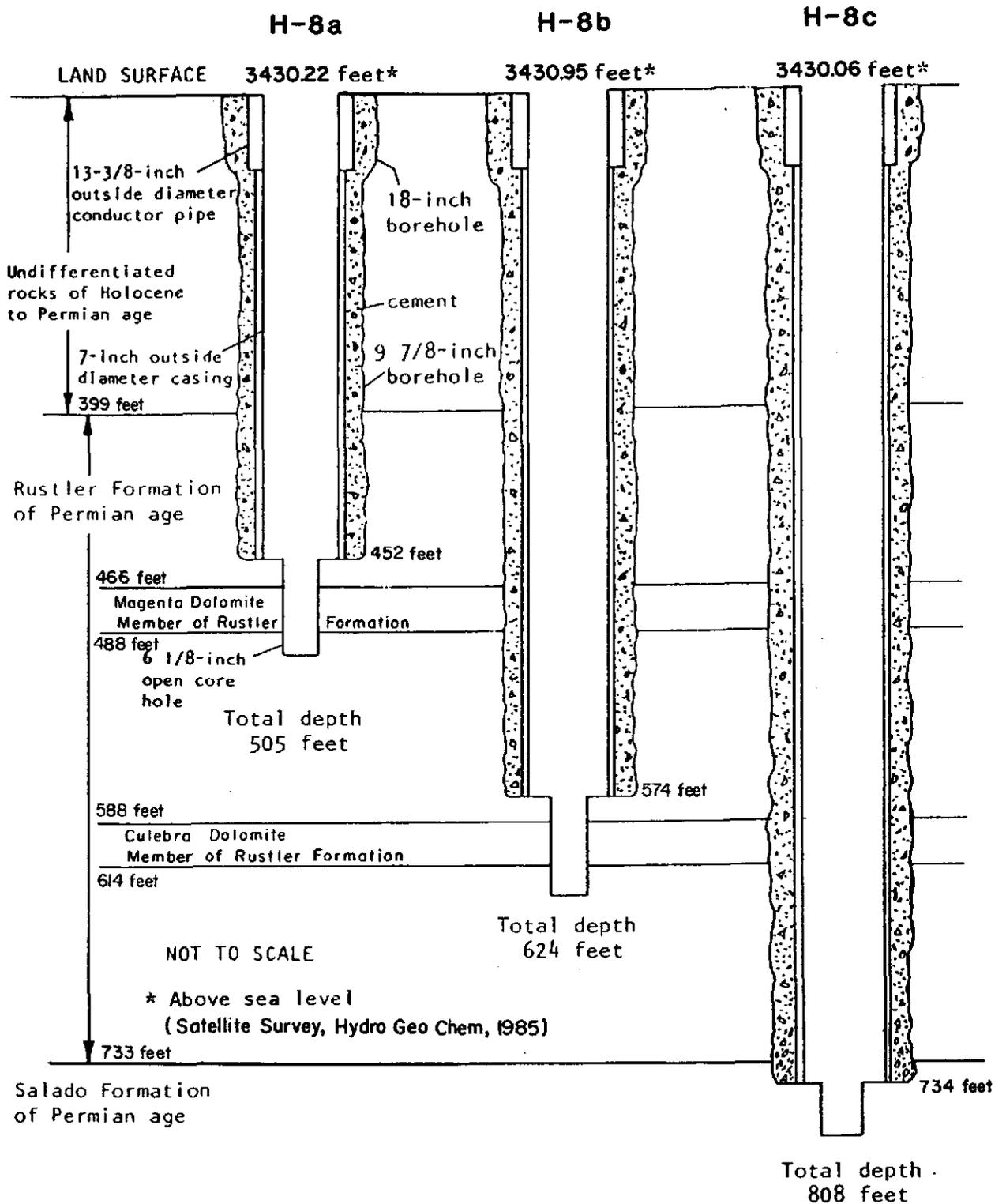


Figure 1.3 Well construction details for the H-8 hydropad. (After Wells and Drellack, 1982)

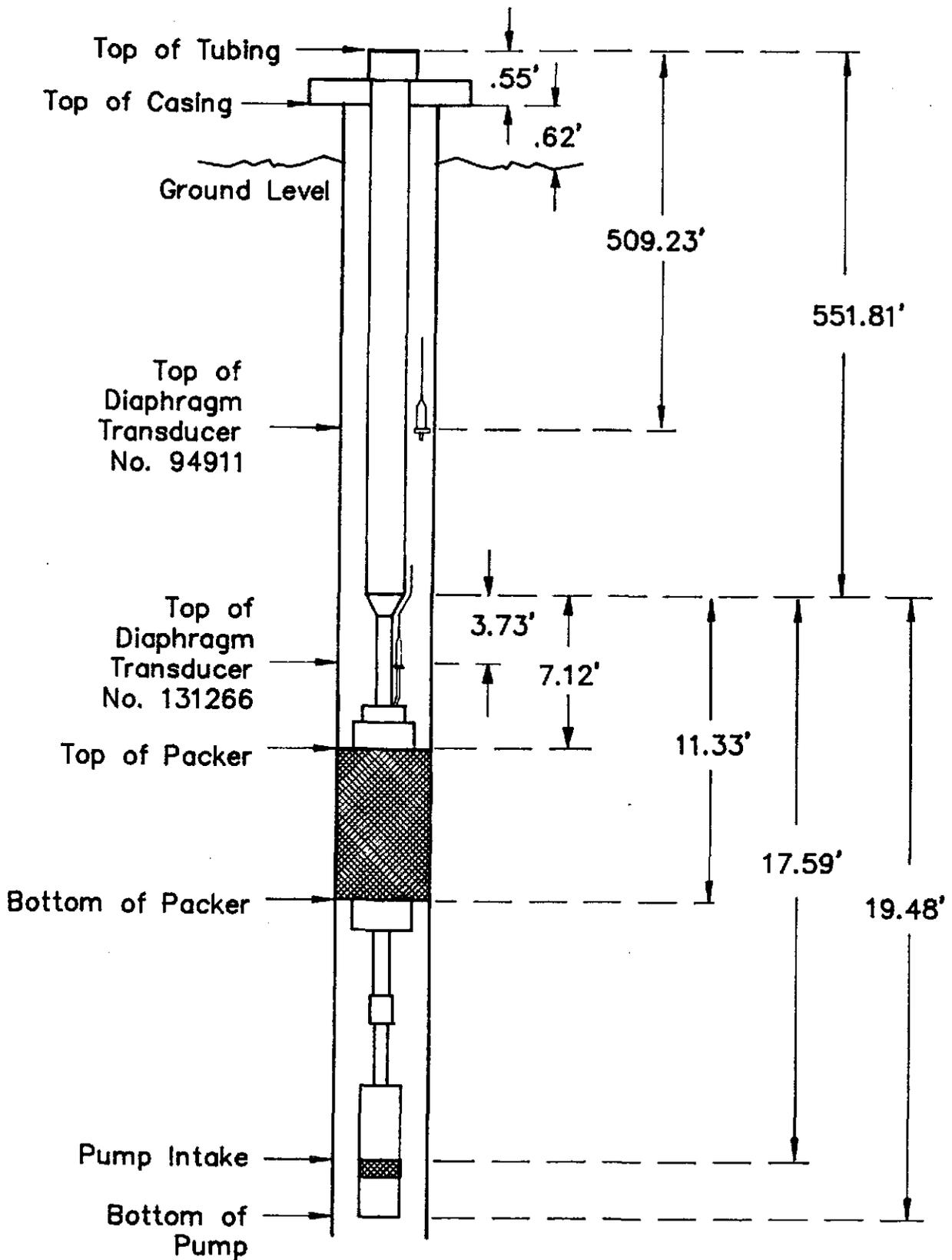


Figure 1.4 Pump and packer configuration in pumping well H-8b.

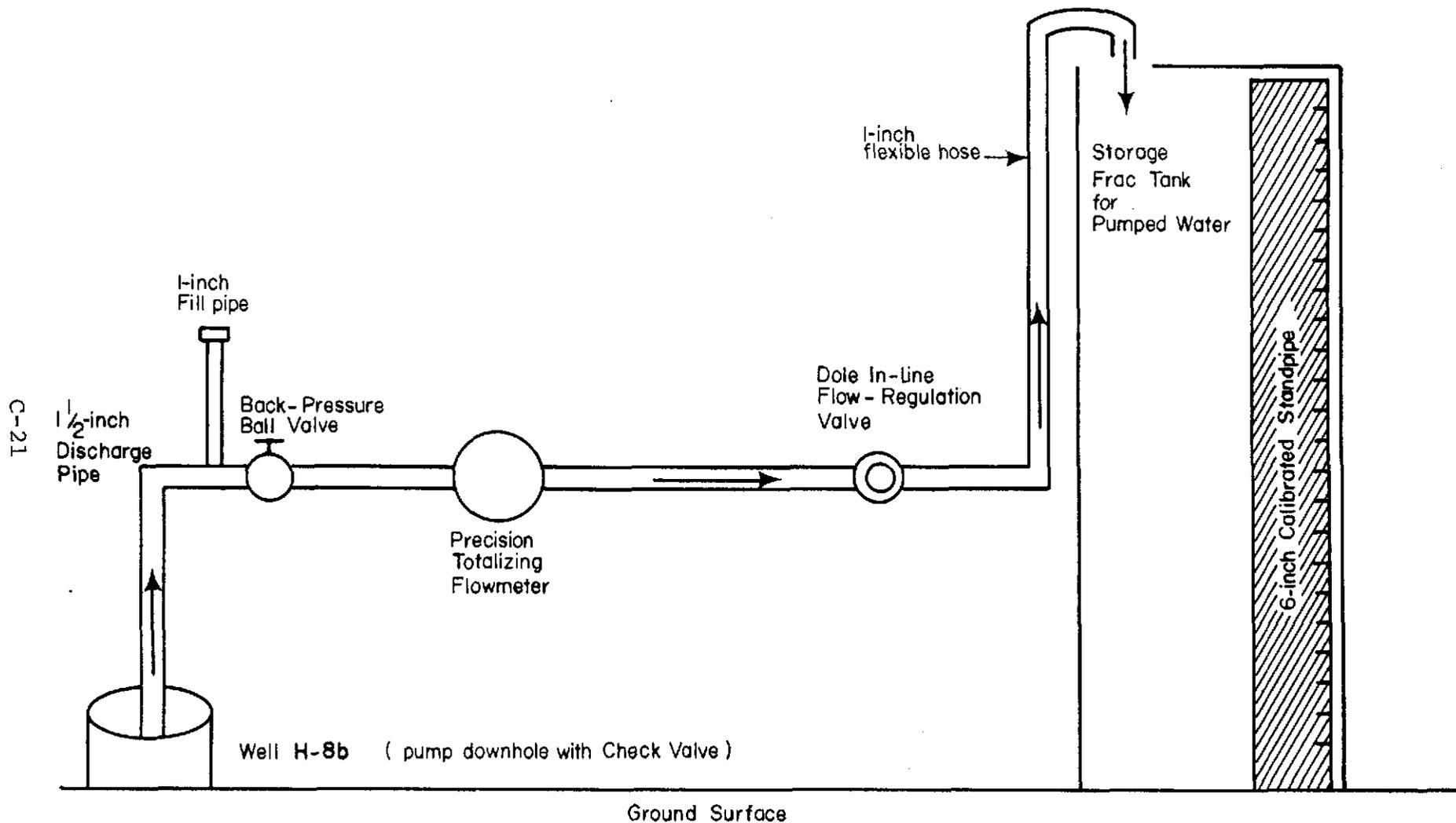


Figure 2.1 Flow-regulation and discharge-measurement system.

C-22

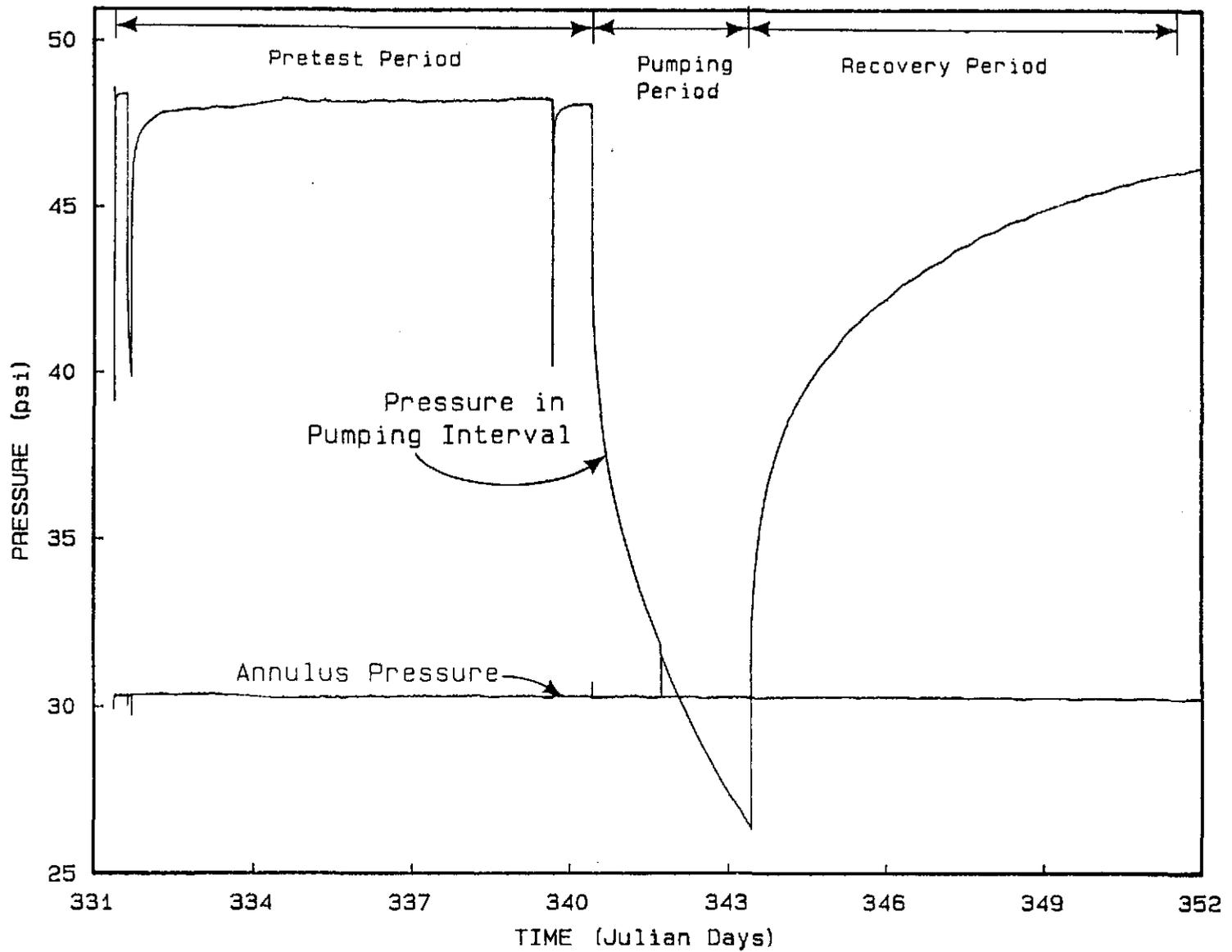


Figure 4.1 Linear-linear plot of pressure measurements in pumping well H-8b during the pretest, pumping, and recovery periods of the H-8 pumping test.

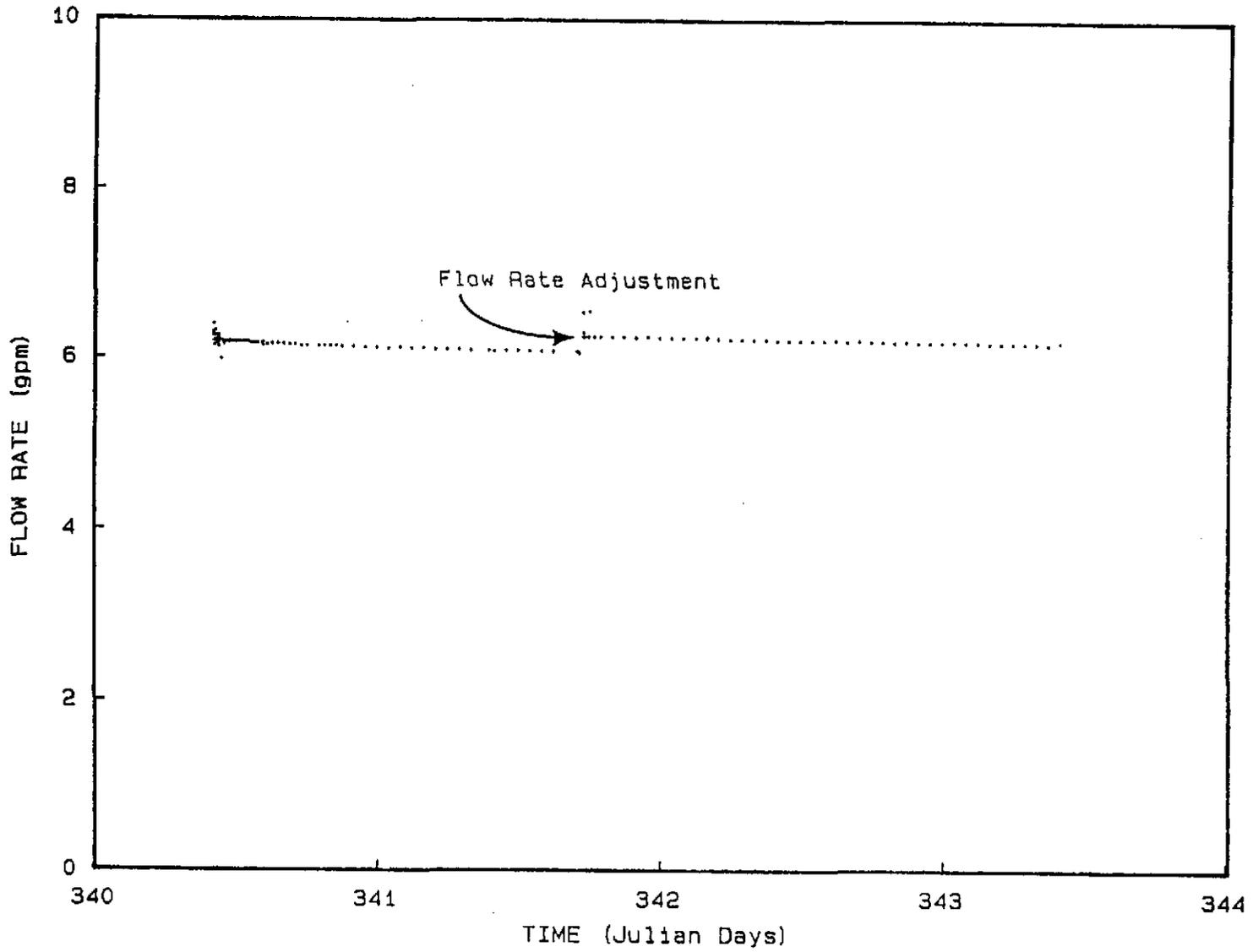


Figure 4.2 Plot of measured pumping rate versus time during pumping from H-8b.

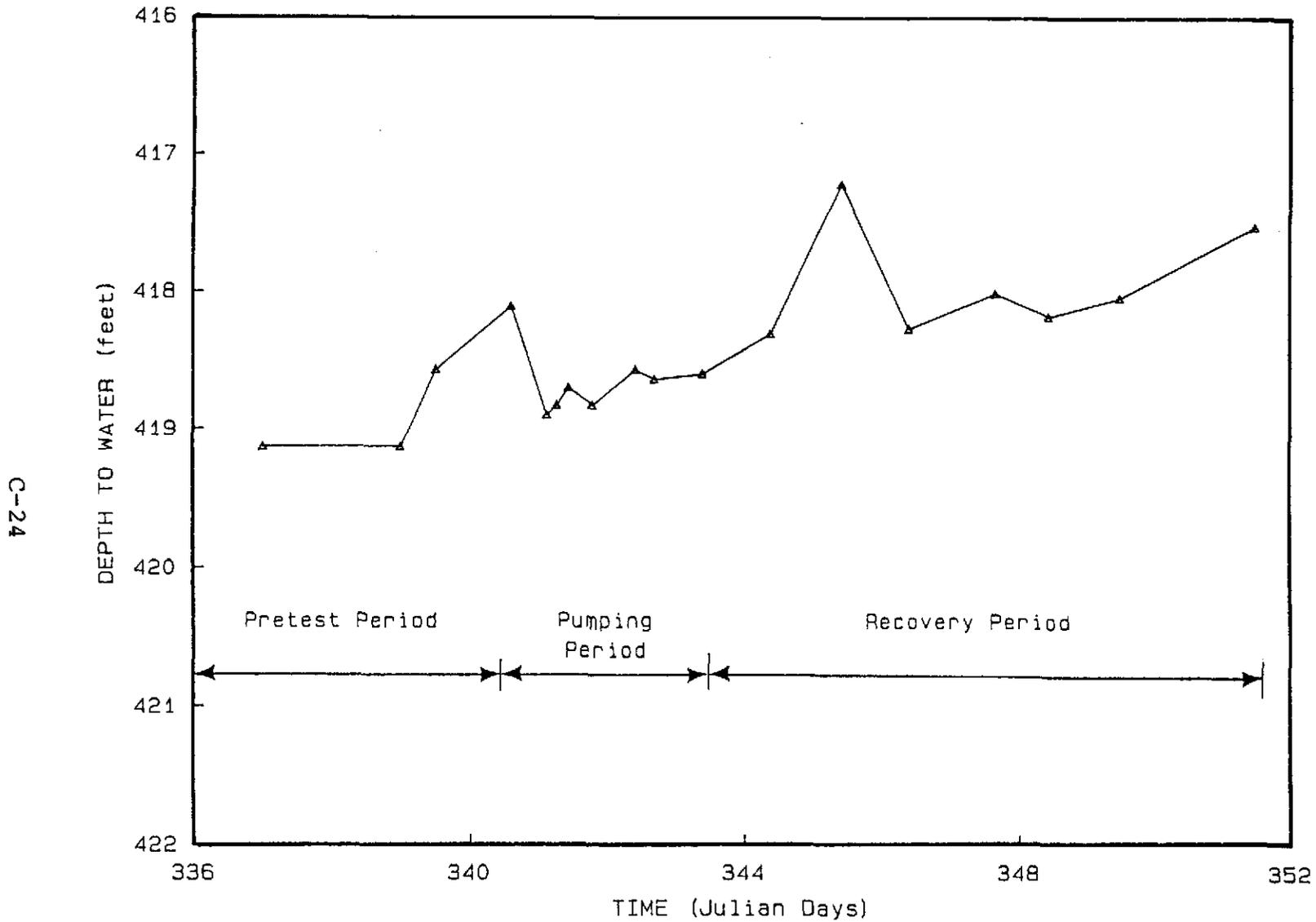


Figure 4.3 Water-level measurements at H-8a during the H-8 pumping test.

C-25

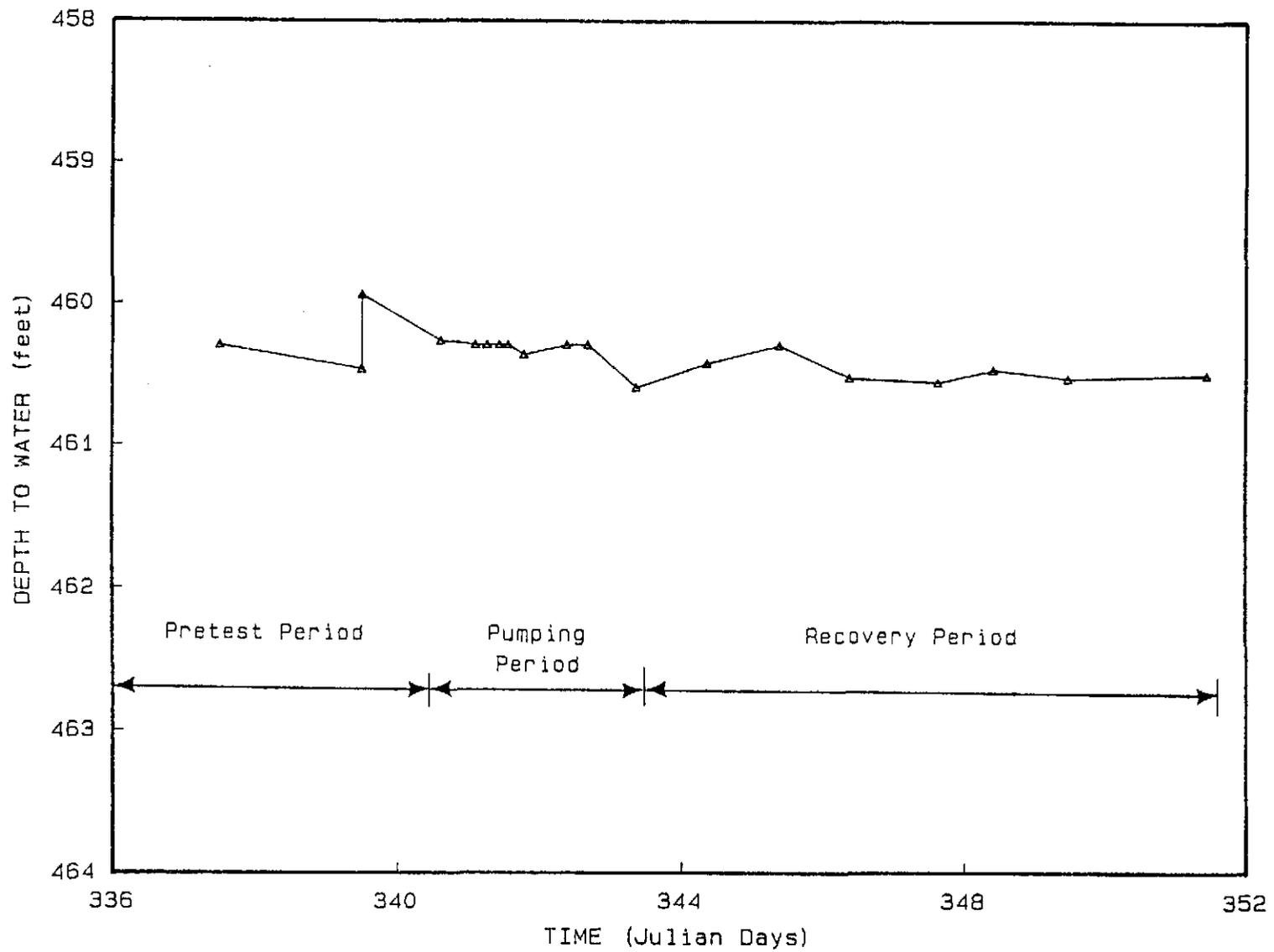


Figure 4.4 Water-level measurements at H-8c during the H-8 pumping test.

C-26

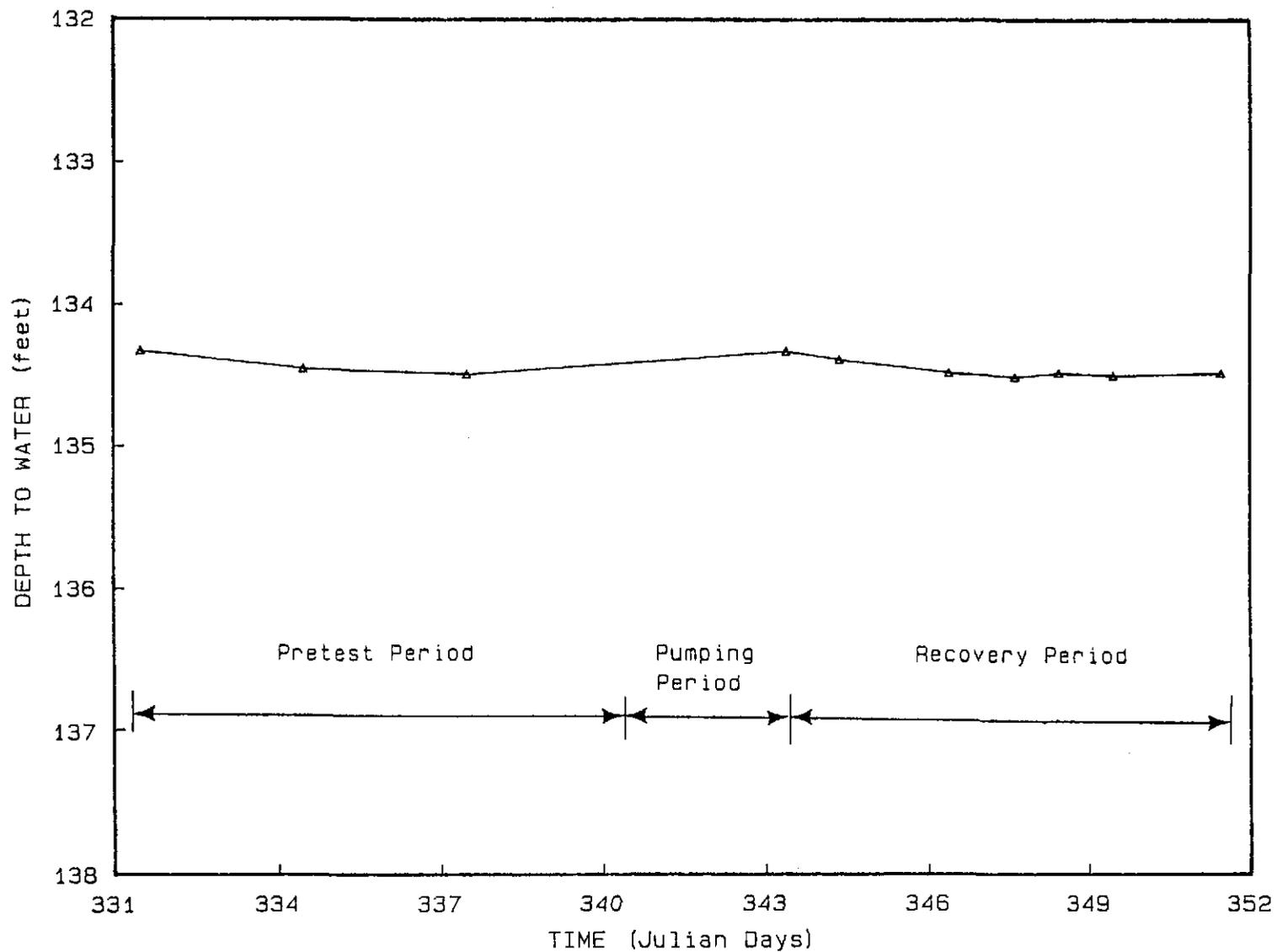


Figure 4.5 Water-level measurements at the Poker Trap well during the H-8 pumping test.

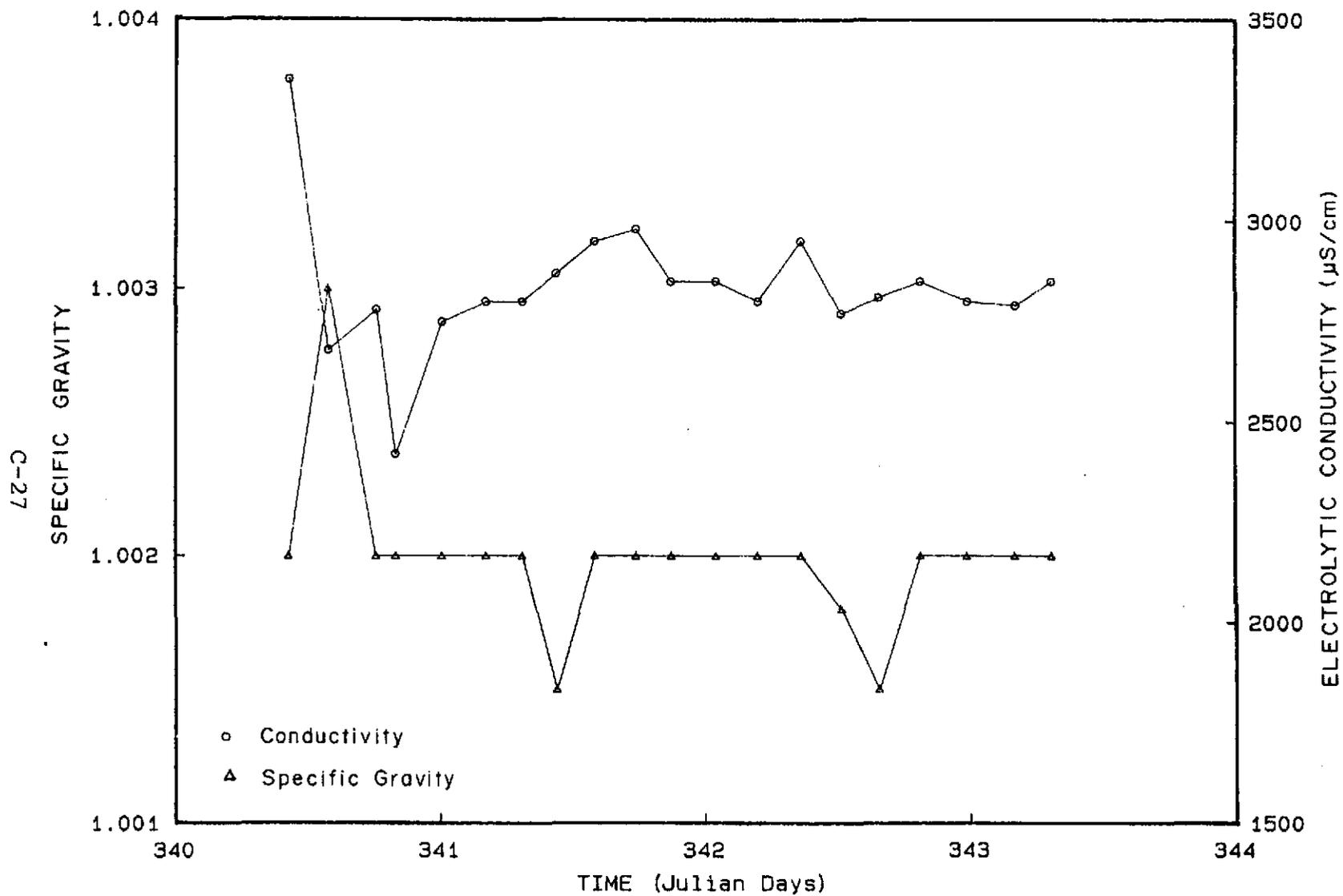


Figure 4.6 Plot of electrolytic conductivity and specific gravity of water produced during the H-8 pumping test.

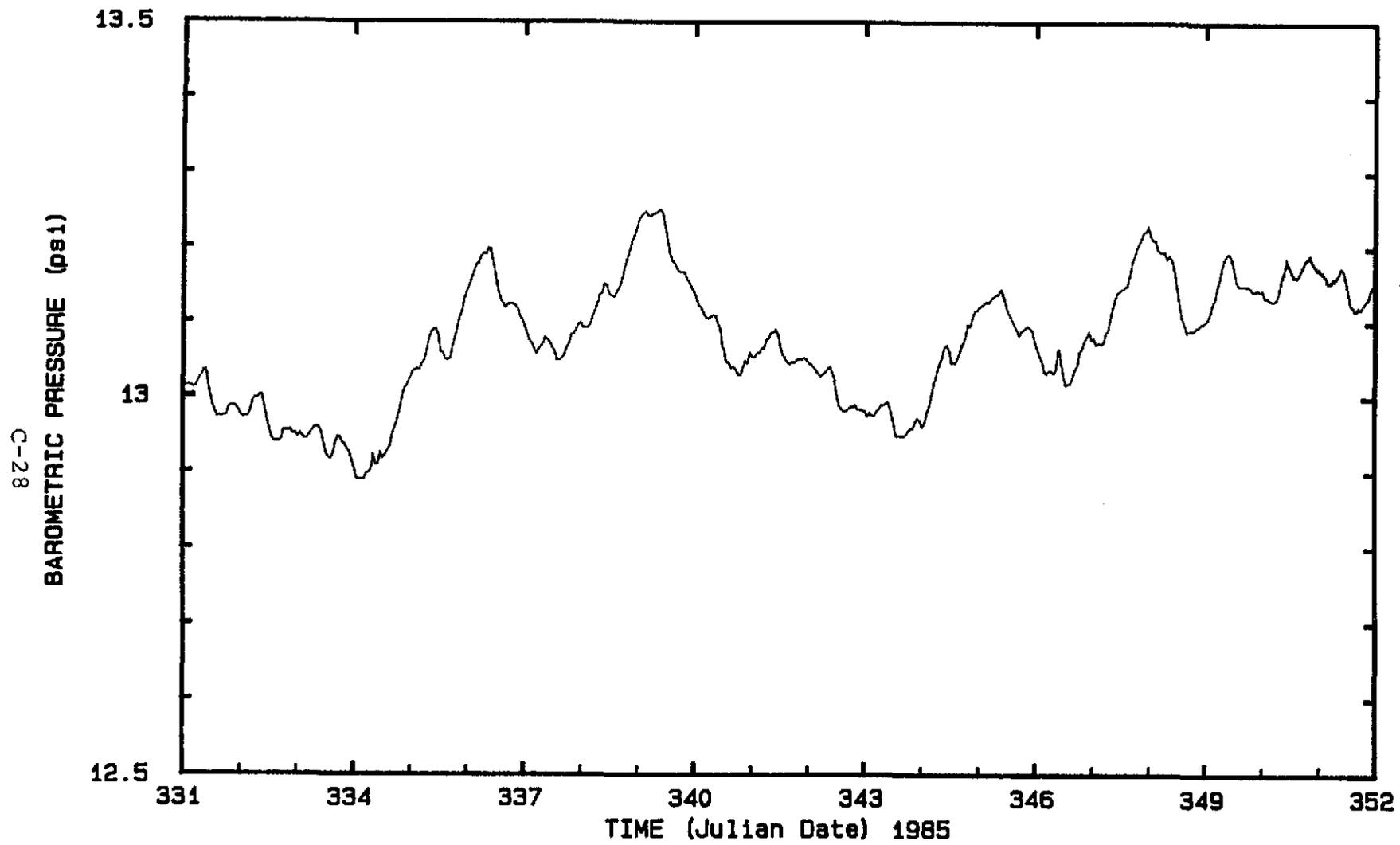


Figure 4.7 Barometric-pressure fluctuations during the H-8 pumping test.

APPENDIX 1.0

TEST CONFIGURATION FOR THE H-8 HYDROPAD

APPENDIX 2.0

TABULATED PUMPING-RATE DATA FOR PUMPING WELL H-8b

TABLE A2-1
 ANNOTATED SUMMARY OF PUMPING RATES
 FOR THE H-8 PUMPING TEST

DAY	HR	MN	TIME FROM START OF PUMPING (hours)	METER READING (gallons)	CUMULATIVE VOLUME PUMPED (gallons)	FLOW RATE (gpm)	COMMENTS
340	10	0	0.00	1149.70	0.00	0.00	PUMP ON
340	10	1	0.02	1156.00	6.30	6.30	
340	10	2	0.03	1162.25	12.55	6.25	
340	10	3	0.05	1168.52	18.82	6.27	
340	10	4	0.07	1174.71	25.01	6.19	
340	10	5	0.08	1181.10	31.40	6.39	
340	10	6	0.10	1187.24	37.54	6.14	
340	10	7	0.12	1193.50	43.80	6.26	
340	10	8	0.13	1199.75	50.05	6.25	
340	10	9	0.15	1206.00	56.30	6.25	Note: SP
340	10	10	0.17	1212.20	62.50	6.20	indicates
340	10	11	0.18	1218.40	68.70	6.20	a standpipe
340	10	12	0.20	1224.71	75.01	6.31	measurement
340	10	13	0.22	1230.90	81.20	6.19	
340	10	14	0.23	1237.10	87.40	6.20	
340	10	15	0.25	1243.29	93.59	6.19	
340	10	16	0.27	1249.55	99.85	6.26	
340	10	17	0.28	1255.72	106.02	6.17	
340	10	18	0.30	1261.91	112.21	6.19	
340	10	19	0.32	1268.10	118.40	6.19	
340	10	20	0.33	1274.30	124.60	6.20	
340	10	21	0.35	1280.50	130.80	6.20	
340	10	22	0.37	1286.68	136.98	6.18	
340	10	23	0.38	1292.90	143.20	6.22	
340	10	24	0.40	1299.11	149.41	6.21	
340	10	25	0.42	1305.31	155.61	6.20	
340	10	26	0.43	1311.45	161.75	6.14	
340	10	27	0.45	1317.62	167.92	6.17	
340	10	28	0.47	1323.88	174.18	6.26	
340	10	29	0.48	1330.00	180.30	6.12	
340	10	30	0.50	1336.23	186.53	6.23	
340	10	35	0.58	1367.23	217.53	6.20	SP=6.14 gpm
340	10	40	0.67	1397.11	247.41	5.98	
340	10	45	0.75	1428.09	278.39	6.20	
340	10	50	0.83	1459.01	309.31	6.18	
340	10	55	0.92	1489.75	340.05	6.15	
340	11	0	1.00	1520.65	370.95	6.18	
340	11	5	1.08	1551.60	401.90	6.19	SP=6.35 gpm
340	11	10	1.17	1582.57	432.87	6.19	
340	11	15	1.25	1613.49	463.79	6.18	
340	11	20	1.33	1644.34	494.64	6.17	
340	11	25	1.42	1675.30	525.60	6.19	
340	11	30	1.50	1706.21	556.51	6.18	
340	11	35	1.58	1737.12	587.42	6.18	SP=6.35 gpm
340	11	40	1.67	1768.02	618.32	6.18	
340	11	45	1.75	1798.91	649.21	6.18	
340	11	50	1.83	1829.80	680.10	6.18	

TABLE A2-1 (continued)
 ANNOTATED SUMMARY OF PUMPING RATES
 FOR THE H-8 PUMPING TEST

DAY	HR	MN	TIME FROM START OF PUMPING (hours)	METER READING (gallons)	CUMULATIVE VOLUME PUMPED (gallons)	FLOW RATE (gpm)	COMMENTS
340	11	55	1.92	1860.69	710.99	6.18	
340	12	0	2.00	1891.60	741.90	6.18	SP=6.34 gpm
340	12	15	2.25	1984.36	834.66	6.18	
340	12	30	2.50	2077.04	927.34	6.18	SP=6.34 gpm
340	12	45	2.75	2169.75	1020.05	6.18	
340	13	0	3.00	2262.45	1112.75	6.18	SP=6.34 gpm
340	13	15	3.25	2354.90	1205.20	6.16	
340	13	30	3.50	2447.48	1297.78	6.17	SP=6.33 gpm
340	13	45	3.75	2540.03	1390.33	6.17	
340	14	9	4.15	2688.11	1538.41	6.17	SP=6.35 gpm
340	14	13	4.22	2712.68	1562.98	6.14	
340	14	15	4.25	2725.05	1575.35	6.18	
340	14	35	4.58	2848.10	1698.40	6.15	
340	15	0	5.00	3002.11	1852.41	6.16	SP=6.34 gpm
340	15	30	5.50	3186.81	2037.11	6.16	
340	16	0	6.00	3371.51	2221.81	6.16	SP=6.34 gpm
340	16	30	6.50	3556.00	2406.30	6.15	
340	17	0	7.00	3740.50	2590.80	6.15	SP=6.33 gpm
340	17	30	7.50	3924.70	2775.00	6.14	
340	18	0	8.00	4108.90	2959.20	6.14	SP=6.31 gpm
340	19	0	9.00	4477.10	3327.40	6.14	
340	19	30	9.50	4661.20	3511.50	6.14	
340	20	0	10.00	4845.40	3695.70	6.14	
340	20	30	10.50	5029.60	3879.90	6.14	
340	21	0	11.00	5213.40	4063.70	6.13	
340	22	0	12.00	5581.40	4431.70	6.13	
340	23	0	13.00	5948.80	4799.10	6.12	
341	0	0	14.00	6316.00	5166.30	6.12	
341	1	0	15.00	6682.80	5533.10	6.11	
341	2	0	16.00	7050.00	5900.30	6.12	
341	3	0	17.00	7416.60	6266.90	6.11	
341	4	0	18.00	7783.10	6633.40	6.11	
341	5	0	19.00	8149.00	6999.30	6.10	
341	6	0	20.00	8515.00	7365.30	6.10	SP=6.27 gpm
341	7	0	21.00	8880.90	7731.20	6.10	
341	8	0	22.00	9246.50	8096.80	6.09	
341	9	32	23.53	9806.60	8656.90	6.09	
341	10	0	24.00	9976.95	8827.25	6.08	
341	11	0	25.00	10342.12	9192.42	6.09	
341	12	0	26.00	10707.28	9557.58	6.09	
341	13	0	27.00	11072.18	9922.48	6.08	
341	14	0	28.00	11436.95	10287.25	6.08	SP=6.26 gpm
341	15	0	29.00	11801.80	10652.10	6.08	
341	17	0	31.00	12531.33	11381.63	6.08	
341	17	12	31.20	12604.21	11454.51	6.07	
341	17	13	31.22	12610.27	11460.57	6.06	FLOW RATE
341	17	33	31.55	12741.05	11591.35	6.54	ADJUSTED

TABLE A2-1 (continued)
 ANNOTATED SUMMARY OF PUMPING RATES
 FOR THE H-8 PUMPING TEST

DAY	HR	MN	TIME FROM START OF PUMPING (hours)	METER READING (gallons)	CUMULATIVE VOLUME PUMPED (gallons)	FLOW RATE (gpm)	COMMENTS
341	17	34	31.57	12747.30	11597.60	6.25	
341	17	35	31.58	12753.60	11603.90	6.30	
341	17	40	31.67	12784.84	11635.14	6.25	
341	18	0	32.00	12909.90	11760.20	6.25	
341	18	30	32.50	13097.55	11947.85	6.25	SP=6.44 gpm
341	19	0	33.00	13285.12	12135.42	6.25	
341	20	0	34.00	13660.21	12510.51	6.25	
341	21	0	35.00	14035.00	12885.30	6.25	
341	22	0	36.00	14409.50	13259.80	6.24	
341	23	0	37.00	14784.60	13634.90	6.25	
342	0	0	38.00	15159.10	14009.40	6.24	SP=6.41 gpm
342	1	0	39.00	15533.40	14383.70	6.24	
342	2	0	40.00	15907.60	14757.90	6.24	
342	3	5	41.08	16312.90	15163.20	6.24	
342	4	0	42.00	16655.70	15506.00	6.23	
342	4	4	42.07	16680.70	15531.00	6.25	
342	5	0	43.00	17029.70	15880.00	6.23	SP=6.40 gpm
342	6	0	44.00	17403.10	16253.40	6.22	
342	7	0	45.00	17776.60	16626.90	6.22	
342	8	1	46.02	18156.10	17006.40	6.22	
342	9	5	47.08	18554.20	17404.50	6.22	SP=6.39 gpm
342	10	0	48.00	18895.94	17746.24	6.21	
342	11	2	49.03	19280.90	18131.20	6.21	
342	12	0	50.00	19641.05	18491.35	6.21	
342	13	0	51.00	20013.52	18863.82	6.21	
342	14	0	52.00	20386.00	19236.30	6.21	
342	15	0	53.00	20758.51	19608.81	6.21	
342	16	0	54.00	21130.66	19980.96	6.20	SP=6.40 gpm
342	17	0	55.00	21502.98	20353.28	6.21	
342	18	0	56.00	21875.14	20725.44	6.20	
342	19	0	57.00	22247.00	21097.30	6.20	
342	20	0	58.00	22618.46	21468.76	6.19	SP=6.38 gpm
342	21	0	59.00	22990.40	21840.70	6.20	
342	22	0	60.00	23361.80	22212.10	6.19	
342	23	0	61.00	23733.40	22583.70	6.19	
343	0	0	62.00	24104.80	22955.10	6.19	SP=6.37 gpm
343	1	0	63.00	24476.60	23326.90	6.20	
343	2	0	64.00	24848.00	23698.30	6.19	
343	3	0	65.00	25219.20	24069.50	6.19	
343	4	0	66.00	25590.30	24440.60	6.18	SP=6.28 gpm
343	5	0	67.00	25961.30	24811.60	6.18	
343	6	0	68.00	26332.30	25182.60	6.18	
343	7	0	69.00	26703.20	25553.50	6.18	SP=6.36 gpm
343	8	0	70.00	27074.00	25924.30	6.18	
343	9	0	71.00	27444.10	26294.40	6.17	
343	10	0	72.00	27816.06	26666.36	6.20	PUMP OFF

APPENDIX 3.0

TEST DESCRIPTION AND TABULATED PRESSURE DATA FOR
THE WELLS AT THE H-8 HYDROPAD

WELL TEST DESCRIPTION

Location: WIPP
Well Site: H-8
Type of test: PUMPING
Type of pump: RED JACKET 3 HP
Unit tested: CULEBRA
Pumping Well: H-8b
Observation Wells: H-8a, H-8c, POKER TRAP
Year of test: 1985
Start of available data: 331 08 51 0
End of available data: 352 10 54 0
Start of test: 340 10 0 0
Transducer Data (Serial # / Sensitivity / Channels)
Pumping Interval 131266 1.0157 3, 16
Annulus 94911 1.0038 4, 17
Available data files: H80025, H80035, H80045

TABLE A3-1
 PRESSURE RECORDS FROM THE H-8 PUMPING TEST, RECORDED
 AT THE H-8 HYDROPAD, 27 NOVEMBER TO 17 DECEMBER, 1985.

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi)		COMMENTS
	H-8b Pumping Interval	H-8b Annulus	
331: 8:51: 0	48.52	29.92	Start H80025
331: 9:22:50	48.54	30.32	
331: 9:23: 0	42.88	30.25	PUMP ON
331: 9:23:10	40.40	30.31	
331: 9:23:30	39.60	30.33	
331: 9:24: 0	39.24	30.34	
331: 9:25: 0	39.86	30.31	
331: 9:26: 0	41.70	30.32	
331: 9:27: 0	42.90	30.32	
331: 9:27:50	42.86	30.30	
331: 9:29: 0	42.79	30.29	
331: 9:30: 0	46.03	30.32	PUMP OFF
331: 9:30:30	47.13	30.31	
331: 9:31: 0	47.36	30.31	
331: 9:33: 0	47.72	30.31	
331: 9:35: 0	47.85	30.29	
331: 9:40: 0	48.05	30.31	
331:10: 0: 0	48.26	30.32	
331:11: 0: 0	48.34	30.31	
331:12: 0: 0	48.36	30.29	
331:14: 0: 0	48.37	30.31	
331:14:54:55	48.38	30.33	
331:14:55: 0	43.11	30.03	PUMP ON
331:14:55: 5	44.61	30.29	
331:14:55:10	44.38	30.31	
331:14:55:30	43.99	30.30	
331:14:56: 0	43.71	30.33	
331:14:57: 0	43.42	30.32	
331:14:58: 0	43.26	30.30	
331:14:59: 0	43.10	30.31	
331:15: 0: 0	42.97	30.29	
331:15:11:30	42.15	30.28	
331:15:20: 0	41.83	30.28	
331:15:30:30	41.47	30.27	
331:16: 0:30	40.80	30.31	
331:16:54:50	39.85	30.32	
331:16:55: 0	42.01	29.70	PUMP OFF
331:16:55:10	43.82	30.32	
331:16:55:30	44.22	30.32	
331:16:56: 0	44.45	30.30	
331:16:57: 0	44.72	30.30	
331:16:58: 0	44.92	30.32	
331:16:59: 0	45.03	30.31	

TABLE A3-1 (continued)
 PRESSURE RECORDS FROM THE H-8 PUMPING TEST, RECORDED
 AT THE H-8 HYDROPAD, 27 NOVEMBER TO 17 DECEMBER, 1985.

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi)		COMMENTS
	H-8b Pumping Interval	H-8b Annulus	
331:17: 0: 0	45.13	30.31	
331:17:10: 0	45.71	30.32	
331:17:31:41	46.22	30.34	
331:18: 3: 0	46.55	30.34	
331:19: 3: 0	46.90	30.34	
331:20: 3: 0	47.12	30.35	
332: 0: 3: 0	47.47	30.34	
332: 6: 3: 0	47.80	30.36	
332:11:48: 0	47.85	30.34	
333:11:48: 0	47.96	30.31	
334:12:52:50	48.21	30.21	
335:11:57: 0	48.14	30.23	
336:11:57: 0	48.21	30.28	
337:12: 1: 0	48.17	30.27	
338:12: 1: 0	48.19	30.25	
339:12: 1: 0	48.24	30.25	
339:13: 1: 0	48.26	30.26	End file H80025
339:13:10:14	48.24	30.26	Start H80035
339:16: 0: 0	48.22	30.25	
339:16: 0:20	45.99	30.29	PUMP ON
339:16:36:29	46.51	30.30	PUMP OFF 16:35
339:16:40: 0	46.90	30.29	
339:17: 1:10	47.46	30.30	
339:18: 9: 0	47.77	30.31	
339:20: 9: 0	47.94	30.32	
340: 0: 9: 0	48.05	30.30	
340: 6: 9: 0	48.10	30.32	
340: 9:59: 0	48.08	30.28	
340:10: 0: 0	44.87	30.70	PUMP ON
340:10: 0: 5	44.65	30.30	
340:10: 0:10	44.43	30.31	
340:10: 0:15	44.29	30.30	
340:10: 0:20	44.19	30.29	
340:10: 0:25	44.12	30.31	
340:10: 0:30	44.05	30.25	
340:10: 0:35	43.99	30.30	
340:10: 0:40	43.95	30.29	
340:10: 0:45	43.90	30.29	
340:10: 0:50	43.86	30.30	
340:10: 0:55	43.81	30.28	
340:10: 1: 0	43.79	30.29	
340:10: 1:15	43.72	30.30	
340:10: 1:30	43.63	30.28	

TABLE A3-1 (continued)
 PRESSURE RECORDS FROM THE H-8 PUMPING TEST, RECORDED
 AT THE H-8 HYDROPAD, 27 NOVEMBER TO 17 DECEMBER, 1985.

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi)		COMMENTS
	H-8b Pumping Interval	H-8b Annulus	
340:10: 1:45	43.58	30.27	
340:10: 2: 0	43.53	30.29	
340:10: 2:30	43.43	30.29	
340:10: 3: 0	43.32	30.25	
340:10: 3:30	43.27	30.28	
340:10: 4: 0	43.23	30.28	
340:10: 4:30	43.16	30.28	
340:10: 5: 0	43.08	30.24	
340:10: 6: 0	42.97	30.23	
340:10: 7: 0	42.89	30.23	
340:10: 8: 0	42.84	30.26	
340:10: 9: 0	42.74	30.24	
340:10:10: 0	42.68	30.23	
340:10:15: 0	42.44	30.24	
340:10:20: 0	42.22	30.24	
340:10:25: 0	42.04	30.23	
340:10:30: 0	41.90	30.28	
340:10:45: 0	41.50	30.26	
340:11: 0: 0	41.15	30.24	
340:11:15: 0	40.86	30.24	
340:11:30: 0	40.62	30.26	
340:11:45: 0	40.38	30.27	
340:12: 0: 0	40.18	30.28	
340:12:30: 0	39.76	30.25	
340:13: 0: 0	39.43	30.27	
340:14: 0: 0	38.81	30.30	
340:15: 0: 0	38.26	30.29	
340:16: 0: 0	37.78	30.29	
340:17: 0: 0	37.34	30.27	
340:18: 0: 0	36.96	30.29	
340:19: 0: 0	36.57	30.26	
340:20: 0: 0	36.26	30.29	
340:22: 6: 0	35.65	30.28	
341: 0: 6: 0	35.12	30.30	
341: 2: 3:32	34.67	30.30	
341: 4: 3:32	34.22	30.31	
341: 6: 3:32	33.76	30.28	
341: 8: 3:32	33.38	30.29	
341:10: 3:32	33.00	30.28	
341:12: 3:32	32.67	30.28	
341:15: 3:32	32.12	30.24	
341:18: 3:32	31.38	30.26	
341:21: 1: 0	30.86	30.27	

TABLE A3-1 (continued)
 PRESSURE RECORDS FROM THE H-8 PUMPING TEST, RECORDED
 AT THE H-8 HYDROPAD, 27 NOVEMBER TO 17 DECEMBER, 1985.

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi)		COMMENTS
	H-8b Pumping Interval	H-8b Annulus	
342: 0: 1: 0	30.43	30.27	
342: 3: 1: 0	30.01	30.27	
342: 6: 1: 0	29.60	30.30	
342: 9: 1: 0	29.14	30.25	
342:12: 1: 0	28.78	30.24	
342:15: 1: 0	28.43	30.28	
342:18: 1: 0	28.02	30.26	
342:21: 5: 0	27.67	30.30	
343: 0: 5: 0	27.35	30.25	
343: 3: 5: 0	27.07	30.27	
343: 6: 5: 0	26.77	30.27	
343: 9:59:55	26.35	30.26	
343:10: 0: 0	29.23	30.32	PUMP OFF
343:10: 0: 5	29.78	30.26	
343:10: 0:10	29.97	30.24	
343:10: 0:15	30.11	30.25	
343:10: 0:20	30.21	30.25	
343:10: 0:25	30.29	30.27	
343:10: 0:30	30.32	30.24	
343:10: 0:35	30.41	30.28	
343:10: 0:40	30.45	30.27	
343:10: 0:45	30.48	30.25	
343:10: 0:50	30.49	30.24	
343:10: 0:55	30.56	30.27	
343:10: 1: 0	30.56	30.25	
343:10: 1:15	30.67	30.26	
343:10: 1:30	30.71	30.24	
343:10: 1:45	30.80	30.27	
343:10: 2: 0	30.82	30.24	
343:10: 2:30	30.91	30.25	
343:10: 3: 0	31.03	30.28	
343:10: 3:30	31.09	30.27	
343:10: 4: 0	31.15	30.25	
343:10: 4:30	31.19	30.24	
343:10: 5: 0	31.25	30.24	
343:10: 6: 0	31.34	30.25	
343:10: 7: 0	31.45	30.27	
343:10: 8: 0	31.54	30.28	
343:10: 9: 0	31.59	30.27	
343:10:10: 0	31.63	30.26	
343:10:15: 0	31.89	30.24	
343:10:20: 0	32.13	30.27	
343:10:25: 0	32.27	30.25	

TABLE A3-1 (continued)
 PRESSURE RECORDS FROM THE H-8 PUMPING TEST, RECORDED
 AT THE H-8 HYDROPAD, 27 NOVEMBER TO 17 DECEMBER, 1985.

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi)		COMMENTS
	H-8b Pumping Interval	H-8b Annulus	
343:10:30: 0	32.44	30.26	
343:10:45: 0	32.79	30.24	
343:11: 0: 0	33.13	30.28	
343:11:15: 0	33.38	30.27	
343:11:30: 0	33.61	30.25	
343:11:45: 0	33.84	30.25	
343:12: 0: 0	34.03	30.25	
343:12:30: 0	34.39	30.25	
343:13: 0: 0	34.68	30.25	
343:14: 0: 0	35.23	30.24	
343:15: 0: 0	35.66	30.25	
343:16: 0: 0	36.09	30.26	
343:17: 0: 0	36.41	30.27	
343:18: 0: 0	36.72	30.28	
343:19: 0: 0	36.99	30.28	
343:20: 0: 0	37.18	30.25	
343:22: 0: 0	37.62	30.27	
344: 0: 0: 0	37.99	30.26	
344: 2: 0: 0	38.38	30.28	
344: 4: 0: 0	38.71	30.29	
344: 6: 0: 0	38.98	30.28	
344: 6:49:12	39.07	30.26	End H80035
344: 6:55:30	39.10	30.28	Start H80045
344: 8: 0: 0	39.24	30.30	
344:10: 0: 0	39.45	30.26	
344:12: 0: 0	39.68	30.29	
344:15: 0: 0	39.99	30.28	
344:18: 0: 0	40.28	30.29	
344:21: 0: 0	40.47	30.26	
345: 0: 0: 0	40.70	30.25	
345: 3: 0: 0	40.99	30.27	
345: 6: 0: 0	41.25	30.28	
345: 9: 0: 0	41.45	30.29	
345:12: 0: 0	41.61	30.25	
345:15: 0: 0	41.80	30.26	
345:18: 0: 0	41.98	30.27	
345:21: 0: 0	42.13	30.29	
346: 0: 0: 0	42.24	30.26	
346: 3: 0: 0	42.42	30.25	
346: 6: 0: 0	42.64	30.29	
346: 9: 0: 0	42.75	30.26	
346:12: 0: 0	42.86	30.24	
346:18: 0: 0	43.18	30.26	

TABLE A3-1 (continued)
 PRESSURE RECORDS FROM THE H-8 PUMPING TEST, RECORDED
 AT THE H-8 HYDROPAD, 27 NOVEMBER TO 17 DECEMBER, 1985.

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi)		COMMENTS
	H-8b Pumping Interval	H-8b Annulus	
347: 0: 0: 0	43.40	30.28	
347: 6: 0: 0	43.66	30.26	
347:11:55: 3	43.88	30.24	
347:17:55: 3	44.12	30.25	
347:23:55: 3	44.27	30.26	
348: 5:55: 3	44.48	30.26	
348:11:55: 3	44.64	30.24	
348:17:55: 3	44.76	30.22	
348:18:40: 3	44.80	30.24	
349:12: 7: 0	45.22	30.22	
350: 0: 7: 0	45.47	30.25	
350:12: 7: 0	45.71	30.23	
350:23:37: 0	45.91	30.24	
351:13:15:17	46.08	30.19	
352: 0: 9: 0	46.23	30.23	
352:10:54: 0	46.40	30.22	End H80045

APPENDIX 4.0

TABULATED WATER-LEVEL DATA COLLECTED FOR
OBSERVATION WELLS H-8a, H-8c, AND THE POKER TRAP WELL
DURING THE H-8 PUMPING TEST

TABLE A4-1
 WATER-LEVEL MEASUREMENTS
 FOR OBSERVATION WELL H-8a
 DURING THE H-8 PUMPING TEST

DAY	HR	MM	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR (meters)	DEVICE
300	12	52	10/27/85	427.66	130.35	0.04	IRON HORSE
309	14	43	11/05/85	424.67	129.44	0.04	IRON HORSE
337	12	0	12/03/85	419.13	127.75	0.04	IRON HORSE
339	12	0	12/05/85	419.13	127.75	0.04	IRON HORSE
339	12	5	12/05/85	418.57	127.58	0.00	SOLINST
340	14	15	12/06/85	418.11	127.44	0.00	SOLINST #1
341	2	35	12/07/85	418.90	127.68	0.05	IRON HORSE
341	6	8	12/07/85	418.83	127.66	0.06	IRON HORSE
341	10	10	12/07/85	418.70	127.62	0.05	IRON HORSE
341	18	32	12/07/85	418.83	127.66	0.09	IRON HORSE
342	9	30	12/08/85	418.57	127.58	0.07	IRON HORSE
342	16	15	12/08/85	418.64	127.60	0.04	IRON HORSE
343	9	6	12/09/85	418.60	127.59	0.05	IRON HORSE
344	8	52	12/10/85	418.31	127.50	0.05	IRON HORSE
345	9	34	12/11/85	417.22	127.17	0.04	IRON HORSE
346	9	20	12/12/85	418.27	127.49	0.04	IRON HORSE
347	15	17	12/13/85	418.01	127.41	0.04	IRON HORSE
348	9	54	12/14/85	418.18	127.46	0.05	IRON HORSE
349	11	0	12/15/85	418.04	127.42	0.05	IRON HORSE
351	10	54	12/17/85	417.52	127.26	0.05	IRON HORSE

TABLE A4-2
 WATER-LEVEL MEASUREMENTS
 FOR OBSERVATION WELL H-8c
 DURING THE H-8 PUMPING TEST

DAY	HR	MM	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR (meters)	DEVICE
300	12	40	10/27/85	460.40	140.33	0.05	IRON HORSE
309	14	40	11/05/85	460.53	140.37	0.04	IRON HORSE
326	13	15	11/22/85	460.17	140.26	0.07	IRON HORSE
337	12	15	12/03/85	460.30	140.30	0.06	IRON HORSE
339	12	10	12/05/85	460.47	140.35	0.06	IRON HORSE
339	12	15	12/05/85	459.94	140.19	0.00	SOLINST
340	14	45	12/06/85	460.27	140.29	0.00	SOLINST #1
341	2	21	12/07/85	460.30	140.30	0.08	IRON HORSE
341	6	20	12/07/85	460.30	140.30	0.06	IRON HORSE
341	10	27	12/07/85	460.30	140.30	0.07	IRON HORSE
341	13	25	12/07/85	460.30	140.30	0.05	IRON HORSE
341	18	44	12/07/85	460.37	140.32	0.08	IRON HORSE
342	9	20	12/08/85	460.30	140.30	0.08	IRON HORSE
342	16	25	12/08/85	460.30	140.30	0.07	IRON HORSE
343	8	52	12/09/85	460.60	140.39	0.05	IRON HORSE
344	8	43	12/10/85	460.43	140.34	0.05	IRON HORSE
345	9	24	12/11/85	460.30	140.30	0.04	IRON HORSE
346	9	11	12/12/85	460.53	140.37	0.04	IRON HORSE
347	15	5	12/13/85	460.56	140.38	0.04	IRON HORSE
348	9	40	12/14/85	460.47	140.35	0.05	IRON HORSE
349	11	16	12/15/85	460.53	140.37	0.05	IRON HORSE
351	10	48	12/17/85	460.50	140.36	0.04	IRON HORSE

TABLE A4-3
 WATER-LEVEL MEASUREMENTS
 FOR THE POKER TRAP OBSERVATION WELL
 DURING THE H-8 PUMPING TEST

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR (m)	DEVICE
331	12	0	11/27/85	440.85	134.37	0.00	IRON HORSE
334	12	0	11/30/85	441.27	134.50	0.00	IRON HORSE
337	12	0	12/03/85	441.40	134.54	0.05	IRON HORSE
343	9	40	12/09/85	440.75	134.34	0.03	IRON HORSE
344	9	13	12/10/85	440.94	134.40	0.05	IRON HORSE
346	9	32	12/12/85	441.24	134.49	0.04	IRON HORSE
347	14	50	12/13/85	441.34	134.52	0.04	IRON HORSE
348	10	19	12/14/85	441.24	134.49	0.04	IRON HORSE
349	10	50	12/15/85	441.31	134.51	0.05	IRON HORSE
351	11	11	12/17/85	441.24	134.49	0.04	IRON HORSE

APPENDIX 5.0

TABULATED WATER-QUALITY DATA FOR
THE H-8 PUMPING TEST

TABLE A5-1
 ELECTROLYTIC CONDUCTIVITY, TEMPERATURE AND SPECIFIC
 GRAVITY OF WATER PRODUCED DURING THE H-8 PUMPING TEST

DAY	HR	MM	ELECTROLYTIC CONDUCT- TIVITY (μ S/cm)	SPECIFIC GRAVITY	TEMPER- ATURE (deg C)
340	10	18	3350	1.0020	23.0
340	13	54	2680	1.0030	19.5
340	18	14	2780	1.0020	23.0
340	20	2	2420	1.0020	23.0
341	0	12	2750	1.0020	23.0
341	4	12	2800	1.0020	23.0
341	7	30	2800	1.0020	23.0
341	10	35	2870	1.0015	23.0
341	14	5	2950	1.0020	23.5
341	17	50	2980	1.0020	24.0
341	21	1	2850	1.0020	23.0
342	1	3	2850	1.0020	23.5
342	4	49	2800	1.0020	23.0
342	8	44	2950	1.0020	23.0
342	12	20	2770	1.0018	23.0
342	15	45	2810	1.0015	24.0
342	19	35	2850	1.0020	23.5
342	23	45	2800	1.0020	23.0
343	4	5	2790	1.0020	23.0
343	7	25	2850	1.0020	23.0

**PART D. PUMPING TEST AT THE H-7 HYDROPAD CONDUCTED
FEBRUARY 18-24, 1986**

1.0 INTRODUCTION

A hydraulic pumping test was conducted at the H-7 hydropad, approximately three miles southwest of the WIPP site, February 18 to 24, 1986 (Figure 1.1). Following is a compilation of the hydrologic data collected during that test describing the test objectives, well configurations, test equipment, and test history. Section 4.0 contains descriptions and graphical representations of the test results. The Appendixes present details of well configurations, tabulated data from the pumping and observation wells at the H-7 hydropad, and tabulated water-quality data.

1.1 Objectives

The primary objective of the H-7 pumping test was to provide data with which to evaluate the transmissivity and, if possible, the storativity of the Culebra Dolomite Member of the Rustler Formation at the H-7 hydropad. Additionally, the pumping served to develop and clean the pumping well, H-7b prior to geochemical sampling of the Culebra by another Department of Energy (DOE) subcontractor. Because well H-7a, completed to the Magenta Member of the Rustler Formation, is dry at the H-7 hydropad, no information regarding Magenta-Culebra connection was possible during the test.

1.2 Configuration of the H-7 Hydropad

The H-7 hydropad is located approximately three miles southwest of the WIPP site (Figure 1.1). The hydropad configuration comprises four wells in a diamond pattern, with approximately 100 feet separating each well except wells H-7a and H-7b2, which are on opposite ends of the diamond (Figure 1.2). Both surface and Culebra locations and distances between the boreholes are shown in Figure 1.2. A deviation survey has not been performed in H-7b2, and the deviation survey in H-7a which was completed only through the Magenta dolomite, reaches a depth of 145 feet. Wells H-7b, H-7b2, and H-7c are completed in the Culebra Dolomite Member of the Rustler Formation. Well H-7c was originally drilled and cased to the Rustler-Salado formation contact zone; then the casing was subsequently perforated at the Culebra horizon and a bridge plug was installed to separate the Culebra and Rustler-Salado contact zone. Well construction details of the wells at the H-7 hydropad are presented in Figure 1.3.

To reduce the influence of wellbore storage effects on the fluid-pressure response in the wells at the H-7 hydropad, Baski 5-5/8-inch sliding-end air-inflatable packers with feed-through assemblies and downhole transducers were installed in H-7b, the pumping well, and observation wells H-7b2 and H-7c on January 21, 1986. In well H-7b, an electric submersible pump was installed below the packer to allow pumping from the test zone. Figures 1.4, 1.5, and 1.6 present details of the equipment configuration in wells H-7b, H-7b2, and H-7c, respectively. To assess the integrity of the packer isolation of the Culebra in the pumping well, a one-inch PVC pipe, capable of allowing water-level-sounder measurements was installed in the annular space between the 2-3/8-inch discharge pipe and the

7-inch (O.D.) casing on February 6. Periodic measurements were then made of the annulus water level as a means of determining packer integrity.

2.0 TEST EQUIPMENT

The equipment for the H-7 pumping test consisted of a Data Acquisition System (DAS) to collect, process, and store data from well H-7b and observation wells H-7b2 and H-7c; a submersible pump installed in pumping well H-7b; packers with feed-through assemblies to isolate the Culebra test interval in wells H-7b, H-7b2 and H-7c; a discharge-measurement and flow-regulation system; and a Solinst electric water-level sounder. Detailed descriptions of the test equipment are presented in the following sections.

2.1 Data-Acquisition System (DAS)

Data collection was performed with an HP-9845B-controlled DAS similar to that used in other tests at the WIPP site as described in Part A, Section 2.1.1. Downhole pressure transducers monitored the fluid pressure in the Culebra test interval in the pumping well H-7b, and observation wells H-7b2 and H-7c. Table A1-1, Appendix 1.0 summarizes the details of equipment installation, transducer-calibration data, transducer depths, and pretest water levels for the wells at the H-7 hydropad.

The primary components of the DAS are described in detail in Hydrologic Data Report #2 (INTERA Technologies and Hydro Geo Chem Inc., 1985).

2.2 Druck Transducers

Three Druck PDCR 10 pressure transducers, rated 0 to 100 psi, were installed in H-7b, the pumping well, and in H-7b2 and H-7c for the H-7 pumping test. The transducers and their calibration are described and illustrated in Part A, Section 2.2.3. All the transducers were recalibrated at the end of the test. Pretest and posttest calibration data are presented in Table A1-1, Appendix 1.0

2.3 Downhole Assembly

2.3.1 Submersible Pump

The pump used for the H-7 pumping test was a 10-horsepower Simmons SS-6, four-stage pump. The pump was chosen because it has the ability to produce 0 to 150 gallons per minute (gpm) from depths in excess of 500 feet, and it has the ability to maintain minimum pumping-rate loss per unit decline in head.

2.3.2 Packer Feed-Through Assembly

The packer feed-through assembly used in all instrumented wells at the H-7 hydropad during the H-7 test consisted of a Baski 5-5/8-inch diameter sliding-end packer, an inflation line, a discharge pipe (only in the pumping well, H-7b), a transducer, and a feed-through plug as described in Part A, Section 2.2.2. The packer and feed-through assembly is designed to isolate the test interval and minimize the effects of wellbore storage, while still allowing transducer access to the test interval for fluid-pressure measurements.

2.3.3 Discharge-Measurement System

Figure 2.1 is a schematic diagram of the discharge-measurement system used during the H-7 test. The system utilized three means of measuring pumping rate and a flow-regulation device. The discharge was measured with a 1 1/2 inch Hays in-line totalizing flow meter, a 250-gpm 2-inch cutthroat flume, and a 55-gallon drum. The Hays totalizing flow meter is a one-inch orifice, brass-housed, synthetic (non-corrosive), turbine flow meter designed for discharge rates of 1 to 125 gallons per minute, with scale divisions to 0.5 gallon. The Hays flow meter is a totalizing flow meter and monitors only the total volume of fluid pumped. The average pumping rate was obtained by reading the meter at the beginning and end of time periods. Correlation between the pumping-rate measuring devices was established prior to the test. Comparison of the pumping rate measured by the Hays totalizing flow meter and the cutthroat flume showed that the cutthroat flume measurement was 0.98 times the Hays totalizer value. The 55-gallon drum was utilized only as a backup system and was not used as frequently as the other measurement devices. Usually, the drum measurement was 98 percent of the average of the pumping rates measured by the cutthroat flume and the Hays flow meter.

The discharge line was quite long for this test, about 150 feet, making filling of the discharge line with a fill pipe impractical. Therefore, before the test, the discharge line was filled during the pretest pump and pumping-rate checks. The line was kept full by elevating the flexible hose at the end of the line after the pump was turned off. Coupled with the pump's check valve, the filling of the discharge line insured that regulated flow conditions were in effect from the moment the pump was

turned on. Thus, average discharge rate data correspond to all drawdown data collected during the test, including the early-time data.

Previous testing (Mercer, 1983) indicated that large quantities of relatively fresh water would be produced at the H-7 hydropad. The large volume of relatively fresh water pumped during the H-7 pumping test necessitated a water disposal system different than that normally used at and near the WIPP site when pumping wells of lower permeability.

Two methods were evaluated for handling the water produced during the H-7 test:

- 1) Surface discharge into a shallow depression bordering the H-7 hydropad
- 2) Discharge to a frac tank to be periodically transported by a brine hauler to a disposal station.

After discussing the problem with the United States Bureau of Land Management (U.S. BLM) and the New Mexico State Engineer's Office, it was agreed that surface discharge was an environmentally safe and cost-effective method of handling the discharge. INTERA then placed perforated plastic in the shallow depression to prevent erosion and allow infiltration. The cutthroat flume was positioned in the bank of this depression, and a small settling pond was built behind the flume to pond the discharge for flume measurement and to control the discharge velocity to the depression. The water-disposal system was inspected and approved by the U.S. BLM. The discharge system was used throughout the pretest and pumping periods of the H-7 pumping test. Figure 2.1 also shows that in the event any

saline water were to be produced during the test, a 21,000-gallon frac tank would be utilized for water storage by diverting the discharge with a tee-connection to the discharge line. If needed, discharge could have been directed to the tank and trucked away by a brine hauler.

2.4 Water-Level Measurement Devices

Water-level measurements in the H-7b annulus were performed with the Solinst electric water-level sounder. The measurements were recorded and entered onto the digital data base for retrieval and plotting. The function and use of INTERA's water-level sounders were described in detail in Hydrologic Data Report #2 (INTERA Technologies and Hydro Geo Chem, 1985).

2.5 Water-Quality Measurement Devices

The H-7 pumping test included measurement of electrolytic conductivity, specific gravity and temperature of the water produced during the test. The electrolytic conductivity was measured with a Labline Lectro Mho-Meter whose function and operation are described in Part A, Section 2.1.4.

The specific gravity of the pumped water was measured with a calibrated, Cole Parmer hydrometer with a specific gravity range of 0.9900 to 1.0100. Measurements were performed in a similar manner to that during other pumping tests at the WIPP, as described in Part A, Section 2.1.4.

2.6 Barometric-Pressure Measurement

The barometric pressure was measured at the H-3 hydropad during the H-7 pumping test. The pressure was measured

approximately every hour with a Weathertronics Model 7105-A analog-output barometer as described in Part A, Section 2.1.5. The barometer was in continuous operation during the pretest, pumping, and recovery periods of the H-7 pumping test.

3.0 TEST HISTORY

The H-7 pumping test began February 18, 1986 (Julian Day 49). The test consisted of a three-day pumping period and a three-day recovery period. The following sections describe the test preparations, and operations during the pumping and recovery periods.

3.1 Test Preparation

The pump, packers, and transducers used for the H-7 test were installed at the H-7 hydropad on January 21, 1986 (Julian Day 21) (see configurations in Figures 1.4, 1.5, and 1.6). Immediately prior to packer and transducer installation, the static water level below top of casing was measured with the Solinst meter to establish the correspondence between water-level-sounder measurements and pressure measurements made with the transducer. After installation, the phase polarity of the pump was checked and the DAS was activated and checked. Table A1-1, Appendix 1.0 contains a tabulation of all data pertinent to the installation.

3.1.1 Pump and Flow-Rate Checks

The pump in well H-7b was operated for four brief periods prior to the H-7 pumping test. These pumping periods served to establish the pumping rate and check equipment such as the discharge line, flow meter, cutthroat flume,

and 55-gallon drum. The initial pumping periods also served to fill the discharge line and allow flow regulation during subsequent pumping periods.

The first of the four brief testing periods began on February 1, when the pump was run for 100 minutes. During this test it was discovered that the maximum sustained pumping rate that could be achieved was 80 to 85 gpm. The maximum pumping rate was limited because of friction losses in the 150 feet of 2-7/8-inch (O.D.) surface discharge line, which, together with use of the one-inch ball valve, constituted a discharge-regulation system with enough flexibility to allow pumping-rate adjustments as the pump lift increased during drawdown.

Following is a summary of the short pretest pumping periods. (See Table A3-1, Appendix 3.0 for pressure-response records during these pumping periods.)

Sequence	Calendar Date	Julian Day	Time	Pressure (psi)
1 Pump On	Feb. 1	032	11:00:00	14.8
Pump Off	Feb. 1	032	12:40:00	11.0
2 Pump On	Feb. 6	037	14:30:00	15.0
Pump Off	Feb. 6	037	15:30:00	11.4
3 Pump On	Feb. 15	046	09:30:00	15.0
Pump Off	Feb. 15	046	11:30:00	10.7
4 Pump On	Feb. 17	048	12:15:00	15.0
Pump Off	Feb. 17	048	12:42:18	11.6

3.1.2 Water-Level Measurements

Water levels at the H-7 hydropad were measured semi-monthly for six months prior to the start of the H-7 test. The water levels were also measured before and after packer installation, and a normal semi-monthly schedule was established after the pumping test. Part F contains a record of manual water-level measurements at the H-7 hydropad.

3.1.3 Water-Quality Measurements

Electrolytic conductivity, temperature, and specific gravity of the discharge were measured every three to four hours during the test. A $\frac{1}{4}$ inch sample line was installed in the discharge line, immediately upstream of the Hays flow meter. Samples were collected with a plastic container, which was rinsed with the discharge water several times before the samples were collected.

Table A5-1, Appendix 5.0, is a tabulation of the electrolytic conductivity, temperature, and specific gravity data.

3.1.4 Barometric-Pressure Measurements

The barometric pressure was measured approximately hourly at the H-3 hydropad during the pretest, pumping, and recovery periods of the test. The analog barometer's millivolt signal was read during each scan initiated by the DAS at the H-3 hydropad. The data were recorded on floppy disc along with other data from the H-3 multipad test. The data are printed out in Part A as Table A6-1, Appendix 6.0.

3.2 Pumping Period

The H-7 test pumping period began on February 18 at 10:00:00 (Julian Day 49). The pump operated successfully throughout the 3-day test period, with a flow rate of 80.9 to 82.8 gpm. The flow rate was relatively stable at approximately 81.5 gpm throughout most of the test. The highest rates occurred immediately after the start of pumping, and the lowest values were recorded during mid-day on days 50 and 51. Pumping ended on February 21 at 10:00:00 (Julian Day 52). During the test, 352,874 gallons of water were produced from the Culebra. All water produced was discharged into the shallow depression below the cutthroat flume, and from there onto the surrounding land surface. Little or no erosion was noted and all water either infiltrated into the soil zone or was evaporated.

Tables A2-1, A2-2, and A2-3, Appendix 2.0 provide a compilation of flow-rate data for the H-7 test.

3.3 Recovery Period

Recovery in well H-7b began on February 21 at 10:00:00 hours (Julian Day 52). The well recovered 98 percent of the pressure drawdown in 12 hours after the pump was turned off, and the well was 100 percent recovered on the morning of February 24 (Julian Day 55).

3.4 Equipment Performance

All equipment performed very well during the H-7 pumping test. The record of annulus water-level measurements indicates there was no leakage of pressure across the packer during either the pumping or recovery periods. The slight

rise in water level noted during the test was probably due to some small leakage from the discharge line.

Transducer 94977 in well H-7c displayed some apparently erratic behavior during the later pumping stages which was mimicked to a lesser degree in H-7b and H-7b2. However, the pressure values were consistent from day to day and the posttest calibration showed that the transducer was within calibration limits. Some unknown formation or response factors or electrical difficulties may have been responsible for the "erratic" response (see Section 4.2).

4.0 TEST RESULTS

4.1 Fluid-Pressure Response at Pumping Well H-7b

Figure 4.1 is a linear-linear plot displaying the pressure responses of wells H-7b, H-7b2, and H-7c during the pumping and recovery periods of the H-7 test. Table A4-1, Appendix 4.0 lists water-level measurements in the H-7b annulus during the pumping test. These data shows that no disturbances, due to leakage or loss of packer pressure, occurred during both the pumping and recovery periods of the test.

The pressure recovery due to all the pretest pumping activity discussed in Section 3.1.1 was very rapid and caused no pressure depletion in the pumping well. Therefore, the pretest conditions are considered very good for analysis of the H-7 test. An abridged, annotated, tabulation of pressure (calculated from the transducer's millivolt signal) versus time data for the pretest, pumping, and recovery periods for the H-7 pumping test is found in Table A3-1, Appendix 3.0.

Figure 4.2 is a plot of the Hays totalizing flow-meter pumping-rate data for the pumping period. No pumping-rate adjustments were required throughout the pumping period. The pumping rates are calculated as average flow over time periods ranging from 1 minute to 1 hour. Table A2-1, Appendix 2.0, provides a complete annotated tabulation of the pumping-rate data.

4.2 Fluid-Pressure Responses in Observation Wells

Figure 4.1 displays the fluid-pressure responses in wells H-7b2 and H-7c during the pumping and recovery periods of the H-7 pumping test. The figure shows that a similar response occurred in both observation wells, and that H-7c showed a somewhat erratic response as discussed earlier in Section 3.4. Table A3-1, Appendix 3.0, contains an abridged tabulation of the pressures (as calculated from the transducer's millivolt signal) versus time for the pretest, pumping, and recovery periods of the H-7 pumping test.

4.3 Water-Quality Data

Figure 4.3 is a plot of the electrolytic conductivity and specific gravity of water produced during the H-7 pumping test. The water produced had a temperature (as measured at the sample line) of 21 to 22°C. The electrolytic conductivity was relatively stable throughout the test, ranging from 3450 to 3710 $\mu\text{S}/\text{cm}$. All electrolytic conductivity measurements are temperature compensated to a standard temperature of 25°C.

The measured specific gravity of the water produced during the test was very consistent and ranged from 0.9990 to 1.0010.

Table A5-1, Appendix 5.0, provides a complete tabulation of the electrolytic conductivity, temperature, and specific gravity data.

4.4 Barometric-Pressure Data

Figure 4.4 is a plot of barometric pressure versus time during the H-7 pumping test. The data were recorded at the H-3 hydropad as part of the H-3 multipad test. The H-7 hydropad is approximately five miles south-southwest of H-3, but the data are considered to represent the regional fluctuations affecting both sites during the time the H-7 test was conducted. Tabulated barometric pressure data are found in Part A, Table A6-1, Appendix 6.0.

5.0 REFERENCES

- Drellack, S.L., Jr., and Wells, J.G., 1982. Geologic and well-construction data for the H-7 borehole complex near the proposed Waste Isolation Pilot Plant site, southeastern New Mexico: U.S. Geological Survey, Water-Resources Investigations 82-38, 25 pp.
- Hydro Geo Chem, Inc., 1985. Hydrologic Data Report #1. Sandia National Laboratories, Contractor Report SAND85-7206, 710 pp.
- INTERA Technologies, Inc., and Hydro Geo Chem, Inc., 1985. Hydrologic Data Report #2. Sandia National Laboratories, Contractor Report SAND 85-7263, 478 pp.
- Mercer, J.W., 1983. Geohydrology of the proposed Waste Isolation Pilot Plant site, Los Medanos area, southeastern New Mexico: U.S. Geological Survey, Water-Resources Investigations 83-4016, 113 pp.

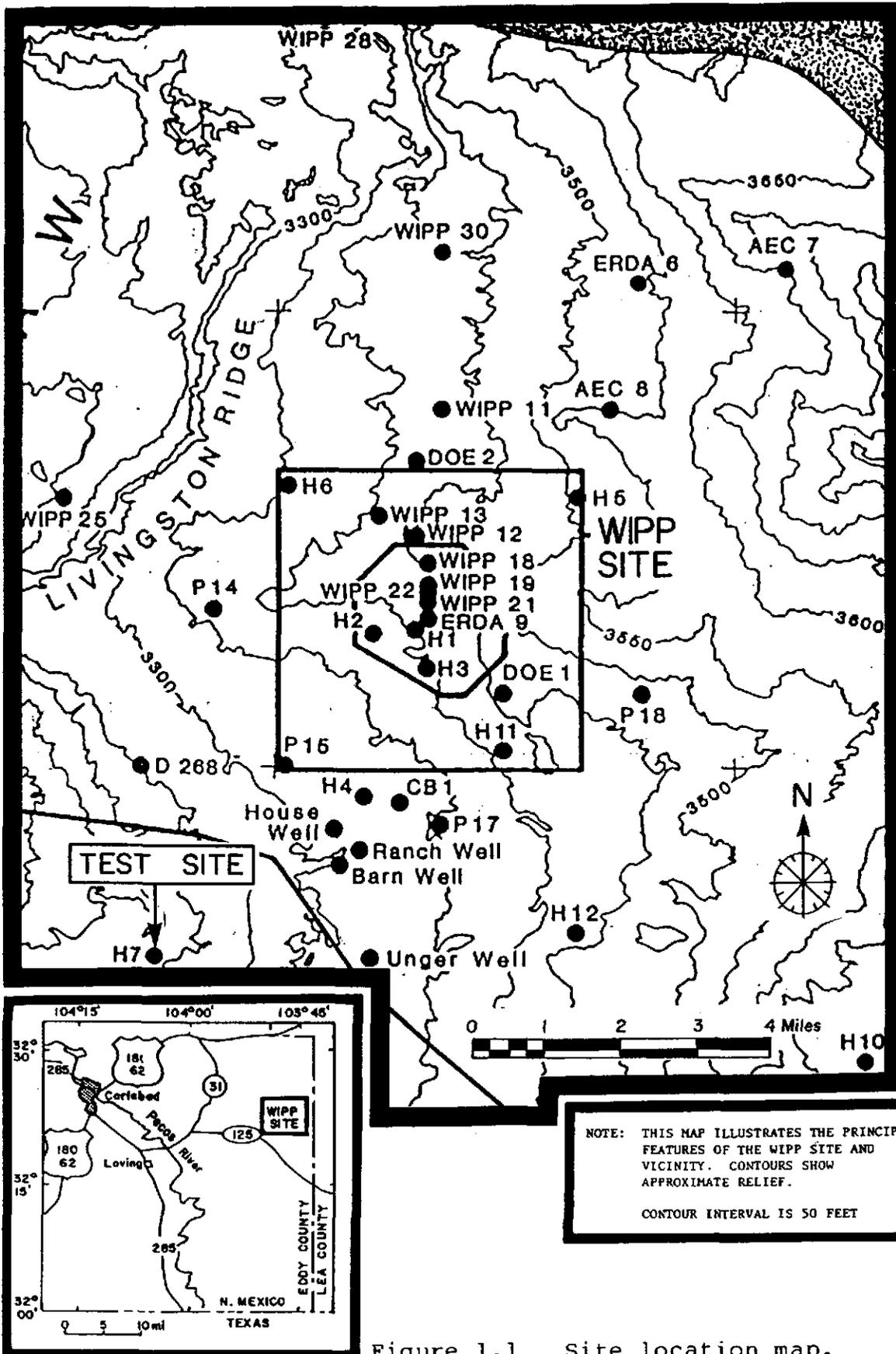


Figure 1.1 Site location map.

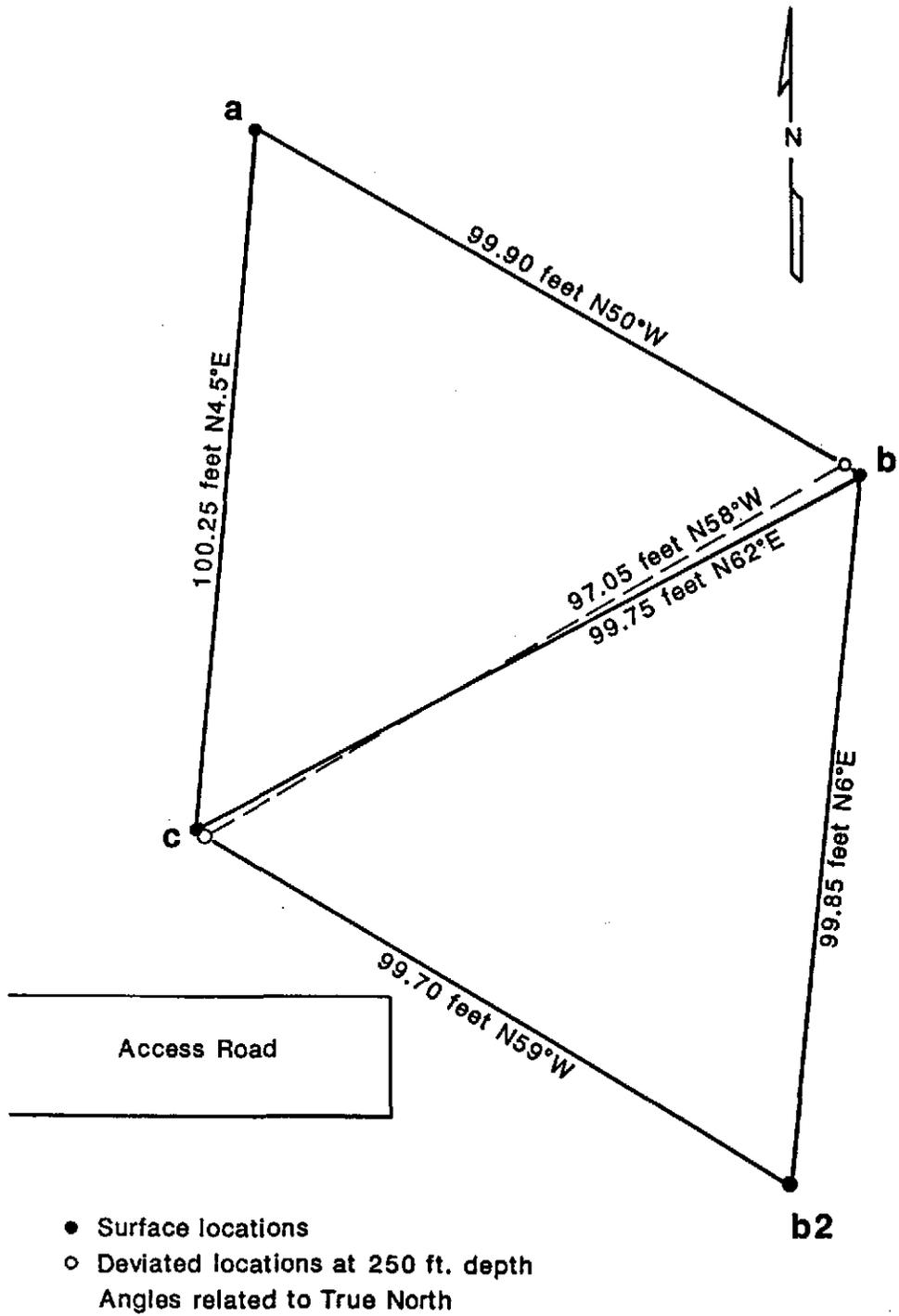


Figure 1.2 Plan view of the wells at the H-7 hydropad.

D-17

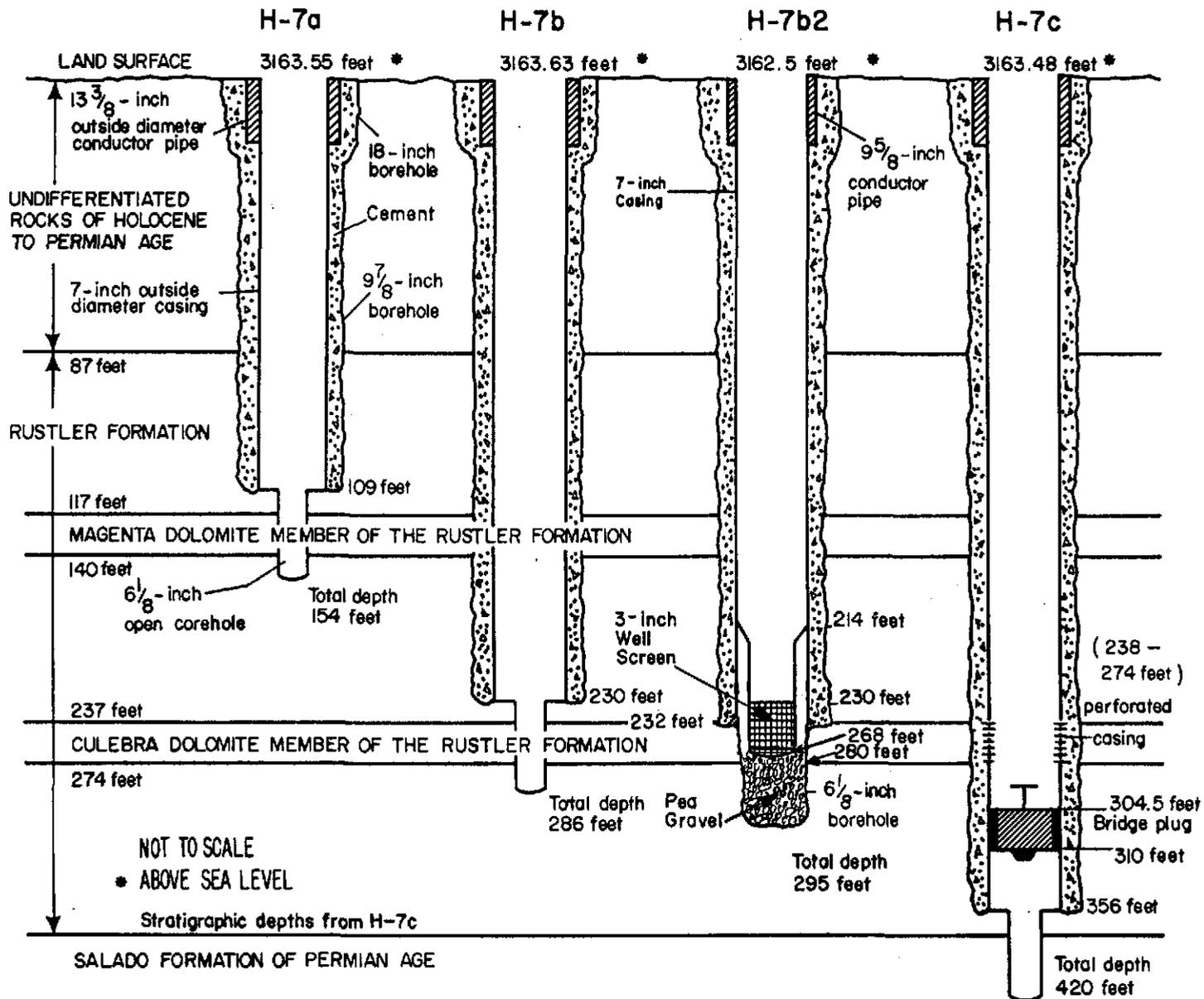


Figure 1.3 Schematic diagram of the wells at the H-7 Hydropad.
 (modified from Drellack and Wells, 1982)

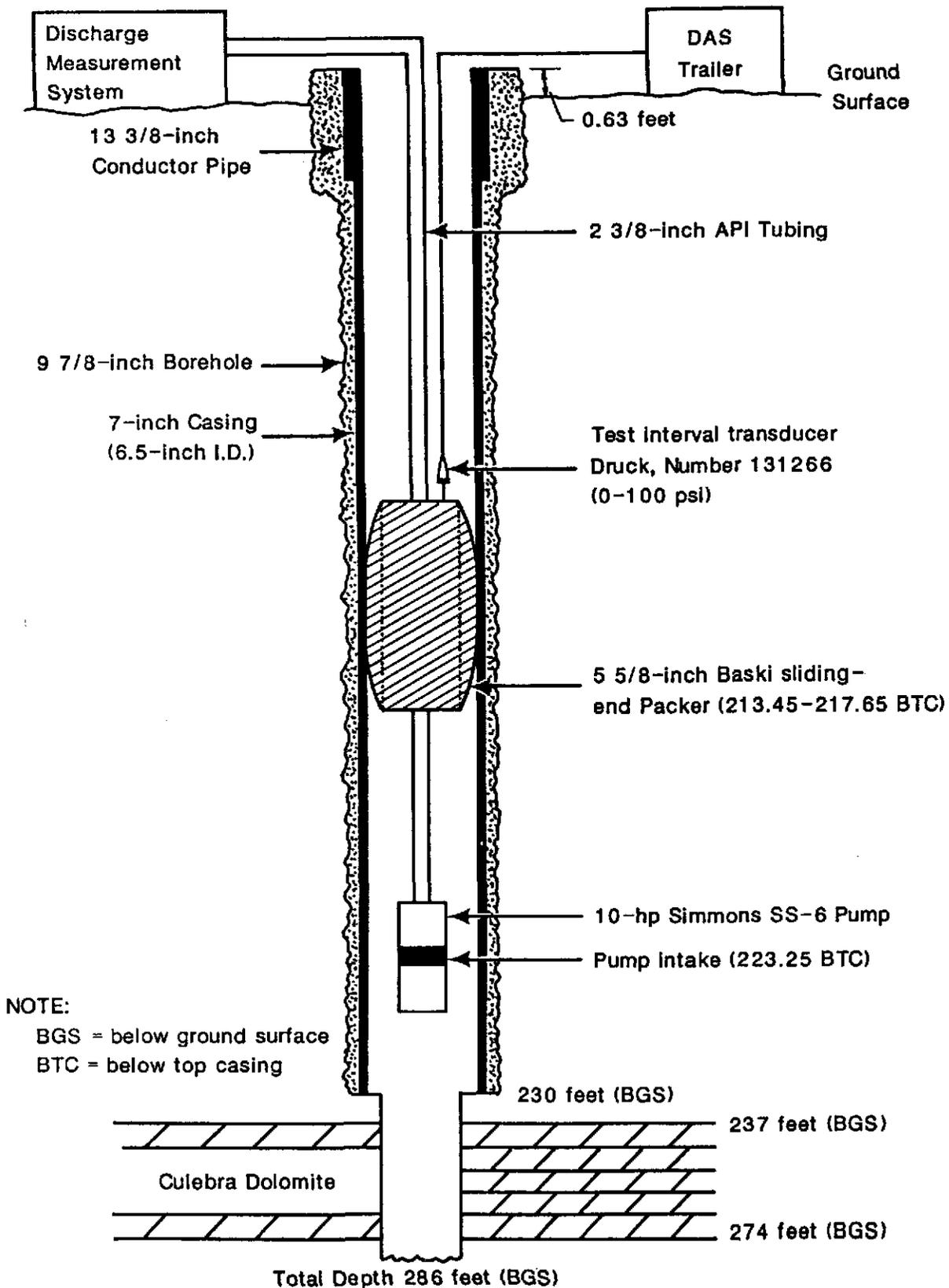


Figure 1.4 Schematic diagram of packer and pump installation in H-7b.

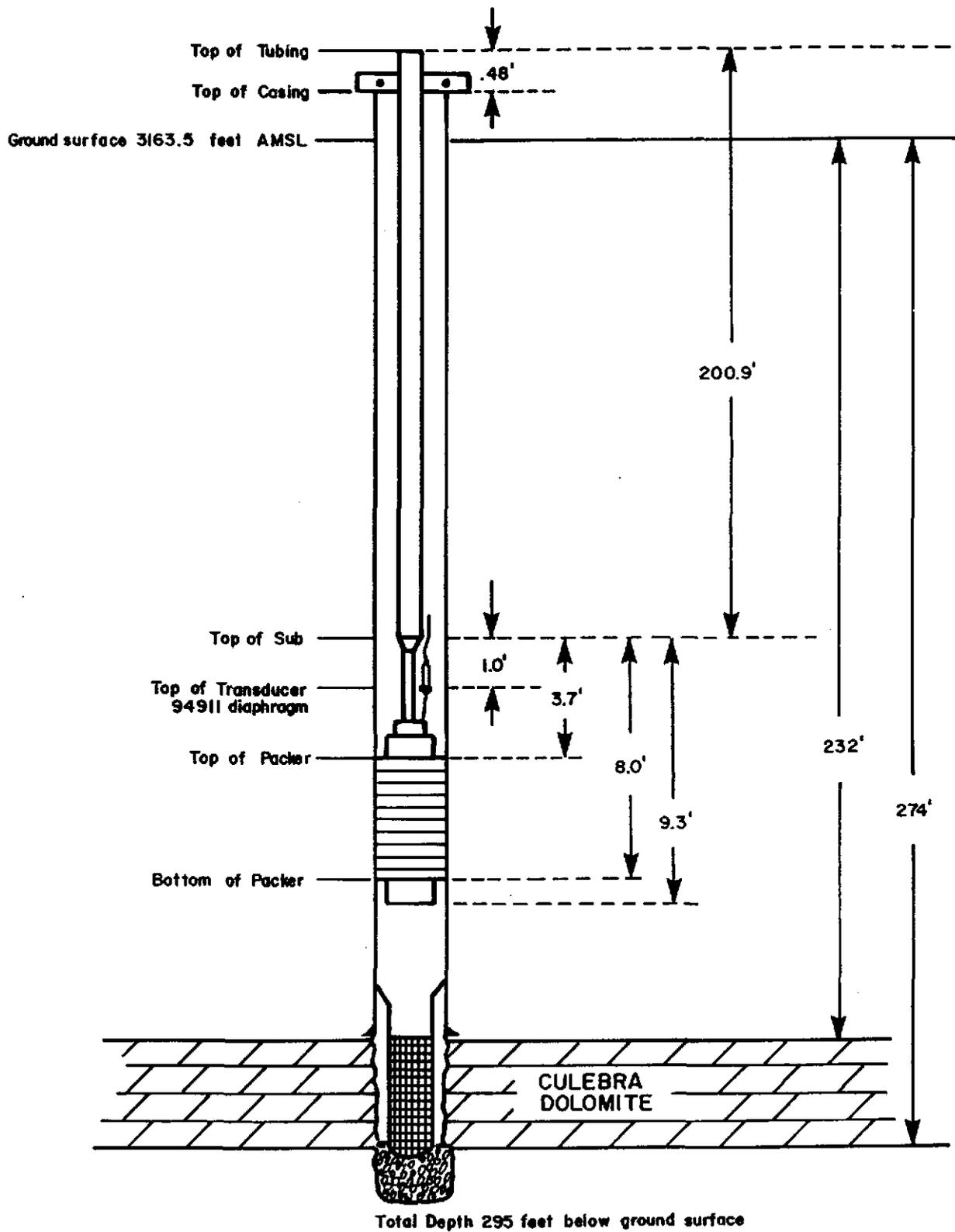


Figure 1.5 Schematic diagram of packer installation in H-7b2.

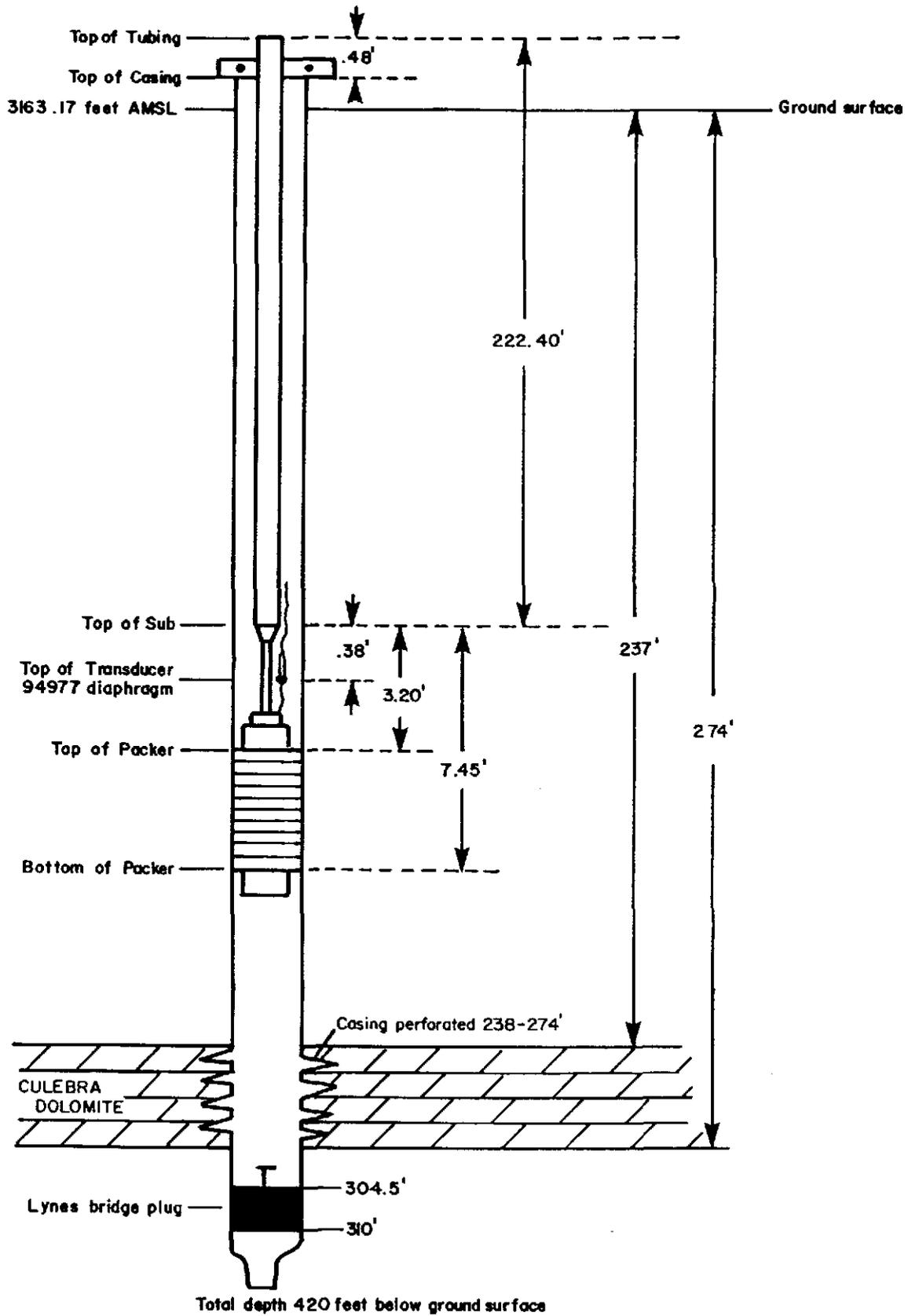


Figure 1.6 Schematic diagram of packer and bridge plug installation in H-7c.

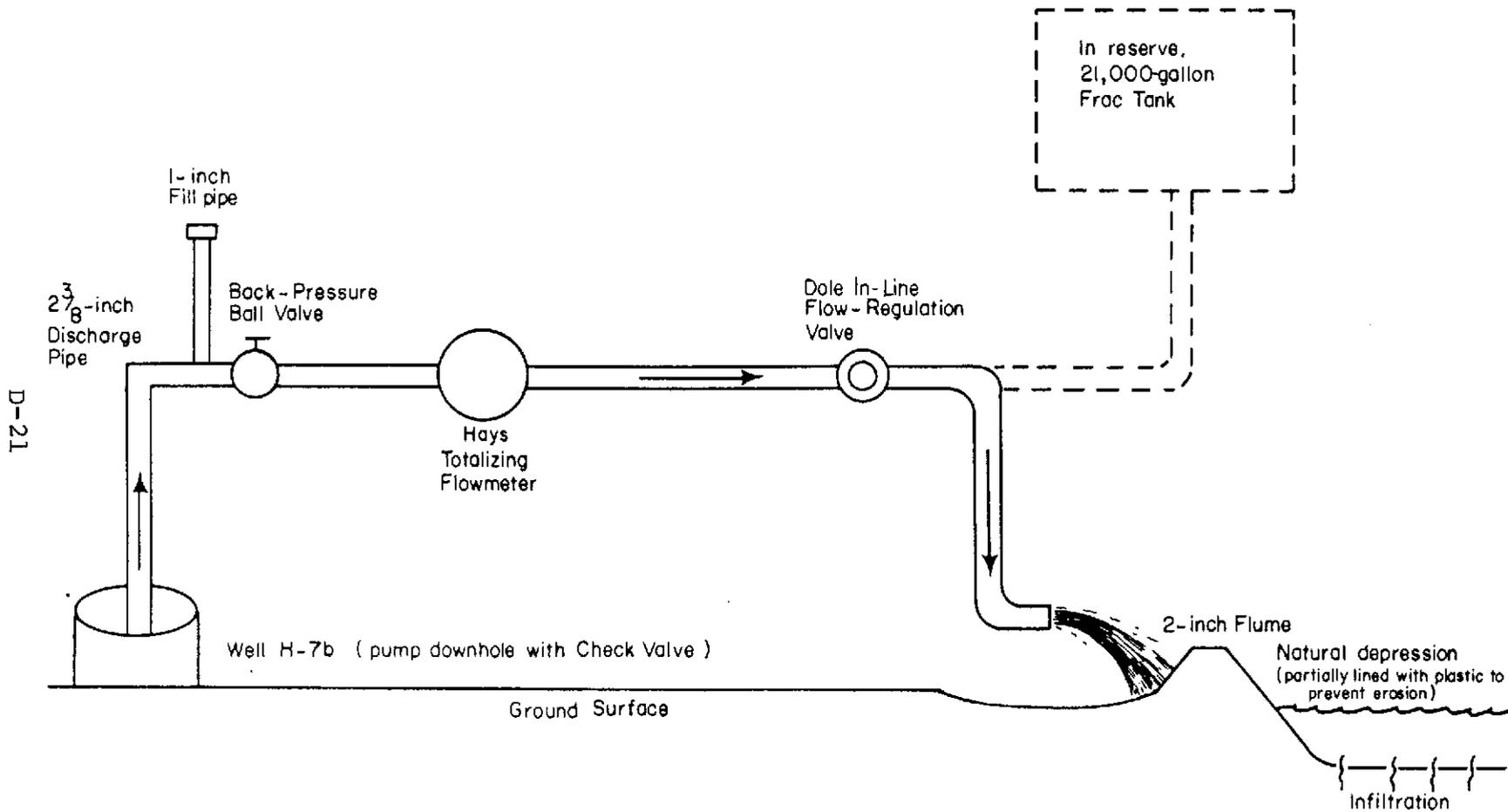


Figure 2.1 Flow-regulation and discharge-measurement system.

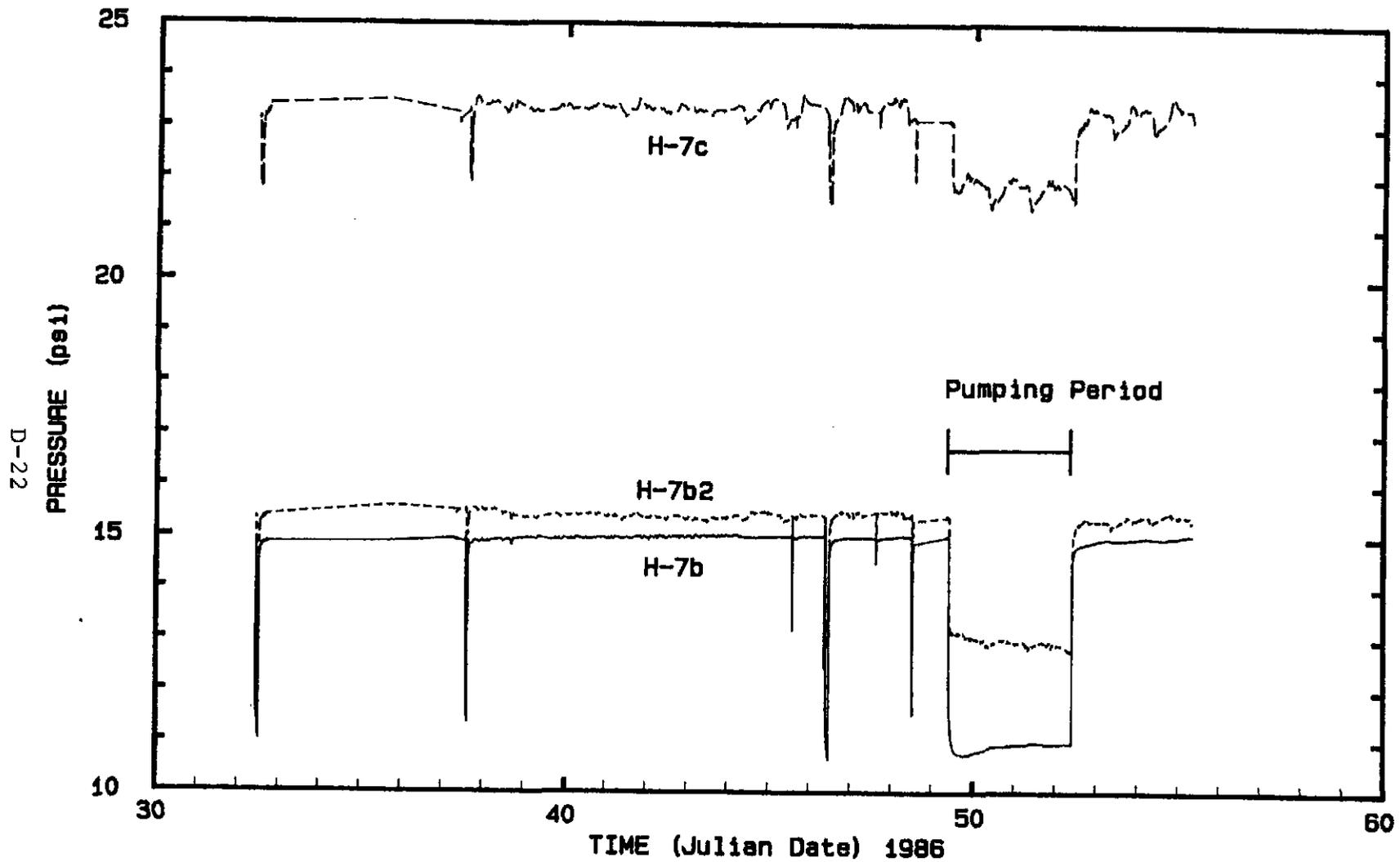


Figure 4.1 Fluid-pressure responses in wells H-7b (the pumping well), H-7b2, and H-7c during the H-7 pumping test, February 18 to 24, 1986.

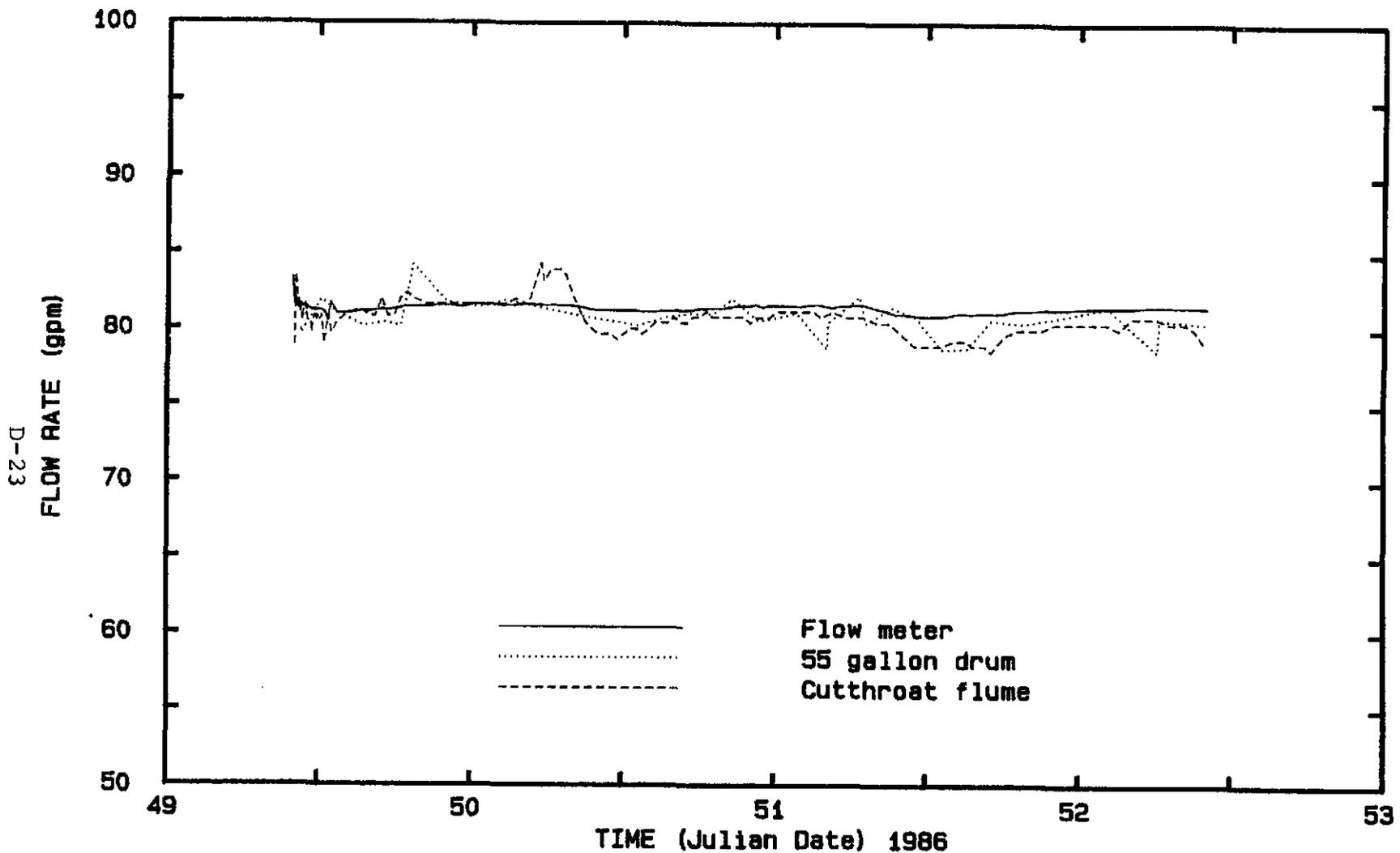


Figure 4.2 Pumping rates during the H-7 pumping test, February 18 to 24, 1986. Rates calculated using Hays totalizing flow meter, cutthroat flume, and 55-gallon drum.

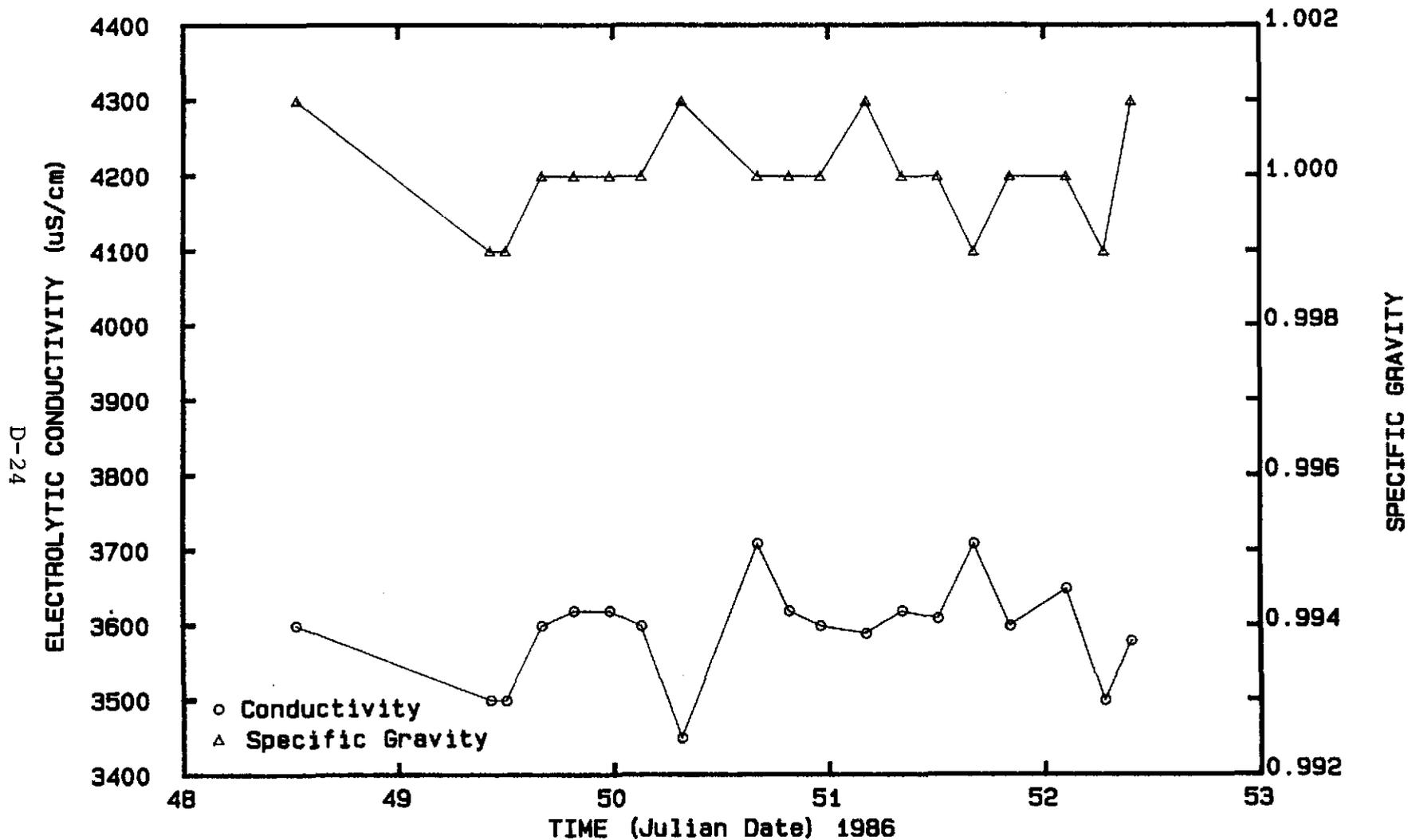


Figure 4.3 Electrolytic conductivity and specific gravity of water produced from well H-7b during the H-7 pumping test.

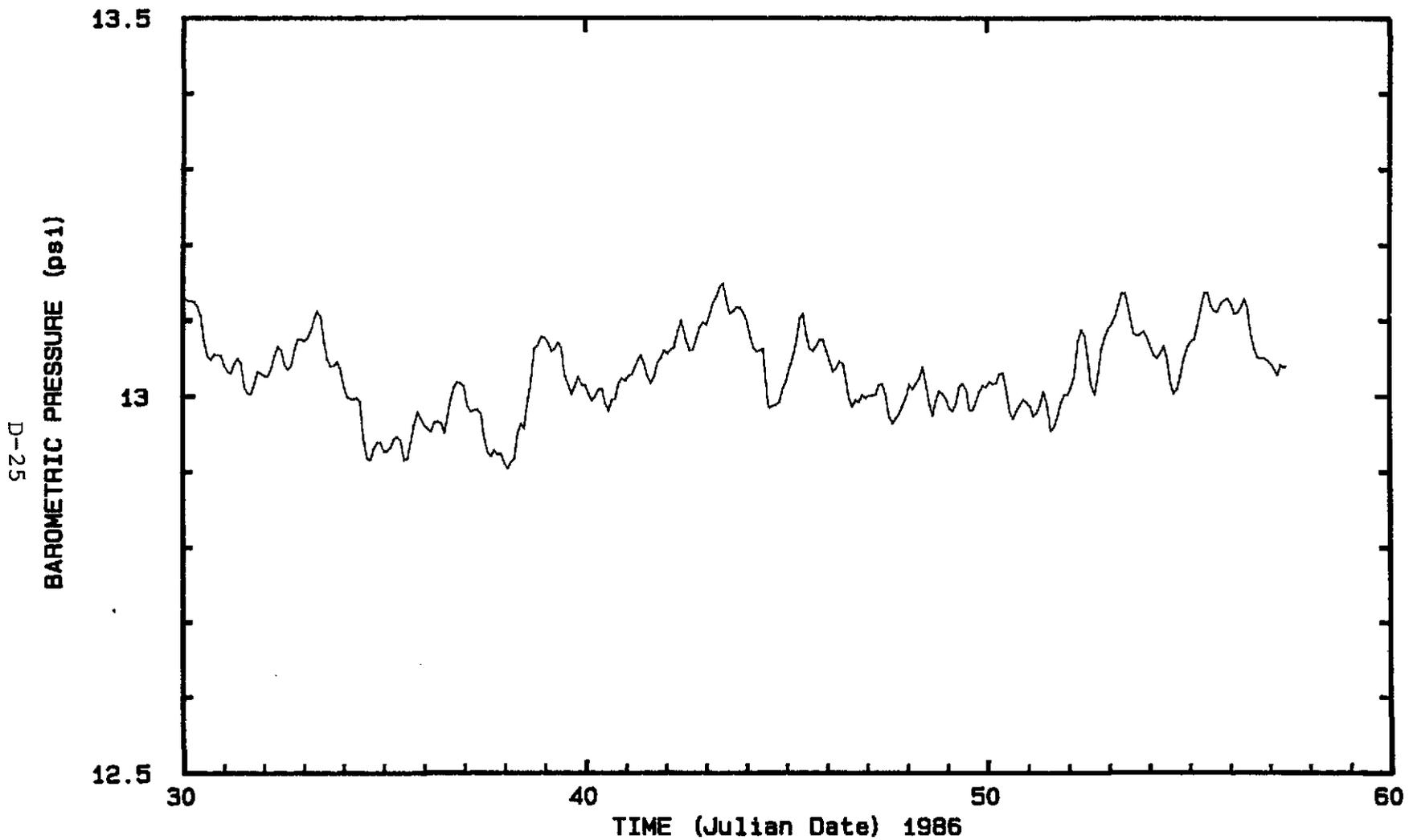


Figure 4.4 Barometric pressure measured at the H-3 hydropad during the H-7b pumping test.

APPENDIX 1.0

TEST CONFIGURATION FOR THE H-7 HYDROPAD

TABLE A1-1 CONFIGURATION OF DOWNHOLE TEST EQUIPMENT FOR THE
THE H-7 HYDROPAD, JANUARY 21 TO FEBRUARY 25, 1986

Unit tested: Culebra Pumping well no.: H-7b Intake depth (BTC):
 Type of test: Pumping Observation well no.: H-7b2, H-7c 223.25 ft
 Test data file no.: H70026, H70036, Pump type: Simmons
10-Horsepower SS6MF-4

Well No.	D-27 Ser. No.	Transducers			Init. Water Level (ft. BTC)	Top of Casing (ft. a.m.s.l.)	Land Surface Elevation (ft. a.m.s.l.)	Water Level (ft. a.m.s.l.)
		Depth (ft. BTC)	Calibration Date	Sensitivity Coefficient (mV/psi)				
H-7b	131266	210.45	01/02/86 02/27/86	1.0162 1.0167	170.25	3163.26	3162.63	2993.1
H-7b2	94911	201.42	01/02/86 02/27/86	1.0024 1.0021	170.7	3163.5	3162.5	2992.8
H-7c	94977	222.30	01/18/86 02/27/86	1.0062 1.0068	170.2	3163.17	3162.5	2993.0

- NOTE:**
- 1) BTC = Below Top of Casing
 - 2) a.m.s.l. = above mean sea level
 - 3) Calibration information shows pretest and posttest calibration dates and calculated sensitivity coefficients for those calibrations
 - 4) Initial water level was measured January 1, 1986
 - 5) Top of casing elevation from Satellite Survey, Hydro Geo Chem, 1985
 - 6) Land surface elevation determined by direct measurement from Top Of Casing

APPENDIX 2.0

TABULATED PUMPING-RATE DATA FOR
THE PUMPING WELL H-7b

TABLE A2-1
 ANNOTATED SUMMARY OF PUMPING RATES
 FOR THE H-7 PUMPING TEST, USING THE
 HAYS TOTALIZING FLOW METER

DAY	HR	MN	TIME FROM START OF PUMPING (hours)	METER READING (gallons)	CUMULATIVE VOLUME PUMPED (gallons)	AVERAGE PUMPING RATE (gpm)	COMMENTS
49	10	0	0.00	567948.50	0.00	0.00	PUMP ON
49	10	1	0.02	568031.30	82.80	82.80	
49	10	2	0.03	568114.60	166.10	83.30	
49	10	3	0.05	568197.60	249.10	83.00	
49	10	4	0.07	568279.50	331.00	81.90	
49	10	5	0.08	568361.90	413.40	82.40	
49	10	6	0.10	568444.60	496.10	82.70	
49	10	7	0.12	568526.50	578.00	81.90	
49	10	8	0.13	568608.40	659.90	81.90	
49	10	9	0.15	568690.90	742.40	82.50	
49	10	10	0.17	568772.50	824.00	81.60	
49	10	11	0.18	568854.50	906.00	82.00	
49	10	12	0.20	568936.30	987.80	81.80	
49	10	13	0.22	569018.00	1069.50	81.70	
49	10	14	0.23	569099.90	1151.40	81.90	
49	10	15	0.25	569181.60	1233.10	81.70	
49	10	16	0.27	569263.50	1315.00	81.90	
49	10	17	0.28	569345.00	1396.50	81.50	
49	10	18	0.30	569426.60	1478.10	81.60	
49	10	19	0.32	569508.30	1559.80	81.70	
49	10	20	0.33	569589.70	1641.20	81.40	
49	10	21	0.35	569671.40	1722.90	81.70	
49	10	22	0.37	569753.10	1804.60	81.70	
49	10	23	0.38	569834.70	1886.20	81.60	
49	10	24	0.40	569916.00	1967.50	81.30	
49	10	25	0.42	569997.50	2049.00	81.50	
49	10	26	0.43	570079.10	2130.60	81.60	
49	10	27	0.45	570160.70	2212.20	81.60	
49	10	28	0.47	570242.20	2293.70	81.50	
49	10	29	0.48	570324.00	2375.50	81.80	
49	10	30	0.50	570405.40	2456.90	81.40	
49	10	35	0.58	570810.60	2862.10	81.04	
49	10	40	0.67	571218.40	3269.90	81.56	
49	10	45	0.75	571625.40	3676.90	81.40	
49	10	50	0.83	572032.30	4083.80	81.38	
49	10	55	0.92	572439.60	4491.10	81.46	
49	11	0	1.00	572846.20	4897.70	81.32	
49	11	5	1.08	573251.70	5303.20	81.10	
49	11	10	1.17	573658.50	5710.00	81.36	
49	11	15	1.25	574065.00	6116.50	81.30	
49	11	20	1.33	574471.20	6522.70	81.24	
49	11	25	1.42	574877.50	6929.00	81.26	
49	11	30	1.50	575283.20	7334.70	81.14	
49	11	35	1.58	575689.50	7741.00	81.26	
49	11	40	1.67	576095.50	8147.00	81.20	
49	11	45	1.75	576501.70	8553.20	81.24	

TABLE A2-1 (continued)
 ANNOTATED SUMMARY OF PUMPING RATES
 FOR THE H-7 PUMPING TEST, USING THE
 HAYS TOTALIZING FLOW METER

DAY	HR	MN	TIME FROM START OF PUMPING (hours)	METER READING (gallons)	CUMULATIVE VOLUME PUMPED (gallons)	AVERAGE PUMPING RATE (gpm)	COMMENTS
49	11	50	1.83	576907.60	8959.10	81.18	
49	11	55	1.92	577313.20	9364.70	81.12	
49	12	0	2.00	577719.10	9770.60	81.18	
49	12	15	2.25	578936.00	10987.50	81.13	
49	12	30	2.50	580151.40	12202.90	81.03	
49	12	45	2.75	581358.50	13410.00	80.47	
49	13	0	3.00	582583.50	14635.00	81.67	
49	13	30	3.50	585013.00	17064.50	80.98	
49	14	0	4.00	587441.50	19493.00	80.95	
49	14	30	4.50	589872.00	21923.50	81.02	
49	15	0	5.00	592304.10	24355.60	81.07	
49	15	30	5.50	594739.00	26790.50	81.16	
49	16	0	6.00	597171.30	29222.80	81.08	
49	16	30	6.50	599606.40	31657.90	81.17	
49	17	0	7.00	602043.00	34094.50	81.22	
49	17	30	7.50	604478.00	36529.50	81.17	
49	18	0	8.00	606915.80	38967.30	81.26	
49	18	30	8.50	609356.00	41407.50	81.34	
49	19	0	9.00	611798.50	43850.00	81.42	
49	19	30	9.50	614240.50	46292.00	81.40	
49	20	0	10.00	616683.00	48734.50	81.42	
49	20	30	10.50	619126.00	51177.50	81.43	
49	21	0	11.00	621569.50	53621.00	81.45	
49	21	30	11.50	624015.00	56066.50	81.52	
49	22	0	12.00	626460.00	58511.50	81.50	
49	22	30	12.50	628905.10	60956.60	81.50	
49	23	0	13.00	631347.00	63398.50	81.40	
49	23	30	13.50	633788.50	65840.00	81.38	
50	0	0	14.00	636235.80	68287.30	81.58	
50	0	30	14.50	638684.50	70736.00	81.62	
50	1	0	15.00	641130.00	73181.50	81.52	
50	1	30	15.50	643577.50	75629.00	81.58	
50	2	0	16.00	646025.50	78077.00	81.60	
50	2	30	16.50	648469.40	80520.90	81.46	
50	3	0	17.00	650915.40	82966.90	81.53	
50	3	30	17.50	653361.00	85412.50	81.52	
50	4	0	18.00	655809.00	87860.50	81.60	
50	4	30	18.50	658257.90	90309.40	81.63	
50	5	0	19.00	660704.50	92756.00	81.55	
50	5	30	19.50	663151.50	95203.00	81.57	
50	6	0	20.00	665596.50	97648.00	81.50	
50	6	30	20.50	668043.50	100095.00	81.57	
50	7	0	21.00	670488.60	102540.10	81.50	
50	7	30	21.50	672934.70	104986.20	81.54	
50	8	0	22.00	675378.70	107430.20	81.47	
50	8	30	22.50	677821.90	109873.40	81.44	

TABLE A2-1 (continued)
 ANNOTATED SUMMARY OF PUMPING RATES
 FOR THE H-7 PUMPING TEST, USING THE
 HAYS TOTALIZING FLOW METER

DAY	HR	MN	TIME FROM START OF PUMPING (hours)	METER READING (gallons)	CUMULATIVE VOLUME PUMPED (gallons)	AVERAGE PUMPING RATE (gpm)	COMMENTS
50	9	0	23.00	680262.00	112313.50	81.34	
50	9	30	23.50	682699.50	114751.00	81.25	
50	10	0	24.00	685135.50	117187.00	81.20	
50	10	30	24.50	687571.40	119622.90	81.20	
50	11	0	25.00	690007.70	122059.20	81.21	
50	11	30	25.50	692443.50	124495.00	81.19	
50	12	0	26.00	694878.50	126930.00	81.17	
50	12	30	26.50	697314.30	129365.80	81.19	
50	13	0	27.00	699750.70	131802.20	81.21	
50	13	30	27.50	702184.50	134236.00	81.13	
50	14	0	28.00	704619.30	136670.80	81.16	
50	14	30	28.50	707053.00	139104.50	81.12	
50	15	0	29.00	709489.10	141540.60	81.20	
50	15	30	29.50	711925.00	143976.50	81.20	
50	16	0	30.00	714361.70	146413.20	81.22	
50	16	30	30.50	716799.00	148850.50	81.24	
50	17	0	31.00	719235.40	151286.90	81.21	
50	17	30	31.50	721673.30	153724.80	81.26	
50	18	0	32.00	724114.40	156165.90	81.37	
50	18	30	32.50	726555.10	158606.60	81.36	
50	19	0	33.00	728997.20	161048.70	81.40	
50	19	30	33.50	731439.20	163490.70	81.40	
50	20	0	34.00	733881.20	165932.70	81.40	
50	20	30	34.50	736325.50	168377.00	81.48	
50	21	0	35.00	738772.00	170823.50	81.55	
50	21	30	35.50	741218.20	173269.70	81.54	
50	22	0	36.00	743664.50	175716.00	81.54	
50	22	30	36.50	746113.70	178165.20	81.64	
50	23	0	37.00	748556.50	180608.00	81.43	
50	23	30	37.50	751004.20	183055.70	81.59	
51	0	0	38.00	753451.00	185502.50	81.56	
51	0	30	38.50	755896.90	187948.40	81.53	
51	1	0	39.00	758343.10	190394.60	81.54	
51	2	0	40.00	763232.60	195284.10	81.49	
51	3	0	41.00	768131.30	200182.80	81.65	
51	3	30	41.50	770580.50	202632.00	81.64	
51	4	30	42.50	775464.80	207516.30	81.41	
51	5	0	43.00	777912.00	209963.50	81.57	
51	6	0	43.50	782806.90	214858.40	81.58	
51	7	0	45.00	787708.00	219759.50	81.68	
51	7	30	45.50	790153.00	222204.50	81.50	
51	8	0	46.00	792594.00	224645.50	81.37	
51	8	30	46.50	795032.20	227083.70	81.27	
51	9	0	47.00	797466.60	229518.10	81.15	
51	9	30	47.50	799897.00	231948.50	81.01	
51	10	0	48.00	802327.30	234378.80	81.01	

TABLE A2-1 (continued)
 ANNOTATED SUMMARY OF PUMPING RATES
 FOR THE H-7 PUMPING TEST, USING THE
 HAYS TOTALIZING FLOW METER

DAY	HR	MN	TIME FROM START OF PUMPING (hours)	METER READING (gallons)	CUMULATIVE VOLUME PUMPED (gallons)	AVERAGE PUMPING RATE (gpm)	COMMENTS
51	11	0	49.00	807183.30	239234.80	80.93	
51	11	30	49.50	809609.40	241660.90	80.87	
51	12	0	50.00	812035.40	244086.90	80.87	
51	12	30	50.50	814462.50	246514.00	80.90	
51	13	0	51.00	816889.30	248940.80	80.89	
51	13	30	51.50	819317.40	251368.90	80.94	
51	14	0	52.00	821748.40	253799.90	81.03	
51	14	30	52.50	824181.80	256233.30	81.11	
51	15	0	53.00	826613.60	258665.10	81.06	
51	15	30	53.50	829044.20	261095.70	81.02	
51	16	0	54.00	831477.40	263528.90	81.11	
51	16	30	54.50	833909.60	265961.10	81.07	
51	17	0	55.00	836343.00	268394.50	81.11	
51	17	30	55.50	838775.00	270826.50	81.07	
51	18	0	56.00	841209.00	273260.50	81.13	
51	19	0	57.00	846086.50	278138.00	81.29	
51	20	0	58.00	850962.50	283014.00	81.27	
51	21	0	59.00	855842.50	287894.00	81.33	
51	22	0	60.00	860726.40	292777.90	81.40	
51	23	0	61.00	865608.50	297660.00	81.37	
52	0	0	62.00	870495.50	302547.00	81.45	
52	1	0	63.00	875384.50	307436.00	81.48	
52	2	0	64.00	880274.40	312325.90	81.50	
52	3	0	65.00	885161.20	317212.70	81.45	
52	4	0	66.00	890051.80	322103.30	81.51	
52	5	0	67.00	894945.30	326996.80	81.56	
52	6	0	68.00	899840.00	331891.50	81.58	
52	7	0	69.00	904734.50	336786.00	81.58	
52	8	0	70.00	909627.10	341678.60	81.54	
52	9	0	71.00	914519.60	346571.10	81.54	
52	10	0	72.00	919407.60	351459.10	81.47	PUMP OFF

TABLE A2-2
PUMPING RATE DURING THE H-7
PUMPING TEST AS ESTIMATED BY THE
CUTTHROAT FLUME

DAY	HR	MIN	TIME FROM START OF PUMPING (minutes)	GAGE READING (feet)	PUMPING RATE (gpm)	COMMENTS
49	10	7	7	0.415	78.88	PUMP ON 10:00
49	10	10	10	0.422	81.56	
49	10	15	15	0.427	83.51	
49	10	20	20	0.425	82.73	
49	10	25	25	0.423	81.95	
49	10	30	30	0.421	81.18	
49	10	40	40	0.422	81.56	
49	10	45	45	0.419	80.41	
49	10	50	50	0.421	81.18	
49	10	55	55	0.421	81.18	
49	11	0	60	0.422	81.56	
49	11	5	65	0.420	80.79	
49	11	10	70	0.419	80.41	
49	11	15	75	0.419	80.41	
49	11	20	80	0.419	80.41	
49	11	25	85	0.419	80.41	
49	11	30	90	0.417	79.64	
49	11	35	95	0.419	80.41	
49	11	40	100	0.420	80.79	
49	11	45	105	0.420	80.79	
49	11	50	110	0.419	80.41	
49	11	55	115	0.420	80.79	
49	12	0	120	0.419	80.41	
49	12	15	135	0.420	80.79	
49	12	30	150	0.415	78.88	
49	12	47	167	0.420	80.79	
49	13	3	183	0.417	79.64	
49	13	30	210	0.419	80.41	
49	14	2	242	0.420	80.79	
49	15	2	302	0.421	81.18	
49	15	30	330	0.421	81.18	
49	16	0	360	0.420	80.79	
49	16	30	390	0.420	80.79	
49	17	0	420	0.423	81.95	
49	17	30	450	0.420	80.79	
49	18	0	480	0.420	80.79	
49	18	30	510	0.423	81.95	
49	19	0	540	0.424	82.34	
49	19	30	570	0.423	81.95	
49	20	32	632	0.422	81.56	
49	21	3	663	0.422	81.56	
49	21	33	693	0.422	81.56	
49	22	3	723	0.422	81.56	
49	22	33	753	0.422	81.56	
49	23	5	785	0.422	81.56	
49	23	35	815	0.422	81.56	

TABLE A2-2 (continued)
PUMPING RATE DURING THE H-7
PUMPING TEST AS ESTIMATED BY THE
CUTTHROAT FLUME

DAY	HR	MIN	TIME FROM START OF PUMPING (minutes)	GAGE READING (feet)	PUMPING RATE (gpm)	COMMENTS
50	0	4	844	0.422	81.56	
50	0	33	873	0.422	81.56	
50	0	45	885	0.422	81.56	
50	1	32	932	0.422	81.56	
50	2	32	992	0.422	81.56	
50	3	33	1053	0.423	81.95	
50	4	33	1113	0.422	81.56	
50	5	33	1173	0.429	84.29	high
50	5	47	1187	0.426	83.12	discharge
50	6	20	1220	0.428	83.90	readings
50	7	3	1263	0.428	83.90	due to flume
50	7	30	1290	0.427	83.51	blockage
50	8	10	1330	0.423	81.95	
50	9	2	1382	0.419	80.41	
50	9	32	1412	0.418	80.02	
50	10	2	1442	0.417	79.64	
50	10	32	1472	0.417	79.64	
50	11	2	1502	0.417	79.64	
50	11	32	1532	0.416	79.26	
50	12	2	1562	0.417	79.64	
50	12	32	1592	0.418	80.02	
50	13	2	1622	0.418	80.02	
50	13	32	1652	0.417	79.64	
50	14	2	1682	0.418	80.02	
50	14	32	1712	0.419	80.41	
50	15	2	1742	0.419	80.41	
50	15	32	1772	0.419	80.41	
50	16	2	1802	0.420	80.79	
50	16	32	1832	0.419	80.41	
50	17	2	1862	0.419	80.41	
50	17	32	1892	0.420	80.79	
50	18	2	1922	0.420	80.79	
50	18	32	1952	0.421	81.18	
50	19	2	1982	0.420	80.79	
50	19	32	2012	0.420	80.79	
50	20	2	2042	0.420	80.79	
50	20	32	2072	0.420	80.79	
50	21	2	2102	0.420	80.79	
50	21	32	2132	0.420	80.79	
50	22	3	2163	0.419	80.41	
50	22	32	2192	0.420	80.79	
50	23	2	2222	0.420	80.79	
50	23	32	2252	0.420	80.79	
51	0	5	2285	0.421	81.18	
51	0	32	2312	0.421	81.18	
51	1	32	2372	0.421	81.18	

TABLE A2-2 (continued)
PUMPING RATE DURING THE H-7
PUMPING TEST AS ESTIMATED BY THE
CUTTHROAT FLUME

DAY	HR	MIN	TIME FROM START OF PUMPING (minutes)	GAGE READING (feet)	PUMPING RATE (gpm)	COMMENTS
51	2	2	2402	0.421	81.18	
51	3	3	2463	0.421	81.18	
51	3	32	2492	0.420	80.79	
51	4	32	2552	0.421	81.18	
51	5	32	2612	0.420	80.79	
51	6	32	2672	0.420	80.79	
51	7	2	2702	0.420	80.79	
51	8	2	2762	0.419	80.41	
51	9	2	2822	0.419	80.41	
51	10	2	2882	0.417	79.64	
51	11	2	2942	0.415	78.88	
51	12	2	3002	0.415	78.88	
51	13	2	3062	0.415	78.88	
51	14	2	3122	0.416	79.26	
51	15	2	3182	0.416	79.26	
51	15	32	3212	0.415	78.88	
51	16	32	3272	0.415	78.88	
51	17	0	3300	0.414	78.50	
51	18	5	3365	0.417	79.64	
51	19	5	3425	0.418	80.02	
51	20	2	3482	0.418	80.02	
51	21	2	3542	0.418	80.02	
51	22	2	3602	0.419	80.41	
51	23	2	3662	0.419	80.41	
52	0	2	3722	0.419	80.41	
52	1	2	3782	0.419	80.41	
52	2	2	3842	0.419	80.41	
52	3	2	3902	0.418	80.02	
52	4	2	3962	0.420	80.79	
52	5	2	4022	0.420	80.79	
52	6	2	4082	0.420	80.79	
52	7	2	4142	0.419	80.41	
52	8	20	4220	0.419	80.41	
52	9	2	4262	0.418	80.02	
52	9	58	4318	0.415	78.88	PUMP OFF 10:00

TABLE A2-3
PUMPING RATE DURING THE H-7 PUMPING
TEST AS ESTIMATED BY THE TIMED FILLING
OF A 55-GALLON DRUM

DAY	HR	MIN	TIME FROM START OF PUMPING (minutes)	VOLUME (gallons)	ELAPSED TIME (seconds)	PUMPING RATE (gpm)	COMMENTS
49	10	35	35	25	18.79	79.83	PUMP ON 10:00
49	10	36	36	25	18.85	79.58	
49	12	15	135	25	18.32	81.88	
49	13	30	210	20	14.82	80.97	
49	15	30	330	25	18.72	80.13	
49	17	5	425	25	18.66	80.39	
49	18	30	510	20	14.98	80.11	
49	19	30	570	25	17.82	84.18	
49	22	10	730	20	14.69	81.69	
50	0	47	887	20	14.75	81.36	
50	2	40	1000	20	14.66	81.86	
50	9	10	1390	25	18.58	80.73	
50	13	10	1630	20	14.96	80.21	
50	15	10	1750	25	18.58	80.73	
50	17	10	1870	25	18.51	81.04	
50	19	10	1990	25	18.51	81.04	
50	20	35	2075	20	14.63	82.02	
50	22	40	2200	20	14.90	80.54	
51	1	40	2380	20	14.80	81.08	
51	4	5	2525	20	15.25	78.69	
51	4	11	2531	20	14.91	80.48	
51	6	40	2680	20	14.60	82.19	
51	7	11	2711	25	18.65	80.43	
51	9	10	2830	25	18.41	81.48	
51	11	10	2950	25	18.57	80.78	
51	13	10	3070	25	19.06	78.70	
51	15	10	3190	25	19.04	78.78	
51	17	0	3300	25	18.61	80.60	
51	19	30	3450	25	18.66	80.39	
52	2	10	3850	25	18.40	81.52	
52	6	5	4085	20	15.28	78.53	
52	6	15	4095	20	14.87	80.70	
52	9	53	4313	25	18.65	80.43	PUMP OFF 10:00

APPENDIX 3.0

TEST DESCRIPTION AND TABULATED PRESSURE DATA
FOR THE WELLS AT THE H-7 HYDROPAD

WELL TEST DESCRIPTION

Location: WIPP
Well Site: H-7
Type of test: PUMPING
Type of pump: SIMMONS 10 HP SS-6
Unit tested: CULEBRA
Pumping Well: H-7b
Observation Wells: H-7b2, H-7c
Year of test: 1986
Start of available data: 032 10 40 15
End of available data: 054 9 0 0
Start of test: 049 10 0 0
Transducer Data (Serial # / Sensitivity / Channels)
Pumping Interval 131266 1.0162 3, 16
H-7b2 94911 1.0024 4, 17
H-7c 94977 1.0062 5, 18
Available data files: H70026, H70036

TABLE A3-1
 TABULATED PRESSURE DATA FROM THE H-7 PUMPING TEST,
 RECORDED AT THE H-7 HYDROPAD

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi)			COMMENTS
	H-7b Culebra	H-7b2 Culebra	H-7c Culebra	
32:10:40:15	14.89	15.36	23.14	Start H70026
32:10:59:55	14.88	15.34	23.15	
32:11: 0: 0	14.42	15.35	23.14	PUMP ON
32:11: 0: 5	14.13	15.32	23.16	
32:11: 0:10	13.75	15.22	23.14	
32:11: 0:30	13.25	14.90	23.07	
32:11: 1: 0	12.97	14.63	22.96	
32:11: 2: 0	12.61	14.28	22.74	
32:11: 3: 0	12.41	14.08	22.61	
32:11: 4: 0	12.26	13.94	22.50	
32:11: 5: 0	12.15	13.82	22.42	
32:11:10: 0	11.85	13.53	22.22	
32:11:15: 0	11.70	13.39	22.10	
32:11:20: 0	11.62	13.30	22.02	
32:11:30: 0	11.50	13.20	21.95	
32:12: 0: 0	11.26	13.11	21.86	
32:12:30: 0	11.06	13.11	21.83	
32:12:39:55	11.04	13.09	21.80	
32:12:40: 0	11.47	13.08	21.80	PUMP OFF
32:12:40: 5	11.71	13.11	21.80	
32:12:40:10	11.97	13.16	21.79	
32:12:40:30	12.58	13.45	21.83	
32:12:41: 0	13.22	13.74	21.95	
32:12:42: 0	13.61	14.11	22.20	
32:12:43: 0	13.83	14.33	22.37	
32:12:44: 0	14.00	14.50	22.49	
32:12:45: 0	14.12	14.62	22.60	
32:12:50: 0	14.42	14.95	22.84	
32:13: 0: 0	14.62	15.17	23.03	
32:13:26: 0	14.75	15.26	23.13	
32:14: 1: 0	14.80	15.31	23.20	
32:17: 1: 0	14.84	15.38	23.37	
35:17:11:21	14.90	15.59	23.51	
37:14:29:45	14.96	15.54	23.33	
37:14:30: 0	14.01	15.48	23.29	PUMP ON
37:14:30:15	13.38	15.22	23.12	
37:14:30:30	13.21	15.04	23.09	
37:14:31: 0	12.90	14.73	22.94	
37:14:32: 0	12.58	14.36	22.73	
37:14:33: 0	12.42	14.16	22.61	
37:14:34: 0	12.30	14.07	22.58	
37:14:35: 0	12.19	13.96	22.50	
37:14:40: 0	11.91	13.64	22.29	
37:14:45: 0	11.76	13.49	22.15	

TABLE A3-1 (continued)
 TABULATED PRESSURE DATA FROM THE H-7 PUMPING TEST,
 RECORDED AT THE H-7 HYDROPAD

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi)			COMMENTS
	H-7b Culebra	H-7b2 Culebra	H-7c Culebra	
37:14:50: 0	11.67	13.42	22.09	
37:15: 0: 0	11.61	13.41	22.08	
37:15:29: 0	11.39	13.36	21.96	
37:15:30: 0	12.45	13.30	21.92	PUMP OFF
37:15:31: 0	13.40	14.04	22.29	
37:15:32: 0	13.78	14.39	22.47	
37:15:33: 0	13.96	14.54	22.54	
37:15:34: 0	14.15	14.73	22.66	
37:15:35: 0	14.21	14.82	22.72	
37:15:40: 0	14.52	15.20	23.02	
37:15:45: 0	14.62	15.29	23.08	
37:15:50: 0	14.68	15.28	23.06	
37:15:59: 0	14.74	15.37	23.14	
37:20: 6: 0	14.93	15.54	23.53	
38:12: 6: 0	14.91	15.43	23.25	
39:15:51:34	14.93	15.42	23.32	
40:11:52: 0	14.96	15.42	23.31	
41:11:52: 0	14.99	15.38	23.23	
42:11:52: 0	14.97	15.33	23.25	
43:11:52: 0	15.01	15.30	23.22	
44:11:52: 0	15.00	15.40	23.16	
45:11:36: 0	15.01	15.34	23.16	
45:13:59:55	15.00	15.41	23.20	
45:14: 0: 0	13.55	15.39	23.18	PUMP ON
45:14: 0: 5	13.45	15.34	23.14	
45:14: 0:10	13.27	15.20	23.07	
45:14: 0:20	14.60	15.01	23.01	PUMP OFF
45:14: 0:25	14.67	15.02	23.06	
45:14: 0:30	14.69	15.06	23.05	
45:14: 2: 0	14.93	15.34	23.17	
45:14: 5: 0	14.96	15.35	23.19	
45:15: 7: 0	15.01	15.39	23.20	
46: 8:59:55	15.01	15.38	23.21	
46: 9: 0: 0	14.02	15.41	23.22	PUMP ON
46: 9: 0: 5	13.49	15.32	23.15	
46: 9: 0:10	13.34	15.22	23.11	
46: 9: 0:30	13.05	14.86	22.97	
46: 9: 1: 0	12.77	14.56	22.85	
46: 9: 1:55	12.45	14.22	22.67	PUMP OFF
46: 9: 4:24	14.48	14.84	22.88	
46: 9: 5: 0	14.59	14.95	22.94	
46: 9:10: 0	14.93	15.28	23.13	
46: 9:20: 0	14.98	15.33	23.15	
46: 9:30: 0	15.01	15.37	23.16	PUMP ON

TABLE A3-1 (continued)
 TABULATED PRESSURE DATA FROM THE H-7 PUMPING TEST,
 RECORDED AT THE H-7 HYDROPAD

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi)			COMMENTS
	H-7b Culebra	H-7b2 Culebra	H-7c Culebra	
46: 9:30: 6	14.97	15.31	23.13	
46: 9:30:12	13.57	15.32	23.10	
46: 9:30:30	13.15	14.96	22.96	
46: 9:31: 0	12.82	14.59	22.80	
46: 9:32: 3	12.44	14.20	22.60	
46: 9:33: 3	12.23	13.98	22.48	
46: 9:34: 3	12.06	13.81	22.37	
46: 9:35: 3	11.93	13.68	22.29	
46: 9:40: 3	11.62	13.35	22.06	
46: 9:50: 0	11.39	13.15	21.91	
46:10: 0: 0	11.24	13.03	21.79	
46:10:30: 0	10.95	12.94	21.62	
46:11: 0: 0	10.78	12.91	21.54	
46:11:30: 0	10.65	12.97	21.59	PUMP OFF
46:11:30: 6	11.68	12.99	21.60	
46:11:30:12	11.83	13.10	21.64	
46:11:30:30	12.23	13.43	21.77	
46:11:31: 0	12.67	13.72	21.89	
46:11:32: 0	13.62	14.08	22.14	
46:11:33: 0	13.85	14.28	22.26	
46:11:34: 0	14.01	14.44	22.37	
46:11:35: 0	14.13	14.57	22.46	
46:11:40: 0	14.47	14.92	22.71	
46:11:50: 0	14.69	15.14	22.89	
46:12: 0: 0	14.77	15.22	22.95	
46:12:58: 0	14.91	15.38	23.13	
46:13:58: 0	14.95	15.40	23.18	
46:16:10: 0	14.96	15.45	23.29	
46:19:55: 0	15.00	15.48	23.61	
47:11:35:25	15.00	15.46	23.29	
47:14:53:44	14.99	15.49	23.33	PUMP ON
47:15:23:44	14.92	15.43	23.29	14:57-15:03
47:15:38:44	14.96	15.47	23.34	
48:12:14:54	15.01	15.46	23.19	
48:12:15: 0	14.00	15.46	23.19	PUMP ON
48:12:15: 6	13.49	15.39	23.12	
48:12:15:12	13.32	15.25	23.07	
48:12:15:30	13.06	14.93	22.94	
48:12:16: 0	12.79	14.64	22.82	
48:12:17: 0	12.45	14.29	22.65	
48:12:18: 0	12.24	14.07	22.52	
48:12:19: 0	12.09	13.92	22.43	
48:12:20: 0	11.98	13.80	22.36	
48:12:25: 0	11.81	13.53	22.16	

TABLE A3-1 (continued)
 TABULATED PRESSURE DATA FROM THE H-7 PUMPING TEST,
 RECORDED AT THE H-7 HYDROPAD

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi)			COMMENTS
	H-7b Culebra	H-7b2 Culebra	H-7c Culebra	
48:12:30: 0	11.70	13.41	22.07	
48:12:42:24	11.64	13.27	21.97	PUMP OFF
48:12:42:30	12.88	13.31	22.02	
48:12:43: 0	13.36	13.80	22.20	
48:12:44: 0	13.79	14.24	22.42	
48:12:45: 0	14.05	14.50	22.56	
48:12:52: 0	14.68	15.12	22.97	
48:13: 2: 0	14.85	15.30	23.11	
49: 8:45: 0	15.03	15.44	23.15	End H70026
49: 8:52:57	15.03	15.42	23.14	Start H70036
49: 9:59:54	15.02	15.41	23.12	
49:10: 0: 0	14.15	15.40	23.11	PUMP ON
49:10: 0: 6	13.67	15.31	23.04	
49:10: 0:12	13.49	15.18	22.99	
49:10: 0:18	13.36	15.07	22.95	
49:10: 0:24	13.26	14.98	22.92	
49:10: 0:30	13.20	14.90	22.88	
49:10: 0:36	13.12	14.83	22.85	
49:10: 0:42	13.07	14.77	22.83	
49:10: 0:48	13.00	14.72	22.80	
49:10: 0:54	12.96	14.67	22.78	
49:10: 1: 0	12.91	14.62	22.76	
49:10: 1: 6	12.88	14.58	22.74	
49:10: 1:12	12.84	14.54	22.72	
49:10: 1:18	12.80	14.50	22.70	
49:10: 1:24	12.77	14.46	22.68	
49:10: 1:30	12.73	14.43	22.66	
49:10: 1:36	12.70	14.39	22.65	
49:10: 1:42	12.68	14.36	22.63	
49:10: 1:48	12.64	14.33	22.61	
49:10: 1:54	12.61	14.31	22.60	
49:10: 2: 4	12.58	14.27	22.58	
49:10: 2:30	12.47	14.17	22.52	
49:10: 3: 0	12.38	14.08	22.47	
49:10: 3:30	12.31	13.99	22.42	
49:10: 4: 0	12.25	13.92	22.37	
49:10: 4:30	12.20	13.87	22.33	
49:10: 5: 0	12.15	13.82	22.30	
49:10: 6: 0	12.06	13.73	22.24	
49:10: 7: 0	12.00	13.67	22.20	
49:10: 8: 0	11.94	13.62	22.17	
49:10: 9: 0	11.90	13.57	22.14	
49:10:10: 0	11.86	13.54	22.13	
49:10:11:30	11.82	13.49	22.09	

TABLE A3-1 (continued)
 TABULATED PRESSURE DATA FROM THE H-7 PUMPING TEST,
 RECORDED AT THE H-7 HYDROPAD

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi)			COMMENTS
	H-7b Culebra	H-7b2 Culebra	H-7c Culebra	
49:10:12:30	11.78	13.46	22.07	
49:10:13:30	11.75	13.43	22.05	
49:10:14:30	11.74	13.40	22.03	
49:10:15:30	11.71	13.39	22.02	
49:10:20: 0	11.63	13.33	21.98	
49:10:25: 0	11.57	13.30	21.96	
49:10:30: 0	11.52	13.25	21.92	
49:10:45: 0	11.38	13.23	21.91	
49:11: 0: 0	11.25	13.13	21.82	
49:11:15: 0	11.14	13.12	21.78	
49:11:30: 0	11.07	13.15	21.81	
49:11:45: 0	11.02	13.16	21.82	
49:12: 0: 0	10.98	13.14	21.79	
49:12:30: 0	10.91	13.13	21.79	
49:13: 0: 0	10.86	13.13	21.76	
49:14: 0: 0	10.81	13.14	21.78	
49:15: 0: 0	10.78	13.15	21.83	
49:16: 0: 0	10.77	13.15	21.92	
49:17: 0: 0	10.77	13.13	21.96	
49:17:55: 0	10.76	13.14	22.03	
49:18:55: 0	10.75	13.11	22.15	
49:19:55: 0	10.75	13.05	22.05	
49:20:55: 0	10.76	13.08	22.04	
49:21:55: 0	10.77	13.05	22.02	
49:22:55: 0	10.78	13.07	21.99	
49:23:55: 0	10.80	13.06	22.01	
50: 0:55: 0	10.81	13.04	22.00	
50: 1:55: 0	10.81	13.03	21.95	
50: 2:55: 0	10.82	13.02	21.93	
50: 3:55: 0	10.83	13.04	21.93	
50: 4:55: 0	10.84	12.98	21.88	
50: 5:55: 0	10.85	12.99	21.83	
50: 7: 6:32	10.87	12.98	21.85	
50: 8: 8:49	10.87	12.90	21.58	
50: 9: 2:50	10.88	12.89	21.45	
50:10: 2:50	10.91	12.95	21.56	
50:11: 2:50	10.91	12.95	21.63	
50:12: 2:50	10.93	12.96	21.64	
50:13: 2:50	10.93	12.96	21.61	
50:14: 2:50	10.93	12.98	21.66	
50:15: 2:50	10.94	12.99	21.72	
50:16: 2:50	10.93	13.01	21.80	
50:17: 2:50	10.93	13.02	21.94	
50:18: 2:50	10.93	12.99	21.98	

TABLE A3-1 (continued)
 TABULATED PRESSURE DATA FROM THE H-7 PUMPING TEST,
 RECORDED AT THE H-7 HYDROPAD

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi)			COMMENTS
	H-7b Culebra	H-7b2 Culebra	H-7c Culebra	
50:19: 2:50	10.94	12.99	22.00	
50:20: 2:50	10.94	12.97	21.95	
50:21: 2:50	10.94	12.99	22.04	
50:22: 2:50	10.94	12.97	22.03	
50:23: 2:50	10.94	12.97	22.02	
51: 0: 2:50	10.95	12.96	21.97	
51: 1: 2:50	10.96	12.94	21.89	
51: 2: 2:50	10.96	12.96	21.87	
51: 3: 2:50	10.97	12.96	21.87	
51: 4: 2:50	10.96	12.96	21.87	
51: 5: 2:50	10.97	12.98	21.89	
51: 6: 2:50	10.97	12.96	21.89	
51: 7: 2:50	10.96	12.87	21.75	
51: 7:57:27	10.97	12.90	21.55	
51: 8:57:27	10.99	12.88	21.44	
51: 9:57:27	11.00	12.90	21.52	
51:10:57:27	11.00	12.90	21.57	
51:11:57:27	10.99	12.92	21.63	
51:12:57:27	11.00	12.92	21.66	
51:13:57:27	10.98	12.97	21.74	
51:14:57:27	10.99	12.96	21.79	
51:15:57:27	10.98	12.97	21.83	
51:16:57:27	10.99	12.96	21.88	
51:18: 0:43	10.97	12.98	21.96	
51:19: 0:43	10.98	12.92	21.95	
51:20: 0:43	10.96	12.94	21.93	
51:21: 0:43	10.96	12.91	22.01	
51:22: 0:43	10.97	12.89	21.84	
51:23: 0:43	10.97	12.92	21.89	
52: 0: 0:43	10.97	12.91	21.90	
52: 1: 0:43	10.97	12.92	21.87	
52: 2: 0:43	10.97	12.91	21.91	
52: 3: 0:43	10.97	12.91	21.92	
52: 4: 0:43	10.98	12.90	21.91	
52: 5: 0:43	10.98	12.87	21.88	
52: 6: 0:43	10.99	12.86	21.85	
52: 7: 0:43	10.98	12.82	21.79	
52: 8: 0:43	10.98	12.79	21.69	
52: 8:55: 0	10.98	12.78	21.65	
52: 9:59:54	10.97	12.76	21.55	
52:10: 0: 0	11.53	12.76	21.56	PUMP OFF
52:10: 0: 6	12.43	12.80	21.61	
52:10: 0:12	12.57	12.90	21.66	
52:10: 0:18	12.68	13.01	21.69	

TABLE A3-1 (continued)
 TABULATED PRESSURE DATA FROM THE H-7 PUMPING TEST,
 RECORDED AT THE H-7 HYDROPAD

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi)			COMMENTS
	H-7b Culebra	H-7b2 Culebra	H-7c Culebra	
52:10: 0:24	12.77	13.10	21.73	
52:10: 0:30	12.85	13.18	21.76	
52:10: 0:36	12.92	13.25	21.79	
52:10: 0:42	12.97	13.32	21.81	
52:10: 0:48	13.03	13.37	21.84	
52:10: 0:54	13.08	13.43	21.86	
52:10: 1: 0	13.14	13.47	21.88	
52:10: 1: 6	13.18	13.52	21.90	
52:10: 1:12	13.22	13.57	21.93	
52:10: 1:18	13.27	13.61	21.95	
52:10: 1:24	13.30	13.64	21.97	
52:10: 1:30	13.33	13.68	21.99	
52:10: 1:36	13.37	13.71	22.00	
52:10: 1:42	13.41	13.75	22.02	
52:10: 1:48	13.43	13.78	22.04	
52:10: 1:54	13.46	13.81	22.06	
52:10: 2: 0	13.49	13.83	22.07	
52:10: 2: 6	13.52	13.87	22.09	
52:10: 2:30	13.62	13.97	22.14	
52:10: 3: 0	13.73	14.07	22.21	
52:10: 3:30	13.81	14.16	22.26	
52:10: 4: 0	13.89	14.23	22.31	
52:10: 4:30	13.96	14.29	22.35	
52:10: 5: 0	14.01	14.35	22.38	
52:10: 6: 0	14.11	14.44	22.44	
52:10: 7: 0	14.19	14.51	22.48	
52:10: 8: 0	14.24	14.56	22.51	
52:10: 9: 0	14.29	14.60	22.54	
52:10:10: 0	14.33	14.65	22.57	
52:10:11: 0	14.37	14.68	22.60	
52:10:12: 0	14.40	14.71	22.61	
52:10:13: 0	14.42	14.73	22.63	
52:10:14: 0	14.44	14.75	22.64	
52:10:15: 0	14.46	14.77	22.66	
52:10:20: 0	14.53	14.87	22.72	
52:10:25: 0	14.57	14.93	22.77	
52:10:30: 0	14.61	14.98	22.80	
52:10:45: 0	14.67	15.06	22.87	
52:11: 0: 0	14.71	15.11	22.90	
52:11:15: 0	14.74	15.10	22.90	
52:11:30: 0	14.77	15.15	22.94	
52:11:45: 0	14.79	15.18	22.97	
52:12: 0: 0	14.80	15.20	23.02	
52:12:30: 0	14.82	15.19	22.96	

TABLE A3-1 (continued)
 TABULATED PRESSURE DATA FROM THE H-7 PUMPING TEST,
 RECORDED AT THE H-7 HYDROPAD

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi)			COMMENTS
	H-7b Culebra	H-7b2 Culebra	H-7c Culebra	
52:13: 0: 0	14.83	15.26	23.03	
52:14: 0: 0	14.85	15.27	23.02	
52:15: 0: 0	14.86	15.34	23.14	
52:16: 0: 0	14.87	15.33	23.12	
52:17: 0: 0	14.88	15.36	23.21	
52:18: 0: 0	14.90	15.41	23.36	
52:19: 0: 0	14.91	15.35	23.42	
52:20: 0: 0	14.91	15.33	23.35	
52:21: 0: 0	14.92	15.34	23.35	
52:22: 0: 0	14.93	15.34	23.39	
52:23: 0: 0	14.94	15.33	23.34	
53: 0: 0: 0	14.95	15.33	23.35	
53: 1: 0: 0	14.95	15.33	23.32	
53: 2: 0: 0	14.97	15.34	23.32	
53: 3: 0: 0	14.97	15.33	23.30	
53: 4: 0: 0	14.98	15.33	23.27	
53: 5: 0: 0	14.99	15.34	23.29	
53: 6: 0: 0	14.99	15.33	23.29	
53: 7: 0: 0	14.99	15.28	23.21	
53: 8: 0: 0	14.98	15.21	22.93	
53: 9: 0: 0	14.97	15.26	22.89	
53:10: 0: 0	14.97	15.26	22.96	
53:11: 0: 0	14.98	15.26	22.96	
53:12: 0: 0	14.97	15.28	22.95	
53:13: 0: 0	14.97	15.32	23.01	
53:14: 0: 0	14.97	15.33	23.03	
53:15: 0: 0	14.98	15.35	23.10	
53:16: 0: 0	14.98	15.38	23.11	
53:17: 0: 0	14.98	15.38	23.22	
53:18: 0: 0	14.99	15.45	23.43	
53:19: 0: 0	14.99	15.40	23.49	
53:20: 0: 0	14.99	15.39	23.44	
53:21: 0: 0	14.99	15.34	23.33	
53:22: 0: 0	14.99	15.37	23.29	
53:23: 0: 0	14.99	15.37	23.27	
54: 0: 0: 0	15.00	15.41	23.35	
54: 1: 0: 0	15.00	15.42	23.38	
54: 2: 0: 0	15.01	15.44	23.39	
54: 3: 0: 0	15.02	15.43	23.39	
54: 4: 0: 0	15.02	15.43	23.36	
54: 5: 0: 0	15.02	15.44	23.37	
54: 6: 0: 0	15.02	15.43	23.34	
54: 7: 0: 0	15.01	15.37	23.26	
54: 8: 0: 0	15.00	15.30	22.93	

TABLE A3-1 (continued)
 TABULATED PRESSURE DATA FROM THE H-7 PUMPING TEST,
 RECORDED AT THE H-7 HYDROPAD

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi)			COMMENTS
	H-7b Culebra	H-7b2 Culebra	H-7c Culebra	
54: 9: 0: 0	15.00	15.33	22.87	
54:10: 4: 0	14.99	15.36	23.00	
54:11: 4: 0	15.00	15.37	23.02	
54:12: 4: 0	15.00	15.40	23.04	
54:13: 4: 0	14.99	15.41	23.06	
54:14: 4: 0	14.99	15.44	23.11	
54:15: 4: 0	14.99	15.45	23.16	
54:16: 4: 0	14.99	15.48	23.22	
54:17: 4: 0	15.00	15.47	23.32	
54:18: 4: 0	15.01	15.52	23.50	
54:19: 4: 0	15.01	15.51	23.57	
54:20: 4: 0	15.01	15.46	23.59	
54:21: 4: 0	15.02	15.43	23.48	
54:22: 4: 0	15.02	15.44	23.45	
54:23: 4: 0	15.02	15.41	23.40	
55: 0: 4: 0	15.03	15.43	23.37	
55: 1: 4: 0	15.03	15.42	23.39	
55: 2: 4: 0	15.03	15.43	23.38	
55: 3: 4: 0	15.05	15.44	23.38	
55: 4: 4: 0	15.05	15.42	23.34	
55: 5: 4: 0	15.06	15.42	23.34	
55: 6: 4: 0	15.06	15.42	23.36	
55: 7: 4: 0	15.06	15.33	23.18	
55: 7:49: 0	15.05	15.33	23.01	End H70036

APPENDIX 4.0

TABULATED WATER-LEVEL DATA FOR THE
ANNULUS ABOVE THE PACKER IN WELL H-7b

TABLE A4-1
 WATER-LEVEL MEASUREMENTS
 IN THE ANNULUS ABOVE THE PACKER
 IN WELL H-7b

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	DEVICE
49	9	8	02/18/86	166.57	50.77	SOLINST #1
49	10	14	02/18/86	166.57	50.77	SOLINST #1
49	10	46	02/18/86	166.56	50.77	SOLINST #1
49	11	26	02/18/86	166.56	50.77	SOLINST #1
49	12	30	02/18/86	166.56	50.77	SOLINST #1
49	13	53	02/18/86	166.56	50.77	SOLINST #1
49	15	42	02/18/86	166.57	50.77	SOLINST #1
49	17	36	02/18/86	166.56	50.77	SOLINST #1
49	19	32	02/18/86	166.55	50.76	SOLINST #1
49	22	35	02/18/86	166.56	50.77	SOLINST #1
50	1	15	02/19/86	166.56	50.77	SOLINST #1
50	2	7	02/19/86	166.57	50.77	SOLINST #1
50	3	40	02/19/86	166.57	50.77	SOLINST #1
50	6	37	02/19/86	166.55	50.76	SOLINST #1
50	9	55	02/19/86	166.55	50.76	SOLINST #1
50	14	5	02/19/86	166.53	50.76	SOLINST #1
50	15	35	02/19/86	166.53	50.76	SOLINST #1
50	18	5	02/19/86	166.53	50.76	SOLINST #1
50	20	40	02/19/86	166.53	50.76	SOLINST #1
50	23	25	02/19/86	166.53	50.76	SOLINST #1
51	3	10	02/20/86	166.53	50.76	SOLINST #1
51	7	15	02/20/86	166.52	50.76	SOLINST #1
51	11	15	02/20/86	166.52	50.76	SOLINST #1
51	15	15	02/20/86	166.52	50.76	SOLINST #1
51	18	10	02/20/86	166.52	50.76	SOLINST #1
51	20	5	02/20/86	166.51	50.75	SOLINST #1
52	1	10	02/21/86	166.51	50.75	SOLINST #1
52	6	10	02/21/86	166.50	50.75	SOLINST #1
52	10	45	02/21/86	166.50	50.75	SOLINST #1

APPENDIX 5.0

TABULATED WATER-QUALITY DATA FOR
THE H-7 PUMPING TEST

TABLE A5-1
ELECTROLYTIC CONDUCTIVITY, TEMPERATURE AND SPECIFIC
GRAVITY OF WATER PRODUCED DURING THE H-7 PUMPING TEST

DAY:HR:MIN	ELECTROLYTIC CONDUCTIVITY (μ S/cm)	TEMPERATURE (deg. C)	SPECIFIC GRAVITY	COMMENTS
048:12:45	3600	21.0	1.0010	sample from 55 gal. barrel
049:10:20	3500	21.0	0.9990	sulfurous odor
049:12:05	3500	22.0	0.9990	sulfurous odor
049:16:05	3600	22.0	1.0000	slight sulfurous odor
049:19:40	3620	22.0	1.0000	
049:23:40	3620	22.0	1.0000	very slight sulfurous odor
050:03:10	3600	22.3	1.0000	very slight sulfurous odor
050:07:40	3450	21.5	1.0010	
050:16:10	3710	21.5	1.0000	
050:19:40	3620	21.0	1.0000	slight sulfurous odor
050:23:10	3600	21.5	1.0000	
051:04:15	3590	21.5	1.0010	
051:08:15	3620	21.5	1.0000	slight sulfurous odor
051:12:15	3610	21.8	1.0000	slight sulfurous odor
051:16:15	3710	21.5	0.9990	
051:20:15	3600	21.5	1.0000	
052:02:30	3650	22.0	1.0000	
052:06:43	3500	22.0	0.9990	
052:09:43	3580	21.5	1.0010	

**PART E. HYDROLOGIC TESTING CONDUCTED AT WELL DOE-2 DURING
1984 AND 1985**

1.0 INTRODUCTION

Well DOE-2 was drilled and tested from August 1984 through July 1985. The well is located immediately north of the WIPP site boundary (Figure 1.1). DOE-2 was drilled as a stratigraphic and hydrologic test borehole to investigate possible geophysical anomalies, to provide a point of stratigraphic control in an area of few boreholes or wells, and to provide hydrologic data from all potential water-bearing zones from the surface to the Permian Bell Canyon Formation.

1.1 Objectives

Hydrologic tests were conducted in the DOE-2 borehole after drilling proceeded to four stopping points, the top of the Rustler Formation, the top of the Salado Formation, the top of the Castile Formation, and the total depth point, about 254 feet deep in the Bell Canyon Formation. Test zones were selected to analyze particular horizons which could play a role in possible facility-breach events, especially ones affecting the shallow aquifers undergoing regional characterization as potential offsite solute-transport pathways.

The hydrologic testing program was conducted in four phases:

- o Phase I: Constant-head borehole-infiltration testing of the Dewey Lake Red Beds and drill-stem testing of the Rustler Formation
- o Phase Ia: A pumping test of the Culebra Dolomite Member of the Rustler Formation
- o Phase II: Drill-stem and pressure-pulse testing of the Salado Formation
- o Phase III: Drill-stem testing of the Bell Canyon Formation

1.2 Test Methods

The stratigraphic and hydrologic units selected for hydrologic testing included one unsaturated horizon and a series of confined saturated horizons. The permeabilities of the units tested varied by an estimated six orders of magnitude requiring utilization of a variety of test methods. The majority of tests were drill-stem tests, consisting of a sequence of withdrawal and buildup tests, followed by slug-withdrawal tests. A constant-head borehole-infiltration test was performed on the lower Dewey Lake Red Beds. A pumping test was conducted on the Culebra Dolomite Member of the Rustler Formation. Pressure-pulse tests were conducted on the Salado Formation.

1.3 Well Configuration

The DOE-2 borehole was tested under open-hole conditions using a variety of configurations involving downhole, inflatable packers, pressure transducers, and a pump. The two primary test configurations were a single packer above the test interval and open-hole or bridge plug below, and dual packers straddling the test interval. Both configurations are schematically illustrated in Figure 1.2. Other configuration differences involved the brands of packers and transducers used in testing and will be described in detail in Section 2.0.

2.0 TEST EQUIPMENT

2.1 Data-Acquisition Systems (DAS's)

2.1.1 United States Geological Survey DAS

Figure 2.1 schematically illustrates the Data-Acquisition System (DAS) used by the United States Geological Survey (USGS) in the Phase I testing of the Dewey Lake Red Beds and the Rustler Formation. The DAS is described in detail by Basler (1983) and features a Validyne CD19 carrier demodulator amplifier to send an excitation access signal to the downhole Bell and Howell CEC1000 strain-gauge transducers and process the corresponding millivolt return signal from the transducers. The return signals were transformed to pressure, in pounds per square inch, and recorded by a Soltec VP-6723S strip chart recorder and digitally by an Esterline Angus PD2064 data logger. The system also included a Validyne DB-199 digital barometer which measured the barometric pressure, which was then recorded on the Soltec and Esterline Angus data recorders. The test output was stored on paper tape,

which required an additional manual step to produce floppy disks suitable for data retrieval and analysis.

Calibration verification of the recorders and digital meters in the USGS DAS was accomplished by using a Datel DVC-8500 Voltage Calibrator.

2.1.2 Sandia National Laboratories DAS

The Sandia National Laboratories (SNL) DAS used for data collection during the Phase Ia pumping test of the Culebra Dolomite Member of the Rustler Formation was the same HP-9845B-controlled system used in other tests at the WIPP site and described in Part A, Section 2.1.1. In observation wells H-5b and H-6b, the same SNL DAS was used as in DOE-2 with the exception that in H-5b, due to the inavailability of an HP-9845B micro-computer, the transducer's millivolt output was manually read from the HP-3456A DVM and recorded in the H-5 log book.

2.1.3 Baker Production Technology DAS

The Baker Production Technology (BPT) DAS is schematically illustrated in Figure 2.2. The DAS consisted of BPT equipment to access the downhole BPT quartz-crystal transducers. SNL provided control and output equipment to process and store the data and provide real-time hard-copy output. The BPT equipment consisted of an SC-2 interface unit linking the transducers with the rest of the system. SNL equipment included an HP-5316A universal counter to measure the frequencies of the current pulses from the transducers, an HP-59306A relay actuator or an HP-3497A data-acquisition/control unit to switch access channels, an HP-85 computer to store data on magnetic cassette cartridges, an HP-2225A printer or an Epson LX-80

printer for real-time listing of the data, and an HP-9872 plotter for real-time plotting of the data.

2.2 Downhole Transducer

Three types of downhole transducers were used during the DOE-2 testing series.

- Phase I: Bell and Howell CEC 1000
- Phase Ia: Druck PDCR-10
- Phase II: } Baker Production Technology
- Phase III: } quartz crystal

Bell and Howell CEC1000 - The Bell and Howell CEC1000 is a strain-gage transducer which provides long-term stability and a construction utilizing double case insulation to isolate the transducer from external stresses. The transducer requires a four-conductor cable, two conductors to excite the strain-gage bridge, and two conductors to carry the return signal. The transducers were calibrated before and after installation with a Chandler 23-1 dead-weight tester.

Druck PDCR-10 Druck PDCR-10 strain-gage transducers are built around a fully-active four-arm strain-gauge bridge diffused into the surface of a single-crystal silicon diaphragm. The transducer has a highly linear response and excellent hysteresis accuracy. The transducer comes equipped with a six-conductor insulated cable which brings the 10-volt excitation signal to the transducer and returns a voltage which reflects the pressure exerted on the transducer diaphragm. The Druck PDCR-10's were rated either 0-250 psi (utilized in the pumping interval in DOE-2), or 0-100 psi (utilized in the DOE-2 annulus, H-5b, and H-6b), and were calibrated before and after installation using a

Heise pressure gage as described in Part A, Section 2.2.3.

BPT Quartz-Crystal Transducer - The BPT quartz-crystal transducer is a laboratory-calibrated, 0-5000 psia device which operates on a dual-conductor cable and measures pressure and temperature. The temperature transducers are all located in the sensor carrier immediately below the shut-in tool (see Section 2.3.1.2). The transducer is highly accurate ($\pm 0.05\%$ F.S.) and produces high-resolution ($\pm 0.005\%$ F.S.) low-noise data.

2.3 Downhole Assemblies

2.3.1 Packer Systems

Four different packer configurations were used during the DOE-2 testing program; two single-packer systems and two double-packer systems. Both BPT and Baski inflatable packers were used, and all testing was performed in the open borehole.

2.3.1.1 Single-Packer Systems

Phase I: Figure 2.3 shows the constant-head borehole-infiltration testing apparatus used to test the lower Dewey Lake Red Beds. The borehole was open to the top of the Rustler Formation and a single Baski air-inflatable packer was set at the 539-foot depth. The packer was equipped with a feed-through plug allowing a transducer above the packer to sense the fluid pressure in the borehole below the packer. Initially, a pressure-controlled injection system was attached to 2-3/8-inch tubing and used to inject water into the formation while maintaining a constant head. When the injection system failed to maintain a measurable

fluid-injection rate, it was removed from the tubing and a graduated cylinder was used to add measured amounts of fluid to keep the 2-3/8-inch tubing filled, thus maintaining a constant head on the system.

Phase Ia: - Figure 2.4 shows the single-packer and bridge-plug arrangement used to isolate the Culebra dolomite from the other parts of the Rustler Formation during a 21-day pumping test. A BPT water-inflatable, resettable bridge plug was set at the base of the Culebra and a Baski air-inflatable, sliding-end packer was set above the Culebra, with a Red Jacket three-horsepower 32BC submersible pump suspended below the packer. A feed-through plug on the packer allowed pressure-transducer access to the test interval, and a transducer was placed above the packer to check for packer deflation or formation communication around the packer. This configuration was also used, without the pump and bridge plug, in the H-5b and H-6b observation wells to monitor water levels during the pumping test.

Phases II and III - The BPT hydrological test tool was used in single-packer configuration to conduct bottom-hole tests on the Salado Formation (test interval 1040-3095 feet below surface) and the Hays sandstone of the Bell Canyon Formation (test interval 4220-4325 feet). The packer configuration consisted of a single, water-inflatable packer, a shut-in tool, and a sensor carrier containing three quartz-crystal transducers, two of which measured fluid pressure and temperature in the test interval below the packer, and one which measured the fluid pressure and temperature in the annular space above the packer. By opening and closing the shut-in tool and swabbing the tubing, flow and buildup tests were performed on the isolated

interval. The upper transducer was used to monitor whether or not there was pressure communication around the packer, and to detect packer deflation.

2.3.1.2 Double-Packer Systems

Phase I: - Phase I testing of the Rustler Formation was conducted with a Baski air-inflatable straddle-packer DST tool with transducer access below, between, and above the packers. Figure 2.5 is a diagram of the Baski system showing that an air-inflatable, valve packer is used as a shut-in device in the tubing above the upper packer. The Baski straddle-packer system was used with three Bell and Howell CEC1000 strain-gage transducers in the testing of the Rustler Formation.

Phase II and Phase III - Figure 2.6 illustrates the BPT Hydrological Test Tool which was used in the drill-stem, pulse, and slug testing of the Salado and Bell Canyon Formations. The dual-packer system consisted of two water-inflatable packers, a shut-in tool, and a sensor carrier containing three quartz-crystal transducers capable of measuring both pressure and temperature below, between, and above the packers. The BPT system was linked to the surface DAS via a stainless-steel protected, dual-conductor cable. The hydrological test tool was lowered into the open borehole using standard 2-3/8-inch tubing. By setting both packers, tests on the isolated test interval were conducted by swabbing or filling the 2-3/8-inch tubing and opening and closing the shut-in tool. The upper and lower transducers act to detect pressure communication around the packers or packer deflation, and the middle transducer measures fluid-pressure response in the test interval.

2.3.2 Submersible Pump

A Red Jacket 32BC three-horsepower, submersible electric pump was used to conduct a pumping test of the Culebra dolomite during Phase Ia. This pump was chosen because it can pump from depths greater than 400 feet while sustaining a pumping rate of four to seven gallons per minute. The Red Jacket 32BC also has the ability to maintain a minimum decrease in pumping-rate per unit decline in head during drawdown.

2.4 Pumping-Rate Measurement Systems

Constant-Head Borehole-Infiltration Test - During the constant-head borehole-infiltration test of the lower Dewey Lake Red Beds, a Certainteed water meter was used to measure the injection flow rate. Coupled with an Ashcroft 0-100 psi pressure gage and a ball valve to control back pressure, careful control could be kept on the amount of fluid added during the test. When the injection rate was less than the 0.25 gpm required to turn the flow-meter turbine, the injection system was removed from the 2-3/8-inch tubing. A graduated cylinder was used to add measured amounts of fluid to keep the 2-3/8-inch tubing filled for the remainder of the test, providing a measurement of the infiltration rate at a constant head.

Pumping Test - Discharge during the pumping test was measured using a Precision totalizing flow meter placed in-line in the discharge line (Figure 2.7). The Precision flow meter provides data for time-averaged pumping-rate measurements. The pumping rate was calculated in two ways. First, the total volume passing the meter in a specified time interval, as noted on the meter's dial (which

indicates the volume to the nearest 0.1 gallons) was used to obtain the average pumping rate over that time. Second, the average pumping rate was calculated by using a stopwatch to record the total time required to fill a 20-gallon container.

2.5 Water-Level Measurements

Before the installation of packers in pumping well DOE-2, and observation wells H-5b and H-6b for the Culebra pumping test, the water levels in the boreholes were measured with the Iron Horse water-level sounder to provide correlation values for the transducer pressure measurements. These measurements are included in Tables A1-2 and A1-3, Appendix 1.0.

2.6 Water-Quality Measurements

Borehole-fluid samples were collected from the Culebra dolomite during the Phase Ia pumping test, and from the Hays sandstone following drill-stem testing. The Culebra sampling was performed during pumping, by collecting water from the 0.25-inch nylon sample tubing, which was connected to the discharge pipe immediately above the pump (see Figure 2.5). The water produced from this sample tubing was analyzed in the field using a set of serial samples collected during the pumping period. The serial samples were analyzed for temperature, Eh, pH, specific gravity, alkalinity, chloride, and divalent cations using methods, equipment, and stability criteria described in Lambert and Robinson (1984), and Colton and Morse (1985). When stability in the values of the field parameters was reached, samples were collected for laboratory analyses.

The Hays sandstone was sampled by a swabbing operation conducted after the Hays sandstone slug test. Forty-three swabs, which removed approximately 11,000 gallons, were serially sampled and analyzed in the field for temperature, specific gravity, electrolytic conductivity, chloride, and divalent cations. After the field parameter values had stabilized, a sample of the swabbed water was collected for laboratory analysis. The criteria, methodology, and equipment of Lambert and Robinson (1984) and Colton and Morse (1985) were again used to perform the serial-sample determinations.

3.0 TEST HISTORY

3.1 Testing Sequences

Table A1-1, Appendix 1.0 lists the depths of the units tested, the date and time of the tests, and the setting depth of the packers used in the testing. The testing sequence was designed to correspond to stopping points during drilling. The four stopping points were 1) top of the Rustler Formation; 2) top of the Salado Formation; 3) top of the Castile Formation; and 4) about 254 feet into the Bell Canyon Formation.

The borehole was cased through the Rustler Formation before continuing drilling in the Salado, Castile, and Bell Canyon Formations. All tests were run under "open-hole" conditions.

3.1.1 Phase I

The Dewey Lake Red Beds were tested after the first stopping point at the top of the Rustler Formation, 641 feet below land surface (bls). Hole conditions

prevented more than one test of the Dewey Lake, and a reliable packer seat was only found at a depth of 539 feet. The presence of an apparently unsaturated zone in the lower Dewey Lake Red Beds led to the decision to run a constant-head borehole-infiltration test.

The DOE-2 borehole was then deepened to the top of the Salado Formation, the second stopping point, and testing began on the Forty-niner, Magenta, Tamarisk, and Culebra Members of the Rustler Formation, and on the claystone at the Rustler-Salado contact. The Baski straddle-packer test tool was used to run drill-stem and slug-withdrawal tests. Water was removed from the tubing by swabbing, before the start of the test sequence.

3.1.2 Phase Ia

Evidence of borehole damage, drilling-fluid infiltration, and apparent hydraulic well development of the Culebra dolomite during Phase I operations indicated the need for additional testing of the Culebra. The unit was tested a second time by installing a BPT bridge plug below the Culebra and suspending a pump from a Baski packer set above the Culebra, and conducting a 21-day pumping test from February 19 to March 12, 1985. The pumping rate varied from about 4.8 to 6.4 gpm, and averaged about 6.2 gpm. The test results and measured flow rates are presented in Section 4.1.3. After completion of Phase Ia testing, the borehole was deepened to 1009 feet, reamed to a diameter of 11 inches, and a 9-5/8-inch casing was installed and cemented to the top of the Salado Formation before continuation of the drilling and testing program.

3.1.3 Phase II

Phase II testing began at the completion of Phase II drilling, which extended the borehole through the Salado Formation to the upper Castile Formation, a depth of 3095 feet bls. Phase II testing consisted of one double-packer test and one set of single-packer bottom-hole tests.

The double-packer test was a drill-stem test from 2195-2309 feet bls, covering Marker Beds 138, 139, and the WIPP facility horizon. The test consisted of a 21-minute flow period followed by a 23.3-hour buildup period.

The second period of Phase II testing consisted of single-packer pulse-withdrawal and pulse-injection tests of the Salado and upper Castile Formations from 1040 to 3095 feet bls, an interval similar to that previously tested in Cabin Baby-1 (Beauheim et al., 1983). The test sequence was preceded by a shut-in period which served to relieve drilling-induced over-pressurization of the Salado and help dissipate the pressure skin developed in the borehole during drilling.

3.1.4 Phase III

Phase III testing began after completion of Phase III drilling, which included penetration of the Castile Formation and the first 254 feet of the Bell Canyon Formation, including the Lamar limestone, the Ramsey sandstone, the Olds sandstone, and the Hays sandstone. The BPT hydrological test tool was used in double-packer configuration to perform drill-stem and slug-withdrawal tests on the Ramsey and Olds sandstones, and in single-packer configuration to perform drill-stem and slug-withdrawal tests on the Hays sandstone. The test zones

were chosen because these were zones previously tested at other wells in the area, notably at Cabin Baby-1, and because these zones were the only ones that preliminary examination of the core indicated as being potentially permeable.

3.2 Equipment Performance

3.2.1 Phase I

The primary problem in Phase I was obtaining a good packer seat during testing of the Dewey Lake Red Beds. Once obtained, the constant-head test was performed with no equipment problems. The drill-stem and slug tests in the Rustler Formation were carried out with few mechanical problems, but transducer response included periods of noisy data (Forty-niner Member Test), and transducer drift (Magenta and Tamarisk Members) in the Bell and Howell CEC1000 transducer response. The source of these erratic transducer responses could have been either in the equipment itself or in the electric power supply provided by the on-site generators. The problem has not been specifically identified, and the interpretation of these data must consider the problem of data quality.

3.2.2 Phase Ia

The beginning of the Phase Ia pumping test of the Culebra dolomite was slowed because of a variety of pump and electrical-power problems. The test was first attempted with a pump with too great a capacity for the well. After replacement, the new pump performed satisfactorily for about four hours, when it developed a lowered pumping rate and had to be turned off. After removing and inspecting the pump, it was determined that the main electrical cable

from the surface was cut in a number of places during installation and required replacement. After cable replacement, the test was restarted and the pump performed satisfactorily for the duration of the test, except for a sudden period of reduced pumping rate after about four days of pumping, when a severe rain storm caused problems with the electric generator supplying power to the pump. Once corrected, the test ran to the 21-day completion point with few problems. No packer problems were encountered and the transducers produced satisfactory data for the remainder of the test.

3.2.3 Phase II and Phase III

The BPT hydrological test tool generally performed very well for the entire Phase II and Phase III test periods. A partial short circuit in the dual-conductor cable during the Ramsey sandstone tests caused a number of bad data points but did not affect the tests results. The entire system performed optimally during all other tests. The quartz-crystal transducers produced the highest quality data obtained during the DOE-2 testing program, as indicated by the high-resolution and low-noise response.

4.0 TEST RESULTS

4.1 Hydrologic Testing

4.1.1 Phase I, Dewey Lake Red Beds

Table A3-1, Appendix 3.0 is an annotated tabulation of the results of the constant-head borehole-infiltration test on the lower portion of the Dewey Lake Red Beds from 539 to 641 feet below land surface. The data indicate the amount of water added and the pressure in the test interval during the test.

4.1.2 Phase I, Rustler Formation

Figures 4.1, 4.2, 4.3, 4.4, and 4.5 are linear-linear sequence plots showing the test results, in pressure (pounds per square inch, gage) for the sequence of drill-stem and slug-withdrawal tests performed on the Fortyniner, Magenta, Tamarisk, and Culebra Members of the Rustler Formation, and the claystone at the Rustler-Salado contact zone, respectively. Tables A3-2 to A3-5 and A3-9, Appendix 3.0 contain the tabulated data from which these plots were derived.

4.1.3 Phase Ia, Culebra Pumping Test

Figure 4.6 is a sequence plot showing the fluid-pressure response in pumping well DOE-2 during the pre-pumping and pumping periods of the Culebra dolomite test, and Figure 4.7 is a plot of pumping rates during that test.

The fluid-pressure response plot (Figure 4.6) shows the rapid pressure drop and rise when the pump was turned on and off, respectively. This response pattern indicates that wellbore storage, wellbore damage, and a formation pressure boundary have possibly combined to produce the observed pattern. During the test, the drawdown remained relatively constant while the pumping rate gradually increased, an indication that the well may have been undergoing development during the test. Table A3-6, Appendix 3.0 presents an annotated tabulation of the data obtained during the pumping period and Table A2-1, Appendix 2.0 presents an annotated tabulation of the pumping-rate data.

Figures 4.8 and 4.9 are plots of the fluid-pressure responses to the Culebra pumping test in observation wells H-6b and H-5b, respectively. Well H-6b showed a stronger response. Whether or not well H-5b responded is somewhat uncertain, because the pressure-decline appears to have begun before the onset of pumping. However, the well may have been responding to a longer-term trend or the two pretest pumping episodes shown on Figure 4.6. The response at H-6b is also uncertain, but the results may be suitable for observation-well analysis using standard techniques if analysis indicates that the response during the DOE-2 Culebra testing deviates from observed long-term trends. The H-5b and H-6b pressure data are tabulated in Tables A3-7 and A3-8, Appendix 3.0, respectively.

4.1.4 Phase II, Salado Formation

Figures 4.10 and 4.11 are linear-linear sequence plots of fluid pressure versus time for drill-stem testing of the Marker Beds 138 and 139 and the pulse testing of the entire Salado Formation. The data were obtained with the BPT Hydrological Test Tool. Figure 4.10 also shows the pressure in the test interval (P2), and above (P3) and below (P1) the double-packer assembly; while Figure 4.11 shows only the pressure in the test interval (P2) and above (P3) the single-packer assembly used in the bottom-hole type test performed on the entire Salado Formation. Tables A3-10 and A3-11, Appendix 3.0 contain tabulated pressure data for the two Salado Formation tests.

4.1.5 Phase III, Bell Canyon Formation

Figures 4.12, 4.13, and 4.14 are linear-linear sequence plots of fluid pressure versus time for the sequence of drill-stem and slug tests performed on the Ramsey, Olds,

and Hays sandstones of the Bell Canyon Formation, respectively. The Ramsey and Olds test plots also show the pressure in the test interval, and the pressure above and below the double-packer assembly; while the Hays test plot shows only the test-interval pressure and the pressure above the single-packer assembly. Tables A3-12, A3-13, and A3-14, Appendix 3.0, contain tabulated pressure data for testing conducted on the Ramsey, Olds, and Hays sandstones, respectively.

4.2 Water-Quality Data

The Culebra was sampled during the Phase Ia pumping test described above. Eight serial samples were collected during the twenty-one day test and the final laboratory samples were collected on March 12, 1985 after the pumping produced 184,000 gallons of fluid. (Analyses of these samples are presented in Colton and Morse (1985).) The test-system volume was approximately 115 gallons. Therefore, the samples were collected after approximately 1600 test-system volumes were removed from the borehole.

Prior to water-quality sampling, serial samples were collected from fluid produced from the Hays sandstone test interval during swabbing operations, which produced 11,000 gallons of fluid from the DOE-2 borehole, July 19 to 23, 1985. The fluid was removed from the test interval by swabbing the tubing connected to the single packer set at 4220 feet below land surface. The total volume in the test interval (i.e., the test-system volume), was approximately 274 gallons. The sample for laboratory analysis represents the formation fluid after removal of 40 test-system volumes. Relative parameter stability was achieved after about 25 test-system volumes were removed.

5.0 REFERENCES

- Basler, J.A., 1983. Instrumentation Used for Hydraulic Testing of Potential Water-Bearing Formations at the Waste Isolation Pilot Plant Site in Southeastern New Mexico, USGS Open-file Report 83-144, 29 pp.
- Beauheim, R.L., Hassinger, B.W., and Klaiber, J.A., 1983. Basic Data Report for Borehole Cabin Baby-1 Deepening and Hydrologic Testing, Waste Isolation Pilot Plant (WIPP) Project, Southeastern New Mexico. U.S. Department of Energy, Waste Isolation Pilot Plant, WTSD-TME-020.
- Colton, I.D. and J.G. Morse, 1985. Water Quality Sampling Plan, WIPP-DOE-205, USDOE, WIPP Project Office, Carlsbad, New Mexico.
- INTERA Technologies, Inc., and Hydro Geo Chem, Inc., 1985. Hydrologic Data Report #2. Sandia National Laboratories, Sandia Report, SAND 85-7263.
- Lambert, S.J. and K.L. Robinson, 1984. Field Geochemical Studies of Groundwaters in Nash Draw, Southeastern New Mexico. Sandia National Laboratories, SAND 83-1122, 38 pp.

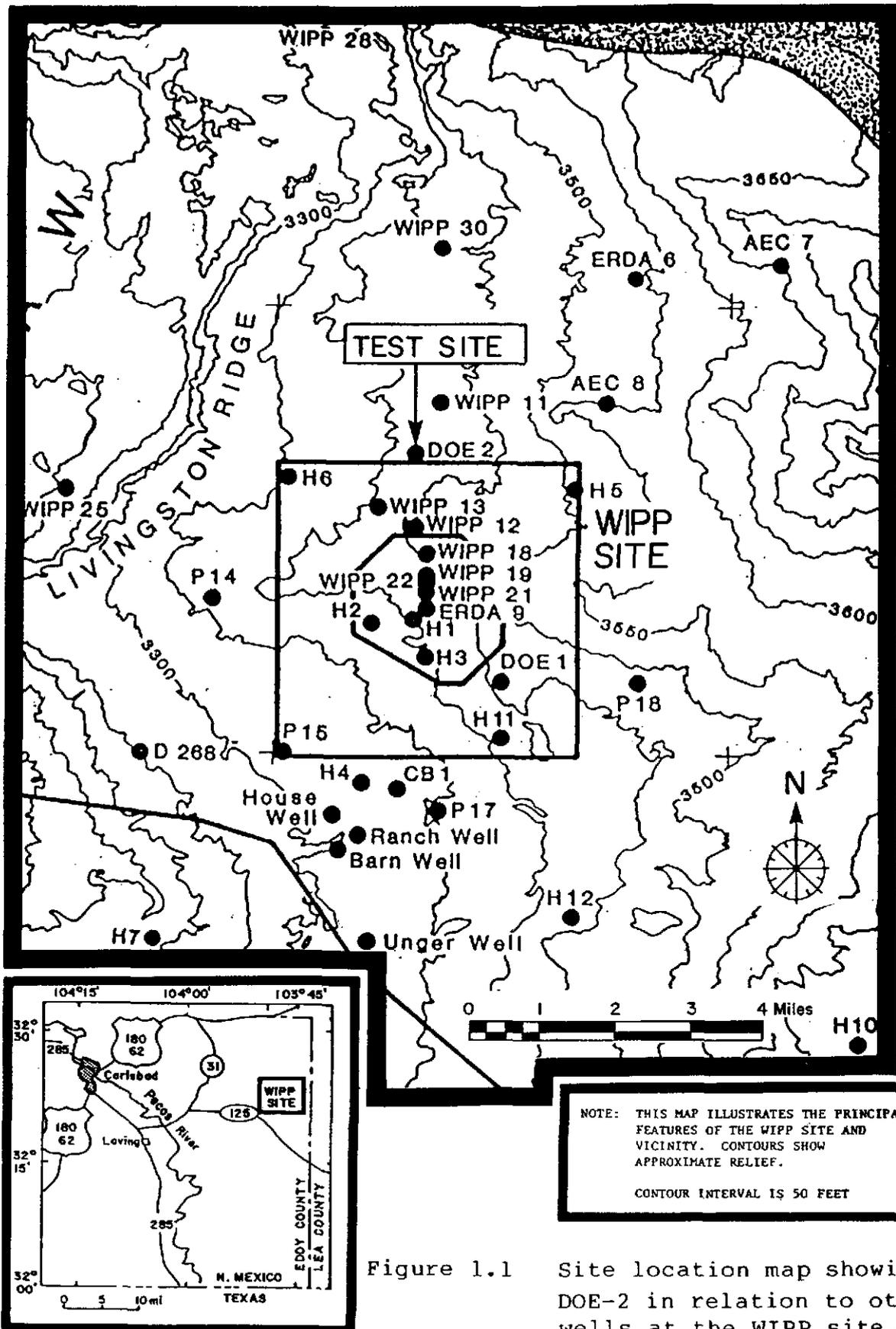
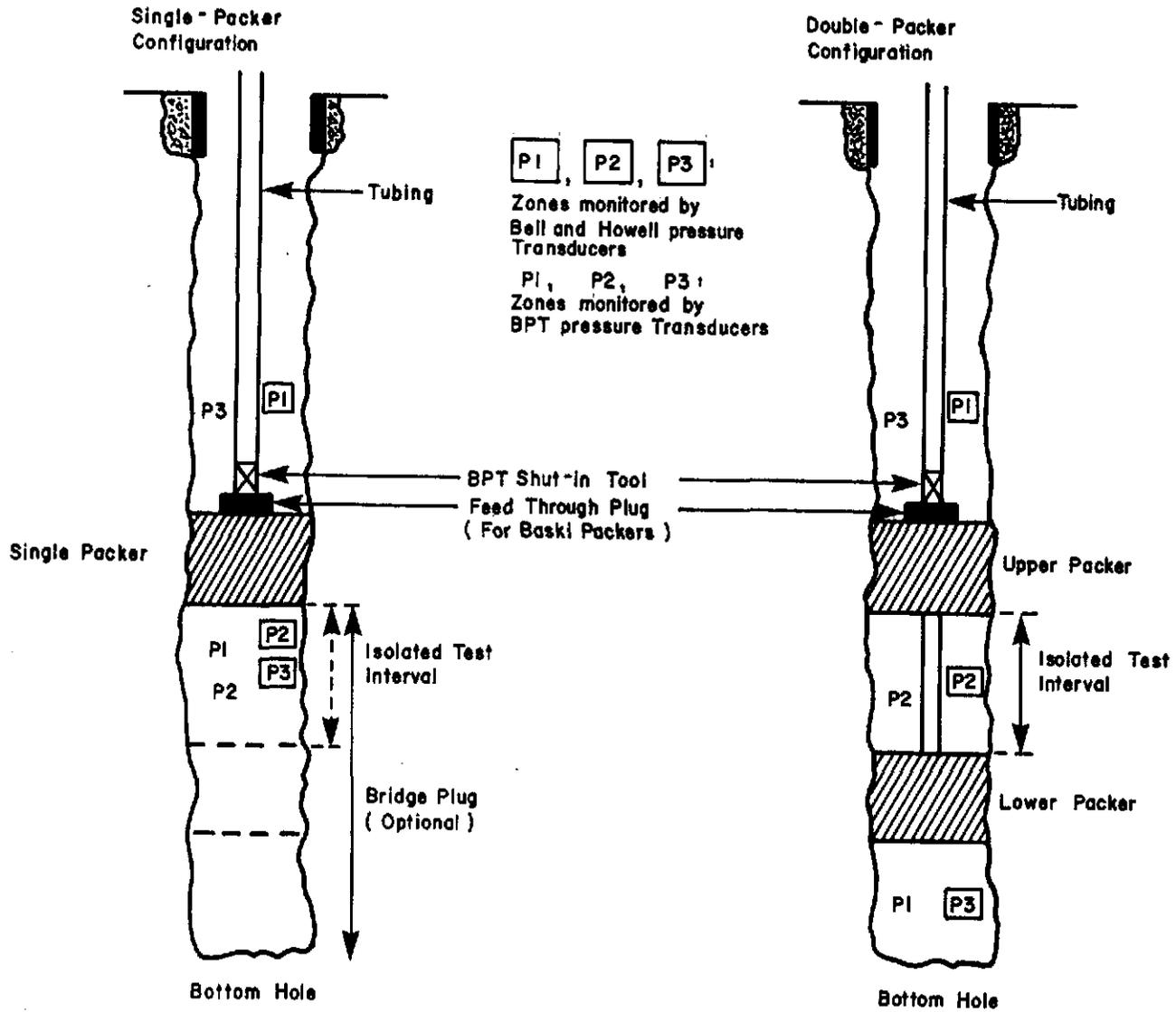


Figure 1.1 Site location map showing DOE-2 in relation to other wells at the WIPP site.



E-22

Figure 1.2 Schematic illustration of single- and double-packer test configurations.

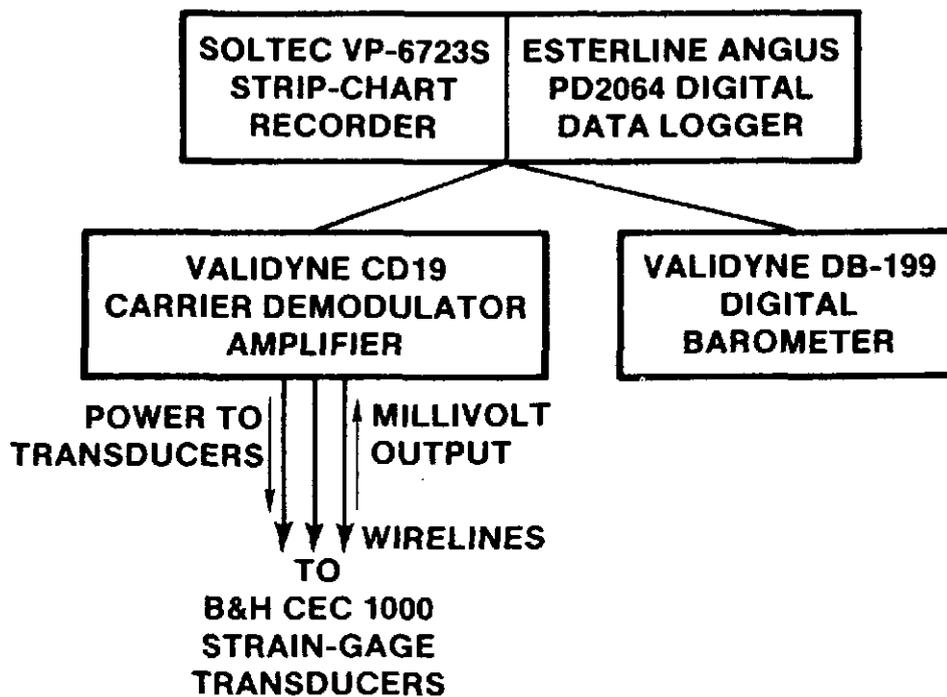


Figure 2.1 United States Geological Survey Data-Acquisition System.

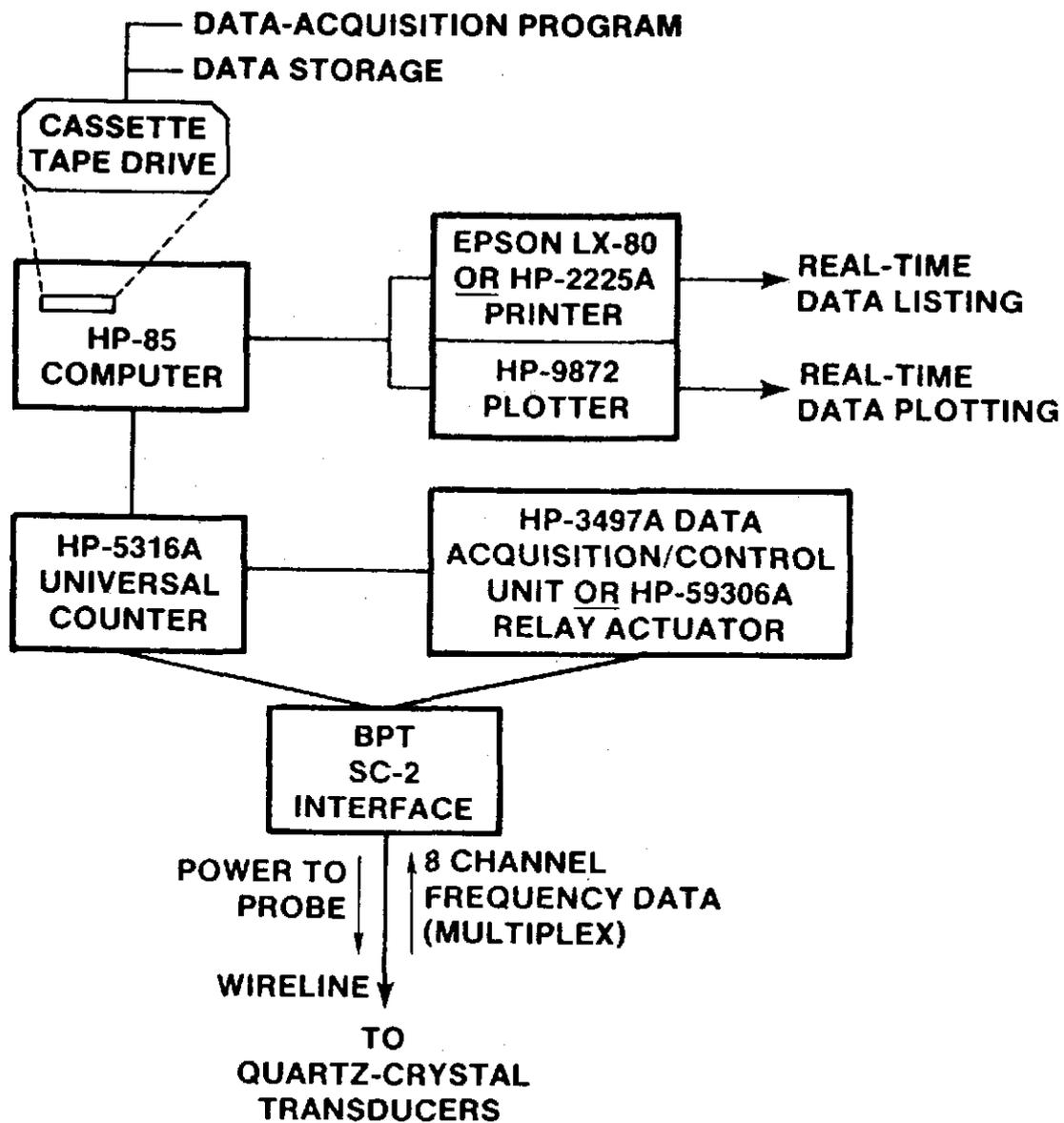


Figure 2.2 Baker Production Technology Data-Acquisition System.

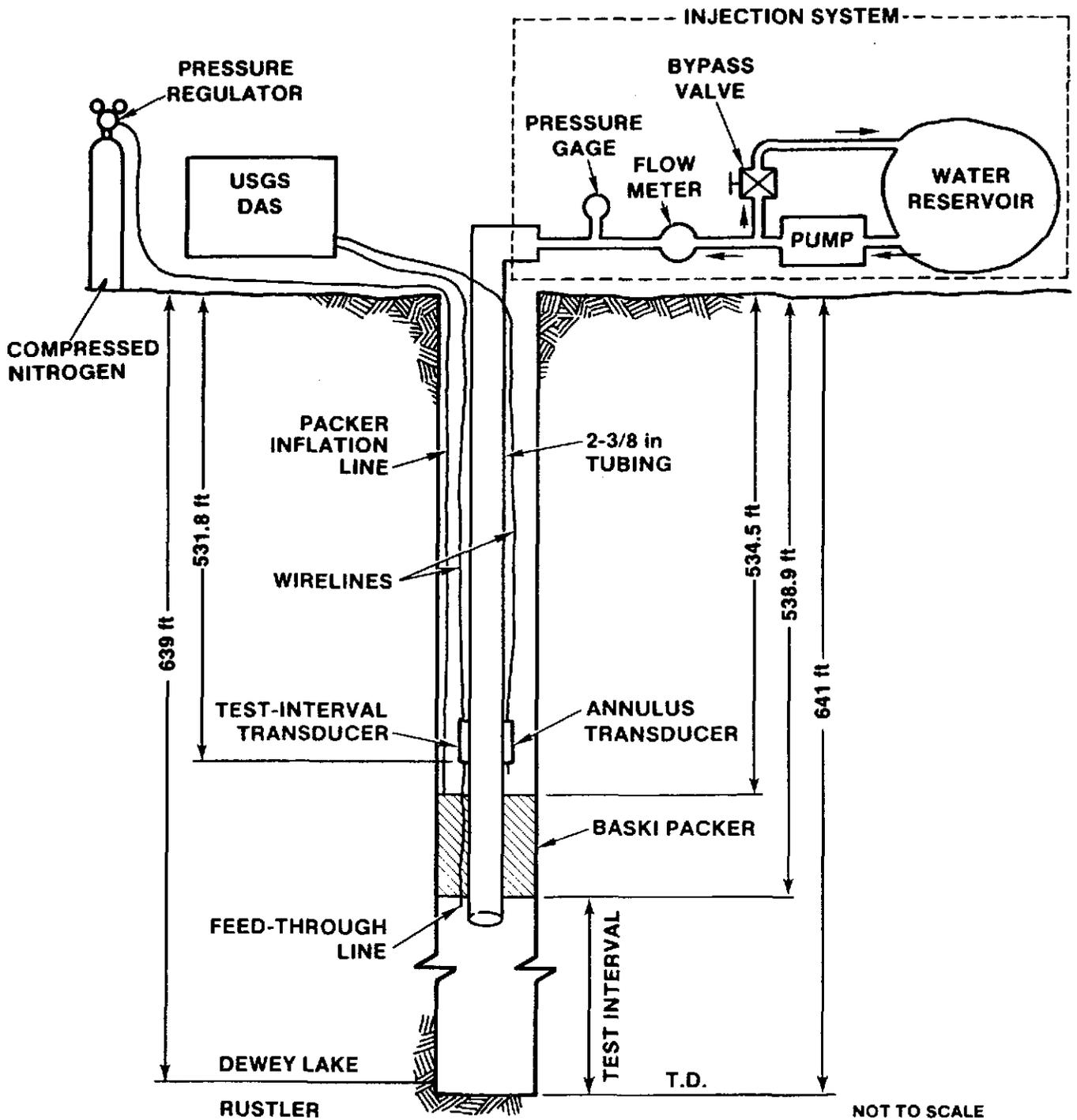


Figure 2.3 Test equipment for the constant-head borehole-infiltration test on the lower Dewey Lake Red Beds.

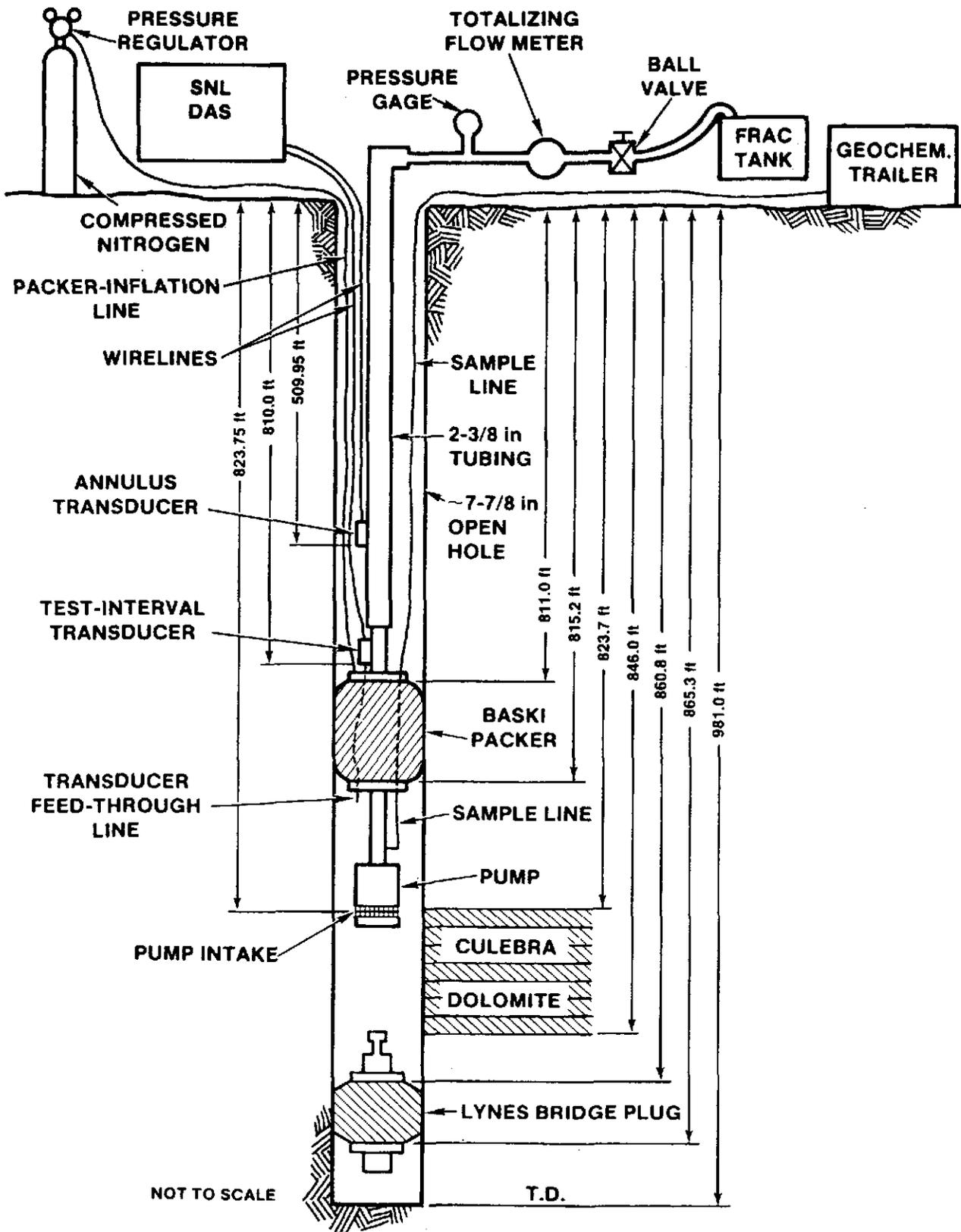


Figure 2.4 Well configuration for the pumping test of the Culebra dolomite.

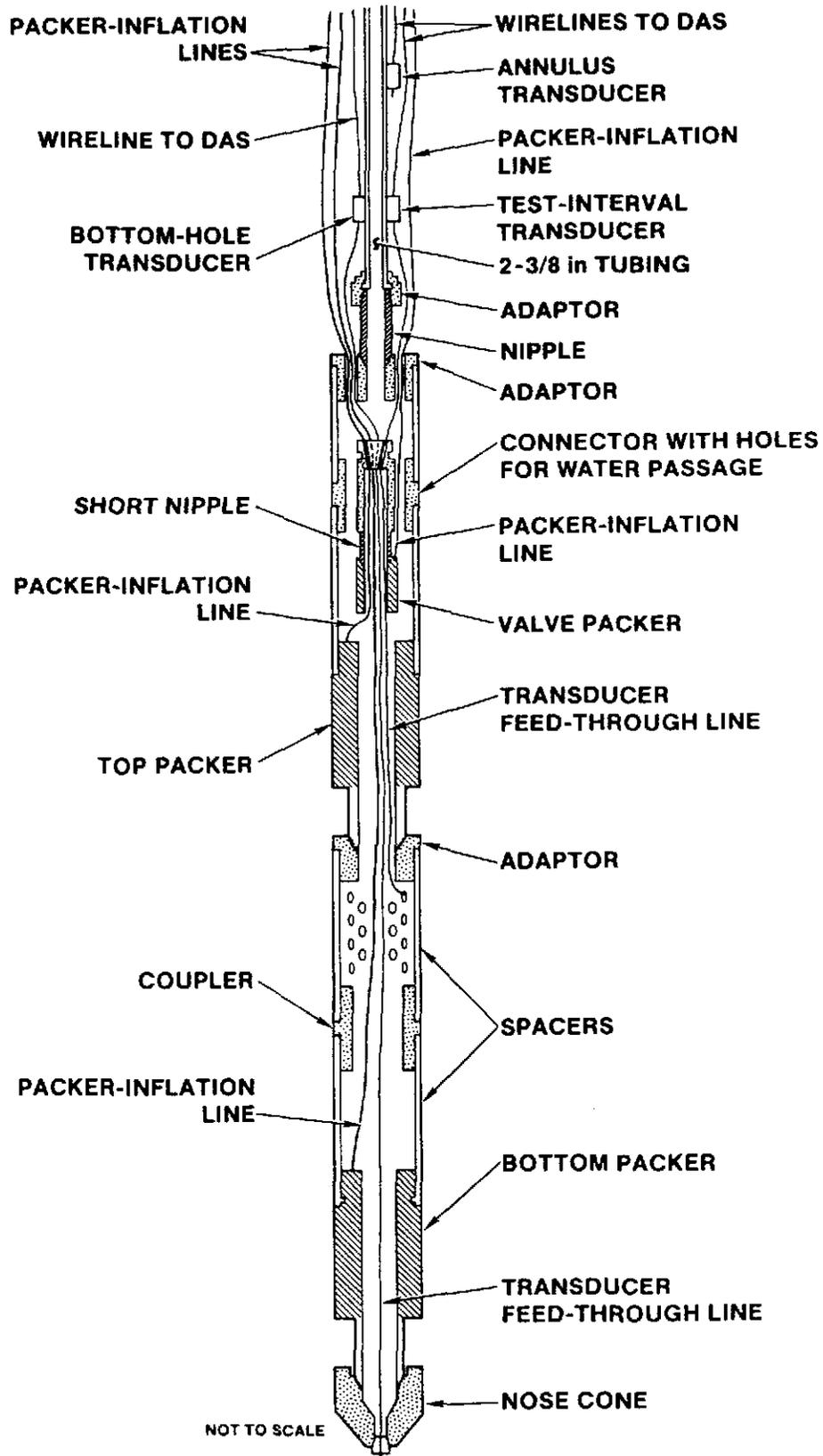
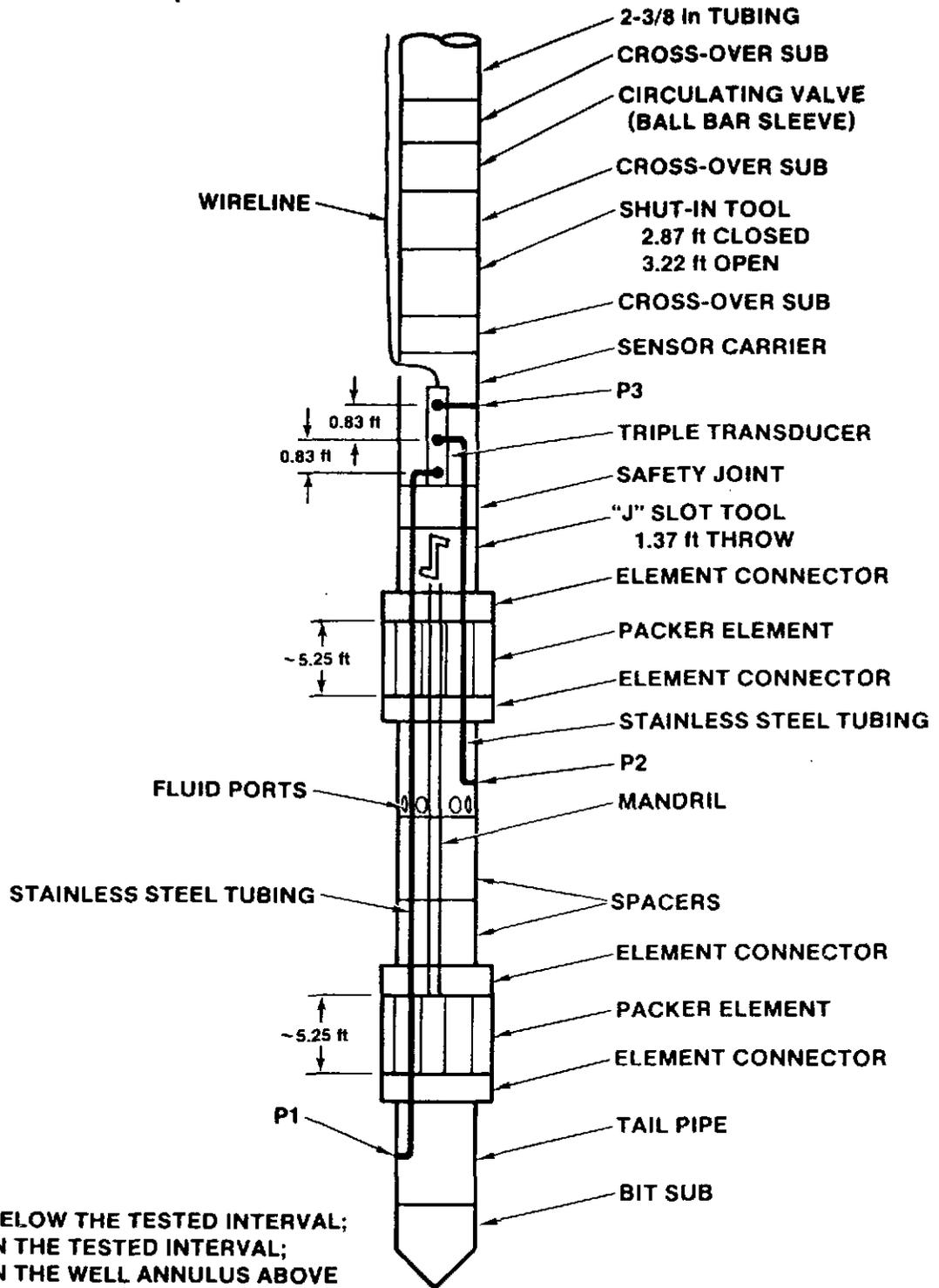


Figure 2.5 Baski double-packer system.



NOTE:
 P1 IS PRESSURE BELOW THE TESTED INTERVAL;
 P2 IS PRESSURE IN THE TESTED INTERVAL;
 P3 IS PRESSURE IN THE WELL ANNULUS ABOVE
 THE TESTED INTERVAL.

Figure 2.6 Baker Production Technology hydrological test tool.

E-29

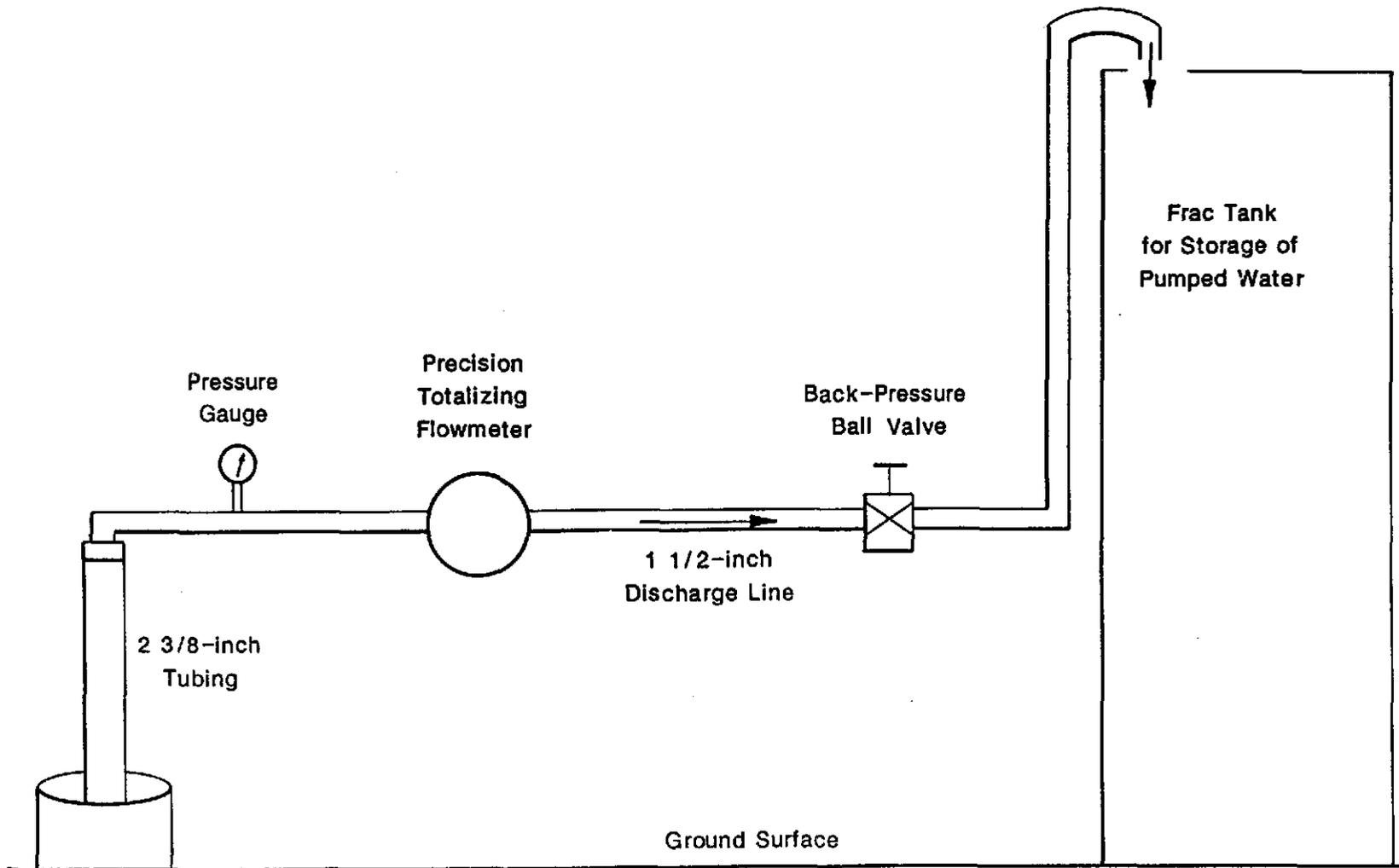


Figure 2.7 Discharge-measurement system during the DOE-2 pumping test.

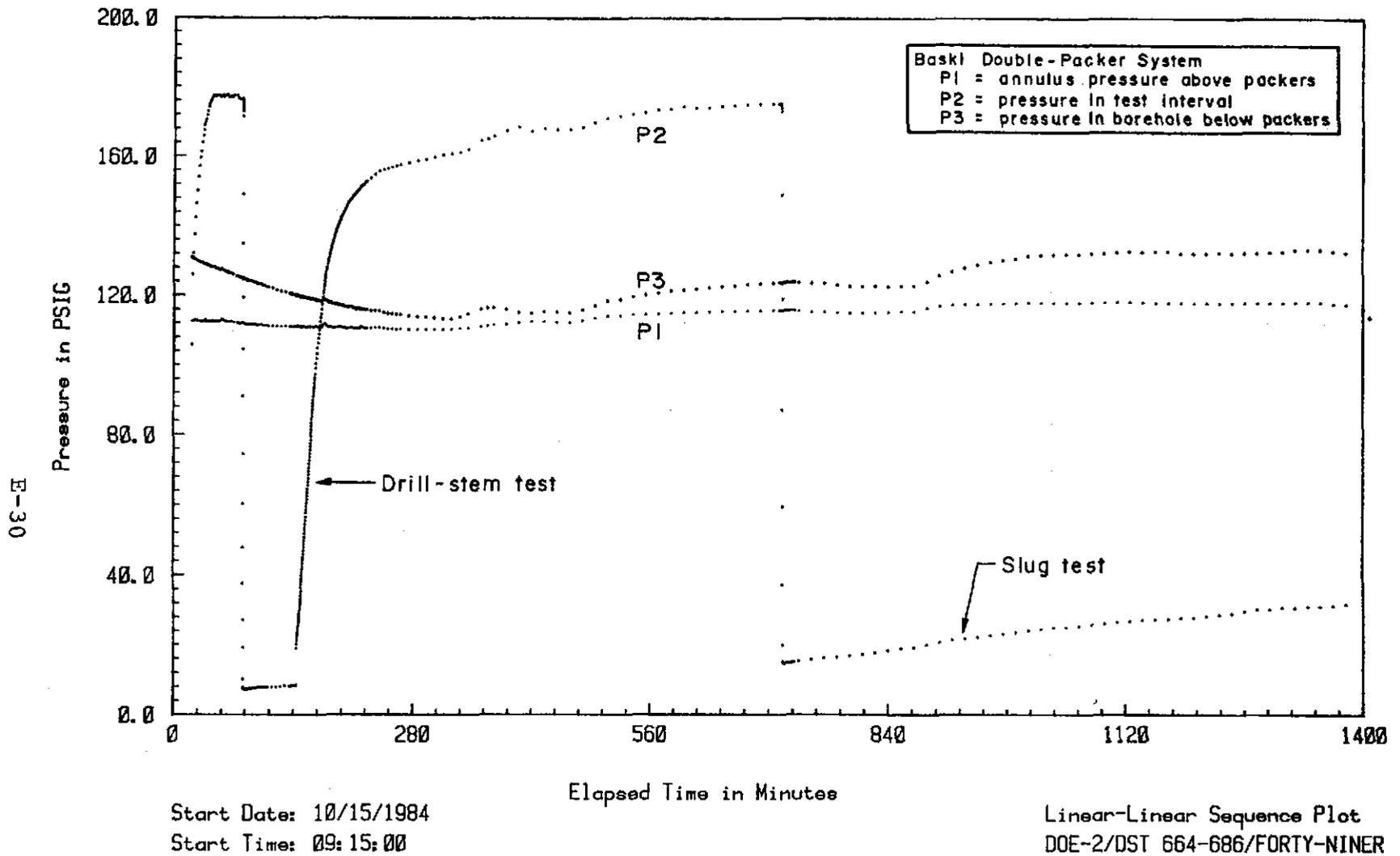


Figure 4.1 Linear-linear sequence plot of drill-stem and slug testing of the Forty-niner Member of the Rustler Formation in well DOE-2.

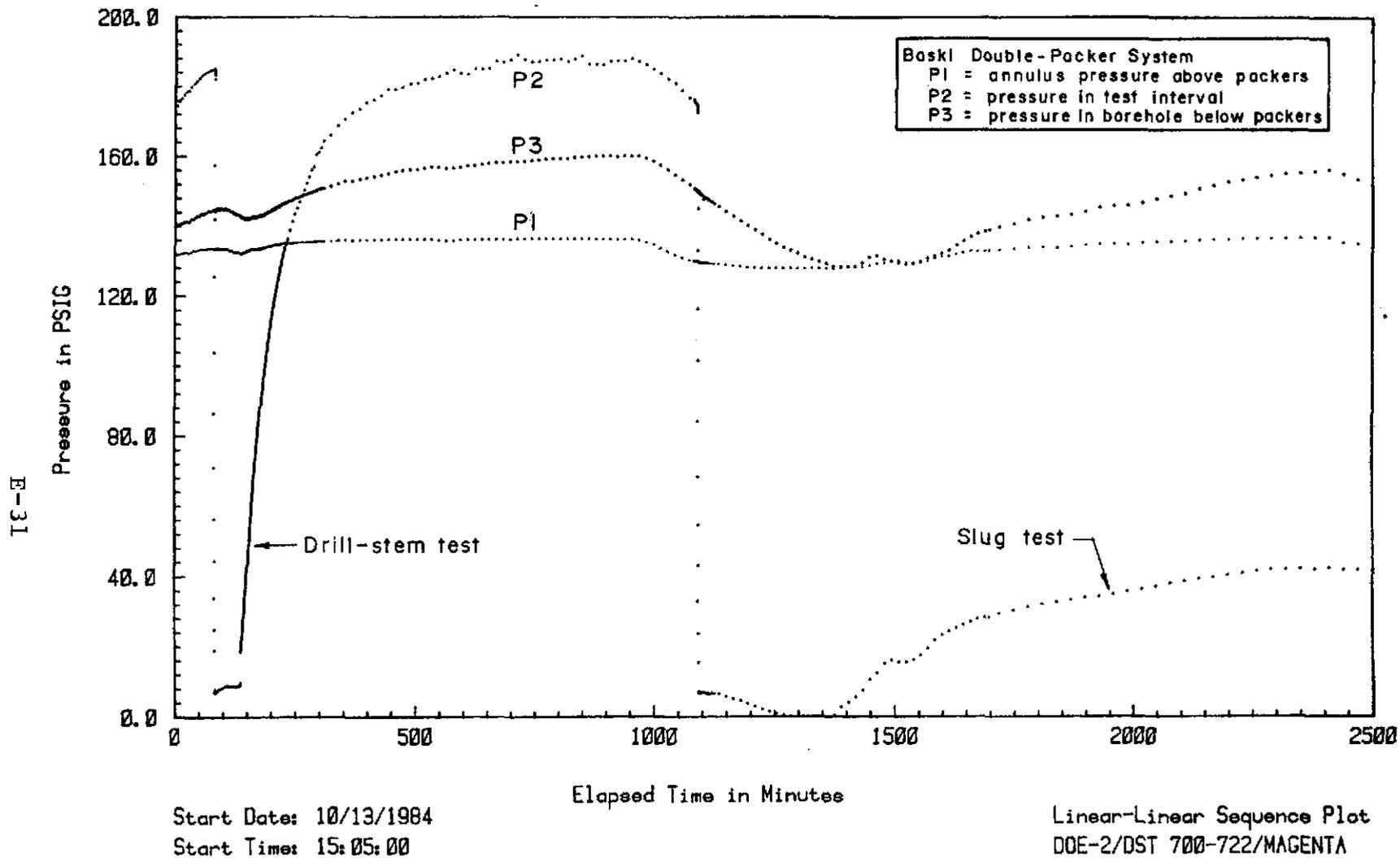


Figure 4.2 Linear-linear sequence plot of drill-stem and slug testing of the Magenta Dolomite Member of the Rustler Formation in well DOE-2.

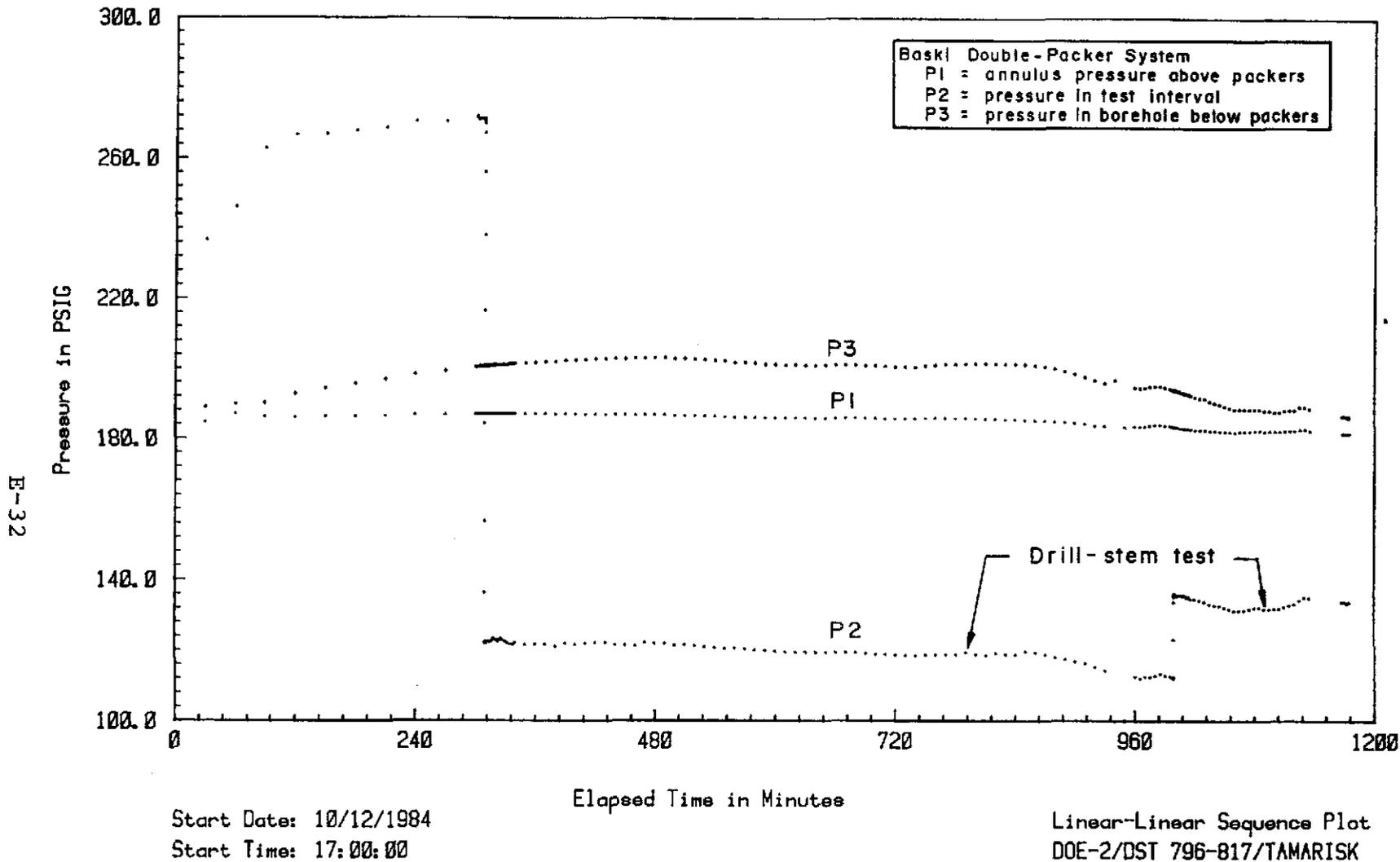


Figure 4.3 Linear-linear sequence plot of drill-stem testing of the Tamarisk Member of the Rustler Formation in well DOE-2.

E-33

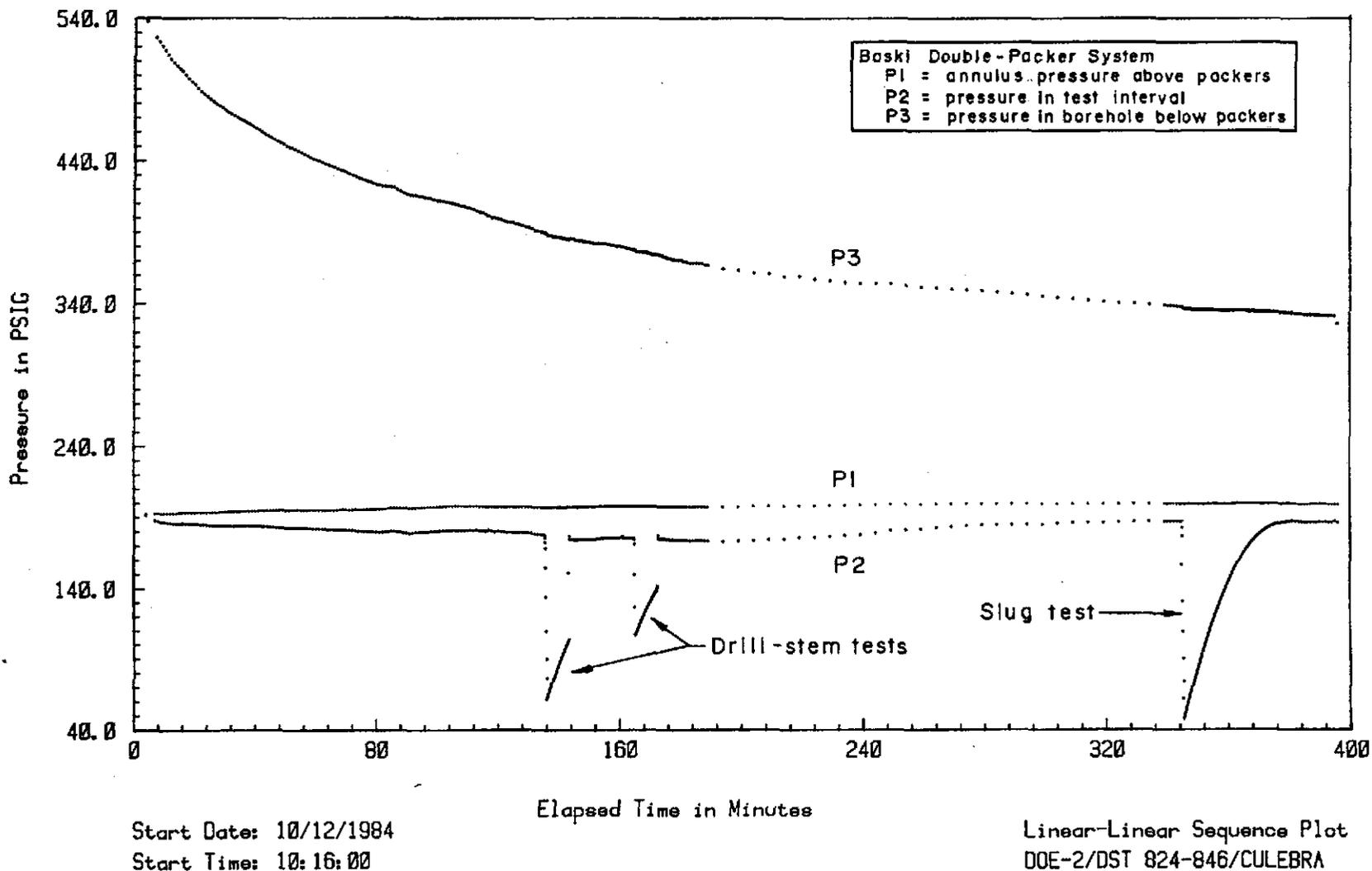


Figure 4.4 Linear-linear sequence plot of drill-stem and slug testing in the Culebra Dolomite Member of the Rustler Formation in well DOE-2.

E-34

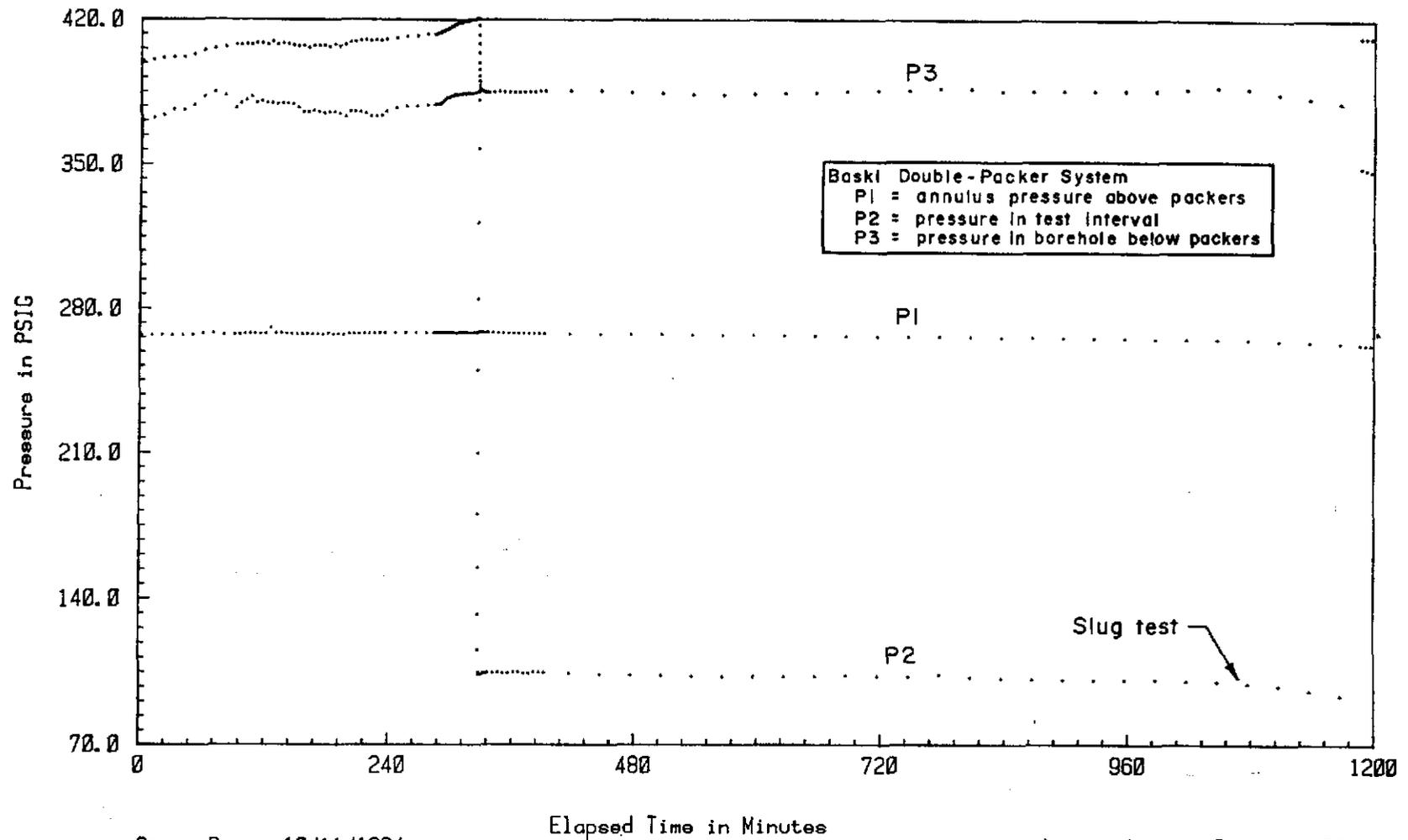


Figure 4.5 Linear-linear sequence plot of slug testing in the Rustler-Salado contact zone in well DOE-2.

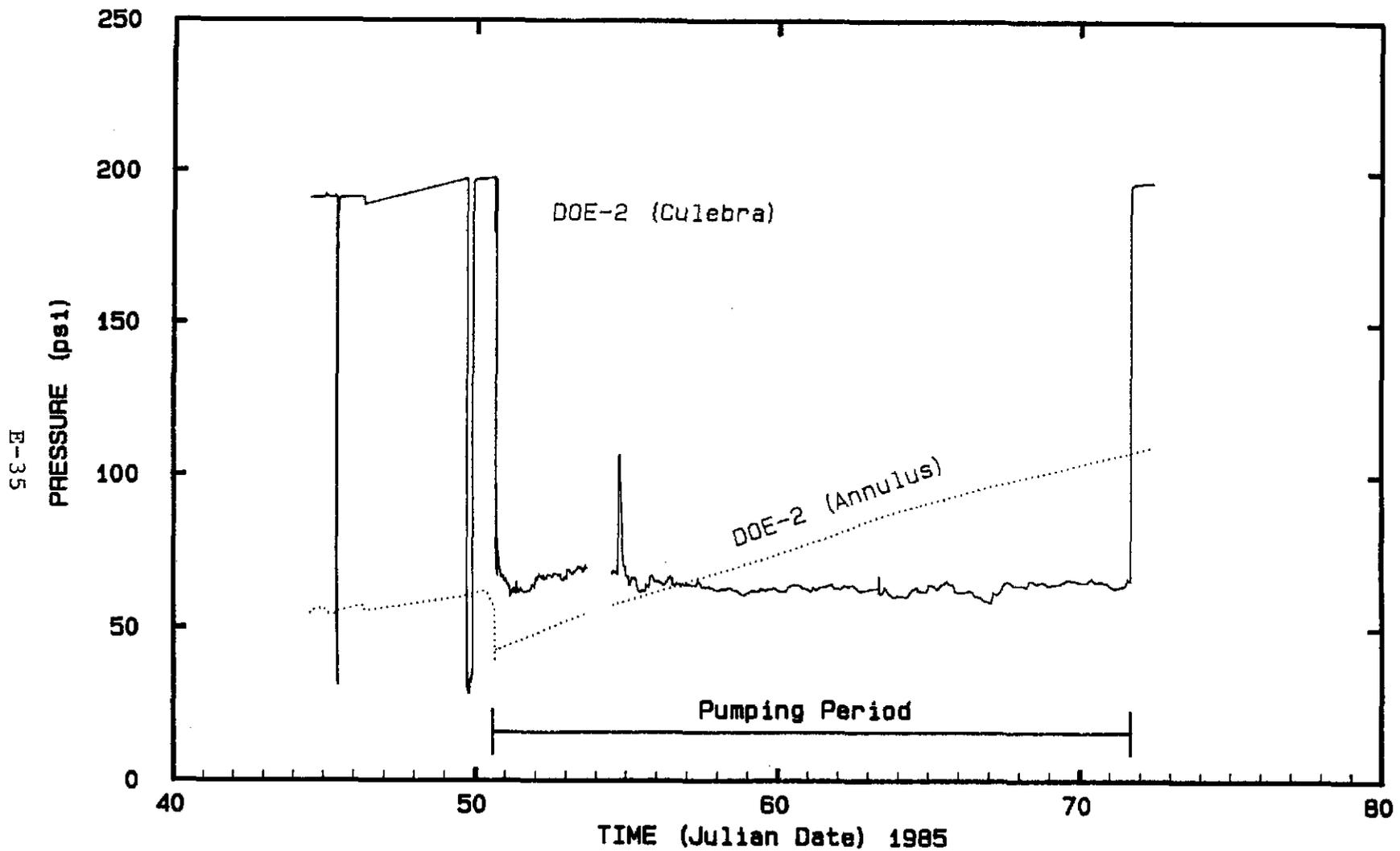


Figure 4.6 Fluid-pressure response of the Culebra dolomite in well DOE-2 during pretest and pumping test periods from February 14 to March 13, 1985.

E-36

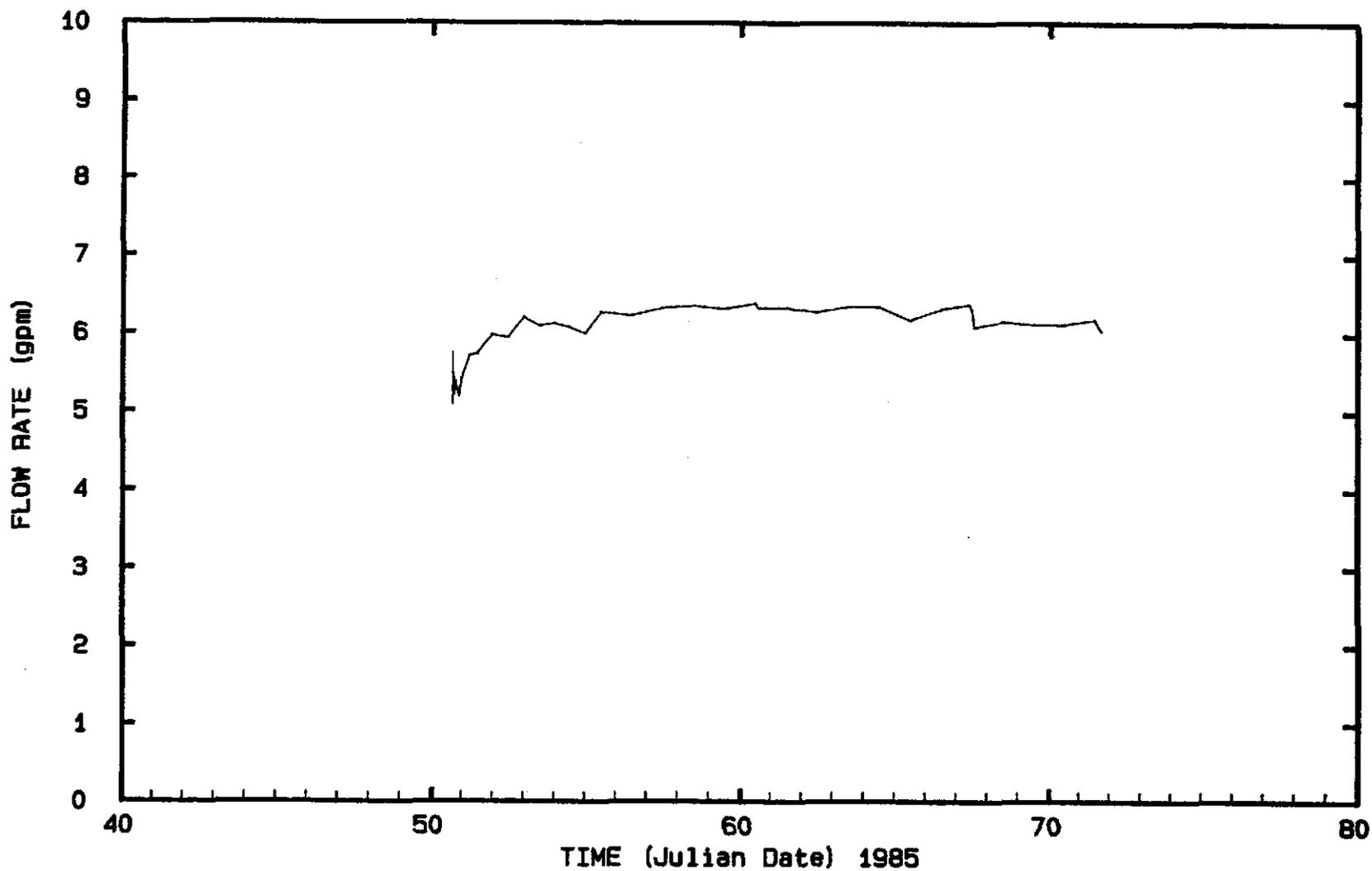


Figure 4.7 Plot of pumping rate versus time during the pumping test at well DOE-2, February 19-March 12, 1986.

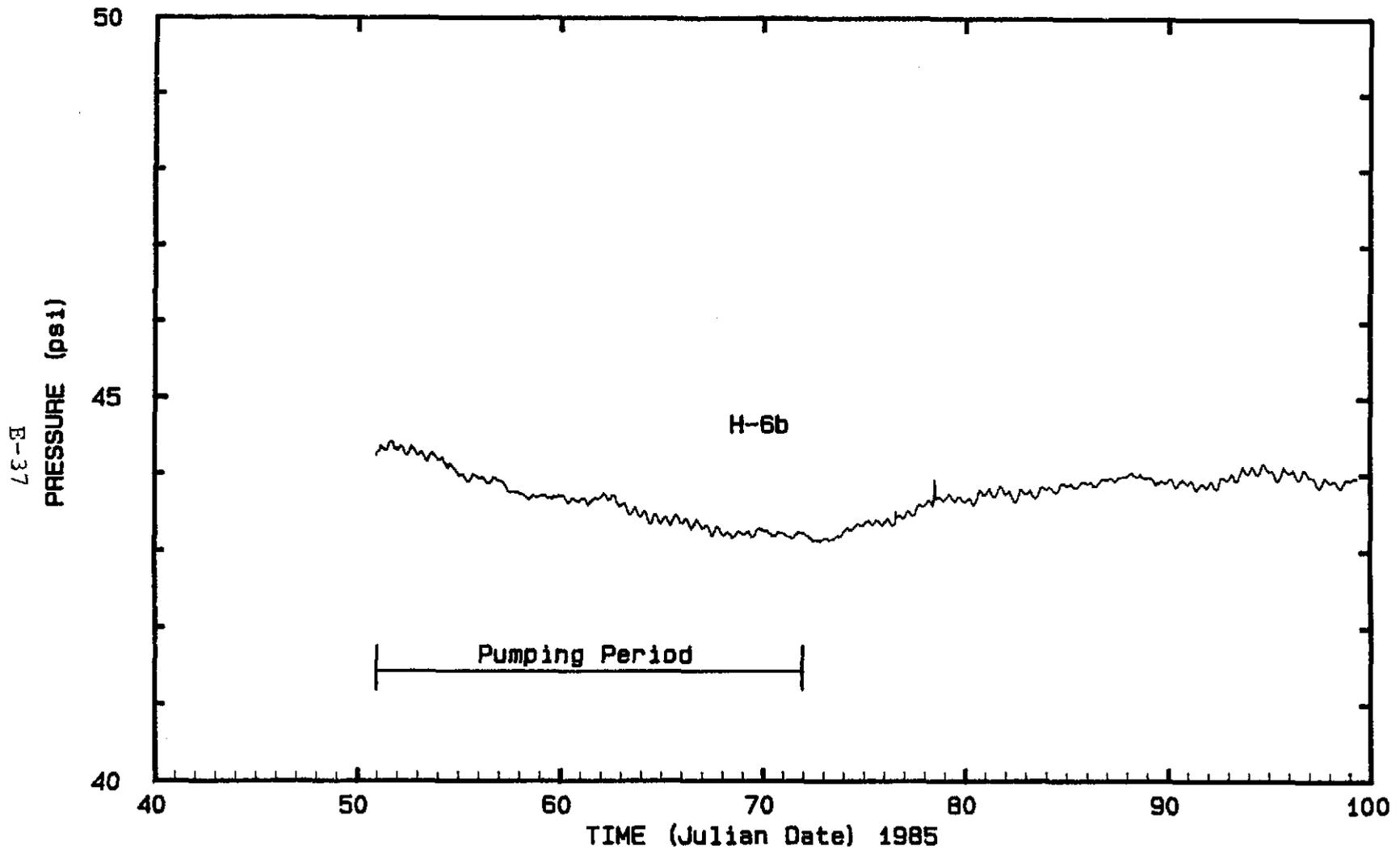


Figure 4.8 Fluid-pressure response of the Culebra dolomite in well H-6b during the pumping test at DOE-2, February 19 to March 12, 1985.

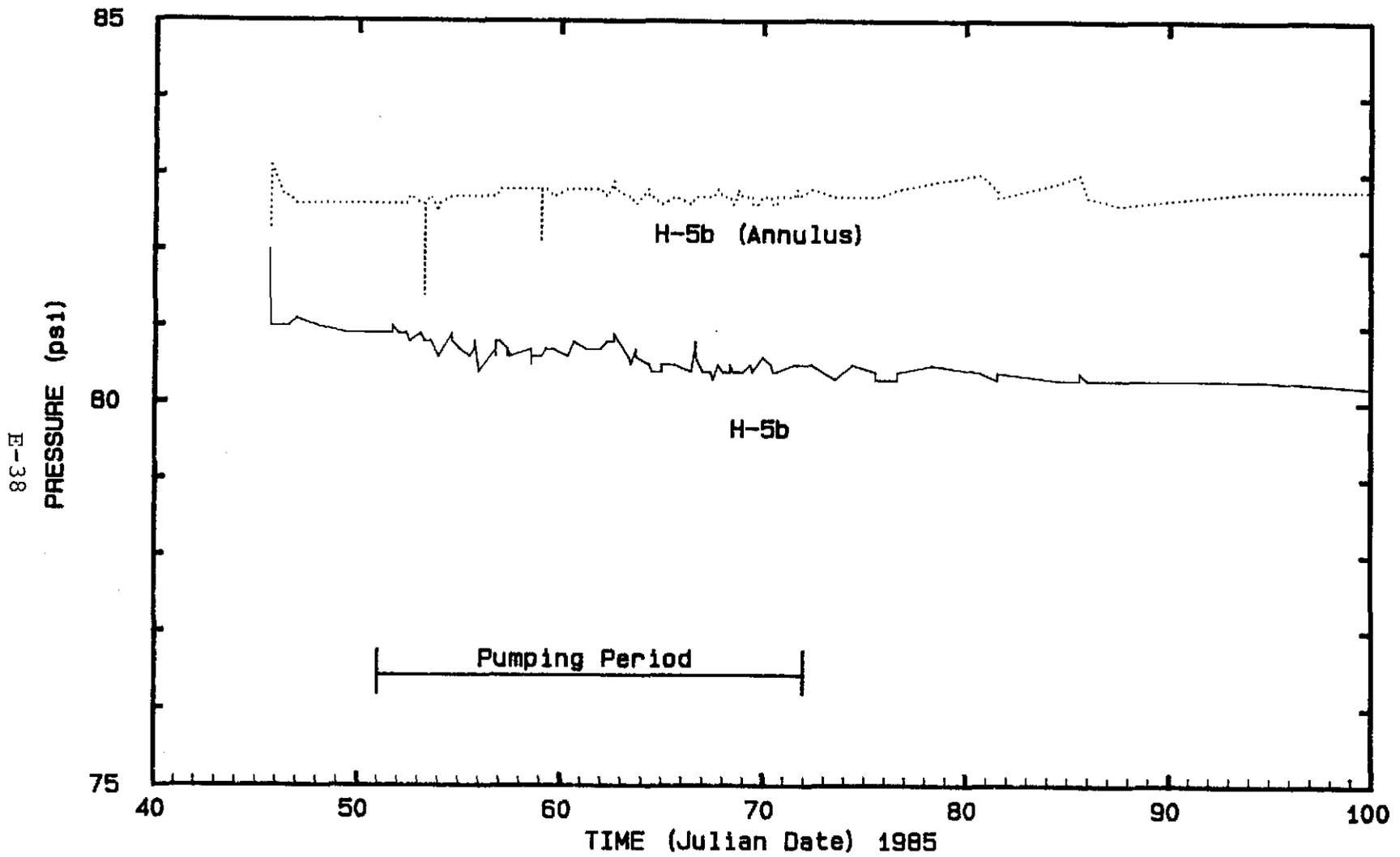


Figure 4.9 Fluid-pressure response of the Culebra dolomite in well H-5b during the pumping test at DOE-2, February 19 to March 12, 1985.

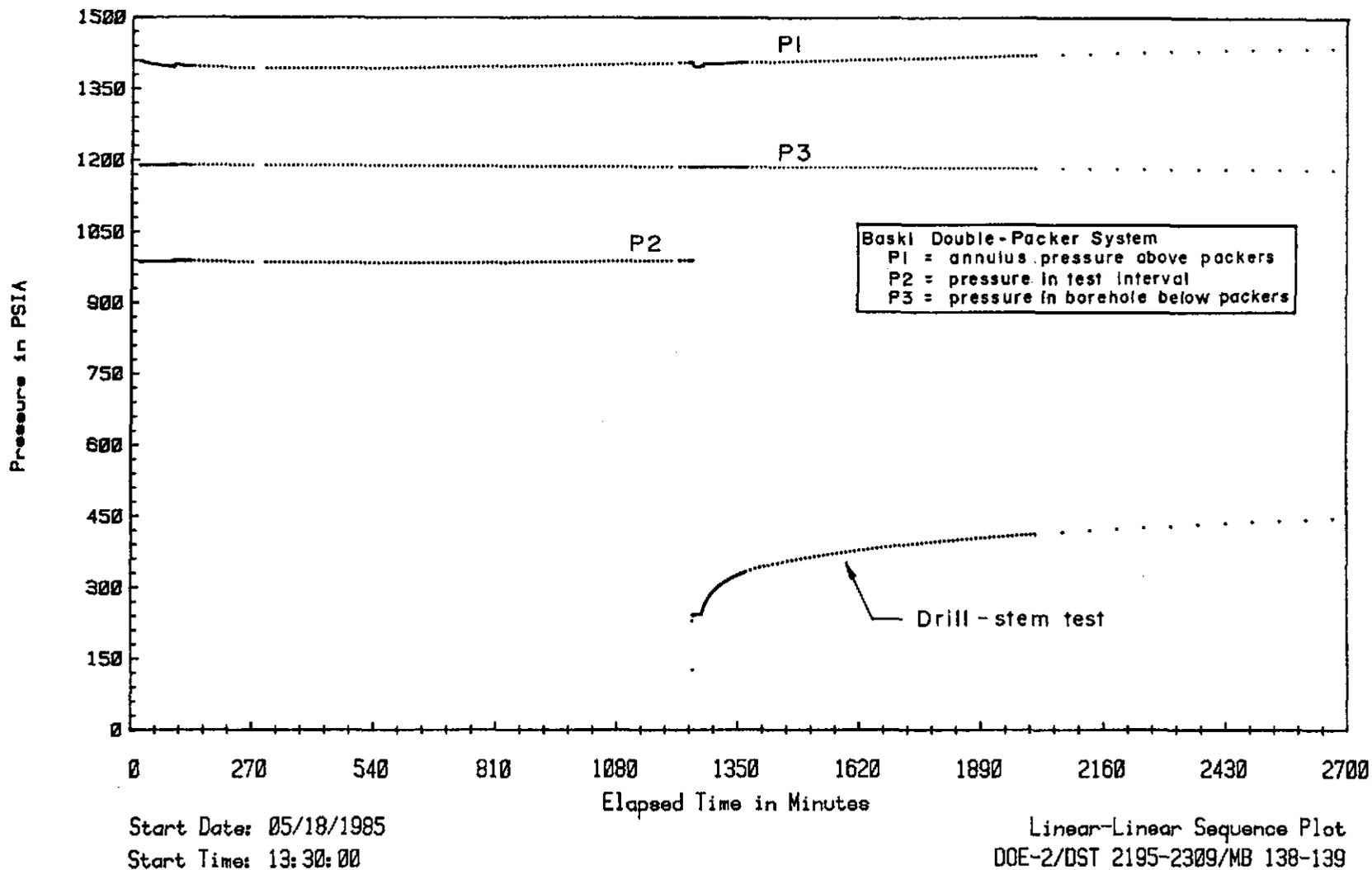


Figure 4.10 Linear-linear sequence plot of drill-stem testing of Marker Beds 138 and 139 of the Salado Formation in well DOE-2.

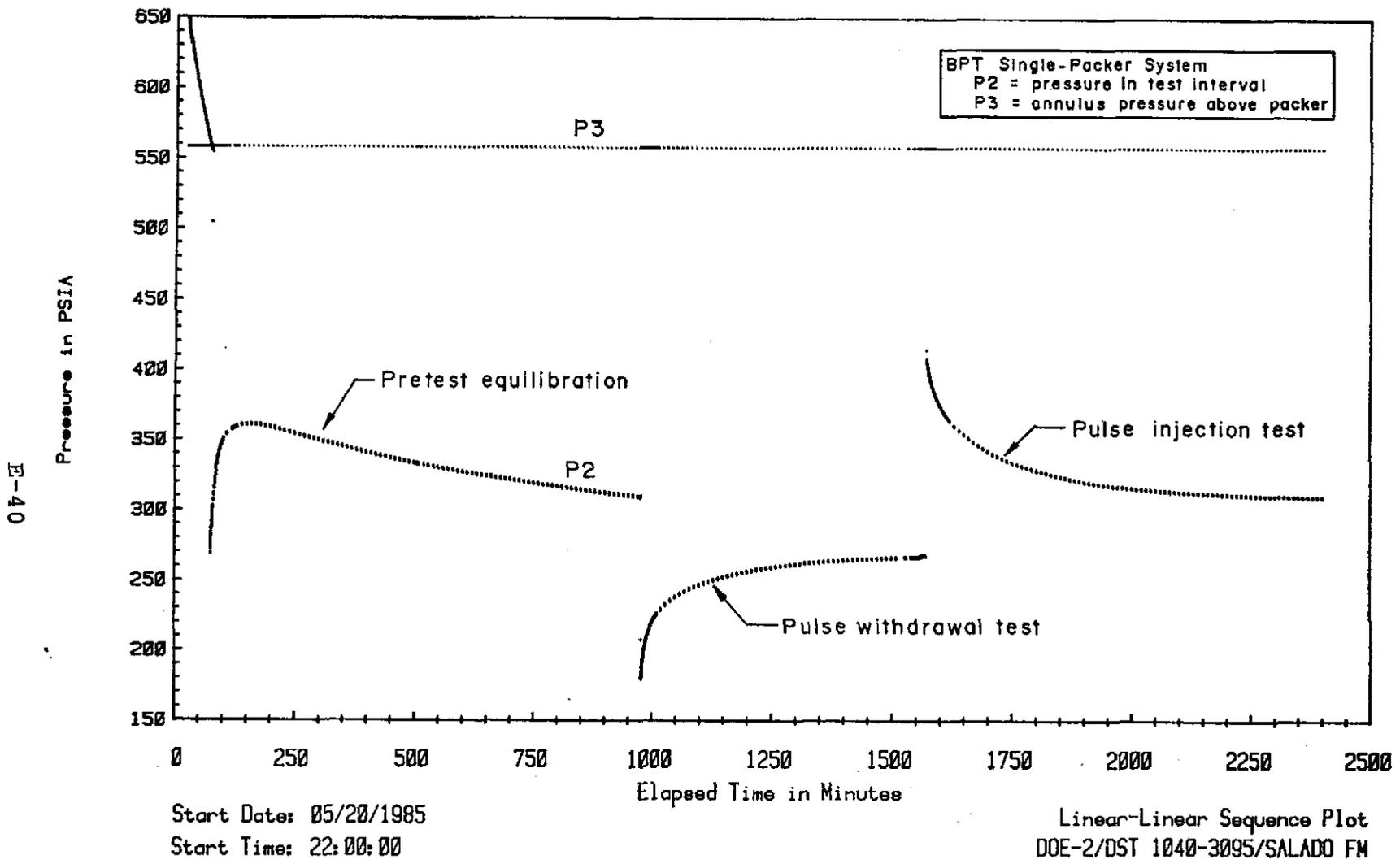


Figure 4.11 Linear-linear sequence plot of pulse testing of the Salado Formation in well DOE-2.

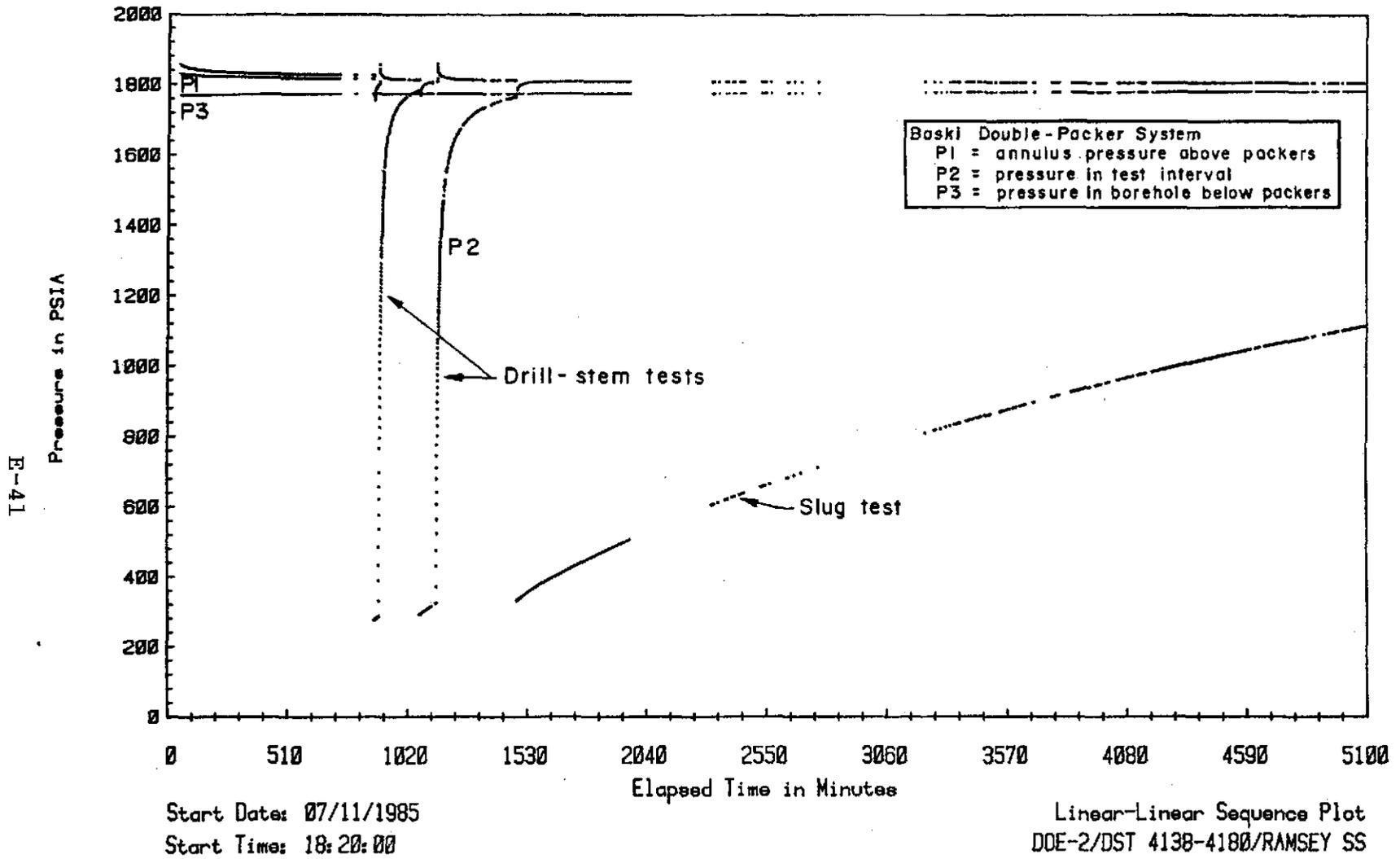


Figure 4.12 Linear-linear sequence plot of drill-stem testing and slug testing of the Ramsey sandstone of the Bell Canyon Formation in well DOE-2.

E-42

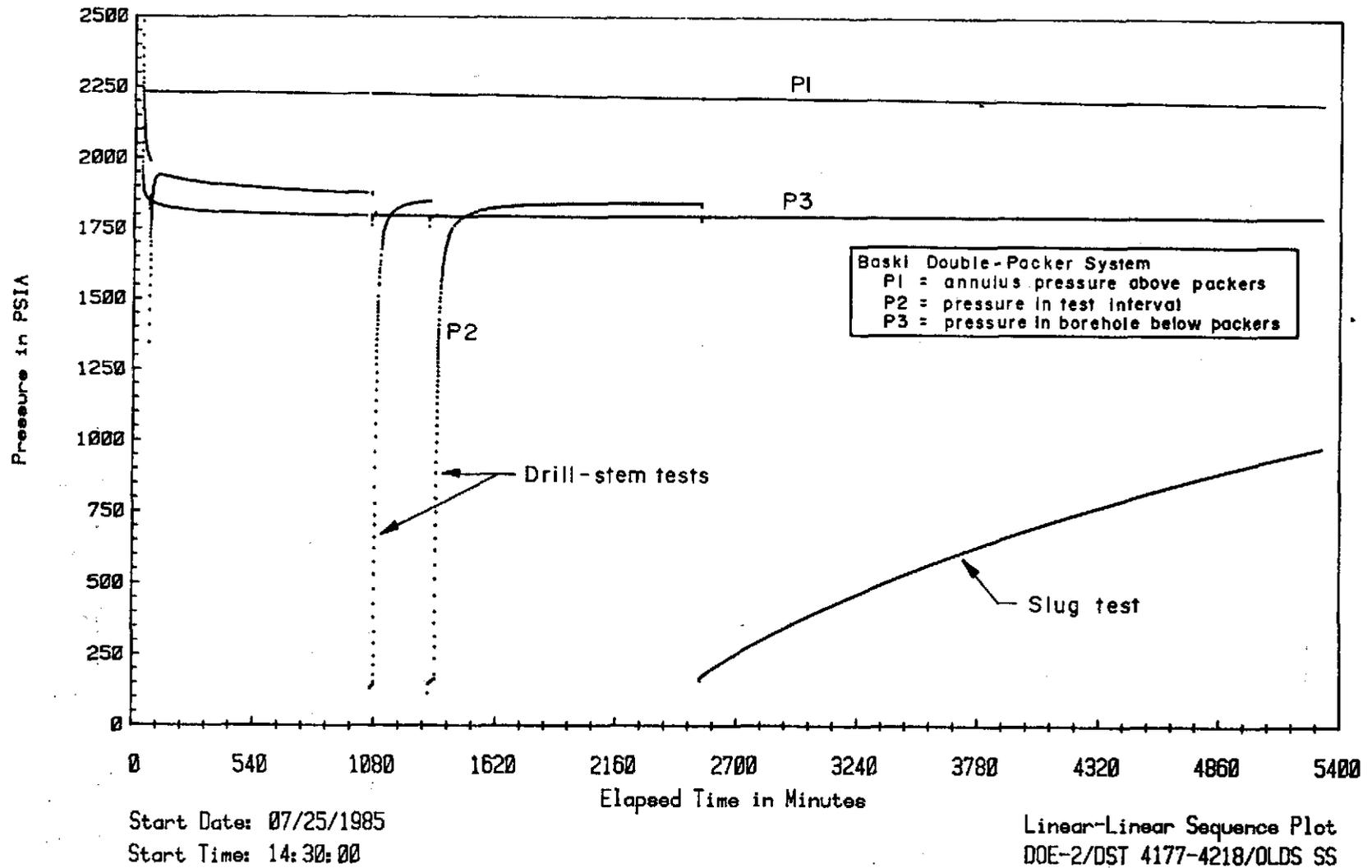


Figure 4.13 Linear-linear sequence plot of drill-stem testing and slug testing in the Olds sandstone of the Bell Canyon Formation in well DOE-2.

E-43

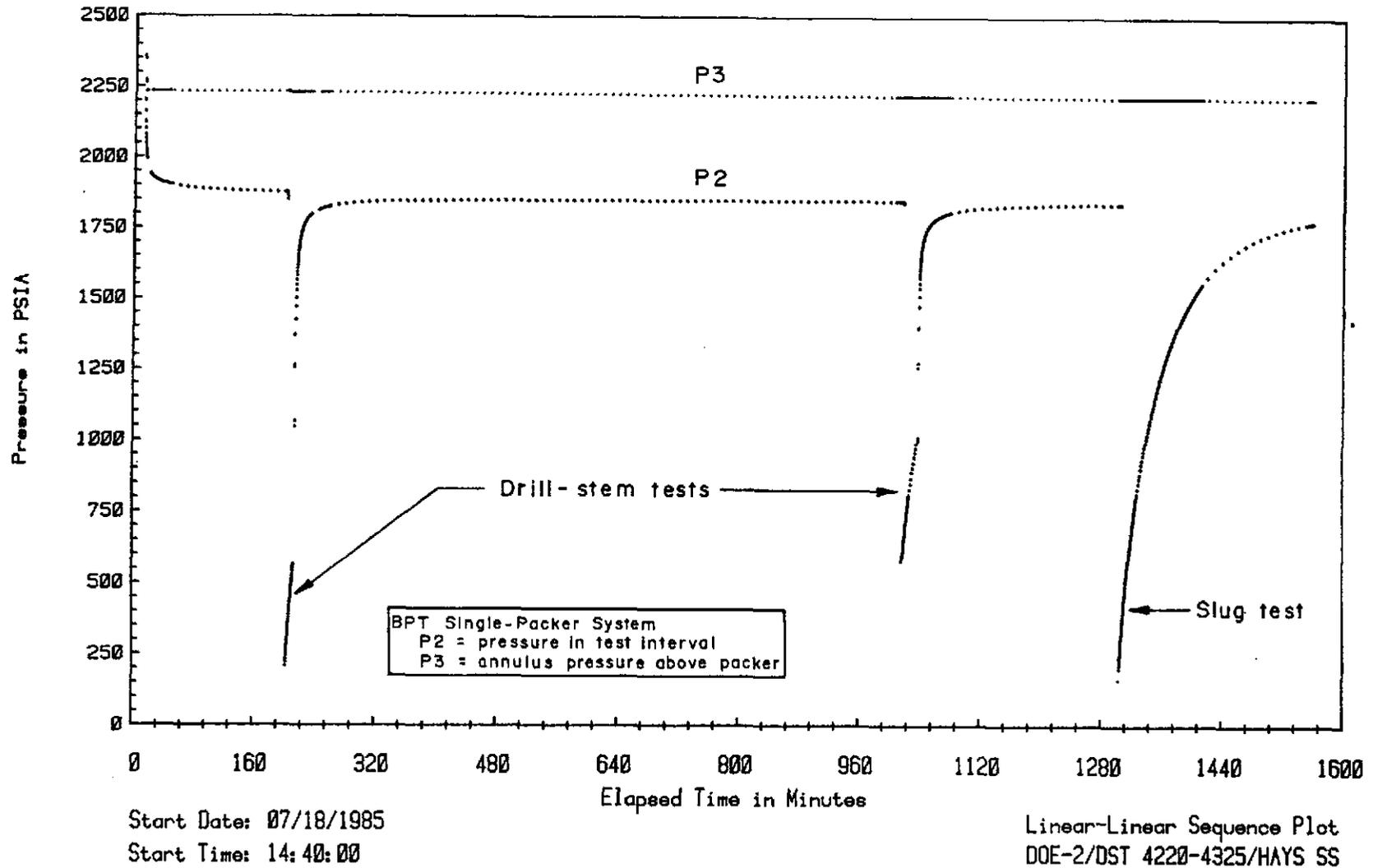


Figure 4.14 Linear-linear sequence plot of drill-stem testing and slug testing in the Hays sandstone of the Bell Canyon Formation in well DOE-2.

APPENDIX 1.0

WELL CONFIGURATION DATA FOR DOE-2
OPEN-HOLE WELL TESTING 1984 TO 1985

TABLE A1-1 WELL CONFIGURATION DATA FOR THE OPEN-HOLE TESTING PROGRAM
DURING THE DRILLING OF WELL DOE-2, SEPTEMBER 1984 through JULY 1985

UNIT TESTED	DATE	TEST INTERVAL-Depth in feet below land surface	Position	TRANSDUCER	DATA Depth	Type	Packer Assembly
Dewey Lake Red Beds	9/14-9/15/84	538.9 - 641	Annulus Test Interval		531.8 531.8	Bell and Howell CEC1000	Baski Single
Forty-niner	10/15-10/16/84	664.2 - 685.6	Upper Middle Lower		484.1 644.4 643.1	Bell and Howell CEC1000	Baski Double
Magenta	10/13-10/15/84	700.7 - 722.1	Upper Middle Lower		520.5 680.9 680.3	Bell and Howell CEC1000	Baski Double
Tamarisk	10/12-10/13/84	796.1 - 817.5	Upper Middle Lower		610.6 776.3 775.7	Bell and Howell CEC1000	Baski Double
Culebra	10/12/84	824.6 - 846.0	Upper Middle Lower		644.4 804.8 804.2	Bell and Howell CEC1000	Baski Double
Rustler- Salado Contact Zone	10/11-10/12/84	945.4 - 966.9	Upper Middle Lower		765.3 925.6 925.0	Bell and Howell CEC1000	Baski Double
MB 138- 139	5/18-5/20/85	2195-2309	Upper Middle Lower		2176.11 2176.94 2177.77	BPT quartz- crystal	BPT Double
Salado	5/21-5/22/85	1040-3095	Upper Middle Lower		1021.50 1022.33 1023.16	BPT quartz- crystal	BPT Single
Rausay	7/10-7/15/85	4138-4180	Upper Middle Lower		4119.74 4120.57 4121.40	BPT quartz- crystal	BPT Double
Olds	7/25-7/27/85	4177-4218	Upper Middle Lower		4158.36 4159.19 4160.02	BPT quartz- crystal	BPT Double
Hays	7/17-7/23/85	4220-4325	Upper Middle Lower		4205.48 4206.31 4207.14	BPT quartz- crystal	BPT Single

E-45

NOTE: All depths in feet below land surface, which is 3422 fasl

TABLE A1-2 CONFIGURATION OF DOWNHOLE TEST EQUIPMENT FOR WELL DOE-2
DURING THE CULEBRA PUMPING TEST, FEBRUARY 19 TO MARCH 12, 1985

Unit tested: Culebra Pumping well no.: DOE-2 Intake depth (BTC):
 Type of test: Pumping Observation well no.: H-5b, H-6b 862.2 ft
 Test data file no.: D20185, D20385, Pump type: Red Jacket 3-Horsepower
D20485, D20585 32 B
D20685, D20785

Well No.	E-46 Ser. No.	Transducers			Init. Water Level (ft. BTC)	Top of Casing (ft. a.m.s.l.)	Land Surface Elevation (ft. a.m.s.l.)	Water Level (ft. a.m.s.l.)
		Depth (ft. BTC)	Calibration Date	Sensitivity Coefficient (mV/psi)				
DOE-2	103636	810	02/11/85	1.0042	391.1	NA	3422	3030.9
DOE-2 (Annulus)	95079	509	02/11/85	2.4898	391.1	NA	3422	3030.9

- NOTE:**
- 1) BTC = Below Top of Casing
 - 2) a.m.s.l. = above mean sea level
 - 3) Calibration information shows pretest calibration dates and calculated sensitivity coefficients for those calibrations
 - 4) Initial water level was measured at the times of installation

TABLE A1-3 CONFIGURATION OF DOWNHOLE TEST EQUIPMENT FOR THE OBSERVATION WELLS H-5b AND H-6b DURING THE CULEBRA PUMPING TEST IN WELL DOE-2, FEBRUARY 19 TO MARCH 12, 1985

Unit tested: Culebra Pumping well no.: DOE-2 Intake depth (BTC): _____
 Type of test: Pumping Observation well no.: H-5b, H-6b _____
 Test data file no.: H60015, H60025, Pump type: Red Jacket 3-Horsepower _____
 _____ 32-B _____

Well No.	E-47	Transducers			Init. Water Level (ft. BTC)	Top of Casing (ft. a.m.s.l.)	Land Surface Elevation (ft. a.m.s.l.)	Water Level (ft. a.m.s.l.)	
		Ser. No.	Depth (ft. BTC)	Calibration Date					Sensitivity Coefficient (mV/psi)
H-5b		103638	650	02/13/85	0.9969	485.2	3506.35	3505.7	3021.15
H-5b (Annulus)		103815	649	02/13/85	2.1742	485.2	3506.35	3505.7	3021.15
H-6b		103637	400	02/15/85	0.9996	302.3	3346.76	3346.1	3044.46

- NOTE:**
- 1) BTC = Below Top of Casing
 - 2) a.m.s.l. = above mean sea level
 - 3) Calibration information shows pretest calibration dates and calculated sensitivity coefficients for those calibrations
 - 4) Initial water level was measured at the times of installation
 - 5) Top of casing elevation from Satellite Survey, Hydro Geo Chem, 1985
 - 6) Land surface elevation determined by direct measurement from Top Of Casing

APPENDIX 2.0

TABULATED PUMPING-RATE DATA FOR THE
DOE-2 CULEBRA PUMPING TEST

TABLE A2-1
 TABULATED PUMPING RATES FOR THE DOE-2 (CULEBRA)
 PUMPING TEST, 824 TO 846 FEET BELOW LAND
 SURFACE, FEBRUARY 19 TO MARCH 13, 1985

DAY	HR	MN	TIME FROM START OF PUMPING (hours)	METER READING (gallons)	CUMULATIVE VOLUME PUMPED (gallons)	AVERAGE FLOW RATE (gpm)	COMMENTS
50	17	0	0.00	68.5	0.0	0.00	PUMP ON
50	17	2	0.03	80.0	11.5	5.75	
50	17	3	0.05	85.5	17.0	5.50	
50	17	4	0.07	90.8	22.3	5.30	
50	17	5	0.08	96.1	27.6	5.30	
50	17	10	0.17	122.0	53.5	5.10	
50	17	15	0.25	147.9	79.4	5.20	
50	17	20	0.33	174.1	105.6	5.50	
50	17	30	0.50	228.0	159.5	5.50	
50	18	30	1.50	553.6	485.1	5.22	
50	19	0	2.00	717.5	649.0	5.40	
50	22	0	5.00	1721.1	1652.6	5.20	
51	0	0	7.00	2392.3	2323.8	5.43	
51	6	0	13.00	4422.6	4354.1	5.72	
51	11	50	18.83	6416.9	6348.4	5.74	
51	23	10	30.17	10349.0	10280.5	5.99	
52	12	0	43.00	14906.0	14837.5	5.95	
53	0	0	55.00	19235.0	19166.5	6.22	
53	12	0	67.00	23560.0	23491.5	6.10	
54	0	3	79.05	27981.1	27912.6	6.14	
54	12	0	91.00	32362.1	32293.6	6.08	
55	0	0	103.00	36527.7	36459.2	6.00	
55	12	0	115.00	40992.6	40924.1	6.28	
56	12	0	139.00	50003.3	49934.8	6.23	
57	12	0	163.00	59143.5	59075.0	6.34	
58	12	0	187.00	68344.2	68275.7	6.37	
59	12	1	211.02	77604.5	77536.0	6.32	
60	12	0	235.00	86810.0	86741.5	6.40	
60	14	0	237.00	87570.0	87501.5	6.33	
61	12	0	259.00	95967.5	95899.0	6.34	
62	12	0	283.00	105054.0	104985.5	6.28	
63	12	0	307.00	114161.7	114093.2	6.36	
64	12	0	331.00	123370.2	123301.7	6.36	FLOW RATE
65	12	0	355.00	132463.4	132394.9	6.18	THROUGH
66	12	0	379.00	141537.6	141469.1	6.33	SAMPLE LINE
67	10	25	401.42	150128.3	150059.8	6.39	(gpm)
67	12	0	403.00	150610.2	150541.7	5.07	1.26
67	14	0	405.00	151190.7	151122.2	4.84	1.25
68	12	0	427.00	157696.0	157627.5	5.02	1.15
69	12	0	451.00	165141.8	165073.3	5.10	1.03
70	12	0	475.00	172371.6	172303.1	5.18	0.95
71	12	0	499.00	179718.1	179649.6	5.02	1.18
71	17	0	504.00	181471.0	181402.5	6.05	PUMP OFF

APPENDIX 3.0

TABULATED PRESSURE DATA FOR HYDRAULIC TESTS CONDUCTED
AT WELL DOE-2 DURING 1984 AND 1985

Note: Nomenclature for drill-stem and pressure-pulse
tests

FFL = First Flow Period
FBU = First Build-up Period
SFL = Second Flow Period
SBU = Second Build-up Period

TABLE A3-1
 TABULATED PRESSURE DATA FOR THE CONSTANT-HEAD BOREHOLE-
 INFILTRATION TEST OF THE DEWEY LAKE RED BEDS, 539 TO 641
 FEET BELOW LAND SURFACE, SEPTEMBER 14, 1984

DATE	TIME HR:MM:SS	PRESSURE (psi) DOE-2 Dewey Lake Red Beds	PRESSURE (psi) DOE-2 Annulus	COMMENTS
09/14/84	2: 8: 0	284.47	93.53	
09/14/84	2: 9: 0	284.50	93.48	Filled tubing
09/14/84	2:10: 0	284.48	93.51	to top - Start
09/14/84	2:11: 0	284.47	93.47	Test at 2:08
09/14/84	2:12: 0	284.47	93.51	
09/14/84	2:13: 0	284.48	93.48	
09/14/84	2:14: 0	284.47	93.48	
09/14/84	2:15: 0	284.47	93.50	
09/14/84	2:16: 0	284.48	93.45	
09/14/84	2:17: 0	284.45	93.47	
09/14/84	2:18: 0	284.46	93.50	
09/14/84	2:19: 0	284.50	93.49	
09/14/84	2:20: 0	284.48	93.46	
09/14/84	2:21: 0	284.46	93.46	
09/14/84	2:22: 0	284.45	93.45	
09/14/84	2:23: 0	284.47	93.47	
09/14/84	2:24: 0	284.48	93.46	
09/14/84	2:25: 0	284.45	93.44	
09/14/84	2:26: 0	284.49	93.41	
09/14/84	2:27: 0	284.45	93.42	
09/14/84	2:28: 0	284.46	93.42	
09/14/84	2:29: 0	284.46	93.45	
09/14/84	2:30: 0	284.44	93.44	
09/14/84	2:31: 0	284.47	93.41	
09/14/84	2:32: 0	284.43	93.42	
09/14/84	2:33: 0	284.44	93.44	Added 25 ml to
09/14/84	2:34: 0	284.45	93.43	tubing at 2:33
09/14/84	2:35: 0	284.46	93.41	
09/14/84	2:36: 0	284.43	93.43	
09/14/84	2:37: 0	284.46	93.41	
09/14/84	2:38: 0	284.44	93.39	
09/14/84	2:39: 0	284.45	93.39	
09/14/84	2:40: 0	284.44	93.38	
09/14/84	2:41: 0	284.42	93.38	
09/14/84	2:42: 0	284.43	93.42	
09/14/84	2:43: 0	284.44	93.41	
09/14/84	2:44: 0	284.46	93.42	
09/14/84	2:45: 0	284.41	93.37	
09/14/84	2:46: 0	284.40	93.39	
09/14/84	2:47: 0	284.43	93.41	
09/14/84	2:48: 0	284.41	93.36	
09/14/84	2:49: 0	284.43	93.38	
09/14/84	2:50: 0	284.40	93.36	
09/14/84	2:51: 0	283.75	426.60	
09/14/84	2:53: 0	283.76	426.59	Added 20 ml to
09/14/84	2:54: 0	283.76	426.59	tubing at 2:53

TABLE A3-1 (continued)
 TABULATED PRESSURE DATA FOR THE CONSTANT-HEAD BOREHOLE-
 INFILTRATION TEST OF THE DEWEY LAKE RED BEDS, 539 TO 641
 FEET BELOW LAND SURFACE, SEPTEMBER 14, 1984

DATE	TIME HR:MM:SS	PRESSURE (psi)		COMMENTS
		DOE-2 Dewey Lake Red Beds	DOE-2 Annulus	
09/14/84	2:55: 0	283.74	426.64	
09/14/84	2:56: 0	283.78	426.59	
09/14/84	2:57: 0	283.74	426.61	
09/14/84	2:58: 0	283.78	426.62	
09/14/84	2:59: 0	283.77	426.57	
09/14/84	3: 0: 0	283.65	426.58	
09/14/84	3: 1: 0	283.77	426.57	
09/14/84	3: 2: 0	283.75	426.57	
09/14/84	3: 3: 0	283.77	426.60	
09/14/84	3: 4: 0	283.74	426.58	
09/14/84	3: 5: 0	283.76	426.59	
09/14/84	3: 6: 0	283.74	426.57	Added 13 ml to
09/14/84	3: 7: 0	283.76	426.60	tubing - End
09/14/84	3: 8: 0	283.75	426.60	Test at 3:08

TABLE A3-2

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE FORTY-NINER MEMBER OF THE RUSTLER FORMATION, 664 TO 686
FEET BELOW LAND SURFACE, OCTOBER 15 TO 16, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/15/1984	09:15:00	113.4	206.7	221.2	Inflated Straddle
10/15/1984	09:20:00	113.3	315.1	143.4	Packers
10/15/1984	09:22:00	113.3	281.3	137.8	
10/15/1984	09:22:30	113.3	274.7	137.0	
10/15/1984	09:23:00	113.3	268.8	136.4	
10/15/1984	09:23:30	113.4	264.1	135.8	
10/15/1984	09:24:00	113.3	260.0	135.3	
10/15/1984	09:24:30	113.2	256.9	134.9	
10/15/1984	09:25:00	113.1	252.6	134.5	
10/15/1984	09:25:30	113.1	248.8	134.2	
10/15/1984	09:26:00	113.1	246.1	133.9	
10/15/1984	09:27:00	113.0	239.1	133.3	
10/15/1984	09:28:00	113.0	234.6	132.8	
10/15/1984	09:29:00	113.0	229.5	132.5	
10/15/1984	09:30:00	113.0	226.1	132.2	
10/15/1984	09:31:00	112.9	223.8	131.9	
10/15/1984	09:32:00	112.9	219.4	131.7	
10/15/1984	09:33:00	112.9	213.2	131.4	Deflated Valve
10/15/1984	09:34:00	112.8	64.9	131.0	Packer
10/15/1984	09:35:00	112.8	64.2	131.0	Shut-in
10/15/1984	09:36:00	112.6	105.9	131.0	Test Interval
10/15/1984	09:37:00	112.6	126.0	130.7	
10/15/1984	09:38:00	112.6	132.2	130.6	
10/15/1984	09:39:00	112.8	137.6	130.5	
10/15/1984	09:40:00	112.7	142.4	130.4	
10/15/1984	09:41:00	112.7	146.4	130.2	
10/15/1984	09:42:00	112.7	150.2	130.0	
10/15/1984	09:43:00	112.5	154.0	129.8	
10/15/1984	09:44:00	112.5	157.1	129.7	
10/15/1984	09:45:00	112.6	159.6	129.6	
10/15/1984	09:46:00	112.5	161.4	129.5	
10/15/1984	09:47:00	112.4	164.0	129.4	
10/15/1984	09:48:00	112.5	165.9	129.4	
10/15/1984	09:49:00	112.6	167.5	129.2	
10/15/1984	09:50:00	112.6	168.9	129.1	
10/15/1984	09:51:00	112.9	169.7	128.9	
10/15/1984	09:52:00	112.4	170.5	128.9	
10/15/1984	09:53:00	112.5	171.8	128.8	
10/15/1984	09:54:00	112.5	173.0	128.8	
10/15/1984	09:55:00	112.6	174.2	128.6	
10/15/1984	09:56:00	112.5	175.0	128.5	
10/15/1984	09:57:00	112.4	175.6	128.4	
10/15/1984	09:58:00	112.6	176.1	128.2	
10/15/1984	09:59:00	112.4	177.0	128.2	
10/15/1984	10:00:00	112.5	177.2	128.2	
10/15/1984	10:01:00	112.5	177.4	128.1	
10/15/1984	10:02:00	112.5	177.2	128.0	
10/15/1984	10:03:00	112.6	177.0	128.0	
10/15/1984	10:04:00	112.4	177.2	127.7	
10/15/1984	10:05:00	112.3	177.4	127.6	

TABLE A3-2 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE FORTY-NINER MEMBER OF THE RUSTLER FORMATION, 664 TO 686
 FEET BELOW LAND SURFACE, OCTOBER 15 TO 16, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/15/1984	10:06:00	112.4	177.3	127.7	
10/15/1984	10:07:00	112.5	177.5	127.5	
10/15/1984	10:08:00	112.5	177.1	127.4	
10/15/1984	10:09:00	112.6	176.9	127.3	
10/15/1984	10:10:00	113.1	177.1	127.5	
10/15/1984	10:11:00	112.9	177.2	127.6	
10/15/1984	10:12:00	112.9	177.6	127.4	
10/15/1984	10:13:00	112.6	176.9	127.2	
10/15/1984	10:14:00	112.6	177.2	127.1	
10/15/1984	10:15:00	112.5	177.4	127.0	
10/15/1984	10:16:00	112.4	177.5	126.8	
10/15/1984	10:17:00	112.4	177.7	126.6	
10/15/1984	10:18:00	112.4	177.2	126.7	
10/15/1984	10:19:00	112.3	176.9	126.4	
10/15/1984	10:20:00	112.3	176.8	126.5	
10/15/1984	10:21:00	112.3	177.1	126.3	
10/15/1984	10:22:00	112.4	177.2	126.3	
10/15/1984	10:23:00	112.3	176.9	126.2	
10/15/1984	10:25:00	112.2	177.3	126.0	
10/15/1984	10:29:00	112.1	177.4	125.4	
10/15/1984	10:30:00	112.0	176.7	125.5	
10/15/1984	10:31:00	111.9	176.4	125.3	
10/15/1984	10:32:00	111.8	176.3	125.2	
10/15/1984	10:33:00	111.9	176.4	125.2	
10/15/1984	10:34:00	112.0	176.3	125.1	
10/15/1984	10:35:00	111.9	176.5	125.0	
10/15/1984	10:35:05	112.0	176.4	125.1	
10/15/1984	10:35:10	111.9	176.3	125.0	
10/15/1984	10:35:15	112.0	176.3	125.0	
10/15/1984	10:35:20	112.0	176.3	124.9	Deflated Valve
10/15/1984	10:35:25	112.0	176.2	125.0	Packer- FFL
10/15/1984	10:35:30	112.0	176.1	125.0	
10/15/1984	10:35:35	112.0	175.9	125.0	
10/15/1984	10:35:40	111.9	175.3	124.9	
10/15/1984	10:35:45	112.0	174.7	125.0	
10/15/1984	10:35:50	112.0	173.9	124.9	
10/15/1984	10:35:55	112.0	172.9	125.0	
10/15/1984	10:36:00	112.0	171.3	125.0	
10/15/1984	10:36:05	112.0	149.0	124.9	
10/15/1984	10:36:10	112.0	135.0	124.9	
10/15/1984	10:36:15	112.0	119.4	124.9	
10/15/1984	10:36:20	111.9	104.6	124.7	
10/15/1984	10:36:25	112.0	91.0	124.7	
10/15/1984	10:36:30	112.0	74.4	124.6	
10/15/1984	10:36:35	112.0	60.3	124.8	
10/15/1984	10:36:40	111.9	47.8	124.7	
10/15/1984	10:36:45	111.9	37.6	124.8	
10/15/1984	10:36:50	111.9	27.2	124.6	
10/15/1984	10:36:55	111.9	19.2	124.6	
10/15/1984	10:37:00	111.9	10.2	124.7	

TABLE A3-2 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE FORTY-NINER MEMBER OF THE RUSTLER FORMATION, 664 TO 686
 FEET BELOW LAND SURFACE, OCTOBER 15 TO 16, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/15/1984	10:37:05	112.0	7.8	124.6	
10/15/1984	10:37:10	111.9	7.8	124.7	
10/15/1984	10:37:15	111.9	7.7	124.6	
10/15/1984	10:37:20	111.9	7.6	124.8	
10/15/1984	10:37:25	111.9	7.5	124.7	
10/15/1984	10:37:30	111.9	7.5	124.7	
10/15/1984	10:37:35	111.9	7.4	124.7	
10/15/1984	10:37:40	111.9	7.3	124.7	
10/15/1984	10:37:45	111.8	7.4	124.6	
10/15/1984	10:37:50	111.8	7.4	124.7	
10/15/1984	10:37:55	111.8	7.3	124.7	
10/15/1984	10:38:00	111.9	7.3	124.7	
10/15/1984	10:38:05	111.8	7.2	124.7	
10/15/1984	10:38:10	111.9	7.3	124.7	
10/15/1984	10:38:15	111.8	7.3	124.6	
10/15/1984	10:38:20	111.8	7.2	124.6	
10/15/1984	10:38:25	111.7	7.3	124.6	
10/15/1984	10:38:30	111.8	7.3	124.7	
10/15/1984	10:38:35	111.8	7.3	124.6	
10/15/1984	10:38:40	111.8	7.3	124.6	
10/15/1984	10:38:45	111.8	7.3	124.6	
10/15/1984	10:38:50	111.8	7.3	124.6	
10/15/1984	10:38:55	111.8	7.2	124.6	
10/15/1984	10:39:00	111.8	7.3	124.6	
10/15/1984	10:39:10	111.8	7.4	124.6	
10/15/1984	10:39:20	111.7	7.3	124.6	
10/15/1984	10:39:30	111.8	7.3	124.4	
10/15/1984	10:39:40	111.8	7.2	124.5	
10/15/1984	10:39:50	111.8	7.3	124.6	
10/15/1984	10:40:00	111.8	7.3	124.4	
10/15/1984	10:40:10	111.8	7.4	124.5	
10/15/1984	10:40:20	111.8	7.3	124.4	
10/15/1984	10:40:30	111.8	7.3	124.4	
10/15/1984	10:40:40	111.7	7.3	124.3	
10/15/1984	10:40:50	111.7	7.2	124.3	
10/15/1984	10:41:00	111.7	7.2	124.3	
10/15/1984	10:41:10	111.7	7.3	124.4	
10/15/1984	10:41:20	111.6	7.2	124.3	
10/15/1984	10:41:30	111.6	7.2	124.3	
10/15/1984	10:41:45	111.6	7.2	124.2	
10/15/1984	10:42:00	111.6	7.3	124.2	
10/15/1984	10:42:15	111.6	7.2	124.3	
10/15/1984	10:42:30	111.6	7.4	124.2	
10/15/1984	10:42:45	111.7	7.4	124.2	
10/15/1984	10:43:00	111.7	7.4	124.2	
10/15/1984	10:43:15	111.6	7.4	124.2	
10/15/1984	10:43:30	111.7	7.5	124.2	
10/15/1984	10:43:45	111.7	7.5	124.2	
10/15/1984	10:44:00	111.7	7.5	124.1	
10/15/1984	10:44:15	111.7	7.5	124.2	

TABLE A3-2 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE FORTY-NINER MEMBER OF THE RUSTLER FORMATION, 664 TO 686
 FEET BELOW LAND SURFACE, OCTOBER 15 TO 16, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/15/1984	10:44:30	111.7	7.5	124.2	
10/15/1984	10:44:45	111.7	7.6	124.1	
10/15/1984	10:45:00	111.7	7.5	124.1	
10/15/1984	10:45:30	111.7	7.4	124.0	
10/15/1984	10:46:00	111.6	7.5	123.9	
10/15/1984	10:46:30	111.6	7.5	124.0	
10/15/1984	10:47:00	111.7	7.6	123.9	
10/15/1984	10:47:30	111.7	7.6	123.9	
10/15/1984	10:48:00	111.6	7.6	123.9	
10/15/1984	10:48:30	111.6	7.7	123.9	
10/15/1984	10:49:00	111.6	7.6	123.8	
10/15/1984	10:50:00	111.5	7.6	123.7	
10/15/1984	10:51:00	111.5	7.6	123.5	
10/15/1984	10:52:00	111.3	7.7	123.3	
10/15/1984	10:54:00	111.5	7.8	123.4	
10/15/1984	10:56:00	111.6	8.0	123.2	
10/15/1984	10:58:00	111.4	7.8	122.9	
10/15/1984	11:00:00	111.3	7.8	122.8	
10/15/1984	11:02:00	111.3	7.8	122.5	
10/15/1984	11:05:00	111.2	7.9	122.3	
10/15/1984	11:10:00	111.2	8.0	122.0	
10/15/1984	11:15:00	111.1	8.0	121.5	
10/15/1984	11:20:00	111.1	8.1	121.2	
10/15/1984	11:25:00	111.2	8.3	120.9	
10/15/1984	11:30:00	111.1	8.2	120.6	
10/15/1984	11:31:00	111.1	8.2	120.4	
10/15/1984	11:32:00	111.0	8.1	120.6	
10/15/1984	11:33:00	111.0	8.3	120.4	
10/15/1984	11:34:00	111.0	8.3	120.4	
10/15/1984	11:35:00	111.1	8.3	120.2	
10/15/1984	11:36:00	111.0	8.3	120.1	
10/15/1984	11:37:00	111.0	8.3	119.9	
10/15/1984	11:38:00	111.1	8.4	120.1	
10/15/1984	11:38:10	111.0	8.3	120.1	
10/15/1984	11:38:20	111.1	8.6	120.1	Shut-in For FBU
10/15/1984	11:38:30	111.2	19.0	120.0	
10/15/1984	11:38:40	111.2	20.3	120.0	
10/15/1984	11:38:50	111.2	21.1	120.0	
10/15/1984	11:39:00	111.1	21.7	120.1	
10/15/1984	11:39:10	111.2	22.0	120.1	
10/15/1984	11:39:20	111.1	22.6	120.0	
10/15/1984	11:39:30	111.1	23.0	119.9	
10/15/1984	11:39:40	111.1	23.3	119.9	
10/15/1984	11:39:50	111.1	23.8	119.8	
10/15/1984	11:40:00	111.1	24.4	119.9	
10/15/1984	11:40:10	111.1	24.7	120.0	
10/15/1984	11:40:20	111.1	25.2	119.9	
10/15/1984	11:40:30	111.1	25.6	119.9	
10/15/1984	11:40:40	111.1	26.1	119.8	
10/15/1984	11:40:50	111.1	26.5	119.8	

TABLE A3-2 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE FORTY-NINER MEMBER OF THE RUSTLER FORMATION, 664 TO 686
 FEET BELOW LAND SURFACE, OCTOBER 15 TO 16, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/15/1984	11:41:00	111.1	26.9	119.8	
10/15/1984	11:41:10	111.1	27.3	119.8	
10/15/1984	11:41:20	111.1	27.8	119.8	
10/15/1984	11:41:30	111.1	28.3	119.7	
10/15/1984	11:41:40	111.1	28.8	119.7	
10/15/1984	11:41:50	111.1	29.2	119.7	
10/15/1984	11:42:00	111.0	29.7	119.7	
10/15/1984	11:42:10	111.0	30.2	119.7	
10/15/1984	11:42:20	111.0	30.7	119.7	
10/15/1984	11:42:30	111.0	31.2	119.5	
10/15/1984	11:42:40	111.0	31.6	119.6	
10/15/1984	11:42:50	110.9	32.1	119.5	
10/15/1984	11:43:00	111.0	32.5	119.6	
10/15/1984	11:43:15	111.0	33.2	119.6	
10/15/1984	11:43:30	110.9	34.1	119.6	
10/15/1984	11:43:45	111.0	34.9	119.7	
10/15/1984	11:44:00	110.9	35.6	119.6	
10/15/1984	11:44:15	110.9	36.5	119.6	
10/15/1984	11:44:30	111.0	37.4	119.7	
10/15/1984	11:44:45	111.0	38.2	119.6	
10/15/1984	11:45:00	111.0	39.0	119.6	
10/15/1984	11:45:15	111.1	39.9	119.6	
10/15/1984	11:45:30	111.1	40.7	119.6	
10/15/1984	11:45:45	111.1	41.6	119.6	
10/15/1984	11:46:00	111.0	42.4	119.5	
10/15/1984	11:46:15	111.0	43.3	119.5	
10/15/1984	11:46:30	111.1	44.2	119.5	
10/15/1984	11:46:45	111.0	45.0	119.5	
10/15/1984	11:47:00	111.0	46.0	119.5	
10/15/1984	11:47:15	111.0	46.9	119.4	
10/15/1984	11:47:30	111.0	47.9	119.4	
10/15/1984	11:47:45	111.0	48.8	119.5	
10/15/1984	11:48:00	111.0	49.8	119.5	
10/15/1984	11:48:15	111.0	50.8	119.4	
10/15/1984	11:48:30	111.0	51.8	119.4	
10/15/1984	11:48:45	110.9	52.7	119.4	
10/15/1984	11:49:00	110.9	53.6	119.3	
10/15/1984	11:49:15	110.9	54.6	119.3	
10/15/1984	11:49:30	111.0	55.5	119.2	
10/15/1984	11:49:45	111.0	56.6	119.2	
10/15/1984	11:50:00	110.9	57.7	119.2	
10/15/1984	11:50:15	111.0	58.6	119.3	
10/15/1984	11:50:30	111.0	59.6	119.3	
10/15/1984	11:50:45	111.0	60.6	119.2	
10/15/1984	11:51:00	111.0	61.6	119.3	
10/15/1984	11:51:15	111.0	62.6	119.2	
10/15/1984	11:51:30	111.0	63.5	119.1	
10/15/1984	11:51:45	110.9	64.5	119.3	
10/15/1984	11:52:00	111.0	65.6	119.2	
10/15/1984	11:52:15	110.9	66.6	119.2	

TABLE A3-2 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE FORTY-NINER MEMBER OF THE RUSTLER FORMATION, 664 TO 686
 FEET BELOW LAND SURFACE, OCTOBER 15 TO 16, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/15/1984	11:52:30	111.0	67.6	119.2	
10/15/1984	11:52:45	111.1	68.6	119.2	
10/15/1984	11:53:00	111.1	69.6	119.2	
10/15/1984	11:53:15	111.1	70.6	119.1	
10/15/1984	11:53:30	111.1	71.7	119.1	
10/15/1984	11:53:45	111.0	72.8	119.1	
10/15/1984	11:54:00	111.0	73.7	119.0	
10/15/1984	11:54:15	111.0	74.6	119.0	
10/15/1984	11:54:30	110.9	75.7	119.0	
10/15/1984	11:54:45	111.0	76.7	118.9	
10/15/1984	11:55:00	111.0	77.6	119.0	
10/15/1984	11:55:15	111.0	78.5	119.0	
10/15/1984	11:55:30	111.0	79.6	119.0	
10/15/1984	11:55:45	111.0	80.5	119.0	
10/15/1984	11:56:00	111.0	81.5	119.0	
10/15/1984	11:56:15	111.0	82.5	119.0	
10/15/1984	11:56:30	111.0	83.4	119.0	
10/15/1984	11:56:45	111.0	84.5	119.1	
10/15/1984	11:57:00	111.0	85.3	119.0	
10/15/1984	11:57:15	111.0	86.3	119.0	
10/15/1984	11:57:30	111.0	87.2	118.9	
10/15/1984	11:57:45	111.0	88.2	119.0	
10/15/1984	11:58:00	111.0	89.1	118.9	
10/15/1984	11:58:15	111.0	90.0	118.8	
10/15/1984	11:58:30	111.0	90.9	118.8	
10/15/1984	11:58:45	110.9	91.7	118.9	
10/15/1984	11:59:00	111.0	92.5	118.9	
10/15/1984	11:59:15	111.0	93.3	119.0	
10/15/1984	11:59:30	111.1	94.0	118.8	
10/15/1984	11:59:45	111.0	94.9	118.9	
10/15/1984	12:00:00	111.0	95.8	118.8	
10/15/1984	12:00:15	111.1	96.5	118.9	
10/15/1984	12:00:30	111.1	97.4	118.7	
10/15/1984	12:01:00	111.1	99.1	118.6	
10/15/1984	12:01:30	111.1	100.5	118.6	
10/15/1984	12:02:00	111.0	101.9	118.6	
10/15/1984	12:02:30	111.0	103.4	118.6	
10/15/1984	12:03:00	111.0	105.0	118.7	
10/15/1984	12:03:30	111.0	106.4	118.5	
10/15/1984	12:04:00	111.0	107.7	118.5	
10/15/1984	12:04:30	111.0	109.0	118.4	
10/15/1984	12:05:00	111.0	110.2	118.5	
10/15/1984	12:05:30	110.9	111.4	118.4	
10/15/1984	12:06:00	110.9	112.6	118.4	
10/15/1984	12:06:30	110.9	113.7	118.4	
10/15/1984	12:07:00	110.8	114.8	118.4	
10/15/1984	12:07:30	111.2	116.1	118.4	
10/15/1984	12:08:00	111.5	117.5	118.6	
10/15/1984	12:08:30	111.3	118.4	118.6	
10/15/1984	12:09:00	111.6	119.6	118.7	

TABLE A3-2 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE FORTY-NINER MEMBER OF THE RUSTLER FORMATION, 664 TO 686
 FEET BELOW LAND SURFACE, OCTOBER 15 TO 16, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/15/1984	12:09:30	111.8	120.7	118.8	
10/15/1984	12:10:00	111.7	121.6	118.8	
10/15/1984	12:10:30	111.6	122.5	118.7	
10/15/1984	12:11:00	111.8	123.3	118.8	
10/15/1984	12:11:30	111.7	124.0	118.7	
10/15/1984	12:12:00	111.6	124.9	118.7	
10/15/1984	12:12:30	111.4	125.7	118.6	
10/15/1984	12:13:00	111.2	126.4	118.5	
10/15/1984	12:13:30	111.1	127.1	118.3	
10/15/1984	12:14:00	111.1	127.6	118.3	
10/15/1984	12:14:30	111.0	128.1	118.3	
10/15/1984	12:15:00	110.9	129.0	118.2	
10/15/1984	12:15:30	110.9	129.6	118.0	
10/15/1984	12:16:00	110.8	130.2	117.9	
10/15/1984	12:16:30	110.8	130.8	118.0	
10/15/1984	12:17:00	110.9	131.4	117.9	
10/15/1984	12:17:30	110.8	132.0	117.9	
10/15/1984	12:18:00	110.8	132.5	117.9	
10/15/1984	12:18:30	110.8	133.1	117.9	
10/15/1984	12:19:00	110.8	133.6	117.8	
10/15/1984	12:19:30	110.8	134.1	117.7	
10/15/1984	12:20:00	110.7	134.6	117.5	
10/15/1984	12:20:30	110.6	135.0	117.7	
10/15/1984	12:21:00	110.7	135.5	117.6	
10/15/1984	12:21:30	110.7	136.0	117.6	
10/15/1984	12:22:00	110.7	136.4	117.5	
10/15/1984	12:22:30	110.7	136.9	117.6	
10/15/1984	12:23:00	110.8	137.3	117.6	
10/15/1984	12:23:30	110.7	137.7	117.5	
10/15/1984	12:24:00	110.7	138.0	117.6	
10/15/1984	12:24:30	110.8	138.4	117.5	
10/15/1984	12:25:00	110.7	138.8	117.4	
10/15/1984	12:25:30	110.7	139.2	117.3	
10/15/1984	12:26:00	110.8	139.6	117.4	
10/15/1984	12:26:30	110.8	139.9	117.3	
10/15/1984	12:27:00	110.8	140.2	117.3	
10/15/1984	12:27:30	110.9	140.5	117.3	
10/15/1984	12:28:00	110.9	140.9	117.4	
10/15/1984	12:28:30	110.9	141.3	117.3	
10/15/1984	12:29:00	110.8	141.6	117.2	
10/15/1984	12:29:30	110.8	141.8	117.2	
10/15/1984	12:30:00	110.8	142.2	117.2	
10/15/1984	12:30:30	110.8	142.6	117.1	
10/15/1984	12:31:00	110.7	142.8	117.0	
10/15/1984	12:32:00	110.6	143.2	117.0	
10/15/1984	12:33:00	110.7	143.8	117.0	
10/15/1984	12:34:00	110.7	144.3	116.8	
10/15/1984	12:35:00	110.6	144.8	116.8	
10/15/1984	12:36:00	110.5	145.3	116.7	
10/15/1984	12:37:00	110.5	145.7	116.7	

TABLE A3-2 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE FORTY-NINER MEMBER OF THE RUSTLER FORMATION, 664 TO 686
 FEET BELOW LAND SURFACE, OCTOBER 15 TO 16, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/15/1984	12:38:00	110.6	146.4	116.5	
10/15/1984	12:39:00	110.6	146.8	116.6	
10/15/1984	12:40:00	110.6	147.2	116.7	
10/15/1984	12:41:00	110.7	147.5	116.8	
10/15/1984	12:42:00	110.7	147.7	116.6	
10/15/1984	12:43:00	110.7	148.1	116.5	
10/15/1984	12:44:00	110.6	148.5	116.6	
10/15/1984	12:45:00	110.6	148.7	116.3	
10/15/1984	12:46:00	110.5	149.0	116.1	
10/15/1984	12:47:00	110.6	149.3	116.0	
10/15/1984	12:48:00	110.5	149.6	116.1	
10/15/1984	12:49:00	110.6	149.9	116.1	
10/15/1984	12:50:00	110.6	150.2	116.1	
10/15/1984	12:51:00	110.6	150.4	116.1	
10/15/1984	12:52:00	110.6	150.7	116.0	
10/15/1984	12:53:00	111.0	151.3	116.1	
10/15/1984	12:54:00	110.9	151.4	116.0	
10/15/1984	12:55:00	110.7	151.6	116.0	
10/15/1984	12:56:00	110.7	151.8	116.0	
10/15/1984	12:57:00	110.6	152.0	116.0	
10/15/1984	12:58:00	110.6	152.3	115.8	
10/15/1984	12:59:00	110.6	152.5	115.8	
10/15/1984	13:00:00	110.5	152.7	115.8	
10/15/1984	13:05:00	110.6	153.7	115.5	
10/15/1984	13:10:00	110.7	154.8	115.6	
10/15/1984	13:15:00	110.7	155.7	115.5	
10/15/1984	13:20:00	110.5	156.1	115.1	
10/15/1984	13:25:00	110.3	156.5	114.8	
10/15/1984	13:30:00	110.3	156.9	114.7	
10/15/1984	13:35:00	110.2	157.2	114.5	
10/15/1984	13:40:00	110.3	157.5	114.4	
10/15/1984	13:50:00	110.1	158.1	114.0	
10/15/1984	14:00:00	110.2	158.7	113.8	
10/15/1984	14:10:00	110.2	159.1	113.7	
10/15/1984	14:20:00	110.2	159.7	113.5	
10/15/1984	14:30:00	110.2	160.3	113.2	
10/15/1984	14:40:00	110.3	160.7	113.2	
10/15/1984	14:50:00	110.5	161.1	113.8	
10/15/1984	15:00:00	110.6	162.0	114.7	
10/15/1984	15:15:00	110.9	164.5	115.9	
10/15/1984	15:23:00	111.2	165.0	116.4	
10/15/1984	15:30:00	111.5	165.7	116.4	
10/15/1984	15:45:00	111.6	167.3	115.9	
10/15/1984	16:00:00	112.1	168.4	115.0	
10/15/1984	16:15:00	112.4	167.1	114.7	
10/15/1984	16:30:00	112.4	167.9	115.3	
10/15/1984	16:45:00	112.2	167.6	115.2	
10/15/1984	17:00:00	112.1	167.6	114.9	
10/15/1984	17:15:00	112.7	168.3	115.8	
10/15/1984	17:30:00	113.4	169.7	117.0	

TABLE A3-2 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE FORTY-NINER MEMBER OF THE RUSTLER FORMATION, 664 TO 686
 FEET BELOW LAND SURFACE, OCTOBER 15 TO 16, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/15/1984	17:45:00	114.0	170.9	118.3	
10/15/1984	18:00:00	114.1	171.6	118.7	
10/15/1984	18:15:00	114.3	172.1	119.5	
10/15/1984	18:30:00	114.5	172.6	120.1	
10/15/1984	18:45:00	114.6	173.3	120.6	
10/15/1984	19:00:00	114.8	173.6	121.1	
10/15/1984	19:15:00	114.9	174.3	121.4	
10/15/1984	19:30:00	115.0	173.9	121.7	
10/15/1984	19:45:00	115.2	174.0	122.1	
10/15/1984	20:00:00	115.4	174.4	122.5	
10/15/1984	20:15:00	115.4	174.6	122.7	
10/15/1984	20:30:00	115.5	174.9	123.1	
10/15/1984	20:45:00	115.6	175.1	123.4	
10/15/1984	21:00:00	115.8	175.1	123.6	
10/15/1984	21:07:00	115.7	175.2	123.8	End FBU
10/15/1984	21:08:00	115.8	175.2	123.7	
10/15/1984	21:08:10	115.8	175.1	123.8	
10/15/1984	21:08:20	115.7	175.2	123.8	
10/15/1984	21:08:30	115.7	175.2	123.7	Deflated Valve
10/15/1984	21:08:40	115.7	175.2	123.7	Packer for SLUG Test
10/15/1984	21:08:50	115.7	175.2	123.7	
10/15/1984	21:09:00	115.7	175.2	123.7	
10/15/1984	21:09:10	115.7	175.1	123.7	
10/15/1984	21:09:20	115.7	175.2	123.8	
10/15/1984	21:09:30	115.7	175.2	123.7	
10/15/1984	21:09:40	115.7	175.1	123.7	
10/15/1984	21:09:50	115.7	175.0	123.7	
10/15/1984	21:10:00	115.7	175.0	123.7	
10/15/1984	21:10:10	115.7	174.5	123.6	
10/15/1984	21:10:20	115.8	173.9	123.6	
10/15/1984	21:10:30	115.8	172.9	123.6	
10/15/1984	21:10:40	115.6	149.0	123.6	
10/15/1984	21:10:50	115.7	119.1	123.7	
10/15/1984	21:11:00	115.7	87.2	123.6	
10/15/1984	21:11:10	115.7	59.6	123.6	
10/15/1984	21:11:20	115.8	37.3	123.6	
10/15/1984	21:11:30	115.8	19.9	123.5	
10/15/1984	21:11:40	115.8	15.2	123.7	
10/15/1984	21:11:50	115.8	15.1	123.7	
10/15/1984	21:12:00	115.7	14.9	123.7	Begin Slug Test
10/15/1984	21:12:10	115.8	14.7	123.8	
10/15/1984	21:12:20	115.7	14.7	123.7	
10/15/1984	21:12:30	115.7	14.7	123.7	
10/15/1984	21:12:40	115.7	14.7	123.6	
10/15/1984	21:12:50	115.8	14.7	123.7	
10/15/1984	21:13:00	115.7	14.7	123.8	
10/15/1984	21:13:10	115.8	14.7	123.9	
10/15/1984	21:13:20	115.7	14.7	123.7	
10/15/1984	21:13:30	115.7	14.7	123.8	
10/15/1984	21:13:40	115.8	14.6	123.8	

TABLE A3-2 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE FORTY-NINER MEMBER OF THE RUSTLER FORMATION, 664 TO 686
 FEET BELOW LAND SURFACE, OCTOBER 15 TO 16, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/15/1984	21:13:50	115.8	14.7	123.7	
10/15/1984	21:14:00	115.8	14.7	123.8	
10/15/1984	21:14:10	115.8	14.7	123.8	
10/15/1984	21:14:20	115.8	14.7	123.7	
10/15/1984	21:14:30	115.8	14.7	123.7	
10/15/1984	21:14:40	115.8	14.7	123.8	
10/15/1984	21:14:50	115.9	14.8	123.8	
10/15/1984	21:15:00	115.8	14.9	123.8	
10/15/1984	21:15:30	115.8	14.8	123.8	
10/15/1984	21:16:00	115.8	14.8	124.0	
10/15/1984	21:16:30	115.8	14.8	123.8	
10/15/1984	21:17:00	115.9	14.8	123.8	
10/15/1984	21:17:30	115.8	14.8	123.8	
10/15/1984	21:18:00	115.9	14.9	123.8	
10/15/1984	21:19:00	115.8	14.8	123.8	
10/15/1984	21:20:00	115.9	14.9	123.8	
10/15/1984	21:21:00	115.9	15.0	123.9	
10/15/1984	21:22:00	115.9	15.0	123.8	
10/15/1984	21:23:00	115.9	15.1	124.0	
10/15/1984	21:24:00	115.9	15.1	123.8	
10/15/1984	21:25:00	115.8	15.1	124.0	
10/15/1984	21:30:00	115.6	15.3	123.7	
10/15/1984	21:45:00	115.3	15.8	123.6	
10/15/1984	22:00:00	115.3	16.2	123.5	
10/15/1984	22:15:00	115.1	16.5	123.0	
10/15/1984	22:30:00	115.0	16.9	122.7	
10/15/1984	22:45:00	115.0	17.3	122.6	
10/15/1984	23:00:00	115.1	17.8	122.7	
10/15/1984	23:15:00	115.2	18.4	122.5	
10/15/1984	23:30:00	115.4	18.9	122.7	
10/15/1984	23:45:00	115.3	19.2	122.8	
10/16/1984	00:00:00	116.4	20.0	124.0	
10/16/1984	00:15:00	117.0	20.8	125.7	
10/16/1984	00:30:00	117.3	21.4	127.0	
10/16/1984	00:45:00	117.5	21.8	128.0	
10/16/1984	01:00:00	117.5	22.2	128.9	
10/16/1984	01:15:00	117.7	22.7	129.7	
10/16/1984	01:30:00	117.8	23.1	130.4	
10/16/1984	01:45:00	117.9	23.6	130.7	
10/16/1984	02:00:00	118.0	24.1	131.5	
10/16/1984	02:15:00	118.0	24.6	131.8	
10/16/1984	02:30:00	118.0	25.0	131.9	
10/16/1984	02:45:00	118.0	25.1	132.1	
10/16/1984	03:00:00	118.0	25.5	132.0	
10/16/1984	03:15:00	118.0	25.9	132.2	
10/16/1984	03:30:00	118.2	26.2	132.4	
10/16/1984	03:45:00	118.3	26.7	132.7	
10/16/1984	04:00:00	118.3	26.8	132.9	
10/16/1984	04:15:00	118.2	27.2	132.8	
10/16/1984	04:30:00	118.1	27.4	133.0	

TABLE A3-2 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE FORTY-NINER MEMBER OF THE RUSTLER FORMATION, 664 TO 686
 FEET BELOW LAND SURFACE, OCTOBER 15 TO 16, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/16/1984	04:45:00	118.1	27.6	132.9	
10/16/1984	05:00:00	118.1	27.8	132.4	
10/16/1984	05:15:00	118.0	28.0	132.4	
10/16/1984	05:30:00	118.1	28.4	132.5	
10/16/1984	05:45:00	118.0	28.8	132.6	
10/16/1984	06:00:00	118.1	29.1	132.5	
10/16/1984	06:15:00	118.1	29.8	132.5	
10/16/1984	06:30:00	118.1	30.4	132.6	
10/16/1984	06:45:00	118.1	30.2	132.8	
10/16/1984	07:00:00	118.2	30.8	132.9	
10/16/1984	07:15:00	118.3	30.7	133.5	
10/16/1984	07:30:00	118.3	31.1	133.6	
10/16/1984	07:45:00	118.3	31.1	133.6	
10/16/1984	08:00:00	117.9	31.3	133.1	
10/16/1984	08:15:00	117.8	31.8	132.7	End of Slug Test

TABLE A3-3
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE MAGENTA DOLOMITE MEMBER OF THE RUSTLER FORMATION, 700
 TO 722 FEET BELOW LAND SURFACE, OCTOBER 13 TO 15, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/13/1984	13:30:00	124.3	199.8	219.7	
10/13/1984	13:35:00	124.3	200.0	219.8	
10/13/1984	13:40:00	124.8	201.4	220.2	Inflated Straddle
10/13/1984	13:45:00	126.6	255.9	145.6	Packers
10/13/1984	13:46:00	126.7	250.9	143.2	
10/13/1984	13:47:00	126.8	247.2	142.2	
10/13/1984	13:47:30	126.9	245.7	141.8	Deflated Valve
10/13/1984	13:48:00	126.9	162.7	141.4	Packer
10/13/1984	13:48:30	127.0	105.1	141.2	
10/13/1984	13:49:00	127.0	105.1	141.1	
10/13/1984	13:49:30	127.0	105.3	140.9	
10/13/1984	13:50:00	127.1	105.4	140.8	
10/13/1984	13:50:30	127.2	105.5	140.8	
10/13/1984	13:51:00	127.2	105.5	140.5	
10/13/1984	13:51:30	127.2	105.5	140.3	
10/13/1984	13:52:00	127.1	105.6	140.3	
10/13/1984	13:52:30	127.2	105.5	140.0	
10/13/1984	13:53:00	127.1	105.6	139.9	
10/13/1984	13:53:30	127.1	105.5	139.9	
10/13/1984	13:54:00	127.0	105.3	139.6	
10/13/1984	13:54:30	127.0	105.2	139.5	
10/13/1984	13:55:00	127.0	105.2	139.3	
10/13/1984	13:55:30	126.9	105.1	139.2	
10/13/1984	13:56:00	127.1	105.2	139.2	
10/13/1984	13:56:30	127.2	105.2	139.1	
10/13/1984	13:57:00	127.2	105.3	139.0	
10/13/1984	13:57:30	127.2	105.3	139.0	
10/13/1984	13:58:00	127.2	105.3	138.9	
10/13/1984	13:58:30	127.2	105.1	139.0	Inflated Valve
10/13/1984	13:59:00	127.3	141.1	139.0	Packer
10/13/1984	13:59:30	127.4	136.6	139.0	
10/13/1984	14:00:00	127.4	135.6	138.9	Bailed Tubing
10/13/1984	14:00:30	127.6	135.5	139.0	
10/13/1984	14:01:00	127.6	136.2	139.0	
10/13/1984	14:01:30	127.6	136.8	139.0	
10/13/1984	14:02:00	127.7	137.6	138.8	
10/13/1984	14:02:30	127.8	138.3	138.9	
10/13/1984	14:03:00	127.9	139.2	138.8	
10/13/1984	14:04:00	128.0	140.7	138.9	
10/13/1984	14:05:00	127.7	142.0	139.0	
10/13/1984	14:10:00	128.3	147.7	138.7	
10/13/1984	14:15:00	128.8	153.1	139.0	
10/13/1984	14:20:00	129.5	157.9	139.3	
10/13/1984	14:25:00	130.1	161.3	139.5	
10/13/1984	14:30:00	129.9	163.3	139.2	
10/13/1984	14:35:00	129.8	164.2	138.7	
10/13/1984	14:40:00	130.1	165.8	138.4	
10/13/1984	14:45:00	130.3	167.7	138.8	
10/13/1984	14:50:00	131.0	169.9	139.3	
10/13/1984	14:55:00	131.2	171.5	139.7	

TABLE A3-3 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE MAGENTA DOLOMITE MEMBER OF THE RUSTLER FORMATION, 700
 TO 722 FEET BELOW LAND SURFACE, OCTOBER 13 TO 15, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/13/1984	15:00:00	131.4	172.6	139.9	
10/13/1984	15:05:00	131.5	173.6	140.0	
10/13/1984	15:10:00	131.7	174.6	140.3	
10/13/1984	15:15:00	131.9	175.8	140.6	
10/13/1984	15:20:00	132.1	176.7	140.9	
10/13/1984	15:25:00	132.3	177.7	141.1	
10/13/1984	15:30:00	132.3	178.5	141.4	
10/13/1984	15:35:00	132.3	179.0	141.5	
10/13/1984	15:40:00	132.5	180.1	142.1	
10/13/1984	15:45:00	133.0	181.0	142.3	
10/13/1984	15:50:00	132.9	181.7	142.9	
10/13/1984	15:55:00	133.2	182.5	143.1	
10/13/1984	16:00:00	133.4	183.3	143.6	
10/13/1984	16:05:00	133.4	183.8	143.7	
10/13/1984	16:10:00	133.4	184.2	144.0	
10/13/1984	16:15:00	133.6	184.6	144.4	
10/13/1984	16:20:00	133.6	184.9	144.5	
10/13/1984	16:25:00	133.6	185.0	144.7	
10/13/1984	16:25:30	133.6	185.1	144.6	
10/13/1984	16:26:00	133.6	185.1	144.7	
10/13/1984	16:26:30	133.6	185.2	144.7	
10/13/1984	16:27:00	133.6	185.1	144.8	
10/13/1984	16:27:05	133.6	185.2	144.9	
10/13/1984	16:27:10	133.6	185.2	144.7	
10/13/1984	16:27:15	133.6	185.1	144.8	
10/13/1984	16:27:20	133.6	185.2	144.7	
10/13/1984	16:27:25	133.5	185.2	144.9	
10/13/1984	16:27:30	133.6	185.2	144.8	
10/13/1984	16:27:35	133.6	185.2	144.8	
10/13/1984	16:27:40	133.6	185.1	144.8	
10/13/1984	16:27:45	133.6	184.8	144.8	
10/13/1984	16:27:50	133.6	184.4	144.8	
10/13/1984	16:27:55	133.6	184.1	144.8	Deflated Valve
10/13/1984	16:28:00	133.6	183.5	144.9	Packer
10/13/1984	16:28:05	133.6	182.2	144.8	
10/13/1984	16:28:10	133.6	157.5	144.8	
10/13/1984	16:28:15	133.6	142.2	144.7	
10/13/1984	16:28:20	133.6	125.7	144.8	
10/13/1984	16:28:25	133.6	104.1	144.7	
10/13/1984	16:28:30	133.6	86.6	144.7	
10/13/1984	16:28:35	133.6	71.2	144.6	
10/13/1984	16:28:40	133.6	56.5	144.8	
10/13/1984	16:28:45	133.6	44.5	144.7	
10/13/1984	16:28:50	133.6	34.1	144.6	
10/13/1984	16:28:55	133.6	25.1	144.6	
10/13/1984	16:29:00	133.6	19.0	144.6	
10/13/1984	16:29:05	133.6	7.9	144.7	FFL
10/13/1984	16:29:10	133.6	7.1	144.5	
10/13/1984	16:29:15	133.6	7.2	144.8	
10/13/1984	16:29:20	133.6	7.2	144.7	

TABLE A3-3 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE MAGENTA DOLOMITE MEMBER OF THE RUSTLER FORMATION, 700
 TO 722 FEET BELOW LAND SURFACE, OCTOBER 13 TO 15, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/13/1984	16:29:25	133.6	7.0	144.6	
10/13/1984	16:29:30	133.6	7.1	144.8	
10/13/1984	16:29:35	133.6	7.0	144.7	
10/13/1984	16:29:40	133.6	7.0	144.8	
10/13/1984	16:29:45	133.5	7.0	144.8	
10/13/1984	16:29:50	133.6	7.0	144.8	
10/13/1984	16:29:55	133.6	7.0	144.7	
10/13/1984	16:30:00	133.6	7.0	144.9	
10/13/1984	16:30:05	133.5	7.0	144.8	
10/13/1984	16:30:10	133.6	7.0	144.8	
10/13/1984	16:30:15	133.6	6.9	144.9	
10/13/1984	16:30:20	133.6	7.0	144.8	
10/13/1984	16:30:25	133.6	7.0	144.8	
10/13/1984	16:30:30	133.5	7.1	144.8	
10/13/1984	16:30:35	133.6	7.1	145.0	
10/13/1984	16:30:40	133.6	7.1	144.9	
10/13/1984	16:30:45	133.6	7.1	144.9	
10/13/1984	16:30:50	133.6	7.1	144.8	
10/13/1984	16:31:00	133.6	7.0	144.9	
10/13/1984	16:31:10	133.6	7.1	144.9	
10/13/1984	16:31:20	133.6	7.1	145.0	
10/13/1984	16:31:30	133.6	7.1	144.9	
10/13/1984	16:31:40	133.6	7.2	144.9	
10/13/1984	16:31:50	133.5	7.2	145.0	
10/13/1984	16:32:00	133.6	7.3	144.8	
10/13/1984	16:32:10	133.6	7.3	144.9	
10/13/1984	16:32:20	133.6	7.3	145.0	
10/13/1984	16:32:30	133.6	7.3	144.8	
10/13/1984	16:32:40	133.6	7.4	144.8	
10/13/1984	16:32:50	133.6	7.4	144.9	
10/13/1984	16:33:00	133.6	7.4	144.9	
10/13/1984	16:33:10	133.6	7.5	144.9	
10/13/1984	16:33:20	133.6	7.6	145.0	
10/13/1984	16:33:30	133.7	7.5	144.9	
10/13/1984	16:33:40	133.7	7.5	145.0	
10/13/1984	16:33:50	133.6	7.5	145.0	
10/13/1984	16:34:00	133.6	7.5	145.1	
10/13/1984	16:34:15	133.6	7.6	145.1	
10/13/1984	16:34:30	133.7	7.6	144.9	
10/13/1984	16:34:45	133.6	7.7	145.0	
10/13/1984	16:35:00	133.6	7.7	144.9	
10/13/1984	16:35:15	133.7	7.8	145.0	
10/13/1984	16:35:30	133.6	7.8	145.0	
10/13/1984	16:36:00	133.7	7.8	145.1	
10/13/1984	16:36:30	133.7	7.9	145.1	
10/13/1984	16:37:00	133.6	7.9	144.9	
10/13/1984	16:37:30	133.6	8.0	145.0	
10/13/1984	16:38:00	133.6	8.1	145.1	
10/13/1984	16:38:30	133.7	8.0	145.1	
10/13/1984	16:39:00	133.6	8.0	145.1	

TABLE A3-3 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE MAGENTA DOLOMITE MEMBER OF THE RUSTLER FORMATION, 700
 TO 722 FEET BELOW LAND SURFACE, OCTOBER 13 TO 15, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/13/1984	16:39:30	133.6	8.1	145.2	
10/13/1984	16:40:00	133.7	8.2	145.1	
10/13/1984	16:40:30	133.6	8.2	145.0	
10/13/1984	16:41:00	133.6	8.2	145.1	FFL
10/13/1984	16:41:30	133.6	8.3	145.2	
10/13/1984	16:42:00	133.7	8.3	145.2	
10/13/1984	16:42:30	133.6	8.3	145.2	
10/13/1984	16:43:00	133.6	8.4	145.1	
10/13/1984	16:44:00	133.6	8.3	145.1	
10/13/1984	16:45:00	133.6	8.4	145.0	
10/13/1984	16:46:00	133.5	8.6	145.0	
10/13/1984	16:47:00	133.5	8.6	145.0	
10/13/1984	16:48:00	133.5	8.7	145.0	
10/13/1984	16:49:00	133.6	8.8	145.2	
10/13/1984	16:50:00	133.6	8.8	145.1	
10/13/1984	16:51:00	133.6	8.9	145.1	
10/13/1984	16:52:00	133.6	9.0	145.1	
10/13/1984	16:53:00	133.6	9.0	144.9	
10/13/1984	16:54:00	133.5	9.1	145.0	
10/13/1984	16:55:00	133.4	9.0	144.9	
10/13/1984	16:56:00	133.4	9.1	144.9	
10/13/1984	16:57:00	133.4	9.1	144.8	
10/13/1984	16:58:00	133.2	9.0	144.7	
10/13/1984	16:59:00	133.2	9.0	144.6	
10/13/1984	17:00:00	133.0	8.9	144.5	
10/13/1984	17:01:00	133.0	8.9	144.4	
10/13/1984	17:02:00	133.0	8.9	144.4	
10/13/1984	17:03:00	133.0	8.9	144.2	
10/13/1984	17:04:00	133.0	9.0	144.3	
10/13/1984	17:05:00	133.0	9.0	144.3	
10/13/1984	17:06:00	132.9	9.0	144.1	
10/13/1984	17:07:00	132.8	8.9	144.1	
10/13/1984	17:08:00	132.7	8.9	144.0	
10/13/1984	17:09:00	132.6	8.8	143.7	
10/13/1984	17:10:00	132.5	8.8	143.8	
10/13/1984	17:11:00	132.4	8.8	143.7	
10/13/1984	17:12:00	132.4	8.7	143.6	
10/13/1984	17:13:00	132.5	8.8	143.6	
10/13/1984	17:14:00	132.5	8.9	143.6	
10/13/1984	17:15:00	132.5	9.0	143.6	
10/13/1984	17:16:00	132.5	9.0	143.6	
10/13/1984	17:17:00	132.5	9.1	143.3	
10/13/1984	17:18:00	132.4	9.0	143.4	
10/13/1984	17:19:00	132.4	9.0	143.4	
10/13/1984	17:20:00	132.4	9.1	143.2	
10/13/1984	17:21:00	132.3	9.1	143.1	
10/13/1984	17:22:00	132.3	9.1	142.9	
10/13/1984	17:22:20	132.3	9.1	142.9	
10/13/1984	17:22:30	132.2	10.0	142.9	Shut-in For FBU
10/13/1984	17:22:40	132.2	18.7	142.9	

TABLE A3-3 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE MAGENTA DOLOMITE MEMBER OF THE RUSTLER FORMATION, 700
 TO 722 FEET BELOW LAND SURFACE, OCTOBER 13 TO 15, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/13/1984	17:22:50	132.3	19.1	142.8	
10/13/1984	17:23:00	132.2	19.2	142.8	
10/13/1984	17:23:10	132.2	19.3	142.8	
10/13/1984	17:23:20	132.3	19.6	142.7	
10/13/1984	17:23:30	132.2	19.8	142.8	
10/13/1984	17:23:40	132.3	19.9	142.7	
10/13/1984	17:23:50	132.2	20.2	142.7	
10/13/1984	17:24:00	132.3	20.4	142.6	
10/13/1984	17:24:10	132.3	20.5	142.7	
10/13/1984	17:24:20	132.2	20.8	142.7	
10/13/1984	17:24:30	132.3	21.0	142.7	
10/13/1984	17:24:40	132.2	21.2	142.7	
10/13/1984	17:24:50	132.3	21.4	142.6	
10/13/1984	17:25:00	132.2	21.7	142.6	
10/13/1984	17:25:10	132.2	22.0	142.6	
10/13/1984	17:25:20	132.2	22.2	142.7	
10/13/1984	17:25:30	132.3	22.5	142.6	
10/13/1984	17:25:40	132.2	22.7	142.7	
10/13/1984	17:25:50	132.2	22.9	142.5	
10/13/1984	17:26:00	132.2	23.2	142.5	
10/13/1984	17:26:10	132.2	23.5	142.6	
10/13/1984	17:26:20	132.3	23.7	142.5	
10/13/1984	17:26:30	132.3	24.0	142.5	
10/13/1984	17:26:40	132.3	24.1	142.6	
10/13/1984	17:26:50	132.2	24.5	142.6	
10/13/1984	17:27:00	132.3	24.7	142.6	
10/13/1984	17:27:10	132.2	25.1	142.6	
10/13/1984	17:27:20	132.3	25.4	142.5	
10/13/1984	17:27:30	132.3	25.6	142.6	
10/13/1984	17:27:40	132.4	25.9	142.6	
10/13/1984	17:27:50	132.4	26.2	142.4	
10/13/1984	17:28:00	132.4	26.5	142.5	
10/13/1984	17:28:10	132.3	26.7	142.4	
10/13/1984	17:28:20	132.4	26.9	142.5	
10/13/1984	17:28:30	132.4	27.3	142.4	
10/13/1984	17:28:40	132.4	27.7	142.3	
10/13/1984	17:28:50	132.4	27.9	142.4	
10/13/1984	17:29:00	132.4	28.2	142.4	
10/13/1984	17:29:10	132.4	28.5	142.3	
10/13/1984	17:29:20	132.4	28.7	142.4	
10/13/1984	17:29:30	132.5	29.0	142.4	
10/13/1984	17:29:40	132.4	29.3	142.3	
10/13/1984	17:29:50	132.4	29.6	142.3	
10/13/1984	17:30:00	132.5	29.9	142.3	
10/13/1984	17:30:10	132.5	30.1	142.3	
10/13/1984	17:30:20	132.5	30.4	142.3	
10/13/1984	17:30:30	132.5	30.8	142.3	
10/13/1984	17:30:40	132.5	31.1	142.3	
10/13/1984	17:30:50	132.6	31.4	142.3	
10/13/1984	17:31:00	132.5	31.6	142.3	

TABLE A3-3 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE MAGENTA DOLOMITE MEMBER OF THE RUSTLER FORMATION, 700
 TO 722 FEET BELOW LAND SURFACE, OCTOBER 13 TO 15, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/13/1984	17:31:10	132.6	32.0	142.2	
10/13/1984	17:31:20	132.6	32.2	142.2	
10/13/1984	17:31:30	132.6	32.5	142.3	
10/13/1984	17:31:40	132.6	32.9	142.3	
10/13/1984	17:31:50	132.6	33.1	142.3	
10/13/1984	17:32:00	132.6	33.5	142.3	
10/13/1984	17:32:10	132.6	33.8	142.3	
10/13/1984	17:32:20	132.6	34.1	142.3	
10/13/1984	17:32:30	132.6	34.4	142.2	
10/13/1984	17:32:40	132.7	34.7	142.3	
10/13/1984	17:32:50	132.6	35.1	142.3	
10/13/1984	17:33:00	132.7	35.3	142.3	
10/13/1984	17:33:10	132.6	35.6	142.3	
10/13/1984	17:33:20	132.7	35.9	142.2	
10/13/1984	17:33:30	132.7	36.3	142.2	
10/13/1984	17:33:40	132.7	36.5	142.2	
10/13/1984	17:33:50	132.7	36.9	142.4	
10/13/1984	17:34:00	132.7	37.2	142.1	
10/13/1984	17:34:10	132.7	37.4	142.2	
10/13/1984	17:34:20	132.7	37.8	142.4	
10/13/1984	17:34:30	132.7	38.1	142.3	
10/13/1984	17:34:40	132.7	38.4	142.3	
10/13/1984	17:34:50	132.7	38.7	142.2	
10/13/1984	17:35:00	132.8	39.1	142.2	
10/13/1984	17:35:10	132.7	39.4	142.3	
10/13/1984	17:35:20	132.8	39.6	142.2	
10/13/1984	17:35:30	132.8	39.9	142.2	
10/13/1984	17:35:40	132.8	40.3	142.1	
10/13/1984	17:35:50	132.8	40.6	142.2	
10/13/1984	17:36:00	132.8	40.9	142.2	
10/13/1984	17:36:10	132.8	41.2	142.3	
10/13/1984	17:36:20	132.8	41.5	142.3	
10/13/1984	17:36:30	132.8	41.8	142.2	
10/13/1984	17:36:40	132.8	42.1	142.2	
10/13/1984	17:36:50	132.9	42.3	142.1	
10/13/1984	17:37:00	132.9	42.7	142.4	
10/13/1984	17:37:10	132.8	43.0	142.3	
10/13/1984	17:37:20	132.9	43.3	142.3	
10/13/1984	17:37:30	132.9	43.5	142.3	
10/13/1984	17:37:40	132.9	43.9	142.4	
10/13/1984	17:37:50	132.9	44.3	142.3	
10/13/1984	17:38:00	132.9	44.7	142.3	
10/13/1984	17:38:10	132.9	45.0	142.3	
10/13/1984	17:38:20	132.9	45.3	142.4	
10/13/1984	17:38:30	132.9	45.6	142.3	
10/13/1984	17:38:40	133.0	45.8	142.3	
10/13/1984	17:38:50	132.9	46.2	142.3	
10/13/1984	17:39:00	132.9	46.5	142.4	
10/13/1984	17:39:10	133.0	46.8	142.3	
10/13/1984	17:39:20	132.9	47.1	142.4	

TABLE A3-3 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE MAGENTA DOLOMITE MEMBER OF THE RUSTLER FORMATION, 700
 TO 722 FEET BELOW LAND SURFACE, OCTOBER 13 TO 15, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/13/1984	17:39:30	133.0	47.4	142.3	
10/13/1984	17:39:40	133.0	47.7	142.3	
10/13/1984	17:39:50	133.0	48.0	142.3	
10/13/1984	17:40:00	133.0	48.3	142.4	
10/13/1984	17:40:10	133.0	48.7	142.4	
10/13/1984	17:40:20	133.1	48.9	142.4	
10/13/1984	17:40:30	133.0	49.3	142.4	
10/13/1984	17:40:40	133.1	49.6	142.3	
10/13/1984	17:40:50	133.1	49.9	142.4	
10/13/1984	17:41:00	133.1	50.3	142.4	
10/13/1984	17:41:10	133.2	50.6	142.4	
10/13/1984	17:41:20	133.1	50.9	142.4	
10/13/1984	17:41:30	133.1	51.2	142.4	
10/13/1984	17:41:40	133.2	51.5	142.5	
10/13/1984	17:41:50	133.2	51.8	142.3	
10/13/1984	17:42:00	133.2	52.2	142.5	
10/13/1984	17:42:10	133.2	52.4	142.4	
10/13/1984	17:42:20	133.2	52.8	142.4	
10/13/1984	17:42:30	133.2	53.1	142.4	
10/13/1984	17:42:40	133.3	53.5	142.6	
10/13/1984	17:42:50	133.2	53.7	142.6	
10/13/1984	17:43:00	133.2	54.0	142.5	
10/13/1984	17:43:10	133.3	54.2	142.6	
10/13/1984	17:43:20	133.3	54.6	142.6	
10/13/1984	17:43:30	133.3	54.9	142.6	
10/13/1984	17:43:40	133.3	55.2	142.6	
10/13/1984	17:43:50	133.3	55.6	142.7	
10/13/1984	17:44:00	133.3	55.8	142.7	
10/13/1984	17:44:10	133.3	56.1	142.7	
10/13/1984	17:44:20	133.3	56.5	142.7	
10/13/1984	17:44:30	133.3	56.8	142.7	
10/13/1984	17:44:40	133.4	57.0	142.7	
10/13/1984	17:44:50	133.4	57.4	142.8	
10/13/1984	17:45:00	133.3	57.8	142.8	
10/13/1984	17:45:10	133.4	58.0	142.7	
10/13/1984	17:45:20	133.3	58.3	142.7	
10/13/1984	17:45:30	133.4	58.7	142.6	
10/13/1984	17:45:40	133.4	58.9	142.7	
10/13/1984	17:45:50	133.4	59.2	142.7	
10/13/1984	17:46:00	133.4	59.5	142.8	
10/13/1984	17:46:10	133.4	59.9	142.8	
10/13/1984	17:46:20	133.5	60.2	142.7	
10/13/1984	17:46:30	133.5	60.4	142.7	
10/13/1984	17:46:40	133.5	60.7	142.7	
10/13/1984	17:46:50	133.4	61.1	142.8	
10/13/1984	17:47:00	133.5	61.4	142.8	
10/13/1984	17:47:10	133.5	61.6	142.7	
10/13/1984	17:47:20	133.5	62.0	142.8	
10/13/1984	17:47:30	133.5	62.3	142.8	
10/13/1984	17:47:40	133.4	62.5	142.8	

TABLE A3-3 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE MAGENTA DOLOMITE MEMBER OF THE RUSTLER FORMATION, 700
 TO 722 FEET BELOW LAND SURFACE, OCTOBER 13 TO 15, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/13/1984	17:47:50	133.5	62.9	142.7	
10/13/1984	17:48:00	133.5	63.2	142.7	
10/13/1984	17:48:10	133.5	63.5	142.7	
10/13/1984	17:48:20	133.5	63.8	142.7	
10/13/1984	17:48:30	133.5	63.9	142.8	
10/13/1984	17:48:40	133.5	64.3	142.8	
10/13/1984	17:48:50	133.4	64.6	142.8	
10/13/1984	17:49:00	133.5	64.9	142.8	
10/13/1984	17:49:10	133.4	65.2	142.8	
10/13/1984	17:49:20	133.5	65.4	142.7	
10/13/1984	17:49:30	133.5	65.7	142.7	
10/13/1984	17:49:40	133.5	66.0	142.8	
10/13/1984	17:49:50	133.5	66.3	142.7	
10/13/1984	17:50:00	133.5	66.5	142.9	
10/13/1984	17:50:10	133.5	66.9	142.8	
10/13/1984	17:50:20	133.5	67.1	142.8	
10/13/1984	17:50:30	133.5	67.4	142.8	
10/13/1984	17:50:40	133.5	67.7	142.8	
10/13/1984	17:50:50	133.5	68.0	142.8	
10/13/1984	17:51:00	133.5	68.2	142.9	
10/13/1984	17:51:10	133.5	68.5	142.9	
10/13/1984	17:51:20	133.5	68.8	142.9	
10/13/1984	17:51:30	133.5	69.1	142.9	
10/13/1984	17:51:40	133.5	69.3	142.8	
10/13/1984	17:51:50	133.5	69.6	142.8	
10/13/1984	17:52:00	133.5	69.9	142.9	
10/13/1984	17:52:10	133.5	70.2	142.8	
10/13/1984	17:52:20	133.6	70.5	142.9	
10/13/1984	17:52:30	133.5	70.7	142.8	
10/13/1984	17:52:40	133.5	71.0	142.8	
10/13/1984	17:52:50	133.5	71.2	142.7	
10/13/1984	17:53:00	133.5	71.5	142.8	
10/13/1984	17:53:10	133.5	71.8	142.8	
10/13/1984	17:53:20	133.5	72.0	142.8	
10/13/1984	17:53:30	133.5	72.4	142.7	
10/13/1984	17:53:40	133.5	72.7	142.8	
10/13/1984	17:53:50	133.5	72.8	143.0	
10/13/1984	17:54:00	133.5	73.2	142.9	
10/13/1984	17:54:10	133.5	73.4	142.9	
10/13/1984	17:54:20	133.5	73.6	142.7	
10/13/1984	17:54:30	133.5	73.9	142.8	
10/13/1984	17:54:40	133.5	74.1	142.9	
10/13/1984	17:54:50	133.5	74.5	142.9	
10/13/1984	17:55:00	133.5	74.7	142.9	
10/13/1984	17:55:10	133.5	75.0	143.0	
10/13/1984	17:55:20	133.5	75.2	142.8	
10/13/1984	17:55:30	133.5	75.5	142.8	
10/13/1984	17:55:40	133.5	75.8	142.8	
10/13/1984	17:55:50	133.5	76.1	142.7	
10/13/1984	17:56:00	133.5	76.3	142.8	

TABLE A3-3 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE MAGENTA DOLOMITE MEMBER OF THE RUSTLER FORMATION, 700
 TO 722 FEET BELOW LAND SURFACE, OCTOBER 13 TO 15, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/13/1984	17:56:10	133.5	76.5	142.8	
10/13/1984	17:56:20	133.5	76.8	142.8	
10/13/1984	17:56:30	133.5	77.1	142.9	
10/13/1984	17:56:40	133.5	77.3	142.9	
10/13/1984	17:56:50	133.5	77.5	143.0	
10/13/1984	17:57:00	133.5	77.8	142.9	
10/13/1984	17:57:10	133.5	78.1	142.9	
10/13/1984	17:57:20	133.5	78.3	142.9	
10/13/1984	17:57:30	133.5	78.5	143.0	
10/13/1984	17:57:40	133.5	78.8	143.1	
10/13/1984	17:57:50	133.5	79.1	143.0	
10/13/1984	17:58:00	133.5	79.3	143.1	
10/13/1984	17:58:10	133.5	79.6	143.1	
10/13/1984	17:58:20	133.5	79.8	143.1	
10/13/1984	17:58:30	133.5	80.0	143.1	
10/13/1984	17:58:40	133.5	80.3	143.1	
10/13/1984	17:58:50	133.5	80.5	143.1	
10/13/1984	17:59:00	133.5	80.7	143.1	
10/13/1984	17:59:10	133.6	80.9	143.1	
10/13/1984	17:59:20	133.6	81.2	143.1	
10/13/1984	17:59:30	133.5	81.5	143.1	
10/13/1984	17:59:40	133.5	81.7	143.1	
10/13/1984	17:59:50	133.6	82.0	143.0	
10/13/1984	18:00:00	133.5	82.2	142.9	
10/13/1984	18:00:10	133.5	82.5	143.0	
10/13/1984	18:00:20	133.5	82.7	142.9	
10/13/1984	18:00:30	133.6	82.9	143.0	
10/13/1984	18:00:40	133.6	83.1	142.9	
10/13/1984	18:00:50	133.5	83.4	143.2	
10/13/1984	18:01:00	133.5	83.7	143.0	
10/13/1984	18:01:10	133.6	83.8	143.1	
10/13/1984	18:01:20	133.6	84.1	143.1	
10/13/1984	18:01:30	133.5	84.3	143.2	
10/13/1984	18:01:40	133.5	84.5	143.2	
10/13/1984	18:01:50	133.5	84.8	143.1	
10/13/1984	18:02:00	133.6	85.0	143.2	
10/13/1984	18:02:10	133.6	85.2	143.1	
10/13/1984	18:02:20	133.5	85.6	143.2	
10/13/1984	18:02:30	133.5	85.8	143.2	
10/13/1984	18:02:40	133.6	85.9	143.2	
10/13/1984	18:02:50	133.6	86.2	143.3	
10/13/1984	18:03:00	133.6	86.3	143.2	
10/13/1984	18:03:10	133.6	86.6	143.2	
10/13/1984	18:03:20	133.6	86.7	143.2	
10/13/1984	18:03:30	133.5	87.0	143.0	
10/13/1984	18:03:40	133.6	87.2	143.1	
10/13/1984	18:03:50	133.6	87.5	143.1	
10/13/1984	18:04:00	133.6	87.7	143.1	
10/13/1984	18:04:10	133.6	87.9	143.1	
10/13/1984	18:04:20	133.6	88.1	143.2	

TABLE A3-3 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE MAGENTA DOLOMITE MEMBER OF THE RUSTLER FORMATION, 700
 TO 722 FEET BELOW LAND SURFACE, OCTOBER 13 TO 15, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/13/1984	18:04:30	133.6	88.3	143.1	
10/13/1984	18:04:40	133.5	88.7	143.2	
10/13/1984	18:04:50	133.6	88.8	143.2	
10/13/1984	18:05:00	133.6	89.1	143.3	
10/13/1984	18:05:15	133.6	89.3	143.3	
10/13/1984	18:05:30	133.6	89.7	143.2	
10/13/1984	18:05:45	133.6	89.9	143.2	
10/13/1984	18:06:00	133.6	90.3	143.2	
10/13/1984	18:06:15	133.6	90.6	143.1	
10/13/1984	18:06:30	133.6	91.0	143.3	
10/13/1984	18:06:45	133.6	91.3	143.3	
10/13/1984	18:07:00	133.6	91.5	143.3	
10/13/1984	18:07:15	133.7	91.8	143.4	
10/13/1984	18:07:30	133.6	92.3	143.3	
10/13/1984	18:07:45	133.7	92.5	143.4	
10/13/1984	18:08:00	133.7	92.8	143.3	
10/13/1984	18:08:15	133.7	93.1	143.3	
10/13/1984	18:08:30	133.7	93.4	143.4	
10/13/1984	18:08:45	133.7	93.8	143.3	
10/13/1984	18:09:00	133.7	94.0	143.4	
10/13/1984	18:09:15	133.7	94.3	143.4	
10/13/1984	18:09:30	133.7	94.7	143.2	
10/13/1984	18:09:45	133.7	94.9	143.3	
10/13/1984	18:10:00	133.7	95.3	143.5	
10/13/1984	18:10:15	133.7	95.5	143.5	
10/13/1984	18:10:30	133.7	95.8	143.6	
10/13/1984	18:10:45	133.8	96.2	143.5	
10/13/1984	18:11:00	133.8	96.5	143.5	
10/13/1984	18:11:15	133.8	96.7	143.6	
10/13/1984	18:11:30	133.9	97.1	143.5	
10/13/1984	18:11:45	133.8	97.3	143.6	
10/13/1984	18:12:00	133.8	97.6	143.6	
10/13/1984	18:12:15	133.9	97.9	143.6	
10/13/1984	18:12:30	133.8	98.2	143.6	
10/13/1984	18:12:45	133.9	98.6	143.6	
10/13/1984	18:13:00	133.8	98.9	143.6	
10/13/1984	18:13:15	133.9	99.1	143.6	
10/13/1984	18:13:30	133.9	99.4	143.8	
10/13/1984	18:13:45	133.9	99.6	143.8	
10/13/1984	18:14:00	134.0	99.9	143.8	
10/13/1984	18:14:15	133.9	100.2	143.8	
10/13/1984	18:14:30	133.9	100.6	143.8	
10/13/1984	18:14:45	134.0	100.8	143.8	
10/13/1984	18:15:00	133.9	101.0	143.9	
10/13/1984	18:15:15	134.0	101.3	143.9	
10/13/1984	18:15:30	134.0	101.6	143.9	
10/13/1984	18:15:45	134.0	101.9	143.8	
10/13/1984	18:16:00	134.0	102.1	143.9	
10/13/1984	18:16:15	134.0	102.4	143.9	
10/13/1984	18:16:30	134.1	102.7	144.0	

TABLE A3-3 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE MAGENTA DOLOMITE MEMBER OF THE RUSTLER FORMATION, 700
 TO 722 FEET BELOW LAND SURFACE, OCTOBER 13 TO 15, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/13/1984	18:16:45	134.0	103.0	143.9	
10/13/1984	18:17:00	134.1	103.2	144.0	
10/13/1984	18:17:15	134.1	103.5	144.0	
10/13/1984	18:17:30	134.1	103.8	144.1	
10/13/1984	18:17:45	134.1	104.0	144.1	
10/13/1984	18:18:00	134.1	104.4	144.1	
10/13/1984	18:18:15	134.1	104.6	144.1	
10/13/1984	18:18:30	134.1	104.8	144.2	
10/13/1984	18:18:45	134.1	105.1	144.2	
10/13/1984	18:19:00	134.1	105.3	144.1	
10/13/1984	18:19:15	134.1	105.6	144.1	
10/13/1984	18:19:30	134.2	105.9	144.1	
10/13/1984	18:19:45	134.1	106.2	144.1	
10/13/1984	18:20:00	134.1	106.4	144.3	
10/13/1984	18:20:15	134.2	106.7	144.2	
10/13/1984	18:20:30	134.2	107.0	144.4	
10/13/1984	18:20:45	134.2	107.2	144.2	
10/13/1984	18:21:00	134.2	107.4	144.3	
10/13/1984	18:21:15	134.2	107.7	144.3	
10/13/1984	18:21:30	134.2	107.9	144.3	
10/13/1984	18:21:45	134.2	108.2	144.3	
10/13/1984	18:22:00	134.2	108.5	144.4	
10/13/1984	18:22:30	134.3	109.0	144.3	
10/13/1984	18:23:00	134.2	109.4	144.3	
10/13/1984	18:23:30	134.3	109.9	144.4	
10/13/1984	18:24:00	134.3	110.4	144.5	
10/13/1984	18:24:30	134.3	110.9	144.6	
10/13/1984	18:25:00	134.3	111.3	144.6	
10/13/1984	18:25:30	134.3	111.9	144.6	
10/13/1984	18:26:00	134.4	112.3	144.6	
10/13/1984	18:26:30	134.4	112.7	144.7	
10/13/1984	18:27:00	134.4	113.3	144.6	
10/13/1984	18:27:30	134.4	113.6	144.8	
10/13/1984	18:28:00	134.4	114.1	144.9	
10/13/1984	18:28:30	134.5	114.7	145.0	
10/13/1984	18:29:00	134.4	115.0	144.8	
10/13/1984	18:29:30	134.5	115.5	144.8	
10/13/1984	18:30:00	134.5	116.0	145.0	
10/13/1984	18:30:30	134.5	116.3	145.0	
10/13/1984	18:31:00	134.6	116.8	145.1	
10/13/1984	18:31:30	134.6	117.2	145.1	
10/13/1984	18:32:00	134.6	117.6	145.0	
10/13/1984	18:32:30	134.6	118.0	145.2	
10/13/1984	18:33:00	134.6	118.5	145.1	
10/13/1984	18:33:30	134.6	118.9	145.2	
10/13/1984	18:34:00	134.6	119.2	145.1	
10/13/1984	18:34:30	134.7	119.6	145.2	
10/13/1984	18:35:00	134.7	120.1	145.2	
10/13/1984	18:35:30	134.7	120.6	145.4	
10/13/1984	18:36:00	134.7	120.9	145.4	

TABLE A3-3 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE MAGENTA DOLOMITE MEMBER OF THE RUSTLER FORMATION, 700
 TO 722 FEET BELOW LAND SURFACE, OCTOBER 13 TO 15, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/13/1984	18:36:30	134.7	121.3	145.5	
10/13/1984	18:37:00	134.8	121.6	145.5	
10/13/1984	18:37:30	134.7	122.0	145.6	
10/13/1984	18:38:00	134.7	122.5	145.6	
10/13/1984	18:38:30	134.8	122.8	145.6	
10/13/1984	18:39:00	134.8	123.2	145.7	
10/13/1984	18:39:30	134.8	123.6	145.7	
10/13/1984	18:40:00	134.8	124.1	145.7	
10/13/1984	18:40:30	134.8	124.4	145.7	
10/13/1984	18:41:00	134.8	124.7	145.8	
10/13/1984	18:41:30	134.9	124.9	145.7	
10/13/1984	18:42:00	134.8	125.4	145.9	
10/13/1984	18:42:30	134.9	125.7	145.8	
10/13/1984	18:43:00	134.8	126.1	145.8	
10/13/1984	18:43:30	134.9	126.4	145.9	
10/13/1984	18:44:00	134.9	126.8	146.0	
10/13/1984	18:44:30	134.9	127.1	146.0	
10/13/1984	18:45:00	135.0	127.5	146.1	
10/13/1984	18:45:30	135.0	127.8	146.1	
10/13/1984	18:46:00	134.9	128.2	146.1	
10/13/1984	18:46:30	135.0	128.6	146.2	
10/13/1984	18:47:00	135.0	128.8	146.3	
10/13/1984	18:47:30	135.0	129.1	146.3	
10/13/1984	18:48:00	135.0	129.4	146.3	
10/13/1984	18:48:30	135.0	129.8	146.4	
10/13/1984	18:49:00	135.0	130.1	146.4	
10/13/1984	18:50:00	135.1	130.8	146.5	
10/13/1984	18:51:00	135.0	131.5	146.5	
10/13/1984	18:52:00	135.1	132.0	146.6	
10/13/1984	18:53:00	135.1	132.7	146.7	
10/13/1984	18:54:00	135.2	133.2	146.6	
10/13/1984	18:55:00	135.1	133.8	146.8	
10/13/1984	18:56:00	135.1	134.3	146.9	
10/13/1984	18:57:00	135.2	135.0	146.8	
10/13/1984	18:58:00	135.2	135.5	147.0	
10/13/1984	18:59:00	135.1	136.1	146.9	
10/13/1984	19:00:00	135.2	136.6	147.1	
10/13/1984	19:05:00	135.2	139.1	147.4	
10/13/1984	19:10:00	135.2	141.6	147.6	
10/13/1984	19:15:00	135.3	143.7	148.1	
10/13/1984	19:20:00	135.3	145.4	148.2	
10/13/1984	19:25:00	135.4	147.2	148.5	
10/13/1984	19:30:00	135.5	149.0	148.8	
10/13/1984	19:35:00	135.4	150.6	149.2	
10/13/1984	19:40:00	135.5	152.5	149.3	
10/13/1984	19:45:00	135.5	154.3	149.6	
10/13/1984	19:50:00	135.5	156.2	149.8	
10/13/1984	19:55:00	135.6	157.1	150.1	
10/13/1984	20:00:00	135.6	160.6	150.3	
10/13/1984	20:05:00	135.7	161.3	150.7	

TABLE A3-3 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE MAGENTA DOLOMITE MEMBER OF THE RUSTLER FORMATION, 700
 TO 722 FEET BELOW LAND SURFACE, OCTOBER 13 TO 15, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/13/1984	20:10:00	135.6	162.5	150.8	
10/13/1984	20:15:00	135.7	164.5	151.0	
10/13/1984	20:30:00	135.8	166.2	151.6	
10/13/1984	20:45:00	136.0	168.9	152.2	
10/13/1984	21:00:00	136.1	170.7	152.9	
10/13/1984	21:15:00	136.1	172.7	153.1	
10/13/1984	21:30:00	136.2	173.7	153.6	
10/13/1984	21:45:00	136.2	175.5	153.9	
10/13/1984	22:00:00	136.2	176.3	154.3	
10/13/1984	22:15:00	136.2	177.5	154.8	
10/13/1984	22:30:00	136.3	179.3	155.1	
10/13/1984	22:45:00	136.3	179.2	155.7	
10/13/1984	23:00:00	136.4	179.8	156.0	
10/13/1984	23:15:00	136.4	180.9	156.3	
10/13/1984	23:30:00	136.3	181.0	156.4	
10/13/1984	23:45:00	136.4	182.1	156.8	
10/14/1984	00:00:00	136.4	182.4	157.1	
10/14/1984	00:15:00	136.1	183.0	157.0	
10/14/1984	00:30:00	135.9	183.9	156.7	
10/14/1984	00:45:00	136.0	184.8	156.8	
10/14/1984	01:00:00	136.2	183.8	157.1	
10/14/1984	01:15:00	136.3	183.6	157.5	
10/14/1984	01:30:00	136.4	185.1	157.5	
10/14/1984	01:45:00	136.4	185.1	157.9	
10/14/1984	02:00:00	136.4	185.3	158.1	
10/14/1984	02:15:00	136.4	187.4	158.4	
10/14/1984	02:30:00	136.4	187.1	158.4	
10/14/1984	02:45:00	136.4	187.9	158.6	
10/14/1984	03:00:00	136.5	189.3	158.7	
10/14/1984	03:15:00	136.5	187.9	158.8	
10/14/1984	03:30:00	136.5	187.2	159.0	
10/14/1984	03:45:00	136.6	187.3	159.2	
10/14/1984	04:00:00	136.6	187.7	159.4	
10/14/1984	04:15:00	136.5	187.7	159.5	
10/14/1984	04:30:00	136.5	188.1	159.5	
10/14/1984	04:45:00	136.5	187.3	159.6	
10/14/1984	05:00:00	136.5	188.0	159.8	
10/14/1984	05:15:00	136.5	188.9	159.9	End FBU
10/14/1984	05:30:00	136.5	186.6	160.0	
10/14/1984	05:45:00	136.4	186.5	160.2	
10/14/1984	06:00:00	136.4	186.3	160.2	
10/14/1984	06:15:00	136.4	187.4	160.2	
10/14/1984	06:30:00	136.3	187.5	160.0	
10/14/1984	06:45:00	136.3	187.5	160.2	
10/14/1984	07:00:00	136.3	188.1	160.1	Drift
10/14/1984	07:15:00	136.1	187.3	160.1	
10/14/1984	07:30:00	135.4	186.4	159.5	
10/14/1984	07:45:00	134.7	185.0	158.6	
10/14/1984	08:00:00	133.6	183.8	157.3	
10/14/1984	08:15:00	132.7	182.3	156.0	

TABLE A3-3 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE MAGENTA DOLOMITE MEMBER OF THE RUSTLER FORMATION, 700
 TO 722 FEET BELOW LAND SURFACE, OCTOBER 13 TO 15, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/14/1984	08:30:00	131.8	181.0	154.7	
10/14/1984	08:45:00	131.0	179.0	153.3	
10/14/1984	09:00:00	130.3	176.9	151.9	
10/14/1984	09:09:00	130.1	176.6	150.9	
10/14/1984	09:10:00	130.1	176.3	150.7	
10/14/1984	09:10:30	130.0	175.9	150.7	
10/14/1984	09:11:00	130.0	176.0	150.7	
10/14/1984	09:11:30	130.0	175.6	150.6	
10/14/1984	09:12:00	130.0	175.6	150.5	
10/14/1984	09:12:30	130.0	175.5	150.6	
10/14/1984	09:12:45	130.0	175.3	150.6	
10/14/1984	09:13:00	130.0	175.2	150.5	
10/14/1984	09:13:15	130.0	175.4	150.5	
10/14/1984	09:13:30	130.0	175.5	150.5	
10/14/1984	09:13:45	130.0	175.4	150.4	
10/14/1984	09:14:00	130.0	175.4	150.3	
10/14/1984	09:14:15	130.0	175.3	150.4	
10/14/1984	09:15:15	129.9	175.0	150.2	
10/14/1984	09:15:30	129.9	174.8	150.2	
10/14/1984	09:15:45	129.9	174.8	150.1	
10/14/1984	09:15:50	129.9	174.7	150.3	
10/14/1984	09:15:55	129.9	174.7	150.2	
10/14/1984	09:16:00	129.9	174.7	150.2	
10/14/1984	09:16:05	129.8	174.7	150.1	
10/14/1984	09:16:10	129.9	174.7	150.1	
10/14/1984	09:16:15	129.9	174.7	150.0	
10/14/1984	09:16:20	129.8	174.7	150.1	
10/14/1984	09:16:25	129.8	174.8	150.1	
10/14/1984	09:16:30	129.8	174.7	150.1	
10/14/1984	09:16:35	129.8	174.6	150.0	Deflated Valve Packer
10/14/1984	09:16:40	129.8	174.2	150.1	
10/14/1984	09:16:45	129.8	173.9	150.1	
10/14/1984	09:16:50	129.8	173.6	150.1	
10/14/1984	09:16:55	129.8	173.4	150.2	
10/14/1984	09:17:00	129.8	173.1	150.2	
10/14/1984	09:17:05	129.8	172.6	150.1	
10/14/1984	09:17:10	129.9	145.2	150.0	
10/14/1984	09:17:15	129.8	133.1	150.0	
10/14/1984	09:17:20	129.8	116.5	149.9	
10/14/1984	09:17:25	129.8	101.7	150.0	
10/14/1984	09:17:30	129.8	84.1	150.0	
10/14/1984	09:17:35	129.8	68.4	149.9	
10/14/1984	09:17:40	129.8	54.7	149.9	
10/14/1984	09:17:45	129.8	43.2	149.8	
10/14/1984	09:17:50	129.8	33.1	149.9	
10/14/1984	09:17:55	129.8	23.7	149.9	
10/14/1984	09:18:00	129.9	15.5	149.8	
10/14/1984	09:18:05	129.8	7.1	149.8	
10/14/1984	09:18:10	129.8	7.4	149.9	
10/14/1984	09:18:15	129.8	7.3	149.8	

TABLE A3-3 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE MAGENTA DOLOMITE MEMBER OF THE RUSTLER FORMATION, 700
 TO 722 FEET BELOW LAND SURFACE, OCTOBER 13 TO 15, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/14/1984	09:18:20	129.8	7.2	149.8	
10/14/1984	09:18:25	129.8	7.1	149.8	
10/14/1984	09:18:30	129.7	7.0	149.8	
10/14/1984	09:18:35	129.8	7.0	149.8	
10/14/1984	09:18:40	129.8	6.9	149.8	Begin Slug Test
10/14/1984	09:18:45	129.7	6.9	149.7	
10/14/1984	09:18:50	129.7	6.9	149.9	
10/14/1984	09:18:55	129.8	6.9	149.9	
10/14/1984	09:19:00	129.8	6.9	149.7	
10/14/1984	09:19:05	129.8	6.8	149.7	
10/14/1984	09:19:10	129.7	6.9	149.8	
10/14/1984	09:19:15	129.8	6.9	149.8	
10/14/1984	09:19:20	129.8	6.8	149.7	
10/14/1984	09:19:25	129.7	6.9	149.7	
10/14/1984	09:19:30	129.8	6.9	149.7	
10/14/1984	09:19:35	129.8	6.8	149.7	
10/14/1984	09:19:40	129.7	6.9	149.6	
10/14/1984	09:19:45	129.8	6.9	149.6	
10/14/1984	09:19:50	129.7	6.8	149.6	
10/14/1984	09:19:55	129.8	6.9	149.7	
10/14/1984	09:20:00	129.8	7.0	149.6	
10/14/1984	09:20:10	129.8	6.9	149.5	
10/14/1984	09:20:20	129.7	6.9	149.5	
10/14/1984	09:20:30	129.7	6.9	149.5	
10/14/1984	09:20:40	129.7	6.9	149.5	
10/14/1984	09:20:50	129.7	6.9	149.4	
10/14/1984	09:21:00	129.7	6.9	149.4	
10/14/1984	09:21:10	129.7	6.9	149.4	
10/14/1984	09:21:20	129.7	6.9	149.4	
10/14/1984	09:21:30	129.7	6.9	149.4	
10/14/1984	09:21:40	129.7	7.0	149.3	
10/14/1984	09:21:50	129.7	6.9	149.4	
10/14/1984	09:22:00	129.7	6.9	149.4	
10/14/1984	09:22:10	129.7	6.9	149.3	
10/14/1984	09:22:20	129.7	6.9	149.1	
10/14/1984	09:22:30	129.7	7.0	149.3	
10/14/1984	09:22:45	129.7	6.9	149.1	
10/14/1984	09:23:00	129.7	7.0	149.2	
10/14/1984	09:23:15	129.7	7.0	149.1	
10/14/1984	09:23:30	129.7	7.0	149.1	
10/14/1984	09:23:45	129.7	7.0	149.1	
10/14/1984	09:24:00	129.7	6.9	149.0	
10/14/1984	09:24:15	129.7	7.0	149.1	
10/14/1984	09:24:30	129.7	7.0	149.0	
10/14/1984	09:24:45	129.7	7.0	149.0	
10/14/1984	09:25:00	129.7	7.0	149.0	
10/14/1984	09:25:30	129.6	6.9	148.9	
10/14/1984	09:26:00	129.6	7.0	148.8	
10/14/1984	09:26:30	129.6	7.1	148.8	
10/14/1984	09:27:00	129.6	7.1	147.8	

TABLE A3-3 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE MAGENTA DOLOMITE MEMBER OF THE RUSTLER FORMATION, 700
 TO 722 FEET BELOW LAND SURFACE, OCTOBER 13 TO 15, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/14/1984	09:27:30	129.6	7.0	147.8	
10/14/1984	09:28:00	129.7	7.1	148.6	
10/14/1984	09:28:30	129.6	6.9	148.6	
10/14/1984	09:29:00	129.6	7.0	148.6	
10/14/1984	09:29:30	129.6	7.0	148.4	
10/14/1984	09:30:00	129.5	7.0	148.4	
10/14/1984	09:31:00	129.6	7.0	148.4	
10/14/1984	09:32:00	129.5	6.8	148.3	
10/14/1984	09:33:00	129.5	6.8	148.3	
10/14/1984	09:34:00	129.4	6.8	148.0	
10/14/1984	09:35:00	129.5	6.7	147.9	
10/14/1984	09:36:00	129.4	6.7	147.9	
10/14/1984	09:37:00	129.5	6.9	147.9	
10/14/1984	09:40:00	129.4	6.6	147.6	
10/14/1984	09:45:00	129.4	6.9	147.1	
10/14/1984	09:50:00	129.3	6.7	146.5	
10/14/1984	10:00:00	129.2	6.7	145.7	
10/14/1984	10:15:00	129.0	5.9	144.3	
10/14/1984	10:30:00	128.8	5.3	142.9	
10/14/1984	10:45:00	128.6	4.8	141.6	
10/14/1984	11:00:00	128.3	3.9	140.2	
10/14/1984	11:15:00	128.2	3.1	139.1	
10/14/1984	11:30:00	128.0	2.3	137.7	
10/14/1984	11:45:00	128.0	1.7	136.2	
10/14/1984	12:00:00	128.0	1.1	135.1	
10/14/1984	12:15:00	128.0	.6	134.0	
10/14/1984	12:30:00	128.0	.3	133.2	
10/14/1984	12:45:00	127.9	-.2	132.3	
10/14/1984	13:00:00	127.9	-.2	131.2	
10/14/1984	13:15:00	128.1	-.3	130.6	
10/14/1984	13:30:00	127.9	-.2	130.0	
10/14/1984	13:45:00	127.8	.2	129.2	
10/14/1984	14:00:00	127.9	.6	128.6	
10/14/1984	14:15:00	128.2	3.0	128.5	
10/14/1984	14:30:00	128.3	4.3	128.4	
10/14/1984	14:45:00	128.3	5.7	128.6	
10/14/1984	15:00:00	128.4	7.7	129.6	
10/14/1984	15:15:00	128.8	10.8	131.2	
10/14/1984	15:30:00	129.4	12.6	131.6	
10/14/1984	15:45:00	129.5	15.3	130.6	
10/14/1984	16:00:00	130.1	16.1	130.0	
10/14/1984	16:15:00	130.1	15.6	129.5	
10/14/1984	16:30:00	129.6	15.6	129.1	
10/14/1984	16:45:00	129.6	16.3	129.4	
10/14/1984	17:00:00	129.9	17.6	129.9	
10/14/1984	17:15:00	130.1	19.5	130.9	
10/14/1984	17:30:00	130.8	21.9	131.5	
10/14/1984	17:45:00	131.4	23.4	132.3	
10/14/1984	18:00:00	131.5	24.4	133.1	
10/14/1984	18:15:00	132.1	25.4	134.7	

TABLE A3-3 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE MAGENTA DOLOMITE MEMBER OF THE RUSTLER FORMATION, 700
 TO 722 FEET BELOW LAND SURFACE, OCTOBER 13 TO 15, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/14/1984	18:30:00	132.5	26.4	135.9	
10/14/1984	18:45:00	133.0	27.2	137.1	
10/14/1984	19:00:00	132.9	28.0	138.0	
10/14/1984	19:15:00	132.9	28.3	138.6	
10/14/1984	19:23:27	133.1	28.5	139.2	
10/14/1984	19:45:00	133.4	29.6	139.9	
10/14/1984	20:15:00	133.6	30.5	140.8	
10/14/1984	20:45:00	134.0	31.5	142.0	
10/14/1984	21:15:00	134.1	32.3	142.7	
10/14/1984	21:45:00	134.0	32.9	143.1	
10/14/1984	22:15:00	134.3	33.5	143.5	
10/14/1984	22:45:00	134.7	34.2	144.4	
10/14/1984	23:15:00	135.0	34.5	145.5	
10/14/1984	23:45:00	135.0	35.2	145.9	
10/15/1984	00:15:00	134.9	36.0	146.1	
10/15/1984	00:45:00	135.3	36.5	146.8	
10/15/1984	01:15:00	135.7	37.4	148.0	
10/15/1984	01:45:00	135.7	38.3	148.7	
10/15/1984	02:15:00	135.9	38.9	149.5	
10/15/1984	02:45:00	136.2	39.6	150.8	
10/15/1984	03:15:00	136.4	40.0	151.7	
10/15/1984	03:45:00	136.4	40.6	152.7	
10/15/1984	04:15:00	136.6	41.1	153.3	
10/15/1984	04:45:00	136.7	41.7	154.0	
10/15/1984	05:15:00	136.7	42.2	154.6	
10/15/1984	05:45:00	136.7	42.2	155.1	
10/15/1984	06:15:00	136.8	42.4	155.3	
10/15/1984	06:45:00	136.9	42.2	155.7	
10/15/1984	07:15:00	136.9	42.6	156.1	
10/15/1984	07:45:00	135.5	42.1	155.0	
10/15/1984	08:15:00	135.2	42.1	153.4	End Slug Test
10/15/1984	08:45:00	134.0	41.8	151.7	Inflated Valve Packer
10/15/1984	08:55:00	133.7	52.3	150.9	Deflated Valve
10/15/1984	09:00:00	133.0	224.8	242.0	Packers

TABLE A3-4

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE TAMARISK MEMBER OF THE RUSTLER FORMATION, 796 TO 817
FEET BELOW LAND SURFACE, OCTOBER 12 TO 13, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/12/1984	17:00:00	187.9	268.8	282.4	
10/12/1984	17:01:00	188.0	269.0	282.6	
10/12/1984	17:02:00	189.1	268.6	280.4	
10/12/1984	17:03:00	170.9	253.5	268.2	
10/12/1984	17:04:00	169.4	250.9	264.6	
10/12/1984	17:05:00	169.4	251.3	264.4	
10/12/1984	17:06:00	169.4	251.6	264.4	
10/12/1984	17:07:00	169.7	251.8	264.0	
10/12/1984	17:08:00	181.6	263.9	276.6	
10/12/1984	17:09:00	180.7	264.7	278.4	
10/12/1984	17:10:00	184.1	266.7	279.3	
10/12/1984	17:11:00	184.1	266.8	279.1	
10/12/1984	17:12:00	184.1	266.8	279.1	Inflated Straddle Packers
10/12/1984	17:13:00	184.3	365.4	214.0	
10/12/1984	17:14:00	184.3	382.2	196.0	
10/12/1984	17:15:00	184.3	382.1	193.1	
10/12/1984	17:16:00	184.4	381.9	192.0	
10/12/1984	17:17:00	184.4	376.6	191.4	Deflated Valve Packer
10/12/1984	17:18:00	184.4	191.3	190.8	
10/12/1984	17:19:00	184.4	191.3	190.5	
10/12/1984	17:20:00	184.4	191.5	190.3	
10/12/1984	17:21:00	184.4	191.4	190.1	
10/12/1984	17:22:00	184.4	191.4	189.9	
10/12/1984	17:23:00	184.4	191.4	189.6	
10/12/1984	17:25:00	184.4	191.2	189.2	Inflated Valve Packer
10/12/1984	17:30:00	184.5	236.7	188.9	Bailed Tubing
10/12/1984	18:00:00	187.0	246.1	189.8	
10/12/1984	18:30:00	186.2	262.8	190.1	
10/12/1984	19:00:00	186.0	266.7	192.8	
10/12/1984	19:30:00	186.3	266.9	194.3	
10/12/1984	20:00:00	186.3	267.9	195.7	
10/12/1984	20:30:00	186.5	268.8	197.0	
10/12/1984	21:00:00	186.7	270.7	198.4	
10/12/1984	21:30:00	186.7	270.6	199.3	
10/12/1984	22:00:00	186.9	271.9	200.5	
10/12/1984	22:01:00	187.0	272.1	200.4	
10/12/1984	22:02:00	186.9	271.3	200.5	
10/12/1984	22:03:00	186.9	271.1	200.5	
10/12/1984	22:04:00	186.9	271.3	200.4	
10/12/1984	22:05:00	186.9	271.6	200.7	
10/12/1984	22:06:00	187.0	271.4	200.5	
10/12/1984	22:07:00	186.9	271.1	200.6	
10/12/1984	22:08:00	186.9	271.4	200.7	
10/12/1984	22:08:05	187.0	271.4	200.6	
10/12/1984	22:08:10	186.9	271.4	200.7	
10/12/1984	22:08:15	186.9	271.5	200.7	
10/12/1984	22:08:20	187.0	271.5	200.7	
10/12/1984	22:08:25	187.0	271.5	200.6	
10/12/1984	22:08:30	186.9	271.4	200.6	
10/12/1984	22:08:35	186.9	271.4	200.6	

TABLE A3-4 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE TAMARISK MEMBER OF THE RUSTLER FORMATION, 796 TO 817
 FEET BELOW LAND SURFACE, OCTOBER 12 TO 13, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/12/1984	22:08:40	186.9	271.4	200.5	
10/12/1984	22:08:45	187.0	271.4	200.6	Deflated Valve
10/12/1984	22:08:50	186.9	270.9	200.6	Packer
10/12/1984	22:08:55	187.0	270.4	200.6	
10/12/1984	22:09:00	187.0	270.0	200.5	
10/12/1984	22:09:05	186.9	267.3	200.7	
10/12/1984	22:09:10	187.0	256.2	200.7	
10/12/1984	22:09:15	187.0	238.1	200.7	
10/12/1984	22:09:20	187.0	216.5	200.6	
10/12/1984	22:09:25	187.0	184.3	200.7	
10/12/1984	22:09:30	187.0	156.5	200.7	
10/12/1984	22:09:35	187.0	136.4	200.7	Begin FFL
10/12/1984	22:09:40	187.0	122.0	200.6	
10/12/1984	22:09:45	187.0	122.3	200.6	
10/12/1984	22:09:50	187.0	122.3	200.7	
10/12/1984	22:09:55	187.0	122.1	200.6	
10/12/1984	22:10:00	187.0	122.0	200.7	
10/12/1984	22:10:05	186.9	121.9	200.7	
10/12/1984	22:10:10	187.0	122.0	200.6	
10/12/1984	22:10:15	187.0	122.0	200.7	
10/12/1984	22:10:20	187.0	122.1	200.6	
10/12/1984	22:10:25	187.0	122.0	200.7	
10/12/1984	22:10:30	186.9	122.1	200.7	
10/12/1984	22:10:35	186.9	122.1	200.7	
10/12/1984	22:10:40	187.0	122.1	200.6	
10/12/1984	22:10:45	187.0	122.1	200.6	
10/12/1984	22:10:50	187.0	122.1	200.7	
10/12/1984	22:10:55	187.0	122.0	200.8	
10/12/1984	22:11:00	186.9	122.1	200.6	
10/12/1984	22:11:10	186.9	122.0	200.9	
10/12/1984	22:11:20	187.0	122.1	200.7	
10/12/1984	22:11:30	186.9	122.2	200.6	
10/12/1984	22:11:40	187.0	122.3	200.7	
10/12/1984	22:11:50	186.9	122.3	200.7	
10/12/1984	22:12:00	186.9	122.3	200.7	
10/12/1984	22:12:10	187.0	122.3	200.8	
10/12/1984	22:12:20	187.0	122.4	200.8	
10/12/1984	22:12:30	187.0	122.5	200.7	
10/12/1984	22:12:40	186.9	122.5	200.6	
10/12/1984	22:12:50	186.9	122.5	200.7	
10/12/1984	22:13:00	187.0	122.5	200.8	
10/12/1984	22:13:10	187.0	122.5	200.8	
10/12/1984	22:13:20	186.9	122.5	200.8	
10/12/1984	22:13:30	187.0	122.6	200.8	
10/12/1984	22:13:40	186.9	122.4	200.7	
10/12/1984	22:13:50	187.0	122.5	200.7	
10/12/1984	22:14:00	186.9	122.4	200.7	
10/12/1984	22:14:10	187.0	122.4	200.7	
10/12/1984	22:14:20	187.0	122.4	200.9	
10/12/1984	22:14:30	187.0	122.3	200.9	

TABLE A3-4 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE TAMARISK MEMBER OF THE RUSTLER FORMATION, 796 TO 817
 FEET BELOW LAND SURFACE, OCTOBER 12 TO 13, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/12/1984	22:14:40	187.0	122.2	200.9	
10/12/1984	22:14:50	187.0	122.3	200.9	
10/12/1984	22:15:00	187.0	122.3	201.0	
10/12/1984	22:15:15	187.0	122.3	200.8	
10/12/1984	22:15:30	187.0	122.3	200.8	
10/12/1984	22:15:45	187.0	122.3	200.8	
10/12/1984	22:16:00	187.0	122.4	200.8	
10/12/1984	22:16:15	187.0	122.4	200.9	
10/12/1984	22:16:30	187.0	122.6	201.0	
10/12/1984	22:17:00	187.0	122.8	200.9	
10/12/1984	22:17:30	187.0	123.0	200.8	
10/12/1984	22:18:00	187.0	123.3	201.1	FFL
10/12/1984	22:18:30	187.0	123.5	201.1	
10/12/1984	22:19:00	187.0	123.3	200.8	
10/12/1984	22:19:30	187.0	123.2	201.0	
10/12/1984	22:20:00	187.0	123.0	201.0	
10/12/1984	22:20:30	187.0	122.9	201.2	
10/12/1984	22:21:00	187.0	123.0	200.9	
10/12/1984	22:21:30	187.0	123.0	201.0	
10/12/1984	22:22:00	187.0	122.9	201.1	
10/12/1984	22:22:30	187.0	122.6	200.9	
10/12/1984	22:23:00	187.0	122.5	201.1	
10/12/1984	22:24:00	187.0	122.7	201.0	
10/12/1984	22:25:00	187.0	123.0	201.0	
10/12/1984	22:26:00	187.0	123.3	201.1	
10/12/1984	22:27:00	187.0	123.1	201.1	
10/12/1984	22:28:00	187.0	122.8	201.2	
10/12/1984	22:30:00	187.0	122.5	201.1	
10/12/1984	22:32:00	187.0	122.1	201.2	
10/12/1984	22:34:00	187.0	121.7	201.4	
10/12/1984	22:36:00	187.0	121.8	201.3	
10/12/1984	22:38:00	187.0	121.6	201.4	
10/12/1984	22:40:00	187.0	122.1	201.4	
10/12/1984	22:50:00	186.9	121.5	201.5	
10/12/1984	23:00:00	186.9	121.7	201.7	
10/12/1984	23:10:00	186.9	121.6	201.9	
10/12/1984	23:20:00	186.8	121.0	201.9	
10/12/1984	23:30:00	186.9	121.9	202.3	
10/12/1984	23:40:00	186.8	121.5	202.4	
10/12/1984	23:50:00	186.8	121.9	202.5	
10/13/1984	00:00:00	186.9	122.1	202.8	
10/13/1984	00:10:00	186.8	122.2	202.8	
10/13/1984	00:20:00	186.7	121.4	202.8	
10/13/1984	00:30:00	186.7	121.4	202.8	
10/13/1984	00:40:00	186.6	121.1	203.0	
10/13/1984	00:50:00	186.7	122.1	203.0	
10/13/1984	01:00:00	186.7	121.9	203.1	
10/13/1984	01:10:00	186.7	121.9	203.2	
10/13/1984	01:20:00	186.5	121.3	202.8	
10/13/1984	01:30:00	186.5	121.5	202.9	

TABLE A3-4 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE TAMARISK MEMBER OF THE RUSTLER FORMATION, 796 TO 817
 FEET BELOW LAND SURFACE, OCTOBER 12 TO 13, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/13/1984	01:40:00	186.5	121.1	202.7	
10/13/1984	01:50:00	186.4	120.8	202.6	
10/13/1984	02:00:00	186.3	120.7	202.4	
10/13/1984	02:10:00	186.2	120.4	202.2	
10/13/1984	02:20:00	186.1	120.6	201.7	
10/13/1984	02:30:00	186.0	120.3	201.8	
10/13/1984	02:40:00	186.0	120.0	201.6	
10/13/1984	02:50:00	185.9	119.9	201.2	
10/13/1984	03:00:00	185.9	119.7	201.2	
10/13/1984	03:10:00	185.9	119.5	201.0	
10/13/1984	03:20:00	185.9	119.5	201.2	
10/13/1984	03:30:00	185.9	119.5	201.0	FFL
10/13/1984	03:40:00	185.8	119.4	200.9	
10/13/1984	03:50:00	185.8	119.4	201.1	
10/13/1984	04:00:00	185.8	119.3	201.1	
10/13/1984	04:10:00	185.9	119.3	201.1	
10/13/1984	04:20:00	185.9	119.3	201.1	
10/13/1984	04:30:00	185.8	119.1	200.9	
10/13/1984	04:40:00	185.7	118.8	200.9	
10/13/1984	04:50:00	185.6	118.7	200.7	
10/13/1984	05:00:00	185.6	118.6	200.5	
10/13/1984	05:10:00	185.6	118.4	200.6	
10/13/1984	05:20:00	185.6	118.4	200.4	
10/13/1984	05:30:00	185.7	118.6	200.8	
10/13/1984	05:40:00	185.8	118.7	201.0	
10/13/1984	05:50:00	185.8	118.8	201.3	
10/13/1984	06:00:00	185.7	118.7	201.4	
10/13/1984	06:10:00	185.8	119.4	201.5	
10/13/1984	06:20:00	185.7	118.8	201.6	
10/13/1984	06:30:00	185.6	118.5	201.6	
10/13/1984	06:40:00	185.6	119.1	201.5	
10/13/1984	06:50:00	185.4	118.8	201.5	
10/13/1984	07:00:00	185.4	118.7	201.5	
10/13/1984	07:10:00	185.3	119.6	201.3	
10/13/1984	07:20:00	185.2	119.4	201.0	
10/13/1984	07:30:00	185.1	118.8	200.7	
10/13/1984	07:40:00	184.8	118.0	200.1	
10/13/1984	07:50:00	184.7	117.4	199.4	
10/13/1984	08:00:00	184.5	116.8	198.6	
10/13/1984	08:10:00	184.2	116.2	197.7	
10/13/1984	08:20:00	183.7	115.2	196.7	
10/13/1984	08:30:00	183.6	114.2	195.9	
10/13/1984	08:40:00	0.0	0.0	196.8	Spooled Cable
10/13/1984	08:50:00	183.3	0.0	0.0	Spooled Cable
10/13/1984	09:00:00	183.5	112.5	194.7	
10/13/1984	09:05:00	183.4	112.0	194.4	
10/13/1984	09:10:00	183.5	112.5	194.6	
10/13/1984	09:15:00	183.7	112.4	194.9	
10/13/1984	09:20:00	183.9	112.8	195.1	
10/13/1984	09:25:00	184.0	113.4	195.1	

TABLE A3-4 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE TAMARISK MEMBER OF THE RUSTLER FORMATION, 796 TO 817
 FEET BELOW LAND SURFACE, OCTOBER 12 TO 13, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/13/1984	09:30:00	183.8	112.7	194.8	
10/13/1984	09:35:00	183.6	112.6	194.4	
10/13/1984	09:37:00	183.5	112.3	194.1	
10/13/1984	09:37:05	183.5	112.2	194.1	
10/13/1984	09:37:10	183.5	112.2	194.2	FFL
10/13/1984	09:37:15	183.5	112.2	194.1	
10/13/1984	09:37:20	183.5	112.3	194.2	
10/13/1984	09:37:25	183.4	112.3	194.1	
10/13/1984	09:37:30	183.4	112.2	194.2	
10/13/1984	09:37:35	183.4	112.2	194.1	
10/13/1984	09:37:40	183.5	112.1	194.1	
10/13/1984	09:37:45	183.4	112.0	194.0	
10/13/1984	09:37:50	183.5	112.2	194.0	
10/13/1984	09:37:55	183.4	112.1	194.1	
10/13/1984	09:38:00	183.4	112.1	194.1	
10/13/1984	09:38:05	183.4	112.1	194.1	
10/13/1984	09:38:10	183.5	112.1	194.0	
10/13/1984	09:38:15	183.5	112.1	194.1	
10/13/1984	09:38:20	183.4	112.1	194.0	
10/13/1984	09:38:25	183.5	112.1	194.0	
10/13/1984	09:38:30	183.4	112.2	194.0	Inflated Valve
10/13/1984	09:38:35	183.4	112.5	194.0	Packer
10/13/1984	09:38:40	183.4	123.1	194.0	
10/13/1984	09:38:45	183.4	133.7	194.0	
10/13/1984	09:38:50	183.4	135.3	193.9	
10/13/1984	09:38:55	183.4	135.6	194.0	
10/13/1984	09:39:00	183.4	135.8	194.1	
10/13/1984	09:39:05	183.4	136.1	194.0	
10/13/1984	09:39:10	183.4	136.2	194.1	
10/13/1984	09:39:15	183.4	136.2	194.1	FBU
10/13/1984	09:39:20	183.4	136.2	194.0	
10/13/1984	09:39:25	183.3	136.2	193.9	
10/13/1984	09:39:30	183.4	136.2	193.9	
10/13/1984	09:39:35	183.3	136.2	193.9	
10/13/1984	09:39:40	183.4	136.2	193.9	
10/13/1984	09:39:45	183.3	136.1	193.8	
10/13/1984	09:39:50	183.4	136.0	193.9	
10/13/1984	09:39:55	183.4	135.9	193.9	
10/13/1984	09:40:00	183.3	135.9	193.9	
10/13/1984	09:40:05	183.3	135.7	193.9	
10/13/1984	09:40:10	183.3	135.8	193.9	
10/13/1984	09:40:15	183.3	135.7	194.0	
10/13/1984	09:40:20	183.3	135.8	193.8	
10/13/1984	09:40:25	183.4	135.8	193.9	
10/13/1984	09:40:30	183.3	135.7	193.9	
10/13/1984	09:40:35	183.3	135.7	193.9	
10/13/1984	09:40:40	183.3	135.8	194.0	
10/13/1984	09:40:45	183.3	135.8	193.9	
10/13/1984	09:40:55	183.3	135.7	193.9	
10/13/1984	09:41:05	183.3	135.6	193.8	

TABLE A3-4 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE TAMARISK MEMBER OF THE RUSTLER FORMATION, 796 TO 817
 FEET BELOW LAND SURFACE, OCTOBER 12 TO 13, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/13/1984	09:41:20	183.3	135.4	193.8	
10/13/1984	09:41:35	183.2	135.4	193.8	
10/13/1984	09:41:50	183.3	135.5	193.7	
10/13/1984	09:42:05	183.3	135.5	193.8	
10/13/1984	09:42:20	183.2	135.5	193.8	
10/13/1984	09:42:45	183.2	135.7	193.7	
10/13/1984	09:43:00	183.1	135.6	193.6	
10/13/1984	09:43:30	183.1	135.6	193.6	
10/13/1984	09:44:00	183.2	135.7	193.7	
10/13/1984	09:44:30	183.1	135.6	193.6	
10/13/1984	09:45:00	183.1	135.7	193.6	
10/13/1984	09:46:00	183.0	135.6	193.4	
10/13/1984	09:47:00	183.0	135.5	193.3	
10/13/1984	09:48:00	183.0	135.4	193.2	
10/13/1984	09:49:00	183.0	135.7	193.2	
10/13/1984	09:50:00	182.8	135.5	193.0	
10/13/1984	09:51:00	182.8	135.5	193.0	
10/13/1984	09:52:00	182.8	135.0	192.9	
10/13/1984	09:53:00	182.8	135.3	192.8	
10/13/1984	09:54:00	182.8	135.4	192.7	
10/13/1984	09:55:00	182.7	134.8	192.6	
10/13/1984	09:56:00	182.7	134.6	192.5	
10/13/1984	10:00:00	182.6	134.6	192.0	
10/13/1984	10:05:00	182.5	134.2	191.7	
10/13/1984	10:10:00	182.5	133.8	191.5	
10/13/1984	10:15:00	182.3	133.2	190.8	
10/13/1984	10:20:00	182.3	132.8	190.3	
10/13/1984	10:25:00	182.2	132.8	189.9	
10/13/1984	10:30:00	182.1	132.3	189.4	
10/13/1984	10:35:00	182.0	131.8	189.0	
10/13/1984	10:40:00	181.9	131.4	188.6	
10/13/1984	10:45:00	182.1	131.4	188.6	
10/13/1984	10:50:00	182.2	131.5	188.6	
10/13/1984	10:55:00	182.3	131.9	188.5	
10/13/1984	11:00:00	182.4	132.1	188.5	
10/13/1984	11:05:00	182.4	132.3	188.5	
10/13/1984	11:10:00	182.2	131.9	188.2	
10/13/1984	11:15:00	182.1	131.8	188.0	
10/13/1984	11:20:00	182.1	131.8	187.7	
10/13/1984	11:25:00	182.1	131.8	187.8	
10/13/1984	11:30:00	182.3	132.4	188.2	
10/13/1984	11:35:00	182.4	132.9	188.4	
10/13/1984	11:40:00	182.4	133.2	188.4	
10/13/1984	11:45:00	182.7	134.3	189.3	
10/13/1984	11:50:00	182.8	135.1	189.3	
10/13/1984	11:55:00	182.4	134.9	188.7	FBU
10/13/1984	12:28:00	181.7	133.8	186.6	
10/13/1984	12:29:00	181.7	133.8	186.7	
10/13/1984	12:30:00	181.7	133.8	186.7	
10/13/1984	12:31:00	181.7	133.7	186.6	

TABLE A3-4 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE TAMARISK MEMBER OF THE RUSTLER FORMATION, 796 TO 817
 FEET BELOW LAND SURFACE, OCTOBER 12 TO 13, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/13/1984	12:32:00	181.7	133.6	186.5	
10/13/1984	12:33:00	181.6	133.3	186.3	
10/13/1984	12:34:00	181.6	133.6	186.4	
10/13/1984	12:35:00	181.7	133.7	186.3	
10/13/1984	12:40:00	181.6	123.6	185.9	Deflated Packers
10/13/1984	12:45:00	177.7	252.3	270.9	
10/13/1984	12:50:00	173.0	249.5	268.5	
10/13/1984	12:55:00	150.6	226.3	245.4	
10/13/1984	13:00:00	121.9	197.6	215.0	
10/13/1984	13:05:00	122.6	191.8	208.8	
10/13/1984	13:10:00	124.4	198.5	218.8	
10/13/1984	13:15:00	124.3	198.8	218.9	
10/13/1984	13:20:00	124.6	200.0	219.4	
10/13/1984	13:25:00	124.5	200.3	220.3	

TABLE A3-5
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE CULEBRA DOLOMITE MEMBER OF THE RUSTLER FORMATION, 824
 TO 846 FEET BELOW LAND SURFACE, OCTOBER 12, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/12/1984	09:55:00	178.2	259.1	278.4	
10/12/1984	10:00:00	178.1	258.3	277.8	
10/12/1984	10:05:00	191.0	270.6	290.4	
10/12/1984	10:10:00	191.1	270.6	289.9	
10/12/1984	10:15:00	191.3	270.9	289.8	Inflated Straddle
10/12/1984	10:20:00	192.8	192.0	537.9	Packer
10/12/1984	10:23:00	192.9	187.8	526.6	
10/12/1984	10:24:00	192.9	187.2	523.3	
10/12/1984	10:25:00	193.0	187.0	520.6	
10/12/1984	10:26:00	193.1	186.8	517.5	
10/12/1984	10:27:00	193.1	186.4	514.5	
10/12/1984	10:28:00	193.0	186.2	511.4	
10/12/1984	10:29:00	193.0	185.9	508.8	
10/12/1984	10:30:00	193.1	185.7	506.4	
10/12/1984	10:31:00	193.4	186.0	504.6	
10/12/1984	10:32:00	193.7	186.1	502.5	
10/12/1984	10:33:00	193.7	186.0	500.1	
10/12/1984	10:34:00	193.7	185.7	497.4	
10/12/1984	10:35:00	193.8	185.6	495.1	
10/12/1984	10:36:00	193.8	185.5	493.2	
10/12/1984	10:37:00	193.8	185.3	490.7	
10/12/1984	10:38:00	193.7	185.1	488.4	
10/12/1984	10:39:00	193.7	185.0	486.6	
10/12/1984	10:40:00	193.7	184.8	484.8	
10/12/1984	10:41:00	193.7	184.6	483.1	
10/12/1984	10:42:00	193.7	184.4	481.3	
10/12/1984	10:43:00	193.8	184.2	479.7	
10/12/1984	10:44:00	193.8	184.2	478.4	
10/12/1984	10:45:00	194.0	184.2	477.1	
10/12/1984	10:46:00	194.0	184.1	475.4	
10/12/1984	10:47:00	194.0	183.8	473.7	
10/12/1984	10:48:00	194.1	184.0	472.7	
10/12/1984	10:49:00	194.2	183.9	471.4	
10/12/1984	10:50:00	194.3	183.9	470.0	
10/12/1984	10:51:00	194.3	183.8	468.7	
10/12/1984	10:52:00	194.5	184.0	467.7	
10/12/1984	10:53:00	194.6	184.1	466.6	
10/12/1984	10:54:00	194.6	184.0	465.2	
10/12/1984	10:55:00	194.6	183.9	464.0	
10/12/1984	10:56:00	194.6	184.0	462.6	
10/12/1984	10:57:00	194.6	183.8	461.4	
10/12/1984	10:58:00	194.7	183.6	460.0	
10/12/1984	10:59:00	194.7	183.4	458.4	
10/12/1984	11:00:00	194.7	183.4	457.3	
10/12/1984	11:01:00	194.8	183.2	456.0	
10/12/1984	11:02:00	194.7	183.2	454.9	
10/12/1984	11:03:00	194.8	183.0	453.7	
10/12/1984	11:04:00	195.3	183.1	452.8	
10/12/1984	11:05:00	195.0	182.8	451.6	
10/12/1984	11:06:00	194.9	182.8	450.5	

TABLE A3-5 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE CULEBRA DOLOMITE MEMBER OF THE RUSTLER FORMATION, 824
 TO 846 FEET BELOW LAND SURFACE, OCTOBER 12, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/12/1984	11:07:00	195.2	182.7	449.3	
10/12/1984	11:08:00	195.3	182.6	448.6	
10/12/1984	11:09:00	195.3	182.9	447.7	
10/12/1984	11:10:00	195.4	182.8	446.7	
10/12/1984	11:11:00	195.2	182.7	445.7	
10/12/1984	11:12:00	195.2	182.4	444.3	
10/12/1984	11:13:00	195.1	182.5	443.4	
10/12/1984	11:14:00	195.2	182.3	442.2	
10/12/1984	11:15:00	195.2	182.1	441.2	
10/12/1984	11:16:00	195.2	182.0	440.4	
10/12/1984	11:17:00	195.2	182.0	439.7	
10/12/1984	11:18:00	195.2	181.9	438.6	
10/12/1984	11:19:00	195.1	181.9	437.6	
10/12/1984	11:20:00	195.2	181.6	436.9	
10/12/1984	11:21:00	195.2	181.7	436.1	
10/12/1984	11:22:00	195.0	181.5	435.3	
10/12/1984	11:23:00	195.3	181.3	434.2	
10/12/1984	11:24:00	195.4	181.4	433.5	
10/12/1984	11:25:00	195.5	181.4	432.8	
10/12/1984	11:26:00	195.5	181.2	431.7	
10/12/1984	11:27:00	195.3	181.0	430.6	
10/12/1984	11:28:00	195.4	180.9	429.9	
10/12/1984	11:29:00	195.5	180.8	429.0	
10/12/1984	11:30:00	195.4	180.6	427.9	
10/12/1984	11:31:00	195.5	180.4	427.0	
10/12/1984	11:32:00	195.5	180.3	426.4	
10/12/1984	11:33:00	195.6	180.2	425.7	
10/12/1984	11:34:00	195.6	180.1	424.9	
10/12/1984	11:35:00	195.7	179.9	423.9	
10/12/1984	11:36:00	195.7	179.7	423.3	
10/12/1984	11:37:00	195.8	179.6	423.1	
10/12/1984	11:38:00	195.9	179.7	422.3	
10/12/1984	11:39:00	196.1	179.9	422.1	
10/12/1984	11:40:00	196.4	180.1	421.8	
10/12/1984	11:41:00	196.5	180.4	421.5	
10/12/1984	11:42:00	196.7	180.5	421.2	
10/12/1984	11:43:00	196.6	180.1	419.9	
10/12/1984	11:44:00	196.5	179.8	418.6	
10/12/1984	11:45:00	196.3	179.3	417.4	
10/12/1984	11:46:00	196.4	179.2	416.4	
10/12/1984	11:47:00	196.5	179.2	415.9	
10/12/1984	11:48:00	196.7	179.3	415.7	
10/12/1984	11:49:00	196.8	179.5	415.6	
10/12/1984	11:50:00	196.9	179.7	415.1	
10/12/1984	11:51:00	197.0	179.7	415.1	
10/12/1984	11:52:00	197.1	180.0	414.2	
10/12/1984	11:53:00	197.2	180.1	413.9	
10/12/1984	11:54:00	197.2	180.3	413.4	
10/12/1984	11:55:00	197.2	180.2	412.6	
10/12/1984	11:56:00	197.4	180.3	412.1	

TABLE A3-5 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE CULEBRA DOLOMITE MEMBER OF THE RUSTLER FORMATION, 824
 TO 846 FEET BELOW LAND SURFACE, OCTOBER 12, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/12/1984	11:57:00	197.6	180.6	411.9	
10/12/1984	11:58:00	197.6	180.7	411.4	
10/12/1984	11:59:00	197.7	180.8	411.0	
10/12/1984	12:00:00	197.9	181.0	410.7	
10/12/1984	12:01:00	197.8	181.0	410.0	
10/12/1984	12:02:00	198.0	181.0	409.6	
10/12/1984	12:03:00	198.0	180.9	409.0	
10/12/1984	12:04:00	197.9	180.7	408.1	
10/12/1984	12:05:00	197.7	180.9	407.9	Bailed
10/12/1984	12:06:00	197.8	181.0	406.9	
10/12/1984	12:07:00	197.8	181.1	406.4	Tubing
10/12/1984	12:08:00	197.8	180.9	405.9	
10/12/1984	12:09:00	197.8	181.2	404.8	
10/12/1984	12:10:00	197.6	180.6	404.1	
10/12/1984	12:11:00	197.5	180.8	403.5	
10/12/1984	12:12:00	197.3	180.2	402.2	
10/12/1984	12:13:00	197.3	181.2	401.3	
10/12/1984	12:14:00	197.2	180.2	399.9	
10/12/1984	12:15:00	197.3	179.8	399.9	
10/12/1984	12:16:00	197.2	180.2	399.4	
10/12/1984	12:17:00	197.3	180.0	398.8	
10/12/1984	12:18:00	197.2	180.0	397.7	
10/12/1984	12:19:00	197.2	179.5	397.1	
10/12/1984	12:20:00	197.3	179.7	397.1	
10/12/1984	12:21:00	197.2	179.4	396.5	
10/12/1984	12:22:00	197.3	179.4	395.5	
10/12/1984	12:23:00	197.2	179.5	395.0	
10/12/1984	12:24:00	197.2	179.4	394.4	
10/12/1984	12:25:00	197.2	179.1	393.6	
10/12/1984	12:26:00	197.1	179.0	393.1	
10/12/1984	12:27:00	197.2	178.7	392.3	
10/12/1984	12:28:00	197.1	178.6	391.4	
10/12/1984	12:29:00	197.1	178.4	390.9	
10/12/1984	12:30:00	197.1	178.2	390.3	
10/12/1984	12:30:05	197.1	178.4	390.3	
10/12/1984	12:30:10	197.1	178.3	390.3	
10/12/1984	12:30:15	197.1	178.2	390.2	
10/12/1984	12:30:20	197.1	178.3	390.2	
10/12/1984	12:30:25	197.1	178.3	390.2	
10/12/1984	12:30:30	197.1	178.2	390.1	
10/12/1984	12:30:35	197.1	178.3	390.1	
10/12/1984	12:30:40	197.1	178.2	390.1	
10/12/1984	12:30:45	197.1	178.2	390.1	
10/12/1984	12:30:50	197.1	178.1	390.0	
10/12/1984	12:30:55	197.1	178.0	390.0	
10/12/1984	12:31:00	197.1	177.9	389.9	Deflated Valve Packer
10/12/1984	12:31:05	197.1	177.7	389.8	
10/12/1984	12:31:10	197.1	177.6	389.8	
10/12/1984	12:31:15	197.1	177.6	389.6	
10/12/1984	12:31:20	197.1	177.3	389.6	

TABLE A3-5 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE CULEBRA DOLOMITE MEMBER OF THE RUSTLER FORMATION, 824
 TO 846 FEET BELOW LAND SURFACE, OCTOBER 12, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/12/1984	12:31:25	197.1	175.7	389.6	
10/12/1984	12:31:30	197.1	172.6	389.4	
10/12/1984	12:31:35	197.1	168.4	389.3	
10/12/1984	12:31:40	197.1	154.9	389.3	
10/12/1984	12:31:45	197.0	134.0	388.9	
10/12/1984	12:31:50	197.1	109.8	388.6	
10/12/1984	12:31:55	197.0	89.9	388.3	
10/12/1984	12:32:00	197.1	76.4	388.1	Begin FFL
10/12/1984	12:32:05	197.1	61.6	388.0	
10/12/1984	12:32:10	197.0	62.4	387.8	
10/12/1984	12:32:15	197.0	63.1	387.9	
10/12/1984	12:32:20	197.1	63.5	388.0	
10/12/1984	12:32:25	197.1	64.0	388.0	
10/12/1984	12:32:30	197.1	64.6	387.8	
10/12/1984	12:32:35	197.1	65.2	387.7	
10/12/1984	12:32:40	197.1	65.6	387.7	
10/12/1984	12:32:45	197.1	66.4	387.7	
10/12/1984	12:32:50	197.1	66.9	387.8	
10/12/1984	12:32:55	197.1	67.5	387.7	
10/12/1984	12:33:00	197.1	68.2	387.6	
10/12/1984	12:33:05	197.1	68.7	387.6	
10/12/1984	12:33:10	197.1	69.2	387.5	
10/12/1984	12:33:15	197.1	69.7	387.4	
10/12/1984	12:33:20	197.1	70.3	387.3	
10/12/1984	12:33:25	197.1	70.8	387.3	
10/12/1984	12:33:30	197.0	71.4	387.2	
10/12/1984	12:33:35	197.1	71.9	387.2	
10/12/1984	12:33:40	197.1	72.4	387.2	
10/12/1984	12:33:45	197.1	72.9	387.0	
10/12/1984	12:33:50	197.1	73.5	387.0	
10/12/1984	12:33:55	197.1	74.0	386.9	
10/12/1984	12:34:00	197.1	74.5	386.9	
10/12/1984	12:34:05	197.1	75.0	386.9	
10/12/1984	12:34:10	197.1	75.5	386.8	
10/12/1984	12:34:15	197.1	76.0	386.8	
10/12/1984	12:34:20	197.1	76.5	386.8	
10/12/1984	12:34:25	197.1	77.0	386.8	
10/12/1984	12:34:30	197.1	77.6	386.8	
10/12/1984	12:34:35	197.1	78.1	386.8	
10/12/1984	12:34:40	197.1	78.6	386.7	
10/12/1984	12:34:45	197.1	79.1	386.7	
10/12/1984	12:34:50	197.1	79.4	386.6	
10/12/1984	12:34:55	197.2	80.1	386.6	
10/12/1984	12:35:00	197.1	80.5	386.5	
10/12/1984	12:35:05	197.1	81.1	386.7	
10/12/1984	12:35:10	197.1	81.6	386.5	
10/12/1984	12:35:15	197.2	82.1	386.5	
10/12/1984	12:35:20	197.1	82.7	386.5	
10/12/1984	12:35:25	197.1	83.1	386.4	
10/12/1984	12:35:30	197.1	83.6	386.4	

TABLE A3-5 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE CULEBRA DOLOMITE MEMBER OF THE RUSTLER FORMATION, 824
 TO 846 FEET BELOW LAND SURFACE, OCTOBER 12, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/12/1984	12:35:35	197.1	84.0	386.3	
10/12/1984	12:35:40	197.1	84.6	386.3	
10/12/1984	12:35:45	197.1	85.1	386.3	
10/12/1984	12:35:50	197.1	85.6	386.3	
10/12/1984	12:35:55	197.2	86.0	386.3	
10/12/1984	12:36:00	197.1	86.5	386.2	
10/12/1984	12:36:05	197.1	87.0	386.2	
10/12/1984	12:36:10	197.1	87.4	386.2	
10/12/1984	12:36:15	197.1	87.9	386.1	
10/12/1984	12:36:20	197.1	88.4	386.1	
10/12/1984	12:36:25	197.1	88.9	386.1	
10/12/1984	12:36:30	197.2	89.3	386.0	
10/12/1984	12:36:35	197.2	89.8	385.9	
10/12/1984	12:36:40	197.2	90.2	385.9	
10/12/1984	12:36:45	197.1	90.7	385.9	
10/12/1984	12:36:50	197.1	91.0	385.9	
10/12/1984	12:36:55	197.1	91.6	385.8	
10/12/1984	12:37:00	197.2	92.0	385.7	
10/12/1984	12:37:05	197.1	92.4	385.8	
10/12/1984	12:37:10	197.1	92.8	385.8	
10/12/1984	12:37:15	197.1	93.3	385.7	
10/12/1984	12:37:20	197.2	93.8	385.7	
10/12/1984	12:37:25	197.2	94.1	385.7	
10/12/1984	12:37:30	197.1	94.5	385.8	
10/12/1984	12:37:35	197.1	95.0	385.6	
10/12/1984	12:37:40	197.1	95.4	385.5	
10/12/1984	12:37:45	197.1	95.9	385.6	
10/12/1984	12:37:50	197.2	96.3	385.3	
10/12/1984	12:37:55	197.2	96.7	385.2	
10/12/1984	12:38:00	197.1	97.1	385.2	
10/12/1984	12:38:05	197.1	97.6	385.3	
10/12/1984	12:38:10	197.2	98.0	385.2	
10/12/1984	12:38:15	197.1	98.4	385.2	
10/12/1984	12:38:20	197.1	98.8	385.2	
10/12/1984	12:38:25	197.2	99.2	385.1	
10/12/1984	12:38:30	197.1	99.7	385.0	
10/12/1984	12:38:35	197.1	100.0	385.0	
10/12/1984	12:38:40	197.1	100.5	385.0	
10/12/1984	12:38:45	197.1	100.8	384.8	
10/12/1984	12:38:50	197.1	101.3	384.8	
10/12/1984	12:38:55	197.2	101.7	384.7	
10/12/1984	12:39:00	197.1	102.0	384.7	Inflated Valve
10/12/1984	12:39:05	197.1	103.1	384.7	Packer
10/12/1984	12:39:10	197.1	103.1	384.6	
10/12/1984	12:39:15	197.1	103.9	384.6	FBU
10/12/1984	12:39:20	197.1	151.2	385.0	
10/12/1984	12:39:25	197.1	177.1	385.4	
10/12/1984	12:39:30	197.1	174.7	385.4	
10/12/1984	12:39:35	197.1	174.3	385.3	
10/12/1984	12:39:40	197.2	174.4	385.5	

TABLE A3-5 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE CULEBRA DOLOMITE MEMBER OF THE RUSTLER FORMATION, 824
 TO 846 FEET BELOW LAND SURFACE, OCTOBER 12, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/12/1984	12:39:45	197.1	174.5	385.4	
10/12/1984	12:39:50	197.1	174.4	385.3	
10/12/1984	12:39:55	197.2	174.5	385.3	
10/12/1984	12:40:00	197.2	174.6	385.3	
10/12/1984	12:40:05	197.1	174.5	385.4	
10/12/1984	12:40:15	197.2	174.7	385.3	
10/12/1984	12:40:25	197.2	174.7	385.2	
10/12/1984	12:40:35	197.2	174.4	385.0	
10/12/1984	12:40:45	197.2	174.4	384.7	
10/12/1984	12:40:55	197.2	174.2	384.6	
10/12/1984	12:41:05	197.2	174.1	384.4	
10/12/1984	12:41:15	197.2	174.1	384.3	
10/12/1984	12:41:25	197.2	174.3	384.1	
10/12/1984	12:41:35	197.1	174.2	384.0	
10/12/1984	12:41:45	197.2	174.2	384.0	
10/12/1984	12:41:55	197.1	174.3	384.0	
10/12/1984	12:42:05	197.2	174.3	383.9	FBU
10/12/1984	12:42:15	197.2	174.3	383.8	
10/12/1984	12:42:20	197.2	174.3	383.8	
10/12/1984	12:42:25	197.2	174.4	383.7	
10/12/1984	12:42:30	197.2	174.4	383.9	
10/12/1984	12:42:40	197.2	174.4	383.8	
10/12/1984	12:42:50	197.2	174.4	383.8	
10/12/1984	12:43:00	197.2	174.4	383.9	
10/12/1984	12:43:10	197.2	174.4	383.8	
10/12/1984	12:43:20	197.2	174.5	383.8	
10/12/1984	12:43:30	197.2	174.3	383.8	
10/12/1984	12:43:40	197.2	174.4	383.4	
10/12/1984	12:43:50	197.2	174.5	383.4	
10/12/1984	12:44:00	197.3	174.5	383.4	
10/12/1984	12:44:30	197.3	174.5	383.2	
10/12/1984	12:45:00	197.3	174.4	383.0	
10/12/1984	12:45:30	197.3	174.5	382.8	
10/12/1984	12:46:00	197.4	174.5	382.6	
10/12/1984	12:46:30	197.3	174.6	382.5	
10/12/1984	12:47:00	197.3	174.5	382.2	
10/12/1984	12:47:30	197.3	174.4	381.9	
10/12/1984	12:48:00	197.3	174.6	381.7	
10/12/1984	12:48:30	197.4	174.9	381.9	
10/12/1984	12:49:00	197.5	174.9	382.0	
10/12/1984	12:49:30	197.6	175.0	381.8	
10/12/1984	12:50:00	197.6	175.2	381.9	
10/12/1984	12:50:30	197.6	175.2	381.7	
10/12/1984	12:51:00	197.7	175.3	381.5	
10/12/1984	12:51:30	197.6	175.4	381.3	
10/12/1984	12:52:00	197.6	175.4	381.0	
10/12/1984	12:52:30	197.7	175.4	381.0	
10/12/1984	12:53:00	197.7	175.4	380.6	
10/12/1984	12:53:30	197.7	175.5	380.2	
10/12/1984	12:54:00	197.7	175.4	380.3	

TABLE A3-5 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE CULEBRA DOLOMITE MEMBER OF THE RUSTLER FORMATION, 824
 TO 846 FEET BELOW LAND SURFACE, OCTOBER 12, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/12/1984	12:54:30	197.6	175.4	379.8	
10/12/1984	12:55:00	197.7	175.5	379.7	
10/12/1984	12:55:30	197.8	175.8	379.9	
10/12/1984	12:56:00	197.8	175.8	379.7	FBU
10/12/1984	12:56:30	197.7	175.8	379.4	
10/12/1984	12:57:00	197.7	176.4	379.1	
10/12/1984	12:57:30	197.7	175.4	378.6	
10/12/1984	12:58:00	197.7	175.3	378.6	
10/12/1984	12:58:30	197.7	175.6	378.2	
10/12/1984	12:59:00	197.7	175.2	377.8	
10/12/1984	12:59:30	197.6	175.4	377.5	
10/12/1984	13:00:00	197.7	175.5	377.4	
10/12/1984	13:00:05	197.7	175.5	377.4	
10/12/1984	13:00:10	197.7	175.6	377.4	
10/12/1984	13:00:15	197.7	175.6	377.4	
10/12/1984	13:00:20	197.7	175.6	377.2	
10/12/1984	13:00:25	197.7	175.5	377.2	
10/12/1984	13:00:30	197.7	175.6	377.3	
10/12/1984	13:00:35	197.7	175.5	377.1	
10/12/1984	13:00:40	197.7	175.6	377.1	Deflated Valve
10/12/1984	13:00:45	197.7	174.5	377.0	Packer
10/12/1984	13:00:50	197.6	171.3	377.0	
10/12/1984	13:00:55	197.7	149.8	376.6	
10/12/1984	13:01:00	197.7	126.7	376.5	
10/12/1984	13:01:05	197.7	107.3	376.1	Begin SFL
10/12/1984	13:01:10	197.6	107.1	376.0	
10/12/1984	13:01:15	197.7	107.5	376.2	
10/12/1984	13:01:20	197.7	107.9	376.1	
10/12/1984	13:01:25	197.6	108.3	375.9	
10/12/1984	13:01:30	197.7	108.6	375.9	
10/12/1984	13:01:35	197.7	109.2	375.8	
10/12/1984	13:01:40	197.6	109.6	375.8	
10/12/1984	13:01:45	197.6	110.1	375.7	
10/12/1984	13:01:50	197.6	110.6	375.7	
10/12/1984	13:01:55	197.6	111.1	375.6	
10/12/1984	13:02:00	197.7	111.5	375.7	
10/12/1984	13:02:05	197.6	112.0	375.6	SFL
10/12/1984	13:02:10	197.6	112.4	375.5	
10/12/1984	13:02:15	197.6	112.8	375.6	
10/12/1984	13:02:20	197.6	113.3	375.5	
10/12/1984	13:02:25	197.6	113.8	375.4	
10/12/1984	13:02:30	197.6	114.0	375.5	
10/12/1984	13:02:35	197.7	114.6	375.5	
10/12/1984	13:02:40	197.6	115.0	375.5	
10/12/1984	13:02:45	197.6	115.4	375.4	
10/12/1984	13:02:50	197.7	115.9	375.3	
10/12/1984	13:02:55	197.6	116.3	375.3	
10/12/1984	13:03:00	197.6	116.8	375.3	
10/12/1984	13:03:05	197.7	117.2	375.4	
10/12/1984	13:03:10	197.7	117.7	375.3	

TABLE A3-5 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE CULEBRA DOLOMITE MEMBER OF THE RUSTLER FORMATION, 824
 TO 846 FEET BELOW LAND SURFACE, OCTOBER 12, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/12/1984	13:03:15	197.6	118.0	375.5	
10/12/1984	13:03:20	197.7	118.5	375.4	
10/12/1984	13:03:25	197.7	118.8	375.5	
10/12/1984	13:03:30	197.7	119.3	375.6	
10/12/1984	13:03:35	197.7	119.6	375.4	
10/12/1984	13:03:40	197.7	120.1	375.4	
10/12/1984	13:03:45	197.7	120.6	375.3	
10/12/1984	13:03:50	197.8	120.9	375.6	
10/12/1984	13:03:55	197.8	121.2	375.4	
10/12/1984	13:04:00	197.7	121.7	375.6	
10/12/1984	13:04:05	197.7	122.2	375.5	
10/12/1984	13:04:10	197.7	122.4	375.4	
10/12/1984	13:04:15	197.7	122.9	375.5	
10/12/1984	13:04:20	197.8	123.3	375.6	
10/12/1984	13:04:25	197.8	123.7	375.4	
10/12/1984	13:04:30	197.8	124.1	375.5	
10/12/1984	13:04:35	197.8	124.5	375.4	
10/12/1984	13:04:40	197.7	124.9	375.2	
10/12/1984	13:04:45	197.8	125.1	375.2	
10/12/1984	13:04:50	197.8	125.5	375.1	
10/12/1984	13:04:55	197.7	125.9	375.1	
10/12/1984	13:05:00	197.7	126.2	375.0	
10/12/1984	13:05:05	197.7	126.6	375.0	SFL
10/12/1984	13:05:10	197.7	126.9	374.8	
10/12/1984	13:05:15	197.7	127.3	374.7	
10/12/1984	13:05:20	197.7	127.6	374.8	
10/12/1984	13:05:25	197.7	127.9	374.7	
10/12/1984	13:05:30	197.6	128.3	374.6	
10/12/1984	13:05:35	197.7	128.6	374.5	
10/12/1984	13:05:40	197.7	129.0	374.5	
10/12/1984	13:05:45	197.6	129.3	374.5	
10/12/1984	13:05:50	197.7	129.6	374.4	
10/12/1984	13:05:55	197.6	129.9	374.2	
10/12/1984	13:06:00	197.7	130.2	374.1	
10/12/1984	13:06:05	197.6	130.6	374.2	
10/12/1984	13:06:10	197.7	130.9	374.1	
10/12/1984	13:06:15	197.6	131.2	373.9	
10/12/1984	13:06:20	197.6	131.6	374.0	
10/12/1984	13:06:25	197.6	132.0	374.0	
10/12/1984	13:06:30	197.6	132.2	373.9	
10/12/1984	13:06:35	197.6	132.6	373.9	
10/12/1984	13:06:40	197.6	132.9	373.9	
10/12/1984	13:06:45	197.6	133.3	373.9	
10/12/1984	13:06:50	197.6	133.6	373.8	
10/12/1984	13:06:55	197.6	134.0	373.8	
10/12/1984	13:07:00	197.7	134.2	373.8	
10/12/1984	13:07:05	197.6	134.6	373.7	
10/12/1984	13:07:10	197.7	134.8	373.8	
10/12/1984	13:07:15	197.7	135.3	373.7	
10/12/1984	13:07:20	197.7	135.5	373.7	

TABLE A3-5 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE CULEBRA DOLOMITE MEMBER OF THE RUSTLER FORMATION, 824
 TO 846 FEET BELOW LAND SURFACE, OCTOBER 12, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/12/1984	13:07:25	197.6	135.9	373.8	
10/12/1984	13:07:30	197.7	136.2	373.7	
10/12/1984	13:07:35	197.7	136.6	373.7	
10/12/1984	13:07:40	197.7	136.9	373.6	
10/12/1984	13:07:45	197.6	137.2	373.5	
10/12/1984	13:07:50	197.7	137.5	373.7	
10/12/1984	13:07:55	197.7	137.8	373.6	
10/12/1984	13:08:00	197.7	138.1	373.6	
10/12/1984	13:08:05	197.7	138.6	373.6	
10/12/1984	13:08:10	197.7	138.7	373.6	
10/12/1984	13:08:15	197.7	139.1	373.6	
10/12/1984	13:08:20	197.7	139.7	373.6	
10/12/1984	13:08:25	197.7	140.0	373.5	Inflated Valve
10/12/1984	13:08:30	197.7	142.0	373.6	Packer
10/12/1984	13:08:35	197.6	177.6	373.9	
10/12/1984	13:08:40	197.7	175.4	373.9	
10/12/1984	13:08:45	197.7	175.0	373.8	
10/12/1984	13:08:50	197.6	174.9	373.9	
10/12/1984	13:08:55	197.7	175.0	373.8	
10/12/1984	13:09:00	197.7	175.0	373.7	
10/12/1984	13:09:05	197.6	175.0	373.7	SBU
10/12/1984	13:09:10	197.7	175.0	373.6	
10/12/1984	13:09:15	197.6	175.1	373.5	
10/12/1984	13:09:20	197.6	175.1	373.5	
10/12/1984	13:09:25	197.6	175.1	373.3	
10/12/1984	13:09:30	197.6	175.0	373.3	
10/12/1984	13:09:35	197.7	175.1	373.2	
10/12/1984	13:09:40	197.6	175.0	373.1	
10/12/1984	13:09:45	197.6	175.1	373.0	
10/12/1984	13:09:50	197.6	175.0	372.9	
10/12/1984	13:09:55	197.6	175.0	373.0	
10/12/1984	13:10:00	197.6	174.9	372.6	
10/12/1984	13:10:05	197.6	174.9	372.7	
10/12/1984	13:10:10	197.5	174.8	372.7	
10/12/1984	13:10:15	197.5	174.9	372.5	
10/12/1984	13:10:20	197.6	174.9	372.4	
10/12/1984	13:10:30	197.5	175.0	372.3	
10/12/1984	13:10:40	197.5	174.9	372.2	
10/12/1984	13:10:50	197.5	174.9	371.9	
10/12/1984	13:11:00	197.5	174.8	371.9	
10/12/1984	13:11:10	197.5	174.8	371.7	
10/12/1984	13:11:20	197.4	174.7	371.6	
10/12/1984	13:11:30	197.4	174.7	371.6	
10/12/1984	13:12:00	197.5	174.7	371.2	
10/12/1984	13:12:30	197.4	174.5	370.9	
10/12/1984	13:13:00	197.4	174.4	370.6	
10/12/1984	13:13:30	197.4	174.4	370.4	
10/12/1984	13:14:00	197.4	174.2	370.3	
10/12/1984	13:14:30	197.4	174.3	370.1	
10/12/1984	13:15:00	197.4	174.3	369.8	

TABLE A3-5 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE CULEBRA DOLOMITE MEMBER OF THE RUSTLER FORMATION, 824
 TO 846 FEET BELOW LAND SURFACE, OCTOBER 12, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/12/1984	13:15:30	197.5	174.2	369.8	
10/12/1984	13:16:00	197.4	174.3	369.9	
10/12/1984	13:16:30	197.4	174.2	369.5	
10/12/1984	13:17:00	197.6	174.0	368.9	
10/12/1984	13:18:00	197.3	173.9	368.5	
10/12/1984	13:19:00	197.3	173.6	367.9	
10/12/1984	13:20:00	197.2	173.7	368.1	
10/12/1984	13:21:00	197.4	173.8	368.2	
10/12/1984	13:22:00	197.6	173.9	368.0	
10/12/1984	13:23:00	197.3	173.9	367.9	
10/12/1984	13:24:00	197.3	173.6	366.7	
10/12/1984	13:25:00	197.3	173.5	366.2	
10/12/1984	13:30:00	197.2	173.2	364.0	
10/12/1984	13:35:00	197.4	173.4	362.8	SBU
10/12/1984	13:40:00	197.9	173.9	361.3	
10/12/1984	13:45:00	197.7	174.4	360.5	
10/12/1984	13:50:00	197.7	175.0	358.8	
10/12/1984	13:55:00	198.2	176.3	358.8	
10/12/1984	14:00:00	198.2	176.3	356.7	
10/12/1984	14:05:00	198.2	176.9	355.5	
10/12/1984	14:10:00	198.2	177.3	354.3	
10/12/1984	14:15:00	198.5	177.9	353.6	
10/12/1984	14:20:00	198.7	179.2	353.4	
10/12/1984	14:25:00	199.0	180.9	353.4	
10/12/1984	14:30:00	199.0	181.4	352.0	
10/12/1984	14:35:00	199.0	181.7	351.1	
10/12/1984	14:40:00	199.2	182.8	350.6	
10/12/1984	14:45:00	199.4	183.5	349.9	
10/12/1984	14:50:00	199.6	184.2	349.3	
10/12/1984	14:55:00	199.4	184.7	348.5	
10/12/1984	15:00:00	199.4	185.0	347.7	
10/12/1984	15:05:00	199.4	185.0	346.9	
10/12/1984	15:10:00	199.4	184.9	345.9	
10/12/1984	15:15:00	199.4	184.9	345.0	
10/12/1984	15:20:00	199.3	186.0	344.0	
10/12/1984	15:25:00	199.4	186.5	343.2	
10/12/1984	15:30:00	199.4	186.5	342.2	
10/12/1984	15:35:00	199.4	186.4	341.3	
10/12/1984	15:40:00	199.4	186.9	340.6	
10/12/1984	15:45:00	199.6	187.1	340.1	
10/12/1984	15:50:00	199.5	187.1	339.2	
10/12/1984	15:55:00	199.6	187.3	338.7	
10/12/1984	15:56:00	199.6	187.3	338.5	
10/12/1984	15:57:00	199.6	187.3	338.4	
10/12/1984	15:58:00	199.6	187.3	338.2	
10/12/1984	15:59:00	199.5	187.3	338.1	
10/12/1984	16:00:00	199.5	187.2	337.9	
10/12/1984	16:00:05	199.6	187.3	337.8	
10/12/1984	16:00:10	199.5	187.2	337.8	
10/12/1984	16:00:15	199.5	187.2	337.8	

TABLE A3-5 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE CULEBRA DOLOMITE MEMBER OF THE RUSTLER FORMATION, 824
 TO 846 FEET BELOW LAND SURFACE, OCTOBER 12, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/12/1984	16:00:20	199.5	187.2	337.6	
10/12/1984	16:00:25	199.5	187.2	337.7	
10/12/1984	16:00:30	199.5	187.1	337.7	
10/12/1984	16:00:35	199.5	187.2	337.8	Deflated Valve
10/12/1984	16:00:40	199.6	176.8	337.8	Packer
10/12/1984	16:00:45	199.6	182.9	337.9	
10/12/1984	16:00:50	199.7	156.9	337.3	
10/12/1984	16:00:55	199.6	131.2	337.1	
10/12/1984	16:01:00	199.4	109.5	337.0	
10/12/1984	16:01:05	199.6	90.2	336.6	
10/12/1984	16:01:10	199.5	74.0	336.6	
10/12/1984	16:01:15	199.6	61.9	336.6	Begin SLUG Test
10/12/1984	16:01:20	199.5	47.7	336.2	
10/12/1984	16:01:25	199.6	48.3	336.4	
10/12/1984	16:01:30	199.5	49.1	336.2	
10/12/1984	16:01:35	199.6	49.7	336.3	
10/12/1984	16:01:40	199.6	50.4	336.2	
10/12/1984	16:01:45	199.5	51.1	336.2	
10/12/1984	16:01:50	199.6	51.9	336.3	
10/12/1984	16:01:55	199.6	52.6	336.3	
10/12/1984	16:02:00	199.5	53.2	336.3	
10/12/1984	16:02:05	199.6	54.0	336.2	
10/12/1984	16:02:10	199.6	54.7	336.2	
10/12/1984	16:02:15	199.5	55.4	336.2	
10/12/1984	16:02:20	199.6	56.1	336.3	
10/12/1984	16:02:25	199.5	56.9	336.3	
10/12/1984	16:02:30	199.6	57.6	336.4	
10/12/1984	16:02:35	199.6	58.2	336.2	
10/12/1984	16:02:40	199.5	59.0	336.2	
10/12/1984	16:02:45	199.6	59.7	336.3	
10/12/1984	16:02:50	199.5	60.4	336.2	
10/12/1984	16:02:55	199.5	61.0	336.3	
10/12/1984	16:03:00	199.5	61.7	336.3	
10/12/1984	16:03:05	199.5	62.4	336.2	
10/12/1984	16:03:10	199.5	63.1	336.3	
10/12/1984	16:03:15	199.5	63.7	336.2	
10/12/1984	16:03:20	199.5	64.4	336.2	
10/12/1984	16:03:25	199.5	65.1	336.2	
10/12/1984	16:03:30	199.5	65.7	336.1	
10/12/1984	16:03:35	199.5	66.4	336.1	
10/12/1984	16:03:40	199.5	67.2	336.1	
10/12/1984	16:03:45	199.5	67.8	336.1	
10/12/1984	16:03:50	199.5	68.4	336.0	
10/12/1984	16:03:55	199.5	69.1	336.0	
10/12/1984	16:04:00	199.5	69.7	336.0	
10/12/1984	16:04:05	199.5	70.4	336.0	
10/12/1984	16:04:10	199.5	71.0	336.0	
10/12/1984	16:04:15	199.5	71.6	336.0	
10/12/1984	16:04:20	199.5	72.1	336.0	
10/12/1984	16:04:25	199.5	72.9	335.9	

TABLE A3-5 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE CULEBRA DOLOMITE MEMBER OF THE RUSTLER FORMATION, 824
 TO 846 FEET BELOW LAND SURFACE, OCTOBER 12, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/12/1984	16:04:30	199.4	73.5	336.0	
10/12/1984	16:04:35	199.5	74.2	335.9	
10/12/1984	16:04:40	199.4	74.7	336.1	
10/12/1984	16:04:45	199.5	75.3	336.0	
10/12/1984	16:04:50	199.4	76.0	336.0	
10/12/1984	16:04:55	199.4	76.6	335.9	
10/12/1984	16:05:00	199.4	77.2	335.8	
10/12/1984	16:05:05	199.5	77.9	335.8	
10/12/1984	16:05:10	199.4	78.4	335.8	
10/12/1984	16:05:15	199.4	79.1	335.8	
10/12/1984	16:05:20	199.4	79.8	335.8	
10/12/1984	16:05:25	199.5	80.4	335.9	
10/12/1984	16:05:30	199.4	81.0	335.8	
10/12/1984	16:05:35	199.4	81.7	335.8	
10/12/1984	16:05:40	199.4	82.3	335.8	
10/12/1984	16:05:45	199.4	83.0	335.8	
10/12/1984	16:05:50	199.4	83.5	335.9	
10/12/1984	16:05:55	199.4	84.2	335.8	
10/12/1984	16:06:00	199.4	84.9	335.7	
10/12/1984	16:06:05	199.4	85.4	335.7	
10/12/1984	16:06:10	199.4	86.0	335.7	
10/12/1984	16:06:15	199.3	86.7	335.7	
10/12/1984	16:06:20	199.4	87.2	335.8	
10/12/1984	16:06:25	199.4	87.8	335.7	
10/12/1984	16:06:30	199.4	88.5	335.6	
10/12/1984	16:06:35	199.3	89.0	335.8	
10/12/1984	16:06:40	199.3	89.7	335.7	
10/12/1984	16:06:45	199.4	90.2	335.7	
10/12/1984	16:06:50	199.4	90.9	335.6	
10/12/1984	16:06:55	199.3	91.5	335.8	
10/12/1984	16:07:00	199.3	92.0	335.8	
10/12/1984	16:07:05	199.3	92.7	335.7	
10/12/1984	16:07:10	199.3	93.2	335.7	
10/12/1984	16:07:15	199.3	93.8	335.6	
10/12/1984	16:07:20	199.4	94.3	335.7	
10/12/1984	16:07:25	199.3	94.9	335.7	
10/12/1984	16:07:30	199.4	95.4	335.7	
10/12/1984	16:07:35	199.3	96.1	335.7	
10/12/1984	16:07:40	199.4	96.7	335.7	
10/12/1984	16:07:45	199.3	97.2	335.7	
10/12/1984	16:07:50	199.3	97.8	335.7	
10/12/1984	16:07:55	199.3	98.3	335.7	
10/12/1984	16:08:00	199.4	98.9	335.7	
10/12/1984	16:08:05	199.4	99.5	335.7	
10/12/1984	16:08:10	199.4	100.1	335.7	
10/12/1984	16:08:15	199.3	100.6	335.6	
10/12/1984	16:08:20	199.3	101.1	335.6	
10/12/1984	16:08:25	199.4	101.8	335.6	
10/12/1984	16:08:30	199.3	102.3	335.6	
10/12/1984	16:08:35	199.4	102.9	335.6	

TABLE A3-5 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE CULEBRA DOLOMITE MEMBER OF THE RUSTLER FORMATION, 824
 TO 846 FEET BELOW LAND SURFACE, OCTOBER 12, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/12/1984	16:08:40	199.3	103.5	335.7	
10/12/1984	16:08:45	199.4	104.0	335.6	
10/12/1984	16:08:50	199.4	104.6	335.6	
10/12/1984	16:08:55	199.5	105.2	335.5	
10/12/1984	16:09:00	199.5	105.8	335.6	
10/12/1984	16:09:05	199.5	106.3	335.7	
10/12/1984	16:09:10	199.5	106.8	335.6	
10/12/1984	16:09:15	199.4	107.4	335.7	
10/12/1984	16:09:20	199.5	108.0	335.6	
10/12/1984	16:09:25	199.4	108.4	335.7	
10/12/1984	16:09:30	199.5	109.1	335.6	
10/12/1984	16:09:35	199.4	109.6	335.7	
10/12/1984	16:09:40	199.4	110.2	335.7	
10/12/1984	16:09:45	199.5	110.8	335.6	
10/12/1984	16:09:50	199.4	111.3	335.7	
10/12/1984	16:09:55	199.5	111.9	335.7	
10/12/1984	16:10:00	199.5	112.4	335.8	
10/12/1984	16:10:10	199.5	113.5	335.7	
10/12/1984	16:10:20	199.5	114.5	335.7	
10/12/1984	16:10:30	199.5	115.5	335.6	
10/12/1984	16:10:40	199.6	116.4	335.6	
10/12/1984	16:10:50	199.6	117.4	335.7	
10/12/1984	16:11:00	199.6	118.5	335.6	
10/12/1984	16:11:10	199.5	119.4	335.6	
10/12/1984	16:11:20	199.5	120.4	335.5	
10/12/1984	16:11:30	199.5	121.4	335.6	
10/12/1984	16:11:40	199.5	122.3	335.5	
10/12/1984	16:11:50	199.5	123.3	335.6	
10/12/1984	16:12:00	199.4	124.2	335.4	
10/12/1984	16:12:10	199.4	125.1	335.5	
10/12/1984	16:12:20	199.4	126.0	335.6	
10/12/1984	16:12:30	199.4	127.0	335.4	
10/12/1984	16:12:40	199.3	127.8	335.2	
10/12/1984	16:12:50	199.4	128.8	335.3	
10/12/1984	16:13:00	199.4	129.7	335.3	
10/12/1984	16:13:10	199.4	130.5	335.1	
10/12/1984	16:13:20	199.3	131.4	335.1	
10/12/1984	16:13:30	199.3	132.2	335.0	
10/12/1984	16:13:40	199.3	133.0	335.1	
10/12/1984	16:13:50	199.3	133.9	335.1	
10/12/1984	16:14:00	199.3	134.9	335.1	
10/12/1984	16:14:10	199.3	135.7	335.2	
10/12/1984	16:14:20	199.3	136.6	335.1	
10/12/1984	16:14:30	199.4	137.4	335.1	
10/12/1984	16:14:40	199.3	138.4	335.1	
10/12/1984	16:14:50	199.3	139.2	335.1	
10/12/1984	16:15:00	199.3	140.1	335.1	
10/12/1984	16:15:15	199.3	141.2	335.0	
10/12/1984	16:15:30	199.3	142.4	335.0	
10/12/1984	16:15:45	199.3	143.7	335.0	

TABLE A3-5 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE CULEBRA DOLOMITE MEMBER OF THE RUSTLER FORMATION, 824
 TO 846 FEET BELOW LAND SURFACE, OCTOBER 12, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/12/1984	16:16:00	199.3	144.8	335.0	
10/12/1984	16:16:15	199.3	146.0	335.0	
10/12/1984	16:16:30	199.3	147.2	335.1	
10/12/1984	16:16:45	199.3	148.3	335.1	
10/12/1984	16:17:00	199.3	149.5	335.2	
10/12/1984	16:17:15	199.4	150.7	335.2	
10/12/1984	16:17:30	199.4	151.7	335.1	
10/12/1984	16:17:45	199.5	152.9	335.1	
10/12/1984	16:18:00	199.5	154.0	335.1	
10/12/1984	16:18:15	199.5	155.0	335.1	
10/12/1984	16:18:30	199.6	156.1	335.2	
10/12/1984	16:18:45	199.6	157.2	335.3	
10/12/1984	16:19:00	199.6	158.2	335.3	
10/12/1984	16:19:15	199.6	159.0	335.1	
10/12/1984	16:19:30	199.6	160.0	335.2	
10/12/1984	16:19:45	199.6	161.0	335.2	
10/12/1984	16:20:00	199.6	162.0	335.1	
10/12/1984	16:20:15	199.6	162.9	335.3	
10/12/1984	16:20:30	199.5	163.9	335.2	
10/12/1984	16:20:45	199.6	164.7	335.0	
10/12/1984	16:21:00	199.6	165.5	335.0	
10/12/1984	16:21:15	199.6	166.4	335.1	
10/12/1984	16:21:30	199.6	167.1	335.0	
10/12/1984	16:21:45	199.6	167.9	335.1	
10/12/1984	16:22:00	199.6	168.6	334.9	
10/12/1984	16:22:15	199.5	169.3	334.9	
10/12/1984	16:22:30	199.5	170.0	334.9	
10/12/1984	16:22:45	199.5	170.8	334.7	
10/12/1984	16:23:00	199.5	171.5	334.8	
10/12/1984	16:23:15	199.5	172.1	334.8	
10/12/1984	16:23:30	199.5	172.8	334.7	
10/12/1984	16:23:45	199.5	173.3	334.9	
10/12/1984	16:24:00	199.5	173.9	334.8	
10/12/1984	16:24:15	199.5	174.6	334.8	
10/12/1984	16:24:30	199.5	175.2	334.8	
10/12/1984	16:24:45	199.5	175.7	334.7	
10/12/1984	16:25:00	199.5	176.3	334.6	
10/12/1984	16:25:15	199.5	176.7	334.6	
10/12/1984	16:25:30	199.5	177.4	334.7	
10/12/1984	16:25:45	199.5	177.8	334.7	
10/12/1984	16:26:00	199.4	178.2	334.5	
10/12/1984	16:26:15	199.5	178.8	334.5	
10/12/1984	16:26:30	199.5	179.1	334.4	
10/12/1984	16:26:45	199.5	179.6	334.7	
10/12/1984	16:27:00	199.5	180.1	334.6	
10/12/1984	16:27:15	199.5	180.5	334.6	
10/12/1984	16:27:30	199.5	180.8	334.7	
10/12/1984	16:27:45	199.5	181.2	334.5	
10/12/1984	16:28:00	199.5	181.5	334.5	
10/12/1984	16:28:15	199.5	182.0	334.4	

TABLE A3-5 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE CULEBRA DOLOMITE MEMBER OF THE RUSTLER FORMATION, 824
 TO 846 FEET BELOW LAND SURFACE, OCTOBER 12, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/12/1984	16:28:30	199.5	182.2	334.4	
10/12/1984	16:28:45	199.5	182.5	334.4	
10/12/1984	16:29:00	199.5	182.8	334.5	
10/12/1984	16:29:15	199.5	183.2	334.5	
10/12/1984	16:29:30	199.5	183.4	334.4	
10/12/1984	16:29:45	199.5	183.7	334.2	
10/12/1984	16:30:00	199.5	183.9	334.3	
10/12/1984	16:30:15	199.5	184.3	334.2	
10/12/1984	16:30:30	199.5	184.6	334.2	
10/12/1984	16:30:45	199.6	184.8	334.3	
10/12/1984	16:31:00	199.5	184.8	334.3	
10/12/1984	16:31:15	199.5	185.1	334.1	
10/12/1984	16:31:30	199.5	185.4	334.1	
10/12/1984	16:32:00	199.5	185.6	334.0	
10/12/1984	16:32:30	199.6	186.0	333.8	
10/12/1984	16:33:00	199.5	186.1	333.8	
10/12/1984	16:33:30	199.5	186.5	333.8	
10/12/1984	16:34:00	199.7	186.6	333.9	
10/12/1984	16:34:30	199.5	186.7	333.6	
10/12/1984	16:35:00	199.8	187.0	333.6	
10/12/1984	16:35:30	199.7	187.1	333.5	
10/12/1984	16:36:00	199.6	187.1	333.4	
10/12/1984	16:36:30	199.6	187.2	333.5	
10/12/1984	16:37:00	199.5	187.2	333.4	
10/12/1984	16:38:00	199.3	187.1	333.1	
10/12/1984	16:39:00	199.1	186.9	332.7	
10/12/1984	16:40:00	199.1	186.7	332.6	
10/12/1984	16:41:00	199.0	186.6	332.3	
10/12/1984	16:42:00	199.1	186.7	332.3	
10/12/1984	16:43:00	199.3	186.8	332.3	
10/12/1984	16:44:00	199.2	186.8	332.3	
10/12/1984	16:45:00	199.3	186.8	332.1	
10/12/1984	16:46:00	199.4	186.9	332.1	
10/12/1984	16:47:00	199.3	186.8	331.9	
10/12/1984	16:48:00	199.2	186.8	331.8	
10/12/1984	16:49:00	199.1	186.5	331.6	
10/12/1984	16:50:00	199.0	186.5	331.7	
10/12/1984	16:51:00	199.1	187.2	331.3	
10/12/1984	16:52:00	199.1	186.4	326.0	End SLUG Test

TABLE A3-6
 TABULATED PRESSURE DATA FOR THE DOE-2 PUMPING TEST
 OF THE CULEBRA DOLOMITE MEMBER OF THE RUSTLER
 FORMATION, FEBRUARY 19 TO MARCH 13, 1985

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi)		COMMENTS
	DOE-2 Culebra	DOE-2 Annulus	
44:13:11: 1	191.18	54.54	Start D20015
44:18: 0: 0	191.16	55.84	
45: 0: 0: 0	191.21	56.41	
45:10: 0: 0	191.14	55.23	
45:10:30: 0	191.13	55.28	
45:10:39:50	191.14	55.29	
45:10:40: 0	117.57	55.34	PUMP ON
45:10:40:10	63.41	55.28	
45:10:40:30	59.88	55.29	
45:10:41: 0	55.02	55.30	
45:10:42: 0	49.96	55.29	
45:10:43: 0	49.25	55.29	
45:10:44: 0	49.22	55.29	
45:10:45: 0	48.17	55.30	
45:10:50: 0	49.06	55.30	
45:10:55: 0	36.68	55.31	
45:10:59:59	35.20	55.31	
45:11:10: 0	35.96	55.34	
45:11:20: 0	34.89	55.35	
45:11:30: 0	34.23	55.38	
45:11:39:50	31.17	55.40	
45:11:40: 0	37.75	55.46	PUMP OFF
45:11:40:10	55.56	55.40	
45:11:40:30	108.05	55.40	
45:11:41: 0	174.49	55.41	
45:11:42: 0	187.74	55.41	
45:11:43: 0	188.74	55.41	
45:11:44: 0	189.26	55.41	
45:11:45: 0	189.50	55.41	
45:11:50: 0	190.15	55.43	
45:12: 0: 0	190.53	55.44	
45:12:31: 0	190.98	55.47	
45:13: 1: 0	191.06	55.52	
45:14: 0: 0	191.14	55.62	
45:18: 0:17	191.26	56.06	
46: 0: 0:17	191.29	56.67	
46: 8:30:17	188.83	55.51	End D20015
49:14:48: 0	197.27	60.32	Start D20035
49:18: 0: 0	197.30	60.67	
49:18: 0:39	197.29	60.45	PUMP ON
49:18: 0:39	130.98	60.39	Timer
49:18: 0:39	99.65	60.66	malfunction
49:18: 0:39	81.75	60.80	

TABLE A3-6 (continued)
 TABULATED PRESSURE DATA FOR THE DOE-2 PUMPING TEST
 OF THE CULEBRA DOLOMITE MEMBER OF THE RUSTLER
 FORMATION, FEBRUARY 19 TO MARCH 13, 1985

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi)		COMMENTS
	DOE-2 Culebra	DOE-2 Annulus	
49:18: 0:39	70.83	60.66	
49:18: 0:39	61.96	60.68	
49:18: 0:39	54.27	60.68	
49:18: 0:39	50.23	60.67	
49:18: 0:39	50.49	60.68	
49:18: 0:39	48.73	60.68	
49:18: 0:39	47.46	60.68	
49:18: 0:39	46.08	60.68	
49:18: 5:30	41.88	60.67	Timer fixed
49:18: 5:40	41.46	60.67	
49:18: 6: 0	40.95	60.68	
49:18: 7: 0	36.97	60.68	
49:18: 8: 0	34.80	60.68	
49:18: 9: 0	34.12	60.68	
49:18:10: 0	33.60	60.68	
49:18:15: 0	31.57	60.69	
49:18:20: 0	29.80	60.70	
49:18:30: 0	30.94	60.72	
49:19: 2: 0	28.71	60.79	
49:20: 0: 0	31.07	60.94	
49:21: 2: 0	33.80	61.05	
49:22: 2: 0	34.69	61.16	
49:22:42: 0	35.09	61.24	
49:22:52: 0	194.05	61.23	PUMP OFF
49:23: 2: 0	196.12	61.26	
49:23:32: 0	196.82	61.33	
49:23:42: 0	196.90	61.34	
49:23:52: 0	196.96	61.35	
50: 0: 2: 0	197.01	61.36	
50: 9: 2: 0	197.37	62.17	
50:16: 0: 0	182.65	41.66	
50:16:27: 0	197.07	42.59	End D20035
50:16:52: 0	197.15	42.66	Start D20045
50:16:59: 0	197.16	42.69	
50:17: 0: 0	197.16	42.53	PUMP ON
50:17: 0: 2	141.21	42.78	
50:17: 0: 4	117.89	42.64	
50:17: 0: 7	104.53	42.73	
50:17: 0: 9	96.65	42.67	
50:17: 0:12	91.37	42.70	
50:17: 0:14	88.86	42.69	
50:17: 0:17	86.10	42.70	
50:17: 0:19	83.93	42.69	

TABLE A3-6 (continued)
 TABULATED PRESSURE DATA FOR THE DOE-2 PUMPING TEST
 OF THE CULEBRA DOLOMITE MEMBER OF THE RUSTLER
 FORMATION, FEBRUARY 19 TO MARCH 13, 1985

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi)		COMMENTS
	DOE-2 Culebra	DOE-2 Annulus	
50:17: 0:22	82.49	42.70	
50:17: 0:24	81.81	42.69	
50:17: 0:27	80.62	42.69	
50:17: 0:29	79.58	42.69	
50:17: 0:32	78.92	42.69	
50:17: 0:34	78.81	42.69	
50:17: 0:37	78.58	42.69	
50:17: 0:39	78.42	42.69	
50:17: 0:42	78.32	42.69	
50:17: 0:44	78.13	42.69	
50:17: 0:47	78.07	42.69	
50:17: 0:49	77.72	42.70	
50:17: 0:52	77.61	42.69	
50:17: 0:54	77.57	42.70	
50:17: 0:57	77.30	42.69	
50:17: 0:59	77.06	42.69	
50:17: 1: 2	76.95	42.69	
50:17: 1: 4	76.80	42.69	
50:17: 1: 6	76.66	42.69	
50:17: 1: 9	76.36	42.69	
50:17: 1:11	76.24	42.69	
50:17: 1:14	76.13	42.69	
50:17: 1:16	76.05	42.70	
50:17: 1:19	76.12	42.70	
50:17: 1:21	75.96	42.70	
50:17: 1:24	75.97	42.69	
50:17: 1:26	76.08	42.69	
50:17: 1:29	76.22	42.70	
50:17: 1:31	76.38	42.69	
50:17: 1:34	76.42	42.69	
50:17: 1:36	76.38	42.69	
50:17: 1:39	76.49	42.70	
50:17: 1:41	76.51	42.69	
50:17: 1:44	76.74	42.69	
50:17: 1:46	76.78	42.69	
50:17: 1:49	76.91	42.69	
50:17: 1:51	76.84	42.69	
50:17: 1:54	76.67	42.69	
50:17: 1:56	76.62	42.69	
50:17: 1:59	76.47	42.69	
50:17: 2: 1	76.32	42.69	
50:17: 2:16	76.80	42.69	
50:17: 2:31	77.16	42.70	

TABLE A3-6 (continued)
 TABULATED PRESSURE DATA FOR THE DOE-2 PUMPING TEST
 OF THE CULEBRA DOLOMITE MEMBER OF THE RUSTLER
 FORMATION, FEBRUARY 19 TO MARCH 13, 1985

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi)		COMMENTS
	DOE-2 Culebra	DOE-2 Annulus	
50:17: 2:46	77.14	42.70	
50:17: 3: 1	77.21	42.70	
50:17: 3:16	77.53	42.70	
50:17: 3:30	77.71	42.70	
50:17: 3:45	77.57	42.70	
50:17: 4: 0	77.76	42.70	
50:17: 4:30	77.76	42.70	
50:17: 5: 0	78.33	42.70	
50:17: 6:30	78.13	42.70	
50:17: 7: 0	78.27	42.70	
50:17: 8: 0	77.56	42.71	
50:17: 9: 0	77.56	42.71	
50:17:10: 0	77.11	42.71	
50:17:12: 0	75.95	42.72	
50:17:14: 0	75.47	42.72	
50:17:16: 0	74.43	42.73	
50:17:18: 0	73.65	42.74	
50:17:20: 0	72.35	42.74	
50:17:25: 0	71.05	42.75	
50:17:30: 0	70.77	42.77	
50:17:45: 0	69.43	42.83	
50:18: 0: 0	68.74	42.88	
50:18:15: 0	68.38	42.93	
50:18:30: 0	75.58	42.99	
50:19: 0: 0	74.39	43.08	
50:20: 0: 2	70.30	43.27	
50:22: 0: 0	66.86	43.61	
51: 0: 0: 0	65.60	43.91	
51: 6: 0: 0	62.38	44.91	
51:12:10: 0	62.25	45.92	
51:18: 0: 0	61.99	47.01	
52: 0:40: 0	66.22	48.20	
52:12:20: 0	67.11	50.20	
53:12:30: 0	69.92	54.08	
53:16:40: 0	69.70	54.77	End D20045
54:13:18:28	67.79	57.53	Start D20055
55:12: 0: 4	61.70	60.26	
56:10:30: 0	66.54	63.16	End D20055
56:11: 0: 0	66.51	63.22	Start D20065
56:12:10: 0	65.62	63.34	
57:12:20: 0	63.25	66.69	
58:11:40: 0	62.76	69.46	
59:12:40: 0	62.74	72.71	

TABLE A3-6 (continued)
 TABULATED PRESSURE DATA FOR THE DOE-2 PUMPING TEST
 OF THE CULEBRA DOLOMITE MEMBER OF THE RUSTLER
 FORMATION, FEBRUARY 19 TO MARCH 13, 1985

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi)		COMMENTS
	DOE-2 Culebra	DOE-2 Annulus	
60:12: 0: 0	64.17	75.80	
61:11:20: 0	63.53	79.10	
62:12:20: 0	64.19	83.26	
62:19: 0: 0	62.11	84.56	End D20065
63: 8:57:15	63.35	86.53	Start D20075
63:12:30: 0	62.59	86.91	
64:12:44:16	62.96	89.76	
65:11:41:40	64.60	92.30	
66:12:40: 0	60.95	95.23	
67:12: 0: 3	64.68	97.70	
68:11:20: 3	65.36	100.12	
69:12:20: 0	65.51	102.45	
70:11:40: 0	65.49	104.87	
71:12:40: 0	64.43	107.35	
71:16:59:58	65.60	107.92	
71:17: 0: 0	67.41	107.50	PUMP OFF
71:17: 0: 3	70.22	108.00	
71:17: 0: 5	72.99	108.06	
71:17: 0: 8	75.65	107.80	
71:17: 0:10	78.30	107.90	
71:17: 0:13	80.94	107.95	
71:17: 0:15	83.63	107.88	
71:17: 0:18	86.38	107.88	
71:17: 0:20	89.19	107.89	
71:17: 0:23	92.03	107.91	
71:17: 0:25	94.92	107.89	
71:17: 0:28	97.90	107.90	
71:17: 0:30	100.95	107.90	
71:17: 0:33	104.03	107.89	
71:17: 0:35	107.20	107.91	
71:17: 0:38	110.40	107.90	
71:17: 0:40	113.67	107.89	
71:17: 0:43	116.97	107.90	
71:17: 0:45	120.29	107.89	
71:17: 0:48	123.63	107.92	
71:17: 0:50	126.98	107.90	
71:17: 0:53	130.36	107.87	
71:17: 0:55	133.72	107.92	
71:17: 0:58	137.04	107.91	
71:17: 1: 0	140.35	107.89	
71:17: 1: 3	143.61	107.91	
71:17: 1: 5	146.80	107.89	
71:17: 1: 8	149.92	107.89	

TABLE A3-6 (continued)
 TABULATED PRESSURE DATA FOR THE DOE-2 PUMPING TEST
 OF THE CULEBRA DOLOMITE MEMBER OF THE RUSTLER
 FORMATION, FEBRUARY 19 TO MARCH 13, 1985

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi)		COMMENTS
	DOE-2 Culebra	DOE-2 Annulus	
71:17: 1:10	152.95	107.91	
71:17: 1:13	155.85	107.91	
71:17: 1:15	158.68	107.90	
71:17: 1:18	161.39	107.90	
71:17: 1:20	163.99	107.91	
71:17: 1:23	166.46	107.90	
71:17: 1:25	168.79	107.89	
71:17: 1:28	170.99	107.91	
71:17: 1:30	173.03	107.91	
71:17: 1:32	174.94	107.89	
71:17: 1:35	176.71	107.90	
71:17: 1:37	178.34	107.90	
71:17: 1:40	179.84	107.90	
71:17: 1:42	181.20	107.90	
71:17: 1:45	182.46	107.91	
71:17: 1:47	183.59	107.91	
71:17: 1:50	184.62	107.89	
71:17: 1:52	185.54	107.90	
71:17: 1:55	186.36	107.91	
71:17: 1:57	187.10	107.90	
71:17: 2: 0	187.75	107.90	
71:17: 2: 2	188.33	107.91	
71:17: 2: 5	188.86	107.90	
71:17: 2:10	189.75	107.90	
71:17: 2:15	190.42	107.90	
71:17: 2:30	191.74	107.91	
71:17: 2:45	192.44	107.91	
71:17: 3: 0	192.84	107.91	
71:17: 3:30	193.31	107.93	
71:17: 3:59	193.61	107.91	
71:17: 4:29	193.79	107.90	
71:17: 5: 2	193.98	107.91	
71:17: 7: 0	194.42	107.90	
71:17: 8: 0	194.57	107.91	
71:17: 9: 0	194.70	107.92	
71:17: 9:50	194.75	107.92	
71:17:15: 0	195.14	107.93	
71:17:20: 0	195.36	107.95	
71:17:30: 0	195.61	107.97	
71:18: 0: 0	195.93	108.05	
71:19: 0: 0	196.14	108.15	
71:20: 0: 0	196.24	108.27	
71:22: 0: 0	196.37	108.46	

TABLE A3-6 (continued)
 TABULATED PRESSURE DATA FOR THE DOE-2 PUMPING TEST
 OF THE CULEBRA DOLOMITE MEMBER OF THE RUSTLER
 FORMATION, FEBRUARY 19 TO MARCH 13, 1985

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi)		COMMENTS
	DOE-2 Culebra	DOE-2 Annulus	
72: 0: 0: 0	196.45	108.66	
72: 6: 0: 0	196.60	109.30	
72:10: 0: 0	196.63	109.66	End D20075

TABLE A3-7
 TABULATED PRESSURE DATA FOR OBSERVATION WELL H-5b
 DURING THE DOE-2 (CULEBRA) PUMPING TEST, FEBRUARY 19
 TO MARCH 13, 1985

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi)		COMMENTS
	H-5b Culebra	H-5b Annulus	
45:17: 5: 0	82.0	82.3	
45:17:50: 0	81.1	83.1	
46: 9: 0: 0	81.0	82.7	
47: 0: 0: 0	81.1	82.6	
48: 0: 0: 0	81.0	82.6	
49:10:25: 0	80.9	82.6	
50:10:30: 0	80.9	82.6	
50:18: 0: 0	80.9	82.6	PUMP ON 17:00
51: 0: 0: 0	80.9	82.6	
51: 9:10: 0	80.9	82.6	
52: 9:15: 0	80.9	82.6	
53:13:50: 0	80.8	82.7	
54:15:20: 0	80.9	82.7	
55:12:10: 0	80.6	82.7	
56:19:15: 0	80.7	82.7	
57:12: 0: 0	80.6	82.8	
58:13:10: 0	80.7	82.8	
59:15:50: 0	80.7	82.7	
60:15:40: 0	80.8	82.8	
61: 6:25: 0	80.7	82.8	
62:15:35: 0	80.8	82.9	
63:11:30: 0	80.5	82.7	
64:12:10: 0	80.4	82.7	
65:15:30: 1	80.5	82.7	
66:10:40: 0	80.4	82.6	
67:12:35: 0	80.3	82.7	
68:12:30: 1	80.4	82.6	
69:11:35: 0	80.4	82.6	
70:11:40: 0	80.4	82.6	
71:12:20: 0	80.5	82.7	
71:16:30: 0	80.5	82.8	PUMP OFF 17:00
72: 9:30: 1	80.5	82.8	
73:13:50: 0	80.3	82.7	
74:10:15: 1	80.5	82.7	
75:13:40: 0	80.3	82.7	
76:15:40: 0	80.4	82.8	
78: 8:40: 0	80.5	82.9	
80:17: 0: 1	80.4	83.0	
81:13:10: 0	80.3	82.8	
84:13:10: 0	80.3	82.9	
85:14:20: 0	80.3	83.0	
86: 0: 0: 0	80.3	82.7	
87:13:18: 0	80.3	82.6	
94:10:35: 0	80.3	82.8	
100:10:30: 0	80.2	82.8	

TABLE A3-8
 TABULATED PRESSURE DATA FOR OBSERVATION WELL H-6b
 DURING THE DOE-2 (CULEBRA) PUMPING TEST, FEBRUARY 19
 TO MARCH 13, 1985

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi) H-6b	COMMENTS
51: 0:46: 1	44.24	Start H60015
51: 6: 0: 0	44.35	PUMP ON
51:12: 0: 0	44.32	50:17:0:0
51:14: 0: 0	44.33	End H60015
51:14:42: 0	44.36	Start H60025
52:12: 0: 0	44.24	
53:12: 0: 0	44.16	
54:12: 0: 0	44.13	
55:12: 0: 0	43.90	
56:12: 0: 0	43.87	
57:12:20: 0	43.77	
58:11:40: 0	43.67	
59:11:50: 0	43.69	
60:11:41: 2	43.62	
61:11:51: 2	43.62	
62:12: 1: 2	43.68	
63:12: 5: 0	43.47	
64:12:15: 0	43.35	
65:11:40:48	43.33	
66:11:50:48	43.28	
67:12:30:17	43.19	
68:11:50:17	43.17	
69:12:50:17	43.18	
70:12:40: 0	43.20	
71:12: 0: 0	43.16	
71:17: 0: 0	43.22	PUMP OFF
72:11:20: 0	43.16	
73:13:58:38	43.17	
74:12:10: 0	43.30	
75:11:30: 0	43.34	
76:12:30: 0	43.35	
77:12:50: 0	43.48	
78:11:20: 0	43.65	
79:12:20: 0	43.65	
80:11:40: 0	43.61	
81:12:40: 0	43.72	
82:12: 0: 0	43.64	
83:12:37: 9	43.70	
84:11:57: 9	43.77	
85:12:57: 9	43.84	
86:12:40: 0	43.87	
87:12: 0: 0	43.94	
88:11:20: 0	43.98	

TABLE A3-8 (continued)
 TABULATED PRESSURE DATA FOR OBSERVATION WELL H-6b
 DURING THE DOE-2 (CULEBRA) PUMPING TEST, FEBRUARY 19
 TO MARCH 13, 1985

TIME Julian Date DAY:HR:MIN:SEC	PRESSURE (psi) H-6b	COMMENTS
89:12:20: 0	43.90	
90:11:40: 0	43.86	
91:12:40: 0	43.84	
92:12: 0: 0	43.83	
93:11:20: 0	43.92	
94:12:20: 0	44.01	
95:11:40: 0	43.92	
96:12:40: 0	43.94	
97:12: 0: 0	43.83	
98:11:20: 0	43.85	
99: 9: 0: 0	43.95	End H60025

TABLE A3-9
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE RUSTLER-SALADO CONTACT ZONE, 945 TO 967 FEET BELOW LAND
 SURFACE, OCTOBER 11 TO 12, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/11/1984	06:32:33	275.7	350.8	396.7	
10/11/1984	06:35:00	275.6	350.5	396.2	Inflated Straddle
10/11/1984	06:38:00	275.5	350.2	397.7	Packer
10/11/1984	06:40:00	275.5	350.4	402.7	
10/11/1984	06:42:00	275.4	350.2	403.1	
10/11/1984	06:44:00	275.2	350.4	403.5	
10/11/1984	06:46:00	275.1	351.8	403.9	
10/11/1984	06:46:04	275.1	351.7	404.0	
10/11/1984	06:48:00	275.0	349.2	404.7	
10/11/1984	06:49:00	275.0	349.2	404.9	
10/11/1984	06:50:00	274.9	349.0	405.0	
10/11/1984	06:52:00	274.8	350.9	405.5	
10/11/1984	06:54:00	274.7	350.0	406.0	
10/11/1984	06:56:00	274.6	351.3	406.5	
10/11/1984	06:58:00	274.5	350.8	407.0	
10/11/1984	07:00:00	274.4	349.2	407.6	
10/11/1984	07:02:00	274.4	350.2	407.9	
10/11/1984	07:04:00	274.2	349.3	408.3	
10/11/1984	07:06:00	274.2	349.2	408.5	
10/11/1984	07:08:00	274.2	350.3	408.8	
10/11/1984	07:10:00	274.1	350.0	409.3	
10/11/1984	07:12:00	274.1	348.7	409.6	
10/11/1984	07:14:00	274.1	350.1	410.0	
10/11/1984	07:16:00	274.1	348.4	410.2	
10/11/1984	07:18:00	274.0	349.1	410.4	
10/11/1984	07:20:00	274.0	348.4	410.7	
10/11/1984	07:22:00	274.0	348.8	411.1	
10/11/1984	07:24:00	274.0	350.3	411.4	
10/11/1984	07:26:00	274.0	349.2	412.1	
10/11/1984	07:28:00	274.0	349.0	412.5	
10/11/1984	07:30:00	274.2	348.5	413.1	
10/11/1984	07:35:00	275.0	349.7	414.3	
10/11/1984	07:40:00	275.3	353.2	413.4	
10/11/1984	07:45:00	273.8	354.9	413.3	
10/11/1984	07:50:00	273.5	355.2	413.6	
10/11/1984	07:55:00	273.2	354.8	414.1	
10/11/1984	08:00:00	273.0	355.7	414.2	
10/11/1984	08:05:00	272.8	357.9	413.6	
10/11/1984	08:15:00	271.3	358.6	413.0	
10/11/1984	08:25:00	270.9	358.6	412.9	
10/11/1984	08:35:00	270.7	357.7	412.8	
10/11/1984	08:45:00	270.5	356.8	412.8	
10/11/1984	08:55:00	270.3	355.1	412.6	
10/11/1984	09:05:00	270.1	354.5	412.5	
10/11/1984	09:15:00	269.8	354.0	412.2	
10/11/1984	09:25:00	269.8	353.4	411.9	
10/11/1984	09:35:00	269.6	352.3	411.9	
10/11/1984	09:45:00	269.4	351.8	411.7	
10/11/1984	09:55:00	269.3	351.6	411.1	
10/11/1984	10:05:00	269.2	351.5	411.3	

TABLE A3-9 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE RUSTLER-SALADO CONTACT ZONE, 945 TO 967 FEET BELOW LAND
 SURFACE, OCTOBER 11 TO 12, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/11/1984	10:15:00	269.0	350.2	410.9	
10/11/1984	10:25:00	268.8	350.3	410.5	
10/11/1984	10:35:00	268.7	348.7	409.8	
10/11/1984	10:45:00	268.6	349.7	409.0	
10/11/1984	10:55:00	268.3	347.8	408.0	
10/11/1984	11:05:00	268.3	347.4	407.7	
10/11/1984	11:15:00	268.1	347.7	406.9	
10/11/1984	11:25:00	267.9	346.3	405.8	
10/11/1984	11:35:00	267.8	346.2	405.0	
10/11/1984	11:45:00	267.7	343.5	404.0	
10/11/1984	11:55:00	267.3	342.2	402.1	Bailed Tubing
10/11/1984	12:05:00	267.2	335.2	400.7	
10/11/1984	12:15:00	267.3	320.2	397.9	
10/11/1984	12:25:00	267.2	291.8	392.6	
10/11/1984	12:35:00	267.0	289.8	392.2	
10/11/1984	12:45:00	267.3	260.3	386.7	Inflated Valve Packer
10/11/1984	12:55:00	267.2	326.3	393.5	
10/11/1984	13:05:00	267.1	343.9	396.3	
10/11/1984	13:15:00	267.0	356.1	397.5	
10/11/1984	13:25:00	267.5	364.5	399.5	
10/11/1984	13:35:00	267.2	371.1	400.1	
10/11/1984	13:45:00	267.1	372.4	400.8	
10/11/1984	13:55:00	267.3	373.6	401.6	
10/11/1984	14:05:00	267.2	376.6	401.9	
10/11/1984	14:15:00	267.1	376.2	402.0	
10/11/1984	14:25:00	267.5	378.5	403.3	
10/11/1984	14:35:00	268.3	382.8	405.2	
10/11/1984	14:45:00	268.2	384.8	406.1	
10/11/1984	14:55:00	267.5	383.3	406.9	
10/11/1984	15:05:00	267.6	377.1	407.9	
10/11/1984	15:10:00	267.7	379.4	407.8	
10/11/1984	15:15:00	268.0	381.0	408.2	Bailed Tubing
10/11/1984	15:20:00	268.1	382.6	408.0	
10/11/1984	15:25:00	268.1	379.8	408.6	
10/11/1984	15:30:00	268.0	380.6	408.5	
10/11/1984	15:35:00	268.1	379.7	407.9	
10/11/1984	15:40:00	270.8	379.5	409.2	
10/11/1984	15:45:00	268.2	379.2	407.8	
10/11/1984	15:50:00	268.3	379.4	408.4	
10/11/1984	15:55:00	268.1	379.4	408.1	
10/11/1984	16:00:00	267.9	379.1	407.5	
10/11/1984	16:05:00	267.6	377.3	407.0	
10/11/1984	16:10:00	267.8	375.2	407.3	
10/11/1984	16:15:00	267.9	375.2	406.3	
10/11/1984	16:20:00	267.6	375.9	407.2	
10/11/1984	16:25:00	267.7	375.5	407.3	
10/11/1984	16:30:00	267.5	374.7	407.2	
10/11/1984	16:35:00	268.2	375.2	406.7	
10/11/1984	16:40:00	267.5	375.2	407.8	
10/11/1984	16:45:00	267.8	374.4	406.8	

TABLE A3-9 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE RUSTLER-SALADO CONTACT ZONE, 945 TO 967 FEET BELOW LAND
 SURFACE, OCTOBER 11 TO 12, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/11/1984	16:50:00	267.4	372.9	407.7	
10/11/1984	16:55:00	267.8	375.6	408.8	Bailed Tubing
10/11/1984	17:00:00	267.8	375.5	409.2	
10/11/1984	17:05:00	267.8	375.2	409.7	
10/11/1984	17:10:00	267.9	374.6	410.1	
10/11/1984	17:15:00	267.9	373.3	409.5	
10/11/1984	17:20:00	268.0	373.2	409.7	
10/11/1984	17:25:00	268.1	373.6	409.4	
10/11/1984	17:30:00	268.1	375.5	410.2	
10/11/1984	17:40:00	268.2	377.2	410.8	
10/11/1984	17:50:00	268.3	377.9	411.5	
10/11/1984	18:00:00	268.3	378.2	411.9	
10/11/1984	18:10:00	268.3	378.6	412.9	
10/11/1984	18:17:00	268.3	378.8	412.7	Started to Rain
10/11/1984	18:18:00	268.3	378.8	412.7	
10/11/1984	18:19:00	268.3	379.1	412.8	
10/11/1984	18:20:00	268.3	379.1	413.0	
10/11/1984	18:21:00	268.3	379.2	413.3	
10/11/1984	18:22:00	268.4	379.2	413.5	
10/11/1984	18:22:05	268.4	379.3	413.6	
10/11/1984	18:22:10	268.4	379.2	413.6	
10/11/1984	18:22:15	268.5	379.2	413.5	
10/11/1984	18:22:20	268.5	379.2	413.4	
10/11/1984	18:22:25	268.5	379.3	413.6	
10/11/1984	18:22:30	268.5	379.1	413.5	Equilibration
10/11/1984	18:22:35	268.5	379.2	413.7	
10/11/1984	18:22:40	268.5	379.2	413.5	
10/11/1984	18:22:45	268.5	379.2	413.6	
10/11/1984	18:22:55	268.5	379.3	413.6	
10/11/1984	18:23:05	268.5	379.4	413.7	
10/11/1984	18:23:15	268.5	379.4	413.8	
10/11/1984	18:23:30	268.5	379.5	414.0	
10/11/1984	18:23:45	268.5	379.7	414.0	
10/11/1984	18:24:00	268.5	379.8	414.1	
10/11/1984	18:24:15	268.6	379.9	414.2	
10/11/1984	18:24:30	268.5	380.0	414.1	
10/11/1984	18:24:45	268.5	380.2	414.3	
10/11/1984	18:25:00	268.5	380.2	414.3	
10/11/1984	18:25:15	268.5	380.4	414.3	
10/11/1984	18:25:30	268.5	380.5	414.4	
10/11/1984	18:26:00	268.5	380.7	414.4	
10/11/1984	18:26:30	268.5	381.0	414.7	
10/11/1984	18:27:00	268.5	381.2	414.8	
10/11/1984	18:27:30	268.5	381.5	414.8	
10/11/1984	18:28:00	268.5	381.5	414.9	
10/11/1984	18:28:30	268.5	382.0	415.1	
10/11/1984	18:29:00	268.5	382.3	415.4	
10/11/1984	18:29:30	268.4	382.1	415.4	
10/11/1984	18:30:00	268.4	382.1	415.6	
10/11/1984	18:30:30	268.4	382.2	415.4	

TABLE A3-9 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE RUSTLER-SALADO CONTACT ZONE, 945 TO 967 FEET BELOW LAND
 SURFACE, OCTOBER 11 TO 12, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/11/1984	18:31:00	268.4	382.2	415.9	
10/11/1984	18:31:30	268.4	382.6	415.9	
10/11/1984	18:32:00	268.5	382.6	416.1	
10/11/1984	18:32:30	268.5	382.9	416.2	
10/11/1984	18:33:00	268.5	382.8	416.3	
10/11/1984	18:33:30	268.5	382.9	416.6	
10/11/1984	18:34:00	268.5	383.0	416.6	
10/11/1984	18:34:30	268.5	382.9	416.6	
10/11/1984	18:35:00	268.5	383.2	416.8	
10/11/1984	18:35:30	268.5	383.4	417.0	
10/11/1984	18:36:00	268.2	383.5	417.4	
10/11/1984	18:36:30	268.1	383.8	417.5	
10/11/1984	18:37:00	268.1	383.4	417.5	
10/11/1984	18:37:30	268.2	383.5	417.7	
10/11/1984	18:38:00	268.1	383.4	417.8	
10/11/1984	18:38:30	268.2	383.3	417.8	
10/11/1984	18:39:00	268.2	383.6	418.0	
10/11/1984	18:39:30	268.1	383.5	418.0	
10/11/1984	18:40:00	268.2	383.6	418.1	Equilibration
10/11/1984	18:40:30	268.2	383.5	418.2	
10/11/1984	18:41:00	268.2	383.6	418.2	
10/11/1984	18:41:30	268.3	383.6	418.2	
10/11/1984	18:42:00	268.2	383.6	418.3	
10/11/1984	18:42:30	268.2	383.6	418.4	
10/11/1984	18:43:00	268.3	383.9	418.4	
10/11/1984	18:43:30	268.2	383.9	418.7	
10/11/1984	18:44:00	268.3	384.1	418.7	
10/11/1984	18:44:30	268.3	384.2	418.8	
10/11/1984	18:45:00	268.3	384.2	418.8	
10/11/1984	18:45:30	268.3	384.1	418.9	
10/11/1984	18:46:00	268.4	384.2	418.9	
10/11/1984	18:46:30	268.3	384.2	419.1	
10/11/1984	18:47:00	268.3	384.0	419.0	
10/11/1984	18:47:30	268.3	384.1	419.1	
10/11/1984	18:48:00	268.3	384.1	419.2	
10/11/1984	18:48:30	268.3	384.4	419.3	
10/11/1984	18:49:00	268.3	384.3	419.3	
10/11/1984	18:49:30	268.3	384.4	419.3	
10/11/1984	18:50:00	268.3	384.3	419.6	
10/11/1984	18:50:30	268.3	384.3	419.6	
10/11/1984	18:51:00	268.3	384.2	419.6	
10/11/1984	18:52:00	268.2	384.3	419.6	
10/11/1984	18:53:00	268.3	384.1	419.7	
10/11/1984	18:54:00	268.3	384.2	419.9	
10/11/1984	18:55:00	268.3	384.3	419.9	
10/11/1984	18:56:00	268.3	384.5	420.1	
10/11/1984	18:57:00	268.3	384.4	420.2	
10/11/1984	18:58:00	268.3	384.6	420.3	
10/11/1984	18:59:00	268.3	384.6	420.4	
10/11/1984	18:59:05	268.4	384.7	420.4	

TABLE A3-9 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE RUSTLER-SALADO CONTACT ZONE, 945 TO 967 FEET BELOW LAND
 SURFACE, OCTOBER 11 TO 12, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/11/1984	18:59:10	268.3	384.6	420.4	
10/11/1984	18:59:15	268.3	384.6	420.3	
10/11/1984	18:59:20	268.3	384.6	420.4	
10/11/1984	18:59:25	268.3	384.6	420.4	Equilibration
10/11/1984	18:59:30	268.3	384.6	420.4	
10/11/1984	18:59:35	268.3	384.6	420.4	
10/11/1984	18:59:40	268.3	384.7	420.5	
10/11/1984	18:59:45	268.3	384.6	420.6	
10/11/1984	18:59:50	268.3	384.6	420.4	
10/11/1984	18:59:55	268.3	384.7	420.5	
10/11/1984	19:00:00	268.3	384.7	420.5	
10/11/1984	19:00:05	268.4	380.8	419.9	Deflated Valve
10/11/1984	19:00:10	268.3	357.4	416.8	Packer
10/11/1984	19:00:15	268.4	321.6	412.3	
10/11/1984	19:00:20	268.3	284.7	407.8	
10/11/1984	19:00:25	268.3	249.9	403.6	
10/11/1984	19:00:30	268.5	209.8	398.6	
10/11/1984	19:00:35	268.3	180.5	395.4	
10/11/1984	19:00:40	268.4	154.9	392.4	
10/11/1984	19:00:45	268.3	132.6	389.9	
10/11/1984	19:00:50	268.3	115.6	387.9	
10/11/1984	19:00:55	268.4	103.9	386.5	FFL
10/11/1984	19:01:00	268.3	104.7	386.5	
10/11/1984	19:01:05	268.4	104.7	386.6	
10/11/1984	19:01:10	268.3	104.6	386.4	
10/11/1984	19:01:15	268.4	104.5	386.2	
10/11/1984	19:01:20	268.3	104.4	386.2	
10/11/1984	19:01:25	268.4	104.3	386.2	
10/11/1984	19:01:30	268.4	104.2	386.0	
10/11/1984	19:01:35	268.3	104.3	386.1	
10/11/1984	19:01:40	268.3	104.3	386.0	
10/11/1984	19:01:45	268.4	104.2	385.7	
10/11/1984	19:01:50	268.3	104.3	385.8	
10/11/1984	19:01:55	268.3	104.2	385.8	
10/11/1984	19:02:00	268.4	104.2	385.7	
10/11/1984	19:02:05	268.3	104.2	385.7	
10/11/1984	19:02:10	268.3	104.3	385.8	
10/11/1984	19:02:15	268.3	104.3	385.6	
10/11/1984	19:02:20	268.4	104.2	385.5	
10/11/1984	19:02:30	268.3	104.3	385.6	
10/11/1984	19:02:40	268.3	104.2	385.4	
10/11/1984	19:02:50	268.3	104.2	385.4	
10/11/1984	19:03:10	268.3	104.2	385.3	
10/11/1984	19:03:30	268.4	104.1	385.3	
10/11/1984	19:04:00	268.4	104.0	385.1	
10/11/1984	19:04:30	268.3	104.4	385.2	
10/11/1984	19:05:00	268.3	104.4	385.0	
10/11/1984	19:05:30	268.3	104.3	385.1	
10/11/1984	19:06:00	268.3	104.4	385.0	
10/11/1984	19:06:30	268.3	104.4	384.9	

TABLE A3-9 (continued)
 TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE RUSTLER-SALADO CONTACT ZONE, 945 TO 967 FEET BELOW LAND
 SURFACE, OCTOBER 11 TO 12, 1984

Date	Time	P1 (psig) Above	P2 (psig) Test Zone	P3 (psig) Below	Comments
10/11/1984	19:07:00	268.3	104.4	384.8	
10/11/1984	19:08:00	268.3	104.5	384.8	
10/11/1984	19:09:00	268.3	104.4	384.8	
10/11/1984	19:10:00	268.4	104.6	384.7	
10/11/1984	19:15:00	268.3	104.6	384.8	
10/11/1984	19:20:00	268.3	104.7	385.2	
10/11/1984	19:25:00	268.2	104.4	384.9	
10/11/1984	19:30:00	268.1	104.4	384.9	
10/11/1984	19:35:00	268.1	104.9	384.8	
10/11/1984	19:40:00	268.1	105.0	384.7	
10/11/1984	19:45:00	268.1	104.3	384.9	
10/11/1984	19:50:00	268.1	104.3	385.0	
10/11/1984	19:55:00	268.0	104.9	385.0	
10/11/1984	20:00:00	268.0	104.8	385.3	
10/11/1984	20:05:00	267.9	104.6	385.3	
10/11/1984	20:30:00	267.7	104.2	385.6	
10/11/1984	21:00:00	267.7	103.8	385.7	
10/11/1984	21:30:00	267.5	103.4	384.8	
10/11/1984	22:00:00	267.3	103.2	384.5	
10/11/1984	22:30:00	267.2	102.8	383.8	
10/11/1984	23:00:00	267.0	102.7	383.6	
10/11/1984	23:30:00	266.9	103.0	383.9	
10/12/1984	00:00:00	266.9	102.6	384.3	
10/12/1984	00:30:00	266.8	102.9	384.7	
10/12/1984	01:00:00	266.7	103.5	385.3	
10/12/1984	01:30:00	266.6	103.0	385.8	
10/12/1984	02:00:00	266.5	102.7	385.8	
10/12/1984	02:30:00	266.4	103.6	386.6	
10/12/1984	03:00:00	266.3	102.4	386.6	
10/12/1984	03:30:00	266.2	101.9	385.6	
10/12/1984	04:00:00	266.1	101.4	385.6	
10/12/1984	04:30:00	266.0	101.3	385.7	
10/12/1984	05:00:00	265.9	101.2	385.7	
10/12/1984	05:30:00	265.8	101.1	385.8	
10/12/1984	06:00:00	265.7	101.6	385.9	
10/12/1984	06:30:00	265.6	100.7	386.6	
10/12/1984	07:00:00	265.5	100.4	387.4	
10/12/1984	07:30:00	265.3	99.4	386.9	
10/12/1984	08:00:00	264.7	98.3	384.3	
10/12/1984	08:30:00	264.1	95.9	382.1	
10/12/1984	09:00:00	263.6	93.6	379.9	End FFL
10/12/1984	09:20:00	263.1	348.8	411.9	Inflated Valve
10/12/1984	09:25:00	262.9	348.0	412.0	Packer
10/12/1984	09:30:00	262.8	347.2	411.9	End Test
10/12/1984	09:35:00	259.4	343.2	362.6	Deflate Straddle
10/12/1984	09:40:00	241.9	324.9	343.6	Packer
10/12/1984	09:45:00	216.4	297.5	316.1	

TABLE A3-10

TABULATED PRESSURE DATA FOR DRILL-STEM TESTING OF MARKER BEDS
138 AND 139 OF THE SALADO FORMATION, 2195 TO 2309 FEET BELOW
LAND SURFACE, MAY 19 TO 20, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
05/18/85	13:47:33	1409.43	985.95	1189.29	81.04	81.37	81.55	
05/18/85	13:47:43	1409.47	986.21	1189.31	81.03	81.37	81.55	
05/18/85	13:47:56	1409.37	986.50	1189.27	81.03	81.37	81.55	
05/18/85	13:48:06	1409.33	986.32	1189.31	81.04	81.38	81.55	
05/18/85	13:48:18	1409.31	986.35	1189.33	81.03	81.38	81.55	
05/18/85	13:48:28	1409.27	986.54	1189.31	81.03	81.39	81.55	
05/18/85	13:48:40	1409.11	986.08	1189.31	81.03	81.38	81.55	
05/18/85	13:48:50	1408.90	986.43	1189.29	81.03	81.40	81.55	
05/18/85	13:49:02	1409.02	986.50	1189.25	81.03	81.40	81.54	
05/18/85	13:49:12	1408.98	986.69	1189.29	81.03	81.38	81.55	
05/18/85	13:49:23	1408.86	986.32	1189.27	81.03	81.39	81.55	
05/18/85	13:49:33	1408.84	986.59	1189.23	81.03	81.40	81.55	
05/18/85	13:49:45	1408.76	986.72	1189.27	81.03	81.41	81.55	
05/18/85	13:49:55	1408.68	986.54	1189.29	81.03	81.41	81.55	
05/18/85	13:50:07	1408.58	986.32	1189.31	81.03	81.41	81.55	
05/18/85	13:50:17	1408.68	986.50	1189.27	81.03	81.42	81.55	
05/18/85	13:50:29	1408.50	986.66	1189.29	81.03	81.42	81.55	
05/18/85	13:50:41	1408.40	986.59	1189.27	81.03	81.43	81.55	
05/18/85	13:50:51	1408.48	986.44	1189.23	81.03	81.41	81.55	
05/18/85	13:51:03	1408.24	986.52	1189.29	81.03	81.40	81.55	
05/18/85	13:51:13	1408.20	986.48	1189.29	81.02	81.42	81.55	
05/18/85	13:51:25	1408.20	986.74	1189.27	81.02	81.43	81.55	
05/18/85	13:51:35	1408.28	986.44	1189.31	81.02	81.42	81.55	
05/18/85	13:51:47	1408.01	986.70	1189.25	81.04	81.43	81.55	
05/18/85	13:51:57	1407.97	986.65	1189.25	81.02	81.42	81.55	
05/18/85	13:52:09	1407.87	986.77	1189.25	81.02	81.44	81.55	
05/18/85	13:52:19	1407.81	986.55	1189.27	81.02	81.41	81.55	
05/18/85	13:52:31	1407.79	986.68	1189.23	81.02	81.41	81.55	
05/18/85	13:52:41	1407.69	986.63	1189.23	81.03	81.44	81.55	
05/18/85	13:52:53	1407.63	986.83	1189.25	81.02	81.44	81.55	
05/18/85	13:53:03	1407.61	986.70	1189.27	81.02	81.44	81.55	
05/18/85	13:53:14	1407.55	986.53	1189.23	81.02	81.45	81.55	
05/18/85	13:53:27	1407.47	986.74	1189.25	81.02	81.44	81.55	
05/18/85	13:53:37	1407.47	986.63	1189.27	81.02	81.44	81.55	
05/18/85	13:53:49	1407.43	986.66	1189.29	81.03	81.45	81.55	
05/18/85	13:53:59	1407.26	986.68	1189.19	81.02	81.43	81.55	
05/18/85	13:54:10	1407.31	986.85	1189.27	81.01	81.47	81.55	
05/18/85	13:54:20	1407.27	986.72	1189.25	81.01	81.46	81.55	
05/18/85	13:54:32	1407.08	986.77	1189.27	81.02	81.46	81.55	
05/18/85	13:54:42	1407.47	986.59	1189.23	81.01	81.47	81.55	
05/18/85	13:54:54	1406.98	986.96	1189.25	81.01	81.46	81.55	
05/18/85	13:55:04	1406.82	986.88	1189.27	81.01	81.47	81.55	
05/18/85	13:55:16	1406.86	986.64	1189.23	81.01	81.46	81.55	
05/18/85	13:55:26	1406.88	986.83	1189.23	81.01	81.47	81.55	

TABLE A3-10 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM TESTING OF MARKER BEDS
138 AND 139 OF THE SALADO FORMATION, 2195 TO 2309 FEET BELOW
LAND SURFACE, MAY 19 TO 20, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
05/18/85	13:55:38	1406.76	986.88	1189.29	81.01	81.47	81.55	
05/18/85	13:55:48	1406.86	986.86	1189.27	81.01	81.48	81.55	
05/18/85	13:56:00	1406.70	986.75	1189.23	81.01	81.48	81.55	
05/18/85	13:56:10	1406.86	986.92	1189.27	81.01	81.47	81.55	
05/18/85	13:56:22	1406.58	986.81	1189.23	81.01	81.49	81.55	
05/18/85	13:56:34	1406.44	986.90	1189.27	81.01	81.48	81.55	
05/18/85	13:56:51	1406.46	986.88	1189.23	81.02	81.50	81.55	
05/18/85	13:57:04	1406.31	986.88	1189.19	81.01	81.49	81.55	
05/18/85	13:57:14	1406.66	986.88	1189.25	81.01	81.50	81.55	
05/18/85	13:57:26	1406.23	986.94	1189.25	81.01	81.50	81.55	
05/18/85	13:57:36	1406.46	986.94	1189.21	81.01	81.50	81.55	
05/18/85	13:57:48	1406.17	986.97	1189.19	81.00	81.51	81.54	
05/18/85	13:57:57	1406.05	987.05	1189.25	81.00	81.50	81.55	
05/18/85	13:58:09	1406.01	987.04	1189.23	81.00	81.51	81.55	
05/18/85	13:58:19	1406.25	986.92	1189.25	81.02	81.51	81.55	
05/18/85	13:58:31	1405.99	986.99	1189.25	81.00	81.50	81.55	
05/18/85	13:58:41	1406.05	987.08	1189.27	81.00	81.51	81.55	
05/18/85	13:58:53	1405.79	987.04	1189.23	81.00	81.52	81.55	
05/18/85	13:59:03	1405.85	987.04	1189.23	81.00	81.52	81.55	
05/18/85	13:59:15	1405.71	987.12	1189.23	81.00	81.52	81.54	
05/18/85	13:59:27	1405.69	987.06	1189.21	81.00	81.53	81.55	
05/18/85	13:59:37	1405.85	987.08	1189.21	81.00	81.52	81.55	
05/18/85	13:59:49	1405.55	987.12	1189.23	81.01	81.52	81.55	
05/18/85	13:59:59	1405.45	987.08	1189.27	81.00	81.53	81.55	
05/18/85	14:00:11	1405.47	987.12	1189.25	81.00	81.53	81.55	
05/18/85	14:00:21	1405.45	987.04	1189.27	81.00	81.53	81.55	
05/18/85	14:00:33	1405.47	987.19	1189.29	81.00	81.54	81.55	
05/18/85	14:00:43	1405.53	987.14	1189.19	81.00	81.53	81.55	
05/18/85	14:00:55	1405.30	987.14	1189.23	81.00	81.54	81.55	
05/18/85	14:01:05	1405.28	987.15	1189.21	81.00	81.54	81.55	
05/18/85	14:01:17	1405.18	987.14	1189.27	81.00	81.53	81.55	
05/18/85	14:01:26	1405.45	987.17	1189.19	81.00	81.54	81.54	
05/18/85	14:01:38	1405.06	987.12	1189.23	81.00	81.54	81.55	
05/18/85	14:01:48	1404.82	987.23	1189.19	80.99	81.54	81.55	
05/18/85	14:02:00	1405.04	987.12	1189.17	81.01	81.54	81.55	
05/18/85	14:02:10	1405.04	987.15	1189.23	81.00	81.54	81.55	
05/18/85	14:02:22	1404.82	987.19	1189.27	80.99	81.54	81.55	
05/18/85	14:02:34	1404.82	987.15	1189.23	80.99	81.55	81.55	
05/18/85	14:02:44	1404.43	987.15	1189.17	80.99	81.54	81.55	
05/18/85	14:02:56	1404.78	987.15	1189.19	80.99	81.55	81.55	
05/18/85	14:03:06	1404.60	987.13	1189.27	81.00	81.56	81.55	
05/18/85	14:03:18	1404.64	987.23	1189.19	81.00	81.54	81.55	
05/18/85	14:03:28	1404.64	987.24	1189.19	80.99	81.56	81.55	
05/18/85	14:03:40	1404.58	987.17	1189.21	80.99	81.55	81.55	

TABLE A3-10 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM TESTING OF MARKER BEDS
138 AND 139 OF THE SALADO FORMATION, 2195 TO 2309 FEET BELOW
LAND SURFACE, MAY 19 TO 20, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
05/18/85	14:03:50	1404.64	987.15	1189.23	81.01	81.56	81.55	
05/18/85	14:04:02	1404.43	987.23	1189.23	80.99	81.56	81.55	
05/18/85	14:04:12	1404.43	987.19	1189.23	81.00	81.57	81.55	
05/18/85	14:04:24	1404.41	987.19	1189.19	80.99	81.57	81.55	
05/18/85	14:04:34	1404.64	987.19	1189.19	81.00	81.54	81.55	
05/18/85	14:04:46	1404.29	987.17	1189.23	80.99	81.52	81.55	
05/18/85	14:04:55	1404.15	987.21	1189.31	80.99	81.56	81.55	
05/18/85	14:05:07	1404.21	987.19	1189.21	80.99	81.58	81.55	
05/18/85	14:05:44	1404.17	987.22	1189.25	80.99	81.57	81.55	
05/18/85	14:06:03	1404.01	987.21	1189.21	80.99	81.55	81.55	
05/18/85	14:07:07	1403.69	987.23	1189.19	80.98	81.56	81.55	
05/18/85	14:08:00	1403.48	987.28	1189.19	80.98	81.57	81.55	
05/18/85	14:09:02	1403.32	987.19	1189.19	80.98	81.53	81.55	
05/18/85	14:10:04	1403.08	987.25	1189.19	80.98	81.52	81.55	
05/18/85	14:11:00	1402.82	987.26	1189.21	80.97	81.56	81.55	
05/18/85	14:12:01	1402.65	987.28	1189.23	80.99	81.53	81.55	
05/18/85	14:13:05	1402.35	987.26	1189.23	80.97	81.56	81.55	
05/18/85	14:14:07	1402.21	987.23	1189.15	80.97	81.50	81.55	
05/18/85	14:15:03	1401.99	987.24	1189.15	80.97	81.55	81.55	
05/18/85	14:16:04	1401.79	987.30	1189.17	80.97	81.60	81.55	
05/18/85	14:17:00	1401.58	987.26	1189.17	80.98	81.57	81.55	
05/18/85	14:18:02	1401.30	987.31	1189.17	80.96	81.61	81.55	
05/18/85	14:19:06	1401.16	987.22	1189.17	80.96	81.61	81.55	
05/18/85	14:20:07	1400.96	987.20	1189.15	80.96	81.61	81.55	
05/18/85	14:21:03	1400.88	987.29	1189.19	80.96	81.63	81.55	
05/18/85	14:22:07	1400.74	987.29	1189.15	80.95	81.63	81.55	
05/18/85	14:23:00	1400.53	987.26	1189.09	80.97	81.67	81.55	
05/18/85	14:24:04	1400.31	987.31	1189.13	80.97	81.64	81.55	
05/18/85	14:25:06	1400.17	987.24	1189.13	80.95	81.68	81.55	
05/18/85	14:26:01	1400.01	987.26	1189.11	80.97	81.66	81.55	
05/18/85	14:27:03	1399.83	987.25	1189.11	80.95	81.68	81.55	
05/18/85	14:28:07	1399.60	987.31	1189.15	80.94	81.68	81.55	
05/18/85	14:29:00	1399.56	987.25	1189.09	80.95	81.71	81.55	
05/18/85	14:30:04	1399.42	987.29	1189.11	80.95	81.72	81.55	
05/18/85	14:31:06	1399.14	987.34	1189.09	80.95	81.71	81.55	
05/18/85	14:32:02	1399.00	987.31	1189.11	80.95	81.69	81.55	
05/18/85	14:33:03	1398.90	987.27	1189.13	80.96	81.73	81.55	
05/18/85	14:34:07	1398.82	987.27	1189.05	80.94	81.75	81.55	
05/18/85	14:35:01	1398.69	987.29	1189.09	80.94	81.73	81.55	
05/18/85	14:36:05	1398.49	987.32	1189.01	80.94	81.75	81.55	
05/18/85	14:37:00	1398.41	987.29	1189.09	80.93	81.75	81.55	
05/18/85	14:38:02	1398.23	987.29	1189.09	80.93	81.65	81.55	
05/18/85	14:39:06	1398.03	987.23	1189.09	80.94	81.74	81.55	
05/18/85	14:40:08	1397.86	987.30	1189.07	80.95	81.52	81.55	

TABLE A3-10 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM TESTING OF MARKER BEDS
138 AND 139 OF THE SALADO FORMATION, 2195 TO 2309 FEET BELOW
LAND SURFACE, MAY 19 TO 20, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
05/18/85	14:41:03	1397.83	987.27	1189.05	80.93	81.51	81.55	
05/18/85	14:42:05	1397.60	987.31	1189.07	80.93	81.46	81.55	
05/18/85	14:43:00	1397.48	987.24	1189.03	80.93	81.36	81.55	
05/18/85	14:44:02	1397.44	987.33	1189.03	80.92	81.37	81.55	
05/18/85	14:45:06	1397.34	987.27	1189.03	80.92	81.52	81.55	
05/18/85	14:46:08	1397.18	987.28	1189.07	80.93	81.56	81.55	
05/18/85	14:47:03	1397.08	987.28	1189.01	80.92	81.59	81.55	
05/18/85	14:48:05	1397.06	987.28	1189.03	80.93	81.60	81.55	
05/18/85	14:49:00	1396.86	987.20	1189.03	80.92	81.61	81.55	
05/18/85	14:50:02	1396.71	987.26	1189.05	80.92	81.63	81.55	
05/18/85	14:51:06	1396.63	987.28	1188.99	80.92	81.63	81.55	
05/18/85	14:52:00	1396.55	987.24	1188.99	80.92	81.67	81.55	
05/18/85	14:53:03	1396.49	987.22	1189.03	80.92	81.67	81.55	
05/18/85	14:54:07	1396.29	987.25	1189.01	80.91	81.67	81.55	
05/18/85	14:55:01	1396.17	987.27	1189.03	80.91	81.65	81.55	
05/18/85	14:55:49	1396.25	987.24	1189.01	80.92	81.65	81.55	
05/18/85	14:55:59	1396.15	987.29	1188.99	80.91	81.65	81.55	
05/18/85	14:56:12	1396.15	987.24	1189.01	80.92	81.65	81.55	
05/18/85	14:56:29	1396.13	987.27	1189.01	80.93	81.65	81.55	
05/18/85	14:56:42	1396.07	987.26	1189.03	80.92	81.64	81.55	
05/18/85	14:56:52	1396.03	987.28	1189.05	80.91	81.64	81.55	
05/18/85	14:57:04	1396.03	987.24	1188.99	80.93	81.64	81.55	
05/18/85	14:57:14	1396.05	987.28	1189.03	80.91	81.64	81.55	
05/18/85	14:57:27	1395.95	987.27	1189.01	80.91	81.64	81.55	
05/18/85	14:57:37	1396.01	987.27	1188.97	80.91	81.64	81.55	
05/18/85	14:57:49	1395.89	987.24	1188.97	80.91	81.63	81.55	
05/18/85	14:57:59	1395.93	987.24	1189.03	80.91	81.64	81.55	
05/18/85	14:58:12	1395.87	987.28	1188.99	80.91	81.64	81.55	
05/18/85	14:58:24	1395.90	987.24	1188.95	80.93	81.64	81.55	
05/18/85	14:58:34	1395.91	987.24	1189.03	80.91	81.64	81.55	
05/18/85	14:58:47	1395.84	987.22	1189.03	80.91	81.64	81.55	
05/18/85	14:58:57	1395.84	987.22	1188.99	80.92	81.64	81.55	
05/18/85	14:59:09	1395.78	987.28	1189.03	80.91	81.64	81.55	
05/18/85	14:59:19	1395.78	987.28	1188.97	80.91	81.63	81.55	
05/18/85	14:59:32	1395.78	987.31	1188.97	80.91	81.64	81.54	
05/18/85	14:59:42	1395.78	987.26	1189.01	80.91	81.64	81.55	
05/18/85	14:59:54	1395.74	987.29	1188.97	80.91	81.64	81.55	
05/18/85	15:00:04	1395.72	987.24	1188.99	80.91	81.64	81.55	
05/18/85	15:00:17	1395.76	987.16	1188.95	80.91	81.64	81.55	
05/18/85	15:00:27	1395.68	987.30	1189.01	80.91	81.62	81.55	
05/18/85	15:00:39	1395.74	987.28	1189.01	80.91	81.63	81.55	
05/18/85	15:00:49	1395.64	987.24	1188.97	80.91	81.62	81.54	
05/18/85	15:01:02	1395.68	987.26	1188.95	80.92	81.62	81.54	
05/18/85	15:01:12	1395.64	987.26	1189.01	80.91	81.63	81.55	

TABLE A3-10 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM TESTING OF MARKER BEDS
138 AND 139 OF THE SALADO FORMATION, 2195 TO 2309 FEET BELOW
LAND SURFACE, MAY 19 TO 20, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
05/18/85	15:01:25	1395.62	987.29	1189.01	80.91	81.63	81.55	
05/18/85	15:01:37	1395.62	987.28	1189.01	80.91	81.63	81.55	
05/18/85	15:01:47	1395.58	987.24	1188.97	80.91	81.62	81.55	
05/18/85	15:01:59	1395.58	987.22	1188.99	80.91	81.64	81.55	
05/18/85	15:02:09	1395.52	987.26	1188.99	80.91	81.62	81.55	
05/18/85	15:02:22	1395.48	987.28	1188.97	80.91	81.63	81.55	
05/18/85	15:02:32	1395.50	987.28	1188.99	80.91	81.62	81.55	
05/18/85	15:02:44	1395.48	987.26	1188.97	80.91	81.62	81.55	
05/18/85	15:02:54	1395.46	987.24	1188.97	80.91	81.62	81.55	
05/18/85	15:03:07	1395.50	987.30	1189.01	80.91	81.62	81.55	
05/18/85	15:03:17	1395.40	987.26	1188.93	80.92	81.62	81.54	
05/18/85	15:03:30	1395.40	987.30	1188.99	80.91	81.62	81.55	
05/18/85	15:03:39	1395.42	987.30	1188.97	80.91	81.62	81.54	
05/18/85	15:03:52	1395.36	987.30	1188.97	80.91	81.62	81.55	
05/18/85	15:04:02	1395.38	987.24	1188.97	80.91	81.63	81.55	
05/18/85	15:04:14	1395.28	987.24	1188.97	80.91	81.61	81.54	
05/18/85	15:04:27	1395.28	988.20	1188.93	80.90	81.61	81.54	
05/18/85	15:04:37	1395.42	988.93	1188.91	80.92	81.66	81.55	Shut-in
05/18/85	15:04:49	1398.75	987.99	1189.25	80.95	81.65	81.55	
05/18/85	15:04:59	1400.39	988.30	1188.99	80.96	81.72	81.55	
05/18/85	15:05:12	1400.33	988.47	1189.03	80.95	81.72	81.55	
05/18/85	15:05:22	1400.33	988.56	1189.09	80.95	81.77	81.55	
05/18/85	15:05:34	1400.27	988.68	1189.05	80.96	81.76	81.55	
05/18/85	15:05:44	1400.29	988.69	1189.07	80.95	81.75	81.55	
05/18/85	15:06:04	1400.31	988.80	1189.05	80.95	81.76	81.55	
05/18/85	15:06:14	1400.27	988.80	1189.09	80.95	81.74	81.55	
05/18/85	15:06:26	1400.19	988.85	1189.07	80.95	81.75	81.55	
05/18/85	15:06:36	1400.19	988.83	1189.05	80.95	81.76	81.55	
05/18/85	15:06:49	1400.19	988.89	1189.05	80.96	81.76	81.55	
05/18/85	15:06:59	1400.15	988.87	1189.09	80.95	81.76	81.55	
05/18/85	15:07:12	1400.15	988.89	1189.09	80.95	81.76	81.55	
05/18/85	15:07:22	1400.09	988.91	1189.05	80.96	81.76	81.55	
05/18/85	15:07:34	1400.09	988.91	1189.11	80.96	81.74	81.55	
05/18/85	15:07:46	1400.11	988.96	1189.11	80.95	81.76	81.55	
05/18/85	15:07:56	1400.05	988.91	1189.07	80.95	81.76	81.55	
05/18/85	15:08:09	1400.03	988.95	1189.09	80.96	81.72	81.55	
05/18/85	15:08:19	1400.05	988.95	1189.07	80.96	81.70	81.55	
05/18/85	15:08:31	1400.03	988.89	1189.09	80.95	81.74	81.55	
05/18/85	15:08:41	1399.97	988.92	1189.09	80.95	81.76	81.55	
05/18/85	15:08:54	1399.93	988.92	1189.07	80.95	81.76	81.55	
05/18/85	15:09:04	1399.93	988.98	1189.11	80.95	81.72	81.55	
05/18/85	15:09:16	1399.87	988.98	1189.09	80.95	81.76	81.55	
05/18/85	15:09:26	1399.91	988.94	1189.09	80.95	81.76	81.55	
05/18/85	15:09:39	1399.95	988.95	1189.05	80.95	81.68	81.55	

TABLE A3-10 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM TESTING OF MARKER BEDS
138 AND 139 OF THE SALADO FORMATION, 2195 TO 2309 FEET BELOW
LAND SURFACE, MAY 19 TO 20, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
05/18/85	15:09:49	1399.93	988.96	1189.01	80.95	81.76	81.55	
05/18/85	15:10:01	1399.83	988.99	1189.09	80.95	81.66	81.55	
05/18/85	15:10:11	1399.87	988.96	1189.11	80.96	81.73	81.55	
05/18/85	15:10:24	1399.81	988.95	1189.03	80.95	81.71	81.55	
05/18/85	15:10:36	1399.79	988.93	1189.07	80.95	81.75	81.55	
05/18/85	15:11:03	1399.68	988.94	1189.09	80.95	81.56	81.55	
05/18/85	15:12:07	1399.66	988.86	1189.07	80.94	81.62	81.55	
05/18/85	15:13:00	1399.56	988.83	1189.03	80.95	81.50	81.55	
05/18/85	15:14:04	1399.38	988.74	1189.03	80.94	81.70	81.55	
05/18/85	15:15:06	1399.40	988.77	1189.09	80.95	81.60	81.55	
05/18/85	15:16:01	1399.20	988.76	1189.09	80.94	81.51	81.55	
05/18/85	15:17:03	1399.24	988.70	1189.05	80.96	81.49	81.55	
05/18/85	15:18:07	1399.16	988.69	1189.07	80.95	81.40	81.55	
05/18/85	15:19:01	1399.08	988.67	1189.01	80.96	81.42	81.55	
05/18/85	15:20:04	1398.98	988.65	1189.05	80.94	81.43	81.55	
05/18/85	15:21:06	1398.86	988.56	1188.97	80.95	81.41	81.55	
05/18/85	15:22:01	1398.79	988.56	1189.01	80.95	81.41	81.55	
05/18/85	15:23:03	1398.63	988.49	1188.99	80.94	81.39	81.55	
05/18/85	15:24:07	1398.51	988.46	1189.01	80.95	81.57	81.55	
05/18/85	15:25:00	1398.47	988.46	1189.05	80.93	81.56	81.55	
05/18/85	15:26:04	1398.43	988.47	1188.97	80.93	81.63	81.55	
05/18/85	15:27:08	1398.37	988.40	1189.03	80.93	81.62	81.55	
05/18/85	15:28:01	1398.21	988.34	1189.01	80.93	81.67	81.55	
05/18/85	15:29:05	1398.17	988.36	1188.93	80.93	81.64	81.55	
05/18/85	15:30:07	1398.09	988.32	1188.99	80.93	81.65	81.55	
05/18/85	15:31:02	1398.03	988.29	1188.97	80.93	81.66	81.54	
05/18/85	15:32:04	1398.01	988.25	1189.01	80.93	81.66	81.54	
05/18/85	15:33:08	1397.85	988.21	1188.97	80.93	81.67	81.54	
05/18/85	15:34:01	1397.83	988.25	1188.95	80.93	81.64	81.54	
05/18/85	15:35:05	1397.76	988.16	1188.91	80.93	81.66	81.54	
05/18/85	15:36:06	1397.64	988.14	1188.93	80.94	81.69	81.54	
05/18/85	15:37:01	1397.66	988.16	1188.91	80.93	81.65	81.54	
05/18/85	15:38:03	1397.56	988.10	1188.91	80.93	81.66	81.54	
05/18/85	15:39:07	1397.58	988.01	1188.91	80.94	81.66	81.54	
05/18/85	15:40:00	1397.40	988.03	1188.93	80.93	81.68	81.54	
05/18/85	15:41:04	1397.32	988.01	1188.89	80.93	81.66	81.54	
05/18/85	15:42:08	1397.28	988.01	1188.89	80.92	81.68	81.54	
05/18/85	15:43:10	1397.34	987.97	1188.95	80.92	81.65	81.54	
05/18/85	15:50:06	1396.83	987.81	1188.82	80.92	81.67	81.54	
05/18/85	16:00:01	1396.35	987.55	1188.82	80.91	81.65	81.54	
05/18/85	16:10:06	1395.78	987.31	1188.76	80.92	81.64	81.54	
05/18/85	16:20:02	1395.42	987.11	1188.72	80.91	81.62	81.54	
05/18/85	16:30:07	1395.02	986.93	1188.72	80.90	81.61	81.54	
05/18/85	16:40:02	1394.79	986.82	1188.66	80.91	81.61	81.54	

TABLE A3-10 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM TESTING OF MARKER BEDS
138 AND 139 OF THE SALADO FORMATION, 2195 TO 2309 FEET BELOW
LAND SURFACE, MAY 19 TO 20, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
05/18/85	16:50:07	1394.51	986.69	1188.68	80.90	81.60	81.54	
05/18/85	17:00:02	1394.27	986.58	1188.66	80.91	81.59	81.54	
05/18/85	17:10:07	1394.01	986.51	1188.66	80.90	81.58	81.54	
05/18/85	17:20:01	1393.82	986.30	1188.62	80.90	81.58	81.54	
05/18/85	17:30:07	1393.58	986.16	1188.62	80.89	81.56	81.54	
05/18/85	17:40:01	1393.36	986.10	1188.58	80.90	81.56	81.54	
05/18/85	17:50:07	1393.18	985.97	1188.54	80.89	81.56	81.54	
05/18/85	18:00:02	1393.02	985.79	1188.56	80.88	81.58	81.54	
05/18/85	18:29:19	1392.65	985.51	1188.56	80.88	81.56	81.53	
05/18/85	18:30:04	1392.65	985.50	1188.48	80.88	81.55	81.53	
05/18/85	18:30:46	1392.65	985.46	1188.52	80.89	81.57	81.54	
05/18/85	18:40:09	1392.53	985.37	1188.50	80.89	81.56	81.54	
05/18/85	18:50:03	1392.53	985.27	1188.44	80.89	81.55	81.54	
05/18/85	19:00:08	1392.40	985.17	1188.42	80.88	81.56	81.54	
05/18/85	19:10:10	1392.33	985.09	1188.42	80.88	81.57	81.54	
05/18/85	19:20:10	1392.27	985.05	1188.41	80.88	81.57	81.54	
05/18/85	19:30:11	1392.23	984.75	1188.39	80.88	81.56	81.54	
05/18/85	19:40:11	1392.18	984.64	1188.35	80.88	81.58	81.54	
05/18/85	19:50:13	1392.17	984.62	1188.32	80.88	81.57	81.54	
05/18/85	20:00:12	1392.16	984.47	1188.27	80.88	81.57	81.53	
05/18/85	20:10:14	1392.15	984.39	1188.24	80.88	81.58	81.54	
05/18/85	20:20:13	1392.18	984.18	1188.20	80.88	81.58	81.54	
05/18/85	20:30:14	1392.16	984.18	1188.16	80.88	81.58	81.54	
05/18/85	20:40:13	1392.21	984.20	1188.15	80.88	81.59	81.54	
05/18/85	20:50:14	1392.21	984.03	1188.11	80.88	81.59	81.53	
05/18/85	21:00:16	1392.24	984.02	1188.09	80.88	81.59	81.54	
05/18/85	21:10:15	1392.28	983.99	1188.05	80.88	81.59	81.54	
05/18/85	21:20:17	1392.34	983.95	1188.01	80.88	81.59	81.53	
05/18/85	21:30:16	1392.40	983.92	1187.99	80.88	81.59	81.53	
05/18/85	21:40:18	1392.47	983.89	1187.96	80.88	81.59	81.54	
05/18/85	21:50:17	1392.50	983.87	1187.97	80.88	81.59	81.53	
05/18/85	22:00:19	1392.55	983.86	1187.97	80.88	81.59	81.53	
05/18/85	22:10:18	1392.63	983.83	1187.95	80.88	81.58	81.53	
05/18/85	22:20:20	1392.67	983.80	1187.93	80.88	81.59	81.53	
05/18/85	22:30:21	1392.75	983.77	1187.89	80.88	81.56	81.53	
05/18/85	22:40:00	1392.81	983.76	1187.87	80.88	81.56	81.52	
05/18/85	22:50:22	1392.90	983.73	1187.81	80.88	81.55	81.53	
05/18/85	23:00:02	1392.97	983.72	1187.78	80.88	81.52	81.53	
05/18/85	23:10:01	1393.05	983.71	1187.73	80.89	81.50	81.53	
05/18/85	23:20:03	1393.15	983.71	1187.68	80.89	81.45	81.53	
05/18/85	23:30:05	1393.24	983.71	1187.65	80.89	81.35	81.53	
05/18/85	23:40:04	1393.36	983.72	1187.61	80.89	81.24	81.53	
05/18/85	23:50:07	1393.45	983.74	1187.59	80.89	81.22	81.53	
05/19/85	00:00:06	1393.57	983.76	1187.55	80.89	81.24	81.53	

TABLE A3-10 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM TESTING OF MARKER BEDS
138 AND 139 OF THE SALADO FORMATION, 2195 TO 2309 FEET BELOW
LAND SURFACE, MAY 19 TO 20, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
05/19/85	00:10:09	1393.68	983.80	1187.48	80.89	81.26	81.53	
05/19/85	00:20:08	1393.77	983.84	1187.45	80.89	81.33	81.52	
05/19/85	00:30:12	1393.91	983.90	1187.39	80.90	81.35	81.53	
05/19/85	00:40:12	1394.02	983.94	1187.37	80.90	81.35	81.53	
05/19/85	00:50:15	1394.15	984.00	1187.31	80.90	81.43	81.53	
05/19/85	01:00:15	1394.27	984.08	1187.28	80.90	81.40	81.53	
05/19/85	01:10:18	1394.39	984.14	1187.21	80.90	81.47	81.53	
05/19/85	01:20:18	1394.54	984.20	1187.17	80.90	81.45	81.53	
05/19/85	01:30:21	1394.66	984.30	1187.12	80.90	81.48	81.52	
05/19/85	01:40:21	1394.83	984.34	1187.07	80.90	81.54	81.52	
05/19/85	01:50:00	1394.95	984.44	1187.03	80.90	81.53	81.52	
05/19/85	02:00:00	1395.10	984.50	1186.99	80.91	81.57	81.52	
05/19/85	02:10:03	1395.20	984.57	1186.93	80.91	81.60	81.53	
05/19/85	02:20:05	1395.41	984.64	1186.90	80.91	81.66	81.52	
05/19/85	02:30:13	1395.55	984.71	1186.84	80.91	81.68	81.53	
05/19/85	02:40:16	1395.69	984.78	1186.81	80.91	81.72	81.51	
05/19/85	02:50:15	1395.85	984.87	1186.76	80.91	81.72	81.52	
05/19/85	03:00:17	1396.02	984.94	1186.72	80.91	81.71	81.52	
05/19/85	03:10:17	1396.20	985.01	1186.66	80.91	81.70	81.51	
05/19/85	03:20:19	1396.33	985.10	1186.62	80.92	81.68	81.52	
05/19/85	03:30:19	1396.53	985.19	1186.59	80.92	81.67	81.52	
05/19/85	03:40:21	1396.69	985.27	1186.54	80.92	81.67	81.52	
05/19/85	03:50:21	1396.86	985.34	1186.50	80.92	81.67	81.52	
05/19/85	04:00:01	1397.05	985.41	1186.45	80.92	81.66	81.52	
05/19/85	04:10:01	1397.20	985.49	1186.41	80.92	81.65	81.51	
05/19/85	04:20:04	1397.41	985.58	1186.37	80.92	81.63	81.51	
05/19/85	04:30:04	1397.57	985.66	1186.33	80.93	81.64	81.52	
05/19/85	04:40:06	1397.74	985.75	1186.31	80.93	81.62	81.52	
05/19/85	04:50:09	1397.93	985.82	1186.29	80.93	81.62	81.52	
05/19/85	05:00:09	1398.11	985.91	1186.27	80.93	81.61	81.52	
05/19/85	05:10:11	1398.28	985.98	1186.24	80.93	81.60	81.52	
05/19/85	05:20:11	1398.48	986.05	1186.23	80.94	81.59	81.52	
05/19/85	05:30:14	1398.67	986.15	1186.22	80.94	81.58	81.51	
05/19/85	05:40:14	1398.87	986.22	1186.20	80.94	81.57	81.52	
05/19/85	05:50:16	1399.04	986.32	1186.17	80.94	81.53	81.51	
05/19/85	06:00:16	1399.26	986.40	1186.16	80.94	81.53	81.52	
05/19/85	06:10:18	1399.45	986.47	1186.14	80.94	81.50	81.51	
05/19/85	06:20:18	1399.65	986.55	1186.12	80.95	81.48	81.52	
05/19/85	06:30:21	1399.83	986.64	1186.10	80.95	81.47	81.51	
05/19/85	06:40:21	1400.04	986.74	1186.06	80.95	81.46	81.52	
05/19/85	06:50:00	1400.23	986.82	1186.06	80.95	81.45	81.52	
05/19/85	07:00:23	1400.43	986.89	1186.03	80.95	81.42	81.51	
05/19/85	07:10:02	1400.63	986.98	1186.00	80.95	81.43	81.50	
05/19/85	07:20:02	1400.84	987.06	1185.96	80.96	81.43	81.51	

TABLE A3-10 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM TESTING OF MARKER BEDS
138 AND 139 OF THE SALADO FORMATION, 2195 TO 2309 FEET BELOW
LAND SURFACE, MAY 19 TO 20, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
05/19/85	07:30:04	1401.04	987.13	1185.94	80.96	81.40	81.51	
05/19/85	07:40:06	1401.26	987.21	1185.92	80.96	81.40	81.51	
05/19/85	07:50:06	1401.45	987.31	1185.90	80.96	81.40	81.51	
05/19/85	08:00:08	1401.66	987.38	1185.86	80.96	81.39	81.52	
05/19/85	08:10:08	1401.87	987.46	1185.80	80.97	81.37	81.51	
05/19/85	08:20:10	1402.10	987.54	1185.79	80.97	81.36	81.51	
05/19/85	08:30:10	1402.30	987.64	1185.73	80.97	81.36	81.51	
05/19/85	08:40:12	1402.50	987.70	1185.70	80.97	81.33	81.50	
05/19/85	08:50:11	1402.71	987.79	1185.66	80.97	81.33	81.52	
05/19/85	09:00:13	1402.94	987.87	1185.62	80.98	81.33	81.51	
05/19/85	09:10:13	1403.14	987.94	1185.58	80.98	81.31	81.51	
05/19/85	09:20:15	1403.34	988.04	1185.55	80.98	81.29	81.50	
05/19/85	09:30:14	1403.59	988.12	1185.50	80.98	81.30	81.48	
05/19/85	09:47:42	1403.97	988.26	1185.43	80.98	81.27	81.51	
05/19/85	09:50:01	1403.98	988.28	1185.47	80.98	81.26	81.51	
05/19/85	09:51:15	1403.99	988.28	1185.45	80.99	81.27	81.51	
05/19/85	10:00:07	1404.21	988.35	1185.43	80.99	81.27	81.51	
05/19/85	10:08:19	1404.37	988.42	1185.42	80.99	81.25	81.51	
05/19/85	10:08:43	1404.41	988.46	1185.44	80.99	81.26	81.50	
05/19/85	10:08:55	1404.41	988.43	1185.44	80.99	81.22	81.51	
05/19/85	10:09:17	1404.47	988.43	1185.46	80.99	81.22	81.51	
05/19/85	10:09:28	1404.43	988.45	1185.44	80.99	81.22	81.51	
05/19/85	10:09:42	1404.43	988.41	1185.46	80.99	81.24	81.50	
05/19/85	10:09:54	1404.50	988.48	1185.46	80.99	81.21	81.50	
05/19/85	10:10:07	1404.41	988.42	1185.42	80.99	81.26	81.49	
05/19/85	10:10:18	1404.47	988.42	1185.46	80.99	81.26	81.50	
05/19/85	10:10:31	1404.41	988.46	1185.42	80.99	81.25	81.50	
05/19/85	10:10:42	1404.50	988.48	1185.48	80.99	81.24	81.51	
05/19/85	10:10:55	1404.45	988.45	1185.40	80.99	81.21	81.50	
05/19/85	10:11:06	1404.39	988.46	1185.40	80.99	81.26	81.50	
05/19/85	10:11:18	1404.47	988.50	1185.44	80.99	81.26	81.49	
05/19/85	10:11:29	1404.47	988.48	1185.44	80.99	81.21	81.51	
05/19/85	10:11:42	1404.48	988.50	1185.40	80.99	81.21	81.50	
05/19/85	10:11:56	1404.50	988.48	1185.42	80.99	81.22	81.50	
05/19/85	10:12:07	1404.47	988.46	1185.44	80.99	81.24	81.50	
05/19/85	10:12:20	1404.45	988.48	1185.44	80.99	81.24	81.51	
05/19/85	10:12:31	1404.54	988.45	1185.38	80.99	81.23	81.50	
05/19/85	10:12:44	1404.50	988.48	1185.44	80.99	81.23	81.51	
05/19/85	10:12:55	1404.58	988.50	1185.44	80.99	81.23	81.51	
05/19/85	10:13:08	1404.50	988.50	1185.40	80.99	81.23	81.50	
05/19/85	10:13:19	1404.54	988.46	1185.44	80.99	81.25	81.50	
05/19/85	10:13:32	1404.52	988.52	1185.42	80.99	81.24	81.49	
05/19/85	10:13:42	1404.54	988.48	1185.42	80.99	81.24	81.50	
05/19/85	10:13:54	1404.52	988.50	1185.42	80.99	81.21	81.49	

TABLE A3-10 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM TESTING OF MARKER BEDS
138 AND 139 OF THE SALADO FORMATION, 2195 TO 2309 FEET BELOW
LAND SURFACE, MAY 19 TO 20, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
05/19/85	10:14:04	1404.84	988.48	1185.48	80.99	81.24	81.49	
05/19/85	10:14:16	1404.62	988.50	1185.42	80.99	81.23	81.51	
05/19/85	10:14:25	1404.54	988.52	1185.46	80.99	81.21	81.51	
05/19/85	10:14:38	1404.66	988.50	1185.42	80.99	81.26	81.50	
05/19/85	10:14:49	1404.52	988.50	1185.46	80.99	81.22	81.51	
05/19/85	10:14:59	1404.58	988.47	1185.44	80.99	81.21	81.51	
05/19/85	10:15:11	1404.56	988.50	1185.38	80.99	81.24	81.49	
05/19/85	10:15:20	1404.58	988.47	1185.38	80.99	81.20	81.50	
05/19/85	10:15:33	1404.62	988.47	1185.42	80.99	81.20	81.51	
05/19/85	10:15:42	1404.56	988.52	1185.42	80.99	81.23	81.50	
05/19/85	10:15:54	1404.60	988.48	1185.36	80.99	81.21	81.50	
05/19/85	10:16:04	1404.62	988.45	1185.46	80.99	81.23	81.50	
05/19/85	10:16:16	1404.54	988.50	1185.44	80.99	81.26	81.51	
05/19/85	10:16:26	1404.60	988.50	1185.40	80.99	81.26	81.50	
05/19/85	10:16:38	1404.64	988.54	1185.44	80.99	81.23	81.50	
05/19/85	10:16:47	1404.62	988.48	1185.44	80.99	81.23	81.51	
05/19/85	10:16:59	1404.88	988.50	1185.48	80.99	81.25	81.51	
05/19/85	10:17:08	1404.56	988.50	1185.38	80.99	81.20	81.50	
05/19/85	10:17:21	1404.54	988.47	1185.44	80.99	81.18	81.51	
05/19/85	10:17:30	1404.62	988.45	1185.44	80.99	81.24	81.51	
05/19/85	10:17:42	1404.43	988.52	1185.44	80.99	81.21	81.51	
05/19/85	10:17:54	1404.62	988.50	1185.48	80.99	81.25	81.49	
05/19/85	10:18:03	1404.68	988.58	1185.42	80.99	81.22	81.51	
05/19/85	10:18:15	1404.64	988.54	1185.44	80.99	81.23	81.49	
05/19/85	10:18:24	1404.58	988.56	1185.44	80.99	81.21	81.48	
05/19/85	10:18:37	1404.60	988.52	1185.42	80.99	81.22	81.51	
05/19/85	10:18:53	1404.60	988.52	1185.44	80.99	81.23	81.49	
05/19/85	10:19:05	1404.72	988.56	1185.40	80.99	81.18	81.51	
05/19/85	10:19:14	1404.66	988.56	1185.44	80.99	81.22	81.51	
05/19/85	10:19:27	1404.52	988.46	1185.42	80.99	81.22	81.50	
05/19/85	10:19:36	1404.64	988.43	1185.44	80.99	81.22	81.51	
05/19/85	10:19:48	1404.60	988.41	1185.23	80.99	81.20	81.50	
05/19/85	10:19:57	1396.63	125.15	1184.61	80.93	81.13	81.47	Opened Tool for
05/19/85	10:20:10	1397.18	228.69	1185.15	80.92	81.13	81.49	FFL
05/19/85	10:20:20	1396.61	241.00	1185.67	80.92	81.05	81.47	
05/19/85	10:20:32	1396.59	241.21	1185.52	80.92	81.08	81.49	FFL
05/19/85	10:20:45	1396.47	241.02	1185.48	80.92	81.13	81.47	
05/19/85	10:20:55	1396.51	241.16	1185.43	80.92	81.12	81.43	
05/19/85	10:21:07	1396.39	241.31	1185.44	80.92	81.12	81.47	
05/19/85	10:21:17	1396.37	241.40	1185.48	80.92	81.13	81.49	
05/19/85	10:21:29	1396.45	241.47	1185.46	80.91	81.14	81.51	
05/19/85	10:21:39	1396.41	241.58	1185.46	80.92	81.14	81.46	
05/19/85	10:21:52	1396.41	241.65	1185.44	80.91	81.15	81.47	
05/19/85	10:22:02	1396.47	241.70	1185.46	80.92	81.15	81.49	

TABLE A3-10 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM TESTING OF MARKER BEDS
138 AND 139 OF THE SALADO FORMATION, 2195 TO 2309 FEET BELOW
LAND SURFACE, MAY 19 TO 20, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
05/19/85	10:22:14	1396.39	241.70	1185.42	80.91	81.14	81.47	
05/19/85	10:22:24	1396.25	241.79	1185.44	80.91	81.14	81.49	
05/19/85	10:22:36	1396.35	241.84	1185.44	80.91	81.14	81.47	
05/19/85	10:22:46	1396.19	241.86	1185.47	80.92	81.15	81.44	
05/19/85	10:22:59	1396.33	241.91	1185.42	80.91	81.15	81.47	
05/19/85	10:23:09	1396.27	241.93	1185.44	80.91	81.16	81.48	
05/19/85	10:23:21	1396.27	241.96	1185.42	80.92	81.16	81.49	
05/19/85	10:23:31	1396.39	242.03	1185.42	80.92	81.16	81.47	
05/19/85	10:23:43	1396.33	242.07	1185.44	80.91	81.16	81.51	
05/19/85	10:23:56	1396.29	242.10	1185.42	80.91	81.14	81.51	
05/19/85	10:24:06	1396.31	242.12	1185.46	80.92	81.14	81.47	
05/19/85	10:24:18	1396.37	242.16	1185.48	80.92	81.15	81.49	
05/19/85	10:24:28	1396.23	242.12	1185.42	80.91	81.16	81.49	
05/19/85	10:24:40	1396.33	242.16	1185.49	80.91	81.13	81.46	
05/19/85	10:24:51	1396.29	242.19	1185.42	80.91	81.16	81.51	
05/19/85	10:25:03	1396.33	242.19	1185.44	80.92	81.14	81.49	
05/19/85	10:25:13	1396.17	242.25	1185.42	80.91	81.14	81.49	
05/19/85	10:25:25	1396.35	242.32	1185.44	80.91	81.15	81.51	
05/19/85	10:25:35	1396.37	242.24	1185.42	80.92	81.16	81.49	
05/19/85	10:25:47	1396.27	242.25	1185.40	80.91	81.14	81.45	
05/19/85	10:25:58	1396.25	242.28	1185.40	80.92	81.12	81.51	
05/19/85	10:26:10	1396.33	242.35	1185.38	80.91	81.15	81.45	
05/19/85	10:26:20	1396.37	242.33	1185.42	80.92	81.13	81.47	
05/19/85	10:26:32	1396.39	242.37	1185.42	80.91	81.13	81.51	
05/19/85	10:26:45	1396.33	242.35	1185.40	80.91	81.16	81.49	
05/19/85	10:26:55	1396.45	242.40	1185.42	80.92	81.12	81.49	
05/19/85	10:27:07	1396.35	242.37	1185.40	80.91	81.13	81.47	
05/19/85	10:27:17	1396.31	242.35	1185.41	80.92	81.11	81.44	
05/19/85	10:27:29	1396.41	242.35	1185.40	80.91	81.14	81.45	
05/19/85	10:27:39	1396.39	242.37	1185.40	80.91	81.15	81.49	
05/19/85	10:27:52	1396.41	242.35	1185.38	80.91	81.12	81.45	
05/19/85	10:28:02	1396.31	242.35	1185.42	80.91	81.12	81.47	
05/19/85	10:28:21	1396.47	242.46	1185.39	80.92	81.11	81.44	
05/19/85	10:28:31	1396.29	242.48	1185.35	80.92	81.11	81.42	
05/19/85	10:28:43	1396.37	242.51	1185.38	80.92	81.09	81.49	
05/19/85	10:28:53	1396.33	242.49	1185.45	80.92	81.11	81.45	
05/19/85	10:29:06	1396.39	242.51	1185.39	80.92	81.15	81.43	
05/19/85	10:29:16	1396.49	242.51	1185.38	80.92	81.14	81.45	
05/19/85	10:29:30	1396.39	242.53	1185.41	80.92	81.11	81.43	
05/19/85	10:29:42	1396.39	242.56	1185.43	80.92	81.10	81.43	
05/19/85	10:29:56	1396.39	242.55	1185.40	80.92	81.12	81.48	
05/19/85	10:30:11	1396.43	242.54	1185.36	80.92	81.13	81.47	
05/19/85	10:30:23	1396.39	242.62	1185.44	80.92	81.12	81.38	
05/19/85	10:30:37	1396.43	242.67	1185.40	80.92	81.12	81.45	

TABLE A3-10 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM TESTING OF MARKER BEDS
138 AND 139 OF THE SALADO FORMATION, 2195 TO 2309 FEET BELOW
LAND SURFACE, MAY 19 TO 20, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
05/19/85	10:30:49	1396.55	242.63	1185.39	80.92	81.13	81.42	
05/19/85	10:31:03	1396.45	242.65	1185.39	80.92	81.12	81.43	
05/19/85	10:31:16	1396.49	242.67	1185.41	80.92	81.11	81.41	
05/19/85	10:31:31	1396.43	242.69	1185.39	80.92	81.14	81.41	
05/19/85	10:31:44	1396.43	242.70	1185.38	80.92	81.14	81.46	
05/19/85	10:31:59	1396.51	242.69	1185.40	80.92	81.13	81.45	
05/19/85	10:32:11	1396.45	242.72	1185.42	80.92	81.14	81.37	
05/19/85	10:32:26	1396.47	242.72	1185.39	80.92	81.15	81.38	
05/19/85	10:32:39	1396.49	242.77	1185.43	80.92	81.13	81.44	
05/19/85	10:32:54	1396.47	242.70	1185.42	80.92	81.13	81.33	
05/19/85	10:33:07	1396.53	242.76	1185.39	80.92	81.14	81.42	
05/19/85	10:33:22	1396.49	242.76	1185.39	80.92	81.13	81.42	
05/19/85	10:33:37	1396.55	242.77	1185.36	80.92	81.13	81.46	
05/19/85	10:33:50	1396.53	242.83	1185.40	80.92	81.15	81.51	
05/19/85	10:34:05	1396.55	242.81	1185.39	80.92	81.14	81.40	
05/19/85	10:34:17	1396.51	242.83	1185.41	80.92	81.13	81.43	
05/19/85	10:34:32	1396.55	242.83	1185.37	80.92	81.12	81.43	
05/19/85	10:34:45	1396.55	242.84	1185.34	80.92	81.15	81.46	
05/19/85	10:35:00	1396.57	242.84	1185.36	80.92	81.16	81.44	
05/19/85	10:35:13	1396.59	242.82	1185.38	80.92	81.15	81.50	
05/19/85	10:35:28	1396.59	242.86	1185.34	80.92	81.14	81.48	
05/19/85	10:35:41	1396.57	242.82	1185.38	80.92	81.17	81.50	
05/19/85	10:35:55	1396.61	242.88	1185.40	80.92	81.13	81.51	
05/19/85	10:36:08	1396.59	242.90	1185.38	80.92	81.15	81.46	
05/19/85	10:36:23	1396.63	242.90	1185.40	80.92	81.14	81.49	
05/19/85	10:36:36	1396.55	242.86	1185.38	80.92	81.15	81.48	
05/19/85	10:36:51	1396.65	242.91	1185.38	80.92	81.15	81.45	
05/19/85	10:37:04	1396.63	242.90	1185.30	80.92	81.14	81.47	
05/19/85	10:37:19	1396.63	242.91	1185.40	80.92	81.16	81.46	
05/19/85	10:37:34	1396.69	242.93	1185.38	80.92	81.15	81.47	
05/19/85	10:37:46	1396.73	242.93	1185.41	80.92	81.16	81.44	
05/19/85	10:38:01	1396.69	242.93	1185.38	80.92	81.14	81.46	
05/19/85	10:38:14	1396.65	242.95	1185.36	80.92	81.15	81.44	
05/19/85	10:38:29	1396.67	242.95	1185.36	80.92	81.16	81.47	
05/19/85	10:38:42	1396.65	242.98	1185.39	80.92	81.15	81.43	
05/19/85	10:38:57	1396.67	242.95	1185.38	80.92	81.14	81.46	
05/19/85	10:39:09	1396.69	242.98	1185.38	80.92	81.13	81.48	
05/19/85	10:39:23	1396.79	243.00	1185.38	80.93	81.15	81.46	
05/19/85	10:39:40	1396.77	242.97	1185.34	80.92	81.14	81.47	
05/19/85	10:39:53	1396.71	243.02	1185.36	80.92	81.12	81.47	
05/19/85	10:40:04	1396.67	243.04	1185.36	80.92	81.15	81.48	
05/19/85	10:40:16	1396.71	243.02	1185.34	80.92	81.13	81.49	
05/19/85	10:40:27	1396.73	242.97	1185.33	80.93	81.13	81.51	
05/19/85	10:40:39	1396.69	243.00	1185.39	80.92	81.14	81.43	

TABLE A3-10 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM TESTING OF MARKER BEDS
138 AND 139 OF THE SALADO FORMATION, 2195 TO 2309 FEET BELOW
LAND SURFACE, MAY 19 TO 20, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
05/19/85	10:40:52	1396.75	243.06	1185.36	80.92	81.12	81.45	End FFL
05/19/85	10:41:02	1396.79	243.71	1185.94	80.92	81.11	81.44	Shut-in for FBU
05/19/85	10:41:15	1402.23	245.26	1186.28	80.97	81.09	81.50	
05/19/85	10:41:25	1401.89	245.97	1185.46	80.96	81.14	81.50	
05/19/85	10:41:38	1401.81	246.80	1185.67	80.97	81.11	81.47	
05/19/85	10:41:48	1401.83	247.45	1185.54	80.97	81.11	81.49	
05/19/85	10:42:01	1401.89	248.18	1185.50	80.97	81.05	81.49	
05/19/85	10:42:11	1401.89	248.76	1185.50	80.97	81.06	81.47	
05/19/85	10:42:24	1401.89	249.46	1185.50	80.97	81.07	81.47	
05/19/85	10:42:34	1401.95	249.99	1185.44	80.97	81.10	81.51	
05/19/85	10:42:47	1401.99	250.67	1185.48	80.97	81.14	81.51	
05/19/85	10:42:57	1401.95	251.15	1185.44	80.97	81.13	81.49	
05/19/85	10:43:10	1401.99	251.80	1185.47	80.97	81.12	81.44	
05/19/85	10:43:20	1401.95	252.29	1185.44	80.97	81.12	81.48	
05/19/85	10:43:33	1401.91	252.89	1185.38	80.97	81.13	81.51	
05/19/85	10:43:43	1402.01	253.43	1185.42	80.97	81.10	81.49	
05/19/85	10:43:56	1401.99	254.00	1185.44	80.97	81.11	81.47	
05/19/85	10:44:08	1401.97	254.60	1185.42	80.97	81.05	81.49	
05/19/85	10:44:19	1401.97	255.06	1185.38	80.97	81.06	81.49	
05/19/85	10:44:31	1401.95	255.59	1185.48	80.97	81.17	81.49	
05/19/85	10:44:42	1401.97	256.05	1185.44	80.97	81.25	81.51	
05/19/85	10:44:54	1401.99	256.65	1185.40	80.97	81.20	81.47	
05/19/85	10:45:05	1401.99	257.04	1185.38	80.96	81.10	81.45	
05/19/85	10:45:17	1401.99	257.58	1185.48	80.97	81.15	81.47	
05/19/85	10:45:28	1402.01	257.97	1185.42	80.97	81.23	81.47	
05/19/85	10:45:40	1401.99	258.52	1185.46	80.97	81.17	81.47	
05/19/85	10:45:51	1401.95	258.94	1185.44	80.97	81.11	81.47	
05/19/85	10:46:03	1402.01	259.49	1185.44	80.97	81.15	81.47	
05/19/85	10:46:14	1401.97	259.86	1185.40	80.97	81.12	81.47	
05/19/85	10:46:26	1401.97	260.35	1185.46	80.97	81.12	81.50	
05/19/85	10:46:36	1402.05	260.78	1185.44	80.97	81.04	81.48	
05/19/85	10:46:51	1402.03	261.34	1185.44	80.97	81.05	81.50	
05/19/85	10:47:06	1402.03	261.89	1185.40	80.97	81.05	81.48	
05/19/85	10:47:19	1401.97	262.34	1185.42	80.97	81.09	81.48	
05/19/85	10:47:33	1402.05	262.89	1185.44	80.97	81.08	81.48	
05/19/85	10:47:46	1402.05	263.33	1185.42	80.97	81.10	81.48	
05/19/85	10:48:01	1402.05	263.87	1185.44	80.97	81.07	81.50	
05/19/85	10:48:13	1402.09	264.28	1185.38	80.97	81.10	81.47	
05/19/85	10:48:28	1401.99	264.82	1185.44	80.97	81.09	81.51	
05/19/85	10:48:40	1402.11	265.26	1185.44	80.97	81.10	81.50	
05/19/85	10:48:55	1402.07	265.78	1185.38	80.97	81.08	81.50	
05/19/85	10:49:08	1402.07	266.16	1185.40	80.97	81.09	81.51	
05/19/85	10:49:22	1402.07	266.66	1185.40	80.97	81.05	81.50	
05/19/85	10:49:35	1402.15	267.05	1185.40	80.97	81.02	81.49	

TABLE A3-10 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM TESTING OF MARKER BEDS
138 AND 139 OF THE SALADO FORMATION, 2195 TO 2309 FEET BELOW
LAND SURFACE, MAY 19 TO 20, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
05/19/85	10:49:57	1402.15	267.75	1185.42	80.97	81.03	81.50	
05/19/85	10:50:09	1402.05	268.17	1185.42	80.97	81.02	81.51	
05/19/85	10:50:24	1402.15	268.63	1185.42	80.97	81.04	81.50	
05/19/85	10:50:37	1402.11	269.02	1185.42	80.97	81.06	81.49	
05/19/85	10:50:54	1402.09	269.55	1185.42	80.97	81.05	81.49	
05/19/85	10:51:11	1402.11	270.07	1185.42	80.97	81.07	81.51	
05/19/85	10:51:45	1402.21	271.06	1185.44	80.97	81.09	81.48	
05/19/85	10:52:02	1402.09	271.57	1185.42	80.97	81.07	81.51	
05/19/85	10:53:09	1402.29	273.42	1185.42	80.97	81.05	81.51	
05/19/85	10:54:04	1402.21	274.94	1185.38	80.97	81.01	81.50	
05/19/85	10:55:10	1402.21	276.61	1185.38	80.97	81.13	81.51	
05/19/85	10:56:05	1402.11	277.98	1185.40	80.97	81.14	81.50	
05/19/85	10:57:12	1402.23	279.57	1185.38	80.97	81.12	81.51	
05/19/85	10:58:07	1402.33	280.83	1185.38	80.97	81.15	81.51	
05/19/85	10:59:01	1402.45	282.03	1185.38	80.97	81.12	81.50	
05/19/85	11:00:09	1402.41	283.49	1185.38	80.97	81.21	81.51	
05/19/85	11:01:02	1402.47	284.61	1185.38	80.97	81.30	81.51	
05/19/85	11:02:10	1402.51	285.96	1185.38	80.97	81.28	81.51	
05/19/85	11:03:04	1402.39	287.05	1185.40	80.97	81.28	81.50	
05/19/85	11:04:11	1402.60	288.31	1185.40	80.97	81.15	81.49	
05/19/85	11:05:07	1402.57	289.33	1185.38	80.97	81.18	81.51	
05/19/85	11:06:00	1402.47	290.27	1185.36	80.97	81.17	81.50	
05/19/85	11:07:08	1402.55	291.48	1185.36	80.97	81.19	81.51	
05/19/85	11:08:02	1402.51	292.38	1185.38	80.97	81.20	81.50	
05/19/85	11:09:09	1402.57	293.53	1185.38	80.97	81.14	81.51	
05/19/85	11:10:03	1402.59	294.39	1185.36	80.98	81.16	81.50	
05/19/85	11:11:10	1402.64	295.45	1185.36	80.97	81.16	81.48	
05/19/85	11:12:04	1402.62	296.24	1185.38	80.97	81.20	81.51	
05/19/85	11:13:12	1402.66	297.27	1185.36	80.97	81.18	81.50	
05/19/85	11:14:05	1402.74	298.06	1185.36	80.97	81.18	81.50	
05/19/85	11:15:00	1402.84	298.84	1185.38	80.97	81.18	81.51	
05/19/85	11:16:07	1402.84	299.76	1185.34	80.97	81.18	81.45	
05/19/85	11:17:02	1402.84	300.50	1185.36	80.98	81.14	81.50	
05/19/85	11:18:08	1402.80	301.40	1185.36	80.97	81.15	81.50	
05/19/85	11:19:03	1402.94	302.14	1185.36	80.98	81.16	81.50	
05/19/85	11:20:10	1402.98	302.99	1185.36	80.98	81.15	81.51	
05/19/85	11:21:05	1403.04	303.66	1185.33	80.98	81.15	81.51	
05/19/85	11:22:00	1403.06	304.37	1185.33	80.98	81.12	81.51	
05/19/85	11:23:06	1402.96	305.16	1185.36	80.98	81.14	81.50	
05/19/85	11:24:01	1402.98	305.80	1185.36	80.98	81.12	81.51	
05/19/85	11:25:07	1403.08	306.57	1185.31	80.98	81.11	81.51	
05/19/85	11:26:03	1403.10	307.23	1185.33	80.98	81.09	81.51	
05/19/85	11:27:09	1403.20	307.95	1185.33	80.98	81.11	81.51	
05/19/85	11:28:04	1403.12	308.55	1185.36	80.98	81.13	81.51	

TABLE A3-10 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM TESTING OF MARKER BEDS
138 AND 139 OF THE SALADO FORMATION, 2195 TO 2309 FEET BELOW
LAND SURFACE, MAY 19 TO 20, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
05/19/85	11:29:11	1403.10	309.26	1185.32	80.98	81.14	81.50	
05/19/85	11:30:06	1403.14	309.87	1185.32	80.98	81.14	81.49	
05/19/85	11:31:12	1403.30	310.55	1185.31	80.98	81.14	81.51	
05/19/85	11:32:07	1403.24	311.11	1185.31	80.98	81.13	81.51	
05/19/85	11:33:01	1403.28	311.66	1185.31	80.98	81.11	81.51	
05/19/85	11:34:08	1403.24	312.37	1185.30	80.98	81.11	81.50	
05/19/85	11:35:08	1403.44	312.93	1185.32	80.98	81.12	81.50	
05/19/85	11:36:03	1403.18	313.44	1185.31	80.98	81.09	81.51	
05/19/85	11:37:11	1403.32	314.12	1185.31	80.98	81.08	81.51	
05/19/85	11:38:04	1403.28	314.62	1185.32	80.98	81.14	81.49	
05/19/85	11:39:00	1403.34	315.13	1185.30	80.98	81.19	81.50	
05/19/85	11:40:06	1403.55	315.71	1185.31	80.98	81.22	81.51	
05/19/85	11:41:01	1403.50	316.21	1185.31	80.98	81.17	81.51	
05/19/85	11:42:07	1403.50	316.84	1185.29	80.98	81.11	81.51	
05/19/85	11:43:02	1403.57	317.31	1185.31	80.98	81.13	81.51	
05/19/85	11:44:08	1403.46	317.89	1185.30	80.98	81.23	81.50	
05/19/85	11:45:04	1403.57	318.35	1185.30	80.98	81.19	81.48	
05/19/85	11:46:10	1403.44	318.90	1185.28	80.98	81.19	81.50	
05/19/85	11:47:05	1403.61	319.34	1185.29	80.98	81.12	81.51	
05/19/85	11:48:11	1403.67	319.89	1185.29	80.99	81.14	81.51	
05/19/85	11:49:06	1403.71	320.35	1185.28	80.99	81.19	81.50	
05/19/85	11:50:12	1403.77	320.84	1185.28	80.98	81.12	81.50	
05/19/85	11:51:07	1403.71	321.31	1185.27	80.98	81.07	81.51	
05/19/85	11:52:01	1403.67	321.69	1185.27	80.98	81.11	81.51	
05/19/85	11:53:08	1403.79	322.28	1185.27	80.99	81.09	81.51	
05/19/85	11:54:03	1403.75	322.69	1185.27	80.99	81.05	81.50	
05/19/85	11:55:10	1403.81	323.14	1185.27	80.98	81.10	81.51	
05/19/85	11:56:05	1403.87	323.59	1185.27	80.99	81.08	81.51	
05/19/85	11:57:11	1403.91	324.05	1185.30	80.99	81.08	81.50	
05/19/85	11:58:06	1403.97	324.45	1185.30	80.98	81.11	81.49	
05/19/85	11:59:12	1403.99	324.93	1185.26	80.98	81.14	81.49	
05/19/85	12:00:07	1404.03	325.32	1185.28	80.99	81.13	81.49	
05/19/85	12:01:01	1403.91	325.67	1185.26	80.99	81.18	81.49	
05/19/85	12:02:08	1404.03	326.16	1185.25	80.99	81.12	81.51	
05/19/85	12:03:02	1404.09	326.50	1185.25	80.99	81.12	81.50	
05/19/85	12:04:10	1404.07	326.96	1185.25	80.99	81.13	81.51	
05/19/85	12:05:03	1404.05	327.31	1185.25	80.99	81.12	81.51	
05/19/85	12:06:11	1404.15	327.79	1185.25	80.99	81.09	81.51	
05/19/85	12:07:04	1404.19	328.11	1185.24	80.99	81.07	81.48	
05/19/85	12:08:12	1404.29	328.54	1185.21	80.99	81.03	81.51	
05/19/85	12:09:07	1404.25	328.92	1185.23	80.99	81.09	81.51	
05/19/85	12:10:01	1404.15	329.26	1185.24	80.99	81.11	81.49	
05/19/85	12:11:08	1404.31	329.67	1185.24	80.99	81.11	81.49	
05/19/85	12:12:02	1404.27	330.02	1185.21	80.99	81.12	81.50	

TABLE A3-10 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM TESTING OF MARKER BEDS
138 AND 139 OF THE SALADO FORMATION, 2195 TO 2309 FEET BELOW
LAND SURFACE, MAY 19 TO 20, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
05/19/85	12:13:10	1404.25	330.41	1185.25	80.99	81.12	81.51	
05/19/85	12:14:03	1404.41	330.76	1185.24	80.99	81.13	81.49	
05/19/85	12:15:11	1404.31	331.15	1185.21	80.99	81.09	81.51	
05/19/85	12:16:24	1404.43	331.59	1185.23	80.99	81.11	81.51	
05/19/85	12:20:03	1404.45	332.85	1185.21	80.99	81.10	81.51	
05/19/85	12:30:00	1404.68	336.07	1185.17	80.99	81.08	81.51	
05/19/85	12:40:11	1405.00	339.11	1185.15	80.99	81.05	81.51	
05/19/85	12:50:08	1405.20	341.80	1185.13	81.00	81.12	81.50	
05/19/85	13:00:06	1405.59	344.33	1185.13	81.00	81.05	81.51	
05/19/85	13:10:02	1405.83	346.68	1185.07	81.00	81.11	81.49	
05/19/85	13:20:12	1406.01	348.96	1185.09	81.00	81.19	81.49	
05/19/85	13:30:08	1406.21	351.05	1185.05	81.01	81.15	81.51	
05/19/85	13:40:00	1406.56	353.04	1185.01	81.01	81.15	81.49	
05/19/85	13:50:09	1406.70	354.95	1184.97	81.01	81.14	81.51	
05/19/85	14:00:04	1406.90	356.72	1184.89	81.01	81.18	81.50	
05/19/85	14:10:00	1407.27	358.44	1184.87	81.02	81.33	81.51	
05/19/85	14:20:08	1407.55	360.13	1184.85	81.02	81.34	81.49	
05/19/85	14:30:04	1407.79	361.75	1184.85	81.02	81.35	81.51	
05/19/85	14:40:11	1408.03	363.33	1184.75	81.03	81.03	81.49	
05/19/85	14:50:06	1408.26	364.84	1184.76	81.02	81.06	81.51	
05/19/85	15:00:01	1408.44	366.27	1184.70	81.03	81.09	81.51	
05/19/85	15:10:09	1408.82	367.71	1184.69	81.03	81.09	81.48	
05/19/85	15:20:02	1409.00	369.11	1184.64	81.03	81.08	81.51	
05/19/85	15:30:10	1409.31	370.47	1184.58	81.03	81.06	81.49	
05/19/85	15:40:04	1409.57	371.79	1184.54	81.04	81.06	81.50	
05/19/85	15:50:11	1409.89	373.06	1184.54	81.04	81.05	81.50	
05/19/85	16:00:05	1410.08	374.33	1184.50	81.04	80.98	81.50	
05/19/85	16:10:12	1410.46	375.60	1184.44	81.04	81.03	81.49	
05/19/85	16:20:06	1410.62	376.86	1184.38	81.05	81.04	81.50	
05/19/85	16:30:00	1410.86	378.10	1184.38	81.05	81.05	81.49	
05/19/85	16:40:06	1411.17	379.30	1184.32	81.05	81.09	81.49	
05/19/85	16:50:11	1411.35	380.47	1184.34	81.06	81.09	81.49	
05/19/85	17:00:06	1411.43	381.62	1184.28	81.06	81.11	81.49	
05/19/85	17:10:10	1411.96	382.76	1184.24	81.06	81.08	81.49	
05/19/85	17:20:03	1412.16	383.83	1184.19	81.06	81.05	81.50	
05/19/85	17:30:06	1412.44	384.95	1184.15	81.06	81.02	81.50	
05/19/85	17:40:10	1412.87	386.01	1184.09	81.07	81.07	81.50	
05/19/85	17:50:00	1412.75	387.03	1184.07	81.07	81.12	81.50	
05/19/85	18:00:03	1413.23	388.06	1184.03	81.07	81.13	81.49	
05/19/85	18:10:05	1413.35	389.08	1184.01	81.07	81.11	81.48	
05/19/85	18:20:08	1413.80	390.08	1183.95	81.07	81.14	81.49	
05/19/85	18:30:10	1413.90	391.04	1183.93	81.08	81.14	81.50	
05/19/85	18:40:01	1414.28	391.98	1183.91	81.08	81.13	81.49	
05/19/85	18:50:03	1414.42	392.96	1183.85	81.08	81.13	81.48	

TABLE A3-10 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM TESTING OF MARKER BEDS
138 AND 139 OF THE SALADO FORMATION, 2195 TO 2309 FEET BELOW
LAND SURFACE, MAY 19 TO 20, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
05/19/85	19:00:07	1414.67	393.85	1183.78	81.08	81.14	81.50	
05/19/85	19:10:09	1414.93	394.75	1183.76	81.09	81.15	81.50	
05/19/85	19:20:11	1415.19	395.64	1183.70	81.09	81.17	81.50	
05/19/85	19:30:03	1415.44	396.49	1183.70	81.09	81.17	81.49	
05/19/85	19:40:05	1415.64	397.38	1183.64	81.09	81.17	81.49	
05/19/85	19:50:10	1416.26	398.21	1183.60	81.10	81.18	81.50	
05/19/85	20:00:00	1416.26	399.05	1183.54	81.10	81.18	81.50	
05/19/85	20:10:05	1416.37	399.86	1183.50	81.10	81.19	81.50	
05/19/85	20:20:08	1416.77	400.68	1183.48	81.10	81.18	81.48	
05/19/85	20:30:00	1417.01	401.48	1183.40	81.10	81.18	81.49	
05/19/85	20:40:04	1417.18	402.30	1183.38	81.11	81.18	81.49	
05/19/85	20:50:09	1417.60	403.06	1183.30	81.11	81.18	81.48	
05/19/85	21:00:01	1417.60	403.84	1183.25	81.11	81.18	81.49	
05/19/85	21:10:07	1418.02	404.57	1183.25	81.11	81.20	81.49	
05/19/85	21:20:11	1418.19	405.33	1183.19	81.12	81.19	81.48	
05/19/85	21:30:05	1418.49	406.04	1183.15	81.12	81.21	81.49	
05/19/85	21:40:11	1418.77	406.79	1183.09	81.12	81.21	81.49	
05/19/85	21:50:03	1419.04	407.52	1183.03	81.12	81.21	81.49	
05/19/85	22:00:05	1419.38	408.23	1183.03	81.13	81.20	81.48	
05/19/85	22:10:11	1419.81	408.90	1182.95	81.13	81.19	81.48	
05/19/85	22:20:06	1419.87	409.62	1182.89	81.13	81.20	81.49	
05/19/85	22:30:11	1420.25	410.29	1182.85	81.13	81.20	81.48	
05/19/85	22:40:07	1420.25	410.98	1182.83	81.14	81.17	81.49	
05/19/85	22:50:12	1420.53	411.64	1182.74	81.14	81.16	81.49	
05/19/85	22:59:36	1420.41	412.31	1182.72	81.14	81.24	81.48	
05/19/85	23:00:03	1420.78	412.30	1182.74	81.14	81.21	81.48	
05/20/85	00:00:06	1422.40	416.16	1182.44	81.15	81.13	81.49	
05/20/85	01:00:02	1423.87	419.79	1182.15	81.17	81.12	81.48	
05/20/85	02:00:02	1425.49	423.17	1181.87	81.18	81.12	81.48	
05/20/85	03:00:02	1426.99	426.42	1181.60	81.20	81.13	81.48	
05/20/85	04:00:05	1428.61	429.52	1181.34	81.21	81.10	81.46	
05/20/85	05:00:06	1430.03	432.45	1181.05	81.22	81.08	81.47	
05/20/85	06:00:08	1431.46	435.34	1180.81	81.24	81.08	81.47	
05/20/85	07:00:01	1433.10	438.05	1180.52	81.25	81.04	81.46	
05/20/85	08:00:04	1434.50	440.64	1180.30	81.27	81.04	81.46	
05/20/85	09:00:09	1436.18	443.15	1180.03	81.27	81.06	81.46	
05/20/85	10:00:09	1437.42	445.61	1179.79	81.29	81.06	81.46	End FBU

TABLE A3-11

TABULATED PRESSURE DATA FOR PULSE TESTING OF THE SALADO
FORMATION, 1040 TO 3095 FEET BELOW LAND SURFACE, MAY 21
TO 22, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
05/20/85	22:23:58	657.66	648.39	558.01	76.61	76.58	76.55	
05/20/85	22:24:11	641.47	644.46	558.07	76.63	76.56	76.56	
05/20/85	22:24:21	643.62	644.08	558.09	76.62	76.57	76.56	
05/20/85	22:24:33	648.07	646.59	558.03	76.64	76.58	76.56	
05/20/85	22:24:43	646.97	645.99	558.07	76.64	76.57	76.56	
05/20/85	22:24:55	645.15	644.01	558.07	76.65	76.58	76.56	
05/20/85	22:25:05	644.74	643.77	558.09	76.65	76.57	76.57	
05/20/85	22:25:17	644.47	643.49	558.09	76.67	76.57	76.57	
05/20/85	22:25:27	643.99	642.93	558.05	76.65	76.57	76.57	
05/20/85	22:25:39	643.37	642.31	558.05	76.67	76.58	76.58	
05/20/85	22:25:49	642.85	641.86	558.09	76.66	76.59	76.58	
05/20/85	22:26:01	642.25	641.25	558.05	76.68	76.57	76.57	
05/20/85	22:26:11	641.84	640.78	558.11	76.67	76.57	76.58	
05/20/85	22:26:23	641.30	640.20	558.01	76.67	76.57	76.59	
05/20/85	22:26:34	640.76	639.74	558.07	76.69	76.56	76.59	
05/20/85	22:26:46	640.21	639.25	558.05	76.71	76.56	76.59	
05/20/85	22:26:59	639.65	638.60	558.08	76.72	76.57	76.60	
05/20/85	22:27:10	639.07	638.06	558.04	76.71	76.58	76.60	
05/20/85	22:27:23	638.49	637.48	558.03	76.72	76.58	76.60	
05/20/85	22:27:34	638.02	636.98	558.06	76.73	76.59	76.60	
05/20/85	22:27:48	637.35	636.35	558.05	76.75	76.58	76.60	
05/20/85	22:27:59	636.90	635.82	558.05	76.74	76.59	76.59	
05/20/85	22:28:13	636.32	635.23	558.07	76.72	76.59	76.59	
05/20/85	22:28:24	635.84	634.78	558.05	76.74	76.62	76.59	
05/20/85	22:28:37	635.26	634.22	558.05	76.75	76.59	76.58	
05/20/85	22:28:48	634.77	633.68	558.05	76.74	76.60	76.58	
05/20/85	22:29:14	633.65	632.63	558.03	76.76	76.60	76.57	
05/20/85	22:29:26	633.22	632.15	558.03	76.76	76.60	76.57	
05/20/85	22:29:39	632.65	631.62	557.99	76.74	76.60	76.57	
05/20/85	22:29:50	632.20	631.16	558.03	76.75	76.61	76.57	
05/20/85	22:30:04	632.03	631.46	557.93	76.76	76.60	76.59	
05/20/85	22:30:17	635.14	634.11	558.07	76.76	76.60	76.59	
05/20/85	22:30:28	634.73	633.66	558.15	76.75	76.61	76.58	
05/20/85	22:30:42	634.25	633.19	558.11	76.76	76.61	76.58	
05/20/85	22:30:53	633.77	632.74	558.13	76.76	76.61	76.57	
05/20/85	22:31:06	633.23	632.18	558.09	76.75	76.60	76.57	
05/20/85	22:31:17	632.76	631.75	558.11	76.76	76.60	76.57	
05/20/85	22:31:31	632.28	631.25	558.09	76.75	76.61	76.56	
05/20/85	22:31:42	631.79	630.76	558.09	76.75	76.61	76.57	
05/20/85	22:31:55	631.25	630.25	558.09	76.74	76.60	76.57	
05/20/85	22:32:06	630.87	629.82	558.09	76.74	76.60	76.57	
05/20/85	22:32:20	630.29	629.28	558.09	76.74	76.60	76.57	
05/20/85	22:32:31	629.90	628.85	558.05	76.73	76.61	76.56	
05/20/85	22:32:44	629.44	628.34	558.09	76.73	76.61	76.57	

TABLE A3-11 (continued)

TABULATED PRESSURE DATA FOR PULSE TESTING OF THE SALADO
FORMATION, 1040 TO 3095 FEET BELOW LAND SURFACE, MAY 21
TO 22, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
05/20/85	22:32:55	628.99	627.89	558.09	76.72	76.61	76.56	
05/20/85	22:33:09	628.49	627.39	558.09	76.72	76.62	76.57	
05/20/85	22:33:20	628.04	626.94	558.09	76.72	76.60	76.57	
05/20/85	22:33:34	627.56	626.45	558.07	76.71	76.61	76.56	
05/20/85	22:33:47	627.02	625.95	558.11	76.71	76.61	76.57	
05/20/85	22:33:58	626.61	625.55	558.07	76.70	76.61	76.58	
05/20/85	22:34:12	626.11	625.09	558.11	76.70	76.61	76.56	
05/20/85	22:34:23	625.69	624.63	558.19	76.69	76.61	76.57	
05/20/85	22:34:36	625.18	624.13	558.13	76.69	76.60	76.57	
05/20/85	22:34:47	624.78	623.75	558.15	76.69	76.59	76.57	
05/20/85	22:35:01	624.31	623.27	558.13	76.68	76.59	76.56	
05/20/85	22:35:12	623.93	622.87	558.13	76.68	76.59	76.58	
05/20/85	22:35:25	623.40	622.35	558.11	76.67	76.60	76.58	
05/20/85	22:35:36	623.00	621.95	558.17	76.67	76.60	76.58	
05/20/85	22:35:50	622.54	621.48	558.13	76.67	76.61	76.58	
05/20/85	22:36:01	622.17	621.11	558.13	76.66	76.60	76.58	
05/20/85	22:36:14	621.67	620.62	558.13	76.66	76.58	76.58	
05/20/85	22:36:25	621.26	620.21	558.15	76.66	76.60	76.58	
05/20/85	22:36:39	620.83	619.70	558.07	76.65	76.59	76.59	
05/20/85	22:36:52	620.39	619.29	558.11	76.65	76.58	76.58	
05/20/85	22:37:03	619.98	618.87	558.13	76.65	76.59	76.59	
05/20/85	22:37:17	619.46	618.41	558.07	76.66	76.59	76.58	
05/20/85	22:37:28	619.10	618.06	558.11	76.65	76.59	76.59	
05/20/85	22:37:41	618.63	617.58	558.11	76.64	76.59	76.59	
05/20/85	22:38:27	617.10	615.99	558.07	76.65	76.59	76.58	
05/20/85	22:39:00	615.96	614.86	558.09	76.65	76.60	76.58	
05/20/85	22:40:02	613.88	612.86	558.10	76.65	76.62	76.60	
05/20/85	22:41:06	611.81	610.75	558.07	76.66	76.65	76.59	
05/20/85	22:42:08	609.80	608.74	558.09	76.68	76.65	76.59	
05/20/85	22:43:01	608.10	607.01	558.07	76.68	76.65	76.58	
05/20/85	22:44:03	606.17	605.07	558.05	76.71	76.64	76.59	
05/20/85	22:45:07	604.12	603.11	558.07	76.70	76.63	76.59	
05/20/85	22:46:09	602.25	601.17	558.09	76.72	76.62	76.59	
05/20/85	22:47:03	600.62	599.51	558.09	76.71	76.62	76.58	
05/20/85	22:48:05	598.81	597.70	558.05	76.70	76.62	76.59	
05/20/85	22:49:09	596.90	595.83	558.05	76.68	76.62	76.59	
05/20/85	22:50:02	595.28	594.25	558.11	76.67	76.62	76.59	
05/20/85	22:51:04	593.58	592.49	558.13	76.65	76.62	76.59	
05/20/85	22:52:08	591.71	590.65	558.07	76.65	76.62	76.59	
05/20/85	22:53:09	589.97	588.91	558.01	76.67	76.65	76.60	
05/20/85	22:54:03	588.54	587.43	558.08	76.71	76.63	76.60	
05/20/85	22:55:05	586.77	585.68	558.07	76.71	76.62	76.58	
05/20/85	22:56:09	585.01	583.99	558.07	76.72	76.63	76.59	
05/20/85	22:57:00	583.62	582.55	558.07	76.74	76.62	76.58	

TABLE A3-11 (continued)

TABULATED PRESSURE DATA FOR PULSE TESTING OF THE SALADO
FORMATION, 1040 TO 3095 FEET BELOW LAND SURFACE, MAY 21
TO 22, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
05/20/85	22:58:04	581.98	580.84	558.07	76.75	76.61	76.58	
05/20/85	22:59:06	580.32	579.19	558.13	76.75	76.62	76.58	
05/20/85	23:00:09	578.63	577.57	558.07	76.74	76.63	76.59	
05/20/85	23:01:01	577.33	576.21	558.11	76.73	76.63	76.59	
05/20/85	23:02:05	575.62	574.58	558.03	76.72	76.62	76.59	
05/20/85	23:03:06	574.06	572.98	558.13	76.70	76.62	76.59	
05/20/85	23:04:00	572.69	571.65	558.09	76.69	76.63	76.58	
05/20/85	23:05:04	571.07	570.02	558.13	76.68	76.61	76.58	
05/20/85	23:06:06	569.63	568.55	558.09	76.67	76.60	76.59	
05/20/85	23:07:09	568.05	566.93	558.07	76.66	76.61	76.58	
05/20/85	23:08:01	566.74	565.71	558.07	76.66	76.60	76.57	
05/20/85	23:09:05	565.20	564.15	558.09	76.64	76.60	76.57	
05/20/85	23:10:06	563.79	562.70	558.09	76.64	76.58	76.57	
05/20/85	23:11:00	562.52	561.43	558.07	76.64	76.58	76.58	
05/20/85	23:12:41	560.09	559.09	558.01	76.60	76.59	76.59	
05/20/85	23:12:54	559.86	558.75	558.05	76.61	76.59	76.57	
05/20/85	23:13:05	559.59	558.54	558.03	76.62	76.59	76.57	
05/20/85	23:13:18	559.30	558.22	558.05	76.64	76.58	76.57	
05/20/85	23:13:29	559.05	557.96	558.07	76.62	76.58	76.57	
05/20/85	23:13:43	558.74	557.66	558.07	76.62	76.59	76.57	
05/20/85	23:13:54	558.47	557.39	558.09	76.63	76.60	76.58	
05/20/85	23:14:07	558.17	557.09	558.07	76.63	76.57	76.57	
05/20/85	23:14:18	557.91	556.82	558.03	76.63	76.58	76.56	
05/20/85	23:14:31	557.68	556.57	558.09	76.64	76.57	76.57	
05/20/85	23:14:44	557.39	556.22	558.03	76.63	76.59	76.57	
05/20/85	23:14:54	557.11	556.01	558.07	76.63	76.58	76.57	
05/20/85	23:15:07	556.91	555.76	558.05	76.62	76.58	76.58	
05/20/85	23:15:17	556.62	555.53	558.11	76.63	76.57	76.57	
05/20/85	23:15:30	556.18	555.19	558.15	76.62	76.57	76.57	
05/20/85	23:15:40	554.26	504.27	557.93	76.86	76.61	76.56	
05/20/85	23:15:53	279.45	276.56	558.03	76.70	76.66	76.58	
05/20/85	23:16:03	271.60	272.64	558.01	76.74	76.62	76.57	
05/20/85	23:16:16	272.17	268.71	558.01	76.68	76.65	76.57	Shut-in
05/20/85	23:16:26	275.58	273.90	558.13	76.67	76.70	76.58	
05/20/85	23:16:39	278.14	276.66	558.11	76.66	76.73	76.57	
05/20/85	23:16:49	280.15	278.78	558.11	76.67	76.74	76.57	
05/20/85	23:17:02	282.37	280.98	558.09	76.65	76.75	76.58	
05/20/85	23:17:12	284.11	282.62	558.11	76.65	76.76	76.57	
05/20/85	23:17:36	287.45	286.02	558.09	76.63	76.75	76.57	
05/20/85	23:17:49	289.13	287.65	558.09	76.63	76.72	76.57	
05/20/85	23:17:59	290.39	288.97	558.09	76.61	76.71	76.56	
05/20/85	23:18:12	292.02	290.47	558.11	76.59	76.68	76.55	
05/20/85	23:18:22	293.16	291.65	558.11	76.59	76.67	76.55	
05/20/85	23:18:35	294.67	292.98	558.09	76.58	76.66	76.55	

TABLE A3-11 (continued)

TABULATED PRESSURE DATA FOR PULSE TESTING OF THE SALADO
FORMATION, 1040 TO 3095 FEET BELOW LAND SURFACE, MAY 21
TO 22, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
05/20/85	23:18:45	295.51	294.11	558.09	76.57	76.67	76.55	
05/20/85	23:18:58	296.76	295.40	558.05	76.59	76.63	76.55	
05/20/85	23:19:08	297.82	296.37	558.09	76.58	76.64	76.55	
05/20/85	23:19:21	299.22	297.57	558.11	76.59	76.63	76.53	
05/20/85	23:19:52	301.94	300.39	558.10	76.60	76.64	76.53	
05/20/85	23:20:05	303.02	301.50	558.08	76.60	76.63	76.52	
05/20/85	23:21:02	307.63	306.16	558.12	76.63	76.63	76.50	
05/20/85	23:22:01	311.93	310.53	558.08	76.64	76.58	76.48	
05/20/85	23:23:08	316.38	314.95	558.10	76.61	76.54	76.47	
05/20/85	23:24:08	319.95	318.46	558.09	76.58	76.53	76.46	
05/20/85	23:25:05	323.06	321.59	558.08	76.58	76.52	76.47	
05/20/85	23:26:05	326.01	324.61	558.08	76.56	76.51	76.47	
05/20/85	23:27:05	328.73	327.28	558.04	76.57	76.52	76.47	
05/20/85	23:28:02	331.12	329.63	558.08	76.55	76.51	76.49	
05/20/85	23:29:02	333.36	331.88	558.10	76.58	76.52	76.51	
05/20/85	23:30:09	335.64	334.14	558.08	76.56	76.49	76.52	
05/20/85	23:31:08	337.53	336.04	558.07	76.53	76.49	76.54	
05/20/85	23:32:06	339.18	337.70	558.03	76.55	76.49	76.56	
05/20/85	23:33:06	340.68	339.28	558.01	76.56	76.48	76.56	
05/20/85	23:34:03	342.11	340.69	558.07	76.57	76.50	76.57	
05/20/85	23:35:03	343.44	341.96	558.11	76.59	76.49	76.56	
05/20/85	23:36:00	344.69	343.20	558.05	76.60	76.49	76.57	
05/20/85	23:37:00	345.79	344.32	558.07	76.61	76.51	76.56	
05/20/85	23:38:07	346.92	345.47	558.09	76.62	76.50	76.57	
05/20/85	23:39:06	347.87	346.42	558.07	76.60	76.51	76.57	
05/20/85	23:40:04	348.74	347.31	558.11	76.61	76.51	76.57	
05/20/85	23:41:04	349.54	348.12	558.07	76.62	76.51	76.57	
05/20/85	23:42:03	350.32	348.88	558.03	76.61	76.53	76.58	
05/20/85	23:43:01	350.99	349.57	558.11	76.58	76.53	76.57	
05/20/85	23:43:34	351.33	349.96	558.05	76.60	76.53	76.58	
05/20/85	23:50:01	354.89	353.43	558.13	76.57	76.56	76.59	
05/21/85	00:00:07	358.26	356.74	558.07	76.55	76.58	76.57	
05/21/85	00:04:53	359.23	357.80	558.05	76.51	76.60	76.57	
05/21/85	00:10:06	360.17	358.65	558.05	76.51	76.61	76.57	
05/21/85	00:20:00	361.23	359.69	558.05	76.54	76.61	76.58	
05/21/85	00:30:07	361.69	360.19	558.07	76.51	76.61	76.59	
05/21/85	00:40:02	361.88	360.35	558.05	76.52	76.59	76.58	
05/21/85	00:50:08	361.65	360.14	558.03	76.53	76.61	76.58	
05/21/85	01:00:03	361.23	359.62	558.05	76.51	76.61	76.58	
05/21/85	01:10:01	360.58	359.09	558.07	76.52	76.61	76.58	
05/21/85	01:20:06	359.82	358.26	558.09	76.52	76.59	76.59	
05/21/85	01:30:03	358.93	357.43	558.03	76.52	76.59	76.58	
05/21/85	01:40:08	358.00	356.49	558.03	76.53	76.58	76.59	
05/21/85	01:50:06	357.08	355.50	558.05	76.56	76.57	76.58	

TABLE A3-11 (continued)

TABULATED PRESSURE DATA FOR PULSE TESTING OF THE SALADO
FORMATION, 1040 TO 3095 FEET BELOW LAND SURFACE, MAY 21
TO 22, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
05/21/85	02:00:05	356.07	354.56	558.07	76.55	76.57	76.59	
05/21/85	02:10:01	355.14	353.59	558.05	76.56	76.56	76.59	
05/21/85	02:20:08	354.15	352.63	558.05	76.59	76.55	76.59	
05/21/85	02:30:04	353.22	351.66	558.03	76.57	76.55	76.58	
05/21/85	02:40:02	352.27	350.76	558.05	76.56	76.54	76.60	
05/21/85	02:50:07	351.35	349.82	558.05	76.58	76.54	76.59	
05/21/85	03:00:06	350.40	348.86	558.01	76.61	76.53	76.58	
05/21/85	03:10:02	349.45	347.98	558.07	76.61	76.52	76.59	
05/21/85	03:20:00	348.61	347.04	558.03	76.62	76.52	76.59	
05/21/85	03:30:06	347.66	346.17	558.02	76.62	76.51	76.61	
05/21/85	03:40:05	346.78	345.27	558.05	76.62	76.51	76.60	
05/21/85	03:50:01	345.91	344.40	557.99	76.61	76.51	76.59	
05/21/85	04:00:00	345.05	343.54	558.05	76.60	76.51	76.60	
05/21/85	04:10:06	344.20	342.67	558.03	76.60	76.50	76.59	
05/21/85	04:20:05	343.38	341.80	558.03	76.58	76.51	76.58	
05/21/85	04:30:04	342.53	341.02	558.01	76.58	76.51	76.58	
05/21/85	04:40:00	341.67	340.21	558.03	76.57	76.52	76.58	
05/21/85	04:50:09	340.87	339.38	558.03	76.56	76.50	76.57	
05/21/85	05:00:05	340.11	338.56	557.99	76.55	76.52	76.56	
05/21/85	05:10:04	339.29	337.80	558.05	76.55	76.51	76.56	
05/21/85	05:20:01	338.53	336.96	558.03	76.54	76.51	76.56	
05/21/85	05:30:08	337.77	336.18	558.07	76.53	76.52	76.55	
05/21/85	05:40:04	336.96	335.49	557.99	76.52	76.52	76.54	
05/21/85	05:50:02	336.27	334.71	558.01	76.52	76.51	76.54	
05/21/85	06:00:08	335.59	334.07	558.02	76.55	76.52	76.53	
05/21/85	06:10:06	334.92	333.40	558.04	76.50	76.52	76.52	
05/21/85	06:20:02	334.16	332.66	558.00	76.53	76.53	76.52	
05/21/85	06:26:05	333.86	332.25	558.06	76.51	76.56	76.52	
05/21/85	06:30:00	333.50	331.98	558.04	76.55	76.54	76.51	
05/21/85	06:40:08	332.87	331.38	558.04	76.55	76.52	76.52	
05/21/85	06:50:02	332.22	330.71	558.04	76.54	76.53	76.51	
05/21/85	07:00:07	331.61	330.09	558.04	76.55	76.54	76.50	
05/21/85	07:10:02	331.01	329.46	558.08	76.55	76.53	76.50	
05/21/85	07:20:06	330.36	328.80	558.02	76.54	76.54	76.50	
05/21/85	07:30:01	329.77	328.27	558.02	76.54	76.52	76.50	
05/21/85	07:40:03	329.18	327.65	558.04	76.54	76.53	76.49	
05/21/85	07:50:09	328.59	327.10	558.04	76.54	76.53	76.49	
05/21/85	08:00:01	328.04	326.49	558.02	76.55	76.53	76.48	
05/21/85	08:10:06	327.42	325.90	558.06	76.54	76.52	76.49	
05/21/85	08:20:09	326.83	325.36	558.02	76.54	76.52	76.48	
05/21/85	08:30:03	326.37	324.84	558.02	76.55	76.52	76.48	
05/21/85	08:40:05	325.76	324.24	558.04	76.55	76.52	76.48	
05/21/85	08:50:00	325.16	323.69	558.02	76.54	76.52	76.48	
05/21/85	09:00:02	324.68	323.15	558.04	76.55	76.53	76.47	

TABLE A3-11 (continued)

TABULATED PRESSURE DATA FOR PULSE TESTING OF THE SALADO FORMATION, 1040 TO 3095 FEET BELOW LAND SURFACE, MAY 21 TO 22, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
05/21/85	09:10:06	324.15	322.67	558.09	76.55	76.52	76.46	
05/21/85	09:20:08	323.62	322.05	558.05	76.54	76.53	76.47	
05/21/85	09:30:02	323.07	321.50	558.02	76.55	76.53	76.48	
05/21/85	09:40:06	322.63	321.10	558.03	76.56	76.53	76.47	
05/21/85	09:50:08	322.08	320.55	558.03	76.56	76.52	76.45	
05/21/85	10:00:01	321.53	320.02	558.03	76.56	76.52	76.47	
05/21/85	10:10:03	321.01	319.47	558.01	76.56	76.53	76.46	
05/21/85	10:20:06	320.48	318.97	557.99	76.57	76.53	76.47	
05/21/85	10:30:07	319.95	318.50	558.03	76.56	76.53	76.46	
05/21/85	10:40:01	319.49	317.93	558.01	76.57	76.52	76.46	
05/21/85	10:50:02	318.94	317.44	558.05	76.57	76.52	76.46	
05/21/85	11:00:06	318.51	317.03	557.99	76.56	76.53	76.47	
05/21/85	11:10:08	318.13	316.63	557.99	76.57	76.53	76.45	
05/21/85	11:20:02	317.65	316.15	558.05	76.57	76.52	76.46	
05/21/85	11:30:03	317.20	315.67	558.07	76.57	76.52	76.46	
05/21/85	11:40:07	316.78	315.21	558.07	76.57	76.53	76.46	
05/21/85	11:50:09	316.25	314.72	558.05	76.56	76.52	76.45	
05/21/85	12:00:03	315.81	314.26	558.05	76.57	76.52	76.45	
05/21/85	12:10:04	315.34	313.85	558.05	76.57	76.54	76.46	
05/21/85	12:20:07	314.92	313.38	558.05	76.57	76.53	76.45	
05/21/85	12:30:01	314.46	312.97	558.01	76.58	76.52	76.45	
05/21/85	12:40:03	314.04	312.53	557.95	76.57	76.53	76.45	
05/21/85	12:50:07	313.65	312.14	558.01	76.58	76.53	76.44	
05/21/85	13:00:08	313.23	311.73	557.99	76.58	76.53	76.45	
05/21/85	13:10:01	312.91	311.33	557.99	76.57	76.53	76.45	
05/21/85	13:20:02	312.45	310.94	558.01	76.59	76.54	76.45	
05/21/85	13:30:06	312.05	310.53	557.99	76.58	76.53	76.44	
05/21/85	13:40:07	311.71	310.18	557.95	76.59	76.53	76.44	
05/21/85	13:50:00	311.39	309.79	557.99	76.58	76.54	76.44	
05/21/85	14:00:01	311.04	309.49	557.95	76.59	76.54	76.45	
05/21/85	14:10:05	310.65	309.12	557.97	76.59	76.54	76.44	
05/21/85	14:12:17	310.49	309.03	557.99	76.59	76.53	76.44	
05/21/85	14:13:01	310.55	308.98	557.97	76.59	76.53	76.43	
05/21/85	14:14:08	310.49	308.98	558.01	76.59	76.54	76.45	
05/21/85	14:15:06	310.46	308.92	557.97	76.59	76.54	76.44	
05/21/85	14:15:50	310.47	308.91	557.97	76.62	76.53	76.44	
05/21/85	14:16:01	310.38	308.87	557.95	76.60	76.53	76.43	
05/21/85	14:16:14	310.51	308.84	557.97	76.59	76.53	76.43	
05/21/85	14:16:24	310.36	308.87	557.97	76.59	76.53	76.44	
05/21/85	14:16:37	310.27	308.87	557.99	76.59	76.53	76.44	
05/21/85	14:16:47	310.38	308.87	558.03	76.59	76.53	76.43	
05/21/85	14:17:00	310.27	308.82	558.01	76.59	76.53	76.44	
05/21/85	14:17:11	207.68	187.89	558.04	76.39	76.51	76.49	Opened and Closed
05/21/85	14:17:24	184.34	181.74	557.92	76.41	76.50	76.49	Shut-in Tool

TABLE A3-11 (continued)

TABULATED PRESSURE DATA FOR PULSE TESTING OF THE SALADO
FORMATION, 1040 TO 3095 FEET BELOW LAND SURFACE, MAY 21
TO 22, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
05/21/85	14:17:35	180.54	179.36	557.94	76.44	76.50	76.49	
05/21/85	14:17:48	181.61	179.78	557.94	76.44	76.50	76.49	
05/21/85	14:17:58	182.66	180.88	557.88	76.43	76.50	76.49	
05/21/85	14:18:11	182.23	180.90	557.96	76.45	76.50	76.49	
05/21/85	14:18:21	184.32	182.53	558.04	76.46	76.50	76.49	PULSE 1
05/21/85	14:18:34	185.55	183.84	558.00	76.47	76.51	76.49	
05/21/85	14:18:45	186.60	184.80	558.02	76.48	76.50	76.49	
05/21/85	14:18:58	187.52	185.94	557.98	76.49	76.51	76.49	
05/21/85	14:19:10	188.63	186.94	557.98	76.50	76.49	76.49	
05/21/85	14:19:20	189.44	187.73	557.98	76.50	76.50	76.50	
05/21/85	14:19:33	190.52	188.62	557.98	76.51	76.48	76.50	
05/21/85	14:19:44	191.01	189.31	557.96	76.52	76.48	76.49	
05/21/85	14:20:07	192.48	190.80	558.00	76.53	76.47	76.49	
05/21/85	14:20:18	193.12	191.46	557.94	76.54	76.48	76.50	
05/21/85	14:20:31	193.91	192.16	558.00	76.55	76.48	76.49	
05/21/85	14:20:41	194.44	192.72	558.00	76.55	76.49	76.49	
05/21/85	14:20:54	195.23	193.41	558.00	76.56	76.50	76.49	
05/21/85	14:21:05	195.59	193.97	557.96	76.56	76.51	76.50	
05/21/85	14:21:18	196.24	194.62	557.94	76.57	76.52	76.49	
05/21/85	14:21:29	196.81	195.11	557.98	76.57	76.52	76.49	
05/21/85	14:21:42	197.45	195.74	557.98	76.58	76.53	76.50	
05/21/85	14:21:52	197.83	196.18	558.00	76.58	76.53	76.49	
05/21/85	14:22:05	198.36	196.74	557.98	76.59	76.53	76.49	
05/21/85	14:22:17	198.86	197.25	557.96	76.59	76.51	76.48	
05/21/85	14:22:28	199.37	197.70	557.94	76.60	76.50	76.49	
05/21/85	14:22:41	199.73	198.19	557.98	76.60	76.53	76.48	
05/21/85	14:22:51	200.32	198.61	558.02	76.61	76.53	76.49	
05/21/85	14:23:04	200.67	199.11	558.00	76.61	76.51	76.48	
05/21/85	14:23:14	201.14	199.49	557.98	76.61	76.52	76.48	
05/21/85	14:23:27	201.82	199.89	558.00	76.62	76.50	76.49	
05/21/85	14:23:38	201.92	200.33	557.98	76.62	76.50	76.49	
05/21/85	14:23:50	202.39	200.79	557.98	76.63	76.51	76.48	
05/21/85	14:24:01	202.71	201.09	558.00	76.63	76.50	76.49	
05/21/85	14:24:14	203.07	201.49	557.96	76.63	76.49	76.48	
05/21/85	14:24:24	203.50	201.82	557.96	76.64	76.50	76.49	
05/21/85	14:24:37	203.99	202.25	557.98	76.64	76.50	76.48	
05/21/85	14:24:47	204.25	202.58	557.94	76.64	76.50	76.48	
05/21/85	14:25:00	204.44	202.93	557.98	76.65	76.51	76.49	
05/21/85	14:25:10	204.86	203.26	557.96	76.65	76.49	76.48	
05/21/85	14:25:23	205.24	203.63	557.98	76.65	76.50	76.48	
05/21/85	14:25:36	205.59	203.93	557.98	76.66	76.48	76.48	
05/21/85	14:25:46	205.90	204.25	557.98	76.66	76.49	76.49	
05/21/85	14:25:59	206.37	204.53	557.98	76.66	76.50	76.48	
05/21/85	14:26:10	206.42	204.89	557.94	76.67	76.50	76.48	

TABLE A3-11 (continued)

TABULATED PRESSURE DATA FOR PULSE TESTING OF THE SALADO
FORMATION, 1040 TO 3095 FEET BELOW LAND SURFACE, MAY 21
TO 22, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
05/21/85	14:26:23	207.03	205.21	558.00	76.67	76.48	76.48	
05/21/85	14:26:33	207.14	205.44	558.00	76.67	76.49	76.48	
05/21/85	14:26:46	207.37	205.74	557.98	76.67	76.50	76.48	
05/21/85	14:26:56	207.63	206.03	557.94	76.68	76.50	76.48	
05/21/85	14:27:09	208.23	206.32	557.94	76.68	76.48	76.48	
05/21/85	14:27:19	208.21	206.56	557.96	76.68	76.48	76.49	
05/21/85	14:27:32	208.61	206.86	557.98	76.68	76.49	76.48	
05/21/85	14:27:43	208.78	207.07	558.00	76.69	76.48	76.48	
05/21/85	14:27:55	208.95	207.39	557.99	76.69	76.47	76.47	
05/21/85	14:28:06	209.36	207.65	558.03	76.69	76.48	76.47	
05/21/85	14:28:34	209.82	208.23	557.96	76.70	76.48	76.49	
05/21/85	14:29:06	210.53	208.86	557.97	76.70	76.48	76.48	
05/21/85	14:30:04	211.63	210.00	558.00	76.71	76.47	76.48	
05/21/85	14:31:04	212.66	211.05	557.90	76.72	76.48	76.48	
05/21/85	14:32:02	213.72	212.02	557.94	76.73	76.47	76.48	
05/21/85	14:33:02	214.61	212.95	557.98	76.74	76.47	76.49	
05/21/85	14:34:00	215.48	213.84	557.97	76.75	76.49	76.47	
05/21/85	14:35:01	216.29	214.72	557.95	76.76	76.48	76.47	
05/21/85	14:36:00	217.19	215.53	557.98	76.77	76.49	76.48	
05/21/85	14:37:01	218.02	216.32	557.93	76.77	76.49	76.48	
05/21/85	14:38:09	218.80	217.15	558.00	76.78	76.48	76.48	
05/21/85	14:39:09	219.44	217.83	557.96	76.79	76.49	76.48	
05/21/85	14:40:07	220.14	218.55	557.98	76.80	76.49	76.48	
05/21/85	14:41:07	220.76	219.13	557.98	76.80	76.49	76.48	
05/21/85	14:42:05	221.42	219.78	557.94	76.80	76.48	76.48	
05/21/85	14:43:06	221.97	220.41	557.98	76.81	76.49	76.48	
05/21/85	14:44:04	222.61	220.94	557.96	76.82	76.49	76.48	
05/21/85	14:45:04	223.12	221.52	557.92	76.82	76.49	76.48	
05/21/85	14:46:04	223.68	222.08	557.98	76.83	76.49	76.49	
05/21/85	14:47:02	224.23	222.59	557.93	76.83	76.48	76.48	
05/21/85	14:48:02	224.70	223.11	557.96	76.84	76.49	76.48	
05/21/85	14:49:01	225.29	223.59	557.94	76.84	76.50	76.49	
05/21/85	14:50:01	225.76	224.11	557.96	76.85	76.50	76.49	
05/21/85	14:51:08	226.29	224.66	557.94	76.84	76.50	76.48	
05/21/85	14:51:49	226.53	224.97	557.95	76.83	76.51	76.47	
05/21/85	15:00:04	230.05	228.43	557.91	76.83	76.52	76.48	
05/21/85	15:10:08	233.56	231.95	557.96	76.79	76.52	76.50	
05/21/85	15:20:08	236.44	234.85	557.94	76.77	76.52	76.48	
05/21/85	15:30:01	238.87	237.26	557.97	76.79	76.51	76.47	
05/21/85	15:40:01	240.99	239.47	557.93	76.79	76.53	76.48	
05/21/85	15:50:04	242.94	241.32	557.91	76.75	76.55	76.47	
05/21/85	16:00:03	244.53	243.04	557.93	76.70	76.54	76.47	
05/21/85	16:10:06	246.12	244.62	557.93	76.70	76.56	76.45	
05/21/85	16:20:08	247.52	246.05	557.91	76.67	76.55	76.46	

TABLE A3-11 (continued)

TABULATED PRESSURE DATA FOR PULSE TESTING OF THE SALADO
FORMATION, 1040 TO 3095 FEET BELOW LAND SURFACE, MAY 21
TO 22, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
05/21/85	16:30:08	248.82	247.35	557.89	76.65	76.55	76.46	
05/21/85	16:40:00	250.00	248.54	557.93	76.67	76.55	76.46	
05/21/85	16:50:09	251.21	249.67	557.89	76.66	76.55	76.45	
05/21/85	17:00:01	252.15	250.64	557.97	76.66	76.55	76.45	
05/21/85	17:10:07	253.00	251.66	557.87	76.63	76.54	76.45	
05/21/85	17:20:07	254.01	252.52	557.93	76.61	76.55	76.45	
05/21/85	17:30:05	254.82	253.35	557.91	76.62	76.55	76.45	
05/21/85	17:40:04	255.62	254.16	557.89	76.63	76.54	76.44	
05/21/85	17:50:01	256.37	254.90	557.97	76.62	76.54	76.45	
05/21/85	18:00:00	257.17	255.65	557.91	76.60	76.53	76.45	
05/21/85	18:10:05	257.85	256.44	557.93	76.60	76.54	76.45	
05/21/85	18:20:04	258.53	257.04	557.89	76.62	76.53	76.45	
05/21/85	18:30:09	259.12	257.64	557.87	76.58	76.53	76.46	
05/21/85	18:40:07	259.71	258.27	557.87	76.57	76.53	76.45	
05/21/85	18:50:03	260.22	258.75	557.91	76.59	76.54	76.45	
05/21/85	19:00:02	260.71	259.26	557.87	76.57	76.54	76.46	
05/21/85	19:10:01	261.10	259.68	557.87	76.58	76.55	76.46	
05/21/85	19:20:07	261.60	260.12	557.93	76.59	76.55	76.45	
05/21/85	19:30:06	261.99	260.47	557.83	76.58	76.55	76.45	
05/21/85	19:40:03	262.32	260.90	557.85	76.56	76.56	76.45	
05/21/85	19:50:03	262.73	261.25	557.87	76.57	76.56	76.45	
05/21/85	20:00:01	263.07	261.63	557.87	76.55	76.57	76.46	
05/21/85	20:10:02	263.45	261.95	557.85	76.55	76.57	76.46	
05/21/85	20:20:00	263.68	262.29	557.89	76.56	76.57	76.46	
05/21/85	20:30:01	264.08	262.57	557.93	76.55	76.57	76.45	
05/21/85	20:40:00	264.27	262.81	557.87	76.56	76.58	76.46	
05/21/85	20:50:01	264.57	263.04	557.89	76.55	76.58	76.46	
05/21/85	21:00:08	264.78	263.31	557.85	76.55	76.58	76.45	
05/21/85	21:10:01	264.99	263.57	557.91	76.57	76.58	76.46	
05/21/85	21:20:09	265.33	263.78	557.91	76.56	76.59	76.45	
05/21/85	21:30:01	265.50	264.01	557.87	76.55	76.59	76.46	
05/21/85	21:40:01	265.74	264.24	557.87	76.55	76.59	76.45	
05/21/85	21:50:09	265.91	264.45	557.91	76.56	76.59	76.45	
05/21/85	22:00:00	266.07	264.63	557.85	76.55	76.60	76.47	
05/21/85	22:10:08	266.25	264.78	557.89	76.56	76.60	76.45	
05/21/85	22:20:00	266.44	264.92	557.87	76.54	76.60	76.45	
05/21/85	22:30:09	266.56	265.07	557.93	76.55	76.60	76.44	
05/21/85	22:40:01	266.71	265.22	557.91	76.54	76.60	76.45	
05/21/85	22:50:00	266.82	265.36	557.85	76.54	76.60	76.43	
05/21/85	23:00:02	266.97	265.49	557.91	76.54	76.60	76.43	
05/21/85	23:10:02	267.16	265.63	557.89	76.55	76.60	76.44	
05/21/85	23:28:07	267.39	265.93	557.90	76.52	76.60	76.41	
05/21/85	23:30:03	267.43	265.91	557.85	76.53	76.60	76.43	
05/21/85	23:40:06	267.51	266.09	557.89	76.53	76.61	76.43	

TABLE A3-11 (continued)

TABULATED PRESSURE DATA FOR PULSE TESTING OF THE SALADO
FORMATION, 1040 TO 3095 FEET BELOW LAND SURFACE, MAY 21
TO 22, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
05/21/85	23:41:51	267.60	266.05	557.87	76.53	76.61	76.44	
05/21/85	23:42:04	267.60	266.07	557.87	76.53	76.61	76.44	
05/21/85	23:43:02	267.52	266.07	557.89	76.53	76.61	76.44	
05/21/85	23:44:03	267.56	266.03	557.89	76.53	76.61	76.43	
05/21/85	23:45:01	267.58	266.14	557.87	76.54	76.61	76.44	
05/21/85	23:46:02	267.58	266.12	557.87	76.53	76.61	76.44	
05/21/85	23:47:00	267.58	266.17	557.87	76.53	76.61	76.44	
05/21/85	23:48:01	267.58	266.14	557.89	76.54	76.61	76.44	
05/21/85	23:49:09	267.62	266.16	557.87	76.54	76.61	76.44	
05/21/85	23:50:01	267.68	266.19	557.89	76.54	76.60	76.44	
05/21/85	23:51:08	267.64	266.17	557.89	76.54	76.61	76.44	
05/21/85	23:52:00	267.62	266.19	557.87	76.53	76.61	76.44	
05/21/85	23:53:07	267.73	266.17	557.91	76.53	76.61	76.45	
05/21/85	23:54:08	267.69	266.21	557.91	76.53	76.60	76.43	
05/21/85	23:55:00	267.62	266.21	557.89	76.53	76.60	76.44	
05/21/85	23:56:08	267.69	266.23	557.89	76.54	76.61	76.44	Filled Tubing
05/21/85	23:57:09	267.73	266.24	557.87	76.53	76.61	76.45	With Brine
05/21/85	23:58:07	267.79	266.37	557.87	76.54	76.61	76.43	
05/21/85	23:59:08	268.13	266.65	557.91	76.53	76.62	76.43	
05/22/85	00:00:06	268.19	266.68	557.93	76.52	76.61	76.44	
05/22/85	00:01:07	268.22	266.76	557.85	76.54	76.60	76.44	
05/22/85	00:02:05	268.28	266.84	557.89	76.54	76.61	76.43	
05/22/85	00:03:06	268.30	266.86	557.89	76.52	76.61	76.44	
05/22/85	00:04:04	268.43	266.91	557.87	76.53	76.61	76.44	
05/22/85	00:05:05	268.47	266.97	557.89	76.53	76.61	76.44	
05/22/85	00:06:03	268.57	266.98	557.87	76.53	76.62	76.44	
05/22/85	00:07:04	268.58	267.04	557.87	76.55	76.62	76.43	
05/22/85	00:08:03	268.58	267.09	557.93	76.53	76.62	76.43	
05/22/85	00:09:27	268.70	267.16	557.91	76.54	76.61	76.43	
05/22/85	00:09:40	268.68	267.21	557.85	76.54	76.61	76.43	
05/22/85	00:09:51	268.64	267.14	557.89	76.53	76.61	76.43	
05/22/85	00:10:04	268.62	267.16	557.97	76.53	76.62	76.43	
05/22/85	00:10:15	268.60	267.12	557.97	76.54	76.61	76.43	
05/22/85	00:10:28	268.62	267.18	557.89	76.54	76.61	76.43	
05/22/85	00:10:39	268.60	267.07	557.97	76.53	76.62	76.43	
05/22/85	00:10:52	268.49	267.10	557.87	76.53	76.44	76.46	
05/22/85	00:11:04	414.54	407.90	557.91	76.58	76.51	76.42	Opened and Close
05/22/85	00:11:16	408.16	406.25	557.86	76.56	76.53	76.42	Shut-in Tool
05/22/85	00:11:28	406.50	405.36	557.88	76.54	76.52	76.41	
05/22/85	00:11:40	406.73	405.31	557.86	76.54	76.52	76.41	
05/22/85	00:11:51	406.56	405.25	557.88	76.54	76.53	76.42	
05/22/85	00:12:04	406.62	405.29	557.86	76.54	76.53	76.41	
05/22/85	00:12:14	406.39	405.11	557.84	76.57	76.52	76.42	
05/22/85	00:12:27	406.96	405.86	557.97	76.55	76.53	76.42	

TABLE A3-11 (continued)

TABULATED PRESSURE DATA FOR PULSE TESTING OF THE SALADO
FORMATION, 1040 TO 3095 FEET BELOW LAND SURFACE, MAY 21
TO 22, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
05/22/85	00:12:37	406.62	405.29	557.96	76.56	76.53	76.41	PULSE 2
05/22/85	00:12:50	405.91	404.60	557.95	76.56	76.53	76.42	
05/22/85	00:13:03	405.43	404.01	557.90	76.59	76.55	76.42	
05/22/85	00:13:24	404.38	403.05	557.95	76.60	76.55	76.42	
05/22/85	00:13:37	403.96	402.50	557.97	76.60	76.54	76.43	
05/22/85	00:13:47	403.41	402.07	557.93	76.60	76.55	76.43	
05/22/85	00:14:00	402.89	401.63	557.95	76.62	76.55	76.42	
05/22/85	00:14:11	402.57	401.20	557.91	76.63	76.54	76.43	
05/22/85	00:14:23	402.15	400.83	557.91	76.62	76.54	76.43	
05/22/85	00:14:34	401.75	400.44	557.93	76.62	76.54	76.43	
05/22/85	00:14:47	401.31	400.00	557.91	76.64	76.54	76.42	
05/22/85	00:14:57	400.89	399.68	557.95	76.64	76.53	76.44	
05/22/85	00:15:10	400.49	399.20	557.89	76.63	76.54	76.42	
05/22/85	00:15:20	400.28	398.86	557.91	76.65	76.52	76.44	
05/22/85	00:15:33	399.78	398.52	557.87	76.65	76.53	76.43	
05/22/85	00:15:43	399.59	398.20	557.91	76.65	76.52	76.44	
05/22/85	00:15:56	399.25	397.81	557.89	76.65	76.52	76.44	
05/22/85	00:16:09	398.69	397.40	557.93	76.65	76.52	76.44	
05/22/85	00:16:19	398.52	397.14	557.89	76.65	76.52	76.43	
05/22/85	00:16:32	397.95	396.80	557.91	76.66	76.51	76.44	
05/22/85	00:16:42	397.85	396.48	557.91	76.65	76.51	76.44	
05/22/85	00:16:55	397.32	396.22	557.93	76.65	76.51	76.45	
05/22/85	00:17:06	397.22	395.88	557.95	76.67	76.50	76.44	
05/22/85	00:17:18	396.79	395.56	557.89	76.67	76.50	76.45	
05/22/85	00:17:29	396.69	395.28	557.91	76.68	76.50	76.44	
05/22/85	00:17:42	396.29	394.97	557.91	76.67	76.50	76.44	
05/22/85	00:17:52	396.12	394.73	557.89	76.66	76.49	76.45	
05/22/85	00:18:05	395.53	394.42	557.93	76.68	76.49	76.44	
05/22/85	00:18:15	395.56	394.18	557.89	76.68	76.49	76.44	
05/22/85	00:18:28	395.09	393.84	557.91	76.69	76.48	76.44	
05/22/85	00:18:38	394.90	393.59	557.93	76.67	76.48	76.45	
05/22/85	00:18:51	394.61	393.34	557.93	76.68	76.48	76.45	
05/22/85	00:19:01	394.36	393.09	557.95	76.68	76.48	76.45	
05/22/85	00:19:14	394.13	392.81	557.91	76.67	76.47	76.45	
05/22/85	00:19:27	393.96	392.49	557.91	76.68	76.47	76.45	
05/22/85	00:19:37	393.66	392.31	557.95	76.68	76.47	76.45	
05/22/85	00:19:50	393.37	392.01	557.95	76.68	76.47	76.46	
05/22/85	00:20:00	393.10	391.80	557.89	76.69	76.46	76.45	
05/22/85	00:20:13	392.78	391.52	557.91	76.67	76.46	76.45	
05/22/85	00:20:24	392.53	391.27	557.89	76.68	76.46	76.45	
05/22/85	00:20:37	392.17	390.98	557.93	76.68	76.46	76.45	
05/22/85	00:20:47	392.15	390.79	557.93	76.68	76.45	76.45	
05/22/85	00:21:00	391.83	390.52	557.93	76.68	76.46	76.44	
05/22/85	00:21:10	391.62	390.33	557.91	76.68	76.46	76.45	

TABLE A3-11 (continued)

TABULATED PRESSURE DATA FOR PULSE TESTING OF THE SALADO FORMATION, 1040 TO 3095 FEET BELOW LAND SURFACE, MAY 21 TO 22, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
05/22/85	00:21:23	391.27	390.04	557.93	76.69	76.45	76.45	
05/22/85	00:21:34	391.14	389.87	557.93	76.68	76.45	76.45	
05/22/85	00:21:46	390.72	389.58	557.87	76.67	76.45	76.46	
05/22/85	00:21:57	390.72	389.37	557.93	76.68	76.44	76.46	
05/22/85	00:22:10	390.59	389.17	557.93	76.67	76.45	76.45	
05/22/85	00:22:22	390.51	388.93	557.93	76.67	76.44	76.46	
05/22/85	00:22:33	390.03	388.70	557.93	76.68	76.44	76.45	
05/22/85	00:22:45	389.94	388.47	557.93	76.68	76.43	76.45	
05/22/85	00:22:56	389.58	388.31	557.87	76.67	76.44	76.45	
05/22/85	00:23:19	389.17	387.92	557.91	76.67	76.43	76.46	
05/22/85	00:23:51	388.60	387.28	557.91	76.67	76.43	76.45	
05/22/85	00:24:04	388.39	387.05	557.91	76.66	76.43	76.44	
05/22/85	00:25:02	387.36	386.09	557.93	76.66	76.42	76.46	
05/22/85	00:26:02	386.41	385.11	557.95	76.65	76.42	76.46	
05/22/85	00:27:01	385.44	384.14	557.93	76.64	76.42	76.45	
05/22/85	00:28:01	384.56	383.20	557.89	76.63	76.41	76.45	
05/22/85	00:29:08	383.53	382.15	557.91	76.62	76.41	76.46	
05/22/85	00:30:00	382.79	381.44	557.89	76.61	76.41	76.45	
05/22/85	00:31:08	381.88	380.52	557.91	76.61	76.40	76.45	
05/22/85	00:32:08	380.98	379.65	557.89	76.60	76.40	76.45	
05/22/85	00:33:06	380.24	378.91	557.89	76.59	76.39	76.45	
05/22/85	00:34:07	379.44	378.09	557.91	76.58	76.40	76.46	
05/22/85	00:35:08	378.64	377.31	557.95	76.58	76.41	76.45	
05/22/85	00:36:06	377.93	376.65	557.93	76.57	76.42	76.45	
05/22/85	00:37:07	377.27	375.89	557.87	76.56	76.42	76.45	
05/22/85	00:38:05	376.60	375.29	557.95	76.56	76.42	76.45	
05/22/85	00:39:06	375.91	374.54	557.91	76.55	76.41	76.45	
05/22/85	00:40:04	375.30	373.90	557.93	76.55	76.42	76.44	
05/22/85	00:41:05	374.62	373.28	557.91	76.54	76.42	76.45	
05/22/85	00:42:03	374.07	372.65	557.91	76.53	76.41	76.44	
05/22/85	00:43:04	373.32	372.06	557.93	76.53	76.42	76.44	
05/22/85	00:44:02	372.83	371.47	557.91	76.52	76.43	76.44	
05/22/85	00:45:03	372.16	370.87	557.89	76.52	76.42	76.44	
05/22/85	00:46:01	371.65	370.32	557.89	76.51	76.42	76.44	
05/22/85	00:47:02	371.12	369.79	557.89	76.50	76.42	76.44	
05/22/85	00:48:01	370.52	369.21	557.91	76.50	76.41	76.44	
05/22/85	00:49:01	369.99	368.69	557.93	76.49	76.42	76.43	
05/22/85	00:50:03	369.46	368.14	557.89	76.49	76.41	76.43	
05/22/85	00:51:01	368.98	367.61	557.91	76.49	76.42	76.44	
05/22/85	00:52:02	368.49	367.17	557.83	76.48	76.42	76.44	
05/22/85	00:53:00	368.03	366.67	557.85	76.47	76.41	76.44	
05/22/85	00:54:01	367.54	366.18	557.89	76.47	76.41	76.44	
05/22/85	00:55:08	366.95	365.65	557.93	76.47	76.40	76.43	
05/22/85	00:56:00	366.62	365.22	557.89	76.46	76.40	76.43	

TABLE A3-11 (continued)

TABULATED PRESSURE DATA FOR PULSE TESTING OF THE SALADO
FORMATION, 1040 TO 3095 FEET BELOW LAND SURFACE, MAY 21
TO 22, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
05/22/85	00:57:08	366.05	364.74	557.89	76.46	76.40	76.42	
05/22/85	00:58:09	365.59	364.28	557.89	76.45	76.41	76.43	
05/22/85	00:59:07	365.12	363.84	557.91	76.45	76.38	76.43	
05/22/85	00:59:42	364.97	363.57	557.87	76.45	76.38	76.42	
05/22/85	01:00:02	364.85	363.47	557.87	76.45	76.40	76.42	
05/22/85	01:10:05	360.95	359.58	557.91	76.42	76.43	76.43	
05/22/85	01:20:05	357.54	356.29	557.89	76.40	76.42	76.43	
05/22/85	01:30:08	354.71	353.31	557.89	76.39	76.46	76.44	
05/22/85	01:40:09	351.91	350.55	557.97	76.37	76.47	76.44	
05/22/85	01:50:03	349.38	348.00	557.91	76.39	76.47	76.46	
05/22/85	02:00:08	346.93	345.59	557.93	76.33	76.46	76.46	
05/22/85	02:10:00	344.77	343.51	557.93	76.26	76.46	76.46	
05/22/85	02:20:05	342.73	341.38	557.87	76.36	76.44	76.46	
05/22/85	02:30:07	340.78	339.42	557.89	76.47	76.43	76.47	
05/22/85	02:40:03	339.09	337.79	557.88	76.48	76.42	76.49	
05/22/85	02:50:06	337.47	336.26	557.90	76.51	76.41	76.48	
05/22/85	03:00:01	336.03	334.74	557.89	76.52	76.41	76.48	
05/22/85	03:10:03	334.60	333.30	557.89	76.50	76.40	76.48	
05/22/85	03:20:08	333.40	332.05	557.87	76.49	76.40	76.48	
05/22/85	03:30:01	332.19	330.88	557.87	76.48	76.42	76.48	
05/22/85	03:40:06	331.09	329.85	557.89	76.47	76.41	76.47	
05/22/85	03:50:08	330.17	328.79	557.91	76.46	76.42	76.47	
05/22/85	04:00:04	329.13	327.86	557.91	76.46	76.41	76.46	
05/22/85	04:10:07	328.20	326.99	557.87	76.45	76.41	76.45	
05/22/85	04:20:03	327.46	326.11	557.93	76.46	76.41	76.45	
05/22/85	04:30:00	326.60	325.31	557.89	76.45	76.42	76.44	
05/22/85	04:40:03	325.79	324.46	557.87	76.44	76.40	76.43	
05/22/85	04:50:09	324.93	323.63	557.91	76.44	76.42	76.43	
05/22/85	05:00:02	324.12	322.85	557.87	76.43	76.43	76.42	
05/22/85	05:10:08	323.30	322.06	557.94	76.43	76.42	76.41	
05/22/85	05:20:03	322.60	321.33	557.88	76.43	76.42	76.41	
05/22/85	05:30:00	321.93	320.63	557.92	76.44	76.42	76.40	
05/22/85	05:40:03	321.31	319.99	557.92	76.42	76.42	76.40	
05/22/85	05:50:00	320.72	319.44	557.96	76.43	76.42	76.40	
05/22/85	06:00:04	320.26	318.97	557.88	76.44	76.42	76.39	
05/22/85	06:10:01	319.71	318.47	557.92	76.43	76.42	76.39	
05/22/85	06:20:05	319.22	317.98	557.90	76.41	76.42	76.38	
05/22/85	06:30:02	318.80	317.48	557.92	76.42	76.43	76.39	
05/22/85	06:40:05	318.34	317.08	557.92	76.42	76.41	76.38	
05/22/85	06:50:03	318.04	316.69	557.92	76.43	76.42	76.38	
05/22/85	07:00:07	317.62	316.30	557.92	76.42	76.42	76.36	
05/22/85	07:10:04	317.22	315.91	557.92	76.43	76.41	76.38	
05/22/85	07:20:01	316.80	315.52	557.94	76.42	76.42	76.37	
05/22/85	07:30:05	316.52	315.20	557.90	76.42	76.41	76.36	

TABLE A3-11 (continued)

TABULATED PRESSURE DATA FOR PULSE TESTING OF THE SALADO FORMATION, 1040 TO 3095 FEET BELOW LAND SURFACE, MAY 21 TO 22, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
05/22/85	07:40:02	316.20	314.90	557.94	76.43	76.42	76.36	
05/22/85	07:50:07	315.99	314.64	557.92	76.43	76.41	76.36	
05/22/85	08:00:04	315.74	314.39	557.96	76.43	76.41	76.36	
05/22/85	08:10:07	315.51	314.14	557.94	76.41	76.41	76.36	
05/22/85	08:20:04	315.19	313.91	557.92	76.42	76.41	76.37	
05/22/85	08:30:07	315.04	313.65	557.89	76.42	76.41	76.35	
05/22/85	08:40:04	314.74	313.45	557.92	76.42	76.42	76.36	
05/22/85	08:50:07	314.53	313.26	557.89	76.42	76.41	76.36	
05/22/85	09:00:04	314.24	313.03	557.90	76.42	76.40	76.35	
05/22/85	09:10:07	314.05	312.82	557.95	76.43	76.40	76.35	
05/22/85	09:20:03	313.88	312.61	557.93	76.41	76.41	76.35	
05/22/85	09:30:06	313.63	312.41	557.92	76.42	76.41	76.35	
05/22/85	09:40:02	313.54	312.20	557.90	76.42	76.40	76.36	
05/22/85	09:50:08	313.35	312.06	557.91	76.42	76.41	76.35	
05/22/85	10:00:02	313.22	311.90	557.95	76.42	76.41	76.34	
05/22/85	10:10:07	312.99	311.74	557.90	76.43	76.41	76.36	
05/22/85	10:20:00	312.84	311.58	557.91	76.42	76.41	76.33	
05/22/85	10:30:06	312.65	311.39	557.95	76.42	76.40	76.35	
05/22/85	10:40:09	312.59	311.34	557.93	76.41	76.41	76.34	
05/22/85	10:50:05	312.36	311.14	557.93	76.42	76.41	76.34	
05/22/85	11:00:08	312.19	310.97	557.98	76.41	76.40	76.35	
05/22/85	11:10:04	312.12	310.84	557.93	76.43	76.40	76.34	
05/22/85	11:20:06	312.02	310.79	557.93	76.41	76.39	76.34	
05/22/85	11:30:02	311.85	310.59	557.91	76.41	76.41	76.34	
05/22/85	11:40:04	311.75	310.49	557.95	76.42	76.40	76.34	
05/22/85	11:50:00	311.62	310.40	557.87	76.42	76.40	76.34	
05/22/85	12:00:02	311.51	310.35	557.95	76.41	76.39	76.35	
05/22/85	12:10:07	311.41	310.28	557.87	76.41	76.40	76.35	
05/22/85	12:20:09	311.41	310.12	557.89	76.42	76.39	76.34	
05/22/85	12:30:04	311.26	310.05	557.87	76.42	76.39	76.34	
05/22/85	12:40:09	311.09	309.96	557.91	76.41	76.40	76.35	
05/22/85	12:50:02	311.03	309.85	557.91	76.40	76.39	76.33	
05/22/85	13:00:07	310.92	309.77	557.95	76.41	76.40	76.34	
05/22/85	13:10:00	310.88	309.64	557.91	76.41	76.40	76.34	
05/22/85	13:20:05	310.71	309.52	557.89	76.41	76.39	76.33	
05/22/85	13:30:08	310.56	309.47	557.89	76.42	76.39	76.34	
05/22/85	13:40:04	310.60	309.38	557.93	76.41	76.40	76.33	
05/22/85	13:50:06	310.58	309.38	557.87	76.41	76.40	76.33	
05/22/85	14:00:02	310.48	309.34	557.89	76.40	76.39	76.34	

End of Test

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
 THE RAMSEY SANDSTONE OF THE BELL CANYON FORMATION, 4138 TO 4180
 FEET BELOW LAND SURFACE, JULY 12 TO 14, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/11/85	19:50:08	1828.01	1847.02	1770.19	88.18	88.07	87.99	
07/11/85	20:00:02	1827.39	1845.46	1770.21	88.25	88.08	88.02	
07/11/85	20:10:08	1826.78	1844.13	1770.16	88.31	88.08	88.06	
07/11/85	20:20:02	1826.23	1842.90	1770.26	88.33	88.15	88.10	
07/11/85	20:30:08	1825.69	1841.84	1770.28	88.34	88.09	88.15	
07/11/85	20:40:03	1825.27	1840.91	1770.32	88.34	88.14	88.16	
07/11/85	20:50:00	1824.78	1839.97	1770.38	88.34	88.20	88.18	
07/11/85	21:00:06	1824.36	1839.27	1770.35	88.33	88.26	88.21	
07/11/85	21:10:03	1823.99	1838.57	1770.44	88.33	88.29	88.23	
07/11/85	21:20:09	1823.64	1837.93	1770.41	88.33	88.31	88.25	
07/11/85	21:30:06	1823.22	1837.29	1770.47	88.32	88.34	88.27	
07/11/85	21:40:02	1822.89	1836.73	1770.47	88.32	88.35	88.30	
07/11/85	21:50:01	1822.58	1836.19	1770.51	88.32	88.36	88.32	
07/11/85	22:00:09	1822.29	1835.68	1770.55	88.31	88.40	88.33	
07/11/85	22:10:06	1822.00	1835.22	1770.61	88.32	88.42	88.36	
07/11/85	22:20:04	1821.67	1834.83	1770.59	88.31	88.44	88.37	
07/11/85	22:30:01	1821.46	1834.38	1770.61	88.32	88.47	88.38	
07/11/85	22:40:00	1821.13	1834.03	1770.67	88.34	88.51	88.39	
07/11/85	22:50:06	1820.86	1833.60	1770.69	88.34	88.52	88.39	
07/11/85	23:00:05	1820.74	1833.33	1770.73	88.36	88.54	88.39	
07/11/85	23:10:02	1820.51	1833.00	1770.71	88.39	88.54	88.41	
07/11/85	23:20:01	1820.24	1832.67	1770.79	88.42	88.55	88.41	
07/11/85	23:30:08	1820.01	1832.38	1770.83	88.44	88.55	88.43	
07/11/85	23:40:07	1819.89	1832.11	1770.86	88.47	88.57	88.40	
07/11/85	23:50:03	1819.66	1831.84	1770.87	88.47	88.58	88.48	
07/12/85	00:00:02	1819.39	1831.55	1770.91	88.50	88.58	88.47	
07/12/85	00:10:09	1819.29	1831.35	1770.93	88.54	88.60	88.48	
07/12/85	00:20:07	1819.02	1831.08	1771.00	88.59	88.61	88.49	
07/12/85	00:30:06	1818.97	1830.81	1770.99	88.60	88.62	88.50	
07/12/85	00:40:03	1818.73	1830.63	1771.06	88.61	88.62	88.50	
07/12/85	00:50:03	1818.58	1830.40	1771.01	88.63	88.63	88.50	
07/12/85	01:00:10	1818.41	1830.11	1771.08	88.65	88.63	88.51	
07/12/85	01:10:09	1818.27	1830.01	1771.12	88.67	88.65	88.51	
07/12/85	01:20:06	1818.14	1829.78	1771.10	88.69	88.64	88.52	
07/12/85	01:30:06	1817.98	1829.65	1771.16	88.70	88.65	88.52	
07/12/85	01:40:04	1817.79	1829.47	1771.16	88.72	88.65	88.53	
07/12/85	01:50:03	1817.71	1829.26	1771.16	88.73	88.66	88.52	
07/12/85	02:00:01	1817.48	1829.14	1771.22	88.75	88.67	88.53	
07/12/85	02:10:02	1817.44	1828.91	1771.24	88.77	88.66	88.54	
07/12/85	02:20:00	1817.29	1828.79	1771.22	88.77	88.67	88.56	
07/12/85	02:30:00	1817.23	1828.66	1771.24	88.76	88.67	88.55	
07/12/85	02:40:08	1817.03	1828.48	1771.33	88.79	88.68	88.55	
07/12/85	02:50:08	1816.90	1828.33	1771.35	88.80	88.68	88.57	
07/12/85	03:00:07	1816.84	1828.21	1771.34	88.80	88.70	88.57	

TABLE A3-12 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE RAMSEY SANDSTONE OF THE BELL CANYON FORMATION, 4138 TO 4180
FEET BELOW LAND SURFACE, JULY 12 TO 14, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/12/85	03:10:07	1816.74	1828.02	1771.45	88.82	88.70	88.57	
07/12/85	03:20:07	1816.55	1827.92	1771.43	88.81	88.70	88.57	
07/12/85	03:30:04	1816.49	1827.79	1771.45	88.82	88.69	88.58	
07/12/85	03:40:05	1816.38	1827.63	1771.47	88.82	88.70	88.58	
07/12/85	03:50:04	1816.30	1827.51	1771.47	88.83	88.70	88.59	
07/12/85	04:00:05	1816.20	1827.36	1771.57	88.82	88.70	88.59	
07/12/85	04:10:04	1816.01	1827.30	1771.55	88.84	88.71	88.59	
07/12/85	04:20:05	1816.01	1827.18	1771.55	88.85	88.71	88.60	
07/12/85	04:30:04	1815.84	1827.03	1771.60	88.85	88.72	88.59	
07/12/85	04:40:05	1815.78	1826.91	1771.66	88.86	88.72	88.61	
07/12/85	04:50:04	1815.64	1826.85	1771.62	88.87	88.72	88.60	
07/12/85	05:00:06	1815.55	1826.72	1771.62	88.86	88.72	88.60	
07/12/85	05:10:05	1815.49	1826.60	1771.64	88.89	88.72	88.60	
07/12/85	05:20:06	1815.33	1826.52	1771.78	88.87	88.72	88.60	
07/12/85	05:30:06	1815.26	1826.41	1771.78	88.87	88.74	88.60	
07/12/85	05:40:07	1815.22	1826.35	1771.79	88.89	88.73	88.58	
07/12/85	05:50:09	1815.16	1826.29	1771.81	88.86	88.74	88.59	
07/12/85	06:00:08	1815.10	1826.14	1771.83	88.89	88.73	88.59	
07/12/85	06:10:09	1814.93	1826.10	1771.83	88.89	88.74	88.59	
07/12/85	06:20:09	1814.91	1826.02	1771.89	88.87	88.73	88.58	
07/12/85	06:30:01	1814.83	1825.91	1771.91	88.88	88.73	88.59	
07/12/85	07:31:42	1814.40	1825.43	1772.12	88.70	88.61	88.47	
07/12/85	07:40:00	1814.35	1825.29	1772.06	88.83	88.71	88.55	
07/12/85	08:48:28	1813.86	1824.84	1772.29	88.93	88.72	88.57	
07/12/85	08:48:41	1813.77	1824.88	1772.32	88.92	88.73	88.57	
07/12/85	08:48:52	1813.86	1824.86	1772.27	88.92	88.73	88.58	
07/12/85	08:49:05	1813.80	1824.88	1772.27	88.89	88.72	88.58	
07/12/85	08:49:16	1813.86	1824.84	1772.29	88.90	88.74	88.57	
07/12/85	08:49:30	1813.90	1824.82	1772.29	88.89	88.72	88.58	
07/12/85	08:49:41	1813.80	1824.78	1772.27	88.89	88.72	88.57	
07/12/85	08:49:55	1813.77	1824.82	1772.27	88.91	88.72	88.58	
07/12/85	08:50:06	1813.86	1824.90	1772.27	88.90	88.73	88.58	
07/12/85	08:50:19	1813.94	1824.80	1772.21	88.89	88.73	88.57	
07/12/85	08:50:30	1813.92	1824.82	1772.25	88.89	88.73	88.58	
07/12/85	08:50:44	1813.84	1824.82	1772.32	88.91	88.73	88.57	
07/12/85	08:50:55	1813.86	1824.86	1772.29	88.89	88.74	88.58	
07/12/85	08:51:09	1813.82	1824.80	1772.31	88.90	88.73	88.58	
07/12/85	08:51:20	1813.84	1824.80	1772.27	88.90	88.74	88.60	
07/12/85	08:51:33	1813.79	1824.82	1772.34	88.90	88.74	88.57	
07/12/85	08:51:45	1813.82	1824.84	1772.31	88.90	88.72	88.58	
07/12/85	08:51:55	1813.92	1824.86	1772.17	88.89	88.73	88.58	
07/12/85	08:52:07	1813.88	1824.73	1772.36	88.88	88.71	88.56	
07/12/85	08:52:15	1813.88	1824.84	1772.27	88.87	88.71	88.57	
07/12/85	08:52:26	1814.06	1824.78	1772.21	88.86	88.72	88.57	

TABLE A3-12 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE RAMSEY SANDSTONE OF THE BELL CANYON FORMATION, 4138 TO 4180
FEET BELOW LAND SURFACE, JULY 12 TO 14, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/12/85	08:52:34	1813.84	1824.78	1772.29	88.85	88.72	88.57	
07/12/85	08:52:45	1813.75	1824.78	1772.25	88.86	88.72	88.58	
07/12/85	08:52:54	1813.80	1824.76	1772.38	88.87	88.73	88.57	
07/12/85	08:53:04	1813.94	1824.80	1772.32	88.89	88.72	88.56	
07/12/85	08:53:13	1813.77	1824.82	1772.21	88.86	88.72	88.57	
07/12/85	08:53:23	1813.77	1824.75	1772.34	88.86	88.70	88.56	
07/12/85	08:53:31	1814.06	1824.74	1772.34	88.87	88.72	88.56	
07/12/85	08:53:41	1813.86	1824.84	1772.25	88.90	88.70	88.56	
07/12/85	08:53:49	1814.06	1824.84	1772.34	88.89	88.70	88.58	
07/12/85	08:53:59	1813.86	1824.88	1772.25	88.89	88.72	88.57	
07/12/85	08:54:09	1813.84	1824.82	1772.19	88.86	88.71	88.57	End Stabilization
07/12/85	08:54:17	1813.86	1824.82	1772.27	88.85	88.72	88.58	
07/12/85	08:54:27	1813.86	1824.74	1772.29	88.88	88.72	88.57	
07/12/85	08:54:35	1814.06	1824.78	1772.27	88.90	88.71	88.58	
07/12/85	08:54:45	1813.86	1824.88	1772.36	88.91	88.73	88.57	
07/12/85	08:54:53	1813.86	1824.98	1772.23	88.86	88.71	88.58	
07/12/85	08:55:03	1813.63	1823.99	1772.51	88.87	88.73	88.57	Open
07/12/85	08:55:21	1765.27	1821.01	1772.17	88.68	88.75	88.54	for
07/12/85	08:55:29	1769.83	1820.53	1772.15	88.74	88.64	88.58	FFL
07/12/85	08:55:39	1672.33	261.63	1771.89	88.70	88.69	88.57	
07/12/85	08:55:48	1651.08	266.45	1773.22	88.71	88.77	88.57	
07/12/85	08:55:59	1673.28	271.28	1772.19	88.75	88.61	88.58	
07/12/85	08:56:08	1686.32	271.79	1772.50	88.86	88.66	88.58	
07/12/85	08:56:19	1699.78	272.08	1772.40	88.89	88.75	88.58	
07/12/85	08:56:28	1707.27	272.38	1772.34	88.81	88.76	88.56	
07/12/85	08:56:39	1715.83	272.63	1772.36	88.79	88.73	88.55	
07/12/85	08:56:50	1722.73	272.74	1772.30	88.71	88.71	88.54	
07/12/85	08:57:08	1730.99	273.13	1772.45	88.67	88.69	88.52	
07/12/85	08:57:19	1735.70	273.07	1772.30	88.71	88.70	88.53	
07/12/85	08:57:29	1738.86	273.20	1772.36	88.73	88.72	88.52	
07/12/85	08:57:40	1742.87	273.28	1772.45	88.73	88.75	88.50	
07/12/85	08:57:49	1745.55	273.39	1772.47	88.75	88.67	88.51	
07/12/85	08:58:00	1749.00	273.57	1772.39	88.77	88.67	88.50	
07/12/85	08:58:09	1751.25	273.58	1772.24	88.51	88.67	88.50	
07/12/85	08:58:20	1753.47	273.74	1772.39	88.63	88.66	88.47	
07/12/85	08:58:29	1755.72	273.76	1772.33	88.59	88.65	88.47	Begin
07/12/85	08:58:41	1757.45	273.94	1772.37	88.62	88.65	88.47	FFL
07/12/85	08:58:49	1759.31	273.92	1772.35	88.61	88.66	88.47	
07/12/85	08:59:01	1761.25	274.11	1772.37	88.64	88.64	88.47	
07/12/85	08:59:11	1763.11	274.20	1772.39	88.66	88.64	88.46	
07/12/85	08:59:24	1764.80	274.31	1772.37	88.61	88.63	88.46	
07/12/85	08:59:37	1766.62	274.48	1772.39	88.62	88.65	88.44	
07/12/85	08:59:48	1768.37	274.54	1772.31	88.58	88.65	88.43	
07/12/85	09:00:01	1769.59	274.71	1772.40	88.56	88.64	88.41	

TABLE A3-12 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE RAMSEY SANDSTONE OF THE BELL CANYON FORMATION, 4138 TO 4180
FEET BELOW LAND SURFACE, JULY 12 TO 14, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/12/85	09:00:12	1770.83	274.82	1772.48	88.56	88.64	88.42	
07/12/85	09:00:25	1772.38	274.89	1772.44	88.56	88.63	88.42	
07/12/85	09:00:36	1773.16	274.96	1772.36	88.57	88.64	88.41	
07/12/85	09:00:49	1774.59	275.08	1772.36	88.58	88.63	88.42	
07/12/85	09:01:00	1775.64	275.14	1772.40	88.59	88.61	88.42	
07/12/85	09:01:13	1776.69	275.26	1772.33	88.60	88.61	88.42	
07/12/85	09:01:24	1777.48	275.35	1772.42	88.61	88.61	88.41	
07/12/85	09:01:37	1778.61	275.53	1772.40	88.62	88.60	88.42	
07/12/85	09:01:48	1779.11	275.60	1772.31	88.63	88.60	88.41	
07/12/85	09:02:01	1780.04	275.75	1772.38	88.64	88.60	88.41	
07/12/85	09:02:12	1780.70	275.83	1772.38	88.64	88.60	88.41	
07/12/85	09:02:25	1781.52	275.97	1772.31	88.65	88.59	88.42	
07/12/85	09:02:36	1782.43	276.04	1772.36	88.65	88.58	88.42	
07/12/85	09:02:49	1782.85	276.14	1772.27	88.66	88.58	88.41	
07/12/85	09:03:02	1783.40	276.32	1772.38	88.66	88.57	88.42	
07/12/85	09:03:13	1784.19	276.41	1772.36	88.67	88.58	88.41	
07/12/85	09:03:26	1784.56	276.46	1772.38	88.67	88.56	88.41	
07/12/85	09:03:37	1785.33	276.57	1772.36	88.68	88.56	88.41	
07/12/85	09:03:50	1785.39	276.69	1772.25	88.68	88.56	88.40	
07/12/85	09:04:01	1786.77	276.80	1772.38	88.68	88.56	88.40	
07/12/85	09:04:14	1786.36	276.94	1772.32	88.69	88.55	88.39	
07/12/85	09:04:25	1786.98	276.99	1772.27	88.69	88.55	88.40	
07/12/85	09:04:38	1787.21	277.15	1772.38	88.69	88.55	88.39	
07/12/85	09:04:49	1787.80	277.20	1772.27	88.70	88.55	88.39	
07/12/85	09:05:02	1787.78	277.31	1772.29	88.69	88.55	88.40	
07/12/85	09:05:14	1788.38	277.47	1772.25	88.70	88.55	88.39	
07/12/85	09:05:29	1788.67	277.57	1772.30	88.71	88.54	88.38	
07/12/85	09:05:41	1788.94	277.70	1772.34	88.71	88.54	88.39	
07/12/85	09:05:56	1789.48	277.82	1772.27	88.70	88.53	88.39	
07/12/85	09:06:11	1789.66	277.87	1772.30	88.71	88.53	88.38	
07/12/85	09:06:23	1789.91	278.03	1772.34	88.69	88.52	88.38	
07/12/85	09:06:38	1790.22	278.19	1772.32	88.70	88.52	88.38	
07/12/85	09:06:51	1790.35	278.28	1772.30	88.70	88.53	88.38	
07/12/85	09:07:14	1791.09	278.40	1772.30	88.70	88.51	88.38	
07/12/85	09:07:26	1791.07	278.58	1772.32	88.71	88.52	88.38	
07/12/85	09:07:41	1791.34	278.74	1772.27	88.70	88.51	88.39	
07/12/85	09:07:53	1791.44	278.81	1772.30	88.69	88.51	88.38	
07/12/85	09:08:08	1791.67	278.93	1772.32	88.69	88.50	88.38	
07/12/85	09:08:20	1791.96	279.02	1772.36	88.69	88.51	88.38	
07/12/85	09:08:35	1792.19	279.18	1772.30	88.70	88.51	88.37	
07/12/85	09:08:47	1792.29	279.28	1772.30	88.69	88.50	88.37	
07/12/85	09:09:02	1792.43	279.39	1772.30	88.68	88.50	88.36	
07/12/85	09:09:15	1792.70	279.51	1772.30	88.68	88.50	88.36	
07/12/85	09:09:29	1792.91	279.65	1772.34	88.66	88.50	88.36	

TABLE A3-12 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE RAMSEY SANDSTONE OF THE BELL CANYON FORMATION, 4138 TO 4180
FEET BELOW LAND SURFACE, JULY 12 TO 14, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/12/85	09:09:42	1792.99	279.71	1772.28	88.68	88.50	88.37	
07/12/85	09:09:57	1793.10	279.94	1772.34	88.66	88.50	88.36	
07/12/85	09:10:11	1793.36	280.01	1772.32	88.67	88.51	88.36	
07/12/85	09:10:24	1793.43	280.09	1772.32	88.69	88.51	88.36	
07/12/85	09:10:39	1793.72	280.25	1772.38	88.69	88.50	88.37	
07/12/85	09:10:51	1793.86	280.34	1772.36	88.69	88.48	88.37	
07/12/85	09:11:06	1794.03	280.48	1772.32	88.69	88.49	88.37	
07/12/85	09:11:18	1794.09	280.59	1772.32	88.67	88.50	88.37	
07/12/85	09:11:33	1794.34	280.73	1772.32	88.68	88.49	88.36	
07/12/85	09:11:45	1794.56	280.83	1772.34	88.66	88.49	88.36	
07/12/85	09:12:00	1794.69	280.94	1772.28	88.65	88.49	88.37	
07/12/85	09:12:13	1794.83	281.10	1772.28	88.69	88.51	88.37	
07/12/85	09:12:28	1794.94	281.20	1772.34	88.67	88.49	88.37	
07/12/85	09:12:40	1795.14	281.31	1772.32	88.66	88.49	88.37	
07/12/85	09:12:55	1795.27	281.42	1772.30	88.67	88.50	88.36	
07/12/85	09:13:07	1795.41	281.54	1772.26	88.66	88.49	88.37	
07/12/85	09:13:22	1795.64	281.64	1772.28	88.67	88.50	88.37	
07/12/85	09:13:37	1795.78	281.80	1772.28	88.68	88.48	88.38	
07/12/85	09:13:49	1795.89	281.87	1772.34	88.65	88.49	88.38	
07/12/85	09:14:04	1796.03	282.03	1772.32	88.65	88.50	88.38	
07/12/85	09:14:16	1796.26	282.14	1772.30	88.66	88.50	88.38	
07/12/85	09:14:31	1796.32	282.31	1772.36	88.65	88.50	88.38	
07/12/85	09:14:44	1796.49	282.39	1772.36	88.66	88.50	88.38	
07/12/85	09:14:58	1796.69	282.49	1772.30	88.66	88.49	88.38	
07/12/85	09:15:11	1796.75	282.60	1772.32	88.66	88.49	88.38	
07/12/85	09:15:26	1796.94	282.74	1772.34	88.65	88.49	88.39	
07/12/85	09:15:38	1797.07	282.86	1772.32	88.63	88.50	88.38	
07/12/85	09:15:53	1797.17	283.02	1772.32	88.64	88.50	88.38	
07/12/85	09:16:05	1797.23	283.11	1772.30	88.65	88.50	88.38	
07/12/85	09:16:20	1797.42	283.21	1772.30	88.64	88.51	88.39	
07/12/85	09:16:32	1797.50	283.35	1772.30	88.65	88.49	88.38	
07/12/85	09:16:47	1797.56	283.41	1772.32	88.64	88.49	88.38	
07/12/85	09:17:00	1797.64	283.58	1772.32	88.65	88.51	88.39	
07/12/85	09:17:14	1797.83	283.71	1772.36	88.65	88.50	88.39	
07/12/85	09:17:29	1797.91	283.81	1772.27	88.64	88.50	88.39	
07/12/85	09:17:41	1798.02	283.90	1772.27	88.63	88.51	88.40	
07/12/85	09:17:56	1798.14	284.04	1772.34	88.64	88.51	88.39	
07/12/85	09:18:09	1798.28	284.17	1772.23	88.66	88.50	88.39	
07/12/85	09:18:24	1798.49	284.32	1772.27	88.65	88.51	88.39	
07/12/85	09:18:44	1798.55	284.48	1772.32	88.65	88.52	88.39	
07/12/85	09:18:59	1798.70	284.55	1772.34	88.65	88.51	88.39	
07/12/85	09:19:11	1798.82	284.68	1772.34	88.64	88.50	88.40	
07/12/85	09:19:26	1799.01	284.80	1772.34	88.66	88.50	88.40	
07/12/85	09:19:38	1799.05	284.92	1772.29	88.65	88.51	88.40	End FFL

TABLE A3-12 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE RAMSEY SANDSTONE OF THE BELL CANYON FORMATION, 4138 TO 4180
FEET BELOW LAND SURFACE, JULY 12 TO 14, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/12/85	09:19:53	1801.68	285.24	1772.40	88.59	88.50	88.39	Shut-in for FBV
07/12/85	09:20:04	1806.83	329.45	1773.48	88.63	88.53	88.39	FBV
07/12/85	09:20:17	1855.24	387.67	1772.53	88.56	88.47	88.39	
07/12/85	09:20:27	1842.26	430.75	1772.49	88.48	88.49	88.38	
07/12/85	09:20:40	1836.29	483.47	1772.57	88.44	88.43	88.40	
07/12/85	09:20:53	1833.39	534.14	1772.51	88.41	88.09	88.40	
07/12/85	09:21:03	1832.11	573.40	1772.48	88.40	88.48	88.39	
07/12/85	09:21:16	1830.70	619.47	1772.59	88.39	88.96	88.39	
07/12/85	09:21:26	1853.95	654.83	1772.50	88.43	89.31	88.40	
07/12/85	09:21:39	1829.41	696.12	1772.53	88.69	89.08	88.40	
07/12/85	09:22:02	1828.75	764.76	1772.57	88.49	88.59	88.35	
07/12/85	09:22:12	1828.46	793.12	1772.57	88.41	88.65	88.35	
07/12/85	09:22:25	1828.17	824.65	1772.46	88.41	88.57	88.60	
07/12/85	09:22:34	1827.94	850.10	1772.42	88.44	88.54	88.44	
07/12/85	09:22:48	1827.90	881.75	1772.48	88.46	88.57	88.40	
07/12/85	09:23:00	1827.63	908.41	1772.44	88.41	88.59	88.40	
07/12/85	09:23:14	1827.43	938.14	1772.46	88.40	88.62	88.40	
07/12/85	09:23:26	1827.24	961.75	1772.50	88.42	88.55	88.40	
07/12/85	09:23:40	1827.03	988.20	1772.44	88.47	88.64	88.42	
07/12/85	09:23:52	1826.76	1009.41	1772.48	88.41	88.53	88.42	
07/12/85	09:24:06	1826.53	1033.26	1772.52	88.46	88.69	88.44	
07/12/85	09:24:20	1826.28	1055.61	1772.48	88.50	88.59	88.42	
07/12/85	09:24:32	1826.24	1073.53	1772.52	88.53	88.57	88.42	
07/12/85	09:24:46	1826.24	1093.53	1772.50	88.59	88.62	88.43	
07/12/85	09:24:58	1826.70	1108.38	1772.46	88.54	88.62	88.42	
07/12/85	09:25:11	1826.24	1126.65	1772.50	88.57	88.58	88.43	
07/12/85	09:25:23	1826.33	1140.44	1772.42	88.53	88.70	88.43	
07/12/85	09:25:36	1826.06	1156.99	1772.48	88.49	88.66	88.44	
07/12/85	09:25:48	1825.93	1169.48	1772.48	88.50	88.67	88.44	
07/12/85	09:26:02	1825.83	1184.90	1772.50	88.49	88.68	88.48	
07/12/85	09:26:13	1825.70	1196.48	1772.41	88.54	88.66	88.47	
07/12/85	09:26:27	1825.64	1210.68	1772.41	88.52	88.65	88.48	
07/12/85	09:26:39	1825.60	1221.35	1772.45	88.58	88.68	88.48	
07/12/85	09:26:52	1825.25	1234.49	1772.45	88.67	88.67	88.47	
07/12/85	09:27:04	1825.08	1244.27	1772.50	88.58	88.63	88.46	
07/12/85	09:27:17	1825.02	1256.43	1772.49	88.61	88.66	88.52	
07/12/85	09:27:31	1824.85	1268.13	1772.49	88.57	88.69	88.54	
07/12/85	09:27:44	1824.69	1277.96	1772.45	88.61	88.68	88.52	
07/12/85	09:27:59	1824.50	1289.30	1772.43	88.67	88.67	88.53	
07/12/85	09:28:11	1824.34	1403.74	1772.47	88.56	88.63	88.53	
07/12/85	09:28:26	1824.15	1309.23	1772.47	88.62	88.58	88.53	
07/12/85	09:28:39	1824.17	1317.66	1772.51	88.62	89.00	88.53	
07/12/85	09:28:53	1823.82	1327.62	1772.45	88.65	88.74	88.54	
07/12/85	09:29:06	1823.57	1335.45	1772.47	88.68	88.75	88.54	

TABLE A3-12 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE RAMSEY SANDSTONE OF THE BELL CANYON FORMATION, 4138 TO 4180
FEET BELOW LAND SURFACE, JULY 12 TO 14, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/12/85	09:29:29	1823.32	1349.55	1772.53	88.69	88.70	88.54	
07/12/85	09:29:42	1823.20	1356.66	1772.47	88.69	88.70	88.54	
07/12/85	09:29:56	1823.05	1364.91	1772.42	88.68	88.70	88.54	
07/12/85	09:30:09	1822.91	1371.66	1772.48	88.59	88.69	88.59	
07/12/85	09:30:24	1822.82	1379.46	1772.46	88.67	88.68	88.60	
07/12/85	09:30:36	1822.64	1385.66	1772.42	88.69	88.69	88.58	
07/12/85	09:30:51	1822.51	1392.87	1772.44	88.72	88.71	88.57	
07/12/85	09:31:03	1822.35	1398.95	1772.50	88.72	88.73	88.58	
07/12/85	09:31:18	1822.26	1405.76	1772.44	88.73	88.71	88.58	
07/12/85	09:31:33	1822.12	1412.24	1772.48	88.73	88.75	88.58	
07/12/85	09:31:45	1821.91	1417.68	1772.50	88.76	88.73	88.60	
07/12/85	09:32:00	1821.81	1423.79	1772.48	88.80	88.71	88.58	
07/12/85	09:32:13	1821.85	1428.87	1772.42	88.80	88.71	88.60	
07/12/85	09:32:27	1821.64	1434.72	1772.44	88.81	88.71	88.59	
07/12/85	09:32:40	1821.58	1454.47	1772.42	88.78	88.73	88.59	
07/12/85	09:32:55	1821.43	1444.95	1772.42	88.88	88.74	88.56	
07/12/85	09:33:22	1821.19	1454.70	1772.50	88.84	88.81	88.63	
07/12/85	09:33:34	1821.04	1459.00	1772.46	88.80	88.80	88.63	
07/12/85	09:33:49	1821.00	1478.94	1772.46	88.81	88.69	88.62	
07/12/85	09:34:02	1820.83	1468.00	1772.43	88.79	88.70	88.64	
07/12/85	09:34:29	1820.73	1476.51	1772.48	88.83	88.76	88.62	
07/12/85	09:34:44	1820.65	1481.01	1772.43	88.85	88.80	88.64	
07/12/85	09:35:11	1820.50	1488.99	1772.43	88.81	88.87	88.65	
07/12/85	09:35:26	1820.34	1553.16	1772.37	88.81	89.24	88.65	
07/12/85	09:35:38	1820.25	1496.47	1772.50	88.84	88.90	88.65	
07/12/85	09:36:06	1820.23	1503.60	1772.43	88.86	88.96	88.67	
07/12/85	09:36:20	1820.15	1507.39	1772.45	88.84	88.93	89.02	
07/12/85	09:36:33	1820.03	1510.54	1772.47	88.83	88.89	88.67	
07/12/85	09:36:47	1820.05	1544.13	1772.47	88.83	88.92	89.02	
07/12/85	09:37:00	1840.20	1547.06	1772.45	88.80	88.92	88.67	
07/12/85	09:37:15	1819.82	1520.48	1772.45	88.80	88.88	88.67	
07/12/85	09:37:27	1840.05	1523.36	1772.50	89.16	88.84	88.66	
07/12/85	09:37:54	1819.74	1529.35	1772.45	88.84	88.80	88.68	
07/12/85	09:38:09	1819.70	1532.53	1772.51	88.81	88.83	88.68	
07/12/85	09:38:36	1819.69	1538.18	1772.47	88.84	88.84	88.68	
07/12/85	09:38:51	1819.51	1541.17	1772.47	88.86	88.83	88.67	
07/12/85	09:39:19	1819.41	1546.46	1772.52	88.79	88.80	88.66	
07/12/85	09:39:31	1819.43	1548.74	1772.45	88.80	88.82	88.65	
07/12/85	09:41:01	1819.17	1564.62	1772.45	89.16	88.77	88.68	
07/12/85	09:41:16	1819.20	1567.00	1772.49	88.81	88.78	88.70	
07/12/85	09:41:28	1819.05	1569.02	1772.47	88.82	88.77	88.71	
07/12/85	09:41:43	1819.03	1571.37	1772.53	88.83	88.78	88.71	
07/12/85	09:41:56	1819.05	1573.28	1772.49	88.85	88.76	88.74	
07/12/85	09:42:10	1819.01	1575.49	1772.44	88.85	88.77	88.73	

TABLE A3-12 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE RAMSEY SANDSTONE OF THE BELL CANYON FORMATION, 4138 TO 4180
FEET BELOW LAND SURFACE, JULY 12 TO 14, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/12/85	09:42:25	1818.97	1577.74	1772.47	88.85	88.78	88.73	
07/12/85	09:42:38	1818.93	1579.57	1772.45	88.87	88.77	88.72	
07/12/85	09:42:52	1818.93	1581.69	1772.47	88.89	88.76	88.72	
07/12/85	09:43:05	1818.84	1583.45	1772.49	88.91	88.75	88.72	
07/12/85	09:43:41	1818.72	1588.43	1772.45	88.93	88.77	88.70	
07/12/85	09:44:04	1818.70	1591.52	1772.47	88.93	88.76	88.70	
07/12/85	09:45:04	1818.55	1599.06	1772.51	88.92	88.74	88.70	
07/12/85	09:46:01	1818.37	1605.84	1772.51	88.93	88.80	88.70	
07/12/85	09:47:01	1818.24	1612.44	1772.47	88.94	88.81	88.70	
07/12/85	09:48:09	1818.10	1619.57	1772.51	88.94	88.82	88.70	
07/12/85	09:49:09	1817.93	1625.31	1772.51	88.93	88.84	88.70	
07/12/85	09:50:06	1817.73	1630.57	1772.49	88.97	88.84	88.70	
07/12/85	09:51:05	1817.56	1635.74	1772.55	88.96	88.85	88.69	
07/12/85	09:52:03	1817.44	1640.37	1772.32	88.96	88.84	88.70	
07/12/85	09:53:02	1817.31	1645.02	1772.47	88.97	88.82	88.70	
07/12/85	09:54:11	1817.15	1650.08	1772.47	88.95	88.83	88.69	
07/12/85	09:55:10	1816.57	1654.28	1772.49	88.95	88.81	88.69	
07/12/85	09:56:10	1816.82	1658.15	1772.53	88.96	88.84	88.69	
07/12/85	09:57:07	1816.73	1661.79	1772.51	88.96	88.79	88.69	
07/12/85	09:58:07	1816.48	1665.38	1772.49	88.96	88.80	88.70	
07/12/85	10:00:04	1816.32	1671.98	1772.49	88.95	88.78	88.69	
07/12/85	10:01:01	1853.30	1675.01	1772.53	88.95	88.73	88.69	
07/12/85	10:03:09	1815.95	1681.35	1772.49	88.94	88.64	88.68	
07/12/85	10:04:09	1815.82	1684.11	1772.52	88.92	88.69	88.67	
07/12/85	10:05:06	1815.72	1686.84	1772.54	88.94	88.68	88.66	
07/12/85	10:06:05	1815.59	1689.33	1772.52	88.96	88.70	88.66	
07/12/85	10:07:03	1815.51	1691.68	1772.56	88.94	88.72	88.65	
07/12/85	10:08:02	1815.39	1694.02	1772.56	88.95	88.73	88.67	
07/12/85	10:10:10	1815.16	1698.80	1772.52	88.94	88.78	88.60	
07/12/85	10:11:10	1815.10	1700.95	1772.54	88.93	88.80	88.64	
07/12/85	10:13:07	1814.97	1704.91	1772.54	88.93	88.84	88.65	
07/12/85	10:14:04	1815.22	1709.27	1772.58	88.93	88.88	88.65	
07/12/85	10:17:00	1814.79	1713.06	1772.58	88.91	88.92	88.68	
07/12/85	10:18:09	1814.66	1714.75	1772.58	88.91	88.93	88.70	
07/12/85	10:23:10	1814.42	1722.08	1772.58	88.91	88.99	88.68	
07/12/85	10:26:04	1814.29	1725.96	1772.51	89.28	88.99	88.67	
07/12/85	10:27:04	1814.27	1727.29	1772.58	88.91	88.98	88.67	
07/12/85	10:29:00	1814.08	1729.68	1772.50	88.94	89.03	89.02	
07/12/85	10:30:00	1814.02	1730.87	1772.52	88.91	89.09	88.66	
07/12/85	10:34:05	1813.96	1735.44	1772.38	88.90	88.92	90.43	
07/12/85	10:36:02	1813.90	1737.54	1772.62	88.91	88.95	88.66	
07/12/85	10:41:04	1813.75	1742.34	1772.58	88.91	88.87	89.02	
07/12/85	10:43:03	1813.65	1744.17	1772.62	88.91	88.86	88.67	
07/12/85	10:47:08	1813.48	1747.54	1772.56	88.93	88.82	88.68	

TABLE A3-12 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE RAMSEY SANDSTONE OF THE BELL CANYON FORMATION, 4138 TO 4180
FEET BELOW LAND SURFACE, JULY 12 TO 14, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/12/85	10:49:05	1831.95	1749.12	1772.58	88.92	88.78	88.68	
07/12/85	10:51:02	1813.51	1750.53	1772.58	88.90	88.77	88.67	
07/12/85	10:53:10	1813.40	1752.11	1772.56	88.93	88.76	88.68	
07/12/85	10:55:06	1813.40	1753.46	1772.62	89.28	88.78	88.68	
07/12/85	10:57:03	1813.36	1754.73	1772.60	88.91	88.76	88.68	
07/12/85	10:58:00	1813.34	1755.31	1772.56	88.91	89.14	89.38	
07/12/85	10:59:00	1813.36	1755.98	1772.50	88.91	88.78	90.10	
07/12/85	11:01:08	1813.32	1757.32	1772.66	88.90	88.76	88.68	
07/12/85	11:02:08	1813.29	1757.91	1772.56	89.28	88.76	89.04	
07/12/85	11:03:05	1813.24	1758.53	1772.58	88.92	88.77	88.67	
07/12/85	11:05:02	1813.30	1759.55	1772.66	88.91	88.79	88.67	
07/12/85	11:10:06	1849.53	1762.27	1772.47	88.91	88.71	88.67	
07/12/85	11:11:03	1831.70	1762.87	1772.66	89.26	88.73	88.67	
07/12/85	11:22:05	1813.07	1798.22	1772.60	88.90	88.77	89.38	
07/12/85	11:25:02	1831.31	1769.25	1772.62	88.90	88.78	88.67	
07/12/85	11:28:07	1812.83	1785.59	1772.56	89.61	89.08	89.38	
07/12/85	11:30:04	1831.31	1786.32	1772.64	88.89	88.76	88.67	
07/12/85	11:35:08	1831.54	1773.00	1772.47	88.90	88.77	90.79	
07/12/85	11:37:05	1812.80	1773.73	1772.68	88.91	88.77	88.68	
07/12/85	11:39:02	1812.78	1774.47	1772.73	89.26	88.75	88.67	
07/12/85	11:41:10	1849.84	1775.14	1772.66	88.89	88.78	88.68	
07/12/85	11:42:09	1812.64	1775.45	1772.68	88.88	88.77	89.03	
07/12/85	11:44:06	1812.68	1776.03	1772.68	88.89	88.75	88.68	
07/12/85	11:45:03	1812.68	1776.36	1772.73	88.90	88.76	88.68	
07/12/85	11:46:03	1812.66	1776.69	1772.70	88.90	88.75	88.68	
07/12/85	11:47:02	1812.57	1777.00	1772.66	88.89	88.74	88.68	
07/12/85	11:48:00	1812.62	1777.29	1772.66	88.90	88.74	88.68	
07/12/85	11:50:08	1812.62	1777.85	1772.70	88.90	88.72	88.69	
07/12/85	11:51:07	1812.64	1778.15	1772.72	88.89	88.73	88.68	
07/12/85	11:54:01	1812.56	1824.32	1772.73	89.61	88.74	88.68	
07/12/85	11:55:01	1812.53	1779.24	1772.73	88.91	88.74	89.04	
07/12/85	11:58:06	1812.62	1780.08	1772.77	88.92	88.73	88.68	
07/12/85	11:59:05	1812.55	1780.30	1772.81	88.89	88.72	88.69	
07/12/85	12:00:02	1830.96	1780.49	1772.79	88.89	88.72	89.03	
07/12/85	12:01:02	1812.55	1780.76	1772.79	88.89	88.71	88.69	
07/12/85	12:02:10	1812.53	1781.05	1772.75	88.89	88.73	88.68	
07/12/85	12:03:07	1812.49	1781.32	1772.75	88.90	88.73	88.68	
07/12/85	12:04:07	1812.49	1781.51	1772.75	88.89	88.73	88.69	
07/12/85	12:05:04	1812.53	1781.78	1772.77	88.90	88.72	88.68	
07/12/85	12:06:03	1812.47	1781.96	1772.75	88.90	88.72	88.69	
07/12/85	12:07:01	1812.51	1782.23	1772.77	88.89	88.74	88.69	
07/12/85	12:08:00	1812.51	1782.42	1772.77	88.89	88.73	88.68	
07/12/85	12:10:39	1812.37	1783.04	1772.81	88.88	88.74	88.68	
07/12/85	12:10:51	1812.47	1783.10	1772.81	88.90	88.73	88.68	

TABLE A3-12 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE RAMSEY SANDSTONE OF THE BELL CANYON FORMATION, 4138 TO 4180
FEET BELOW LAND SURFACE, JULY 12 TO 14, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/12/85	12:11:06	1812.47	1783.12	1772.75	88.89	88.73	88.67	
07/12/85	12:11:16	1812.57	1783.14	1772.81	88.89	88.73	88.68	
07/12/85	12:11:28	1812.45	1783.21	1772.83	88.89	88.73	88.67	
07/12/85	12:11:38	1812.49	1783.29	1772.77	88.88	88.73	88.67	
07/12/85	12:11:50	1754.98	1776.32	1773.23	88.70	88.76	88.66	End FBU Open for SF
07/12/85	12:12:13	1700.19	288.09	1771.84	88.80	88.80	88.63	
07/12/85	12:12:26	1718.13	288.35	1772.77	88.82	88.77	88.63	
07/12/85	12:12:36	1728.31	289.07	1772.82	88.78	88.77	88.61	
07/12/85	12:12:49	1737.31	289.36	1772.84	88.76	88.78	88.61	
07/12/85	12:13:00	1742.91	289.62	1772.75	88.77	88.79	88.61	
07/12/85	12:13:13	1748.36	289.81	1772.84	88.81	88.80	88.61	
07/12/85	12:13:23	1751.68	289.99	1772.78	88.79	88.79	88.61	
07/12/85	12:13:36	1756.26	290.08	1772.76	88.77	88.77	88.60	
07/12/85	12:13:47	1759.47	290.29	1772.84	88.75	88.76	88.59	
07/12/85	12:14:00	1762.57	290.36	1772.82	88.71	88.74	88.58	
07/12/85	12:14:10	1764.92	290.52	1772.86	88.71	88.73	88.58	
07/12/85	12:14:23	1767.17	290.54	1772.80	88.69	88.75	88.59	
07/12/85	12:14:34	1769.24	290.68	1772.89	88.78	88.73	88.56	
07/12/85	12:14:47	1770.91	290.68	1772.80	88.60	88.72	88.57	
07/12/85	12:14:57	1772.64	290.89	1772.89	88.61	88.72	88.57	
07/12/85	12:15:11	1774.52	291.07	1772.72	88.61	88.71	88.56	
07/12/85	12:15:21	1775.58	291.03	1772.78	88.65	88.72	88.58	
07/12/85	12:15:34	1777.06	291.16	1772.82	88.61	88.69	88.57	
07/12/85	12:15:47	1777.68	291.30	1772.80	88.61	88.70	88.56	
07/12/85	12:15:57	1779.21	291.44	1772.82	88.63	88.68	88.57	
07/12/85	12:16:11	1780.43	291.51	1772.82	88.64	88.68	88.56	
07/12/85	12:16:21	1781.36	291.60	1772.83	88.65	88.65	88.55	
07/12/85	12:16:34	1782.31	291.64	1772.80	88.66	88.65	88.55	
07/12/85	12:16:45	1782.99	291.80	1772.85	88.66	88.63	88.54	
07/12/85	12:16:58	1783.71	291.88	1772.81	88.67	88.63	88.53	
07/12/85	12:17:08	1784.62	291.99	1772.72	88.67	88.63	88.53	
07/12/85	12:17:21	1785.33	292.08	1772.74	88.68	88.63	88.52	
07/12/85	12:17:50	1786.67	292.36	1772.85	88.69	88.62	88.49	
07/12/85	12:18:02	1787.12	292.48	1772.83	88.69	88.60	88.49	
07/12/85	12:19:03	1789.35	292.96	1772.77	88.71	88.55	88.46	
07/12/85	12:20:05	1791.26	293.53	1772.80	88.72	88.52	88.44	
07/12/85	12:21:06	1792.33	293.92	1772.82	88.73	88.52	88.43	
07/12/85	12:22:00	1793.24	294.38	1772.78	88.73	88.48	88.42	
07/12/85	12:23:02	1794.56	294.92	1772.84	88.71	88.50	88.41	
07/12/85	12:24:03	1795.16	317.34	1772.74	88.69	88.48	88.93	
07/12/85	12:26:06	1797.09	296.41	1772.74	88.68	88.47	88.40	
07/12/85	12:27:00	1797.58	296.81	1772.72	88.67	88.46	88.93	
07/12/85	12:29:03	1798.51	297.82	1772.78	88.67	88.47	88.41	
07/12/85	12:30:04	1798.84	298.22	1772.72	88.66	88.47	88.40	

TABLE A3-12 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE RAMSEY SANDSTONE OF THE BELL CANYON FORMATION, 4138 TO 4180
FEET BELOW LAND SURFACE, JULY 12 TO 14, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/12/85	12:31:06	1799.42	298.75	1772.67	88.65	88.47	88.41	
07/12/85	12:33:00	1800.23	299.70	1772.80	88.64	88.49	88.41	
07/12/85	12:34:01	1800.58	300.18	1772.76	88.65	88.48	88.40	
07/12/85	12:35:03	1801.10	300.59	1772.74	88.65	88.51	88.41	
07/12/85	12:36:04	1801.18	301.12	1772.82	88.68	88.50	88.41	
07/12/85	12:39:01	1802.07	302.51	1772.82	88.68	88.52	88.43	
07/12/85	12:40:03	1802.71	303.06	1772.90	88.68	88.53	88.42	
07/12/85	12:42:07	1803.16	303.99	1772.82	88.67	88.52	88.44	
07/12/85	12:45:01	1803.74	305.44	1772.71	88.71	88.54	88.44	
07/12/85	12:47:04	1803.64	306.36	1772.69	88.73	88.56	88.45	
07/12/85	12:48:07	1804.05	306.80	1772.73	88.71	88.56	88.46	
07/12/85	12:49:00	1804.32	350.55	1772.75	88.75	88.56	88.45	
07/12/85	12:51:02	1804.96	308.26	1772.75	88.76	88.60	88.48	
07/12/85	12:52:05	1805.00	308.65	1772.81	88.75	88.60	88.48	
07/12/85	12:58:03	1805.95	311.30	1772.79	88.82	88.61	88.50	
07/12/85	12:59:05	1806.06	311.79	1772.79	88.80	88.61	88.51	
07/12/85	13:01:03	1806.35	312.68	1772.85	88.80	88.62	88.52	
07/12/85	13:02:00	1806.41	313.06	1772.83	88.82	88.64	88.53	
07/12/85	13:03:45	1806.58	313.88	1772.77	88.82	88.63	88.52	
07/12/85	13:04:00	1806.49	329.34	1772.79	88.79	88.63	88.52	
07/12/85	13:04:13	1806.74	314.07	1772.89	88.79	88.64	88.51	
07/12/85	13:04:28	1803.31	314.12	1772.81	88.78	88.63	88.52	
07/12/85	13:04:41	1806.72	314.26	1772.83	88.77	88.63	88.52	
07/12/85	13:05:41	1806.82	314.72	1772.89	88.85	88.64	88.53	
07/12/85	13:25:28	1807.90	323.24	1772.89	88.86	88.56	88.54	
07/12/85	13:25:43	1807.80	323.31	1772.87	88.85	88.56	88.55	
07/12/85	13:26:00	1807.98	323.49	1772.89	88.85	88.57	88.55	
07/12/85	13:26:15	1807.96	323.60	1772.87	88.85	88.58	88.56	
07/12/85	13:26:32	1807.98	323.74	1772.87	88.85	88.59	88.55	
07/12/85	13:26:47	1807.98	323.82	1772.91	88.86	88.61	88.56	
07/12/85	13:27:04	1807.96	324.00	1773.31	88.85	88.66	88.54	End SFL
07/12/85	13:27:19	1816.51	371.26	1772.59	88.80	88.67	88.54	Shut-in for SBU
07/12/85	13:27:46	1848.97	474.02	1773.16	88.56	88.66	88.55	
07/12/85	13:28:01	1844.25	523.13	1773.02	88.56	88.49	88.55	
07/12/85	13:28:13	1842.42	562.53	1773.06	88.54	88.39	88.54	
07/12/85	13:28:28	1840.23	606.34	1773.08	88.52	88.83	88.55	
07/12/85	13:28:40	1839.07	641.13	1773.08	88.52	89.18	88.55	
07/12/85	13:28:54	1838.17	679.50	1773.08	88.68	89.49	88.55	
07/12/85	13:29:06	1837.48	710.10	1773.02	88.90	89.05	88.54	
07/12/85	13:29:21	1836.85	743.95	1773.10	88.66	88.75	88.54	
07/12/85	13:29:35	1836.33	775.40	1773.08	88.65	88.79	88.51	
07/12/85	13:29:47	1835.64	800.86	1773.05	88.64	88.78	88.46	
07/12/85	13:30:02	1835.15	829.10	1773.08	88.64	88.77	88.68	
07/12/85	13:30:14	1834.69	851.75	1773.02	88.63	88.76	88.69	

TABLE A3-12 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE RAMSEY SANDSTONE OF THE BELL CANYON FORMATION, 4138 TO 4180
FEET BELOW LAND SURFACE, JULY 12 TO 14, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/12/85	13:30:28	1834.17	876.90	1773.05	88.61	88.77	88.59	
07/12/85	13:30:41	1833.78	896.97	1773.07	88.68	88.76	88.59	
07/12/85	13:30:55	1833.37	919.47	1773.03	88.65	88.75	88.58	
07/12/85	13:31:07	1833.01	937.34	1773.01	88.71	88.77	88.57	
07/12/85	13:31:21	1832.54	957.66	1772.99	88.69	88.75	88.57	
07/12/85	13:31:34	1832.49	972.79	1773.05	88.71	88.74	88.58	
07/12/85	13:31:47	1831.89	991.25	1773.03	88.69	88.71	88.59	
07/12/85	13:31:59	1831.60	1004.91	1773.01	88.72	88.76	88.60	
07/12/85	13:32:13	1831.25	1021.67	1773.05	88.70	88.75	88.60	
07/12/85	13:32:25	1831.06	1034.26	1773.01	88.77	88.74	88.62	
07/12/85	13:32:38	1830.71	1049.59	1773.03	88.74	88.77	88.61	
07/12/85	13:32:53	1830.36	1064.14	1773.01	88.77	88.74	88.62	
07/12/85	13:33:05	1829.88	1075.02	1773.05	88.82	88.73	88.62	
07/12/85	13:33:18	1829.97	1088.17	1772.97	88.73	88.74	88.61	
07/12/85	13:33:30	1830.03	1098.16	1773.01	88.70	88.74	88.62	
07/12/85	13:33:44	1829.70	1110.25	1773.07	88.80	88.80	88.61	
07/12/85	13:33:56	1829.70	1119.42	1772.96	88.72	88.77	88.62	
07/12/85	13:34:10	1829.37	1130.71	1773.01	88.80	88.73	88.63	
07/12/85	13:34:22	1829.34	1139.23	1773.00	88.86	88.74	88.64	
07/12/85	13:34:35	1829.05	1149.79	1773.11	88.90	88.77	88.64	
07/12/85	13:34:47	1828.97	1157.73	1773.00	88.99	88.82	88.64	
07/12/85	13:35:01	1828.70	1167.54	1773.00	88.90	88.85	88.64	
07/12/85	13:35:13	1828.70	1174.98	1773.00	88.84	88.82	88.64	
07/12/85	13:35:26	1828.35	1184.13	1772.99	88.86	88.78	88.62	
07/12/85	13:35:38	1828.23	1191.10	1773.05	88.83	88.76	88.64	
07/12/85	13:35:52	1827.96	1199.25	1772.98	88.85	88.79	88.67	
07/12/85	13:36:03	1827.87	1205.87	1773.06	88.86	88.78	88.68	
07/12/85	13:36:16	1827.52	1213.45	1773.02	88.88	88.80	88.67	
07/12/85	13:36:30	1827.52	1220.83	1773.04	88.86	88.78	88.68	
07/12/85	13:36:49	1827.11	1231.38	1773.02	88.84	88.77	88.68	
07/12/85	13:37:03	1826.92	1238.52	1773.04	88.81	88.80	88.69	
07/12/85	13:37:15	1826.80	1244.09	1772.98	88.87	88.80	88.68	
07/12/85	13:37:28	1826.44	1250.58	1772.98	88.90	88.76	88.68	
07/12/85	13:37:40	1826.38	1255.93	1773.09	88.91	88.80	88.65	
07/12/85	13:37:53	1826.36	1262.00	1773.04	88.95	88.80	88.67	
07/12/85	13:38:04	1826.09	1267.07	1773.00	88.97	88.84	88.68	
07/12/85	13:38:18	1825.82	1272.88	1773.00	88.93	88.80	88.70	
07/12/85	13:38:29	1825.72	1277.62	1773.02	88.92	88.85	88.72	
07/12/85	13:38:43	1825.57	1283.09	1773.00	88.93	88.85	88.72	
07/12/85	13:38:54	1825.59	1287.63	1773.00	88.96	88.84	88.71	
07/12/85	13:39:07	1825.49	1292.91	1773.02	88.93	88.88	88.72	
07/12/85	13:39:18	1825.41	1297.25	1773.08	88.96	88.85	88.71	
07/12/85	13:39:32	1825.22	1302.22	1773.02	88.96	88.85	88.70	
07/12/85	13:39:45	1825.01	1307.12	1773.10	88.96	88.85	88.71	

TABLE A3-12 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE RAMSEY SANDSTONE OF THE BELL CANYON FORMATION, 4138 TO 4180
FEET BELOW LAND SURFACE, JULY 12 TO 14, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/12/85	13:39:56	1824.85	1311.19	1772.97	88.97	88.82	88.72	
07/12/85	13:40:10	1824.97	1315.81	1773.00	88.99	88.80	88.71	
07/12/85	13:40:21	1824.68	1319.74	1773.04	88.97	88.86	88.71	
07/12/85	13:40:35	1824.56	1324.23	1772.95	88.97	88.74	88.71	
07/12/85	13:40:46	1824.43	1327.93	1773.04	88.97	88.78	88.72	
07/12/85	13:40:59	1824.31	1332.28	1773.02	88.96	88.77	88.72	
07/12/85	13:41:11	1824.25	1336.03	1773.04	88.95	88.82	88.72	
07/12/85	13:41:25	1824.04	1340.40	1773.02	88.99	88.85	88.72	
07/12/85	13:41:51	1823.88	1348.09	1773.01	88.92	88.93	88.73	
07/12/85	13:42:03	1823.81	1351.47	1773.01	88.97	88.96	88.73	
07/12/85	13:42:17	1823.58	1387.18	1773.08	89.00	88.98	88.73	
07/12/85	13:42:43	1823.52	1362.51	1773.08	88.97	88.97	88.73	
07/12/85	13:43:09	1823.40	1369.31	1773.01	88.99	88.98	88.73	
07/12/85	13:43:23	1823.30	1372.92	1772.97	88.97	89.04	88.73	
07/12/85	13:43:35	1823.21	1375.81	1773.06	88.99	88.95	88.74	
07/12/85	13:43:49	1823.09	1379.30	1773.01	88.97	88.91	88.74	
07/12/85	13:44:01	1823.01	1382.15	1773.04	88.97	88.90	88.74	
07/12/85	13:44:15	1822.96	1385.47	1773.08	88.98	88.87	88.73	
07/12/85	13:44:27	1822.96	1388.24	1773.10	89.00	88.84	88.75	
07/12/85	13:44:41	1822.86	1391.45	1773.01	88.95	88.85	88.77	
07/12/85	13:44:53	1822.72	1394.09	1773.03	88.99	88.85	88.79	
07/12/85	13:45:07	1822.69	1397.17	1773.03	88.99	88.85	88.81	
07/12/85	13:45:19	1822.53	1399.79	1772.96	89.02	88.88	88.81	
07/12/85	13:45:33	1822.47	1402.75	1773.07	89.01	88.87	88.80	
07/12/85	13:45:45	1822.49	1405.23	1773.05	89.00	88.86	88.80	
07/12/85	13:45:59	1822.30	1408.04	1773.07	89.01	88.87	88.79	
07/12/85	13:46:11	1822.26	1410.44	1773.03	88.99	88.87	88.78	
07/12/85	13:46:25	1822.26	1413.27	1772.99	89.00	88.85	88.77	
07/12/85	13:46:39	1822.11	1415.99	1773.05	89.00	88.90	88.78	
07/12/85	13:46:51	1822.09	1418.31	1773.03	88.99	88.90	88.77	
07/12/85	13:47:05	1822.07	1420.94	1772.99	88.98	88.88	88.78	
07/12/85	13:47:17	1821.99	1423.12	1773.07	88.98	88.89	88.78	
07/12/85	13:47:40	1821.89	1427.16	1773.03	88.97	88.89	88.77	
07/12/85	13:47:51	1821.85	1429.24	1773.01	88.98	88.91	88.77	
07/12/85	13:48:05	1821.83	1431.70	1773.05	88.92	88.92	88.77	
07/12/85	13:48:17	1821.74	1433.67	1773.07	88.96	88.90	88.77	
07/12/85	13:48:31	1821.70	1436.07	1773.07	88.97	88.91	88.77	
07/12/85	13:48:43	1821.70	1438.13	1772.97	88.97	88.91	88.78	
07/12/85	13:48:57	1821.87	1440.44	1773.05	88.95	88.88	88.78	
07/12/85	13:49:09	1821.58	1442.39	1773.07	88.92	88.88	88.77	
07/12/85	13:49:23	1821.53	1444.66	1773.01	88.99	88.90	88.78	
07/12/85	13:49:35	1821.41	1446.53	1773.05	88.98	88.90	88.78	
07/12/85	13:49:49	1821.58	1448.75	1773.03	88.98	88.92	88.77	
07/12/85	13:50:01	1821.49	1450.55	1773.07	88.99	88.89	88.78	

TABLE A3-12 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE RAMSEY SANDSTONE OF THE BELL CANYON FORMATION, 4138 TO 4180
FEET BELOW LAND SURFACE, JULY 12 TO 14, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/12/85	13:50:15	1821.41	1452.76	1773.01	89.00	88.91	88.77	
07/12/85	13:50:29	1821.43	1454.81	1773.03	88.99	88.89	88.78	
07/12/85	13:50:41	1821.41	1456.53	1773.09	88.99	88.89	88.78	
07/12/85	13:50:55	1821.49	1458.69	1773.03	88.99	88.91	88.77	
07/12/85	13:51:07	1821.45	1460.30	1773.03	88.99	88.92	88.76	
07/12/85	13:51:38	1821.41	1464.68	1773.07	89.01	88.92	88.77	
07/12/85	13:52:00	1821.43	1467.84	1773.05	89.00	88.91	88.77	
07/12/85	13:53:08	1842.73	1524.49	1773.11	88.97	88.93	88.79	
07/12/85	13:54:02	1820.85	1483.43	1773.07	89.00	88.92	88.77	
07/12/85	13:55:10	1842.08	1507.33	1773.01	89.00	88.90	89.15	
07/12/85	13:56:04	1820.40	1497.51	1773.05	89.00	88.96	88.77	
07/12/85	13:58:06	1798.71	1510.25	1773.14	88.99	89.06	88.78	
07/12/85	13:59:03	1819.67	1515.76	1773.16	88.98	89.09	88.78	
07/12/85	14:00:08	1819.42	1521.81	1773.03	88.96	88.97	88.77	
07/12/85	14:01:05	1819.22	1526.85	1773.07	88.96	88.95	88.78	
07/12/85	14:03:07	1840.07	1552.93	1773.10	88.95	88.94	88.76	
07/12/85	14:06:05	1818.31	1550.42	1773.08	88.96	88.88	88.75	
07/12/85	14:07:00	1818.16	1554.23	1773.01	88.95	88.90	88.74	
07/12/85	14:08:07	1818.02	1558.82	1773.10	88.93	88.87	88.73	
07/12/85	14:09:01	1817.93	1562.27	1773.04	88.96	88.88	88.73	
07/12/85	14:12:00	1838.98	1573.21	1773.08	88.91	88.85	88.75	
07/12/85	14:13:05	1817.23	1576.94	1773.09	88.91	88.82	88.78	
07/12/85	14:14:02	1817.17	1579.99	1773.07	88.92	88.84	88.79	
07/12/85	14:15:07	1817.02	1583.50	1773.09	89.33	89.21	88.78	
07/12/85	14:17:09	1816.79	1589.74	1773.05	88.96	88.81	88.76	
07/12/85	14:18:06	1816.59	1592.47	1772.90	88.96	88.82	90.27	
07/12/85	14:19:02	1816.51	1595.16	1773.07	88.97	88.81	88.76	
07/12/85	14:21:04	1816.22	1600.70	1773.12	88.96	88.79	88.74	
07/12/85	14:22:09	1816.11	1603.55	1773.10	88.96	88.80	88.74	
07/12/85	14:23:06	1816.03	1605.94	1773.10	88.96	88.81	88.73	
07/12/85	14:24:08	1837.26	1608.52	1773.18	88.96	88.84	88.74	
07/12/85	14:25:05	1815.86	1610.77	1773.12	88.96	88.82	88.72	
07/12/85	14:26:10	1815.70	1613.33	1773.08	88.96	88.82	88.72	
07/12/85	14:28:01	1815.55	1617.54	1773.12	88.96	88.83	88.71	
07/12/85	14:29:09	1815.43	1619.97	1773.14	88.95	88.83	88.71	
07/12/85	14:30:03	1815.39	1621.94	1773.10	88.96	88.84	88.72	
07/12/85	14:32:05	1815.26	1626.09	1773.08	88.95	88.83	88.71	
07/12/85	14:33:02	1815.21	1627.96	1773.12	89.71	88.86	88.71	
07/12/85	14:34:09	1815.12	1630.13	1773.10	88.95	88.84	88.71	
07/12/85	14:35:04	1814.99	1631.87	1773.04	88.95	88.85	88.71	
07/12/85	14:36:01	1815.02	1633.63	1773.12	88.95	88.86	88.71	
07/12/85	14:40:04	1814.73	1640.81	1773.17	88.95	88.86	88.71	
07/12/85	14:41:09	1814.79	1658.65	1773.08	88.95	88.84	88.71	
07/12/85	14:42:06	1814.70	1644.12	1773.08	88.95	88.84	88.70	

TABLE A3-12 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE RAMSEY SANDSTONE OF THE BELL CANYON FORMATION, 4138 TO 4180
FEET BELOW LAND SURFACE, JULY 12 TO 14, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/12/85	14:43:01	1814.73	1645.56	1773.17	88.95	88.89	88.71	
07/12/85	14:45:02	1814.58	1696.80	1773.14	88.95	88.85	88.70	
07/12/85	14:47:04	1814.50	1651.80	1773.15	88.95	88.85	88.70	
07/12/85	14:48:01	1836.30	1685.87	1773.19	88.95	88.84	88.70	
07/12/85	14:49:06	1814.39	1654.72	1773.17	88.95	88.88	88.69	
07/12/85	14:50:03	1814.33	1656.00	1773.17	88.94	88.85	88.70	
07/12/85	14:51:10	1814.25	1657.54	1773.08	88.94	88.81	88.70	
07/12/85	14:55:03	1814.23	1662.66	1773.19	88.94	88.80	88.70	
07/12/85	14:56:08	1814.06	1663.98	1773.15	88.94	88.79	88.70	
07/12/85	15:00:01	1813.96	1668.68	1773.21	88.94	88.74	88.70	
07/12/85	15:01:09	1813.92	1669.93	1773.19	88.94	88.77	88.69	
07/12/85	15:03:00	1835.46	1672.08	1773.21	89.71	88.74	88.70	
07/12/85	15:07:03	1813.79	1708.61	1773.17	88.94	88.72	88.69	
07/12/85	15:11:07	1813.65	1712.59	1773.23	88.94	88.71	88.69	
07/12/85	15:13:09	1813.59	1682.46	1773.17	88.94	88.70	88.69	
07/12/85	15:14:03	1813.53	1683.36	1773.19	88.93	88.70	88.69	
07/12/85	15:16:05	1834.87	1685.17	1773.21	88.94	88.69	88.69	
07/12/85	15:17:10	1813.50	1686.15	1773.19	88.93	88.68	88.68	
07/12/85	15:18:06	1813.46	1686.99	1773.32	88.94	88.69	88.67	
07/12/85	15:19:01	1834.79	1687.78	1773.10	88.94	88.70	89.42	
07/12/85	15:22:10	1813.36	1690.45	1773.23	88.93	88.70	88.68	
07/12/85	15:25:08	1813.29	1692.85	1773.21	89.31	89.10	88.67	
07/12/85	15:28:04	1813.28	1695.25	1773.19	88.94	88.74	88.69	
07/12/85	15:29:01	1813.26	1695.98	1773.23	88.93	88.75	88.68	
07/12/85	15:30:06	1813.21	1696.78	1773.28	88.93	88.76	88.66	
07/12/85	15:31:03	1813.11	1697.46	1773.22	88.93	88.77	88.64	
07/12/85	15:32:08	1813.15	1698.28	1773.20	88.93	88.77	88.62	
07/12/85	15:37:08	1812.99	1701.82	1773.30	88.93	88.81	88.65	
07/12/85	15:38:05	1813.09	1702.47	1773.27	88.93	88.81	88.67	
07/12/85	15:42:08	1812.97	1737.44	1773.09	88.93	88.84	90.52	
07/12/85	15:47:06	1749.47	1708.29	1773.21	88.93	88.87	88.66	
07/12/85	15:49:08	1812.82	1709.50	1773.34	88.92	88.88	88.67	
07/12/85	15:50:05	1812.80	1710.10	1773.27	88.92	88.89	89.04	
07/12/85	15:51:10	1812.72	1710.75	1773.27	88.91	88.89	88.68	
07/12/85	15:53:01	1791.36	1711.83	1773.19	88.93	88.90	88.67	
07/12/85	15:54:08	1812.66	1712.44	1773.32	88.92	88.91	88.69	
07/12/85	15:55:05	1812.76	1712.98	1773.27	88.92	88.91	89.06	
07/12/85	15:56:10	1812.67	1713.60	1773.32	89.31	88.92	88.68	
07/12/85	15:57:07	1812.68	1714.08	1773.36	88.92	89.31	88.69	
07/12/85	15:58:01	1812.64	1714.63	1773.23	88.91	88.93	89.08	
07/12/85	16:02:04	1812.66	1716.71	1773.27	88.92	88.95	88.70	
07/12/85	16:10:01	1812.45	1720.73	1773.31	88.92	88.99	88.70	
07/12/85	16:11:06	1812.39	1721.23	1773.27	88.92	88.98	88.70	
07/12/85	16:12:03	1812.39	1721.71	1773.31	88.92	88.99	88.70	

TABLE A3-12 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE RAMSEY SANDSTONE OF THE BELL CANYON FORMATION, 4138 TO 4180
FEET BELOW LAND SURFACE, JULY 12 TO 14, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/12/85	16:13:08	1812.33	1722.21	1773.31	88.91	88.98	88.70	
07/12/85	16:15:10	1812.28	1723.13	1773.25	88.92	88.97	89.07	
07/12/85	16:16:06	1854.92	1804.01	1773.23	88.92	89.74	89.46	
07/12/85	16:20:10	1812.16	1725.39	1773.12	88.92	88.99	90.56	
07/12/85	16:21:04	1812.30	1725.75	1773.36	88.92	89.00	88.69	
07/12/85	16:23:06	1812.24	1726.64	1773.27	88.92	89.00	88.69	
07/12/85	16:28:06	1833.75	1728.69	1773.42	88.92	89.05	88.68	
07/12/85	16:30:08	1833.09	1713.46	1773.31	88.92	88.96	88.69	
07/12/85	16:31:04	1812.10	1729.87	1773.34	88.92	89.02	88.69	
07/12/85	16:34:00	1812.01	1730.95	1773.38	88.92	89.02	88.68	
07/12/85	16:39:00	1811.99	1732.87	1773.38	88.92	88.98	88.68	
07/12/85	16:40:06	1812.02	1733.22	1773.33	88.92	88.97	89.44	
07/12/85	16:41:03	1811.99	1733.49	1773.40	88.92	88.96	88.68	
07/12/85	16:42:10	1811.99	1734.01	1773.36	88.92	88.95	88.68	
07/12/85	16:43:04	1811.93	1734.36	1773.42	88.92	88.96	88.68	
07/12/85	16:47:08	1811.95	1719.58	1773.72	88.92	88.92	88.67	
07/12/85	16:48:04	1812.12	1736.05	1773.49	88.92	88.94	88.67	
07/12/85	17:15:14	1811.64	1742.64	1773.51	89.30	88.86	88.67	
07/12/85	17:19:19	1811.64	1745.36	1773.42	88.91	88.84	88.67	
07/12/85	17:21:13	1811.58	1745.90	1773.53	88.92	88.82	88.66	
07/12/85	17:22:33	1835.04	1794.47	1773.51	88.92	88.78	88.65	
07/12/85	17:24:06	1811.74	1746.66	1773.40	89.51	89.40	89.25	
07/12/85	17:25:29	1811.62	1746.92	1773.51	88.91	88.82	88.66	
07/12/85	17:26:46	1811.60	1747.27	1773.47	89.29	88.79	88.67	
07/12/85	17:28:09	1811.49	1747.64	1773.53	89.31	89.19	88.66	
07/12/85	17:41:52	1811.38	1750.92	1773.65	88.80	88.65	88.54	
07/12/85	17:42:06	1811.44	1751.00	1773.65	88.80	88.65	88.54	
07/12/85	17:52:09	1811.33	1753.09	1773.62	88.90	88.77	88.64	
07/12/85	17:53:05	1811.37	1753.29	1773.55	88.90	88.76	88.64	
07/12/85	18:20:21	1811.10	1758.47	1773.62	88.91	88.83	88.62	
07/12/85	18:20:33	1811.21	1758.57	1773.62	88.91	88.83	88.63	
07/12/85	18:20:47	1811.06	1758.57	1773.66	88.92	88.81	88.63	
07/12/85	18:20:58	1811.25	1758.60	1773.60	88.91	88.83	88.64	
07/12/85	18:21:12	1811.17	1758.59	1773.64	88.91	88.82	88.64	
07/12/85	18:21:23	1811.15	1758.60	1773.62	88.92	88.82	88.64	
07/12/85	18:21:37	1811.10	1758.64	1773.61	88.91	88.81	88.66	
07/12/85	18:21:49	1811.23	1758.66	1773.59	88.91	88.81	88.64	
07/12/85	18:22:03	1811.25	1758.76	1773.62	88.91	88.81	88.65	
07/12/85	18:22:14	1811.21	1758.82	1773.66	88.91	88.81	88.65	
07/12/85	18:22:28	1811.25	1758.88	1773.64	88.91	88.80	88.64	
07/12/85	18:22:40	1811.10	1758.88	1773.68	88.90	88.81	88.64	
07/12/85	18:22:54	1811.21	1758.91	1773.66	88.90	88.80	88.64	
07/12/85	18:23:05	1811.15	1758.95	1773.61	88.91	88.80	88.65	
07/12/85	18:23:19	1811.19	1758.95	1773.64	88.92	88.80	88.64	

TABLE A3-12 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE RAMSEY SANDSTONE OF THE BELL CANYON FORMATION, 4138 TO 4180
FEET BELOW LAND SURFACE, JULY 12 TO 14, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/12/85	18:23:31	1811.15	1758.99	1773.64	88.91	88.79	88.65	
07/12/85	18:23:45	1811.17	1759.01	1773.59	88.90	88.79	88.65	
07/12/85	18:23:58	1811.10	1759.13	1773.68	88.91	88.78	88.65	
07/12/85	18:24:10	1811.15	1759.11	1773.68	88.92	88.78	88.65	
07/12/85	18:24:45	1811.25	1759.22	1773.68	88.91	88.77	88.64	
07/12/85	18:25:07	1811.10	1759.32	1773.62	88.91	88.77	88.65	
07/12/85	18:26:03	1811.15	1759.46	1773.64	88.91	88.75	88.65	
07/12/85	18:27:07	1811.13	1759.63	1773.62	88.90	88.73	88.65	
07/12/85	18:28:03	1811.17	1759.82	1773.64	88.91	88.72	88.65	
07/12/85	18:29:07	1811.10	1759.92	1773.68	88.91	88.71	88.65	
07/12/85	18:30:02	1811.19	1760.15	1773.70	88.91	88.76	88.65	
07/12/85	18:31:06	1811.08	1760.31	1773.70	88.91	88.72	88.66	
07/12/85	18:32:02	1811.15	1760.48	1773.66	88.91	88.74	88.66	
07/12/85	18:33:06	1811.13	1760.61	1773.66	88.91	88.76	88.66	
07/12/85	18:34:01	1811.13	1760.75	1773.62	88.91	88.77	88.65	
07/12/85	18:35:05	1811.10	1760.92	1773.64	88.91	88.76	88.66	
07/12/85	18:36:01	1811.08	1761.08	1773.66	88.91	88.77	88.66	
07/12/85	18:37:08	1811.08	1761.31	1773.66	88.91	88.75	88.65	
07/12/85	18:38:01	1811.06	1761.44	1773.62	88.91	88.75	88.65	
07/12/85	18:39:07	1811.06	1761.62	1773.59	88.91	88.73	88.67	
07/12/85	18:40:01	1811.13	1761.75	1773.64	88.91	88.77	88.66	
07/12/85	18:41:07	1811.10	1761.89	1773.68	88.91	88.76	88.65	
07/12/85	18:42:00	1811.04	1762.02	1773.64	88.91	88.75	88.65	
07/12/85	18:43:07	1811.08	1762.31	1773.70	88.90	88.77	88.65	
07/12/85	18:44:00	1811.04	1762.35	1773.68	88.91	88.74	88.66	
07/12/85	18:45:06	1811.04	1762.50	1773.74	88.91	88.75	88.66	
07/12/85	18:46:00	1811.06	1762.64	1773.68	88.91	88.75	88.66	
07/12/85	18:47:06	1811.06	1762.85	1773.64	88.91	88.76	88.66	
07/12/85	18:48:00	1811.04	1762.89	1773.68	88.91	88.77	88.67	
07/12/85	18:49:06	1811.02	1763.08	1773.74	88.89	88.76	88.65	
07/12/85	18:50:10	1810.96	1763.27	1773.72	88.90	88.76	88.66	
07/12/85	18:51:06	1811.06	1763.37	1773.70	88.91	88.76	88.65	
07/12/85	18:52:10	1811.08	1763.56	1773.68	88.91	88.78	88.65	
07/12/85	18:53:05	1811.13	1763.68	1773.74	88.91	88.76	88.66	
07/12/85	18:54:01	1811.06	1763.80	1773.66	88.91	88.77	88.66	
07/12/85	18:55:04	1811.00	1764.03	1773.72	88.91	88.77	88.66	
07/12/85	18:56:10	1810.96	1764.14	1773.70	88.90	88.77	88.65	
07/12/85	18:57:03	1811.00	1764.30	1773.72	88.91	88.77	88.66	
07/12/85	18:58:09	1811.00	1764.43	1773.74	88.91	88.77	88.68	
07/12/85	18:59:03	1811.06	1764.59	1773.72	88.91	88.77	88.68	
07/12/85	19:00:09	1810.94	1764.70	1773.70	88.90	88.75	88.68	
07/12/85	19:00:41	1810.96	1764.78	1773.70	88.91	88.78	88.67	
07/12/85	19:00:54	1810.98	1764.84	1773.72	88.91	88.76	88.68	
07/12/85	19:01:06	1810.94	1764.80	1773.68	88.91	88.78	88.68	

TABLE A3-12 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE RAMSEY SANDSTONE OF THE BELL CANYON FORMATION, 4138 TO 4180
FEET BELOW LAND SURFACE, JULY 12 TO 14, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/12/85	19:01:20	1811.00	1764.88	1773.72	88.91	88.77	88.67	
07/12/85	19:01:31	1810.94	1764.91	1773.70	88.90	88.77	88.66	
07/12/85	19:01:44	1811.13	1764.97	1773.80	88.91	88.76	88.66	End SBU
07/12/85	19:01:55	1758.42	1757.81	1773.53	88.70	88.83	88.65	Open for SLUG
07/12/85	19:02:08	1688.41	342.56	1775.26	88.90	88.73	88.67	Test
07/12/85	19:02:22	1713.58	326.86	1773.99	88.92	88.79	88.65	
07/12/85	19:02:33	1727.05	327.63	1773.64	88.70	88.79	88.66	
07/12/85	19:02:47	1737.91	328.17	1773.68	88.77	88.77	88.64	
07/12/85	19:02:59	1743.55	328.41	1773.72	88.78	88.78	88.64	
07/12/85	19:03:13	1750.25	328.71	1773.74	88.78	88.81	88.64	
07/12/85	19:03:25	1753.68	328.85	1773.72	88.80	88.78	88.62	
07/12/85	19:03:39	1758.28	329.01	1773.70	88.76	88.74	88.62	
07/12/85	19:03:51	1761.21	329.14	1773.68	88.74	88.74	88.61	
07/12/85	19:04:05	1764.55	329.28	1773.69	88.77	88.74	88.58	
07/12/85	19:04:33	1769.15	329.56	1773.71	88.73	88.73	88.56	
07/12/85	19:05:06	1773.80	329.87	1773.71	88.69	88.70	88.57	
07/12/85	19:06:07	1780.53	330.39	1773.73	88.64	88.72	88.55	
07/12/85	19:07:00	1783.84	330.73	1773.75	88.67	88.68	88.54	
07/12/85	19:08:00	1786.94	331.20	1773.72	88.69	88.60	88.51	
07/12/85	19:09:03	1789.46	331.72	1773.68	88.72	88.63	88.48	
07/12/85	19:10:05	1791.05	332.26	1773.72	88.73	88.60	88.46	
07/12/85	19:11:09	1792.43	332.75	1773.70	88.74	88.60	88.45	
07/12/85	19:12:03	1793.40	333.25	1773.68	88.73	88.59	88.43	
07/12/85	19:13:06	1794.44	333.88	1773.73	88.75	88.59	88.43	
07/12/85	19:14:00	1795.35	334.36	1773.75	88.72	88.58	88.43	
07/12/85	19:15:03	1796.05	334.98	1773.68	88.72	88.58	88.42	
07/12/85	19:16:07	1796.82	335.49	1773.68	88.72	88.57	88.43	
07/12/85	19:17:09	1797.29	335.97	1773.75	88.73	88.58	88.42	
07/12/85	19:18:04	1797.71	336.43	1773.73	88.71	88.58	88.42	
07/12/85	19:19:06	1798.22	337.03	1773.75	88.72	88.58	88.43	
07/12/85	19:20:01	1798.47	337.47	1773.70	88.74	88.58	88.43	
07/12/85	19:21:03	1798.82	338.00	1773.77	88.71	88.59	88.44	
07/12/85	19:22:07	1799.26	338.52	1773.70	88.73	88.60	88.45	
07/12/85	19:23:00	1799.69	338.96	1773.72	88.73	88.60	88.46	
07/12/85	19:24:04	1800.17	339.53	1773.66	88.74	88.59	88.45	
07/12/85	19:25:07	1800.48	340.06	1773.68	88.75	88.60	88.46	
07/12/85	19:26:01	1800.68	340.45	1773.74	88.75	88.61	88.46	
07/12/85	19:27:06	1801.12	341.01	1773.66	88.76	88.60	88.47	
07/12/85	19:28:08	1800.95	341.56	1773.74	88.77	88.60	88.48	
07/12/85	19:29:03	1800.27	341.97	1773.66	88.77	88.63	88.49	
07/12/85	19:30:05	1800.91	342.50	1773.80	88.78	88.64	88.50	
07/12/85	19:31:09	1801.53	343.06	1773.76	88.77	88.65	88.53	
07/12/85	19:40:02	1803.80	347.68	1773.75	88.85	88.70	88.55	
07/12/85	19:50:08	1805.46	352.88	1773.77	88.86	88.73	88.59	

TABLE A3-12 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE RAMSEY SANDSTONE OF THE BELL CANYON FORMATION, 4138 TO 4180
FEET BELOW LAND SURFACE, JULY 12 TO 14, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/12/85	19:52:44	1805.62	354.16	1773.77	88.86	88.72	88.61	
07/12/85	20:00:00	1806.28	357.66	1773.77	88.87	88.73	88.60	
07/12/85	20:10:04	1806.99	362.30	1773.81	88.88	88.75	88.60	
07/12/85	20:20:01	1807.40	366.61	1773.87	88.88	88.73	88.62	
07/12/85	20:30:06	1807.73	370.90	1773.87	88.88	88.70	88.62	
07/12/85	20:40:04	1807.96	375.10	1773.91	88.89	88.73	88.64	
07/12/85	20:50:00	1808.17	379.23	1773.98	88.89	88.71	88.64	
07/12/85	21:00:08	1808.44	383.45	1773.93	88.89	88.75	88.64	
07/12/85	21:10:03	1808.58	386.75	1773.95	88.89	88.73	88.65	
07/12/85	21:20:02	1808.44	389.98	1773.99	88.89	88.73	88.67	
07/12/85	21:30:00	1808.58	393.44	1774.02	88.89	88.74	88.66	
07/12/85	21:40:07	1808.70	396.85	1773.98	88.89	88.79	88.64	
07/12/85	21:50:05	1808.81	400.45	1774.04	88.89	88.78	88.65	
07/12/85	22:00:01	1808.73	403.99	1774.08	88.89	88.79	88.67	
07/12/85	22:10:00	1808.99	407.40	1774.14	88.90	88.82	88.67	
07/12/85	22:20:07	1808.93	410.95	1774.09	88.90	88.82	88.70	
07/12/85	22:30:06	1809.04	414.59	1774.14	88.90	88.83	88.71	
07/12/85	22:40:03	1809.04	417.97	1774.14	88.90	88.81	88.71	
07/12/85	22:50:02	1809.04	421.44	1774.18	88.90	88.80	88.70	
07/12/85	23:00:00	1809.02	424.80	1774.16	88.90	88.83	88.70	
07/12/85	23:10:09	1808.99	428.39	1774.24	88.90	88.83	88.71	
07/12/85	23:20:06	1809.02	431.83	1774.28	88.90	88.81	88.71	
07/12/85	23:30:06	1809.16	435.23	1774.35	88.90	88.80	88.70	
07/12/85	23:40:04	1809.02	438.48	1774.31	88.90	88.81	88.71	
07/12/85	23:50:04	1809.16	441.88	1774.35	88.90	88.83	88.71	
07/13/85	00:00:04	1809.10	445.25	1774.35	88.90	88.83	88.70	
07/13/85	00:10:01	1809.08	448.63	1774.45	88.90	88.82	88.71	
07/13/85	00:20:01	1809.08	451.87	1774.45	88.90	88.83	88.71	
07/13/85	00:30:09	1809.04	455.22	1774.43	88.90	88.87	88.70	
07/13/85	00:40:08	1809.06	458.41	1774.41	88.90	88.87	88.71	
07/13/85	00:50:07	1809.06	461.80	1774.50	88.90	88.91	88.70	
07/13/85	01:00:06	1809.08	465.01	1774.48	88.90	88.82	88.70	
07/13/85	01:10:04	1809.16	468.15	1774.58	88.90	88.82	88.71	
07/13/85	01:20:04	1809.02	471.30	1774.62	88.90	88.82	88.70	
07/13/85	01:30:01	1808.99	474.41	1774.54	88.90	88.84	88.71	
07/13/85	01:40:02	1809.10	477.62	1774.62	88.90	88.85	88.71	
07/13/85	01:50:00	1809.04	480.67	1774.62	88.90	88.81	88.71	
07/13/85	02:00:00	1808.95	483.78	1774.70	88.90	88.82	88.74	
07/13/85	02:10:08	1808.97	486.95	1774.66	88.90	88.82	88.74	
07/13/85	02:20:08	1808.93	490.04	1774.68	88.90	88.82	88.74	
07/13/85	02:30:07	1808.97	493.08	1774.70	88.89	88.82	88.75	
07/13/85	02:40:07	1809.04	496.10	1774.72	88.89	88.83	88.74	
07/13/85	02:50:08	1808.91	499.24	1774.79	88.89	88.81	88.73	
07/13/85	03:00:06	1808.91	502.42	1774.85	88.90	88.81	88.75	

TABLE A3-12 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE RAMSEY SANDSTONE OF THE BELL CANYON FORMATION, 4139 TO 4180
FEET BELOW LAND SURFACE, JULY 12 TO 14, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/13/85	03:10:07	1808.89	505.55	1774.83	88.90	88.81	88.74	
07/13/85	09:00:53	1808.48	604.51	1775.69	88.89	88.69	88.74	
07/13/85	09:01:05	1808.25	604.62	1775.76	88.89	88.68	88.74	
07/13/85	09:02:10	1808.44	604.89	1775.74	88.89	88.68	88.75	
07/13/85	09:05:00	1808.29	605.59	1775.69	88.89	88.69	88.76	
07/13/85	09:08:02	1808.37	606.34	1775.69	88.89	88.70	88.77	
07/13/85	09:09:05	1808.39	606.61	1775.71	88.89	88.71	88.76	
07/13/85	09:12:06	1808.35	607.37	1775.76	88.89	88.71	88.76	
07/13/85	09:30:00	1808.37	611.90	1775.71	88.89	88.75	88.78	
07/13/85	09:40:10	1808.33	614.49	1775.64	88.89	88.78	89.98	
07/13/85	10:00:08	1808.35	619.51	1775.82	88.89	88.84	88.78	
07/13/85	10:10:07	1808.23	621.99	1775.82	88.89	88.86	88.78	
07/13/85	10:30:05	1808.31	626.94	1775.90	88.89	88.90	88.78	
07/13/85	10:40:02	1808.25	629.41	1775.97	88.89	88.93	88.77	
07/13/85	11:00:08	1808.27	634.38	1775.99	88.89	88.98	88.78	
07/13/85	11:10:08	1808.31	636.80	1775.89	88.89	89.42	89.20	
07/13/85	11:20:05	1808.21	639.26	1776.03	88.88	89.03	88.79	
07/13/85	12:30:02	1808.13	656.13	1776.13	88.86	89.21	88.78	
07/13/85	12:40:02	1808.11	658.57	1776.20	88.84	89.23	88.78	
07/13/85	12:50:09	1808.11	660.93	1776.18	88.87	89.26	88.78	
07/13/85	13:10:05	1807.92	665.66	1776.26	88.87	89.30	88.79	
07/13/85	14:20:00	1807.90	682.02	1776.47	88.77	89.47	88.80	
07/13/85	14:24:09	1833.38	682.97	1776.40	88.81	89.48	89.19	
07/13/85	14:25:03	1808.06	683.21	1776.43	88.89	89.48	88.79	
07/13/85	14:50:02	1807.94	688.76	1776.49	88.86	89.54	88.79	
07/13/85	15:20:03	1807.87	695.99	1776.49	89.29	89.62	89.21	
07/13/85	16:30:03	1807.94	711.80	1776.66	88.92	89.78	88.80	
07/13/85	17:30:04	1807.91	725.19	1776.27	89.39	89.97	94.50	
07/14/85	00:03:23	1807.38	808.78	1777.79	88.90	88.97	88.74	
07/14/85	00:06:07	1807.28	809.30	1777.60	88.90	88.99	90.39	
07/14/85	00:41:29	1807.28	816.34	1777.93	88.89	88.97	88.73	
07/14/85	00:42:05	1807.17	816.50	1777.90	88.88	88.97	88.70	
07/14/85	00:48:25	1770.00	817.74	1777.91	88.88	89.00	88.73	
07/14/85	01:09:07	1807.11	821.88	1778.00	88.88	88.93	88.70	
07/14/85	01:49:17	1806.97	829.86	1778.20	88.88	88.93	88.66	
07/14/85	02:00:06	1807.05	818.01	1778.09	88.88	88.98	88.71	
07/14/85	02:06:01	1807.05	832.98	1778.07	88.88	89.32	88.70	
07/14/85	02:15:14	1807.11	834.84	1778.09	88.88	88.97	88.68	
07/14/85	02:24:01	1807.07	836.54	1778.13	88.88	88.98	88.67	
07/14/85	02:26:05	1807.03	836.96	1778.17	88.88	88.98	88.70	
07/14/85	02:27:06	1807.01	837.17	1778.13	88.88	88.99	88.70	
07/14/85	02:28:06	1807.01	837.36	1778.15	88.88	88.99	88.69	
07/14/85	02:29:09	1790.63	837.54	1778.19	88.88	89.01	88.70	
07/14/85	02:30:09	1806.99	823.97	1778.17	88.88	89.00	88.70	

TABLE A3-12 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE RAMSEY SANDSTONE OF THE BELL CANYON FORMATION, 4138 TO 4180
FEET BELOW LAND SURFACE, JULY 12 TO 14, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/14/85	02:31:00	1823.03	837.96	1778.15	88.88	89.00	88.69	
07/14/85	02:57:04	1806.95	843.09	1778.19	88.88	88.93	88.73	
07/14/85	03:01:57	1807.13	843.97	1778.25	88.88	88.87	88.73	
07/14/85	03:12:02	1807.01	845.98	1778.27	88.88	88.83	88.75	
07/14/85	03:13:18	1807.03	846.18	1778.23	88.88	88.85	88.75	
07/14/85	03:16:25	1807.15	846.81	1778.25	88.88	89.54	88.75	
07/14/85	03:19:09	1807.24	847.38	1778.31	88.88	88.81	88.76	
07/14/85	03:24:45	1806.93	848.41	1778.27	88.88	88.81	88.76	
07/14/85	03:25:10	1807.03	848.50	1778.29	88.88	88.81	88.77	
07/14/85	03:26:01	1807.05	848.64	1778.33	88.88	88.82	88.77	
07/14/85	03:27:01	1807.01	848.81	1778.27	88.88	88.84	88.78	
07/14/85	03:29:48	1806.88	863.20	1778.27	88.88	88.80	88.78	
07/14/85	03:42:06	1838.99	851.79	1778.31	89.22	89.10	88.80	
07/14/85	03:46:02	1807.05	852.44	1778.26	88.88	88.82	88.81	
07/14/85	03:47:05	1823.17	852.62	1778.28	88.88	88.84	88.81	
07/14/85	03:49:26	1806.95	811.58	1778.19	88.88	88.88	89.48	
07/14/85	03:51:04	1806.97	853.44	1778.30	88.88	88.88	88.82	
07/14/85	03:59:09	1806.97	855.00	1778.28	88.88	88.86	88.84	
07/14/85	04:14:33	1807.09	858.03	1778.47	88.88	88.76	88.87	
07/14/85	04:15:09	1806.99	871.90	1778.38	88.88	88.79	88.86	
07/14/85	04:16:00	1807.09	858.21	1778.43	88.88	89.83	88.87	
07/14/85	04:19:07	1806.86	858.76	1778.36	88.88	88.85	88.88	
07/14/85	04:22:40	1806.88	859.47	1778.38	88.88	88.82	88.88	
07/14/85	04:23:06	1806.95	859.49	1778.36	88.88	88.83	88.88	
07/14/85	04:24:09	1838.89	916.43	1778.38	89.21	88.84	88.88	
07/14/85	04:35:54	1806.93	862.04	1778.43	88.88	88.69	88.66	
07/14/85	04:36:09	1807.01	862.15	1778.57	88.87	88.68	88.69	
07/14/85	04:37:00	1806.93	862.24	1778.42	88.88	88.71	88.71	
07/14/85	04:38:01	1806.91	862.40	1778.46	88.88	88.75	88.77	
07/14/85	04:40:06	1806.91	862.76	1778.43	88.88	88.81	88.86	
07/14/85	04:59:00	1806.96	894.01	1778.38	89.21	89.14	90.79	
07/14/85	05:00:00	1806.95	866.65	1778.49	88.88	88.83	88.86	
07/14/85	05:01:03	1806.93	866.75	1778.45	88.88	88.85	88.85	
07/14/85	05:20:12	1807.01	870.45	1778.67	88.86	88.66	88.61	
07/14/85	05:21:01	1806.93	870.55	1778.58	88.87	88.69	88.63	
07/14/85	05:22:04	1806.84	870.74	1778.60	88.87	88.72	88.66	
07/14/85	05:23:05	1806.93	870.88	1778.55	88.87	88.72	88.70	
07/14/85	05:24:08	1806.86	871.08	1778.52	88.88	88.78	88.75	
07/14/85	05:25:11	1806.80	871.28	1778.56	88.88	88.80	88.76	
07/14/85	05:30:10	1806.84	872.18	1778.61	88.88	88.81	88.75	
07/14/85	05:33:54	1806.82	872.87	1778.54	88.87	88.85	88.82	
07/14/85	05:34:09	1806.78	873.00	1778.51	88.88	88.84	88.85	
07/14/85	05:37:22	1806.82	873.53	1778.58	88.88	88.89	88.84	
07/14/85	05:38:01	1806.86	873.65	1778.53	88.88	88.88	88.86	

TABLE A3-12 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE RAMSEY SANDSTONE OF THE BELL CANYON FORMATION, 4138 TO 4180
FEET BELOW LAND SURFACE, JULY 12 TO 14, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/14/85	05:51:08	1806.82	875.97	1778.59	88.88	88.93	88.92	
07/14/85	06:00:01	1806.91	877.72	1778.58	88.88	88.84	88.83	
07/14/85	06:14:00	1806.80	894.17	1778.73	88.88	89.09	88.62	
07/14/85	06:15:00	1806.82	880.50	1778.73	88.88	88.75	88.64	
07/14/85	06:16:03	1806.80	880.65	1778.70	88.88	88.76	88.68	
07/14/85	06:17:03	1806.78	880.83	1778.72	88.88	88.77	88.70	
07/14/85	06:28:39	1806.86	883.04	1778.81	88.87	88.75	88.62	
07/14/85	06:29:06	1806.84	883.17	1778.81	88.88	88.76	88.63	
07/14/85	06:30:06	1806.84	883.32	1778.75	88.88	88.77	88.64	
07/14/85	06:45:16	1806.86	899.94	1778.81	88.88	88.77	88.62	
07/14/85	06:46:07	1806.88	886.26	1778.81	88.88	88.79	88.65	
07/14/85	06:47:07	1806.82	886.41	1778.81	88.88	88.80	88.68	
07/14/85	06:48:10	1806.76	886.57	1778.76	88.88	88.80	88.70	
07/14/85	06:49:11	1822.86	886.74	1778.69	89.21	89.15	88.74	
07/14/85	06:58:10	1806.78	888.51	1778.81	88.88	88.74	88.60	
07/14/85	06:59:10	1806.74	888.72	1778.90	88.88	88.76	88.62	
07/14/85	07:00:01	1806.76	888.80	1778.81	88.88	88.80	88.64	
07/14/85	07:01:02	1806.70	888.95	1778.70	88.88	88.81	89.02	
07/14/85	07:04:00	1806.68	889.48	1778.80	88.88	88.84	88.76	
07/14/85	07:05:03	1806.70	889.63	1778.77	88.87	88.85	88.78	
07/14/85	07:09:57	1806.64	890.65	1778.82	88.88	88.84	88.72	
07/14/85	07:10:13	1806.80	890.72	1778.76	88.88	88.85	89.06	
07/14/85	07:43:07	1806.72	896.70	1778.88	88.87	88.73	88.62	
07/14/85	07:44:10	1806.74	896.93	1778.85	88.87	88.76	88.64	
07/14/85	07:45:10	1806.70	897.12	1778.93	88.87	88.81	88.67	
07/14/85	07:46:02	1806.66	897.26	1778.89	88.87	88.85	88.70	
07/14/85	07:47:02	1806.70	897.39	1778.91	88.87	88.86	88.72	
07/14/85	07:48:01	1806.68	897.59	1778.88	88.87	88.88	88.74	
07/14/85	09:02:13	1806.82	911.21	1779.21	88.77	88.56	88.48	
07/14/85	09:03:03	1806.68	911.34	1779.16	88.83	88.62	88.52	
07/14/85	09:04:04	1806.68	911.52	1779.14	88.86	88.66	88.57	
07/14/85	09:05:07	1806.60	911.67	1779.11	88.87	88.69	88.60	
07/14/85	09:06:07	1806.66	911.83	1779.11	88.87	88.73	88.62	
07/14/85	09:07:10	1806.57	912.03	1779.04	88.87	88.76	88.65	
07/14/85	09:08:10	1806.57	912.16	1779.02	88.87	88.81	88.66	
07/14/85	09:09:02	1806.57	912.36	1779.06	88.87	88.84	88.71	
07/14/85	09:10:02	1806.64	912.54	1779.08	88.88	88.86	88.72	
07/14/85	09:11:05	1806.55	912.65	1779.09	88.87	88.89	88.74	
07/14/85	09:12:08	1806.55	912.92	1779.10	88.87	88.89	88.73	
07/14/85	09:13:08	1806.62	913.03	1779.09	88.87	88.90	88.75	
07/14/85	09:14:11	1806.57	913.25	1779.05	88.87	88.92	88.76	
07/14/85	09:15:00	1806.55	913.43	1779.09	88.87	88.93	88.75	
07/14/85	09:24:20	1806.41	994.26	1779.18	88.87	89.06	88.95	
07/14/85	09:25:06	1854.57	915.29	1779.23	88.87	88.75	88.64	

TABLE A3-12 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE RAMSEY SANDSTONE OF THE BELL CANYON FORMATION, 4138 TO 4180
FEET BELOW LAND SURFACE, JULY 12 TO 14, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/14/85	09:27:10	1806.57	915.64	1779.16	88.87	88.81	88.69	
07/14/85	09:28:01	1806.53	915.79	1779.31	88.87	88.82	88.71	
07/14/85	09:34:10	1806.53	916.85	1779.09	88.87	88.89	88.75	
07/14/85	09:35:01	1822.51	986.37	1779.18	88.87	88.90	88.76	
07/14/85	10:26:08	1806.43	925.94	1779.35	88.87	88.85	88.75	
07/14/85	10:35:16	1806.55	927.52	1779.28	88.87	88.88	88.76	
07/14/85	10:36:07	1822.68	941.60	1779.28	88.87	88.89	89.10	
07/14/85	10:39:08	1806.45	928.22	1779.28	88.88	88.91	88.78	
07/14/85	10:40:11	1806.41	928.38	1779.24	88.88	88.93	88.78	
07/14/85	10:41:11	1844.78	984.21	1779.26	88.87	88.92	88.79	
07/14/85	10:42:02	1806.47	928.71	1779.28	88.87	88.92	88.80	
07/14/85	10:44:06	1806.43	929.10	1779.32	88.87	88.92	88.82	
07/14/85	10:46:09	1806.45	943.26	1779.26	88.87	88.95	88.81	
07/14/85	10:47:09	1806.39	929.55	1779.23	88.88	88.94	88.82	
07/14/85	10:49:00	1806.37	929.94	1779.25	88.87	88.94	88.82	
07/14/85	10:50:03	1806.43	930.10	1779.30	88.88	88.94	88.82	
07/14/85	10:53:09	1806.41	930.65	1779.30	88.88	88.95	88.83	
07/14/85	10:57:04	1806.35	931.35	1779.30	88.89	88.95	88.82	
07/14/85	11:00:07	1822.47	931.83	1779.32	88.88	88.95	88.82	
07/14/85	11:03:01	1806.39	932.38	1779.30	88.88	88.95	88.82	
07/14/85	11:05:05	1806.37	932.64	1779.38	88.88	88.93	88.82	
07/14/85	11:07:08	1806.39	932.99	1779.32	88.88	89.59	88.82	
07/14/85	11:09:11	1806.37	933.43	1779.36	88.87	88.93	88.82	
07/14/85	11:11:17	1806.48	933.77	1779.36	89.54	88.94	88.82	
07/14/85	11:12:07	1806.39	933.92	1779.32	88.87	88.92	88.82	
07/14/85	11:14:11	1822.82	975.90	1779.43	88.87	89.95	89.48	
07/14/85	11:15:11	1806.39	934.49	1779.28	88.88	88.94	88.81	
07/14/85	11:16:02	1806.41	934.64	1779.34	88.88	88.95	88.82	
07/14/85	11:18:05	1806.41	934.95	1779.32	88.87	88.95	88.83	
07/14/85	11:19:05	1806.41	935.11	1779.36	88.87	88.94	88.82	
07/14/85	11:20:08	1806.35	935.27	1779.30	88.88	88.62	89.15	
07/14/85	11:21:08	1806.41	935.46	1779.30	88.87	88.96	88.82	
07/14/85	11:22:00	1806.35	935.63	1779.34	88.87	88.95	88.82	
07/14/85	11:25:08	1838.79	964.07	1779.24	88.87	88.94	89.47	
07/14/85	11:26:08	1854.37	936.47	1779.45	89.54	88.96	89.15	
07/14/85	11:28:09	1822.58	964.51	1779.43	89.54	88.96	89.14	
07/14/85	11:30:00	1806.35	937.02	1779.32	88.88	88.98	88.82	
07/14/85	11:37:08	1822.49	938.26	1779.52	88.87	89.29	88.49	
07/14/85	11:38:08	1822.72	966.20	1779.40	88.88	88.94	88.82	
07/14/85	11:40:02	1806.35	938.70	1779.43	88.88	89.27	89.15	
07/14/85	11:41:04	1806.37	952.78	1779.40	88.88	88.94	88.82	
07/14/85	11:43:07	1740.27	939.20	1779.42	88.88	89.61	88.82	
07/14/85	11:44:10	1806.39	939.45	1779.44	88.87	88.94	88.82	
07/14/85	11:45:10	1806.39	939.61	1779.40	88.87	88.95	88.82	

TABLE A3-12 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE RAMSEY SANDSTONE OF THE BELL CANYON FORMATION, 4138 TO 4180
FEET BELOW LAND SURFACE, JULY 12 TO 14, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/14/85	11:46:01	1806.51	953.64	1779.38	89.21	88.94	88.82	
07/14/85	11:51:00	1855.09	953.81	1779.37	88.87	88.96	89.14	
07/14/85	11:56:09	1838.56	969.25	1779.38	89.21	88.94	90.14	
07/14/85	12:10:06	1822.43	943.89	1779.36	88.87	88.95	88.82	
07/14/85	12:11:09	1806.41	985.78	1779.47	88.88	88.94	88.82	
07/14/85	12:12:09	1790.24	930.36	1779.47	88.88	88.93	88.82	
07/14/85	12:19:10	1822.45	945.47	1779.41	88.87	88.97	89.47	
07/14/85	12:22:00	1806.31	945.95	1779.49	88.87	88.96	88.81	
07/14/85	12:24:03	1806.30	946.17	1779.49	89.21	89.64	89.16	
07/14/85	12:27:06	1806.27	946.74	1779.43	88.53	89.31	89.14	
07/14/85	12:32:04	1806.31	947.57	1779.53	88.87	89.62	88.82	
07/14/85	12:35:09	1806.28	864.88	1779.55	88.87	88.95	88.82	
07/14/85	12:40:08	1806.34	893.61	1779.49	89.55	88.96	88.82	
07/14/85	12:41:10	1804.32	893.85	1779.60	88.88	88.96	89.14	
07/14/85	12:52:01	1806.26	951.02	1779.53	89.21	88.94	88.79	
07/14/85	12:54:04	1822.48	951.49	1779.74	89.21	88.96	88.80	
07/14/85	12:56:08	1822.70	951.79	1779.55	88.87	88.96	88.80	
07/14/85	13:00:07	1757.80	966.33	1779.75	89.21	89.26	88.76	
07/14/85	13:07:16	1844.01	953.57	1779.57	88.87	88.94	88.79	
07/14/85	13:41:25	1806.39	959.44	1779.79	88.86	88.73	88.57	
07/14/85	13:42:03	1806.37	959.51	1779.77	88.87	88.75	88.58	
07/14/85	13:43:04	1806.32	959.59	1779.68	89.21	89.11	88.93	
07/14/85	13:44:07	1806.33	973.73	1779.72	88.87	88.82	88.63	
07/14/85	13:45:07	1806.28	959.93	1779.74	88.87	88.83	88.66	
07/14/85	13:46:10	1806.26	974.06	1779.67	88.87	88.84	88.67	
07/14/85	13:47:10	1806.24	974.22	1779.63	88.87	88.86	88.70	
07/14/85	13:48:01	1806.22	960.39	1779.65	88.87	88.86	88.71	
07/14/85	13:51:07	1806.16	960.94	1779.69	88.87	88.89	88.75	
07/14/85	13:53:10	1806.22	975.12	1779.66	88.87	89.25	88.76	
07/14/85	14:04:01	1806.18	963.09	1779.70	88.87	88.94	88.78	
07/14/85	14:05:04	1806.20	963.27	1779.70	88.87	88.95	88.79	
07/14/85	14:06:07	1806.24	977.40	1779.72	88.87	88.94	88.79	
07/14/85	14:07:07	1806.20	991.43	1779.70	88.87	88.95	88.80	
07/14/85	14:08:10	1806.22	963.77	1779.70	88.87	88.95	88.79	
07/14/85	14:09:10	1806.26	963.90	1779.68	88.87	88.96	88.80	
07/14/85	14:12:05	1806.26	950.11	1779.72	88.87	88.97	88.80	
07/14/85	14:16:07	1822.30	965.11	1779.72	88.87	88.97	88.81	
07/14/85	14:18:10	1806.24	965.44	1779.74	88.87	88.97	88.81	
07/14/85	14:23:35	1842.96	980.21	1779.74	88.87	88.98	88.80	
07/14/85	14:24:00	1806.31	966.36	1779.76	88.87	88.97	88.80	
07/14/85	14:25:03	1806.20	966.58	1779.76	88.87	88.98	88.80	
07/14/85	14:26:03	1806.26	966.73	1779.76	88.88	88.98	88.80	
07/14/85	14:27:06	1806.20	980.67	1779.72	88.87	88.98	88.81	
07/14/85	14:31:00	1806.20	967.52	1779.70	88.87	88.98	88.81	

TABLE A3-12 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE RAMSEY SANDSTONE OF THE BELL CANYON FORMATION, 4138 TO 4180
FEET BELOW LAND SURFACE, JULY 12 TO 14, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/14/85	14:34:06	1806.20	968.04	1779.72	88.88	88.97	88.81	
07/14/85	14:36:08	1806.18	968.39	1779.74	88.87	88.92	88.81	
07/14/85	14:47:33	1806.31	970.32	1779.86	88.87	88.85	88.70	
07/14/85	15:08:16	1843.06	987.61	1779.90	88.85	88.65	88.51	
07/14/85	15:09:06	1806.26	973.82	1779.92	88.86	88.68	88.55	
07/14/85	15:10:07	1806.22	973.99	1779.87	88.87	88.70	88.59	
07/14/85	15:18:13	1806.35	975.33	1779.91	88.87	88.67	88.60	
07/14/85	15:19:02	1806.28	975.48	1779.89	88.87	88.71	88.62	
07/14/85	15:20:04	1806.22	975.57	1779.89	88.87	88.74	88.64	
07/14/85	15:21:05	1806.22	975.75	1779.84	88.87	88.77	88.66	
07/14/85	15:22:07	1806.18	975.84	1779.88	88.87	88.85	88.68	
07/14/85	15:23:07	1806.31	976.02	1779.82	88.87	88.85	88.70	
07/14/85	15:24:10	1806.20	976.15	1779.92	88.87	88.87	88.72	
07/14/85	15:25:11	1806.18	976.34	1779.90	88.87	88.90	88.73	
07/14/85	15:26:02	1806.24	976.45	1779.88	88.87	88.90	88.73	
07/14/85	15:27:02	1806.16	962.69	1779.81	88.87	88.91	88.74	
07/14/85	15:32:10	1806.18	977.46	1779.85	88.87	88.93	88.77	
07/14/85	15:33:01	1806.18	977.60	1779.87	88.87	88.94	88.77	
07/14/85	15:34:01	1838.19	977.80	1779.96	88.87	88.96	88.78	
07/14/85	15:35:04	1806.20	977.99	1779.87	88.87	88.95	88.78	
07/14/85	15:36:04	1806.16	978.12	1779.89	88.87	88.96	88.78	
07/14/85	15:37:07	1806.12	978.25	1779.91	88.87	88.96	88.79	
07/14/85	15:38:07	1806.18	978.43	1779.93	88.87	88.96	88.78	
07/14/85	15:39:10	1806.16	978.60	1779.94	88.87	88.96	88.78	
07/14/85	15:40:10	1806.14	978.75	1779.87	88.87	89.30	88.79	
07/14/85	15:42:02	1790.18	979.06	1779.89	88.87	89.30	89.13	
07/14/85	15:46:07	1789.99	965.76	1779.89	88.87	88.96	88.80	
07/14/85	16:08:50	1806.16	983.52	1780.07	88.83	88.63	88.57	
07/14/85	16:09:05	1806.22	983.62	1780.04	88.85	88.65	88.57	
07/14/85	16:10:05	1806.20	983.71	1780.08	88.87	88.67	88.59	
07/14/85	16:11:08	1806.20	983.85	1780.06	88.87	88.69	88.62	
07/14/85	16:12:08	1806.22	984.00	1780.04	88.87	88.72	88.64	
07/14/85	16:13:10	1806.16	984.09	1779.93	88.87	88.75	88.67	
07/14/85	16:14:11	1806.22	984.31	1779.97	88.87	88.78	88.69	
07/14/85	16:15:02	1806.10	984.44	1779.94	88.87	88.79	88.71	
07/14/85	16:16:04	1806.08	984.57	1779.94	88.87	88.83	88.73	
07/14/85	16:17:05	1806.18	984.77	1779.96	88.87	88.84	88.73	
07/14/85	16:18:07	1806.08	984.91	1780.02	88.87	88.86	88.75	
07/14/85	16:19:07	1806.10	985.10	1779.98	88.87	88.89	88.75	
07/14/85	16:20:10	1806.12	985.21	1779.98	88.87	88.90	88.75	
07/14/85	16:21:10	1789.87	985.43	1779.98	88.87	88.90	88.76	
07/14/85	16:22:01	1806.10	985.52	1779.96	88.87	88.91	88.76	
07/14/85	16:23:01	1806.12	985.67	1780.00	88.87	88.92	88.77	
07/14/85	16:24:04	1806.10	985.79	1779.62	88.87	88.93	88.77	

TABLE A3-12 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE RAMSEY SANDSTONE OF THE BELL CANYON FORMATION, 4138 TO 4180
FEET BELOW LAND SURFACE, JULY 12 TO 14, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/14/85	16:25:04	1806.05	985.98	1780.00	89.21	88.92	88.78	
07/14/85	16:29:10	1806.10	986.62	1779.96	88.87	88.95	89.12	
07/14/85	16:30:10	1806.12	986.79	1779.96	88.87	88.95	88.79	
07/14/85	16:31:10	1806.08	986.99	1780.02	88.87	88.95	88.78	
07/14/85	16:32:01	1806.10	987.14	1780.02	88.87	88.95	88.80	
07/14/85	16:33:04	1806.16	987.27	1780.06	88.87	88.96	88.79	
07/14/85	16:34:04	1806.08	987.47	1780.00	88.87	88.95	88.80	
07/14/85	16:35:07	1806.08	987.65	1780.00	88.87	88.96	88.79	
07/14/85	16:36:07	1806.12	987.82	1780.02	88.87	88.96	88.80	
07/14/85	16:37:10	1806.12	987.93	1780.02	88.87	88.96	88.80	
07/14/85	16:38:10	1806.08	988.13	1780.04	88.87	88.96	88.81	
07/14/85	16:39:01	1806.10	988.26	1780.04	88.87	88.97	88.81	
07/14/85	16:40:01	1806.14	988.39	1780.02	88.87	88.97	88.81	
07/14/85	16:41:03	1806.08	988.59	1780.04	88.87	88.97	88.81	
07/14/85	16:42:03	1806.14	988.76	1779.97	88.87	88.96	88.81	
07/14/85	16:43:06	1806.10	988.89	1780.02	88.87	88.96	88.81	
07/14/85	16:44:06	1806.06	989.02	1780.06	88.87	88.96	88.81	
07/14/85	16:45:09	1806.16	989.24	1779.99	88.87	88.96	88.81	
07/14/85	16:46:09	1806.12	989.36	1780.06	88.87	88.97	88.81	
07/14/85	16:47:00	1806.14	989.55	1780.02	88.87	88.96	88.81	
07/14/85	16:48:03	1806.12	989.64	1780.08	88.87	88.97	88.81	
07/14/85	16:49:03	1806.16	989.82	1780.08	88.87	88.98	88.82	
07/14/85	16:50:05	1806.16	990.01	1780.06	88.87	88.96	88.81	
07/14/85	16:51:06	1806.08	990.21	1780.08	88.87	88.97	88.81	
07/14/85	16:52:08	1806.12	990.30	1780.12	88.87	88.96	88.82	
07/14/85	16:53:08	1806.06	990.43	1780.08	88.87	88.97	88.82	
07/14/85	16:54:11	1806.08	990.64	1780.12	88.87	88.96	88.81	
07/14/85	16:55:11	1806.10	990.80	1780.04	88.87	88.97	88.81	
07/14/85	16:56:02	1806.12	990.95	1780.06	88.87	88.97	88.81	
07/14/85	16:57:02	1806.08	991.11	1780.10	88.87	88.96	88.82	
07/14/85	16:58:05	1806.08	991.30	1780.12	88.87	88.97	88.81	
07/14/85	16:59:05	1806.08	991.45	1780.08	88.87	88.95	88.82	
07/14/85	17:00:07	1806.12	991.63	1780.06	88.87	88.97	88.82	
07/14/85	17:01:08	1806.08	991.70	1780.06	88.87	88.96	88.81	
07/14/85	17:02:10	1806.10	991.94	1780.10	88.87	88.96	88.81	
07/14/85	17:03:10	1806.08	992.05	1780.10	88.87	88.97	88.80	
07/14/85	17:04:01	1806.08	992.22	1780.08	88.87	88.96	88.80	
07/14/85	17:05:04	1806.09	992.39	1780.06	89.21	89.64	88.80	
07/14/85	17:06:04	1806.10	992.55	1780.04	88.87	88.96	88.81	
07/14/85	17:07:06	1806.06	992.64	1780.10	88.87	88.96	88.81	
07/14/85	17:08:07	1806.12	992.85	1780.10	88.87	88.97	88.82	
07/14/85	17:09:09	1806.10	993.01	1780.02	88.87	88.96	88.81	
07/14/85	17:10:09	1806.08	993.14	1780.14	88.87	88.96	88.81	
07/14/85	17:11:00	1806.12	993.32	1780.08	88.87	88.98	88.82	

TABLE A3-12 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE RAMSEY SANDSTONE OF THE BELL CANYON FORMATION, 4138 TO 4180
FEET BELOW LAND SURFACE, JULY 12 TO 14, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/14/85	17:12:00	1806.06	993.51	1780.04	88.87	88.96	88.81	
07/14/85	17:13:03	1806.08	993.64	1780.08	88.87	88.97	88.82	
07/14/85	17:14:03	1806.04	993.78	1780.06	88.87	88.98	88.82	
07/14/85	17:15:05	1806.06	993.99	1780.12	88.87	88.98	88.82	
07/14/85	17:16:05	1806.12	994.13	1780.10	88.87	88.98	88.82	
07/14/85	17:17:08	1806.12	994.30	1780.12	88.87	88.98	88.81	
07/14/85	17:18:08	1806.10	994.48	1780.12	88.87	88.98	88.83	
07/14/85	17:19:11	1806.14	1064.41	1780.12	88.87	88.98	88.83	
07/14/85	17:20:09	1806.08	994.78	1780.12	88.87	88.98	88.82	
07/14/85	17:21:09	1806.14	994.89	1780.14	88.87	88.97	88.82	
07/14/85	17:22:00	1806.04	995.09	1780.12	88.87	88.98	88.81	
07/14/85	17:23:00	1806.10	995.24	1780.14	88.87	88.99	88.82	
07/14/85	17:25:03	1806.12	995.59	1779.93	88.87	89.00	88.82	
07/14/85	17:26:05	1806.12	995.72	1780.10	88.87	89.00	88.82	
07/14/85	17:27:05	1806.08	995.86	1780.08	88.87	89.01	88.82	
07/14/85	17:28:08	1806.04	996.09	1780.08	88.87	89.00	88.82	
07/14/85	17:29:08	1822.28	996.21	1780.12	88.87	89.01	88.82	
07/14/85	17:32:01	1806.06	996.69	1780.10	88.87	89.02	88.82	
07/14/85	17:33:01	1806.04	996.84	1780.10	88.87	89.02	88.82	
07/14/85	17:34:04	1806.08	996.99	1780.12	88.87	89.00	88.82	
07/14/85	17:35:04	1806.04	997.15	1780.16	88.87	89.01	88.82	
07/14/85	17:36:07	1806.04	997.34	1780.14	88.87	88.99	88.82	
07/14/85	17:37:09	1806.06	997.49	1780.12	88.87	89.00	88.81	
07/14/85	17:38:09	1806.08	997.67	1780.10	88.87	88.99	88.82	
07/14/85	17:39:00	1806.02	997.80	1780.16	88.87	88.99	88.81	
07/14/85	17:40:00	1822.47	998.00	1780.23	88.87	88.99	88.82	
07/14/85	17:41:02	1806.08	998.15	1780.12	88.87	88.98	88.82	
07/14/85	17:43:05	1806.02	998.48	1780.18	88.87	88.97	88.82	
07/14/85	17:44:05	1806.04	998.59	1780.16	88.87	88.97	88.82	
07/14/85	17:45:08	1806.06	998.76	1780.08	88.87	88.97	88.82	
07/14/85	17:46:08	1806.08	998.91	1780.12	88.87	88.98	88.81	
07/14/85	17:47:10	1806.04	999.13	1780.06	88.87	88.97	89.16	
07/14/85	17:48:10	1806.02	999.27	1780.18	88.87	88.97	88.82	
07/14/85	17:49:01	1806.02	999.35	1780.14	88.87	88.98	88.82	
07/14/85	17:50:01	1806.02	999.57	1780.16	88.87	88.97	88.81	
07/14/85	17:52:05	1806.01	999.88	1780.12	89.21	88.96	88.81	
07/14/85	17:53:05	1806.06	999.99	1780.21	88.87	88.97	88.82	
07/14/85	17:54:08	1806.08	1000.14	1780.08	88.87	88.96	88.81	
07/14/85	17:55:08	1806.02	1000.33	1780.12	88.87	88.96	88.82	
07/14/85	17:56:10	1806.08	1000.47	1780.14	88.87	88.97	88.81	
07/14/85	17:57:10	1806.02	1000.64	1780.16	88.87	89.29	88.80	
07/14/85	17:58:01	1806.02	1000.79	1780.16	88.87	88.95	88.80	
07/14/85	17:59:01	1806.06	1000.95	1780.14	88.87	88.95	88.81	
07/14/85	18:00:04	1806.04	1001.14	1780.18	88.87	88.96	88.81	

TABLE A3-12 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE RAMSEY SANDSTONE OF THE BELL CANYON FORMATION, 4138 TO 4180
FEET BELOW LAND SURFACE, JULY 12 TO 14, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/14/85	18:01:04	1806.02	1001.27	1780.19	88.87	88.96	88.81	
07/14/85	18:02:06	1805.99	1001.49	1780.21	89.21	88.96	88.81	
07/14/85	18:03:06	1806.02	1001.62	1780.21	88.88	88.95	88.81	
07/14/85	18:04:09	1806.02	1001.74	1780.23	88.88	88.96	88.81	
07/14/85	18:05:09	1806.04	1001.91	1780.20	88.87	88.94	88.82	
07/14/85	18:06:00	1806.00	1002.08	1780.20	88.87	88.94	88.82	
07/14/85	18:07:00	1806.06	1002.24	1780.25	88.87	88.95	88.81	
07/14/85	18:08:02	1806.00	1002.39	1780.14	88.87	88.95	88.82	
07/14/85	18:09:05	1806.04	1002.56	1780.23	88.87	88.94	88.83	
07/14/85	18:10:02	1806.04	1002.74	1780.18	88.87	88.94	88.82	
07/14/85	18:11:04	1805.97	1002.91	1780.18	88.87	88.95	88.82	
07/14/85	18:12:04	1806.02	1003.02	1780.25	88.88	88.95	88.82	
07/14/85	18:13:07	1806.02	1003.16	1780.20	88.87	88.94	88.82	
07/14/85	18:14:07	1806.06	1003.29	1780.27	88.87	88.93	88.83	
07/14/85	18:15:09	1806.04	1003.51	1780.18	88.87	88.94	88.82	
07/14/85	18:16:09	1806.00	1003.68	1780.18	88.87	88.93	88.82	
07/14/85	18:17:00	1806.08	1003.79	1780.23	88.88	88.93	88.82	
07/14/85	18:18:00	1806.02	1003.98	1780.23	88.89	88.93	88.82	
07/14/85	18:19:03	1806.08	1004.16	1780.25	88.87	88.94	88.82	
07/14/85	18:20:03	1806.00	1004.25	1780.27	88.88	88.95	88.82	
07/14/85	18:21:05	1805.97	1004.45	1780.18	88.87	88.94	88.82	
07/14/85	18:22:05	1806.00	1004.58	1780.25	88.87	88.94	88.82	
07/14/85	18:23:07	1806.02	1004.75	1780.27	88.89	88.94	88.82	
07/14/85	18:24:10	1806.02	1004.92	1780.27	88.87	88.94	88.81	
07/14/85	18:25:10	1805.95	1005.06	1780.23	88.88	88.94	88.82	
07/14/85	18:26:01	1805.97	1005.25	1780.27	88.87	88.94	88.82	
07/14/85	18:27:01	1806.04	1005.41	1780.25	88.88	88.95	88.82	
07/14/85	18:28:03	1805.95	1005.56	1780.25	88.88	88.94	88.82	
07/14/85	18:29:03	1806.02	1005.65	1780.25	88.87	88.94	88.81	
07/14/85	18:30:06	1805.95	1005.86	1780.25	88.87	88.93	88.82	
07/14/85	18:31:06	1806.00	1005.97	1780.29	88.87	88.93	88.82	
07/14/85	18:32:08	1806.04	1006.19	1780.29	88.88	88.94	88.82	
07/14/85	18:33:08	1805.93	1006.34	1780.29	88.87	88.93	88.82	
07/14/85	18:34:11	1805.97	1006.45	1780.23	88.88	88.93	88.81	
07/14/85	18:35:11	1805.97	1006.63	1780.29	88.88	88.92	88.82	
07/14/85	18:36:01	1805.95	1006.78	1780.29	88.87	88.92	88.82	
07/14/85	18:37:01	1806.04	1006.93	1780.25	88.88	88.92	88.82	
07/14/85	18:38:04	1806.02	1007.05	1780.21	88.88	88.92	88.82	
07/14/85	18:39:04	1805.95	1007.22	1780.33	88.87	88.93	88.81	
07/14/85	18:40:06	1805.97	1007.42	1780.25	88.87	88.92	88.82	
07/14/85	18:41:09	1806.04	1007.59	1780.27	88.87	88.91	88.83	
07/14/85	18:42:09	1806.00	1007.72	1780.27	88.87	88.92	88.82	
07/14/85	18:43:11	1806.00	1007.85	1780.27	88.88	88.93	88.81	
07/14/85	18:44:11	1805.97	1008.05	1780.35	88.88	88.92	88.82	

TABLE A3-12 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE RAMSEY SANDSTONE OF THE BELL CANYON FORMATION, 4138 TO 4180
FEET BELOW LAND SURFACE, JULY 12 TO 14, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/14/85	18:45:02	1805.95	1008.18	1780.29	88.87	88.90	88.82	
07/14/85	18:46:02	1805.97	1008.29	1780.25	88.87	88.91	88.82	
07/14/85	18:47:04	1805.97	1008.53	1780.31	88.87	88.90	88.82	
07/14/85	18:48:04	1805.97	1008.64	1780.31	88.87	88.92	88.82	
07/14/85	18:49:07	1806.00	1008.79	1780.27	88.87	88.91	88.81	
07/14/85	18:50:07	1806.02	1008.94	1780.31	88.87	88.92	88.81	
07/14/85	18:51:09	1806.00	1009.12	1780.31	88.87	88.93	88.81	
07/14/85	18:52:09	1805.97	1009.32	1780.23	88.88	88.92	88.82	
07/14/85	18:53:00	1805.95	1009.40	1780.29	88.87	88.92	88.82	
07/14/85	18:54:00	1805.97	1009.56	1780.29	88.87	88.92	88.82	
07/14/85	18:55:02	1805.97	1009.71	1780.33	88.87	88.91	88.82	
07/14/85	18:56:05	1805.95	1009.88	1780.29	88.88	88.91	88.81	
07/14/85	18:57:05	1805.95	1010.06	1780.33	88.87	88.91	88.81	
07/14/85	18:58:07	1805.91	1010.19	1780.27	88.88	88.91	88.81	
07/14/85	18:59:07	1805.97	1010.34	1780.33	88.87	88.91	88.82	
07/14/85	19:00:07	1805.95	1010.50	1780.35	88.88	88.91	88.82	
07/14/85	19:01:07	1805.97	1010.69	1780.33	88.87	88.91	88.82	
07/14/85	19:02:09	1806.00	1010.82	1780.31	88.88	88.90	88.81	
07/14/85	19:03:09	1805.95	1010.96	1780.33	88.87	88.91	88.82	
07/14/85	19:04:00	1805.93	1011.06	1780.29	88.87	88.91	88.82	
07/14/85	19:05:00	1805.95	1011.24	1780.37	88.87	88.90	88.82	
07/14/85	19:06:03	1806.00	1011.41	1780.33	88.88	88.91	88.81	
07/14/85	19:07:02	1806.00	1011.55	1780.29	88.87	88.90	88.81	
07/14/85	19:08:05	1805.93	1011.72	1780.35	88.88	88.91	88.81	
07/14/85	19:09:05	1805.91	1011.90	1780.33	88.88	88.90	88.81	
07/14/85	19:10:07	1805.97	1011.98	1780.35	88.87	88.91	88.81	
07/14/85	19:11:07	1805.91	1012.18	1780.31	88.87	88.91	88.81	
07/14/85	19:12:10	1805.97	1012.31	1780.35	88.87	88.91	88.80	
07/14/85	19:13:01	1805.97	1012.49	1780.33	88.87	88.91	88.81	
07/14/85	19:14:01	1805.93	1012.62	1780.37	88.87	88.91	88.82	
07/14/85	19:15:03	1805.95	1012.77	1780.33	88.88	88.90	88.81	
07/14/85	19:16:03	1805.91	1012.90	1780.40	88.88	88.90	88.81	
07/14/85	19:17:06	1805.91	1013.07	1780.33	88.88	89.23	88.82	
07/14/85	19:18:06	1805.95	1013.23	1780.33	88.87	88.90	88.81	
07/14/85	19:19:08	1805.95	1013.42	1780.35	88.87	88.91	88.82	
07/14/85	19:20:08	1805.93	1013.53	1780.40	88.87	88.91	88.81	
07/14/85	19:21:10	1805.97	1013.67	1780.40	88.87	88.91	88.81	
07/14/85	19:22:10	1805.93	1013.88	1780.40	88.87	88.91	88.81	
07/14/85	19:23:01	1805.93	1013.97	1780.42	88.87	88.90	88.82	
07/14/85	19:24:01	1805.91	1042.25	1780.35	88.88	88.92	88.82	
07/14/85	19:25:04	1805.91	1014.32	1780.33	88.87	88.91	88.81	
07/14/85	19:26:04	1805.93	1014.54	1780.40	88.87	88.91	88.81	
07/14/85	19:27:06	1805.97	1014.63	1780.42	89.20	88.90	88.82	
07/14/85	19:28:09	1805.89	1014.74	1780.38	88.87	88.90	88.80	

TABLE A3-12 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE RAMSEY SANDSTONE OF THE BELL CANYON FORMATION, 4138 TO 4180
FEET BELOW LAND SURFACE, JULY 12 TO 14, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/14/85	19:29:09	1805.97	1015.00	1780.38	88.87	88.92	88.81	
07/14/85	19:30:11	1805.93	1015.08	1780.40	88.87	88.92	88.82	
07/14/85	19:31:11	1805.95	1015.24	1780.44	88.87	88.91	88.81	
07/14/85	19:32:02	1805.87	1015.37	1780.40	88.87	88.90	88.81	
07/14/85	19:33:02	1805.89	1015.52	1780.48	88.87	88.91	88.81	
07/14/85	19:38:09	1805.95	1016.29	1780.37	88.87	88.91	88.81	
07/14/85	19:39:09	1805.87	1016.44	1780.33	88.87	88.91	88.82	
07/14/85	19:41:00	1805.91	1016.92	1780.42	88.87	88.91	88.81	
07/14/85	19:42:03	1805.87	1016.92	1780.42	88.87	88.91	88.81	
07/14/85	19:43:03	1805.85	1017.11	1780.39	88.87	88.90	88.82	
07/14/85	19:44:05	1805.89	1017.20	1780.37	88.87	88.91	88.81	
07/14/85	19:47:10	1805.93	1017.69	1780.44	88.87	88.92	88.82	
07/14/85	19:48:10	1805.89	1017.82	1780.44	88.87	88.91	88.82	
07/14/85	19:49:01	1805.89	1018.01	1780.46	88.87	88.91	88.82	
07/14/85	19:50:10	1805.87	1018.17	1780.44	88.87	88.91	88.81	
07/14/85	19:51:00	1805.89	1018.29	1780.44	88.87	88.92	88.82	
07/14/85	19:52:00	1805.93	1018.43	1780.44	88.87	88.91	88.82	
07/14/85	19:53:03	1805.87	1018.56	1780.44	88.87	88.92	88.82	
07/14/85	19:54:03	1805.89	1018.75	1780.44	88.87	88.92	88.81	
07/14/85	19:55:05	1805.87	1018.89	1780.46	88.87	88.92	88.83	
07/14/85	19:56:06	1805.87	1019.06	1780.46	88.87	88.92	88.82	
07/14/85	19:57:08	1822.07	1019.19	1780.44	88.87	88.92	88.82	
07/14/85	19:58:08	1805.91	1019.39	1780.46	88.87	88.93	88.83	
07/14/85	19:59:11	1805.85	1019.52	1780.44	88.87	88.92	88.81	
07/14/85	20:00:02	1789.56	1019.63	1780.50	88.87	88.92	88.82	
07/14/85	20:01:02	1805.87	1019.80	1780.46	88.87	88.93	88.82	
07/14/85	20:02:04	1805.85	1019.96	1780.46	88.87	88.93	88.82	
07/14/85	20:03:04	1805.83	1020.11	1780.50	88.87	88.93	88.82	
07/14/85	20:04:07	1805.91	1020.26	1780.44	88.87	88.94	88.82	
07/14/85	20:05:07	1805.91	1020.42	1780.48	88.87	88.92	88.81	
07/14/85	20:06:10	1805.81	1020.61	1780.46	88.87	88.93	88.83	
07/14/85	20:07:10	1805.91	1020.76	1780.50	88.87	88.95	88.83	
07/14/85	20:08:00	1805.85	1020.87	1780.48	88.87	88.94	88.81	
07/14/85	20:09:01	1805.85	1021.03	1780.44	88.87	88.94	88.82	
07/14/85	20:10:03	1805.91	1021.18	1780.44	88.87	88.93	88.82	
07/14/85	20:11:03	1805.85	1021.31	1780.46	88.87	88.93	88.81	
07/14/85	20:12:06	1805.87	1021.44	1780.52	88.87	88.94	88.82	
07/14/85	20:13:06	1805.85	1021.62	1780.48	88.87	88.94	88.82	
07/14/85	20:15:09	1805.83	1021.92	1780.46	88.87	88.94	88.83	
07/14/85	20:16:11	1805.82	1022.10	1780.48	89.20	88.94	88.82	
07/14/85	20:18:02	1805.81	1022.40	1780.48	88.87	88.94	88.82	
07/14/85	20:19:05	1805.87	1022.53	1780.52	88.87	88.94	88.81	
07/14/85	20:20:05	1805.89	1022.69	1780.50	88.87	88.95	88.82	
07/14/85	20:21:08	1805.81	1022.88	1780.52	88.87	88.95	88.82	

TABLE A3-12 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE RAMSEY SANDSTONE OF THE BELL CANYON FORMATION, 4138 TO 4180
FEET BELOW LAND SURFACE, JULY 12 TO 14, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/14/85	20:22:08	1805.87	1023.01	1780.58	88.87	88.95	88.82	
07/14/85	20:23:11	1805.83	1023.14	1780.50	88.87	88.95	88.82	
07/14/85	20:24:11	1805.83	1023.30	1780.50	88.87	88.95	88.81	
07/14/85	20:25:02	1805.83	995.48	1780.48	88.87	88.95	88.81	
07/14/85	20:26:02	1805.77	1023.63	1780.40	88.87	88.94	88.82	
07/14/85	20:27:05	1805.82	1023.71	1780.52	89.54	88.96	88.81	
07/14/85	20:28:05	1805.85	1023.89	1780.54	88.87	88.95	88.82	
07/14/85	20:29:08	1805.81	1024.04	1780.52	88.87	88.94	88.81	
07/14/85	20:30:08	1805.87	1024.24	1780.50	88.87	88.96	88.81	
07/14/85	20:31:11	1805.81	1024.39	1780.52	88.87	88.96	88.81	
07/14/85	20:34:04	1805.83	1024.78	1780.50	88.87	88.96	88.82	
07/14/85	20:35:04	1805.79	1024.93	1780.50	88.87	88.96	88.82	
07/14/85	20:36:07	1805.85	1025.09	1780.52	88.87	88.95	88.81	
07/14/85	20:37:07	1805.79	1025.26	1780.52	88.87	88.96	88.82	
07/14/85	20:38:10	1805.87	1025.44	1780.52	88.87	88.96	88.82	
07/14/85	20:40:09	1805.79	1025.70	1780.61	88.87	88.96	88.82	
07/14/85	20:41:09	1805.85	1025.90	1780.52	89.20	88.96	88.82	
07/14/85	20:43:00	1805.81	1026.18	1780.54	88.87	88.96	88.83	
07/14/85	20:44:03	1805.82	1026.31	1780.50	89.20	88.95	89.16	
07/14/85	20:46:06	1805.81	1026.60	1780.56	88.87	88.96	88.82	
07/14/85	20:47:06	1757.45	1026.79	1780.54	89.20	88.97	88.81	
07/14/85	20:48:08	1805.83	1040.93	1780.58	88.87	88.97	88.83	
07/14/85	20:49:10	1805.79	1027.12	1780.56	88.87	88.97	88.82	
07/14/85	20:50:11	1805.85	1027.23	1780.56	88.87	88.96	88.83	
07/14/85	20:51:02	1805.83	1027.40	1780.59	88.87	88.97	88.82	
07/14/85	20:52:02	1805.85	1027.51	1780.61	88.87	88.97	88.81	
07/14/85	20:53:04	1805.81	1027.69	1780.59	88.87	88.98	88.82	
07/14/85	20:54:05	1805.83	1027.86	1780.61	88.87	88.97	88.82	
07/14/85	20:55:07	1805.81	1028.01	1780.61	88.87	88.97	88.82	
07/14/85	20:56:07	1805.79	1028.17	1780.59	88.87	88.98	88.82	
07/14/85	20:57:10	1805.77	1028.38	1780.61	88.87	88.99	88.82	
07/14/85	20:58:10	1805.83	1028.42	1780.59	88.87	89.33	88.82	
07/14/85	20:59:01	1805.81	1028.62	1780.54	88.87	88.99	88.82	
07/14/85	21:00:01	1805.81	1028.78	1780.59	88.87	88.99	88.81	
07/14/85	21:01:04	1805.79	1028.95	1780.59	88.87	89.00	88.81	
07/14/85	21:02:04	1805.75	1029.06	1780.61	88.87	89.01	88.82	
07/14/85	21:03:07	1805.81	1029.21	1780.60	88.87	89.01	88.84	
07/14/85	21:04:10	1805.87	1029.35	1780.56	88.87	89.00	88.84	
07/14/85	21:05:10	1805.79	1029.50	1780.61	88.87	88.99	88.83	
07/14/85	21:06:01	1805.83	1029.67	1780.56	88.87	88.97	88.82	
07/14/85	21:07:01	1805.79	1029.80	1780.61	88.87	88.96	88.83	
07/14/85	21:09:47	1805.85	1030.22	1780.67	88.87	89.00	88.82	
07/14/85	21:10:00	1805.81	1030.26	1780.63	88.87	88.99	88.82	
07/14/85	21:11:03	1805.85	1030.46	1780.61	88.87	88.98	88.83	

TABLE A3-12 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE RAMSEY SANDSTONE OF THE BELL CANYON FORMATION, 4138 TO 4180
FEET BELOW LAND SURFACE, JULY 12 TO 14, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/14/85	21:12:03	1805.83	1030.55	1780.63	88.87	88.98	88.82	
07/14/85	21:13:06	1805.79	1030.76	1780.63	88.87	88.98	88.82	
07/14/85	21:14:06	1805.83	1030.89	1780.63	88.87	88.99	88.82	
07/14/85	21:15:09	1805.79	1031.05	1780.65	88.87	88.99	88.83	
07/14/85	21:16:02	1805.83	1031.18	1780.67	88.87	89.00	88.83	
07/14/85	21:20:00	1805.85	1031.75	1780.67	88.87	89.00	88.83	
07/14/85	21:30:02	1805.77	1033.27	1780.71	88.87	88.97	88.83	
07/14/85	21:40:06	1805.83	1034.76	1780.75	88.87	88.98	88.83	
07/14/85	21:50:08	1805.77	1036.33	1780.73	88.87	88.99	88.83	
07/14/85	22:00:01	1805.75	1037.76	1780.75	88.87	88.99	88.83	
07/14/85	22:10:06	1805.73	1039.25	1780.77	88.87	88.99	88.83	
07/14/85	22:20:08	1805.71	1040.75	1780.82	88.87	88.97	88.84	
07/14/85	22:30:01	1805.75	1042.17	1780.81	88.87	88.97	88.84	
07/14/85	22:40:04	1805.77	1043.65	1780.82	88.87	88.97	88.84	
07/14/85	22:50:09	1805.71	1045.09	1780.86	88.87	88.98	88.84	
07/14/85	23:00:11	1805.73	1046.61	1780.90	88.87	88.95	88.83	
07/14/85	23:10:04	1805.66	1047.99	1780.94	88.87	88.96	88.84	
07/14/85	23:30:11	1805.66	1050.97	1780.92	88.87	88.98	88.83	
07/14/85	23:40:10	1805.69	1052.32	1781.01	88.86	88.96	88.83	
07/14/85	23:50:04	1805.71	1053.81	1780.98	88.87	88.95	88.84	
07/15/85	00:00:06	1805.62	1083.20	1781.01	88.86	88.94	89.17	
07/15/85	00:10:10	1805.58	1056.72	1781.03	88.86	88.97	88.84	
07/15/85	00:20:01	1805.62	1058.09	1781.07	88.86	88.95	88.83	
07/15/85	00:30:07	1805.58	1059.56	1781.13	88.86	88.97	88.83	
07/15/85	00:40:00	1805.58	1060.97	1781.13	88.86	88.97	88.83	
07/15/85	00:50:03	1805.60	1062.43	1781.15	88.86	88.96	88.82	
07/15/85	01:00:08	1805.58	1063.82	1781.17	88.87	88.99	88.84	
07/15/85	01:10:11	1805.56	1065.24	1781.18	88.87	88.99	88.82	
07/15/85	01:20:04	1805.60	1066.65	1781.20	88.87	88.99	88.83	
07/15/85	01:30:07	1805.58	1068.09	1781.26	88.87	89.01	88.82	
07/15/85	01:40:00	1805.56	1069.44	1781.24	88.87	89.00	88.83	
07/15/85	01:50:03	1805.56	1070.83	1781.24	88.86	89.01	88.83	
07/15/85	02:00:09	1805.60	1072.27	1781.30	88.87	89.01	88.83	
07/15/85	02:10:00	1805.48	1073.66	1781.32	88.87	89.04	88.84	
07/15/85	02:20:05	1805.50	1075.07	1781.34	88.87	89.01	88.84	
07/15/85	02:30:09	1805.54	1076.40	1781.39	88.87	89.01	88.82	
07/15/85	02:40:03	1805.48	1077.81	1781.43	88.87	89.00	88.83	
07/15/85	02:50:06	1805.48	1079.20	1781.39	88.87	89.00	88.83	
07/15/85	03:00:00	1805.54	1080.53	1781.41	88.88	88.98	88.82	
07/15/85	03:10:03	1805.46	1081.92	1781.43	88.87	88.98	88.83	
07/15/85	03:30:05	1805.48	1084.66	1781.47	88.87	88.99	88.84	
07/15/85	03:40:08	1805.48	1086.03	1781.53	88.88	88.99	88.83	
07/15/85	03:50:02	1821.66	1129.03	1781.53	88.87	89.31	88.83	
07/15/85	04:20:02	1805.46	1091.37	1781.58	88.87	88.97	88.82	

TABLE A3-12 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE RAMSEY SANDSTONE OF THE BELL CANYON FORMATION, 4138 TO 4180
FEET BELOW LAND SURFACE, JULY 12 TO 14, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/15/85	04:30:08	1789.40	1092.78	1781.58	89.54	89.65	89.15	
07/15/85	04:40:00	1805.42	1094.18	1781.60	88.88	88.98	88.83	
07/15/85	04:50:06	1805.40	1095.52	1781.68	88.87	88.97	88.82	
07/15/85	05:00:10	1805.40	1096.89	1781.70	88.87	88.96	88.82	
07/15/85	05:10:04	1805.43	1098.19	1781.68	89.20	88.94	88.83	
07/15/85	05:20:08	1805.33	1099.50	1781.77	88.87	88.94	88.84	
07/15/85	05:40:06	1805.35	1102.21	1781.77	88.87	88.96	88.84	
07/15/85	05:50:01	1821.41	1103.54	1781.75	88.87	88.97	88.83	
07/15/85	06:00:08	1805.31	1104.84	1781.83	88.87	88.96	88.84	
07/15/85	06:10:00	1805.35	1106.18	1781.79	88.87	88.95	88.83	
07/15/85	06:20:06	1805.27	1107.50	1781.89	88.87	88.92	88.84	
07/15/85	06:30:10	1805.33	1108.85	1781.91	88.86	88.94	88.84	
07/15/85	06:40:04	1805.29	1110.09	1781.94	88.87	88.96	88.83	
07/15/85	06:50:08	1805.29	1111.41	1782.00	88.86	88.93	88.83	
07/15/85	07:00:03	1805.29	1112.75	1782.00	88.86	88.92	88.82	
07/15/85	07:10:07	1805.27	1114.04	1782.02	88.87	88.93	88.83	

TABLE A3-13

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE OLDS SANDSTONE OF THE BELL CANYON FORMATION, 4177 TO 4218
FEET BELOW LAND SURFACE, JULY 26 TO 29, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/25/85	15:04:58	2171.17	2481.58	2242.95	88.06	88.47	88.29	
07/25/85	15:05:15	2102.41	2433.02	2231.40	88.44	88.43	88.30	
07/25/85	15:05:33	2051.92	2386.84	2231.89	88.43	88.51	88.28	
07/25/85	15:05:49	2022.22	2356.08	2233.64	88.45	88.60	88.31	
07/25/85	15:06:07	1997.29	2324.67	2232.42	88.51	88.40	88.30	
07/25/85	15:06:24	1981.00	2301.98	2232.60	88.53	88.58	88.33	
07/25/85	15:06:42	1966.50	2278.27	2232.66	88.42	88.56	88.34	
07/25/85	15:06:58	1956.04	2262.07	2232.62	88.40	88.54	88.31	
07/25/85	15:07:16	1946.28	2245.17	2232.64	88.51	88.66	88.32	
07/25/85	15:07:35	1938.11	2230.23	2232.62	88.49	88.52	88.34	
07/25/85	15:07:52	1932.67	2218.13	2232.62	88.53	88.53	88.35	
07/25/85	15:08:09	1926.69	2207.14	2232.61	88.57	88.55	88.38	
07/25/85	15:08:25	1922.32	2198.18	2232.63	88.61	88.57	88.37	
07/25/85	15:08:43	1917.76	2188.71	2232.64	88.64	88.56	88.37	
07/25/85	15:08:59	1914.32	2180.77	2232.65	88.64	88.52	88.36	
07/25/85	15:09:17	1910.76	2171.98	2232.62	88.61	88.50	88.36	
07/25/85	15:09:33	1908.00	2165.13	2232.65	88.59	88.52	88.40	
07/25/85	15:09:51	1905.15	2157.34	2232.63	88.57	88.56	88.40	
07/25/85	15:10:08	1902.88	2151.28	2232.60	88.55	88.59	88.42	
07/25/85	15:10:26	1900.56	2144.35	2232.62	88.55	88.63	88.42	
07/25/85	15:10:42	1898.66	2138.97	2232.61	88.51	88.66	88.44	
07/25/85	15:11:00	1896.60	2132.93	2232.61	88.52	88.66	88.43	
07/25/85	15:11:17	1894.96	2128.12	2232.62	88.51	88.65	88.43	
07/25/85	15:11:35	1893.19	2122.67	2232.63	88.48	88.64	88.45	
07/25/85	15:11:54	1891.51	2117.51	2232.59	88.54	88.65	88.42	
07/25/85	15:12:10	1890.20	2113.47	2232.58	88.52	88.63	88.43	
07/25/85	15:12:28	1888.68	2108.79	2232.59	88.53	88.64	88.44	
07/25/85	15:12:45	1887.48	2105.12	2232.56	88.55	88.65	88.44	
07/25/85	15:13:03	1886.31	2100.83	2232.57	88.57	88.61	88.45	
07/25/85	15:13:19	1885.21	2097.49	2232.55	88.59	88.65	88.45	
07/25/85	15:13:37	1884.04	2093.43	2232.57	88.57	88.65	88.45	
07/25/85	15:13:54	1883.07	2090.38	2232.55	88.59	88.65	88.46	
07/25/85	15:14:20	1881.49	2085.62	2232.52	88.60	88.65	88.46	
07/25/85	15:14:35	1880.64	2082.91	2232.56	88.62	88.68	88.46	
07/25/85	15:14:53	1879.71	2079.71	2232.53	88.65	88.63	88.47	
07/25/85	15:15:10	1878.98	2077.17	2232.54	88.66	88.72	88.47	
07/25/85	15:15:28	1878.07	2074.25	2232.55	88.70	88.69	88.46	
07/25/85	15:15:44	1877.26	2071.96	2232.52	88.71	88.70	88.47	
07/25/85	15:16:02	1876.49	2069.27	2232.50	88.74	88.75	88.47	
07/25/85	15:16:19	1875.80	2067.11	2232.54	88.76	88.76	88.47	
07/25/85	15:16:37	1875.00	2064.61	2232.52	88.77	88.72	88.47	
07/25/85	15:16:56	1874.24	2062.23	2232.50	88.74	88.73	88.47	
07/25/85	15:17:12	1873.66	2060.29	2232.54	88.74	88.71	88.48	
07/25/85	15:17:30	1872.94	2058.05	2232.53	88.73	88.69	88.48	

TABLE A3-13 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE OLDS SANDSTONE OF THE BELL CANYON FORMATION, 4177 TO 4218
FEET BELOW LAND SURFACE, JULY 26 TO 29, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/25/85	15:17:47	1872.35	2056.25	2232.52	88.74	88.67	88.49	
07/25/85	15:18:05	1871.68	2054.19	2232.53	88.74	88.65	88.49	
07/25/85	15:18:22	1871.13	2052.51	2232.50	88.75	88.64	88.51	
07/25/85	15:18:40	1870.53	2050.57	2232.49	88.75	88.62	88.51	
07/25/85	15:18:56	1870.03	2048.96	2232.49	88.74	88.60	88.52	
07/25/85	15:19:14	1869.38	2047.12	2232.49	88.74	88.58	88.52	
07/25/85	15:19:31	1868.89	2045.68	2232.52	88.74	88.57	88.51	
07/25/85	15:19:49	1868.35	2043.93	2232.49	88.73	88.55	88.52	
07/25/85	15:20:05	1867.89	2042.58	2232.49	88.73	88.54	88.52	
07/25/85	15:20:23	1867.35	2040.99	2232.49	88.72	88.53	88.52	
07/25/85	15:20:40	1866.96	2039.68	2232.49	88.72	88.51	88.53	
07/25/85	15:20:58	1866.41	2038.44	2232.49	88.72	88.50	88.52	
07/25/85	15:21:17	1865.90	2036.88	2232.49	88.71	88.50	88.53	
07/25/85	15:21:33	1865.48	2035.66	2232.46	88.71	88.49	88.53	
07/25/85	15:21:51	1865.02	2034.22	2232.48	88.70	88.51	88.53	
07/25/85	15:22:08	1864.70	2033.02	2232.47	88.70	88.55	88.54	
07/25/85	15:22:26	1864.20	2031.67	2232.45	88.70	88.56	88.54	
07/25/85	15:22:42	1863.82	2030.58	2232.48	88.69	88.57	88.54	
07/25/85	15:23:00	1863.38	2029.30	2232.48	88.69	88.56	88.54	
07/25/85	15:23:17	1862.99	2028.27	2232.49	88.69	88.59	88.55	
07/25/85	15:23:35	1862.64	2026.98	2232.47	88.67	88.54	88.54	
07/25/85	15:24:39	1861.29	2023.15	2232.46	88.67	88.55	88.54	
07/25/85	15:24:57	1860.87	2022.07	2232.48	88.67	88.53	88.55	
07/25/85	15:25:13	1860.55	2021.19	2232.46	88.65	88.60	88.54	
07/25/85	15:26:26	1859.14	2017.51	2232.49	88.65	88.63	88.56	
07/25/85	15:26:42	1858.87	2016.69	2232.44	88.65	88.66	88.56	
07/25/85	15:27:00	1858.56	2015.74	2232.42	88.65	88.66	88.56	
07/25/85	15:27:17	1858.20	2014.95	2232.44	88.65	88.66	88.57	
07/25/85	15:27:35	1857.91	2014.07	2232.44	88.64	88.67	88.56	
07/25/85	15:27:54	1857.58	2013.20	2232.40	88.64	88.68	88.56	
07/25/85	15:28:10	1857.29	2012.47	2232.44	88.64	88.68	88.56	
07/25/85	15:28:28	1856.98	2011.64	2232.37	88.64	88.68	88.56	
07/25/85	15:28:45	1856.75	2010.97	2232.42	88.64	88.69	88.56	
07/25/85	15:29:03	1856.42	2010.17	2232.39	88.63	88.70	88.56	
07/25/85	15:29:19	1856.13	2009.51	2232.40	88.64	88.69	88.57	
07/25/85	15:29:37	1855.87	2008.75	2232.40	88.64	88.69	88.58	
07/25/85	15:29:54	1855.61	2008.12	2232.39	88.63	88.69	88.57	
07/25/85	15:30:12	1855.36	2007.39	2232.38	88.63	88.70	88.57	
07/25/85	15:30:37	1854.99	2006.43	2232.39	88.63	88.69	88.57	
07/25/85	15:30:55	1854.69	2005.76	2232.40	88.64	88.70	88.57	
07/25/85	15:31:12	1854.53	2005.18	2232.38	88.66	88.70	88.58	
07/25/85	15:31:30	1854.20	2004.47	2232.35	88.66	88.69	88.58	
07/25/85	15:31:46	1854.03	2003.92	2232.41	88.64	88.71	88.58	
07/25/85	15:32:04	1853.74	2003.26	2232.39	88.64	88.74	88.58	

TABLE A3-13 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE OLDS SANDSTONE OF THE BELL CANYON FORMATION, 4177 TO 4218
FEET BELOW LAND SURFACE, JULY 26 TO 29, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/25/85	15:32:23	1853.45	2002.62	2232.38	88.64	88.74	88.58	
07/25/85	15:32:40	1853.27	2002.07	2232.36	88.64	88.73	88.59	
07/25/85	15:32:58	1852.98	2001.47	2232.34	88.64	88.72	88.58	
07/25/85	15:33:14	1852.83	2000.93	2232.35	88.63	88.72	88.59	
07/25/85	15:33:32	1852.48	1999.84	2232.44	88.65	88.72	88.59	
07/25/85	15:33:49	1852.25	1999.39	2232.41	88.64	88.73	88.59	
07/25/85	15:34:07	1852.03	1999.64	2232.32	88.64	88.73	88.60	
07/25/85	15:34:23	1851.90	1999.10	2232.32	88.65	88.72	88.59	
07/25/85	15:34:41	1851.60	1998.49	2232.33	88.67	88.72	88.60	
07/25/85	15:34:58	1851.44	1997.96	2232.35	88.66	88.73	88.60	
07/25/85	15:35:16	1851.20	1997.35	2232.33	88.67	88.73	88.60	
07/25/85	15:35:32	1851.00	1996.85	2232.33	88.66	88.73	88.60	
07/25/85	15:35:50	1850.76	1996.32	2232.33	88.63	88.73	88.61	
07/25/85	15:36:07	1850.59	1995.83	2232.32	88.63	88.73	88.60	
07/25/85	15:36:25	1850.37	1995.29	2232.30	88.63	88.72	88.60	
07/25/85	15:36:41	1850.18	1994.85	2232.31	88.65	88.74	88.60	
07/25/85	15:36:59	1849.99	1994.30	2232.27	88.64	88.74	88.60	
07/25/85	15:37:18	1849.75	1993.81	2232.28	88.67	88.74	88.61	
07/25/85	15:37:35	1849.59	1993.41	2232.31	88.66	88.76	88.62	
07/25/85	15:37:53	1849.40	1992.87	2232.29	88.68	88.75	88.60	
07/25/85	15:38:09	1849.20	1992.49	2232.30	88.67	88.75	88.61	
07/25/85	15:38:27	1848.98	1991.98	2232.31	88.67	88.76	88.61	
07/25/85	15:38:44	1848.87	1991.60	2232.31	88.67	88.77	88.61	
07/25/85	15:39:02	1848.65	1991.12	2232.31	88.66	88.78	88.61	
07/25/85	15:39:19	1848.52	1990.73	2232.31	88.67	88.78	88.61	
07/25/85	15:39:37	1848.29	1990.27	2232.30	88.67	88.79	88.61	
07/25/85	15:39:53	1848.06	1989.91	2232.31	88.67	88.79	88.61	
07/25/85	15:40:11	1847.91	1989.48	2231.72	88.65	88.80	88.61	
07/25/85	15:40:28	1847.75	1989.10	2232.44	88.67	88.80	88.61	
07/25/85	15:40:46	1847.28	1986.36	2232.38	88.67	88.73	88.62	
07/25/85	15:41:02	1817.31	1342.17	2232.39	88.82	88.77	88.61	
07/25/85	15:41:21	1830.57	1342.22	2232.10	88.74	88.79	88.63	
07/25/85	15:41:40	1836.54	1343.34	2232.19	88.69	88.83	88.62	
07/25/85	15:41:56	1839.11	1344.07	2232.12	88.64	88.81	88.62	
07/25/85	15:42:14	1840.85	1344.27	2232.14	88.64	88.81	88.61	
07/25/85	15:42:31	1841.78	1344.46	2232.17	88.64	88.79	88.61	
07/25/85	15:42:49	1863.51	1406.40	2232.87	88.67	88.69	88.59	
07/25/85	15:43:05	1854.70	1458.09	2232.37	88.60	88.76	88.59	
07/25/85	15:43:23	1851.13	1508.59	2232.25	88.58	88.76	88.57	
07/25/85	15:43:40	1849.59	1543.91	2232.31	88.63	88.68	88.63	
07/25/85	15:43:58	1848.49	1580.53	2232.28	88.65	88.64	88.57	
07/25/85	15:44:14	1847.83	1606.89	2232.29	88.58	88.70	88.56	
07/25/85	15:44:32	1847.25	1634.78	2232.25	88.57	88.71	88.57	
07/25/85	15:44:49	1846.84	1655.22	2232.28	88.56	88.60	88.55	

TABLE A3-13 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE OLDS SANDSTONE OF THE BELL CANYON FORMATION, 4177 TO 4218
FEET BELOW LAND SURFACE, JULY 26 TO 29, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/25/85	15:45:15	1846.28	1684.69	2232.26	88.61	88.71	88.53	
07/25/85	15:45:30	1846.11	1700.26	2232.25	88.56	88.85	88.59	
07/25/85	15:45:48	1845.82	1717.39	2232.27	88.57	88.84	88.56	
07/25/85	15:46:05	1845.59	1730.25	2232.24	88.53	88.79	88.57	
07/25/85	15:46:23	1845.34	1744.38	2232.24	88.57	88.73	88.58	
07/25/85	15:46:42	1845.11	1757.21	2232.26	88.53	88.68	88.57	
07/25/85	15:46:58	1844.91	1766.90	2232.23	88.62	88.69	88.57	
07/25/85	15:47:16	1844.73	1777.73	2232.24	88.71	88.67	88.55	
07/25/85	15:47:33	1844.55	1785.99	2232.22	88.76	88.73	88.56	
07/25/85	15:47:51	1844.35	1795.17	2232.20	88.75	88.73	88.56	
07/25/85	15:48:07	1844.18	1802.26	2232.23	88.86	88.79	88.57	
07/25/85	15:48:25	1844.00	1810.14	2232.21	88.74	88.78	88.56	
07/25/85	15:48:42	1843.91	1816.32	2232.21	88.76	88.77	88.56	
07/25/85	15:49:00	1843.68	1823.19	2232.21	88.70	88.75	88.56	
07/25/85	15:49:17	1843.56	1828.50	2232.20	88.66	88.76	88.55	
07/25/85	15:49:35	1843.40	1834.46	2232.19	88.64	88.74	88.56	
07/25/85	15:49:51	1843.25	1839.12	2232.19	88.63	88.74	88.57	
07/25/85	15:50:09	1842.98	1844.00	2232.21	88.64	88.72	88.57	
07/25/85	15:50:24	1843.00	1848.13	2232.17	88.56	88.72	88.57	
07/25/85	15:50:42	1842.82	1852.76	2232.19	88.61	88.74	88.57	
07/25/85	15:51:01	1842.66	1857.15	2232.18	88.59	88.74	88.58	
07/25/85	15:51:18	1842.46	1860.62	2232.17	88.61	88.75	88.58	
07/25/85	15:51:36	1842.35	1864.54	2232.18	88.60	88.75	88.58	
07/25/85	15:51:52	1842.24	1867.56	2232.16	88.61	88.72	88.59	
07/25/85	15:52:10	1842.06	1871.06	2232.15	88.59	88.72	88.58	
07/25/85	15:52:26	1841.99	1873.79	2232.19	88.63	88.71	88.60	
07/25/85	15:52:44	1841.77	1876.92	2232.15	88.60	88.70	88.58	
07/25/85	15:53:01	1841.70	1879.39	2232.14	88.57	88.70	88.59	
07/25/85	15:53:19	1841.51	1882.19	2232.18	88.60	88.73	88.58	
07/25/85	15:53:36	1841.43	1884.39	2232.16	88.64	88.74	88.59	
07/25/85	15:53:53	1841.28	1886.95	2232.15	88.68	88.74	88.59	
07/25/85	15:54:10	1841.18	1888.99	2232.17	88.70	88.71	88.60	
07/25/85	15:54:28	1841.03	1891.20	2232.11	88.65	88.73	88.59	
07/25/85	15:54:45	1841.01	1892.72	2232.15	88.63	88.73	88.60	
07/25/85	15:55:03	1840.87	1894.75	2232.14	88.65	88.72	88.59	
07/25/85	15:55:19	1840.74	1896.43	2232.16	88.64	88.71	88.59	
07/25/85	15:55:37	1840.54	1898.30	2232.15	88.64	88.69	88.58	
07/25/85	15:55:56	1840.42	1900.14	2232.17	88.65	88.67	88.59	
07/25/85	15:56:13	1840.31	1901.61	2232.12	88.65	88.67	88.59	
07/25/85	15:56:30	1840.14	1903.27	2232.18	88.66	88.66	88.59	
07/25/85	15:56:47	1840.02	1904.59	2232.17	88.68	88.67	88.58	
07/25/85	15:57:05	1839.89	1906.08	2232.06	88.67	88.68	88.59	
07/25/85	15:57:22	1839.79	1907.32	2232.22	88.57	88.69	88.58	
07/25/85	15:57:40	1839.66	1908.64	2232.17	88.64	88.69	88.57	

TABLE A3-13 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE OLDS SANDSTONE OF THE BELL CANYON FORMATION, 4177 TO 4218
FEET BELOW LAND SURFACE, JULY 26 TO 29, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/25/85	15:57:56	1839.35	1909.30	2232.09	88.64	88.69	88.58	
07/25/85	15:58:14	1839.36	1910.60	2232.08	88.65	88.71	88.58	
07/25/85	15:58:31	1839.25	1911.69	2232.15	88.65	88.71	88.59	
07/25/85	15:58:49	1839.15	1912.88	2232.13	88.64	88.72	88.59	
07/25/85	15:59:05	1839.13	1913.64	2232.13	88.61	88.73	88.59	
07/25/85	15:59:23	1838.95	1914.81	2232.13	88.70	88.74	88.61	
07/25/85	15:59:48	1838.83	1916.12	2232.15	88.72	88.75	88.60	
07/25/85	16:00:06	1838.67	1917.15	2232.10	88.72	88.76	88.60	
07/25/85	16:00:25	1838.55	1918.06	2232.10	88.70	88.77	88.60	
07/25/85	16:00:42	1838.52	1918.82	2232.09	88.70	88.77	88.61	
07/25/85	16:01:00	1838.34	1919.68	2232.08	88.70	88.77	88.61	
07/25/85	16:01:16	1838.25	1920.37	2232.08	88.72	88.78	88.62	
07/25/85	16:01:34	1838.11	1921.15	2232.06	88.70	88.79	88.62	
07/25/85	16:01:51	1838.07	1921.79	2232.09	88.69	88.81	88.62	
07/25/85	16:02:09	1837.93	1922.50	2232.08	88.70	88.80	88.62	
07/25/85	16:02:25	1837.86	1923.06	2232.09	88.72	88.80	88.63	
07/25/85	16:03:31	1837.45	1925.22	2232.08	88.70	88.80	88.63	
07/25/85	16:04:01	1837.24	1926.09	2232.06	88.72	88.80	88.64	
07/25/85	16:05:01	1836.99	1927.75	2232.01	88.72	88.80	88.68	
07/25/85	16:06:13	1836.58	1929.39	2232.04	88.71	88.79	88.66	
07/25/85	16:07:00	1836.37	1930.35	2231.99	88.72	88.79	88.66	
07/25/85	16:08:12	1835.93	1931.61	2232.03	88.74	88.79	88.68	
07/25/85	16:09:13	1835.46	1932.52	2231.96	88.75	88.79	88.68	
07/25/85	16:10:10	1835.25	1933.33	2231.93	88.75	88.79	88.68	
07/25/85	16:11:12	1834.88	1934.01	2232.02	88.77	88.79	88.68	
07/25/85	16:12:13	1834.65	1934.66	2231.92	88.73	88.78	88.69	
07/25/85	16:13:10	1834.52	1935.16	2231.96	88.74	88.79	88.69	
07/25/85	16:14:11	1834.17	1935.62	2231.95	88.76	88.78	88.69	
07/25/85	16:15:09	1833.82	1936.05	2231.99	88.76	88.78	88.70	
07/25/85	16:16:10	1833.51	1936.37	2231.95	88.76	88.78	88.70	
07/25/85	16:17:08	1833.41	1936.66	2231.91	88.78	88.78	88.70	
07/25/85	16:18:09	1833.03	1936.90	2231.90	88.78	88.77	88.71	
07/25/85	16:19:07	1832.76	1937.08	2231.90	88.78	88.77	88.71	
07/25/85	16:20:08	1832.58	1937.27	2231.91	88.77	88.77	88.71	
07/25/85	16:21:06	1832.37	1937.39	2231.89	88.80	88.76	88.71	
07/25/85	16:22:07	1832.04	1937.50	2231.90	88.80	88.75	88.71	
07/25/85	16:23:05	1831.85	1937.57	2231.86	88.80	88.76	88.71	
07/25/85	16:24:06	1831.62	1937.63	2231.86	88.80	88.77	88.71	
07/25/85	16:25:03	1831.35	1937.63	2231.87	88.90	88.76	88.71	
07/25/85	16:26:04	1831.15	1937.67	2231.85	88.80	88.76	88.71	
07/25/85	16:27:05	1831.08	1937.62	2231.84	88.79	88.76	88.71	
07/25/85	16:28:03	1830.69	1937.67	2231.84	88.80	88.76	88.71	
07/25/85	16:29:04	1830.48	1937.19	2231.87	88.80	88.77	88.71	
07/25/85	16:30:01	1830.13	1936.81	2231.91	88.81	88.77	88.70	

TABLE A3-13 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE OLDS SANDSTONE OF THE BELL CANYON FORMATION, 4177 TO 4218
FEET BELOW LAND SURFACE, JULY 26 TO 29, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/25/85	16:31:02	1829.99	1936.97	2231.86	88.81	88.75	88.70	
07/25/85	16:32:00	1829.84	1937.01	2231.81	88.81	88.74	88.70	
07/25/85	16:33:01	1829.61	1936.97	2231.84	88.81	88.75	88.70	
07/25/85	16:34:13	1829.32	1936.94	2231.82	88.81	88.75	88.70	
07/25/85	16:35:00	1829.16	1936.85	2231.83	88.80	88.76	88.70	
07/25/85	16:36:11	1828.89	1936.78	2231.78	88.80	88.76	88.70	
07/25/85	16:37:12	1828.83	1936.70	2231.79	88.81	88.75	88.70	
07/25/85	16:38:10	1828.45	1936.61	2231.76	88.81	88.75	88.70	
07/25/85	16:39:11	1828.47	1936.45	2231.81	88.80	88.75	88.70	
07/25/85	16:40:08	1828.16	1936.33	2231.77	88.81	88.75	88.70	
07/25/85	16:41:09	1828.08	1936.24	2231.78	88.81	88.75	88.70	
07/25/85	16:42:07	1827.89	1936.09	2231.72	88.82	88.75	88.70	
07/25/85	16:43:01	1827.69	1935.98	2231.74	88.82	88.75	88.70	
07/25/85	16:44:01	1827.46	1935.85	2231.70	88.81	88.74	88.69	
07/25/85	16:45:13	1827.19	1935.66	2231.73	88.81	88.75	88.69	
07/25/85	16:46:00	1827.03	1935.56	2231.74	88.80	88.74	88.69	
07/25/85	16:47:12	1826.82	1935.32	2231.68	88.83	88.74	88.69	
07/25/85	16:48:13	1826.63	1935.20	2231.69	88.81	88.75	88.69	
07/25/85	16:49:10	1826.40	1935.05	2231.68	88.82	88.76	88.69	
07/25/85	16:50:11	1826.30	1934.87	2231.67	88.82	88.75	88.69	
07/25/85	16:51:09	1826.13	1934.71	2231.65	88.82	88.74	88.68	
07/25/85	16:52:10	1826.07	1934.56	2231.66	88.82	88.75	88.69	
07/25/85	16:53:07	1825.78	1934.40	2231.65	88.82	88.76	88.68	
07/25/85	16:54:08	1825.66	1934.24	2231.65	88.81	88.74	88.68	
07/25/85	16:55:06	1825.72	1934.04	2231.64	88.82	88.75	88.68	
07/25/85	16:56:07	1825.41	1933.93	2231.64	88.81	88.74	88.68	
07/25/85	16:57:04	1825.20	1933.69	2231.60	88.83	88.74	88.68	
07/25/85	16:58:05	1825.12	1933.49	2231.60	88.83	88.75	88.67	
07/25/85	16:59:06	1824.97	1933.35	2231.55	88.83	88.75	88.67	
07/25/85	17:00:03	1824.77	1933.21	2231.58	88.83	88.75	88.68	
07/25/85	17:01:04	1824.68	1932.99	2231.55	88.84	88.76	88.67	
07/25/85	17:02:02	1824.56	1932.85	2231.60	88.84	88.75	88.67	
07/25/85	17:03:03	1824.42	1932.64	2231.58	88.83	88.75	88.67	
07/25/85	17:04:00	1824.29	1932.48	2231.55	88.83	88.75	88.67	
07/25/85	17:05:01	1824.15	1932.29	2231.53	88.83	88.77	88.67	
07/25/85	17:06:13	1823.84	1932.07	2231.55	88.84	88.76	88.67	
07/25/85	17:07:13	1823.59	1931.91	2231.55	88.83	88.77	88.67	
07/25/85	17:08:11	1823.63	1931.75	2231.54	88.82	88.76	88.67	
07/25/85	17:09:11	1823.55	1931.54	2231.52	88.84	88.77	88.67	
07/25/85	17:10:09	1823.36	1931.37	2231.50	88.84	88.77	88.67	
07/25/85	17:11:10	1823.09	1931.19	2231.48	88.84	88.77	88.67	
07/25/85	17:12:07	1823.13	1931.05	2231.48	88.83	88.77	88.67	
07/25/85	17:13:08	1822.92	1930.85	2231.48	88.86	88.78	88.67	
07/25/85	17:14:05	1822.78	1930.72	2231.46	88.85	88.78	88.67	

TABLE A3-13 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE OLDS SANDSTONE OF THE BELL CANYON FORMATION, 4177 TO 4218
FEET BELOW LAND SURFACE, JULY 26 TO 29, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/25/85	17:15:06	1822.59	1930.52	2231.50	88.87	88.78	88.67	
07/25/85	17:16:07	1822.41	1930.33	2231.45	88.85	88.78	88.67	
07/25/85	17:17:04	1822.49	1930.17	2231.45	88.84	88.77	88.67	
07/25/85	17:18:05	1822.24	1929.99	2231.43	88.84	88.78	88.66	
07/25/85	17:19:03	1822.18	1929.81	2231.44	88.86	88.77	88.67	
07/25/85	17:20:04	1822.22	1929.64	2231.44	88.86	88.77	88.66	
07/25/85	17:21:01	1822.12	1929.48	2231.42	88.85	88.77	88.66	
07/25/85	17:22:02	1821.74	1929.29	2231.42	88.87	88.77	88.66	
07/25/85	17:23:00	1821.74	1929.14	2231.42	88.86	88.76	88.67	
07/25/85	17:24:00	1821.70	1928.95	2231.39	88.85	88.78	88.66	
07/25/85	17:25:12	1821.31	1928.73	2231.38	88.85	88.78	88.67	
07/25/85	17:26:13	1821.27	1928.58	2231.38	88.87	88.77	88.66	
07/25/85	17:27:10	1821.35	1928.39	2231.41	88.86	88.77	88.66	
07/25/85	17:28:11	1821.08	1928.24	2231.34	88.86	88.77	88.67	
07/25/85	17:29:08	1820.90	1928.08	2231.34	88.86	88.77	88.67	
07/25/85	17:30:09	1820.73	1927.91	2231.35	88.85	88.77	88.65	
07/25/85	17:31:10	1820.89	1927.72	2231.30	88.88	88.76	88.66	
07/25/85	17:32:07	1820.87	1927.58	2231.30	88.88	88.76	88.67	
07/25/85	17:33:02	1820.54	1927.44	2231.33	88.87	88.78	88.66	
07/25/85	17:34:00	1820.52	1927.25	2231.29	88.87	88.77	88.66	
07/25/85	17:35:01	1820.27	1927.09	2231.31	88.87	88.78	88.66	
07/25/85	17:36:12	1820.15	1926.88	2231.27	88.89	88.77	88.66	
07/25/85	17:37:13	1820.03	1926.74	2231.29	88.89	88.77	88.67	
07/25/85	17:38:10	1819.94	1926.56	2231.25	88.87	88.79	88.65	
07/25/85	17:39:11	1819.94	1926.40	2231.27	88.88	88.78	88.65	
07/25/85	17:40:09	1819.63	1926.23	2231.28	88.88	88.77	88.65	
07/25/85	17:41:09	1819.67	1926.06	2231.24	88.89	88.78	88.64	
07/25/85	17:42:07	1819.61	1925.92	2231.24	88.89	88.77	88.64	
07/25/85	17:43:07	1819.49	1925.78	2231.24	88.88	88.78	88.63	
07/25/85	17:44:05	1819.47	1925.59	2231.21	88.91	88.78	88.63	
07/25/85	17:45:05	1819.09	1925.41	2231.24	88.88	88.77	88.63	
07/25/85	17:46:03	1819.07	1925.27	2231.22	88.88	88.79	88.64	
07/25/85	17:47:03	1818.91	1925.14	2231.18	88.90	88.78	88.63	
07/25/85	17:48:04	1818.82	1924.95	2231.18	88.89	88.78	88.64	
07/25/85	17:49:01	1818.87	1924.80	2231.18	88.90	88.79	88.63	
07/25/85	17:50:02	1818.76	1924.65	2231.17	88.90	88.80	88.62	
07/25/85	17:51:13	1818.68	1924.47	2231.17	88.89	88.79	88.61	
07/25/85	17:52:00	1818.66	1924.35	2231.19	88.89	88.79	88.61	
07/25/85	17:53:11	1818.53	1924.18	2231.18	88.91	88.78	88.59	
07/25/85	17:54:12	1818.37	1923.99	2231.17	88.91	88.79	88.61	
07/25/85	17:55:10	1818.18	1923.86	2231.16	88.90	88.79	88.60	
07/25/85	17:56:10	1818.27	1923.70	2231.15	88.90	88.79	88.60	
07/25/85	17:57:08	1817.91	1923.54	2231.13	88.91	88.79	88.60	
07/25/85	17:58:08	1818.08	1923.42	2231.11	88.91	88.79	88.62	

TABLE A3-13 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE OLDS SANDSTONE OF THE BELL CANYON FORMATION, 4177 TO 4218
FEET BELOW LAND SURFACE, JULY 26 TO 29, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/25/85	17:59:06	1817.87	1923.24	2231.10	88.90	88.78	88.61	
07/25/85	18:00:06	1817.71	1923.13	2231.11	88.90	88.79	88.63	
07/25/85	18:01:04	1817.64	1922.98	2231.10	88.91	88.78	88.63	
07/25/85	18:02:04	1817.60	1922.82	2231.08	88.90	88.78	88.63	
07/25/85	18:03:05	1817.54	1922.67	2231.06	88.91	88.79	88.64	
07/25/85	18:04:02	1817.25	1922.53	2231.07	88.91	88.78	88.65	
07/25/85	18:05:03	1817.27	1922.36	2231.05	88.92	88.79	88.65	
07/25/85	18:06:00	1817.31	1922.25	2231.06	88.92	88.79	88.66	
07/25/85	18:07:44	1817.23	1922.01	2231.07	88.93	88.78	88.66	
07/26/85	08:11:14	1796.90	1875.56	2225.16	88.87	88.94	88.85	
07/26/85	08:11:30	1796.77	1875.56	2225.22	88.87	88.94	88.84	
07/26/85	08:11:48	1796.79	1875.54	2225.20	88.87	88.94	88.83	
07/26/85	08:12:05	1796.83	1875.53	2225.20	88.87	88.94	88.84	Equilibration
07/26/85	08:12:23	1797.00	1875.52	2225.21	88.87	88.94	88.83	
07/26/85	08:12:38	1796.85	1875.49	2225.19	88.88	88.94	88.83	
07/26/85	08:12:56	1796.71	1875.53	2225.21	88.88	88.94	88.82	
07/26/85	08:13:11	1796.81	1875.49	2225.22	88.87	88.95	88.83	
07/26/85	08:13:29	1796.79	1875.50	2225.18	88.88	88.94	88.82	
07/26/85	08:13:43	1796.86	1875.45	2225.21	88.85	88.94	88.80	
07/26/85	08:13:55	1796.85	1875.53	2225.60	88.86	88.94	88.80	
07/26/85	08:14:05	1796.77	1875.47	2225.41	88.84	88.93	88.81	
07/26/85	08:14:18	1796.69	1875.49	2225.15	88.87	88.93	88.81	
07/26/85	08:14:28	1796.79	1875.61	2225.26	88.87	88.92	88.80	
07/26/85	08:14:40	1777.47	1869.67	2225.35	88.90	88.91	88.77	Opened Tool for
07/26/85	08:14:50	1760.46	131.39	2226.27	88.96	88.94	88.79	FFL
07/26/85	08:15:03	1781.95	128.21	2227.59	88.93	88.90	88.79	
07/26/85	08:15:16	1787.70	129.33	2224.74	88.90	88.92	88.78	FFL
07/26/85	08:15:27	1790.03	130.04	2225.71	88.82	88.93	88.77	
07/26/85	08:15:40	1791.52	130.58	2225.54	88.78	88.92	88.77	
07/26/85	08:15:51	1792.29	130.90	2225.35	88.81	88.92	88.77	
07/26/85	08:16:04	1792.85	131.21	2225.26	88.80	88.92	88.76	
07/26/85	08:16:18	1793.26	131.41	2225.20	88.78	88.93	88.76	
07/26/85	08:16:34	1793.63	131.73	2225.22	88.80	88.92	88.77	
07/26/85	08:16:50	1793.89	132.00	2225.24	88.80	88.92	88.78	
07/26/85	08:17:09	1794.17	132.22	2225.22	88.79	88.91	88.77	
07/26/85	08:17:26	1794.44	132.39	2225.19	88.78	88.91	88.77	
07/26/85	08:17:46	1794.42	132.66	2225.18	88.78	88.91	88.77	
07/26/85	08:18:11	1794.54	132.81	2225.19	88.78	88.91	88.77	
07/26/85	08:18:38	1794.65	132.51	2225.17	88.77	88.90	88.77	
07/26/85	08:19:03	1794.54	133.80	2225.17	88.77	88.89	88.76	
07/26/85	08:19:31	1794.70	134.48	2225.17	88.77	88.89	88.76	
07/26/85	08:19:58	1794.82	134.87	2225.15	88.77	88.88	88.76	
07/26/85	08:20:23	1794.90	135.22	2225.15	88.77	88.88	88.76	
07/26/85	08:20:50	1794.96	135.56	2225.13	88.77	88.88	88.76	

TABLE A3-13 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE OLDS SANDSTONE OF THE BELL CANYON FORMATION, 4177 TO 4218
FEET BELOW LAND SURFACE, JULY 26 TO 29, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/26/85	08:21:15	1795.01	135.88	2225.14	88.77	88.87	88.76	
07/26/85	08:21:43	1795.04	136.24	2225.12	88.77	88.87	88.76	
07/26/85	08:22:08	1795.09	136.53	2225.12	88.77	88.86	88.76	
07/26/85	08:22:35	1795.14	136.87	2225.10	88.77	88.86	88.75	
07/26/85	08:23:00	1795.18	137.16	2225.11	88.77	88.85	88.75	
07/26/85	08:23:27	1795.22	137.48	2225.11	88.77	88.84	88.75	
07/26/85	08:23:52	1795.25	137.76	2225.09	88.77	88.84	88.75	
07/26/85	08:24:19	1795.29	138.05	2225.07	88.77	88.84	88.74	
07/26/85	08:24:45	1795.34	138.36	2225.08	88.77	88.83	88.74	
07/26/85	08:25:12	1795.25	138.64	2225.09	88.71	88.82	88.74	
07/26/85	08:25:37	1793.48	138.94	2225.09	88.76	88.82	88.74	
07/26/85	08:26:04	1794.34	139.25	2225.08	88.76	88.81	88.73	
07/26/85	08:26:29	1794.63	139.50	2225.06	88.76	88.80	88.73	
07/26/85	08:26:56	1794.79	139.79	2225.06	88.77	88.80	88.73	
07/26/85	08:27:23	1794.88	140.10	2225.07	88.77	88.79	88.72	
07/26/85	08:27:57	1794.98	140.43	2225.05	88.77	88.78	88.72	
07/26/85	08:28:24	1795.06	140.72	2225.04	88.77	88.78	88.72	
07/26/85	08:28:49	1795.14	140.97	2225.06	88.77	88.79	88.71	
07/26/85	08:29:16	1795.12	141.26	2225.03	88.77	88.77	88.72	
07/26/85	08:29:41	1795.45	141.54	2225.01	88.77	88.75	88.68	
07/26/85	08:29:54	1797.79	151.93	2225.67	88.85	88.69	88.63	Shut-in FBU
07/26/85	08:30:04	1805.91	176.77	2230.30	88.85	88.75	88.64	
07/26/85	08:30:17	1801.32	209.81	2224.93	88.82	88.70	88.66	
07/26/85	08:30:27	1799.87	242.57	2226.66	88.81	88.73	88.66	
07/26/85	08:30:40	1798.90	286.29	2224.81	88.80	88.74	88.69	
07/26/85	08:30:50	1798.63	327.41	2225.40	88.80	88.72	88.66	
07/26/85	08:31:03	1798.26	378.67	2225.08	88.80	88.70	88.64	
07/26/85	08:31:13	1798.26	423.83	2225.23	88.80	88.71	88.64	
07/26/85	08:31:26	1798.14	476.84	2225.21	88.80	88.65	88.65	
07/26/85	08:31:39	1798.16	529.02	2225.21	88.80	88.35	88.65	
07/26/85	08:31:49	1798.14	571.78	2225.21	88.80	88.50	88.66	
07/26/85	08:32:02	1798.12	620.32	2225.19	88.67	88.98	88.64	
07/26/85	08:32:12	1797.97	657.08	2225.21	88.76	89.35	88.65	
07/26/85	08:32:24	1798.01	701.02	2225.21	88.82	89.38	88.65	
07/26/85	08:32:34	1798.26	734.24	2225.19	88.87	88.96	88.64	
07/26/85	08:32:47	1798.01	776.43	2225.21	88.80	88.77	88.60	
07/26/85	08:33:05	1797.98	833.70	2225.19	88.79	88.79	88.76	
07/26/85	08:33:30	1797.97	901.53	2225.16	88.79	88.78	88.72	
07/26/85	08:33:53	1797.88	956.29	2225.15	88.79	88.77	88.72	
07/26/85	08:34:19	1797.80	1010.84	2225.15	88.79	88.83	88.73	
07/26/85	08:34:42	1797.74	1055.30	2225.14	88.79	88.82	88.74	
07/26/85	08:35:07	1797.69	1099.85	2225.14	88.79	88.82	88.73	
07/26/85	08:35:30	1797.64	1136.54	2225.12	88.79	88.77	88.75	
07/26/85	08:35:56	1797.54	1173.70	2225.10	88.79	88.88	88.74	

TABLE A3-13 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE OLDS SANDSTONE OF THE BELL CANYON FORMATION, 4177 TO 4218
FEET BELOW LAND SURFACE, JULY 26 TO 29, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/26/85	08:36:19	1797.48	1204.43	2225.11	88.79	88.85	88.75	
07/26/85	08:36:44	1797.42	1235.73	2225.10	88.79	88.87	88.75	
07/26/85	08:37:10	1797.36	1264.52	2225.10	88.81	88.87	88.75	
07/26/85	08:37:33	1797.36	1288.58	2225.11	88.79	88.91	88.76	
07/26/85	08:37:58	1797.27	1313.23	2225.10	88.79	88.82	88.76	
07/26/85	08:38:21	1797.23	1333.88	2225.09	88.79	88.86	88.76	
07/26/85	08:38:47	1797.20	1355.29	2225.09	88.79	89.00	88.76	
07/26/85	08:39:10	1797.15	1373.29	2225.10	88.79	88.96	88.76	
07/26/85	08:39:35	1797.13	1391.94	2225.09	88.81	88.90	88.79	
07/26/85	08:39:58	1797.07	1407.72	2225.11	88.81	88.91	88.78	
07/26/85	08:40:24	1797.06	1424.10	2225.08	88.82	88.94	88.78	
07/26/85	08:40:47	1797.01	1438.01	2225.09	88.88	88.94	88.78	
07/26/85	08:41:12	1797.00	1452.52	2225.08	88.83	88.94	88.79	
07/26/85	08:41:35	1796.98	1464.87	2225.07	88.85	88.96	88.79	
07/26/85	08:42:00	1796.94	1477.80	2225.09	88.85	88.98	88.80	
07/26/85	08:42:24	1796.93	1488.81	2225.08	88.81	88.97	88.80	
07/26/85	08:43:10	1796.90	1508.91	2225.07	88.79	89.11	88.82	
07/26/85	08:44:34	1796.82	1547.64	2225.07	88.82	89.01	88.81	
07/26/85	08:45:08	1796.81	1553.10	2225.10	88.84	88.99	88.81	
07/26/85	08:46:05	1796.77	1575.63	2225.12	88.90	88.94	88.82	
07/26/85	08:47:15	1796.63	1594.45	2225.12	88.94	88.93	88.87	
07/26/85	08:48:04	1796.69	1606.30	2225.05	88.87	88.94	88.85	
07/26/85	08:49:09	1796.69	1620.73	2225.08	88.98	88.94	88.84	
07/26/85	08:50:16	1796.67	1634.16	2225.01	89.03	88.98	88.85	
07/26/85	08:52:27	1796.61	1654.08	2224.96	88.92	89.03	88.90	
07/26/85	08:55:05	1796.54	1676.86	2224.92	88.90	89.00	88.90	
07/26/85	08:56:23	1796.52	1687.65	2224.98	89.00	89.01	88.92	
07/26/85	08:57:15	1796.48	1693.47	2224.99	89.01	88.98	88.92	
07/26/85	08:58:05	1796.48	1698.73	2224.96	89.01	88.95	88.91	
07/26/85	08:59:25	1796.44	1706.56	2224.94	89.02	88.92	88.91	
07/26/85	09:00:15	1796.46	1711.08	2224.96	88.99	88.92	88.89	
07/26/85	09:01:07	1796.46	1715.55	2224.96	88.99	88.95	88.89	
07/26/85	09:02:25	1796.44	1721.81	2224.93	89.03	89.01	88.87	
07/26/85	09:03:17	1796.42	1725.70	2224.94	89.01	89.05	88.89	
07/26/85	09:04:09	1796.42	1729.37	2224.91	88.98	89.08	88.89	
07/26/85	09:05:27	1796.38	1734.61	2224.89	88.97	89.13	88.91	
07/26/85	09:06:19	1796.38	1737.87	2224.91	89.00	89.16	88.92	
07/26/85	09:07:09	1796.42	1740.86	2224.87	88.99	89.19	88.93	
07/26/85	09:08:01	1796.38	1743.87	2224.88	89.02	89.22	88.94	
07/26/85	09:09:19	1796.36	1748.08	2224.87	88.98	89.24	88.93	
07/26/85	09:10:11	1796.40	1750.76	2224.85	88.97	89.21	88.94	
07/26/85	09:11:00	1796.36	1753.20	2224.85	88.99	89.21	88.92	
07/26/85	09:12:21	1796.34	1756.96	2224.84	88.99	89.17	88.91	
07/26/85	09:13:11	1796.38	1759.16	2224.82	88.99	89.31	88.91	

TABLE A3-13 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE OLDS SANDSTONE OF THE BELL CANYON FORMATION, 4177 TO 4218
FEET BELOW LAND SURFACE, JULY 26 TO 29, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/26/85	09:14:03	1796.34	1761.39	2224.84	88.99	89.21	88.90	
07/26/85	09:15:21	1796.29	1764.57	2224.82	88.99	89.12	88.90	
07/26/85	09:16:13	1796.34	1766.56	2224.82	88.97	89.13	88.90	
07/26/85	09:17:02	1796.30	1768.42	2224.82	88.97	89.14	88.90	
07/26/85	09:18:23	1796.32	1771.28	2224.82	88.96	89.11	88.90	
07/26/85	09:19:15	1796.30	1773.04	2224.79	88.96	89.11	88.90	
07/26/85	09:20:04	1796.23	1774.66	2224.79	88.95	89.09	88.90	
07/26/85	09:21:25	1796.27	1777.21	2224.80	88.98	89.07	88.90	
07/26/85	09:22:14	1796.27	1778.72	2224.76	89.03	89.07	88.91	
07/26/85	09:23:07	1796.25	1780.22	2224.77	89.00	89.06	88.89	
07/26/85	09:24:25	1796.28	1782.41	2224.77	88.92	89.05	88.89	
07/26/85	09:25:17	1796.21	1783.79	2224.76	88.88	89.06	88.89	
07/26/85	09:26:06	1796.26	1785.08	2224.75	88.87	89.04	88.89	
07/26/85	09:27:27	1796.26	1787.11	2224.73	88.84	89.00	88.88	
07/26/85	09:28:16	1796.19	1788.32	2224.72	88.88	89.03	88.89	
07/26/85	09:29:09	1796.17	1789.52	2224.74	88.94	89.02	88.89	
07/26/85	09:30:27	1796.21	1791.30	2224.72	88.93	89.02	88.88	
07/26/85	09:31:19	1796.23	1792.41	2224.72	88.94	89.01	88.88	
07/26/85	09:32:08	1796.19	1793.47	2224.69	88.96	89.00	88.88	
07/26/85	09:33:00	1796.17	1794.55	2224.70	88.96	89.01	88.88	
07/26/85	09:34:18	1796.21	1796.10	2224.68	88.96	88.99	88.87	
07/26/85	09:35:10	1796.21	1797.10	2224.66	88.96	89.00	88.87	
07/26/85	09:36:02	1796.17	1798.07	2224.66	88.97	88.98	88.86	
07/26/85	09:37:20	1796.15	1799.49	2224.65	88.98	89.03	88.87	
07/26/85	09:38:12	1796.17	1800.41	2224.66	88.97	89.02	88.87	
07/26/85	09:39:02	1796.17	1801.25	2224.63	88.96	89.01	88.87	
07/26/85	09:40:23	1796.15	1802.60	2224.63	88.97	89.01	88.87	
07/26/85	09:41:00	1796.15	1803.04	2224.64	88.97	89.01	88.86	
07/26/85	09:42:12	1796.13	1804.31	2224.62	88.96	89.00	88.86	
07/26/85	09:43:01	1796.15	1805.03	2224.62	88.97	89.00	88.86	
07/26/85	09:44:22	1796.09	1806.24	2224.60	88.98	89.00	88.85	
07/26/85	09:45:11	1796.13	1806.95	2224.63	88.98	89.00	88.84	
07/26/85	09:46:27	1796.09	1807.88	2224.61	89.00	88.99	88.85	
07/26/85	09:50:26	1796.11	1811.14	2224.55	88.99	88.99	88.85	
07/26/85	10:00:17	1796.05	1817.61	2224.49	89.07	89.00	88.84	
07/26/85	10:10:06	1796.05	1822.78	2224.44	88.96	89.02	88.84	
07/26/85	10:20:25	1795.94	1827.16	2224.34	88.95	89.03	88.83	
07/26/85	10:30:16	1795.88	1830.62	2224.27	88.95	89.05	88.83	
07/26/85	10:40:05	1795.88	1833.50	2224.23	89.13	89.03	88.83	
07/26/85	10:50:24	1795.78	1836.08	2224.15	89.14	89.01	88.83	
07/26/85	11:00:12	1795.78	1838.18	2224.08	88.99	89.03	88.82	
07/26/85	11:10:03	1795.74	1840.03	2224.02	88.88	89.04	88.82	
07/26/85	11:20:20	1795.72	1841.65	2223.92	88.92	89.06	88.83	
07/26/85	11:30:12	1795.70	1843.04	2223.88	88.97	89.06	88.82	

TABLE A3-13 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE OLDS SANDSTONE OF THE BELL CANYON FORMATION, 4177 TO 4218
FEET BELOW LAND SURFACE, JULY 26 TO 29, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/26/85	11:40:00	1795.63	1844.28	2223.81	88.97	89.06	88.82	
07/26/85	11:50:20	1795.61	1845.42	2223.74	88.98	89.07	88.82	
07/26/85	12:00:09	1795.57	1846.37	2223.66	88.99	89.11	88.82	
07/26/85	12:10:00	1795.49	1847.21	2223.56	88.98	89.07	88.83	
07/26/85	12:20:17	1795.49	1848.02	2223.53	88.97	89.07	88.82	
07/26/85	12:27:12	1795.49	1848.52	2223.46	88.98	89.05	88.85	
07/26/85	12:27:32	1795.49	1848.56	2223.48	88.94	89.03	88.81	
07/26/85	12:27:45	1795.51	1848.54	2223.42	88.94	89.03	88.81	
07/26/85	12:27:55	1795.47	1848.58	2223.44	88.93	89.02	88.81	
07/26/85	12:28:08	1795.41	1848.58	2223.44	88.95	89.02	88.80	
07/26/85	12:28:19	1795.49	1848.63	2223.50	88.94	89.00	88.80	
07/26/85	12:28:29	1795.47	1848.60	2223.44	88.94	89.01	88.81	
07/26/85	12:28:40	1795.49	1848.65	2223.52	88.94	89.01	88.81	
07/26/85	12:28:50	1795.47	1848.67	2223.52	88.94	89.02	88.81	
07/26/85	12:29:01	1795.45	1848.67	2223.44	88.94	89.00	88.82	
07/26/85	12:29:11	1795.43	1848.61	2223.39	88.95	89.02	88.80	
07/26/85	12:29:22	1795.43	1848.67	2223.48	88.94	89.00	88.81	
07/26/85	12:29:31	1795.41	1848.71	2223.48	88.96	89.01	88.81	
07/26/85	12:29:43	1795.45	1848.71	2223.50	88.94	89.01	88.80	
07/26/85	12:29:52	1795.51	1848.67	2223.30	88.94	89.02	88.83	
07/26/85	12:30:04	1758.62	112.05	2223.78	89.00	89.00	88.79	Opened tool
07/26/85	12:30:14	1779.89	144.59	2223.76	88.95	89.01	88.83	for SFL
07/26/85	12:30:27	1786.17	143.77	2223.43	88.93	88.99	88.85	
07/26/85	12:30:37	1788.90	144.28	2223.41	88.92	88.99	88.82	SFL
07/26/85	12:30:49	1790.86	144.84	2223.43	88.92	89.00	88.84	
07/26/85	12:31:02	1791.64	145.22	2223.50	88.92	88.98	88.82	
07/26/85	12:31:12	1792.24	145.47	2223.45	88.93	88.96	88.87	
07/26/85	12:31:24	1792.62	145.73	2223.43	88.89	88.96	88.83	
07/26/85	12:31:34	1792.97	145.94	2223.43	88.89	88.96	88.85	
07/26/85	12:31:50	1793.32	146.18	2223.48	88.89	88.95	88.82	
07/26/85	12:32:03	1793.48	146.39	2223.46	88.91	88.95	88.82	
07/26/85	12:32:19	1793.55	146.62	2223.41	88.92	88.95	88.82	
07/26/85	12:32:36	1793.69	146.88	2223.43	88.90	88.95	88.81	
07/26/85	12:33:09	1793.98	147.32	2223.44	88.85	88.93	88.80	
07/26/85	12:33:30	1793.96	147.63	2223.42	88.83	88.91	88.77	
07/26/85	12:33:55	1793.98	147.93	2223.42	88.81	88.90	88.79	
07/26/85	12:34:17	1794.11	148.19	2223.43	88.80	88.90	88.77	
07/26/85	12:34:42	1794.04	148.50	2223.43	88.79	88.89	88.76	
07/26/85	12:35:04	1794.13	148.77	2223.41	88.78	88.88	88.75	
07/26/85	12:35:28	1794.17	149.06	2223.40	88.79	88.88	88.75	
07/26/85	12:35:51	1794.27	149.36	2223.40	88.78	88.87	88.75	
07/26/85	12:36:15	1794.25	149.63	2223.38	88.78	88.85	88.74	
07/26/85	12:36:40	1794.35	149.95	2223.37	88.77	88.85	88.74	
07/26/85	12:37:02	1794.38	150.19	2223.37	88.76	88.84	88.74	

TABLE A3-13 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE OLDS SANDSTONE OF THE BELL CANYON FORMATION, 4177 TO 4218
FEET BELOW LAND SURFACE, JULY 26 TO 29, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/26/85	12:37:27	1794.33	150.47	2223.37	88.77	88.84	88.74	
07/26/85	12:37:49	1794.44	150.71	2223.36	88.76	88.83	88.74	
07/26/85	12:38:14	1794.44	150.99	2223.36	88.76	88.82	88.74	
07/26/85	12:38:36	1794.40	151.23	2223.34	88.76	88.82	88.74	
07/26/85	12:39:00	1794.42	151.50	2223.34	88.76	88.81	88.73	
07/26/85	12:39:23	1794.44	151.75	2223.34	88.76	88.81	88.73	
07/26/85	12:39:47	1794.40	152.01	2223.32	88.76	88.79	88.73	
07/26/85	12:40:09	1794.48	152.24	2223.33	88.76	88.79	88.73	
07/26/85	12:40:34	1794.52	152.51	2223.32	88.76	88.80	88.73	
07/26/85	12:40:56	1794.50	152.75	2223.33	88.76	88.78	88.73	
07/26/85	12:41:20	1794.56	153.01	2223.31	88.76	88.81	88.73	
07/26/85	12:41:43	1794.56	153.23	2223.30	88.76	88.81	88.73	
07/26/85	12:42:07	1794.58	153.50	2223.30	88.76	88.79	88.72	
07/26/85	12:42:32	1794.58	153.76	2223.32	88.76	88.77	88.73	
07/26/85	12:42:54	1794.60	153.99	2223.30	88.76	88.77	88.73	
07/26/85	12:43:19	1794.60	154.25	2223.30	88.76	88.76	88.72	
07/26/85	12:43:41	1794.60	154.48	2223.28	88.76	88.78	88.72	
07/26/85	12:44:05	1794.60	154.73	2223.29	88.76	88.77	88.72	
07/26/85	12:44:45	1794.62	155.12	2223.30	88.76	88.79	88.72	
07/26/85	12:45:09	1794.71	155.38	2223.28	88.76	88.78	88.72	
07/26/85	12:46:20	1794.68	156.22	2223.27	88.76	88.78	88.72	
07/26/85	12:47:14	1794.69	156.77	2223.32	88.76	88.78	88.72	
07/26/85	12:48:06	1794.75	157.28	2223.25	88.76	88.78	88.72	
07/26/85	12:49:29	1794.76	158.10	2223.24	88.76	88.77	88.73	
07/26/85	12:50:00	1794.75	158.32	2223.24	88.77	88.78	88.73	
07/26/85	12:51:14	1794.76	159.15	2223.24	88.77	88.77	88.73	
07/26/85	12:52:06	1794.77	159.63	2223.23	88.77	88.78	88.73	
07/26/85	12:53:00	1794.79	160.15	2223.22	88.77	88.77	88.73	
07/26/85	12:54:21	1794.81	160.94	2223.18	88.77	88.79	88.73	
07/26/85	12:55:15	1794.83	161.47	2223.19	88.77	88.81	88.73	
07/26/85	12:56:09	1794.81	161.96	2223.18	88.77	88.82	88.73	
07/26/85	12:57:00	1794.84	162.46	2223.18	88.77	88.81	88.74	
07/26/85	12:58:23	1794.84	163.25	2223.18	88.77	88.83	88.74	
07/26/85	12:59:18	1794.93	163.64	2223.19	88.77	88.83	88.73	
07/26/85	12:59:31	1794.89	163.73	2223.21	88.77	88.84	88.74	
07/26/85	12:59:41	1794.81	163.83	2223.23	88.77	88.83	88.73	
07/26/85	12:59:55	1795.08	164.02	2223.17	88.77	88.85	88.73	
07/26/85	13:00:05	1794.85	164.04	2223.16	88.77	88.83	88.73	
07/26/85	13:00:18	1799.07	179.57	2225.35	88.92	88.79	88.73	Shut-in for
07/26/85	13:00:36	1800.54	234.57	2222.67	88.82	88.83	88.74	SBU
07/26/85	13:00:49	1798.74	276.22	2223.34	88.80	88.80	88.73	
07/26/85	13:00:58	1798.06	312.47	2223.53	88.79	88.87	88.74	
07/26/85	13:01:10	1797.58	359.71	2223.36	88.79	88.81	88.73	
07/26/85	13:01:20	1797.33	399.71	2223.34	88.79	88.84	88.74	

TABLE A3-13 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE OLDS SANDSTONE OF THE BELL CANYON FORMATION, 4177 TO 4218
FEET BELOW LAND SURFACE, JULY 26 TO 29, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/26/85	13:01:33	1797.12	455.90	2223.38	88.79	88.82	88.73	
07/26/85	13:01:49	1796.90	514.17	2223.36	88.79	88.75	88.74	
07/26/85	13:02:02	1796.98	560.91	2223.34	88.78	88.42	88.74	
07/26/85	13:02:17	1796.79	613.62	2223.34	88.78	88.94	88.74	
07/26/85	13:02:29	1796.77	655.26	2223.32	88.75	89.36	88.74	
07/26/85	13:02:44	1796.65	701.90	2223.34	88.89	89.57	88.74	
07/26/85	13:02:59	1796.61	747.21	2223.32	88.89	88.99	88.74	
07/26/85	13:03:17	1796.53	796.17	2223.32	88.80	88.89	88.65	
07/26/85	13:03:36	1796.44	839.82	2223.26	88.78	88.87	88.87	
07/26/85	13:03:56	1796.40	884.49	2223.28	88.79	88.94	88.77	
07/26/85	13:04:14	1796.40	921.49	2223.29	88.79	88.91	88.74	
07/26/85	13:04:34	1796.26	959.66	2223.30	88.78	88.91	88.74	
07/26/85	13:04:51	1796.24	991.18	2223.26	88.79	88.87	88.74	
07/26/85	13:05:11	1796.22	1023.98	2223.27	88.78	88.93	88.75	
07/26/85	13:05:29	1796.15	1051.32	2223.25	88.79	88.95	88.76	
07/26/85	13:05:49	1796.13	1079.77	2223.29	88.80	88.92	88.75	
07/26/85	13:06:07	1796.07	1103.61	2223.26	88.79	88.91	88.75	
07/26/85	13:06:27	1795.97	1128.54	2223.24	88.82	88.94	88.76	
07/26/85	13:06:46	1795.94	1151.97	2223.27	88.89	88.88	88.76	
07/26/85	13:07:04	1795.92	1171.70	2223.26	88.84	89.02	88.77	
07/26/85	13:07:24	1795.93	1192.44	2223.25	88.82	88.99	88.77	
07/26/85	13:07:42	1795.90	1210.09	2223.25	88.81	88.96	88.79	
07/26/85	13:08:02	1795.88	1228.64	2223.25	88.85	88.97	88.79	
07/26/85	13:08:19	1795.76	1244.42	2223.23	88.89	88.97	88.79	
07/26/85	13:08:39	1795.82	1261.07	2223.21	88.95	88.94	88.80	
07/26/85	13:08:57	1795.76	1275.29	2223.23	88.96	88.95	88.80	
07/26/85	13:09:17	1795.78	1290.28	2223.22	88.85	88.99	88.85	
07/26/85	13:09:34	1795.68	1303.13	2223.22	88.92	89.04	88.83	
07/26/85	13:09:54	1795.80	1316.70	2223.25	88.90	88.99	88.83	
07/26/85	13:10:12	1795.70	1328.35	2223.25	88.89	88.97	88.85	
07/26/85	13:10:32	1795.66	1340.81	2223.24	88.87	88.90	88.85	
07/26/85	13:10:49	1795.66	1351.49	2223.23	88.91	88.99	88.86	
07/26/85	13:11:10	1795.61	1362.83	2223.20	88.96	89.10	88.86	
07/26/85	13:11:29	1795.53	1373.67	2223.21	88.95	89.12	88.88	
07/26/85	13:11:47	1795.55	1383.04	2223.20	88.92	89.12	88.87	
07/26/85	13:12:07	1795.55	1393.02	2223.23	88.94	89.06	88.86	
07/26/85	13:12:39	1795.53	1408.24	2223.20	88.97	89.02	88.94	
07/26/85	13:13:15	1795.53	1428.15	2223.19	88.98	89.05	88.93	
07/26/85	13:14:23	1795.45	1455.16	2223.19	89.08	89.09	88.95	
07/26/85	13:15:08	1795.47	1471.05	2223.19	89.10	89.09	88.96	
07/26/85	13:16:17	1795.49	1492.84	2223.19	89.02	89.10	88.97	
07/26/85	13:17:02	1795.43	1505.85	2223.17	89.03	89.09	88.99	
07/26/85	13:18:11	1795.38	1523.87	2223.16	89.05	89.22	89.00	
07/26/85	13:19:22	1795.43	1540.51	2223.17	89.06	89.19	89.01	

TABLE A3-13 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE OLDS SANDSTONE OF THE BELL CANYON FORMATION, 4177 TO 4218
FEET BELOW LAND SURFACE, JULY 26 TO 29, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/26/85	13:20:05	1795.38	1549.84	2223.16	89.08	89.22	89.03	
07/26/85	13:21:24	1795.36	1565.37	2223.14	88.96	89.17	89.02	
07/26/85	13:22:07	1795.34	1573.18	2223.14	89.03	89.14	89.00	
07/26/85	13:23:18	1795.34	1585.12	2223.12	89.05	89.14	89.01	
07/26/85	13:24:01	1795.38	1591.87	2223.11	89.03	89.12	89.02	
07/26/85	13:25:12	1795.36	1602.24	2223.13	89.10	89.09	89.04	
07/26/85	13:26:22	1795.36	1611.79	2223.10	89.09	89.10	89.05	
07/26/85	13:27:06	1795.30	1617.24	2223.09	89.14	89.09	89.05	
07/26/85	13:28:16	1795.30	1625.65	2223.10	89.13	89.08	89.05	
07/26/85	13:29:25	1795.28	1633.27	2223.11	89.12	89.09	89.04	
07/26/85	13:30:10	1795.30	1637.98	2223.09	89.12	89.10	89.04	
07/26/85	13:31:19	1795.28	1644.77	2223.06	89.07	89.12	89.03	
07/26/85	13:32:04	1795.26	1649.02	2223.06	89.20	89.12	89.03	
07/26/85	13:33:13	1795.28	1655.11	2223.02	89.15	89.12	89.03	
07/26/85	13:34:23	1795.26	1661.04	2223.06	89.15	89.16	89.03	
07/26/85	13:35:07	1795.20	1664.48	2223.04	89.15	89.14	89.02	
07/26/85	13:36:17	1795.22	1669.84	2223.04	89.15	89.15	89.03	
07/26/85	13:37:00	1795.20	1672.98	2223.02	89.16	89.16	89.03	
07/26/85	13:38:11	1795.24	1677.84	2223.01	89.16	89.14	89.03	
07/26/85	13:39:20	1795.22	1682.35	2223.04	89.16	89.13	89.01	
07/26/85	13:40:05	1795.26	1685.18	2223.00	89.15	89.12	89.00	
07/26/85	13:41:16	1795.24	1689.43	2223.00	89.15	89.09	89.01	
07/26/85	13:42:24	1795.20	1693.36	2222.98	89.15	89.08	89.00	
07/26/85	13:43:09	1795.22	1695.81	2222.97	89.15	89.08	89.01	
07/26/85	13:44:18	1795.20	1699.46	2223.00	89.13	89.05	89.01	
07/26/85	13:45:03	1795.20	1701.74	2222.99	89.13	89.05	89.00	
07/26/85	13:46:12	1795.22	1705.11	2222.95	89.13	89.02	88.97	
07/26/85	13:47:23	1795.26	1708.43	2222.96	89.13	88.96	88.98	
07/26/85	13:48:06	1795.18	1710.37	2222.93	89.14	88.95	88.98	
07/26/85	13:49:16	1795.22	1713.44	2222.94	89.12	88.94	88.97	
07/26/85	13:50:00	1795.24	1715.23	2222.96	89.11	88.95	88.97	
07/26/85	13:51:10	1795.20	1718.11	2222.93	89.10	88.98	88.99	
07/26/85	13:52:19	1795.20	1720.79	2222.93	89.09	89.00	88.95	
07/26/85	13:53:04	1795.20	1722.48	2222.89	89.10	89.01	88.92	
07/26/85	13:54:13	1795.16	1724.98	2222.90	89.09	89.04	88.93	
07/26/85	13:55:24	1795.18	1727.46	2222.89	89.08	89.06	88.95	
07/26/85	13:56:07	1795.16	1728.95	2222.90	89.08	89.07	88.94	
07/26/85	13:57:17	1795.16	1731.27	2222.89	89.09	89.10	88.93	
07/26/85	13:58:03	1795.16	1732.72	2222.88	89.07	89.11	88.95	
07/26/85	13:59:11	1795.14	1734.86	2222.89	89.08	89.13	88.94	
07/26/85	14:00:22	1795.14	1736.95	2222.86	89.07	89.15	88.94	
07/26/85	14:01:05	1795.12	1738.20	2222.88	89.05	89.16	88.94	
07/26/85	14:04:50	1795.24	1744.11	2222.76	89.05	89.22	88.99	
07/26/85	14:10:04	1795.12	1751.93	2222.77	89.07	89.24	89.00	

TABLE A3-13 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE OLDS SANDSTONE OF THE BELL CANYON FORMATION, 4177 TO 4218
FEET BELOW LAND SURFACE, JULY 26 TO 29, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/26/85	14:20:09	1795.12	1763.97	2222.75	89.05	89.21	88.94	
07/26/85	14:30:12	1795.12	1773.44	2222.67	89.03	89.20	88.95	
07/26/85	14:40:17	1795.06	1781.18	2222.59	88.92	89.11	88.94	
07/26/85	14:50:20	1794.97	1787.61	2222.48	88.92	89.08	88.93	
07/26/85	15:00:25	1795.01	1793.03	2222.47	88.98	89.04	88.93	
07/26/85	15:10:02	1794.99	1797.46	2222.40	89.01	89.02	88.91	
07/26/85	15:20:07	1795.01	1801.47	2222.31	89.02	89.03	88.91	
07/26/85	15:30:17	1794.99	1805.02	2222.25	89.01	89.05	88.93	
07/26/85	15:40:22	1794.97	1808.10	2222.18	89.00	89.04	88.92	
07/26/85	15:50:00	1794.95	1810.72	2222.13	89.01	89.05	88.91	
07/26/85	16:00:02	1794.93	1813.16	2222.05	89.03	89.04	88.91	
07/26/85	16:10:07	1794.91	1815.36	2222.00	89.04	89.05	88.91	
07/26/85	16:20:09	1794.91	1817.33	2221.92	89.04	89.04	88.91	
07/26/85	16:30:14	1794.89	1819.13	2221.85	89.02	89.05	88.92	
07/26/85	16:40:16	1794.89	1820.77	2221.79	89.03	89.06	88.91	
07/26/85	16:50:20	1794.85	1822.22	2221.71	89.02	89.05	88.92	
07/26/85	17:00:23	1794.87	1823.59	2221.67	89.05	89.06	88.91	
07/26/85	17:10:16	1794.83	1824.83	2221.62	88.98	89.05	88.92	
07/26/85	17:20:18	1794.85	1825.98	2221.54	89.03	89.06	88.91	
07/26/85	17:30:23	1794.83	1827.06	2221.45	89.00	89.06	88.91	
07/26/85	17:40:00	1794.85	1827.97	2221.38	89.01	89.07	88.92	
07/26/85	17:50:05	1794.83	1828.89	2221.33	89.04	89.10	88.91	
07/26/85	18:00:08	1794.74	1829.76	2221.26	89.05	89.09	88.92	
07/26/85	18:10:13	1794.78	1830.55	2221.22	89.05	89.09	88.91	
07/26/85	18:20:16	1794.83	1831.27	2221.12	89.03	89.08	88.92	
07/26/85	18:30:21	1794.76	1832.01	2221.10	89.06	89.09	88.92	
07/26/85	18:40:01	1794.74	1832.62	2221.03	89.13	89.09	88.93	
07/26/85	18:50:04	1794.76	1833.24	2220.95	89.19	89.09	88.92	
07/26/85	19:00:09	1794.74	1833.78	2220.90	89.22	89.09	88.93	
07/26/85	19:10:13	1794.70	1834.32	2220.82	89.18	89.09	88.93	
07/26/85	19:20:18	1794.68	1834.82	2220.76	89.15	89.10	88.92	
07/26/85	19:30:22	1794.72	1835.29	2220.69	89.12	89.10	88.93	
07/26/85	19:40:02	1794.68	1835.71	2220.62	89.09	89.11	88.93	
07/26/85	19:50:06	1794.76	1836.16	2220.53	89.05	89.10	88.93	
07/26/85	20:00:12	1794.74	1836.56	2220.48	89.03	89.10	88.93	
07/26/85	20:10:16	1794.70	1836.93	2220.40	89.00	89.12	88.93	
07/26/85	20:20:22	1794.70	1837.31	2220.36	89.01	89.12	88.94	
07/26/85	20:30:00	1794.66	1837.59	2220.28	89.01	89.12	88.94	
07/26/85	20:40:06	1794.72	1837.95	2220.23	89.02	89.10	88.94	
07/26/85	20:50:10	1794.72	1838.22	2220.18	88.98	89.11	88.94	
07/26/85	21:00:16	1794.64	1838.51	2220.11	89.03	89.11	88.94	
07/26/85	21:10:22	1794.66	1838.76	2220.02	89.04	89.12	88.94	
07/26/85	21:20:01	1794.66	1839.04	2219.96	89.04	89.11	88.94	
07/26/85	21:30:07	1794.72	1839.30	2219.92	89.02	89.11	88.95	

TABLE A3-13 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE OLDS SANDSTONE OF THE BELL CANYON FORMATION, 4177 TO 4218
FEET BELOW LAND SURFACE, JULY 26 TO 29, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/26/85	21:40:11	1794.70	1839.51	2219.83	89.03	89.12	88.95	
07/26/85	21:50:17	1794.74	1839.72	2219.78	89.03	89.11	88.96	
07/26/85	22:00:22	1794.68	1839.93	2219.70	89.05	89.11	88.96	
07/26/85	22:10:03	1794.70	1840.13	2219.64	89.06	89.12	88.95	
07/26/85	22:20:08	1794.72	1840.30	2219.60	89.05	89.12	88.96	
07/26/85	22:30:15	1794.70	1840.47	2219.51	89.05	89.11	88.95	
07/26/85	22:40:20	1794.72	1840.66	2219.47	89.08	89.12	88.96	
07/26/85	22:50:01	1794.66	1840.79	2219.41	89.07	89.13	88.96	
07/26/85	23:00:07	1794.70	1840.96	2219.32	89.09	89.13	88.96	
07/26/85	23:10:14	1794.72	1841.08	2219.27	89.09	89.13	88.97	
07/26/85	23:20:19	1794.74	1841.25	2219.20	89.08	89.13	88.96	
07/26/85	23:30:00	1794.70	1841.36	2219.12	89.07	89.13	88.97	
07/26/85	23:40:06	1794.70	1841.47	2219.08	89.09	89.13	88.97	
07/26/85	23:50:21	1794.72	1841.60	2218.98	89.07	89.14	88.98	
07/27/85	00:00:03	1794.72	1841.71	2218.93	89.09	89.15	88.96	
07/27/85	00:10:08	1794.74	1841.80	2218.87	89.08	89.14	88.97	
07/27/85	00:20:15	1794.78	1841.89	2218.80	89.08	89.14	88.97	
07/27/85	00:30:21	1794.70	1842.01	2218.72	89.09	89.13	88.96	
07/27/85	00:40:03	1794.80	1842.08	2218.69	89.12	89.14	88.98	
07/27/85	00:50:08	1794.72	1842.19	2218.59	89.10	89.15	88.97	
07/27/85	01:00:16	1794.74	1842.26	2218.53	89.10	89.14	88.98	
07/27/85	01:10:21	1794.74	1842.32	2218.47	89.09	89.14	88.98	
07/27/85	01:20:03	1794.72	1842.39	2218.43	89.09	89.15	88.98	
07/27/85	01:30:08	1794.76	1842.45	2218.36	89.09	89.15	88.98	
07/27/85	01:40:16	1794.74	1842.50	2218.31	89.08	89.14	88.97	
07/27/85	01:50:22	1794.78	1842.58	2218.22	89.09	89.15	88.99	
07/27/85	02:00:04	1794.74	1842.62	2218.17	89.08	89.15	88.98	
07/27/85	02:10:10	1794.78	1842.68	2218.09	89.09	89.15	88.98	
07/27/85	02:20:18	1794.76	1842.73	2218.02	89.08	89.15	88.99	
07/27/85	02:30:00	1794.78	1842.77	2217.97	89.09	89.15	88.99	
07/27/85	02:40:05	1794.80	1842.83	2217.91	89.09	89.16	88.99	
07/27/85	02:50:13	1794.85	1842.86	2217.85	89.10	89.15	88.99	
07/27/85	03:00:19	1794.78	1842.88	2217.77	89.10	89.15	88.99	
07/27/85	03:10:02	1794.83	1842.96	2217.69	89.10	89.15	88.99	
07/27/85	03:20:08	1794.80	1842.98	2217.63	89.11	89.15	88.99	
07/27/85	03:30:15	1794.83	1842.99	2217.57	89.11	89.16	88.99	
07/27/85	03:40:21	1794.83	1843.01	2217.51	89.10	89.15	88.99	
07/27/85	03:50:04	1794.80	1843.05	2217.48	89.10	89.16	88.99	
07/27/85	04:00:10	1794.85	1843.06	2217.36	89.12	89.17	89.00	
07/27/85	04:10:18	1794.87	1843.08	2217.31	89.10	89.16	88.99	
07/27/85	04:20:23	1794.85	1843.11	2217.25	89.11	89.15	89.00	
07/27/85	04:30:06	1794.82	1843.10	2217.20	89.12	89.15	88.99	
07/27/85	04:40:12	1794.85	1843.11	2217.12	89.12	89.16	89.00	
07/27/85	04:50:20	1794.93	1843.13	2217.05	89.12	89.16	89.00	

TABLE A3-13 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE OLDS SANDSTONE OF THE BELL CANYON FORMATION, 4177 TO 4218
FEET BELOW LAND SURFACE, JULY 26 TO 29, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/27/85	05:00:01	1794.85	1843.16	2216.99	89.11	89.17	88.99	
07/27/85	05:10:09	1794.85	1843.16	2216.95	89.12	89.16	88.99	
07/27/85	05:20:18	1794.89	1843.15	2216.85	89.12	89.16	89.00	
07/27/85	05:30:24	1794.89	1843.16	2216.83	89.12	89.17	89.00	
07/27/85	05:40:07	1794.91	1843.17	2216.73	89.11	89.16	89.00	
07/27/85	05:50:14	1794.89	1843.17	2216.66	89.12	89.17	89.00	
07/27/85	06:00:22	1794.93	1843.17	2216.61	89.11	89.17	89.00	
07/27/85	06:10:03	1794.93	1843.17	2216.56	89.11	89.17	89.00	
07/27/85	06:20:12	1794.95	1843.16	2216.48	89.12	89.17	89.00	
07/27/85	06:30:19	1794.91	1843.16	2216.43	89.11	89.16	89.01	
07/27/85	06:40:02	1794.91	1843.16	2216.36	89.13	89.17	89.00	
07/27/85	06:50:08	1794.93	1843.15	2216.29	89.12	89.17	89.00	
07/27/85	07:00:16	1794.93	1843.15	2216.24	89.12	89.16	89.00	
07/27/85	07:10:22	1794.97	1843.11	2216.16	89.12	89.17	89.01	
07/27/85	07:20:05	1794.93	1843.14	2216.09	89.12	89.17	89.00	
07/27/85	07:30:11	1794.97	1843.10	2216.02	89.12	89.17	89.00	
07/27/85	07:40:19	1794.95	1843.09	2215.95	89.12	89.17	89.00	
07/27/85	07:50:01	1795.03	1843.09	2215.91	89.13	89.17	89.00	
07/27/85	08:00:08	1794.97	1843.07	2215.84	89.12	89.18	89.00	
07/27/85	08:10:16	1794.95	1843.07	2215.77	89.11	89.17	89.00	
07/27/85	08:20:04	1795.03	1843.04	2215.72	89.12	89.17	89.00	
07/27/85	08:30:22	1795.01	1843.02	2215.63	89.12	89.17	89.00	
07/27/85	08:40:10	1795.01	1842.98	2215.59	89.12	89.18	89.00	
07/27/85	08:45:46	1795.03	1843.00	2215.56	89.18	89.17	89.00	SBU
07/27/85	08:46:04	1794.99	1843.00	2215.56	89.16	89.17	89.00	
07/27/85	08:46:24	1795.01	1842.99	2215.63	89.12	89.15	88.99	
07/27/85	08:46:33	1795.03	1843.01	2215.58	89.12	89.14	88.99	
07/27/85	08:46:45	1794.99	1843.04	2215.52	89.11	89.16	88.98	
07/27/85	08:46:55	1795.01	1842.97	2215.59	89.12	89.15	88.98	
07/27/85	08:47:07	1795.03	1842.99	2215.54	89.11	89.13	88.99	
07/27/85	08:47:17	1795.05	1843.01	2215.54	89.11	89.15	88.99	
07/27/85	08:47:29	1795.01	1843.01	2215.58	89.12	89.16	89.00	
07/27/85	08:47:39	1795.03	1843.01	2215.71	89.11	89.15	88.99	
07/27/85	08:47:50	1794.91	1843.03	2215.30	89.10	89.15	88.98	
07/27/85	08:48:01	1794.02	1838.28	2216.45	89.13	89.11	88.98	Opened tool for
07/27/85	08:48:10	1785.13	1831.78	2215.13	89.17	89.05	88.98	SLUG Test
07/27/85	08:48:21	1778.09	157.30	2216.73	89.10	89.10	88.99	
07/27/85	08:48:31	1784.57	166.55	2216.04	89.10	89.14	89.01	SLUG Test
07/27/85	08:48:43	1788.40	166.64	2215.48	89.12	89.11	88.99	
07/27/85	08:48:53	1790.26	167.15	2215.61	89.08	89.10	88.99	
07/27/85	08:49:05	1791.50	167.67	2215.54	89.08	89.10	89.00	
07/27/85	08:49:17	1792.10	167.99	2215.52	89.07	89.11	89.00	
07/27/85	08:49:32	1792.59	168.28	2215.54	89.06	89.08	88.98	
07/27/85	08:49:45	1792.90	168.51	2215.56	89.05	89.08	88.98	

TABLE A3-13 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE OLDS SANDSTONE OF THE BELL CANYON FORMATION, 4177 TO 4218
FEET BELOW LAND SURFACE, JULY 26 TO 29, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/27/85	08:50:00	1793.15	168.79	2215.54	89.04	89.07	88.97	
07/27/85	08:50:12	1793.36	169.00	2215.56	89.07	89.08	88.97	
07/27/85	08:50:38	1793.67	169.37	2215.56	89.04	89.06	88.95	
07/27/85	08:51:00	1793.79	169.67	2215.54	89.03	89.05	88.93	
07/27/85	08:51:25	1793.90	169.99	2215.55	89.02	89.03	88.90	
07/27/85	08:51:50	1794.02	170.32	2215.55	89.02	89.01	88.88	
07/27/85	08:52:12	1794.12	170.60	2215.56	89.02	88.99	88.87	
07/27/85	08:52:37	1794.19	170.92	2215.55	89.02	88.97	88.84	
07/27/85	08:52:59	1794.21	171.19	2215.53	89.02	88.96	88.84	
07/27/85	08:53:24	1794.28	171.48	2215.54	89.00	88.95	88.83	
07/27/85	08:53:46	1794.29	171.74	2215.52	88.98	88.93	88.81	
07/27/85	08:54:11	1794.34	172.04	2215.51	88.97	88.92	88.80	
07/27/85	08:54:49	1794.35	172.45	2215.54	88.94	88.91	88.78	
07/27/85	08:55:14	1794.41	172.72	2215.49	88.91	88.90	88.78	
07/27/85	08:56:26	1794.44	173.64	2215.49	88.89	88.87	88.75	
07/27/85	08:57:00	1794.48	173.89	2215.47	88.87	88.87	88.74	
07/27/85	08:58:12	1794.52	174.78	2215.45	88.87	88.86	88.73	
07/27/85	08:59:06	1794.47	175.34	2215.47	88.85	88.84	88.72	
07/27/85	09:00:28	1794.43	176.18	2215.44	88.86	88.84	88.71	
07/27/85	09:01:02	1794.62	176.43	2215.43	88.86	88.84	88.71	
07/27/85	09:02:14	1794.61	177.26	2215.43	88.83	88.83	88.70	
07/27/85	09:03:08	1794.62	177.80	2215.41	88.85	88.83	88.70	
07/27/85	09:04:02	1794.65	178.34	2215.38	88.85	88.83	88.70	
07/27/85	09:05:24	1794.65	179.14	2215.39	88.90	88.82	88.72	
07/27/85	09:06:18	1794.66	179.68	2215.39	88.86	88.81	88.73	
07/27/85	09:07:17	1794.69	180.26	2215.39	88.87	88.83	88.73	
07/27/85	09:08:12	1794.72	180.77	2215.39	88.85	88.83	88.72	
07/27/85	09:09:04	1794.73	181.27	2215.35	88.86	88.83	88.72	
07/27/85	09:10:28	1794.76	182.08	2215.36	88.85	88.85	88.73	
07/27/85	09:11:19	1794.76	182.57	2215.34	88.86	88.86	88.72	
07/27/85	09:12:14	1794.77	183.07	2215.34	88.84	88.86	88.73	
07/27/85	09:13:05	1794.76	183.57	2215.34	88.89	88.85	88.74	
07/27/85	09:14:00	1794.79	184.07	2215.35	88.87	88.84	88.73	
07/27/85	09:15:21	1794.80	184.81	2215.32	88.88	88.84	88.74	
07/27/85	09:16:15	1794.80	185.32	2215.32	88.88	88.83	88.74	
07/27/85	09:17:07	1794.84	185.79	2215.31	88.89	88.84	88.74	
07/27/85	09:18:01	1794.82	186.29	2215.30	88.88	88.84	88.74	
07/27/85	09:19:25	1794.82	187.06	2215.29	88.89	88.83	88.76	
07/27/85	09:20:17	1794.83	187.53	2215.31	88.90	88.84	88.76	
07/27/85	09:21:11	1794.82	188.02	2215.30	88.91	88.84	88.76	
07/27/85	09:22:02	1794.81	188.49	2215.26	88.92	88.83	88.76	
07/27/85	09:23:26	1794.88	189.25	2215.26	88.92	88.85	88.77	
07/27/85	09:24:18	1794.86	189.72	2215.25	88.92	88.85	88.78	
07/27/85	09:25:12	1794.86	190.19	2215.26	88.93	88.85	88.78	

TABLE A3-13 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE OLDS SANDSTONE OF THE BELL CANYON FORMATION, 4177 TO 4218
FEET BELOW LAND SURFACE, JULY 26 TO 29, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/27/85	09:26:04	1794.87	190.66	2215.26	88.96	88.85	88.78	
07/27/85	09:26:59	1794.85	191.06	2215.22	89.02	88.85	88.77	
07/27/85	09:30:09	1794.86	192.83	2215.22	89.00	88.88	88.78	
07/27/85	09:40:24	1794.91	198.17	2215.15	88.86	88.89	88.79	
07/27/85	09:50:07	1794.92	203.08	2215.07	88.96	88.94	88.81	
07/27/85	10:00:22	1794.95	208.31	2215.01	88.95	88.99	88.82	
07/27/85	10:10:04	1794.85	213.17	2214.94	88.89	89.03	88.83	
07/27/85	10:20:19	1794.89	218.26	2214.87	88.91	89.04	88.83	
07/27/85	10:30:01	1794.74	223.10	2214.84	88.94	89.04	88.85	
07/27/85	10:40:15	1794.87	228.11	2214.75	89.00	89.06	88.88	
07/27/85	10:50:29	1794.85	233.06	2214.69	89.01	89.09	88.87	
07/27/85	11:00:10	1794.83	237.74	2214.63	89.02	89.02	88.91	
07/27/85	11:10:24	1794.89	242.65	2214.56	89.03	89.03	88.91	
07/27/85	11:20:05	1794.94	247.26	2214.50	89.06	89.04	88.93	
07/27/85	11:30:18	1794.86	252.03	2214.42	89.06	89.03	88.94	
07/27/85	11:40:28	1794.87	256.62	2214.35	89.03	89.05	88.95	
07/27/85	11:50:11	1794.92	261.01	2214.29	89.03	89.06	88.96	
07/27/85	12:00:21	1794.93	265.55	2214.23	89.05	89.07	88.97	
07/27/85	12:10:03	1794.88	269.84	2214.16	88.98	89.09	88.96	
07/27/85	12:20:13	1794.88	274.31	2214.09	89.05	89.03	88.97	
07/27/85	12:30:24	1794.93	278.72	2214.03	89.06	89.08	88.97	
07/27/85	12:40:04	1794.97	282.86	2213.95	89.09	89.06	88.98	
07/27/85	12:50:14	1794.93	287.21	2213.89	89.09	89.08	88.97	
07/27/85	13:00:23	1794.95	291.50	2213.85	89.10	89.12	88.98	
07/27/85	13:10:04	1794.95	295.63	2213.76	89.07	89.14	88.98	
07/27/85	13:20:15	1794.99	299.88	2213.70	89.09	89.18	88.98	
07/27/85	13:30:23	1794.95	304.11	2213.62	89.13	89.15	88.98	
07/27/85	13:40:04	1795.03	308.13	2213.56	89.13	89.15	88.98	
07/27/85	13:50:11	1794.99	312.31	2213.50	89.09	89.15	88.99	
07/27/85	14:00:21	1795.01	316.47	2213.44	89.18	89.16	88.99	
07/27/85	14:10:28	1795.01	320.59	2213.35	89.18	89.16	88.99	
07/27/85	14:20:16	1795.03	324.56	2213.32	89.19	89.16	88.98	
07/27/85	14:30:24	1795.03	328.64	2213.23	89.19	89.17	88.99	
07/27/85	14:40:04	1795.03	332.50	2213.16	89.19	89.19	89.00	
07/27/85	14:50:10	1795.03	336.54	2213.12	89.21	89.20	89.00	
07/27/85	15:00:20	1795.05	340.54	2213.04	89.19	89.20	89.00	
07/27/85	15:10:26	1795.03	344.49	2212.96	89.20	89.21	89.00	
07/27/85	15:20:06	1795.03	348.24	2212.90	89.20	89.21	89.00	
07/27/85	15:30:13	1795.05	352.15	2212.85	89.20	89.20	89.00	
07/27/85	15:40:16	1795.04	356.02	2212.78	89.18	89.21	89.00	
07/27/85	15:50:05	1795.09	359.78	2212.71	89.16	89.20	89.00	
07/27/85	16:00:18	1795.09	363.68	2212.67	89.19	89.19	88.99	
07/27/85	16:10:06	1795.03	367.42	2212.57	89.16	89.21	88.99	
07/27/85	16:20:17	1795.09	371.23	2212.50	89.18	89.17	88.99	

TABLE A3-13 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE OLDS SANDSTONE OF THE BELL CANYON FORMATION, 4177 TO 4218
FEET BELOW LAND SURFACE, JULY 26 TO 29, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/27/85	16:30:06	1795.09	374.93	2212.43	89.18	89.18	88.99	
07/27/85	16:40:17	1795.07	378.70	2212.35	89.18	89.16	89.00	
07/27/85	16:50:05	1795.16	382.35	2212.33	89.15	89.20	88.99	
07/27/85	17:00:14	1795.17	386.16	2212.26	89.23	89.20	88.99	
07/27/85	17:10:02	1795.07	389.76	2212.22	89.23	89.22	89.00	
07/27/85	17:20:11	1795.15	393.48	2212.12	89.23	89.20	88.99	
07/27/85	17:30:21	1795.13	397.23	2212.06	89.24	89.20	89.00	
07/27/85	17:40:06	1795.17	400.76	2212.02	89.23	89.21	88.99	
07/27/85	17:50:16	1795.15	404.49	2211.94	89.24	89.21	89.00	
07/27/85	18:00:01	1795.20	407.99	2211.89	89.23	89.19	88.99	
07/27/85	18:10:12	1795.17	411.63	2211.80	89.23	89.20	88.99	
07/27/85	18:20:21	1795.22	415.29	2211.74	89.24	89.19	89.00	
07/27/85	18:30:07	1795.20	418.75	2211.69	89.24	89.18	88.99	
07/27/85	18:40:18	1795.22	422.38	2211.63	89.24	89.18	88.99	
07/27/85	18:50:03	1795.24	425.87	2211.55	89.25	89.18	89.00	
07/27/85	19:00:14	1795.30	429.47	2211.47	89.24	89.17	89.00	
07/27/85	19:10:00	1795.26	432.91	2211.42	89.24	89.16	89.01	
07/27/85	19:20:11	1795.22	436.45	2211.33	89.24	89.17	89.03	
07/27/85	19:30:20	1795.24	439.95	2211.32	89.24	89.19	89.01	
07/27/85	19:40:07	1795.28	443.30	2211.26	89.24	89.21	89.02	
07/27/85	19:50:16	1795.28	446.81	2211.17	89.25	89.22	89.03	
07/27/85	20:00:04	1795.38	450.16	2211.11	89.24	89.22	89.05	
07/27/85	20:10:14	1795.28	453.64	2211.05	89.25	89.22	89.04	
07/27/85	20:20:02	1795.28	457.03	2210.98	89.24	89.21	89.04	
07/27/85	20:30:12	1795.32	460.52	2210.92	89.25	89.19	89.04	
07/27/85	20:40:00	1795.30	463.87	2210.85	89.24	89.22	89.04	
07/27/85	20:50:11	1795.36	467.30	2210.81	89.24	89.23	89.05	
07/27/85	21:00:00	1795.40	470.62	2210.74	89.24	89.22	89.04	
07/27/85	21:10:10	1795.40	474.00	2210.69	89.25	89.22	89.03	
07/27/85	21:20:23	1795.38	477.44	2210.58	89.24	89.22	89.02	
07/27/85	21:30:12	1795.38	480.72	2210.54	89.25	89.24	89.04	
07/27/85	21:40:23	1795.38	484.11	2210.48	89.25	89.24	89.04	
07/27/85	21:50:12	1795.38	487.34	2210.43	89.24	89.25	89.03	
07/27/85	22:00:23	1795.36	490.75	2210.37	89.24	89.26	89.04	
07/27/85	22:10:13	1795.44	493.98	2210.29	89.25	89.25	89.03	
07/27/85	22:20:00	1795.46	497.21	2210.25	89.25	89.25	89.04	
07/27/85	22:30:14	1795.46	500.56	2210.18	89.25	89.26	89.05	
07/27/85	22:40:10	1795.46	503.82	2210.10	89.25	89.24	89.04	
07/27/85	22:50:00	1795.46	506.99	2210.06	89.25	89.25	89.05	
07/27/85	23:00:11	1795.46	510.31	2210.00	89.25	89.25	89.04	
07/27/85	23:10:01	1795.46	513.49	2209.92	89.25	89.26	89.05	
07/27/85	23:20:13	1795.51	516.78	2209.83	89.24	89.25	89.06	
07/27/85	23:30:03	1795.48	519.93	2209.80	89.25	89.25	89.07	
07/27/85	23:40:14	1795.51	523.20	2209.73	89.25	89.25	89.08	

TABLE A3-13 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE OLDS SANDSTONE OF THE BELL CANYON FORMATION, 4177 TO 4218
FEET BELOW LAND SURFACE, JULY 26 TO 29, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/27/85	23:50:04	1795.51	526.35	2209.67	89.25	89.24	89.09	
07/28/85	00:00:17	1795.53	529.57	2209.61	89.25	89.24	89.10	
07/28/85	00:10:05	1795.55	532.71	2209.55	89.25	89.25	89.11	
07/28/85	00:20:19	1795.57	535.88	2209.47	89.25	89.26	89.07	
07/28/85	00:30:07	1795.59	538.93	2209.42	89.25	89.26	89.09	
07/28/85	00:40:20	1795.61	542.13	2209.36	89.25	89.24	89.09	
07/28/85	00:50:08	1795.61	545.17	2209.30	89.25	89.26	89.07	
07/28/85	01:00:22	1795.63	548.31	2209.21	89.25	89.24	89.08	
07/28/85	01:10:11	1795.63	551.33	2209.15	89.27	89.23	89.09	
07/28/85	01:20:00	1795.61	554.36	2209.09	89.25	89.23	89.09	
07/28/85	01:30:12	1795.65	557.47	2209.04	89.25	89.21	89.09	
07/28/85	01:40:02	1795.65	560.46	2208.98	89.25	89.21	89.11	
07/28/85	01:50:14	1795.67	563.59	2208.91	89.25	89.22	89.09	
07/28/85	02:00:04	1795.69	566.56	2208.89	89.26	89.19	89.10	
07/28/85	02:10:16	1795.71	569.60	2208.77	89.25	89.19	89.09	
07/28/85	02:20:06	1795.69	572.58	2208.72	89.26	89.20	89.10	
07/28/85	02:30:18	1795.69	575.63	2208.65	89.26	89.18	89.10	
07/28/85	02:40:08	1795.71	578.57	2208.58	89.25	89.15	89.10	
07/28/85	02:50:22	1795.71	581.60	2208.53	89.26	89.20	89.12	
07/28/85	03:00:10	1795.79	584.57	2208.46	89.25	89.11	89.11	
07/28/85	03:10:01	1795.77	587.48	2208.43	89.28	89.15	89.11	
07/28/85	03:20:13	1795.75	590.53	2208.34	89.26	89.14	89.11	
07/28/85	03:30:04	1795.77	593.47	2208.26	89.29	89.09	89.11	
07/28/85	03:40:16	1795.77	596.47	2208.21	89.31	89.07	89.10	
07/28/85	03:50:07	1795.81	599.35	2208.16	89.28	89.02	89.11	
07/28/85	04:00:20	1795.84	602.36	2208.08	89.27	88.80	89.10	
07/28/85	04:10:10	1795.84	605.20	2208.03	89.27	88.83	89.11	
07/28/85	04:20:23	1795.81	608.15	2207.95	89.30	88.86	89.11	
07/28/85	04:30:13	1795.86	611.00	2207.91	89.28	88.77	89.11	
07/28/85	04:40:02	1795.88	613.82	2207.89	89.27	88.77	89.12	
07/28/85	04:50:18	1795.84	616.77	2207.76	89.28	88.60	89.13	
07/28/85	05:00:07	1795.86	619.56	2207.71	89.27	88.83	89.13	
07/28/85	05:10:21	1795.90	622.45	2207.65	89.26	88.86	89.12	
07/28/85	05:20:13	1795.92	625.24	2207.57	89.26	88.89	89.12	
07/28/85	05:30:02	1795.94	628.02	2207.54	89.27	88.92	89.11	
07/28/85	05:40:17	1795.90	630.92	2207.46	89.29	88.95	89.12	
07/28/85	05:50:06	1795.98	633.67	2207.44	89.27	88.98	89.12	
07/28/85	06:00:21	1795.96	636.57	2207.35	89.27	89.01	89.12	
07/28/85	06:10:11	1795.96	639.26	2207.30	89.25	89.04	89.11	
07/28/85	06:20:03	1795.94	642.01	2207.21	89.29	89.06	89.12	
07/28/85	06:30:17	1795.98	644.80	2207.16	89.26	89.10	89.12	
07/28/85	06:40:22	1795.96	647.59	2207.11	89.27	89.12	89.12	
07/28/85	06:50:19	1795.96	650.32	2207.04	89.26	89.15	89.13	
07/28/85	07:00:17	1796.02	653.08	2206.98	89.26	89.18	89.11	

TABLE A3-13 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE OLDS SANDSTONE OF THE BELL CANYON FORMATION, 4177 TO 4218
FEET BELOW LAND SURFACE, JULY 26 TO 29, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/28/85	07:10:15	1796.00	655.77	2206.92	89.26	89.20	89.12	
07/28/85	07:20:15	1796.00	658.55	2206.86	89.27	89.23	89.12	
07/28/85	07:30:12	1795.98	661.28	2206.78	89.26	89.26	89.11	
07/28/85	07:40:12	1796.02	663.96	2206.70	89.25	89.29	89.11	
07/28/85	07:50:08	1796.04	666.70	2206.66	89.26	89.32	89.13	
07/28/85	08:00:08	1796.00	669.42	2206.63	89.24	89.34	89.13	
07/28/85	08:10:08	1795.84	672.10	2206.53	89.25	89.37	89.15	
07/28/85	08:20:05	1796.02	674.81	2206.48	89.25	89.40	89.14	
07/28/85	08:30:04	1796.04	677.51	2206.45	89.25	89.43	89.12	
07/28/85	08:40:01	1796.04	680.17	2206.37	89.25	89.45	89.11	
07/28/85	08:50:01	1796.08	682.83	2206.32	89.29	89.48	89.13	
07/28/85	09:00:22	1796.08	685.58	2206.25	89.22	89.51	89.13	
07/28/85	09:10:21	1796.13	688.22	2206.20	89.23	89.54	89.13	
07/28/85	09:20:18	1796.10	690.80	2206.13	89.25	89.56	89.13	
07/28/85	09:30:17	1796.15	693.41	2206.05	89.23	89.59	89.13	
07/28/85	09:40:13	1796.10	696.03	2206.03	89.29	89.62	89.14	
07/28/85	09:50:12	1796.11	698.60	2205.91	89.16	89.64	89.12	
07/28/85	10:00:08	1796.17	701.22	2205.88	89.19	89.67	89.13	
07/28/85	10:10:17	1796.17	703.84	2205.84	89.22	89.70	89.14	
07/28/85	10:11:07	1796.17	703.99	2205.82	89.23	89.70	89.13	
07/28/85	10:20:00	1796.17	706.38	2205.74	89.23	89.72	89.14	
07/28/85	10:30:14	1796.17	709.02	2205.70	89.22	89.75	89.15	
07/28/85	10:40:02	1796.19	711.53	2205.64	89.24	89.77	89.12	
07/28/85	10:50:16	1796.19	714.19	2205.59	89.24	89.80	89.14	
07/28/85	11:00:04	1796.21	716.69	2205.52	89.22	89.83	89.14	
07/28/85	11:10:18	1796.19	719.31	2205.43	89.15	89.85	89.14	
07/28/85	11:20:05	1796.21	721.85	2205.37	89.24	89.88	89.13	
07/28/85	11:30:18	1796.15	724.45	2205.32	89.17	89.91	89.14	
07/28/85	11:40:06	1796.25	726.96	2205.24	89.14	89.93	89.14	
07/28/85	11:50:19	1796.25	729.55	2205.19	89.11	89.96	89.14	
07/28/85	12:00:06	1796.27	732.03	2205.15	89.13	89.98	89.14	
07/28/85	12:10:20	1796.29	734.58	2205.07	89.16	90.01	89.14	
07/28/85	12:20:07	1796.31	737.05	2205.01	89.18	90.03	89.15	
07/28/85	12:30:20	1796.29	739.60	2204.96	89.20	90.06	89.14	
07/28/85	12:40:07	1796.31	742.01	2204.89	89.23	90.09	89.14	
07/28/85	12:50:20	1796.29	744.57	2204.85	89.25	90.11	89.14	
07/28/85	13:00:07	1796.31	746.97	2204.74	89.27	90.13	89.15	
07/28/85	13:10:19	1796.29	749.50	2204.71	89.30	90.15	89.14	
07/28/85	13:20:08	1796.35	751.88	2204.66	89.32	90.17	89.15	
07/28/85	13:30:19	1796.37	754.38	2204.56	89.33	90.17	89.15	
07/28/85	13:40:08	1796.39	756.78	2204.51	89.35	90.08	89.14	
07/28/85	13:50:18	1796.37	759.22	2204.42	89.33	90.03	89.14	
07/28/85	14:00:07	1796.39	761.62	2204.38	89.33	90.14	89.15	
07/28/85	14:10:18	1796.41	764.05	2204.32	89.32	89.86	89.14	

TABLE A3-13 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE OLDS SANDSTONE OF THE BELL CANYON FORMATION, 4177 TO 4218
FEET BELOW LAND SURFACE, JULY 26 TO 29, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/28/85	14:20:06	1796.41	766.40	2204.29	89.36	90.07	89.15	
07/28/85	14:30:17	1796.43	768.87	2204.19	89.34	89.97	89.15	
07/28/85	14:40:05	1796.45	771.21	2204.18	89.36	90.01	89.14	
07/28/85	14:50:16	1796.43	773.66	2204.08	89.37	89.86	89.14	
07/28/85	15:00:04	1796.47	776.02	2204.04	89.39	89.85	89.15	
07/28/85	15:10:23	1796.47	778.48	2203.96	89.41	89.85	89.14	
07/28/85	15:20:10	1796.54	780.83	2203.89	89.43	89.52	89.14	
07/28/85	15:30:21	1796.50	783.23	2203.85	89.40	89.63	89.13	
07/28/85	15:40:08	1796.52	785.55	2203.77	89.31	89.65	89.14	
07/28/85	15:50:20	1796.56	787.95	2203.68	89.37	89.64	89.14	
07/28/85	16:00:06	1796.60	790.26	2203.66	89.42	89.56	89.14	
07/28/85	16:10:17	1796.60	792.64	2203.58	89.37	89.50	89.12	
07/28/85	16:20:03	1796.56	794.91	2203.49	89.40	89.53	89.13	
07/28/85	16:30:14	1796.58	797.28	2203.46	89.48	89.55	89.13	
07/28/85	16:40:23	1796.60	799.64	2203.38	89.49	89.58	89.12	
07/28/85	16:50:09	1796.64	801.89	2203.33	89.64	89.59	89.13	
07/28/85	17:00:18	1796.64	804.18	2203.29	89.35	89.58	89.13	
07/28/85	17:10:04	1796.64	806.42	2203.20	89.45	89.44	89.13	
07/28/85	17:20:12	1796.66	808.72	2203.13	89.44	89.43	89.13	
07/28/85	17:30:22	1796.66	811.05	2203.09	89.40	89.42	89.12	
07/28/85	17:40:03	1796.64	813.24	2203.05	89.39	89.40	89.12	
07/28/85	17:50:12	1796.68	815.55	2203.00	89.32	89.37	89.11	
07/28/85	18:00:20	1796.66	817.83	2202.92	89.43	89.43	89.11	
07/28/85	18:10:06	1796.70	820.04	2202.86	89.38	89.40	89.11	
07/28/85	18:20:13	1796.74	822.34	2202.79	89.32	89.38	89.11	
07/28/85	18:30:23	1796.77	824.62	2202.74	89.28	89.40	89.12	
07/28/85	18:40:09	1796.74	826.82	2202.69	89.35	89.37	89.12	
07/28/85	18:50:17	1796.77	829.07	2202.64	89.33	89.38	89.10	
07/28/85	19:00:03	1796.79	831.27	2202.60	89.32	89.37	89.10	
07/28/85	19:10:10	1796.79	833.52	2202.47	89.30	89.38	89.10	
07/28/85	19:20:20	1796.79	835.81	2202.42	89.29	89.36	89.10	
07/28/85	19:30:04	1796.79	838.00	2202.39	89.31	89.35	89.11	
07/28/85	19:40:15	1796.81	840.25	2202.31	89.32	89.31	89.09	
07/28/85	19:50:23	1796.79	842.50	2202.25	89.32	89.34	89.09	
07/28/85	20:00:10	1796.83	844.65	2202.22	89.28	89.35	89.08	
07/28/85	20:10:18	1796.79	846.90	2202.16	89.35	89.33	89.08	
07/28/85	20:20:05	1796.85	848.98	2202.10	89.36	89.33	89.09	
07/28/85	20:30:14	1796.85	851.21	2202.06	89.35	89.33	89.07	
07/28/85	20:40:01	1796.85	853.34	2201.99	89.34	89.32	89.08	
07/28/85	20:50:11	1796.87	855.52	2201.92	89.32	89.31	89.10	
07/28/85	21:00:22	1796.89	857.71	2201.88	89.31	89.31	89.03	
07/28/85	21:10:10	1796.89	859.83	2201.79	89.30	89.32	89.11	
07/28/85	21:20:20	1796.91	862.02	2201.75	89.28	89.33	89.01	
07/28/85	21:30:08	1796.91	864.11	2201.68	89.26	89.34	89.08	

TABLE A3-13 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE OLDS SANDSTONE OF THE BELL CANYON FORMATION, 4177 TO 4218
FEET BELOW LAND SURFACE, JULY 26 TO 29, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/28/85	21:40:18	1796.97	866.30	2201.62	89.27	89.34	89.04	
07/28/85	21:50:06	1796.91	868.45	2201.57	89.29	89.36	89.07	
07/28/85	22:00:17	1796.93	870.66	2201.51	89.29	89.36	89.05	
07/28/85	22:10:05	1796.91	872.76	2201.46	89.30	89.37	89.05	
07/28/85	22:20:16	1796.97	874.94	2201.42	89.30	89.34	89.05	
07/28/85	22:30:04	1796.99	877.06	2201.36	89.29	89.32	89.07	
07/28/85	22:40:15	1796.99	879.25	2201.28	89.29	89.31	89.09	
07/28/85	22:50:04	1797.03	881.31	2201.24	89.29	89.33	89.10	
07/28/85	23:00:14	1796.99	883.49	2201.11	89.29	89.34	89.13	
07/28/85	23:10:03	1797.01	885.52	2201.09	89.30	89.33	89.14	
07/28/85	23:20:13	1796.99	887.69	2201.02	89.29	89.33	89.16	
07/28/85	23:30:11	1797.03	889.78	2200.93	89.28	89.33	89.18	
07/28/85	23:40:22	1796.99	891.91	2200.89	89.31	89.33	89.21	
07/28/85	23:50:11	1797.06	893.95	2200.84	89.28	89.34	89.23	
07/29/85	00:00:00	1797.06	896.01	2200.77	89.30	89.35	89.25	
07/29/85	00:10:11	1797.06	898.11	2200.72	89.28	89.32	89.27	
07/29/85	00:20:00	1797.06	900.13	2200.66	89.29	89.26	89.29	
07/29/85	00:30:11	1797.06	902.21	2200.58	89.30	89.30	89.31	
07/29/85	00:40:00	1797.14	904.24	2200.53	89.29	89.31	89.31	
07/29/85	00:50:11	1797.12	906.33	2200.50	89.29	89.32	89.31	
07/29/85	01:00:00	1797.16	908.31	2200.42	89.29	89.33	89.33	
07/29/85	01:10:11	1797.16	910.37	2200.36	89.28	89.33	89.31	
07/29/85	01:20:01	1797.14	912.38	2200.29	89.29	89.32	89.28	
07/29/85	01:30:12	1797.20	914.42	2200.25	89.29	89.32	89.22	
07/29/85	01:40:01	1797.18	916.44	2200.22	89.27	89.32	89.26	
07/29/85	01:50:13	1797.20	918.48	2200.16	89.29	89.30	89.21	
07/29/85	02:00:03	1797.22	920.46	2200.07	89.28	89.31	89.21	
07/29/85	02:10:14	1797.22	922.54	2200.02	89.28	89.29	89.19	
07/29/85	02:20:04	1797.20	924.52	2199.97	89.27	89.31	89.17	
07/29/85	02:30:17	1797.24	926.56	2199.91	89.30	89.28	89.18	
07/29/85	02:40:05	1797.24	928.53	2199.85	89.30	89.28	89.18	
07/29/85	02:50:18	1797.24	930.59	2199.79	89.29	89.27	89.17	
07/29/85	03:00:06	1797.32	932.51	2199.74	89.28	89.29	89.17	
07/29/85	03:10:19	1797.28	934.49	2199.66	89.28	89.30	89.16	
07/29/85	03:20:07	1797.28	936.42	2199.61	89.28	89.32	89.16	
07/29/85	03:30:21	1797.32	938.41	2199.55	89.28	89.32	89.16	
07/29/85	03:40:09	1797.37	940.30	2199.50	89.28	89.33	89.15	
07/29/85	03:50:23	1797.32	942.29	2199.44	89.30	89.38	89.15	
07/29/85	04:00:11	1797.36	944.17	2199.39	89.32	89.35	89.15	
07/29/85	04:10:02	1797.34	946.11	2199.33	89.29	89.34	89.15	
07/29/85	04:20:14	1797.45	948.06	2199.28	89.28	89.33	89.15	
07/29/85	04:30:04	1797.43	949.94	2199.23	89.29	89.33	89.14	
07/29/85	04:40:16	1797.34	951.96	2199.18	89.31	89.33	89.14	
07/29/85	04:50:07	1797.34	953.83	2199.13	89.30	89.35	89.14	

TABLE A3-13 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE OLDS SANDSTONE OF THE BELL CANYON FORMATION, 4177 TO 4218
FEET BELOW LAND SURFACE, JULY 26 TO 29, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/29/85	05:00:19	1797.34	955.81	2199.06	89.28	89.30	89.13	
07/29/85	05:10:09	1797.37	957.72	2199.01	89.28	89.32	89.14	
07/29/85	05:20:00	1797.41	959.57	2198.92	89.28	89.33	89.14	
07/29/85	05:30:12	1797.39	961.47	2198.88	89.28	89.32	89.13	
07/29/85	05:40:02	1797.45	963.36	2198.81	89.29	89.31	89.14	
07/29/85	05:50:13	1797.39	965.27	2198.80	89.26	89.29	89.14	
07/29/85	06:00:03	1797.41	967.16	2198.73	89.30	89.27	89.13	
07/29/85	06:10:15	1797.45	969.09	2198.66	89.30	89.26	89.13	
07/29/85	06:20:06	1797.47	970.92	2198.57	89.29	89.28	89.13	
07/29/85	06:30:17	1797.53	972.86	2198.54	89.29	89.28	89.13	
07/29/85	06:40:08	1797.49	974.68	2198.45	89.28	89.27	89.13	
07/29/85	06:50:19	1797.55	976.62	2198.44	89.28	89.27	89.13	
07/29/85	07:00:10	1797.55	978.45	2198.39	89.28	89.27	89.12	
07/29/85	07:10:23	1797.55	980.35	2198.33	89.28	89.29	89.12	End of Test

TABLE A3-14

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE HAYS SANDSTONE OF THE BELL CANYON FORMATION, 4220 TO 4325
FEET BELOW LAND SURFACE, JULY 18 TO 19, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/18/85	14:52:51	2359.05	2349.10	2231.96	89.36	88.77	88.69	Equilibration
07/18/85	14:53:01	2272.61	2264.36	2231.28	88.68	88.88	88.72	
07/18/85	14:53:13	2202.86	2197.34	2234.72	88.20	88.94	88.72	
07/18/85	14:53:23	2163.45	2159.43	2232.74	88.73	88.69	88.68	
07/18/85	14:53:34	2126.61	2122.96	2233.19	88.76	88.80	88.71	
07/18/85	14:53:44	2102.76	2099.26	2233.21	88.79	88.93	88.72	
07/18/85	14:53:56	2079.86	2077.03	2233.10	88.85	88.82	88.73	
07/18/85	14:54:06	2064.80	2061.93	2233.18	88.85	88.71	88.76	
07/18/85	14:54:18	2049.18	2046.81	2233.07	88.78	88.72	88.75	
07/18/85	14:54:28	2038.70	2036.24	2233.16	88.83	88.78	88.74	
07/18/85	14:54:40	2027.51	2025.42	2233.16	88.89	88.82	88.76	
07/18/85	14:54:49	2019.93	2017.80	2233.12	88.88	88.86	88.76	
07/18/85	14:55:02	2011.73	2009.79	2233.16	88.85	88.89	88.77	
07/18/85	14:55:13	2004.64	2002.79	2233.18	88.79	88.85	88.76	
07/18/85	14:55:23	1999.60	1997.61	2233.16	88.75	88.88	88.77	
07/18/85	14:55:35	1993.91	1992.19	2233.20	88.73	88.91	88.79	
07/18/85	15:00:47	1940.02	1938.44	2233.09	88.89	88.91	88.77	
07/18/85	15:00:57	1939.31	1937.81	2233.07	88.88	88.91	88.77	
07/18/85	15:01:09	1938.50	1936.91	2233.05	88.87	88.92	88.77	
07/18/85	15:01:19	1938.04	1936.25	2233.05	88.87	88.92	88.77	
07/18/85	15:01:31	1937.10	1935.57	2232.98	88.86	88.93	88.79	
07/18/85	15:01:40	1936.39	1934.95	2233.09	88.85	88.92	88.77	
07/18/85	15:01:52	1935.71	1934.19	2233.03	88.85	88.92	88.78	
07/18/85	15:02:02	1935.12	1933.60	2233.03	88.84	88.92	88.78	
07/18/85	15:02:13	1934.46	1932.90	2233.00	88.85	88.91	88.80	
07/18/85	15:02:23	1934.08	1932.38	2233.05	88.84	88.91	88.80	
07/18/85	15:02:34	1933.18	1931.69	2233.02	88.84	88.90	88.81	
07/18/85	15:02:44	1932.83	1931.25	2233.02	88.82	88.89	88.81	
07/18/85	15:02:56	1932.16	1930.64	2233.05	88.83	88.89	88.80	
07/18/85	15:03:05	1931.62	1930.12	2232.98	88.83	88.88	88.81	
07/18/85	15:03:32	1930.52	1928.97	2233.00	88.85	88.87	88.80	
07/18/85	15:04:07	1928.64	1927.20	2232.94	88.87	88.87	88.81	
07/18/85	15:05:05	1926.23	1924.84	2232.98	88.92	88.88	88.82	
07/18/85	15:06:04	1924.27	1922.74	2232.91	88.97	88.90	88.82	
07/18/85	15:07:09	1922.02	1920.69	2232.94	89.00	88.92	88.83	
07/18/85	15:08:07	1920.37	1918.94	2232.98	89.04	88.96	88.83	
07/18/85	15:09:03	1919.12	1917.63	2232.98	89.09	88.95	88.83	
07/18/85	15:10:01	1917.50	1916.11	2232.87	89.12	88.96	88.83	
07/18/85	15:11:06	1916.06	1914.61	2232.85	89.14	88.98	88.83	
07/18/85	15:12:05	1914.86	1913.41	2232.87	89.15	88.95	88.83	
07/18/85	15:13:00	1913.82	1912.34	2232.87	89.15	88.95	88.83	
07/18/85	15:14:08	1912.57	1911.06	2232.81	89.14	88.95	88.83	
07/18/85	15:15:03	1911.55	1910.08	2232.80	89.13	88.97	88.84	
07/18/85	15:16:02	1910.53	1909.11	2232.85	89.12	88.97	88.84	

TABLE A3-14 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE HAYS SANDSTONE OF THE BELL CANYON FORMATION, 4220 TO 4325
FEET BELOW LAND SURFACE, JULY 18 TO 19, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/18/85	15:17:06	1909.61	1908.27	2232.78	89.11	88.97	88.85	
07/18/85	15:18:05	1908.84	1907.34	2232.74	89.11	88.98	88.86	
07/18/85	15:19:01	1908.09	1906.54	2232.72	89.10	88.99	88.85	
07/18/85	15:20:08	1906.97	1905.63	2232.72	89.09	88.99	88.86	
07/18/85	15:21:06	1906.41	1904.96	2232.72	89.08	89.01	88.86	
07/18/85	15:22:02	1905.79	1904.28	2232.69	89.08	89.00	88.86	
07/18/85	15:23:01	1905.00	1903.54	2232.69	89.07	89.01	88.87	
07/18/85	15:24:05	1904.27	1902.82	2232.74	89.07	89.02	88.87	
07/18/85	15:25:04	1903.60	1902.18	2232.65	89.06	89.02	88.87	
07/18/85	15:25:46	1903.19	1901.74	2232.69	89.06	89.02	88.90	
07/18/85	15:30:05	1900.73	1899.30	2232.58	89.03	89.03	88.88	
07/18/85	15:40:06	1896.43	1894.97	2232.52	88.99	89.03	88.87	
07/18/85	15:50:07	1892.73	1891.29	2232.45	88.96	89.08	88.89	
07/18/85	16:00:02	1889.79	1888.32	2232.24	89.01	89.09	88.93	
07/18/85	16:10:17	1887.48	1886.02	2232.24	89.02	89.10	88.95	
07/18/85	16:20:04	1885.66	1884.18	2232.06	89.02	89.10	88.94	
07/18/85	16:30:18	1883.78	1882.35	2231.96	89.06	89.12	88.95	
07/18/85	16:40:08	1882.06	1880.64	2231.81	89.07	89.13	88.95	
07/18/85	16:50:21	1880.71	1879.25	2231.62	89.06	89.13	88.96	
07/18/85	17:00:12	1879.53	1878.02	2231.47	89.06	89.12	88.93	
07/18/85	17:10:02	1878.31	1876.89	2231.34	89.06	89.13	88.94	
07/18/85	17:20:04	1877.31	1875.84	2231.19	89.07	89.15	88.95	
07/18/85	17:30:12	1876.23	1874.91	2231.03	89.08	89.16	88.97	
07/18/85	17:40:00	1875.48	1874.05	2230.92	89.10	89.15	88.99	
07/18/85	17:50:00	1874.67	1873.30	2230.76	89.11	89.14	88.98	
07/18/85	18:00:02	1874.01	1872.44	2230.61	89.14	89.14	88.99	
07/18/85	18:01:40	1873.72	1872.29	2230.60	89.11	89.14	88.97	
07/18/85	18:01:54	1873.70	1872.26	2230.60	89.13	89.14	88.97	
07/18/85	18:02:06	1873.76	1872.29	2230.62	89.13	89.13	88.97	
07/18/85	18:02:21	1873.72	1872.24	2230.62	89.12	89.13	88.97	
07/18/85	18:02:33	1873.70	1872.20	2230.60	89.13	89.14	88.96	
07/18/85	18:02:48	1873.70	1872.22	2230.60	89.14	89.14	88.97	
07/18/85	18:03:00	1873.68	1872.22	2230.52	89.13	89.14	88.97	
07/18/85	18:03:15	1873.64	1872.20	2230.50	89.12	89.13	88.96	
07/18/85	18:03:27	1873.64	1872.20	2230.04	89.12	89.13	88.97	
07/18/85	18:03:41	1866.95	1846.11	2231.30	89.28	89.11	88.97	Open for FFL
07/18/85	18:03:56	1858.58	1857.30	2229.14	89.65	89.10	89.04	
07/18/85	18:04:08	206.89	206.08	2232.29	89.34	89.02	88.99	
07/18/85	18:04:24	221.35	220.52	2230.45	89.23	89.16	88.99	FFL
07/18/85	18:04:37	231.22	230.27	2230.06	89.16	89.14	88.97	
07/18/85	18:04:51	242.01	241.03	2230.63	89.15	89.04	88.96	
07/18/85	18:05:04	250.61	249.65	2230.45	89.19	89.06	88.97	
07/18/85	18:05:18	260.60	259.69	2230.58	89.15	89.06	88.95	
07/18/85	18:05:30	268.87	267.93	2230.54	89.10	89.03	88.94	

TABLE A3-14 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE HAYS SANDSTONE OF THE BELL CANYON FORMATION, 4220 TO 4325
FEET BELOW LAND SURFACE, JULY 18 TO 19, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/18/85	18:05:45	278.44	277.48	2230.59	88.99	89.01	88.91	
07/18/85	18:05:57	286.22	285.22	2230.61	89.00	89.07	88.89	
07/18/85	18:06:12	295.28	294.32	2230.59	89.08	89.05	88.88	
07/18/85	18:06:24	302.78	301.85	2230.59	89.08	89.03	88.87	
07/18/85	18:06:39	311.62	310.63	2230.60	89.17	89.01	88.82	
07/18/85	18:06:51	318.89	317.94	2230.57	89.12	89.01	88.87	
07/18/85	18:07:06	327.61	326.58	2230.62	89.03	89.02	88.86	
07/18/85	18:07:18	334.77	333.78	2230.57	89.07	89.06	88.85	
07/18/85	18:07:33	343.17	342.20	2230.58	88.99	89.08	88.82	
07/18/85	18:07:47	351.56	350.50	2230.55	88.96	88.99	88.83	
07/18/85	18:08:00	358.94	358.27	2230.56	88.95	88.96	88.82	
07/18/85	18:08:18	368.54	367.79	2230.56	88.91	89.01	88.81	
07/18/85	18:08:33	376.77	375.85	2230.57	88.97	88.98	88.81	
07/18/85	18:08:51	386.41	385.81	2230.51	89.07	88.95	88.81	
07/18/85	18:09:10	396.86	396.32	2230.52	89.09	88.89	88.81	
07/18/85	18:09:32	408.50	407.84	2230.49	89.01	88.93	88.80	
07/18/85	18:09:52	418.68	418.09	2230.52	88.99	88.99	88.81	
07/18/85	18:10:14	429.90	429.28	2230.46	88.88	88.96	88.81	
07/18/85	18:10:33	439.76	439.14	2230.47	88.87	88.94	88.80	
07/18/85	18:10:55	450.61	449.92	2230.46	88.97	88.98	88.80	
07/18/85	18:11:15	460.14	459.57	2230.42	89.06	88.98	88.80	
07/18/85	18:11:37	470.75	470.02	2230.44	89.09	88.94	88.80	
07/18/85	18:11:56	480.05	479.36	2230.43	89.03	88.96	88.80	
07/18/85	18:12:18	490.46	489.73	2230.42	88.99	88.95	88.82	
07/18/85	18:12:40	500.63	499.86	2230.40	89.03	88.93	88.82	
07/18/85	18:13:00	509.61	508.92	2230.38	89.06	88.93	88.82	
07/18/85	18:13:22	519.58	518.84	2230.40	89.12	88.95	88.83	
07/18/85	18:13:41	528.44	527.72	2230.37	89.10	88.95	88.82	
07/18/85	18:14:12	541.91	541.26	2230.37	89.05	88.93	88.83	
07/18/85	18:14:31	550.62	549.88	2230.35	88.98	88.94	88.86	FFL
07/18/85	18:14:53	560.00	558.96	2230.36	88.97	88.94	88.85	
07/18/85	18:15:05	565.16	563.82	2230.64	88.99	88.81	88.83	
07/18/85	18:15:19	1045.54	1066.46	2231.92	89.13	89.03	88.85	Shut-in for FBU
07/18/85	18:15:30	1255.47	1264.08	2230.90	89.04	89.06	88.86	
07/18/85	18:15:44	1368.62	1371.98	2230.44	89.20	89.05	88.87	
07/18/85	18:15:55	1423.70	1426.05	2230.38	88.99	89.17	88.87	
07/18/85	18:16:08	1470.53	1471.61	2230.46	89.11	89.10	88.88	
07/18/85	18:16:19	1499.54	1500.27	2230.59	88.97	89.10	88.88	
07/18/85	18:16:33	1527.48	1527.58	2230.61	89.19	89.23	88.90	
07/18/85	18:16:44	1546.38	1546.39	2230.50	89.36	89.11	88.92	
07/18/85	18:16:58	1565.64	1565.48	2230.52	89.52	89.13	88.91	
07/18/85	18:17:11	1581.95	1581.61	2230.52	89.34	89.19	88.92	
07/18/85	18:17:22	1594.11	1593.54	2230.51	89.09	89.14	88.99	
07/18/85	18:17:36	1606.87	1606.15	2230.51	89.20	89.11	89.03	

TABLE A3-14 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE HAYS SANDSTONE OF THE BELL CANYON FORMATION, 4220 TO 4325
FEET BELOW LAND SURFACE, JULY 18 TO 19, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/18/85	18:17:49	1617.72	1617.34	2230.55	89.27	89.10	89.03	
07/18/85	18:18:05	1629.30	1628.60	2230.48	89.24	89.17	89.05	
07/18/85	18:18:19	1638.77	1638.11	2230.43	89.24	89.17	89.07	
07/18/85	18:18:36	1649.28	1648.65	2230.46	89.28	89.16	89.08	
07/18/85	18:18:51	1657.61	1657.04	2230.45	89.33	89.22	89.10	
07/18/85	18:19:14	1668.47	1667.98	2230.41	89.39	89.26	89.12	
07/18/85	18:19:34	1677.27	1676.66	2230.43	89.37	89.28	89.12	
07/18/85	18:19:57	1686.04	1685.36	2230.42	89.35	89.29	89.13	
07/18/85	18:20:18	1693.16	1692.40	2230.42	89.37	89.29	89.14	
07/18/85	18:20:41	1700.35	1699.52	2230.41	89.41	89.31	89.15	
07/18/85	18:21:01	1706.23	1705.35	2230.41	89.39	89.31	89.16	
07/18/85	18:21:24	1712.23	1711.29	2230.41	89.34	89.32	89.16	
07/18/85	18:21:47	1717.70	1716.75	2230.39	89.29	89.27	89.16	
07/18/85	18:22:08	1722.29	1721.29	2230.40	89.27	89.26	89.16	
07/18/85	18:22:31	1727.03	1725.98	2230.40	89.25	89.26	89.16	
07/18/85	18:22:51	1730.94	1729.90	2230.39	89.25	89.22	89.17	
07/18/85	18:23:14	1735.05	1733.96	2230.39	89.29	89.22	89.16	
07/18/85	18:23:34	1738.51	1737.38	2230.38	89.32	89.23	89.17	
07/18/85	18:23:57	1742.08	1740.95	2230.38	89.35	89.23	89.18	
07/18/85	18:24:18	1745.09	1743.97	2230.38	89.38	89.24	89.18	
07/18/85	18:25:03	1751.09	1749.87	2230.38	89.43	89.29	89.20	
07/18/85	18:26:00	1757.94	1756.67	2230.36	89.49	89.35	89.22	
07/18/85	18:27:00	1764.13	1762.83	2230.35	89.55	89.41	89.20	
07/18/85	18:28:16	1770.92	1769.58	2230.33	89.60	89.48	89.22	
07/18/85	18:29:16	1775.56	1774.17	2230.29	89.60	89.52	89.24	
07/18/85	18:30:14	1779.53	1778.17	2230.29	89.55	89.54	89.24	
07/18/85	18:31:14	1783.25	1781.90	2230.27	89.48	89.54	89.23	
07/18/85	18:32:11	1786.55	1785.16	2230.26	89.39	89.54	89.23	
07/18/85	18:33:11	1789.63	1788.23	2230.25	89.35	89.53	89.21	
07/18/85	18:34:11	1792.51	1791.04	2230.25	89.32	89.48	89.19	
07/18/85	18:35:09	1794.97	1793.54	2230.23	89.30	89.44	89.18	
07/18/85	18:36:09	1797.39	1795.92	2230.22	89.30	89.40	89.17	
07/18/85	18:45:17	1812.80	1811.37	2230.08	89.25	89.31	89.15	
07/18/85	18:46:14	1813.96	1812.49	2230.04	89.23	89.29	89.14	
07/18/85	18:47:14	1815.09	1813.67	2230.04	89.22	89.26	89.14	
07/18/85	18:48:12	1816.11	1814.67	2230.01	89.22	89.26	89.14	
07/18/85	18:49:11	1817.21	1815.72	2230.00	89.21	89.25	89.14	
07/18/85	18:50:09	1818.14	1816.68	2229.98	89.21	89.23	89.14	
07/18/85	18:51:09	1819.09	1817.60	2229.99	89.20	89.24	89.13	
07/18/85	18:52:06	1819.88	1818.47	2229.94	89.21	89.23	89.13	
07/18/85	18:53:06	1820.79	1819.32	2229.95	89.19	89.22	89.13	
07/18/85	18:54:04	1821.59	1820.09	2229.91	89.18	89.21	89.13	
07/18/85	18:55:03	1822.30	1820.87	2229.91	89.17	89.22	89.13	
07/18/85	18:56:01	1823.00	1821.59	2229.90	89.18	89.21	89.13	

TABLE A3-14 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE HAYS SANDSTONE OF THE BELL CANYON FORMATION, 4220 TO 4325
FEET BELOW LAND SURFACE, JULY 18 TO 19, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/18/85	18:57:01	1823.73	1822.29	2229.89	89.16	89.21	89.13	
07/18/85	18:57:50	1824.35	1822.84	2229.89	89.16	89.22	89.12	
07/18/85	19:00:03	1825.76	1824.31	2229.84	89.15	89.21	89.12	
07/18/85	19:10:15	1830.95	1829.48	2229.71	89.18	89.19	89.11	
07/18/85	19:20:10	1834.54	1833.10	2229.55	89.20	89.18	89.11	
07/18/85	19:30:06	1837.25	1835.80	2229.42	89.21	89.18	89.11	
07/18/85	19:40:17	1839.39	1837.91	2229.28	89.21	89.19	89.10	
07/18/85	19:50:13	1841.00	1839.52	2229.17	89.22	89.18	89.09	
07/18/85	20:00:06	1842.31	1840.83	2229.04	89.22	89.20	89.08	
07/18/85	20:10:02	1843.30	1841.90	2228.87	89.22	89.19	89.08	
07/18/85	20:20:14	1844.24	1842.78	2228.75	89.23	89.19	89.08	
07/18/85	20:30:11	1845.00	1843.49	2228.60	89.23	89.19	89.08	
07/18/85	20:40:05	1845.54	1844.13	2228.48	89.23	89.21	89.08	
07/18/85	20:50:02	1846.12	1844.61	2228.36	89.24	89.20	89.08	
07/18/85	21:00:14	1846.58	1845.08	2228.22	89.24	89.21	89.08	
07/18/85	21:10:11	1846.95	1845.47	2228.09	89.25	89.21	89.07	
07/18/85	21:20:06	1847.24	1845.79	2227.97	89.25	89.21	89.09	
07/18/85	21:30:02	1847.51	1846.07	2227.83	89.25	89.22	89.08	
07/18/85	21:40:16	1847.80	1846.33	2227.70	89.25	89.22	89.08	
07/18/85	21:50:13	1847.97	1846.53	2227.59	89.25	89.22	89.08	
07/18/85	22:00:11	1848.20	1846.72	2227.45	89.26	89.23	89.08	
07/18/85	22:10:07	1848.38	1846.88	2227.32	89.26	89.23	89.09	
07/18/85	22:20:05	1848.51	1847.03	2227.17	89.26	89.23	89.09	
07/18/85	22:30:00	1848.59	1847.13	2227.04	89.26	89.23	89.09	
07/18/85	22:40:17	1848.71	1847.24	2226.92	89.26	89.22	89.10	
07/18/85	22:50:13	1848.80	1847.35	2226.78	89.26	89.23	89.09	
07/18/85	23:00:12	1848.90	1847.39	2226.68	89.26	89.23	89.09	
07/18/85	23:10:08	1848.96	1847.48	2226.54	89.26	89.24	89.10	
07/18/85	23:20:07	1848.96	1847.51	2226.40	89.26	89.23	89.09	
07/18/85	23:30:03	1849.00	1847.56	2226.30	89.27	89.24	89.10	
07/18/85	23:40:01	1849.05	1847.61	2226.14	89.26	89.24	89.10	
07/18/85	23:50:17	1849.05	1847.63	2226.01	89.27	89.25	89.10	
07/19/85	00:00:16	1849.11	1847.66	2225.86	89.26	89.24	89.10	
07/19/85	00:10:12	1849.11	1847.68	2225.76	89.27	89.25	89.10	
07/19/85	00:20:12	1849.15	1847.67	2225.63	89.27	89.24	89.10	
07/19/85	00:30:10	1849.19	1847.71	2225.51	89.27	89.24	89.10	
07/19/85	00:40:09	1849.17	1847.71	2225.39	89.27	89.24	89.10	
07/19/85	00:50:08	1849.21	1847.71	2225.27	89.27	89.24	89.09	
07/19/85	01:00:12	1849.13	1847.72	2225.13	89.27	89.24	89.09	
07/19/85	01:10:12	1849.15	1847.70	2225.02	89.27	89.24	89.09	
07/19/85	01:20:09	1849.19	1847.70	2224.88	89.27	89.23	89.09	
07/19/85	01:30:08	1849.13	1847.68	2224.74	89.27	89.23	89.09	
07/19/85	01:40:06	1849.11	1847.69	2224.63	89.27	89.24	89.09	
07/19/85	01:50:06	1849.19	1847.66	2224.51	89.27	89.24	89.09	

TABLE A3-14 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE HAYS SANDSTONE OF THE BELL CANYON FORMATION, 4220 TO 4325
FEET BELOW LAND SURFACE, JULY 18 TO 19, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/19/85	02:00:04	1849.13	1847.68	2224.38	89.27	89.25	89.09	
07/19/85	02:10:04	1849.15	1847.65	2224.24	89.27	89.24	89.09	
07/19/85	02:20:02	1849.11	1847.63	2224.12	89.27	89.24	89.09	
07/19/85	02:30:03	1849.07	1847.64	2223.99	89.27	89.24	89.09	
07/19/85	02:40:00	1849.07	1847.60	2223.86	89.27	89.25	89.09	
07/19/85	02:50:00	1849.05	1847.59	2223.75	89.27	89.25	89.09	
07/19/85	03:00:17	1849.05	1847.55	2223.64	89.27	89.25	89.09	
07/19/85	03:10:17	1848.96	1847.53	2223.51	89.27	89.25	89.09	
07/19/85	03:20:18	1848.92	1847.52	2223.36	89.27	89.24	89.09	
07/19/85	03:30:16	1848.94	1847.50	2223.25	89.27	89.24	89.09	
07/19/85	03:40:16	1848.92	1847.49	2223.13	89.28	89.25	89.08	
07/19/85	03:50:14	1848.86	1847.46	2223.00	89.27	89.25	89.08	
07/19/85	04:00:15	1848.84	1847.43	2222.87	89.27	89.25	89.08	
07/19/85	04:10:13	1848.88	1847.41	2222.76	89.26	89.24	89.08	
07/19/85	04:20:14	1848.86	1847.38	2222.62	89.27	89.24	89.08	
07/19/85	04:30:13	1848.82	1847.36	2222.52	89.27	89.24	89.08	
07/19/85	04:40:14	1848.84	1847.32	2222.38	89.27	89.24	89.08	
07/19/85	04:50:12	1848.78	1847.29	2222.27	89.27	89.25	89.08	
07/19/85	05:00:13	1848.73	1847.28	2222.12	89.27	89.25	89.08	
07/19/85	05:10:12	1848.78	1847.24	2222.03	89.27	89.24	89.08	
07/19/85	05:20:13	1848.71	1847.22	2221.91	89.27	89.24	89.08	
07/19/85	05:30:12	1848.65	1847.20	2221.77	89.26	89.24	89.08	
07/19/85	05:40:13	1848.63	1847.17	2221.67	89.26	89.24	89.07	
07/19/85	05:50:13	1848.61	1847.17	2221.55	89.27	89.25	89.08	
07/19/85	06:00:15	1848.57	1847.14	2221.41	89.26	89.24	89.07	
07/19/85	06:10:16	1848.59	1847.09	2221.30	89.27	89.25	89.07	
07/19/85	06:20:15	1848.49	1847.06	2221.18	89.26	89.24	89.07	
07/19/85	06:30:17	1848.51	1847.03	2221.06	89.26	89.24	89.07	
07/19/85	06:40:16	1848.44	1847.01	2220.94	89.26	89.25	89.07	
07/19/85	06:50:00	1848.44	1846.97	2220.82	89.26	89.23	89.07	
07/19/85	07:00:17	1848.47	1846.96	2220.68	89.26	89.25	89.07	
07/19/85	07:10:01	1848.34	1846.93	2220.55	89.26	89.24	89.07	
07/19/85	07:20:00	1848.40	1846.91	2220.44	89.26	89.25	89.07	
07/19/85	07:26:56	1848.38	1846.88	2220.37	89.27	89.25	89.07	
07/19/85	07:27:16	1848.34	1846.86	2220.37	89.27	89.25	89.07	
07/19/85	07:28:17	1848.36	1846.87	2220.33	89.26	89.25	89.07	
07/19/85	07:30:48	1848.65	1846.76	2220.31	89.27	89.25	89.07	
07/19/85	07:31:07	1848.31	1846.86	2220.32	89.27	89.25	89.06	
07/19/85	07:31:47	1848.30	1846.87	2220.31	89.26	89.25	89.07	
07/19/85	07:32:10	1848.36	1846.85	2220.29	89.26	89.25	89.07	
07/19/85	07:33:11	1848.36	1846.85	2220.28	89.26	89.25	89.07	
07/19/85	07:34:09	1848.34	1846.87	2220.26	89.26	89.25	89.07	
07/19/85	07:35:09	1848.28	1846.86	2220.27	89.27	89.24	89.06	
07/19/85	07:36:07	1848.30	1846.85	2220.24	89.26	89.24	89.07	

TABLE A3-14 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE HAYS SANDSTONE OF THE BELL CANYON FORMATION, 4220 TO 4325
FEET BELOW LAND SURFACE, JULY 18 TO 19, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/19/85	07:37:39	1848.34	1846.83	2220.25	89.26	89.24	89.06	End FBU
07/19/85	07:37:52	1845.02	1839.48	2220.36	89.21	89.20	89.06	Open for SFL
07/19/85	07:38:05	578.25	606.21	2219.99	89.18	88.94	89.06	
07/19/85	07:38:15	586.33	586.71	2219.60	89.19	88.94	89.06	
07/19/85	07:38:27	595.22	594.01	2219.43	89.27	88.80	89.06	SFL
07/19/85	07:38:37	601.03	599.85	2219.69	89.32	88.65	89.06	
07/19/85	07:38:50	607.91	606.79	2220.12	89.38	88.72	89.06	
07/19/85	07:39:00	613.24	612.06	2220.20	89.42	88.77	89.06	
07/19/85	07:39:13	619.56	618.50	2220.27	89.41	88.84	89.06	
07/19/85	07:39:23	624.51	623.43	2220.25	89.37	88.90	89.06	
07/19/85	07:39:35	630.73	629.64	2220.29	89.28	88.95	89.06	
07/19/85	07:39:46	635.57	634.38	2220.25	89.23	89.00	89.06	
07/19/85	07:39:58	641.37	640.31	2220.31	89.16	89.06	89.06	
07/19/85	07:40:11	647.14	646.13	2220.27	89.15	89.12	89.05	
07/19/85	07:40:21	651.73	650.60	2220.32	89.08	89.17	89.04	
07/19/85	07:40:34	657.31	656.26	2220.25	89.09	89.23	89.04	
07/19/85	07:40:44	661.78	660.73	2220.34	89.14	89.27	89.04	
07/19/85	07:40:56	667.29	666.22	2220.27	89.18	89.33	89.05	
07/19/85	07:41:07	671.65	670.50	2220.29	89.22	89.37	89.05	
07/19/85	07:41:19	676.96	675.91	2220.21	89.22	89.43	89.05	
07/19/85	07:41:29	681.36	680.23	2220.23	89.18	89.47	89.06	
07/19/85	07:41:42	686.68	685.65	2220.29	89.18	89.53	89.05	
07/19/85	07:41:52	691.12	689.93	2220.25	89.22	89.57	89.05	
07/19/85	07:42:05	696.38	695.26	2220.25	89.23	89.62	89.04	
07/19/85	07:42:15	700.66	699.49	2220.27	89.19	89.67	89.05	
07/19/85	07:42:27	705.92	704.77	2220.21	89.18	89.72	89.05	
07/19/85	07:42:38	710.10	708.94	2220.21	89.16	89.76	89.05	
07/19/85	07:42:50	715.23	714.11	2220.25	89.13	89.82	89.05	
07/19/85	07:43:03	720.40	719.34	2220.23	89.02	89.87	89.04	
07/19/85	07:43:13	724.44	723.25	2220.21	89.05	89.91	89.05	
07/19/85	07:43:25	729.42	728.33	2220.18	89.11	89.96	89.05	
07/19/85	07:43:36	733.47	732.26	2220.16	89.14	89.98	89.06	
07/19/85	07:43:48	738.43	737.28	2220.16	89.19	89.94	89.05	
07/19/85	07:43:58	742.38	741.22	2220.18	89.23	89.91	89.05	
07/19/85	07:44:11	747.31	746.10	2220.12	89.28	89.83	89.05	
07/19/85	07:44:21	751.24	750.02	2220.16	89.32	89.79	89.05	
07/19/85	07:44:35	756.73	755.50	2220.18	89.36	89.74	89.05	
07/19/85	07:44:49	761.84	760.83	2220.16	89.20	89.70	89.05	
07/19/85	07:45:06	768.37	767.41	2220.16	89.32	89.53	89.04	
07/19/85	07:45:22	774.12	773.12	2220.13	89.43	89.41	89.05	
07/19/85	07:45:40	780.83	779.87	2220.13	89.37	89.38	89.05	
07/19/85	07:45:56	786.57	785.46	2220.17	89.32	89.37	89.05	
07/19/85	07:46:13	793.03	792.05	2220.14	89.37	89.36	89.04	
07/19/85	07:46:29	798.57	797.46	2220.12	89.42	89.32	89.04	

TABLE A3-14 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE HAYS SANDSTONE OF THE BELL CANYON FORMATION, 4220 TO 4325
FEET BELOW LAND SURFACE, JULY 18 TO 19, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/19/85	07:46:47	804.92	803.94	2220.12	89.48	89.29	89.04	
07/19/85	07:47:05	811.37	810.38	2220.15	89.51	89.29	89.05	
07/19/85	07:48:04	831.26	830.19	2220.11	89.34	89.24	89.03	
07/19/85	07:49:03	850.86	849.68	2220.09	89.39	89.28	89.04	
07/19/85	07:50:00	868.74	867.69	2220.08	89.40	89.33	89.05	
07/19/85	07:51:12	891.50	890.37	2220.03	89.35	89.34	89.22	
07/19/85	07:52:03	906.96	905.80	2220.02	89.33	89.31	89.34	
07/19/85	07:53:02	924.76	923.44	2220.02	89.20	89.35	89.27	
07/19/85	07:54:12	944.72	943.54	2219.99	89.37	89.39	89.28	
07/19/85	07:55:11	961.39	960.09	2220.00	89.53	89.51	89.30	
07/19/85	07:56:07	976.55	975.42	2220.00	89.60	89.48	89.30	SFL
07/19/85	07:57:07	992.25	991.05	2219.99	89.57	89.49	89.31	
07/19/85	07:57:42	1001.54	1000.41	2219.98	89.58	89.54	89.31	
07/19/85	07:58:00	1006.12	1004.76	2219.96	89.58	89.52	89.32	
07/19/85	07:58:10	1008.57	1007.29	2219.98	89.58	89.51	89.32	
07/19/85	07:58:21	1011.60	1010.27	2220.45	89.59	89.54	89.33	
07/19/85	07:58:33	1260.45	1277.47	2220.47	89.52	89.48	89.35	Shut-in for
07/19/85	07:58:43	1399.06	1404.40	2218.72	89.61	89.67	89.33	SBU
07/19/85	07:58:55	1475.32	1477.61	2220.26	89.48	89.62	89.33	
07/19/85	07:59:04	1510.92	1512.05	2220.58	89.63	89.52	89.34	
07/19/85	07:59:16	1542.04	1542.35	2220.15	89.46	89.51	89.34	
07/19/85	07:59:25	1560.54	1560.46	2219.93	89.49	89.63	89.35	
07/19/85	07:59:37	1578.84	1578.65	2220.32	89.64	89.74	89.34	
07/19/85	07:59:47	1591.00	1590.50	2220.26	89.75	89.67	89.35	
07/19/85	07:59:58	1603.84	1603.36	2220.15	89.87	89.50	89.35	
07/19/85	08:00:08	1612.78	1612.15	2220.17	89.94	89.56	89.36	
07/19/85	08:00:20	1622.64	1621.92	2220.23	89.92	89.62	89.36	
07/19/85	08:00:29	1629.71	1628.79	2220.19	89.77	89.65	89.36	
07/19/85	08:00:41	1637.58	1636.71	2220.08	89.64	89.64	89.39	
07/19/85	08:00:51	1643.29	1642.34	2220.10	89.62	89.62	89.43	
07/19/85	08:01:02	1649.85	1648.89	2220.16	89.65	89.60	89.45	
07/19/85	08:01:12	1654.74	1653.67	2220.14	89.64	89.57	89.45	
07/19/85	08:01:24	1660.31	1659.32	2220.11	89.68	89.58	89.48	
07/19/85	08:01:39	1666.68	1665.74	2220.13	89.68	89.56	89.47	
07/19/85	08:01:52	1672.09	1671.12	2220.10	89.72	89.60	89.49	
07/19/85	08:02:11	1678.75	1677.79	2220.08	89.72	89.63	89.50	
07/19/85	08:02:27	1684.21	1683.25	2220.08	89.70	89.65	89.51	
07/19/85	08:02:46	1689.86	1688.80	2220.05	89.71	89.65	89.52	
07/19/85	08:03:02	1694.47	1693.40	2220.08	89.71	89.65	89.52	
07/19/85	08:03:21	1699.24	1698.12	2220.06	89.73	89.65	89.53	
07/19/85	08:03:38	1703.14	1702.07	2220.06	89.76	89.65	89.53	
07/19/85	08:03:57	1707.34	1706.16	2220.06	89.79	89.69	89.52	
07/19/85	08:04:13	1710.75	1709.61	2220.05	89.81	89.70	89.54	
07/19/85	08:04:32	1714.31	1713.18	2220.06	89.83	89.71	89.54	

TABLE A3-14 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE HAYS SANDSTONE OF THE BELL CANYON FORMATION, 4220 TO 4325
FEET BELOW LAND SURFACE, JULY 18 TO 19, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/19/85	08:04:48	1717.42	1716.22	2220.06	89.84	89.73	89.54	
07/19/85	08:05:07	1720.65	1719.41	2220.06	89.84	89.72	89.53	
07/19/85	08:05:23	1723.33	1722.13	2220.05	89.84	89.73	89.55	
07/19/85	08:05:43	1726.27	1724.98	2220.04	89.83	89.75	89.56	
07/19/85	08:06:01	1728.99	1727.69	2220.06	89.81	89.74	89.54	
07/19/85	08:06:17	1731.24	1730.00	2220.04	89.79	89.74	89.53	
07/19/85	08:06:37	1733.73	1732.45	2220.06	89.78	89.74	89.55	
07/19/85	08:06:53	1735.79	1734.53	2220.04	89.78	89.74	89.58	
07/19/85	08:07:12	1738.06	1736.79	2220.03	89.78	89.74	89.57	
07/19/85	08:07:44	1741.79	1740.42	2220.02	89.80	89.74	89.58	
07/19/85	08:08:03	1743.72	1742.39	2220.04	89.80	89.73	89.59	
07/19/85	08:09:05	1749.70	1748.34	2220.01	89.80	89.73	89.61	
07/19/85	08:10:02	1754.57	1753.25	2219.99	89.72	89.70	89.60	
07/19/85	08:11:04	1759.26	1757.92	2219.99	89.66	89.69	89.58	
07/19/85	08:12:07	1763.65	1762.21	2219.97	89.63	89.63	89.57	
07/19/85	08:13:09	1767.16	1765.94	2219.97	89.58	89.59	89.56	
07/19/85	08:14:13	1770.90	1769.43	2219.91	89.61	89.56	89.54	
07/19/85	08:15:14	1773.91	1772.52	2219.94	89.64	89.54	89.52	
07/19/85	08:16:03	1776.18	1774.76	2219.91	89.66	89.53	89.51	
07/19/85	08:17:04	1778.87	1777.40	2219.92	89.68	89.55	89.47	
07/19/85	08:18:08	1781.28	1779.92	2219.89	89.70	89.57	89.48	
07/19/85	08:19:12	1783.64	1782.27	2219.87	89.73	89.59	89.47	
07/19/85	08:20:13	1785.78	1784.34	2219.86	89.74	89.62	89.45	
07/19/85	08:21:02	1787.25	1785.88	2219.86	89.76	89.63	89.44	
07/19/85	08:22:04	1789.15	1787.75	2219.84	89.78	89.65	89.43	
07/19/85	08:23:07	1791.07	1789.56	2219.83	89.79	89.67	89.44	
07/19/85	08:24:09	1792.60	1791.20	2219.81	89.80	89.68	89.44	
07/19/85	08:25:12	1794.17	1792.74	2219.79	89.79	89.69	89.45	
07/19/85	08:26:14	1795.60	1794.19	2219.77	89.74	89.71	89.43	
07/19/85	08:27:03	1796.68	1795.27	2219.75	89.71	89.69	89.43	
07/19/85	08:28:04	1798.06	1796.59	2219.75	89.66	89.70	89.44	
07/19/85	08:29:08	1799.41	1797.85	2219.74	89.62	89.71	89.41	
07/19/85	08:30:09	1800.40	1799.04	2219.72	89.58	89.69	89.39	
07/19/85	08:31:13	1801.62	1800.18	2219.86	89.54	89.69	89.38	
07/19/85	08:32:14	1802.76	1801.27	2219.74	89.51	89.68	89.36	
07/19/85	08:33:03	1803.48	1802.05	2219.84	89.50	89.67	89.35	
07/19/85	08:34:08	1804.48	1803.09	2219.79	89.45	89.62	89.33	
07/19/85	08:35:11	1805.51	1804.08	2219.68	89.45	89.60	89.33	
07/19/85	08:36:00	1806.30	1804.79	2219.91	89.43	89.57	89.33	
07/19/85	08:36:54	1806.65	1805.31	2220.04	89.44	89.53	89.33	
07/19/85	08:40:12	1809.48	1808.07	2219.76	89.43	89.50	89.31	
07/19/85	08:50:13	1815.63	1814.17	2219.64	89.43	89.48	89.29	
07/19/85	09:00:01	1820.00	1818.52	2219.49	89.39	89.46	89.26	
07/19/85	09:10:02	1823.46	1821.92	2219.37	89.33	89.38	89.23	

TABLE A3-14 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE HAYS SANDSTONE OF THE BELL CANYON FORMATION, 4220 TO 4325
FEET BELOW LAND SURFACE, JULY 18 TO 19, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/19/85	09:20:05	1826.02	1824.54	2219.29	89.31	89.34	89.20	
07/19/85	09:30:06	1828.18	1826.69	2219.11	89.31	89.33	89.18	
07/19/85	09:40:10	1829.81	1828.43	2218.96	89.30	89.31	89.17	
07/19/85	09:50:11	1831.26	1829.91	2218.85	89.28	89.31	89.16	
07/19/85	10:00:00	1832.51	1831.09	2218.73	89.27	89.30	89.15	
07/19/85	10:10:02	1833.56	1832.15	2218.67	89.25	89.30	89.15	
07/19/85	10:20:05	1834.52	1833.06	2218.52	89.24	89.30	89.15	
07/19/85	10:30:07	1835.41	1833.89	2218.39	89.24	89.28	89.14	
07/19/85	10:40:10	1836.07	1834.59	2218.26	89.24	89.30	89.14	
07/19/85	10:50:13	1836.63	1835.21	2218.10	89.25	89.29	89.16	
07/19/85	11:00:14	1837.21	1835.77	2218.02	89.25	89.29	89.16	
07/19/85	11:10:02	1837.75	1836.24	2217.89	89.25	89.30	89.16	
07/19/85	11:20:04	1838.18	1836.70	2217.76	89.27	89.28	89.15	
07/19/85	11:30:07	1838.49	1837.09	2217.66	89.26	89.30	89.16	
07/19/85	11:40:08	1838.85	1837.46	2217.52	89.27	89.28	89.15	
07/19/85	11:50:10	1839.20	1837.78	2217.39	89.27	89.28	89.15	
07/19/85	12:00:11	1839.53	1838.09	2217.30	89.27	89.29	89.14	
07/19/85	12:10:13	1839.90	1838.41	2217.17	89.27	89.29	89.15	
07/19/85	12:20:08	1840.17	1838.61	2217.05	89.27	89.29	89.15	
07/19/85	12:21:26	1840.17	1838.64	2217.01	89.28	89.28	89.16	
07/19/85	12:22:13	1840.17	1838.67	2217.04	89.28	89.29	89.15	
07/19/85	12:22:48	1840.07	1838.70	2217.04	89.27	89.26	89.12	
07/19/85	12:22:57	1840.03	1838.70	2216.97	89.27	89.25	89.13	
07/19/85	12:23:09	1840.17	1838.72	2217.00	89.27	89.26	89.11	
07/19/85	12:23:22	1840.13	1838.78	2216.95	89.26	89.25	89.12	
07/19/85	12:23:32	1840.26	1838.72	2217.02	89.25	89.25	89.13	
07/19/85	12:23:44	1840.11	1838.72	2216.99	89.28	89.25	89.14	
07/19/85	12:23:54	1840.19	1838.68	2217.04	89.27	89.27	89.11	
07/19/85	12:24:06	1840.17	1838.74	2216.98	89.27	89.25	89.10	
07/19/85	12:24:16	1840.09	1838.56	2216.74	89.25	89.26	89.09	
07/19/85	12:24:28	162.68	239.14	2216.49	90.34	89.25	89.23	End SBU
07/19/85	12:24:39	203.70	202.70	2216.00	89.48	89.25	89.14	Open for SLUG
07/19/85	12:24:51	215.10	214.09	2216.82	89.51	89.22	89.11	Test
07/19/85	12:25:02	223.38	222.31	2217.21	89.53	89.19	89.14	SLUG Test
07/19/85	12:25:15	232.68	231.62	2217.04	89.51	89.26	89.10	
07/19/85	12:25:26	239.80	238.75	2217.13	89.45	89.34	89.12	
07/19/85	12:25:39	248.21	247.12	2217.06	89.35	89.30	89.10	
07/19/85	12:25:49	254.89	253.90	2217.04	89.29	89.26	89.08	
07/19/85	12:26:02	263.27	261.92	2216.98	89.33	89.22	89.07	
07/19/85	12:26:12	269.59	268.65	2217.05	89.35	89.23	89.06	
07/19/85	12:26:25	277.39	276.28	2217.03	89.33	89.22	89.06	
07/19/85	12:26:37	284.86	283.95	2217.01	89.28	89.17	89.04	
07/19/85	12:26:47	291.23	290.31	2217.03	89.25	89.17	89.04	
07/19/85	12:27:02	300.27	299.43	2217.01	89.19	89.24	89.04	

TABLE A3-14 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE HAYS SANDSTONE OF THE BELL CANYON FORMATION, 4220 TO 4325
FEET BELOW LAND SURFACE, JULY 18 TO 19, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/19/85	12:27:15	307.95	307.07	2217.03	89.21	89.26	89.04	
07/19/85	12:27:31	316.93	316.08	2217.01	89.29	89.23	89.04	
07/19/85	12:27:44	324.47	323.57	2216.96	89.33	89.21	89.05	
07/19/85	12:27:59	333.23	332.36	2216.96	89.43	89.23	89.03	
07/19/85	12:28:13	340.55	339.71	2216.98	89.35	89.21	89.07	
07/19/85	12:28:28	349.16	348.29	2216.96	89.27	89.24	89.07	
07/19/85	12:28:41	356.34	355.43	2217.00	89.29	89.29	89.06	
07/19/85	12:28:57	364.65	363.79	2216.96	89.30	89.33	89.05	
07/19/85	12:29:10	371.62	370.66	2216.98	89.29	89.32	89.04	
07/19/85	12:29:25	379.66	378.80	2216.96	89.21	89.24	89.05	
07/19/85	12:29:39	386.52	385.62	2216.96	89.22	89.23	89.07	
07/19/85	12:29:56	395.83	395.14	2216.94	89.21	89.27	89.06	
07/19/85	12:30:15	405.50	404.78	2216.96	89.25	89.27	89.05	
07/19/85	12:30:32	413.71	412.72	2216.91	89.33	89.23	89.05	
07/19/85	12:30:50	422.90	422.19	2216.91	89.41	89.19	89.06	
07/19/85	12:31:07	430.83	429.87	2216.88	89.39	89.19	89.07	
07/19/85	12:31:25	439.78	439.05	2216.89	89.34	89.24	89.04	
07/19/85	12:31:42	447.49	446.59	2216.90	89.33	89.28	89.09	
07/19/85	12:32:00	456.37	455.60	2216.90	89.31	89.27	89.10	
07/19/85	12:32:16	463.91	462.93	2216.88	89.24	89.32	89.12	
07/19/85	12:32:34	472.49	471.71	2216.89	89.21	89.33	89.10	
07/19/85	12:32:51	479.97	478.97	2216.87	89.25	89.30	89.10	
07/19/85	12:33:09	488.44	487.69	2216.86	89.33	89.35	89.11	
07/19/85	12:33:26	495.79	494.74	2216.86	89.40	89.35	89.13	
07/19/85	12:33:52	507.74	507.03	2216.83	89.48	89.31	89.14	
07/19/85	12:34:09	514.97	513.96	2216.84	89.43	89.33	89.15	
07/19/85	12:34:27	523.08	522.28	2216.83	89.42	89.38	89.18	
07/19/85	12:34:44	530.13	529.12	2216.81	89.42	89.34	89.20	
07/19/85	12:35:02	538.13	537.39	2216.82	89.43	89.34	89.23	
07/19/85	12:35:21	546.31	545.51	2216.81	89.43	89.33	89.25	
07/19/85	12:35:37	553.20	552.20	2216.81	89.47	89.34	89.24	
07/19/85	12:35:56	560.94	560.17	2216.82	89.52	89.36	89.26	
07/19/85	12:36:12	567.68	566.64	2216.81	89.52	89.36	89.27	
07/19/85	12:36:30	575.24	574.44	2216.79	89.50	89.38	89.27	
07/19/85	12:36:47	581.85	580.81	2216.78	89.49	89.37	89.27	SLUG Test
07/19/85	12:37:05	589.30	588.46	2216.79	89.48	89.39	89.29	
07/19/85	12:37:22	595.72	594.75	2216.80	89.46	89.40	89.31	
07/19/85	12:37:40	603.12	602.28	2216.77	89.44	89.35	89.31	
07/19/85	12:37:56	609.47	608.43	2216.77	89.42	89.33	89.32	
07/19/85	12:38:14	616.75	615.89	2216.75	89.49	89.15	89.35	
07/19/85	12:38:31	623.02	622.03	2216.76	89.54	89.10	89.34	
07/19/85	12:38:49	630.21	629.35	2216.76	89.61	89.05	89.35	
07/19/85	12:39:06	636.40	635.31	2216.76	89.67	89.04	89.37	
07/19/85	12:39:24	643.33	642.45	2216.73	89.73	89.09	89.38	

TABLE A3-14 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE HAYS SANDSTONE OF THE BELL CANYON FORMATION, 4220 TO 4325
FEET BELOW LAND SURFACE, JULY 18 TO 19, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/19/85	12:39:43	650.43	649.59	2216.74	89.79	89.17	89.40	
07/19/85	12:40:00	656.43	655.43	2216.76	89.84	89.23	89.42	
07/19/85	12:40:18	663.25	662.40	2216.76	89.80	89.30	89.44	
07/19/85	12:40:34	669.18	668.12	2216.72	89.76	89.36	89.44	
07/19/85	12:40:52	675.83	674.96	2216.72	89.67	89.43	89.46	
07/19/85	12:41:09	681.63	680.64	2216.74	89.64	89.49	89.47	
07/19/85	12:41:27	688.32	687.43	2216.72	89.62	89.55	89.46	
07/19/85	12:41:44	694.07	693.04	2216.72	89.60	89.61	89.48	
07/19/85	12:42:02	700.67	699.73	2216.73	89.56	89.68	89.50	
07/19/85	12:42:18	706.40	705.29	2216.71	89.60	89.73	89.51	
07/19/85	12:42:36	712.83	711.90	2216.76	89.65	89.80	89.51	
07/19/85	12:42:53	718.35	717.28	2216.72	89.69	89.86	89.55	
07/19/85	12:43:11	724.69	723.74	2216.73	89.74	89.92	89.56	
07/19/85	12:43:28	730.12	729.10	2216.70	89.76	89.98	89.59	
07/19/85	12:43:46	736.48	735.50	2216.70	89.75	90.04	89.56	
07/19/85	12:44:03	741.89	740.81	2216.69	89.79	90.10	89.60	
07/19/85	12:44:21	748.11	747.15	2216.67	89.86	90.16	89.64	
07/19/85	12:44:40	754.43	753.49	2216.69	89.89	90.23	89.66	
07/19/85	12:44:56	759.79	758.73	2216.67	89.84	90.28	89.72	
07/19/85	12:45:14	765.86	764.88	2216.67	89.84	90.34	89.68	
07/19/85	12:45:31	771.10	769.97	2216.67	89.84	90.39	89.70	
07/19/85	12:45:49	777.04	776.08	2216.67	89.71	90.46	89.69	
07/19/85	12:46:06	782.19	781.08	2216.65	89.72	90.51	89.73	
07/19/85	12:46:24	788.07	787.07	2216.69	89.71	90.57	89.73	
07/19/85	12:46:41	793.05	791.98	2216.69	89.76	90.62	89.74	
07/19/85	12:46:59	798.91	797.92	2216.67	89.81	90.68	89.82	
07/19/85	12:47:15	803.92	802.79	2216.67	89.87	90.64	89.78	
07/19/85	12:47:48	814.18	813.03	2216.68	89.96	90.62	89.83	
07/19/85	12:48:04	818.88	817.80	2216.64	90.01	90.66	89.86	
07/19/85	12:49:06	837.27	836.11	2216.62	90.16	90.32	90.04	
07/19/85	12:50:12	856.68	855.41	2216.60	90.07	90.36	90.14	
07/19/85	12:51:13	874.16	872.93	2216.60	90.14	90.12	90.21	
07/19/85	12:52:00	887.31	886.11	2216.56	90.26	90.09	90.34	
07/19/85	12:53:12	907.17	905.97	2216.52	90.19	90.06	90.35	
07/19/85	12:54:13	923.75	922.46	2216.51	90.13	90.05	90.34	
07/19/85	12:55:11	938.84	937.64	2216.52	90.16	90.13	90.52	
07/19/85	12:56:12	954.46	953.36	2216.51	90.17	90.17	90.50	
07/19/85	12:57:10	969.04	967.87	2216.49	90.11	90.16	90.49	
07/19/85	12:58:12	984.03	982.81	2216.49	90.11	90.11	90.40	
07/19/85	12:59:09	997.74	996.66	2216.48	90.00	90.15	90.32	SLUG Test
07/19/85	13:00:11	1012.48	1011.14	2216.46	90.02	90.11	90.42	
07/19/85	13:01:09	1025.60	1024.38	2216.47	90.14	90.18	90.54	
07/19/85	13:02:10	1039.46	1038.17	2216.44	90.27	90.20	90.63	
07/19/85	13:03:08	1052.23	1050.98	2216.42	90.32	90.20	90.72	

TABLE A3-14 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE HAYS SANDSTONE OF THE BELL CANYON FORMATION, 4220 TO 4325
FEET BELOW LAND SURFACE, JULY 18 TO 19, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/19/85	13:04:09	1065.46	1064.21	2216.41	90.28	90.21	90.59	
07/19/85	13:05:07	1077.72	1076.46	2216.42	90.28	90.23	90.51	
07/19/85	13:06:08	1090.53	1089.08	2216.41	90.28	90.27	90.48	
07/19/85	13:07:06	1102.09	1100.85	2216.38	90.27	90.31	90.53	
07/19/85	13:08:07	1114.42	1113.01	2216.40	90.27	90.29	90.57	
07/19/85	13:09:08	1126.20	1125.00	2216.37	90.25	90.26	90.57	
07/19/85	13:10:06	1137.41	1136.15	2216.35	90.25	90.21	90.64	
07/19/85	13:11:07	1148.92	1147.66	2216.31	90.35	90.22	90.66	
07/19/85	13:12:05	1159.59	1158.28	2216.32	90.39	90.31	90.68	
07/19/85	13:13:06	1170.70	1169.33	2216.29	90.36	90.29	90.75	
07/19/85	13:14:04	1180.98	1179.57	2216.28	90.35	90.29	90.74	
07/19/85	13:15:05	1191.69	1190.25	2216.30	90.36	90.30	90.76	
07/19/85	13:16:03	1201.54	1200.16	2216.27	90.33	90.36	90.76	
07/19/85	13:17:04	1211.78	1210.48	2216.28	90.31	90.37	90.76	
07/19/85	13:18:02	1221.44	1220.12	2216.23	90.33	90.31	90.76	
07/19/85	13:19:03	1231.29	1230.00	2216.21	90.29	90.27	90.76	
07/19/85	13:20:01	1240.46	1239.10	2216.21	90.26	90.24	90.74	
07/19/85	13:21:02	1249.82	1248.53	2216.21	90.23	90.24	90.76	
07/19/85	13:22:00	1258.66	1257.38	2216.22	90.19	90.26	90.76	
07/19/85	13:23:01	1267.93	1266.54	2216.16	90.27	90.29	90.76	
07/19/85	13:24:02	1276.92	1275.62	2216.17	90.36	90.30	90.76	
07/19/85	13:25:00	1285.34	1284.05	2216.17	90.43	90.30	90.76	
07/19/85	13:26:01	1294.12	1292.78	2216.17	90.52	90.25	90.76	
07/19/85	13:27:13	1304.17	1302.83	2216.14	90.61	90.30	90.76	
07/19/85	13:28:00	1310.56	1309.21	2216.14	90.67	90.35	90.76	
07/19/85	13:29:12	1319.94	1318.70	2216.09	90.76	90.43	90.75	
07/19/85	13:30:13	1327.85	1326.53	2216.10	90.75	90.44	90.75	
07/19/85	13:31:11	1335.24	1333.89	2216.08	90.51	90.42	90.76	
07/19/85	13:32:12	1342.78	1341.51	2216.07	90.54	90.35	90.76	
07/19/85	13:33:10	1350.07	1348.64	2216.07	90.62	90.38	90.76	
07/19/85	13:34:11	1357.45	1356.05	2216.08	90.53	90.41	90.76	
07/19/85	13:35:09	1364.27	1363.02	2216.03	90.45	90.41	90.76	
07/19/85	13:36:10	1371.56	1370.18	2216.05	90.41	90.38	90.76	
07/19/85	13:37:08	1378.24	1376.85	2216.03	90.39	90.35	90.76	
07/19/85	13:38:09	1385.05	1383.72	2216.02	90.38	90.35	90.76	
07/19/85	13:39:07	1391.47	1390.13	2216.01	90.38	90.36	90.75	
07/19/85	13:40:02	1397.63	1396.18	2215.98	90.36	90.34	90.75	
07/19/85	13:41:04	1404.04	1402.78	2215.97	90.38	90.33	90.74	
07/19/85	13:42:02	1410.17	1408.85	2215.96	90.38	90.33	90.76	
07/19/85	13:43:03	1416.67	1415.17	2215.92	90.36	90.31	90.76	
07/19/85	13:44:00	1422.44	1421.02	2215.93	90.31	90.31	90.75	
07/19/85	13:45:02	1428.55	1427.08	2215.94	90.30	90.36	90.76	
07/19/85	13:46:13	1435.42	1434.08	2215.91	90.32	90.34	90.75	
07/19/85	13:47:00	1439.93	1438.54	2215.94	90.35	90.36	90.76	

TABLE A3-14 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE HAYS SANDSTONE OF THE BELL CANYON FORMATION, 4220 TO 4325
FEET BELOW LAND SURFACE, JULY 18 TO 19, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/19/85	13:48:13	1446.85	1445.35	2215.90	90.41	90.37	90.74	
07/19/85	13:49:00	1451.16	1449.76	2215.84	90.44	90.36	90.76	
07/19/85	13:50:12	1457.71	1456.30	2215.86	90.48	90.34	90.76	SLUG Test
07/19/85	13:51:13	1463.07	1461.78	2215.88	90.47	90.27	90.74	
07/19/85	13:52:11	1468.26	1466.85	2215.84	90.44	90.25	90.76	
07/19/85	13:53:12	1473.58	1472.16	2215.81	90.39	90.21	90.73	
07/19/85	13:54:10	1478.50	1477.08	2215.80	90.38	90.20	90.75	
07/19/85	13:55:12	1483.62	1482.15	2215.83	90.31	90.25	90.74	
07/19/85	13:56:13	1488.59	1487.11	2215.79	90.25	90.30	90.76	
07/19/85	13:57:10	1493.17	1491.77	2215.78	90.24	90.34	90.75	
07/19/85	13:58:12	1497.86	1496.60	2215.76	90.28	90.38	90.75	
07/19/85	13:59:09	1502.58	1501.12	2215.74	90.32	90.38	90.75	
07/19/85	14:00:10	1507.22	1505.84	2215.74	90.37	90.41	90.75	
07/19/85	14:01:08	1511.63	1510.22	2215.72	90.40	90.42	90.75	
07/19/85	14:02:09	1516.02	1514.78	2215.68	90.43	90.40	90.76	
07/19/85	14:03:07	1520.34	1519.02	2215.69	90.47	90.34	90.75	
07/19/85	14:04:08	1524.84	1523.44	2215.71	90.49	90.29	90.75	
07/19/85	14:05:06	1528.75	1527.52	2215.68	90.48	90.24	90.74	
07/19/85	14:06:07	1533.23	1531.74	2215.66	90.46	90.27	90.75	
07/19/85	14:07:05	1537.16	1535.72	2215.64	90.39	90.27	90.74	
07/19/85	14:08:06	1541.16	1539.81	2215.65	90.38	90.23	90.75	
07/19/85	14:09:04	1545.11	1543.63	2215.65	90.34	90.24	90.75	
07/19/85	14:10:05	1549.00	1547.58	2215.62	90.31	90.24	90.73	
07/19/85	14:11:03	1552.55	1551.22	2215.60	90.29	90.25	90.74	
07/19/85	14:12:04	1556.49	1555.06	2215.63	90.28	90.27	90.74	
07/19/85	14:13:06	1560.24	1558.85	2215.59	90.25	90.30	90.75	
07/19/85	14:20:09	1584.66	1583.32	2215.51	90.30	90.28	90.75	
07/19/85	14:30:03	1614.41	1613.01	2215.37	90.19	90.25	90.72	
07/19/85	14:40:08	1640.71	1639.13	2215.26	90.18	90.34	90.73	
07/19/85	14:50:03	1662.34	1660.99	2215.11	90.38	90.19	90.71	
07/19/85	15:00:08	1681.51	1680.06	2214.99	90.53	90.16	90.69	
07/19/85	15:10:02	1697.77	1696.26	2214.87	90.21	90.15	90.65	
07/19/85	15:20:07	1712.05	1710.62	2214.77	90.14	90.05	90.60	SLUG Test
07/19/85	15:30:01	1724.17	1722.78	2214.69	90.13	90.04	90.58	
07/19/85	15:40:06	1735.17	1733.63	2214.55	90.08	90.00	90.40	
07/19/85	15:50:00	1744.44	1743.04	2214.43	90.12	90.01	90.32	
07/19/85	16:00:04	1752.63	1751.41	2214.33	90.09	90.00	90.13	
07/19/85	16:10:12	1760.43	1758.82	2214.22	90.04	89.97	90.16	
07/19/85	16:20:01	1766.54	1765.10	2214.09	90.03	89.95	90.08	
07/19/85	16:30:08	1772.25	1770.83	2214.00	89.99	89.92	90.13	
07/19/85	16:30:53	1772.75	1771.22	2213.97	90.00	89.92	90.07	
07/19/85	16:31:09	1772.75	1771.39	2213.96	89.99	89.91	90.13	
07/19/85	16:32:03	1773.20	1771.82	2213.96	89.98	89.91	90.10	
07/19/85	16:33:00	1773.78	1772.32	2213.97	89.98	89.91	90.05	

TABLE A3-14 (continued)

TABULATED PRESSURE DATA FOR DRILL-STEM AND SLUG TESTING OF
THE HAYS SANDSTONE OF THE BELL CANYON FORMATION, 4220 TO 4325
FEET BELOW LAND SURFACE, JULY 18 TO 19, 1985

DATE	TIME	PRESSURES (psia)			TEMPERATURES (deg. F)			COMMENTS
		P1	P2	P3	T1	T2	T3	
07/19/85	16:34:01	1774.19	1772.64	2213.73	89.97	89.90	90.07	
07/19/85	16:35:13	1774.79	1773.41	2213.96	89.95	89.91	89.96	
07/19/85	16:36:00	1775.00	1773.81	2213.92	89.95	89.91	89.99	
07/19/85	16:37:11	1775.74	1774.40	2213.92	89.93	89.91	90.01	
07/19/85	16:38:12	1776.32	1774.88	2213.88	89.92	89.91	90.10	
07/19/85	16:39:10	1776.82	1775.35	2213.87	89.91	89.90	90.15	
07/19/85	16:40:11	1777.27	1775.82	2213.87	89.91	89.91	90.14	End SLUG Test

**PART F. WATER-LEVEL MEASUREMENTS FOR OBSERVATION WELLS AT
AND NEAR THE WIPP SITE FOR THE PERIOD NOVEMBER
1985 TO APRIL 1986**

1.0 INTRODUCTION

1.1 General

Part F contains 1985 and 1986 water-level data for observation wells completed in the Magenta and Culebra Members of the Rustler Formation, the contact between the Rustler and Salado Formations, the Bell Canyon Formation, and the lumped Salado and Castile Formations at and near the WIPP site. Figure 1.1 shows the observation-well network and its relation to the WIPP site boundaries. The majority of the observation wells are completed to the Culebra. There are four wells completed to the Magenta: H-1a, H-2b1, H-8a, and H-10a. Well H-4a has a Production-Injection Packer (PIP) and well H-3b1 has a Baski packer installed to separate and isolate the Culebra and Magenta. In well H-4a, the Magenta is inaccessible to electric water-level sounders or steel tape. Wells H-4c and H-2a were not available for water-level measurements during the reporting period because another DOE subcontractor has installed test instrumentation in these wells.

Six wells, drilled in 1978, were completed to the Culebra dolomite in October 1985. In WIPP-12 and WIPP-13, a bridge plug was set below the Culebra in the 9 5/8-inch casing. The boreholes were filled with brine, and the Culebra was shot-perforated and subsequent water levels were measured. WIPP-18, WIPP-19, WIPP-21, and WIPP-22 had been filled with brine mud since being drilled. In October 1985, these wells were cleaned of mud and debris, and reamed to a diameter of

7-7/8-inches. Then, 5-1/2-inch casing was set and cemented to total depth in the top part of the Salado Formation, leaving a cement plug in the bottom of the casing. The deepest well, WIPP-22, required that a cement plug be set in the Salado Formation prior to casing. All four wells were then shot-perforated in the Culebra interval and subsequent water levels were measured. The water-level data for these wells are included in the figures and tables discussed in Section 2.0 and a more detailed discussion of the work on these wells and the subsequent water-level measurements is found in Part A, Sections 3.3 and 4.3.

1.2 Measurement Factors

All water levels presented in this part of the report are actual depth to water as measured in the field with the instruments described in the following subsections. No correction is made for fluid density. Table 1-1 is a list of observation wells for which data are presented, with measuring-point elevations. Table 1-2 is a list of late 1985 through April 1986 hydrologic activities, pumping tests, water-quality sampling activities, and well-development and cleaning operations, which may have affected water levels during the period of record.

Water levels measured with the Iron Horse water-level sounder may be inaccurate during the period January 16 to 20, 1986. At that time, comparison of results with previous measurements, and corroborative measurements with the Solinst water-level sounder indicated a probable data inaccuracy. The Iron Horse was serviced on January 27 and consistent data collection resumed.

1.3 Data-Acquisition Systems

Wells at the H-3 hydropad (H-3b1 Magenta, H-3b1 Culebra, H-3b2 Culebra, and H-3b3 Culebra), DOE-1 Culebra, H-4b Culebra, H-11b3 Culebra, and H-2c Culebra, were equipped with transducers and automated data-acquisition systems (DAS's) for very frequent pressure measurements during the H-3 multipad test (October 15, 1985 to April 12, 1986). Plots and tabulations of the data for these wells from early October to the end of the H-3 multipad test are presented in Part A, Section 4.2 and Appendix 3.0.

1.4 Water-Level Measuring Devices

The water-level data (i.e., depth to water in the wells) was measured with electric water-level sounders and steel tape. Three types of electric water-level sounders were used: the Iron Horse, the Solinst Meter, and the Powers Meter. The function and use of all these water-level measurement devices is described in Part C, Section 1.4 of Hydrologic Data Report #2 (INTERA Technologies, Inc. and Hydro Geo Chem, Inc. 1985).

2.0 WATER-LEVEL DATA

2.1 Magenta Dolomite

Figures 2.1 through 2.4 are plots of water level in the Magenta dolomite versus time for November 18, 1985 to April 30, 1986. The tabulated data are given in Appendix 1.0, Tables A1-2 (H-1), A1-3 (H-2b1), A1-16 (H-8a), and A1-22 (H-10a).

2.2 Culebra Dolomite

Figures 2.5 to 2.40 are plots of water level in the Culebra dolomite versus time for November 18, 1985 to April 30 1985. The tabulated data are given in Appendix 1.0 Tables A1-1, A1-4 to A1-15, A1-17, A1-19 to A1-21, A1-23 to A1-25, and A1-27 to A1-42.

2.3 Other Water-Level Measurements (Rustler-Salado Contact, Bell Canyon Formation and Salado-Castile Formations)

Four wells at and near the WIPP site completed to zones other than the Culebra and Magenta were also monitored during 1985 and 1986. These wells include well H-8c which measures the water level at the Rustler-Salado contact, well DOE-2 which had a PIP packer installed allowing separate water-level measurements in the Bell Canyon and Salado-Castile Formations, and wells Cabin Baby-1 and AEC-8, which measure water levels in the Bell Canyon Formation. Plots of the water levels in these wells are presented in Figures 2.41 to 2.44, and the tabulated water levels are found in Appendix 1, Tables A1-18 (H-8c, Rustler-Salado), A1-26 (DOE-2, Bell Canyon), A1-43 (Cabin Baby-1, Bell Canyon), and A1-44 (AEC-8, Bell Canyon).

3.0 REFERENCES

Hydro Geo Chem, Inc., 1985. Hydrologic Data Report #1.
Sandia National Laboratories, Contractor Report
SAND 85-7206, 710 p.

INTERA Technologies, Inc., and Hydro Geo Chem, Inc., 1985.
Hydrologic Data Report #2. Sandia National Laboratories,
Sandia Report, SAND 85-7263.

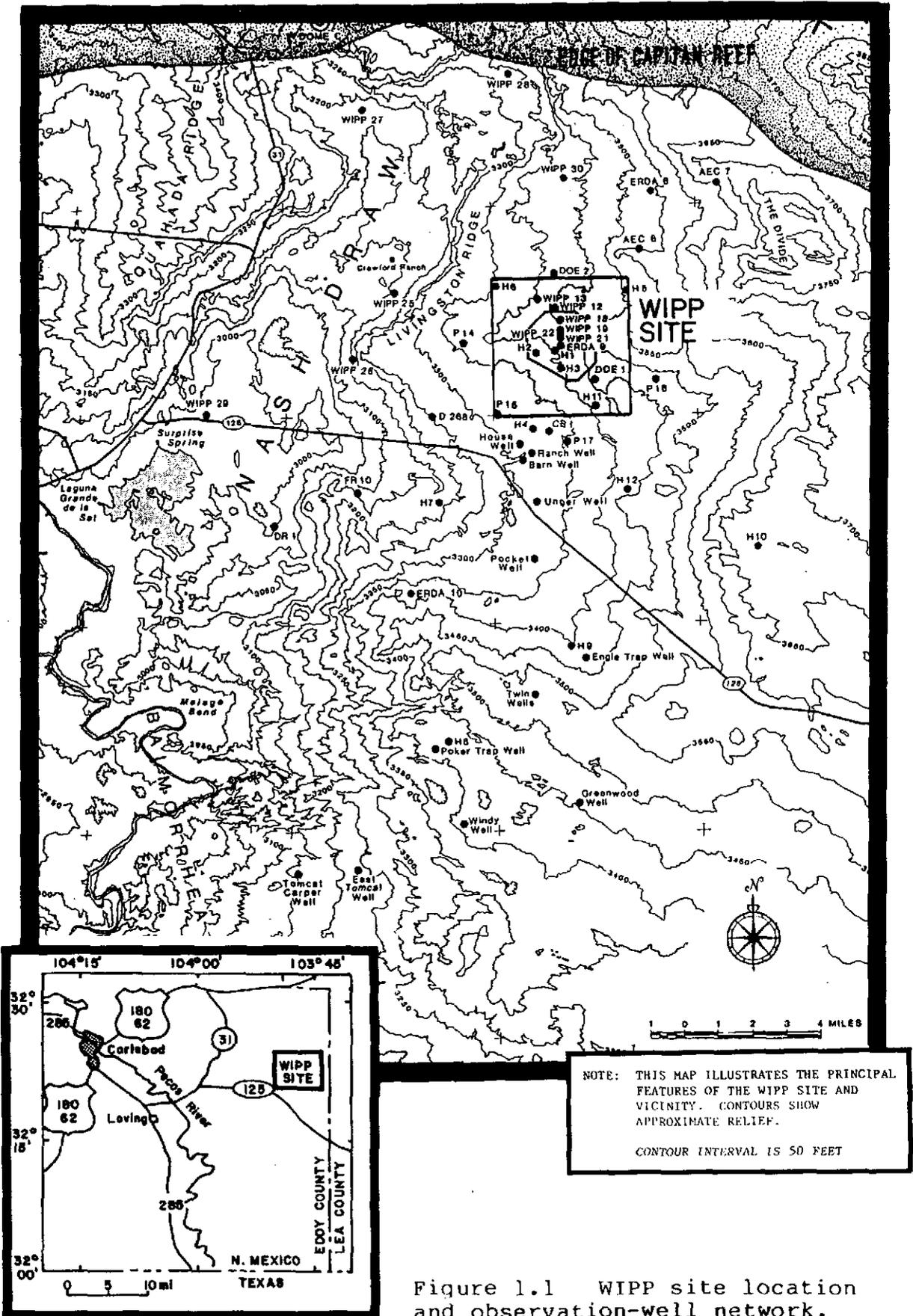


Figure 1.1 WIPP site location and observation-well network.

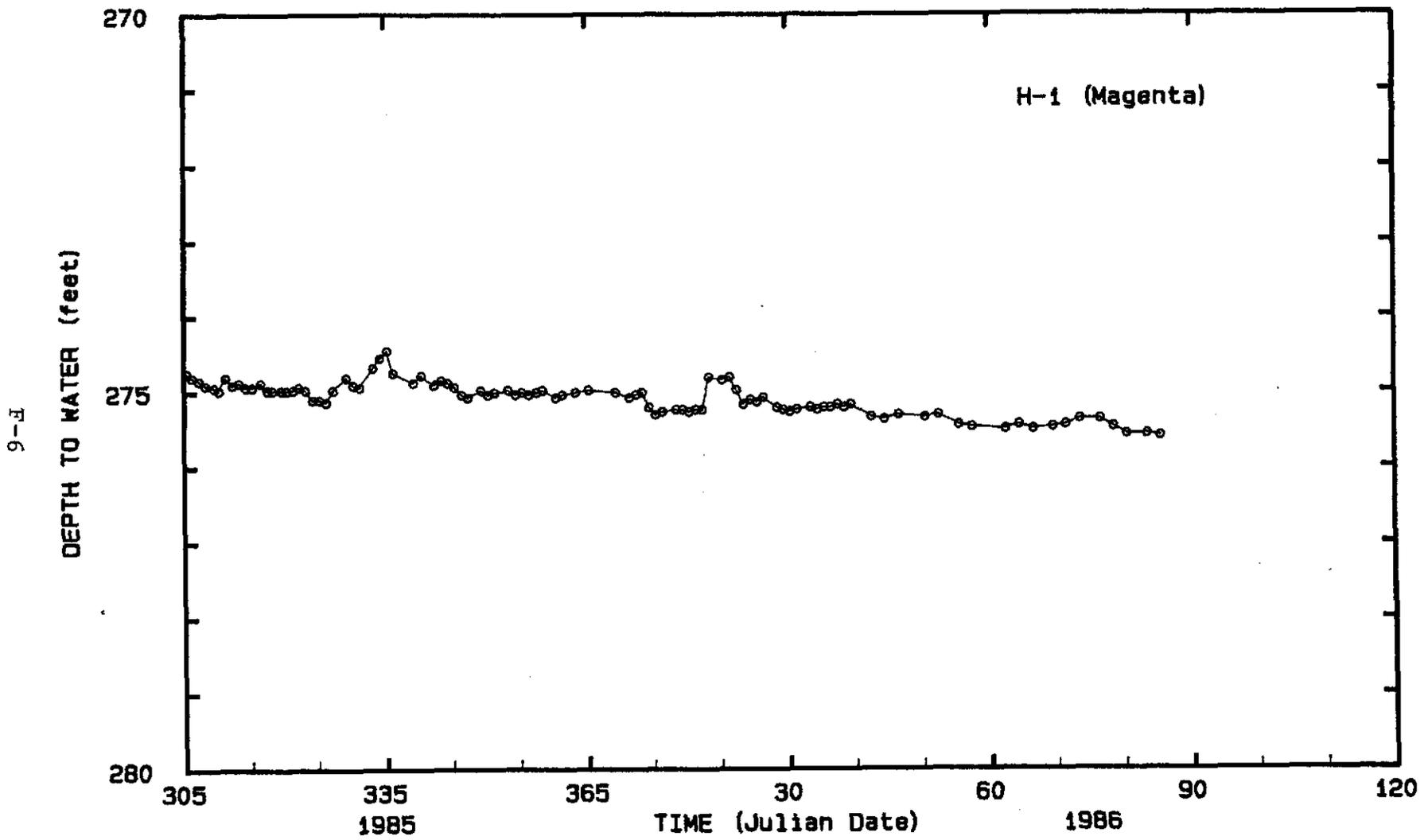


Figure 2.1 Water-level measurements at well H-1, Magenta, November 1985 through April 1986.

E-7

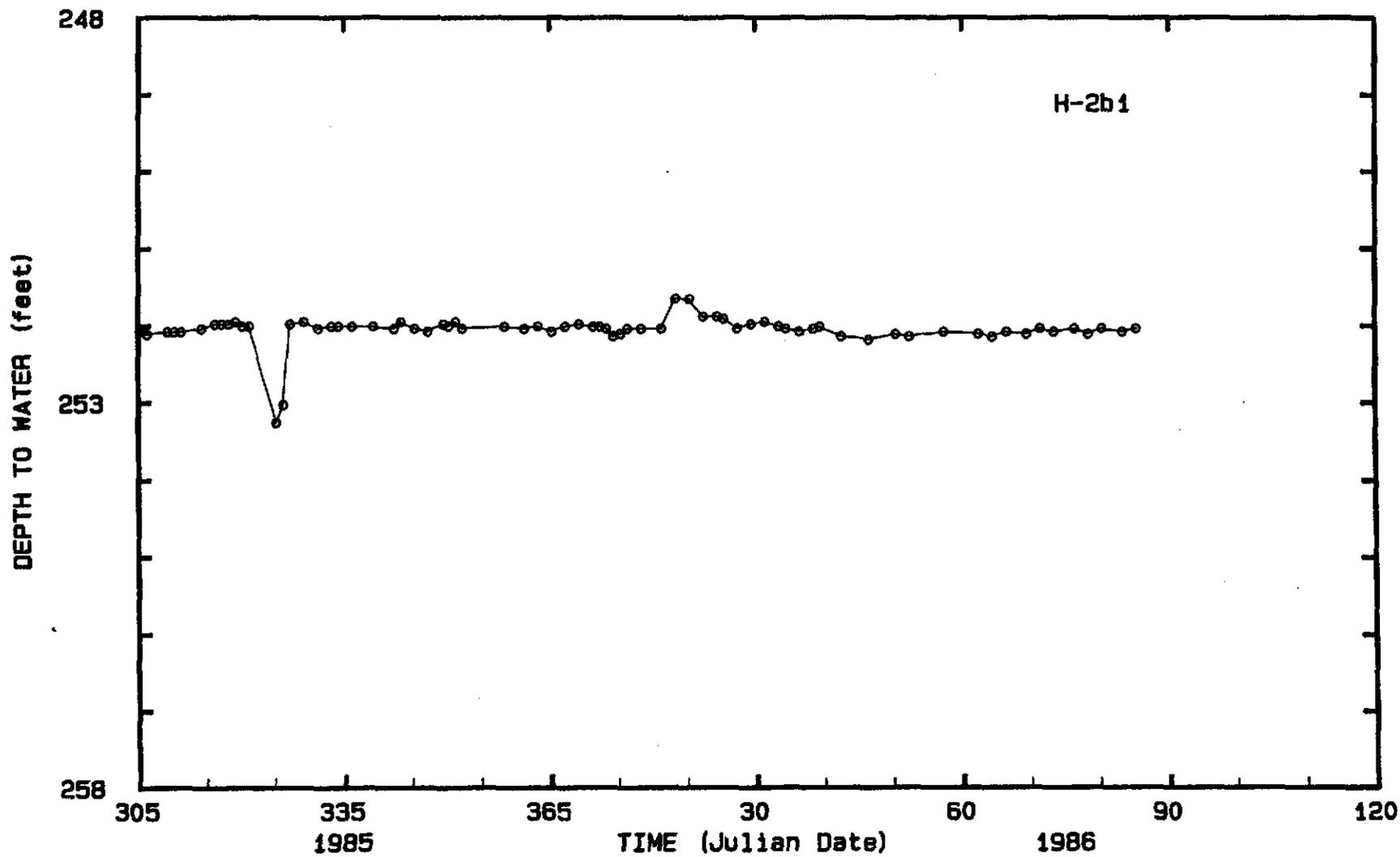


Figure 2.2 Water-level measurements at well H-2b1, Magenta, November 1985 through April 1986.

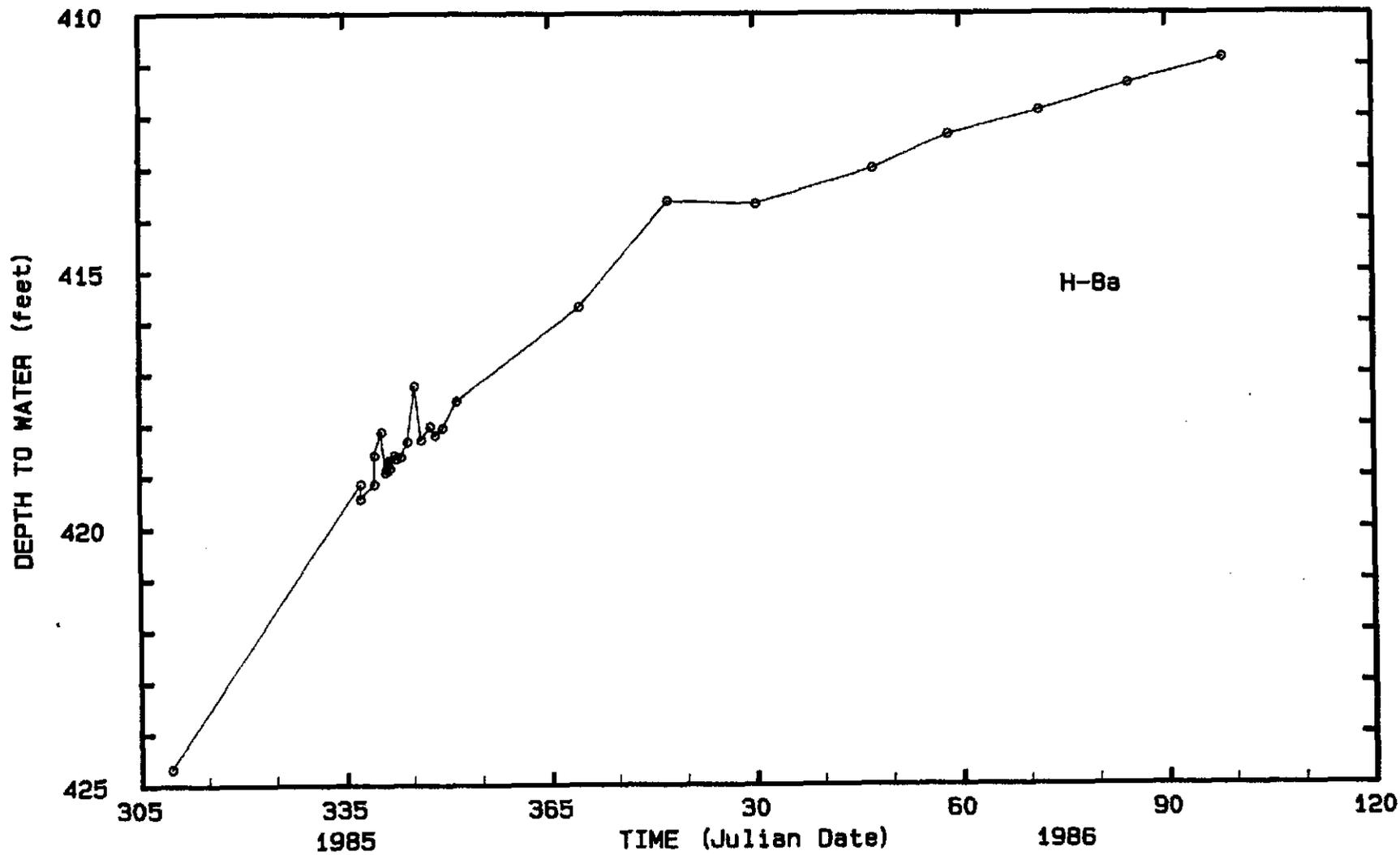


Figure 2.3 Water-level measurements at well H-8a, Magenta, November 1985 through April 1986.

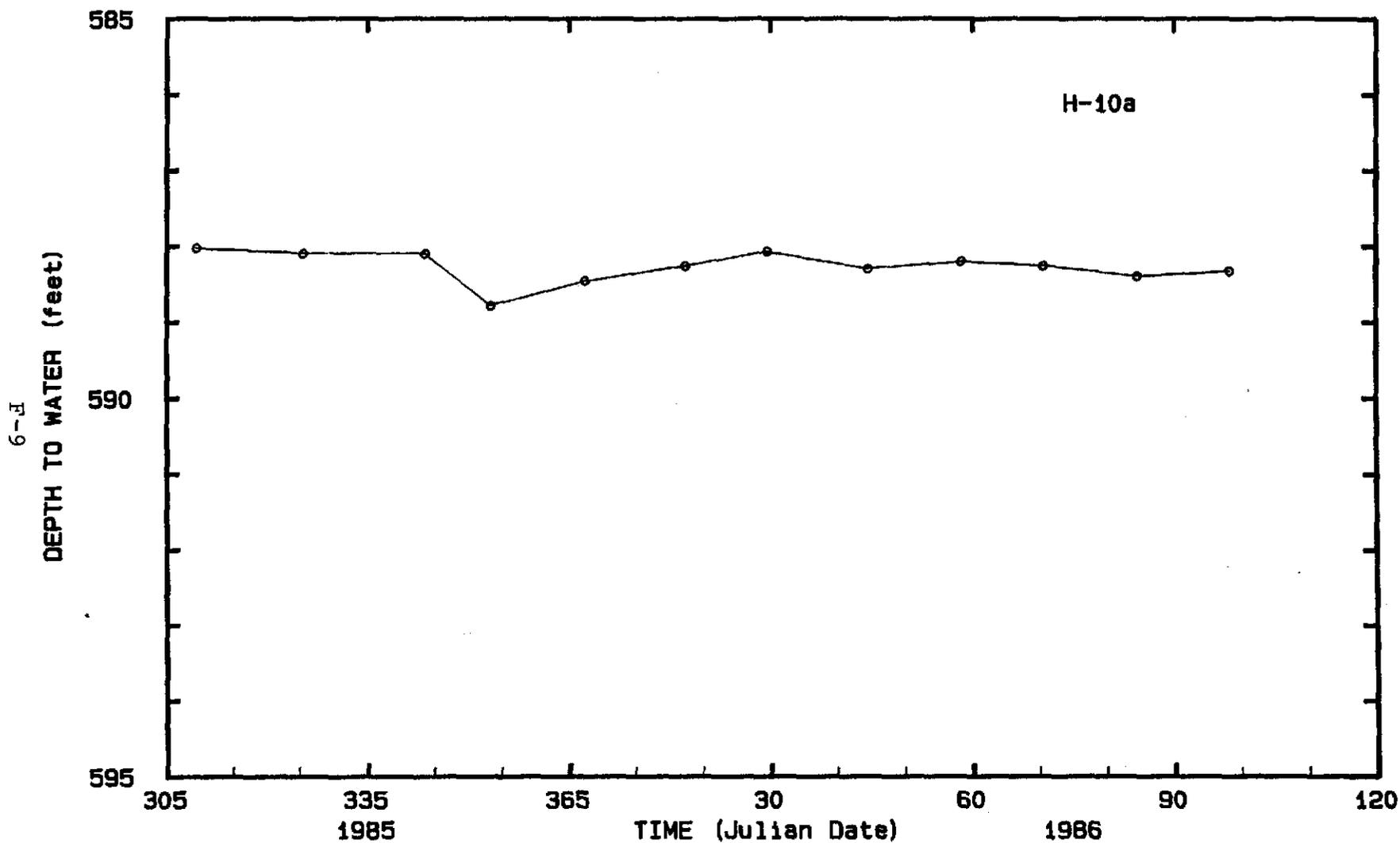


Figure 2.4 Water-level measurements at well H-10a, Magenta, November 1985 through April 1986.

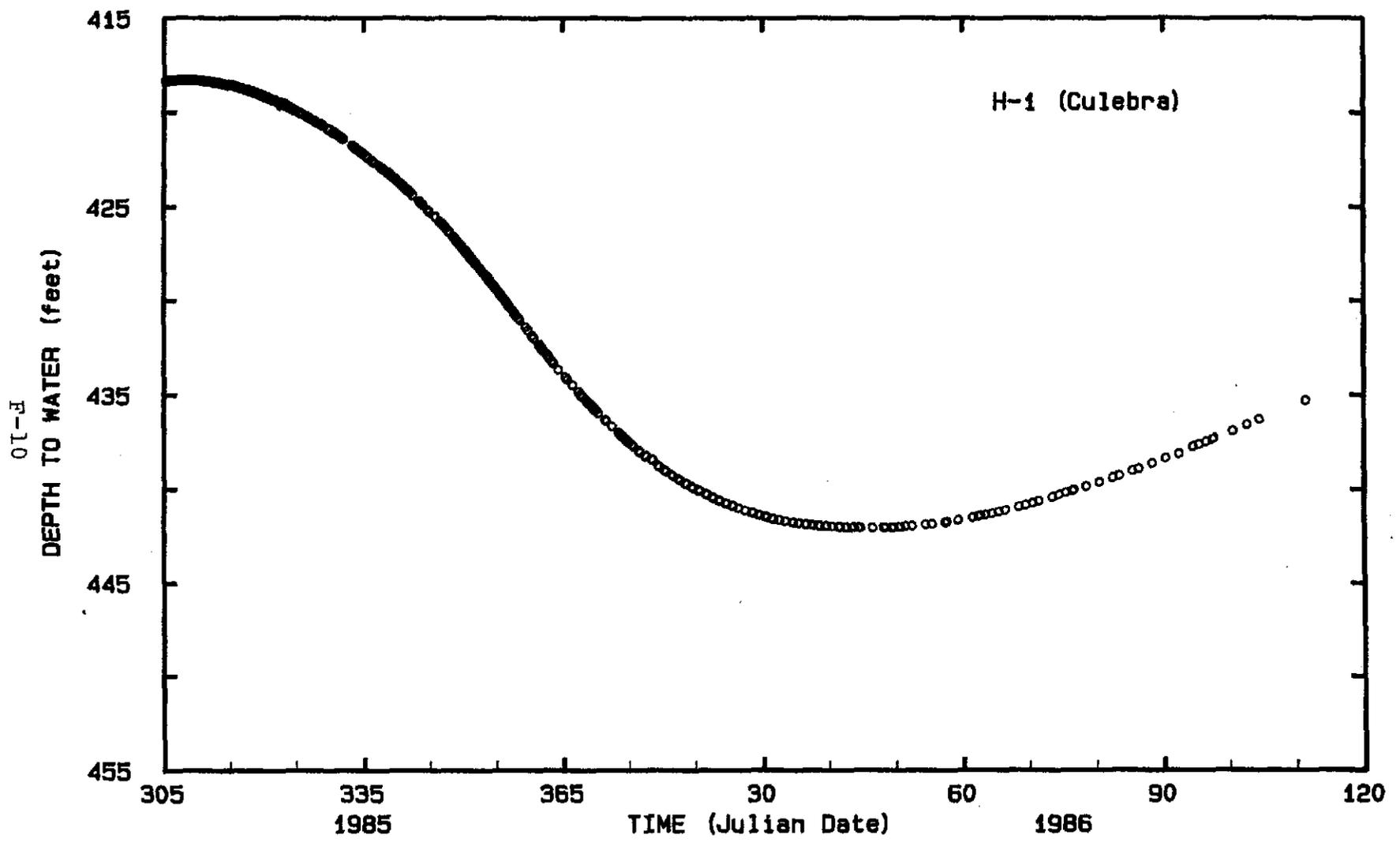
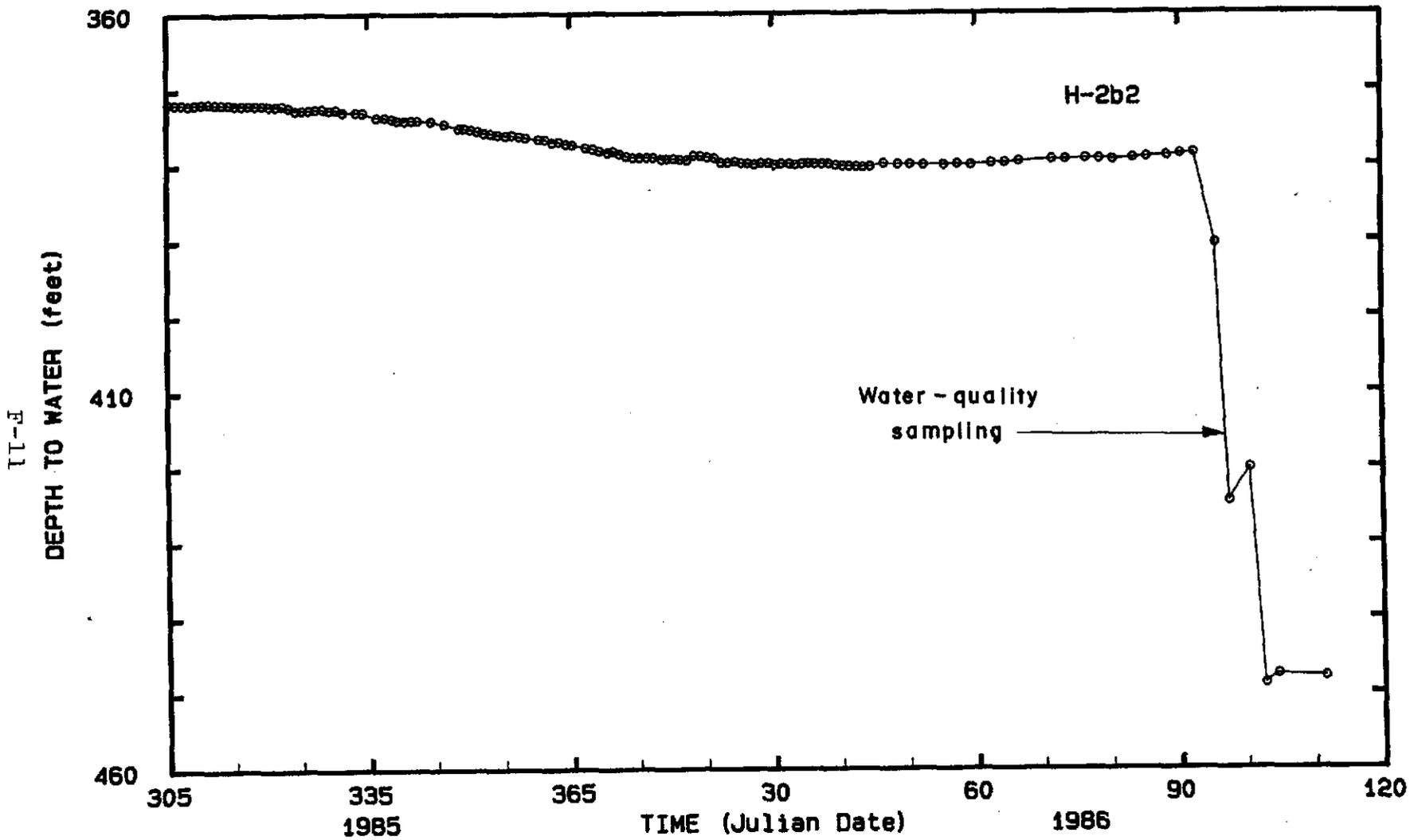


Figure 2.5 Water-level measurements at well H-1, Culebra, November 1985 through April 1986.



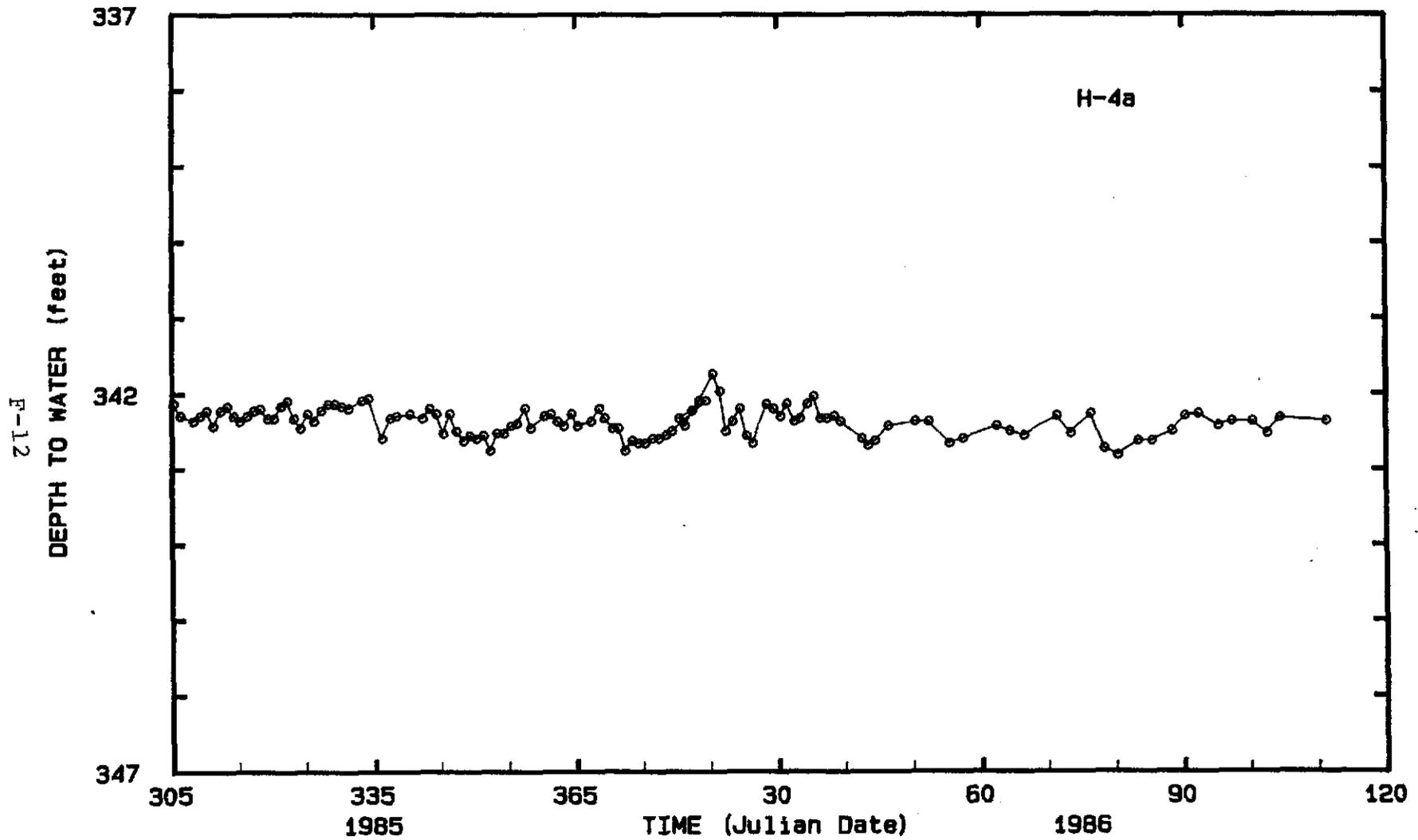


Figure 2.7 Water-level measurements at well H-4a, Culebra, November 1985 through April 1986.

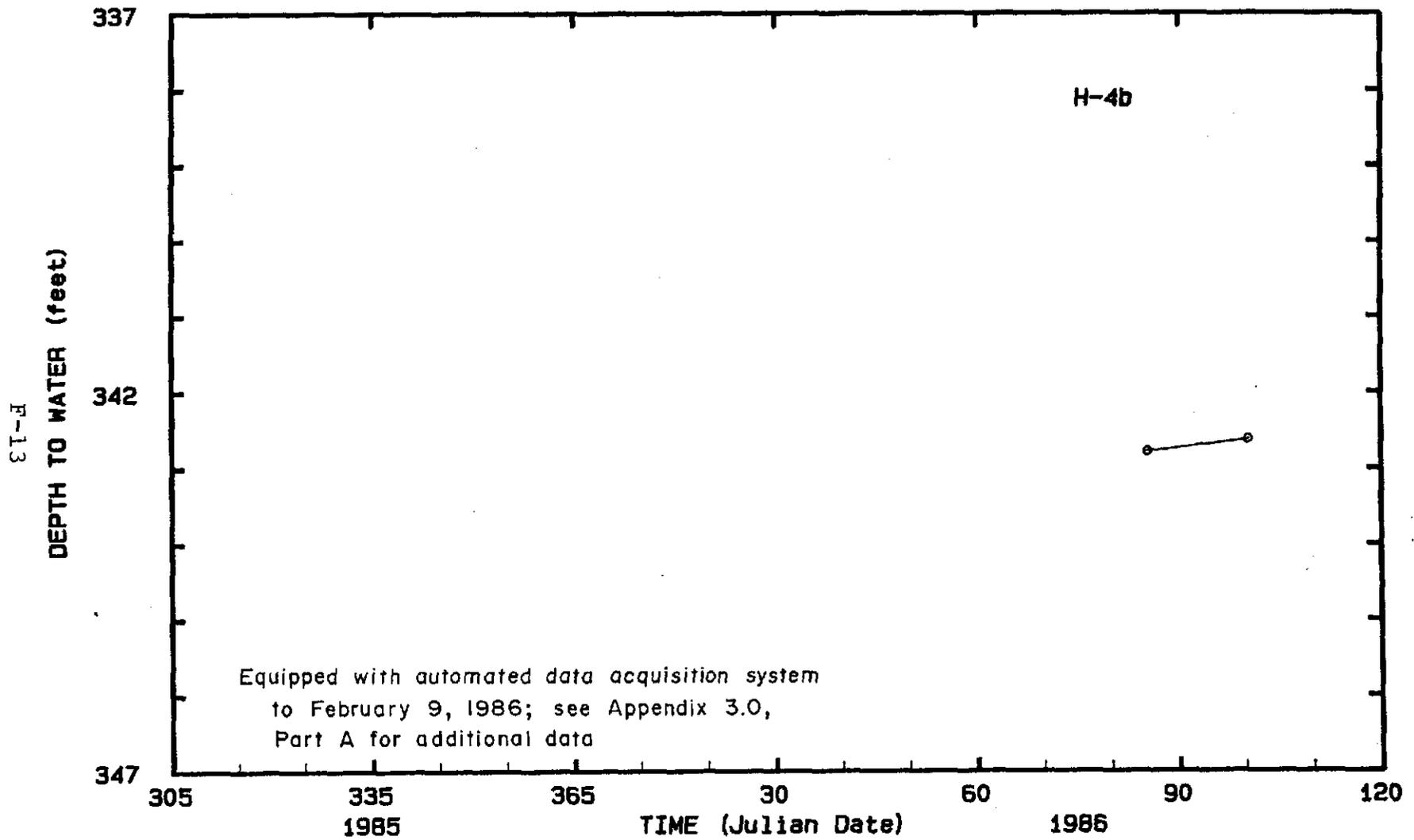


Figure 2.8 Water-level measurements at well H-4b, Culebra, November 1985 through April 1986.

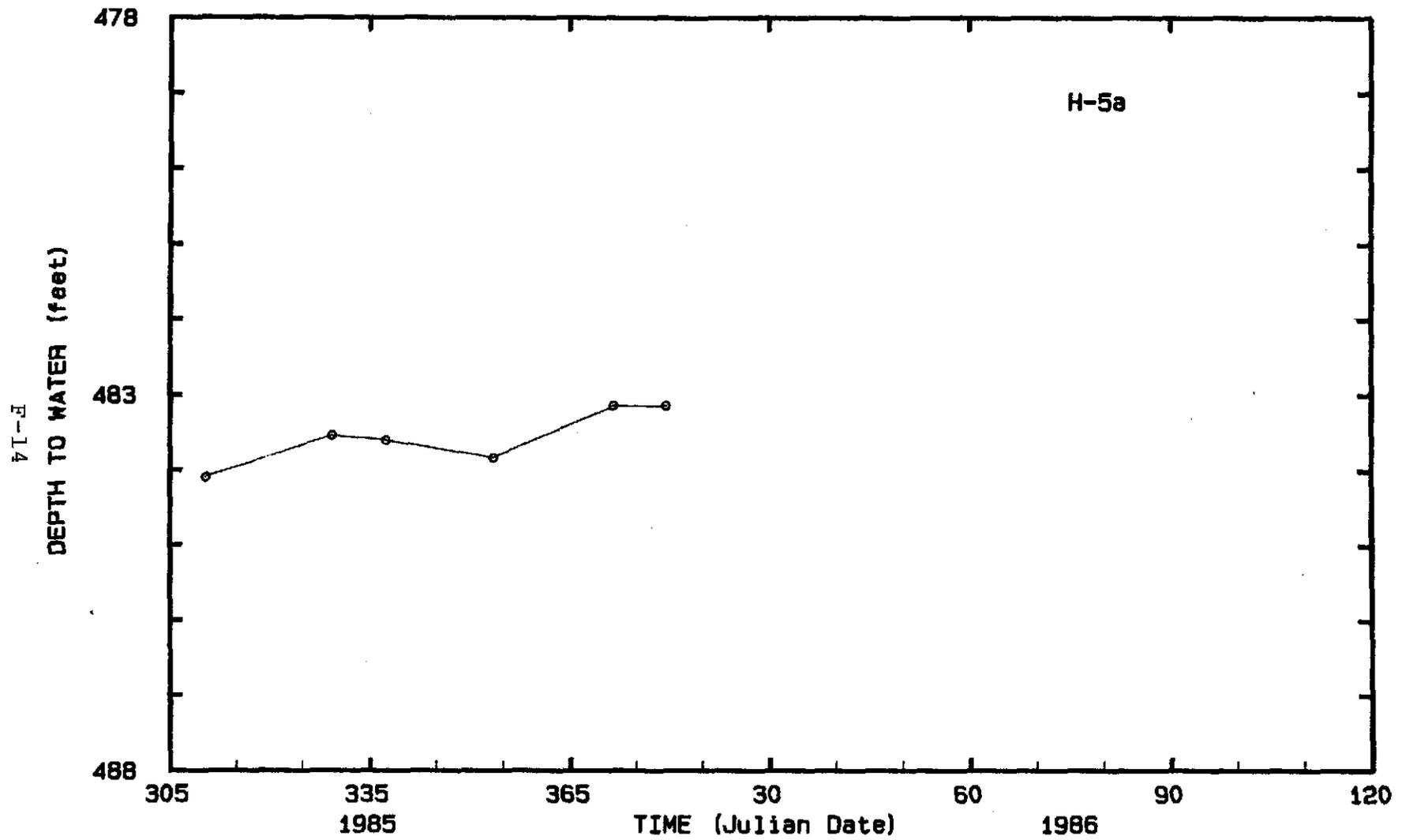


Figure 2.9 Water-level measurements at well H-5a, Culebra, November 1985 through April 1986.

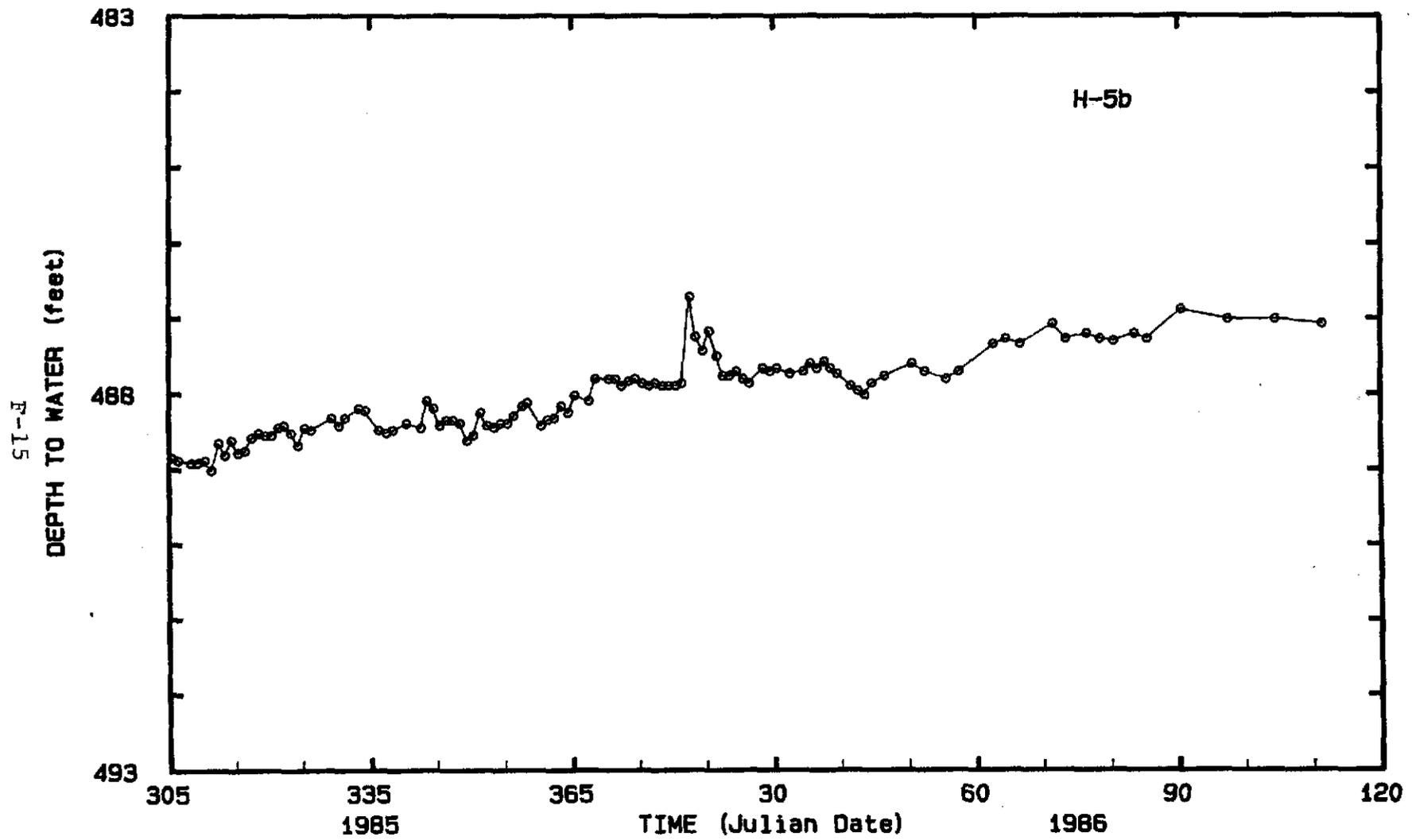


Figure 2.10 Water-level measurements at well H-5b, Culebra, November 1985 through April 1986.

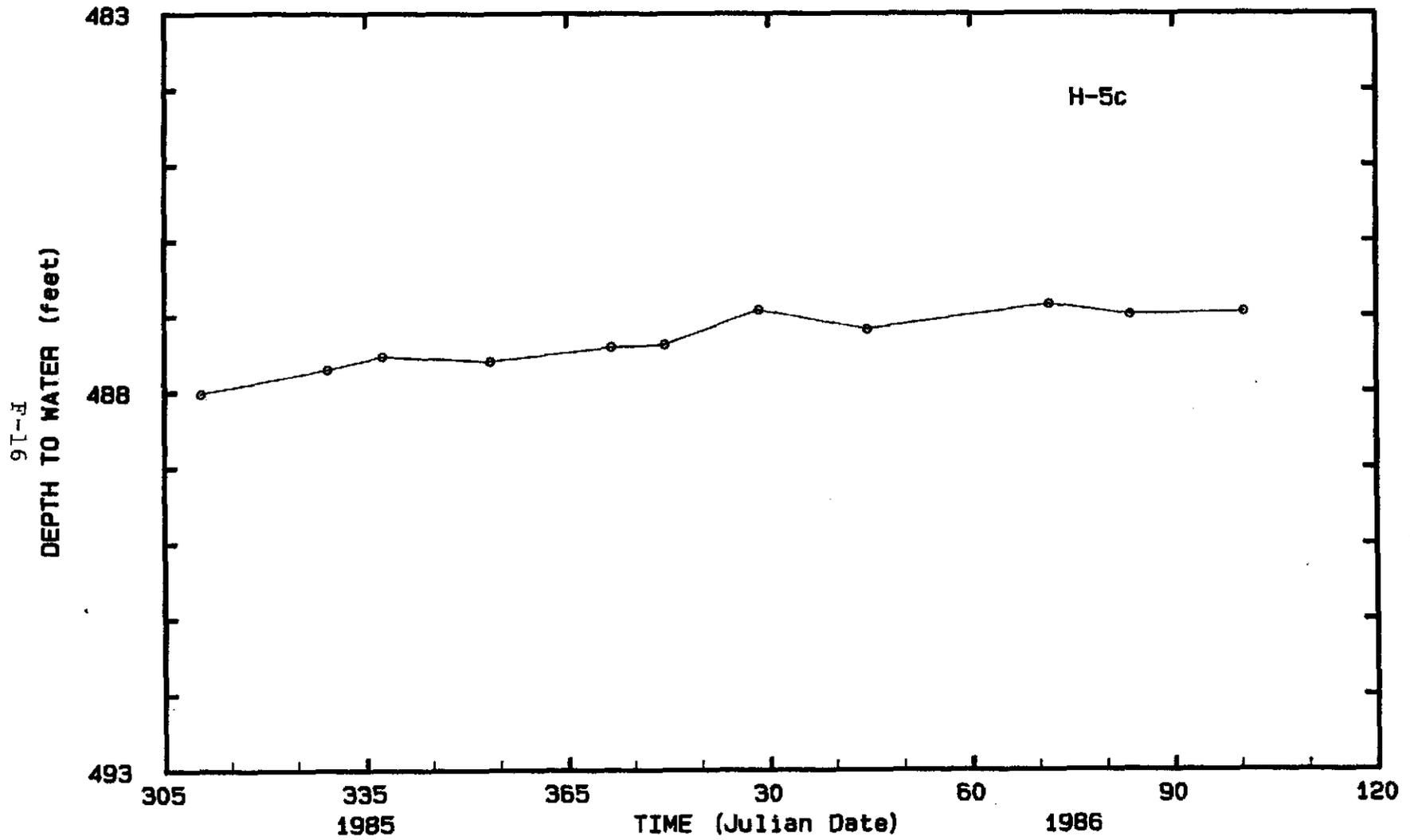


Figure 2.11 Water-level measurements at well H-5c, Culebra, November 1985 through April 1986.

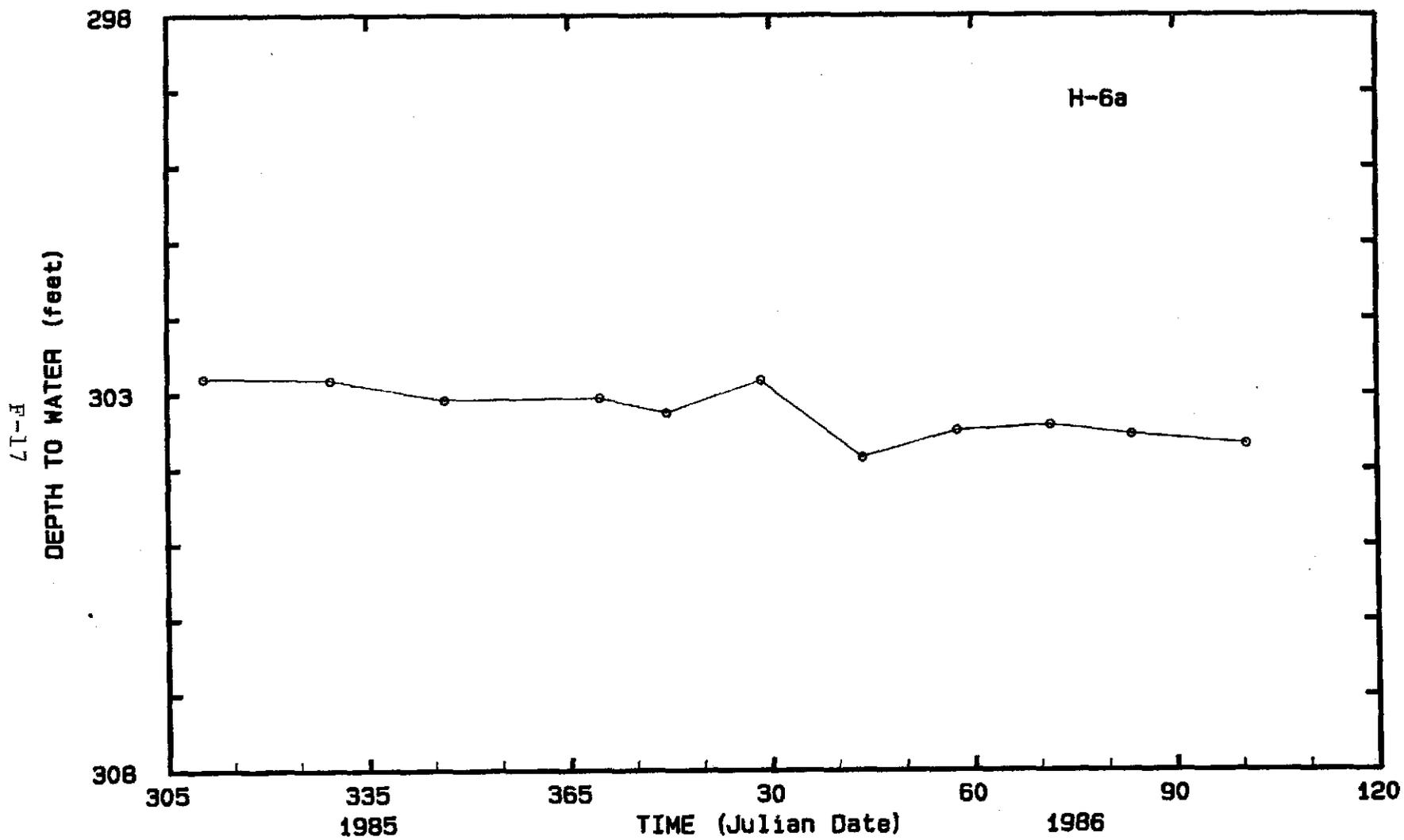


Figure 2.12 Water-level measurements at well H-6a, Culebra, November 1985 through April 1986.

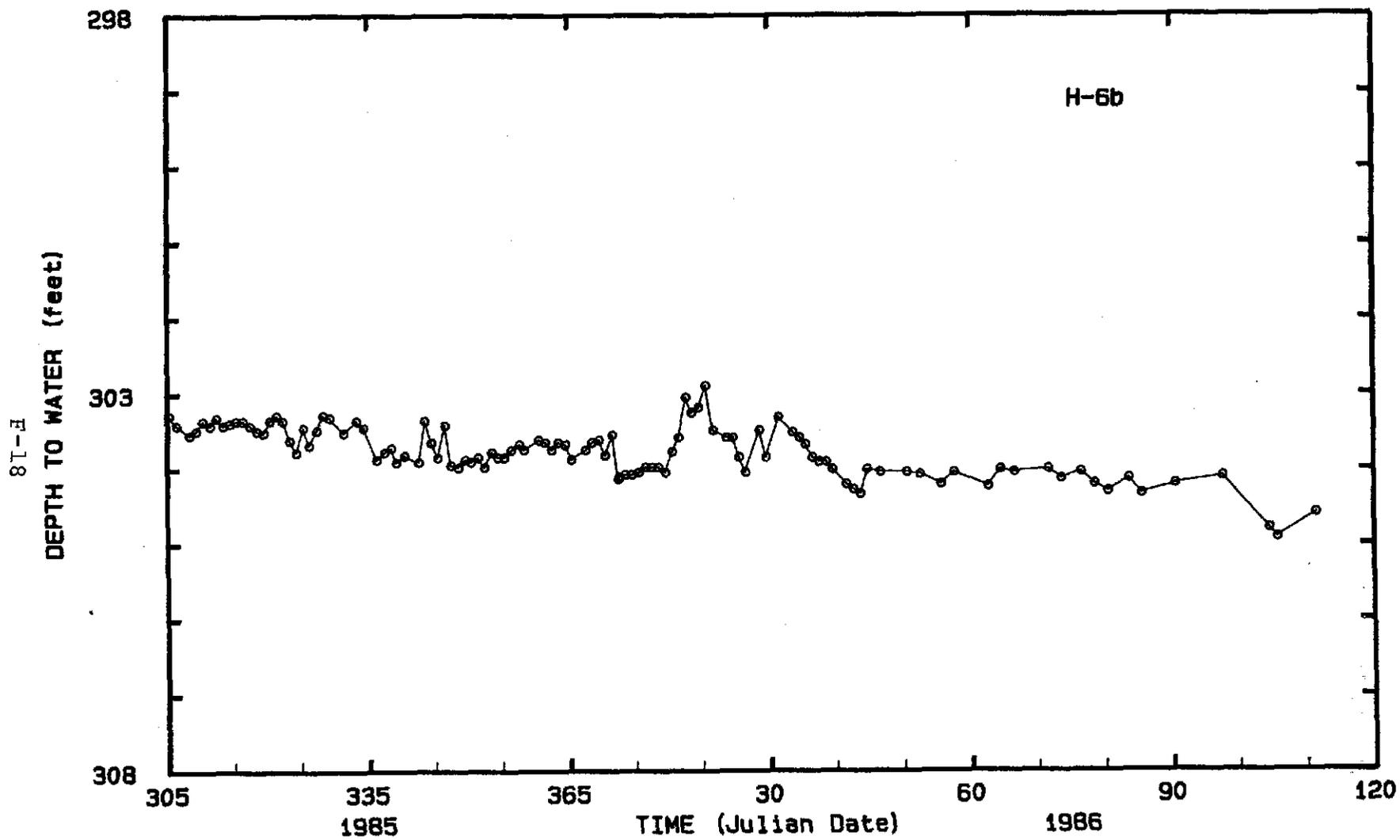


Figure 2.13 Water-level measurements at well H-6b, Culebra, November 1985 through April 1986.

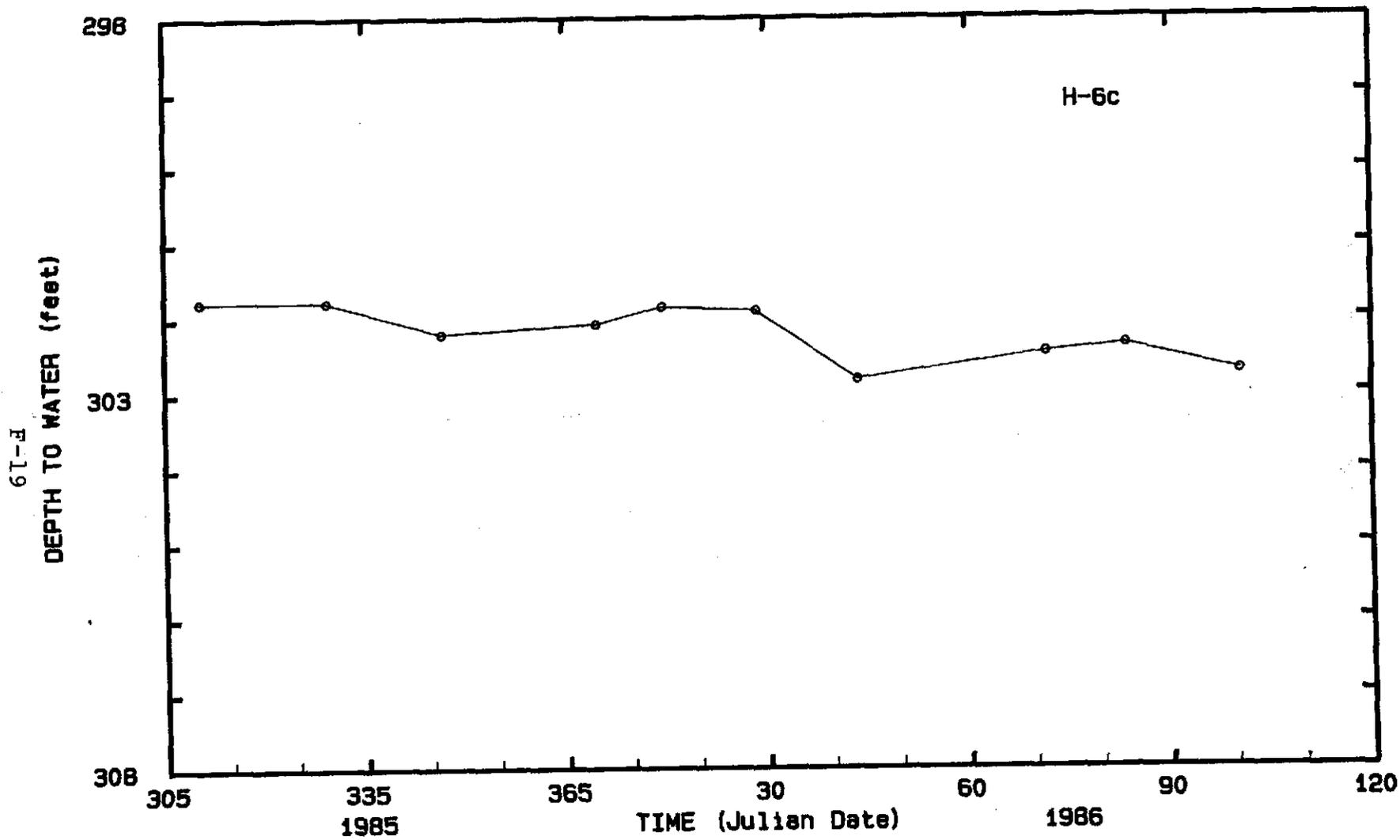


Figure 2.14 Water-level measurements at well H-6c, Culebra, November 1985 through April 1986.

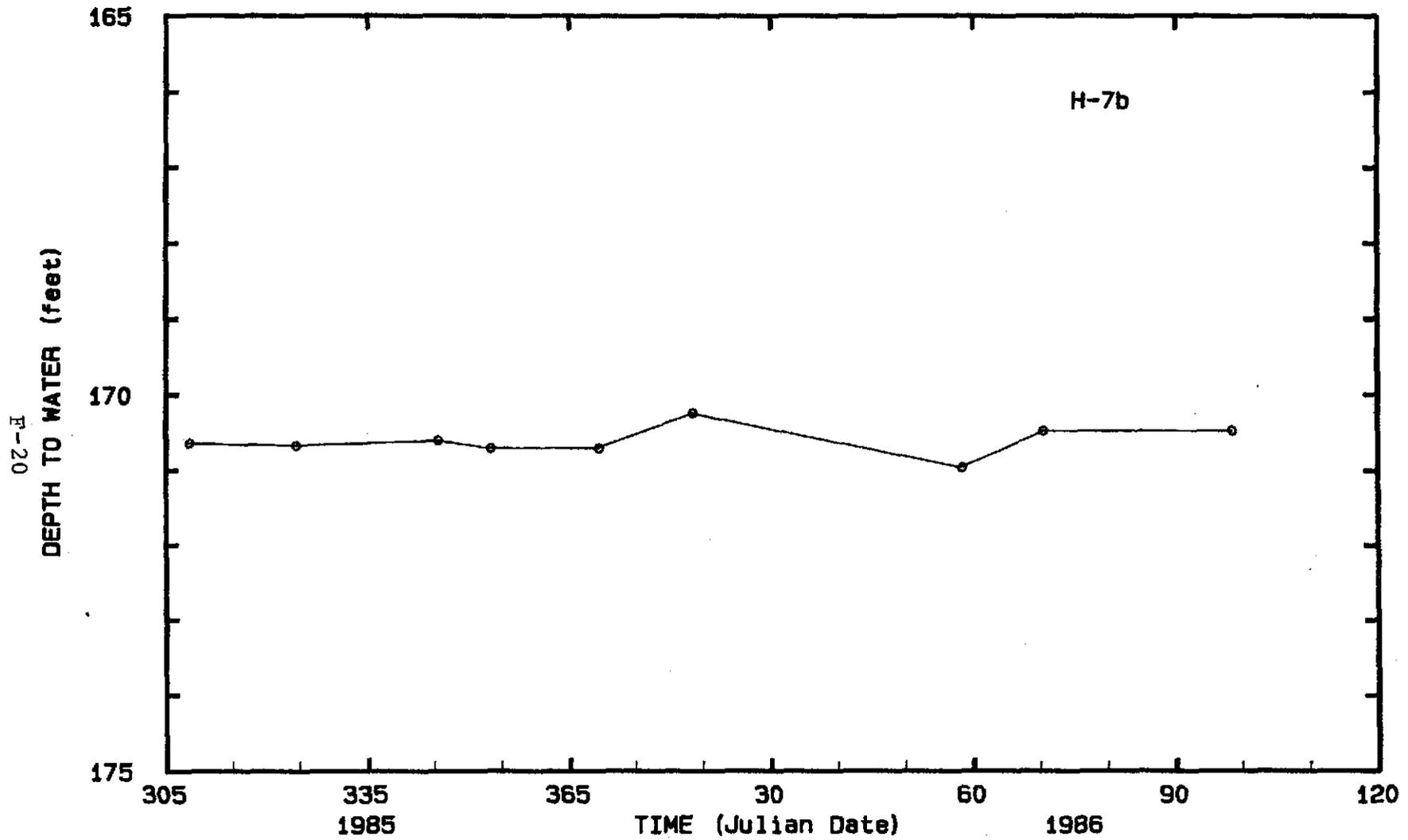


Figure 2.15 Water-level measurements at well H-7b, Culebra, November 1985 through April 1986.

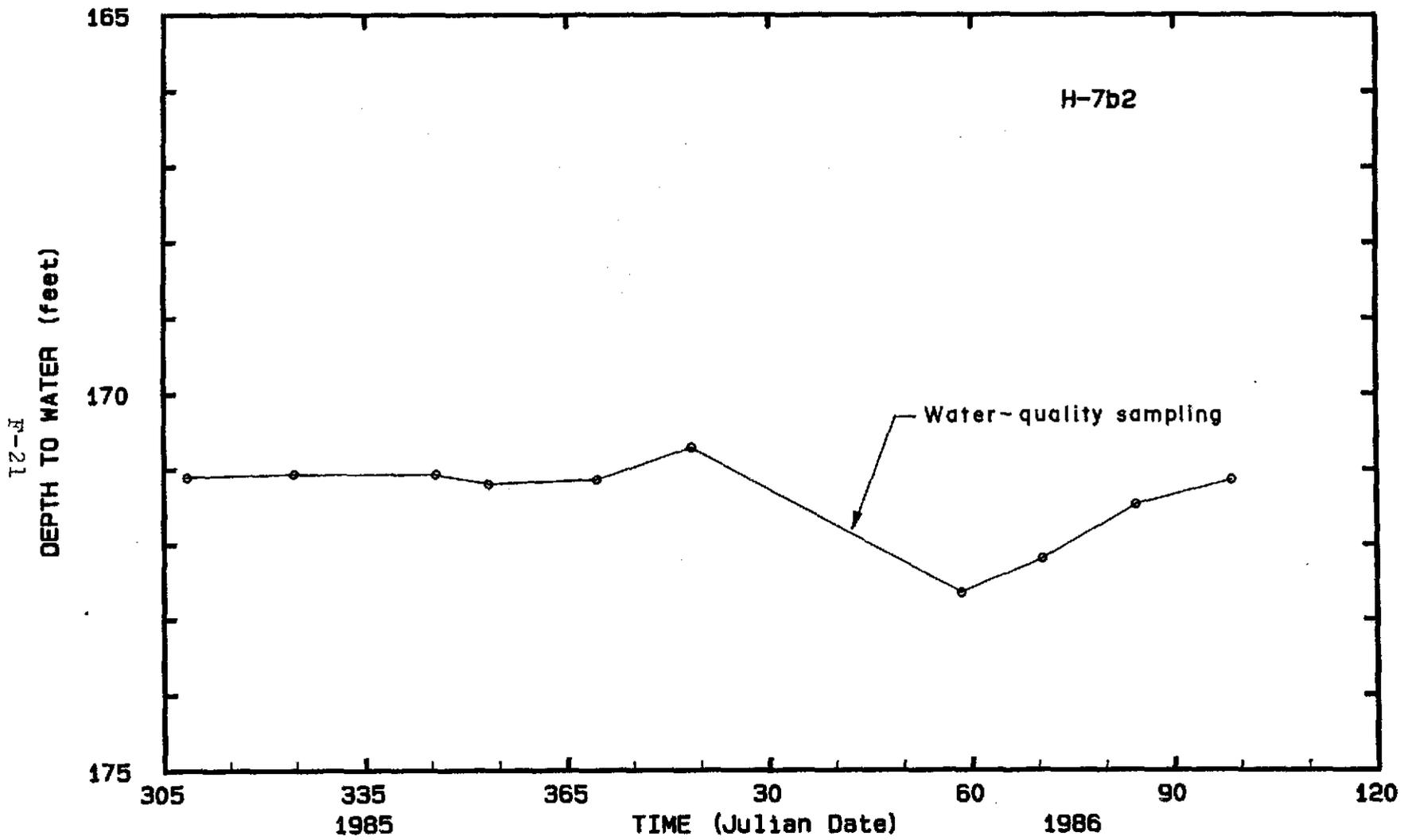


Figure 2.16 Water-level measurements at well H-7b2, Culebra, November 1985 through April 1986.

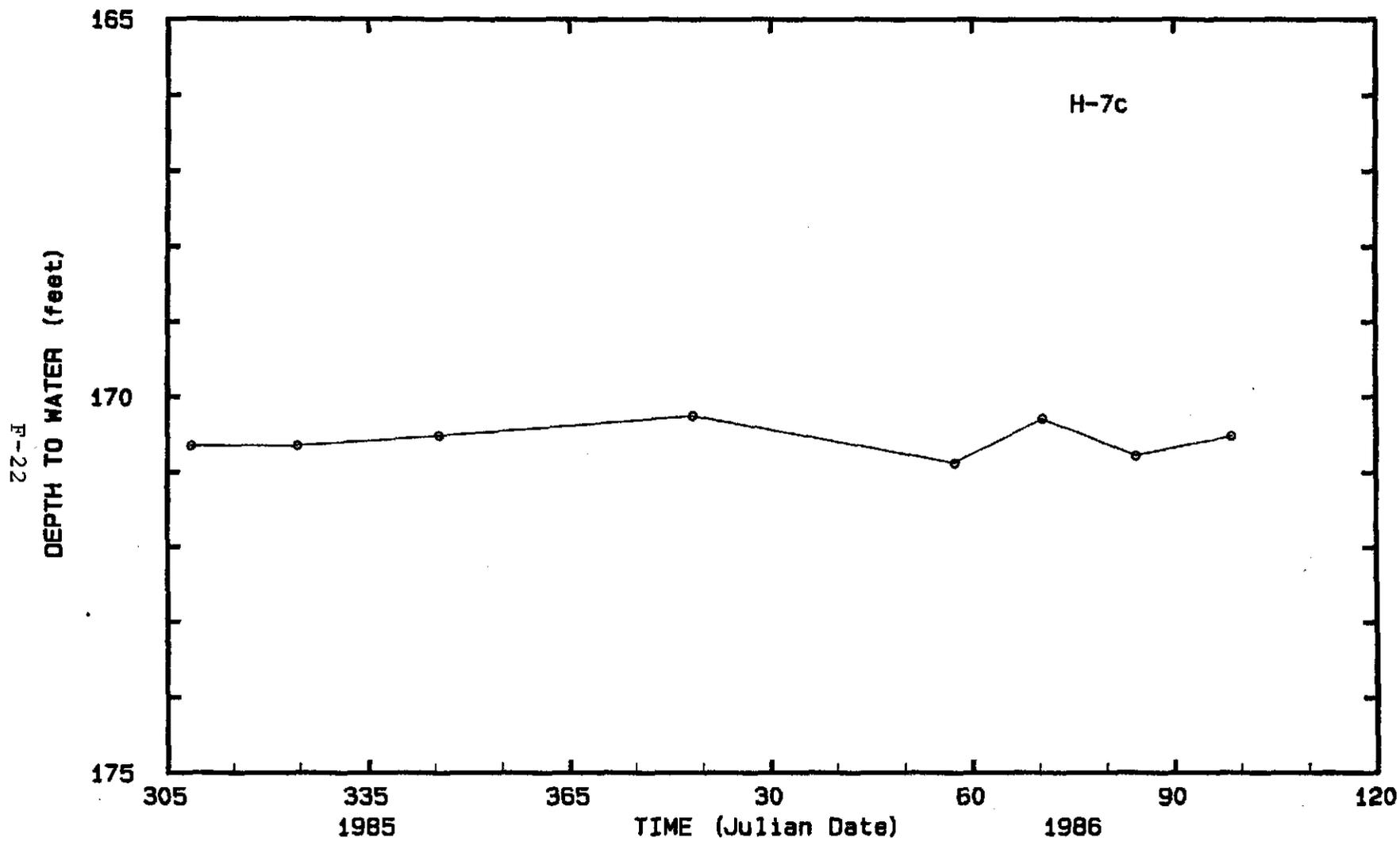


Figure 2.17 Water-level measurements at well H-7c, Culebra, November 1985 through April 1986.

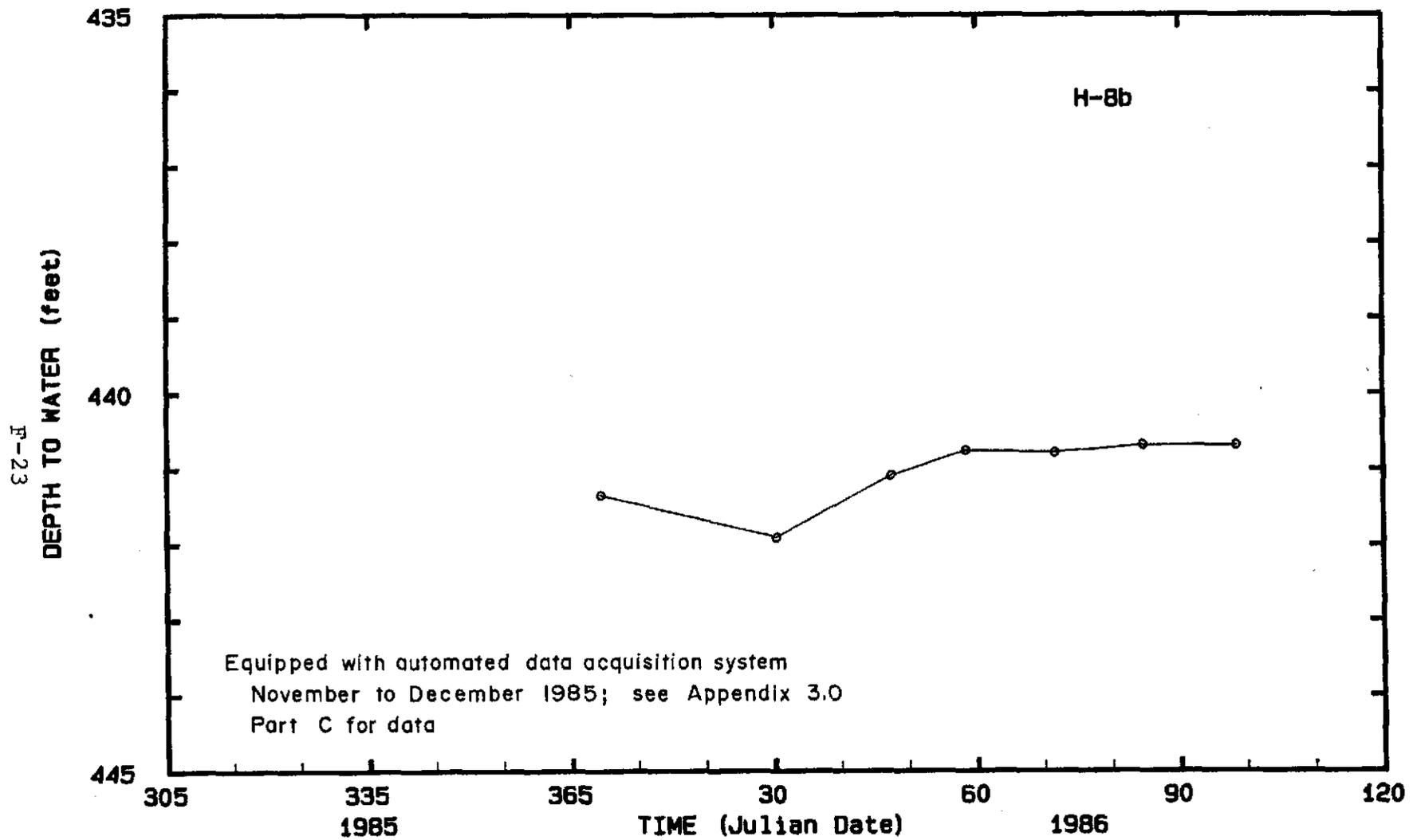


Figure 2.18 Water-level measurements at well H-8b, Culebra, November 1985 through April 1986.

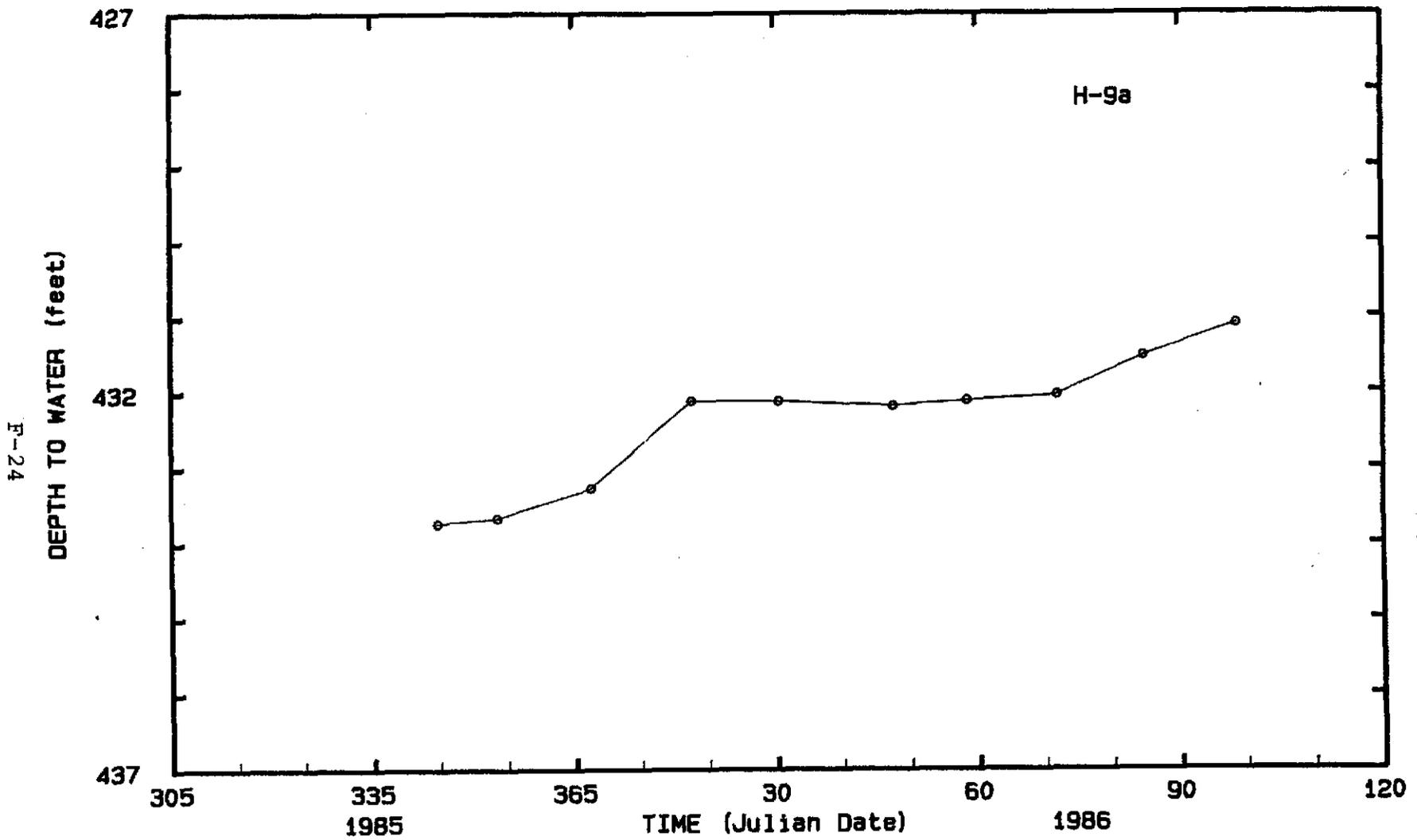


Figure 2.19 Water-level measurements at well H-9a, Culebra, November 1985 through April 1986.

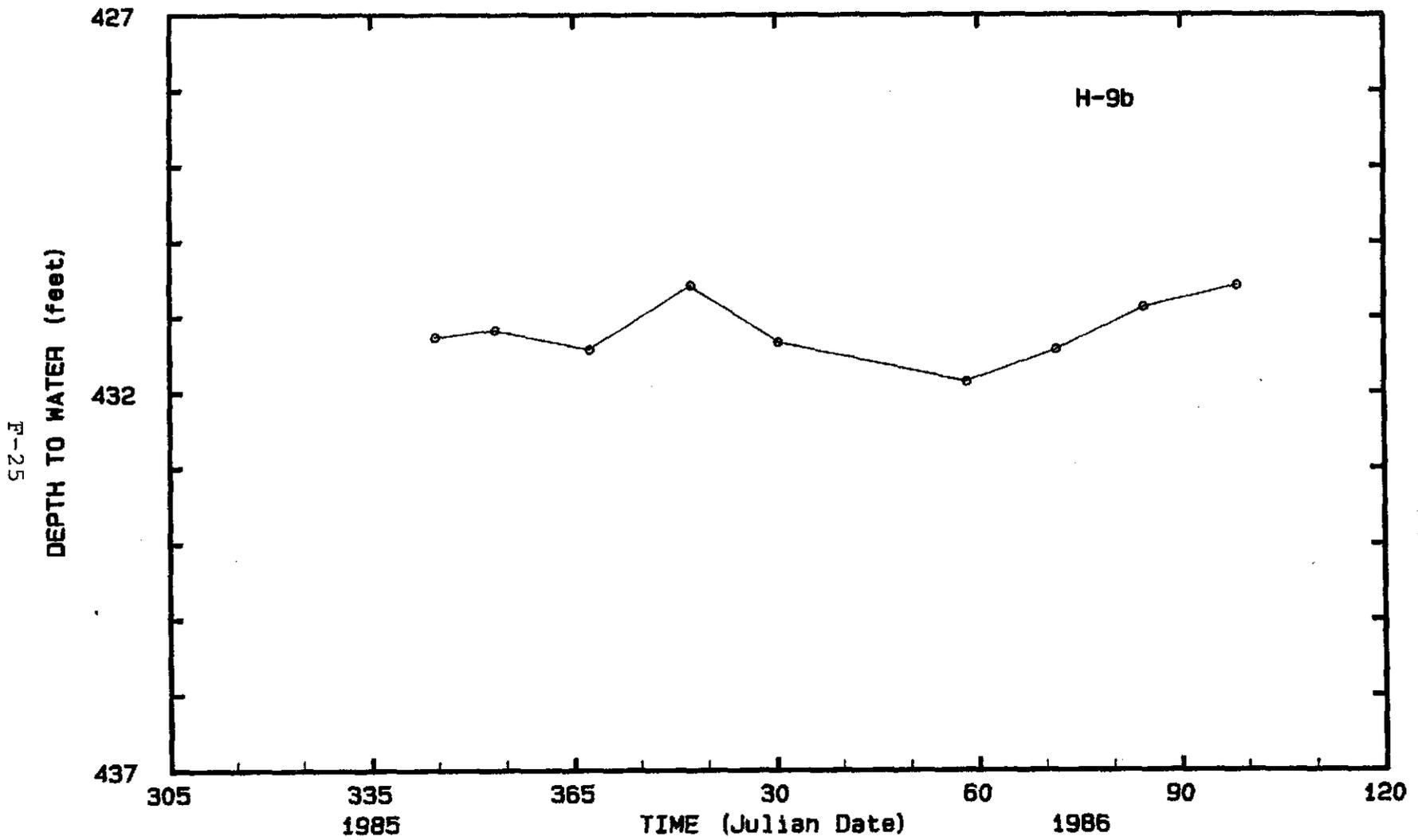


Figure 2.20 Water-level measurements at well H-9b, Culebra, November 1985 through April 1986.

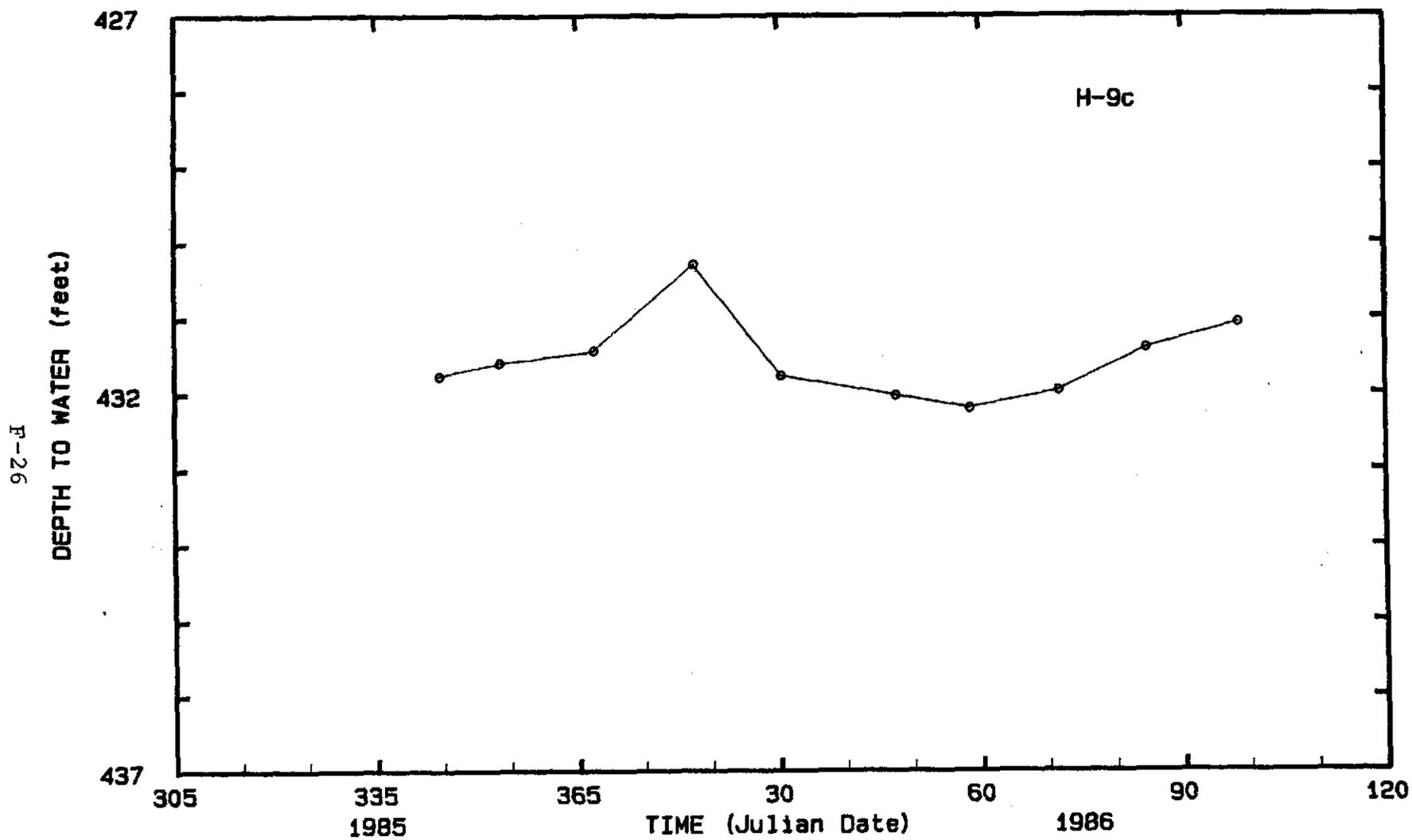


Figure 2.21 Water-level measurements at well H-9c, Culebra, November 1985 through April 1986.

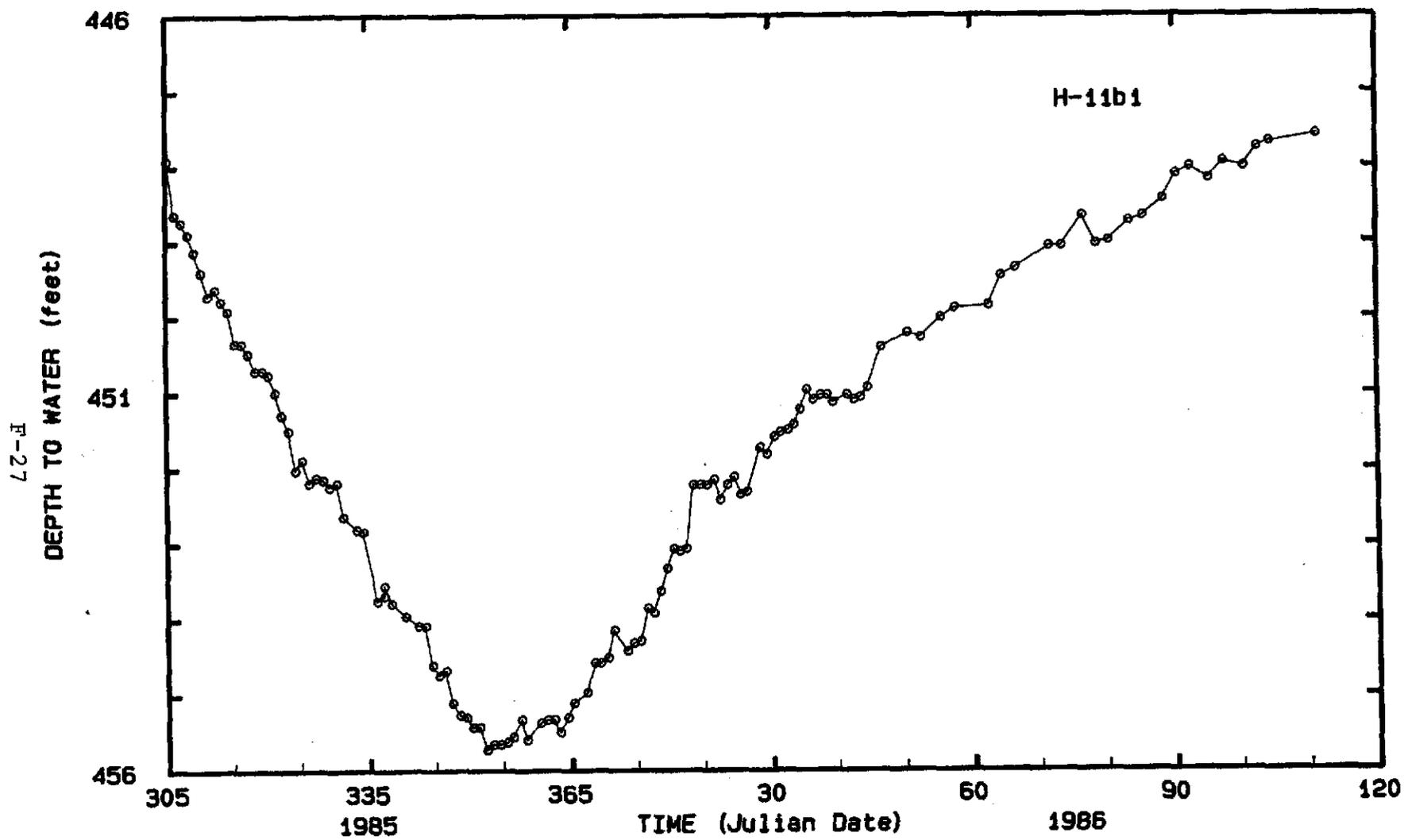


Figure 2.22 Water-level measurements at well H-11b1, Culebra, November 1985 through April 1986.

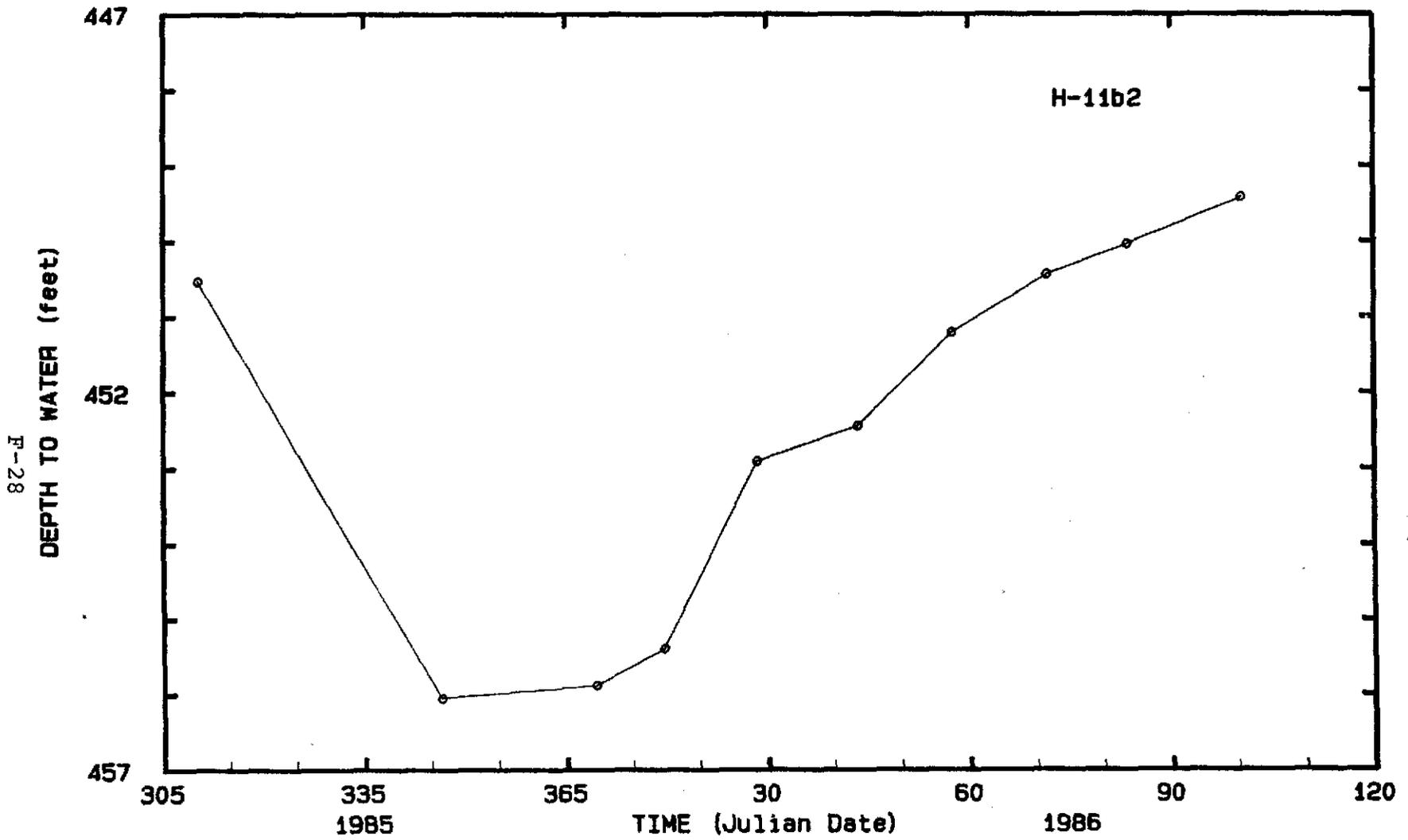


Figure 2.23 Water-level measurements at well H-11b2, Culebra, November 1985 through April 1986.

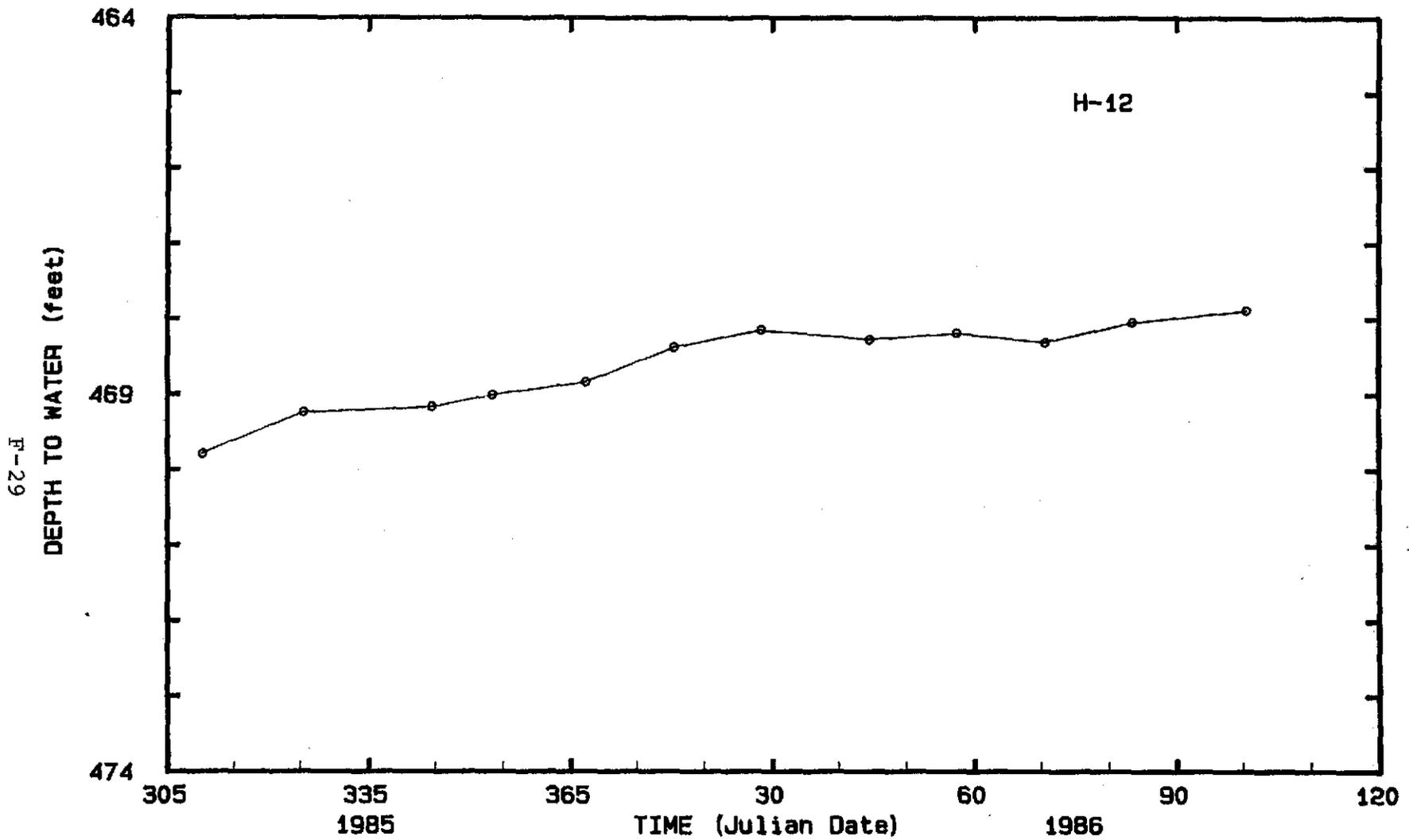


Figure 2.24 Water-level measurements at well H-12, Culebra, November 1985 through April 1986.

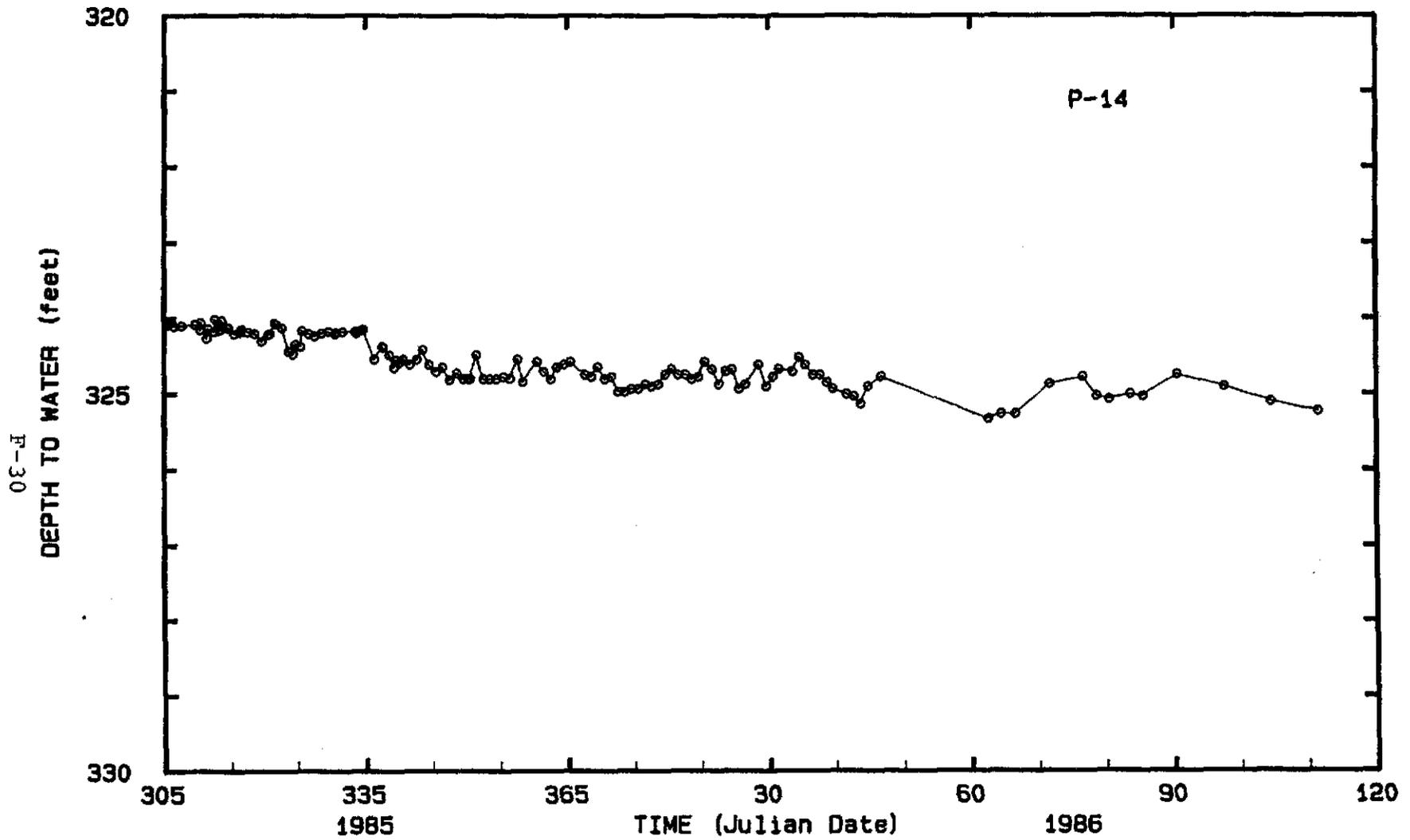
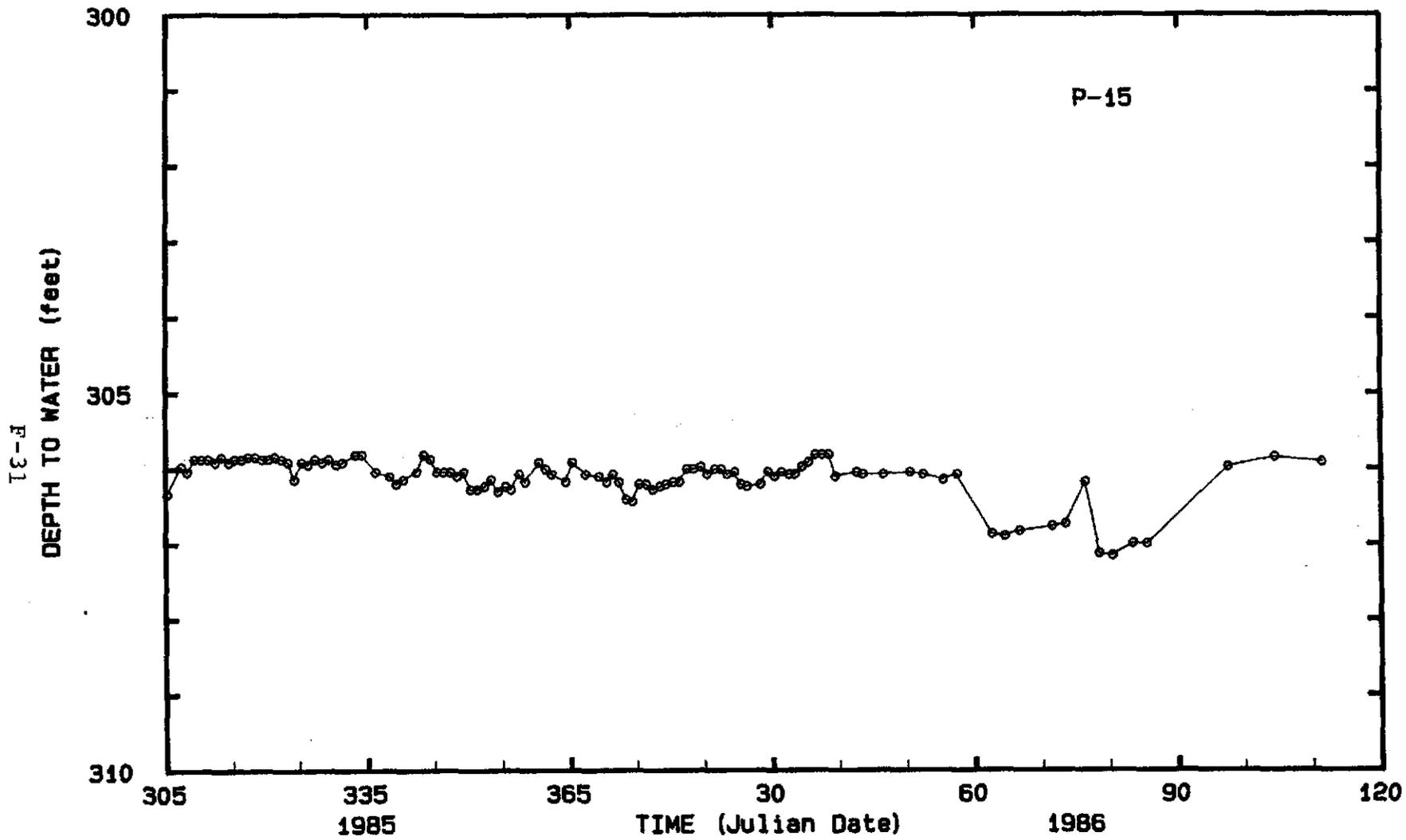


Figure 2.25 Water-level measurements at well P-14, Culebra, November 1985 through April 1986.



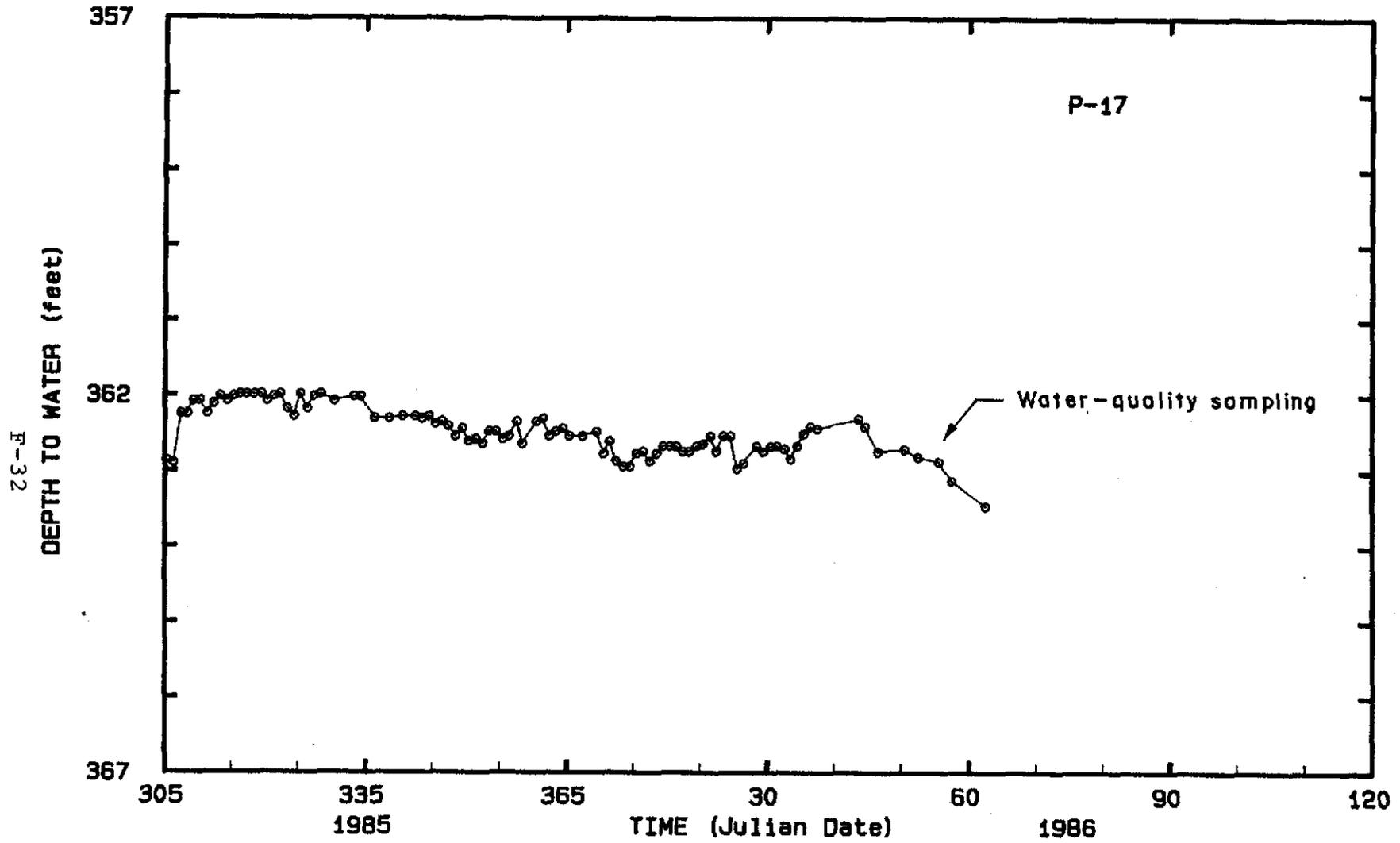


Figure 2.27 Water-level measurements at well P-17, Culebra, November 1985 through April 1986.

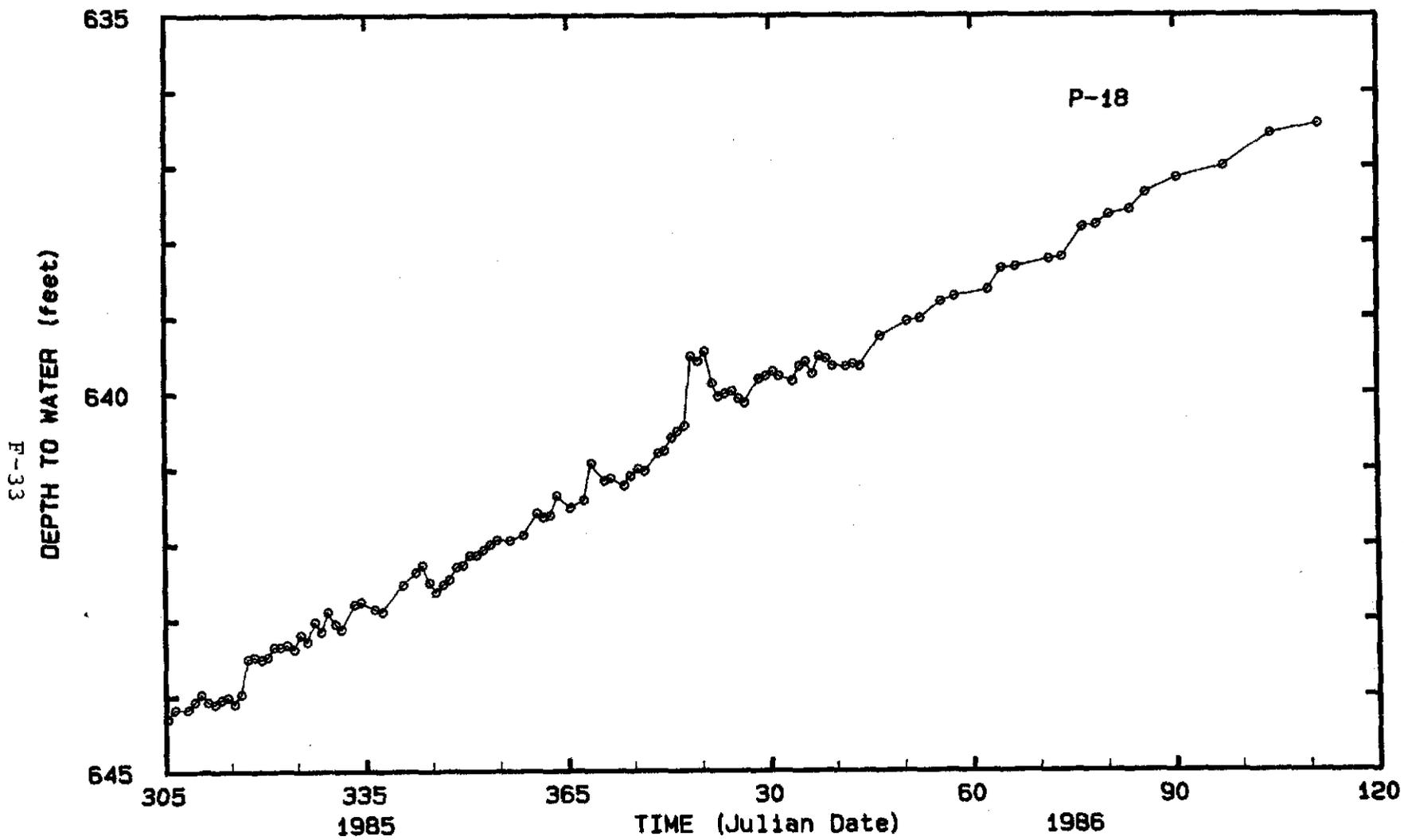


Figure 2.28 Water-level measurements at well P-18, Culebra, November 1985 through April 1986.

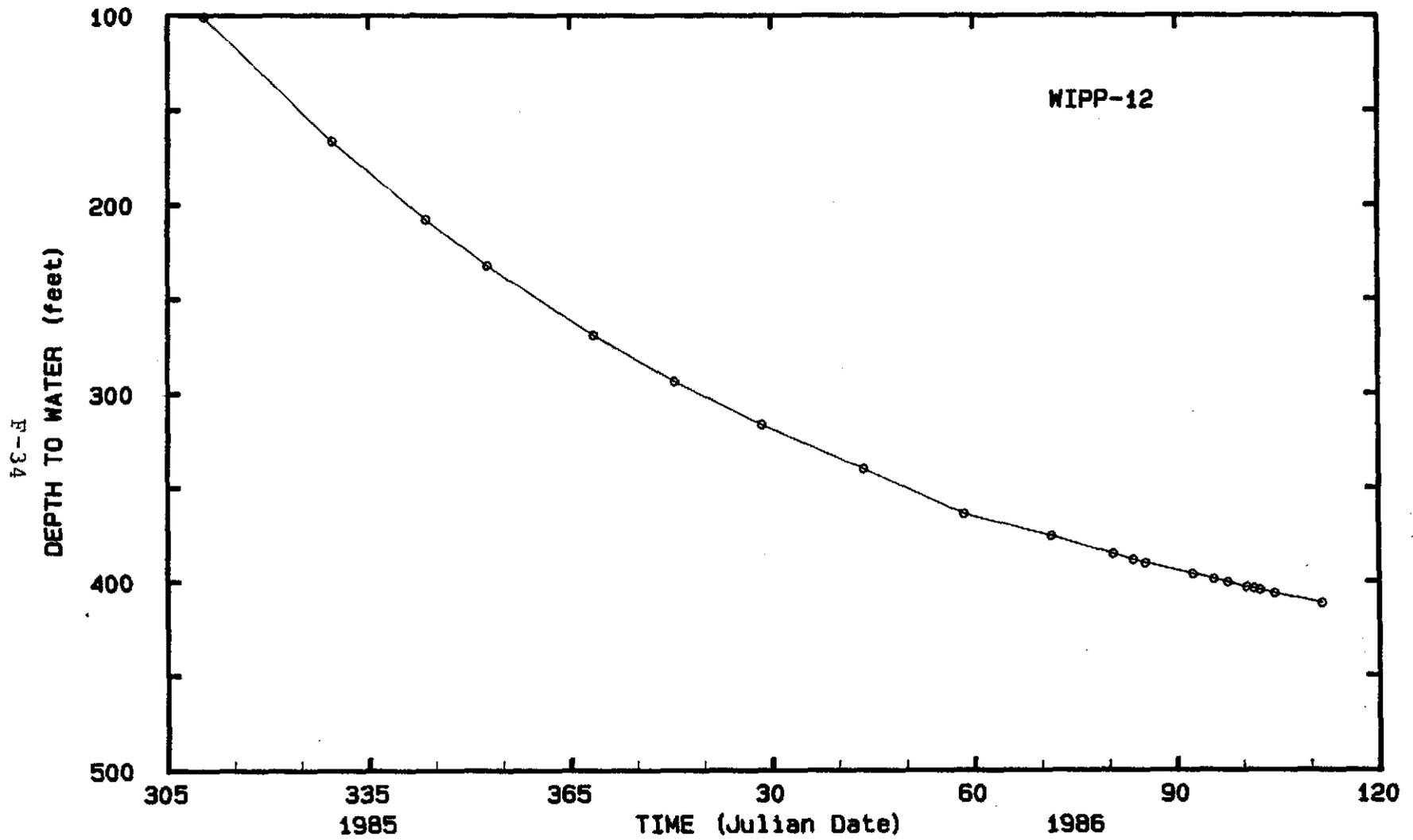


Figure 2.29 Water-level measurements at well WIPP-12, Culebra, November 1985 through April 1986.

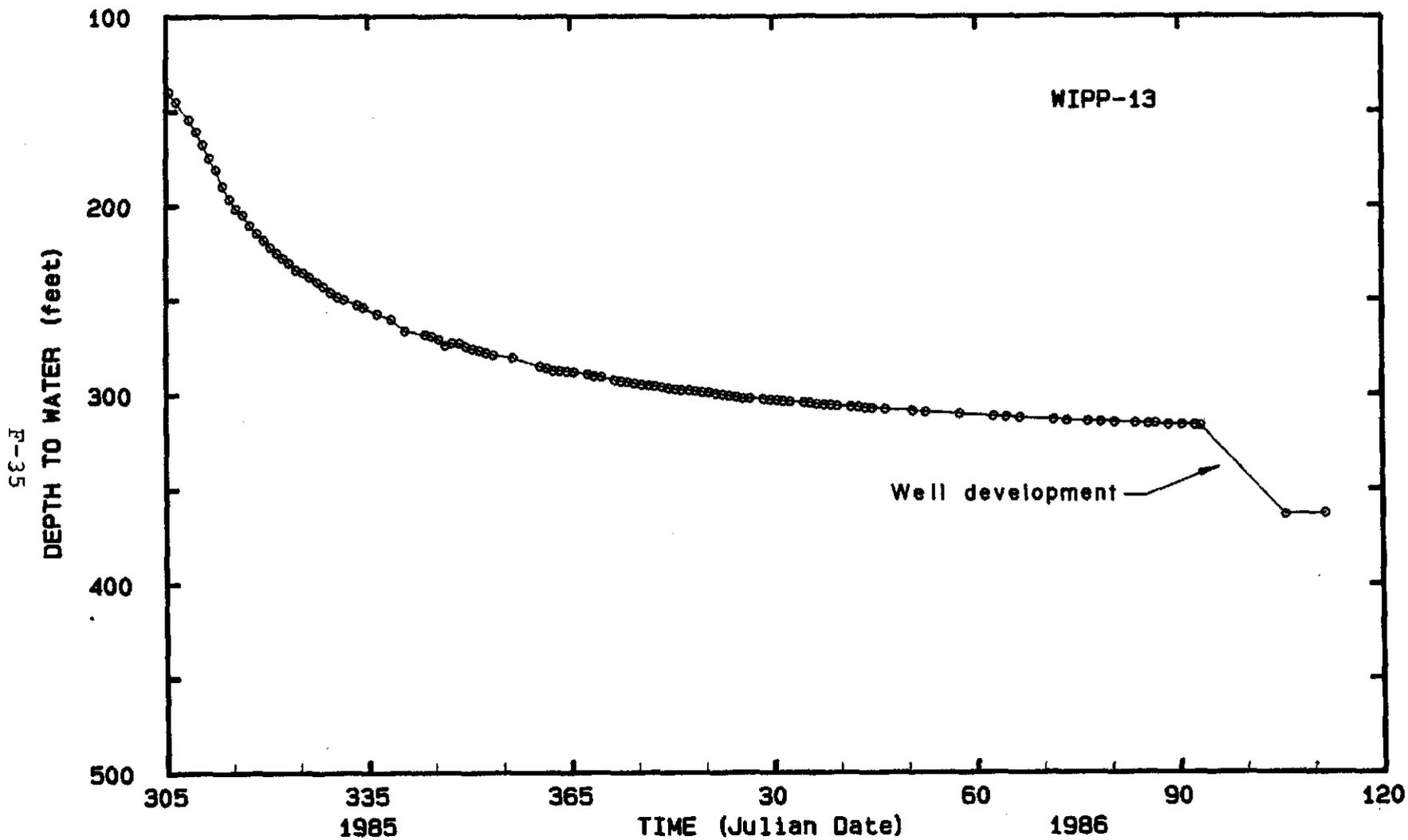


Figure 2.30 Water-level measurements at well WIPP-13, Culebra, November 1985 through April 1986.

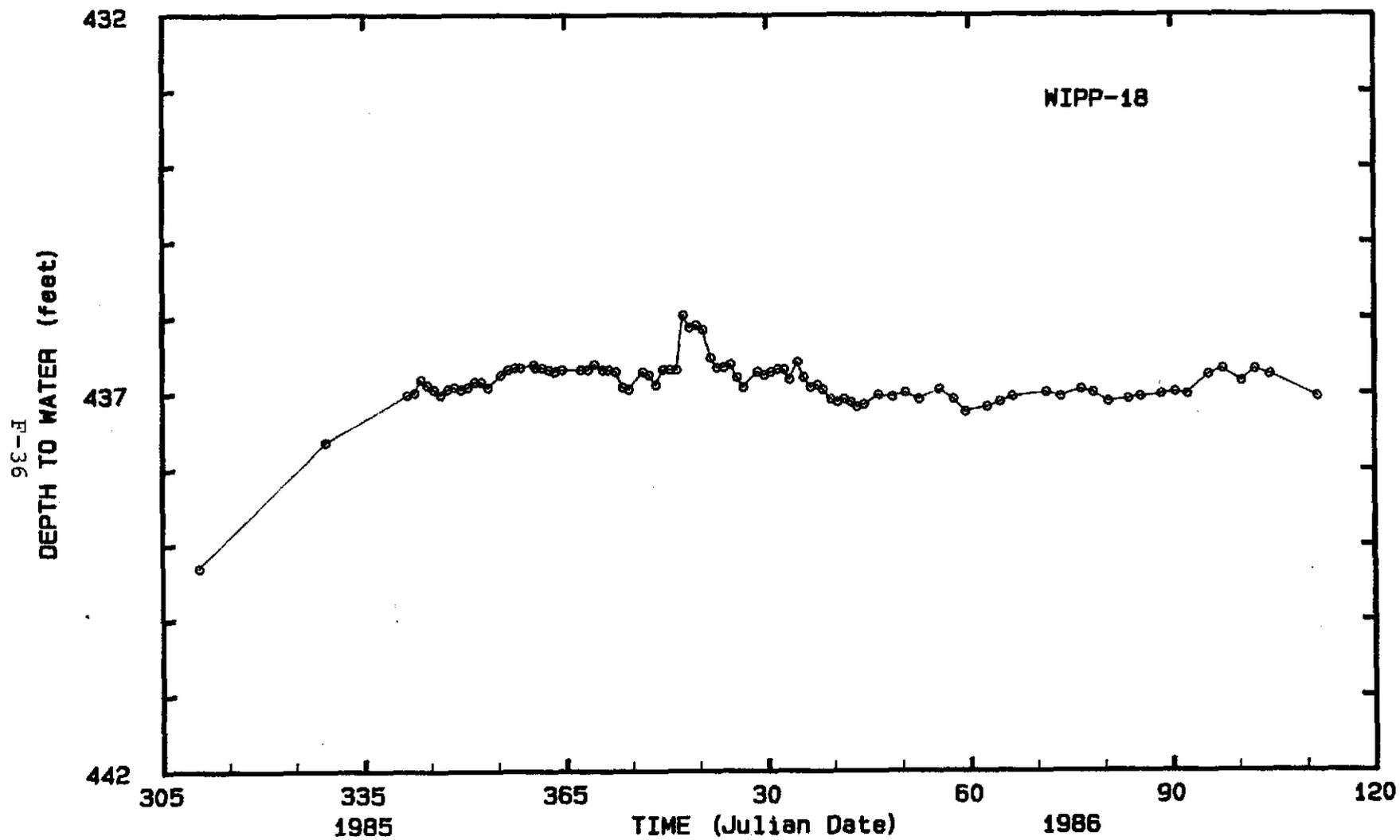


Figure 2.31 Water-level measurements at well WIPP-18, Culebra, November 1985 through April 1986.

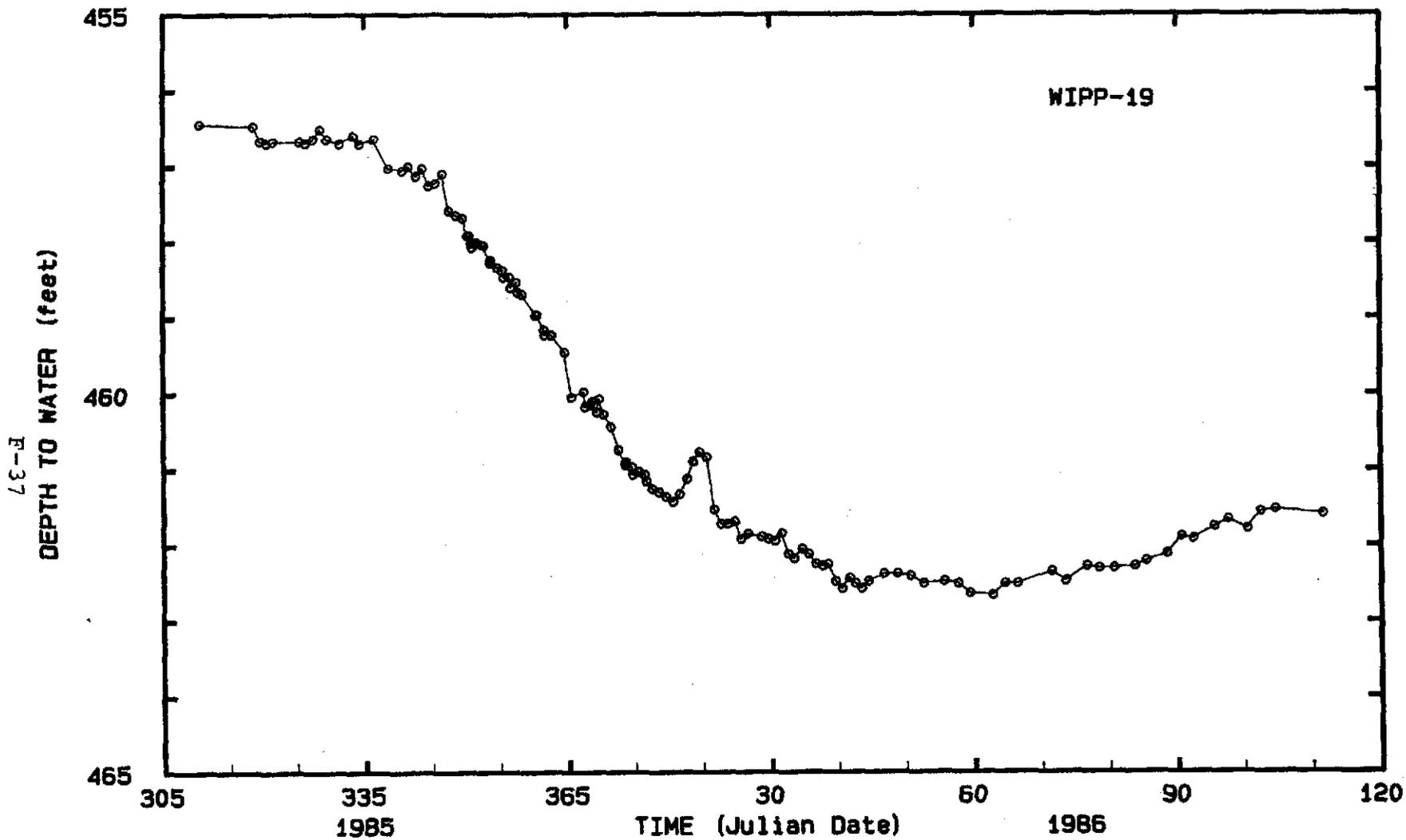


Figure 2.32 Water-level measurements at well WIPP-19, Culebra, November 1985 through April 1986.

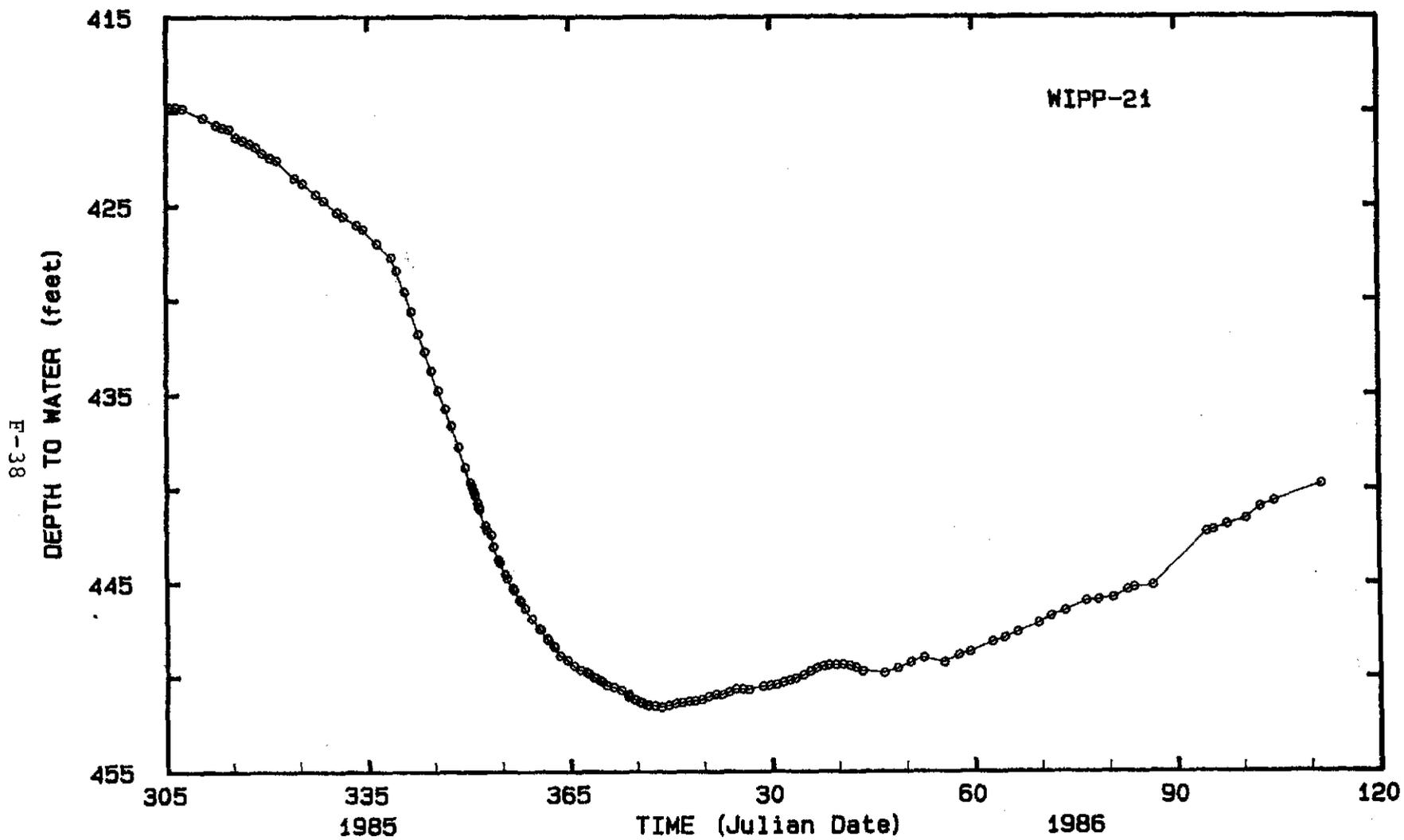


Figure 2.33 Water-level measurements at well WIPP-21, Culebra, November 1985 through April 1986.

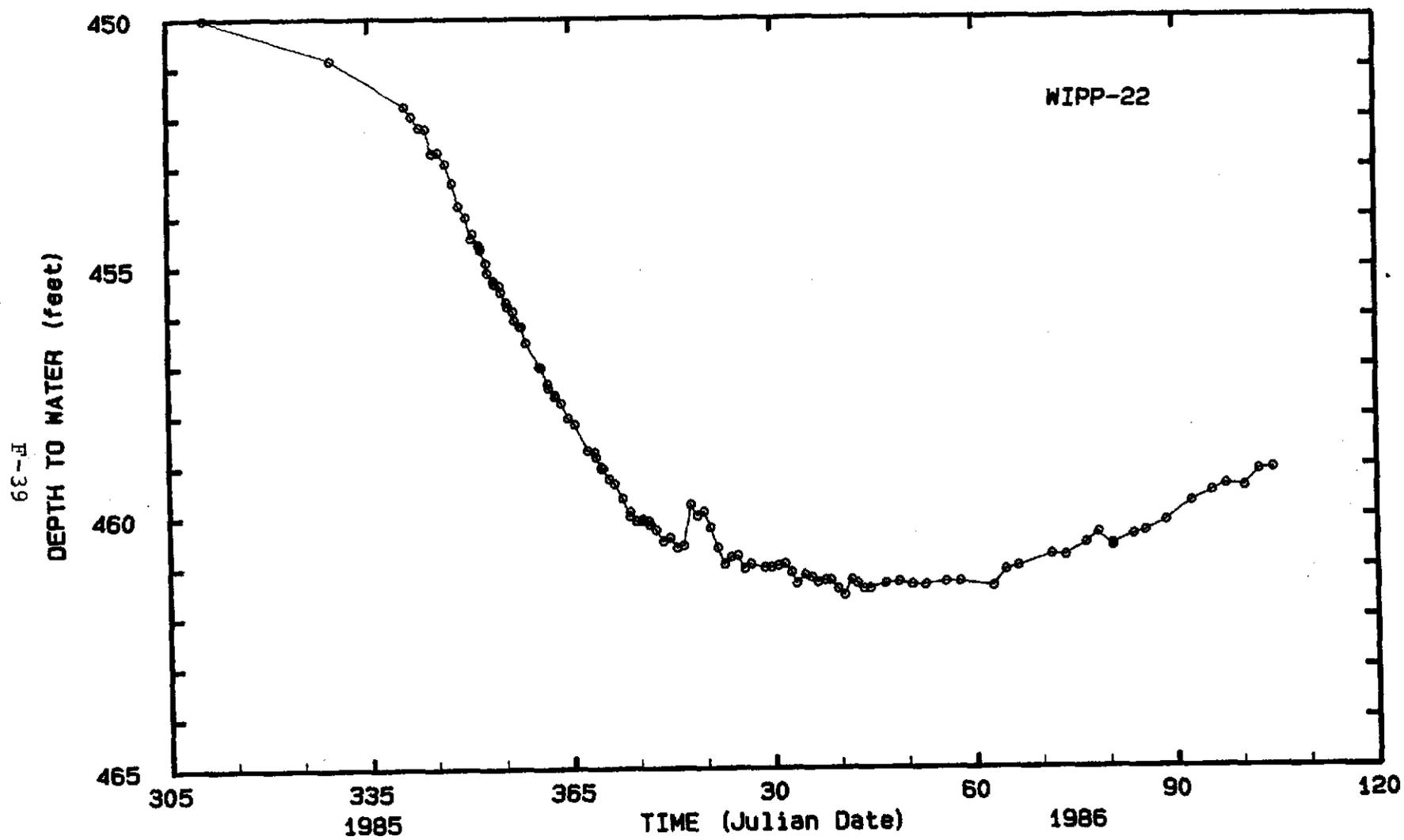


Figure 2.34 Water-level measurements at well WIPP-22, Culebra, November 1985 through April 1986.

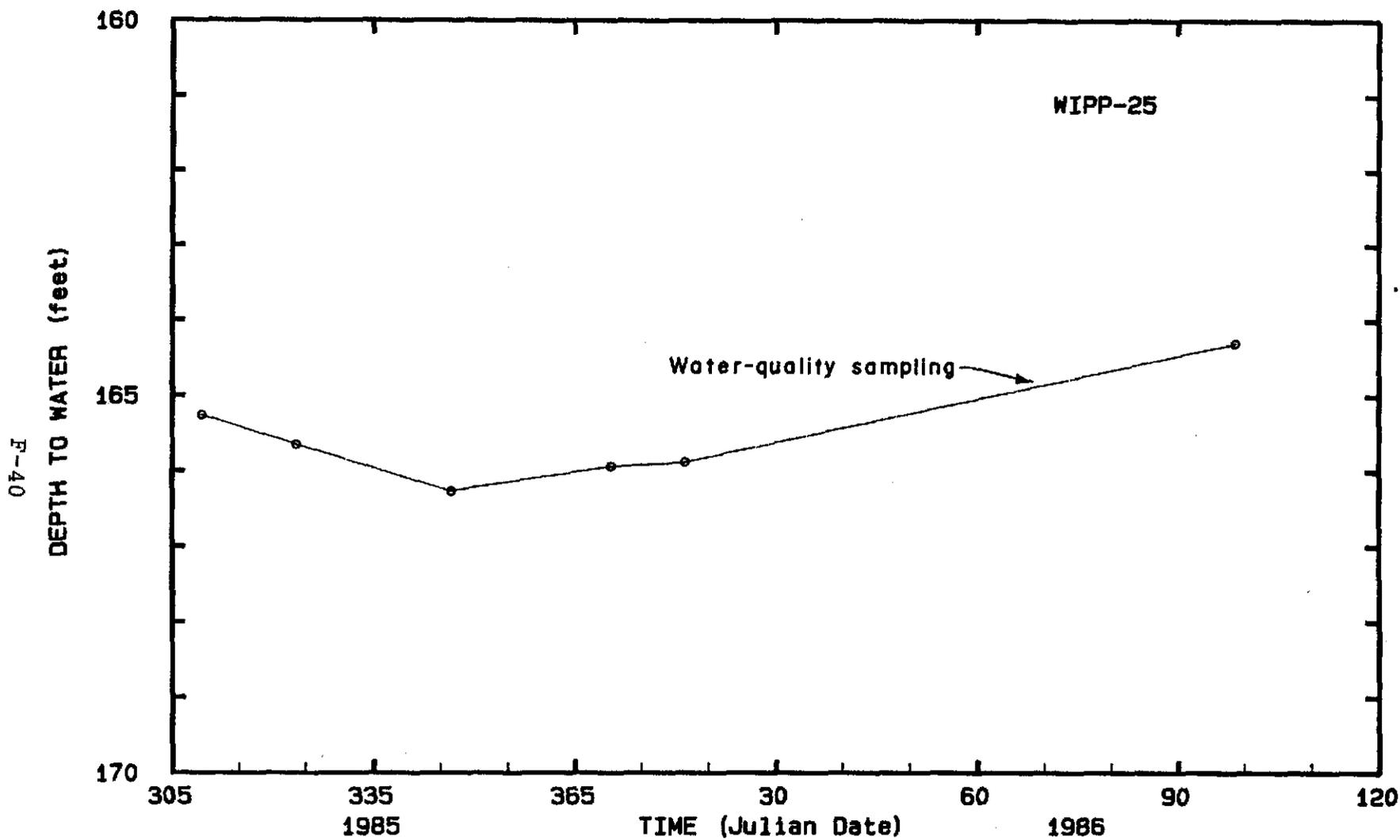


Figure 2.35 Water-level measurements at well WIPP-25, Culebra, November 1985 through April 1986.

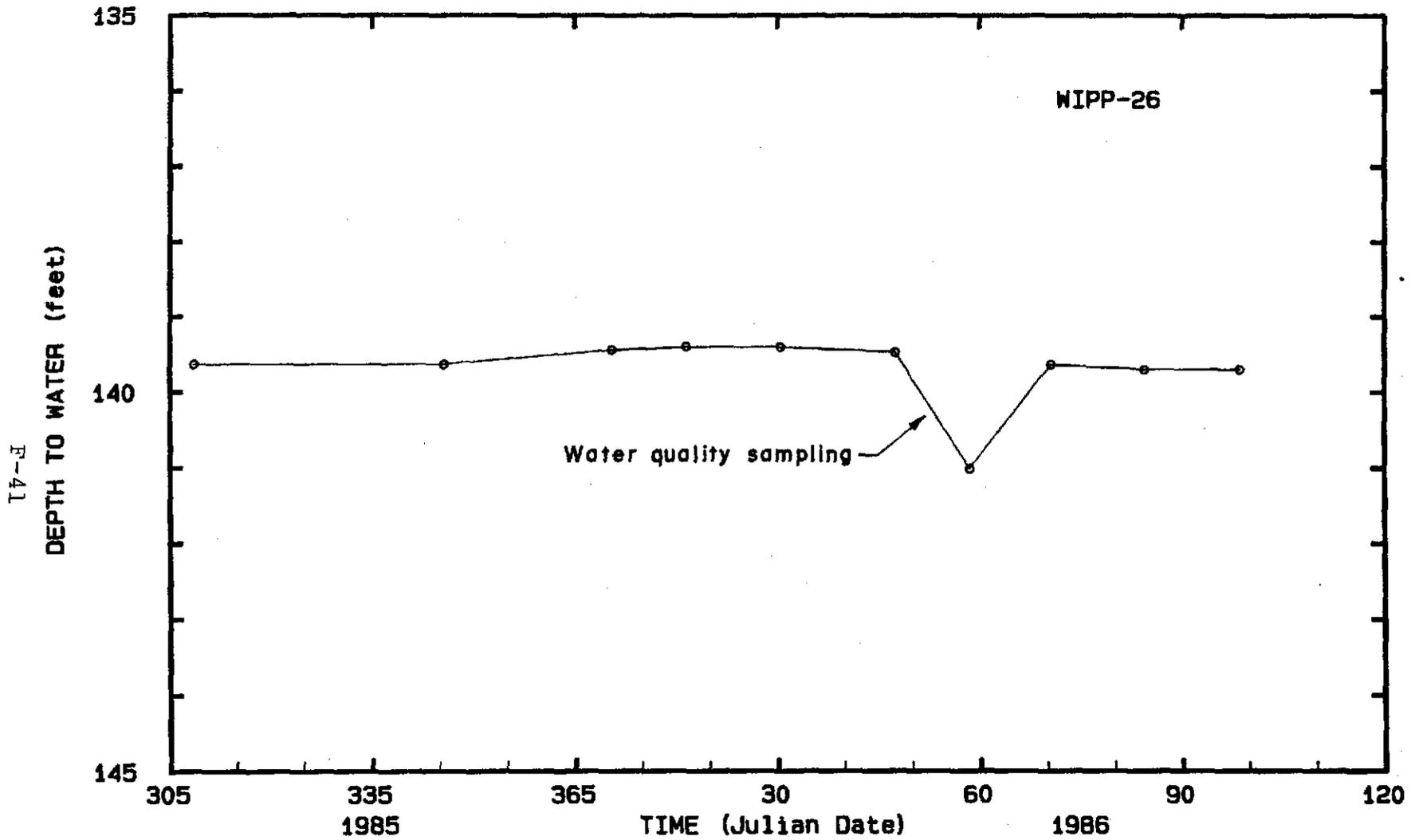


Figure 2.36 Water-level measurements at well WIPP-26, Culebra, November 1985 through April 1986.

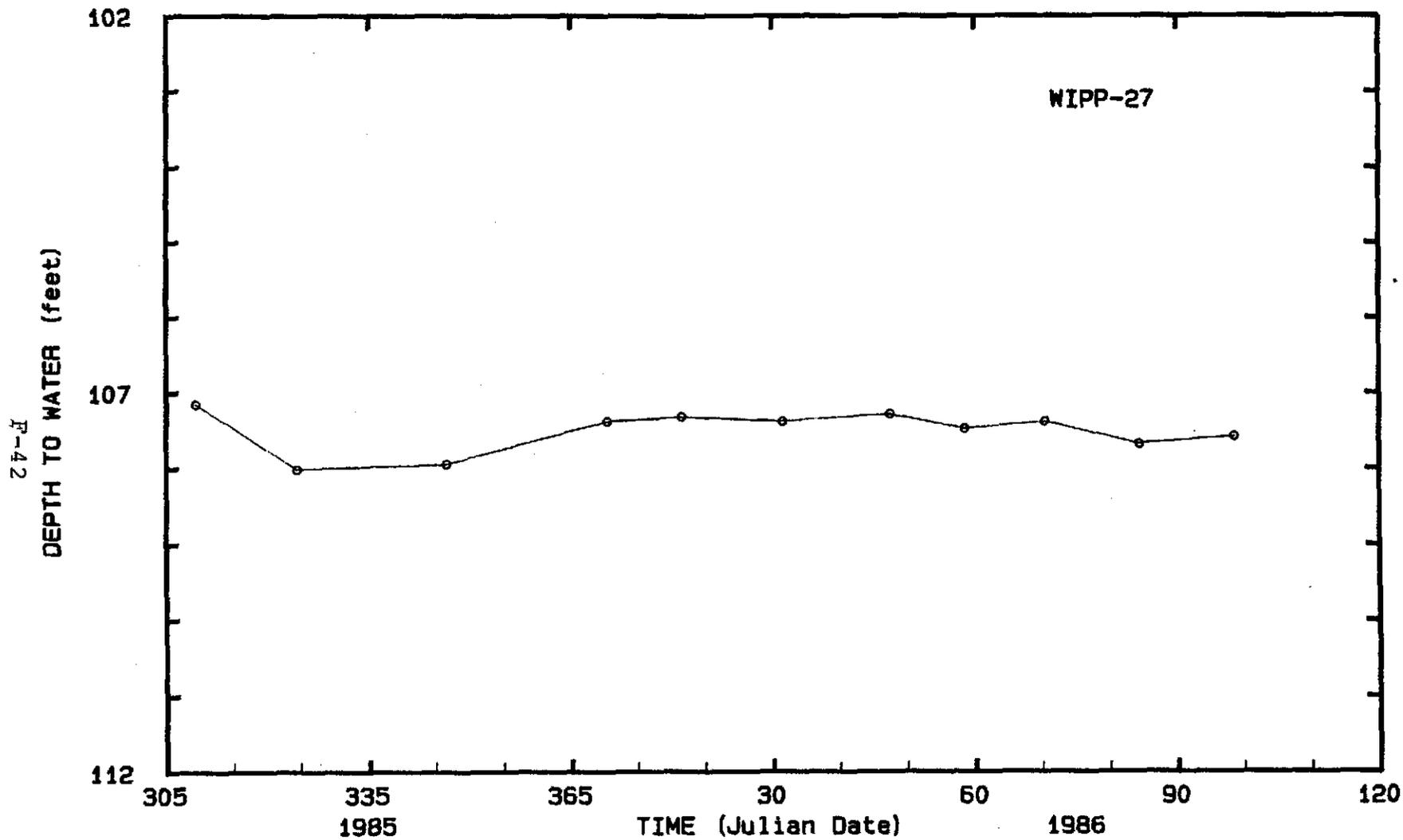


Figure 2.37 Water-level measurements at well WIPP-27, Culebra, November 1985 through April 1986.

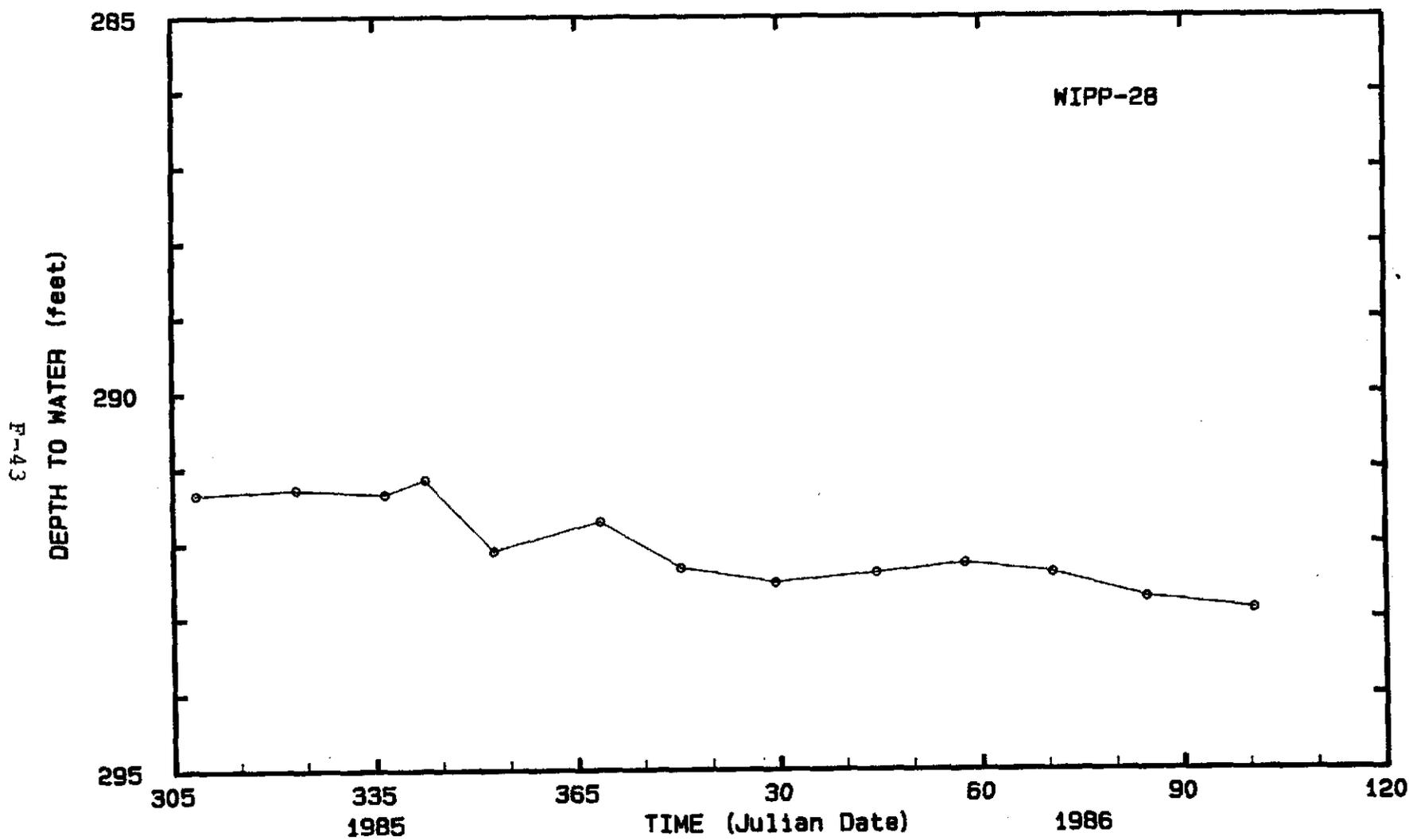


Figure 2.38 Water-level measurements at well WIPP-28, Culebra, November 1985 through April 1986.

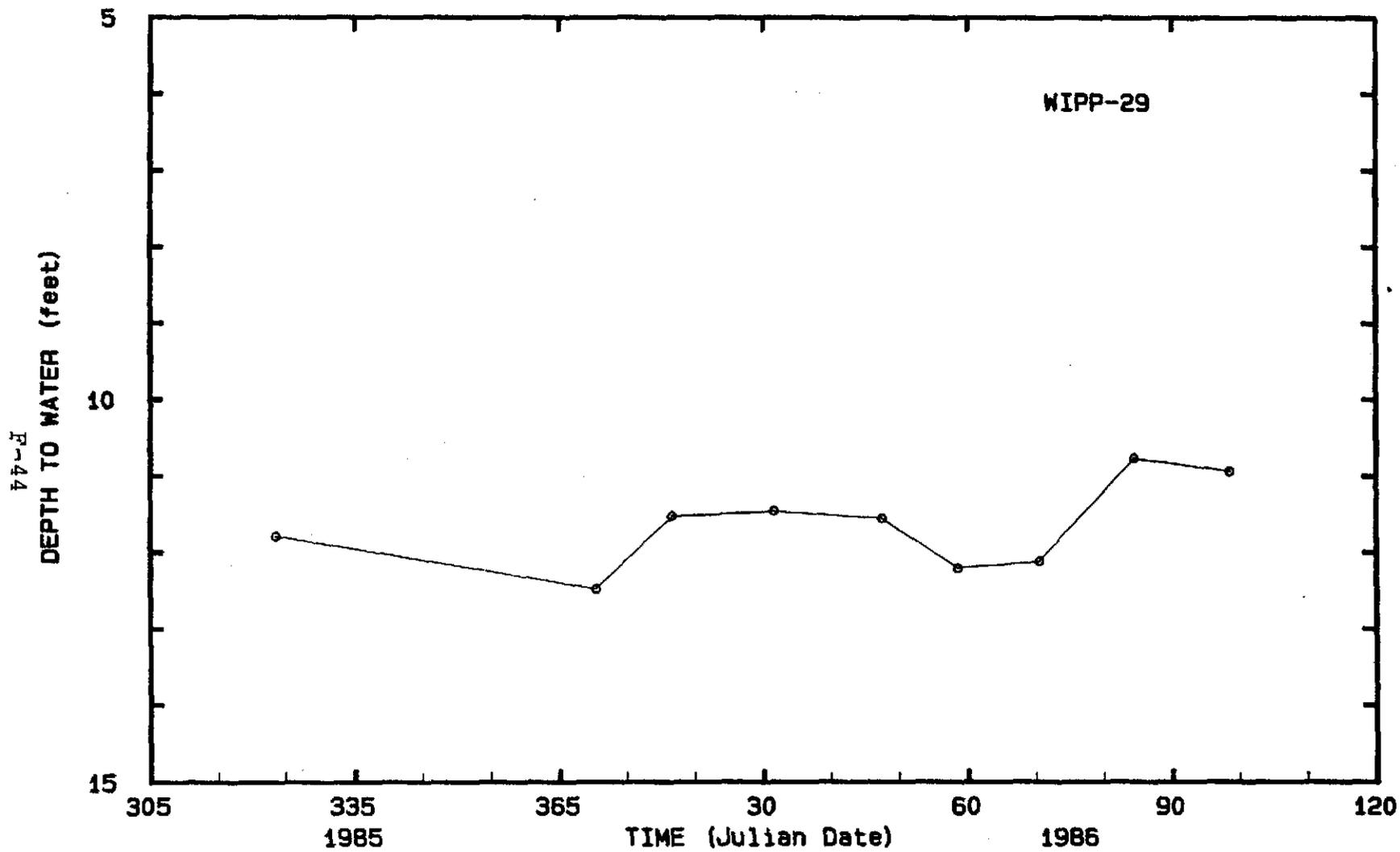


Figure 2.39 Water-level measurements at well WIPP-29, Culebra, November 1985 through April 1986.

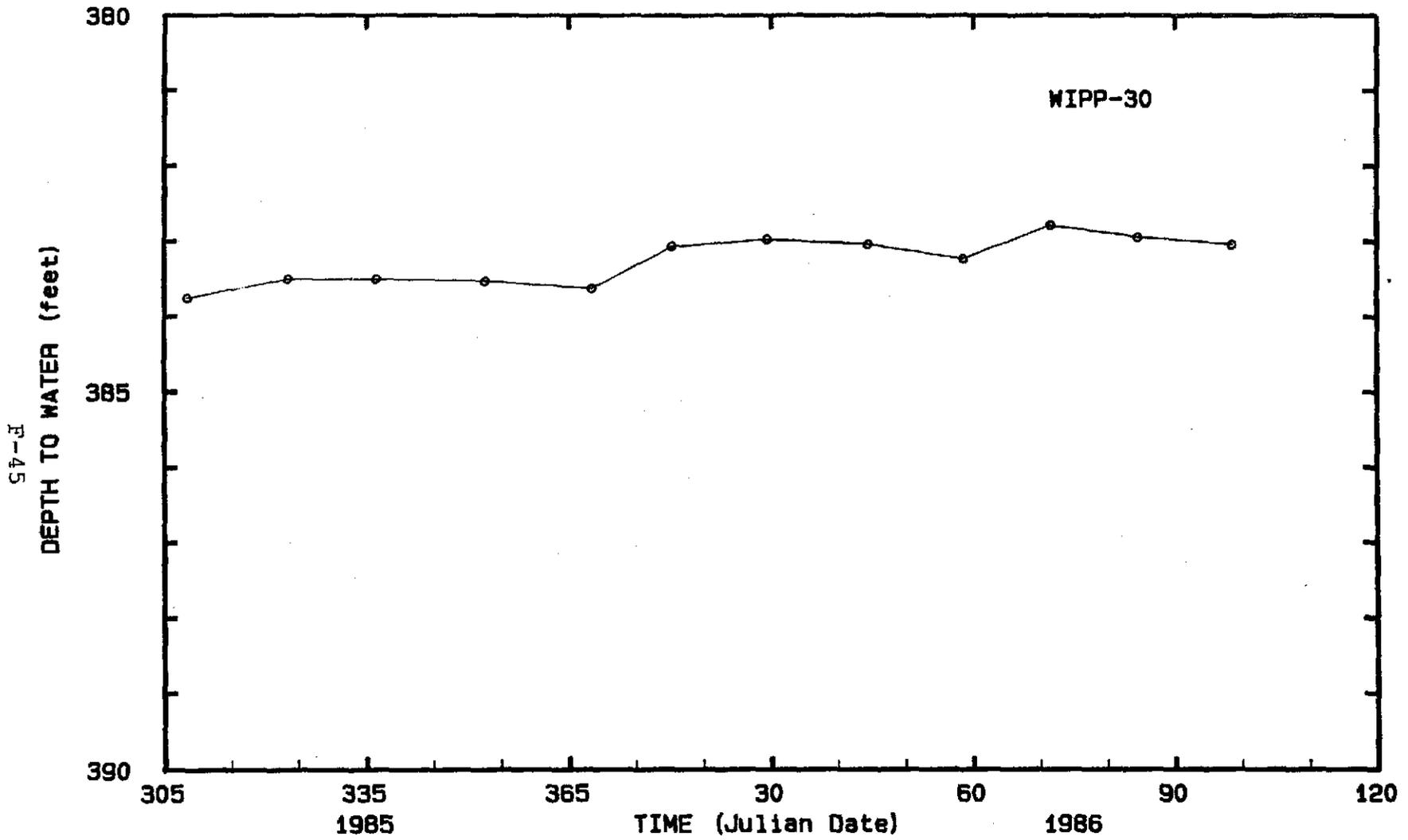


Figure 2.40 Water-level measurements at well WIPP-30, Culebra, November 1985 through April 1986.

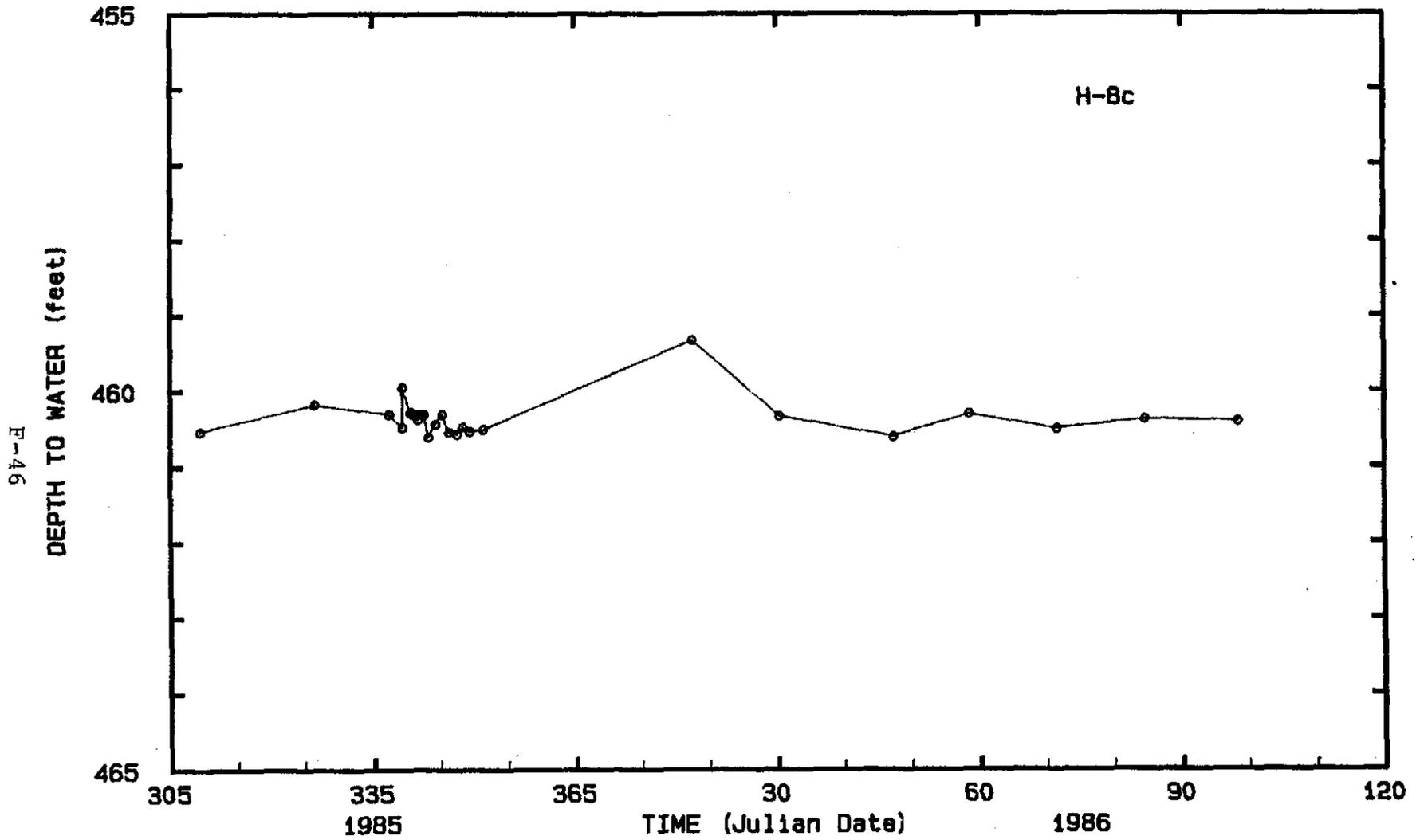


Figure 2.41 Water-level measurements at well H-8c, Rustler-Salado contact, November through April 1986.

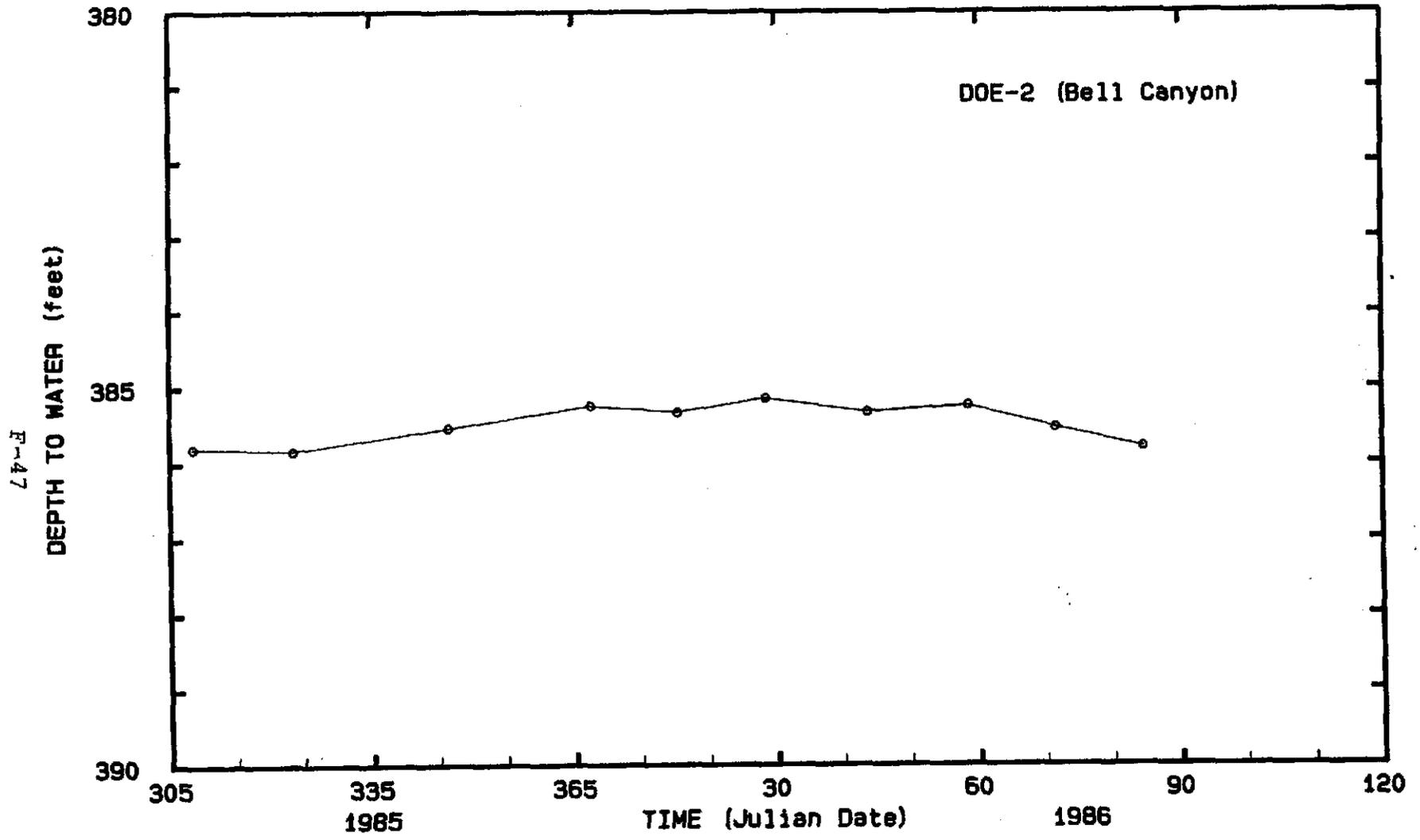


Figure 2.42 Water-level measurements at well DOE-2, Bell Canyon Formation, January to November 1985.

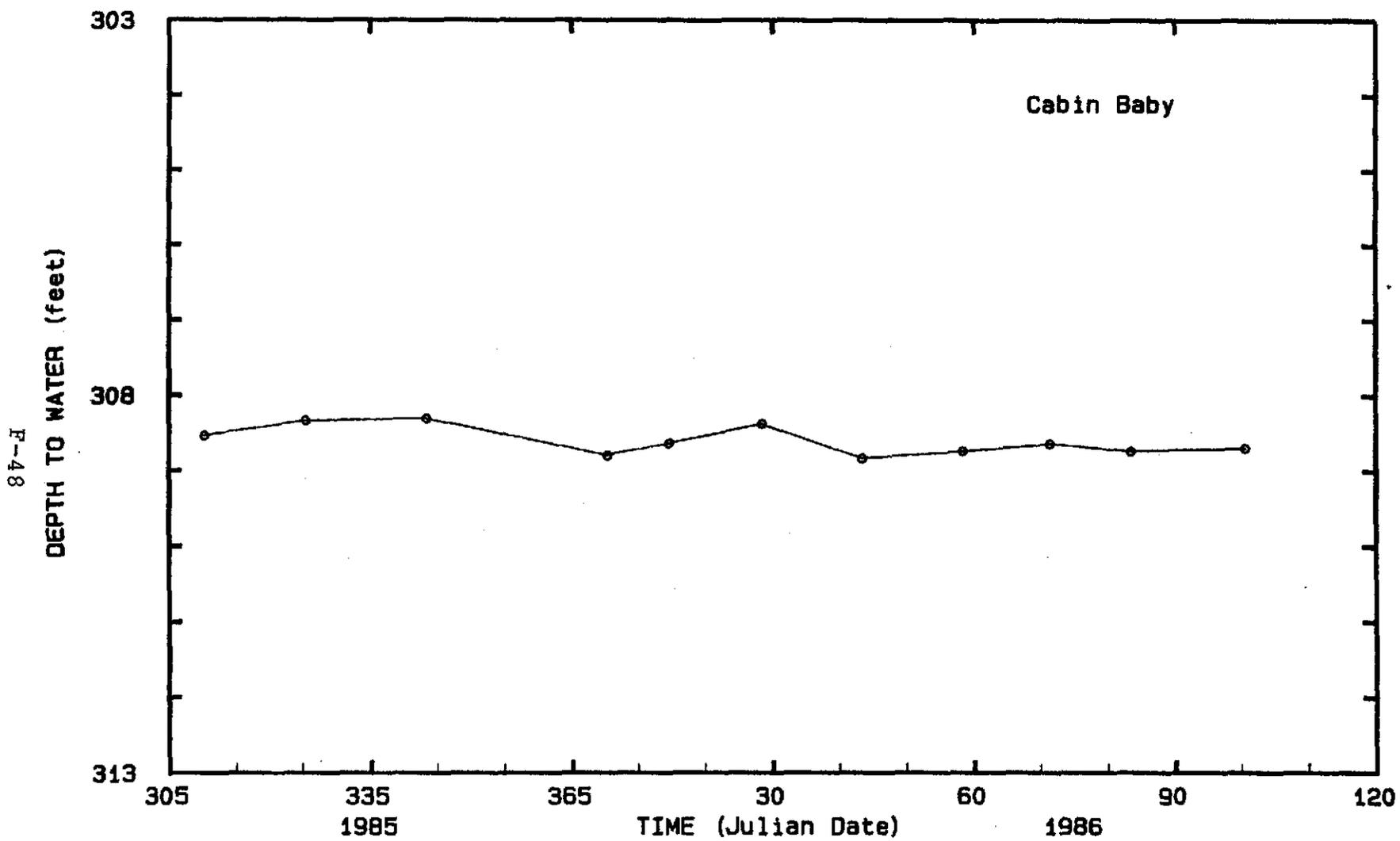


Figure 2.43 Water-level measurements at well Cabin Baby-1, Bell Canyon Formation, November 1985 through April 1986.

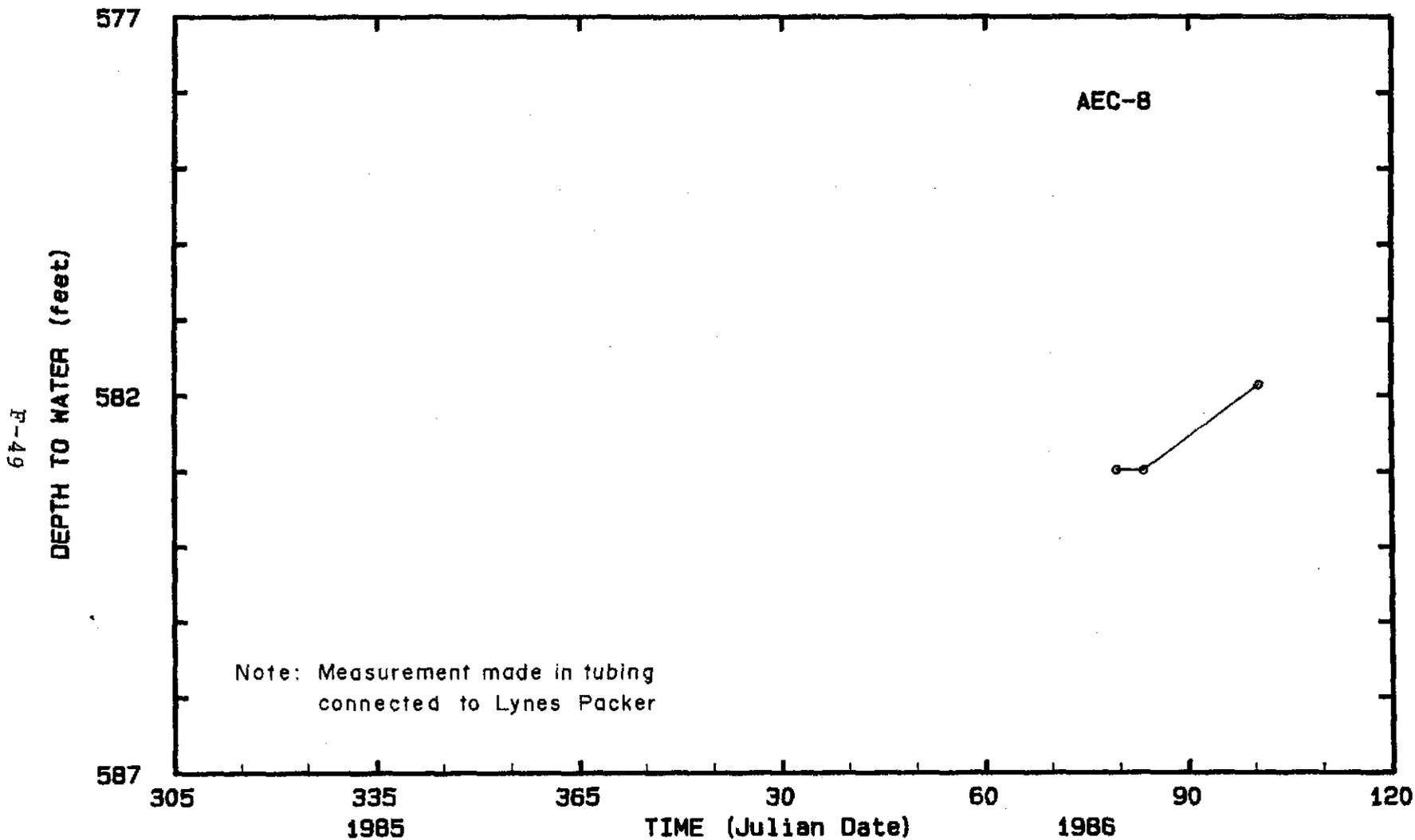


Figure 2.44 Water-level measurements at well AEC-8, Bell Canyon Formation, March through April 1986.

TABLE 1-1 MEASURING POINT ELEVATIONS ACCORDING TO
OCTOBER 1984 SATELLITE SURVEY*

Well Number	Measuring Point (a.m.s.l.)	Well Number	Measuring Point (a.m.s.l.)
H-1	3398.58	H-11b1	3408.81
H-2a	3376.96	H-11b2	3408.85
H-2b	3377.47	H-11b3	3409.62
H-2c	3377.51	H-12	3424.50
H-3b1	3389.73	DOE-1	3463.96
H-3b2	3388.93	DOE-2	3419.30
H-3b3	3387.72	P-14	3361.72
H-4a	3331.82	P-15	3311.56
H-4b	3331.44	P-17	3335.65
H-4c	3332.14	P-18	3476.93
H-5a	3506.86	WIPP-25	3214.15
H-5b	3506.35	WIPP-26	3153.16
H-5c	3506.33	WIPP-29	2979.03
H-6a	3346.67	WIPP-30	3426.80
H-6b	3346.76	Barn Well	3305.08
H-6c	3347.03	Cabin Baby	3326.87
H-7a	3163.18	Carper	3169.70
H-7b	3163.26	Engle	3420.42
H-7b2	3163.50	House Well	3293.12
H-7c	3163.17	Pocket	3337.33
H-8a	3430.91	Ranch Well	3296.22
H-8b	3431.57	Twin Wells	
H-8c	3430.82	(house)	3516.65
H-9a	3405.10	Twin Wells	
H-9b	3405.32	(pasture)	3522.63
H-9c	3405.76	Unger	3307.14
H-10 a	3687.13	AEC-7	3656.50
H-10 b	3687.92	AEC-8	3531.94
		D-268	3278.47

* Hydro Geo Chem (1985)

TABLE 1-2 HYDRAULIC TESTING, WATER-QUALITY SAMPLING AND WELL-RECOMPLETION OPERATIONS IN THE OBSERVATION-WELL NETWORK DURING THE PERIOD NOVEMBER 1985 THROUGH APRIL 1986

H-2	(1)	H-2a Water-Quality Sampling;	April 4 to 21, 1986
H-3	(1)	H-3b2 Multipad Pumping Test;	Oct. 15 to Dec. 16, 1985
	(2)	H-3b3 Water-Quality Sampling;	April 25 to May 5, 1985
H-7	(1)	H-7b Pumping Test	Feb. 18 to 24, 1986
	(2)	H-7b Water-Quality Sampling;	March 20 to 27, 1986
H-8	(1)	H-8b Pumping Test;	Dec. 8 to 18, 1985
	(2)	H-8a Water-Quality Sampling;	
H-9	(1)	H-9b Water-Quality Sampling;	Oct. 30 to Nov. 14, 1985
P-14	(1)	Water-Quality Sampling;	Feb. 18 to 27, 1986
P-17	(1)	Water-Quality Sampling;	March 4 to 17, 1986
WIPP-25	(1)	Water-Quality Sampling;	Jan. 29 to Feb. 13, 1986
WIPP-26	(1)	Water-Quality Sampling;	Nov. 15 to 26, 1985
WIPP-29	(1)	Water-Quality Sampling;	Nov. 26 to Dec. 15, 1985
DOE-2	(1)	Reset Packer and Perforate Casing to Culebra	April 1 to 2, 1986

APPENDIX 1.0

TABULATED WATER-LEVEL DATA FOR OBSERVATION WELLS

- Note: 1) "Device" refers to measuring equipment
2) "Error" refers to difference between start and end value of Iron Horse depth counter, a value greater than 0.08 meters requires a repeat measurement

TABLE A1-1
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL H-1

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
305	7	45	11/01/85	418.28	127.49	0.00	SOLINST #2
305	13	41	11/01/85	418.28	127.49	0.00	SOLINST #2
305	15	41	11/01/85	418.28	127.49	0.00	SOLINST #2
305	17	18	11/01/85	418.28	127.49	0.00	SOLINST #2
305	19	8	11/01/85	418.27	127.49	0.00	SOLINST #2
305	21	10	11/01/85	418.27	127.49	0.00	SOLINST #2
305	23	4	11/01/85	418.26	127.49	0.00	SOLINST #2
306	10	35	11/02/85	418.24	127.48	0.00	SOLINST #2
306	13	38	11/02/85	418.25	127.48	0.00	SOLINST #2
306	15	30	11/02/85	418.25	127.48	0.00	SOLINST #2
306	18	6	11/02/85	418.25	127.48	0.00	SOLINST #2
306	20	10	11/02/85	418.25	127.48	0.00	SOLINST #2
306	22	30	11/02/85	418.24	127.48	0.00	SOLINST #2
306	23	20	11/02/85	418.24	127.48	0.00	SOLINST #2
307	9	5	11/03/85	418.23	127.48	0.00	SOLINST #2
307	17	3	11/03/85	418.24	127.48	0.00	SOLINST #2
307	19	22	11/03/85	418.24	127.48	0.00	SOLINST #2
307	21	2	11/03/85	418.23	127.48	0.00	SOLINST #2
307	23	11	11/03/85	418.23	127.48	0.00	SOLINST #2
308	10	42	11/04/85	418.24	127.48	0.00	SOLINST #2
308	12	7	11/04/85	418.24	127.48	0.00	SOLINST #2
308	15	0	11/04/85	418.23	127.48	0.00	SOLINST #2
308	17	10	11/04/85	418.24	127.48	0.00	SOLINST #2
308	19	6	11/04/85	418.24	127.48	0.00	SOLINST #2
308	21	10	11/04/85	418.24	127.48	0.00	SOLINST #2
308	23	15	11/04/85	418.24	127.48	0.00	SOLINST #2
309	10	15	11/05/85	418.24	127.48	0.00	SOLINST #2
309	12	42	11/05/85	418.25	127.48	0.00	SOLINST #2
309	15	0	11/05/85	418.25	127.48	0.00	SOLINST #2
309	18	27	11/05/85	418.26	127.49	0.00	SOLINST #2
309	20	44	11/05/85	418.26	127.49	0.00	SOLINST #2
309	23	58	11/05/85	418.26	127.49	0.00	SOLINST #2
310	10	33	11/06/85	418.27	127.49	0.00	SOLINST #2
310	14	9	11/06/85	418.27	127.49	0.00	SOLINST #2
310	15	45	11/06/85	418.27	127.49	0.00	SOLINST #2
310	18	22	11/06/85	418.28	127.49	0.00	SOLINST #2
310	20	59	11/06/85	418.28	127.49	0.00	SOLINST #2
310	23	5	11/06/85	418.29	127.49	0.00	SOLINST #2
311	10	12	11/07/85	418.30	127.50	0.00	SOLINST #2
311	16	0	11/07/85	418.31	127.50	0.00	SOLINST #2
311	20	0	11/07/85	418.32	127.50	0.00	SOLINST #2
311	21	11	11/07/85	418.33	127.51	0.00	SOLINST #2
312	9	44	11/08/85	418.35	127.51	0.00	SOLINST #2

TABLE A1-1 (Continued)
WATER-LEVEL MEASUREMENTS
FOR THE CULEBRA DOLOMITE
IN WELL H-1

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
312	14	0	11/08/85	418.36	127.52	0.00	SOLINST #2
312	17	11	11/08/85	418.37	127.52	0.00	SOLINST #2
312	19	1	11/08/85	418.37	127.52	0.00	SOLINST #2
312	21	8	11/08/85	418.38	127.52	0.00	SOLINST #2
312	23	8	11/08/85	418.38	127.52	0.00	SOLINST #2
313	9	8	11/09/85	418.41	127.53	0.00	SOLINST #2
313	13	6	11/09/85	418.41	127.53	0.00	SOLINST #2
313	17	0	11/09/85	418.42	127.53	0.00	SOLINST #2
313	19	20	11/09/85	418.44	127.54	0.00	SOLINST #2
313	21	11	11/09/85	418.44	127.54	0.00	SOLINST #2
313	23	16	11/09/85	418.44	127.54	0.00	SOLINST #2
314	9	34	11/10/85	418.48	127.55	0.00	SOLINST #2
314	11	10	11/10/85	418.48	127.55	0.00	SOLINST #2
314	13	27	11/10/85	418.49	127.56	0.00	SOLINST #2
314	15	20	11/10/85	418.50	127.56	0.00	SOLINST #2
314	19	18	11/10/85	418.51	127.56	0.00	SOLINST #2
314	22	53	11/10/85	418.52	127.56	0.00	SOLINST #2
315	8	40	11/11/85	418.55	127.57	0.00	SOLINST #2
315	12	13	11/11/85	418.56	127.58	0.00	SOLINST #2
315	15	5	11/11/85	418.57	127.58	0.00	SOLINST #2
315	18	37	11/11/85	418.58	127.58	0.00	SOLINST #2
315	21	6	11/11/85	418.60	127.59	0.00	SOLINST #2
315	23	34	11/11/85	418.61	127.59	0.00	SOLINST #2
316	9	48	11/12/85	418.65	127.60	0.00	SOLINST #2
316	12	31	11/12/85	418.66	127.61	0.00	SOLINST #2
316	16	0	11/12/85	418.67	127.61	0.00	SOLINST #2
316	20	30	11/12/85	418.69	127.62	0.00	SOLINST #2
317	10	9	11/13/85	418.75	127.64	0.00	SOLINST #2
317	11	30	11/13/85	418.76	127.64	0.00	SOLINST #2
317	13	20	11/13/85	418.76	127.64	0.00	SOLINST #2
317	15	37	11/13/85	418.77	127.64	0.00	SOLINST #2
317	17	42	11/13/85	418.78	127.64	0.00	SOLINST #2
317	21	2	11/13/85	418.80	127.65	0.00	SOLINST #2
317	22	51	11/13/85	418.80	127.65	0.00	SOLINST #2
318	9	4	11/14/85	418.86	127.67	0.00	SOLINST #2
318	12	7	11/14/85	418.87	127.67	0.00	SOLINST #2
318	15	6	11/14/85	418.89	127.68	0.00	SOLINST #2
318	16	50	11/14/85	418.90	127.68	0.00	SOLINST #2
318	18	35	11/14/85	418.91	127.68	0.00	SOLINST #2
318	20	45	11/14/85	418.92	127.69	0.00	SOLINST #2
318	22	37	11/14/85	418.93	127.69	0.00	SOLINST #2
319	8	56	11/15/85	418.98	127.71	0.00	SOLINST #2
319	11	27	11/15/85	419.00	127.71	0.00	SOLINST #2

TABLE A1-1 (Continued)
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL H-1

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
319	13	12	11/15/85	419.02	127.72	0.00	SOLINST #2
319	15	58	11/15/85	419.02	127.72	0.00	SOLINST #2
319	17	55	11/15/85	419.03	127.72	0.00	SOLINST #2
319	20	3	11/15/85	419.05	127.73	0.00	SOLINST #2
319	21	35	11/15/85	419.06	127.73	0.00	SOLINST #2
319	23	35	11/15/85	419.07	127.73	0.00	SOLINST #2
320	10	36	11/16/85	419.13	127.75	0.00	SOLINST #2
320	11	50	11/16/85	419.14	127.75	0.00	SOLINST #2
320	15	3	11/16/85	419.15	127.76	0.00	SOLINST #2
320	17	4	11/16/85	419.17	127.76	0.00	SOLINST #2
320	19	7	11/16/85	419.18	127.77	0.00	SOLINST #2
320	21	6	11/16/85	419.19	127.77	0.00	SOLINST #2
320	23	12	11/16/85	419.21	127.78	0.00	SOLINST #2
321	8	21	11/17/85	419.27	127.79	0.00	SOLINST #2
321	11	5	11/17/85	419.28	127.80	0.00	SOLINST #2
321	13	17	11/17/85	419.30	127.80	0.00	SOLINST #2
321	17	15	11/17/85	419.31	127.81	0.00	SOLINST #2
321	19	41	11/17/85	419.31	127.81	0.00	SOLINST #2
321	21	20	11/17/85	419.32	127.81	0.00	SOLINST #2
321	23	10	11/17/85	419.33	127.81	0.00	SOLINST #2
322	10	20	11/18/85	419.42	127.84	0.00	SOLINST #2
322	12	29	11/18/85	419.43	127.84	0.00	SOLINST #2
322	15	50	11/18/85	419.45	127.85	0.00	SOLINST #2
322	18	11	11/18/85	419.60	127.89	0.00	SOLINST #2
322	20	10	11/18/85	419.47	127.85	0.00	SOLINST #2
322	21	50	11/18/85	419.50	127.86	0.00	SOLINST #2
322	32	10	11/18/85	419.50	127.86	0.00	SOLINST #2
323	9	15	11/19/85	419.57	127.88	0.00	SOLINST #2
323	11	10	11/19/85	419.59	127.89	0.00	SOLINST #2
323	13	42	11/19/85	419.60	127.89	0.00	SOLINST #2
323	17	12	11/19/85	419.64	127.91	0.00	SOLINST #2
323	19	19	11/19/85	419.66	127.91	0.00	SOLINST #2
323	21	11	11/19/85	419.67	127.92	0.00	SOLINST #2
323	23	20	11/19/85	419.69	127.92	0.00	SOLINST #2
324	0	6	11/20/85	419.69	127.92	0.00	SOLINST #2
324	8	47	11/20/85	419.75	127.94	0.00	SOLINST #2
324	10	50	11/20/85	419.76	127.94	0.00	SOLINST #2
324	16	19	11/20/85	419.81	127.96	0.00	SOLINST #2
324	18	10	11/20/85	419.83	127.96	0.00	SOLINST #2
324	20	11	11/20/85	419.84	127.97	0.00	SOLINST #2
324	22	27	11/20/85	419.86	127.97	0.00	SOLINST #2
325	0	9	11/21/85	419.88	127.98	0.00	SOLINST #2
325	10	43	11/21/85	419.95	128.00	0.00	SOLINST #2

TABLE A1-1 (Continued)
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL H-1

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
325	15	47	11/21/85	419.98	128.01	0.00	SOLINST #2
325	17	15	11/21/85	419.98	128.01	0.00	SOLINST #2
325	19	15	11/21/85	420.01	128.02	0.00	SOLINST #2
325	21	12	11/21/85	420.03	128.03	0.00	SOLINST #2
325	23	13	11/21/85	420.05	128.03	0.00	SOLINST #2
326	9	48	11/22/85	420.13	128.06	0.00	SOLINST #2
326	12	2	11/22/85	420.15	128.06	0.00	SOLINST #2
326	13	21	11/22/85	420.17	128.07	0.00	SOLINST #2
326	16	13	11/22/85	420.19	128.07	0.00	SOLINST #2
326	18	7	11/22/85	420.21	128.08	0.00	SOLINST #2
326	20	6	11/22/85	420.23	128.09	0.00	SOLINST #2
326	22	31	11/22/85	420.24	128.09	0.00	SOLINST #2
327	0	7	11/23/85	420.27	128.10	0.00	SOLINST #2
327	9	30	11/23/85	420.34	128.12	0.00	SOLINST #2
327	16	47	11/23/85	420.40	128.14	0.00	SOLINST #2
327	21	3	11/23/85	420.44	128.15	0.00	SOLINST #2
327	22	45	11/23/85	420.45	128.15	0.00	SOLINST #2
328	10	30	11/24/85	420.54	128.18	0.00	SOLINST #2
328	14	45	11/24/85	420.57	128.19	0.00	SOLINST #2
328	16	37	11/24/85	420.58	128.19	0.00	SOLINST #2
328	18	15	11/24/85	420.58	128.19	0.00	SOLINST #2
328	20	10	11/24/85	420.60	128.20	0.00	SOLINST #2
328	22	30	11/24/85	420.63	128.21	0.00	SOLINST #2
328	23	15	11/24/85	420.66	128.22	0.00	SOLINST #2
329	16	30	11/25/85	420.82	128.27	0.00	SOLINST #2
329	18	30	11/25/85	420.85	128.28	0.00	SOLINST #2
329	20	35	11/25/85	420.85	128.28	0.00	SOLINST #2
329	22	5	11/25/85	420.87	128.28	0.00	SOLINST #2
329	23	30	11/25/85	420.89	128.29	0.00	SOLINST #2
330	10	22	11/26/85	421.00	128.32	0.00	SOLINST #2
330	14	19	11/26/85	421.03	128.33	0.00	SOLINST #2
330	16	20	11/26/85	421.05	128.34	0.00	SOLINST #2
330	18	8	11/26/85	421.07	128.34	0.00	SOLINST #2
330	20	12	11/26/85	421.09	128.35	0.00	SOLINST #2
330	22	26	11/26/85	421.11	128.35	0.00	SOLINST #2
331	0	8	11/27/85	421.13	128.36	0.00	SOLINST #2
331	10	11	11/27/85	421.23	128.39	0.00	SOLINST #2
331	16	12	11/27/85	421.29	128.41	0.00	SOLINST #2
331	18	11	11/27/85	421.31	128.42	0.00	SOLINST #2
331	20	9	11/27/85	421.33	128.42	0.00	SOLINST #2
331	22	25	11/27/85	421.36	128.43	0.00	SOLINST #2
332	0	8	11/28/85	421.38	128.44	0.00	SOLINST #2
333	8	26	11/29/85	421.71	128.54	0.00	SOLINST #2

TABLE A1-1 (Continued)
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL H-1

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
333	16	15	11/29/85	421.79	128.56	0.00	SOLINST #2
333	18	9	11/29/85	421.81	128.57	0.00	SOLINST #2
333	20	8	11/29/85	421.83	128.57	0.00	SOLINST #2
333	22	25	11/29/85	421.86	128.58	0.00	SOLINST #2
334	0	8	11/30/85	421.88	128.59	0.00	SOLINST #2
334	8	40	11/30/85	421.97	128.62	0.00	SOLINST #2
334	16	10	11/30/85	422.06	128.64	0.00	SOLINST #2
334	18	8	11/30/85	422.08	128.65	0.00	SOLINST #2
334	20	10	11/30/85	422.10	128.66	0.00	SOLINST #2
334	22	23	11/30/85	422.13	128.67	0.00	SOLINST #2
335	0	7	12/01/85	422.14	128.67	0.00	SOLINST #2
335	10	15	12/01/85	422.26	128.70	0.00	SOLINST #2
335	18	50	12/01/85	422.37	128.74	0.00	SOLINST #2
336	8	48	12/02/85	422.53	128.79	0.00	SOLINST #2
336	13	54	12/02/85	422.60	128.81	0.00	SOLINST #2
336	19	0	12/02/85	422.65	128.82	0.00	SOLINST #2
337	9	40	12/03/85	422.78	128.86	0.00	SOLINST #2
337	15	46	12/03/85	422.88	128.89	0.00	SOLINST #2
337	16	14	12/03/85	422.89	128.90	0.00	SOLINST #2
337	18	8	12/03/85	422.91	128.90	0.00	SOLINST #2
337	20	10	12/03/85	422.93	128.91	0.00	SOLINST #2
337	22	25	12/03/85	422.96	128.92	0.00	SOLINST #2
338	0	6	12/04/85	422.98	128.92	0.00	SOLINST #2
338	16	20	12/04/85	423.17	128.98	0.00	SOLINST #2
338	18	9	12/04/85	423.19	128.99	0.00	SOLINST #2
338	20	10	12/04/85	423.22	129.00	0.00	SOLINST #2
338	22	25	12/04/85	423.24	129.00	0.00	SOLINST #2
339	0	7	12/05/85	423.27	129.01	0.00	SOLINST #2
339	8	40	12/05/85	423.37	129.04	0.00	SOLINST #2
339	16	12	12/05/85	423.47	129.07	0.00	SOLINST #2
339	18	8	12/05/85	423.49	129.08	0.00	SOLINST #2
339	20	14	12/05/85	423.51	129.09	0.00	SOLINST #2
339	22	9	12/05/85	423.54	129.09	0.00	SOLINST #2
340	0	6	12/06/85	423.57	129.10	0.00	SOLINST #2
340	12	33	12/06/85	423.72	129.15	0.00	SOLINST #2
340	16	20	12/06/85	423.77	129.17	0.00	SOLINST #2
340	18	11	12/06/85	423.79	129.17	0.00	SOLINST #2
340	20	9	12/06/85	423.82	129.18	0.00	SOLINST #2
340	22	17	12/06/85	423.84	129.19	0.00	SOLINST #2
341	0	6	12/07/85	423.87	129.20	0.00	SOLINST #2
341	10	30	12/07/85	424.00	129.24	0.00	SOLINST #2
341	14	9	12/07/85	424.05	129.25	0.00	SOLINST #2
341	16	20	12/07/85	424.08	129.26	0.00	SOLINST #2

TABLE A1-1 (Continued)
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL H-1

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
341	18	8	12/07/85	424.09	129.26	0.00	SOLINST #2
341	20	7	12/07/85	424.13	129.27	0.00	SOLINST #2
341	22	10	12/07/85	424.15	129.28	0.00	SOLINST #2
342	0	6	12/08/85	424.18	129.29	0.00	SOLINST #2
342	10	17	12/08/85	424.33	129.34	0.00	SOLINST #2
343	10	26	12/09/85	424.66	129.44	0.00	SOLINST #2
343	17	0	12/09/85	424.76	129.47	0.00	SOLINST #2
343	22	0	12/09/85	424.82	129.49	0.00	SOLINST #2
343	23	15	12/09/85	424.85	129.49	0.00	SOLINST #2
344	16	15	12/10/85	425.10	129.57	0.00	SOLINST #2
344	22	45	12/10/85	425.21	129.60	0.00	SOLINST #2
345	16	45	12/11/85	425.45	129.68	0.00	SOLINST #2
345	20	30	12/11/85	425.49	129.69	0.00	SOLINST #2
346	10	15	12/12/85	425.75	129.77	0.00	SOLINST #2
346	17	20	12/12/85	425.86	129.80	0.00	SOLINST #2
346	23	5	12/12/85	425.95	129.83	0.00	SOLINST #2
347	8	43	12/13/85	426.10	129.88	0.00	SOLINST #2
347	16	58	12/13/85	426.25	129.92	0.00	SOLINST #2
347	21	36	12/13/85	426.32	129.94	0.00	SOLINST #2
348	11	0	12/14/85	426.54	130.01	0.00	SOLINST #2
348	15	35	12/14/85	426.60	130.03	0.00	SOLINST #2
348	19	15	12/14/85	426.67	130.05	0.00	SOLINST #2
348	22	16	12/14/85	426.73	130.07	0.00	SOLINST #2
348	23	30	12/14/85	426.75	130.07	0.00	SOLINST #2
349	8	45	12/15/85	426.90	130.12	0.00	SOLINST #2
349	14	55	12/15/85	427.00	130.15	0.00	SOLINST #2
349	17	15	12/15/85	427.05	130.16	0.00	SOLINST #2
349	22	45	12/15/85	427.15	130.20	0.00	SOLINST #2
350	8	55	12/16/85	427.31	130.24	0.00	SOLINST #2
350	9	7	12/16/85	427.32	130.25	0.00	SOLINST #2
350	9	10	12/16/85	427.32	130.25	0.00	SOLINST #2
350	9	30	12/16/85	427.32	130.25	0.00	SOLINST #2
350	10	0	12/16/85	427.33	130.25	0.00	SOLINST #2
350	11	5	12/16/85	427.36	130.26	0.00	SOLINST #2
350	12	0	12/16/85	427.37	130.26	0.00	SOLINST #2
350	13	56	12/16/85	427.41	130.27	0.00	SOLINST #2
350	16	34	12/16/85	427.45	130.29	0.00	SOLINST #2
350	18	14	12/16/85	427.48	130.30	0.00	SOLINST #2
350	19	2	12/16/85	427.48	130.30	0.00	SOLINST #2
350	21	25	12/16/85	427.53	130.31	0.00	SOLINST #2
351	0	7	12/17/85	427.60	130.33	0.00	SOLINST #2
351	2	30	12/17/85	427.63	130.34	0.00	SOLINST #2
351	4	35	12/17/85	427.66	130.35	0.00	SOLINST #2

TABLE A1-1 (Continued)
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL H-1

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
351	6	15	12/17/85	427.70	130.36	0.00	SOLINST #2
351	8	35	12/17/85	427.72	130.37	0.00	SOLINST #2
351	10	23	12/17/85	427.77	130.38	0.00	SOLINST #2
351	15	14	12/17/85	427.85	130.41	0.00	SOLINST #2
351	16	5	12/17/85	427.87	130.41	0.00	SOLINST #2
351	18	10	12/17/85	427.90	130.42	0.00	SOLINST #2
351	20	10	12/17/85	427.94	130.44	0.00	SOLINST #2
351	22	5	12/17/85	427.97	130.45	0.00	SOLINST #2
351	23	32	12/17/85	428.00	130.45	0.00	SOLINST #2
352	8	45	12/18/85	428.17	130.51	0.00	SOLINST #2
352	12	1	12/18/85	428.23	130.52	0.00	SOLINST #2
352	13	23	12/18/85	428.25	130.53	0.00	SOLINST #2
352	15	9	12/18/85	428.28	130.54	0.00	SOLINST #2
352	16	10	12/18/85	428.33	130.55	0.00	SOLINST #2
352	18	25	12/18/85	428.35	130.56	0.00	SOLINST #2
352	20	5	12/18/85	428.38	130.57	0.00	SOLINST #2
352	22	0	12/18/85	428.41	130.58	0.00	SOLINST #2
352	23	25	12/18/85	428.44	130.59	0.00	SOLINST #2
353	9	18	12/19/85	428.63	130.65	0.00	SOLINST #2
353	11	50	12/19/85	428.67	130.66	0.00	SOLINST #2
353	14	30	12/19/85	428.73	130.68	0.00	SOLINST #2
353	16	10	12/19/85	428.76	130.69	0.00	SOLINST #2
353	18	5	12/19/85	428.78	130.69	0.00	SOLINST #2
353	20	4	12/19/85	428.82	130.70	0.00	SOLINST #2
353	22	20	12/19/85	428.87	130.72	0.00	SOLINST #2
353	23	27	12/19/85	428.89	130.73	0.00	SOLINST #2
354	9	1	12/20/85	429.07	130.78	0.00	SOLINST #2
354	12	12	12/20/85	429.14	130.80	0.00	SOLINST #2
354	14	45	12/20/85	429.18	130.81	0.00	SOLINST #2
354	16	10	12/20/85	429.21	130.82	0.00	SOLINST #2
354	18	1	12/20/85	429.24	130.83	0.00	SOLINST #2
354	20	8	12/20/85	429.28	130.84	0.00	SOLINST #2
354	22	20	12/20/85	429.33	130.86	0.00	SOLINST #2
354	23	25	12/20/85	429.35	130.87	0.00	SOLINST #2
355	8	47	12/21/85	429.51	130.91	0.00	SOLINST #2
355	10	42	12/21/85	429.55	130.93	0.00	SOLINST #2
355	14	13	12/21/85	429.62	130.95	0.00	SOLINST #2
355	16	10	12/21/85	429.67	130.96	0.00	SOLINST #2
355	18	0	12/21/85	429.70	130.97	0.00	SOLINST #2
355	20	20	12/21/85	429.75	130.99	0.00	SOLINST #2
355	22	2	12/21/85	429.78	131.00	0.00	SOLINST #2
355	23	42	12/21/85	429.81	131.01	0.00	SOLINST #2
356	9	15	12/22/85	429.97	131.05	0.00	SOLINST #2

TABLE A1-1 (Continued)
WATER-LEVEL MEASUREMENTS
FOR THE CULEBRA DOLOMITE
IN WELL H-1

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
356	12	30	12/22/85	430.04	131.08	0.00	SOLINST #2
356	14	30	12/22/85	430.08	131.09	0.00	SOLINST #2
356	16	10	12/22/85	430.13	131.10	0.00	SOLINST #2
356	18	17	12/22/85	430.17	131.12	0.00	SOLINST #2
356	20	12	12/22/85	430.21	131.13	0.00	SOLINST #2
356	22	7	12/22/85	430.25	131.14	0.00	SOLINST #2
356	23	40	12/22/85	430.28	131.15	0.00	SOLINST #2
357	11	33	12/23/85	430.47	131.21	0.00	SOLINST #2
357	16	24	12/23/85	430.60	131.25	0.00	SOLINST #2
357	18	0	12/23/85	430.61	131.25	0.00	SOLINST #2
357	20	13	12/23/85	430.66	131.27	0.00	SOLINST #2
357	22	1	12/23/85	430.70	131.28	0.00	SOLINST #2
357	23	40	12/23/85	430.74	131.29	0.00	SOLINST #2
358	8	12	12/24/85	430.88	131.33	0.00	SOLINST #2
358	10	35	12/24/85	430.91	131.34	0.00	SOLINST #2
358	13	6	12/24/85	430.98	131.36	0.00	SOLINST #2
359	8	17	12/25/85	431.35	131.48	0.00	SOLINST #2
359	16	55	12/25/85	431.51	131.52	0.00	SOLINST #2
360	7	45	12/26/85	431.80	131.61	0.00	SOLINST #2
360	14	27	12/26/85	431.93	131.65	0.00	SOLINST #2
361	9	25	12/27/85	432.27	131.76	0.00	SOLINST #2
361	14	37	12/27/85	432.37	131.79	0.00	SOLINST #2
361	16	5	12/27/85	432.41	131.80	0.00	SOLINST #2
361	18	4	12/27/85	432.44	131.81	0.00	SOLINST #2
361	20	18	12/27/85	432.48	131.82	0.00	SOLINST #2
361	22	0	12/27/85	432.52	131.83	0.00	SOLINST #2
361	23	45	12/27/85	432.56	131.84	0.00	SOLINST #2
362	9	35	12/28/85	432.72	131.89	0.00	SOLINST #2
362	18	0	12/28/85	432.84	131.93	0.00	SOLINST #2
362	20	13	12/28/85	432.92	131.95	0.00	SOLINST #2
362	22	3	12/28/85	432.96	131.97	0.00	SOLINST #2
362	23	39	12/28/85	432.99	131.98	0.00	SOLINST #2
363	8	53	12/29/85	433.15	132.02	0.00	SOLINST #2
363	15	30	12/29/85	433.27	132.06	0.00	SOLINST #2
364	9	45	12/30/85	433.60	132.16	0.00	SOLINST #2
365	8	35	12/31/85	433.99	132.28	0.00	SOLINST #2
365	14	53	12/31/85	434.13	132.32	0.00	SOLINST #2
1	11	20	01/01/86	434.43	132.41	0.00	SOLINST #2
2	8	29	01/02/86	434.78	132.52	0.00	SOLINST #2
2	16	10	01/02/86	434.91	132.56	0.00	SOLINST #2
2	18	5	01/02/86	434.95	132.57	0.00	SOLINST #2
2	20	7	01/02/86	434.98	132.58	0.00	SOLINST #2
2	22	2	01/02/86	435.01	132.59	0.00	SOLINST #2

TABLE A1-1 (Continued)
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL H-1

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
2	23	42	01/02/86	435.04	132.60	0.00	SOLINST #2
3	11	0	01/03/86	435.21	132.65	0.00	SOLINST #2
3	16	10	01/03/86	435.29	132.68	0.00	SOLINST #2
3	18	5	01/03/86	435.32	132.69	0.00	SOLINST #2
3	20	10	01/03/86	435.35	132.69	0.00	SOLINST #2
3	22	3	01/03/86	435.38	132.70	0.00	SOLINST #2
3	23	42	01/03/86	435.41	132.71	0.00	SOLINST #2
4	9	0	01/04/86	435.55	132.76	0.00	SOLINST #2
4	16	15	01/04/86	435.67	132.79	0.00	SOLINST #2
4	18	4	01/04/86	435.70	132.80	0.00	SOLINST #2
4	20	8	01/04/86	435.73	132.81	0.00	SOLINST #2
4	22	3	01/04/86	435.75	132.82	0.00	SOLINST #2
4	23	41	01/04/86	435.78	132.83	0.00	SOLINST #2
5	9	15	01/05/86	435.93	132.87	0.00	SOLINST #2
6	10	16	01/06/86	436.28	132.98	0.00	SOLINST #2
6	14	40	01/06/86	436.35	133.00	0.00	SOLINST #2
7	9	30	01/07/86	436.61	133.08	0.00	SOLINST #2
8	9	35	01/08/86	436.95	133.18	0.00	SOLINST #2
8	15	30	01/08/86	437.03	133.21	0.00	SOLINST #2
8	16	15	01/08/86	437.05	133.21	0.00	SOLINST #2
8	18	5	01/08/86	437.08	133.22	0.00	SOLINST #2
8	20	11	01/08/86	437.10	133.23	0.00	SOLINST #2
8	22	2	01/08/86	437.13	133.24	0.00	SOLINST #2
8	23	43	01/08/86	437.15	133.24	0.00	SOLINST #2
9	9	13	01/09/86	437.26	133.28	0.00	SOLINST #2
9	13	53	01/09/86	437.32	133.30	0.00	SOLINST #2
9	16	15	01/09/86	437.37	133.31	0.00	SOLINST #2
9	18	4	01/09/86	437.39	133.32	0.00	SOLINST #2
9	20	19	01/09/86	437.41	133.32	0.00	SOLINST #2
9	22	1	01/09/86	437.43	133.33	0.00	SOLINST #2
9	23	43	01/09/86	437.46	133.34	0.00	SOLINST #2
10	9	24	01/10/86	437.58	133.37	0.00	SOLINST #2
10	15	11	01/10/86	437.65	133.40	0.00	SOLINST #2
11	10	1	01/11/86	437.89	133.47	0.00	SOLINST #2
11	15	52	01/11/86	437.97	133.49	0.00	SOLINST #2
12	9	48	01/12/86	438.17	133.55	0.00	SOLINST #2
12	14	4	01/12/86	438.21	133.57	0.00	SOLINST #2
13	10	34	01/13/86	438.35	133.61	0.00	SOLINST #2
13	14	47	01/13/86	438.40	133.62	0.00	SOLINST #2
14	9	38	01/14/86	438.70	133.72	0.00	SOLINST #2
14	15	0	01/14/86	438.75	133.73	0.00	SOLINST #2
15	8	49	01/15/86	438.94	133.79	0.00	SOLINST #2
15	16	1	01/15/86	439.01	133.81	0.00	SOLINST #2

TABLE A1-1 (Continued)
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL H-1

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
16	9	4	01/16/86	439.17	133.86	0.00	SOLINST #2
16	16	22	01/16/86	439.24	133.88	0.00	SOLINST #2
17	8	45	01/17/86	439.39	133.93	0.00	SOLINST #2
17	16	14	01/17/86	439.46	133.95	0.00	SOLINST #2
18	9	15	01/18/86	439.63	134.00	0.00	SOLINST #2
18	15	47	01/18/86	439.68	134.01	0.00	SOLINST #2
19	10	14	01/19/86	439.81	134.05	0.00	SOLINST #2
19	14	37	01/19/86	439.87	134.07	0.00	SOLINST #2
20	9	41	01/20/86	440.01	134.12	0.00	SOLINST #2
20	15	20	01/20/86	440.06	134.13	0.00	SOLINST #2
21	11	52	01/21/86	440.20	134.17	0.00	SOLINST #2
21	16	40	01/21/86	440.24	134.19	0.00	SOLINST #2
22	10	33	01/22/86	440.38	134.23	0.00	SOLINST #2
22	15	53	01/22/86	440.42	134.24	0.00	SOLINST #2
23	10	24	01/23/86	440.54	134.28	0.00	SOLINST #2
23	15	26	01/23/86	440.57	134.29	0.00	SOLINST #2
24	11	7	01/24/86	440.70	134.33	0.00	SOLINST #2
24	15	33	01/24/86	440.72	134.33	0.00	SOLINST #2
25	10	50	01/25/86	440.82	134.36	0.00	SOLINST #2
25	15	12	01/25/86	440.85	134.37	0.00	SOLINST #2
26	9	30	01/26/86	440.95	134.40	0.00	SOLINST #2
27	9	20	01/27/86	441.06	134.44	0.00	SOLINST #2
28	9	19	01/28/86	441.20	134.48	0.00	SOLINST #2
28	15	36	01/28/86	441.23	134.49	0.00	SOLINST #2
29	9	0	01/29/86	441.31	134.51	0.00	SOLINST #2
29	15	47	01/29/86	441.34	134.52	0.00	SOLINST #2
30	9	4	01/30/86	441.40	134.54	0.00	SOLINST #2
30	15	48	01/30/86	441.44	134.55	0.00	SOLINST #2
31	9	26	01/31/86	441.50	134.57	0.00	SOLINST #2
31	15	10	01/31/86	441.54	134.58	0.00	SOLINST #2
32	13	12	02/01/86	441.58	134.59	0.00	SOLINST #2
33	9	22	02/02/86	441.65	134.61	0.00	SOLINST #2
34	10	45	02/03/86	441.71	134.63	0.00	SOLINST #2
34	15	11	02/03/86	441.73	134.64	0.00	SOLINST #2
35	9	29	02/04/86	441.77	134.65	0.00	SOLINST #2
36	9	20	02/05/86	441.83	134.67	0.00	SOLINST #2
36	14	45	02/05/86	441.83	134.67	0.00	SOLINST #2
37	9	34	02/06/86	441.86	134.68	0.00	SOLINST #2
37	15	30	02/06/86	441.88	134.69	0.00	SOLINST #2
38	9	33	02/07/86	441.90	134.69	0.00	SOLINST #2
38	15	12	02/07/86	441.90	134.69	0.00	SOLINST #2
39	9	57	02/08/86	441.92	134.70	0.00	SOLINST #2
39	13	55	02/08/86	441.92	134.70	0.00	SOLINST #2

TABLE A1-1 (Continued)
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL H-1

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
40	10	30	02/09/86	441.94	134.70	0.00	SOLINST #2
41	10	5	02/10/86	441.96	134.71	0.00	SOLINST #2
41	14	58	02/10/86	441.97	134.71	0.00	SOLINST #2
42	10	29	02/11/86	441.98	134.72	0.00	SOLINST #2
42	15	18	02/11/86	441.98	134.72	0.00	SOLINST #2
43	9	14	02/12/86	441.99	134.72	0.00	SOLINST #2
43	16	32	02/12/86	441.99	134.72	0.00	SOLINST #2
44	9	6	02/13/86	441.99	134.72	0.00	SOLINST #2
44	16	28	02/13/86	442.00	134.72	0.00	SOLINST #2
46	11	26	02/15/86	442.00	134.72	0.00	SOLINST #2
48	2	17	02/17/86	441.98	134.72	0.00	SOLINST #2
48	9	37	02/17/86	441.99	134.72	0.00	SOLINST #2
49	8	15	02/18/86	441.98	134.72	0.00	SOLINST #2
49	15	0	02/18/86	441.98	134.72	0.00	SOLINST #2
50	9	35	02/19/86	441.95	134.71	0.00	SOLINST #2
50	15	35	02/19/86	441.95	134.71	0.00	SOLINST #2
51	9	40	02/20/86	441.93	134.70	0.00	SOLINST #2
52	9	46	02/21/86	441.91	134.69	0.00	SOLINST #2
54	11	0	02/23/86	441.84	134.67	0.00	SOLINST #2
55	9	49	02/24/86	441.81	134.66	0.00	SOLINST #2
57	9	20	02/26/86	441.72	134.64	0.00	SOLINST #2
57	15	45	02/26/86	441.69	134.63	0.00	SOLINST #2
59	8	17	02/28/86	441.60	134.60	0.00	SOLINST #2
61	12	0	03/02/86	441.46	134.56	0.00	SOLINST #2
62	9	50	03/03/86	441.38	134.53	0.00	SOLINST #2
62	16	20	03/03/86	441.36	134.53	0.00	SOLINST #2
63	10	15	03/04/86	441.32	134.51	0.00	SOLINST #2
64	9	0	03/05/86	441.25	134.49	0.00	SOLINST #2
65	10	0	03/06/86	441.16	134.47	0.00	SOLINST #2
66	10	40	03/07/86	441.07	134.44	0.00	SOLINST #2
68	10	5	03/09/86	440.89	134.38	0.00	SOLINST #2
69	9	10	03/10/86	440.80	134.36	0.00	SOLINST #2
70	11	30	03/11/86	440.68	134.32	0.00	SOLINST #2
71	8	29	03/12/86	440.59	134.29	0.00	SOLINST #2
73	8	29	03/14/86	440.37	134.22	0.00	SOLINST #2
74	9	0	03/15/86	440.26	134.19	0.00	SOLINST #2
75	10	0	03/16/86	440.14	134.15	0.00	SOLINST #2
76	9	0	03/17/86	440.03	134.12	0.00	SOLINST #2
76	14	46	03/17/86	440.00	134.11	0.00	SOLINST #2
78	8	41	03/19/86	439.81	134.05	0.00	SOLINST #2
80	8	45	03/21/86	439.58	133.98	0.00	SOLINST #2
82	8	55	03/23/86	439.35	133.91	0.00	SOLINST #2
83	9	0	03/24/86	439.22	133.87	0.00	SOLINST #2

TABLE A1-1 (Continued)
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL H-1

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
85	9	0	03/26/86	438.97	133.80	0.00	SOLINST #2
86	8	45	03/27/86	438.86	133.76	0.00	SOLINST #2
88	10	10	03/29/86	438.58	133.68	0.00	SOLINST #2
90	9	30	03/31/86	438.31	133.60	0.00	SOLINST #2
92	9	16	04/02/86	438.07	133.52	0.00	SOLINST #2
94	12	57	04/04/86	437.70	133.41	0.00	SOLINST #2
95	9	25	04/05/86	437.58	133.37	0.00	SOLINST #2
96	9	10	04/06/86	437.44	133.33	0.00	SOLINST #2
97	9	40	04/07/86	437.30	133.29	0.00	SOLINST #2
97	15	8	04/07/86	437.26	133.28	0.00	SOLINST #2
100	9	0	04/10/86	436.87	133.16	0.00	SOLINST #2
102	12	35	04/12/86	436.53	133.05	0.00	SOLINST #2
104	9	0	04/14/86	436.25	132.97	0.00	SOLINST #2
111	9	0	04/21/86	435.25	132.66	0.00	SOLINST #2

TABLE A1-2
 WATER-LEVEL MEASUREMENTS
 FOR THE MAGENTA DOLOMITE
 IN WELL H-1

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
305	13	10	11/01/85	274.74	83.74	0.04	IRON HORSE
306	8	42	11/02/85	274.80	83.76	0.04	IRON HORSE
307	9	8	11/03/85	274.84	83.77	0.03	IRON HORSE
308	8	10	11/04/85	274.90	83.79	0.04	IRON HORSE
309	15	30	11/05/85	274.93	83.80	0.03	IRON HORSE
310	8	30	11/06/85	274.97	83.81	0.04	IRON HORSE
311	8	45	11/07/85	274.80	83.76	0.03	IRON HORSE
312	9	59	11/08/85	274.90	83.79	0.04	IRON HORSE
313	9	5	11/09/85	274.87	83.78	0.02	IRON HORSE
314	9	15	11/10/85	274.93	83.80	0.03	IRON HORSE
315	8	40	11/11/85	274.93	83.80	0.04	IRON HORSE
316	15	17	11/12/85	274.87	83.78	0.03	IRON HORSE
317	13	52	11/13/85	274.97	83.81	0.03	IRON HORSE
318	8	36	11/14/85	274.97	83.81	0.03	IRON HORSE
319	16	15	11/15/85	274.97	83.81	0.03	IRON HORSE
320	8	50	11/16/85	274.97	83.81	0.03	IRON HORSE
321	8	50	11/17/85	274.97	83.81	0.03	IRON HORSE
322	8	30	11/18/85	274.93	83.80	0.04	IRON HORSE
323	9	4	11/19/85	274.97	83.81	0.04	IRON HORSE
324	8	59	11/20/85	275.10	83.85	0.04	IRON HORSE
325	9	0	11/21/85	275.10	83.85	0.04	IRON HORSE
326	8	30	11/22/85	275.13	83.86	0.04	IRON HORSE
327	9	26	11/23/85	274.97	83.81	0.04	IRON HORSE
329	9	32	11/25/85	274.80	83.76	0.04	IRON HORSE
330	10	14	11/26/85	274.90	83.79	0.04	IRON HORSE
331	9	52	11/27/85	274.93	83.80	0.03	IRON HORSE
333	8	33	11/29/85	274.67	83.72	0.03	IRON HORSE
334	8	47	11/30/85	274.54	83.68	0.04	IRON HORSE
335	10	35	12/01/85	274.44	83.65	0.00	IRON HORSE
336	8	45	12/02/85	274.74	83.74	0.04	IRON HORSE
339	8	50	12/05/85	274.87	83.78	0.04	IRON HORSE
340	12	38	12/06/85	274.77	83.75	0.04	IRON HORSE
342	10	24	12/08/85	274.90	83.79	0.04	IRON HORSE
343	10	22	12/09/85	274.84	83.77	0.03	IRON HORSE
344	10	13	12/10/85	274.87	83.78	0.03	IRON HORSE
345	10	36	12/11/85	274.93	83.80	0.03	IRON HORSE
346	10	10	12/12/85	275.03	83.83	0.03	IRON HORSE
347	8	41	12/13/85	275.07	83.84	0.03	IRON HORSE
349	8	50	12/15/85	274.97	83.81	0.03	IRON HORSE
350	8	45	12/16/85	275.03	83.83	0.04	IRON HORSE
351	8	30	12/17/85	275.00	83.82	0.03	IRON HORSE
353	8	58	12/19/85	274.97	83.81	0.03	IRON HORSE
354	10	52	12/20/85	275.03	83.83	0.04	IRON HORSE

TABLE A1-2 (Continued)
 WATER-LEVEL MEASUREMENTS
 FOR THE MAGENTA DOLOMITE
 IN WELL H-1

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
355	10	55	12/21/85	275.00	83.82	0.08	IRON HORSE
356	9	20	12/22/85	275.03	83.83	0.04	IRON HORSE
357	13	35	12/23/85	275.00	83.82	0.05	IRON HORSE
358	12	55	12/24/85	274.97	83.81	0.05	IRON HORSE
360	10	3	12/26/85	275.07	83.84	0.04	IRON HORSE
361	9	15	12/27/85	275.03	83.83	0.04	IRON HORSE
363	8	57	12/29/85	275.00	83.82	0.03	IRON HORSE
365	8	30	12/31/85	274.97	83.81	0.03	IRON HORSE
4	8	46	01/04/86	275.00	83.82	0.05	IRON HORSE
6	10	1	01/06/86	275.07	83.84	0.04	IRON HORSE
7	9	25	01/07/86	275.03	83.83	0.05	IRON HORSE
8	9	25	01/08/86	275.00	83.82	0.04	IRON HORSE
9	9	27	01/09/86	275.20	83.88	0.05	IRON HORSE
10	9	20	01/10/86	275.30	83.91	0.03	IRON HORSE
11	9	56	01/11/86	275.26	83.90	0.03	IRON HORSE
13	10	29	01/13/86	275.23	83.89	0.03	IRON HORSE
14	9	33	01/14/86	275.23	83.89	0.04	IRON HORSE
15	8	59	01/15/86	275.26	83.90	0.03	IRON HORSE
16	9	0	01/16/86	275.23	83.89	0.04	IRON HORSE
17	8	40	01/17/86	275.23	83.89	0.03	IRON HORSE
18	9	11	01/18/86	274.80	83.76	0.04	IRON HORSE
20	9	36	01/20/86	274.84	83.77	0.04	IRON HORSE
21	11	48	01/21/86	274.80	83.76	0.03	IRON HORSE
22	10	29	01/22/86	274.97	83.81	0.03	IRON HORSE
23	10	20	01/23/86	275.16	83.87	0.03	IRON HORSE
24	11	4	01/24/86	275.10	83.85	0.03	IRON HORSE
25	10	43	01/25/86	275.13	83.86	0.04	IRON HORSE
26	9	20	01/26/86	275.07	83.84	0.04	IRON HORSE
28	9	12	01/28/86	275.20	83.88	0.03	IRON HORSE
29	9	9	01/29/86	275.23	83.89	0.03	IRON HORSE
30	9	0	01/30/86	275.26	83.90	0.03	IRON HORSE
31	9	32	01/31/86	275.23	83.89	0.03	IRON HORSE
33	9	14	02/02/86	275.20	83.88	0.03	IRON HORSE
34	10	40	02/03/86	275.23	83.89	0.03	IRON HORSE
35	9	25	02/04/86	275.20	83.88	0.03	IRON HORSE
36	9	16	02/05/86	275.20	83.88	0.03	IRON HORSE
37	9	31	02/06/86	275.16	83.87	0.03	IRON HORSE
38	9	39	02/07/86	275.20	83.88	0.03	IRON HORSE
39	9	51	02/08/86	275.16	83.87	0.03	IRON HORSE
42	10	24	02/11/86	275.33	83.92	0.03	IRON HORSE
44	9	1	02/13/86	275.36	83.93	0.03	IRON HORSE
46	11	21	02/15/86	275.30	83.91	0.03	IRON HORSE
50	9	30	02/19/86	275.33	83.92	0.03	IRON HORSE

TABLE A1-2 (Continued)
 WATER-LEVEL MEASUREMENTS
 FOR THE MAGENTA DOLOMITE
 IN WELL H-1

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
52	9	38	02/21/86	275.30	83.91	0.03	IRON HORSE
55	9	57	02/24/86	275.43	83.95	0.02	IRON HORSE
57	9	30	02/26/86	275.46	83.96	0.03	IRON HORSE
62	9	45	03/03/86	275.49	83.97	0.03	IRON HORSE
64	8	52	03/05/86	275.43	83.95	0.03	IRON HORSE
66	12	30	03/07/86	275.49	83.97	0.04	IRON HORSE
69	9	50	03/10/86	275.46	83.96	0.04	IRON HORSE
71	8	20	03/12/86	275.43	83.95	0.03	IRON HORSE
73	8	26	03/14/86	275.36	83.93	0.03	IRON HORSE
76	9	5	03/17/86	275.36	83.93	0.04	IRON HORSE
78	8	30	03/19/86	275.46	83.96	0.04	IRON HORSE
80	8	40	03/21/86	275.56	83.99	0.04	IRON HORSE
83	9	55	03/24/86	275.56	83.99	0.04	IRON HORSE
85	10	12	03/26/86	275.59	84.00	0.03	IRON HORSE

TABLE A1-3
 WATER-LEVEL MEASUREMENTS
 FOR THE MAGENTA DOLOMITE
 IN WELL H-2b1

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
305	8	46	11/01/85	252.07	76.83	0.02	IRON HORSE
306	9	24	11/02/85	252.10	76.84	0.02	IRON HORSE
309	8	50	11/05/85	252.07	76.83	0.03	IRON HORSE
310	8	40	11/06/85	252.07	76.83	0.03	IRON HORSE
311	8	50	11/07/85	252.07	76.83	0.02	IRON HORSE
314	9	21	11/10/85	252.03	76.82	0.03	IRON HORSE
316	8	54	11/12/85	251.97	76.80	0.03	IRON HORSE
317	8	37	11/13/85	251.97	76.80	0.03	IRON HORSE
318	8	58	11/14/85	251.97	76.80	0.03	IRON HORSE
319	9	5	11/15/85	251.94	76.79	0.03	IRON HORSE
320	9	20	11/16/85	252.00	76.81	0.03	IRON HORSE
321	9	15	11/17/85	252.00	76.81	0.03	IRON HORSE
325	9	14	11/21/85	253.25	77.19	0.04	IRON HORSE
326	8	40	11/22/85	253.02	77.12	0.05	IRON HORSE
327	9	40	11/23/85	251.97	76.80	0.04	IRON HORSE
329	9	49	11/25/85	251.94	76.79	0.03	IRON HORSE
331	10	18	11/27/85	252.03	76.82	0.05	IRON HORSE
333	8	53	11/29/85	252.00	76.81	0.02	IRON HORSE
334	9	8	11/30/85	252.00	76.81	0.03	IRON HORSE
336	9	0	12/02/85	252.00	76.81	0.06	IRON HORSE
339	10	25	12/05/85	252.00	76.81	0.04	IRON HORSE
342	10	48	12/08/85	252.03	76.82	0.04	IRON HORSE
343	10	37	12/09/85	251.94	76.79	0.03	IRON HORSE
345	10	46	12/11/85	252.03	76.82	0.03	IRON HORSE
347	9	0	12/13/85	252.07	76.83	0.03	IRON HORSE
349	14	50	12/15/85	251.97	76.80	0.03	IRON HORSE
350	9	10	12/16/85	252.00	76.81	0.04	IRON HORSE
351	9	45	12/17/85	251.94	76.79	0.04	IRON HORSE
352	9	24	12/18/85	252.03	76.82	0.04	IRON HORSE
358	12	43	12/24/85	252.00	76.81	0.00	IRON HORSE
361	9	40	12/27/85	252.03	76.82	0.03	IRON HORSE
363	9	11	12/29/85	252.00	76.81	0.04	IRON HORSE
365	8	57	12/31/85	252.07	76.83	0.03	IRON HORSE
2	8	34	01/02/86	252.00	76.81	0.04	IRON HORSE
4	9	50	01/04/86	251.97	76.80	0.04	IRON HORSE
6	11	22	01/06/86	252.00	76.81	0.04	IRON HORSE
7	9	41	01/07/86	252.00	76.81	0.05	IRON HORSE
8	9	45	01/08/86	252.03	76.82	0.05	IRON HORSE
9	9	45	01/09/86	252.13	76.85	0.01	IRON HORSE
10	9	35	01/10/86	252.10	76.84	0.02	IRON HORSE
11	10	50	01/11/86	252.03	76.82	0.02	IRON HORSE
13	10	48	01/13/86	252.03	76.82	0.02	IRON HORSE
16	9	14	01/16/86	252.03	76.82	0.03	IRON HORSE

TABLE A1-3 (Continued)
 WATER-LEVEL MEASUREMENTS
 FOR THE MAGENTA DOLOMITE
 IN WELL H-2b1

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
18	9	31	01/18/86	251.64	76.70	0.03	IRON HORSE
20	10	6	01/20/86	251.64	76.70	0.03	IRON HORSE
22	10	42	01/22/86	251.87	76.77	0.03	IRON HORSE
24	11	20	01/24/86	251.87	76.77	0.03	IRON HORSE
25	10	55	01/25/86	251.90	76.78	0.03	IRON HORSE
27	9	29	01/27/86	252.03	76.82	0.03	IRON HORSE
29	10	47	01/29/86	251.97	76.80	0.03	IRON HORSE
31	9	40	01/31/86	251.94	76.79	0.03	IRON HORSE
33	10	16	02/02/86	252.00	76.81	0.04	IRON HORSE
34	10	54	02/03/86	252.03	76.82	0.03	IRON HORSE
36	9	30	02/05/86	252.07	76.83	0.03	IRON HORSE
38	10	32	02/07/86	252.03	76.82	0.03	IRON HORSE
39	10	4	02/08/86	252.00	76.81	0.04	IRON HORSE
42	11	24	02/11/86	252.13	76.85	0.03	IRON HORSE
46	11	33	02/15/86	252.17	76.86	0.03	IRON HORSE
50	10	15	02/19/86	252.10	76.84	0.03	IRON HORSE
52	10	0	02/21/86	252.13	76.85	0.03	IRON HORSE
57	9	55	02/26/86	252.07	76.83	0.04	IRON HORSE
62	10	25	03/03/86	252.10	76.84	0.03	IRON HORSE
64	9	12	03/05/86	252.13	76.85	0.02	IRON HORSE
66	12	44	03/07/86	252.07	76.83	0.03	IRON HORSE
69	10	14	03/10/86	252.10	76.84	0.02	IRON HORSE
71	9	34	03/12/86	252.03	76.82	0.02	IRON HORSE
73	8	40	03/14/86	252.07	76.83	0.02	IRON HORSE
76	9	40	03/17/86	252.03	76.82	0.02	IRON HORSE
78	9	44	03/19/86	252.10	76.84	0.03	IRON HORSE
80	8	55	03/21/86	252.03	76.82	0.03	IRON HORSE
83	9	25	03/24/86	252.07	76.83	0.02	IRON HORSE
85	10	19	03/26/86	252.03	76.82	0.03	IRON HORSE

WATER-LEVEL MEASUREMENTS
FOR THE CULEBRA DOLOMITE
IN WELL H-2b2

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
305	8	54	11/01/85	371.65	113.28	0.03	IRON HORSE
306	9	34	11/02/85	371.75	113.31	0.04	IRON HORSE
307	9	30	11/03/85	371.75	113.31	0.04	IRON HORSE
308	9	23	11/04/85	371.88	113.35	0.02	IRON HORSE
309	8	55	11/05/85	371.78	113.32	0.03	IRON HORSE
310	8	47	11/06/85	371.72	113.30	0.04	IRON HORSE
311	9	0	11/07/85	371.69	113.29	0.05	IRON HORSE
312	10	9	11/08/85	371.69	113.29	0.05	IRON HORSE
313	9	24	11/09/85	371.72	113.30	0.04	IRON HORSE
314	9	33	11/10/85	371.75	113.31	0.04	IRON HORSE
315	8	50	11/11/85	371.88	113.35	0.03	IRON HORSE
316	9	4	11/12/85	371.88	113.35	0.04	IRON HORSE
317	8	50	11/13/85	371.88	113.35	0.04	IRON HORSE
318	9	8	11/14/85	371.92	113.36	0.03	IRON HORSE
319	9	9	11/15/85	371.95	113.37	0.03	IRON HORSE
320	9	32	11/16/85	371.98	113.38	0.03	IRON HORSE
321	9	25	11/17/85	372.01	113.39	0.04	IRON HORSE
322	8	45	11/18/85	371.92	113.36	0.04	IRON HORSE
323	8	50	11/19/85	372.18	113.44	0.05	IRON HORSE
324	9	0	11/20/85	372.60	113.57	0.05	IRON HORSE
325	9	24	11/21/85	372.54	113.55	0.04	IRON HORSE
326	8	47	11/22/85	372.51	113.54	0.06	IRON HORSE
327	9	48	11/23/85	372.44	113.52	0.04	IRON HORSE
328	11	7	11/24/85	372.38	113.50	0.04	IRON HORSE
329	9	50	11/25/85	372.51	113.54	0.04	IRON HORSE
330	10	26	11/26/85	372.44	113.52	0.03	IRON HORSE
331	10	11	11/27/85	372.80	113.63	0.04	IRON HORSE
333	8	45	11/29/85	372.83	113.64	0.06	IRON HORSE
334	8	57	11/30/85	372.90	113.66	0.02	IRON HORSE
336	9	8	12/02/85	373.59	113.87	0.02	IRON HORSE
337	15	15	12/03/85	373.49	113.84	0.03	IRON HORSE
338	15	50	12/04/85	373.69	113.90	0.04	IRON HORSE
339	10	35	12/05/85	373.92	113.97	0.05	IRON HORSE
340	12	45	12/06/85	373.98	113.99	0.03	IRON HORSE
341	13	58	12/07/85	373.92	113.97	0.05	IRON HORSE
342	10	41	12/08/85	373.92	113.97	0.05	IRON HORSE
344	10	30	12/10/85	374.08	114.02	0.04	IRON HORSE
346	10	25	12/12/85	374.41	114.12	0.05	IRON HORSE
348	15	30	12/14/85	375.00	114.30	0.05	IRON HORSE
349	9	1	12/15/85	375.00	114.30	0.04	IRON HORSE
350	9	17	12/16/85	375.16	114.35	0.05	IRON HORSE
351	9	34	12/17/85	375.36	114.41	0.04	IRON HORSE
352	9	40	12/18/85	375.66	114.50	0.05	IRON HORSE

TABLE A1-4 (Continued)
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL H-2b2

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
353	9	11	12/19/85	375.75	114.53	0.04	IRON HORSE
354	11	8	12/20/85	375.85	114.56	0.05	IRON HORSE
355	14	6	12/21/85	375.98	114.60	0.02	IRON HORSE
356	12	45	12/22/85	375.89	114.57	0.04	IRON HORSE
357	13	52	12/23/85	376.08	114.63	0.04	IRON HORSE
358	12	55	12/24/85	376.25	114.68	0.08	IRON HORSE
360	10	25	12/26/85	376.51	114.76	0.05	IRON HORSE
361	9	53	12/27/85	376.57	114.78	0.05	IRON HORSE
362	10	1	12/28/85	376.90	114.88	0.04	IRON HORSE
363	9	17	12/29/85	376.80	114.85	0.03	IRON HORSE
364	10	13	12/30/85	377.10	114.94	0.03	IRON HORSE
365	9	8	12/31/85	377.20	114.97	0.03	IRON HORSE
2	8	44	01/02/86	377.62	115.10	0.04	IRON HORSE
3	10	50	01/03/86	377.79	115.15	0.03	IRON HORSE
4	10	8	01/04/86	378.08	115.24	0.04	IRON HORSE
5	15	39	01/05/86	378.25	115.29	0.04	IRON HORSE
6	11	12	01/06/86	378.08	115.24	0.05	IRON HORSE
7	9	50	01/07/86	378.41	115.34	0.05	IRON HORSE
8	10	13	01/08/86	378.74	115.44	0.06	IRON HORSE
9	9	53	01/09/86	378.94	115.50	0.06	IRON HORSE
10	9	42	01/10/86	378.94	115.50	0.04	IRON HORSE
11	10	57	01/11/86	378.94	115.50	0.04	IRON HORSE
12	9	58	01/12/86	378.97	115.51	0.03	IRON HORSE
13	14	56	01/13/86	379.20	115.58	0.04	IRON HORSE
14	9	48	01/14/86	379.13	115.56	0.03	IRON HORSE
15	11	27	01/15/86	379.10	115.55	0.03	IRON HORSE
16	9	20	01/16/86	379.20	115.58	0.03	IRON HORSE
17	9	24	01/17/86	379.33	115.62	0.04	IRON HORSE
18	9	39	01/18/86	378.71	115.43	0.03	IRON HORSE
19	10	45	01/19/86	378.77	115.45	0.04	IRON HORSE
20	10	12	01/20/86	378.94	115.50	0.03	IRON HORSE
21	12	1	01/21/86	379.07	115.54	0.04	IRON HORSE
22	10	50	01/22/86	379.63	115.71	0.04	IRON HORSE
23	10	35	01/23/86	379.63	115.71	0.04	IRON HORSE
24	11	26	01/24/86	379.53	115.68	0.04	IRON HORSE
25	11	12	01/25/86	379.72	115.74	0.05	IRON HORSE
26	9	40	01/26/86	379.76	115.75	0.06	IRON HORSE
27	9	31	01/27/86	379.92	115.80	0.05	IRON HORSE
28	9	28	01/28/86	379.76	115.75	0.05	IRON HORSE
29	10	52	01/29/86	379.79	115.76	0.04	IRON HORSE
30	9	11	01/30/86	379.92	115.80	0.04	IRON HORSE
31	9	45	01/31/86	379.76	115.75	0.04	IRON HORSE
32	14	7	02/01/86	379.79	115.76	0.06	IRON HORSE

TABLE A1-4 (Continued)
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL H-2b2

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
33	10	34	02/02/86	379.92	115.80	0.05	IRON HORSE
34	10	59	02/03/86	379.79	115.76	0.04	IRON HORSE
35	9	34	02/04/86	379.76	115.75	0.04	IRON HORSE
36	9	36	02/05/86	379.82	115.77	0.04	IRON HORSE
37	9	47	02/06/86	379.86	115.78	0.04	IRON HORSE
38	10	38	02/07/86	379.86	115.78	0.04	IRON HORSE
39	10	18	02/08/86	379.99	115.82	0.05	IRON HORSE
40	10	58	02/09/86	380.12	115.86	0.05	IRON HORSE
41	10	16	02/10/86	380.15	115.87	0.05	IRON HORSE
42	11	29	02/11/86	380.22	115.89	0.05	IRON HORSE
43	10	2	02/12/86	380.28	115.91	0.04	IRON HORSE
44	11	23	02/13/86	380.22	115.89	0.04	IRON HORSE
46	11	43	02/15/86	379.86	115.78	0.04	IRON HORSE
48	14	37	02/17/86	379.92	115.80	0.00	IRON HORSE
50	10	0	02/19/86	379.89	115.79	0.04	IRON HORSE
52	10	7	02/21/86	379.99	115.82	0.04	IRON HORSE
55	10	6	02/24/86	379.99	115.82	0.00	IRON HORSE
57	9	50	02/26/86	379.86	115.78	0.04	IRON HORSE
59	8	30	02/28/86	379.99	115.82	0.05	IRON HORSE
62	10	37	03/03/86	379.79	115.76	0.05	IRON HORSE
64	9	25	03/05/86	379.69	115.73	0.04	IRON HORSE
66	10	56	03/07/86	379.53	115.68	0.04	IRON HORSE
71	9	44	03/12/86	379.33	115.62	0.05	IRON HORSE
73	8	50	03/14/86	379.27	115.60	0.05	IRON HORSE
76	9	30	03/17/86	379.17	115.57	0.04	IRON HORSE
78	9	53	03/19/86	379.27	115.60	0.05	IRON HORSE
80	9	10	03/21/86	379.36	115.63	0.05	IRON HORSE
83	9	32	03/24/86	379.10	115.55	0.05	IRON HORSE
85	10	30	03/26/86	379.00	115.52	0.04	IRON HORSE
88	10	30	03/29/86	378.84	115.47	0.04	IRON HORSE
90	9	40	03/31/86	378.54	115.38	0.04	IRON HORSE
92	10	16	04/02/86	378.44	115.35	0.04	IRON HORSE
95	9	40	04/05/86	390.42	119.00	0.04	IRON HORSE
97	9	45	04/07/86	424.48	129.38	0.04	IRON HORSE
100	10	6	04/10/86	420.14	128.06	0.03	IRON HORSE
102	11	45	04/12/86	448.82	136.80	0.06	IRON HORSE
104	9	8	04/14/86	447.51	136.40	0.04	IRON HORSE
111	9	45	04/21/86	447.90	136.52	0.06	IRON HORSE

TABLE A1-5
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL H-4a

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
305	9	30	11/01/85	342.13	104.28	0.03	IRON HORSE
306	10	30	11/02/85	342.29	104.33	0.04	IRON HORSE
308	9	30	11/04/85	342.36	104.35	0.04	IRON HORSE
309	9	8	11/05/85	342.29	104.33	0.05	IRON HORSE
310	9	0	11/06/85	342.22	104.31	0.04	IRON HORSE
311	9	10	11/07/85	342.42	104.37	0.04	IRON HORSE
312	10	47	11/08/85	342.22	104.31	0.05	IRON HORSE
313	9	59	11/09/85	342.16	104.29	0.05	IRON HORSE
314	9	50	11/10/85	342.29	104.33	0.04	IRON HORSE
315	9	5	11/11/85	342.36	104.35	0.04	IRON HORSE
316	9	52	11/12/85	342.29	104.33	0.04	IRON HORSE
317	9	39	11/13/85	342.22	104.31	0.04	IRON HORSE
318	9	0	11/14/85	342.19	104.30	0.04	IRON HORSE
319	12	20	11/15/85	342.32	104.34	0.04	IRON HORSE
320	9	50	11/16/85	342.32	104.34	0.04	IRON HORSE
321	10	10	11/17/85	342.16	104.29	0.05	IRON HORSE
322	9	0	11/18/85	342.09	104.27	0.05	IRON HORSE
323	9	18	11/19/85	342.32	104.34	0.04	IRON HORSE
324	9	20	11/20/85	342.45	104.38	0.05	IRON HORSE
325	10	0	11/21/85	342.26	104.32	0.04	IRON HORSE
326	9	25	11/22/85	342.36	104.35	0.05	IRON HORSE
327	10	35	11/23/85	342.22	104.31	0.04	IRON HORSE
328	11	36	11/24/85	342.13	104.28	0.04	IRON HORSE
329	10	42	11/25/85	342.13	104.28	0.04	IRON HORSE
330	10	40	11/26/85	342.16	104.29	0.04	IRON HORSE
331	10	52	11/27/85	342.19	104.30	0.06	IRON HORSE
333	9	33	11/29/85	342.09	104.27	0.04	IRON HORSE
334	9	41	11/30/85	342.06	104.26	0.03	IRON HORSE
336	9	24	12/02/85	342.59	104.42	0.06	IRON HORSE
337	15	30	12/03/85	342.32	104.34	0.05	IRON HORSE
338	13	12	12/04/85	342.29	104.33	0.05	IRON HORSE
340	13	9	12/06/85	342.26	104.32	0.04	IRON HORSE
342	11	7	12/08/85	342.32	104.34	0.03	IRON HORSE
343	10	59	12/09/85	342.19	104.30	0.03	IRON HORSE
344	11	4	12/10/85	342.26	104.32	0.03	IRON HORSE
345	11	17	12/11/85	342.52	104.40	0.03	IRON HORSE
346	10	32	12/12/85	342.26	104.32	0.04	IRON HORSE
347	9	47	12/13/85	342.49	104.39	0.04	IRON HORSE
348	10	38	12/14/85	342.62	104.43	0.03	IRON HORSE
349	9	16	12/15/85	342.55	104.41	0.03	IRON HORSE
350	9	55	12/16/85	342.59	104.42	0.04	IRON HORSE
351	10	15	12/17/85	342.55	104.41	0.05	IRON HORSE
352	9	57	12/18/85	342.75	104.47	0.04	IRON HORSE

TABLE A1-5 (Continued)
WATER-LEVEL MEASUREMENTS
FOR THE CULEBRA DOLOMITE
IN WELL H-4a

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
353	9	52	12/19/85	342.52	104.40	0.04	IRON HORSE
354	11	25	12/20/85	342.52	104.40	0.04	IRON HORSE
355	13	36	12/21/85	342.42	104.37	0.05	IRON HORSE
356	10	8	12/22/85	342.39	104.36	0.04	IRON HORSE
357	13	58	12/23/85	342.19	104.30	0.04	IRON HORSE
358	12	10	12/24/85	342.45	104.38	0.08	IRON HORSE
360	11	18	12/26/85	342.29	104.33	0.03	IRON HORSE
361	10	30	12/27/85	342.26	104.32	0.04	IRON HORSE
362	10	19	12/28/85	342.36	104.35	0.05	IRON HORSE
363	9	32	12/29/85	342.42	104.37	0.04	IRON HORSE
364	11	30	12/30/85	342.26	104.32	0.03	IRON HORSE
365	10	0	12/31/85	342.42	104.37	0.04	IRON HORSE
2	10	18	01/02/86	342.36	104.35	0.06	IRON HORSE
3	15	21	01/03/86	342.19	104.30	0.05	IRON HORSE
4	10	41	01/04/86	342.32	104.34	0.04	IRON HORSE
5	15	27	01/05/86	342.45	104.38	0.06	IRON HORSE
6	11	46	01/06/86	342.45	104.38	0.04	IRON HORSE
7	10	37	01/07/86	342.75	104.47	0.05	IRON HORSE
8	11	20	01/08/86	342.62	104.43	0.05	IRON HORSE
9	10	28	01/09/86	342.65	104.44	0.06	IRON HORSE
10	10	59	01/10/86	342.65	104.44	0.04	IRON HORSE
11	11	41	01/11/86	342.59	104.42	0.04	IRON HORSE
12	10	39	01/12/86	342.59	104.42	0.06	IRON HORSE
13	11	35	01/13/86	342.55	104.41	0.05	IRON HORSE
14	10	32	01/14/86	342.49	104.39	0.04	IRON HORSE
19	11	14	01/14/86	342.09	104.27	0.05	IRON HORSE
15	12	0	01/15/86	342.32	104.34	0.04	IRON HORSE
16	9	55	01/16/86	342.42	104.37	0.04	IRON HORSE
17	10	0	01/17/86	342.22	104.31	0.05	IRON HORSE
18	10	18	01/18/86	342.09	104.27	0.04	IRON HORSE
20	11	4	01/20/86	341.73	104.16	0.04	IRON HORSE
21	13	10	01/21/86	341.96	104.23	0.04	IRON HORSE
22	11	37	01/22/86	342.49	104.39	0.04	IRON HORSE
23	11	37	01/23/86	342.36	104.35	0.04	IRON HORSE
24	12	31	01/24/86	342.19	104.30	0.04	IRON HORSE
25	11	45	01/25/86	342.55	104.41	0.07	IRON HORSE
26	9	55	01/26/86	342.65	104.44	0.06	IRON HORSE
28	10	18	01/28/86	342.13	104.28	0.04	IRON HORSE
29	11	25	01/29/86	342.19	104.30	0.04	IRON HORSE
30	12	39	01/30/86	342.29	104.33	0.04	IRON HORSE
31	10	15	01/31/86	342.13	104.28	0.04	IRON HORSE
32	14	23	02/01/86	342.36	104.35	0.06	IRON HORSE
33	10	44	02/02/86	342.32	104.34	0.05	IRON HORSE

TABLE A1-5 (Continued)
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL H-4a

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
34	11	29	02/03/86	342.13	104.28	0.04	IRON HORSE
35	10	7	02/04/86	342.03	104.25	0.04	IRON HORSE
36	10	30	02/05/86	342.32	104.34	0.04	IRON HORSE
37	10	58	02/06/86	342.32	104.34	0.04	IRON HORSE
38	11	22	02/07/86	342.29	104.33	0.04	IRON HORSE
39	10	54	02/08/86	342.36	104.35	0.05	IRON HORSE
42	12	35	02/11/86	342.59	104.42	0.04	IRON HORSE
43	10	41	02/12/86	342.68	104.45	0.04	IRON HORSE
44	11	45	02/13/86	342.62	104.43	0.04	IRON HORSE
46	12	13	02/15/86	342.42	104.37	0.03	IRON HORSE
50	10	25	02/19/86	342.36	104.35	0.04	IRON HORSE
52	10	42	02/21/86	342.36	104.35	0.04	IRON HORSE
55	10	38	02/24/86	342.65	104.44	0.04	IRON HORSE
57	10	10	02/26/86	342.59	104.42	0.04	IRON HORSE
62	10	50	03/03/86	342.42	104.37	0.05	IRON HORSE
64	10	0	03/05/86	342.49	104.39	0.05	IRON HORSE
66	13	6	03/07/86	342.55	104.41	0.04	IRON HORSE
71	10	0	03/12/86	342.29	104.33	0.03	IRON HORSE
73	9	25	03/14/86	342.52	104.40	0.04	IRON HORSE
76	10	5	03/17/86	342.26	104.32	0.04	IRON HORSE
78	10	5	03/19/86	342.72	104.46	0.04	IRON HORSE
78	10	11	03/19/86	342.72	104.46	0.03	IRON HORSE
80	9	40	03/21/86	342.81	104.49	0.04	IRON HORSE
83	9	50	03/24/86	342.62	104.43	0.04	IRON HORSE
85	10	48	03/26/86	342.62	104.43	0.04	IRON HORSE
88	10	50	03/29/86	342.49	104.39	0.04	IRON HORSE
90	9	50	03/31/86	342.29	104.33	0.04	IRON HORSE
92	10	28	04/02/86	342.26	104.32	0.05	IRON HORSE
95	10	0	04/05/86	342.42	104.37	0.04	IRON HORSE
97	10	0	04/07/86	342.36	104.35	0.05	IRON HORSE
100	10	39	04/10/86	342.36	104.35	0.04	IRON HORSE
102	12	0	04/12/86	342.52	104.40	0.02	IRON HORSE
104	9	40	04/14/86	342.32	104.34	0.03	IRON HORSE
111	10	0	04/21/86	342.36	104.35	0.04	IRON HORSE

TABLE A1-6
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL H-4b

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
85	10	41	03/26/86	342.78	104.48	0.04	IRON HORSE
100	10	25	04/10/86	342.62	104.43	0.04	IRON HORSE

TABLE A1-7
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL H-5a

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
310	13	10	11/06/85	484.09	147.55	0.04	IRON HORSE
329	12	7	11/25/85	483.53	147.38	0.04	IRON HORSE
337	13	55	12/03/85	483.60	147.40	0.06	IRON HORSE
353	13	37	12/19/85	483.83	147.47	0.05	IRON HORSE
6	13	31	01/06/86	483.14	147.26	0.05	IRON HORSE
14	12	36	01/14/86	483.14	147.26	0.04	IRON HORSE

TABLE A1-8
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL H-5b

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
305	11	18	11/01/85	488.85	149.00	0.04	IRON HORSE
306	12	32	11/02/85	488.88	149.01	0.04	IRON HORSE
308	11	0	11/04/85	488.91	149.02	0.05	IRON HORSE
309	10	20	11/05/85	488.91	149.02	0.04	IRON HORSE
310	11	8	11/06/85	488.88	149.01	0.04	IRON HORSE
311	12	8	11/07/85	489.01	149.05	0.04	IRON HORSE
312	12	33	11/08/85	488.65	148.94	0.06	IRON HORSE
313	11	26	11/09/85	488.81	148.99	0.05	IRON HORSE
314	12	0	11/10/85	488.62	148.93	0.06	IRON HORSE
315	10	50	11/11/85	488.78	148.98	0.05	IRON HORSE
316	11	35	11/12/85	488.75	148.97	0.05	IRON HORSE
317	11	42	11/13/85	488.58	148.92	0.05	IRON HORSE
318	12	46	11/14/85	488.52	148.90	0.04	IRON HORSE
319	14	11	11/15/85	488.55	148.91	0.05	IRON HORSE
320	12	0	11/16/85	488.55	148.91	0.04	IRON HORSE
321	12	38	11/17/85	488.45	148.88	0.05	IRON HORSE
322	10	50	11/18/85	488.42	148.87	0.05	IRON HORSE
323	10	45	11/19/85	488.52	148.90	0.05	IRON HORSE
324	11	0	11/20/85	488.68	148.95	0.06	IRON HORSE
325	11	27	11/21/85	488.45	148.88	0.05	IRON HORSE
326	10	45	11/22/85	488.48	148.89	0.06	IRON HORSE
329	11	55	11/25/85	488.32	148.84	0.05	IRON HORSE
330	13	30	11/26/85	488.42	148.87	0.06	IRON HORSE
331	11	53	11/27/85	488.32	148.84	0.07	IRON HORSE
333	10	47	11/29/85	488.19	148.80	0.07	IRON HORSE
334	10	45	11/30/85	488.22	148.81	0.06	IRON HORSE
336	10	55	12/02/85	488.48	148.89	0.05	IRON HORSE
337	14	8	12/03/85	488.52	148.90	0.05	IRON HORSE
338	14	0	12/04/85	488.48	148.89	0.06	IRON HORSE
340	14	32	12/06/85	488.39	148.86	0.06	IRON HORSE
342	18	0	12/08/85	488.45	148.88	0.07	IRON HORSE
343	13	26	12/09/85	488.09	148.77	0.04	IRON HORSE
344	12	42	12/10/85	488.19	148.80	0.04	IRON HORSE
345	12	38	12/11/85	488.42	148.87	0.04	IRON HORSE
346	11	56	12/12/85	488.35	148.85	0.05	IRON HORSE
347	11	42	12/13/85	488.35	148.85	0.04	IRON HORSE
348	12	35	12/14/85	488.39	148.86	0.06	IRON HORSE
349	12	39	12/15/85	488.62	148.93	0.07	IRON HORSE
350	12	10	12/16/85	488.55	148.91	0.06	IRON HORSE
351	12	42	12/17/85	488.25	148.82	0.07	IRON HORSE
352	12	20	12/18/85	488.42	148.87	0.07	IRON HORSE
353	13	24	12/19/85	488.45	148.88	0.06	IRON HORSE
354	12	29	12/20/85	488.39	148.86	0.08	IRON HORSE

TABLE A1-8 (Continued)
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL H-5b

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
355	12	46	12/21/85	488.39	148.86	0.05	IRON HORSE
356	11	10	12/22/85	488.29	148.83	0.07	IRON HORSE
357	16	39	12/23/85	488.16	148.79	0.05	IRON HORSE
358	10	48	12/24/85	488.12	148.78	0.08	IRON HORSE
360	13	12	12/26/85	488.42	148.87	0.05	IRON HORSE
361	12	20	12/27/85	488.35	148.85	0.06	IRON HORSE
362	12	20	12/28/85	488.32	148.84	0.06	IRON HORSE
363	11	12	12/29/85	488.16	148.79	0.06	IRON HORSE
364	12	41	12/30/85	488.25	148.82	0.07	IRON HORSE
365	12	0	12/31/85	488.02	148.75	0.05	IRON HORSE
2	14	8	01/02/86	488.09	148.77	0.06	IRON HORSE
3	14	30	01/03/86	487.80	148.68	0.08	IRON HORSE
5	14	15	01/05/86	487.80	148.68	0.07	IRON HORSE
6	13	23	01/06/86	487.80	148.68	0.08	IRON HORSE
7	11	54	01/07/86	487.89	148.71	0.07	IRON HORSE
8	13	11	01/08/86	487.83	148.69	0.07	IRON HORSE
9	11	43	01/09/86	487.80	148.68	0.08	IRON HORSE
10	13	19	01/10/86	487.86	148.70	0.04	IRON HORSE
11	13	58	01/11/86	487.89	148.71	0.05	IRON HORSE
12	11	52	01/12/86	487.86	148.70	0.07	IRON HORSE
13	13	14	01/13/86	487.89	148.71	0.04	IRON HORSE
14	12	22	01/14/86	487.89	148.71	0.04	IRON HORSE
15	14	2	01/15/86	487.89	148.71	0.04	IRON HORSE
16	11	2	01/16/86	487.86	148.70	0.05	IRON HORSE
17	14	34	01/17/86	486.71	148.35	0.05	IRON HORSE
18	11	27	01/18/86	487.24	148.51	0.05	IRON HORSE
19	12	46	01/19/86	487.43	148.57	0.05	IRON HORSE
20	12	48	01/20/86	487.17	148.49	0.04	IRON HORSE
21	14	26	01/21/86	487.50	148.59	0.05	IRON HORSE
22	13	35	01/22/86	487.76	148.67	0.05	IRON HORSE
23	13	24	01/23/86	487.76	148.67	0.05	IRON HORSE
24	13	52	01/24/86	487.70	148.65	0.05	IRON HORSE
25	13	5	01/25/86	487.80	148.68	0.08	IRON HORSE
26	11	21	01/26/86	487.86	148.70	0.06	IRON HORSE
28	12	46	01/28/86	487.66	148.64	0.05	IRON HORSE
29	14	7	01/29/86	487.70	148.65	0.05	IRON HORSE
30	14	5	01/30/86	487.66	148.64	0.05	IRON HORSE
32	12	28	02/02/86	487.73	148.66	0.07	IRON HORSE
34	13	9	02/03/86	487.70	148.65	0.05	IRON HORSE
35	11	15	02/04/86	487.60	148.62	0.05	IRON HORSE
36	12	16	02/05/86	487.66	148.64	0.05	IRON HORSE
37	12	50	02/06/86	487.57	148.61	0.05	IRON HORSE
38	13	15	02/07/86	487.66	148.64	0.05	IRON HORSE

TABLE A1-8 (Continued)
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL H-5b

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
39	12	39	02/08/86	487.73	148.66	0.06	IRON HORSE
41	12	17	02/10/86	487.89	148.71	0.08	IRON HORSE
42	13	59	02/11/86	487.96	148.73	0.05	IRON HORSE
43	14	23	02/12/86	488.02	148.75	0.05	IRON HORSE
44	14	52	02/13/86	487.86	148.70	0.05	IRON HORSE
46	13	23	02/15/86	487.76	148.67	0.05	IRON HORSE
50	12	55	02/19/86	487.60	148.62	0.05	IRON HORSE
52	12	7	02/21/86	487.70	148.65	0.05	IRON HORSE
55	15	7	02/24/86	487.80	148.68	0.08	IRON HORSE
57	12	50	02/26/86	487.70	148.65	0.06	IRON HORSE
62	13	20	03/03/86	487.34	148.54	0.05	IRON HORSE
64	11	10	03/05/86	487.27	148.52	0.04	IRON HORSE
66	14	23	03/07/86	487.34	148.54	0.06	IRON HORSE
71	11	44	03/12/86	487.07	148.46	0.06	IRON HORSE
73	10	34	03/14/86	487.27	148.52	0.05	IRON HORSE
76	11	55	03/17/86	487.20	148.50	0.06	IRON HORSE
78	12	30	03/19/86	487.27	148.52	0.05	IRON HORSE
80	11	35	03/21/86	487.30	148.53	0.05	IRON HORSE
83	13	15	03/24/86	487.20	148.50	0.05	IRON HORSE
85	12	5	03/26/86	487.27	148.52	0.06	IRON HORSE
90	11	45	03/31/86	486.88	148.40	0.05	IRON HORSE
97	12	30	04/07/86	487.01	148.44	0.05	IRON HORSE
104	11	20	04/14/86	487.01	148.44	0.06	IRON HORSE
111	11	45	04/21/86	487.07	148.46	0.04	IRON HORSE

TABLE A1-9
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL H-5c

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
310	13	28	11/06/85	488.02	148.75	0.04	IRON HORSE
329	12	18	11/25/85	487.70	148.65	0.04	IRON HORSE
337	14	27	12/03/85	487.53	148.60	0.06	IRON HORSE
353	13	48	12/19/85	487.60	148.62	0.06	IRON HORSE
6	13	40	01/06/86	487.40	148.56	0.07	IRON HORSE
14	12	47	01/14/86	487.37	148.55	0.04	IRON HORSE
28	12	56	01/28/86	486.91	148.41	0.04	IRON HORSE
44	15	1	02/13/86	487.17	148.49	0.05	IRON HORSE
71	11	36	03/12/86	486.84	148.39	0.06	IRON HORSE
83	13	23	03/24/86	486.98	148.43	0.05	IRON HORSE
100	12	10	04/10/86	486.94	148.42	0.06	IRON HORSE

TABLE A1-10
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL H-6a

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
310	12	25	11/06/85	302.79	92.29	0.04	IRON HORSE
329	13	10	11/25/85	302.82	92.30	0.04	IRON HORSE
346	13	0	12/12/85	303.08	92.38	0.04	IRON HORSE
4	15	10	01/04/86	303.05	92.37	0.03	IRON HORSE
14	13	19	01/14/86	303.25	92.43	0.04	IRON HORSE
28	13	35	01/28/86	302.82	92.30	0.04	IRON HORSE
43	15	16	02/12/86	303.84	92.61	0.04	IRON HORSE
57	15	5	02/26/86	303.48	92.50	0.04	IRON HORSE
71	13	8	03/12/86	303.41	92.48	0.03	IRON HORSE
83	14	30	03/24/86	303.54	92.52	0.04	IRON HORSE
100	13	48	04/10/86	303.67	92.56	0.04	IRON HORSE

TABLE A1-11
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL H-6b

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
305	11	34	11/01/85	303.28	92.44	0.04	IRON HORSE
306	13	13	11/02/85	303.41	92.48	0.03	IRON HORSE
308	11	15	11/04/85	303.54	92.52	0.04	IRON HORSE
309	10	45	11/05/85	303.48	92.50	0.04	IRON HORSE
310	12	1	11/06/85	303.35	92.46	0.04	IRON HORSE
311	12	51	11/07/85	303.41	92.48	0.04	IRON HORSE
312	12	59	11/08/85	303.31	92.45	0.04	IRON HORSE
313	11	52	11/09/85	303.41	92.48	0.03	IRON HORSE
314	12	30	11/10/85	303.38	92.47	0.04	IRON HORSE
315	11	38	11/11/85	303.35	92.46	0.04	IRON HORSE
316	12	48	11/12/85	303.35	92.46	0.04	IRON HORSE
317	12	52	11/13/85	303.41	92.48	0.03	IRON HORSE
318	13	15	11/14/85	303.48	92.50	0.03	IRON HORSE
319	14	42	11/15/85	303.51	92.51	0.03	IRON HORSE
320	12	50	11/16/85	303.35	92.46	0.03	IRON HORSE
321	13	7	11/17/85	303.28	92.44	0.04	IRON HORSE
322	11	20	11/18/85	303.35	92.46	0.04	IRON HORSE
323	11	10	11/19/85	303.61	92.54	0.03	IRON HORSE
324	12	6	11/20/85	303.77	92.59	0.03	IRON HORSE
325	11	55	11/21/85	303.44	92.49	0.04	IRON HORSE
326	11	5	11/22/85	303.67	92.56	0.04	IRON HORSE
327	14	3	11/23/85	303.48	92.50	0.04	IRON HORSE
328	13	55	11/24/85	303.28	92.44	0.04	IRON HORSE
329	13	3	11/25/85	303.31	92.45	0.04	IRON HORSE
331	12	28	11/27/85	303.51	92.51	0.03	IRON HORSE
333	11	25	11/29/85	303.35	92.46	0.04	IRON HORSE
334	11	11	11/30/85	303.44	92.49	0.03	IRON HORSE
336	11	18	12/02/85	303.87	92.62	0.05	IRON HORSE
337	14	40	12/03/85	303.77	92.59	0.04	IRON HORSE
338	14	53	12/04/85	303.71	92.57	0.04	IRON HORSE
339	9	28	12/05/85	303.90	92.63	0.04	IRON HORSE
340	15	6	12/06/85	303.81	92.60	0.05	IRON HORSE
342	18	16	12/08/85	303.90	92.63	0.04	IRON HORSE
343	13	50	12/09/85	303.35	92.46	0.04	IRON HORSE
344	13	4	12/10/85	303.64	92.55	0.04	IRON HORSE
345	13	0	12/11/85	303.84	92.61	0.04	IRON HORSE
346	13	1	12/12/85	303.41	92.48	0.04	IRON HORSE
347	12	0	12/13/85	303.94	92.64	0.03	IRON HORSE
348	14	59	12/14/85	303.97	92.65	0.03	IRON HORSE
349	13	16	12/15/85	303.87	92.62	0.04	IRON HORSE
350	12	53	12/16/85	303.90	92.63	0.03	IRON HORSE
351	13	32	12/17/85	303.84	92.61	0.04	IRON HORSE
352	13	17	12/18/85	303.97	92.65	0.04	IRON HORSE

TABLE A1-11 (Continued)
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL H-6b

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
353	14	25	12/19/85	303.77	92.59	0.04	IRON HORSE
354	12	49	12/20/85	303.84	92.61	0.04	IRON HORSE
355	12	2	12/21/85	303.84	92.61	0.04	IRON HORSE
356	12	8	12/22/85	303.74	92.58	0.04	IRON HORSE
357	16	57	12/23/85	303.67	92.56	0.04	IRON HORSE
358	10	21	12/24/85	303.74	92.58	0.08	IRON HORSE
360	13	37	12/26/85	303.61	92.54	0.05	IRON HORSE
361	12	53	12/27/85	303.64	92.55	0.04	IRON HORSE
362	12	58	12/28/85	303.74	92.58	0.06	IRON HORSE
363	11	30	12/29/85	303.64	92.55	0.04	IRON HORSE
364	13	12	12/30/85	303.67	92.56	0.03	IRON HORSE
365	12	30	12/31/85	303.87	92.62	0.03	IRON HORSE
	2	15	01/02/86	303.74	92.58	0.03	IRON HORSE
	3	13	01/03/86	303.64	92.55	0.04	IRON HORSE
	4	15	01/04/86	303.61	92.54	0.02	IRON HORSE
	5	13	01/05/86	303.81	92.60	0.04	IRON HORSE
	6	14	01/06/86	303.54	92.52	0.03	IRON HORSE
	7	13	01/07/86	304.13	92.70	0.03	IRON HORSE
	7	13	01/07/86	304.10	92.69	0.03	IRON HORSE
	8	14	01/08/86	304.07	92.68	0.05	IRON HORSE
	9	12	01/09/86	304.07	92.68	0.05	IRON HORSE
	10	13	01/10/86	304.04	92.67	0.04	IRON HORSE
	11	14	01/11/86	303.97	92.65	0.04	IRON HORSE
	12	12	01/12/86	303.97	92.65	0.05	IRON HORSE
	13	13	01/13/86	303.97	92.65	0.04	IRON HORSE
	14	13	01/14/86	304.04	92.67	0.04	IRON HORSE
	15	14	01/15/86	303.77	92.59	0.04	IRON HORSE
	16	12	01/16/86	303.58	92.53	0.04	IRON HORSE
	17	15	01/17/86	303.05	92.37	0.05	IRON HORSE
	18	12	01/18/86	303.25	92.43	0.04	IRON HORSE
	19	13	01/19/86	303.18	92.41	0.04	IRON HORSE
	20	13	01/20/86	302.89	92.32	0.04	IRON HORSE
	21	15	01/21/86	303.48	92.50	0.03	IRON HORSE
	23	13	01/23/86	303.58	92.53	0.03	IRON HORSE
	24	14	01/24/86	303.58	92.53	0.04	IRON HORSE
	25	13	01/25/86	303.84	92.61	0.06	IRON HORSE
	26	12	01/26/86	304.04	92.67	0.04	IRON HORSE
	28	13	01/28/86	303.48	92.50	0.04	IRON HORSE
	29	14	01/29/86	303.84	92.61	0.04	IRON HORSE
	31	11	01/31/86	303.31	92.45	0.04	IRON HORSE
	33	12	02/02/86	303.51	92.51	0.05	IRON HORSE
	34	13	02/03/86	303.58	92.53	0.04	IRON HORSE
	35	11	02/04/86	303.67	92.56	0.04	IRON HORSE

TABLE A1-11 (Continued)
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL H-6b

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
36	13	5	02/05/86	303.84	92.61	0.04	IRON HORSE
37	13	39	02/06/86	303.90	92.63	0.04	IRON HORSE
38	14	4	02/07/86	303.90	92.63	0.04	IRON HORSE
39	12	27	02/08/86	304.00	92.66	0.04	IRON HORSE
41	12	56	02/10/86	304.20	92.72	0.06	IRON HORSE
42	14	34	02/11/86	304.27	92.74	0.04	IRON HORSE
43	15	9	02/12/86	304.33	92.76	0.04	IRON HORSE
44	16	0	02/13/86	304.00	92.66	0.04	IRON HORSE
46	13	54	02/15/86	304.04	92.67	0.04	IRON HORSE
50	13	35	02/19/86	304.04	92.67	0.04	IRON HORSE
52	13	0	02/21/86	304.07	92.68	0.05	IRON HORSE
55	14	45	02/24/86	304.20	92.72	0.02	IRON HORSE
57	14	35	02/26/86	304.04	92.67	0.03	IRON HORSE
62	14	40	03/03/86	304.23	92.73	0.03	IRON HORSE
64	12	0	03/05/86	304.00	92.66	0.03	IRON HORSE
66	11	20	03/07/86	304.04	92.67	0.03	IRON HORSE
71	13	21	03/12/86	304.00	92.66	0.04	IRON HORSE
73	11	10	03/14/86	304.13	92.70	0.03	IRON HORSE
76	13	10	03/17/86	304.04	92.67	0.04	IRON HORSE
78	13	4	03/19/86	304.20	92.72	0.04	IRON HORSE
80	12	25	03/21/86	304.30	92.75	0.04	IRON HORSE
83	14	15	03/24/86	304.13	92.70	0.04	IRON HORSE
85	12	39	03/26/86	304.33	92.76	0.04	IRON HORSE
90	12	30	03/31/86	304.20	92.72	0.04	IRON HORSE
97	13	30	04/07/86	304.10	92.69	0.04	IRON HORSE
104	12	45	04/14/86	304.79	92.90	0.04	IRON HORSE
105	17	17	04/15/86	304.92	92.94	0.04	IRON HORSE
111	12	50	04/21/86	304.59	92.84	0.04	IRON HORSE

TABLE A1-12
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL H-6c

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
310	12	21	11/06/85	301.77	91.98	0.03	IRON HORSE
329	13	19	11/25/85	301.77	91.98	0.03	IRON HORSE
346	13	11	12/12/85	302.20	92.11	0.03	IRON HORSE
4	15	20	01/04/86	302.07	92.07	0.03	IRON HORSE
14	13	27	01/14/86	301.84	92.00	0.04	IRON HORSE
28	13	41	01/28/86	301.90	92.02	0.04	IRON HORSE
43	15	23	02/12/86	302.82	92.30	0.04	IRON HORSE
71	13	14	03/12/86	302.46	92.19	0.04	IRON HORSE
83	14	42	03/24/86	302.36	92.16	0.04	IRON HORSE
100	13	55	04/10/86	302.72	92.27	0.04	IRON HORSE

TABLE A1-13
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL H-7b

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
308	16	7	11/04/85	170.64	52.01	0.00	IRON HORSE
324	14	47	11/20/85	170.67	52.02	0.02	IRON HORSE
345	15	1	12/11/85	170.60	52.00	0.01	IRON HORSE
353	10	19	12/19/85	170.70	52.03	0.02	IRON HORSE
4	13	29	01/04/86	170.70	52.03	0.02	IRON HORSE
18	13	29	01/18/86	170.24	51.89	0.00	IRON HORSE
58	11	49	02/27/86	170.96	52.11	0.01	IRON HORSE
70	12	13	03/11/86	170.47	51.96	0.02	IRON HORSE
98	15	27	04/08/86	170.47	51.96	0.02	IRON HORSE

TABLE A1-14
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL H-7b2

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
308	16	20	11/04/85	171.10	52.15	0.01	IRON HORSE
324	14	51	11/20/85	171.06	52.14	0.01	IRON HORSE
345	15	10	12/11/85	171.06	52.14	0.01	IRON HORSE
353	10	27	12/19/85	171.19	52.18	0.02	IRON HORSE
4	13	0	01/04/86	171.13	52.16	0.02	IRON HORSE
18	13	36	01/18/86	170.70	52.03	0.00	IRON HORSE
58	11	55	02/27/86	172.64	52.62	0.02	IRON HORSE
70	12	26	03/11/86	172.18	52.48	0.01	IRON HORSE
84	10	25	03/25/86	171.46	52.26	0.02	IRON HORSE
98	15	19	04/08/86	171.13	52.16	0.02	IRON HORSE

TABLE A1-15
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL H-7c

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
308	16	0	11/04/85	170.64	52.01	0.00	IRON HORSE
324	14	37	11/20/85	170.64	52.01	0.04	IRON HORSE
345	14	53	12/11/85	170.51	51.97	0.01	IRON HORSE
18	13	22	01/18/86	170.24	51.89	0.01	IRON HORSE
57	11	43	02/27/86	170.87	52.08	0.02	IRON HORSE
70	12	20	03/11/86	170.28	51.90	0.02	IRON HORSE
84	10	8	03/25/86	170.77	52.05	0.02	IRON HORSE
98	15	33	04/08/86	170.51	51.97	0.02	IRON HORSE

TABLE A1-16
 WATER-LEVEL MEASUREMENTS
 FOR THE MAGENTA DOLOMITE
 IN WELL H-8a

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
309	14	43	11/05/85	424.67	129.44	0.04	IRON HORSE
309	14	43	11/05/85	424.67	129.44	0.04	IRON HORSE
337	12	0	12/03/85	419.13	127.75	0.04	IRON HORSE
337	12	5	12/03/85	419.42	127.84	0.04	IRON HORSE
339	12	0	12/05/85	419.13	127.75	0.04	IRON HORSE
339	12	5	12/05/85	418.57	127.58	0.00	SOLINST #3
340	14	15	12/06/85	418.11	127.44	0.00	SOLINST #1
341	2	35	12/07/85	418.90	127.68	0.05	IRON HORSE
341	6	8	12/07/85	418.83	127.66	0.06	IRON HORSE
341	10	10	12/07/85	418.70	127.62	0.05	IRON HORSE
341	13	34	12/07/85	418.67	127.61	0.05	IRON HORSE
341	18	32	12/07/85	418.83	127.66	0.09	IRON HORSE
342	9	30	12/08/85	418.57	127.58	0.07	IRON HORSE
342	16	15	12/08/85	418.64	127.60	0.04	IRON HORSE
343	9	6	12/09/85	418.60	127.59	0.05	IRON HORSE
344	8	52	12/10/85	418.31	127.50	0.05	IRON HORSE
345	9	34	12/11/85	417.22	127.17	0.04	IRON HORSE
346	9	20	12/12/85	418.27	127.49	0.04	IRON HORSE
347	15	17	12/13/85	418.01	127.41	0.04	IRON HORSE
348	9	54	12/14/85	418.18	127.46	0.05	IRON HORSE
349	11	0	12/15/85	418.04	127.42	0.05	IRON HORSE
351	10	54	12/17/85	417.52	127.26	0.05	IRON HORSE
4	12	26	01/04/86	415.68	126.70	0.06	IRON HORSE
17	13	39	01/17/86	413.62	126.07	0.04	IRON HORSE
30	10	27	01/30/86	413.68	126.09	0.04	IRON HORSE
47	9	46	02/16/86	412.99	125.88	0.05	IRON HORSE
58	10	54	02/27/86	412.34	125.68	0.05	IRON HORSE
71	15	1	03/12/86	411.88	125.54	0.04	IRON HORSE
84	15	45	03/25/86	411.35	125.38	0.04	IRON HORSE
98	11	16	04/08/86	410.86	125.23	0.04	IRON HORSE

TABLE A1-17
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL H-8b

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
4	12	40	01/04/86	441.34	134.52	0.06	IRON HORSE
30	10	20	01/30/86	441.90	134.69	0.05	IRON HORSE
47	9	33	02/16/86	441.08	134.44	0.05	IRON HORSE
58	11	5	02/27/86	440.75	134.34	0.05	IRON HORSE
71	14	51	03/12/86	440.78	134.35	0.05	IRON HORSE
84	15	57	03/25/86	440.68	134.32	0.04	IRON HORSE
98	11	5	04/08/86	440.68	134.32	0.05	IRON HORSE

TABLE A1-18
 WATER-LEVEL MEASUREMENTS
 FOR THE RUSTLER-SALADO
 CONTACT IN WELL H-8c

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
309	14	40	11/05/85	460.53	140.37	0.04	IRON HORSE
309	14	40	11/05/85	460.53	140.37	0.04	IRON HORSE
326	13	15	11/22/85	460.17	140.26	0.07	IRON HORSE
326	13	15	11/22/85	460.17	140.26	0.07	IRON HORSE
337	12	15	12/03/85	460.30	140.30	0.06	IRON HORSE
337	12	15	12/03/85	460.30	140.30	0.06	IRON HORSE
339	12	10	12/05/85	460.47	140.35	0.06	IRON HORSE
339	12	15	12/05/85	459.94	140.19	0.00	SOLINST #3
340	14	45	12/06/85	460.27	140.29	0.00	SOLINST #1
341	2	21	12/07/85	460.30	140.30	0.08	IRON HORSE
341	6	20	12/07/85	460.30	140.30	0.06	IRON HORSE
341	10	27	12/07/85	460.30	140.30	0.07	IRON HORSE
341	13	25	12/07/85	460.30	140.30	0.05	IRON HORSE
341	18	44	12/07/85	460.37	140.32	0.08	IRON HORSE
342	9	20	12/08/85	460.30	140.30	0.08	IRON HORSE
342	16	25	12/08/85	460.30	140.30	0.07	IRON HORSE
343	8	52	12/09/85	460.60	140.39	0.05	IRON HORSE
344	8	43	12/10/85	460.43	140.34	0.05	IRON HORSE
345	9	24	12/11/85	460.30	140.30	0.04	IRON HORSE
346	9	11	12/12/85	460.53	140.37	0.04	IRON HORSE
347	15	5	12/13/85	460.56	140.38	0.04	IRON HORSE
348	9	40	12/14/85	460.47	140.35	0.05	IRON HORSE
349	11	16	12/15/85	460.53	140.37	0.05	IRON HORSE
351	10	48	12/17/85	460.50	140.36	0.04	IRON HORSE
4	12	15	01/04/86	458.66	139.80	0.07	IRON HORSE
17	13	30	01/17/86	459.32	140.00	0.05	IRON HORSE
30	10	11	01/30/86	460.33	140.31	0.05	IRON HORSE
47	9	24	02/16/86	460.60	140.39	0.05	IRON HORSE
58	11	13	02/27/86	460.30	140.30	0.06	IRON HORSE
71	14	42	03/12/86	460.50	140.36	0.06	IRON HORSE
84	15	25	03/25/86	460.37	140.32	0.05	IRON HORSE
98	10	54	04/08/86	460.40	140.33	0.06	IRON HORSE

TABLE A1-19
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL H-9a

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
344	15	43	12/10/85	433.73	132.20	0.05	IRON HORSE
353	13	3	12/19/85	433.66	132.18	0.05	IRON HORSE
2	13	0	01/02/86	433.27	132.06	0.05	IRON HORSE
17	12	35	01/17/86	432.12	131.71	0.05	IRON HORSE
30	10	57	01/30/86	432.12	131.71	0.05	IRON HORSE
47	10	28	02/16/86	432.19	131.73	0.05	IRON HORSE
58	10	10	02/27/86	432.12	131.71	0.06	IRON HORSE
71	15	44	03/12/86	432.05	131.69	0.05	IRON HORSE
84	14	55	03/25/86	431.53	131.53	0.04	IRON HORSE
98	10	17	04/08/86	431.10	131.40	0.05	IRON HORSE

TABLE A1-20
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL H-9b

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
344	15	53	12/10/85	431.27	131.45	0.04	IRON HORSE
353	12	43	12/19/85	431.17	131.42	0.04	IRON HORSE
2	12	46	01/02/86	431.43	131.50	0.04	IRON HORSE
17	12	45	01/17/86	430.58	131.24	0.03	IRON HORSE
30	11	4	01/30/86	431.33	131.47	0.04	IRON HORSE
58	10	22	02/27/86	431.86	131.63	0.05	IRON HORSE
71	15	35	03/12/86	431.43	131.50	0.05	IRON HORSE
84	14	43	03/25/86	430.87	131.33	0.04	IRON HORSE
98	10	29	04/08/86	430.58	131.24	0.05	IRON HORSE

TABLE A1-21
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL H-9c

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
344	16	11	12/10/85	431.76	131.60	0.04	IRON HORSE
353	12	52	12/19/85	431.59	131.55	0.04	IRON HORSE
2	13	9	01/02/86	431.43	131.50	0.06	IRON HORSE
17	12	53	01/17/86	430.28	131.15	0.05	IRON HORSE
30	11	10	01/30/86	431.76	131.60	0.05	IRON HORSE
47	10	17	02/16/86	432.02	131.68	0.05	IRON HORSE
58	10	31	02/27/86	432.19	131.73	0.06	IRON HORSE
71	15	27	03/12/86	431.96	131.66	0.06	IRON HORSE
84	14	30	03/25/86	431.40	131.49	0.05	IRON HORSE
98	10	7	04/08/86	431.07	131.39	0.05	IRON HORSE

TABLE A1-22
 WATER-LEVEL MEASUREMENTS
 FOR THE MAGENTA DOLOMITE
 IN WELL H-10a

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
309	13	40	11/05/85	588.02	179.23	0.05	IRON HORSE
325	15	8	11/21/85	588.09	179.25	0.04	IRON HORSE
343	16	20	12/09/85	588.09	179.25	0.04	IRON HORSE
353	12	10	12/19/85	588.78	179.46	0.07	IRON HORSE
2	12	9	01/02/86	588.45	179.36	0.07	IRON HORSE
17	11	32	01/17/86	588.25	179.30	0.05	IRON HORSE
29	13	29	01/29/86	588.06	179.24	0.05	IRON HORSE
44	14	11	02/13/86	588.29	179.31	0.05	IRON HORSE
58	9	41	02/27/86	588.19	179.28	0.07	IRON HORSE
70	13	15	03/11/86	588.25	179.30	0.07	IRON HORSE
84	13	45	03/25/86	588.39	179.34	0.06	IRON HORSE
98	9	34	04/08/86	588.32	179.32	0.07	IRON HORSE

TABLE A1-23
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL H-11b1

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
305	10	17	11/01/85	447.90	136.52	0.04	IRON HORSE
306	11	20	11/02/85	448.62	136.74	0.05	IRON HORSE
307	11	25	11/03/85	448.72	136.77	0.06	IRON HORSE
308	10	30	11/04/85	448.88	136.82	0.06	IRON HORSE
309	9	50	11/05/85	449.11	136.89	0.04	IRON HORSE
310	10	0	11/06/85	449.38	136.97	0.05	IRON HORSE
311	10	0	11/07/85	449.70	137.07	0.04	IRON HORSE
312	11	28	11/08/85	449.61	137.04	0.05	IRON HORSE
313	10	45	11/09/85	449.77	137.09	0.06	IRON HORSE
314	10	15	11/10/85	449.90	137.13	0.05	IRON HORSE
315	10	0	11/11/85	450.33	137.26	0.04	IRON HORSE
316	10	40	11/12/85	450.33	137.26	0.04	IRON HORSE
317	10	46	11/13/85	450.46	137.30	0.04	IRON HORSE
318	11	2	11/14/85	450.69	137.37	0.04	IRON HORSE
319	13	30	11/15/85	450.69	137.37	0.05	IRON HORSE
320	11	6	11/16/85	450.75	137.39	0.05	IRON HORSE
321	11	19	11/17/85	450.98	137.46	0.04	IRON HORSE
322	10	0	11/18/85	451.28	137.55	0.05	IRON HORSE
322	10	0	11/18/85	451.28	137.55	0.05	IRON HORSE
323	10	15	11/19/85	451.48	137.61	0.06	IRON HORSE
324	10	30	11/20/85	452.00	137.77	0.05	IRON HORSE
325	10	41	11/21/85	451.87	137.73	0.05	IRON HORSE
326	10	8	11/22/85	452.17	137.82	0.06	IRON HORSE
327	11	13	11/23/85	452.10	137.80	0.04	IRON HORSE
328	12	30	11/24/85	452.13	137.81	0.05	IRON HORSE
329	11	7	11/25/85	452.23	137.84	0.05	IRON HORSE
330	12	52	11/26/85	452.17	137.82	0.04	IRON HORSE
331	11	15	11/27/85	452.62	137.96	0.06	IRON HORSE
333	10	7	11/29/85	452.79	138.01	0.06	IRON HORSE
334	10	13	11/30/85	452.82	138.02	0.05	IRON HORSE
336	10	16	12/02/85	453.74	138.30	0.05	IRON HORSE
337	12	59	12/03/85	453.67	138.28	0.05	IRON HORSE
337	13	3	12/03/85	453.54	138.24	0.05	IRON HORSE
338	13	40	12/04/85	453.77	138.31	0.05	IRON HORSE
340	13	53	12/06/85	453.94	138.36	0.06	IRON HORSE
342	12	0	12/08/85	454.07	138.40	0.06	IRON HORSE
343	12	37	12/09/85	454.07	138.40	0.04	IRON HORSE
344	11	42	12/10/85	454.59	138.56	0.04	IRON HORSE
345	11	42	12/11/85	454.72	138.60	0.04	IRON HORSE
346	11	19	12/12/85	454.66	138.58	0.04	IRON HORSE
347	10	26	12/13/85	455.09	138.71	0.04	IRON HORSE
348	11	33	12/14/85	455.25	138.76	0.05	IRON HORSE
349	11	53	12/15/85	455.28	138.77	0.05	IRON HORSE

TABLE A1-23 (Continued)
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL H-11b1

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
350	11	26	12/16/85	455.41	138.81	0.05	IRON HORSE
351	12	0	12/17/85	455.41	138.81	0.05	IRON HORSE
352	11	44	12/18/85	455.71	138.90	0.05	IRON HORSE
353	10	53	12/19/85	455.64	138.88	0.05	IRON HORSE
354	11	46	12/20/85	455.64	138.88	0.05	IRON HORSE
355	13	5	12/21/85	455.61	138.87	0.04	IRON HORSE
356	10	45	12/22/85	455.54	138.85	0.04	IRON HORSE
357	15	20	12/23/85	455.31	138.78	0.00	IRON HORSE
358	11	30	12/24/85	455.58	138.86	0.00	IRON HORSE
360	11	52	12/26/85	455.35	138.79	0.05	IRON HORSE
361	11	22	12/27/85	455.31	138.78	0.06	IRON HORSE
362	11	27	12/28/85	455.31	138.78	0.05	IRON HORSE
363	10	26	12/29/85	455.48	138.83	0.06	IRON HORSE
364	12	15	12/30/85	455.28	138.77	0.07	IRON HORSE
365	10	46	12/31/85	455.09	138.71	0.05	IRON HORSE
2	11	0	01/02/86	454.95	138.67	0.06	IRON HORSE
3	15	0	01/03/86	454.56	138.55	0.05	IRON HORSE
4	11	23	01/04/86	454.56	138.55	0.04	IRON HORSE
5	14	48	01/05/86	454.49	138.53	0.06	IRON HORSE
6	12	24	01/06/86	454.13	138.42	0.06	IRON HORSE
8	12	28	01/08/86	454.40	138.50	0.06	IRON HORSE
9	11	8	01/09/86	454.30	138.47	0.06	IRON HORSE
10	11	59	01/10/86	454.27	138.46	0.04	IRON HORSE
11	13	22	01/11/86	453.84	138.33	0.04	IRON HORSE
12	11	20	01/12/86	453.90	138.35	0.05	IRON HORSE
13	12	36	01/13/86	453.61	138.26	0.04	IRON HORSE
14	11	4	01/14/86	453.31	138.17	0.05	IRON HORSE
15	12	58	01/15/86	453.05	138.09	0.05	IRON HORSE
16	10	26	01/16/86	453.08	138.10	0.04	IRON HORSE
17	10	34	01/17/86	453.05	138.09	0.05	IRON HORSE
18	10	47	01/18/86	452.20	137.83	0.05	IRON HORSE
19	12	13	01/19/86	452.20	137.83	0.04	IRON HORSE
20	11	43	01/20/86	452.20	137.83	0.04	IRON HORSE
21	13	47	01/21/86	452.13	137.81	0.04	IRON HORSE
22	12	46	01/22/86	452.40	137.89	0.05	IRON HORSE
23	12	46	01/23/86	452.20	137.83	0.05	IRON HORSE
24	13	15	01/24/86	452.10	137.80	0.05	IRON HORSE
25	12	23	01/25/86	452.33	137.87	0.08	IRON HORSE
26	10	48	01/26/86	452.30	137.86	0.06	IRON HORSE
28	11	9	01/28/86	451.71	137.68	0.05	IRON HORSE
29	12	33	01/29/86	451.80	137.71	0.05	IRON HORSE
30	13	21	01/30/86	451.57	137.64	0.05	IRON HORSE
31	10	48	01/31/86	451.51	137.62	0.05	IRON HORSE

TABLE A1-23 (Continued)
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL H-11b1

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
32	14	56	02/01/86	451.48	137.61	0.04	IRON HORSE
33	11	48	02/02/86	451.41	137.59	0.06	IRON HORSE
34	11	45	02/03/86	451.21	137.53	0.05	IRON HORSE
35	10	42	02/04/86	450.95	137.45	0.05	IRON HORSE
36	11	7	02/05/86	451.08	137.49	0.05	IRON HORSE
37	11	30	02/06/86	451.02	137.47	0.05	IRON HORSE
38	12	0	02/07/86	451.02	137.47	0.05	IRON HORSE
39	11	8	02/08/86	451.12	137.50	0.06	IRON HORSE
41	11	22	02/10/86	451.02	137.47	0.05	IRON HORSE
42	13	12	02/11/86	451.08	137.49	0.05	IRON HORSE
43	11	9	02/12/86	451.05	137.48	0.05	IRON HORSE
44	12	51	02/13/86	450.92	137.44	0.05	IRON HORSE
46	12	47	02/15/86	450.39	137.28	0.05	IRON HORSE
50	11	45	02/19/86	450.20	137.22	0.04	IRON HORSE
52	11	20	02/21/86	450.26	137.24	0.05	IRON HORSE
55	11	30	02/24/86	450.00	137.16	0.05	IRON HORSE
57	11	10	02/26/86	449.87	137.12	0.04	IRON HORSE
62	12	15	03/03/86	449.84	137.11	0.04	IRON HORSE
64	10	23	03/05/86	449.44	136.99	0.05	IRON HORSE
66	13	47	03/07/86	449.34	136.96	0.07	IRON HORSE
71	10	48	03/12/86	449.05	136.87	0.06	IRON HORSE
73	9	55	03/14/86	449.05	136.87	0.06	IRON HORSE
76	11	5	03/17/86	448.65	136.75	0.05	IRON HORSE
78	10	53	03/19/86	449.02	136.86	0.06	IRON HORSE
80	10	10	03/21/86	448.98	136.85	0.04	IRON HORSE
83	11	10	03/24/86	448.72	136.77	0.06	IRON HORSE
85	11	25	03/26/86	448.65	136.75	0.06	IRON HORSE
88	11	15	03/29/86	448.43	136.68	0.05	IRON HORSE
90	11	10	03/31/86	448.10	136.58	0.05	IRON HORSE
92	10	56	04/02/86	448.00	136.55	0.06	IRON HORSE
95	10	20	04/05/86	448.16	136.60	0.05	IRON HORSE
97	11	18	04/07/86	447.93	136.53	0.06	IRON HORSE
100	10	59	04/10/86	448.00	136.55	0.05	IRON HORSE
102	12	15	04/12/86	447.74	136.47	0.05	IRON HORSE
104	10	25	04/14/86	447.67	136.45	0.05	IRON HORSE
111	10	45	04/21/86	447.57	136.42	0.04	IRON HORSE

TABLE A1-24
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL H-11b2

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
310	10	5	11/06/85	450.52	137.32	0.04	IRON HORSE
346	11	25	12/12/85	456.04	139.00	0.04	IRON HORSE
4	11	0	01/04/86	455.87	138.95	0.06	IRON HORSE
14	15	15	01/14/86	455.38	138.80	0.04	IRON HORSE
28	11	16	01/28/86	452.89	138.04	0.04	IRON HORSE
43	11	17	02/12/86	452.43	137.90	0.04	IRON HORSE
57	11	14	02/26/86	451.20	137.53	0.04	IRIN HORSE
71	11	3	03/12/86	450.43	137.29	0.06	IRON HORSE
83	11	15	03/24/86	450.03	137.17	0.06	IRON HORSE
100	11	5	04/10/86	449.41	136.98	0.06	IRON HORSE

TABLE A1-25
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL H-12

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
310	10	40	11/06/85	469.78	143.19	0.04	IRON HORSE
325	14	31	11/21/85	469.23	143.02	0.04	IRON HORSE
344	15	5	12/10/85	469.16	143.00	0.03	IRON HORSE
353	11	28	12/19/85	469.00	142.95	0.05	IRON HORSE
2	11	38	01/02/86	468.83	142.90	0.07	IRON HORSE
15	13	37	01/15/86	468.37	142.76	0.05	IRON HORSE
28	11	55	01/28/86	468.14	142.69	0.05	IRON HORSE
44	13	40	02/13/86	468.27	142.73	0.05	IRON HORSE
57	11	55	02/26/86	468.18	142.70	0.05	IRON HORSE
70	13	43	03/11/86	468.31	142.74	0.06	IRON HORSE
83	11	45	03/24/86	468.04	142.66	0.05	IRON HORSE
100	11	24	04/10/86	467.88	142.61	0.06	IRON HORSE

TABLE A1-26
 WATER-LEVEL MEASUREMENTS
 FOR THE BELL CANYON
 FORMATION IN WELL DOE-2

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
308	13	50	11/04/85	385.79	117.59	0.00	SOLINST #3
323	13	45	11/23/85	385.83	117.60	0.00	SOLINST #3
346	12	44	12/12/85	385.53	117.51	0.00	SOLINST #3
2	14	26	01/02/86	385.24	117.42	0.00	SOLINST #3
15	10	42	01/15/86	385.33	117.45	0.00	SOLINST #3
28	14	12	01/28/86	385.14	117.39	0.00	SOLINST #3
43	15	57	02/12/86	385.33	117.45	0.00	SOLINST #3
58	14	55	02/27/86	385.24	117.42	0.00	SOLINST #3
71	12	10	03/12/86	385.53	117.51	0.00	SOLINST #3
84	13	20	03/25/86	385.79	117.59	0.00	SOLINST #3

TABLE A1-27
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL P-14

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
305	12	5	11/01/85	324.04	98.77	0.00	SOLINST #1
305	15	29	11/01/85	324.08	98.78	0.00	SOLINST #1
306	13	0	11/02/85	324.10	98.79	0.00	SOLINST #1
306	13	23	11/02/85	324.10	98.79	0.00	SOLINST #1
307	17	20	11/03/85	324.09	98.78	0.00	SOLINST #1
309	16	28	11/05/85	324.08	98.78	0.00	SOLINST #1
310	10	52	11/06/85	324.15	98.80	0.00	SOLINST #1
310	14	24	11/06/85	324.05	98.77	0.00	SOLINST #1
311	11	19	11/07/85	324.26	98.83	0.00	SOLINST #1
311	15	0	11/07/85	324.13	98.79	0.00	SOLINST #1
312	13	15	11/08/85	324.17	98.81	0.00	SOLINST #1
312	17	0	11/08/85	324.01	98.76	0.00	SOLINST #1
313	10	17	11/09/85	324.15	98.80	0.00	SOLINST #1
313	12	1	11/09/85	324.10	98.79	0.00	SOLINST #1
313	16	35	11/09/85	324.02	98.76	0.00	SOLINST #1
314	12	4	11/10/85	324.12	98.79	0.00	SOLINST #1
314	15	0	11/10/85	324.12	98.79	0.00	SOLINST #1
315	12	27	11/11/85	324.20	98.82	0.00	SOLINST #1
316	11	2	11/12/85	324.18	98.81	0.00	SOLINST #1
316	13	6	11/12/85	324.14	98.80	0.00	SOLINST #1
317	13	12	11/13/85	324.18	98.81	0.00	SOLINST #1
318	13	30	11/14/85	324.20	98.82	0.00	SOLINST #1
319	15	0	11/15/85	324.30	98.85	0.00	SOLINST #1
320	13	11	11/16/85	324.21	98.82	0.00	SOLINST #1
320	19	50	11/16/85	324.20	98.82	0.00	SOLINST #1
321	13	25	11/17/85	324.06	98.77	0.00	SOLINST #1
321	17	40	11/17/85	324.07	98.78	0.00	SOLINST #1
322	16	20	11/18/85	324.12	98.79	0.00	SOLINST #1
323	16	53	11/19/85	324.43	98.89	0.00	SOLINST #1
324	11	5	11/20/85	324.47	98.90	0.00	SOLINST #1
324	16	35	11/20/85	324.34	98.86	0.00	SOLINST #1
325	12	30	11/21/85	324.37	98.87	0.00	SOLINST #1
325	16	35	11/21/85	324.16	98.80	0.00	SOLINST #1
326	16	30	11/22/85	324.20	98.82	0.00	SOLINST #1
327	13	52	11/23/85	324.23	98.83	0.00	SOLINST #1
328	13	45	11/24/85	324.19	98.81	0.00	SOLINST #1
329	13	33	11/25/85	324.17	98.81	0.00	SOLINST #1
330	13	42	11/26/85	324.20	98.82	0.00	SOLINST #1
330	16	35	11/26/85	324.18	98.81	0.00	SOLINST #1
331	16	27	11/27/85	324.17	98.81	0.00	SOLINST #1
333	11	39	11/29/85	324.17	98.81	0.00	SOLINST #1
333	18	42	11/29/85	324.19	98.81	0.00	SOLINST #1
334	11	23	11/30/85	324.15	98.80	0.00	SOLINST #1

TABLE A1-27 (Continued)
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL P-14

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
334	18	23	11/30/85	324.14	98.80	0.00	SOLINST #1
336	11	30	12/02/85	324.54	98.92	0.00	SOLINST #1
337	14	56	12/03/85	324.37	98.87	0.00	SOLINST #1
337	16	38	12/03/85	324.38	98.87	0.00	SOLINST #1
338	15	13	12/04/85	324.48	98.90	0.00	SOLINST #1
339	9	17	12/05/85	324.65	98.95	0.00	SOLINST #1
339	16	25	12/05/85	324.55	98.92	0.00	SOLINST #1
340	8	25	12/06/85	324.58	98.93	0.00	SOLINST #1
340	15	25	12/06/85	324.54	98.92	0.00	SOLINST #3
341	17	11	12/07/85	324.61	98.94	0.00	SOLINST #3
342	18	33	12/08/85	324.54	98.92	0.00	SOLINST #3
343	14	12	12/09/85	324.41	98.88	0.00	SOLINST #3
344	13	20	12/10/85	324.61	98.94	0.00	SOLINST #3
345	13	13	12/11/85	324.70	98.97	0.00	SOLINST #3
346	13	27	12/12/85	324.64	98.95	0.00	SOLINST #3
347	12	26	12/13/85	324.81	99.00	0.00	SOLINST #3
348	15	12	12/14/85	324.73	98.98	0.00	SOLINST #3
349	13	32	12/15/85	324.80	99.00	0.00	SOLINST #3
350	8	22	12/16/85	324.80	99.00	0.00	SOLINST #3
350	13	15	12/16/85	324.80	99.00	0.00	SOLINST #3
351	13	51	12/17/85	324.48	98.90	0.00	SOLINST #3
352	12	59	12/18/85	324.80	99.00	0.00	SOLINST #3
353	11	30	12/19/85	324.80	99.00	0.00	SOLINST #3
354	11	20	12/20/85	324.80	99.00	0.00	SOLINST #3
355	12	17	12/21/85	324.77	98.99	0.00	SOLINST #3
356	11	50	12/22/85	324.80	99.00	0.00	SOLINST #3
357	17	10	12/23/85	324.54	98.92	0.00	SOLINST #3
358	10	5	12/24/85	324.84	99.01	0.00	SOLINST #3
360	13	54	12/26/85	324.57	98.93	0.00	SOLINST #3
361	13	15	12/27/85	324.70	98.97	0.00	SOLINST #3
362	13	12	12/28/85	324.80	99.00	0.00	SOLINST #3
363	12	10	12/29/85	324.64	98.95	0.00	SOLINST #3
364	13	19	12/30/85	324.61	98.94	0.00	SOLINST #3
365	13	0	12/31/85	324.57	98.93	0.00	SOLINST #3
2	15	12	01/02/86	324.74	98.98	0.00	SOLINST #3
3	14	0	01/03/86	324.77	98.99	0.00	SOLINST #3
4	14	15	01/04/86	324.64	98.95	0.00	SOLINST #3
5	13	40	01/05/86	324.80	99.00	0.00	SOLINST #3
6	14	14	01/06/86	324.77	98.99	0.00	SOLINST #3
7	13	40	01/07/86	324.97	99.05	0.00	SOLINST #3
8	14	15	01/08/86	324.97	99.05	0.00	SOLINST #3
9	12	52	01/09/86	324.93	99.04	0.00	SOLINST #3
10	14	1	01/10/86	324.93	99.04	0.00	SOLINST #3

TABLE A1-27 (Continued)
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL P-14

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
11	14	43	01/11/86	324.87	99.02	0.00	SOLINST #3
12	12	59	01/12/86	324.90	99.03	0.00	SOLINST #3
13	13	46	01/13/86	324.87	99.02	0.00	SOLINST #3
14	13	44	01/14/86	324.74	98.98	0.00	SOLINST #3
15	14	33	01/15/86	324.67	98.96	0.00	SOLINST #3
16	12	32	01/16/86	324.74	98.98	0.00	SOLINST #3
17	15	20	01/17/86	324.74	98.98	0.00	SOLINST #3
18	12	57	01/18/86	324.80	99.00	0.00	SOLINST #3
19	13	30	01/19/86	324.77	98.99	0.00	SOLINST #3
20	13	39	01/20/86	324.57	98.93	0.00	SOLINST #3
21	15	36	01/21/86	324.67	98.96	0.00	SOLINST #3
22	14	36	01/22/86	324.87	99.02	0.00	SOLINST #3
23	14	13	01/23/86	324.70	98.97	0.00	SOLINST #3
24	14	32	01/24/86	324.67	98.96	0.00	SOLINST #3
25	14	15	01/25/86	324.93	99.04	0.00	SOLINST #3
26	12	10	01/26/86	324.87	99.02	0.00	SOLINST #3
28	13	54	01/28/86	324.61	98.94	0.00	SOLINST #3
29	14	48	01/29/86	324.90	99.03	0.00	SOLINST #3
30	14	41	01/30/86	324.77	98.99	0.00	SOLINST #3
31	12	40	01/31/86	324.67	98.96	0.00	SOLINST #3
33	13	10	02/02/86	324.70	98.97	0.00	SOLINST #3
34	14	2	02/03/86	324.51	98.91	0.00	SOLINST #3
35	11	56	02/04/86	324.61	98.94	0.00	SOLINST #3
36	13	26	02/05/86	324.74	98.98	0.00	SOLINST #3
37	14	4	02/06/86	324.74	98.98	0.00	SOLINST #3
38	14	40	02/07/86	324.84	99.01	0.00	SOLINST #3
39	12	49	02/08/86	324.93	99.04	0.00	SOLINST #3
41	13	16	02/10/86	325.00	99.06	0.00	SOLINST #3
42	14	58	02/11/86	325.03	99.07	0.00	SOLINST #3
43	15	34	02/12/86	325.13	99.10	0.00	SOLINST #3
44	16	13	02/13/86	324.90	99.03	0.00	SOLINST #3
46	14	12	02/15/86	324.77	98.99	0.00	SOLINST #3
62	14	5	03/03/86	325.33	99.16	0.04	IRON HORSE
64	12	15	03/05/86	325.26	99.14	0.04	IRON HORSE
66	14	41	03/07/86	325.26	99.14	0.04	IRON HORSE
71	14	1	03/12/86	324.87	99.02	0.04	IRON HORSE
76	12	40	03/17/86	324.77	98.99	0.04	IRON HORSE
78	13	25	03/19/86	325.03	99.07	0.04	IRON HORSE
80	13	0	03/21/86	325.07	99.08	0.05	IRON HORSE
83	13	50	03/24/86	325.00	99.06	0.04	IRON HORSE
85	12	52	03/26/86	325.03	99.07	0.05	IRON HORSE
90	12	12	03/31/86	324.74	98.98	0.05	IRON HORSE
97	13	0	04/07/86	324.90	99.03	0.04	IRON HORSE

TABLE A1-27 (Continued)
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL P-14

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
104	12	25	04/14/86	325.10	99.09	0.04	IRON HORSE
111	12	25	04/21/86	325.23	99.13	0.04	IRON HORSE

TABLE A1-28
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL P-15

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
305	9	15	11/01/85	306.33	93.37	0.00	POWERS #2
307	10	24	11/03/85	305.97	93.26	0.00	SOLINST #3
308	9	50	11/04/85	306.04	93.28	0.00	SOLINST #3
309	9	20	11/05/85	305.87	93.23	0.00	SOLINST #3
310	9	17	11/06/85	305.87	93.23	0.00	SOLINST #3
311	9	32	11/07/85	305.87	93.23	0.00	SOLINST #3
312	10	25	11/08/85	305.91	93.24	0.00	SOLINST #3
313	9	42	11/09/85	305.84	93.22	0.00	SOLINST #3
314	12	20	11/10/85	305.91	93.24	0.00	SOLINST #3
315	9	20	11/11/85	305.87	93.23	0.00	SOLINST #3
316	9	28	11/12/85	305.87	93.23	0.00	SOLINST #3
317	9	13	11/13/85	305.84	93.22	0.00	SOLINST #3
318	9	36	11/14/85	305.84	93.22	0.00	SOLINST #3
319	9	37	11/15/85	305.87	93.23	0.00	SOLINST #3
320	10	12	11/16/85	305.87	93.23	0.00	SOLINST #3
321	9	48	11/17/85	305.84	93.22	0.00	SOLINST #3
322	9	20	11/18/85	305.87	93.23	0.00	SOLINST #3
323	9	40	11/19/85	305.91	93.24	0.00	SOLINST #3
324	9	48	11/20/85	306.14	93.31	0.00	SOLINST #3
325	9	45	11/21/85	305.91	93.24	0.00	SOLINST #3
326	9	6	11/22/85	305.94	93.25	0.00	SOLINST #3
327	10	17	11/23/85	305.87	93.23	0.00	SOLINST #3
328	11	22	11/24/85	305.91	93.24	0.00	SOLINST #3
329	10	20	11/25/85	305.87	93.23	0.00	SOLINST #3
330	12	20	11/26/85	305.94	93.25	0.00	SOLINST #3
331	10	35	11/27/85	305.91	93.24	0.00	SOLINST #3
333	9	12	11/29/85	305.81	93.21	0.00	SOLINST #3
334	9	24	11/30/85	305.81	93.21	0.00	SOLINST #3
336	9	41	12/02/85	306.04	93.28	0.00	SOLINST #3
338	12	56	12/04/85	306.10	93.30	0.00	SOLINST #3
339	10	50	12/05/85	306.20	93.33	0.00	SOLINST #3
340	12	57	12/06/85	306.14	93.31	0.00	SOLINST #3
342	11	20	12/08/85	306.04	93.28	0.00	SOLINST #3
343	11	19	12/09/85	305.81	93.21	0.00	SOLINST #3
344	10	44	12/10/85	305.87	93.23	0.00	SOLINST #3
345	11	3	12/11/85	306.04	93.28	0.00	SOLINST #3
346	10	46	12/12/85	306.04	93.28	0.00	SOLINST #3
347	9	24	12/13/85	306.04	93.28	0.00	SOLINST #3
348	10	51	12/14/85	306.10	93.30	0.00	SOLINST #3
349	9	22	12/15/85	306.04	93.28	0.00	SOLINST #3
350	9	38	12/16/85	306.27	93.35	0.00	SOLINST #3
351	9	56	12/17/85	306.27	93.35	0.00	SOLINST #3
352	12	19	12/18/85	306.23	93.34	0.00	SOLINST #3

TABLE A1-28 (Continued)
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL P-15

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
353	11	0	12/19/85	306.14	93.31	0.00	SOLINST #3
354	11	40	12/20/85	306.30	93.36	0.00	SOLINST #3
355	13	48	12/21/85	306.23	93.34	0.00	SOLINST #3
356	9	45	12/22/85	306.27	93.35	0.00	SOLINST #3
357	14	36	12/23/85	306.07	93.29	0.00	SOLINST #3
358	12	25	12/24/85	306.17	93.32	0.00	SOLINST #3
360	11	0	12/26/85	305.91	93.24	0.00	SOLINST #3
361	10	5	12/27/85	306.00	93.27	0.00	SOLINST #3
362	10	38	12/28/85	306.07	93.29	0.00	SOLINST #3
364	11	42	12/30/85	306.17	93.32	0.00	SOLINST #3
365	9	35	12/31/85	305.91	93.24	0.00	SOLINST #3
2	9	10	01/02/86	306.07	93.29	0.00	SOLINST #3
4	10	53	01/04/86	306.10	93.30	0.00	SOLINST #3
5	15	13	01/05/86	306.17	93.32	0.00	SOLINST #3
6	11	33	01/06/86	306.07	93.29	0.00	SOLINST #3
7	10	17	01/07/86	306.17	93.32	0.00	SOLINST #3
8	11	0	01/08/86	306.40	93.39	0.00	SOLINST #3
9	10	10	01/09/86	306.43	93.40	0.00	SOLINST #3
10	10	43	01/10/86	306.20	93.33	0.00	SOLINST #3
11	11	27	01/11/86	306.20	93.33	0.00	SOLINST #3
12	10	24	01/12/86	306.27	93.35	0.00	SOLINST #3
13	11	19	01/13/86	306.23	93.34	0.00	SOLINST #3
14	10	18	01/14/86	306.20	93.33	0.00	SOLINST #3
15	11	48	01/15/86	306.17	93.32	0.00	SOLINST #3
16	9	41	01/16/86	306.17	93.32	0.00	SOLINST #3
17	9	48	01/17/86	306.00	93.27	0.00	SOLINST #3
18	10	6	01/18/86	306.00	93.27	0.00	SOLINST #3
19	11	38	01/19/86	305.97	93.26	0.00	SOLINST #3
20	10	48	01/20/86	306.07	93.29	0.00	SOLINST #3
21	12	48	01/21/86	306.00	93.27	0.00	SOLINST #3
22	11	21	01/22/86	306.00	93.27	0.00	SOLINST #3
23	11	21	01/23/86	306.07	93.29	0.00	SOLINST #3
24	11	50	01/24/86	306.04	93.28	0.00	SOLINST #3
25	11	28	01/25/86	306.20	93.33	0.00	SOLINST #3
26	10	10	01/26/86	306.23	93.34	0.00	SOLINST #3
28	10	10	01/28/86	306.20	93.33	0.00	SOLINST #3
29	11	18	01/29/86	306.04	93.28	0.00	SOLINST #3
30	11	57	01/30/86	306.10	93.30	0.00	SOLINST #3
31	10	4	01/31/86	306.04	93.28	0.00	SOLINST #3
32	14	35	02/01/86	306.07	93.29	0.00	SOLINST #3
33	11	0	02/02/86	306.07	93.29	0.00	SOLINST #3
34	11	15	02/03/86	305.97	93.26	0.00	SOLINST #3
35	9	54	02/04/86	305.91	93.24	0.00	SOLINST #3

TABLE A1-28 (Continued)
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL P-15

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
36	10	4	02/05/86	305.81	93.21	0.00	SOLINST #3
37	10	41	02/06/86	305.81	93.21	0.00	SOLINST #3
38	11	5	02/07/86	305.81	93.21	0.00	SOLINST #3
39	10	36	02/08/86	306.10	93.30	0.00	SOLINST #3
42	11	54	02/11/86	306.04	93.28	0.00	SOLINST #3
43	10	27	02/12/86	306.07	93.29	0.00	SOLINST #3
46	12	0	02/15/86	306.07	93.29	0.00	SOLINST #3
50	10	45	02/19/86	306.04	93.28	0.00	SOLINST #3
52	10	23	02/21/86	306.07	93.29	0.00	SOLINST #3
55	10	51	02/24/86	306.14	93.31	0.00	SOLINST #3
57	10	25	02/26/86	306.07	93.29	0.00	SOLINST #3
62	11	5	03/03/86	306.86	93.53	0.00	SOLINST #3
64	9	45	03/05/86	306.89	93.54	0.00	SOLINST #3
66	13	20	03/07/86	306.82	93.52	0.00	SOLINST #3
71	10	20	03/12/86	306.76	93.50	0.00	SOLINST #3
73	9	8	03/14/86	306.73	93.49	0.00	SOLINST #3
76	10	20	03/17/86	306.17	93.32	0.00	SOLINST #3
78	10	25	03/19/86	307.12	93.61	0.00	SOLINST #3
78	10	29	03/19/86	307.12	93.61	0.00	SOLINST #3
80	9	25	03/21/86	307.15	93.62	0.00	SOLINST #3
83	10	0	03/24/86	306.99	93.57	0.00	SOLINST #3
85	11	2	03/26/86	306.99	93.57	0.00	SOLINST #3
97	10	55	04/07/86	305.97	93.26	0.00	SOLINST #3
104	9	55	04/14/86	305.84	93.22	0.00	SOLINST #3
111	10	24	04/21/86	305.91	93.24	0.00	SOLINST #3

TABLE A1-29
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL P-17

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
305	9	50	11/01/85	362.86	110.60	0.00	POWERS #2
306	10	55	11/02/85	362.89	110.61	0.00	POWERS #2
307	11	0	11/03/85	362.24	110.41	0.00	SOLINST #3
308	10	2	11/04/85	362.24	110.41	0.00	SOLINST #3
309	9	41	11/05/85	362.07	110.36	0.00	SOLINST #3
310	9	35	11/06/85	362.07	110.36	0.00	SOLINST #3
311	9	52	11/07/85	362.24	110.41	0.00	SOLINST #3
312	11	10	11/08/85	362.11	110.37	0.00	SOLINST #3
313	10	25	11/09/85	362.01	110.34	0.00	SOLINST #3
314	12	5	11/10/85	362.07	110.36	0.00	SOLINST #3
315	9	40	11/11/85	362.01	110.34	0.00	SOLINST #3
316	10	17	11/12/85	361.98	110.33	0.00	SOLINST #3
317	10	13	11/13/85	361.98	110.33	0.00	SOLINST #3
318	11	35	11/14/85	361.98	110.33	0.00	SOLINST #3
319	13	48	11/15/85	361.98	110.33	0.00	SOLINST #3
320	11	29	11/16/85	362.07	110.36	0.00	SOLINST #3
321	11	40	11/17/85	362.01	110.34	0.00	SOLINST #3
322	9	48	11/18/85	361.98	110.33	0.00	SOLINST #3
323	9	50	11/19/85	362.17	110.39	0.00	SOLINST #3
324	10	20	11/20/85	362.27	110.42	0.00	SOLINST #3
325	10	18	11/21/85	361.98	110.33	0.00	SOLINST #3
326	9	51	11/22/85	362.17	110.39	0.00	SOLINST #3
327	11	1	11/23/85	362.01	110.34	0.00	SOLINST #3
328	12	15	11/24/85	361.98	110.33	0.00	SOLINST #3
330	12	40	11/26/85	362.07	110.36	0.00	SOLINST #3
333	9	51	11/29/85	362.01	110.34	0.00	SOLINST #3
334	9	59	11/30/85	362.01	110.34	0.00	SOLINST #3
336	10	2	12/02/85	362.30	110.43	0.00	SOLINST #3
338	13	29	12/04/85	362.30	110.43	0.00	SOLINST #3
340	13	24	12/06/85	362.27	110.42	0.00	SOLINST #3
342	11	35	12/08/85	362.27	110.42	0.00	SOLINST #3
343	11	37	12/09/85	362.30	110.43	0.00	SOLINST #3
344	11	21	12/10/85	362.27	110.42	0.00	SOLINST #3
345	11	30	12/11/85	362.37	110.45	0.00	SOLINST #3
346	11	7	12/12/85	362.34	110.44	0.00	SOLINST #3
347	10	11	12/13/85	362.40	110.46	0.00	SOLINST #3
348	11	15	12/14/85	362.53	110.50	0.00	SOLINST #3
349	11	40	12/15/85	362.43	110.47	0.00	SOLINST #3
350	11	8	12/16/85	362.60	110.52	0.00	SOLINST #3
351	11	45	12/17/85	362.57	110.51	0.00	SOLINST #3
352	12	35	12/18/85	362.63	110.53	0.00	SOLINST #3
353	10	35	12/19/85	362.47	110.48	0.00	SOLINST #3
354	11	57	12/20/85	362.47	110.48	0.00	SOLINST #3

TABLE A1-29 (Continued)
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL P-17

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
355	13	20	12/21/85	362.57	110.51	0.00	SOLINST #3
356	10	15	12/22/85	362.53	110.50	0.00	SOLINST #3
357	15	6	12/23/85	362.34	110.44	0.00	SOLINST #3
358	11	46	12/24/85	362.63	110.53	0.00	SOLINST #3
360	11	36	12/26/85	362.34	110.44	0.00	SOLINST #3
361	10	54	12/27/85	362.30	110.43	0.00	SOLINST #3
362	11	0	12/28/85	362.53	110.50	0.00	SOLINST #3
363	10	0	12/29/85	362.47	110.48	0.00	SOLINST #3
364	11	55	12/30/85	362.43	110.47	0.00	SOLINST #3
365	10	24	12/31/85	362.53	110.50	0.00	SOLINST #3
2	10	26	01/02/86	362.53	110.50	0.00	SOLINST #3
4	11	41	01/04/86	362.47	110.48	0.00	SOLINST #3
5	14	58	01/05/86	362.76	110.57	0.00	SOLINST #3
6	12	0	01/06/86	362.60	110.52	0.00	SOLINST #3
7	10	58	01/07/86	362.86	110.60	0.00	SOLINST #3
8	11	51	01/08/86	362.93	110.62	0.00	SOLINST #3
9	10	50	01/09/86	362.93	110.62	0.00	SOLINST #3
10	11	39	01/10/86	362.76	110.57	0.00	SOLINST #3
11	12	13	01/11/86	362.73	110.56	0.00	SOLINST #3
12	11	4	01/12/86	362.86	110.60	0.00	SOLINST #3
13	11	59	01/13/86	362.76	110.57	0.00	SOLINST #3
14	10	53	01/14/86	362.66	110.54	0.00	SOLINST #3
15	12	20	01/15/86	362.66	110.54	0.00	SOLINST #3
16	10	15	01/16/86	362.66	110.54	0.00	SOLINST #3
17	10	19	01/17/86	362.73	110.56	0.00	SOLINST #3
18	10	35	01/18/86	362.73	110.56	0.00	SOLINST #3
19	11	51	01/19/86	362.66	110.54	0.00	SOLINST #3
20	11	28	01/20/86	362.63	110.53	0.00	SOLINST #3
21	13	26	01/21/86	362.53	110.50	0.00	SOLINST #3
22	12	3	01/22/86	362.73	110.56	0.00	SOLINST #3
23	11	58	01/23/86	362.53	110.50	0.00	SOLINST #3
24	12	56	01/24/86	362.53	110.50	0.00	SOLINST #3
25	12	7	01/25/86	362.96	110.63	0.00	SOLINST #3
26	10	35	01/26/86	362.89	110.61	0.00	SOLINST #3
28	10	41	01/28/86	362.66	110.54	0.00	SOLINST #3
29	11	51	01/29/86	362.73	110.56	0.00	SOLINST #3
30	13	1	01/30/86	362.66	110.54	0.00	SOLINST #3
31	10	38	01/31/86	362.66	110.54	0.00	SOLINST #3
32	15	7	02/01/86	362.70	110.55	0.00	SOLINST #3
33	11	27	02/02/86	362.83	110.59	0.00	SOLINST #3
34	11	58	02/03/86	362.66	110.54	0.00	SOLINST #3
35	10	30	02/04/86	362.50	110.49	0.00	SOLINST #3
36	10	50	02/05/86	362.40	110.46	0.00	SOLINST #3

TABLE A1-29 (Continued)
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL P-17

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
37	11	47	02/06/86	362.43	110.47	0.00	SOLINST #3
43	13	30	02/12/86	362.30	110.43	0.00	SOLINST #3
44	13	3	02/13/86	362.40	110.46	0.00	SOLINST #3
46	12	33	02/15/86	362.73	110.56	0.00	SOLINST #3
50	11	0	02/19/86	362.70	110.55	0.00	SOLINST #3
52	11	0	02/21/86	362.80	110.58	0.00	SOLINST #3
55	11	15	02/24/86	362.86	110.60	0.00	SOLINST #3
57	10	55	02/26/86	363.12	110.68	0.00	SOLINST #3
62	11	30	03/03/86	363.45	110.78	0.00	SOLINST #3

TABLE A1-30
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL P-18

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
305	10	50	11/01/85	644.29	196.38	0.08	IRON HORSE
306	11	38	11/02/85	644.16	196.34	0.08	IRON HORSE
308	10	44	11/04/85	644.16	196.34	0.07	IRON HORSE
309	10	10	11/05/85	644.06	196.31	0.07	IRON HORSE
310	10	27	11/06/85	643.96	196.28	0.07	IRON HORSE
311	10	18	11/07/85	644.06	196.31	0.07	IRON HORSE
312	11	46	11/08/85	644.09	196.32	0.08	IRON HORSE
313	11	4	11/09/85	644.03	196.30	0.08	IRON HORSE
314	10	29	11/10/85	644.00	196.29	0.07	IRON HORSE
315	10	40	11/11/85	644.09	196.32	0.08	IRON HORSE
316	11	7	11/12/85	643.96	196.28	0.08	IRON HORSE
317	11	17	11/13/85	643.50	196.14	0.08	IRON HORSE
318	10	43	11/14/85	643.47	196.13	0.08	IRON HORSE
319	13	13	11/15/85	643.50	196.14	0.07	IRON HORSE
320	10	45	11/16/85	643.47	196.13	0.07	IRON HORSE
321	10	45	11/17/85	643.34	196.09	0.07	IRON HORSE
322	10	20	11/18/85	643.34	196.09	0.08	IRON HORSE
323	10	23	11/19/85	643.31	196.08	0.09	IRON HORSE
324	10	50	11/20/85	643.37	196.10	0.07	IRON HORSE
325	11	3	11/21/85	643.18	196.04	0.08	IRON HORSE
326	10	34	11/22/85	643.27	196.07	0.08	IRON HORSE
327	11	47	11/23/85	643.01	195.99	0.07	IRON HORSE
328	12	50	11/24/85	643.14	196.03	0.08	IRON HORSE
329	11	35	11/25/85	642.88	195.95	0.08	IRON HORSE
330	13	8	11/26/85	643.04	196.00	0.08	IRON HORSE
331	11	35	11/27/85	643.11	196.02	0.07	IRON HORSE
333	10	26	11/29/85	642.78	195.92	0.08	IRON HORSE
334	10	30	11/30/85	642.75	195.91	0.08	IRON HORSE
336	10	34	12/02/85	642.85	195.94	0.08	IRON HORSE
337	13	40	12/03/85	642.88	195.95	0.08	IRON HORSE
340	14	7	12/06/85	642.52	195.84	0.08	IRON HORSE
342	12	20	12/08/85	642.36	195.79	0.08	IRON HORSE
343	13	3	12/09/85	642.26	195.76	0.07	IRON HORSE
344	11	59	12/10/85	642.49	195.83	0.07	IRON HORSE
345	11	56	12/11/85	642.62	195.87	0.07	IRON HORSE
346	11	41	12/12/85	642.52	195.84	0.08	IRON HORSE
347	10	45	12/13/85	642.45	195.82	0.07	IRON HORSE
348	12	20	12/14/85	642.29	195.77	0.08	IRON HORSE
349	12	15	12/15/85	642.26	195.76	0.08	IRON HORSE
350	11	48	12/16/85	642.13	195.72	0.08	IRON HORSE
351	12	18	12/17/85	642.13	195.72	0.08	IRON HORSE
352	11	59	12/18/85	642.06	195.70	0.08	IRON HORSE
353	11	5	12/19/85	641.99	195.68	0.08	IRON HORSE

TABLE A1-30 (Continued)
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL P-18

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
354	12	5	12/20/85	641.93	195.66	0.08	IRON HORSE
356	10	55	12/22/85	641.93	195.66	0.07	IRON HORSE
358	11	8	12/24/85	641.86	195.64	0.08	IRON HORSE
360	12	47	12/26/85	641.57	195.55	0.07	IRON HORSE
361	11	50	12/27/85	641.63	195.57	0.08	IRON HORSE
362	11	53	12/28/85	641.60	195.56	0.08	IRON HORSE
363	10	50	12/29/85	641.34	195.48	0.07	IRON HORSE
365	11	15	12/31/85	641.50	195.53	0.07	IRON HORSE
2	11	21	01/02/86	641.40	195.50	0.08	IRON HORSE
3	14	50	01/03/86	640.91	195.35	0.08	IRON HORSE
5	14	33	01/05/86	641.14	195.42	0.08	IRON HORSE
6	12	40	01/06/86	641.11	195.41	0.08	IRON HORSE
8	12	47	01/08/86	641.21	195.44	0.08	IRON HORSE
9	11	25	01/09/86	641.08	195.40	0.08	IRON HORSE
10	12	57	01/10/86	640.98	195.37	0.07	IRON HORSE
11	13	38	01/11/86	641.01	195.38	0.08	IRON HORSE
13	12	50	01/13/86	640.78	195.31	0.07	IRON HORSE
14	11	26	01/14/86	640.75	195.30	0.08	IRON HORSE
15	13	19	01/15/86	640.58	195.25	0.08	IRON HORSE
16	10	46	01/16/86	640.49	195.22	0.08	IRON HORSE
17	10	53	01/17/86	640.42	195.20	0.07	IRON HORSE
18	11	9	01/18/86	639.50	194.92	0.08	IRON HORSE
19	12	30	01/19/86	639.57	194.94	0.08	IRON HORSE
20	12	5	01/20/86	639.44	194.90	0.07	IRON HORSE
21	14	8	01/21/86	639.86	195.03	0.07	IRON HORSE
22	13	11	01/22/86	640.03	195.08	0.08	IRON HORSE
23	13	4	01/23/86	639.99	195.07	0.08	IRON HORSE
24	13	35	01/24/86	639.96	195.06	0.08	IRON HORSE
25	12	50	01/25/86	640.06	195.09	0.08	IRON HORSE
26	11	0	01/26/86	640.12	195.11	0.08	IRON HORSE
28	11	37	01/28/86	639.80	195.01	0.07	IRON HORSE
29	12	56	01/29/86	639.76	195.00	0.07	IRON HORSE
30	13	45	01/30/86	639.70	194.98	0.07	IRON HORSE
31	11	7	01/31/86	639.76	195.00	0.07	IRON HORSE
33	12	11	02/02/86	639.83	195.02	0.08	IRON HORSE
34	12	53	02/03/86	639.63	194.96	0.07	IRON HORSE
35	11	1	02/04/86	639.57	194.94	0.07	IRON HORSE
36	11	32	02/05/86	639.73	194.99	0.08	IRON HORSE
37	11	53	02/06/86	639.50	194.92	0.07	IRON HORSE
38	12	51	02/07/86	639.53	194.93	0.07	IRON HORSE
39	11	25	02/08/86	639.63	194.96	0.08	IRON HORSE
41	11	39	02/10/86	639.63	194.96	0.08	IRON HORSE
42	13	39	02/11/86	639.60	194.95	0.08	IRON HORSE

TABLE A1-30 (Continued)
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL P-18

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
43	14	4	02/12/86	639.63	194.96	0.08	IRON HORSE
46	13	3	02/15/86	639.24	194.84	0.08	IRON HORSE
50	12	30	02/19/86	639.04	194.78	0.07	IRON HORSE
52	11	48	02/21/86	639.01	194.77	0.08	IRON HORSE
55	11	52	02/24/86	638.78	194.70	0.09	IRON HORSE
57	12	25	02/26/86	638.71	194.68	0.07	IRON HORSE
62	12	50	03/03/86	638.62	194.65	0.07	IRON HORSE
64	10	48	03/05/86	638.35	194.57	0.07	IRON HORSE
66	14	5	03/07/86	638.32	194.56	0.08	IRON HORSE
71	11	17	03/12/86	638.22	194.53	0.08	IRON HORSE
73	10	14	03/14/86	638.19	194.52	0.08	IRON HORSE
76	11	25	03/17/86	637.80	194.40	0.07	IRON HORSE
78	12	0	03/19/86	637.76	194.39	0.08	IRON HORSE
80	10	40	03/21/86	637.63	194.35	0.08	IRON HORSE
83	12	30	03/24/86	637.57	194.33	0.08	IRON HORSE
85	22	44	03/26/86	637.34	194.26	0.08	IRON HORSE
90	11	25	03/31/86	637.14	194.20	0.08	IRON HORSE
97	11	50	04/07/86	636.98	194.15	0.07	IRON HORSE
104	10	45	04/14/86	636.55	194.02	0.07	IRON HORSE
111	11	20	04/21/86	636.42	193.98	0.08	IRON HORSE

TABLE A1-31
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL WIPP-12

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
310	13	50	11/06/85	100.62	30.67	0.00	SOLINST #3
329	14	32	11/25/85	166.04	50.61	0.02	IRON HORSE
343	15	10	12/09/85	207.35	63.20	0.00	SOLINST #3
352	17	36	12/18/85	231.76	70.64	0.00	SOLINST #3
3	11	26	01/03/86	268.70	81.90	0.00	SOLINST #3
15	15	12	01/15/86	293.21	89.37	0.00	SOLINST #3
28	14	42	01/28/86	316.14	96.36	0.00	SOLINST #3
43	16	22	02/12/86	339.53	103.49	0.00	SOLINST #3
58	13	59	02/27/86	363.52	110.80	0.00	SOLINST #3
71	9	28	03/12/86	375.33	114.40	0.00	SOLINST #3
80	13	15	03/21/86	385.04	117.36	0.00	SOLINST #3
83	15	15	03/24/86	388.12	118.30	0.00	SOLINST #3
85	9	58	03/26/86	389.90	118.84	0.00	SOLINST #3
92	10	6	04/02/86	395.64	120.59	0.00	SOLINST #3
95	11	15	04/05/86	398.43	121.44	0.00	SOLINST #3
97	14	0	04/07/86	400.20	121.98	0.00	SOLINST #3
100	9	52	04/10/86	402.69	122.74	0.00	SOLINST #3
101	11	5	04/11/86	403.51	122.99	0.00	SOLINST #3
102	10	20	04/12/86	404.33	123.24	0.00	SOLINST #3
104	14	0	04/14/86	406.07	123.77	0.00	SOLINST #3
111	13	45	04/21/86	411.38	125.39	0.00	SOLINST #3

TABLE A1-32
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL WIPP-13

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
305	12	50	11/01/85	139.44	42.50	0.00	IRON HORSE
306	13	35	11/02/85	144.69	44.10	0.00	IRON HORSE
308	14	5	11/04/85	154.13	46.98	0.00	IRON HORSE
309	15	25	11/05/85	160.50	48.92	0.00	IRON HORSE
310	13	0	11/06/85	167.39	51.02	0.00	IRON HORSE
311	12	35	11/07/85	174.51	53.19	0.00	IRON HORSE
312	14	6	11/08/85	180.77	55.10	0.00	IRON HORSE
313	12	41	11/09/85	189.30	57.70	0.02	IRON HORSE
314	12	58	11/10/85	196.16	59.79	0.01	IRON HORSE
315	11	50	11/11/85	201.38	61.38	0.02	IRON HORSE
316	13	34	11/12/85	204.53	62.34	0.01	IRON HORSE
317	13	40	11/13/85	210.10	64.04	0.01	IRON HORSE
318	14	50	11/14/85	214.24	65.30	0.01	IRON HORSE
319	15	19	11/15/85	217.91	66.42	0.01	IRON HORSE
320	13	37	11/16/85	221.52	67.52	0.01	IRON HORSE
321	13	52	11/17/85	224.70	68.49	0.01	IRON HORSE
322	11	48	11/18/85	227.56	69.36	0.02	IRON HORSE
323	11	27	11/19/85	230.15	70.15	0.02	IRON HORSE
324	12	20	11/20/85	233.86	71.28	0.02	IRON HORSE
325	12	50	11/21/85	235.24	71.70	0.02	IRON HORSE
326	11	40	11/22/85	237.66	72.44	0.03	IRON HORSE
327	14	20	11/23/85	240.26	73.23	0.02	IRON HORSE
328	13	25	11/24/85	242.62	73.95	0.02	IRON HORSE
329	14	0	11/25/85	245.60	74.86	0.02	IRON HORSE
330	14	0	11/26/85	248.03	75.60	0.02	IRON HORSE
331	12	10	11/27/85	249.34	76.00	0.03	IRON HORSE
333	11	6	11/29/85	252.36	76.92	0.02	IRON HORSE
334	10	57	11/30/85	253.94	77.40	0.01	IRON HORSE
336	13	16	12/02/85	257.22	78.40	0.02	IRON HORSE
338	14	51	12/04/85	260.17	79.30	0.02	IRON HORSE
340	14	54	12/06/85	266.31	81.17	0.01	IRON HORSE
343	14	33	12/09/85	268.18	81.74	0.02	IRON HORSE
344	13	38	12/10/85	269.03	82.00	0.02	IRON HORSE
345	13	31	12/11/85	270.67	82.50	0.02	IRON HORSE
346	12	32	12/12/85	273.88	83.48	0.02	IRON HORSE
347	12	52	12/13/85	272.64	83.10	0.02	IRON HORSE
348	14	30	12/14/85	272.97	83.20	0.03	IRON HORSE
349	13	0	12/15/85	274.61	83.70	0.02	IRON HORSE
350	12	20	12/16/85	275.72	84.04	0.02	IRON HORSE
351	13	0	12/17/85	276.57	84.30	0.02	IRON HORSE
352	12	41	12/18/85	277.76	84.66	0.03	IRON HORSE
353	14	8	12/19/85	278.90	85.01	0.02	IRON HORSE
356	11	30	12/22/85	280.35	85.45	0.03	IRON HORSE

TABLE A1-32 (Continued)
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL WIPP-13

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
360	14	16	12/26/85	285.01	86.87	0.03	IRON HORSE
361	13	34	12/27/85	285.83	87.12	0.04	IRON HORSE
362	12	42	12/28/85	287.17	87.53	0.02	IRON HORSE
363	11	30	12/29/85	287.27	87.56	0.04	IRON HORSE
364	12	47	12/30/85	287.40	87.60	0.04	IRON HORSE
365	13	30	12/31/85	287.66	87.68	0.03	IRON HORSE
2	14	45	01/02/86	288.78	88.02	0.00	IRON HORSE
3	13	21	01/03/86	289.83	88.34	0.00	IRON HORSE
4	15	45	01/04/86	290.29	88.48	0.00	IRON HORSE
6	13	55	01/06/86	292.13	89.04	0.03	IRON HORSE
7	12	53	01/07/86	292.72	89.22	0.03	IRON HORSE
8	13	27	01/08/86	293.11	89.34	0.02	IRON HORSE
9	12	17	01/09/86	293.77	89.54	0.03	IRON HORSE
10	14	19	01/10/86	294.52	89.77	0.03	IRON HORSE
11	15	0	01/11/86	294.95	89.90	0.03	IRON HORSE
12	12	19	01/12/86	295.31	90.01	0.03	IRON HORSE
13	14	2	01/13/86	295.90	90.19	0.02	IRON HORSE
14	14	3	01/14/86	296.36	90.33	0.03	IRON HORSE
15	14	50	01/15/86	296.98	90.52	0.03	IRON HORSE
16	11	16	01/16/86	297.38	90.64	0.03	IRON HORSE
17	14	50	01/17/86	297.38	90.64	0.02	IRON HORSE
18	11	49	01/18/86	297.97	90.82	0.03	IRON HORSE
19	13	3	01/19/86	298.56	91.00	0.03	IRON HORSE
20	13	6	01/20/86	298.82	91.08	0.02	IRON HORSE
21	14	41	01/21/86	299.48	91.28	0.02	IRON HORSE
22	13	51	01/22/86	299.84	91.39	0.03	IRON HORSE
23	13	39	01/23/86	300.49	91.59	0.02	IRON HORSE
24	14	7	01/24/86	300.95	91.73	0.02	IRON HORSE
25	13	30	01/25/86	301.77	91.98	0.04	IRON HORSE
26	13	20	01/26/86	301.74	91.97	0.04	IRON HORSE
28	13	12	01/28/86	302.33	92.15	0.03	IRON HORSE
29	14	21	01/29/86	302.62	92.24	0.03	IRON HORSE
30	14	18	01/30/86	302.85	92.31	0.03	IRON HORSE
31	11	29	01/31/86	303.35	92.46	0.03	IRON HORSE
32	12	42	02/02/86	303.61	92.54	0.04	IRON HORSE
34	13	27	02/03/86	304.07	92.68	0.03	IRON HORSE
35	11	28	02/04/86	304.36	92.77	0.03	IRON HORSE
36	12	33	02/05/86	304.66	92.86	0.03	IRON HORSE
37	13	7	02/06/86	305.09	92.99	0.03	IRON HORSE
38	13	32	02/07/86	305.22	93.03	0.03	IRON HORSE
39	11	55	02/08/86	305.64	93.16	0.03	IRON HORSE
41	12	34	02/10/86	306.20	93.33	0.03	IRON HORSE
42	14	18	02/11/86	306.53	93.43	0.03	IRON HORSE

TABLE A1-32 (Continued)
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL WIPP-13

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
43	14	39	02/12/86	306.79	93.51	0.03	IRON HORSE
44	15	26	02/13/86	306.96	93.56	0.03	IRON HORSE
46	13	38	02/15/86	307.45	93.71	0.03	IRON HORSE
50	13	58	02/19/86	308.43	94.01	0.03	IRON HORSE
50	15	14	02/19/86	308.50	94.03	0.03	IRON HORSE
52	12	41	02/21/86	308.92	94.16	0.03	IRON HORSE
57	14	20	02/26/86	310.07	94.51	0.03	IRON HORSE
62	15	5	03/03/86	311.19	94.85	0.03	IRON HORSE
64	11	30	03/05/86	311.55	94.96	0.03	IRON HORSE
66	11	40	03/07/86	312.01	95.10	0.02	IRON HORSE
71	12	52	03/12/86	312.99	95.40	0.03	IRON HORSE
73	10	52	03/14/86	313.45	95.54	0.04	IRON HORSE
76	13	30	03/17/86	313.81	95.65	0.03	IRON HORSE
78	12	46	03/19/86	314.11	95.74	0.03	IRON HORSE
80	11	55	03/21/86	314.44	95.84	0.04	IRON HORSE
83	14	55	03/24/86	314.76	95.94	0.03	IRON HORSE
85	12	21	03/26/86	315.19	96.07	0.03	IRON HORSE
86	14	25	03/27/86	314.96	96.00	0.08	IRON HORSE
88	12	0	03/29/86	315.55	96.18	0.04	IRON HORSE
90	12	45	03/31/86	315.62	96.20	0.02	IRON HORSE
92	9	5	04/02/86	315.91	96.29	0.04	IRON HORSE
92	9	5	04/02/86	315.91	96.29	0.04	IRON HORSE
93	8	0	04/03/86	316.24	96.39	0.03	IRON HORSE
105	16	56	04/15/86	362.86	110.60	0.04	IRON HORSE
111	13	15	04/21/86	362.14	110.38	0.04	IRON HORSE

TABLE A1-33
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL WIPP-18

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
310	14	0	11/06/85	439.30	133.90	0.00	IRON HORSE
329	14	47	11/25/85	437.63	133.39	0.04	IRON HORSE
341	15	6	12/07/85	437.01	133.20	0.05	IRON HORSE
342	17	37	12/08/85	436.98	133.19	0.07	IRON HORSE
343	15	20	12/09/85	436.81	133.14	0.05	IRON HORSE
344	14	4	12/10/85	436.88	133.16	0.05	IRON HORSE
345	13	58	12/11/85	436.94	133.18	0.05	IRON HORSE
346	14	40	12/12/85	437.01	133.20	0.05	IRON HORSE
347	13	28	12/13/85	436.94	133.18	0.04	IRON HORSE
348	14	46	12/14/85	436.91	133.17	0.05	IRON HORSE
349	14	38	12/15/85	436.94	133.18	0.05	IRON HORSE
350	14	30	12/16/85	436.91	133.17	0.06	IRON HORSE
351	14	32	12/17/85	436.84	133.15	0.04	IRON HORSE
352	13	37	12/18/85	436.84	133.15	0.04	IRON HORSE
353	14	52	12/19/85	436.91	133.17	0.05	IRON HORSE
355	11	40	12/21/85	436.75	133.12	0.07	IRON HORSE
356	13	5	12/22/85	436.68	133.10	0.05	IRON HORSE
357	13	25	12/23/85	436.65	133.09	0.08	IRON HORSE
358	9	36	12/24/85	436.65	133.09	0.08	IRON HORSE
360	9	5	12/26/85	436.61	133.08	0.05	IRON HORSE
360	14	38	12/26/85	436.65	133.09	0.05	IRON HORSE
361	14	3	12/27/85	436.65	133.09	0.06	IRON HORSE
362	15	0	12/28/85	436.68	133.10	0.05	IRON HORSE
363	13	7	12/29/85	436.71	133.11	0.07	IRON HORSE
364	13	42	12/30/85	436.68	133.10	0.08	IRON HORSE
2	9	29	01/02/86	436.68	133.10	0.05	IRON HORSE
3	11	31	01/03/86	436.68	133.10	0.06	IRON HORSE
4	9	21	01/04/86	436.61	133.08	0.06	IRON HORSE
5	15	58	01/05/86	436.68	133.10	0.07	IRON HORSE
6	10	39	01/06/86	436.68	133.10	0.04	IRON HORSE
7	14	58	01/07/86	436.71	133.11	0.05	IRON HORSE
8	15	20	01/08/86	436.91	133.17	0.05	IRON HORSE
9	13	46	01/09/86	436.94	133.18	0.04	IRON HORSE
11	15	18	01/11/86	436.71	133.11	0.04	IRON HORSE
12	13	9	01/12/86	436.75	133.12	0.06	IRON HORSE
13	14	14	01/13/86	436.88	133.16	0.05	IRON HORSE
14	14	20	01/14/86	436.68	133.10	0.05	IRON HORSE
15	15	18	01/15/86	436.68	133.10	0.04	IRON HORSE
16	15	20	01/16/86	436.68	133.10	0.04	IRON HORSE
17	15	40	01/17/86	435.96	132.88	0.05	IRON HORSE
18	14	4	01/18/86	436.12	132.93	0.05	IRON HORSE
19	13	48	01/19/86	436.09	132.92	0.07	IRON HORSE
20	14	16	01/20/86	436.15	132.94	0.05	IRON HORSE

TABLE A1-33 (Continued)
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL WIPP-18

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
21	15	56	01/21/86	436.52	133.05	0.05	IRON HORSE
22	15	1	01/22/86	436.65	133.09	0.05	IRON HORSE
23	14	44	01/23/86	436.65	133.09	0.05	IRON HORSE
24	15	1	01/24/86	436.61	133.08	0.05	IRON HORSE
25	14	45	01/25/86	436.78	133.13	0.06	IRON HORSE
26	13	38	01/26/86	436.91	133.17	0.05	IRON HORSE
28	14	53	01/28/86	436.71	133.11	0.05	IRON HORSE
29	15	14	01/29/86	436.75	133.12	0.05	IRON HORSE
30	15	11	01/30/86	436.71	133.11	0.05	IRON HORSE
31	14	36	01/31/86	436.68	133.10	0.05	IRON HORSE
32	13	21	02/01/86	436.68	133.10	0.04	IRON HORSE
33	9	42	02/02/86	436.81	133.14	0.07	IRON HORSE
34	14	27	02/03/86	436.58	133.07	0.05	IRON HORSE
35	12	45	02/04/86	436.78	133.13	0.05	IRON HORSE
36	13	51	02/05/86	436.91	133.17	0.05	IRON HORSE
37	14	30	02/06/86	436.88	133.16	0.05	IRON HORSE
38	9	45	02/07/86	436.94	133.18	0.05	IRON HORSE
39	13	23	02/08/86	437.07	133.22	0.06	IRON HORSE
40	12	45	02/09/86	437.11	133.23	0.06	IRON HORSE
41	13	42	02/10/86	437.07	133.22	0.05	IRON HORSE
42	10	38	02/11/86	437.11	133.23	0.05	IRON HORSE
43	9	24	02/12/86	437.17	133.25	0.05	IRON HORSE
44	9	12	02/13/86	437.14	133.24	0.05	IRON HORSE
46	14	45	02/15/86	437.01	133.20	0.04	IRON HORSE
48	15	26	02/17/86	437.04	133.21	0.06	IRON HORSE
50	14	15	02/19/86	436.98	133.19	0.04	IRON HORSE
52	13	35	02/21/86	437.07	133.22	0.06	IRON HORSE
55	14	11	02/24/86	436.94	133.18	0.08	IRON HORSE
57	15	52	02/26/86	437.07	133.22	0.05	IRON HORSE
59	8	45	02/28/86	437.24	133.27	0.04	IRON HORSE
62	15	30	03/03/86	437.17	133.25	0.04	IRON HORSE
64	12	40	03/05/86	437.11	133.23	0.05	IRON HORSE
66	10	0	03/07/86	437.04	133.21	0.05	IRON HORSE
71	9	17	03/12/86	436.98	133.19	0.06	IRON HORSE
73	12	14	03/14/86	437.04	133.21	0.05	IRON HORSE
76	13	40	03/17/86	436.94	133.18	0.04	IRON HORSE
78	9	35	03/19/86	436.98	133.19	0.06	IRON HORSE
80	13	30	03/21/86	437.11	133.23	0.05	IRON HORSE
83	15	35	03/24/86	437.07	133.22	0.05	IRON HORSE
85	9	48	03/26/86	437.04	133.21	0.04	IRON HORSE
88	12	10	03/29/86	437.01	133.20	0.05	IRON HORSE
90	13	15	03/31/86	436.98	133.19	0.05	IRON HORSE
92	9	59	04/02/86	437.01	133.20	0.06	IRON HORSE

TABLE A1-33 (Continued)
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL WIPP-18

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
95	11	30	04/05/86	436.75	133.12	0.04	IRON HORSE
97	14	10	04/07/86	436.68	133.10	0.04	IRON HORSE
100	9	40	04/10/86	436.84	133.15	0.05	IRON HORSE
102	10	30	04/12/86	436.68	133.10	0.05	IRON HORSE
104	14	15	04/14/86	436.75	133.12	0.04	IRON HORSE
111	14	0	04/21/86	437.04	133.21	0.04	IRON HORSE

TABLE A1-34
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL WIPP-19

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
310	14	10	11/06/85	456.43	139.12	0.00	IRON HORSE
318	14	22	11/14/85	456.46	139.13	0.04	IRON HORSE
319	16	0	11/15/85	456.66	139.19	0.04	IRON HORSE
320	14	15	11/16/85	456.69	139.20	0.04	IRON HORSE
321	14	20	11/17/85	456.66	139.19	0.03	IRON HORSE
325	13	25	11/21/85	456.66	139.19	0.03	IRON HORSE
326	12	10	11/22/85	456.69	139.20	0.04	IRON HORSE
327	14	50	11/23/85	456.63	139.18	0.03	IRON HORSE
328	14	19	11/24/85	456.50	139.14	0.04	IRON HORSE
329	15	5	11/25/85	456.63	139.18	0.04	IRON HORSE
331	13	20	11/27/85	456.69	139.20	0.05	IRON HORSE
333	12	15	11/29/85	456.59	139.17	0.05	IRON HORSE
334	12	0	11/30/85	456.69	139.20	0.05	IRON HORSE
336	13	38	12/02/85	456.63	139.18	0.03	IRON HORSE
338	15	38	12/04/85	457.02	139.30	0.05	IRON HORSE
340	16	0	12/06/85	457.05	139.31	0.05	IRON HORSE
341	14	50	12/07/85	456.99	139.29	0.04	IRON HORSE
342	17	22	12/08/85	457.12	139.33	0.05	IRON HORSE
343	15	30	12/09/85	457.02	139.30	0.04	IRON HORSE
344	14	16	12/10/85	457.25	139.37	0.04	IRON HORSE
345	14	9	12/11/85	457.22	139.36	0.04	IRON HORSE
346	14	48	12/12/85	457.09	139.32	0.04	IRON HORSE
347	13	50	12/13/85	457.58	139.47	0.05	IRON HORSE
348	14	20	12/14/85	457.64	139.49	0.06	IRON HORSE
349	14	24	12/15/85	457.68	139.50	0.06	IRON HORSE
350	7	54	12/16/85	457.91	139.57	0.06	IRON HORSE
350	13	57	12/16/85	457.91	139.57	0.05	IRON HORSE
350	19	48	12/16/85	458.01	139.60	0.05	IRON HORSE
350	23	55	12/16/85	458.07	139.62	0.06	IRON HORSE
351	9	2	12/17/85	458.01	139.60	0.06	IRON HORSE
351	14	47	12/17/85	458.01	139.60	0.04	IRON HORSE
351	16	53	12/17/85	458.01	139.60	0.04	IRON HORSE
352	13	50	12/18/85	458.04	139.61	0.05	IRON HORSE
352	17	53	12/18/85	458.04	139.61	0.04	IRON HORSE
353	15	5	12/19/85	458.27	139.68	0.03	IRON HORSE
353	16	40	12/19/85	458.23	139.67	0.04	IRON HORSE
354	16	40	12/20/85	458.33	139.70	0.03	IRON HORSE
355	11	30	12/21/85	458.37	139.71	0.06	IRON HORSE
355	16	39	12/21/85	458.46	139.74	0.04	IRON HORSE
356	13	10	12/22/85	458.46	139.74	0.04	IRON HORSE
356	16	35	12/22/85	458.60	139.78	0.05	IRON HORSE
357	13	15	12/23/85	458.53	139.76	0.06	IRON HORSE
357	17	31	12/23/85	458.66	139.80	0.05	IRON HORSE

TABLE A1-34 (Continued)
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL WIPP-19

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
358	9	24	12/24/85	458.69	139.81	0.06	IRON HORSE
360	9	15	12/26/85	458.96	139.89	0.05	IRON HORSE
360	14	50	12/26/85	458.96	139.89	0.04	IRON HORSE
361	14	10	12/27/85	459.15	139.95	0.04	IRON HORSE
361	16	28	12/27/85	459.22	139.97	0.00	IRON HORSE
362	14	45	12/28/85	459.22	139.97	0.06	IRON HORSE
362	16	20	12/28/85	459.22	139.97	0.00	IRON HORSE
364	13	52	12/30/85	459.45	140.04	0.07	IRON HORSE
365	13	55	12/31/85	460.04	140.22	0.05	IRON HORSE
2	10	0	01/02/86	459.97	140.20	0.05	IRON HORSE
2	16	29	01/02/86	460.17	140.26	0.06	IRON HORSE
3	11	40	01/03/86	460.14	140.25	0.06	IRON HORSE
3	16	19	01/03/86	460.10	140.24	0.05	IRON HORSE
4	9	32	01/04/86	460.24	140.28	0.06	IRON HORSE
4	16	36	01/04/86	460.07	140.23	0.05	IRON HORSE
5	9	40	01/05/86	460.27	140.29	0.07	IRON HORSE
6	10	50	01/06/86	460.43	140.34	0.06	IRON HORSE
7	14	46	01/07/86	460.73	140.43	0.06	IRON HORSE
8	15	7	01/08/86	460.93	140.49	0.04	IRON HORSE
8	16	40	01/08/86	460.89	140.48	0.04	IRON HORSE
9	13	35	01/09/86	460.96	140.50	0.05	IRON HORSE
9	16	32	01/09/86	461.06	140.53	0.04	IRON HORSE
10	10	3	01/10/86	461.02	140.52	0.04	IRON HORSE
10	14	42	01/10/86	461.02	140.52	0.04	IRON HORSE
11	10	12	01/11/86	461.06	140.53	0.05	IRON HORSE
11	15	29	01/11/86	461.15	140.56	0.04	IRON HORSE
12	13	19	01/12/86	461.25	140.59	0.06	IRON HORSE
13	14	23	01/13/86	461.29	140.60	0.05	IRON HORSE
14	14	29	01/14/86	461.35	140.62	0.05	IRON HORSE
15	15	28	01/15/86	461.42	140.64	0.05	IRON HORSE
16	15	13	01/16/86	461.32	140.61	0.05	IRON HORSE
17	15	48	01/17/86	461.12	140.55	0.04	IRON HORSE
18	14	12	01/18/86	460.89	140.48	0.04	IRON HORSE
19	14	2	01/19/86	460.76	140.44	0.06	IRON HORSE
20	14	25	01/20/86	460.83	140.46	0.05	IRON HORSE
21	16	9	01/21/86	461.52	140.67	0.05	IRON HORSE
22	15	14	01/22/86	461.71	140.73	0.05	IRON HORSE
23	14	52	01/23/86	461.71	140.73	0.05	IRON HORSE
24	15	7	01/24/86	461.68	140.72	0.06	IRON HORSE
25	14	55	01/25/86	461.91	140.79	0.06	IRON HORSE
26	13	47	01/26/86	461.84	140.77	0.06	IRON HORSE
28	15	3	01/28/86	461.88	140.78	0.05	IRON HORSE
29	15	21	01/29/86	461.91	140.79	0.05	IRON HORSE

TABLE A1-34 (Continued)
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL WIPP-19

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
30	15	19	01/30/86	461.94	140.80	0.05	IRON HORSE
31	14	43	01/31/86	461.84	140.77	0.05	IRON HORSE
32	13	30	02/01/86	462.11	140.85	0.06	IRON HORSE
33	9	52	02/02/86	462.17	140.87	0.08	IRON HORSE
34	14	36	02/03/86	462.04	140.83	0.05	IRON HORSE
35	13	48	02/04/86	462.11	140.85	0.05	IRON HORSE
36	14	7	02/05/86	462.24	140.89	0.05	IRON HORSE
37	14	42	02/06/86	462.27	140.90	0.06	IRON HORSE
38	9	54	02/07/86	462.24	140.89	0.05	IRON HORSE
39	13	36	02/08/86	462.47	140.96	0.05	IRON HORSE
40	12	55	02/09/86	462.57	140.99	0.06	IRON HORSE
41	13	52	02/10/86	462.43	140.95	0.08	IRON HORSE
42	10	48	02/11/86	462.50	140.97	0.05	IRON HORSE
43	9	32	02/12/86	462.57	140.99	0.05	IRON HORSE
44	9	20	02/13/86	462.47	140.96	0.05	IRON HORSE
46	14	54	02/15/86	462.37	140.93	0.05	IRON HORSE
48	15	19	02/17/86	462.37	140.93	0.06	IRON HORSE
50	14	25	02/19/86	462.40	140.94	0.05	IRON HORSE
52	13	50	02/21/86	462.50	140.97	0.04	IRON HORSE
55	14	2	02/24/86	462.47	140.96	0.06	IRON HORSE
57	16	5	02/26/86	462.50	140.97	0.06	IRON HORSE
59	9	0	02/28/86	462.63	141.01	0.06	IRON HORSE
62	15	42	03/03/86	462.66	141.02	0.04	IRON HORSE
64	12	53	03/05/86	462.50	140.97	0.05	IRON HORSE
66	10	13	03/07/86	462.50	140.97	0.04	IRON HORSE
71	9	6	03/12/86	462.34	140.92	0.06	IRON HORSE
73	12	24	03/14/86	462.47	140.96	0.04	IRON HORSE
76	13	50	03/17/86	462.27	140.90	0.04	IRON HORSE
78	9	25	03/19/86	462.30	140.91	0.06	IRON HORSE
80	13	45	03/21/86	462.30	140.91	0.04	IRON HORSE
83	15	45	03/24/86	462.27	140.90	0.04	IRON HORSE
85	9	37	03/26/86	462.20	140.88	0.05	IRON HORSE
88	12	20	03/29/86	462.11	140.85	0.06	IRON HORSE
90	13	33	03/31/86	461.88	140.78	0.04	IRON HORSE
92	9	49	04/02/86	461.91	140.79	0.06	IRON HORSE
95	11	40	04/05/86	461.75	140.74	0.05	IRON HORSE
97	14	33	04/07/86	461.65	140.71	0.05	IRON HORSE
100	9	32	04/10/86	461.78	140.75	0.06	IRON HORSE
102	10	40	04/12/86	461.55	140.68	0.05	IRON HORSE
104	14	25	04/14/86	461.52	140.67	0.05	IRON HORSE
111	14	13	04/21/86	461.58	140.69	0.06	IRON HORSE

TABLE A1-35
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL WIPP-21

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
305	13	18	11/01/85	419.75	127.94	0.00	SOLINST #3
306	14	0	11/02/85	419.75	127.94	0.00	SOLINST #3
307	13	20	11/03/85	419.82	127.96	0.00	SOLINST #3
310	14	32	11/06/85	420.34	128.12	0.00	SOLINST #3
312	13	43	11/08/85	422.67	128.83	0.00	SOLINST #3
313	12	55	11/09/85	420.83	128.27	0.00	SOLINST #3
314	12	30	11/10/85	420.90	128.29	0.00	SOLINST #3
315	12	41	11/11/85	421.33	128.42	0.00	SOLINST #3
316	14	0	11/12/85	421.49	128.47	0.00	SOLINST #3
317	15	0	11/13/85	421.69	128.53	0.00	SOLINST #3
318	13	50	11/14/85	421.88	128.59	0.00	SOLINST #3
319	10	2	11/15/85	422.18	128.68	0.00	SOLINST #3
320	14	0	11/16/85	422.44	128.76	0.00	SOLINST #3
321	14	6	11/17/85	422.57	128.80	0.00	SOLINST #3
324	8	45	11/20/85	423.52	129.09	0.00	SOLINST #3
325	13	6	11/21/85	423.79	129.17	0.00	SOLINST #3
327	13	31	11/23/85	424.38	129.35	0.00	SOLINST #3
328	14	30	11/24/85	424.70	129.45	0.00	SOLINST #3
330	14	10	11/26/85	425.30	129.63	0.00	SOLINST #3
331	13	2	11/27/85	425.56	129.71	0.00	SOLINST #3
333	12	0	11/29/85	425.98	129.84	0.00	SOLINST #3
334	11	46	11/30/85	426.21	129.91	0.00	SOLINST #3
336	13	30	12/02/85	426.97	130.14	0.00	SOLINST #3
338	15	22	12/04/85	427.72	130.37	0.00	SOLINST #3
339	10	10	12/05/85	428.41	130.58	0.00	SOLINST #3
340	15	41	12/06/85	429.53	130.92	0.00	SOLINST #3
341	14	29	12/07/85	430.58	131.24	0.00	SOLINST #3
342	17	6	12/08/85	431.76	131.60	0.00	SOLINST #3
343	14	46	12/09/85	432.68	131.88	0.00	SOLINST #3
344	13	52	12/10/85	433.69	132.19	0.00	SOLINST #3
345	13	45	12/11/85	434.78	132.52	0.00	SOLINST #3
346	15	10	12/12/85	435.73	132.81	0.00	SOLINST #3
347	13	8	12/13/85	436.61	133.08	0.00	SOLINST #3
348	13	30	12/14/85	437.73	133.42	0.00	SOLINST #3
349	14	3	12/15/85	438.81	133.75	0.00	SOLINST #3
350	7	23	12/16/85	439.60	133.99	0.00	SOLINST #3
350	13	42	12/16/85	439.83	134.06	0.00	SOLINST #3
350	19	12	12/16/85	440.09	134.14	0.00	SOLINST #3
350	23	30	12/16/85	440.29	134.20	0.00	SOLINST #3
351	8	44	12/17/85	440.68	134.32	0.00	SOLINST #3
351	14	18	12/17/85	440.91	134.39	0.00	SOLINST #3
351	17	15	12/17/85	441.04	134.43	0.00	SOLINST #3
352	13	17	12/18/85	441.93	134.70	0.00	SOLINST #3

TABLE A1-35 (Continued)
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL WIPP-21

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
352	18	17	12/18/85	442.16	134.77	0.00	SOLINST #3
353	9	30	12/19/85	442.42	134.85	0.00	SOLINST #3
353	17	4	12/19/85	443.04	135.04	0.00	SOLINST #3
354	11	5	12/20/85	443.73	135.25	0.00	SOLINST #3
354	16	36	12/20/85	443.90	135.30	0.00	SOLINST #3
355	11	5	12/21/85	444.52	135.49	0.00	SOLINST #3
355	16	53	12/21/85	444.72	135.55	0.00	SOLINST #3
356	13	40	12/22/85	445.24	135.71	0.00	SOLINST #3
356	16	52	12/22/85	445.34	135.74	0.00	SOLINST #3
357	13	0	12/23/85	445.87	135.90	0.00	SOLINST #3
357	17	52	12/23/85	445.96	135.93	0.00	SOLINST #3
358	8	50	12/24/85	446.33	136.04	0.00	SOLINST #3
359	8	49	12/25/85	443.60	135.21	0.00	SOLINST #3
360	9	35	12/26/85	447.41	136.37	0.00	SOLINST #3
360	15	9	12/26/85	447.47	136.39	0.00	SOLINST #3
361	13	50	12/27/85	447.93	136.53	0.00	SOLINST #3
361	16	48	12/27/85	448.00	136.55	0.00	SOLINST #3
362	13	55	12/28/85	448.33	136.65	0.00	SOLINST #3
362	16	40	12/28/85	448.39	136.67	0.00	SOLINST #3
363	12	25	12/29/85	448.85	136.81	0.00	SOLINST #3
364	14	10	12/30/85	449.08	136.88	0.00	SOLINST #3
365	14	40	12/31/85	449.38	136.97	0.00	SOLINST #3
1	12	1	01/01/86	449.61	137.04	0.00	SOLINST #3
2	10	20	01/02/86	449.74	137.08	0.00	SOLINST #3
2	16	50	01/02/86	449.80	137.10	0.00	SOLINST #3
3	11	16	01/03/86	450.00	137.16	0.00	SOLINST #3
3	16	37	01/03/86	450.03	137.17	0.00	SOLINST #3
4	9	10	01/04/86	450.16	137.21	0.00	SOLINST #3
4	16	52	01/04/86	450.23	137.23	0.00	SOLINST #3
5	9	30	01/05/86	450.43	137.29	0.00	SOLINST #3
6	10	20	01/06/86	450.52	137.32	0.00	SOLINST #3
7	14	7	01/07/86	450.66	137.36	0.00	SOLINST #3
8	14	36	01/08/86	450.89	137.43	0.00	SOLINST #3
8	16	58	01/08/86	451.02	137.47	0.00	SOLINST #3
9	13	14	01/09/86	451.18	137.52	0.00	SOLINST #3
9	16	49	01/09/86	451.21	137.53	0.00	SOLINST #3
10	10	20	01/10/86	451.35	137.57	0.00	SOLINST #3
10	15	4	01/10/86	451.35	137.57	0.00	SOLINST #3
11	10	32	01/11/86	451.48	137.61	0.00	SOLINST #3
11	15	45	01/11/86	451.48	137.61	0.00	SOLINST #3
12	13	59	01/12/86	451.51	137.62	0.00	SOLINST #3
13	14	40	01/13/86	451.57	137.64	0.00	SOLINST #3
14	14	49	01/14/86	451.48	137.61	0.00	SOLINST #3

TABLE A1-35 (Continued)
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL WIPP-21

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
15	15	52	01/15/86	451.38	137.58	0.00	SOLINST #3
16	15	36	01/16/86	451.35	137.57	0.00	SOLINST #3
17	16	8	01/17/86	451.28	137.55	0.00	SOLINST #3
18	14	31	01/18/86	451.25	137.54	0.00	SOLINST #3
19	14	30	01/19/86	451.18	137.52	0.00	SOLINST #3
20	14	46	01/20/86	451.02	137.47	0.00	SOLINST #3
21	16	32	01/21/86	450.89	137.43	0.00	SOLINST #3
22	15	46	01/22/86	450.92	137.44	0.00	SOLINST #3
23	15	13	01/23/86	450.79	137.40	0.00	SOLINST #3
24	15	25	01/24/86	450.62	137.35	0.00	SOLINST #3
25	14	30	01/25/86	450.62	137.35	0.00	SOLINST #3
26	14	0	01/26/86	450.66	137.36	0.00	SOLINST #3
28	15	24	01/28/86	450.46	137.30	0.00	SOLINST #3
29	15	37	01/29/86	450.43	137.29	0.00	SOLINST #3
30	15	37	01/30/86	450.39	137.28	0.00	SOLINST #3
31	14	56	01/31/86	450.26	137.24	0.00	SOLINST #3
32	15	21	02/01/86	450.16	137.21	0.00	SOLINST #3
33	10	10	02/02/86	450.07	137.18	0.00	SOLINST #3
34	14	58	02/03/86	449.87	137.12	0.00	SOLINST #3
35	15	10	02/04/86	449.67	137.06	0.00	SOLINST #3
36	14	30	02/05/86	449.51	137.01	0.00	SOLINST #3
37	15	7	02/06/86	449.41	136.98	0.00	SOLINST #3
38	10	13	02/07/86	449.34	136.96	0.00	SOLINST #3
39	13	11	02/08/86	449.34	136.96	0.00	SOLINST #3
40	13	18	02/09/86	449.31	136.95	0.00	SOLINST #3
41	14	15	02/10/86	449.38	136.97	0.00	SOLINST #3
42	11	6	02/11/86	449.48	137.00	0.00	SOLINST #3
43	9	47	02/12/86	449.67	137.06	0.00	SOLINST #3
46	14	33	02/15/86	449.77	137.09	0.00	SOLINST #3
48	14	53	02/17/86	449.51	137.01	0.00	SOLINST #3
50	15	0	02/19/86	449.21	136.92	0.00	SOLINST #3
52	13	25	02/21/86	448.95	136.84	0.00	SOLINST #3
55	13	37	02/24/86	449.21	136.92	0.00	SOLINST #3
57	16	38	02/26/86	448.82	136.80	0.00	SOLINST #3
59	9	20	02/28/86	448.65	136.75	0.00	SOLINST #3
62	16	8	03/03/86	448.10	136.58	0.00	SOLINST #3
64	12	28	03/05/86	447.90	136.52	0.00	SOLINST #3
66	10	36	03/07/86	447.60	136.43	0.00	SOLINST #3
69	12	50	03/10/86	447.11	136.28	0.00	SOLINST #3
71	8	44	03/12/86	446.75	136.17	0.00	SOLINST #3
73	12	45	03/14/86	446.46	136.08	0.00	SOLINST #3
76	14	25	03/17/86	445.93	135.92	0.00	SOLINST #3
78	9	0	03/19/86	445.87	135.90	0.00	SOLINST #3

TABLE A1-35 (Continued)
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL WIPP-21

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
80	14	20	03/21/86	445.77	135.87	0.00	SOLINST #3
82	16	30	03/23/86	445.34	135.74	0.00	SOLINST #3
83	16	10	03/24/86	445.21	135.70	0.00	SOLINST #3
86	12	25	03/27/86	445.11	135.67	0.00	SOLINST #3
94	13	8	04/04/86	442.26	134.80	0.00	SOLINST #3
95	12	0	04/05/86	442.16	134.77	0.00	SOLINST #3
97	15	0	04/07/86	441.86	134.68	0.00	SOLINST #3
100	9	15	04/10/86	441.57	134.59	0.00	SOLINST #3
102	11	0	04/12/86	440.94	134.40	0.00	SOLINST #3
104	15	0	04/14/86	440.62	134.30	0.00	SOLINST #3
111	14	55	04/21/86	439.70	134.02	0.00	SOLINST #3

TABLE A1-36
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL WIPP-22

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
310	14	18	11/06/85	450.00	137.16	0.04	IRON HORSE
329	15	20	11/25/85	450.82	137.41	0.00	IRON HORSE
340	14	37	12/06/85	451.74	137.69	0.00	IRON HORSE
341	14	45	12/07/85	451.94	137.75	0.04	IRON HORSE
342	17	12	12/08/85	452.17	137.82	0.04	IRON HORSE
343	15	40	12/09/85	452.20	137.83	0.04	IRON HORSE
344	14	26	12/10/85	452.69	137.98	0.03	IRON HORSE
345	14	22	12/11/85	452.66	137.97	0.03	IRON HORSE
346	15	0	12/12/85	452.89	138.04	0.04	IRON HORSE
347	14	10	12/13/85	453.28	138.16	0.04	IRON HORSE
348	13	43	12/14/85	453.74	138.30	0.04	IRON HORSE
349	14	15	12/15/85	453.97	138.37	0.06	IRON HORSE
350	7	41	12/16/85	454.40	138.50	0.05	IRON HORSE
350	14	11	12/16/85	454.30	138.47	0.05	IRON HORSE
351	9	15	12/17/85	454.53	138.54	0.06	IRON HORSE
351	15	0	12/17/85	454.59	138.56	0.06	IRON HORSE
351	17	3	12/17/85	454.63	138.57	0.04	IRON HORSE
352	14	0	12/18/85	454.89	138.65	0.05	IRON HORSE
352	18	7	12/18/85	455.09	138.71	0.04	IRON HORSE
353	15	15	12/19/85	455.25	138.76	0.06	IRON HORSE
353	16	51	12/19/85	455.31	138.78	0.06	IRON HORSE
354	13	4	12/20/85	455.35	138.79	0.08	IRON HORSE
354	16	48	12/20/85	455.48	138.83	0.05	IRON HORSE
355	11	16	12/21/85	455.68	138.89	0.03	IRON HORSE
355	16	47	12/21/85	455.77	138.92	0.03	IRON HORSE
356	13	20	12/22/85	455.87	138.95	0.04	IRON HORSE
356	16	42	12/22/85	456.04	139.00	0.04	IRON HORSE
357	13	4	12/23/85	456.17	139.04	0.04	IRON HORSE
357	17	43	12/23/85	456.17	139.04	0.04	IRON HORSE
358	9	11	12/24/85	456.50	139.14	0.06	IRON HORSE
360	9	25	12/26/85	456.99	139.29	0.05	IRON HORSE
360	14	59	12/26/85	456.99	139.29	0.05	IRON HORSE
361	14	25	12/27/85	457.32	139.39	0.06	IRON HORSE
361	16	38	12/27/85	457.41	139.42	0.00	IRON HORSE
362	14	25	12/28/85	457.58	139.47	0.05	IRON HORSE
362	16	28	12/28/85	457.55	139.46	0.00	IRON HORSE
363	12	43	12/29/85	457.71	139.51	0.07	IRON HORSE
364	14	1	12/30/85	458.01	139.60	0.06	IRON HORSE
365	14	24	12/31/85	458.14	139.64	0.05	IRON HORSE
	2	10	01/02/86	458.66	139.80	0.07	IRON HORSE
	3	11	01/03/86	458.69	139.81	0.06	IRON HORSE
	3	16	01/03/86	458.79	139.84	0.05	IRON HORSE
	4	9	01/04/86	458.99	139.90	0.05	IRON HORSE

TABLE A1-36 (Continued)
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL WIPP-22

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH. TO WATER (meters)	ERROR	DEVICE
4	16	45	01/04/86	459.02	139.91	0.04	IRON HORSE
5	16	15	01/05/86	459.22	139.97	0.06	IRON HORSE
6	11	0	01/06/86	459.32	140.00	0.05	IRON HORSE
7	14	27	01/07/86	459.61	140.09	0.05	IRON HORSE
8	14	52	01/08/86	459.97	140.20	0.06	IRON HORSE
8	16	49	01/08/86	459.88	140.17	0.04	IRON HORSE
9	13	22	01/09/86	460.07	140.23	0.06	IRON HORSE
9	16	41	01/09/86	460.07	140.23	0.04	IRON HORSE
10	10	10	01/10/86	460.07	140.23	0.04	IRON HORSE
10	14	51	01/10/86	460.04	140.22	0.04	IRON HORSE
11	10	21	01/11/86	460.07	140.23	0.04	IRON HORSE
11	15	43	01/11/86	460.14	140.25	0.05	IRON HORSE
12	13	37	01/12/86	460.24	140.28	0.06	IRON HORSE
13	14	31	01/13/86	460.47	140.35	0.05	IRON HORSE
14	14	37	01/14/86	460.40	140.33	0.05	IRON HORSE
15	15	42	01/15/86	460.60	140.39	0.05	IRON HORSE
16	15	19	01/16/86	460.56	140.38	0.04	IRON HORSE
17	16	0	01/17/86	459.74	140.13	0.04	IRON HORSE
18	14	22	01/18/86	459.97	140.20	0.05	IRON HORSE
19	14	16	01/19/86	459.88	140.17	0.05	IRON HORSE
20	14	36	01/20/86	460.20	140.27	0.05	IRON HORSE
21	16	22	01/21/86	460.60	140.39	0.04	IRON HORSE
22	15	27	01/22/86	460.93	140.49	0.05	IRON HORSE
23	15	1	01/23/86	460.79	140.45	0.04	IRON HORSE
24	15	18	01/24/86	460.76	140.44	0.05	IRON HORSE
25	15	5	01/25/86	461.02	140.52	0.06	IRON HORSE
26	13	55	01/26/86	460.93	140.49	0.06	IRON HORSE
28	15	12	01/28/86	460.99	140.51	0.05	IRON HORSE
29	15	27	01/29/86	460.99	140.51	0.05	IRON HORSE
30	15	26	01/30/86	460.96	140.50	0.04	IRON HORSE
31	14	49	01/31/86	460.93	140.49	0.04	IRON HORSE
32	13	40	02/01/86	461.09	140.54	0.06	IRON HORSE
33	10	3	02/02/86	461.32	140.61	0.07	IRON HORSE
34	14	45	02/03/86	461.15	140.56	0.05	IRON HORSE
35	13	58	02/04/86	461.19	140.57	0.05	IRON HORSE
36	14	17	02/05/86	461.29	140.60	0.05	IRON HORSE
37	14	55	02/06/86	461.25	140.59	0.05	IRON HORSE
38	10	2	02/07/86	461.25	140.59	0.05	IRON HORSE
39	13	50	02/08/86	461.42	140.64	0.05	IRON HORSE
40	13	8	02/09/86	461.55	140.68	0.06	IRON HORSE
41	14	4	02/10/86	461.25	140.59	0.06	IRON HORSE
42	10	57	02/11/86	461.32	140.61	0.05	IRON HORSE
43	9	39	02/12/86	461.42	140.64	0.05	IRON HORSE

TABLE A1-36 (Continued)
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL WIPP-22

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
44	9	27	02/13/86	461.42	140.64	0.05	IRON HORSE
46	15	4	02/15/86	461.32	140.61	0.06	IRON HORSE
48	15	9	02/17/86	461.29	140.60	0.04	IRON HORSE
50	14	40	02/19/86	461.35	140.62	0.04	IRON HORSE
52	14	0	02/21/86	461.35	140.62	0.05	IRON HORSE
55	13	51	02/24/86	461.29	140.60	0.05	IRON HORSE
57	16	18	02/26/86	461.29	140.60	0.05	IRON HORSE
62	15	55	03/03/86	461.38	140.63	0.04	IRON HORSE
64	13	3	03/05/86	461.06	140.53	0.05	IRON HORSE
66	10	23	03/07/86	460.99	140.51	0.05	IRON HORSE
71	8	55	03/12/86	460.76	140.44	0.06	IRON HORSE
73	12	34	03/14/86	460.79	140.45	0.05	IRON HORSE
76	14	10	03/17/86	460.53	140.37	0.05	IRON HORSE
78	9	14	03/19/86	460.33	140.31	0.06	IRON HORSE
80	13	55	03/21/86	460.60	140.39	0.05	IRON HORSE
80	14	5	03/21/86	460.56	140.38	0.05	IRON HORSE
83	15	55	03/24/86	460.37	140.32	0.06	IRON HORSE
85	9	25	03/26/86	460.30	140.30	0.05	IRON HORSE
88	12	30	03/29/86	460.10	140.24	0.06	IRON HORSE
92	9	39	04/02/86	459.71	140.12	0.06	IRON HORSE
95	11	50	04/05/86	459.51	140.06	0.05	IRON HORSE
97	14	48	04/07/86	459.38	140.02	0.05	IRON HORSE
100	9	23	04/10/86	459.42	140.03	0.06	IRON HORSE
102	10	50	04/12/86	459.09	139.93	0.05	IRON HORSE
104	14	40	04/14/86	459.06	139.92	0.04	IRON HORSE

TABLE A1-37
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL WIPP-25

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
309	11	11	11/05/85	165.26	50.37	0.01	IRON HORSE
323	14	13	11/19/85	165.65	50.49	0.02	IRON HORSE
346	13	47	12/12/85	166.27	50.68	0.02	IRON HORSE
5	11	23	01/05/86	165.94	50.58	0.01	IRON HORSE
16	12	49	01/16/86	165.88	50.56	0.00	IRON HORSE
98	13	47	04/08/86	164.30	50.08	0.01	IRON HORSE

TABLE A1-38
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL WIPP-26

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
308	15	30	11/04/85	139.63	42.56	0.00	IRON HORSE
345	15	30	12/11/85	139.63	42.56	0.00	IRON HORSE
5	12	55	01/05/86	139.44	42.50	0.02	IRON HORSE
16	14	30	01/16/86	139.40	42.49	0.01	IRON HORSE
30	11	37	01/30/86	139.40	42.49	0.01	IRON HORSE
47	12	20	02/16/86	139.47	42.51	0.00	IRON HORSE
58	13	35	02/27/86	141.01	42.98	0.01	IRON HORSE
70	11	30	03/11/86	139.63	42.56	0.01	IRON HORSE
84	9	45	03/25/86	139.70	42.58	0.01	IRON HORSE
98	15	4	04/08/86	139.70	42.58	0.01	IRON HORSE

TABLE A1-39
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL WIPP-27

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
309	11	45	11/05/85	107.15	32.66	0.01	IRON HORSE
324	13	30	11/20/85	108.01	32.92	0.02	IRON HORSE
346	14	5	12/12/85	107.94	32.90	0.02	IRON HORSE
5	12	0	01/05/86	107.38	32.73	0.00	IRON HORSE
16	13	32	01/16/86	107.32	32.71	0.00	IRON HORSE
31	13	26	01/31/86	107.38	32.73	0.00	IRON HORSE
47	11	26	02/16/86	107.28	32.70	0.02	IRON HORSE
58	12	43	02/27/86	107.48	32.76	0.01	IRON HORSE
70	10	30	03/11/86	107.38	32.73	0.01	IRON HORSE
84	8	30	03/25/86	107.68	32.82	0.00	IRON HORSE
98	14	19	04/08/86	107.58	32.79	0.01	IRON HORSE

TABLE A1-40
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL WIPP-28

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
308	12	35	11/04/85	291.34	88.80	0.02	IRON HORSE
323	12	30	11/19/85	291.27	88.78	0.05	IRON HORSE
336	14	30	12/02/85	291.34	88.80	0.05	IRON HORSE
342	14	59	12/08/85	291.14	88.74	0.04	IRON HORSE
352	15	50	12/18/85	292.09	89.03	0.03	IRON HORSE
3	12	24	01/03/86	291.70	88.91	0.03	IRON HORSE
15	9	30	01/15/86	292.32	89.10	0.03	IRON HORSE
29	9	52	01/29/86	292.52	89.16	0.03	IRON HORSE
44	10	15	02/13/86	292.39	89.12	0.03	IRON HORSE
57	13	45	02/26/86	292.26	89.08	0.03	IRON HORSE
70	14	40	03/11/86	292.39	89.12	0.03	IRON HORSE
84	11	20	03/25/86	292.72	89.22	0.03	IRON HORSE
100	12	27	04/10/86	292.88	89.27	0.03	IRON HORSE

TABLE A1-41
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL WIPP-29

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
323	14	45	11/19/85	11.78	3.59	0.00	IRON HORSE
5	12	33	01/05/86	12.47	3.80	0.00	IRON HORSE
16	14	11	01/16/86	11.52	3.51	0.00	IRON HORSE
31	14	0	01/31/86	11.45	3.49	0.00	IRON HORSE
47	11	59	02/16/86	11.55	3.52	0.00	IRON HORSE
58	13	14	02/27/86	12.20	3.72	0.00	IRON HORSE
70	11	51	03/11/86	12.11	3.69	0.00	IRON HORSE
84	9	25	03/25/86	10.76	3.28	0.00	IRON HORSE
98	14	50	04/08/86	10.93	3.33	0.00	IRON HORSE

TABLE A1-42
 WATER-LEVEL MEASUREMENTS
 FOR THE CULEBRA DOLOMITE
 IN WELL WIPP-30

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
308	13	25	11/04/85	383.76	116.97	0.04	IRON HORSE
323	13	25	11/19/85	383.50	116.89	0.05	IRON HORSE
336	15	25	12/02/85	383.50	116.89	0.03	IRON HORSE
352	16	37	12/18/85	383.53	116.90	0.05	IRON HORSE
3	13	0	01/03/86	383.63	116.93	0.04	IRON HORSE
15	10	19	01/15/86	383.07	116.76	0.03	IRON HORSE
29	10	25	01/29/86	382.97	116.73	0.03	IRON HORSE
44	11	1	02/13/86	383.04	116.75	0.03	IRON HORSE
58	14	32	02/27/86	383.23	116.81	0.04	IRON HORSE
71	12	30	03/12/86	382.78	116.67	0.05	IRON HORSE
84	12	50	03/25/86	382.94	116.72	0.03	IRON HORSE
98	13	5	04/08/86	383.04	116.75	0.04	IRON HORSE

TABLE A1-43
 WATER-LEVEL MEASUREMENTS
 FOR THE BELL CANYON
 FORMATION IN WELL CABIN BABY-1

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
310	9	40	11/06/85	308.53	94.04	0.02	IRON HORSE
325	13	58	11/21/85	308.33	93.98	0.02	IRON HORSE
343	11	56	12/09/85	308.30	93.97	0.02	IRON HORSE
5	11	3	01/05/86	308.79	94.12	0.04	IRON HORSE
14	15	36	01/14/86	308.63	94.07	0.04	IRON HORSE
28	10	58	01/28/86	308.37	93.99	0.04	IRON HORSE
43	10	57	02/12/86	308.83	94.13	0.04	IRON HORSE
58	8	57	02/27/86	308.73	94.10	0.05	IRON HORSE
71	10	39	03/12/86	308.63	94.07	0.04	IRON HORSE
83	11	0	03/24/86	308.73	94.10	0.03	IRON HORSE
100	14	10	04/10/86	308.69	94.09	0.04	IRON HORSE

TABLE A1-44
 WATER-LEVEL MEASUREMENTS
 FOR THE BELL CANYON
 FORMATION IN WELL AEC-8

DAY	HR	MN	DATE	DEPTH TO WATER (feet)	DEPTH TO WATER (meters)	ERROR	DEVICE
79	11	25	03/20/86	582.97	177.69	0.00	SOLINST #2
83	13	0	03/24/86	582.98	177.69	0.00	SOLINST #2
100	11	53	04/10/86	581.86	177.35	0.00	SOLINST #1

DISTRIBUTION:

U.S. Department of Energy (5)
Office of Civilian Radioactive Waste Management
Office of Geologic Repositories
Forrestal Building
Washington, DC 20585

Associate Director

William J. Purcell - RW-20

Director, Repository Coordination Div.

T. H. Isaacs - RW-22

Director, Engineering & Licensing

Ralph Stein - RW-23

Director, Geosciences & Technology

Ralph Stein, Actg. - RW-24

Director, Siting Division

Ellison Burton - RW 25

U.S. Department of Energy, Albuquerque Operations (3)
P.O. Box 5400

Albuquerque, NM 87185

R. G. Romatowski

D. L. Krenz

D. G. Jackson, Director, Public Affairs Division

U.S. Department of Energy (6)

P.O. Box 3090

Carlsbad, NM 88221

W. R. Cooper, WIPP Project Office (Carlsbad) (2)

J. Anderson

A. Hunt, WPO (Carlsbad)

R. Crawley, WPO (Carlsbad) (2)

U.S. Department of Energy, SRPO (3)

Office of Nuclear Waste Isolation

505 King Avenue

Columbus, OH 43201

Jeff O. Neff

R. Wunderlich

G. Appel

U.S. Department of Energy (2)

Idaho Operations Office

Nuclear Fuel Cycle Division

550 Second Street

Idaho Falls, ID 83401

R. M. Nelson

J. Whitsett

U.S. Department of Energy (2)

Savannah River Operations Office

Waste Management Project Office

P.O. Box A

Aiken, SC 29801

S. Cowan

W. J. Brumley

U.S. Department of Energy (3)
Office of Defense Waste and
Transportation Management
Washington, DC 20545
J. E. Dieckhoner - DP-122
L. H. Harmon ----- DP-121
A. Follett ----- DP-121

U.S. Department of Energy
Research & Technical Support Division
P.O. Box E
Oak Ridge, TN 37830
D. E. Large

U.S. Department of the Interior
959 National Center
Geological Survey
Reston, Virginia 22092
E. Roedder

U.S. Nuclear Regulatory Commission (2)
Division of Waste Management
Mail Stop 623SS
Washington, DC 20555
Michael Bell
Hubart Miller

U.S. Geological Survey
Special Projects
MS954, Box 25046
Denver Federal Center
Denver, CO 80255
R. Snyder

U.S. Geological Survey
Conservation Division
Attn: W. Melton
P.O. Box 1857
Roswell, NM 88201

U.S. Geological Survey (2)
Water Resources Division
Western Bank Bldg.
505 Marquette, N.W., #720
Albuquerque, NM 87102
H. Lee Case
Peter Davies

State of New Mexico
Environmental Evaluation Group
320 Marcy Street
P.O. Box 968
Santa Fe, NM 87503
Robert H. Neill, Director (3)

NM Department of Energy & Minerals
P.O. Box 2770
Santa Fe, NM 87501
Kasey LaPlante, Librarian

New Mexico Bureau of Mines (2)
and Mineral Resources
Socorro, NM 87801
F. E. Kottolowski, Director
J. Hawley

Battelle Pacific Northwest Laboratories
Battelle Boulevard
Richland, WA 99352
D. J. Bradley

Battelle Memorial Institute (9)
Project Management Division
505 King Avenue
Columbus, OH 43201
W. Carbiener, General Manager (3)
J. Treadwell
T. Naymik
J. Kirchner
L. Page
O. Swanson
ONWI Library

Bechtel Inc. (2)
P.O. Box 3965
45-11-B34
San Francisco, CA 94119
E. Weber
M. Bethard

IT Corporation (2)
2340 Alamo, SE
Suite 306
Albuquerque, NM 87106
W. R. Coons
J. Zurkoff

IT Corporation (4)
P.O. Box 2078
Carlsbad, NM 88221
W. Patrick
R. McKinney
D. Deal
D. Winstanley

INTERA Technologies, Inc. (3)
6850 Austin Center Blvd., #300
Austin, TX 78731
G. E. Grisak
J. F. Pickens
G. J. Saulnier

INTERA Technologies, Inc.
P.O. Box 2123
Carlsbad, NM 88221
Wayne Stensrud

Martin Marietta Energy Systems, Inc.
Oak Ridge National Laboratory
Box Y
Oak Ridge, TN 37830
J. A. Carter

Martin Marietta Energy Systems, Inc.
Oak Ridge National Laboratory
Environmental Science
X10 Area, Bldg. 1505, Rm. 322
Oak Ridge, TN 37831
E. Bondietti

RE/SPEC Inc.
P.O. 725
Rapid City, SD 57701
Dr. P. Gnirk

RE/SPEC, Inc.
P.O. Box 14984
Albuquerque, NM 87191
S. W. Key

Rockwell International
Atomics International Division
Rockwell Hanford Operations
P.O. Box 800
Richland, WA 99352
W. W. Schultz

Serata Geomechanics
4124 Lakeside Drive
Richmond, CA 94806-1941
Dr. Shosei Serata

G. O. Bachman
Star Route Box 1028
Corrales, NM 87048

Ben Donegan
Leonard Minerals Co.
3202 Candalaria, N.E.
Albuquerque, NM 87107

Ms. Lynn Lantz
Peters Technology Transfer
P.O. Box 216
Swarthmore, PA 19081

National Academy of Sciences, WIPP Panel
Konrad B. Krauskopf
Department of Geology
Stanford University
Stanford, CA 94305

Frank L. Parker
Department of Environmental and
Water Resources Engineering
Vanderbilt University
Nashville, TN 37235

John O. Blomeke
Oak Ridge National Laboratory
P.O. Box X
Oak Ridge, TN 37830

John D. Bredehoeft
Western Region Hydrologist
Water Resources Division
U.S. Geological Survey
345 Middlefield Road
Menlo Park, CA 94025

Dr. Karl P. Cohen
928 N. California Avenue
Palo Alto, CA 94303

Fred M. Ernsberger
1325 N.W. 10th Avenue
Gainesville, FL 32601

Hans P. Eugster
Department of Earth Sciences
Johns Hopkins University
Baltimore, MD 21218

Rodney C. Ewing
University of New Mexico
Department of Geology
Albuquerque, NM 87131

Charles Fairhurst
Department of Geological Sciences
University of Minnesota
Minneapolis, MN 55455

William R. Muehlberger
Department of Geological Sciences
University of Texas at Austin
Austin, TX 78712

D'Arcy A. Shock
233 Virginia
Ponca City, OK 74601

National Academy of Sciences
Committee on Radioactive Waste Management
2101 Constitution Avenue, NW
Washington, DC 20418
Peter Meyers

Hobbs Public Library
509 N. Ship Street
Hobbs, NM 88248
Ms. Marcia Lewis, Librarian

New Mexico Tech
Martin Speere Memorial Library
Campus Street
Socorro, NM 87810

New Mexico State Library
P.O. Box 1629
Santa Fe, NM 87503
Ms. Ingrid Vollenhofer

Zimmerman Library
University of New Mexico
Albuquerque, NM 87131
Zanier Vivian

WIPP Public Reading Room
Atomic Museum, Kirtland East AFB
Albuquerque, NM 87185
Ms. Gwynn Schreiner

WIPP Public Reading Room
Carlsbad Municipal Library
101 S. Hallagueno St.
Carlsbad, NM 88220
Lee Hubbard, Head Librarian

Thomas Brannigan Library
106 W. Hadley St.
Las Cruces, NM 88001
Don Dresp, Head Librarian

Roswell Public Library
301 N. Pennsylvania Avenue
Roswell, NM 88201
Ms. Nancy Langston

University of Minnesota
Dept. of Energy and Materials Science
151 Amundson Hall
421 Washington Ave. S.E.
Minneapolis, MN 55455
R. Oriani

John Handin
Center of Tectonophysics
Texas A&M University
College Station, TX 77840

University of Arizona (2)
Department of Nuclear Engineering
Tucson, AZ 85721
J. G. McCray
J. J. K. Daemen

University of New Mexico (2)
Geology Department
Albuquerque, NM 87131
D. G. Brookins
Library

D. W. Powers
Department of Geological Sciences
University of Texas at El Paso
El Paso, TX 79968

George Pinder
Department of Civil Engineering
Princeton University
Princeton, NJ 08504

Netherlands Energy Research Foundation ECN (2)
Attn: Tuen Deboer, Mgr.
L. H. Vons
3 Westerduinweg
P.O. Box 1
1755 ZG Petten
The Netherlands

1540 W. C. Luth
3141 S. A. Landenberger (Library) (5)
3151 W. L. Garner, For: DOE/OSTI (Unlimited Release) (3)
3154-1 C. H. Dalin (28) for DOE/OSTI
6000 E. H. Beckner
6300 R. W. Lynch
6310 T. O. Hunter
6311 L. W. Scully
6312 F. W. Bingham
6313 J. R. Tillerson
6330 W. D. Weart
6331 A. R. Lappin
6331 R. L. Beauheim (2)
6331 D. J. Borns
6331 M. M. Gonzales
6331 S. J. Lambert
6331 W. B. Miller
6331 K. L. Robinson
6331 C. L. Stein
6331 D. Tomasko

6332 L. D. Tyler
6332 F. G. Yost
6332 Sandia WIPP Central Files (700H. INT) (2)
6431 R. L. Hunter
6431 M. D. Siegel
7100 C. D. Broyles
7120 T. L. Pace
7125 R. Rutter
7130 J. O. Kennedy
7133 R. D. Statler
7133 J. W. Mercer
7135 P. D. Seward

5-29-86/RLB/13501

