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# Brine Sampling and Evaluation Program 1991 Report

Waste Isolation Pilot Plant

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# BRINE SAMPLING AND EVALUATION PROGRAM
# 1991 REPORT

## DOE-WIPP 93-026

September 1993


AUTHORS

D. E. Deal—IT Corporation
R. J. Abitz—IT Corporation
J. Myers—IT Corporation
D. S. Belski—Westinghouse Electric Corporation
M. L. Martin—IT Corporation
D. J. Milligan—IT Corporation
R. W. Sobocinski—IT Corporation
P. P. James Lipponer—IT Corporation


Any comments or questions regarding this report should
be directed to the U.S. Department of Energy
WIPP Project Office
P. O. Box 3090
Carlsbad, New Mexico 88221

or to the Manager
Engineering Department
Westinghouse Electric Corporation
Waste Isolation Division
P.O. Box 2078
Carlsbad, New Mexico 88221

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## List of Abbreviations/Acronyms

| | |
|---|---|
| ASTM | American Society for Testing and Materials |
| BSEP | Brine Sampling and Evaluation Program |
| °C | degrees Celsius |
| CH-TRU | contact-handled transuranic |
| Cl | chloride |
| cm | centimeter(s) |
| DOE | U.S. Department of Energy |
| DRZ | disturbed rock zone |
| EATF | Engineered Alternatives Task Force |
| ft | foot/feet |
| g | gram(s) |
| g/L | gram(s) per liter |
| $g/cm^3$ | gram(s) per cubic centimeter |
| $H_2O$ | water |
| in. | inch(es) |
| IT | IT Corporation |
| ITAS | IT Corporation Analytical Services |
| K | potassium |
| kg | kilogram(s) |
| L | liter(s) |
| m | meter(s) |
| $m^2$ | square meter(s) |
| MB 139 | Marker Bed 139 |
| mg/L | milligram(s) per liter |
| mL | milliliter(s) |
| mm | millimeter(s) |
| MPa | megapascal(s) |
| Na | sodium |
| P | pascal(s) |
| psi | pounds per square inch |
| RCRA | Resource Conservation and Recovery Act |
| SG | specific gravity |
| SI | saturation index |
| SNL/NM | Sandia National Laboratories/New Mexico |
| SPDV | Site and Preliminary Design Validation |
| s.u. | standard units |
| TDS | total dissolved solids |
| TIC | total inorganic carbon |
| TOC | total organic carbon |
| TRU | transuranic |
| UNC | United Nuclear Corporation |
| VOC | volatile organic compound |
| Westinghouse | Westinghouse Electric Corporation |
| WIPP | Waste Isolation Pilot Plant |

# Executive Summary

The data presented in this report are the result of Brine Sampling and Evaluation Program (BSEP) activities at the Waste Isolation Pilot Plan (WIPP) during 1991. These BSEP activities document and investigate the origins, hydraulic characteristics, extent, and composition of brine occurrences in the Permian Salado Formation and seepage of that brine into the excavations at the WIPP. When excavations began at the WIPP in 1982, small brine seepages (weeps) were observed on the walls. Brine studies began as part of the Site Validation Program and were formalized as a program in its own right in 1985.

During nine years of observations (1982–1991), evidence has mounted that the amount of brine seeping into the WIPP excavations is limited, local, and only a small fraction of that required to produce hydrogen gas by corroding the metal in the waste drums and waste inventory. The data through 1990 is discussed in detail and summarized by Deal and others (1991). The data presented in this report describes progress made during the calendar year 1991 and focuses on four major areas: (1) quantification of the amount of brine seeping across vertical surfaces in the WIPP excavations (brine weeps); (2) monitoring of brine inflow, e.g., measuring brines recovered from holes drilled downward from the underground drifts (downholes), upward from the underground drifts (upholes), and from subhorizontal holes; (3) further characterization of brine geochemistry; and (4) preliminary quantification of the amount of brine that might be released by squeezing the underconsolidated clays present in the Salado Formation.

***Measurement of Rib Weeps.*** Quantification of the amount of brine seeping across vertical surfaces into the WIPP excavations continued. Much of the brine evaporates into the air circulated for ventilation, resulting in salt encrustations on the underground surfaces. The encrustations were carefully collected, dried, and weighed. The three areas described by Deal and others (1989, Section 2.2) were sampled again, and two new sampling areas were established. Additionally, one of the areas previously sampled (R1S) was reexcavated (trimmed) 3 feet (ft) (0.9 meters [m]), creating a new surface. An algorithm developed in this study was then used to calculate the amount of brine that would be required to form the encrustations.

Calculated seepage rates based on encrustation development ranged from 0.02 to 1.3 liters (L) per square meter of surface area per year, and the surfaces dried up about three years after they were excavated. If the six areas sampled are each assumed to be representative of conditions in a full-sized WIPP waste storage room (13 ft [4 m] tall by 300 ft [9 m] long, times two walls), these data predict that the total amount of brine seeping through the walls into a waste storage room ranges from 45 to 603 L, much less than the 220,000 L calculated (Deal and others, 1991) as necessary to corrode all the susceptible metal in the CH-TRU waste and waste storage drums.

The facts that the weeps ceased and then were reactivated again after 3 ft (0.9 m) were trimmed from the surface and that about the same amount of encrustation formed the second time strongly suggests that most of the observed brine originates in the meter or so of salt closest to the excavation.

***Damp or Wet areas on Drift Floors.*** Seepage into the one persistent wet area on the floor of the WIPP excavations in Room G (known as GSEEP) continued to decline in 1991, reaching a low value of 0.4 L per day by December. The drift floors in the northern part of the workings (north of the Salt Shaft) were carefully inspected for evidence that brine was flowing upward out of fractures beneath the floors. No such evidence was found. Drillholes penetrating anhydrite Marker Bed 139 (MB 139) in Room G and Site and Preliminary Design Validation (SPDV) Room 4 were also observed. Those observations show that the anhydrite is fractured, but no brine is seeping out of either the anhydrite or the fractures providing strong evidence that there is no significant flow of brine into the excavations from MB 139. If there is far-field flow through MB 139, moisture (or evidence of moisture, such as salt encrustation) should be observed at these locations. No such evidence was found. (In the context of brine flow toward the WIPP excavations, near-field flow is flow that occurs within the DRZ, including the outer zone of plastic deformation and the inner zone of elastic deformation and fracturing [Deal and others, 1991, Chapter 5]. Far-field flow refers to flow far enough beyond the DRZ that the salt does not deform in response to the presence of the WIPP excavations.)

***Seepage into Drillholes.*** Seepage into selected drillholes continued to be monitored. Eight of the ten downholes monitored in 1991 showed fairly steady seepage rates ranging from 0.004 to 0.09 L per day. Downholes are drilled vertically downward into the repository floor. Two downholes, the one in Panel 1 and the one in the underground core storage area, showed decreasing seepage trends. In all of those downholes where MB 139 could be observed, seepage was not entering into the hole from MB 139. Rather, seepage was from deeper horizons that will not be intersected by waste storage rooms or the fracturing expected to occur around waste storage rooms.

Only one monitored uphole continues to produce brine; that seepage appeared to become sporadic in 1991. Upholes are drilled vertically upward into the repository roof. Eleven subhorizontal observation holes continue to be monitored. These holes are drilled at a slight downward angle. Only those four that intersect the orange band (Map Unit 1) continue to have measurable seepage, which is on the order of 0.001 to 0.02 L per day.

***Seepage into Shaft Sumps.*** Observations in the shaft sumps show that MB 139 and open fractures remain dry. The shaft sumps are, in effect, long-term far-field flow experiments. The fact that brine is not observed seeping from MB 139 in the shafts is evidence that significant far-field flow does not exist.

***Geochemistry.*** The general trends of the 1991 geochemistry data are similar to those discussed by Deal and others (1991, Chapter 3, Table 3-5 and 3-3). Long-term trends of strontium values have been decreasing for samples collected from DHP402A. A high strontium signature is characteristic of brine that originated as water from the Rustler Formation and was spread for dust control. The lowering of strontium values is consistent with the hypothesis that less dilution by construction water derived from the Rustler Formation is occurring at these two locations.

***Moisture Contents of Clay in the Salado Formation.*** Clay samples from the WIPP underground were tested in the laboratory to determine how much brine could be squeezed out of them if they were compacted under lithostatic loading. Approximately 25 to 29 percent brine by volume is available. Preliminary calculations indicate that there is enough brine available in the clay within a meter or two of the excavations to account for the observed brine weeps.

# 1.0 Introduction

The Waste Isolation Pilot Plant (WIPP), a U.S. Department of Energy (DOE) research facility, was established to demonstrate the safe disposal of defense-generated transuranic (TRU) waste in the United States. The WIPP facility is 42 kilometers (26 miles) east of Carlsbad, New Mexico (Figure 1-1). The surface and underground layout of the facility is presented in Figure 1-2. The repository is approximately 2,150 feet (ft) (655 meters [m]) below the surface in the Salado Formation. The Salado Formation and underlying Castile Formation make up an evaporite sequence over 3,300 ft (1,000 m) thick (Figure 1-3). An extensive program of site characterization was initiated in 1976 (Powers and others, 1978; Bechtel, 1983) and continued through 1990 (Deal and others, 1991). The hydrogeological activities of the Brine Sampling and Evaluation Program (BSEP) are part of a continuing effort to refine the understanding of the repository geology. The data in this report constitute updates of previous studies that were summarized in Deal and others (1991).

Brine studies began in 1982 as part of the Site Validation Program (Black and others, 1983) and were formalized in 1985 by Morse and Hassinger (1985). The focus of the BSEP is the origin, hydraulic characteristics, extent, and chemical composition of brine in the Salado Formation at the repository horizon and seepage of that brine into the excavations at the WIPP. Although the repository is dry, brine weeps from exposed surfaces, accumulates in drill holes and sumps, and forms encrustations on the ribs (walls). The chemistry of the brine may affect chemical reactions in the buried waste, and the volume of brine and the hydrologic system that drives the brine seepage need to be known to assess the long-term performance of the repository after closure.

Possible brine inflow systems have been discussed in previous BSEP reports. There are basically two systems that have been proposed: one in which far-field flow occurs through undisturbed rock outside of the zone of rock deformation (disturbed rock zone [DRZ]) and a local near-field system where brine is redistributed within the DRZ. Additional effects, such as gas exsolution, development of enhanced porosity and permeability within the DRZ, and preferential flow along bedding planes, may modify brine inflow. However, it is fundamentally important to distinguish between far-field sources and local, relatively limited redistribution of brine in the immediate vicinity of the WIPP excavations. In both cases, the driving mechanism is the pressure gradient caused by the excavation of the underground

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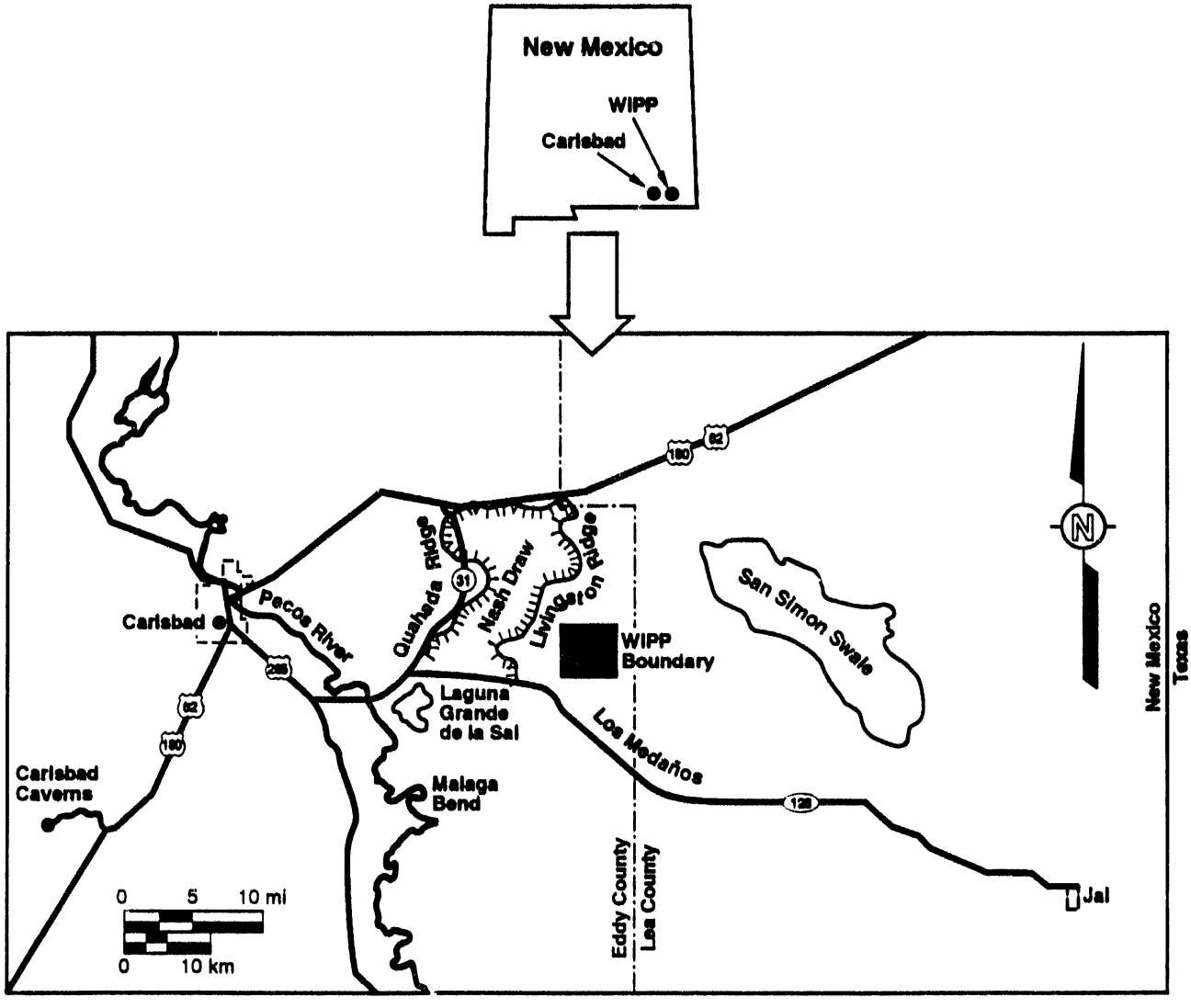


**Figure 1-1**
**WIPP Location in Southeastern New Mexico**

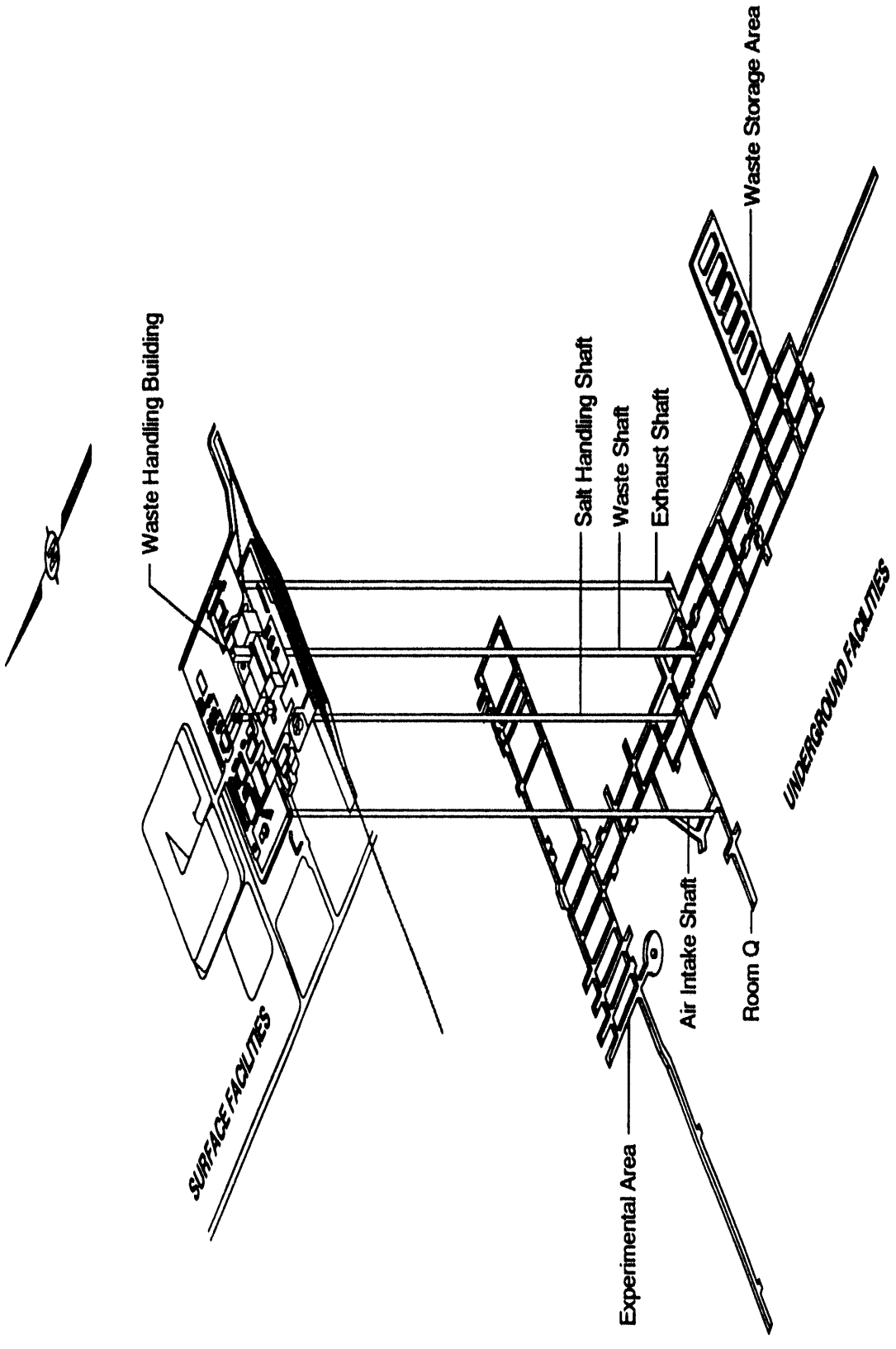


**Figure 1-2**
**Surface and Underground Layout of the WIPP Facility as of December 31, 1991**

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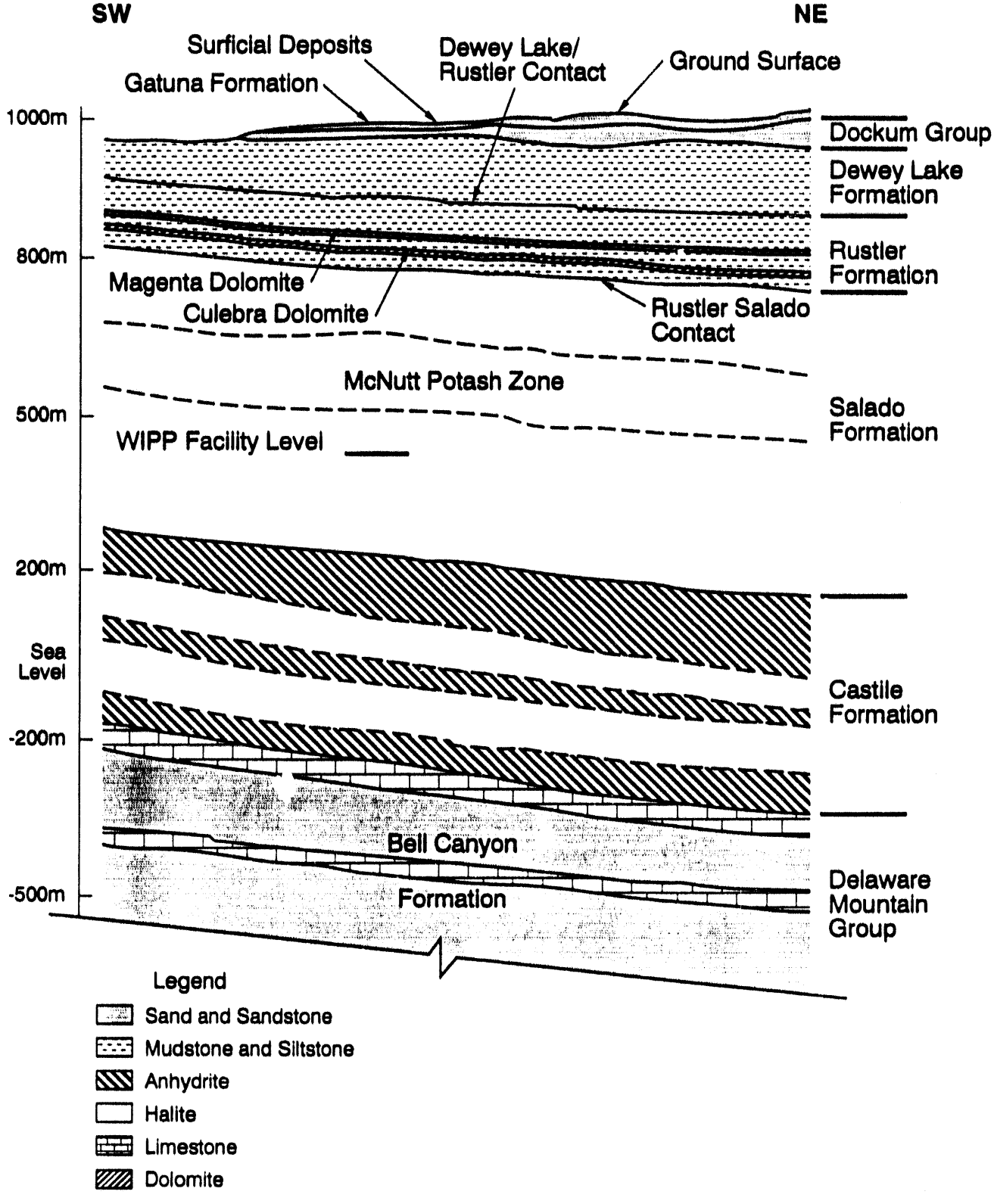



**Figure 1-3**

**Generalized Stratigraphic Cross Section**
**(Modified from Deal and Case, 1987, Figure 1-2)**

openings. Flow pathways are through permeable interbeds, along stratigraphic discontinuities, or through fractures.

The relative importance of these two systems needs to be determined. For example, if there is sufficient far-field flow into the repository, then enough brine may come into the excavations to completely corrode the metal in the waste and the waste drums. In that case, the potential for hydrogen generation due to the corrosion would be limited by the total metal inventory. If brine seepage is a purely local phenomenon due to redistribution of brine in the immediate vicinity of the excavations, there may be insufficient brine available to cause much corrosion after closure. In the latter case, gas generation will be limited by brine availability and may not be a problem. Evidence is mounting, including data presented in this report, that the brine volume is quite limited, is derived from clay within a few meters of the excavations, and will not result in the production of large quantities of hydrogen gas by anoxic corrosion.

The predicted consequences of human-intrusion events, the fate of the waste-generated gases, and the migration of the hazardous constituents during undisturbed performance are all sensitive to brine inflow assumptions, even if both of the proposed systems yield similar volumes of brine during the pressurization phase (initial period of time at which the repository is pressurizing). If the far-field model is valid, a human-intrusion event (drilling into the sealed repository at a future date) will lower fluid pressure in the waste storage rooms, create pressure gradients toward the rooms, and reinstate far-field flow. This will lead to a greater release of radionuclides from the repository as the inflowing brine infiltrates through the waste and flows up the drill hole. Alternatively, if the near-field model is valid, the only brine available for transport of radionuclides is the volume of brine that is trapped in the room at the time of sealing.

Predicting the fate of waste-generated gases is also dependent upon the hydrologic system assumed to be operational. If brine can flow through the far-field, then excess gas pressure can probably be dissipated through the host rock; however, if far-field flow is not a viable concept, gas generation from microbial or radiolytic decomposition of organic materials may yield very high local pressures. Analysis by the WIPP Engineered Alternatives Task Force (EATF) has shown that predicted peak pressures are highly dependent upon the assumed mechanisms by which fluids can flow through the undisturbed host rock (DOE, 1991).

Another long-term performance concern is the migration of hazardous constituents listed in the Resource Conservation and Recovery Act (RCRA) from the repository. If far-field flow

is valid, the generation of excess gas pressure within the repository may force gas, possibly contaminated with volatile organic compounds (VOC), across the RCRA unit boundary. However, if there is no far-field flow, there will be less potential for VOC migration.

Collection techniques and certain general observations should be kept in mind when evaluating the BSEP data. These are listed in Table 1-1. Care should also be exercised when interpreting the various diagrams of drill hole lengths and stratigraphic thicknesses. Although the strata at the WIPP are quite uniform in both composition and thickness, some variation occurs. As a result, there are differences, albeit small, from north to south and from east to west within the WIPP excavations.

Activities in 1991 provided additional information on the brine seepage in the repository (Chapter 2), geochemical properties of the brine (Chapter 3), and the release of brine from undercompacted clays within the Salado Formation (Chapter 4). A summary and conclusions are also provided (Chapter 5). This report supplements the summary of data through 1990 reported and discussed by Deal and others (1991).

Appendix A provides detailed information of the brine seepage into drill holes monitored for this program. The information includes the name of the drill hole; date and time of brine collection or sampling; volume (in liters) removed; days since January 1, 1985 (an arbitrary reference date); the cumulative volume (L) collected; inflow rates in liters per day, and a remarks column. Appendix B contains graphs of the data from Appendix A, presented as an 11-point moving average of the data. This averaging reduces variation introduced by collection techniques and presents a more realistic picture of the real variations in brine seepage rates than would be presented by plots of raw data. Appendix C shows the results of the chemical analyses, including ion concentrations in milligrams per liter (mg/L), pH, specific conductivity, and alkalinity. This report constitutes a permanent quality assurance record and will be retained for this purpose as stipulated in the quality assurance sections of the Geotechnical Engineering program plans and procedures.

## Table 1-1
## Points to be Considered When Evaluating BSEP Data

1. Many of the downholes and sumps are contaminated with water spread on the floor for construction purposes or salt-dust control (Deal and others, 1989).

2. The redistribution of stress around the WIPP excavations as the openings age can cause significant changes in inflow rates. These effects are particularly observable in upholes and downholes.

3. All downholes were originally pumped with a bailer on a two-week interval. During 1989, pressure-suction moisture-collection devices were installed in the holes. These devices have a capacity of less than 1 liter, and the sampling frequency was increased to once a week. The limited capacity of the collection device requires sampling on the following day for quantities of a half-liter or more. The two-day volume measurements are then summed (see Appendix A).

4. Brine seepages in the Salado Formation (Deal and others, 1989) are small and chemically distinct from brines in the Rustler Formation. WIPP brines are also chemically distinct from brines in the Castile Formation.

5. Brine occurrences, particularly those evidenced as halite efflorescences or salt encrustations, are ubiquitous on ribs (walls) but not the back (roof) in recently mined areas throughout the WIPP underground.

6. Brine seepage rates into test drillholes are low, usually on the order of a few hundredths of a liter per day or less.

7. Although small when measured in terms of liters per day at any given location, cumulative seepage volumes may be significant when measured in terms of the entire repository over many years.

8. Brine seepage into downholes can vary several orders of magnitude between locations, even when locations are less than 1 meter apart.

9. Upholes and downholes show a pattern of an initial, maximum flow rate that declines to a steadier (or much more slowly declining) flow rate during the observation period. Many of the upholes dry up completely.

10. Vertical drill holes yield inconsistent data, but horizontal drill holes provide consistent and comparable data sets.

11. Flow in these very low-permeability units is quite complex, has very low velocities, appears to involve small volumes of brine, and requires testing over long periods of time during which the very properties being tested change; therefore, the flow parameters are difficult to quantify.

# 2.0 Monitoring of Brine Inflow Parameters

## 2.1 Introduction

Brine seepage observations in underground locations at the WIPP began in 1982. December 31, 1991, marked nine years of observation. Information regarding the inflow of brine was derived from observations and mapping of moist areas and measurements of brine seeping into holes drilled downward from the floor, upward from the back (roof), and subhorizontally from the rib (wall) of the facility. The locations of the 1991 BSEP observation holes are shown in Figure 2-1, superimposed on a map of the facility as it existed on December 31, 1991. Descriptions and the underground locations of these boreholes are listed in Table A-1 of Appendix A. Table A-2 of Appendix A lists the quantity of brine removed, calculated inflow rates in liters per day, and cumulative volume (L) for all the boreholes monitored in 1991. The brine accumulations from these boreholes at the repository horizon and the stratigraphy of the Salado Formation have been discussed and summarized by Deal and others (1991).

## 2.2 Measurement of Rib Weeps: Quantitative Estimates of Salt Encrustation Weights and Inferred Brine Volumes

Small encrustations of precipitated salt tend to develop on newly excavated portions of the WIPP underground workings in the Salado Formation (Deal and others, 1989). The encrustations, sometimes called salt efflorescences, result from the evaporation of brine seeping from the adjacent salt and often take the form of "buttons" or larger masses, depending upon the amount of brine available. Areas of salt efflorescence on the ribs occur where small amounts of brine seep from the walls of the excavations. These small brine seeps are referred to as weeps. The weeps have been studied since 1982 (Alcorn, 1983) and discussed in detail by Deal and others (1991). The present investigation of the salt efflorescences is a continuation of studies described by Deal and others (1989, Section 2.2) and was pursued to estimate the volume of brine that was seeping from the adjacent rock. Deal and others (1989) developed an algorithm to an estimate the volume of brine required to form the encrustations.

### 2.2.1 Methods

The following five areas (Figure 2-1) with well-developed encrustations were selected: (1) Area R1S, located on the south rib of S1950 at W120; (2) Area R2S (Figure 2-2), located on the south rib at the west end of Room G (N1100 at W2830); (3) Area R3S, located on the east rib of W170 at S1750; (4) Area R4S, located on the west end (W327) of S400 in the

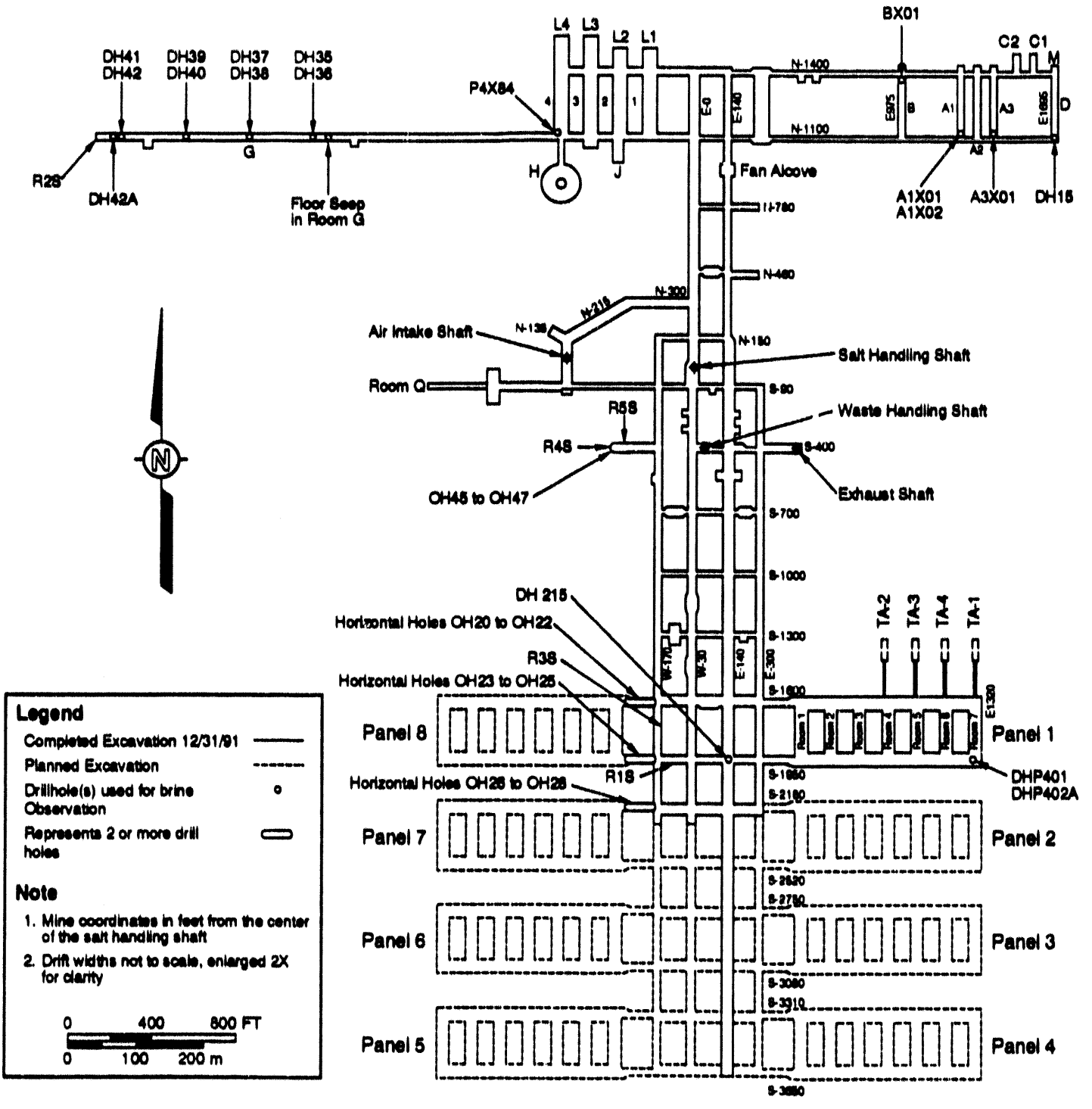



**Figure 2-1**

**Map of WIPP Underground Workings Showing BSEP Observation Locations as of December 31, 1991**

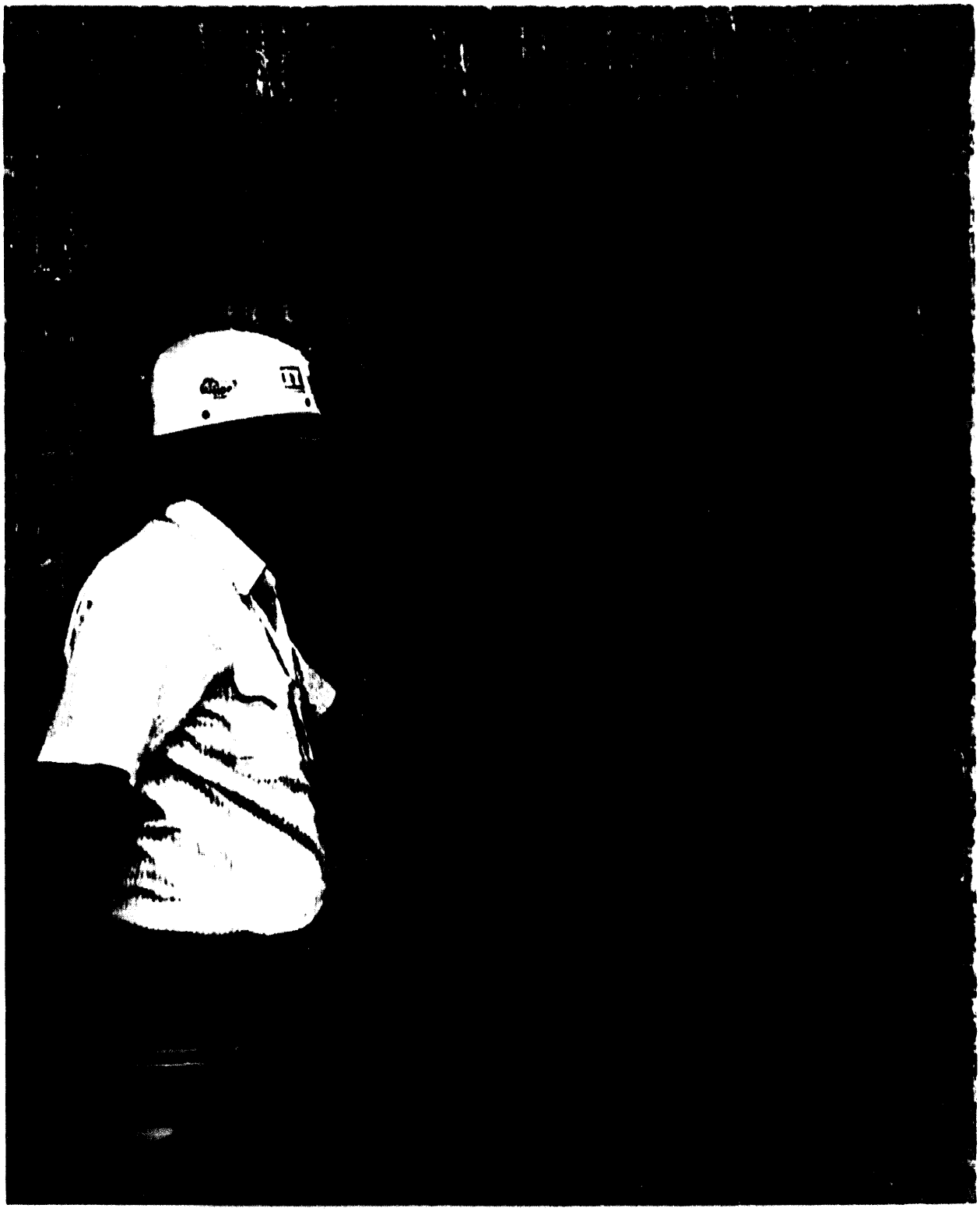


**Figure 2-2**

**Rib Weep Grid Area R2S**

(Photo taken in July 1993 No significant encrustation growth has occurred since June 1989, when encrustations where last removed from this surface.)

core library; and (5) Area R5S, located on the north rib of S400 between W276 and W325 in the core library (S120) (Figure 2-1). The first sampling round at areas R1S, R2S, and R3S has been documented by Deal and others (1989, Section 2.2). Results for these rounds are also presented here for comparison.

At each location, a randomly chosen section of rib was marked with a grid of 1-$ft^2$ (0.09 $m^2$) intervals (Figure 2-2) for a total of 80 $ft^2$ (7.4 $m^2$) for sampling areas R1S, R2S, and R3S; 176 $ft^2$ (16.4 $m^2$) for sampling area R4S; and 416 $ft^2$ (38.6 $m^2$) for sampling area R5S. At R1S, R2S, and R3S, the grid was 8 ft (2.4 m) high and 10 ft (3 m) long, centered vertically between the back and the floor of the drifts, and the positions of the orange band and other stratigraphic markers were noted on the field data sheets. In the core library, grids R4S and R5S were located with the straight top edge located approximately along the slightly undulating exposure of clay F. Both grids were 8 ft (2.4 m) high; R4S was 22 ft (6.7 m) long, and R5S was 52 ft (15.8 m) long. The encrustations within each square-foot (0.09-$m^2$) grid cell was carefully collected by scraping the wall and allowing the loosened material to fall into a tray held beneath the sampled area.

The material from each square-foot (0.09 $m^2$) grid area was placed into an individual plastic bag, labeled, and sealed to prevent moisture loss. Upon return to the surface, the material from each grid square was weighed, transferred to a drying tray, and placed in an oven. The first samples were dried at 250 degrees Celsius (°C), but a few of the samples decrepitated at this temperature, indicating that a lower drying temperature was required to avoid explosively dispersing the samples. Two groups of samples, one dried at 150°C and the other at 95°C, showed no difference in final weight, and thus, all subsequent encrustation samples were dried at 95°C. After an initial drying period, the samples were weighed at 24-hour intervals until no change in weight was detected. The dry weight of each sample was determined, and the water loss was calculated as a weight percentage compared to the original weight of the sample. The data were entered into a database file, and the amount of brine required to deposit that amount of salt crust was calculated using the algorithm devised by Deal and others (1989).

Area R1S was excavated on December 4, 1986, and 3 ft (0.9 m) were trimmed from the rib on December 22, 1989, creating a new surface, redistributing the stress in the salt, and renewing brine weeping. The new surface was 3 ft (0.9 m) south of the former location of R1S and is referred to as R1S-T (after trimming). The area was sampled twice before the rib was trimmed (April 19, 1988, and June 20, 1989) and twice afterwards (June 13, 1990, and

April 11, 1991). The amount of time available for encrustation growth was 502, 427, 173, and 302 days, respectively. Area R2S was excavated January 2, 1985, and sampled twice—April 27, 1988, and June 20, 1989. The time available for encrustation growth was 1,210 days and 419 days, respectively. Area R3S was excavated December 18, 1986, and sampled twice—May 18, 1988, and June 20, 1989. The time available for encrustation growth was 519 days and 398 days, respectively. The core library area (R4S and R5S) was excavated May 31, 1989, and sampled once on April 17, 1991—686 days later.

### 2.2.2 Data

Two quantities, dry weight of salt encrustation and weight percent water loss, were ascribed to the center of a grid square for the purposes of further interpretation. It is recognized that, for any given grid area, some portion of the salt encrustation resulted from brine that flowed down the vertical surface from above. Similarly, some brine that seeped to the surface within the area flowed downward to lower areas before crystallizing.

Although care was taken to completely scrape the ribs of all encrustation material, some was left behind, due to the inability to completely remove it from areas where encrustation was merely a thin film on the rock surfaces. This type of error will lead to underestimation of the encrustation weights. Conversely, small amounts of clay and salt not associated with the encrustation were sometimes incorporated into the samples. Although these amounts were small, their effect would be to provide overestimates of the encrustation weights. Given the sampling uncertainties, the estimated accuracy of the dry weights due to sampling error is ±5 percent.

### 2.2.3 Discussion

Brine will begin to evaporate when it migrates to the surface of the drift and is exposed to the air that is circulated through the excavations. The brine is in equilibrium with halite, so that the evaporation of water from the brine will result in the precipitation of halite and an increase in the concentrations of the undersaturated elements, such as potassium, magnesium, and bromine. As this process proceeds, halite continues to precipitate, and the unsaturated elements continue to concentrate in the remaining brine until the solubility of sylvite is reached. At this point (the halite-sylvite cotectic [Krauskopf, 1979]), the sodium (Na)/potassium (K) ratio in the remaining brine becomes fixed, and both halite and sylvite will precipitate in a fixed proportion as evaporation continues.

Krumhansl and others (1987) noted that the weep encrustations are deficient in magnesium, relative to typical brine geochemistry. In an open system, evaporation at ambient temperatures may never allow for saturation of magnesium salts. Additionally, weep encrustations are also deficient in sulfate salts relative to typical brine geochemistry. Krumhansl and others (1987) also performed x-ray diffraction studies of the weep encrustations from Rooms J and B in the experimental area. They determined that halite and sylvite were the volumetrically dominant phases, with kainite and carnallite present occasionally. Although other mineralogic phases may occur in the encrustations, they probably do not significantly affect the overall bulk composition.

Table 2-1 presents a summary of the rib encrustation data. Using these data, a calculation was performed to estimate the volume of brine required to produce the measured salt encrustation masses. The following assumptions were made:

- The salt encrustations are mostly halite, with a minor amount of sylvite and traces of carnallite and kainite.
- The average composition of the Room J salt encrustations (Krumhansl and others, 1987) is representative of the salt encrustations sampled for the present study.
- The composite brine reported in Table 3-5 of Deal and others (1989) is representative of the brine that evaporated to form the salt encrustations.
- The minerals halite and sylvite control the molar Na/K ratio in the brine, and this ratio can be estimated from the cotectic point in the system Na-K-Cl-$H_2O$ (sodium-potassium-chloride-water).

Using these assumptions and the supporting analytical data on the salt encrustations and brine composition, Deal and others (1989) developed an algorithm to predict the volume of brine from the dry weight of the encrustations. This method estimates a value for the volume of brine produced by the salt residue, based on the molar ratio of sodium to potassium in the encrustations and in the brine (at the cotectic point) (Krauskopf, 1979). This calculation predicts that 233 grams (g) of salt encrustation (dry weight) will precipitate in the WIPP underground environment from each liter of brine that seeps to an exposed surface.

## Table 2-1
## Rib Encrustation Data

| Sample | Sample Date | Original Weight (g) | Dry Weight (g) | Avg. Water Loss (Weight %) | Date Excavated | Time Available for Encrustations to Form (Days) |
|---|---|---|---|---|---|---|
| R1S-1 | 4/19/88 | 1538.34 | 1365.22 | 11.3 | 12/04/86 | 502 |
| R1S-2 | 6/20/89 | 42.70 | 41.06 | 3.8 | 12/04/86 | 427 |
| R1S-T1 | 6/13/90 | 1257.20 | 1064.59 | 15.3 | 12/22/89[a] | 173 |
| R1S-T2 | 4/11/91 | 462.28 | 376.49 | 18.6 | 12/22/89[a] | 302 |
| R2S-1 | 4/27/88 | 798.98 | 771.12 | 3.5 | 01/02/85 | 1,210 |
| R2S-2 | 6/20/89 | 0.55 | 0.50 | 9.1 | 01/02/85 | 419 |
| R3S-1 | 5/18/88 | 359.45 | 313.27 | 12.8 | 12/15/86 | 519 |
| R3S-2 | 6/20/89 | 47.92 | 44.29 | 7.6 | 12/15/86 | 398 |
| R4S | 4/17/91 | 232.01 | 225.87 | 2.6 | 5/31/89 | 686 |
| R5S | 4/17/91 | 952.20 | 907.94 | 4.6 | 5/31/89 | 686 |

[a]This drift was enlarged 3 feet (0.9 meters) on December 22, 1989.

Given this value, an estimate for the volume of brine required to form the salt encrustations can be set using the expression:

$$V_b = W_s / 233$$

where

| | | |
|---|---|---|
| $V_b$ | = | The volume of brine required to form the salt encrustations (L) |
| $W_s$ | = | Total dry weight of salt encrustations taken from the rib (in grams) |
| 233 | = | The grams of solid precipitated from a liter of brine, under ambient mine conditions. |

Based on this relationship, the brine seepage rates were calculated (Table 2-2). The total amount of brine required to form all the encrustation removed from a given sampling location (grid area) is calculated and then converted to the equivalent liter of brine per year per square meter of grid area. Calculated flow rates across 1 square meter ($m^2$) of rib surface range from 0.0003 to 1.30 L per year. This value is then extended to an equivalent WIPP waste storage room, assuming that the sampled location is representative of all the surfaces in one waste storage room and that the rib area for a WIPP waste storage room (assuming that only the ribs on the long sides of the room contribute to flow) is equal to 300 ft times 13 ft times 2 ribs, or 7,800 $ft^2$ (91.45 m times 3.96 m times 2 ribs, or 725 $m^2$). Projected seepage rates into an equivalent WIPP waste storage room vary from 0.2 to 941 L per year (Table 2-2). It is clear that seepage rates are highest immediately after excavation of a new surface, that they decrease rapidly with time, and that they appear to cease about three years (1,000 days) after excavation. Storage room operational requirements have resulted in rooms designed to remain open for a period up to five years (Bechtel National, Inc., 1986). As a result, most of the weep moisture will evaporate into the air circulated during operations and will not be available for corrosion of metals after closure. Previous encrustation data presented in Deal and others (1989) are included in Table 2-2.

### *2.2.4 Conclusions*

Comparison between individual 1-$ft^2$ (0.09-$m^2$) grid squares at any of the weep sampling areas reveals that encrustation development is strongly a function of stratigraphy (see Figures 2-3 through 2-8). Encrustations are best developed at or just below the clay at the upper and lower contacts of the orange band (Map Unit 1) and at or just below clay F (at the top of Map Unit 4). Encrustations are least developed in the clear halite or polyhalitic units

## Table 2-2
## Estimated Brine Flux from Rib Encrustation Data

| Sample Area | Sample Date | Estimated Brine Seepage Across Entire Grid Area (liters) | Average Estimated Brine Seepage Across 1 Square Meter of rib area (liters) | Average Estimated Annual Brine Seepage Across 1 Square Meter of Grid Area (liters/year)[b] | Estimated Annual Brine Seepage Across 725 Square Meter (One WIPP Waste Storage Room) (liters/year)[b] |
|---|---|---|---|---|---|
| R1S-1 | 4/19/88 | 5.86 | 0.79 | 0.57 | 416 |
| R1S-2 | 6/20/89 | 0.18 | 0.02 | 0.02 | 15 |
| R1S-T1 | 6/13/90 | 4.57 | 0.61[a] | 1.30 | 941[a] |
| R1S-T2 | 4/11/91 | 1.62 | 0.22[a] | 0.26 | 190[a] |
| R2S-1 | 4/27/88 | 3.31 | 0.45 | 0.13 | 97 |
| R2S-2 | 6/20/89 | 0.002 | 0.0003 | 0.0003 | 0.2 |
| R3S-1 | 5/18/88 | 1.34 | 0.18 | 0.13 | 92 |
| R3S-2 | 6/20/89 | 0.19 | 0.03 | 0.02 | 17 |
| R4S | 4/17/91 | 0.97 | 0.06 | 0.03 | 23 |
| R5S | 4/17/91 | 3.90 | 0.10 | 0.05 | 39 |

[a]This drift was enlarged 3 feet (0.9 meters) on December 22, 1989.
[b]This rate is normalized to liters per year, and it is noted that large differences in the rate may be observed if one were to sample the encrustations over one-half year, rather than two years.

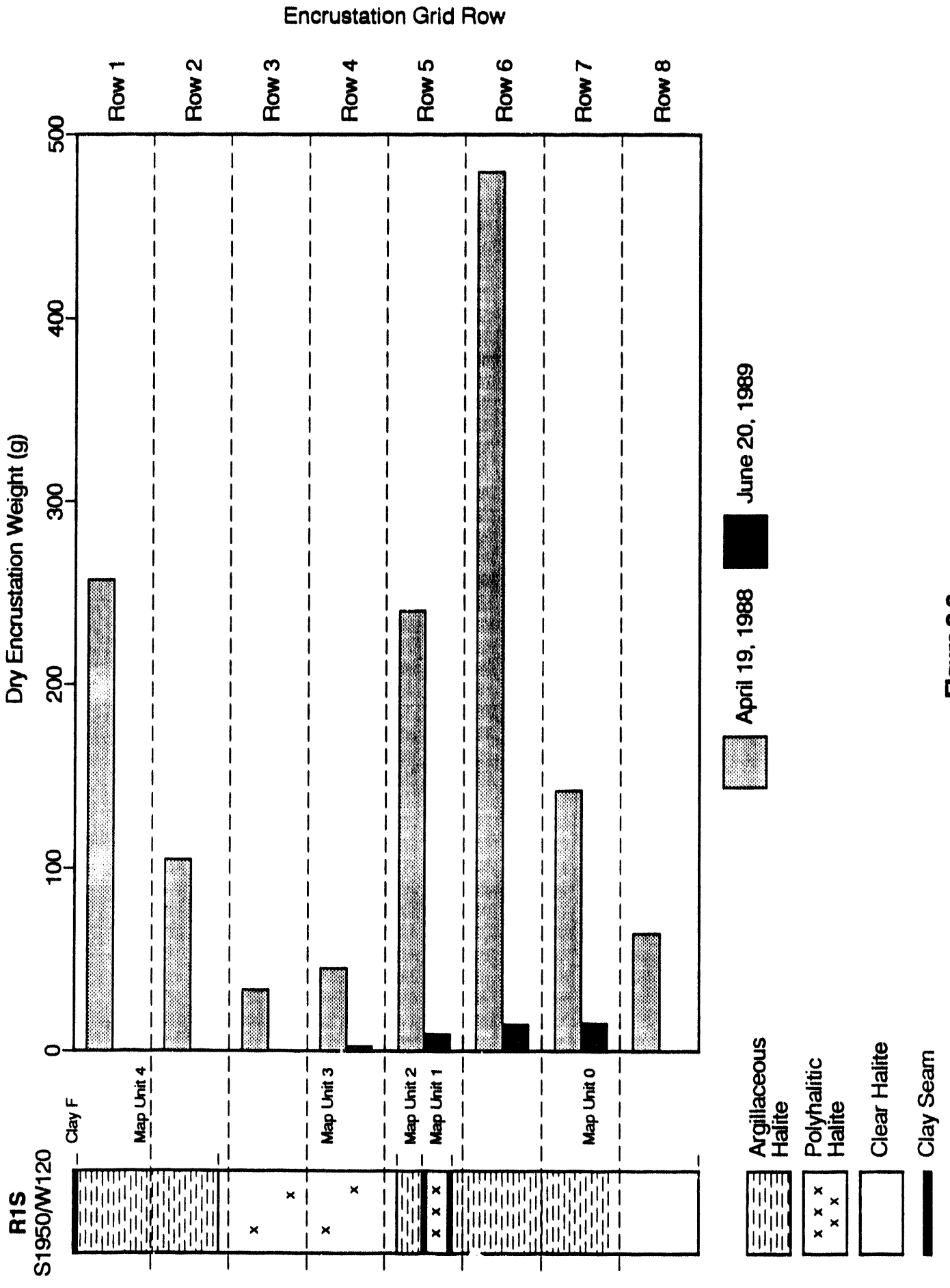



**Figure 2-3**
**Sample Location R1S**

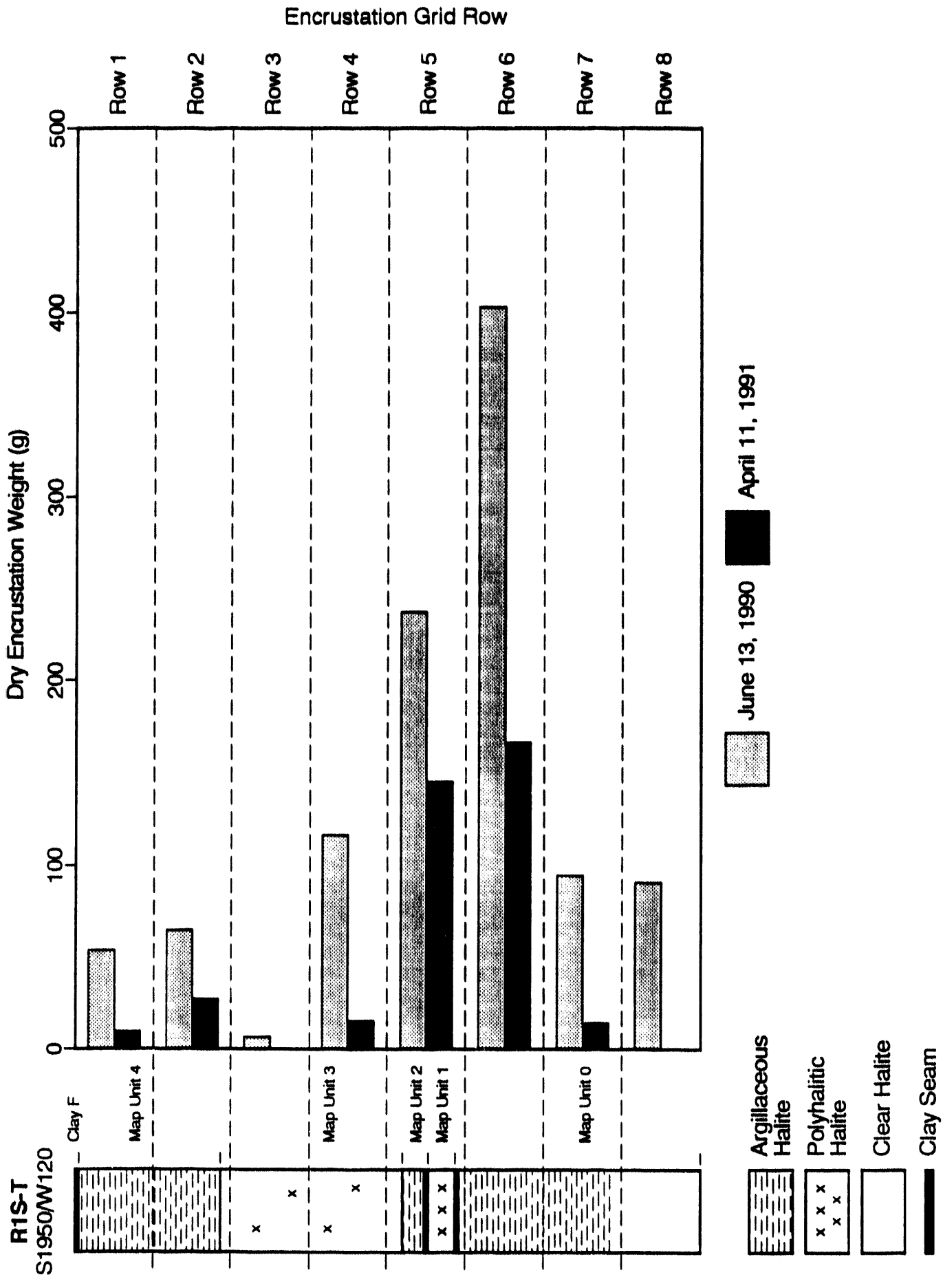



**Figure 2-4**
**Sample Location R1S-T**

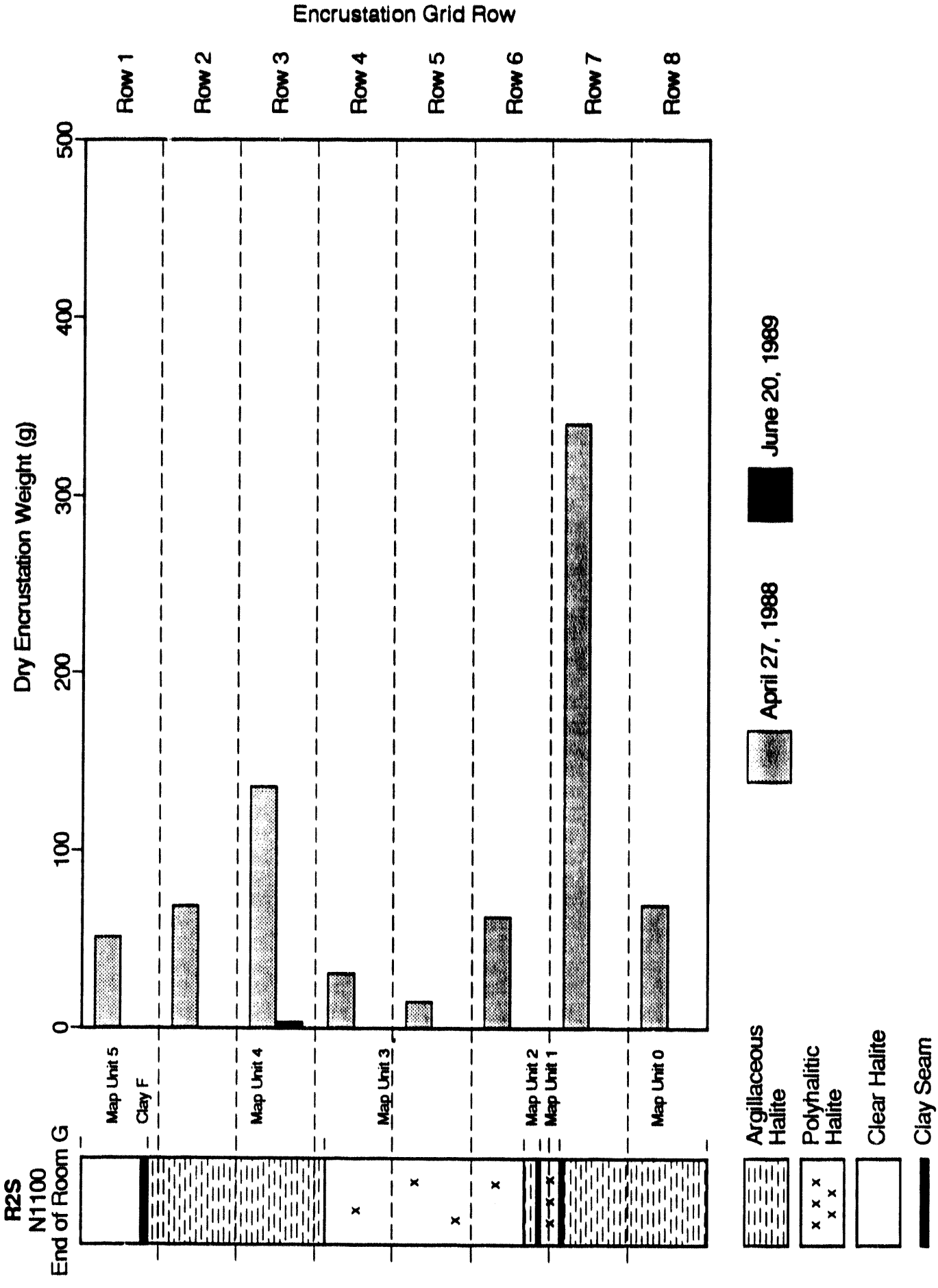



**Figure 2-5**
**Sample Location R2S**

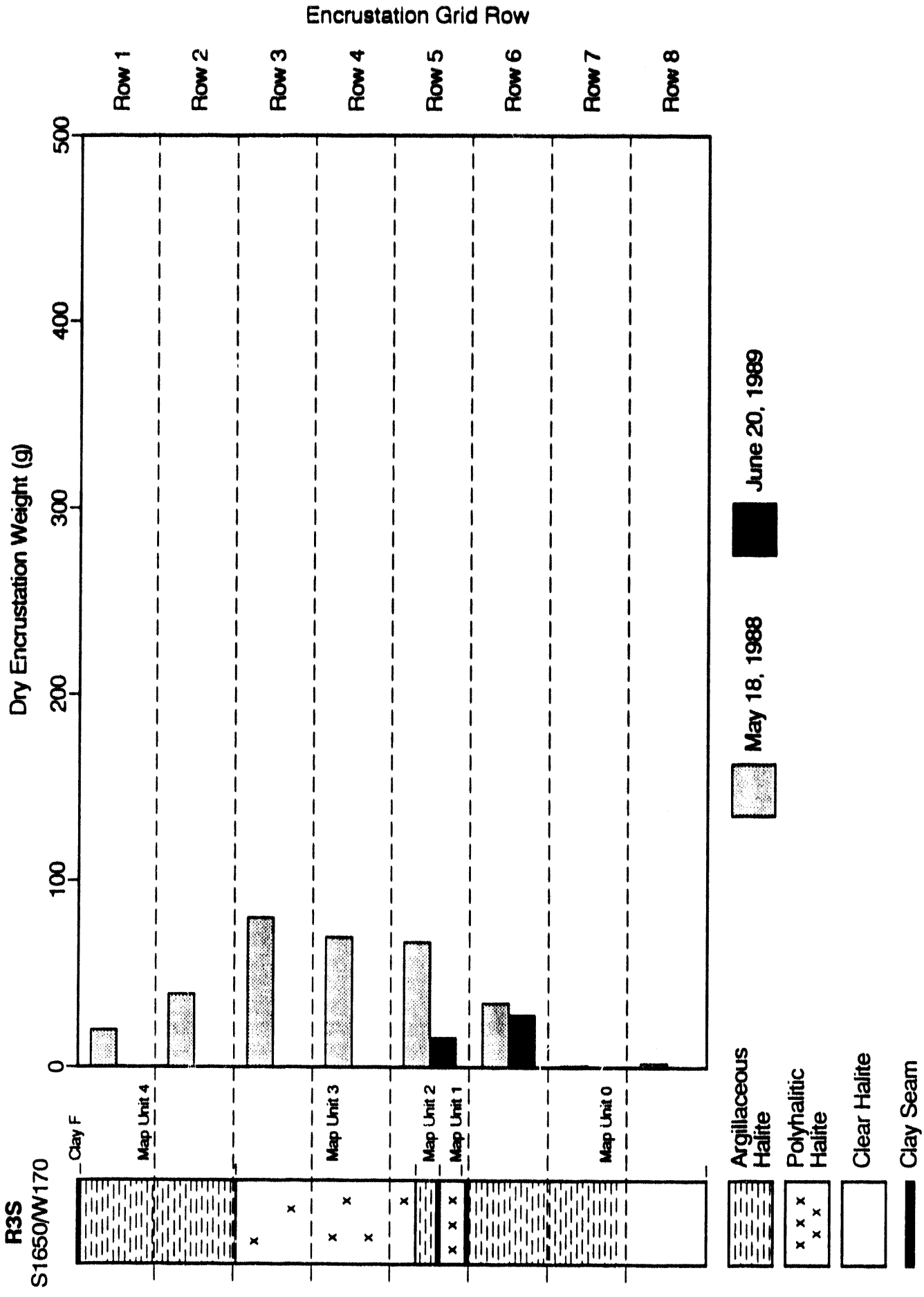



**Figure 2-6**
**Sample Location R3S**

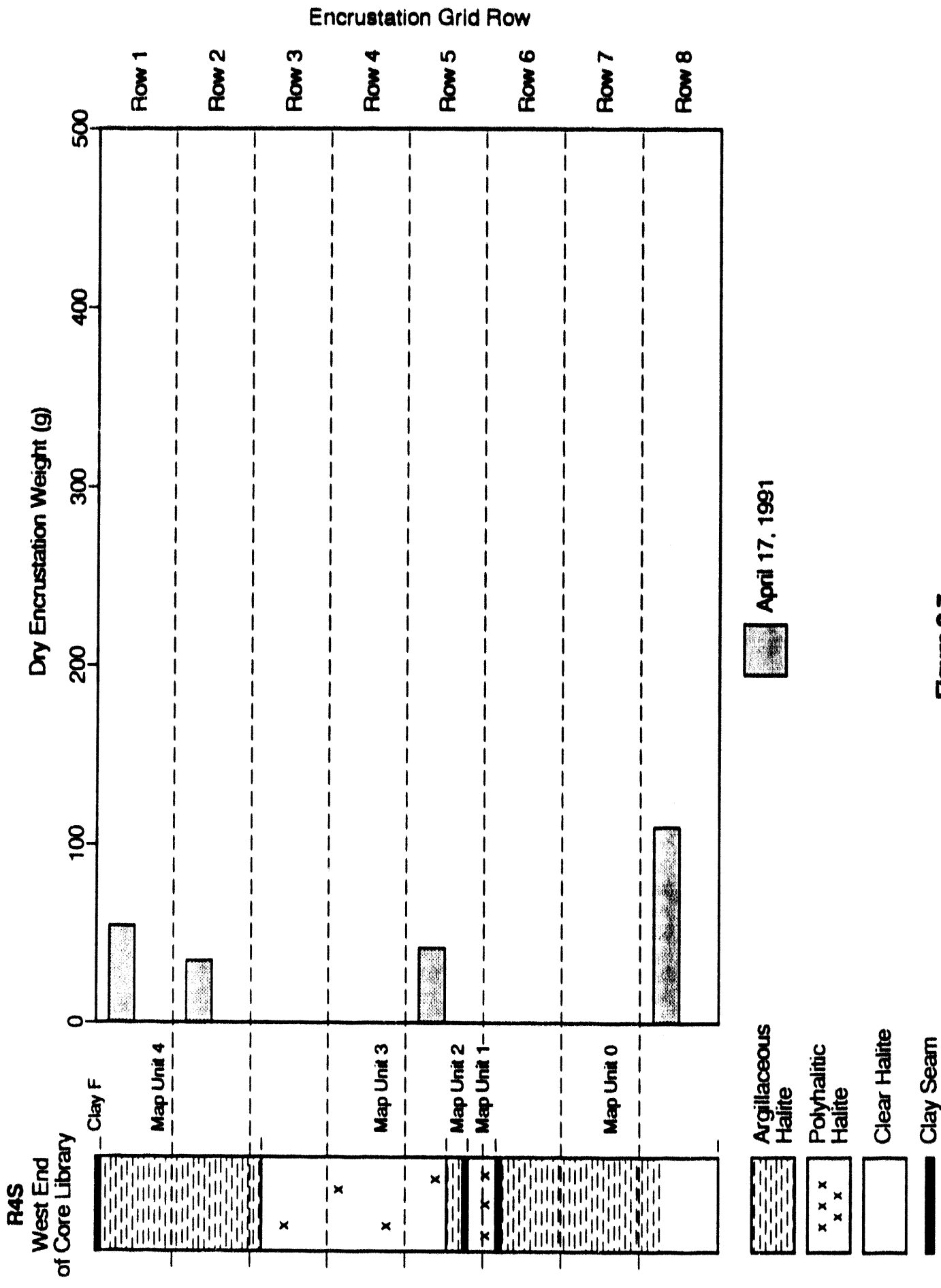



**Figure 2-7**
**Sample Location R4S**

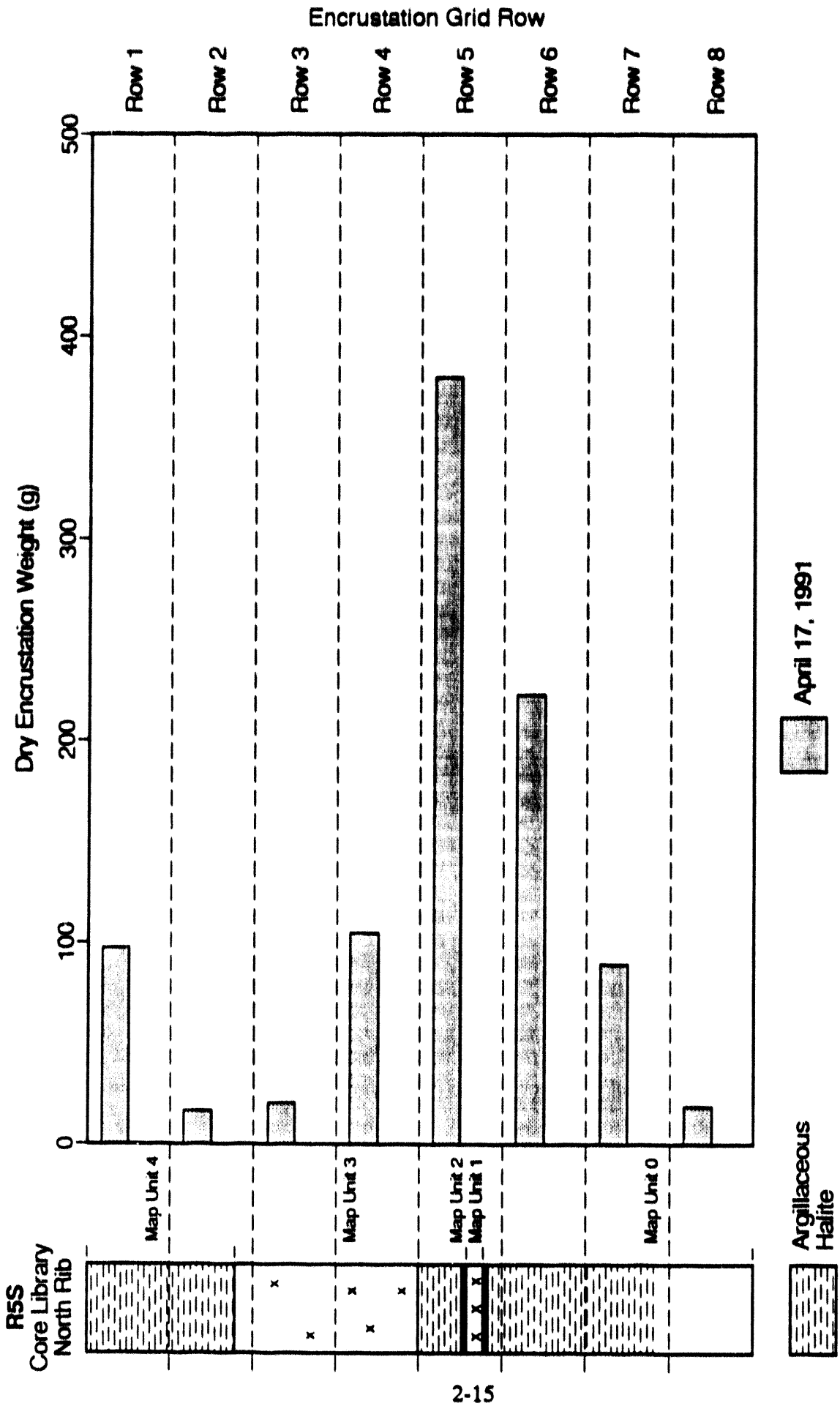



**Figure 2-8**
**Sample Location R5S**

that are essentially free of clay. Most of the encrustations collected from the clear halite or polyhalite were deposited from brine that had seeped out of the overlying, wetter clay or argillaceous halite units and flowed downward across the surface of the clear units as precipitation of salts continued.

The increased brine seepage above and below the orange band and from clay F is probably associated with the abundance of clay at these stratigraphic positions. Previous BSEP work has shown that the moisture content of various units within the Salado Formation correlates directly with clay content (Deal and others, 1989); also, Chapter 4 of this report) demonstrates that approximately 25 to 29 percent brine by volume can be squeezed from the clay below the orange band. Additionally, Beauheim and others (1991) have shown that the hydraulic conductivity of pure halite is lower than that of argillaceous halite. Observed lateral variations along a given stratigraphic horizon suggest that encrustations develop from point sources of brine flow within the rib and coalesce only if there is sufficient flow (Deal and others, 1989, Section 2.2.4).

It is apparent from the encrustation data (Table 2-1) and the estimated brine flux (Table 2-2) that the amount of brine weeping from ribs at the WIPP decreases with time after excavation (Deal and others, 1989). However, if a drift is enlarged, a visually dramatic increase in the quantity of encrustation (and hence brine inflow) may occur (Deal and others, 1989), but the rate again drops. On December 22, 1989, the south rib of the drift S1950 at W120 (R1S sampling location) was enlarged 3 ft (0.9 m). The sampling grid was reestablished at the same location but 3 ft (0.9 m) further south on the new south wall and redesignated R1S-T. Sampling was performed on June 13, 1990 (Table 2-1). An increase in the amount of brine seepage and salt encrustation development was evident. Subsequent sampling of R1S-T showed a decrease in the amount of salt mass and estimated brine volume produced from the weeps.

Deal and Roggenthen (1991) and Deal and others (1991, Section 5) have argued that the brine is being squeezed out of clay in the Salado Formation due to differential stress in the DRZ surrounding the excavations. Deal and others (1989, Figures 5-4 and 5-5) show that the differential stress is concentrated in the few meters of disturbed salt closest to the excavation. Tangential and stress may reach twice lithostatic pressure shortly after excavation (Deal and others, 1989, Figure 5-4). At sampling locations R1S and R2S, encrustation growth and brine seepage had essentially ended by the time these locations were first sampled—502 days and 1,210 days after excavation, respectively (Table 2-1). When area R1S was sampled again

427 days later (929 days after excavation), only 41 g of additional salt deposits were recovered from the entire 7.4-m grid area, indicating that most of the brine seepage had taken place in the first 502 days. Area R2S was sampled again 419 days later (1,630 days after excavation); only 0.5 g of additional encrustations were deposited. Brine seepage had essentially ceased sometime before the initial sampling event. On December 22, 1989, 1,114 days after excavation, 3 ft (0.9 m) were trimmed from the surface at R1S, stress was redistributed around the opening, and brine seepage was immediately renewed. The fact that brine seepage had essentially ceased and that it was renewed after only 3 ft (0.9 m) of the original surface were removed strongly suggests that most of the brine driven from the clays is derived from within a meter of the excavation surface.

An additional factor affecting brine flow is the dilation of the rock close to the excavation (Deal and others, 1989, Section 5; Deal and others, 1991, Section 5), which increases both porosity and permeability. This effect is most pronounced close to the excavation surface and has a minor effect on the renewed seepage, because the rock that experienced the greatest dilation was mined out and removed during the trimming activities.

Table 2-3 shows the number of days between the excavation of the rib surface and the sampling event, the days available for encrustation growth, the range of days (since the surface was excavated) during which the sampled encrustations formed, and the midpoint of that range of days (expressed as days) since the surface was excavated. In other words, if the surface was first sampled 520 days after the surface was excavated, the encrustations sampled grew between day zero and day 520. The midpoint of that range is 260 days after excavation. Sampling removes all the previously accumulated encrustations, so if the same surface was sampled a second time 918 days after excavation, the encrustations sampled grew between day 521 and day 918, a 398-day period of time. The midpoint of that range is 719 days after the surface was excavated (half of 398, or 199 days, plus 520 days).

Assuming that each grid area is representative of the two long walls (ribs) of a WIPP waste storage room, a value was calculated for the amount of brine seepage in liters per year into a storage room (Table 2-2). The range covered in each sampling event is plotted for each sampling location and shown in Figures 2-9 through 2-14. Each of those figures can be used to predict the **total** amount of brine that would seep through the ribs into a WIPP waste storage room, assuming the sampled area is representative of a full-sized storage room. If seepage had ceased (or nearly so) at the end of the initial sampling period (as evidenced by the lack of additional encrustation development during the second sampling period)—as in the

## Table 2-3

## Range and Midpoint of Range of Days Represented by Each Rib Sample

| Sample Area | Estimated Annual Brine Seepage across 725 Square Meters (One WIPP Waste Storage Room) (liters/year) | Days Since Excavation | Days for Encrustation Growth | Period of Encrustation Growth (days) | Midpoint of Encrustation Growth Range (days) |
|---|---|---|---|---|---|
| R1S-1 | 416 | 502 | 502 | 0–502 | 251 |
| R1S-2 | 15 | 929 | 427 | 502–929 | 715.5 |
| R1S-T1 | 941[a] | 173 | 173 | 0–173 | 86.5 |
| R1S-T2 | 191[a] | 475 | 302 | 173–475 | 324 |
| R2S-1 | 97 | 1,210 | 1,210 | 0–1,210 | 605 |
| R2S-2 | 0.2 | 1,629 | 419 | 1,210–1,629 | 1,419.5 |
| R3S-1 | 92 | 519 | 519 | 0–519 | 259.5 |
| R3S-2 | 17 | 917 | 398 | 519–917 | 718 |
| R4S | 23 | 686 | 686 | 0–686 | 343 |
| R5S | 39 | 686 | 686 | 0–686 | 343 |

[a]This drift was enlarged 3 feet (0.9 meters) on December 22, 1989.

## Table 2-4
## Calculated Brine Inflow into a WIPP Storage Room from Rib Encrustation Data

| Location | Sample Number | Brine Seepage Rate (Liter per Year)[a] From Table 2-2 | Volume of Brine Necessary to Form the Encrustations in 725-Square-Meters-Room During the Sampling Period (liters) | Total Volume of Brine Calculated to Enter Room During All Sampling Periods (liters) |
|---|---|---|---|---|
| R1S | R1S-1 | 416 | 572 | 590 |
| | R1S-2 | 15 | 18 | |
| R1S-T | R1S-T1 | 941[b] | 446[b] | 604[c] |
| | R1S-T2 | 191[b] | 158[b] | |
| R2S | R2S-1 | 97 | 321 | 321 |
| | R2S-2 | 0.2 | 0.2 | |
| R3S | R3S-1 | 92 | 131 | 150 |
| | R3S-2 | 17 | 19 | |
| R4S | R4S | 23 | 43 | 43[c] |
| R5S | R5S | 39 | 73 | 73[c] |
| Average | | | | 297 |

[a]Estimated annual brine seepage across 725 square meters (one WIPP waste storage room).
[b]This drift was enlarged 3 feet (0.9 meter) on December 22, 1989.
[c]Total volume may be slightly greater than indicated (see Figures 2.9 through 2-14).

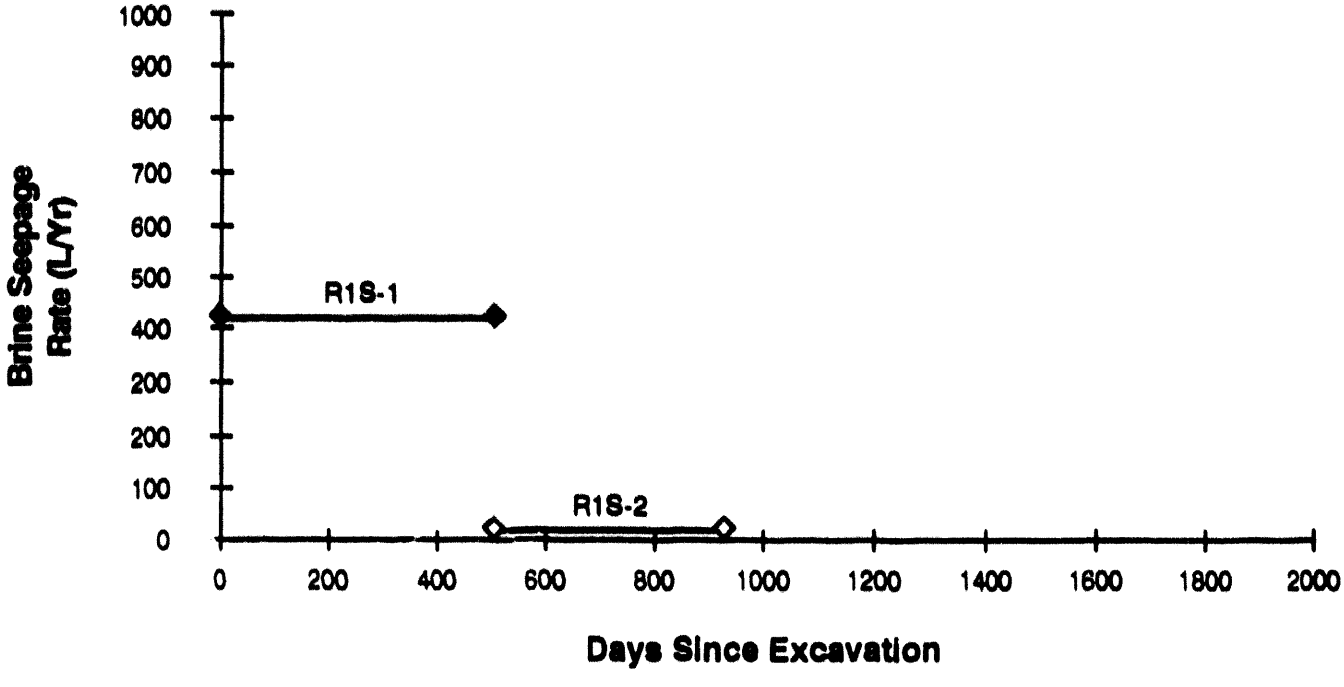



**Figure 2-9**
**Encrustation Growth at Sample Location R1S**
**If this surface was representative of a full-sized WIPP waste storage room, the total amount of brine entering the room would be 590 L.**

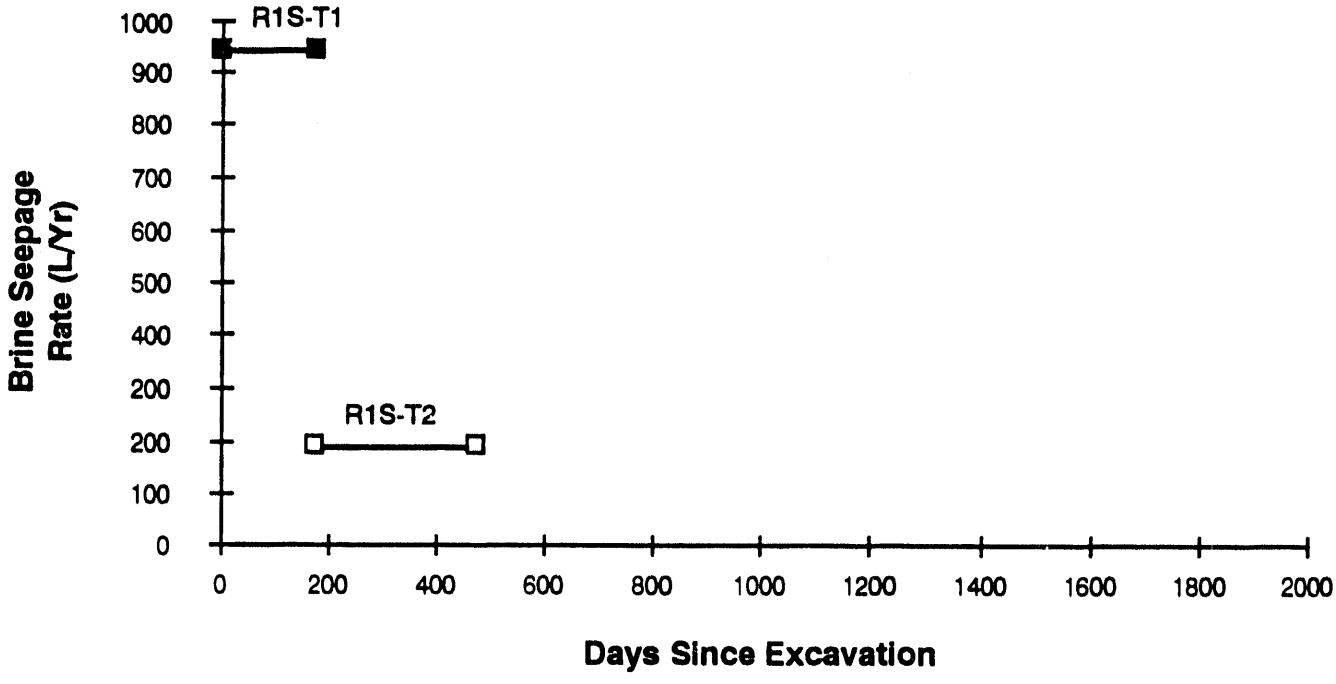



**Figure 2-10**

**Encrustation Growth at Sample Location R1S-T**
**If this surface was representative of a full-sized WIPP waste storage room, the total amount of brine entering the room would be 604 L.**

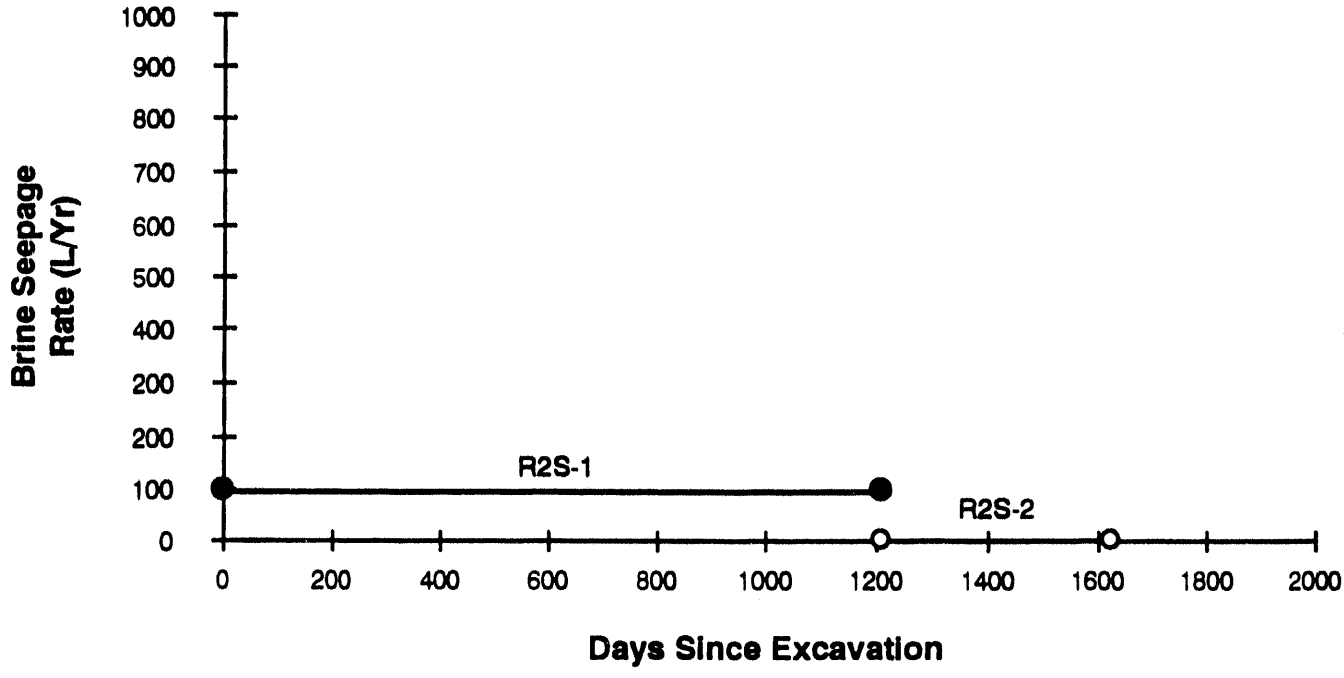



**Figure 2-11**
**Encrustation Growth at Sample Location R2S**
**If this surface was representative of a full-sized WIPP waste storage room, the total amount of brine entering the room would be 321 L.**

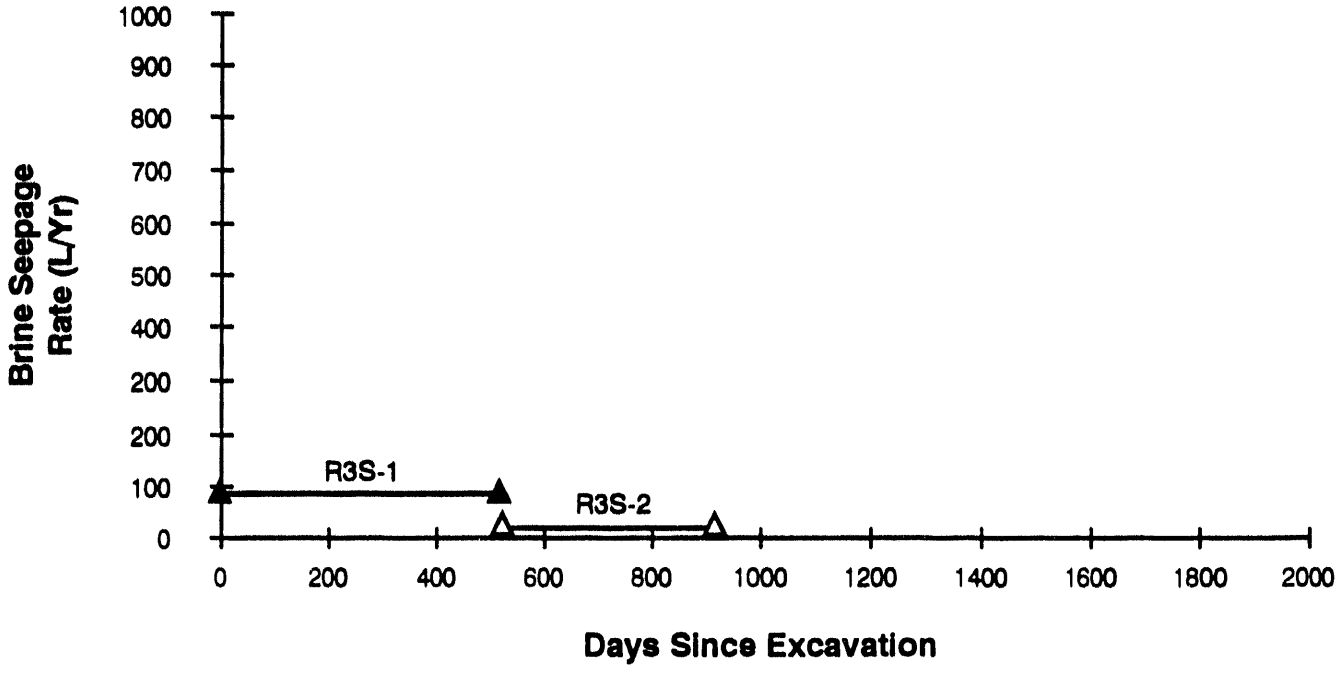



**Figure 2-12**

**Encrustation Growth at Sample Location R3S**
**If this surface was representative of a full-sized WIPP waste storage room, the total amount of brine entering the room would be 150 L.**

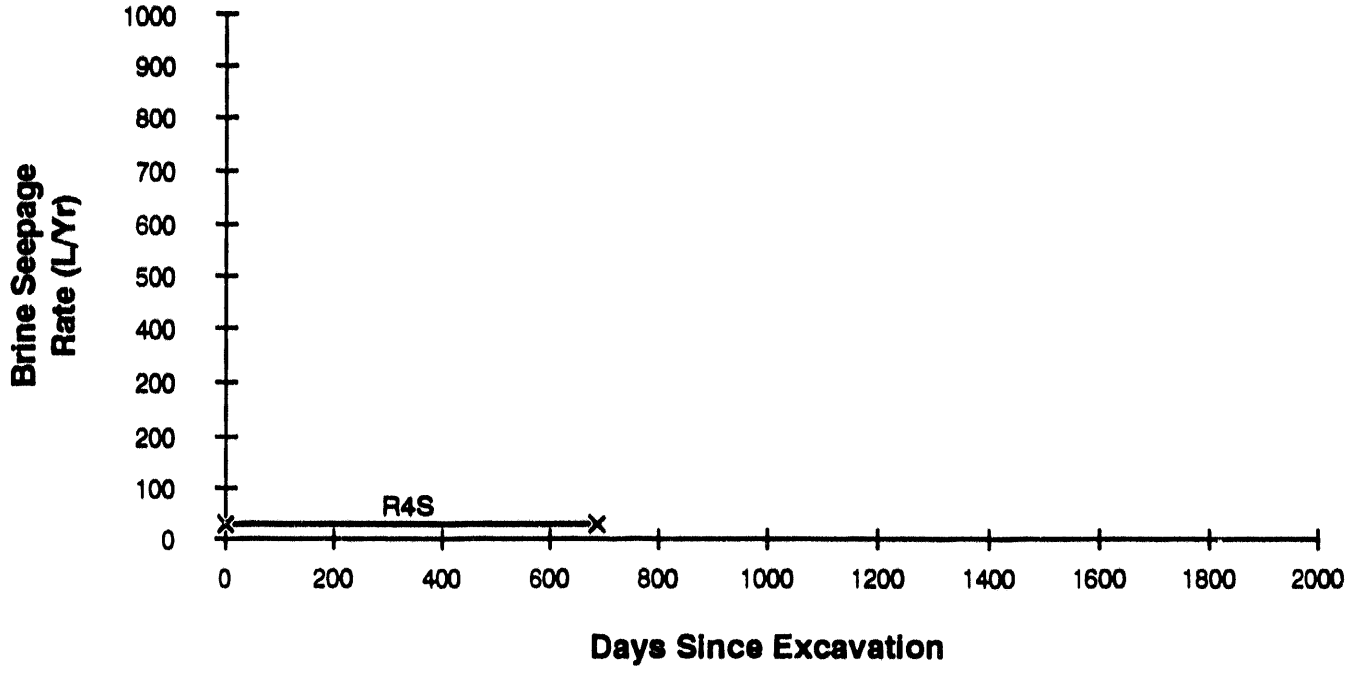



**Figure 2-13**
**Encrustation Growth at Sample Location R4S**
**If this surface was representative of a full-sized WIPP waste storage room, the total amount of brine entering the room would be 43 L.**

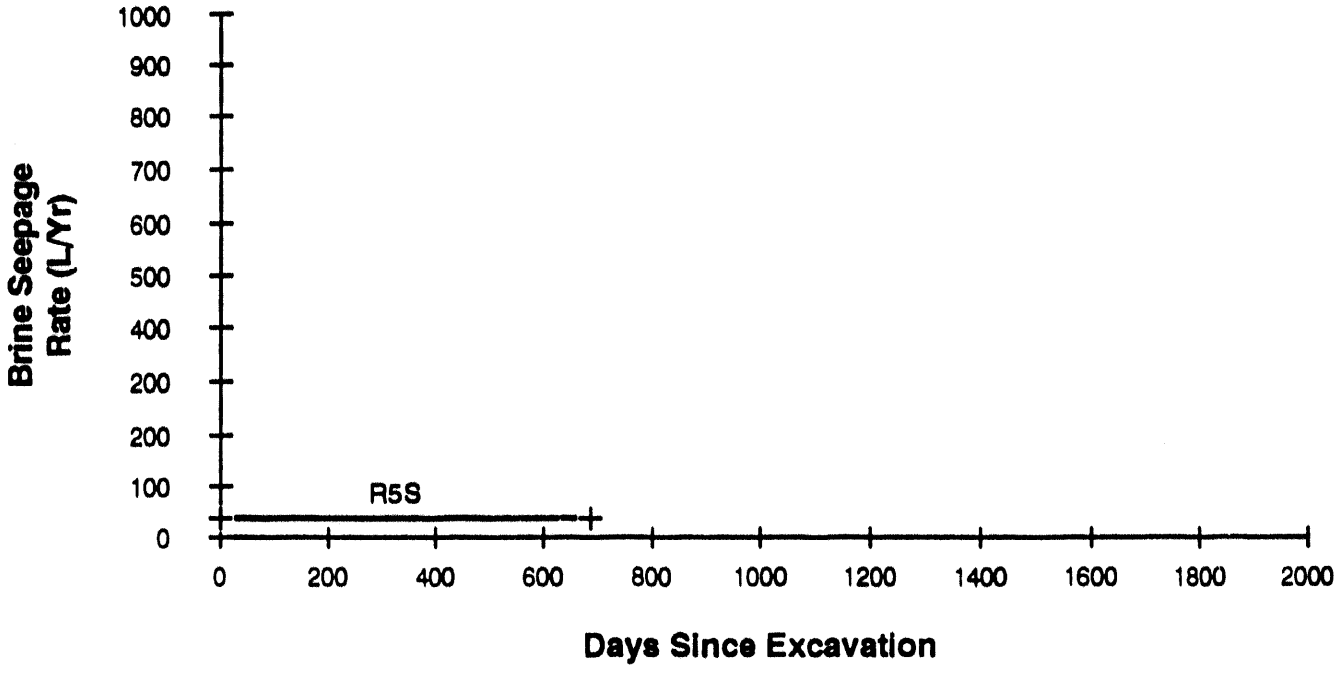



**Figure 2-14**

**Encrustation Growth at Sample Location R5S**
**If this surface was representative of a full-sized WIPP waste storage room, the total amount of brine entering the room would be 73 L.**

case for areas R1S, R2S, and R3S—the total amount of brine that would flow into the room is shown by the area beneath the bar representing the initial sampling period. In any case, the total amount of brine that would seep through the ribs for each case is represented by the sum of the areas beneath the horizontal sampling bars on Figure 2-8. These values for total seepage into an equivalent WIPP storage room are shown in Table 2-4 and range from a low of 43 L to a high of 604 L. For all cases except R1S-T, brine flow had essentially ceased before the second sampling event. For cases R1S-T, R4S, and R5S, an additional sampling should be made. Visual inspection of the areas show that very little additional encrustation has formed. Averaging the six areas predicts a typical value of 297 L for the total amount of brine to seep through the ribs and into a WIPP waste storage room. As discussed in Section 2.2.3, most of this brine will evaporate into the ventilation air circulated through the facility and will not be available after closure. An alternate method for estimating the volume of brine that may flow into a WIPP waste storage room is shown on Figure 2-15.

A regression analysis was performed using the data in columns two and six of Table 2-3. Results (Table 2-5) indicate that the following exponential equation is the best fit to the data:

$$y = 776.4068 * e^{-0.005644518x}$$

The software GRAPHER was used to fit the exponential equation to the data (Figure 2-15). The area under the curve (Figure 2-15) represents 376 L of brine, which is 79 L greater than the estimated 297 L calculated in Table 2-4.

The data points on Figure 2-15 represent the middle of each data range, and since it is known that seepage rates decrease with time, the actual number of days after excavation— when half of the total volume of brine would have seeped into the room—will occur earlier. The resulting point will be shifted toward the "y" ordinate from the median point shown. Therefore, the longer the sampling period, the lower the calculated seepage rate. This is especially true for the data point representing R2S-1 (Figure 2-11), which shows data from an initial sampling event 1,210 days after excavation. Brine seepage had essentially ceased sometime (perhaps a year or more) before day 1,210 (Table 2-3).

### *2.3 Damp or Wet Areas on Drift Floors*

A brine seep on the floor of Room G (known as GSEEP), located at approximately N1100 W1140, is the only persistently moist area in the WIPP excavations. Inflow data for GSEEP are contained in Appendix A, with a smoothed, moving average graph of the data in

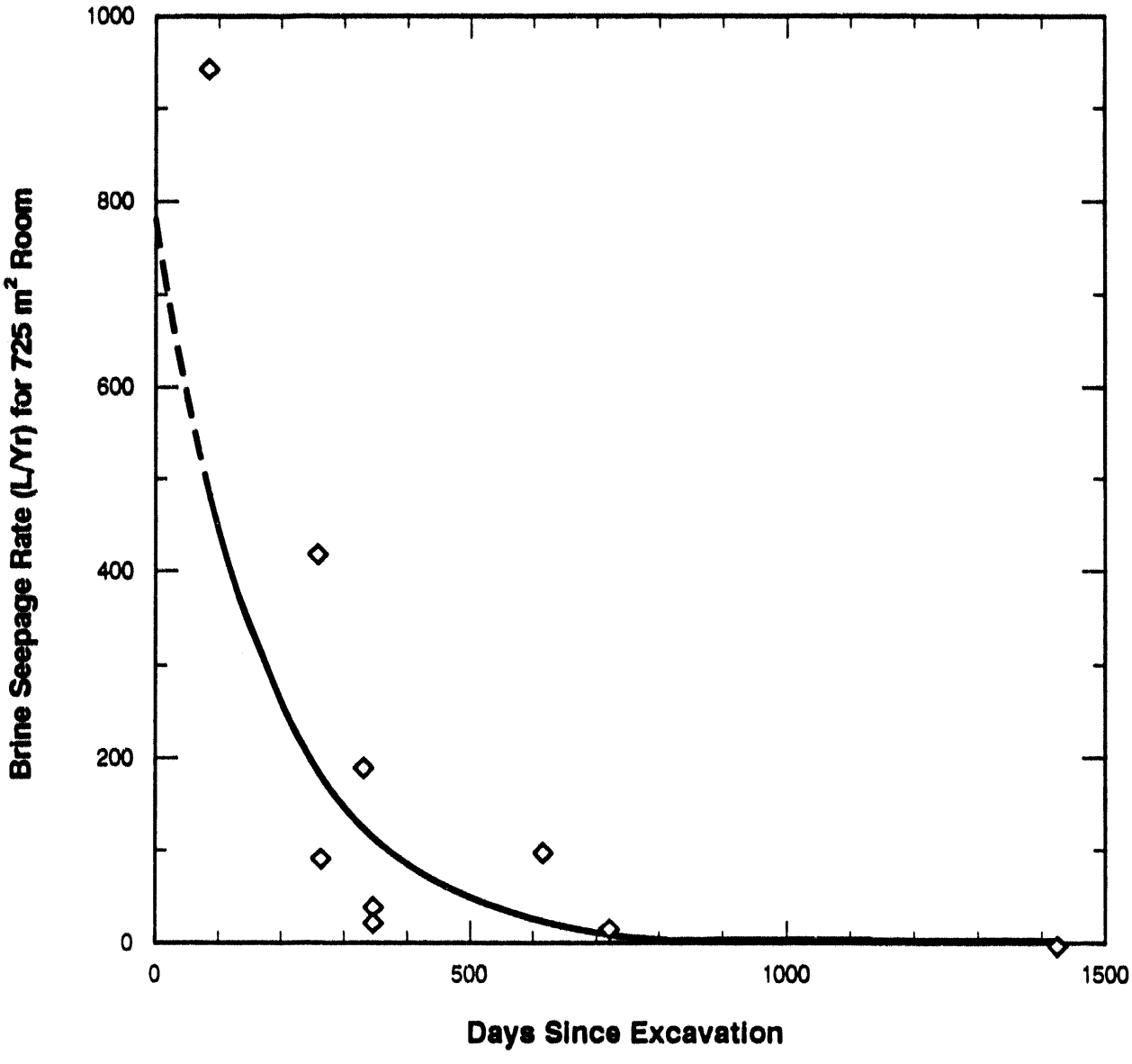



**Figure 2-15**
**Total Amount of Brine (376 L) Entering a WIPP Waste Storage room Calculated from Rib Encrustation Data.**
***Note: Best-Fit Curve Using the Exponential Equation Defined in Text. Dashed Line is Extrapolated.***

**Table 2-5**
**Regression Analysis of Brine Inflow Data**

| | Linear | Exponential | Log | Power |
|---|---|---|---|---|
| $R^2$ | .2984534 | .8531249 | .656425 | .7429127 |

NOTE: A value of $R^2 = 1$ indicates a perfect fit to the data. In general, a value above 0.8 indicates a good fit.

Appendix B. A description of the location and a discussion of the brine chemistry and seepage history through December 1990 are contained in Deal and others (1991, Section 2.5), who conclude that the brine from GSEEP has a component that originates as brine spread in the G Access drift for salt-dust control. The seepage rate reached a maximum of 0.75 L per day in April 1989 but declined to 0.4 L per day by December 1991. A total of 1,129 L have been collected, and more has evaporated into the air ventilation circulated through the WIPP workings.

## *2.4 Downholes and Brine Beneath the Floor*

### *2.4.1 Downholes*

Downholes are drilled vertically downward into the repository floor. Deal and Case (1987, Table 3-1) discussed brine inflow in 13 downholes, with observations beginning in late 1984 and early 1985. A detailed discussion of sampling, data scattering, and inflow rates through the end of 1990 was presented in Deal and others (1991). Eight of the ten downholes monitored in 1991 showed steady inflow (A3X01, BX01, DH36, DH38, DH40, DH42, and DH42A). DHP402A, in Panel 1, and OH-46, in the underground core library (not included in the original 13 downholes monitored) showed a decrease in inflow rate. Five of the original 13 holes (A1X01, IG201, IG202, L1X00, and NG252) could no longer be observed. Table 2-6 summarizes the most important data obtained from the downholes, with additional information in Appendix A.

Contamination of downholes with non-Salado water during construction and for salt dust control has been confirmed in most holes by the chemical composition of the brine, which clearly indicates the mixing of waters with discrete and different chemical signatures (Chapter 3 of this report; Deal and others, 1989; 1991). In some cases inflow rates vary directly with known water-spreading practices. The first eight downholes in Table 2-6 are located in the northern part of the repository (Figure 2-1), where water has not been spread

# Table 2-6
# Brine Accumulation Summary

## Downholes

| Hole | Room Or Location | Date Area Excavated | Date Hole Drilled | Date First Observed | Approx. Maximum Inflow (L/Day)[a] | Approx. Inflow 12/91 (L/Day) | Inflow Trend 12/91[b] | Approx. Total Vol Removed by 12/91 (L) |
|---|---|---|---|---|---|---|---|---|
| A1X01 | A1 | 10/84 | 2/85 | 3/85 | 0.05 | 0.03 | S | 62 |
| A3X01 | A3 | 11/84 | 1/85 | 2/85 | 0.03 | 0.02 | S | 56 |
| BX01 | B | 6/84 | 1/85 | 1/85 | 0.06 | 0.03 | S | 106 |
| DH36 | G | 12/84 | 1/85 | 1/85 | 0.28 | 0.09 | S | 394 |
| DH38 | G | 12/84 | 1/85 | 1/85 | 0.18 | 0.03 | S | 112 |
| DH40 | G | 12/84 | 1/85 | 1/85 | 0.04 | 0.008 | S | 13 |
| DH42 | G | 12/84 | 1/85 | 1/85 | 0.05 | 0.02 | S | 59 |
| DH42A | G | 12/84 | 1/85 | 1/85 | 0.2 | 0.06 | S | 212 |
| DHP402A | S1950/E1330 | 10/86 | 12/86 | 12/86 | 4.0 | 0.3 | D | 629 |
| OH46 | S390/W320 | 5/89 | 6/89 | 7/89 | 0.04 | 0.01 | D | 14 |

## Upholes

| Hole | Room Or Location | Date Area Excavated | Date Hole Drilled | Date First Observed | Approx. Maximum Inflow (L/Day)[a] | Approx. Inflow 12/91 (L/Day) | Inflow Trend 12/91[b] | Approx. Total Vol. Removed by 12/91 (L) |
|---|---|---|---|---|---|---|---|---|
| A1X02 | A1 | 10/84 | 3/85 | 3/85 | 0.09 | 0.03 | D | 80 |
| DH15 | N1104/E1688 | 3/84 | 3/84 | 5/86 | 0.01 | 0 | DRY | 4 |
| DH35 | G | 12/84 | 1/85 | 2/85 | 0.02 | 0 | DRY | 4 |
| DH37 | G | 12/84 | 1/85 | 2/85 | 0.01 | 0 | DRY | 1 |
| DH39 | G | 12/84 | 1/85 | 2/85 | Trace | 0 | DRY | 0 |
| DH41 | G | 12/84 | 1/85 | 2/85 | Trace | 0 | DRY | 0 |
| DH215 | S1960/E153 | 1/83 | 2/83 | 4/84 | 0.09 | 0 | DRY | 18 |
| DHP401 | S1950/E1330 | 10/86 | 1/87 | 3/87 | 0.008 | 0 | DRY | 2 |
| OH47 | S390/W320 | 5/89 | 7/89 | 8/89 | 0.030 | 0 | DRY | 4 |

## Subhorizontal Holes

| Hole | Room Or Location | Date Area Excavated | Date Hole Drilled | Date First Observed | Approx. Maximum Inflow (L/Day)[a] | Approx. Inflow 12/91 (L/Day) | Inflow Trend 12/91[b] | Approx. Total Vol. Removed by 12/91 (L) |
|---|---|---|---|---|---|---|---|---|
| OH20 | S1600/W170 | 9/85 | 3/89 | 3/89 | 0.02 | 0.01 | S | 11 |
| OH21 | S1600/W170 | 9/85 | 12/88 | 2/89 | 0 | 0 | DRY | 0 |
| OH22 | S1600/W170 | 9/85 | 12/88 | 2/89 | 0.006 | 0 | DRY | 1 |
| OH23 | S1950/W170 | 12/85 | 2/89 | 2/89 | 0.06 | 0.01 | D | 18 |
| OH24 | S1950/W170 | 12/85 | 3/89 | 3/89 | 0.002 | 0 | DRY | 0.8 |
| OH25 | S1950/W170 | 12/85 | 3/89 | 3/89 | 0.001 | 0 | DRY | 0.1 |
| OH26 | S2150/W170 | 8/86 | 3/89 | 3/89 | 0.04 | 0.02 | D | 17 |
| OH27 | S2150/W170 | 8/86 | 4/89 | 4/89 | 0.001 | 0 | DRY | 0.2 |
| OH28 | S2150/W170 | 8/86 | 4/89 | 4/89 | 0.006 | 0 | DRY | 2 |
| OH45 | S390/W325 | 5/89 | 6/89 | 6/89 | 0.03 | 0.001 | S | 4 |

[a]Liters (L) per day.
[b]Trend derived from data presented in Appendices A and B—Dry; Decreasing (D); Steady (S).

during construction; therefore, the brine collected from these holes was derived totally from within the Salado Formation. Brine chemistries from these holes differ from chemical signatures associated with construction brines.

All of these eight holes have a similar seven-year seepage pattern (Appendix B), although these holes are at different stratigraphic horizons and penetrate slightly different units (Figure 2-16). The seepage rate varies more than 2 orders of magnitude between these downholes. These holes were drilled into relatively undisturbed salt shortly after the drift or room, was excavated and then monitored. The following conclusions, first reached in 1986 (Deal and Case, 1987), have been confirmed:

- After drilling a hole, a few days elapse where little or no brine seeps into the hole.
- After the initial no-flow or low-flow period, brine seepage quickly reaches a maximum and then begins to decline.
- Seepage rates decrease over a period of several months to steadier, long-term trends.

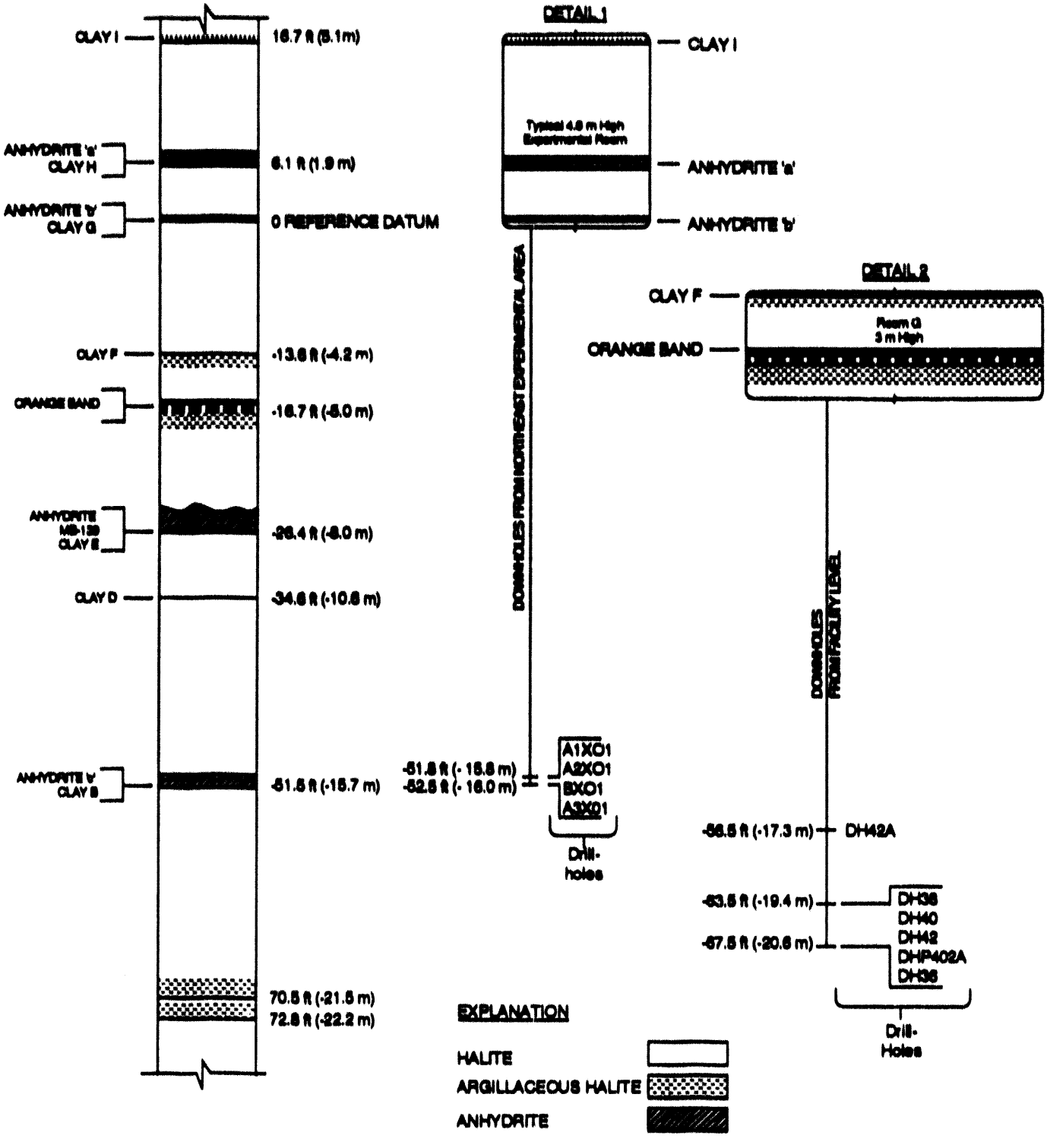
With the exception of DHP402A and OH46, all of the downholes demonstrated a steady flow (within the scatter of the data points) through 1991, though slightly decreased from past years.

### 2.4.2 Shaft Sumps

Deal and others (1991, Section 2.7.1) discuss observations made in the Salt Shaft and Waste Shaft sumps, where MB 139 and open fractures can be seen. The sumps were inspected again in 1991, and again the fractures and MB 139 were found to be dry and free of any thick salt encrustations. The shaft sumps are, in effect, long-term far-field brine inflow experiments. If significant amounts of brine were flowing toward the repository through MB 139, that brine should be obvious in the shaft sumps. The fact that brine is not observed seeping from MB 139 in the shafts is evidence that significant far-field flow does not exist.

## 2.5 Upholes and Brine Above the Back

Upholes are drilled veritcally upward into the repository roof. Moist areas or salt encrustations rarely occur on the back (roof) in areas where upholes do not exist (Deal and others, 1987, Section 2.2). Upholes characteristically produce less brine for shorter periods of time than downholes. Part of this can be attributed to greater evaporation caused by less effective sealing of upholes (Deal and Case, 1987) and loss of moisture by dispersion from




NOTE: Distances above and below anhydrite "b" (clay G) vary from place to place in the WIPP excavations due to natural changes in stratigraphic thickness. This figure has been adjusted to represent thicknesses in the northern part of the workings. Distances from clay E down are from Room G and from the orange band up are from Room A1.

**Figure 2-16**

**Correlation of the Stratigraphy with Downholes in the Northern Part of the Facility**

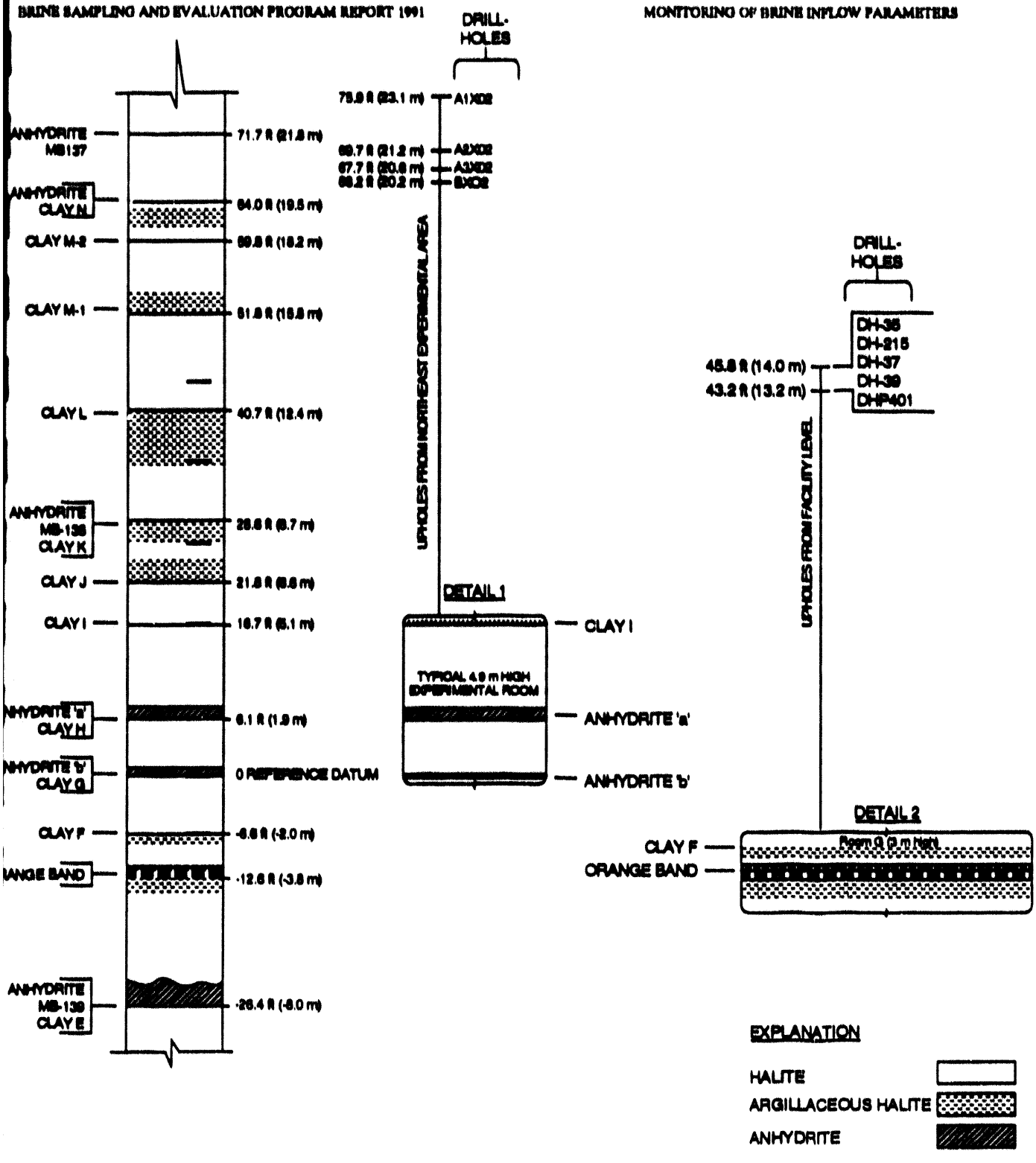
the hole collar into the salt. Loss of moisture by evaporation is evident from salt crust buildup in and around most of the upholes. Chemical data (Deal and others, 1989 and 1991; Abitz and others, 1990), which confirms compositional differences between brine samples from upholes and downholes, can be explained by the partial evaporation of a brine with typical downhole composition to produce the uphole brine. Although the stratigraphy exposed in the upholes (Figure 2-17) is slightly different from that exposed in the downholes, it is unclear whether this contributes significantly to the differences in either brine quantity or chemistry (Deal and others, 1989). Summary data for selected upholes are presented in Table 2-6. Of nine upholes listed in 1985, only A1X02 continues to produce brine. Upholes A2X02, A3X02, and BX02 are no longer monitored. As discussed in Deal and others (1991), A1X02 is longer than any of the other upholes (59 ft [18 m]) and intersects an additional anhydrite unit not penetrated by any other uphole. No associated clay was observed in the core, but clay commonly occurs below anhydrite stringers and may be discontinuous at this horizon. Additional data are presented in Appendix A. During the latter part of 1991 (November and December), inflow data for A1X02 appears sporadic. It is uncertain at this time whether the fluctuations are actual flow changes or if there is debris in the sampling apparatus. The hole is in Room A1, which is inaccessible at this time. It is not possible to verify the correct functioning of the sampling apparatus.

Drill holes in the back that intersect overlying clay layers (clays J and K and argillaceous halite between the two clays), including those for the placement of rock bolts, commonly drip brine for a period of several months, often forming halite stalactites. Seepage is particularly notable when the drifts are allowed to age for several years, allowing bed separations to form prior to drilling.

The undisturbed back in the workings at the WIPP rarely shows evidence of brine seeps or weeps. Drill holes, however, provide a route for brine to move across effectively impermeable clear halite beds, and seepage from drill holes in the back is a common occurrence at the WIPP. Typically, upholes start to show evidence of brine seepage a month or so after drilling, exhibit their most active seepage for the following year or so, and then gradually dry up. Rooms C1 and C2 show this very typical behavior (Deal and others, 1991, Section 2.8.1).

## *2.6 Subhorizontal Holes*

These holes are drilled at a slight downward angle. During 1989, 11 subhorizontal brine sampling holes were drilled to investigate the brine seepage from the WIPP facility




: Distances above and below anhydrite "b" (clay G) vary from place to place in the WIPP excavations due to natural changes in stratigraphic thickness. This figure has been adjusted to represent thicknesses in the northern part of the workings. Distances below the zero datum (clay G) are from Room G, distances above clay G are from Room A1.

**Figure 2-17**

**Correlation of the Stratigraphy with Upholes in the Northern Part of the Facility**

stratigraphic horizon. The holes are oriented slightly downward from the opening, to accumulate brine at the end of the hole where it can be collected and measured without loss to fractures near the surface of excavations. Ten of the eleven holes were drilled westward from the W170 drift at the location of future entries to Panels 7 and 8 at S1600, S1950, and S2180 (Figure 2-1). These portions of the W170 had been excavated in September 1985 at S1950, December 1985 at S1900, and in August 1986 at S2150 and are considered to have a mature DRZ developed around them. Three of the holes (OH20, OH23, and OH26), which are 150 ft (46 m) long and 3 in. (7.6 cm) in diameter, started in the clayey halite (Map Unit 4) above the orange band (Map Unit 1) and are deflected slightly downward (Deal and others, 1991, Figures 2-18, 2-19, and 2-20), so that they end in the clear halite (Map Unit 0) below the orange band. The 150-ft (46-m) holes reached the orange band about 50 ft (15 m) into the holes. Hole OH27A was started at the initial location for OH27 but was terminated at a depth of 4 ft (1.2 m) due to drilling problems. The six remaining 50-ft (15-m) holes were drilled either above or below the orange band. One 50-ft (15-m) hole (OH45), which cuts the same stratigraphic interval as the three 150-ft (46-m) holes, was drilled in a newer excavation in May 1989 at S400.

Several of the holes have produced measurable quantities of brine (Table 2-1, Appendix A). The 150-ft (46-m) holes provide the most uniform and comparable set of measurements yet obtained in the BSEP and have all produced orders of magnitude more brine than the 50-ft (15-m) holes. The longer holes are still producing, while the shorter holes are essentially dry (have not produced enough brine to be measured by the equipment and techniques used), with the exception of OH45, a 50-ft (15-m) hole that cuts the same stratigraphic interval as the 150-ft (46-m) longer holes but was drilled in a more recently mined area at S400, over 1,000 ft (300 m) north of OH20, OH23, and OH26. Lateral variation may play a minor role in the difference in brine seepage. This is considered to be unlikely, as Deal and others (1989) found no significant lateral variation in moisture content for any of the stratigraphic units exposed in the excavations.

Two explanations have been offered for the brine seepage observations (Deal and others, 1991, Section 2.9): (1) The longer holes are tapping an area that is not dewatered, because they extend past the relatively old W170 drift DRZ. As a result, they may only tap about 100 ft (30 m) of undisturbed salt (in this case, the one 50-ft (15-m) hole would still produce brine, because it was drilled from a young excavation where a significant DRZ had not yet developed). (2) Brine flows preferentially from the clay units, so the clay at the top and bottom of the orange band may be the only significant source of brine. Therefore, only the

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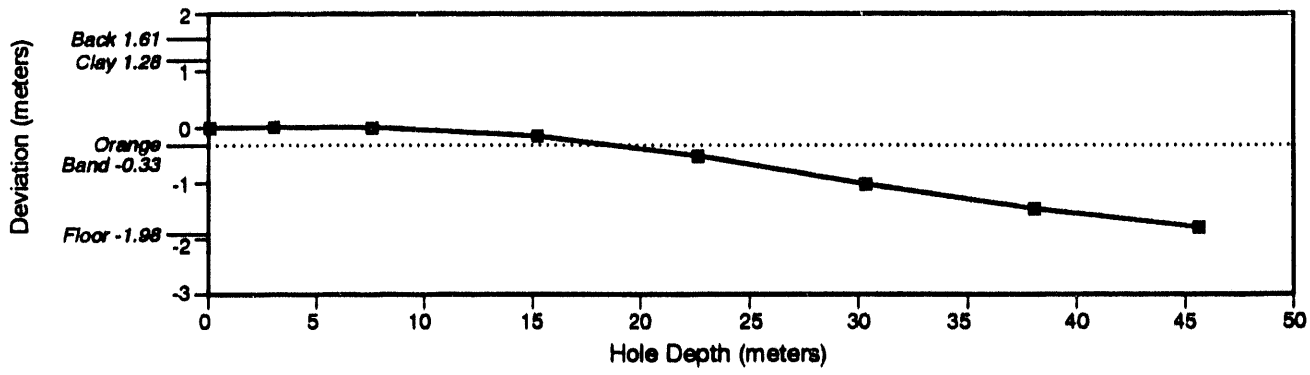



**Figure 2-18**
**Profile of Long Drill Hole OH20**

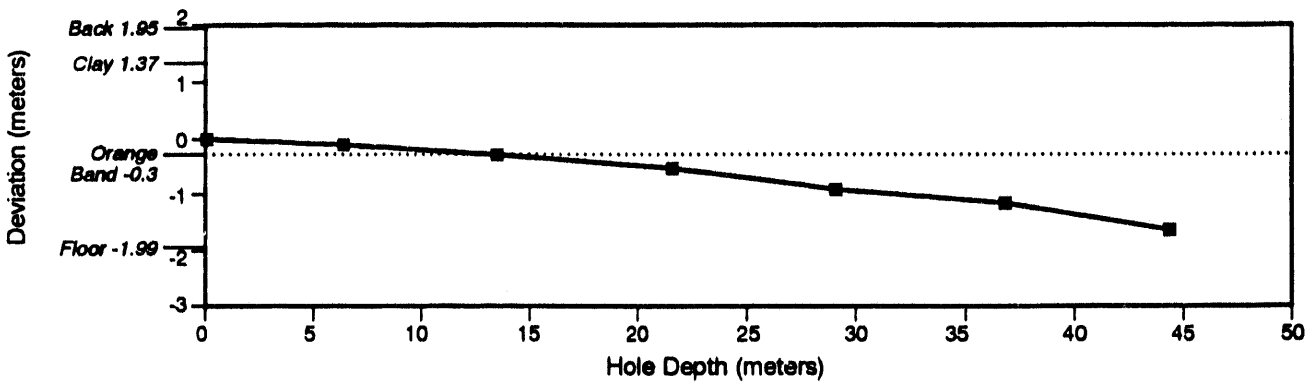



**Figure 2-19**
**Profile of Long Drill Hole OH23**

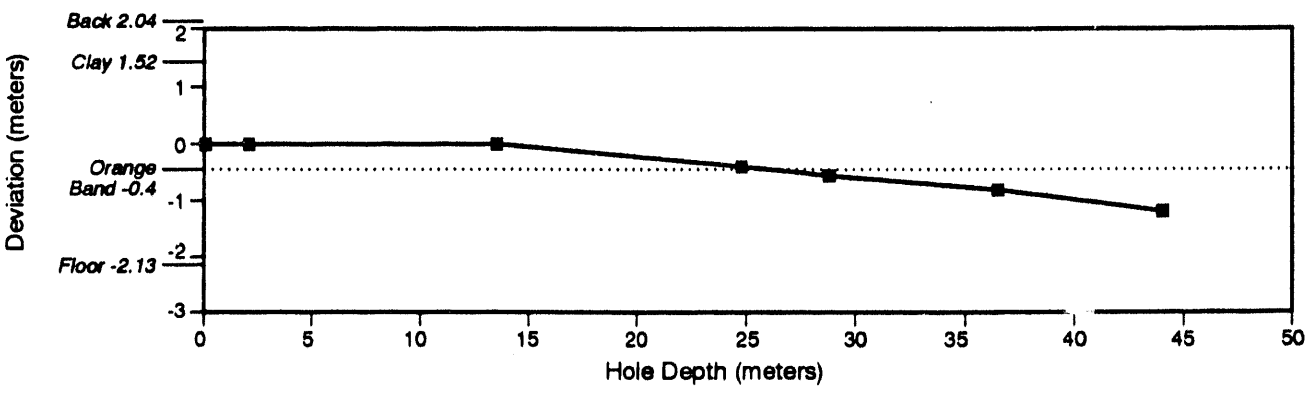



**Figure 2-20**
**Profile of Long Drill Hole OH26**

*NOTE: These holes were not cored. The position of the orange band is projected, and the actual point at which the drill hole crosses the orange band is unknown.*

four holes (OH20, OH23, OH26, and OH45) that cut the orange band accumulate brine. Evidence presented in this report suggests that the second explanation is the more likely one.

### 2.7 Discussion of Data Acquisition and Analyses

Several different sampling techniques have been used in an attempt to collect uniformly the very small amounts of brine that seep into the hole between sampling rounds, and each technique has unique problems. The change in sampling methods and difficulties in sampling techniques was discussed in detail by Deal and others (1991) and is sometimes reflected as apparent variations in seepage rates (Appendix B).

To compensate for sampling-induced apparent variations in seepage rates, the graphs of the seepage data presented in Appendix B have been smoothed using an 11-point moving average (the average of the data point and the five points on each side of the data point). At the beginning and end of each curve, the trend is distorted by the smoothing function, because the number of data points falls below five on one side of the averaging point; therefore, unsmoothed data appears for the first few points at the beginning and the end of each curve for a more accurate graphical representation of the seepage trends. There are slight differences between the curves presented in this report and in previous BSEP reports, because a different software package was used.

### 2.8 Effects of Dissolved Gas on Brine Inflow

Undisturbed Salado brine experiences a confining stress of approximately 14 megapascals (MPa) and contains a significant amount of dissolved gases. When the confining stress is relieved as a result of excavation, the solubilities of the gases are exceeded, causing the brine to "fizz," or exolve, excess gas. When brine samples are withdrawn from brine sampling holes, it is common to observe the exsolution of gas when the sample is swirled in a beaker. It is also common to observe effervescing moist areas on fresh surfaces (Deal and Case, 1987).

Gas monitoring holes have been installed in the WIPP underground as part of the Gas Testing Program (WIPP-DOE-177). These holes have been used to measure shut-in pressures and gas-flow rates, and samples have been taken for chemical analysis. Pressure buildup ranged from 10 to 120.6 pounds per square inch (psi). Measured flow maxima ranged from 2,940 to 12,280 $cm^3$/min and usually decreased to 2 to 5 $cm^3$/min within four days. The dominant gases present in the samples are nitrogen and methane, with minor carbon dioxide and oxygen. It is believed that most of the oxygen is contamination from mine air. The source

of the gas detected in these monitoring holes is probably gas that has exolved from brine as a result of excavation-induced depressurization.

The average composition of gas samples analyzed by the gas testing program (WIPP-DOE-177) and corrected for air contamination is approximately 9.5 percent nitrogen. The precise gas content of a liter of undisturbed WIPP brine pressurized at 14 MPa is unknown, but an upper limit has been calculated based on the solubility of nitrogen in WIPP brine at 14 MPa. When 1 L of brine containing the solubility-limited concentration of nitrogen at 14 MPa is allowed to de-gas at 1 atmosphere, it will yield 180 $cm^3$ of gas, resulting in a total volumetric increase of 18 percent.

This gas exsolution process provides an extra driving force to move brine within the DRZ toward the excavation. In the case of a brine with no dissolved gas, the volumetric expansion caused by depressurization from 14 MPa to room pressure, assuming a brine compressibility of $3.1 \times 10^{-10}$ pascals $(Pa)^{-1}$ at 27°C (Beauheim and others, 1991) is 0.43 percent. This liquid-phase expansion is a small fraction (less than 3 percent) of the total expansion when gas exsolution is considered.

Another phenomena caused by the exsolution of gas is the creation of a partially unsaturated zone within the DRZ. This suggests that after the DRZ has developed to some extent, brine migration within the DRZ will be controlled by two-phase flow processes. Within this unsaturated zone, the permeabilities of brine and gas are functions of the degree of pore saturation.

# 3.0 Geochemistry of BSEP Brines

A major objective of the BSEP has been to characterize the composition of brine collected from drillholes in the Salado Formation at the facility horizon. Geochemical analysis of the brine is an extremely useful tool in understanding the modes of brine occurrence in the Salado Formation and the means by which brine enters the excavations. BSEP geochemistry data has been used to approximate the chemistry of typical Salado Formation brine that may come into contact with waste after closure of the repository and to distinguish between the presence of Salado Brine and artificial brines (Deal and others, 1989).

The geochemistry of brines recovered from the WIPP repository horizon has been the subject of numerous studies (Stein and Krumhansl, 1986; Krumhansl and Stockman, 1987; Stein and Krumhansl, 1988; Deal and others, 1989; Abitz and others, 1990; Krumhansl and others, 1991; Deal and others, 1991). Statistical analysis of WIPP brine chemistry has been performed by Deal and others (1989; 1991). The major-element composition of WIPP brines suggests an origin from evaporating seawater that had precipitated carbonate minerals, anhydrite, and halite, with further modification by diagenetic reactions with gypsum, magnesite, and polyhalite, and ion-exchange with clay minerals. A residual fluid origin is further substantiated by the high magnesium, potassium, and bromine content of the brines, which differs from a composition that would originate by groundwater infiltration and evaporite dissolution (Deal and others, 1991). The major-element compositions of brines recovered from BSEP holes are distinct from fluid inclusions in WIPP halite (Stein and Krumhansl, 1988), implying that the brine recovered from drillholes is largely intergranular fluid, rather than intragranular fluid released by migration of fluid inclusions to grain boundaries in response to stress relief.

During 1991, 83 brine samples were recovered from 17 drillholes in the Salado Formation at the repository horizon. These samples were analyzed for up to 25 chemical parameters by two independent laboratories, United Nuclear Corporation (UNC) (now Rust Geotech) and IT Corporation Analytical Services (ITAS). Brine chemistry data for the samples collected during 1991 are tabulated in Appendix C.

To identify outliers in the 1991 brine chemistry results, the data were compared to brine chemistry data collected prior to 1991 using a Dixon-type test (Kennedy and Neville, 1986). The following observations are based on the outlier evaluation:

- The total dissolved solids (TDS) concentration reported by UNC for several holes sampled on April 8, 1991, appears to be inaccurate. TDS for these samples are approximately one half of the concentrations observed during previous sampling.

- The arsenic concentrations reported by UNC for several holes sampled on July 7, 1991, are most likely too high.

- The calcium concentrations reported by ITAS for several holes sampled on April 8, 1991, are approximately 30 percent higher than previously reported calcium concentrations.

Aside from these outliers, the 1991 brine chemistry data are similar to previously collected data.

The 1991 WIPP brine chemistry data indicate that temporal concentration trends for several parameters continued at downholes DHP402A and GSEEP and subhorizontal hole OH23. The following trends were noted:

- The strontium concentration reported by UNC for DHP402A has decreased from 20.1 to 2.2 mg/L from 1988 to 1991.

- The strontium concentration reported by UNC for GSEEP has decreased from 3.0 to 1.8 mg/L from 1987 to 1991. Also, boron, magnesium, and potassium concentrations at GSEEP have decreased somewhat during the observation period.

- The extended alkalinity, total organic carbon, and iodide concentrations reported by UNC for OH23 have decreased steadily from 1989 to 1991.

Brine originating as water from the Rustler Formation typically has much higher strontium concentrations than representative Salado brine (Deal and others, 1989, Tables 3-2 and 3-3), which typically are on the order of 1 to 2 mg/L. The decrease of strontium values with time at DHP402A is consistent with the hypothesis that less contamination by construction waters (usually brine derived from the Rustler Formation water) is taking place. The high concentrations seen in DHP402A in 1988 were most likely due to the Rustler component in the water.

Statistical analysis indicates that brine samples from DHP402A and GSEEP are not representative of Salado Formation brine chemistry at the facility horizon (Deal and others, 1989) and are probably contaminated by mining operations (Deal and others, 1991). Deal and

Case (1987) and Deal and others (1989) discuss the potential for contamination of downholes by water sprayed onto the floor to control dust or to reconstitute loose salt cuttings.

Deal and others (1989; 1991) have evaluated rock/brine equilibria using the speciation-solubility code EQ3NR (Wolery, 1983). Modeling results indicate that all WIPP brines are saturated or supersaturated with respect to anhydrite, barite, fluorite, glauberite, gypsum, and halite. Several brines are also calculated to be saturated with respect to celestite, dolomite, magnesite, and polyhalite (Deal and others, 1989; Abitz and others, 1990; Deal and others, 1991). Model results agree with the observed mineralogy at the WIPP repository, supporting the contention that WIPP brines are fluids that have equilibrated with evaporite salts.

# 4.0 Release of Brine from Undercompacted Clay in the DRZ

## 4.1 Introduction

This section examines the volume of brine that may be available to migrate into the WIPP excavations by compaction of clay within the DRZ due to lithostatic loading. The release of brine into the WIPP excavation from undercompacted clays in the DRZ was suggested by Deal and Roggenthen (1991) and described in more detail by Deal and others (1991). To determine whether enough brine was present in the clays to account for observed brine seepage, clay samples were obtained from the WIPP excavation and then subjected to laboratory testing. Calculations were subsequently performed that computed the volume of brine released as a function of the thickness of the DRZ. For comparison purposes, volume calculations from compaction experiments were plotted with volume calculations that considered the specific storage of halite.

## 4.2 Sampling and Laboratory Testing

Four clay samples from various areas in the WIPP underground were collected from the clay seam beneath the orange band (Map Unit 1). Samples were sealed in 500-milliliter (mL) bottles and sent to IT Oak Ridge laboratory for modified consolidation experiments. The goal of these experiments was to determine the volume of brine that can be liberated from clay as a result of directed stress. A consolidation cell was developed by IT personnel, such that a constant pressure can be applied to a clay sample while brine liberated from the sample is collected.

The consolidation cell is a 1.4-in. (3.56-cm)-diameter, 2.3-in. (5.72-cm)-high stainless steel cylinder. A stainless steel piston with O-ring polypak seals was fabricated to fit inside the cylinder. The cell was set on top of a porous stone of corundum, which was set in a plastic dish. The plastic dish provided a means of catching brine squeezed out of the sample. This assembly was placed into a standard consolidation cell. Water was placed in the standard consolidation cell, and the completed assembly was placed in a plastic bag to provide a high-humidity environment to minimize evaporation of brine.

The cell assembly was placed in a Wykeham Farrance lever-arm odometer with a load ratio of 11:1. Weights totaling 126.8 kilograms (kg) were applied, giving 13.8 MPa force on the sample for four weeks. The ratio of the mass of brine released to the total sample mass was then determined gravimetrically.

### 4.3 Results

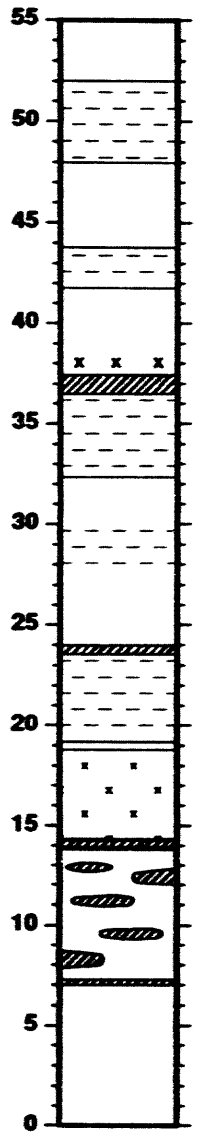
We measured the amount of brine that was driven out of the clay by compression and determined from the modified consolidation tests described above. There is no commonly used term for this brine fraction. Because a significant amount of moisture remains in the clay after squeezing (most as water of hydration or otherwise loosely bound to or within the clay), this amount of brine is some fraction of the true moisture content of the clay. Additionally, brine which is squeezed from the clays during the consolidation tests has a greater density than pure water. The *available volumetric brine content* is the percent by volume of brine that can be squeezed from a given sample. The *brine mass* value of 12.35 percent by weight for the clay was determined experimentally. The approximate clay content of each stratigraphic unit was determined. Assuming that for practical purposes all of the brine present is in the clays, the available volumetric brine contents were calculated for the various stratigraphic units (Table 4-1).

Moisture calculations based on oven-drying clay samples at 110°C, as specified by the American Society for Testing and Materials (ASTM) Procedure D2216-80, are not appropriate for this calculation because the WIPP repository is not (and will not) be heated to any significant extent. Such calculations would exaggerate the amount of brine available and will include water of hydration, which will be driven off clay minerals and hydrous salts by heating. Precipitation of hydrous salts from heating and evaporation of the brine will also introduce errors in the calculation. Calculations based on drying data thus will yield values much too large to be realistic.

#### 4.3.1 Brine Available from Clay Consolidation

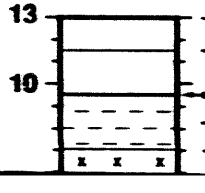
The assumption that moisture in the Salado Formation is associated with clays is made for the following reasons. The amount of moisture driven from the WIPP rock samples by heating to 95°C varies directly with the clay content (Deal and others, 1989, Section 4.1). Borehole conductivity studies (Deal and others, 1989, Section 4.2) also show a direct correlation between conductivity, clay content, and moisture, allowing moisture content to be calculated from conductivity. Observations in the WIPP excavations consistently record that patches of moisture often extend downward from the lithologic units that have the most clay (Deal and others, 1991, Section 2.2.2).

In order to calculate the volumetric brine content from the brine mass value, the density of the brine, the weight percent of clay in the rock, and the density of the rock or sediment sample must be known. The density of the brine is about 1.22 (Deal and others, 1989,




| Height Above Roof (ft) | Weight % Clay (Average) | Calculated Available Volumetric Brine Content (%) |
|---|---|---|
| 48.00 to 52.10 | 3.95 | 8.60E-03 |
| 43.90 to 48.00 | 0.23 | 5.06E-04 |
| 41.80 to 43.90 | 1.10 | 2.39E-03 |
| 37.60 to 41.80 | 0.002 | 4.35E-06 |
| 36.65 to 37.60 | 0.60 | 1.31E-03 |
| 30.00 to 36.65 | 1.36 | 2.96E-03 |
| 24.05 to 30.00 | 1.41 | 3.07E-03 |
| 18.80 to 24.05 | 0.33 | 7.07E-04 |
| 14.44 to 18.80 | 0.10 | 2.18E-04 |
| 13.90 to 14.44 | 0.20 | 4.35E-04 |
| 7.20 to 13.90 | 0.01 | 2.07E-05 |
| 7.05 to 7.20 | 0.03 | 6.53E-05 |
| 0.00 to 7.05 | 0.06 | 1.34E-04 |

Waste Storage Room Roof




| Repository Horizon Height Above Floor (ft.) | Weight % Clay (Average) | Calculated Available Volumetric Brine Content (%) |
|---|---|---|
| 11.50 to 13.00 | 0.10 | 2.13E-04 |
| 9.53 to 11.50 | 1.10 | 2.34E-03 |
| 9.50 to 9.53 | 100.00 | 2.13E-01 |
| 8.30 to 9.50 | 2.81 | 5.98E-03 |
| 7.10 to 8.30 | 0.23 | 4.95E-04 |
| 4.80 to 7.10 | 0.002 | 4.26E-06 |

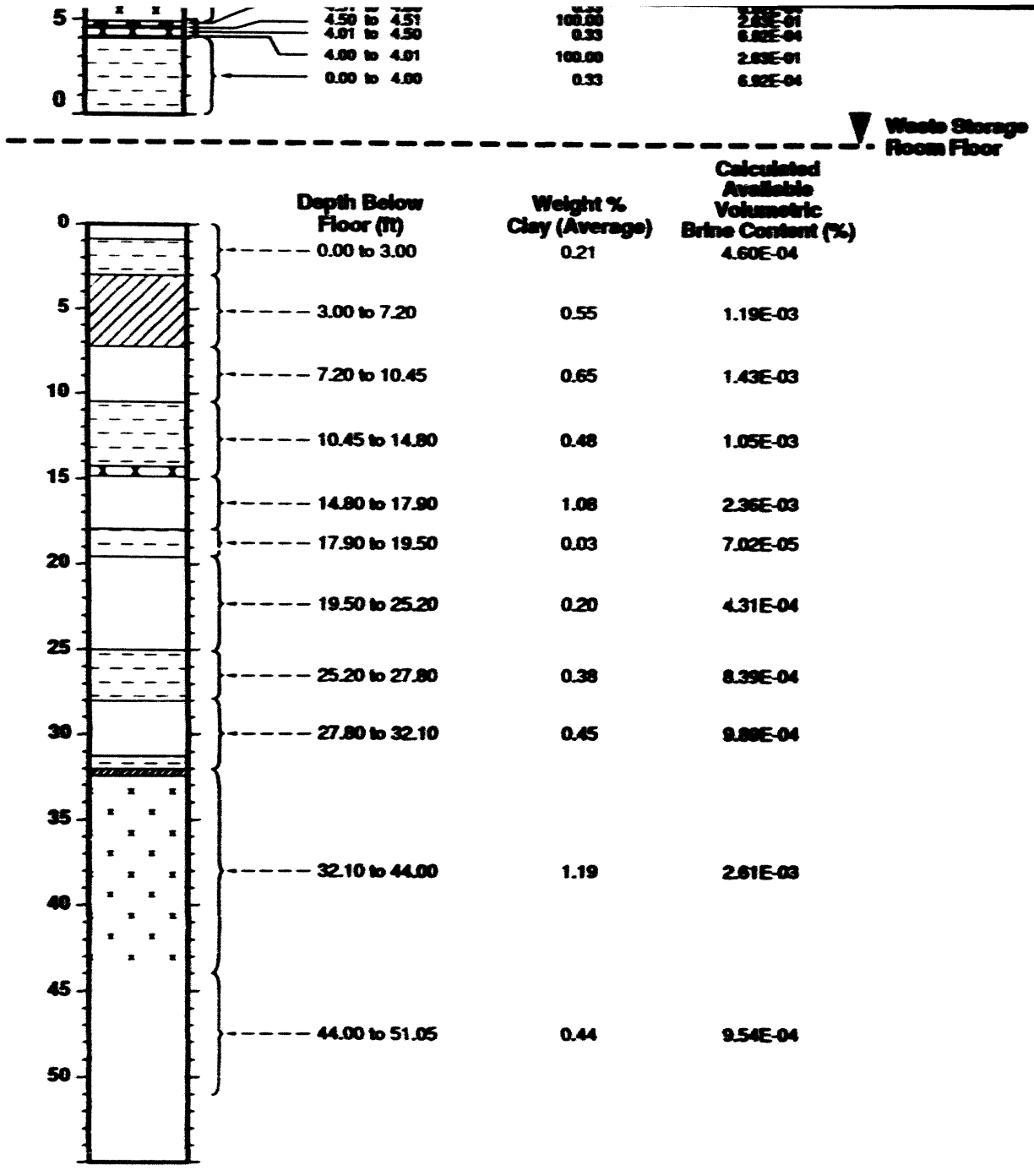



Table 4-1

List of Properties used in Volume Calculations after Stein (1985)

Table 3-5). The laboratory that performed the brine mass measurements proceeded to dry the sample to completion (removing structurally bound water in the clay) and reported a density in excess of 3; as a result, at this time we do not have a laboratory-determined density value for the in situ clay at the WIPP. The density, however, can be approximated. Milligan (1991) has studied the composition of the clay in the Salado Formation and from averaging the x-ray diffraction data has arrived at an approximate composition of 64 percent chlorite-smectite, 10 percent mixed-layer clay illite, 23 percent chlorite, and 3 percent serpentine. The range of clay densities listed in the *Manual of Mineralogy* (Klein and Hurlbut, 1985) shows chlorite from about 2.6 to 2.9 grams per cubic centimeter (g/cm$^3$), montmorillonite (a smectite) at about 2.5 g/cm$^3$, and illite at about 2.8 g/cm$^3$. It is reasonable to assume that the clay exposed in the WIPP excavations has a density somewhere between 2.5 and 2.9 g/cm$^3$, with most likely values of about 2.6 or 2.7 g/cm$^3$. The volumetric brine content of pure clay can be calculated using the following equation

$$\textit{Volumetric Brine Content (\%)} = \textit{Brine Mass (\%)} \times \frac{\textit{Density of Clay}}{\textit{Density of Brine}}$$

(after Hillel, 1980)

where

Brine mass = 12.35 percent
Brine density = 1.22
Range of clay density = 2.5 to 2.9.

The calculated volumetric brine contents of pure Salado clay is shown in Table 4-2, ranging between approximately 25 and 29 percent, with most likely values near 26 or 27 percent.

To calculate the available volumetric brine content of various stratigraphic units exposed around the WIPP excavations, the weight percent of the clay in the Salado Formation and the density of the Salado Formation must also be determined. Table 4-1 provides a listing of parameters used for this calculation. The percentage of clay in the Salado Formation was determined by Stein (1985) for specific mapping units that extend 50 feet (15 m) above and below the repository horizon. Clay content of the repository horizon was approximated by visually comparing repository mapping units with the units above the repository horizon, as determined by Stein (1985). Similarity of the repository mapping units and the units above the repository were determined from expert consensus of IT senior geologist Bob Holt and IT

**Table 4-2**
**Calculated Range of Volumetric Brine Contents of Salado Formation Clay**

| Assumed Clay Density | Volumetric Brine Content (%) |
|---|---|
| 2.5 | 25.3 |
| 2.6 | 26.3 |
| 2.7 | 27.3 |
| 2.8 | 28.3 |
| 2.9 | 29.3 |

geologist Darin Milligan. The density of the Salado Formation was determined from geophysical logging of the ERDA No. 9 drillhole by Griswold and McWhirter (1981). The calculated average values are shown on Figure 4-1. In addition, there are three distinct clay seams exposed in the repository horizon—immediately below the orange band, one just above the orange band, and clay F—that are the probable sources of most of the brine weeps (Deal and others, 1991, Section 2.2.2). Although these clay-rich layers can be traced throughout the excavations, their expression as distinct clay seams is somewhat discontinuous, and the thickness varies from place to place. Krumhansl and others (1990) studied 75 clay samples from the WIPP excavations collected from the clay below the orange band and clay F. They state that these two clay layers "range in thickness from a few cm to several cm." Their reported values are considered to be too large. Representative thicknesses were measured at 20 randomly selected sites and are shown in Table 4-3. Average thicknesses were .14 in. (3.5 millimeters [mm]) for the clay below the orange band, 3.5 mm for the clay above the orange band, and .4 in. (10.1 mm) for clay F. The values shown in Table 4-1 are used to predict the amount of brine that can be squeezed from the clay contents of each unit.

Calculations that use the consolidation data assume a constant uniaxial stress that liberates brine from the sample. Clay samples under an experimental pressure of 13.8 MPa experience pressures similar to the overburden pressure at the WIPP excavation. Figure 4-1 shows the volume of brine available for a 13- by 33- by 300-ft (4- by 10- by 91-meter) waste storage room as a function of the thickness of the DRZ. This plot assumes that all the brine available in the clay flows radially into the storage room. The volume of brine is an over-estimate of the actual amount of brine that will enter a waste storage room. Volume estimates are especially suspect for that part of the DRZ farthest from the excavation. Previous modeling (Deal and others, 1991, Chapter 5) has shown that less than 5 percent of the total amount of

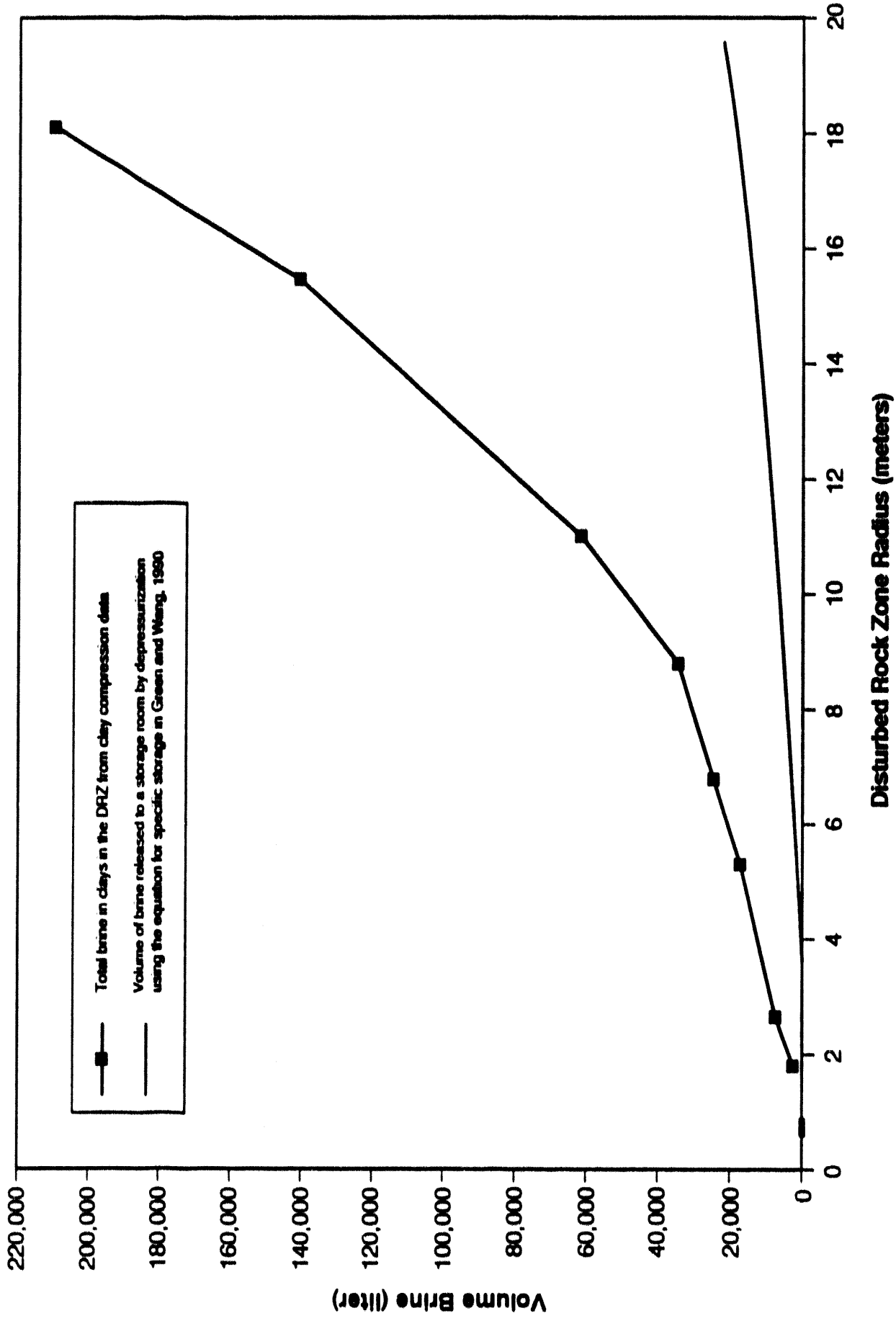



**Figure 4-1**
**Volume of Brine Available for a Room-sized Excavation Calculated from Specific Storage Data and Clay Compression Data Assuming Radial Flow**

## Table 4-3
## Thickness of Clay Seams in the WIPP Excavations

| Location | Clay Below the Orange Band (millimeters) | Clay Above the Orange Band (millimeters) | Clay F (millimeters) |
|---|---|---|---|
| E Rib E0-N640 | 4 | 4 | 13 |
| W Rib E0-N1000 | 0 | 0 | 2 |
| W Rib S End SPDV Room 2 | 0 | 3 | 3 |
| W Rib Center SPDV Room 4 | 0 | 3.5 | 3 |
| E Rib Center Room L3 | 4 | 1.5 | 2 |
| E Rib Shop E300-N1336 | 6 | 5 | 1.3 |
| W Rib E300-N225 | 1.5 | 0 | 2 |
| N Rib S1950-E858 | 5 | 7 | 8 |
| N Rib S1950-E1250 | 20 | 12 | 10 |
| W Rib S1775-E1300 | 0 | 10 | 10 |
| N Rib S1600-E502 | 3 | 8 | 50 |
| S Rib Shop S1300-W10 | 1 | 2 | 4 |
| S Rib S1950-E120 | 1 | 1.5 | 45 |
| W Rib S1600-W170 | 2 | 1.5 | 3 |
| E Rib E0-N35 | 2.5 | 2 | 3.5 |
| N Rib S400-W250 | 8 | 0 | 7 |
| N Rib S90-E855 | 3 | 0 | 12 |
| NW Rib N275-W450 | 4 | 5 | 12 |
| N Rib N1100-W1880 | 1.5 | 2 | 4 |
| N Rib N1100-W2776 | 3 | 2 | 8 |
| Average Thickness | 3.5 | 3.5 | 10.1 |

brine estimated will actually be released to the excavation by depressurization: therefore, this curve is unrealistically high.

### 4.3.2 Specific Storage Calculations

The release of brine into the WIPP excavation may be controlled by several processes (Deal and Roggenthen, 1991). One of these processes is the release of brine due to the depressurization of the DRZ (Deal and others, 1991). Assuming that expansion of brine is the dominant driving force for flow into the excavation, the amount of brine released from a homogeneous DRZ may be calculated by using the equation for specific storage. Specific storage is defined as the volume of water that a unit volume of aquifer releases from storage under a unit decline in hydraulic head (Freeze and Cherry, 1979). Because a value for the change in hydraulic head is known across the DRZ, the volume of brine released due to depressurization was calculated given a volume of DRZ and the calculated specific storages.

The expression for specific storage most commonly used in groundwater hydrology is given by Domenico (1972):

$$S_s = \rho_f \, g \, (\alpha + \phi\beta)$$

where

$\rho_f$ = Fluid density = 1,200 kg/m$^3$
$g$ = Acceleration of gravity = 9.8 ms$^{-2}$
$\alpha$ = Vertical formation compressibility = 4.82 x 10$^{-11}$ Pa$^{-1}$
$\phi$ = Formation porosity = 1.56 percent
$\beta$ = Fluid compressibility = 4.99 x 10$^{-10}$ Pa$^{-1}$.

which gives

$S_s$ = Specific storage = 6.59E-07m$^{-1}$.

The above expression was used to determine the volume of brine released into a 13- by 33- by 300-ft (4- by 10- by 91-meter) waste storage room from a DRZ of a given thickness (Deal and others, 1991, Figure 4-19). They conclude that approximately 180,000 L of brine would be released to a WIPP waste storage room from a 27-m thick DRZ. The specific storage value of halite, with a porosity of 1.56 percent, used in this calculation was 6.6 x 10$^{-7}$ m$^{-1}$. This is almost seven times larger than the specific storage value of 9.5 x 10$^{-8}$ m$^{-1}$, as estimated by Beauheim and others (1991), for halite with a 1 percent porosity. A porosity of 1 percent is considered too low, because the average volumetric

moisture content for halite from the repository units of the Salado Formation is approximately 1.56 percent (Deal and Roggenthen, 1991). Given a volumetric moisture content of 1.56 percent, the porosity must be at least as high to account for the moisture in the formation.

The above equation assumes that the compressibility of the solid framework is a negligible component of the bulk formation compressibility compared to the compressibility of the pores. This assumption is true for most "normal" water-bearing rocks that are low-compressibility solids, such as a quartz sandstone; however, this assumption is probably not valid for halite at a depth of 655 m (2,150 ft). A more rigorous expression for specific storage is presented by Green and Wang (1990):

$$S_s = \rho_f g \left[ \left( \frac{1}{K} - \frac{1}{K_s} \right) \left( 1 - \frac{4G(1-K/K_s)/3}{K+4G/3} \right) + \phi \left( \frac{1}{K_f} - \frac{1}{K_s} \right) \right]$$

where:

| | | |
|---|---|---|
| $\rho_f$ | = | Fluid density = 1,220 kg/m$^3$ |
| g | = | Acceleration of gravity = 9.8 ms$^{-2}$ |
| K | = | Drained bulk modulus of rock = 20.7 GPa |
| $K_s$ | = | Unjacketed bulk modulus of rock (grain or solids modulus) = 23.4 GPa |
| G | = | Drained shear modulus of rock = 12.4 GPa |
| $\phi$ | = | Porosity = 1.56 percent |
| $K_f$ | = | Bulk modulus of fluid = 3.23 GPa. |

which gives

$S_s$ = Specific storage = 1.13 x 10$^{-7}$ m$^{-1}$.

A specific storage estimate of about 1.13 x 10$^{-7}$ for halite with a 1.56 percent porosity has been calculated, using the above equation and values from Beauheim and others (1991). This value of specific storage is slightly larger than the 9.5 x 10$^{-8}$ m$^{-1}$ estimated by Beauheim and others (1991) and was used to calculate the volume of brine released from storage for a 13- by 33- by 300-ft (4- by 10- by 91-meter) waste storage room. This result is plotted in Figure 4-1 as the solid line. Projecting that line suggests that depressurizing a 27-m-thick DRZ will yield on the order of 40,000 L, not the 180,000 L suggested by Deal and others (1991).

### 4.4 Discussions

In Section 4.3.1, it was pointed out that only a small percentage of the brine present in the DRZ would be released by squeezing or depressurization. It would be useful to obtain an estimate for the size of that percentage. Based on the calculations of Deal and others (1991, Figure 4-19), depressurizing a DRZ about 27 m thick could release 180,000 L of brine. Deal and others (1991, Figure 5-3 A) also calculated that the cross section of such a DRZ around a WIPP storage room would have an area of approximately 3,258 square meters. If the room is 300 ft (91 m) long, the volume of rock involved is about 296,000 cubic meters. The Salado Formation at the repository level is 1.56 percent brine by volume (Deal and Roggenthen, 1991), so the volume of the DRZ around a room contains about 4.6 x $10^6$ L of brine. If 180,000 liters are released by depressurization, about 4 percent of the brine is available to enter the room. Recalculation using more appropriate value for specific storage (discussed above) suggests a release of only 40,000 L by depressurizing, which is less than 1 percent of the brine available. These calculations also do not take into account the brine that will be lost by evaporation prior to closing the storage room. For the above reasons, the lower curve in Figure 4-1 presents a more realistic estimate (but still an over-estimate) of how much brine might be released from the DRZ into a WIPP waste storage room.

Figure 4-2 shows that there is enough moisture present in the clay within the repository horizon to explain the brine seepages calculated in Table 2-4 from the weep studies. The following assumptions are made:

- Horizontal seepage only occurs from the repository horizon. This is the assumption argued by Deal and others (1991, Figure 5-3B).
- One hundred percent of the brine available in the clay present within 1 m of the excavation is squeezed into the openings.
- Fifty percent of the brine present in clay that is 1 to 2 m from the excavation is squeezed into the openings.
- Five percent of the brine present in clay in the rest of the DRZ is squeezed into the openings. (This is more than the "less than 1 percent" calculated above and is therefore also an over-estimate of the brine available.)

Alternatively, it is known that, with time, fracturing around the WIPP storage rooms will extend upward to anhydrite "a" and downward to clay E at the base of MB 139 (Deal and others, 1991, Chapter 5). It may be more realistic to predict brine seepage from the clay

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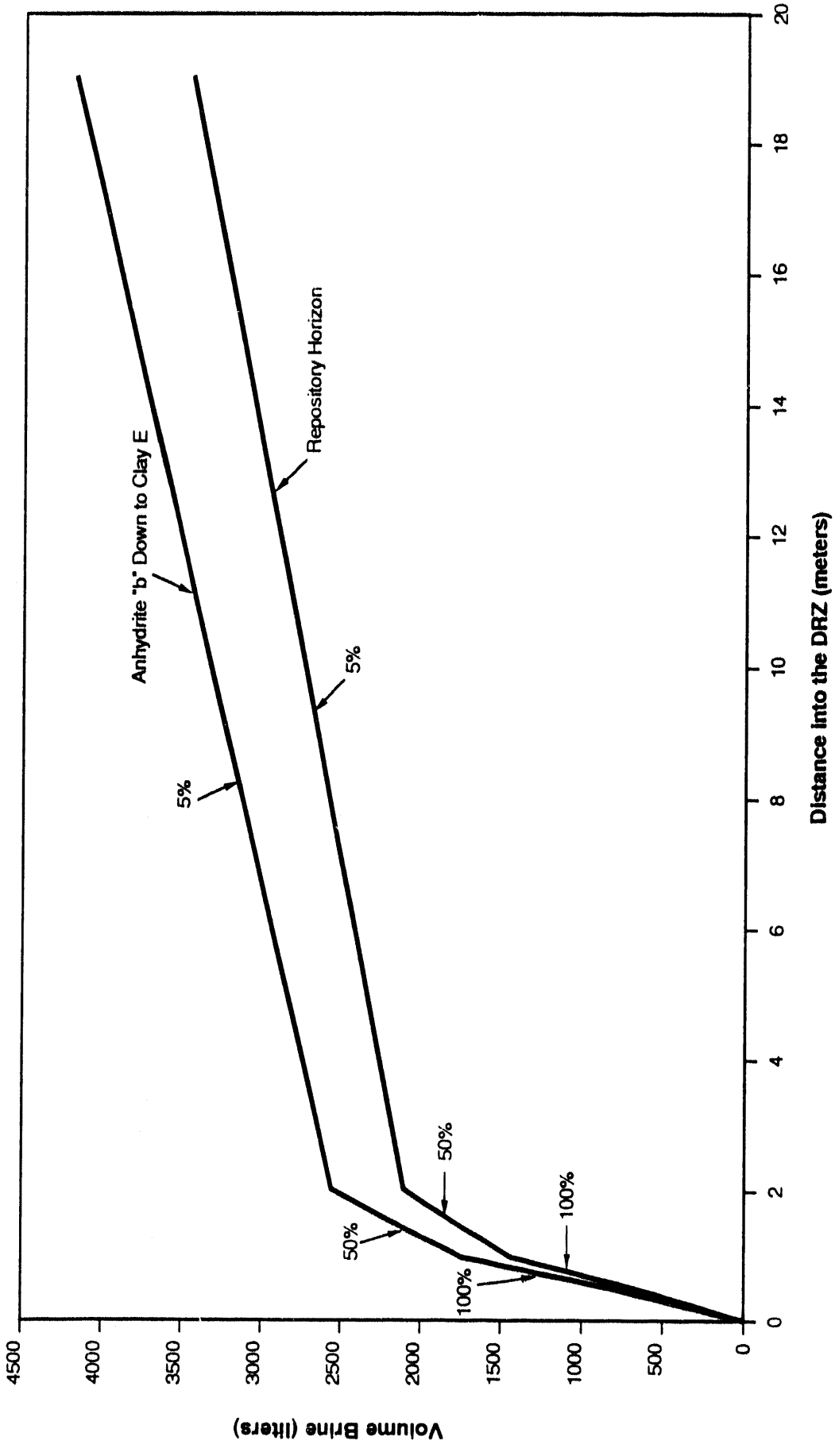


**Figure 4-2**
**Volume of Brine Available to be Squeezed into a WIPP Storage Room from Clay Contained in the WIPP Repository Horizon**
***(percents refer to that percent of the Brine that can be squeezed out of the clay under the Experimental Conditions that is Assumed to be Liberated under In Situ Conditions. See Text for Discussion.)***

contained in that stratigraphy as well. The upper curve in Figure 4-2 shows the results making the same assumptions for 100, 50, and 5 percent yield. In this conceptual model, the DRZ is assumed to extend only horizontally away from the room. This is reasonable, as stress will be relieved in the roof, and the compressive stress required to squeeze brine out of the clays is not likely to be present in units immediately above and below the rooms. This exercise suggests that there is more than enough brine present in the near-field clays to account for all observed brine seepages. Figure 4-2 probably exaggerates the amount that will actually enter a room; however, this volume is still on the order of 2 percent of the 220,000 L necessary to corrode all susceptible metals in CH-TRU waste emplaced in steel drums.

The uniaxial compression experiments do not realistically simulate the stress conditions that exist within the DRZ but are useful as a first approximation to determine whether enough brine is contained in the surrounding rocks to account for the observed brine seepage. Results of analysis for radial-tangential stress development after excavation of a WIPP waste storage room using the VISCOT code indicate that the tangential stress on the wall of the room increases to approximately twice the value of the in situ stress, while the radial stress is reduced to zero (Deal and others, 1989, Figures 5-4 and 5-5). The in situ stress in the Salado Formation is about 15 MPa. In response to high deviatoric stress, the salt creeps into the openings, and the radial and tangential stresses relax with time (Deal and others, 1989). Within 1 or 2 m of the excavated surface, the rock will probably experience much higher stress during the first few days, whereas the pressures experienced in the DRZ some distance from the excavations will stay close to lithostatic, and brine release from consolidation will be limited because the brine is not able to drain into the repository excavations. Thus, uniaxial compression of the clay material in the laboratory is a gross exaggeration of the differential stress state within the DRZ.

In addition, the orientation of the clay-mineral particles relative to the principal stress direction will affect the amount of brine that can be liberated under compaction. Consolidation tests were conducted on disturbed clay particles that were probably randomly oriented at the start of the experiment. The horizontal strain component was confined. The in situ clay is probably oriented parallel to bedding. In the DRZ, clay experiences a high confining-boundary stress, which is effectively simulated by the vertical stress applied by the compaction cell. However, fluid was allowed to be released from the sample vertically, unlike in the DRZ, where flow is probably constrained in the vertical direction perpendicular to clay mineral grains and by confining clear halite units. Thus, the uniaxial compression of

the clay material used in this analysis can only be an approximation to the actual physical processes that liberate brine from the clay in the DRZ.

# 5.0 Summary and Conclusions

During nine years of observations (1982 to 1991), evidence has mounted that the amount of brine seeping into the WIPP excavations is local, limited, and finite and only a small percentage of that required to produce little hydrogen gas by anoxic corrosion of the metal in the CH-TRU waste drums and waste inventory. The data through 1990 are discussed in detail by Deal and others (1991). It was concluded that it will take on the order of 220,000 L of brine to corrode all the susceptible metal (iron and aluminum) and that there is probably less than 10 percent of that volume (less than 20,000 L) available, unless it can be proven that far-field flow does occur at the WIPP. Far-field flow is theoretically unlikely or impossible (Deal and Roggenthen, 1991), and all evidence at the WIPP confirms that significant seepage of brine ceases about three years after the excavation of an opening, although small seeps can continue for a longer period of time.

Data gathered in 1991 support those conclusions and present evidence that the small amounts of brine seeping into the excavations are derived from the clay present in the walls within 1 or 2 m of the excavations. Less than 1 percent of the brine needed to corrode all the susceptible metal is expected to seep into any one WIPP waste storage room, and much of that is expected to evaporate into the air circulated through the repository prior to room closure and, hence, will be unavailable for corrosion. There is no evidence confirming that enough far-field flow exists to supply the needed volume of brine for complete anoxic corrosion of the available iron and aluminum.

## 5.1 Brine Observations

The most telling observations are those of brine seeping through the walls of the excavations. Most of that brine evaporates into the air circulated for ventilation, depositing salt encrustations on the wall. Careful, long-term observations, including repeated collection and measurement of the encrustations, confirm and semiquantify the observation that the brine weeps cease about three years (1,000 days) after an excavation is made (Section 2.2). Study of six sample surfaces throughout the WIPP excavations estimate total seepage into a full-sized waste storage room from rib weeps to be between 43 and 604 L, with an average of less than 300 L (Table 2-4 and Figure 2-14). This is less than 1 percent of the 220,000 L of brine needed to corrode all the susceptible metal in the CH-TRU waste and waste storage drums (Deal and others, 1991, Section 4.6). Therefore, it is highly unlikely that gas generated by corrosion will be a problem at the WIPP after closure.

Weep observations show that vertical surfaces in the WIPP underground dry out in about 1,000 days, supporting the general observations that have been made in the past (Deal and Case, 1987; Deal and others, 1991, Section 2.2). Mining an additional 3 ft (0.9 m) from the dry surface creates a fresh surface on which weeping resumes. This observation also supports the hypothesis that most of the brine that seeps from the vertical surfaces is being squeezed out of the clay (Deal and Roggenthen, 1991; Deal and others, 1991, Chapter 5), primarily from the first 3 ft (0.9 m) of the DRZ.

The clay units appear to be the only significant source of brine. It has been hypothesized that vertical fracturing develops within the ribs after about 1,000 days and that brine continues to seep toward the rooms but is diverted downward through the fractures to accumulate, unseen, in fractures beneath the floor of the drifts (Deal and Roggenthen, 1991; Deal and others, 1991). *This hypothesis is testable.* If brine is being diverted through vertical fractures, brine or evidence of brine (i.e., salt encrustations) should be observable in the fractures.

There are a number of places in the WIPP underground where the vertical fracturing in the walls can be observed, and considerable effort has been made to examine all of these locations to see if brine or salt crusts can be observed. These locations include the 11 subhorizontal drillholes (Section 2.6 of this report), the entrance to Room Q, several horizontal drillholes in the northwest wall of SPDV Room 4, Drillhole WWC1 in the south rib of N1420 across from Room C1, and several locations in Panel 1. Rib fractures have been well-exposed on the east rib of several rooms in Panel 1. A typical exposure was shown in Deal and others (1991, Figure 2-9) and can clearly be seen to be dry and free of salt encrustations. Two large-diameter (3-ft [0.9-m]) horizontal drillholes in the northeast end of Room 1 cut several near-vertical fractures, and they also are dry and free of salt encrustations (Figure 5-1). *There is no observed evidence of past or present moisture at any of these locations.*

A series of horizontal holes have been drilled in the north end of Room D as part of the Sandia National Laboratories/New Mexico (SNL/NM) sealing tests. Brine was injected under high pressure behind the seals, and in some cases, brine leaked out of adjacent fractures. This brine was, however, artificial brine that was deliberately injected at these locations, and no naturally occurring brine seeped out of the Salado Formation.

It has been hypothesized that large quantities of brine will flow into the excavations from the far field (beyond the DRZ), mostly through MB 139 (SNL/NM, 1992). (In the context of

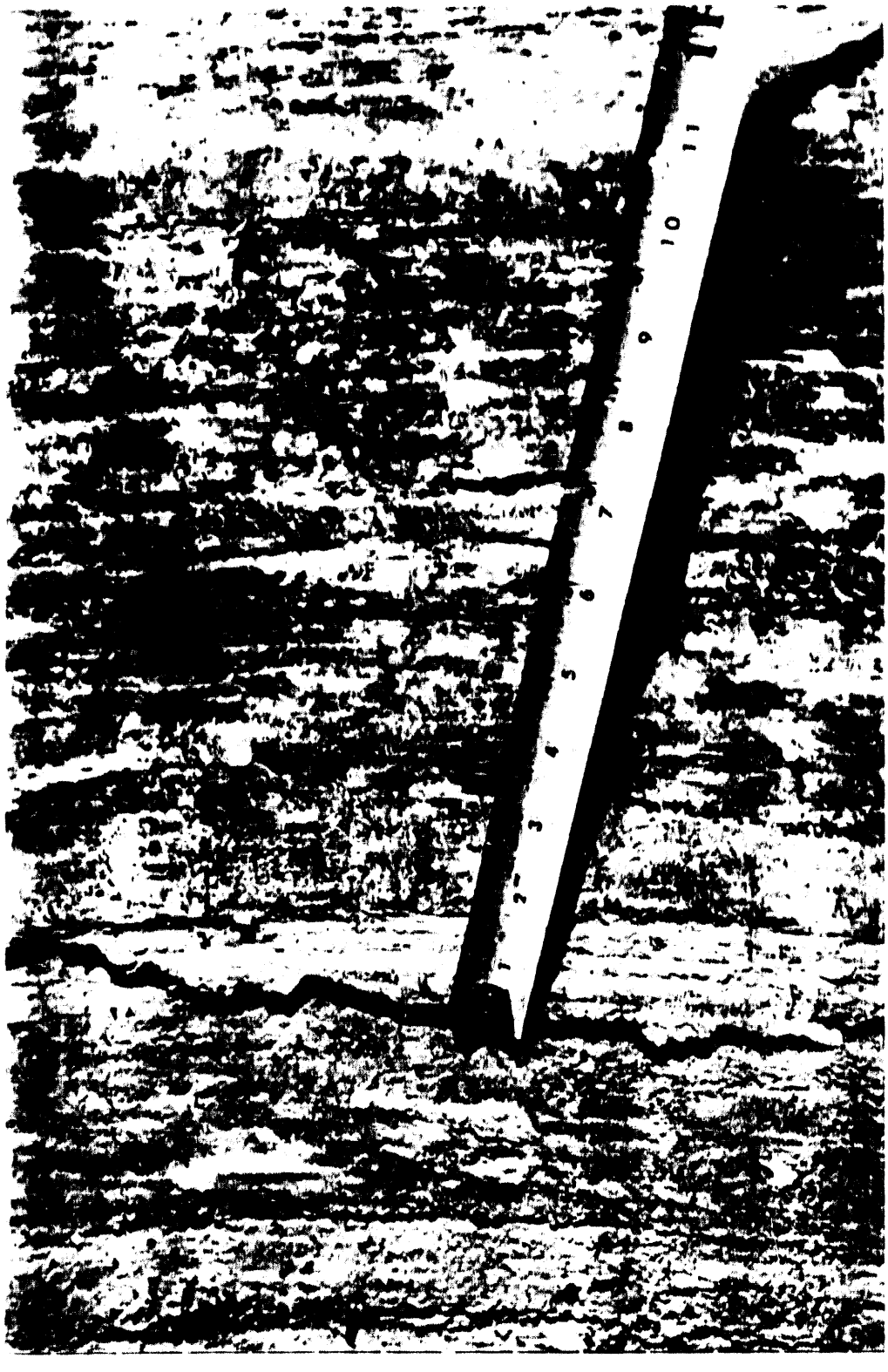

Figure 5-1

Looking upward toward the top of a 3-ft (0.9 m)-diameter horizontal drillhole in the north end of the East Rib, Room 1, Panel 1. The fracture is about 42 cm from the subparallel to the excavation surface. The fracture is dry, and no salt crusts or salt stavacities occur along it.

brine flow toward the WIPP excavations, near-field flow is flow that occurs within the DRZ, including the outer zone of plastic deformation and the inner zone of elastic deformation and fracturing [Deal and others, 1991, Chapter 5]. Far-field flow refers to flow far enough beyond the DRZ that the salt does not deform in response to the presence of the WIPP excavations.) Presumably, this brine would also accumulate in the fractures beneath the floor and eventually rise to the surface of the drifts and inundate the storage rooms. *This hypothesis is testable.* If far-field flow is transporting brine to the WIPP excavations, that brine should be observable.

The best place to look for evidence of far-field flow is in older excavations that are as far removed from other parts of the underground workings as possible. SPDV Room 4 and Room G are ideal locations, as they were excavated in 1983 and 1985, and there is nothing except undisturbed Salado Formation to the north and west and, for most of Room G, to the south.

A series of five downholes (DH36, DH38, DH40, DH42, and DH42A) were drilled through MB 139 beneath the floor of Room G. If far-field flow through MB 139 exists, there should be observable flow into these drillholes from MB 139. Visual inspection of these holes show that MB 139 is distinguishable, some fracturing and a small amount of salt crust build-up can be seen in MB 139, but no brine is seeping out of the anhydrite into the drillhole. No large salt encrustations occur. These observations confirm the identical report of an earlier inspection of DH36 by Deal and others (1991, Section 2.5). These boreholes do produce small amounts of brine (0.004 to 0.09 L/day) from some deeper horizon, probably clay B, that would not be connected to the fracturing around a waste storage room.

There are at least 36 downholes in SPDV Room 4 (including 9 that have routinely been monitored for the Excavation Effects Study). All that are still accessible are dry and contain little encrustation buildup. The condition of MB 139 is especially easy to see in drillhole P4X84, in the southwest corner of Room 4. P4X84 is 36 in. (91 cm) in diameter, 15.7 ft (4.8 m) deep, and often shown to visitors (Figure 5-2). Both the top and bottom of MB 139 are clearly visible, as are large, open fractures. The fractures, MB 139, and the bottom of the drillhole are dry. If far-field flow through MB 139 was occurring, brine should be seeping out of it in the downholes in SPDV Room 4 and Room G. *No brine is observed, and no thick salt encrustations have formed.*

**Figure 5-2**

**Downhole P4x84, a 3-ft (0.9 m) diameter hole in the floor of SPDV Room 4. The wooden wedge to the right of center marks a fracture at the top of MB139. The two smaller wooden pegs to the lower left mark the bottom of MB139. No brine has been observed in this hole and no thick salt encrustations have formed.**

It has previously been noted (Deal and others, 1991) that all of the north end of the workings (except Rooms A1, A2, A3, B, D, and G) has been heavily watered in the past to control salt dust, and all fractures and drillholes in the floor were filled to floor level with brine on numerous occasions. Therefore, if additional brine were seeping into the fractures beneath the floor, either from rib seeps that were diverted downward through fractures or from MB 139, brine should be manifest by either forming pools on the floor or evaporating and leaving salt crusts on the floor. *Neither was found.*

The only other possible mechanism to remove inflowing brine would be through an interconnected fracture system beneath the floors that allowed brine to flow downhill under gravity head to the sumps in the Salt Shaft and Waste Handling Shaft. Deal and others (1991) report making repeated observations in those sumps and observed fractures that cut MB 139 beneath the floor of the drifts. Both the fractures and MB 139 are dry. Pump tests have been performed in the fractured zone beneath the floor of the E0 drift (Crawley and others, 1992), which confirm that interconnected fracture systems have formed only at intersections.

It is unlikely that significant quantities of brine are flowing into the WIPP excavations from either MB 139 or from the downward diversion of rib weeps through fractures behind the walls. If either were occurring, brine should be seeping out of MB 139 and fractures in holes in the floor in SPDV Room 4 and Room G, and one of the following should occur: brine pools should form on the floor of the E0 drift, salt crust should form in the fractures, or brine should seep out of MB 139 or fractures in the shaft sumps. Extensive efforts have been made over the past nine years to find this evidence, but the observations to date are negative. The fact that brine is not observed seeping from MB 139 in the shafts is evidence that significant far-field flow does not exist.

A confirming observation was made by Deal and others (1991, Section 2.5) in the South Exploratory Drift (E140). The south 500 m of this drift slopes downward to the south to a dead end; therefore, if significant amounts of brine were seeping into this drift, the minimal evaporation and the sloping nature of the floor should result in the accumulation of brine at the south end of the drift. Inspections detected no moisture on either the ribs or the floor and only minimal salt encrustations. If significant amounts of brine flowed downslope to the south end and evaporated, salt crusts should be evident. *No such salt crusts were found.*

## 5.2 Moisture Available in Clays

WIPP performance assessment modeling (SNL/NM, 1992) assumes a far-field flow model for the brine seeps. The BSEP work initially made similar assumptions (Deal and others, 1989, Chapter 5), in large part because these assumptions were necessary to perform any conventional hydrologic modeling. Even then, however, the assumptions that Darcy's Law applied and that hydrostatic conditions existed were questioned. Testing of fluid pressures in the units surrounding the WIPP excavations has shown unequivocally that hydrostatic conditions do not exist and that pressures close to lithostatic occur within 10 m of the excavations (Beauheim, 1993). As the studies continued, some of the hydrologists working with the Salado Formation became more aware of the physical implications of the plastic nature of the salt. Additionally, the thin, brittle anhydrite layers are encased in thick, effectively impermeable salt beds, sealing them within. Theoretically, it does not seem possible for far-field flow to occur in the undisturbed Salado Formation (Deal and Roggenthen, 1991). Deal and others (1991) argued that the brine seeps were the result of redistribution of brine in the DRZ in response to the stress redistribution caused by excavating the underground openings. Deal and Roggenthen (1991) also suggested that enough brine might be available in the clays to account for the observed brine occurrences (Chapter 4 of this report). Laboratory testing shows that the clays contain between approximately 25 and 29 percent brine by volume that can be liberated by squeezing clay samples under 13.8 MPa of pressure for one month.

After estimating the amount of clay present in seams and disseminated in the salt units exposed in the walls of the repository (Section 4.3.1 and Figure 4-2 of this report), it was found that there was enough brine available in the clay to explain the brine weeps and resulting salt encrustations that are found in the WIPP (Section 2.2 of this report). In terms of brine inflow into a full-sized WIPP waste storage room, this translates into a likely brine volume on the order of 400 L.

The calculations were extended to include strata above and below the repository horizon to estimate the volume of brine contained in the clays within the DRZ. Figure 4-1 shows that for a DRZ with a thickness of 66 feet (20 m), there is about 220,000 L of brine that could be squeezed out at 13.8 MPa. This is the same order of magnitude as the amount of brine needed to corrode all the susceptible metal to be emplaced in a storage room, but it is an unrealistically large number for the volume of brine that is likely to be liberated.

There are two reasons that 220,000 L is much too high: First, it assumes that a deviatoric stress (not confining stress) (Deal and others, 1991, Chapter 5) of 13.8 MPa is applied to the entire DRZ. This will not happen. Modeling of the DRZ around an 11.8-ft (3.6-m)-diameter shaft, or Room Q (Deal and others, 1989, Chapter 5), shows that large deviatoric stresses only occur within a few meters of the opening, even three years after excavation. Even if radial flow toward the opening is assumed, a refinement of that modeling using a more appropriate calculation of specific storage in halite indicates that less than 1 percent of the available brine would seep into the excavation (Section 4.4 of this report). The second reason is that radial flow will not occur. The clear halite units are effectively impermeable and restrict brine movement to flow paths subparallel to bedding (see discussion in Deal and others, 1991, Chapter 5). An alternative hypothesis to radial flow is that the brine is being squeezed out of the clay, which is present in and between the layers of salt, as a result of tangential stress (vertical loading) and is moving into the excavations due to the differential radial stress toward the excavation.

As a result, assuming that the source of brine are the clays and the driving mechanism is the differential stress caused by excavating the WIPP openings, 4,000 L (Figure 4-2) or less appears to be an extremely large estimate for the amount of brine that will seep into a WIPP waste storage room. To test the feasibility of this latter hypothesis, an initial attempt was made to see if there was sufficient brine that could be squeezed out of the clays to explain observed brine seepage.

### 5.3 Possible Mechanisms Acting to Drive Brine Seepage

Far-field flow does not appear to be active, but two other processes may be acting to drive brine toward the repository. First, the thin clay interbeds provide flow paths for brine driven toward the excavations by differential tangential stress. In this case, brine flow may be modeled by considering the pressure differential along the interbeds caused by relief of confining pressure at the excavation wall with a far-field boundary at lithostatic pressure (12.5 MPa or more). Second, the thin clay may be squeezed between massive halite beds, in which case, the brine seepage can be modeled as a consolidation problem driven by a vertical loading close to twice lithostatic near the excavation walls. It is highly probable that both processes are active.

### 5.4 Recommended Future Work

To further refine our understanding of the brine seepages at the WIPP and the implications for gas generation, the following activities are recommended:

- Stein (1985) made laboratory determinations of the percentage of clay present in the units above and below the repository horizon. No equivalent data exist for the repository horizon. Similar determinations should be made of the units exposed in the excavations, and the calculations performed in Chapter 4 should be repeated with better data to arrive at more accurate numbers for the amount of clay involved.

- The value for the volume of brine that can be squeezed out of the WIPP clays was determined only at one pressure and under uniaxial stress. The experiments should be repeated under different confining stresses, under different vertical loading, ranging from a few MPa to 30 MPa, and over a longer period of time.

- The data from the tests outlined above should be combined with rock mechanics modeling, which predicts the tangential and radial stresses that will develop with time in the walls of a WIPP waste storage room. The objective is to construct a more accurate prediction of how much of the brine in the clay will be driven into the storage rooms.

- To help bound the problem, the two processes described in Section 5.3 should be modeled to obtain an approximate order-of-magnitude of their relative importance. In other words, flow should be modeled both as a consolidation problem and as flow through clay interbeds under a simple pressure differential, assuming lithostatic pressure in the far-field and atmospheric pressure in the excavation.

- The additional drillhole tests proposed in Deal and others (1991, Appendix E) should be executed to resolve uncertainties in the subhorizontal brine seepage data and to assist in resolving the question of whether or not any component of far-field flow exists.

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# APPENDIX A
# BRINE ACCUMULATION

## PART I—LIST OF UNDERGROUND LOCATIONS WHERE BRINE OCCURRENCES WERE OBSERVED AND MONITORED

## PART II—BRINE ACCUMULATION DATA TABLES

# APPENDIX A
# BRINE ACCUMULATION

## PART I—LIST OF UNDERGROUND LOCATIONS WHERE BRINE OCCURRENCES WERE OBSERVED AND MONITORED

# TABLE A-1

## LIST OF UNDERGROUND LOCATIONS WHERE BRINE OCCURRENCES WERE OBSERVED AND MONITORED THROUGH DECEMBER, 1991 AS PART OF THE BRINE SAMPLING AND EVALUATION PROGRAM AT WIPP

| Hole Number | Room or Location | Survey Accuracy S=Surveyed A=Approximate | North-South Coordinates* | East-West Coordinates* | Elevation m | Dia. cm | Length m | Direction U=Up D=Down H=Horiz. | Angle in Degrees | References** | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A1X01 | A1 | S | N1147.02 | E1254.40 | 400.28 | 10 | 15.2 | D | 90 | B, D, E | Monitored as part of the BSEP from 3/85 to 2/91. |
| A1X02 | A1 | S | N1146.88 | E1254.24 | 405.78 | 10 | 18 | U | 90 | B, D, E | Monitored as part of the BSEP since it was drilled in 3/85. |
| A2X01 | A2 | S | N1393.72 | E1338.88 | 399.65 | 10 | 15.3 | D | 90 | B, D, E | Monitored as part of the BSEP from 2/85 to 10/90. |
| A2X02 | A2 | S | N1393.65 | E1338.89 | 405.03 | 10 | 16.1 | U | 90 | B, D, E | Monitored as part of the BSEP from 2/85 to 9/89. |
| A3X01 | A3 | S | N1137.94 | E1406.84 | 399.22 | 10 | 15.4 | D | 90 | B, D, E | Monitored as part of the BSEP since it was drilled in 1/85. Drillers did not report any moisture while drilling. Hole started producing brine a few weeks later. |
| A3X02 | A3 | S | N1138.00 | E1406.89 | 404.75 | 10 | 15.5 | U | 90 | B, D, E | Monitored from 1/85 to 9/89. Drillers did not encounter moisture while drilling. Hole started producing brine a few weeks later. |
| BTPA1 | S1620/W170 | A | S1638 | W162 | 384 | 7.6 | 1.6 | D | 90 | B | Open from 0 to 1.6 m. Drilled for the BSEP study 7/86 and monitored until 12/02/88. |
| BTPA2 | S1620/W170 | A | S1638 | W166 | 384 | 7.6 | 2.8 | D | 90 | B | Cased from 0 to 1.6 m. Open from 1.6 to 2.8 m. Drilled for the BSEP study 7/86 and monitored until 12/02/88. |
| BTPA3 | S1620/W170 | A | S1638 | W170 | 384 | 7.6 | 4.1 | D | 90 | B | Cased from 0 to 3.1 m. Open from 3.1 to 4.1 m. Drilled for the BSEP study 7/86 and monitored until 12/02/88. |
| BTPA4 | S1620/W170 | A | S1638 | W166 | 388 | 7.6 | 1.4 | U | 90 | B | Open from 0 to 1.4 m. Drilled for the BSEP study 7/86 and monitored until 9/27/88. Dry. |
| BTPA5 | S1620/W170 | A | S1638 | W170 | 388 | 7.6 | 1.6 | U | 90 | B | Open from 0 to 1.6 m. Drilled for the BSEP study 7/86 and monitored until 9/27/88. Dry. |
| BTPB1 | S1620/W170 | A | S1636 | W162 | 384 | 7.6 | 1.6 | D | 90 | B | Open from 0 to 1.6 m. Drilled for the BSEP study 7/86 and monitored until 9/27/88. |

* The repository is referenced in feet; therefore the North-South and East-West coordinates are presented in feet.
** For references, see footnote at end of table.

## TABLE A-1

### LIST OF UNDERGROUND LOCATIONS WHERE BRINE OCCURRENCES WERE OBSERVED AND MONITORED THROUGH DECEMBER, 1990 AS PART OF THE BRINE SAMPLING AND EVALUATION PROGRAM AT WIPP (Continued)

| Hole Number | Room or Location | Survey Accuracy S=Surveyed A=Approximate | North-South Coordinates* | East-West Coordinates* | Elevation m | Dia. cm | Length m | Direction U=Up D=Down H=Horiz. | Angle in Degrees | References** | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BTPB2 | S1620/W170 | A | S1636 | W166 | 384 | 7.6 | 2.9 | D | 90 | B | Cased 0 to 1.8 m. Open from 1.8 to 2.9 m. Drilled for the BSEP study 7/86 and monitored until 9/27/88. |
| BTPB3 | S1620/W170 | A | S1636 | W170 | 384 | 7.6 | 4.1 | D | 90 | B | Cased 0 to 3.1 m. Open from 3.0 to 4.1 m. Drilled for the BSEP study 7/86 and monitored until 9/27/88. |
| BTPB4 | S1620/W170 | A | S1636 | W166 | 388 | 7.6 | 3.0 | U | 90 | B | Cased 0 to 2.1 m. Open from 2.1 to 3.0 m. Drilled for the BSEP study 7/86 and monitored until 9/27/88. |
| BTPB5 | S1620/W170 | A | S1636 | W170 | 388 | 7.6 | 3.1 | U | 90 | B | Cased 0 to 1.9 m. Open from 1.9 to 3.1 m. Drilled for the BSEP study 7/86 and monitored until 9/27/88. |
| BTPC1 | S1620/W170 | A | S1634 | W162 | 384 | 7.6 | 1.5 | D | 90 | B | Open from 0 to 1.5 m. Drilled for the BSEP study 7/86 and monitored until 9/27/88. |
| BTPC2 | S1620/W170 | A | S1634 | W166 | 384 | 7.6 | 3.0 | D | 90 | B | Cased from 0 to 1.7 m. Open from 1.8 to 3.0 m. Drilled for the BSEP study 8/86 and monitored until 9/27/88. |
| BTPC3 | S1620/W170 | A | S1634 | W170 | 384 | 7.6 | 4.4 | D | 90 | B | Cased from 0 to 3.0 m. Open from 3.0 to 4.4 m. Drilled for the BSEP study 8/86 and monitored until 9/27/88. |
| BTPC4 | S1620/W170 | A | S1634 | W166 | 388 | 7.6 | 5.4 | U | 90 | B | Cased from 0 to 4.2 m. Open from 4.2 to 5.4 m. Drilled for the BSEP study 7/86 and monitored until 9/27/88. |
| BTPC5 | S1620/W170 | A | S1634 | W170 | 388 | 7.6 | 5.5 | U | 90 | B | Cased from 0 to 4.3 m. Open from 4.3 to 5.5 m. Drilled for the BSEP study 7/86 and monitored until 9/27/88. Dry. |
| BTR1 | S1950/E100 | A | S1942 | E98 | 387 | 8.3 | 0.3 | H | 5 | B | Hole slightly declined below horizontal. Collar above upper clay seam, about 0.3 m below back. Drilled 6/86 and monitored until 9/27/88. Dry. |

* The repository is referenced in feet; therefore the North-South and East-West coordinates are presented in feet.
** For references, see footnote at end of table.

## TABLE A-1

### LIST OF UNDERGROUND LOCATIONS WHERE BRINE OCCURRENCES WERE OBSERVED AND MONITORED THROUGH DECEMBER, 1990 AS PART OF THE BRINE SAMPLING AND EVALUATION PROGRAM AT WIPP (Continued)

| Hole Number | Room or Location | Survey Accuracy S=Surveyed A=Approximate | North-South Coordinates* | East-West Coordinates* | Elevation m | Dia. cm | Length m | Direction U=Up D=Down H=Horiz. | Angle in Degrees | References** | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BTR2 | S1950/E100 | A | S1942 | E100 | 387 | 8.3 | 1.0 | H | 5 | B | Hole slightly declined below horizontal. Collar above upper clay seam, about 0.3 m below back. Drilled 6/86 and monitored until 12/02/98. |
| BTR3 | S1950/E100 | A | S1942 | E101 | 387 | 8.3 | 1.0 | H | 5 | B | Hole slightly declined below horizontal. Collar above upper clay seam, about 0.3 m below back. Drilled 6/86 and monitored until 12/02/88. |
| BTR4 | S1950/E100 | A | S1942 | E98 | 386 | 8.3 | 0.3 | H | 5 | B | Hole slightly declined below horizontal. Collar in halite about 1.1 m below back. Drilled 6/86 and monitored until 12/02/88. |
| BTR5 | S1950/E100 | A | S1942 | E100 | 386 | 8.3 | 0.9 | H | 5 | B | Hole slightly declined below horizontal. Collar in halite about 1.1 m below back. Drilled 6/86 and monitored until 12/02/88. |
| BTR6 | S1950/E100 | A | S1942 | E101 | 386 | 8.3 | 0.9 | H | 5 | B | Hole slightly declined below horizontal. Collar in halite about 1.1 m below back. Drilled 6/86 and monitored until 12/02/88. |
| BTR7 | S1950/E100 | A | S1942 | E98 | 386 | 8.3 | 0.3 | H | 5 | B | Hole slightly declined below horizontal. Collar just above orange band. Drilled 6/86 and monitored until 12/02/88. Dry. |
| BTR8 | S1950/E100 | A | S1942 | E100 | 386 | 8.3 | 0.9 | H | 5 | B | Hole slightly declined below horizontal. Collar just above orange band. Drilled 6/86 and monitored until 12/02/88. |
| BTR9 | S1950/E100 | A | S1942 | E101 | 386 | 8.3 | 0.9 | H | 5 | B | Hole slightly declined below horizontal. Collar just above orange band. Drilled 6/86 and monitored until 12/02/88. |
| BTR10 | S1950/E100 | A | S1942 | E98 | 385 | 8.3 | 0.4 | H | 5 | B | Hole slightly declined below horizontal. Collar about 0.8 m above floor. Drilled 6/86 and monitored until 12/02/88. Dry. |

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## TABLE A-1

### LIST OF UNDERGROUND LOCATIONS WHERE BRINE OCCURRENCES WERE OBSERVED AND MONITORED THROUGH DECEMBER, 1990 AS PART OF THE BRINE SAMPLING AND EVALUATION PROGRAM AT WIPP (Continued)

| Hole Number | Room or Location | Survey Accuracy S=Surveyed A=Approximate | North-South Coordinates* | East-West Coordinates* | Elevation m | Dia. cm | Length m | Direction U=Up D=Down H=Horiz. | Angle in Degrees | References** | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BTR11 | S1950/E100 | A | S1942 | E100 | 385 | 8.3 | 0.9 | H | 5 | B | Hole slightly declined below horizontal. Collar about 0.8 m above floor. Drilled 6/86 and monitored until 12/02/88. |
| BTR12 | S1950/E100 | A | S1942 | E101 | 385 | 8.3 | 0.9 | H | 5 | B | Hole slightly declined below horizontal. Collar about 0.8 m above floor. Drilled 6/86 and monitored until 12/02/88. |
| BX01 | B | S | N1384.68 | E982.33 | 401.56 | 10 | 15.3 | D | 90 | B, E | Monitored as part of the BSEP since it was drilled in 1/85. Core moist from 10.6 to 11.1 m in coarsely crystalline clear halite. MB139 at 7.1 to 7.9 m. |
| BX02 | B | S | N1384.44 | E982.87 | 407.05 | 10 | 15.0 | U | 90 | B, E | Monitored as part of the BSEP from 1/85 to 12/89. |
| DH15 | N1140/E1689 | A | N1140 | E1688.5 | 402 | 7.6 | 15.5 | U | 90 | B | Moisture noticed at collar in 4/86. Collecting device installed 5/86 and monitored as part of the BSEP since then. At present no brine is collected because of insufficient inflow. |
| DH35 | G | A | N1102 | W1882 | 395 | 8.9 | 15.8 | U | 90 | A3, B | Monitored as part of the BSEP since 2/85. At present no brine is collected because of insufficient inflow. |
| DH36 | G | A | N1102 | W1882 | 392 | 8.9 | 15.7 | D | 90 | A3, B | Monitored as part of the BSEP since 1/85. |
| DH37 | G | A | N1101 | W2182 | 396 | 8.9 | 15.7 | U | 90 | A3, B | Monitored as part of the BSEP since 1/85. At the present no brine is collected because of insufficient inflow. |
| DH38 | G | A | N1101 | W2182 | 392 | 8.9 | 14.5 | D | 90 | A3, B | Monitored as part of the BSEP since 1/85. |
| DH39 | G | A | N1101 | W2482 | 395 | 8.9 | 14.5 | U | 90 | A3, B | Monitored as part of the BTP since 2/85. At the present no brine is collected because of insufficient inflow. |

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## TABLE A-1

## LIST OF UNDERGROUND LOCATIONS WHERE BRINE OCCURRENCES WERE OBSERVED AND MONITORED THROUGH DECEMBER, 1990 AS PART OF THE BRINE SAMPLING AND EVALUATION PROGRAM AT WIPP
(Continued)

| Hole Number | Room or Location | Survey Accuracy S=Surveyed A=Approximate | North-South Coordinates* | East-West Coordinates* | Elevation m | Dia. cm | Length m | Direction U=Up D=Down H=Horiz. | Angle in Degrees | References** | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DH40 | G | A | N1101 | W2482 | 392 | 8.9 | 15.5 | D | 90 | A3, B | Monitored as part of the BSEP since 1/85 |
| DH41 | G | A | N1101 | W2782 | 395 | 8.9 | 15.2 | U | 90 | A3, B | Monitored as part of the BSEP since 2/85. At the present no brine is collected because of insufficient inflow. |
| DH42 | G | A | N1101 | W2782 | 392 | 8.9 | 15.6 | D | 90 | A3, B | Monitored as part of the BSEP since 2/85 |
| DH42A | G | A | N1101 | W2789 | 392 | 8.9 | 12.6 | D | 90 | A3, B | Monitored as part of the BSEP since 2/85 |
| DH215 | S1960/E153 | A | S1960 | E153 | 388 | 7.6 | 15.8 | U | 90 | A1, B | Gas releases had been observed in this hole. Monitored as part of the BSEP since 1/85. At the present no brine is collected due to insufficient inflow. |
| DH216 | S1960/E153 | A | S1960 | E153 | 385 | 7.6 | 16.5 | D | 90 | A1, B | Gas releases had been observed in this hole. Monitored as part of the BSEP from 1/85 to 6/85 when collar was destroyed and hole plugged by mining. |
| DH317 | S1600/W30 | A | S1600 | W33 | 388 | 7.6 | 15.3 | U | 90 | A2, B | Stalactite growth monitored as part of the BSEP from 5/85 to 2/86. |
| DH317A | S1600/W30 | A | S1600 | W28 | 388 | 7.6 | 1.5 | U | 90 | A2, B | Stalactite growth monitored as part of the BSEP from 5/85 to 2/86. |
| DH317B | S1600/W30 | A | S1597 | W27 | 388 | 8.9 | 15.5 | U | 90 | A2, B | Gas pocket at 14.0 m. Brine seeped from hole after drill rods were broken at end of run at depth of 5 m. Probable source was anhydrite "a". Stalactite growth monitored as part of the BSEP from 5/85 to 2/86. |
| DHP401 | S1950/E1330 | A | S1950 | E1330 | 387 | 10 | 15.1 | U | 90 | B | Drilled 1/87, observed as part of the BSEP since 3/87. At the present no brine is collected due to insufficient inflow. |

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## TABLE A-1

## LIST OF UNDERGROUND LOCATIONS WHERE BRINE OCCURRENCES WERE OBSERVED AND MONITORED THROUGH DECEMBER, 1990 AS PART OF THE BRINE SAMPLING AND EVALUATION PROGRAM AT WIPP (Continued)

| Hole Number | Room or Location | Survey Accuracy S=Surveyed A=Approximate | North-South Coordinates* | East-West Coordinates* | Elevation m | Dia. cm | Length m | Direction U=Up D=Down H=Horiz. | Angle in Degrees | References** | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DHP402A | S1950/E1330 | A | S1950 | E1330 | 383 | 10 | 15.2 | D | 90 | B | Drilled 12/86, observed as part of the BSEP since 12/86. Hole offset at 13.7 m. There may be a rock bolt or piece of steel in hole. |
| EES12B | N1430/E0140 | A | N1430 | E140 | 398 | 4.7 | 3 | D | 90 | K | Drilled 6/86 as part of the Excavation Effects Study. Observed as part of the BSEP from date of drilling until 12/86. Rapid brine and gas inflow through open fractures. |
| EES21B | S0700/E0066 | A | S700 | E66 | 381 | 4.7 | 2.7 | D | 90 | K | Drilled 7/86 as part of the Excavation Effects Study. Observed as part of the BSEP since drilling until 12/86. Rapid brine and gas inflow through fractures. |
| GSEEP | G | A | N1095 | W1837 | 391 | | | | | B | Damp area on the floor of Room G, near south rib, approximately 13.7 m east of DH35. Seep noticed 8/85. Damp area larger in 11/85. Monitored as part of the BSEP since 11/85. 40 cm diameter collecting sump drilled 9/87. |
| IG201 | 2 | S | N1275.54 | W379.51 | 394.71 | 7.3 | 16.4 | D | 90 | A3, B, H, J | Monitored as part of the BSEP from 11/84 to 9/87 when shear closure pinched hole shut so that sampler would not go to bottom. |
| IG202 | 1 | S | N1264.79 | W246.11 | 395.17 | 7.3 | 14.7 | D | 90 | A3, B, H, J | Monitored as part of the BSEP from 11/84 to 7/87 when shear closure pinched hole shut so that sampler would not go to bottom. Last BSEP brine data collected in 3/87. |
| JV8 | J | S | N1067 | W374 | 393 | 91 | 2.5 | D | 90 | D, F, G | Drilled 8/08/85; drillers reported water at 2.4 m. Not monitored after initial observation. |
| JV9 | J | S | N1067 | W378 | 393.3 | 91 | 2.5 | D | 90 | D, G | Brine in bottom of pilot hole on 8/20/85. Not monitored after initial observation. |
| L1S25 | L1 | A | N1524 | W218 | 400 | 10 | 3.6 | D | 90 | B, H | Monitored as part of the BSEP from 8/85 to 6/89. |

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## TABLE A-1

### LIST OF UNDERGROUND LOCATIONS WHERE BRINE OCCURRENCES WERE OBSERVED AND MONITORED THROUGH DECEMBER, 1990 AS PART OF THE BRINE SAMPLING AND EVALUATION PROGRAM AT WIPP (Continued)

| Hole Number | Room or Location | Survey Accuracy S=Surveyed A=Approximate | North-South Coordinates* | East-West Coordinates* | Elevation m | Dia. cm | Length m | Direction U=Up D=Down H=Horiz. | Angle in Degrees | References** | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| L1S26 | L1 | A | N1524 | W220 | 400 | 10 | 3.6 | D | 90 | B, H | Monitored as part of the BSEP from 8/85 to 6/89 |
| L1S27 | L1 | A | N1524 | W222 | 400 | 10 | 3.6 | D | 90 | B, H | Monitored as part of the BSEP from 8/85 to 6/89 |
| L1S28 | L1 | A | N1524 | W224 | 400 | 10 | 3.7 | D | 90 | B, H | Monitored as part of the BSEP from 8/85 to 6/89 |
| L1S29 | L1 | A | N1524 | W226 | 400 | 10 | 3.7 | D | 90 | B, H | Monitored as part of the BSEP from 8/85 to 6/89 |
| L1S30 | L1 | A | N1524 | W228 | 400 | 10 | 3.7 | D | 90 | B, H | Monitored as part of the BSEP from 8/85 to 6/89 |
| L1S31 | L1 | A | N1524 | W235 | 400 | 10 | 3.6 | D | 90 | B, H | Monitored as part of the BSEP from 8/85 to 6/89 |
| L1S32 | L1 | A | N1524 | W237 | 400 | 10 | 3.6 | D | 90 | B, H | Monitored as part of the BSEP from 8/85 to 6/89 |
| L1S33 | L1 | A | N1524 | W239 | 400 | 10 | 3.6 | D | 90 | B, H | Monitored as part of the BSEP from 8/85 to 6/89 |
| L1S34 | L1 | A | N1524 | W241 | 400 | 10 | 3.7 | D | 90 | B, H | Monitored as part of the BSEP from 8/85 to 6/89 |
| L1S35 | L1 | A | N1524 | W243 | 400 | 10 | 3.8 | D | 90 | B, H | Monitored as part of the BSEP from 8/85 to 6/89 |
| L1S36 | L1 | A | N1524 | W245 | 400 | 10 | 3.7 | D | 90 | B, H | Monitored as part of the BSEP from 8/85 to 6/89 |
| L1X00 | L1 | A | N1538.5 | W225 | 400 | 10 | 3.8 | D | 90 | B, H | Drillers found water in hole at 3 m. 5/13/84 Monitored as part of the BSEP from 10/84 to 4/89. |
| L2C03 | L2 | A | N1510 | W365 | 400 | 41 | 3.7 | D | 90 | B, H | Drilled 4/85 overcoring and destroying L2C25. Brine and gas enters hole quickly through open fractures. Monitored intermittently as part of the BSEP from 12/85 through 12/86. |
| L2C25 | L1 | A | N1510 | W365 | 400 | 12.7 | 3.5 | D | 90 | B, H | L2C25 is a 12.7 cm overcore of a previously grouted SNL/NM test hole. The overcore was drilled 3/85 and air and brine was blown through fractures into hole L2C29, 1.2 m to the north. In 4/85, a 40 cm overcore was made destroying this hole. The larger hole is designated L2C03. |

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## TABLE A-1

### LIST OF UNDERGROUND LOCATIONS WHERE BRINE OCCURRENCES WERE OBSERVED AND MONITORED THROUGH DECEMBER, 1990 AS PART OF THE BRINE SAMPLING AND EVALUATION PROGRAM AT WIPP
(Continued)

| Hole Number | Room or Location | Survey Accuracy S=Surveyed A=Approximate | North-South Coordinates* | East-West Coordinates* | Elevation m | Dia. cm | Length m | Direction U=Up D=Down H=Horiz. | Angle in Degrees | References** | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MIIT2 | J | S | N1088.03 | W377.02 | 393.44 | 8.3 | 0.9 | D | 90 | B, D, G | Brine since drilled; monitored from 10/84 to 4/85. |
| MIIT4 | J | S | N1086.05 | W377.13 | 393.44 | 8.3 | 1.0 | D | 90 | B, D, G | Brine since drilled; monitored from 10/84 to 4/85. |
| MIIT6 | J | S | N1084.16 | W377.15 | 393.36 | 8.3 | 1.0 | D | 90 | B, D, G | Brine since drilled; monitored from 10/84 to 4/85. |
| MIIT8 | J | S | N1082.08 | W377.24 | 393.34 | 8.3 | 1.0 | D | 90 | B, D, G | Brine since drilled; monitored from 10/84 to 4/85. |
| MIIT10 | J | S | N1079.98 | W377.23 | 393.31 | 8.3 | 1.0 | D | 90 | B, D, G | Brine since drilled; monitored from 10/84 to 4/85. |
| MIIT12 | J | S | N1078.11 | W377.21 | 393.25 | 8.3 | 1.0 | D | 90 | B, D, G | Brine since drilled; monitored from 10/84 to 4/85. |
| MIIT14 | J | S | N1076.18 | W377.30 | 393.14 | 7.6 | 1.0 | D | 90 | B, D, G | Brine since drilled; monitored from 10/84 to 4/85. |
| MIIT16 | J | S | N1074.17 | W377.18 | 392.95 | 7.6 | 1.0 | D | 90 | B, D, G | Brine since drilled; monitored from 10/84 to 4/85. |
| MIIT17 | J | S | N1072.03 | W379.10 | 393.29 | 7.6 | 1.0 | D | 90 | B, D, G | Brine since drilled; monitored from 10/84 to 4/85. SNL/NM filled hole with Brine A 4/30/85 and plugged with rubber cork. |
| MIIT18 | J | S | N1071.91 | W377.18 | 393.27 | 7.6 | 1.0 | D | 90 | B, D, G | Brine since drilled; monitored from 10/84 through 4/85. SNL/NM experiment filled hole with Brine A 4/20/85 and plugged hole with rubber cork. |
| MIIT20 | J | S | N1069.84 | W377.22 | 393.30 | 7.6 | 1.8 | D | 90 | B, D, G | Brine noted 10/84; monitored from 10/84 through 4/85. |
| MIIT22 | J | S | N1067.93 | W377.23 | 393.30 | 7.6 | 1.8 | D | 90 | B, D, G | Brine noted 10/84; monitored from 10/84 through 4/85. |
| MIIT24 | J | S | N1065.79 | W377.21 | 393.42 | 7.6 | 1.8 | D | 90 | B, D, G | Brine noted 10/84; monitored 10/84 through 4/85, Sandia experiment added Brine A to hole 4/30/85 and plugged with rubber cork. |

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## LIST OF UNDERGROUND LOCATIONS WHERE BRINE OCCURRENCES WERE OBSERVED AND MONITORED THROUGH DECEMBER, 1990 AS PART OF THE BRINE SAMPLING AND EVALUATION PROGRAM AT WIPP (Continued)

| Hole Number | Room or Location | Survey Accuracy S=Surveyed A=Approximate | North-South Coordinates* | East-West Coordinates* | Elevation m | Dia. cm | Length m | Direction U=Up D=Down H=Horiz. | Angle in Degrees | References** | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MIITP | J | A | N1067 | W378 | 393 | 3.8 | 2.7 | D | 90 | B, F | Brine since drilled; pilot hole for 0.9-m-diameter hole that was never completed. Monitored from 4/02/85 through 4/23/85. |
| NG252 | 2 | S | N1275.86 | W381.05 | 394.68 | 3.8 | 2.3 | D | 90 | A3, B, H, J | Monitored as part of the BSEP from 11/84 to 4/89. This hole constantly produced gas. First time noticed was before 10/84. Room closed 6/89. |
| OH20 | S1600/W170 | S | S1610.36 | W177.16 | 386.22 | 8.9 | 47.2 | H | 0-3 | L | Collared about 0.3 m above the orange band, bottoms in Map Unit 0 below the orange band. Monitored as part of the BSEP since it was drilled 3/89. |
| OH21 | S1600/W170 | S | S1605.36 | W177.16 | 385.50 | 8.9 | 16.2 | H | 0-3 | L | Collared about 0.3 m below the orange band. Monitored for the BSEP since it was drilled 12/88. |
| OH22 | S1600/W170 | S | S1615.36 | W177.16 | 386.65 | 8.9 | 15.1 | H | 0-3 | L | Collared about 0.6 m above the orange band. Monitored for the BSEP since it was drilled 12/88. |
| OH23 | S1950/W170 | S | S1950.41 | W178.86 | 384.94 | 8.9 | 46.0 | H | 0-3 | L | Collared about 0.3 m above the orange band, bottoms in Map Unit 0 below the orange band. Monitored for the BSEP since it was drilled 2/89. |
| OH24 | S1950/W170 | S | S1945.41 | W178.86 | 384.11 | 8.9 | 15.2 | H | 0-3 | L | Collared about 0.3 m below the orange band. Monitored for the BSEP from 3/89 to 8/90. |
| OH25 | S1950/W170 | S | S1955.41 | W178.86 | 385.27 | 8.9 | 15.2 | H | 0-3 | L | Collared about 0.6 m above the orange band. Monitored for the BSEP from 3/89 to 8/90. |
| OH26 | S2180/W170 | S | S2183.01 | W177.14 | 384.70 | 8.9 | 45.7 | H | 0-3 | L | Collared about 0.3 m above the orange band, bottoms in Map Unit 0 below the orange band. Monitored for the BSEP since it was drilled 3/89. |
| OH27 | S2180/W170 | S | S2178.01 | W177.14 | 385 | 8.9 | 15.1 | H | 0-3 | L | Collared about 0.6 m above the orange band. Monitored for the BSEP since it was drilled 4/89. |

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(Continued)

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|---|---|---|---|---|---|---|---|---|---|---|---|
| OH27A | S2180/W170 | S | S2177.01 | W177.14 | 385 | 8.9 | 1.2 | H | 0-3 | L | Short offset hole to OH27. Collared about 0.6 m above the orange band. Monitored for the BSEP since it was drilled 4/89. |
| OH28 | S2180/W170 | S | S2188.01 | W177.14 | 383.78 | 8.9 | 15.1 | H | 0-3 | L | Collared about 0.3 m below the orange band. Monitored for the BSEP since it was drilled 4/89. |
| OH35 | AIS/S90 | S | S100.73 | W628.97 | 383.45 | 8.9 | 3.1 | D | 90 | M | Drilled for hydrologic testing of fractures beneath the floor. Not a part of routine BSEP sampling. |
| OH36 | AIS/S90 | S | S96.71 | W623.11 | 383.39 | 8.9 | 3.1 | D | 90 | M | Drilled for hydrologic testing of fractures beneath the floor. Not a part of routine BSEP sampling. |
| OH37 | AIS/S90 | S | S97.66 | W609.39 | 383.35 | 8.9 | 3.1 | D | 90 | M | Drilled for hydrologic testing of fractures beneath the floor. Not a part of routine BSEP sampling. |
| OH38 | AIS/S90 | S | S97.35 | W595.62 | 383.36 | 8.9 | 3.1 | D | 90 | M | Drilled for Marker Bed 139 hydrologic testing. Not a part of routine BSEP sampling. |
| OH39 | AIS/S90 | A | S97 | W540 | 383 | 8.9 | 3 | D | 90 | M | Drilled for hydrologic testing of fractures beneath the floor. Not a part of routine BSEP sampling. |
| OH40 | AIS/S90 | S | S96.91 | W485.10 | 383.02 | 8.9 | 3 | D | 90 | M | Drilled for hydrologic testing of fractures beneath the floor. Not a part of routine BSEP sampling. |
| OH41 | AIS/S90 | S | S110.52 | W622.79 | 383.44 | 8.9 | 3.5 | D | 90 | M | Drilled for hydrologic testing of fractures beneath the floor. Not a part of routine BSEP sampling. |
| OH42 | AIS/S90 | S | S43.44 | W622.54 | 383.62 | 8.9 | 3.2 | D | 90 | M | Drilled for hydrologic testing of fractures beneath the floor. Not a part of routine BSEP sampling. |
| OH43 | AIS/S90 | S | S124.01 | W622.52 | 383.45 | 8.9 | 3.7 | D | 90 | M | Drilled for hydrologic testing of fractures beneath the floor. Not a part of routine BSEP sampling. |

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### LIST OF UNDERGROUND LOCATIONS WHERE BRINE OCCURRENCES WERE OBSERVED AND MONITORED THROUGH DECEMBER, 1990 AS PART OF THE BRINE SAMPLING AND EVALUATION PROGRAM AT WIPP
(Continued)

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|---|---|---|---|---|---|---|---|---|---|---|---|
| OH44 | AIS/S90 | S | S134.53 | W622.31 | 383.46 | 8.9 | 3.4 | D | 90 | M | Drilled for hydrologic testing of fractures beneath the floor. Not a part of routine BSEP sampling. |
| OH45 | Core Library | S | S391.51 | W326.35 | 384.15 | 8.9 | 14.9 | H | 0-3 | L | Monitored for the BSEP since it was drilled 6/89. |
| OH46 | Core Library | S | S391.51 | W319.01 | 381.65 | 8.9 | 15.3 | D | 90 | L | Monitored for the BSEP since it was drilled 6/89. |
| OH47 | Core Library | S | S391.51 | W319.01 | 385.90 | 8.9 | 15.2 | U | 90 | L | Monitored for the BSEP since it was drilled 7/89. |
| P4X84 | SPDV Room 4 | A | N1138 | W0644 | 394 | 91.4 | 4.8 | D | 90 | B | Large diameter downhole in south end of Room 4 often shown to visitors. MB 139 and fractures beneath the floor are well exposed, both of which are dry. This is good evidence that no far-field flow exists. |
| PR2 | S1600/E140 | A | S1600 | E140 | 388 | 5 | 6.1 | U | 90 | B, C | Stalactite growth monitored as part of the BSEP from 5/85 to 2/86. |
| PR3 | S1282/E140 | A | S2182 | E140 | 385 | 5 | 6.1 | U | 90 | B, C | Stalactite growth monitored as part of the BSEP from 5/85 to 2/86. |
| PR4 | S2748/E140 | A | S2748 | E140 | 381 | 5 | 6.1 | U | 90 | B, C | Stalactite growth monitored as part of the BSEP from 5/85 to 2/86. |
| WWC1 | Room C1 | A | N1420 | | | 91 | 4.9 | H | 0 | B | Large horizontal hole on south rib of N1420 drift, across from Room C1. Photographically monitored for salt buildup. |

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### LIST OF UNDERGROUND LOCATIONS WHERE BRINE OCCURRENCES WERE OBSERVED AND MONITORED THROUGH DECEMBER, 1990 AS PART OF THE BRINE SAMPLING AND EVALUATION PROGRAM AT WIPP
(Continued)

**FOOTNOTE**

| | |
|---|---|
| A1 | TSC-D'Appolonia, 1983 (WIPP-DOE-163) |
| A2 | Bechtel, 1984 (WIPP-DOE-202) |
| A3 | Bechtel, 1985 (WIPP-DOE-213) |
| B | Brine Sampling and Evaluation Program File |
| C | Records of Special Drill Holes, September 12, 1983: BSEP Files |
| D | As-Built Survey Calculation Sheets: BSEP Files |
| E | Field Notes, J. Gallerani, Bechtel: BSEP Files |
| F | Field Notes, D. Deal, IT Corporation: BSEP Files |
| G | Room J Brine Survey: BSEP Files |
| H | Room L1 and L2 Field Notes: BSEP Files |
| J | Geotechnical Instrumentation List, November 2, 1983: BSEP files |
| K | Excavation Effects Drilling Program, Data Transmittal August 12, 1986: Excavation Effects Files: WIPP Geotechnical Engineering Files |
| L | Drilling Record Log: BSEP Files |
| N | Survey Data Sheet: WIPP Geotechnical Engineering Files |

# APPENDIX A
# BRINE ACCUMULATION

## PART II—BRINE ACCUMULATION DATA TABLES

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| A1X01 | 10/10/84 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Room A1 completed. |
| A1X01 | 02/26/85 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Downhole drilled 2/21/85 to 2/26/85. |
| A1X01 | 03/12/85 | 12:20 | 00.08 | 70.514 | 1.000 | 0.000 | 0.08 | First time collected. |
| A1X01 | 03/20/85 | 13:30 | 00.38 | 78.562 | 8.048 | 0.047 | 0.46 | Brine plus some muck. |
| A1X01 | 03/26/85 | 11:25 | 00.23 | 84.476 | 5.914 | 0.039 | 0.69 | Muck in hole, valved leaked, some brine drained back down hole. |
| A1X01 | 04/02/85 | 12:15 | 00.39 | 91.510 | 7.034 | 0.055 | 1.08 | |
| A1X01 | 04/10/85 | 12:20 | 00.33 | 99.514 | 8.004 | 0.041 | 1.41 | |
| A1X01 | 04/17/85 | 11:30 | 00.28 | 106.479 | 6.965 | 0.040 | 1.69 | |
| A1X01 | 04/23/85 | 10:50 | 00.23 | 112.451 | 5.972 | 0.039 | 1.92 | |
| A1X01 | 04/30/85 | 13:26 | 00.26 | 119.560 | 7.109 | 0.037 | 2.18 | |
| A1X01 | 05/07/85 | 09:10 | 00.25 | 126.382 | 6.822 | 0.037 | 2.43 | |
| A1X01 | 05/14/85 | 10:06 | 00.24 | 133.421 | 7.039 | 0.034 | 2.67 | |
| A1X01 | 05/21/85 | 11:40 | 00.26 | 140.486 | 7.065 | 0.037 | 2.93 | |
| A1X01 | 05/29/85 | 10:00 | 00.27 | 148.417 | 7.931 | 0.034 | 3.20 | |
| A1X01 | 06/04/85 | 10:20 | 00.20 | 154.431 | 6.014 | 0.033 | 3.40 | |
| A1X01 | 06/11/85 | 09:40 | 00.23 | 161.403 | 6.972 | 0.033 | 3.63 | |
| A1X01 | 06/18/85 | 09:34 | 00.23 | 168.399 | 6.996 | 0.033 | 3.86 | |
| A1X01 | 06/25/85 | 09:40 | 00.22 | 175.403 | 7.004 | 0.031 | 4.08 | |
| A1X01 | 07/02/85 | 11:00 | 00.23 | 182.458 | 7.055 | 0.033 | 4.31 | |
| A1X01 | 07/09/85 | 10:00 | 00.23 | 189.417 | 6.959 | 0.033 | 4.54 | |
| A1X01 | 07/16/85 | 10:55 | 00.23 | 196.455 | 7.038 | 0.033 | 4.77 | |
| A1X01 | 07/24/85 | 10:00 | 00.25 | 204.417 | 7.962 | 0.031 | 5.02 | New spot on probe. |
| A1X01 | 07/30/85 | 09:32 | 00.19 | 210.397 | 5.980 | 0.032 | 5.21 | |
| A1X01 | 08/06/85 | 09:37 | 00.21 | 217.401 | 7.004 | 0.030 | 5.42 | |
| A1X01 | 08/14/85 | 09:48 | 00.23 | 225.408 | 8.007 | 0.029 | 5.65 | |
| A1X01 | 08/20/85 | 10:18 | 00.19 | 231.429 | 6.021 | 0.032 | 5.84 | |
| A1X01 | 08/28/85 | 09:13 | 00.23 | 239.384 | 7.955 | 0.029 | 6.07 | |
| A1X01 | 09/04/85 | 09:46 | 00.19 | 246.407 | 7.023 | 0.027 | 6.26 | |
| A1X01 | 09/10/85 | 09:30 | 00.18 | 252.396 | 5.989 | 0.030 | 6.44 | |
| A1X01 | 09/17/85 | 09:10 | 00.19 | 259.382 | 6.986 | 0.027 | 6.63 | |
| A1X01 | 09/24/85 | 09:11 | 00.21 | 266.383 | 7.001 | 0.030 | 6.84 | |
| A1X01 | 10/01/85 | 09:23 | 00.21 | 273.391 | 7.008 | 0.030 | 7.05 | |
| A1X01 | 10/08/85 | 12:24 | 00.20 | 280.517 | 7.126 | 0.028 | 7.25 | Room A1 heaters turned on 10/02/85. |
| A1X01 | 10/15/85 | 09:43 | 00.19 | 287.405 | 6.888 | 0.028 | 7.44 | |
| A1X01 | 10/23/85 | 09:55 | 00.20 | 295.413 | 8.008 | 0.025 | 7.64 | |
| A1X01 | 10/29/85 | 11:05 | 00.17 | 301.462 | 6.049 | 0.028 | 7.81 | |
| A1X01 | 11/05/85 | 08:50 | 00.19 | 308.368 | 6.906 | 0.028 | 8.00 | |
| A1X01 | 11/13/85 | 09:15 | 00.22 | 316.385 | 8.017 | 0.027 | 8.22 | |
| A1X01 | 11/21/85 | 10:40 | 00.21 | 324.444 | 8.059 | 0.026 | 8.43 | |
| A1X01 | 11/26/85 | 10:10 | 00.14 | 329.424 | 4.980 | 0.028 | 8.57 | |
| A1X01 | 12/04/85 | 14:13 | 00.20 | 337.592 | 8.168 | 0.024 | 8.77 | Sample for chem. anal. #13. |
| A1X01 | 12/10/85 | 10:40 | 00.15 | 343.444 | 5.852 | 0.026 | 8.92 | |
| A1X01 | 12/17/85 | 13:59 | 00.19 | 350.583 | 7.139 | 0.027 | 9.11 | |
| A1X01 | 01/03/86 | 09:40 | 00.41 | 367.403 | 16.820 | 0.024 | 9.52 | |
| A1X01 | 01/08/86 | 10:20 | 00.09 | 372.431 | 5.028 | 0.018 | 9.61 | |
| A1X01 | 01/16/86 | 09:50 | 00.25 | 380.410 | 7.979 | 0.031 | 9.86 | |
| A1X01 | 01/23/86 | 10:10 | 00.18 | 387.424 | 7.014 | 0.026 | 10.04 | |
| A1X01 | 01/31/86 | 11:05 | 00.21 | 395.462 | 8.038 | 0.026 | 10.25 | |
| A1X01 | 02/12/86 | 10:10 | 00.30 | 407.424 | 11.962 | 0.025 | 10.55 | |
| A1X01 | 02/19/86 | 10:55 | 00.18 | 414.455 | 7.031 | 0.026 | 10.73 | |
| A1X01 | 02/28/86 | 14:05 | 00.23 | 423.587 | 9.132 | 0.025 | 10.96 | |
| A1X01 | 03/06/86 | 10:00 | 00.15 | 429.417 | 5.830 | 0.026 | 11.11 | |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| A1X01 | 03/13/86 | 09:30 | 00.18 | 436.396 | 6.979 | 0.026 | 11.29 | |
| A1X01 | 03/26/86 | 09:20 | 00.33 | 449.389 | 12.993 | 0.025 | 11.62 | |
| A1X01 | 04/02/86 | 09:00 | 00.18 | 456.375 | 6.986 | 0.026 | 11.80 | |
| A1X01 | 04/08/86 | 09:09 | 00.15 | 462.381 | 6.006 | 0.025 | 11.95 | |
| A1X01 | 04/16/86 | 11:30 | 00.20 | 470.479 | 8.098 | 0.025 | 12.15 | |
| A1X01 | 04/24/86 | 09:35 | 00.20 | 478.399 | 7.920 | 0.025 | 12.35 | |
| A1X01 | 04/30/86 | 10:13 | 00.15 | 484.426 | 6.027 | 0.025 | 12.50 | |
| A1X01 | 05/06/86 | 09:40 | 00.12 | 490.403 | 5.977 | 0.020 | 12.62 | |
| A1X01 | 05/13/86 | 09:25 | 00.19 | 497.392 | 6.989 | 0.027 | 12.81 | |
| A1X01 | 05/20/86 | 10:16 | 00.18 | 504.428 | 7.036 | 0.026 | 12.99 | |
| A1X01 | 05/27/86 | 15:05 | 00.18 | 511.628 | 7.200 | 0.025 | 13.17 | |
| A1X01 | 06/03/86 | 09:28 | 00.17 | 518.394 | 6.766 | 0.025 | 13.34 | |
| A1X01 | 06/10/86 | 10:50 | 00.15 | 525.451 | 7.057 | 0.021 | 13.49 | |
| A1X01 | 06/17/86 | 09:59 | 00.19 | 532.416 | 6.965 | 0.027 | 13.68 | Sample for brine chemistry, #19. |
| A1X01 | 06/24/86 | 10:10 | 00.18 | 539.424 | 7.008 | 0.026 | 13.86 | |
| A1X01 | 07/01/86 | 12:46 | 00.19 | 546.532 | 7.108 | 0.027 | 14.05 | |
| A1X01 | 07/08/86 | 10:05 | 00.16 | 553.420 | 6.888 | 0.023 | 14.21 | |
| A1X01 | 07/16/86 | 09:57 | 00.20 | 561.415 | 7.995 | 0.025 | 14.41 | |
| A1X01 | 07/22/86 | 09:26 | 00.16 | 567.393 | 5.978 | 0.027 | 14.57 | |
| A1X01 | 07/29/86 | 10:05 | 00.17 | 574.420 | 7.027 | 0.024 | 14.74 | |
| A1X01 | 08/05/86 | 10:21 | 00.19 | 581.431 | 7.011 | 0.027 | 14.93 | |
| A1X01 | 08/12/86 | 09:58 | 00.18 | 588.415 | 6.984 | 0.026 | 15.11 | |
| A1X01 | 08/19/86 | 10:40 | 00.18 | 595.444 | 7.029 | 0.026 | 15.29 | |
| A1X01 | 08/26/86 | 10:07 | 00.18 | 602.422 | 6.978 | 0.026 | 15.47 | Static level not measured. |
| A1X01 | 09/04/86 | 10:02 | 00.20 | 611.418 | 8.996 | 0.022 | 15.67 | Sample # 17. |
| A1X01 | 09/09/86 | 10:30 | 00.15 | 616.438 | 5.020 | 0.030 | 15.82 | |
| A1X01 | 09/16/86 | 09:36 | 00.18 | 623.400 | 6.962 | 0.026 | 16.00 | |
| A1X01 | 09/23/86 | 09:41 | 00.18 | 630.403 | 7.003 | 0.026 | 16.18 | |
| A1X01 | 10/01/86 | 11:40 | 00.19 | 638.486 | 8.083 | 0.024 | 16.37 | |
| A1X01 | 10/08/86 | 10:34 | 00.17 | 645.440 | 6.954 | 0.024 | 16.54 | |
| A1X01 | 10/14/86 | 10:57 | 00.15 | 651.456 | 6.016 | 0.025 | 16.69 | |
| A1X01 | 11/05/86 | 10:30 | 0.55 | 673.438 | 21.982 | 0.025 | 17.24 | |
| A1X01 | 11/20/86 | 11:45 | 00.38 | 688.490 | 15.052 | 0.025 | 17.62 | |
| A1X01 | 12/31/86 | 12:05 | 00.96 | 729.503 | 41.013 | 0.023 | 18.58 | |
| A1X01 | 02/03/87 | 12:15 | 00.80 | 763.510 | 34.007 | 0.024 | 19.38 | T=31.5c, T 28.4, pH 6.11. |
| A1X01 | 03/06/87 | 11:55 | 0.79 | 794.497 | 30.987 | 0.025 | 20.17 | |
| A1X01 | 03/30/87 | 11:58 | 0.59 | 818.499 | 24.002 | 0.025 | 20.76 | |
| A1X01 | 05/07/87 | 10:50 | 0.98 | 856.451 | 37.952 | 0.026 | 21.74 | |
| A1X01 | 06/17/87 | 11:40 | 1.04 | 897.486 | 41.035 | 0.025 | 22.78 | Sample removed for chemistry. #123A, #123B. |
| A1X01 | 07/28/87 | 11:45 | 1.17 | 938.490 | 41.004 | 0.029 | 23.95 | |
| A1X01 | 09/01/87 | 11:55 | 0.79 | 973.497 | 35.007 | 0.023 | 24.74 | Collected for chemistry, sample #161 A&B. Hose came loose and some brine may have drained back down hole. Trace of diesel/oil in brine. |
| A1X01 | 10/20/87 | 11:08 | 1.39 | 1022.460 | 48.963 | 0.028 | 26.13 | |
| A1X01 | 11/19/87 | 10:30 | 0.77 | 1052.440 | 29.980 | 0.026 | 26.90 | Collected for chemistry, sample #223. |
| A1X01 | 01/04/88 | 11:10 | 1.20 | 1098.470 | 46.030 | 0.026 | 28.10 | |
| A1X01 | 02/08/88 | 13:25 | 0.68 | 1133.560 | 35.090 | 0.019 | 28.78 | Collected for chemistry, sample #303 & #304. Lost some brine back down into hole. |
| A1X01 | 03/30/88 | 12:10 | 2.25 | 1184.510 | 50.950 | 0.044 | 31.03 | Collected for chemistry, sample #389, #390 & #391. Volume high due to lack of complete evacuation on 2/08/88. |
| A1X01 | 05/12/88 | 10:10 | 1.09 | 1227.420 | 42.910 | 0.025 | 32.12 | Sampled for Sandia PA. |

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|---|---|---|---|---|---|---|---|---|
| A1X01 | 07/12/88 | 09:30 | 1.56 | 1288.400 | 60.980 | 0.026 | 33.68 | Collected for chemistry, sample #460 - #462. |
| A1X01 | 09/27/88 | 08:25 | 1.82 | 1365.350 | 76.950 | 0.024 | 35.50 | Collected for chemistry, sample #520 - #523. |
| A1X01 | 12/13/88 | 09:30 | 2.35 | 1442.400 | 77.050 | 0.030 | 37.85 | Collected for chemistry, sample #602 - #605. |
| A1X01 | 03/14/89 | 09:30 | 2.54 | 1533.396 | 91.000 | 0.028 | 40.39 | Check valve and hook in hole. Collected for chemistry, sample #666 - 670. |
| A1X01 | 04/06/89 | 11:55 | NA | 1556.497 | 0.000 | 0.000 | 40.39 | Room locked. |
| A1X01 | 04/20/89 | 10:00 | NA | 1570.417 | 0.000 | 0.000 | 40.39 | Room locked. |
| A1X01 | 05/17/89 | 11:55 | 1.94 | 1597.497 | 64.101 | 0.030 | 42.33 | Collected for chemistry, sample #752 - 755 A & B. |
| A1X01 | 07/11/89 | 10:10 | 1.30 | 1652.424 | 54.927 | 0.024 | 43.63 | |
| A1X01 | 09/12/89 | 11:40 | 2.25 | 1715.486 | 63.062 | 0.036 | 45.88 | Sample saved for chemistry. |
| A1X01 | 10/10/89 | 09:40 | NA | 1743.403 | 0.000 | 0.000 | 45.88 | Installed collecting device. Collection point for brine located outside room. |
| A1X01 | 10/20/89 | 10:42 | 0.74 | 1753.446 | 37.960 | 0.019 | 46.62 | Sample saved for chemistry, sample #851. Some brine may have been left in hole. |
| A1X01 | 11/10/89 | 09:56 | 0.72 | 1774.414 | 20.968 | 0.034 | 47.34 | Sample saved for chemistry, sample #861-1,2. |
| A1X01 | 11/29/89 | 12:10 | 0.65 | 1793.507 | 19.093 | 0.034 | 47.99 | Sample saved for chemistry, sample #872. |
| A1X01 | 12/12/89 | 09:10 | 0.50 | 1806.382 | 12.875 | 0.039 | 48.49 | Sample saved for chemistry, sample #883. |
| A1X01 | 01/04/90 | 10:11 | 0.63 | 1829.424 | 23.042 | 0.027 | 49.12 | |
| A1X01 | 01/17/90 | 11:29 | 0.30 | 1842.478 | 13.054 | 0.023 | 49.42 | |
| A1X01 | 01/31/90 | 09:56 | 0.15 | 1856.414 | 13.936 | 0.011 | 49.57 | |
| A1X01 | 02/13/90 | 09:40 | 0.26 | 1869.403 | 12.989 | 0.020 | 49.83 | |
| A1X01 | 02/27/90 | 12:11 | 0.64 | 1883.508 | 14.105 | 0.045 | 50.47 | |
| A1X01 | 03/05/90 | 11:03 | 0.79 | 1889.460 | 5.952 | 0.133 | 51.26 | |
| A1X01 | 03/21/90 | 11:26 | 0.52 | 1905.476 | 16.016 | 0.032 | 51.78 | |
| A1X01 | 04/06/90 | 10:35 | 0.48 | 1921.441 | 15.965 | 0.030 | 52.26 | |
| A1X01 | 04/17/90 | 11:49 | 0.37 | 1932.492 | 11.051 | 0.033 | 52.63 | |
| A1X01 | 04/24/90 | 10:38 | 0.23 | 1939.443 | 6.951 | 0.033 | 52.86 | |
| A1X01 | 05/02/90 | 11:47 | 0.25 | 1947.491 | 8.048 | 0.031 | 53.11 | |
| A1X01 | 05/09/90 | 11:26 | 0.23 | 1954.476 | 6.985 | 0.033 | 53.34 | |
| A1X01 | 05/16/90 | | NA | 1961.000 | 6.524 | 0.000 | 53.34 | No vacuum in sampler. |
| A1X01 | 05/17/90 | 08:36 | 0.18 | 1962.358 | 7.882 | 0.023 | 53.52 | |
| A1X01 | 05/23/90 | 12:32 | 0.22 | 1968.522 | 6.164 | 0.036 | 53.74 | |
| A1X01 | 05/31/90 | 10:41 | 0.24 | 1976.445 | 7.923 | 0.030 | 53.98 | |
| A1X01 | 06/06/90 | 11:09 | 0.20 | 1982.465 | 6.020 | 0.033 | 54.18 | |
| A1X01 | 06/14/90 | 09:45 | 0.23 | 1990.406 | 7.941 | 0.029 | 54.41 | |
| A1X01 | 06/28/90 | 09:59 | 0.38 | 2004.416 | 14.010 | 0.027 | 54.79 | |
| A1X01 | 07/14/90 | 10:00 | NA | 2020.000 | 0.000 | 0.000 | 0.00 | Heaters turned off. |
| A1X01 | 07/17/90 | 09:52 | 0.39 | 2023.411 | 18.995 | 0.021 | 55.18 | |
| A1X01 | 07/25/90 | 08:25 | 0.42 | 2031.351 | 7.940 | 0.053 | 55.60 | |
| A1X01 | 08/07/90 | 11:10 | 0.42 | 2044.465 | 13.114 | 0.032 | 56.02 | |
| A1X01 | 08/16/90 | 11:25 | 0.33 | 2053.476 | 9.011 | 0.037 | 56.35 | |
| A1X01 | 08/22/90 | 11:44 | 0.24 | 2059.489 | 6.013 | 0.040 | 56.59 | |
| A1X01 | 08/29/90 | 12:50 | 0.20 | 2066.535 | 7.046 | 0.028 | 56.79 | |
| A1X01 | 09/05/90 | 11:45 | 0.25 | 2073.490 | 6.955 | 0.036 | 57.04 | |
| A1X01 | 09/13/90 | 09:56 | 0.21 | 2081.414 | 7.924 | 0.027 | 57.25 | |
| A1X01 | 09/25/90 | 12:05 | 0.34 | 2093.503 | 12.089 | 0.000 | 57.59 | Partial evacuation. |
| A1X01 | 09/26/90 | 10:57 | 0.10 | 2094.456 | 0.953 | 0.034 | 57.69 | Combined with 0.34 liters from 09/25/90. Used 0.44 liters for calculation. |

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## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| A1X01 | 10/03/90 | 10:03 | 0.25 | 2101.419 | 6.963 | 0.036 | 57.94 | |
| A1X01 | 10/10/90 | 11:46 | 0.20 | 2108.490 | 7.071 | 0.028 | 58.14 | |
| A1X01 | 10/18/90 | 10:57 | 0.23 | 2116.456 | 7.966 | 0.029 | 58.37 | |
| A1X01 | 10/24/90 | 12:20 | 0.21 | 2122.514 | 6.058 | 0.035 | 58.58 | |
| A1X01 | 10/31/90 | 11:37 | 0.20 | 2129.484 | 6.970 | 0.029 | 58.78 | |
| A1X01 | 11/07/90 | 10:54 | 0.22 | 2136.454 | 6.970 | 0.032 | 59.00 | |
| A1X01 | 11/14/90 | 11:52 | 0.22 | 2143.494 | 7.040 | 0.031 | 59.22 | |
| A1X01 | 11/28/90 | 10:54 | 0.39 | 2157.454 | 13.960 | 0.028 | 59.61 | |
| A1X01 | 12/05/90 | 08:59 | 0.28 | 2164.374 | 6.920 | 0.040 | 59.89 | |
| A1X01 | 12/13/90 | 09:40 | 0.27 | 2172.403 | 8.029 | 0.034 | 60.16 | |
| A1X01 | 12/20/90 | 09:01 | 0.22 | 2179.376 | 6.973 | 0.032 | 60.38 | |
| A1X01 | 01/09/91 | 09:10 | 0.47 | 2199.382 | 0.000 | 0.000 | 60.85 | Some brine may have been left in hole. |
| A1X01 | 01/16/91 | 09:20 | 0.30 | 2206.389 | 27.013 | 0.029 | 61.15 | Combined with 0.47 liters from 01/09/91. |
| A1X01 | 01/23/91 | 10:29 | 0.25 | 2213.437 | 7.048 | 0.035 | 61.40 | |
| A1X01 | 01/30/91 | 10:30 | 0.21 | 2220.438 | 7.001 | 0.030 | 61.61 | |
| A1X01 | 02/13/91 | 11:40 | 0.33 | 2234.486 | 14.048 | 0.023 | 61.94 | |
| A1X01 | 02/20/91 | 10:50 | Trace | 2241.451 | 6.965 | 0.000 | 61.94 | Sampler failed, access restricted. Last time sampled for BSEP. |
| A1X02 | 10/10/84 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Room A1 completed. |
| A1X02 | 03/07/85 | 09:30 | NA | 65.396 | 1.000 | 0.000 | 0.00 | Uphole drilled 2/27/85 to 3/07/85. Hit brine at 12 ft. on 2/27/85. |
| A1X02 | 03/12/85 | 12:00 | NA | 70.500 | 6.104 | 0.000 | 0.00 | Trace brine, deepened hole to clay seam. Moisture on back 1 ft radius. |
| A1X02 | 03/20/85 | 13:00 | NA | 78.542 | 14.146 | 0.000 | 0.00 | Trace brine, drip missing funnel. |
| A1X02 | 03/26/85 | 11:25 | NA | 84.476 | 20.080 | 0.000 | 0.00 | Repositioned funnel, collected one cup of salt crystals with trace of brine. |
| A1X02 | 04/02/85 | 12:15 | 00.21 | 91.510 | 27.114 | 0.008 | 0.21 | Some drips missing funnel. |
| A1X02 | 04/10/85 | 12:20 | 00.22 | 99.514 | 8.004 | 0.027 | 0.43 | Collecting container had leak. |
| A1X02 | 04/17/85 | 11:30 | 00.12 | 106.479 | 6.965 | 0.017 | 0.55 | Some drips missing funnel. |
| A1X02 | 04/23/85 | 10:50 | 00.12 | 112.451 | 5.972 | 0.020 | 0.67 | Some drips missing funnel. |
| A1X02 | 04/30/85 | 13:16 | 00.12 | 119.553 | 7.102 | 0.017 | 0.79 | Some drips missing funnel. |
| A1X02 | 05/07/85 | 09:05 | 00.16 | 126.378 | 6.825 | 0.023 | 0.95 | |
| A1X02 | 05/14/85 | 10:04 | 00.19 | 133.419 | 7.041 | 0.027 | 1.14 | |
| A1X02 | 05/21/85 | 11:35 | 00.13 | 140.483 | 7.064 | 0.018 | 1.27 | Some drips missing funnel. |
| A1X02 | 05/29/85 | 10:00 | 00.21 | 148.417 | 7.934 | 0.026 | 1.48 | |
| A1X02 | 06/04/85 | 10:25 | 00.17 | 154.434 | 6.017 | 0.028 | 1.65 | |
| A1X02 | 06/11/85 | 09:40 | 00.05 | 161.403 | 6.969 | 0.007 | 1.70 | |
| A1X02 | 06/18/85 | 09:30 | 00.08 | 168.396 | 6.993 | 0.011 | 1.78 | Some drips missing funnel, big stalactite formed. |
| A1X02 | 06/25/85 | 09:45 | 00.16 | 175.406 | 7.010 | 0.023 | 1.94 | |
| A1X02 | 07/02/85 | 11:00 | 00.10 | 182.458 | 7.052 | 0.014 | 2.04 | |
| A1X02 | 07/09/85 | 09:58 | 00.15 | 189.415 | 6.957 | 0.022 | 2.19 | |
| A1X02 | 07/16/85 | 10:53 | 00.24 | 196.453 | 7.038 | 0.034 | 2.43 | |
| A1X02 | 07/24/85 | 09:49 | 00.24 | 204.409 | 7.956 | 0.030 | 2.67 | |
| A1X02 | 07/30/85 | 09:30 | 00.15 | 210.396 | 5.987 | 0.025 | 2.82 | |
| A1X02 | 08/06/85 | 09:35 | 00.14 | 217.399 | 7.003 | 0.020 | 2.96 | |
| A1X02 | 08/14/85 | 09:26 | 00.05 | 225.393 | 7.994 | 0.006 | 3.01 | |
| A1X02 | 08/20/85 | 10:13 | 00.09 | 231.426 | 6.033 | 0.015 | 3.10 | |
| A1X02 | 08/28/85 | 09:08 | 00.06 | 239.381 | 7.955 | 0.008 | 3.16 | |
| A1X02 | 09/04/85 | 09:44 | 00.07 | 246.406 | 7.025 | 0.010 | 3.23 | |
| A1X02 | 09/10/85 | 09:24 | 00.12 | 252.392 | 5.986 | 0.020 | 3.35 | |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| A1X02 | 09/17/85 | 09:08 | 00.13 | 259.381 | 6.989 | 0.019 | 3.48 | Some drips missing funnel. |
| A1X02 | 09/24/85 | 09:07 | 00.17 | 266.380 | 6.999 | 0.024 | 3.65 | |
| A1X02 | 10/01/85 | 09:21 | 00.14 | 273.390 | 7.010 | 0.020 | 3.79 | |
| A1X02 | 10/08/85 | 12:19 | 00.16 | 280.513 | 7.123 | 0.022 | 3.95 | Room A1 heaters turned on 10/02/85. |
| A1X02 | 10/15/85 | 09:41 | 00.12 | 287.403 | 6.890 | 0.017 | 4.07 | |
| A1X02 | 10/23/85 | 09:43 | 00.19 | 295.405 | 8.002 | 0.024 | 4.26 | |
| A1X02 | 10/29/85 | 11:02 | 00.12 | 301.460 | 6.055 | 0.020 | 4.38 | |
| A1X02 | 11/05/85 | 08:46 | 00.12 | 308.365 | 6.905 | 0.017 | 4.50 | |
| A1X02 | 11/13/85 | 09:16 | 00.13 | 316.386 | 8.021 | 0.016 | 4.63 | Some drips missing funnel. |
| A1X02 | 11/21/85 | 10:45 | 00.13 | 324.448 | 8.062 | 0.016 | 4.76 | Some drips missing funnel. |
| A1X02 | 12/04/85 | 14:07 | 00.14 | 337.588 | 13.140 | 0.011 | 4.90 | Sample for chem. anal. #12. |
| A1X02 | 12/10/85 | 10:31 | 00.08 | 343.438 | 5.850 | 0.014 | 4.98 | |
| A1X02 | 12/17/85 | 13:56 | 00.03 | 350.581 | 7.143 | 0.004 | 5.01 | |
| A1X02 | 01/03/86 | 09:40 | 00.01 | 367.403 | 16.822 | 0.001 | 5.02 | Some drips missing funnel. |
| A1X02 | 01/23/86 | 10:10 | 00.06 | 387.424 | 20.021 | 0.003 | 5.08 | New, larger funnel since 01/17. |
| A1X02 | 01/31/86 | 11:05 | 00.23 | 395.462 | 8.038 | 0.029 | 5.31 | |
| A1X02 | 02/12/86 | 10:10 | 00.22 | 407.424 | 11.962 | 0.018 | 5.53 | |
| A1X02 | 02/19/86 | 10:50 | 00.07 | 414.451 | 7.027 | 0.010 | 5.60 | |
| A1X02 | 02/28/86 | 14:00 | 00.02 | 423.583 | 9.132 | 0.002 | 5.62 | |
| A1X02 | 03/13/86 | 09:30 | 00.05 | 436.396 | 12.813 | 0.004 | 5.67 | |
| A1X02 | 03/26/86 | 09:20 | 00.05 | 449.389 | 12.993 | 0.004 | 5.72 | |
| A1X02 | 04/02/86 | 09:00 | 00.08 | 456.375 | 6.986 | 0.011 | 5.80 | |
| A1X02 | 04/16/86 | 11:30 | 00.10 | 470.479 | 14.104 | 0.007 | 5.90 | Sample for chemical analysis #2. |
| A1X02 | 04/24/86 | 09:35 | 00.05 | 478.399 | 7.920 | 0.006 | 5.95 | Sample for chemistry. |
| A1X02 | 04/30/86 | 10:10 | 00.07 | 484.424 | 6.025 | 0.012 | 6.02 | Sample for chemistry. |
| A1X02 | 05/06/86 | 09:40 | 00.16 | 490.403 | 5.979 | 0.027 | 6.18 | |
| A1X02 | 05/13/86 | 09:25 | 00.02 | 497.392 | 6.989 | 0.003 | 6.20 | Sample for chemistry, S #2. |
| A1X02 | 05/20/86 | 10:16 | 00.04 | 504.428 | 7.036 | 0.006 | 6.24 | |
| A1X02 | 05/27/86 | 15:05 | 00.15 | 511.628 | 7.200 | 0.021 | 6.39 | |
| A1X02 | 06/03/86 | 09:28 | 00.13 | 518.394 | 6.766 | 0.019 | 6.52 | |
| A1X02 | 06/10/86 | 10:50 | 00.10 | 525.451 | 7.057 | 0.014 | 6.62 | |
| A1X02 | 06/17/86 | 09:59 | 00.12 | 532.416 | 6.965 | 0.017 | 6.74 | |
| A1X02 | 06/24/86 | 10:10 | 00.25 | 539.424 | 7.008 | 0.036 | 6.99 | |
| A1X02 | 07/01/86 | 12:44 | 00.23 | 546.531 | 7.107 | 0.032 | 7.22 | |
| A1X02 | 07/08/86 | 10:05 | 00.11 | 553.420 | 6.889 | 0.016 | 7.33 | |
| A1X02 | 07/16/86 | 09:54 | 00.25 | 561.413 | 7.993 | 0.031 | 7.58 | |
| A1X02 | 07/22/86 | 09:26 | 00.16 | 567.393 | 5.980 | 0.027 | 7.74 | |
| A1X02 | 07/29/86 | 10:05 | 00.26 | 574.420 | 7.027 | 0.037 | 8.00 | |
| A1X02 | 08/05/86 | 10:19 | 00.22 | 581.430 | 7.010 | 0.031 | 8.22 | |
| A1X02 | 08/12/86 | 09:58 | 00.28 | 588.415 | 6.985 | 0.040 | 8.50 | |
| A1X02 | 08/19/86 | 10:38 | 00.26 | 595.443 | 7.028 | 0.037 | 8.76 | |
| A1X02 | 08/26/86 | 10:07 | 00.24 | 602.422 | 6.979 | 0.034 | 9.00 | Sample #6. |
| A1X02 | 09/04/86 | 10:01 | 00.35 | 611.417 | 8.995 | 0.039 | 9.35 | |
| A1X02 | 09/09/86 | 10:25 | 00.17 | 616.434 | 5.017 | 0.034 | 9.52 | |
| A1X02 | 09/16/86 | 09:35 | 00.27 | 623.399 | 6.965 | 0.039 | 9.79 | |
| A1X02 | 09/23/86 | 09:39 | 00.26 | 630.402 | 7.003 | 0.037 | 10.05 | |
| A1X02 | 10/01/86 | 11:39 | 00.24 | 638.485 | 8.083 | 0.030 | 10.29 | |
| A1X02 | 10/08/86 | 10:32 | 00.17 | 645.439 | 6.954 | 0.024 | 10.46 | |
| A1X02 | 10/14/86 | 10:53 | 00.13 | 651.453 | 6.014 | 0.022 | 10.59 | |
| A1X02 | 11/05/86 | 10:30 | 0.30 | 673.438 | 21.985 | 0.014 | 10.89 | |
| A1X02 | 11/20/86 | 11:43 | 00.11 | 688.488 | 15.050 | 0.007 | 11.00 | |
| A1X02 | 12/31/86 | 12:10 | 00.14 | 729.507 | 41.019 | 0.003 | 11.14 | Low readings from 11/20/86 to 6/20/87 may be due to blockage in collecting system. |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| A1X02 | 02/03/87 | 12:16 | NA | 763.000 | 33.493 | 0.000 | 11.14 | |
| A1X02 | 03/06/87 | 11:55 | 0.05 | 794.497 | 64.990 | 0.001 | 11.19 | |
| A1X02 | 03/30/87 | 11:55 | 0.01 | 818.497 | 24.000 | 0.000 | 11.20 | Tubing plugged, unable to open. |
| A1X02 | 05/07/87 | 10:45 | 0.01 | 856.448 | 1.000 | 0.000 | 11.21 | Tubing plugged, unable to open. |
| A1X02 | 06/30/87 | 12:00 | 1.58 | 910.500 | 92.003 | 0.017 | 12.79 | Removed metal funnel, which was plugged. Most of the brine collected was in the funnel. Installed a large plastic funnel. |
| A1X02 | 07/28/87 | 11:45 | 0.85 | 938.490 | 27.990 | 0.030 | 13.64 | Sample collected for chemistry sample #148. |
| A1X02 | 09/01/87 | 11:55 | 0.94 | 973.497 | 35.007 | 0.027 | 14.58 | Collected for chemistry, sample #159 A&B. |
| A1X02 | 10/20/87 | 10:59 | 1.84 | 1022.460 | 48.963 | 0.038 | 16.42 | |
| A1X02 | 11/19/87 | 10:30 | 1.09 | 1052.440 | 29.980 | 0.036 | 17.51 | Collected for chemistry, sample 226. |
| A1X02 | 01/04/88 | 11:05 | 3.73 | 1098.460 | 46.020 | 0.081 | 21.24 | |
| A1X02 | 02/08/88 | 13:17 | 1.65 | 1133.550 | 35.090 | 0.047 | 22.89 | Collected for chemistry, sample #299, #300, #301 & #302. |
| A1X02 | 03/30/88 | 12:20 | 4.86 | 1184.510 | 50.960 | 0.095 | 27.75 | Collected for chemistry, sample #343 - #352. |
| A1X02 | 06/14/88 | 09:00 | 5.15 | 1260.380 | 75.870 | 0.068 | 32.90 | Collected for chemistry, sample #402 - #406. Removed to provide room for further collection. |
| A1X02 | 07/12/88 | 09:30 | 1.11 | 1288.400 | 28.020 | 0.040 | 34.01 | Collected for chemistry, sample #458 & #459. |
| A1X02 | 09/15/88 | 11:00 | 0.18 | 1353.460 | 0.000 | 0.000 | 34.19 | Not fully evacuated. Do not use for calculation. |
| A1X02 | 09/27/88 | 08:30 | 3.00 | 1365.350 | 76.950 | 0.041 | 37.19 | Collected for chemistry, sample #514 - #519. Used 3.18 liters for calculation (0.18 on 9/15 + 3.00 on 9/27). |
| A1X02 | 12/13/88 | 09:30 | 2.50 | 1442.400 | 77.050 | 0.032 | 39.69 | Collected for chemistry, sample #597 - #601. |
| A1X02 | 04/06/89 | 11:55 | NA | 1556.497 | 0.000 | 0.000 | 39.69 | Room locked. |
| A1X02 | 04/20/89 | 10:00 | NA | 1570.417 | 0.000 | 0.000 | 39.69 | Room locked. |
| A1X02 | 05/17/89 | 12:05 | 4.47 | 1597.503 | 155.107 | 0.029 | 44.16 | Sample saved for chemistry, sample #750 - 751 A & B. |
| A1X02 | 07/11/89 | 10:05 | 2.32 | 1652.420 | 54.917 | 0.042 | 46.48 | |
| A1X02 | 09/12/89 | 11:35 | 2.77 | 1715.483 | 63.063 | 0.044 | 49.25 | Sample saved for chemistry. |
| A1X02 | 10/10/89 | 09:25 | 1.57 | 1743.392 | 27.909 | 0.056 | 50.82 | Sample saved for chemistry, sample #847. |
| A1X02 | 10/10/89 | 10:00 | NA | 1743.417 | 0.000 | 0.000 | 50.82 | Repositioned collecting tube from funnel. Collection point for brine located outside room. |
| A1X02 | 10/20/89 | 10:44 | NA | 1753.447 | 0.000 | 0.000 | 50.82 | No sample. |
| A1X02 | 11/10/89 | 10:08 | 1.90 | 1774.422 | 31.030 | 0.061 | 52.72 | Sample saved for chemistry, sample #862-1,2,3,4. |
| A1X02 | 11/29/89 | 12:10 | 0.53 | 1793.507 | 19.085 | 0.028 | 53.25 | Sample saved for chemistry, sample #873. |
| A1X02 | 12/12/89 | 09:20 | 0.05 | 1806.389 | 12.882 | 0.004 | 53.30 | Sample saved for chemistry, sample #884. |
| A1X02 | 01/04/90 | 10:50 | 0.22 | 1829.451 | 23.062 | 0.010 | 53.52 | Hose broken, some brine leaked to floor. Fixed hose, funnel full of brine. |
| A1X02 | 01/17/90 | 11:35 | 1.20 | 1842.483 | 13.032 | 0.092 | 54.72 | |
| A1X02 | 01/31/90 | 10:27 | 0.53 | 1856.435 | 13.952 | 0.038 | 55.25 | |
| A1X02 | 02/13/90 | 09:53 | 0.29 | 1869.412 | 12.977 | 0.022 | 55.54 | |
| A1X02 | 02/27/90 | 12:17 | 0.45 | 1883.512 | 14.100 | 0.032 | 55.99 | |
| A1X02 | 03/05/90 | 11:11 | 0.58 | 1889.466 | 5.954 | 0.097 | 56.57 | |
| A1X02 | 03/21/90 | 11:26 | 0.18 | 1905.476 | 16.010 | 0.011 | 56.75 | |
| A1X02 | 04/06/90 | 10:40 | 0.34 | 1921.444 | 15.968 | 0.021 | 57.09 | |
| A1X02 | 04/17/90 | 11:53 | 0.17 | 1932.495 | 11.051 | 0.015 | 57.26 | |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| A1X02 | 04/24/90 | 10:40 | 0.01 | 1939.444 | 6.949 | 0.001 | 57.27 | |
| A1X02 | 05/02/90 | 11:49 | 0.23 | 1947.492 | 8.048 | 0.029 | 57.50 | |
| A1X02 | 05/09/90 | 11:13 | 0.19 | 1954.467 | 6.975 | 0.027 | 57.69 | |
| A1X02 | 05/16/90 | 10:49 | 0.23 | 1961.451 | 6.984 | 0.033 | 57.92 | |
| A1X02 | 05/23/90 | 12:32 | 0.20 | 1968.522 | 7.071 | 0.028 | 58.12 | |
| A1X02 | 05/31/90 | 10:29 | 0.25 | 1976.437 | 7.915 | 0.032 | 58.37 | |
| A1X02 | 06/06/90 | 11:20 | 0.13 | 1982.472 | 6.035 | 0.022 | 58.50 | |
| A1X02 | 06/14/90 | 09:51 | 0.11 | 1990.410 | 7.938 | 0.014 | 58.61 | |
| A1X02 | 06/28/90 | 10:08 | 0.24 | 2004.422 | 14.012 | 0.017 | 58.85 | |
| A1X02 | 07/14/90 | 10:00 | NA | 2020.000 | 0.000 | 0.000 | 0.00 | Heaters turned off. |
| A1X02 | 07/17/90 | 09:51 | 0.23 | 2023.410 | 18.988 | 0.012 | 59.08 | |
| A1X02 | 07/25/90 | 08:30 | 0.15 | 2031.354 | 7.944 | 0.019 | 59.23 | |
| A1X02 | 08/07/90 | 10:53 | 0.32 | 2044.453 | 13.099 | 0.024 | 59.55 | |
| A1X02 | 08/16/90 | 11:30 | 0.11 | 2053.479 | 9.026 | 0.012 | 59.66 | |
| A1X02 | 08/22/90 | 11:52 | 0.25 | 2059.494 | 6.015 | 0.042 | 59.91 | |
| A1X02 | 08/29/90 | 12:52 | 0.32 | 2066.536 | 7.042 | 0.045 | 60.23 | |
| A1X02 | 09/05/90 | 11:50 | 0.27 | 2073.493 | 6.957 | 0.039 | 60.50 | |
| A1X02 | 09/13/90 | 09:58 | 0.33 | 2081.415 | 7.922 | 0.042 | 60.83 | |
| A1X02 | 09/25/90 | 12:15 | 0.46 | 2093.510 | 12.095 | 0.038 | 61.29 | |
| A1X02 | 10/03/90 | 10:03 | 0.28 | 2101.419 | 7.909 | 0.035 | 61.57 | |
| A1X02 | 10/10/90 | 11:43 | 0.25 | 2108.488 | 7.069 | 0.035 | 61.82 | |
| A1X02 | 10/18/90 | 11:04 | 0.31 | 2116.461 | 7.973 | 0.039 | 62.13 | |
| A1X02 | 10/24/90 | 12:22 | 0.20 | 2122.515 | 6.054 | 0.033 | 62.33 | |
| A1X02 | 10/31/90 | 11:50 | 0.22 | 2129.493 | 6.978 | 0.032 | 62.55 | |
| A1X02 | 11/07/90 | 10:56 | 0.23 | 2136.456 | 6.963 | 0.033 | 62.78 | |
| A1X02 | 11/14/90 | 11:54 | 0.20 | 2143.496 | 7.040 | 0.028 | 62.98 | |
| A1X02 | 11/28/90 | 10:56 | 0.47 | 2157.456 | 13.960 | 0.034 | 63.45 | |
| A1X02 | 12/05/90 | 09:02 | 0.21 | 2164.376 | 6.920 | 0.030 | 63.66 | |
| A1X02 | 12/13/90 | 09:45 | 0.27 | 2172.406 | 8.030 | 0.034 | 63.93 | |
| A1X02 | 12/20/90 | 09:04 | 0.24 | 2179.378 | 6.972 | 0.034 | 64.17 | |
| A1X02 | 12/20/90 | 09:04 | 0.24 | 2179.378 | 6.972 | 0.034 | 67.13 | |
| A1X02 | 01/09/91 | 09:10 | 0.71 | 2199.382 | 20.004 | 0.035 | 67.84 | |
| A1X02 | 01/16/91 | 09:25 | 0.28 | 2206.392 | 7.010 | 0.040 | 68.12 | |
| A1X02 | 01/23/91 | 10:20 | 0.26 | 2213.431 | 7.039 | 0.037 | 68.38 | |
| A1X02 | 01/30/91 | 10:34 | 0.27 | 2220.440 | 7.009 | 0.039 | 68.65 | |
| A1X02 | 02/13/91 | 11:40 | 0.50 | 2234.486 | 14.046 | 0.036 | 69.15 | |
| A1X02 | 02/20/91 | 10:55 | 0.26 | 2241.455 | 6.969 | 0.037 | 69.41 | |
| A1X02 | 02/27/91 | 10:35 | 0.24 | 2248.441 | 6.986 | 0.034 | 69.65 | |
| A1X02 | 03/07/91 | 10:30 | 0.26 | 2256.438 | 7.997 | 0.033 | 69.91 | |
| A1X02 | 03/20/91 | 11:31 | 0.35 | 2269.480 | 13.042 | 0.027 | 70.26 | |
| A1X02 | 03/28/91 | 11:13 | 0.15 | 2277.467 | 7.987 | 0.019 | 70.41 | |
| A1X02 | 04/10/91 | 09:30 | 0.30 | 2290.396 | 12.929 | 0.023 | 70.71 | |
| A1X02 | 05/14/91 | 09:57 | 1.58 | 2324.415 | 0.000 | 0.000 | 72.29 | Partial evacuation. |
| A1X02 | 05/15/91 | 10:36 | 0.12 | 2325.442 | 35.046 | 0.049 | 72.41 | Combined with 1.58 liters from 05/14/91. |
| A1X02 | 05/30/91 | 12:15 | 0.62 | 2340.510 | 15.068 | 0.041 | 73.03 | |
| A1X02 | 06/05/91 | 14:18 | 0.20 | 2346.596 | 6.086 | 0.033 | 73.23 | |
| A1X02 | 06/12/91 | 10:51 | 0.25 | 2353.452 | 6.856 | 0.036 | 73.48 | |
| A1X02 | 06/19/91 | 15:10 | 0.25 | 2360.632 | 7.180 | 0.035 | 73.73 | |
| A1X02 | 06/26/91 | 09:50 | 0.24 | 2367.410 | 6.778 | 0.035 | 73.97 | |
| A1X02 | 07/11/91 | 11:01 | 0.65 | 2382.459 | 15.049 | 0.043 | 74.62 | |
| A1X02 | 07/17/91 | 10:15 | 0.26 | 2388.427 | 5.968 | 0.044 | 74.88 | |
| A1X02 | 07/30/91 | 09:55 | 0.49 | 2401.413 | 12.986 | 0.038 | 75.37 | |
| A1X02 | 08/08/91 | 08:35 | 0.32 | 2410.358 | 8.945 | 0.036 | 75.69 | |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| A1X02 | 08/14/91 | 09:32 | 0.15 | 2416.397 | 6.039 | 0.025 | 75.84 | |
| A1X02 | 08/21/91 | 09:40 | 0.39 | 2423.403 | 7.006 | 0.056 | 76.23 | |
| A1X02 | 08/28/91 | 09:06 | 0.29 | 2430.379 | 6.976 | 0.042 | 76.52 | |
| A1X02 | 09/04/91 | 10:15 | 0.16 | 2437.427 | 7.048 | 0.023 | 76.68 | |
| A1X02 | 09/11/91 | 11:15 | 0.43 | 2444.469 | 7.042 | 0.061 | 77.11 | |
| A1X02 | 10/02/91 | 10:30 | 1.15 | 2465.438 | 20.969 | 0.055 | 78.26 | |
| A1X02 | 10/16/91 | 10:35 | 0.73 | 2479.441 | 14.003 | 0.052 | 78.99 | |
| A1X02 | 10/31/91 | 10:28 | 0.68 | 2494.436 | 14.995 | 0.045 | 79.67 | |
| A1X02 | 11/06/91 | 11:40 | 0.12 | 2500.486 | 6.050 | 0.020 | 79.79 | |
| A1X02 | 11/13/91 | 10:10 | 0.11 | 2507.424 | 6.938 | 0.016 | 79.90 | |
| A1X02 | 11/20/91 | 09:45 | 0.04 | 2514.406 | 6.982 | 0.006 | 79.94 | |
| A1X02 | 11/27/91 | 08:55 | 0.02 | 2521.372 | 6.966 | 0.003 | 79.96 | |
| A1X02 | 12/04/91 | 10:25 | 0.05 | 2528.434 | 7.062 | 0.007 | 80.01 | |
| A1X02 | 12/11/91 | 10:20 | 0.05 | 2535.431 | 6.997 | 0.007 | 80.06 | |
| A1X02 | 12/18/91 | 10:20 | 0.02 | 2542.431 | 7.000 | 0.003 | 80.08 | |
| A3X01 | 11/06/84 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Room A3 completed. |
| A3X01 | 01/14/85 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Downhole drilled 12/20/85 to 1/14/85. |
| A3X01 | 02/05/85 | 11:10 | NA | 35.465 | 1.000 | 0.000 | 0.00 | Moist muck at the bottom. |
| A3X01 | 02/19/85 | 13:40 | 00.30 | 49.569 | 15.104 | 0.020 | 0.30 | Some oil. First time collected. |
| A3X01 | 02/26/85 | 13:20 | 00.23 | 56.556 | 6.987 | 0.033 | 0.53 | Brine and oil. |
| A3X01 | 03/07/85 | 09:45 | 00.26 | 65.406 | 8.850 | 0.029 | 0.79 | |
| A3X01 | 03/12/85 | 11:45 | 00.17 | 70.490 | 5.084 | 0.033 | 0.96 | |
| A3X01 | 03/20/85 | 13:14 | 00.19 | 78.551 | 8.061 | 0.024 | 1.15 | Valved leaked, some brine drained back down hole. |
| A3X01 | 03/26/85 | 11:12 | 00.22 | 84.467 | 5.916 | 0.037 | 1.37 | |
| A3X01 | 04/02/85 | 12:00 | 00.21 | 91.500 | 7.033 | 0.030 | 1.58 | |
| A3X01 | 04/10/85 | 12:00 | 00.23 | 99.500 | 8.000 | 0.029 | 1.81 | |
| A3X01 | 04/17/85 | 11:20 | 00.20 | 106.472 | 6.972 | 0.029 | 2.01 | |
| A3X01 | 04/23/85 | 10:41 | 00.16 | 112.445 | 5.973 | 0.027 | 2.17 | |
| A3X01 | 04/30/85 | 13:35 | 00.20 | 119.566 | 7.121 | 0.028 | 2.37 | |
| A3X01 | 05/07/85 | 08:55 | 00.20 | 126.372 | 6.806 | 0.029 | 2.57 | |
| A3X01 | 05/14/85 | 09:56 | 00.17 | 133.414 | 7.042 | 0.024 | 2.74 | |
| A3X01 | 05/21/85 | 12:00 | 00.20 | 140.500 | 7.086 | 0.028 | 2.94 | |
| A3X01 | 05/29/85 | 09:25 | 00.21 | 148.392 | 7.892 | 0.027 | 3.15 | |
| A3X01 | 06/04/85 | 09:55 | 00.16 | 154.413 | 6.021 | 0.027 | 3.31 | |
| A3X01 | 06/11/85 | 09:25 | 00.18 | 161.392 | 6.979 | 0.026 | 3.49 | |
| A3X01 | 06/18/85 | 09:27 | 00.18 | 168.394 | 7.002 | 0.026 | 3.67 | |
| A3X01 | 06/25/85 | 09:30 | 00.19 | 175.396 | 7.002 | 0.027 | 3.86 | |
| A3X01 | 07/02/85 | 11:00 | 00.19 | 182.458 | 7.062 | 0.027 | 4.05 | |
| A3X01 | 07/09/85 | 09:50 | 00.17 | 189.410 | 6.952 | 0.024 | 4.22 | |
| A3X01 | 07/16/85 | 10:50 | 00.18 | 196.451 | 7.041 | 0.026 | 4.40 | Brine effervesces. |
| A3X01 | 07/24/85 | 09:47 | 00.21 | 204.408 | 7.957 | 0.026 | 4.61 | |
| A3X01 | 07/30/85 | 09:30 | 00.15 | 210.396 | 5.988 | 0.025 | 4.76 | |
| A3X01 | 08/06/85 | 09:30 | 00.17 | 217.396 | 7.000 | 0.024 | 4.93 | |
| A3X01 | 08/14/85 | 09:21 | 00.20 | 225.390 | 7.994 | 0.025 | 5.13 | |
| A3X01 | 08/20/85 | 10:08 | 00.16 | 231.422 | 6.032 | 0.027 | 5.29 | |
| A3X01 | 08/28/85 | 09:05 | 00.21 | 239.378 | 7.956 | 0.026 | 5.50 | |
| A3X01 | 09/04/85 | 09:29 | 00.17 | 246.395 | 7.017 | 0.024 | 5.67 | |
| A3X01 | 09/10/85 | 09:20 | 00.15 | 252.389 | 5.994 | 0.025 | 5.82 | |
| A3X01 | 09/17/85 | 09:06 | 00.16 | 259.379 | 6.990 | 0.023 | 5.98 | |
| A3X01 | 09/24/85 | 09:03 | 00.17 | 266.377 | 6.998 | 0.024 | 6.15 | |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| A3X01 | 10/01/85 | 09:18 | 00.18 | 273.387 | 7.010 | 0.026 | 6.33 | |
| A3X01 | 10/08/85 | 12:35 | 00.18 | 280.524 | 7.137 | 0.025 | 6.51 | Room A3 heaters turned on 10/02/85. |
| A3X01 | 10/15/85 | 09:35 | 00.16 | 287.399 | 6.875 | 0.023 | 6.67 | |
| A3X01 | 10/23/85 | 09:40 | 00.19 | 295.403 | 8.004 | 0.024 | 6.86 | |
| A3X01 | 10/29/85 | 11:11 | 00.14 | 301.466 | 6.063 | 0.023 | 7.00 | |
| A3X01 | 11/05/85 | 08:42 | 00.16 | 308.362 | 6.896 | 0.023 | 7.16 | |
| A3X01 | 11/13/85 | 09:30 | 00.19 | 316.396 | 8.034 | 0.024 | 7.35 | |
| A3X01 | 11/21/85 | 10:30 | 00.19 | 324.438 | 8.042 | 0.024 | 7.54 | |
| A3X01 | 11/26/85 | 09:55 | 00.10 | 329.413 | 4.975 | 0.020 | 7.64 | |
| A3X01 | 12/04/85 | 14:03 | 00.18 | 337.585 | 8.172 | 0.022 | 7.82 | Sample for chem. anal. #10. |
| A3X01 | 12/10/85 | 10:46 | 00.14 | 343.449 | 5.864 | 0.024 | 7.96 | |
| A3X01 | 12/17/85 | 13:55 | 00.14 | 350.580 | 7.131 | 0.020 | 8.10 | |
| A3X01 | 01/03/86 | 10:00 | 00.39 | 367.417 | 16.837 | 0.023 | 8.49 | |
| A3X01 | 01/08/86 | 10:10 | 00.11 | 372.424 | 5.007 | 0.022 | 8.60 | |
| A3X01 | 01/16/86 | 09:35 | 00.18 | 380.399 | 7.975 | 0.023 | 8.78 | |
| A3X01 | 01/23/86 | 10:00 | 00.15 | 387.417 | 7.018 | 0.021 | 8.93 | |
| A3X01 | 01/31/86 | 10:55 | 00.18 | 395.455 | 8.038 | 0.022 | 9.11 | |
| A3X01 | 02/12/86 | 10:00 | 00.27 | 407.417 | 11.962 | 0.023 | 9.38 | |
| A3X01 | 02/19/86 | 10:40 | 00.15 | 414.444 | 7.027 | 0.021 | 9.53 | |
| A3X01 | 02/28/86 | 14:20 | 00.22 | 423.597 | 9.153 | 0.024 | 9.75 | |
| A3X01 | 03/06/86 | 09:50 | 00.14 | 429.410 | 5.813 | 0.024 | 9.89 | |
| A3X01 | 03/13/86 | 09:20 | 00.15 | 436.389 | 6.979 | 0.021 | 10.04 | |
| A3X01 | 03/26/86 | 09:15 | 00.30 | 449.385 | 12.996 | 0.023 | 10.34 | |
| A3X01 | 04/02/86 | 08:50 | 00.16 | 456.368 | 6.983 | 0.023 | 10.50 | |
| A3X01 | 04/08/86 | 09:05 | 00.14 | 462.378 | 6.010 | 0.023 | 10.64 | |
| A3X01 | 04/16/86 | 11:25 | 00.18 | 470.476 | 8.098 | 0.022 | 10.82 | |
| A3X01 | 04/24/86 | 09:30 | 00.18 | 478.396 | 7.920 | 0.023 | 11.00 | |
| A3X01 | 04/30/86 | 10:00 | 00.14 | 484.417 | 6.021 | 0.023 | 11.14 | |
| A3X01 | 05/06/86 | 09:35 | 00.14 | 490.399 | 5.982 | 0.023 | 11.28 | |
| A3X01 | 05/13/86 | 09:20 | 00.15 | 497.389 | 6.990 | 0.021 | 11.43 | |
| A3X01 | 05/20/86 | 10:10 | 00.15 | 504.424 | 7.035 | 0.021 | 11.58 | |
| A3X01 | 05/27/86 | 15:00 | 00.16 | 511.625 | 7.201 | 0.022 | 11.74 | |
| A3X01 | 06/03/86 | 09:20 | 00.15 | 518.389 | 6.764 | 0.022 | 11.89 | |
| A3X01 | 06/10/86 | 10:42 | 00.16 | 525.446 | 7.057 | 0.023 | 12.05 | |
| A3X01 | 06/17/86 | 09:51 | 00.12 | 532.410 | 6.964 | 0.017 | 12.17 | Sample for brine chemistry, #18. |
| A3X01 | 06/24/86 | 10:05 | 00.16 | 539.420 | 7.010 | 0.023 | 12.33 | |
| A3X01 | 07/01/86 | 12:35 | 00.16 | 546.524 | 7.104 | 0.023 | 12.49 | |
| A3X01 | 07/08/86 | 09:57 | 00.15 | 553.415 | 6.891 | 0.022 | 12.64 | |
| A3X01 | 07/16/86 | 09:47 | 00.19 | 561.408 | 7.993 | 0.024 | 12.83 | |
| A3X01 | 07/22/86 | 09:23 | 00.14 | 567.391 | 5.983 | 0.023 | 12.97 | |
| A3X01 | 07/29/86 | 10:00 | 00.14 | 574.417 | 7.026 | 0.020 | 13.11 | |
| A3X01 | 08/05/86 | 10:15 | 00.18 | 581.427 | 7.010 | 0.026 | 13.29 | |
| A3X01 | 08/12/86 | 09:50 | 00.16 | 588.410 | 6.983 | 0.023 | 13.45 | |
| A3X01 | 08/19/86 | 10:35 | 00.16 | 595.441 | 7.031 | 0.023 | 13.61 | |
| A3X01 | 08/26/86 | 10:00 | 00.15 | 602.417 | 6.976 | 0.022 | 13.76 | Static level not measured. |
| A3X01 | 09/04/86 | 09:52 | 00.20 | 611.411 | 8.994 | 0.022 | 13.96 | Sample # 16. |
| A3X01 | 09/09/86 | 10:35 | 00.12 | 616.441 | 5.030 | 0.024 | 14.08 | |
| A3X01 | 09/16/86 | 09:29 | 00.14 | 623.395 | 6.954 | 0.020 | 14.22 | |
| A3X01 | 09/23/86 | 09:36 | 00.18 | 630.400 | 7.005 | 0.026 | 14.40 | |
| A3X01 | 10/01/86 | 11:30 | 00.19 | 638.479 | 8.079 | 0.024 | 14.59 | |
| A3X01 | 10/08/86 | 10:24 | 00.14 | 645.433 | 6.954 | 0.020 | 14.73 | |
| A3X01 | 10/14/86 | 10:47 | 00.12 | 651.449 | 6.016 | 0.020 | 14.85 | |
| A3X01 | 11/05/86 | 10:20 | 0.52 | 673.431 | 21.982 | 0.024 | 15.37 | |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| A3X01 | 11/20/86 | 11:33 | 00.33 | 688.481 | 15.050 | 0.022 | 15.70 | |
| A3X01 | 12/31/86 | 11:45 | 00.88 | 729.490 | 41.009 | 0.021 | 16.58 | |
| A3X01 | 02/03/87 | 12:00 | 00.73 | 763.500 | 34.010 | 0.021 | 17.31 | T=31.8c, T 28.6, pH 6.14. |
| A3X01 | 03/06/87 | 11:45 | 0.68 | 794.490 | 30.990 | 0.022 | 17.99 | |
| A3X01 | 03/30/87 | 12:00 | 0.55 | 818.500 | 24.010 | 0.023 | 18.54 | |
| A3X01 | 05/07/87 | 10:39 | 0.80 | 856.444 | 37.944 | 0.021 | 19.34 | |
| A3X01 | 06/17/87 | 11:25 | 0.89 | 897.476 | 41.032 | 0.022 | 20.23 | Sample removed for chemistry. #126A, #126B. |
| A3X01 | 07/28/87 | 12:02 | 0.92 | 938.501 | 41.025 | 0.022 | 21.15 | |
| A3X01 | 09/01/87 | 11:45 | 0.77 | 973.490 | 34.989 | 0.022 | 21.92 | Collected for chemistry, sample #172 A&B. |
| A3X01 | 10/20/87 | 10:55 | 1.10 | 1022.450 | 48.960 | 0.022 | 23.02 | |
| A3X01 | 11/19/87 | 10:20 | 0.66 | 1052.430 | 29.980 | 0.022 | 23.68 | Collected for chemistry, sample #220. |
| A3X01 | 01/04/88 | 11:00 | 1.01 | 1098.460 | 46.030 | 0.022 | 24.69 | |
| A3X01 | 02/08/88 | 13:30 | 0.67 | 1133.560 | 35.100 | 0.019 | 25.36 | Collected for chemistry, sample #297 & #298. |
| A3X01 | 03/30/88 | 12:10 | 1.02 | 1184.510 | 50.950 | 0.020 | 26.38 | Collected for chemistry, sample #387 & #388. |
| A3X01 | 05/12/88 | 10:20 | 0.88 | 1227.430 | 42.920 | 0.021 | 27.26 | Sampled for Sandia PA. |
| A3X01 | 07/12/88 | 09:40 | 1.28 | 1288.400 | 60.970 | 0.021 | 28.54 | Collected for chemistry, sample #456 & #457. |
| A3X01 | 09/27/88 | 08:20 | | 1365.350 | 0.000 | 0.000 | 28.54 | Cannot be sampled. Room has bad back. |
| A3X01 | 12/13/88 | 09:25 | 3.35 | 1442.390 | 153.990 | 0.022 | 31.89 | Collected for chemistry, sample #591 - #596. |
| A3X01 | 03/14/89 | 09:15 | 1.90 | 1533.385 | 90.993 | 0.021 | 33.79 | Sample saved for chemistry, sample #656 - 659. |
| A3X01 | 04/06/89 | 12:04 | NA | 1556.503 | 0.000 | 0.000 | 33.79 | Room locked. |
| A3X01 | 04/20/89 | 10:00 | NA | 1570.417 | 0.000 | 0.000 | 33.79 | Room locked. |
| A3X01 | 05/17/89 | 11:45 | 1.42 | 1597.490 | 64.105 | 0.022 | 35.21 | Sample saved for chemistry, sample #758 A & B. |
| A3X01 | 07/11/89 | 09:55 | 0.93 | 1652.413 | 54.923 | 0.017 | 36.14 | |
| A3X01 | 09/12/89 | 11:26 | 1.51 | 1715.476 | 63.063 | 0.024 | 37.65 | Sample saved for chemistry. |
| A3X01 | 10/10/89 | 09:43 | NA | 1743.405 | 0.000 | 0.000 | 37.65 | Installed collecting device. Collection point for brine located outside room. |
| A3X01 | 10/20/89 | 10:39 | 0.36 | 1753.444 | 37.968 | 0.009 | 38.01 | Sample saved for chemistry, sample #850. |
| A3X01 | 11/10/89 | 09:40 | 0.50 | 1774.403 | 20.959 | 0.024 | 38.51 | Sample saved for chemistry, sample #860-1. |
| A3X01 | 11/29/89 | 11:56 | 0.63 | 1793.497 | 19.094 | 0.033 | 39.14 | Sample saved for chemistry, sample #871. |
| A3X01 | 12/12/89 | 09:00 | 0.43 | 1806.375 | 12.878 | 0.033 | 39.57 | Sample saved for chemistry, sample #882. |
| A3X01 | 01/04/90 | 10:00 | 0.50 | 1829.417 | 23.042 | 0.022 | 40.07 | |
| A3X01 | 01/17/90 | 11:24 | 0.25 | 1842.475 | 13.058 | 0.019 | 40.32 | |
| A3X01 | 01/31/90 | 09:40 | 0.24 | 1856.403 | 13.928 | 0.017 | 40.56 | |
| A3X01 | 02/13/90 | 09:21 | 0.31 | 1869.390 | 12.987 | 0.024 | 40.87 | |
| A3X01 | 02/27/90 | 11:43 | 0.32 | 1883.488 | 14.098 | 0.023 | 41.19 | |
| A3X01 | 03/05/90 | 10:45 | 0.30 | 1889.450 | 5.960 | 0.050 | 41.49 | |
| A3X01 | 03/21/90 | 11:15 | 0.15 | 1905.470 | 16.021 | 0.009 | 41.64 | Brine probably left in hole. |
| A3X01 | 04/06/90 | 10:29 | 0.35 | 1921.440 | 15.968 | 0.022 | 41.99 | |
| A3X01 | 04/17/90 | 11:13 | 0.13 | 1932.470 | 11.030 | 0.012 | 42.12 | |
| A3X01 | 04/24/90 | 10:26 | 0.02 | 1939.430 | 6.968 | 0.000 | 42.14 | |
| A3X01 | 04/25/90 | 09:35 | 0.15 | 1940.400 | 0.964 | 0.021 | 42.29 | Reinstalled sampler. Combined with 0.02 liters from 04/24/90. Used 0.17 liters for calculation. |
| A3X01 | 05/02/90 | 11:20 | 0 | 1947.470 | 7.073 | 0.000 | 42.29 | Could not sample. |
| A3X01 | 05/16/90 | 10:26 | NA | 1961.430 | 0.000 | 0.000 | 42.29 | Sampler malfunction. |
| A3X01 | 05/23/90 | 12:35 | 0.08 | 1968.524 | 21.052 | 0.004 | 42.37 | |
| A3X01 | 05/31/90 | 10:51 | 0.14 | 1976.452 | 7.928 | 0.018 | 42.51 | |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| A3X01 | 06/01/90 | 10:25 | NA | 1977.434 | 0.000 | 0.000 | 42.51 | Replaced sampler. |
| A3X01 | 06/06/90 | 11:06 | 0.49 | 1982.462 | 6.010 | 0.082 | 43.00 | |
| A3X01 | 06/14/90 | 08:38 | 0.17 | 1990.360 | 7.898 | 0.022 | 43.17 | |
| A3X01 | 07/17/90 | 10:18 | 0.60 | 2023.429 | 33.069 | 0.000 | 43.77 | |
| A3X01 | 07/18/90 | 10:11 | 0.09 | 2024.424 | 0.995 | 0.020 | 43.86 | Combined with 0.60 liters from 07/17/90. Used 0.69 liters for calculation. |
| A3X01 | 07/25/90 | 08:20 | 0.70 | 2031.347 | 6.923 | 0.000 | 44.56 | |
| A3X01 | 08/07/90 | 11:21 | 0.24 | 2044.473 | 13.126 | 0.047 | 44.80 | Combined with 0.7 liters from 07/25/90. Used 0.94 liters for calculation. |
| A3X01 | 08/16/90 | 11:11 | 0.27 | 2053.466 | 8.993 | 0.030 | 45.07 | |
| A3X01 | 08/22/90 | 11:42 | 0.15 | 2059.488 | 6.022 | 0.025 | 45.22 | |
| A3X01 | 08/23/90 | 10:00 | NA | 2060.000 | 0.000 | 0.000 | 0.00 | Heaters turned off. |
| A3X01 | 08/29/90 | 12:44 | 0.16 | 2066.531 | 7.043 | 0.023 | 45.38 | |
| A3X01 | 09/05/90 | 11:35 | 0.15 | 2073.483 | 6.952 | 0.022 | 45.53 | |
| A3X01 | 09/13/90 | 09:56 | 0.18 | 2081.414 | 7.931 | 0.023 | 45.71 | |
| A3X01 | 09/25/90 | 12:34 | 0.25 | 2093.524 | 12.110 | 0.021 | 45.96 | |
| A3X01 | 09/26/90 | 11:09 | 0.02 | 2094.465 | 0.941 | 0.021 | 45.98 | |
| A3X01 | 10/03/90 | 09:50 | 0.16 | 2101.410 | 6.945 | 0.023 | 46.14 | |
| A3X01 | 10/10/90 | 11:40 | 0.15 | 2108.486 | 7.076 | 0.021 | 46.29 | |
| A3X01 | 10/18/90 | 10:53 | 0.16 | 2116.453 | 7.967 | 0.020 | 46.45 | |
| A3X01 | 10/24/90 | 12:08 | 0.14 | 2122.506 | 6.053 | 0.023 | 46.59 | |
| A3X01 | 10/31/90 | 11:35 | 0.16 | 2129.483 | 6.977 | 0.023 | 46.75 | |
| A3X01 | 11/07/90 | 10:52 | 0.15 | 2136.453 | 6.970 | 0.022 | 46.90 | |
| A3X01 | 11/14/90 | 11:50 | 0.15 | 2143.493 | 7.040 | 0.021 | 47.05 | |
| A3X01 | 11/28/90 | 10:51 | 0.30 | 2157.452 | 13.959 | 0.021 | 47.35 | |
| A3X01 | 12/05/90 | 08:55 | 0.15 | 2164.372 | 6.920 | 0.022 | 47.50 | |
| A3X01 | 12/13/90 | 09:35 | 0.17 | 2172.399 | 8.027 | 0.021 | 47.67 | |
| A3X01 | 12/20/90 | 08:56 | 0.18 | 2179.372 | 6.973 | 0.026 | 47.85 | |
| A3X01 | 01/09/91 | 09:07 | 0.39 | 2199.380 | 20.008 | 0.019 | 48.24 | |
| A3X01 | 01/16/91 | 09:15 | 0.16 | 2206.385 | 7.005 | 0.023 | 48.40 | |
| A3X01 | 01/23/91 | 10:05 | 0.15 | 2213.420 | 7.035 | 0.021 | 48.55 | |
| A3X01 | 01/30/91 | 10:16 | 0.16 | 2220.428 | 7.008 | 0.023 | 48.71 | |
| A3X01 | 02/13/91 | 11:22 | 0.36 | 2234.474 | 14.046 | 0.026 | 49.07 | |
| A3X01 | 02/20/91 | 10:45 | 0.16 | 2241.448 | 6.974 | 0.023 | 49.23 | |
| A3X01 | 02/27/91 | 10:20 | 0.14 | 2248.431 | 6.983 | 0.020 | 49.37 | |
| A3X01 | 03/07/91 | 10:15 | 0.26 | 2256.427 | 7.996 | 0.033 | 49.63 | |
| A3X01 | 03/20/91 | 11:21 | 0.28 | 2269.473 | 13.046 | 0.021 | 49.91 | |
| A3X01 | 03/28/91 | 11:07 | 0.18 | 2277.463 | 7.990 | 0.023 | 50.09 | |
| A3X01 | 04/10/91 | 09:19 | 0.26 | 2290.388 | 12.925 | 0.020 | 50.35 | |
| A3X01 | 05/14/91 | 09:50 | 0.34 | 2324.410 | 0.000 | 0.000 | 50.69 | Partial evacuation. |
| A3X01 | 05/15/91 | 10:20 | 0.30 | 2325.431 | 35.043 | 0.018 | 50.99 | Combined with 0.34 liters from 05/14/91. |
| A3X01 | 05/30/91 | 11:45 | 0.31 | 2340.490 | 15.059 | 0.021 | 51.30 | |
| A3X01 | 06/05/91 | 14:22 | 0.16 | 2346.599 | 6.109 | 0.026 | 51.46 | |
| A3X01 | 06/12/91 | 10:50 | 0.15 | 2353.451 | 6.852 | 0.022 | 51.61 | |
| A3X01 | 06/19/91 | 15:12 | 0.15 | 2360.633 | 7.182 | 0.021 | 51.76 | |
| A3X01 | 06/26/91 | 09:45 | 0.14 | 2367.406 | 6.773 | 0.021 | 51.90 | |
| A3X01 | 07/11/91 | 11:16 | 0.30 | 2382.469 | 15.063 | 0.020 | 52.20 | |
| A3X01 | 07/17/91 | 10:10 | 0.15 | 2388.424 | 5.955 | 0.025 | 52.35 | |
| A3X01 | 07/30/91 | 09:50 | 0.40 | 2401.410 | 12.986 | 0.031 | 52.75 | |
| A3X01 | 08/08/91 | 08:30 | 0.24 | 2410.354 | 8.944 | 0.027 | 52.99 | |
| A3X01 | 08/14/91 | 09:25 | 0.13 | 2416.392 | 6.038 | 0.022 | 53.12 | |
| A3X01 | 08/21/91 | 09:22 | 0.15 | 2423.390 | 6.998 | 0.021 | 53.27 | |
| A3X01 | 08/28/91 | 08:53 | 0.13 | 2430.370 | 6.980 | 0.019 | 53.40 | |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| A3X01 | 09/04/91 | 10:14 | 0.22 | 2437.426 | 7.056 | 0.031 | 53.62 | |
| A3X01 | 09/11/91 | 11:10 | 0.17 | 2444.465 | 7.039 | 0.024 | 53.79 | |
| A3X01 | 10/02/91 | 10:25 | 0.13 | 2465.434 | 20.969 | 0.006 | 53.92 | |
| A3X01 | 10/16/91 | 10:25 | 0.48 | 2479.434 | 14.000 | 0.034 | 54.40 | |
| A3X01 | 10/31/91 | 10:40 | 0.01 | 2494.444 | 0.000 | 0.000 | 54.41 | Some brine may have been left in hole. Lost vacuum prior to sampling. |
| A3X01 | 11/06/91 | 11:35 | 0.06 | 2500.483 | 0.000 | 0.000 | 54.47 | Some brine may have been left in hole. Line clogged. |
| A3X01 | 11/20/91 | 9:30 | 0.53 | 2514.375 | 34.941 | 0.017 | 55.00 | Combined with 0.01 liters from 10/31/91 and 0.06 liters from 11/06/91. |
| A3X01 | 11/27/91 | 09:04 | 0.21 | 2521.378 | 7.003 | 0.030 | 55.21 | |
| A3X01 | 12/04/91 | 10:20 | 0.17 | 2528.431 | 7.053 | 0.024 | 55.38 | |
| A3X01 | 12/11/91 | 10:15 | 0.13 | 2535.427 | 6.996 | 0.019 | 55.51 | |
| A3X01 | 12/18/91 | 10:15 | 0.17 | 2542.427 | 7.000 | 0.024 | 55.68 | |
| A3X01 | 12/23/91 | 09:10 | 0.14 | 2547.382 | 4.955 | 0.028 | 55.82 | |
| BX01 | 06/02/84 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Room B completed. |
| BX01 | 01/27/85 | 00:00 | NA | 0.000 | 1.000 | 0.000 | 0.00 | Downhole drilled 1/24/85 to 1/27/85. Wet core and brine encountered 1/26/85 at 35 to 36.5 feet. |
| BX01 | 02/05/85 | 11:00 | 00.39 | 35.458 | 11.041 | 0.035 | 0.39 | First time collected. |
| BX01 | 02/11/85 | 12:00 | 00.72 | 41.500 | 6.042 | 0.119 | 1.11 | |
| BX01 | 02/19/85 | 13:00 | 00.70 | 49.542 | 8.042 | 0.087 | 1.81 | |
| BX01 | 02/26/85 | 12:45 | 00.61 | 56.531 | 6.989 | 0.087 | 2.42 | |
| BX01 | 03/07/85 | 09:15 | 00.70 | 65.385 | 8.854 | 0.079 | 3.12 | |
| BX01 | 03/12/85 | 11:45 | 00.41 | 70.490 | 5.105 | 0.080 | 3.53 | |
| BX01 | 03/20/85 | 12:50 | 00.61 | 78.535 | 8.045 | 0.076 | 4.14 | |
| BX01 | 03/26/85 | 10:45 | 00.45 | 84.448 | 5.913 | 0.076 | 4.59 | |
| BX01 | 04/02/85 | 11:44 | 00.51 | 91.489 | 7.041 | 0.072 | 5.10 | |
| BX01 | 04/10/85 | 11:38 | 00.55 | 99.485 | 7.996 | 0.069 | 5.65 | |
| BX01 | 04/17/85 | 11:00 | 00.45 | 106.458 | 6.973 | 0.065 | 6.10 | |
| BX01 | 04/23/85 | 10:05 | 00.38 | 112.420 | 5.962 | 0.064 | 6.48 | Room B heaters turned on 4/23/85. |
| BX01 | 05/01/85 | 11:40 | 00.46 | 120.486 | 8.066 | 0.057 | 6.94 | |
| BX01 | 06/04/85 | 09:30 | 02.00 | 154.396 | 33.910 | 0.059 | 8.94 | First check in several weeks. |
| BX01 | 07/16/85 | 10:15 | 02.34 | 196.427 | 42.031 | 0.056 | 11.28 | Brine effervesces. |
| BX01 | 08/26/85 | 13:56 | 02.38 | 237.581 | 41.154 | 0.058 | 13.66 | Room temp. 98 degrees F. at collar, 103 F. in center of room. |
| BX01 | 10/08/85 | 12:00 | 02.27 | 280.500 | 42.919 | 0.053 | 15.93 | |
| BX01 | 11/21/85 | 10:05 | 02.42 | 324.420 | 43.920 | 0.055 | 18.35 | |
| BX01 | 12/04/85 | 13:35 | 00.69 | 337.566 | 13.146 | 0.052 | 19.04 | Sample for chem. anal. #8. |
| BX01 | 01/31/86 | 10:25 | 02.95 | 395.434 | 57.868 | 0.051 | 21.99 | |
| BX01 | 02/12/86 | 09:30 | 00.80 | 407.396 | 11.962 | 0.067 | 22.79 | |
| BX01 | 04/16/86 | 11:00 | 03.45 | 470.458 | 63.062 | 0.055 | 26.24 | |
| BX01 | 04/30/86 | 09:45 | 00.73 | 484.406 | 13.948 | 0.052 | 26.97 | |
| BX01 | 05/06/86 | 09:18 | 00.30 | 490.387 | 5.981 | 0.050 | 27.27 | |
| BX01 | 06/10/86 | 10:20 | 01.85 | 525.431 | 35.044 | 0.053 | 29.12 | Sample for brine chemistry, #12. |
| BX01 | 08/19/86 | 10:50 | 03.21 | 595.451 | 70.020 | 0.046 | 32.33 | |
| BX01 | 09/09/86 | 11:00 | 01.30 | 616.458 | 21.007 | 0.062 | 33.63 | |
| BX01 | 10/01/86 | 11:08 | 01.16 | 638.464 | 22.006 | 0.053 | 34.79 | |
| BX01 | 11/05/86 | 10:00 | NA | 673.417 | 34.953 | 0.000 | 34.79 | Not collected. |
| BX01 | 11/20/86 | 10:39 | 02.40 | 688.444 | 49.980 | 0.048 | 37.19 | |
| BX01 | 12/30/86 | 14:10 | 01.75 | 728.590 | 40.146 | 0.044 | 38.94 | |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| BX01 | 02/03/87 | 11:00 | 01.67 | 763.458 | 34.868 | 0.048 | 40.61 | T=34.4c, T28.2, pH 6.06. |
| BX01 | 03/06/87 | 11:50 | NA | 794.493 | 31.035 | 0.000 | 40.61 | Room closed, bad back, not sampled. |
| BX01 | 10/20/87 | | | 1022.000 | 0.000 | 0.000 | 40.61 | Room closed, could not sample. No calculation. |
| BX01 | 11/16/87 | 11:10 | 12.86 | 1049.470 | 286.012 | 0.045 | 53.47 | Collected for chemistry, sample #198A, #201A, #204A, #207A, #210A #198B, #201B, #204B, #207B, & #210B. |
| BX01 | 01/04/88 | | | 1098.000 | 0.000 | 0.000 | 53.47 | Could not sample. Room closed. |
| BX01 | 02/08/88 | 12:35 | 3.71 | 1133.520 | 84.050 | 0.044 | 57.18 | Collected for chemistry, sample #287, #288, #289, #290, #291, #292 #293 & #294. |
| BX01 | 03/29/88 | 12:00 | 2.30 | 1183.500 | 49.980 | 0.046 | 59.48 | Collected for chemistry, sample #379 - #383. |
| BX01 | 05/12/88 | 10:44 | 1.67 | 1227.450 | 43.950 | 0.038 | 61.15 | Sampled for Sandia PA. |
| BX01 | 07/12/88 | 09:50 | 2.23 | 1288.410 | 60.960 | 0.037 | 63.38 | Collected for chemistry, sample #449 - #452. |
| BX01 | 09/27/88 | 08:00 | 2.61 | 1365.330 | 76.920 | 0.034 | 65.99 | Collected for chemistry, sample #504 - #509. |
| BX01 | 12/13/88 | 09:00 | 0 | 1442.380 | 0.000 | 0.000 | 65.99 | Could not sample. Room locked. |
| BX01 | 01/30/89 | NA | NA | 1490.000 | 0.000 | 0.000 | 65.99 | Heaters in Room B turned off at 14:20 on 1/30/89. |
| BX01 | 03/14/89 | 08:40 | 6.17 | 1533.361 | 168.028 | 0.037 | 72.16 | Sample saved for chemistry, sample #646 - 651. |
| BX01 | 04/06/89 | 11:53 | NA | 1556.495 | 0.000 | 0.000 | 72.15 | Room locked. |
| BX01 | 04/20/89 | 10:00 | NA | 1570.417 | 0.000 | 0.000 | 72.16 | Room locked. |
| BX01 | 05/17/89 | 11:00 | 2.90 | 1597.458 | 64.097 | 0.045 | 75.06 | Sample saved for chemistry, sample #759 - 761 A & B. |
| BX01 | 07/11/89 | 09:30 | 1.77 | 1652.396 | 54.938 | 0.032 | 76.83 | |
| BX01 | 09/12/89 | 10:50 | 1.90 | 1715.451 | 63.055 | 0.030 | 78.73 | Increased buildup of salt crust on cap. No indication of leakage into hole, walls dry. |
| BX01 | 10/11/89 | 10:30 | NA | 1744.438 | 0.000 | 0.000 | 78.73 | Installed collecting device. Collection point for brine located outside heated room. |
| BX01 | 10/20/89 | 10:30 | 0.61 | 1753.438 | 37.987 | 0.016 | 79.34 | Sample saved for chemistry, sample #848. |
| BX01 | 11/10/89 | 08:50 | 0.65 | 1774.368 | 20.930 | 0.031 | 79.99 | Sample saved for chemistry, sample #858-1,2. |
| BX01 | 11/29/89 | 10:50 | 0.66 | 1793.451 | 19.083 | 0.035 | 80.65 | Sample saved for chemistry, sample #869. |
| BX01 | 12/12/89 | 08:49 | 0.63 | 1806.367 | 12.916 | 0.049 | 81.28 | Sample saved for chemistry, sample #880. |
| BX01 | 01/04/90 | 09:03 | 0.14 | 1829.377 | 23.010 | 0.006 | 81.42 | |
| BX01 | 01/17/90 | 10:10 | 0.17 | 1842.424 | 13.047 | 0.013 | 81.59 | |
| BX01 | 01/31/90 | 08:57 | 0.20 | 1856.373 | 13.949 | 0.014 | 81.79 | |
| BX01 | 02/13/90 | 10:23 | 0.41 | 1869.433 | 13.060 | 0.031 | 82.20 | |
| BX01 | 02/27/90 | 11:12 | 0.61 | 1883.467 | 14.034 | 0.043 | 82.81 | |
| BX01 | 03/05/90 | 10:24 | 0.35 | 1889.433 | 5.966 | 0.059 | 83.16 | |
| BX01 | 03/21/90 | 10:59 | 0.58 | 1905.458 | 16.025 | 0.036 | 83.74 | |
| BX01 | 04/04/90 | 10:26 | 0.60 | 1919.435 | 13.977 | 0.043 | 84.34 | |
| BX01 | 04/17/90 | 10:47 | 0.71 | 1932.449 | 13.014 | 0.000 | 85.05 | |
| BX01 | 04/24/90 | 09:45 | 0.63 | 1939.406 | 6.957 | 0.000 | 85.68 | |
| BX01 | 04/25/90 | 09:00 | 0.76 | 1940.375 | 0.969 | 0.100 | 86.44 | Combined with 0.71 liters from 04/17/90 and 0.63 liters from 04/24/90. Used 2.1 liters for calculation. |
| BX01 | 05/02/90 | 10:59 | 0.67 | 1947.458 | 7.083 | 0.095 | 87.11 | |
| BX01 | 05/09/90 | 10:39 | 0.19 | 1954.444 | 6.986 | 0.027 | 87.30 | |
| BX01 | 05/16/90 | 09:56 | 0.20 | 1961.414 | 6.970 | 0.029 | 87.50 | |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| BX01 | 05/23/90 | 12:55 | 0.03 | 1968.538 | 7.124 | 0.004 | 87.53 | |
| BX01 | 05/31/90 | 11:11 | 0.13 | 1976.466 | 7.928 | 0.016 | 87.66 | |
| BX01 | 06/01/90 | 10:15 | NA | 1977.427 | 0.000 | 0.000 | 87.66 | Replaced sampler. |
| BX01 | 06/06/90 | 10:53 | 0.41 | 1982.453 | 5.987 | 0.068 | 88.07 | |
| BX01 | 06/14/90 | 09:14 | 0.28 | 1990.385 | 7.932 | 0.035 | 88.35 | |
| BX01 | 06/20/90 | 08:42 | 0.05 | 1996.362 | 5.977 | 0.008 | 88.40 | |
| BX01 | 06/28/90 | 09:35 | 0.40 | 2004.399 | 8.037 | 0.050 | 88.80 | |
| BX01 | 07/17/90 | 10:20 | 0.12 | 2023.431 | 19.032 | 0.000 | 88.92 | Partial evacuation. |
| BX01 | 07/18/90 | 09:54 | 0.47 | 2024.412 | 0.981 | 0.029 | 89.39 | Combined with 0.12 liters from 07/17/90. Used 0.59 liters for calculation. |
| BX01 | 07/25/90 | 08:10 | 0.38 | 2031.340 | 6.928 | 0.055 | 89.77 | |
| BX01 | 08/07/90 | 11:40 | 0.40 | 2044.486 | 13.146 | 0.030 | 90.17 | |
| BX01 | 08/16/90 | 10:52 | 0.31 | 2053.453 | 8.967 | 0.035 | 90.48 | |
| BX01 | 08/22/90 | 11:40 | 0.21 | 2059.486 | 6.033 | 0.035 | 90.69 | |
| BX01 | 08/29/90 | 12:27 | 0.09 | 2066.519 | 7.033 | 0.013 | 90.78 | |
| BX01 | 09/05/90 | 11:10 | 0.12 | 2073.465 | 6.946 | 0.017 | 90.90 | |
| BX01 | 09/13/90 | 09:27 | 0.30 | 2081.394 | 7.929 | 0.038 | 91.20 | |
| BX01 | 09/25/90 | 12:51 | 0.48 | 2093.535 | 12.141 | 0.000 | 91.68 | Brine probably left in hole. |
| BX01 | 09/26/90 | 11:18 | 0.02 | 2094.471 | 0.936 | 0.038 | 91.70 | Combined with 0.48 liters from 09/25/90. Used 0.50 liters for calculation. |
| BX01 | 10/03/90 | 09:25 | 0.21 | 2101.392 | 6.921 | 0.030 | 91.91 | |
| BX01 | 10/10/90 | 11:10 | 0.23 | 2108.465 | 7.073 | 0.033 | 92.14 | |
| BX01 | 10/18/90 | 10:46 | 0.23 | 2116.449 | 7.984 | 0.029 | 92.37 | |
| BX01 | 10/24/90 | 12:02 | 0.20 | 2122.501 | 6.052 | 0.033 | 92.57 | |
| BX01 | 10/31/90 | 11:26 | 0.22 | 2129.476 | 6.975 | 0.032 | 92.79 | |
| BX01 | 11/07/90 | 10:49 | 0.15 | 2136.451 | 6.975 | 0.022 | 92.94 | |
| BX01 | 11/14/90 | 12:01 | 0.26 | 2143.501 | 7.050 | 0.037 | 93.20 | |
| BX01 | 11/28/90 | 10:41 | 0.49 | 2157.445 | 13.944 | 0.035 | 93.69 | |
| BX01 | 12/05/90 | 08:53 | 0.21 | 2164.370 | 6.925 | 0.030 | 93.90 | |
| BX01 | 12/13/90 | 09:30 | 0.10 | 2172.396 | 8.026 | 0.012 | 94.00 | |
| BX01 | 12/20/90 | 08:47 | 0.38 | 2179.366 | 6.970 | 0.055 | 94.38 | |
| BX01 | 01/09/91 | 09:00 | 0.30 | 2199.375 | 20.009 | 0.015 | 94.68 | |
| BX01 | 01/16/91 | 09:00 | 0.45 | 2206.375 | 7.000 | 0.064 | 95.13 | |
| BX01 | 01/23/91 | 10:00 | 0.29 | 2213.417 | 7.042 | 0.041 | 95.42 | |
| BX01 | 01/30/91 | 09:45 | 0.20 | 2220.406 | 6.989 | 0.029 | 95.62 | |
| BX01 | 02/13/91 | 11:05 | 0.43 | 2234.462 | 14.056 | 0.031 | 96.05 | |
| BX01 | 02/20/91 | 10:32 | 0.21 | 2241.439 | 6.977 | 0.030 | 96.26 | |
| BX01 | 02/27/91 | 10:12 | 0.12 | 2248.425 | 6.986 | 0.017 | 96.38 | |
| BX01 | 03/07/91 | 10:00 | 0.27 | 2256.417 | 7.992 | 0.034 | 96.65 | |
| BX01 | 03/20/91 | 11:09 | 0.38 | 2269.465 | 13.048 | 0.029 | 97.03 | |
| BX01 | 03/28/91 | 10:57 | 0.19 | 2277.456 | 7.991 | 0.024 | 97.22 | |
| BX01 | 04/10/91 | 09:07 | 0.43 | 2290.380 | 12.924 | 0.033 | 97.65 | |
| BX01 | 05/14/91 | 09:30 | 0.45 | 2324.396 | 0.000 | 0.000 | 98.10 | Partial evacuation. |
| BX01 | 05/15/91 | 09:52 | 0.61 | 2325.411 | 35.031 | 0.030 | 98.71 | Combined with 0.45 liters from 05/14/91. |
| BX01 | 05/30/91 | 11:30 | 0.67 | 2340.479 | 15.068 | 0.044 | 99.38 | |
| BX01 | 06/05/91 | 14:00 | 0.20 | 2346.583 | 6.104 | 0.033 | 99.58 | |
| BX01 | 06/12/91 | 10:30 | 0.20 | 2353.438 | 6.855 | 0.029 | 99.78 | |
| BX01 | 06/19/91 | 14:48 | 0.21 | 2360.617 | 7.179 | 0.029 | 99.99 | |
| BX01 | 06/26/91 | 09:33 | 0.20 | 2367.398 | 6.781 | 0.029 | 100.19 | |
| BX01 | 07/11/91 | 10:28 | 0.46 | 2382.436 | 15.038 | 0.031 | 100.65 | |
| BX01 | 07/17/91 | 09:55 | 0.18 | 2388.413 | 5.977 | 0.030 | 100.83 | |
| BX01 | 07/30/91 | 09:45 | 0.43 | 2401.406 | 0.000 | 0.000 | 101.26 | Partial evacuation. |
| BX01 | 07/31/91 | 09:43 | 0.06 | 2402.405 | 13.992 | 0.035 | 101.32 | Combined with 0.43 liters from 07/30/91. |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| BX01 | 08/08/91 | 08:21 | 0.26 | 2410.348 | 7.943 | 0.033 | 101.58 | |
| BX01 | 08/14/91 | 09:15 | 0.18 | 2416.385 | 6.037 | 0.030 | 101.76 | |
| BX01 | 08/21/91 | 09:16 | 0.20 | 2423.386 | 7.001 | 0.029 | 101.96 | |
| BX01 | 08/28/91 | 09:10 | 0.22 | 2430.382 | 6.996 | 0.031 | 102.18 | |
| BX01 | 09/04/91 | 10:18 | 0.39 | 2437.429 | 7.047 | 0.055 | 102.57 | |
| BX01 | 09/11/91 | 11:06 | 0.22 | 2444.463 | 7.034 | 0.031 | 102.79 | |
| BX01 | 10/02/91 | 10:15 | 0.48 | 2465.427 | 20.964 | 0.023 | 103.27 | |
| BX01 | 10/16/91 | 10:00 | 0.52 | 2479.417 | 13.990 | 0.037 | 103.79 | |
| BX01 | 10/31/91 | 11:00 | 0.44 | 2494.458 | 15.041 | 0.029 | 104.23 | |
| BX01 | 11/06/91 | 11:13 | 0.22 | 2500.467 | 6.009 | 0.037 | 104.45 | |
| BX01 | 11/13/91 | 10:00 | 0.22 | 2507.417 | 6.950 | 0.032 | 104.67 | |
| BX01 | 11/20/91 | 9:38 | 0.20 | 2514.381 | 6.964 | 0.029 | 104.87 | |
| BX01 | 11/27/91 | 08:45 | 0.21 | 2521.365 | 6.984 | 0.030 | 105.08 | |
| BX01 | 12/04/91 | 10:05 | 0.23 | 2528.420 | 7.055 | 0.033 | 105.31 | |
| BX01 | 12/11/91 | 10:10 | 0.20 | 2535.424 | 7.004 | 0.029 | 105.51 | |
| BX01 | 12/23/91 | 09:00 | 0.15 | 2547.375 | 11.951 | 0.013 | 105.66 | |
| DH15 | 03/13/84 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Drift excavated at N1104/E1688.5. |
| DH15 | 03/21/84 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Uphole drilled 3/20/84 to 3/21/84. |
| DH15 | 05/20/86 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Collecting funnel and container installed. |
| DH15 | 05/27/86 | 15:00 | NA | 511.625 | 1.000 | 0.000 | 0.00 | Trace of brine. First time collected. |
| DH15 | 06/03/86 | 09:15 | 00.02 | 518.385 | 7.760 | 0.003 | 0.02 | |
| DH15 | 06/10/86 | 10:40 | 00.04 | 525.444 | 7.059 | 0.006 | 0.06 | Sample for brine chemistry, #14. |
| DH15 | 06/17/86 | 09:45 | 00.03 | 532.406 | 6.962 | 0.004 | 0.09 | Sample #14. |
| DH15 | 06/24/86 | 10:00 | 00.05 | 539.417 | 7.011 | 0.007 | 0.14 | Lots of clay has fallen down hole and accumulated in collecting container. |
| DH15 | 07/01/86 | 12:30 | 00.05 | 546.521 | 7.104 | 0.007 | 0.19 | |
| DH15 | 07/08/86 | 09:50 | 00.05 | 553.410 | 6.889 | 0.007 | 0.24 | |
| DH15 | 07/16/86 | 09:40 | 00.06 | 561.403 | 7.993 | 0.008 | 0.30 | |
| DH15 | 07/22/86 | 09:15 | 00.05 | 567.385 | 5.982 | 0.008 | 0.35 | Clay in collecting container. |
| DH15 | 07/29/86 | 09:55 | 00.05 | 574.413 | 7.028 | 0.007 | 0.40 | |
| DH15 | 08/05/86 | 10:20 | 00.05 | 581.431 | 7.018 | 0.007 | 0.45 | |
| DH15 | 08/12/86 | 09:45 | 00.05 | 588.406 | 6.975 | 0.007 | 0.50 | |
| DH15 | 08/19/86 | 10:20 | 00.05 | 595.431 | 7.025 | 0.007 | 0.55 | Sample # 1 for brine chemistry. |
| DH15 | 08/26/86 | 10:00 | 00.05 | 602.417 | 6.986 | 0.007 | 0.60 | Sample # 1. |
| DH15 | 09/04/86 | 09:50 | 00.06 | 611.410 | 8.993 | 0.007 | 0.66 | Sample # 1. |
| DH15 | 09/09/86 | 11:00 | 00.03 | 616.458 | 5.048 | 0.006 | 0.69 | Sample # 1. |
| DH15 | 09/16/86 | 09:25 | 00.05 | 623.392 | 6.934 | 0.007 | 0.74 | |
| DH15 | 09/23/86 | 09:30 | 00.06 | 630.396 | 7.004 | 0.009 | 0.80 | |
| DH15 | 10/01/86 | 11:29 | 00.06 | 638.478 | 8.082 | 0.007 | 0.86 | |
| DH15 | 11/05/86 | 10:15 | 0.22 | 673.427 | 34.949 | 0.006 | 1.08 | |
| DH15 | 11/20/86 | 11:28 | 00.07 | 688.478 | 15.051 | 0.005 | 1.15 | |
| DH15 | 12/31/86 | 11:37 | 00.18 | 729.484 | 41.006 | 0.004 | 1.33 | |
| DH15 | 03/30/87 | 12:02 | 0.41 | 818.501 | 89.017 | 0.005 | 1.74 | |
| DH15 | 05/07/87 | 10:22 | 0.17 | 856.432 | 37.931 | 0.004 | 1.91 | |
| DH15 | 06/17/87 | 11:20 | 0.21 | 897.472 | 41.040 | 0.005 | 2.12 | Sample removed for chemistry, #111A. |
| DH15 | 07/28/87 | 12:07 | 0.14 | 938.505 | 41.033 | 0.003 | 2.26 | Sample collected for chemistry sample #111. |
| DH15 | 09/01/87 | 11:35 | 0.13 | 973.483 | 34.978 | 0.004 | 2.39 | Collected for chemistry, sample #157. |
| DH15 | 09/16/87 | 10:00 | | 988.417 | 0.000 | 0.000 | 2.39 | 0.05 l in jar not removed. No calculation. |
| DH15 | 10/20/87 | 10:45 | 0.29 | 1022.450 | 48.967 | 0.006 | 2.68 | Collected for chemistry, sample #192. |
| DH15 | 11/19/87 | 10:15 | 0.15 | 1052.430 | 29.980 | 0.005 | 2.83 | Collected for chemistry, sample #217. |
| DH15 | 01/04/88 | 11:00 | 0.23 | 1098.460 | 46.030 | 0.005 | 3.06 | |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| DH15 | 02/08/88 | 12:40 | 0.09 | 1133.530 | 35.070 | 0.003 | 3.15 | Collected for chemistry, sample #313. |
| DH15 | 03/30/88 | 12:10 | 0.15 | 1184.510 | 50.980 | 0.003 | 3.30 | Collected for chemistry, sample #342. |
| DH15 | 07/12/88 | 09:50 | 0.21 | 1288.410 | 103.900 | 0.002 | 3.51 | |
| DH15 | 09/27/88 | 08:20 | 0.00 | 1365.350 | 76.940 | 0.000 | 3.51 | Dry. |
| DH15 | 12/13/88 | 09:20 | 0 | 1442.390 | 77.040 | 0.000 | 3.51 | Dry. |
| DH15 | 03/14/89 | 09:12 | 0 | 1533.383 | 90.994 | 0.000 | 3.51 | Hole dry, funnel loose. |
| DH15 | 04/06/89 | 11:55 | 0 | 1556.497 | 23.114 | 0.000 | 3.51 | Hole dry. |
| DH15 | 04/20/89 | 10:05 | 0.04 | 1570.420 | 13.923 | 0.003 | 3.55 | |
| DH15 | 05/17/89 | 11:40 | 0 | 1597.486 | 27.066 | 0.000 | 3.55 | Hole dry. |
| DH15 | 06/29/89 | 10:55 | 0 | 1640.455 | 42.969 | 0.000 | 3.55 | Hole dry. |
| DH15 | 07/25/89 | 11:30 | 0 | 1666.479 | 26.024 | 0.000 | 3.55 | Hole dry. |
| DH15 | 08/16/89 | 10:10 | 0 | 1688.424 | 21.945 | 0.000 | 3.55 | Hole dry. |
| DH15 | 09/12/89 | 12:00 | 0 | 1715.500 | 27.076 | 0.000 | 3.55 | Hole dry. |
| DH15 | 10/20/89 | 10:39 | 0 | 1753.444 | 37.944 | 0.000 | 3.55 | Hole dry. |
| DH15 | 11/10/89 | 09:30 | 0 | 1774.396 | 20.952 | 0.000 | 3.55 | Hole dry. |
| DH15 | 11/29/89 | 11:40 | 0 | 1793.486 | 19.090 | 0.000 | 3.55 | Hole dry. |
| DH15 | 12/12/89 | 08:56 | 0 | 1806.372 | 12.886 | 0.000 | 3.55 | Hole dry. |
| DH15 | 01/04/90 | 09:30 | 0.0 | 1829.396 | 23.024 | 0.000 | 3.55 | Dry. |
| DH15 | 01/17/90 | 11:28 | 0.0 | 1842.478 | 13.082 | 0.000 | 3.55 | Dry. |
| DH15 | 01/31/90 | 09:35 | 0.0 | 1856.399 | 13.921 | 0.000 | 3.55 | Dry. |
| DH15 | 02/13/90 | 09:58 | 0.0 | 1869.415 | 13.016 | 0.000 | 3.55 | Dry. |
| DH15 | 02/27/90 | 11:41 | 0.0 | 1883.487 | 14.072 | 0.000 | 3.55 | Dry. |
| DH15 | 03/05/90 | 10:32 | 0.0 | 1889.439 | 5.952 | 0.000 | 3.55 | Dry. |
| DH15 | 03/21/90 | 11:03 | 0.0 | 1905.460 | 16.021 | 0.000 | 3.55 | Dry. |
| DH15 | 04/04/90 | 11:00 | 0.0 | 1919.458 | 13.998 | 0.000 | 3.55 | Dry. |
| DH15 | 04/06/90 | 10:22 | 0.0 | 1921.432 | 1.974 | 0.000 | 3.55 | Dry. |
| DH15 | 04/17/90 | 11:04 | 0.0 | 1932.461 | 11.029 | 0.000 | 3.55 | Dry. |
| DH15 | 04/24/90 | 10:25 | 0.0 | 1939.434 | 6.973 | 0.000 | 3.55 | Dry. |
| DH15 | 05/02/90 | 11:20 | 0.0 | 1947.472 | 8.038 | 0.000 | 3.55 | Dry. |
| DH15 | 05/09/90 | 10:36 | 0.0 | 1954.442 | 6.970 | 0.000 | 3.55 | Dry. |
| DH15 | 05/16/90 | 10:04 | 0.0 | 1961.419 | 6.977 | 0.000 | 3.55 | Dry. |
| DH15 | 05/23/90 | 12:40 | 0.0 | 1968.528 | 7.109 | 0.000 | 3.55 | Dry. |
| DH15 | 05/31/90 | 10:54 | 0.0 | 1976.454 | 7.926 | 0.000 | 3.55 | Dry. |
| DH15 | 06/06/90 | 11:00 | 0.0 | 1982.458 | 6.004 | 0.000 | 3.55 | Dry. |
| DH15 | 06/14/90 | 09:36 | 0.0 | 1990.400 | 7.942 | 0.000 | 3.55 | Dry. |
| DH15 | 06/20/90 | 08:40 | 0.0 | 1996.361 | 5.961 | 0.000 | 3.55 | Dry. |
| DH15 | 06/28/90 | 09:56 | 0.0 | 2004.414 | 8.053 | 0.000 | 3.55 | Dry. |
| DH15 | 07/25/90 | 08:15 | 0.0 | 2031.344 | 26.930 | 0.000 | 3.55 | Dry. |
| DH15 | 08/16/90 | 10:58 | 0.0 | 2053.457 | 22.113 | 0.000 | 3.55 | Dry. |
| DH15 | 08/22/90 | 11:45 | 0.0 | 2059.490 | 6.033 | 0.000 | 3.55 | Dry. |
| DH15 | 08/29/90 | 12:30 | 0.0 | 2066.521 | 7.031 | 0.000 | 3.55 | Dry. |
| DH15 | 09/05/90 | 11:40 | 0.0 | 2073.486 | 6.965 | 0.000 | 3.55 | Dry. |
| DH15 | 09/13/90 | 09:44 | 0.0 | 2081.406 | 7.920 | 0.000 | 3.55 | Dry. |
| DH15 | 09/25/90 | 12:20 | 0.0 | 2093.514 | 12.108 | 0.000 | 3.55 | Dry. |
| DH15 | 09/26/90 | 11:20 | 0.0 | 2094.472 | 0.958 | 0.000 | 3.55 | Dry. |
| DH15 | 10/03/90 | 09:40 | 0.0 | 2101.403 | 6.931 | 0.000 | 3.55 | Dry. |
| DH15 | 10/10/90 | 11:30 | 0.0 | 2108.479 | 7.076 | 0.000 | 3.55 | Dry. |
| DH15 | 10/18/90 | 10:15 | 0.0 | 2116.427 | 7.948 | 0.000 | 3.55 | Dry. |
| DH15 | 10/24/90 | 12:06 | 0.0 | 2122.504 | 6.077 | 0.000 | 3.55 | Dry. |
| DH15 | 10/31/90 | 11:32 | 0.0 | 2129.481 | 6.977 | 0.000 | 3.55 | Dry. |
| DH15 | 11/14/90 | 11:48 | 0.0 | 2143.492 | 14.011 | 0.000 | 3.55 | Dry. |
| DH15 | 11/28/90 | 10:50 | 0.0 | 2157.451 | 13.959 | 0.000 | 3.55 | Dry. |
| DH15 | 12/05/90 | 08:54 | 0.0 | 2164.371 | 6.920 | 0.000 | 3.55 | Dry. |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| DH15 | 12/13/90 | 09:32 | 0.0 | 2172.397 | 8.026 | 0.000 | 3.55 | Dry. |
| DH15 | 01/30/91 | 10:03 | 0.00 | 2220.419 | 48.022 | 0.000 | 3.55 | Dry. Funnel missing, installed collector. |
| DH15 | 02/13/91 | 11:20 | 0.00 | 2234.472 | 14.053 | 0.000 | 3.55 | Dry. |
| DH15 | 02/27/91 | 10:15 | 0.00 | 2248.427 | 13.955 | 0.000 | 3.55 | Dry. |
| DH15 | 03/07/91 | 10:10 | 0.00 | 2256.424 | 7.997 | 0.000 | 3.55 | Dry. |
| DH15 | 03/20/91 | 11:20 | 0.00 | 2269.472 | 13.048 | 0.000 | 3.55 | Dry. |
| DH15 | 03/28/91 | 10:52 | 0.00 | 2277.453 | 7.981 | 0.000 | 3.55 | Dry. |
| DH15 | 04/10/91 | 09:10 | 0.00 | 2290.382 | 12.929 | 0.000 | 3.55 | Dry. |
| DH15 | 05/14/91 | 09:45 | 0.00 | 2324.406 | 34.024 | 0.000 | 3.55 | Dry. |
| DH15 | 05/15/91 | 09:55 | 0.00 | 2325.413 | 1.007 | 0.000 | 3.55 | Dry. |
| DH15 | 05/30/91 | 11:35 | 0.00 | 2340.483 | 15.070 | 0.000 | 3.55 | Dry. |
| DH15 | 06/05/91 | 14:05 | 0.00 | 2346.587 | 6.104 | 0.000 | 3.55 | Dry. |
| DH15 | 06/12/91 | 10:25 | 0.00 | 2353.434 | 6.847 | 0.000 | 3.55 | Dry. |
| DH15 | 06/19/91 | 14:53 | 0.00 | 2360.620 | 7.186 | 0.000 | 3.55 | Dry. |
| DH15 | 06/26/91 | 09:40 | 0.00 | 2367.403 | 6.783 | 0.000 | 3.55 | Dry. |
| DH15 | 07/11/91 | 10:35 | 0.00 | 2382.441 | 15.038 | 0.000 | 3.55 | Dry. |
| DH15 | 07/17/91 | 09:58 | 0.00 | 2388.415 | 5.974 | 0.000 | 3.55 | Dry. |
| DH15 | 07/30/91 | 09:50 | 0.00 | 2401.410 | 12.995 | 0.000 | 3.55 | Dry. |
| DH15 | 08/08/91 | 08:31 | 0.00 | 2410.355 | 8.945 | 0.000 | 3.55 | Dry. |
| DH15 | 08/14/91 | 09:20 | 0.00 | 2416.389 | 6.034 | 0.000 | 3.55 | Dry. |
| DH15 | 08/21/91 | 09:20 | 0.00 | 2423.389 | 7.000 | 0.000 | 3.55 | Dry. |
| DH15 | 08/28/91 | 08:50 | 0.00 | 2430.368 | 6.979 | 0.000 | 3.55 | Dry. |
| DH15 | 09/04/91 | 10:14 | 0.00 | 2437.426 | 7.058 | 0.000 | 3.55 | Dry. |
| DH15 | 10/02/91 | 10:25 | 0.00 | 2465.434 | 28.008 | 0.000 | 3.55 | Dry. |
| DH15 | 10/16/91 | 10:20 | 0.00 | 2479.431 | 13.997 | 0.000 | 3.55 | Dry. |
| DH15 | 10/31/91 | 10:40 | 0.00 | 2494.444 | 15.013 | 0.000 | 3.55 | Dry. |
| DH15 | 11/06/91 | 11:30 | 0.00 | 2500.479 | 6.035 | 0.000 | 3.55 | Dry. |
| DH15 | 11/13/91 | 10:08 | 0.00 | 2507.422 | 6.943 | 0.000 | 3.55 | Dry. |
| DH15 | 11/20/91 | 9:30 | 0.00 | 2514.375 | 6.953 | 0.000 | 3.55 | Dry. |
| DH15 | 11/27/91 | 08:50 | 0.00 | 2521.368 | 6.993 | 0.000 | 3.55 | Dry. |
| DH15 | 12/04/91 | 10:15 | 0.00 | 2528.427 | 7.059 | 0.000 | 3.55 | Dry. |
| DH15 | 12/11/91 | 10:15 | 0.00 | 2535.427 | 7.000 | 0.000 | 3.55 | Dry. |
| DH215 | 01/02/83 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Approximate date E140 drift was excavated at S1950. |
| DH215 | 01/06/83 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Uphole drilled 1/05/83 to 1/06/83. |
| DH215 | 04/20/84 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Experimental brine collection device installed. |
| DH215 | 01/15/85 | 11:00 | 00.05 | 14.458 | 1.000 | 0.000 | 0.05 | First data entry in BSEP Phase I collecting program. |
| DH215 | 01/22/85 | 12:00 | 00.08 | 21.500 | 7.042 | 0.011 | 0.13 | |
| DH215 | 01/29/85 | 12:00 | 00.08 | 28.500 | 7.000 | 0.011 | 0.21 | |
| DH215 | 02/05/85 | 12:00 | 00.04 | 35.500 | 7.000 | 0.006 | 0.25 | |
| DH215 | 02/11/85 | 13:00 | 00.06 | 41.542 | 6.042 | 0.010 | 0.31 | |
| DH215 | 02/14/85 | 11:00 | 00.03 | 44.458 | 2.916 | 0.010 | 0.34 | Replaced collecting device. |
| DH215 | 02/19/85 | 10:35 | 00.07 | 49.441 | 4.983 | 0.014 | 0.41 | |
| DH215 | 02/26/85 | 12:10 | 00.09 | 56.507 | 7.066 | 0.013 | 0.50 | |
| DH215 | 03/07/85 | 10:30 | 00.12 | 65.438 | 8.931 | 0.013 | 0.62 | |
| DH215 | 03/12/85 | 12:30 | 00.10 | 70.521 | 5.083 | 0.020 | 0.72 | |
| DH215 | 03/20/85 | 14:00 | 00.11 | 78.583 | 8.062 | 0.014 | 0.83 | |
| DH215 | 03/26/85 | 11:30 | 00.05 | 84.479 | 5.896 | 0.008 | 0.88 | |
| DH215 | 04/02/85 | 13:00 | 00.05 | 91.542 | 7.063 | 0.007 | 0.93 | |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| DH215 | 04/10/85 | 13:00 | 00.09 | 99.542 | 8.000 | 0.011 | 1.02 | |
| DH215 | 04/17/85 | 14:00 | 00.03 | 106.583 | 7.041 | 0.004 | 1.05 | Drip missing funnel. |
| DH215 | 04/23/85 | 14:30 | 00.10 | 112.604 | 6.021 | 0.017 | 1.15 | |
| DH215 | 04/30/85 | 09:09 | 00.08 | 119.381 | 6.777 | 0.012 | 1.23 | |
| DH215 | 05/07/85 | 10:50 | 00.09 | 126.451 | 7.070 | 0.013 | 1.32 | Salt crystals in container. |
| DH215 | 05/14/85 | 13:06 | 00.11 | 133.546 | 7.095 | 0.016 | 1.43 | |
| DH215 | 05/21/85 | 12:15 | 00.08 | 140.510 | 6.964 | 0.011 | 1.51 | |
| DH215 | 05/29/85 | 11:00 | 00.09 | 148.458 | 7.948 | 0.011 | 1.60 | |
| DH215 | 06/04/85 | 13:15 | 00.09 | 154.552 | 6.094 | 0.015 | 1.69 | Salt crystals in container. |
| DH215 | 06/11/85 | 13:10 | 00.13 | 161.549 | 6.997 | 0.019 | 1.82 | |
| DH215 | 06/18/85 | 11:22 | 00.13 | 168.474 | 6.925 | 0.019 | 1.95 | |
| DH215 | 06/25/85 | 12:55 | 00.12 | 175.538 | 7.064 | 0.017 | 2.07 | |
| DH215 | 07/02/85 | 11:00 | 00.10 | 182.458 | 6.920 | 0.014 | 2.17 | |
| DH215 | 07/09/85 | 12:39 | 00.09 | 189.527 | 7.069 | 0.013 | 2.26 | |
| DH215 | 07/16/85 | 12:37 | 00.11 | 196.526 | 6.999 | 0.016 | 2.37 | Salt crystals in container. |
| DH215 | 07/24/85 | 12:39 | 00.14 | 204.527 | 8.001 | 0.017 | 2.51 | |
| DH215 | 07/30/85 | 11:09 | 00.10 | 210.465 | 5.938 | 0.017 | 2.61 | |
| DH215 | 08/06/85 | 11:20 | 00.11 | 217.472 | 7.007 | 0.016 | 2.72 | |
| DH215 | 08/14/85 | 13:17 | 00.17 | 225.553 | 8.081 | 0.021 | 2.89 | |
| DH215 | 08/20/85 | 12:57 | 00.10 | 231.540 | 5.987 | 0.017 | 2.99 | |
| DH215 | 08/26/85 | 14:36 | 00.12 | 237.608 | 6.068 | 0.020 | 3.11 | |
| DH215 | 09/04/85 | 11:35 | 00.14 | 246.483 | 8.875 | 0.016 | 3.25 | |
| DH215 | 09/10/85 | 12:05 | 00.09 | 252.503 | 6.020 | 0.015 | 3.34 | |
| DH215 | 09/17/85 | 10:00 | 00.12 | 259.417 | 6.914 | 0.017 | 3.46 | |
| DH215 | 09/24/85 | 11:11 | 00.13 | 266.466 | 7.049 | 0.018 | 3.59 | |
| DH215 | 10/01/85 | 10:55 | 00.12 | 273.455 | 6.989 | 0.017 | 3.71 | Salt crystals in container. |
| DH215 | 10/08/85 | 12:00 | 00.10 | 280.500 | 7.045 | 0.014 | 3.81 | |
| DH215 | 10/15/85 | 11:31 | 00.20 | 287.480 | 6.980 | 0.029 | 4.01 | |
| DH215 | 10/23/85 | 11:54 | 00.33 | 295.496 | 8.016 | 0.041 | 4.34 | |
| DH215 | 10/29/85 | 11:54 | 00.12 | 301.496 | 6.000 | 0.020 | 4.46 | |
| DH215 | 11/13/85 | 11:18 | 00.18 | 316.471 | 14.975 | 0.012 | 4.64 | Floor lowered in E140 north of this location. |
| DH215 | 11/19/85 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 4.64 | Floor of E140 drift excavated, collar of downhole DH216 destroyed. |
| DH215 | 11/20/85 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 4.64 | Crossdrift excavation at S1950 initiated toward east. |
| DH215 | 12/04/85 | 15:00 | 00.35 | 337.625 | 21.154 | 0.017 | 4.99 | Sample for chem. anal. #14. |
| DH215 | 12/10/85 | 13:05 | 00.11 | 343.545 | 5.920 | 0.019 | 5.10 | |
| DH215 | 12/17/85 | 14:20 | 00.40 | 350.597 | 7.052 | 0.057 | 5.50 | |
| DH215 | 01/03/86 | 11:00 | 01.00 | 367.458 | 16.861 | 0.059 | 6.50 | Brine overflowing container, unknown amount not collected. |
| DH215 | 01/08/86 | 11:25 | 00.36 | 372.476 | 5.018 | 0.072 | 6.86 | |
| DH215 | 01/16/86 | 11:00 | 00.70 | 380.458 | 7.982 | 0.088 | 7.56 | |
| DH215 | 01/23/86 | 12:00 | 00.63 | 387.500 | 7.042 | 0.089 | 8.19 | |
| DH215 | 01/29/86 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 8.19 | Crossdrift excavation at S1950 initiated toward west. |
| DH215 | 01/31/86 | 13:50 | 00.45 | 395.576 | 8.076 | 0.056 | 8.64 | |
| DH215 | 02/12/86 | 12:25 | 00.27 | 407.517 | 11.941 | 0.023 | 8.91 | Stalactites removed from container. |
| DH215 | 02/19/86 | 13:15 | 00.26 | 414.552 | 7.035 | 0.037 | 9.17 | |
| DH215 | 02/28/86 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 9.17 | Floor lowered in E140 south of this location. |
| DH215 | 03/06/86 | 12:20 | 00.96 | 429.514 | 14.962 | 0.064 | 10.13 | |
| DH215 | 03/13/86 | 11:30 | 00.40 | 436.479 | 6.965 | 0.057 | 10.53 | |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| DH215 | 03/26/86 | 11:15 | 00.72 | 449.469 | 12.990 | 0.055 | 11.25 | |
| DH215 | 04/02/86 | 10:30 | 00.30 | 456.438 | 6.969 | 0.043 | 11.55 | |
| DH215 | 04/08/86 | 11:00 | 00.15 | 462.458 | 6.020 | 0.025 | 11.70 | |
| DH215 | 04/16/86 | 13:00 | 00.40 | 470.542 | 8.084 | 0.049 | 12.10 | |
| DH215 | 04/24/86 | 11:00 | 00.26 | 478.458 | 7.916 | 0.033 | 12.36 | |
| DH215 | 04/30/86 | 11:35 | 00.16 | 484.483 | 6.025 | 0.027 | 12.52 | |
| DH215 | 05/06/86 | 11:05 | 00.21 | 490.462 | 5.979 | 0.035 | 12.73 | |
| DH215 | 05/13/86 | 10:10 | 00.29 | 497.424 | 6.962 | 0.042 | 13.02 | |
| DH215 | 05/20/86 | 11:45 | 00.20 | 504.490 | 7.066 | 0.028 | 13.22 | |
| DH215 | 05/27/86 | 16:00 | 00.20 | 511.667 | 7.177 | 0.028 | 13.42 | |
| DH215 | 06/03/86 | 11:05 | 00.27 | 518.462 | 6.795 | 0.040 | 13.69 | |
| DH215 | 06/10/86 | 12:10 | 00.33 | 525.507 | 7.045 | 0.047 | 14.02 | Sample for brine chemistry, #16. |
| DH215 | 06/17/86 | 11:47 | 00.23 | 532.491 | 6.984 | 0.033 | 14.25 | |
| DH215 | 06/24/86 | 11:50 | 00.10 | 539.493 | 7.002 | 0.014 | 14.35 | |
| DH215 | 07/01/86 | 14:32 | 00.15 | 546.606 | 7.113 | 0.021 | 14.50 | |
| DH215 | 07/08/86 | 11:30 | 00.14 | 553.479 | 6.873 | 0.020 | 14.64 | About 1 lb. of salt encrustation removed from funnel on 1/07/86. |
| DH215 | 07/16/86 | 11:45 | 00.10 | 561.490 | 8.011 | 0.012 | 14.74 | |
| DH215 | 07/22/86 | 10:31 | 00.06 | 567.438 | 5.948 | 0.010 | 14.80 | |
| DH215 | 07/29/86 | 11:27 | 00.13 | 574.477 | 7.039 | 0.018 | 14.93 | |
| DH215 | 08/05/86 | 11:59 | 00.14 | 581.499 | 7.022 | 0.020 | 15.07 | |
| DH215 | 08/12/86 | 11:40 | 00.13 | 588.486 | 6.987 | 0.019 | 15.20 | |
| DH215 | 08/19/86 | 12:00 | 00.04 | 595.500 | 7.014 | 0.006 | 15.24 | |
| DH215 | 08/26/86 | 11:55 | 00.02 | 602.497 | 6.997 | 0.003 | 15.26 | Sample # 8. |
| DH215 | 09/04/86 | 11:55 | NA | 611.497 | 9.000 | 0.000 | 15.26 | Trace of brine. |
| DH215 | 09/23/86 | 11:35 | 00.00 | 630.483 | 18.986 | 0.000 | 15.26 | Dry. |
| DH215 | 10/01/86 | 08:23 | 00.02 | 638.349 | 7.866 | 0.003 | 15.28 | |
| DH215 | 10/08/86 | 13:41 | NA | 645.570 | 7.221 | 0.000 | 15.28 | Trace, none collected. |
| DH215 | 10/14/86 | 13:47 | 00.00 | 651.574 | 13.225 | 0.000 | 15.28 | Dry. |
| DH215 | 11/05/86 | 12:50 | 0.16 | 673.535 | 35.186 | 0.005 | 15.44 | |
| DH215 | 11/20/86 | NA: | NA | 688.000 | 14.465 | 0.000 | 15.44 | |
| DH215 | 12/30/86 | 09:51 | 00.14 | 728.410 | 54.875 | 0.003 | 15.58 | About 1/2 of this volume was a mixture of salt crystals and sun-flower seeds. |
| DH215 | 02/04/87 | 10:06 | 00.50 | 764.421 | 36.011 | 0.014 | 16.08 | 2 bottles. T 28.5, pH 5.33. |
| DH215 | 03/06/87 | 09:42 | 0.29 | 794.404 | 29.983 | 0.010 | 16.37 | |
| DH215 | 03/30/87 | 09:45 | 0.33 | 818.406 | 24.002 | 0.014 | 16.70 | |
| DH215 | 05/07/87 | 13:10 | 0.09 | 856.549 | 38.143 | 0.002 | 16.79 | |
| DH215 | 06/17/87 | 09:15 | 0.18 | 897.385 | 40.836 | 0.004 | 16.97 | |
| DH215 | 07/28/87 | 10:11 | 0.28 | 938.424 | 41.039 | 0.007 | 17.25 | |
| DH215 | 09/01/87 | 09:05 | 0.20 | 973.378 | 34.954 | 0.006 | 17.45 | |
| DH215 | 10/20/87 | 08:46 | 0.00 | 1022.370 | 48.992 | 0.000 | 17.45 | Dry. 1/2" salt crust in container. |
| DH215 | 11/19/87 | 08:31 | 0.00 | 1052.350 | 29.980 | 0.000 | 17.45 | Dry. |
| DH215 | 12/11/87 | 11:00 | | 1074.460 | 0.000 | 0.000 | 17.45 | Container is dry. Funnel was removed and the back was trimmed. |
| DH215 | 01/04/88 | 10:05 | | 1098.420 | 0.000 | 0.000 | 17.45 | Collar mined out. Dry, no evidence of moisture coming from the hole. |
| DH215 | 02/09/88 | 09:25 | | 1134.390 | 0.000 | 0.000 | 17.45 | Sampler removed. |
| DH215 | 03/29/88 | 09:15 | | 1183.390 | 0.000 | 0.000 | 17.45 | Collecting device removed by mine operations. |
| DH215 | 07/12/88 | 13:50 | | 1288.580 | 0.000 | 0.000 | 17.45 | No funnel. |
| DH215 | 09/27/88 | 13:00 | 0.00 | 1365.540 | 0.000 | 0.000 | 17.45 | None collected. |
| DH215 | 10/13/88 | 11:00 | | 1381.460 | 0.000 | 0.000 | 17.45 | Installed funnel and collection bottle. |
| DH215 | 12/13/88 | 10:45 | 0 | 1442.450 | 390.100 | 0.000 | 17.45 | Dry. |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| DH215 | 04/06/89 | 11:00 | 0 | 1556.458 | 114.010 | 0.000 | 17.45 | Hole dry. |
| DH215 | 04/20/89 | 13:10 | 0.11 | 1570.549 | 14.091 | 0.008 | 17.56 | |
| DH215 | 05/17/89 | 09:00 | 0 | 1597.375 | 26.826 | 0.000 | 17.56 | Hole dry. |
| DH215 | 06/29/89 | 08:50 | 0 | 1640.368 | 42.993 | 0.000 | 17.56 | Hole dry. |
| DH215 | 07/25/89 | 11:00 | 0.25 | 1666.458 | 26.090 | 0.010 | 17.81 | |
| DH215 | 08/16/89 | 09:10 | 0 | 1688.382 | 21.924 | 0.000 | 17.81 | Hole dry. |
| DH215 | 09/12/89 | 12:00 | 0 | 1715.500 | 27.118 | 0.000 | 17.81 | Hole dry. |
| DH215 | 12/12/89 | 12:25 | 0 | 1806.517 | 91.017 | 0.000 | 17.81 | Hole dry. |
| DH215 | 02/07/90 | 11:00 | 0.0 | 1863.458 | 56.941 | 0.000 | 17.81 | Dry. |
| DH215 | 02/21/90 | 09:00 | 0.0 | 1877.375 | 13.917 | 0.000 | 17.81 | Dry. |
| DH215 | 03/05/90 | 12:04 | 0.0 | 1889.503 | 12.128 | 0.000 | 17.81 | Dry. |
| DH215 | 03/21/90 | 09:00 | 0.0 | 1905.375 | 15.872 | 0.000 | 17.81 | Dry. |
| DH215 | 04/11/90 | 10:21 | 0.0 | 1926.431 | 21.056 | 0.000 | 17.81 | Dry. |
| DH215 | 05/02/90 | 09:35 | 0.0 | 1947.399 | 20.968 | 0.000 | 17.81 | Dry. |
| DH215 | 05/08/90 | 10:07 | 0.0 | 1953.422 | 6.023 | 0.000 | 17.81 | Dry. |
| DH215 | 05/17/90 | 09:11 | 0.0 | 1962.383 | 8.961 | 0.000 | 17.81 | Dry. Prepared collector. |
| DH215 | 05/23/90 | 13:35 | 0.0 | 1968.566 | 6.183 | 0.000 | 17.81 | Dry. |
| DH215 | 05/31/90 | 10:00 | 0.01 | 1976.417 | 7.851 | 0.001 | 17.82 | Did not save. |
| DH215 | 06/06/90 | 08:45 | 0.0 | 1982.365 | 5.948 | 0.000 | 17.82 | Dry. |
| DH215 | 06/14/90 | 10:57 | 0.07 | 1990.456 | 8.091 | 0.009 | 17.89 | |
| DH215 | 06/20/90 | 10:20 | NA | 1996.431 | 0.000 | 0.000 | 17.89 | Trace. Did not remove. |
| DH215 | 06/28/90 | 11:00 | NA | 2004.458 | 0.000 | 0.000 | 17.89 | Trace. Did not remove. |
| DH215 | 07/17/90 | 09:33 | NA | 2023.398 | 0.000 | 0.000 | 17.89 | Trace. Did not remove. |
| DH215 | 07/25/90 | 11:00 | 0.0 | 2031.458 | 41.002 | 0.000 | 17.89 | Dry. |
| DH215 | 08/07/90 | 09:10 | 0.04 | 2044.382 | 12.924 | 0.003 | 17.93 | |
| DH215 | 08/22/90 | 11:15 | 0.03 | 2059.469 | 15.087 | 0.002 | 17.96 | |
| DH215 | 08/29/90 | 11:30 | NA | 2066.479 | 0.000 | 0.000 | 17.96 | Trace. Did not sample. |
| DH215 | 09/05/90 | 10:30 | NA | 2073.438 | 0.000 | 0.000 | 17.96 | Trace. Did not collect. |
| DH215 | 09/12/90 | 08:37 | 0.02 | 2080.359 | 20.890 | 0.001 | 17.98 | |
| DH215 | 11/08/90 | 10:01 | 0.05 | 2137.417 | 57.058 | 0.001 | 18.03 | |
| DH215 | 11/14/90 | 10:15 | 0.0 | 2143.427 | 6.010 | 0.000 | 18.03 | Dry. |
| DH215 | 03/20/91 | 13:37 | 0.00 | 2269.567 | 126.140 | 0.000 | 18.03 | Dry. |
| DH215 | 04/10/91 | 12:20 | 0.00 | 2290.514 | 20.947 | 0.000 | 18.03 | Dry. |
| DH215 | 05/01/91 | 10:40 | 0.00 | 2311.444 | 20.930 | 0.000 | 18.03 | Dry. |
| DH215 | 05/08/91 | 09:10 | 0.00 | 2318.382 | 6.938 | 0.000 | 18.03 | Dry. |
| DH215 | 05/15/91 | 10:55 | 0.00 | 2325.455 | 7.073 | 0.000 | 18.03 | Dry. |
| DH215 | 06/19/91 | 16:05 | 0.00 | 2360.670 | 35.215 | 0.000 | 18.03 | Dry. |
| DH215 | 06/26/91 | 10:15 | 0.00 | 2367.427 | 6.757 | 0.000 | 18.03 | Dry. |
| DH215 | 07/17/91 | 11:09 | 0.00 | 2388.465 | 21.038 | 0.000 | 18.03 | Dry. |
| DH215 | 08/14/91 | 11:00 | 0.05 | 2416.458 | 27.993 | 0.002 | 18.08 | Dry. |
| DH215 | 09/18/91 | 10:08 | 0.00 | 2451.422 | 34.964 | 0.000 | 18.08 | Dry. |
| DH215 | 09/25/91 | 12:40 | 0.00 | 2458.528 | 7.106 | 0.000 | 18.08 | Dry. |
| DH215 | 10/23/91 | 10:10 | 0.00 | 2486.424 | 27.896 | 0.000 | 18.08 | Dry. |
| DH215 | 10/31/91 | 11:28 | 0.00 | 2494.478 | 8.054 | 0.000 | 18.08 | Dry. |
| DH215 | 11/13/91 | 09:10 | 0.00 | 2507.382 | 12.904 | 0.000 | 18.08 | Dry. |
| DH215 | 12/04/91 | 09:00 | 0.00 | 2528.375 | 20.993 | 0.000 | 18.08 | Dry. |
| DH35 | 11/21/84 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Approximate date this part of Room G was excavated. |
| DH35 | 01/27/85 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Uphole drilled 1/26/85 to 1/27/85. |
| DH35 | 02/05/85 | 11:15 | NA | 35.469 | 1.000 | 0.000 | 0.00 | Started to drip. |
| DH35 | 03/05/85 | 10:00 | 00.19 | 63.417 | 28.948 | 0.007 | 0.19 | Salt crystals in container. First time |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | collected. |
| DH35 | 03/12/85 | 10:00 | 00.17 | 70.417 | 7.000 | 0.024 | 0.36 | Salt crystals in container. |
| DH35 | 03/20/85 | 10:26 | 00.19 | 78.435 | 8.018 | 0.024 | 0.55 | |
| DH35 | 03/26/85 | 09:45 | 00.13 | 84.406 | 5.971 | 0.022 | 0.68 | |
| DH35 | 04/02/85 | 10:15 | 00.15 | 91.427 | 7.021 | 0.021 | 0.83 | Salt crystals in container. |
| DH35 | 04/10/85 | 10:14 | 00.19 | 99.426 | 7.999 | 0.024 | 1.02 | |
| DH35 | 04/23/85 | 11:46 | 00.12 | 112.490 | 13.064 | 0.009 | 1.14 | |
| DH35 | 04/30/85 | 11:09 | 00.16 | 119.465 | 6.975 | 0.023 | 1.30 | Clay in container. |
| DH35 | 05/07/85 | 09:53 | 00.14 | 126.412 | 6.947 | 0.020 | 1.44 | |
| DH35 | 05/14/85 | 10:48 | 00.16 | 133.450 | 7.038 | 0.023 | 1.60 | |
| DH35 | 05/21/85 | 10:42 | 00.15 | 140.446 | 6.996 | 0.021 | 1.75 | |
| DH35 | 05/29/85 | 10:00 | 00.15 | 148.417 | 7.971 | 0.019 | 1.90 | |
| DH35 | 06/11/85 | 10:10 | 00.02 | 161.424 | 13.007 | 0.002 | 1.92 | |
| DH35 | 07/09/85 | 11:10 | 00.06 | 189.465 | 28.041 | 0.002 | 1.98 | |
| DH35 | 07/16/85 | 11:48 | 00.13 | 196.492 | 7.027 | 0.019 | 2.11 | |
| DH35 | 07/24/85 | 10:37 | 00.12 | 204.442 | 7.950 | 0.015 | 2.23 | |
| DH35 | 07/30/85 | 10:17 | 00.08 | 210.428 | 5.986 | 0.013 | 2.31 | Clay in container. |
| DH35 | 08/06/85 | 10:37 | 00.08 | 217.442 | 7.014 | 0.011 | 2.39 | Clay chunks in container. |
| DH35 | 08/14/85 | 10:53 | 00.11 | 225.453 | 8.011 | 0.014 | 2.50 | |
| DH35 | 08/20/85 | 11:05 | 00.09 | 231.462 | 6.009 | 0.015 | 2.59 | |
| DH35 | 08/28/85 | 10:00 | 00.14 | 239.417 | 7.955 | 0.018 | 2.73 | |
| DH35 | 09/04/85 | 10:30 | 00.11 | 246.438 | 7.021 | 0.016 | 2.84 | |
| DH35 | 09/10/85 | 10:38 | 00.11 | 252.443 | 6.005 | 0.018 | 2.95 | |
| DH35 | 09/17/85 | 09:40 | 00.12 | 259.403 | 6.960 | 0.017 | 3.07 | |
| DH35 | 09/24/85 | 09:48 | 00.07 | 266.408 | 7.005 | 0.010 | 3.14 | |
| DH35 | 10/08/85 | 10:44 | 00.08 | 280.447 | 14.039 | 0.006 | 3.22 | |
| DH35 | 10/15/85 | 10:17 | 00.06 | 287.428 | 6.981 | 0.009 | 3.28 | |
| DH35 | 10/29/85 | 09:42 | 00.06 | 301.404 | 13.976 | 0.004 | 3.34 | |
| DH35 | 11/05/85 | 09:24 | 00.08 | 308.392 | 6.988 | 0.011 | 3.42 | |
| DH35 | 11/13/85 | 10:06 | 00.11 | 316.421 | 8.029 | 0.014 | 3.53 | |
| DH35 | 11/21/85 | 11:32 | 00.07 | 324.481 | 8.060 | 0.009 | 3.60 | |
| DH35 | 11/26/85 | 11:25 | 00.05 | 329.476 | 4.995 | 0.010 | 3.65 | Changed collecting container. |
| DH35 | 01/23/86 | 10:40 | 00.06 | 387.444 | 57.968 | 0.001 | 3.71 | Clay in collecting container. Entry has been restricted since 12/10/85 due to mining activities. |
| DH35 | 01/31/86 | 12:16 | 00.06 | 395.511 | 8.067 | 0.007 | 3.77 | |
| DH35 | 02/12/86 | 10:55 | 00.09 | 407.455 | 11.944 | 0.008 | 3.86 | |
| DH35 | 02/19/86 | 11:45 | 00.07 | 414.490 | 7.035 | 0.010 | 3.93 | |
| DH35 | 02/28/86 | 13:20 | 00.06 | 423.556 | 9.066 | 0.007 | 3.99 | |
| DH35 | 03/06/86 | 10:45 | 00.03 | 429.448 | 5.892 | 0.005 | 4.02 | |
| DH35 | 03/13/86 | 10:10 | 00.07 | 436.424 | 6.976 | 0.010 | 4.09 | |
| DH35 | 03/26/86 | 10:20 | NA | 449.431 | 13.007 | 0.000 | 4.09 | Funnel broken, 5 inch stalactite formed from collar. |
| DH35 | 04/02/86 | 09:40 | NA | 456.403 | 19.979 | 0.000 | 4.09 | Installed new funnel. |
| DH35 | 05/27/86 | 15:45 | NA | 511.656 | 75.232 | 0.000 | 4.09 | Trace of brine. |
| DH35 | 06/03/86 | 10:08 | 00.01 | 518.422 | 81.99[illegible] | 0.000 | 4.10 | |
| DH35 | 06/10/86 | 11:35 | 00.02 | 525.483 | 7.06[illegible] | 0.003 | 4.12 | Sample for brine chemistry, #15. |
| DH35 | 06/17/86 | 10:58 | 00.01 | 532.457 | 6.974 | 0.001 | 4.13 | Sample #15. |
| DH35 | 06/24/86 | 10:57 | 00.02 | 539.456 | 6.999 | 0.003 | 4.15 | |
| DH35 | 07/01/86 | 14:03 | 00.02 | 546.585 | 7.129 | 0.003 | 4.17 | |
| DH35 | 07/08/86 | 10:37 | 00.02 | 553.442 | 6.857 | 0.003 | 4.19 | |
| DH35 | 07/16/86 | 10:36 | 00.03 | 561.442 | 8.000 | 0.004 | 4.22 | |
| DH35 | 07/22/86 | 10:05 | NA | 567.420 | 5.978 | 0.000 | 4.22 | Trace of brine. Cleaned soft clay out of |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | funnel. |
| DH35 | 07/29/86 | 10:35 | 00.01 | 574.441 | 12.999 | 0.001 | 4.23 | |
| DH35 | 08/05/86 | 11:13 | 00.03 | 581.467 | 7.026 | 0.004 | 4.26 | |
| DH35 | 08/12/86 | 10:35 | 00.03 | 588.441 | 6.974 | 0.004 | 4.29 | |
| DH35 | 08/19/86 | 11:35 | 00.01 | 595.483 | 7.042 | 0.001 | 4.30 | Sample # 2 for brine chemistry. |
| DH35 | 08/26/86 | 10:38 | NA | 602.443 | 6.960 | 0.000 | 4.30 | Trace collected. Sample # 2. |
| DH35 | 09/04/86 | 10:40 | 00.01 | 611.444 | 15.961 | 0.001 | 4.31 | Sample # 2. |
| DH35 | 09/09/86 | 10:10 | NA | 616.424 | 4.980 | 0.000 | 4.31 | Trace collected. Sample # 2. |
| DH35 | 09/16/86 | 10:13 | NA | 623.426 | 11.982 | 0.000 | 4.31 | Trace collected. |
| DH35 | 09/23/86 | 10:11 | NA | 630.424 | 18.980 | 0.000 | 4.31 | Trace. |
| DH35 | 10/01/86 | 12:16 | 00.00 | 638.511 | 27.067 | 0.000 | 4.31 | Trace, none collected. |
| DH35 | 10/08/86 | 11:08 | NA | 645.464 | 6.953 | 0.000 | 4.31 | Small amount not collected. |
| DH35 | 11/05/86 | 11:28 | NA | 673.478 | 28.014 | 0.000 | 4.31 | Damp, not collected. |
| DH35 | 11/20/86 | NA: | NA | 688.000 | 42.536 | 0.000 | 4.31 | Not sampled, looked dry. |
| DH35 | 12/30/86 | 12:15 | NA | 728.510 | 83.046 | 0.000 | 4.31 | |
| DH35 | 02/03/87 | NA: | NA | 763.000 | 117.536 | 0.000 | 4.31 | |
| DH35 | 03/06/87 | 11:25 | NA | 794.476 | 149.012 | 0.000 | 4.31 | Dry. |
| DH35 | 03/30/87 | 11:20 | 0.00 | 818.472 | 23.996 | 0.000 | 4.31 | Dry. |
| DH35 | 05/07/87 | 11:35 | 0.00 | 856.483 | 62.007 | 0.000 | 4.31 | Dry. |
| DH35 | 06/18/87 | 12:10 | 0.00 | 898.507 | 104.031 | 0.000 | 4.31 | Dry. |
| DH35 | 07/28/87 | 11:15 | 0.00 | 938.469 | 143.993 | 0.000 | 4.31 | Dry. |
| DH35 | 09/01/87 | 10:50 | 0.00 | 973.451 | 34.982 | 0.000 | 4.31 | Dry. |
| DH35 | 10/20/87 | 11:56 | 0.00 | 1022.500 | 49.049 | 0.000 | 4.31 | Dry. |
| DH35 | 11/19/87 | 11:30 | 0.00 | 1052.480 | 29.980 | 0.000 | 4.31 | Dry. |
| DH35 | 01/04/88 | 12:00 | 0.00 | 1098.500 | 46.020 | 0.000 | 4.31 | Dry. |
| DH35 | 02/08/88 | 11:55 | 0.00 | 1133.500 | 35.000 | 0.000 | 4.31 | Dry. |
| DH35 | 03/29/88 | 11:40 | 0.00 | 1183.490 | 49.990 | 0.000 | 4.31 | Dry. |
| DH35 | 07/12/88 | 08:50 | 0.00 | 1288.370 | 104.880 | 0.000 | 4.31 | Dry. |
| DH35 | 09/27/88 | 10:50 | 0.00 | 1365.450 | 77.080 | 0.000 | 4.31 | Dry. |
| DH35 | 03/15/89 | 10:50 | 0 | 1534.451 | 169.000 | 0.000 | 4.31 | Hole dry. |
| DH35 | 04/06/89 | 09:40 | 0 | 1556.403 | 21.952 | 0.000 | 4.31 | Hole dry. |
| DH35 | 04/20/89 | 09:40 | 0 | 1570.403 | 14.000 | 0.000 | 4.31 | Hole dry. |
| DH35 | 06/06/89 | 10:15 | 0 | 1617.427 | 47.024 | 0.000 | 4.31 | Sample saved for chemistry. |
| DH35 | 06/29/89 | 10:35 | 0 | 1640.441 | 23.014 | 0.000 | 4.31 | Hole dry. |
| DH35 | 07/25/89 | 09:55 | 0 | 1666.413 | 25.972 | 0.000 | 4.31 | Hole dry. |
| DH35 | 08/16/89 | 09:55 | 0 | 1688.413 | 22.000 | 0.000 | 4.31 | Hole dry. |
| DH35 | 08/28/89 | 10:20 | 0 | 1700.431 | 12.018 | 0.000 | 4.31 | Collecting device removed. |
| DH35 | 12/13/89 | 11:20 | 0 | 1807.472 | 107.041 | 0.000 | 4.31 | Hole dry. |
| DH35 | 01/24/90 | 10:00 | 0.0 | 1849.417 | 41.945 | 0.000 | 4.31 | Dry. |
| DH35 | 02/07/90 | 10:30 | 0.0 | 1863.438 | 14.021 | 0.000 | 4.31 | Dry. |
| DH35 | 02/21/90 | 09:48 | 0.0 | 1877.408 | 13.970 | 0.000 | 4.31 | Dry. |
| DH35 | 03/05/90 | 09:35 | 0.0 | 1889.399 | 11.991 | 0.000 | 4.31 | Dry. |
| DH35 | 03/19/90 | 10:36 | 0.0 | 1903.442 | 14.043 | 0.000 | 4.31 | Dry. |
| DH35 | 03/21/90 | 10:30 | 0.0 | 1905.438 | 1.996 | 0.000 | 4.31 | Dry. |
| DH35 | 04/04/90 | 09:56 | 0.0 | 1919.414 | 13.976 | 0.000 | 4.31 | Dry. |
| DH35 | 04/10/90 | 08:34 | 0.0 | 1925.357 | 5.943 | 0.000 | 4.31 | Dry. |
| DH35 | 04/17/90 | 10:17 | 0.0 | 1932.428 | 7.071 | 0.000 | 4.31 | Dry. |
| DH35 | 04/24/90 | 09:35 | 0.0 | 1939.399 | 6.971 | 0.000 | 4.31 | Dry. |
| DH35 | 05/02/90 | 10:30 | 0.0 | 1947.438 | 8.039 | 0.000 | 4.31 | Dry. |
| DH35 | 05/09/90 | 08:42 | 0.0 | 1954.362 | 6.924 | 0.000 | 4.31 | Dry. |
| DH35 | 05/16/90 | 08:45 | 0.0 | 1961.365 | 7.003 | 0.000 | 4.31 | Dry. |
| DH35 | 05/23/90 | 12:03 | 0.0 | 1968.502 | 7.137 | 0.000 | 4.31 | Dry. |
| DH35 | 05/31/90 | 08:40 | 0.0 | 1976.361 | 7.859 | 0.000 | 4.31 | Dry. |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| DH35 | 06/06/90 | 08:43 | 0.0 | 1982.363 | 6.002 | 0.000 | 4.31 | Dry. |
| DH35 | 06/14/90 | 08:32 | 0.0 | 1990.356 | 7.993 | 0.000 | 4.31 | Dry. |
| DH35 | 06/20/90 | 09:53 | 0.0 | 1996.412 | 6.056 | 0.000 | 4.31 | Dry. |
| DH35 | 06/28/90 | 08:38 | 0.0 | 2004.360 | 7.948 | 0.000 | 4.31 | Dry. |
| DH35 | 07/17/90 | 10:50 | 0.0 | 2023.451 | 19.091 | 0.000 | 4.31 | Dry. |
| DH35 | 07/25/90 | 09:32 | 0.0 | 2031.397 | 7.946 | 0.000 | 4.31 | Dry. |
| DH35 | 08/01/90 | 10:38 | 0.0 | 2038.443 | 7.046 | 0.000 | 4.31 | Dry. |
| DH35 | 12/13/90 | 08:50 | 0.0 | 2172.368 | 133.925 | 0.000 | 4.31 | Dry. |
| DH35 | 02/13/91 | 10:45 | 0.00 | 2234.448 | 62.080 | 0.000 | 4.31 | Dry. |
| DH35 | 03/28/91 | 10:40 | 0.00 | 2277.444 | 42.996 | 0.000 | 4.31 | Dry. |
| DH35 | 04/10/91 | 08:25 | 0.00 | 2290.351 | 12.907 | 0.000 | 4.31 | Dry. |
| DH35 | 04/17/91 | 10:41 | 0.00 | 2297.445 | 7.094 | 0.000 | 4.31 | Dry. |
| DH35 | 05/01/91 | 09:26 | 0.00 | 2311.393 | 13.948 | 0.000 | 4.31 | Dry. |
| DH35 | 05/08/91 | 08:39 | 0.00 | 2318.360 | 6.967 | 0.000 | 4.31 | Dry. |
| DH35 | 05/15/91 | 09:25 | 0.00 | 2325.392 | 7.032 | 0.000 | 4.31 | Dry. |
| DH35 | 05/29/91 | 09:29 | 0.00 | 2339.395 | 14.003 | 0.000 | 4.31 | Dry. |
| DH35 | 06/05/91 | 13:55 | 0.00 | 2346.580 | 7.185 | 0.000 | 4.31 | Dry. |
| DH35 | 06/12/91 | 10:20 | 0.00 | 2353.431 | 6.851 | 0.000 | 4.31 | Dry. |
| DH35 | 06/19/91 | 14:15 | 0.00 | 2360.594 | 7.163 | 0.000 | 4.31 | Dry. |
| DH35 | 06/26/91 | 08:55 | 0.00 | 2367.372 | 6.778 | 0.000 | 4.31 | Dry. |
| DH35 | 07/11/91 | 10:26 | 0.00 | 2382.435 | 15.063 | 0.000 | 4.31 | Dry. |
| DH35 | 07/17/91 | 09:35 | 0.00 | 2388.399 | 5.964 | 0.000 | 4.31 | Dry. |
| DH35 | 07/30/91 | 10:35 | 0.00 | 2401.441 | 13.042 | 0.000 | 4.31 | Dry. |
| DH35 | 08/14/91 | 10:00 | 0.00 | 2416.417 | 14.976 | 0.000 | 4.31 | Dry. |
| DH35 | 08/21/91 | 11:00 | 0.00 | 2423.458 | 7.041 | 0.000 | 4.31 | Dry. |
| DH35 | 08/28/91 | 09:55 | 0.00 | 2430.413 | 6.955 | 0.000 | 4.31 | Dry. |
| DH35 | 09/04/91 | 11:22 | 0.00 | 2437.474 | 7.061 | 0.000 | 4.31 | Dry. |
| DH35 | 09/11/91 | 11:55 | 0.00 | 2444.497 | 7.023 | 0.000 | 4.31 | Dry. |
| DH35 | 09/18/91 | 09:27 | 0.00 | 2451.394 | 6.897 | 0.000 | 4.31 | Dry. |
| DH35 | 09/25/91 | 11:25 | 0.00 | 2458.476 | 7.082 | 0.000 | 4.31 | Dry. |
| DH35 | 10/02/91 | 11:13 | 0.00 | 2465.467 | 6.991 | 0.000 | 4.31 | Dry. |
| DH35 | 10/16/91 | 09:45 | 0.00 | 2479.406 | 13.939 | 0.000 | 4.31 | Dry. |
| DH35 | 10/23/91 | 09:55 | 0.00 | 2486.413 | 7.007 | 0.000 | 4.31 | Dry. |
| DH35 | 10/31/91 | 09:52 | 0.00 | 2494.411 | 7.998 | 0.000 | 4.31 | Dry. |
| DH35 | 11/06/91 | 10:15 | 0.00 | 2500.427 | 6.016 | 0.000 | 4.31 | Dry. |
| DH35 | 11/13/91 | 09:20 | 0.00 | 2507.389 | 6.962 | 0.000 | 4.31 | Dry. |
| DH35 | 11/20/91 | 11:05 | 0.00 | 2514.462 | 7.073 | 0.000 | 4.31 | Dry. |
| DH35 | 11/27/91 | 09:40 | 0.00 | 2521.403 | 6.941 | 0.000 | 4.31 | Dry. |
| DH35 | 12/04/91 | 09:52 | 0.00 | 2528.411 | 7.008 | 0.000 | 4.31 | Dry. |
| DH35 | 12/11/91 | 09:55 | 0.00 | 2535.413 | 7.002 | 0.000 | 4.31 | Dry. |
| DH36 | 11/21/84 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Approximate date this part of Room G excavated. |
| DH36 | 01/26/85 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Downhole drilled 1/26/85. |
| DH36 | 01/28/85 | 09:00 | NA | 27.375 | 1.000 | 0.000 | 0.00 | Moist muck at the bottom. |
| DH36 | 02/05/85 | 11:15 | 02.50 | 35.469 | 9.094 | 0.275 | 2.50 | About 1 ft. muck, brine and hydraulic fluid. First time bailed. |
| DH36 | 02/11/85 | 11:00 | 01.51 | 41.458 | 5.989 | 0.252 | 4.01 | Brine, muck, hydraulic fluid. |
| DH36 | 02/19/85 | 12:10 | 01.78 | 49.507 | 8.049 | 0.221 | 5.79 | Some muck. |
| DH36 | 02/26/85 | 10:45 | 01.48 | 56.448 | 6.941 | 0.213 | 7.27 | Brine and muck. |
| DH36 | 03/05/85 | 10:00 | 01.76 | 63.417 | 6.969 | 0.253 | 9.03 | |
| DH36 | 03/12/85 | 10:00 | 01.55 | 70.417 | 7.000 | 0.221 | 10.58 | |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| DH36 | 03/20/85 | 10:26 | 01.59 | 78.435 | 8.018 | 0.198 | 12.17 | |
| DH36 | 03/26/85 | 09:45 | 01.35 | 84.406 | 5.971 | 0.226 | 13.52 | |
| DH36 | 04/02/85 | 10:15 | 01.58 | 91.427 | 7.021 | 0.225 | 15.10 | |
| DH36 | 04/10/85 | 10:25 | 01.71 | 99.434 | 8.007 | 0.214 | 16.81 | |
| DH36 | 04/17/85 | 13:30 | 01.49 | 106.562 | 7.128 | 0.209 | 18.30 | |
| DH36 | 04/23/85 | 11:46 | 01.45 | 112.490 | 5.928 | 0.245 | 19.75 | |
| DH36 | 04/30/85 | 11:21 | 01.49 | 119.473 | 6.983 | 0.213 | 21.24 | |
| DH36 | 05/07/85 | 09:58 | 01.55 | 126.415 | 6.942 | 0.223 | 22.79 | |
| DH36 | 05/14/85 | 10:54 | 01.77 | 133.454 | 7.039 | 0.251 | 24.56 | |
| DH36 | 05/21/85 | 10:45 | 01.61 | 140.448 | 6.994 | 0.230 | 26.17 | |
| DH36 | 05/29/85 | 10:00 | 01.50 | 148.417 | 7.969 | 0.188 | 27.67 | |
| DH36 | 06/04/85 | 11:33 | 01.40 | 154.481 | 6.064 | 0.231 | 29.07 | |
| DH36 | 06/11/85 | 11:15 | 01.55 | 161.469 | 6.988 | 0.222 | 30.62 | |
| DH36 | 06/18/85 | 10:17 | 01.58 | 168.428 | 6.959 | 0.227 | 32.20 | |
| DH36 | 06/25/85 | 10:40 | 01.43 | 175.444 | 7.016 | 0.204 | 33.63 | |
| DH36 | 07/02/85 | 11:00 | 01.59 | 182.458 | 7.014 | 0.227 | 35.22 | |
| DH36 | 07/09/85 | 11:15 | 01.54 | 189.469 | 7.011 | 0.220 | 36.76 | |
| DH36 | 07/16/85 | 11:50 | 01.58 | 196.493 | 7.024 | 0.225 | 38.34 | Brine effervesces. |
| DH36 | 07/24/85 | 10:46 | 01.78 | 204.449 | 7.956 | 0.224 | 40.12 | |
| DH36 | 07/30/85 | 10:20 | 01.39 | 210.431 | 5.982 | 0.232 | 41.51 | |
| DH36 | 08/06/85 | 10:43 | 01.70 | 217.447 | 7.016 | 0.242 | 43.21 | |
| DH36 | 08/14/85 | 11:02 | 01.58 | 225.460 | 8.013 | 0.197 | 44.79 | Valve leaked, some brine drained back down hole. |
| DH36 | 08/20/85 | 11:11 | 01.42 | 231.466 | 6.006 | 0.236 | 46.21 | |
| DH36 | 08/28/85 | 10:00 | 01.94 | 239.417 | 7.951 | 0.244 | 48.15 | |
| DH36 | 09/04/85 | 10:32 | 01.69 | 246.439 | 7.022 | 0.241 | 49.84 | |
| DH36 | 09/10/85 | 10:35 | 01.41 | 252.441 | 6.002 | 0.235 | 51.25 | |
| DH36 | 09/17/85 | 09:42 | 01.53 | 259.404 | 6.963 | 0.220 | 52.78 | |
| DH36 | 09/24/85 | 09:50 | 01.53 | 266.410 | 7.006 | 0.218 | 54.31 | |
| DH36 | 10/01/85 | 09:55 | 01.58 | 273.413 | 7.003 | 0.226 | 55.89 | |
| DH36 | 10/08/85 | 10:52 | 01.63 | 280.453 | 7.040 | 0.232 | 57.52 | |
| DH36 | 10/15/85 | 10:30 | 01.58 | 287.438 | 6.985 | 0.226 | 59.10 | |
| DH36 | 10/23/85 | 10:23 | 01.82 | 295.433 | 7.995 | 0.228 | 60.92 | |
| DH36 | 10/29/85 | 09:51 | 01.36 | 301.410 | 5.977 | 0.228 | 62.28 | |
| DH36 | 11/05/85 | 09:27 | 01.63 | 308.394 | 6.984 | 0.233 | 63.91 | |
| DH36 | 11/13/85 | 10:14 | 01.79 | 316.426 | 8.032 | 0.223 | 65.70 | |
| DH36 | 11/21/85 | 11:36 | 01.91 | 324.483 | 8.057 | 0.237 | 67.61 | |
| DH36 | 11/26/85 | 11:30 | 01.01 | 329.479 | 4.996 | 0.202 | 68.62 | |
| DH36 | 12/03/85 | 13:35 | 01.50 | 336.566 | 7.087 | 0.212 | 70.12 | .50 liters for chem anal. #4. |
| DH36 | 12/10/85 | 12:15 | 01.52 | 343.510 | 6.944 | 0.219 | 71.64 | |
| DH36 | 01/23/86 | 11:00 | 09.30 | 387.458 | 43.948 | 0.212 | 80.94 | Entry restricted since 12/10/85 due to mining activities. |
| DH36 | 01/31/86 | 12:20 | 01.38 | 395.514 | 8.056 | 0.171 | 82.32 | |
| DH36 | 02/12/86 | 11:00 | 03.02 | 407.458 | 11.944 | 0.253 | 85.34 | |
| DH36 | 02/19/86 | 11:45 | 01.55 | 414.490 | 7.032 | 0.220 | 86.89 | |
| DH36 | 02/28/86 | 13:20 | 01.85 | 423.556 | 9.066 | 0.204 | 88.74 | |
| DH36 | 03/06/86 | 10:45 | 01.30 | 429.448 | 5.892 | 0.221 | 90.04 | Volume was estimated. |
| DH36 | 03/13/86 | 10:10 | 01.50 | 436.424 | 6.976 | 0.215 | 91.54 | |
| DH36 | 03/26/86 | 10:20 | 02.56 | 449.431 | 13.007 | 0.197 | 94.10 | |
| DH36 | 04/02/86 | 09:40 | 01.75 | 456.403 | 6.972 | 0.251 | 95.85 | |
| DH36 | 04/08/86 | 09:45 | 00.97 | 462.406 | 6.003 | 0.162 | 96.82 | |
| DH36 | 04/16/86 | 12:25 | 01.65 | 470.517 | 8.111 | 0.203 | 98.47 | |
| DH36 | 04/24/86 | 10:20 | 02.00 | 478.431 | 7.914 | 0.253 | 100.47 | |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| TION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| | 04/30/86 | 10:55 | 01.21 | 484.455 | 6.024 | 0.201 | 101.68 | |
| | 05/06/86 | 10:14 | 01.20 | 490.426 | 5.971 | 0.201 | 102.88 | |
| | 05/13/86 | 11:13 | 01.42 | 497.467 | 7.041 | 0.202 | 104.30 | |
| | 05/20/86 | 11:10 | 01.50 | 504.465 | 6.998 | 0.214 | 105.80 | |
| | 05/27/86 | 15:45 | 01.40 | 511.656 | 7.191 | 0.195 | 107.20 | |
| | 06/03/86 | 10:10 | 01.38 | 518.424 | 6.768 | 0.204 | 108.58 | |
| | 06/10/86 | 11:35 | 01.24 | 525.483 | 7.059 | 0.176 | 109.82 | Valve leaked, some brine drained back down hole. |
| | 06/17/86 | 11:00 | 01.65 | 532.458 | 6.975 | 0.237 | 111.47 | Sample for brine chemistry, #24. |
| | 06/24/86 | 11:00 | 01.45 | 539.458 | 7.000 | 0.207 | 112.92 | |
| | 07/01/86 | 14:05 | 01.55 | 546.587 | 7.129 | 0.217 | 114.47 | |
| | 07/08/86 | 10:45 | 01.40 | 553.448 | 6.861 | 0.204 | 115.87 | |
| | 07/16/86 | 10:45 | 01.76 | 561.448 | 8.000 | 0.220 | 117.63 | |
| | 07/22/86 | 10:07 | 01.29 | 567.422 | 5.974 | 0.216 | 118.92 | |
| | 07/29/86 | 10:40 | 01.45 | 574.444 | 7.022 | 0.206 | 120.37 | |
| | 08/05/86 | 11:20 | 01.46 | 581.472 | 7.028 | 0.208 | 121.83 | |
| | 08/12/86 | 10:37 | 01.50 | 588.442 | 6.970 | 0.215 | 123.33 | |
| | 08/19/86 | 11:35 | 01.38 | 595.483 | 7.041 | 0.196 | 124.71 | |
| | 08/26/86 | 10:38 | 01.49 | 602.443 | 6.960 | 0.214 | 126.20 | Static level not measured. |
| | 09/04/86 | 10:41 | 01.70 | 611.445 | 9.002 | 0.189 | 127.90 | |
| | 09/09/86 | 10:15 | 01.20 | 616.427 | 4.982 | 0.241 | 129.10 | Sample # 26. |
| | 09/16/86 | 10:20 | 01.37 | 623.431 | 7.004 | 0.196 | 130.47 | |
| | 09/23/86 | 10:18 | 01.40 | 630.429 | 6.998 | 0.200 | 131.87 | |
| | 10/01/86 | 12:18 | 01.76 | 638.513 | 8.084 | 0.218 | 133.63 | |
| | 10/08/86 | 11:10 | 01.44 | 645.465 | 6.952 | 0.207 | 135.07 | Brine effervoces as it is poured into beaker. |
| | 10/14/86 | 11:57 | 01.21 | 651.498 | 6.033 | 0.201 | 136.28 | Static level not measured. |
| | 11/05/86 | 11:38 | 4.28 | 673.485 | 21.987 | 0.195 | 140.56 | |
| | 11/20/86 | 12:35 | 03.12 | 688.524 | 15.039 | 0.207 | 143.68 | |
| | 12/30/86 | 12:25 | 01.72 | 728.517 | 0.000 | 0.000 | 143.68 | Partial evacuation. No calculation. Do not plot or use zero value. |
| | 12/31/86 | 12:38 | 6.54 | 729.526 | 41.002 | 0.201 | 151.94 | Calculated using 8.26 liters in 41.002 days (1.72 l. 12/30/86 plus 6.54 l. 12/31/86). |
| | 02/03/87 | 13:35 | 06.84 | 763.566 | 34.040 | 0.201 | 158.78 | T=29.8c, T28.6, pH 6.17. |
| | 03/06/87 | 11:20 | 5.84 | 794.472 | 30.906 | 0.189 | 164.62 | |
| | 03/30/87 | 11:27 | 4.95 | 818.477 | 24.005 | 0.206 | 169.57 | |
| | 05/07/87 | 11:33 | 6.62 | 856.481 | 38.004 | 0.174 | 176.19 | |
| | 06/17/87 | 10:45 | 7.25 | 897.448 | 0.000 | 0.000 | 183.44 | Sample for chem. #108A, #108B, #114A, #114B, #121A, #121B, #127A, #127B, #134A, #134B. Some brine left in hole, no calculation. |
| | 06/18/87 | 12:10 | 0.49 | 898.507 | 42.026 | 0.184 | 183.93 | Original l/day calculation too high due to residual brine left in hole. Recalculated using 7.74 l (7.25 l 6/17/87 plus 0.49 l 6/18/87). |
| | 07/28/87 | 11:27 | 7.76 | 938.477 | 39.970 | 0.194 | 191.69 | |
| | 09/01/87 | 10:50 | 6.99 | 973.451 | 34.974 | 0.200 | 198.68 | Collected for chemistry, sample #153 A&B, #160 A&B, #163 A&B, #158 A&B, #155 A&B, #167 A&B. |
| | 10/20/87 | 11:56 | 8.58 | 1022.500 | 49.049 | 0.175 | 207.26 | |
| | 11/19/87 | 11:30 | 4.19 | 1052.480 | 29.980 | 0.140 | 211.45 | Collected for chemistry, sample #199, #205, #208, & #211. |
| | 01/04/88 | 11:50 | 6.74 | 1098.490 | 46.010 | 0.146 | 218.19 | |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| DH36 | 02/08/88 | 11:50 | 4.90 | 1133.490 | 35.000 | 0.140 | 223.09 | Collected for chemistry, sample #261, #262, #263, #264, #265, #266, #267, #268, #269 & #270. |
| DH36 | 03/29/88 | 11:35 | 7.25 | 1183.480 | 49.990 | 0.145 | 230.34 | Collected for chemistry, sample #367 - #378. |
| DH36 | 05/05/88 | 09:45 | 5.01 | 1220.410 | 36.930 | 0.136 | 235.35 | Sampled for Sandia PA. |
| DH36 | 05/12/88 | 09:50 | 1.30 | 1227.410 | 7.000 | 0.186 | 236.65 | Sampled for Sandia PA. |
| DH36 | 07/12/88 | 08:50 | 7.90 | 1288.370 | 60.960 | 0.130 | 244.55 | Collected for chemistry, sample #422 - #436. |
| DH36 | 07/28/88 | 10:25 | 1.50 | 1304.430 | 16.060 | 0.093 | 246.05 | Sampled for Sandia PA. |
| DH36 | 08/11/88 | 10:30 | 3.66 | 1318.440 | 14.010 | 0.261 | 249.71 | Sampled for Sandia PA. |
| DH36 | 08/25/88 | 09:24 | 2.05 | 1332.390 | 13.950 | 0.147 | 251.76 | Sampled for Sandia PA. |
| DH36 | 09/08/88 | 14:50 | | 1346.620 | 0.000 | 0.000 | 251.76 | Did not sample. |
| DH36 | 09/14/88 | 08:40 | 2.36 | 1352.360 | 19.970 | 0.118 | 254.12 | Slight orange color. |
| DH36 | 09/27/88 | 10:45 | 1.30 | 1365.450 | 13.090 | 0.099 | 255.42 | Collected for chemistry, sample #537 - #539. |
| DH36 | 12/13/88 | 10:00 | 10.63 | 1442.420 | 76.970 | 0.138 | 266.05 | Collected for chemistry, sample #570 - #581. |
| DH36 | 03/14/89 | 10:10 | 11.16 | 1533.424 | 91.007 | 0.123 | 277.21 | Sample saved for chemistry, sample #684 - 695. |
| DH36 | 04/06/89 | 09:31 | 2.73 | 1556.397 | 22.973 | 0.119 | 279.94 | 2.5 liters saved for Sandia brine study. |
| DH36 | 04/20/89 | 09:40 | 1.79 | 1570.403 | 14.006 | 0.128 | 281.73 | Sample saved for Sandia brine study. |
| DH36 | 05/17/89 | 10:20 | 6.45 | 1597.431 | 27.028 | 0.239 | 288.18 | Sample saved for Sandia brine study. |
| DH36 | 06/06/89 | 10:10 | 2.62 | 1617.424 | 19.993 | 0.131 | 290.80 | Sample saved for chemistry. |
| DH36 | 06/29/89 | 10:35 | 2.42 | 1640.441 | 23.017 | 0.105 | 293.22 | Sample saved for Sandia brine study. |
| DH36 | 07/06/89 | 09:10 | 1.08 | 1647.382 | 6.941 | 0.156 | 294.30 | |
| DH36 | 07/25/89 | 09:55 | 2.35 | 1666.413 | 19.031 | 0.123 | 296.65 | Sample saved for Sandia brine study. |
| DH36 | 08/16/89 | 09:27 | 2.75 | 1688.394 | 21.981 | 0.125 | 299.40 | Sample saved for Sandia brine study. |
| DH36 | 09/12/89 | 09:30 | 3.81 | 1715.396 | 27.002 | 0.141 | 303.21 | Sample saved for chemistry. |
| DH36 | 12/13/89 | 11:10 | 11.07 | 1807.465 | 92.069 | 0.120 | 314.28 | Sample saved for chemistry, sample #900. |
| DH36 | 01/10/90 | 10:18 | 2.48 | 1835.429 | 27.964 | 0.089 | 316.76 | |
| DH36 | 01/24/90 | 09:37 | 2.0 | 1849.401 | 13.972 | 0.143 | 318.76 | |
| DH36 | 02/07/90 | 10:17 | 1.53 | 1863.428 | 14.027 | 0.109 | 320.29 | |
| DH36 | 02/21/90 | 09:50 | 1.75 | 1877.410 | 13.982 | 0.125 | 322.04 | |
| DH36 | 03/05/90 | 09:25 | 1.10 | 1889.392 | 11.982 | 0.092 | 323.14 | |
| DH36 | 03/14/90 | 12:30 | NA | 1898.521 | 0.000 | 0.000 | 323.14 | Installed sampler. |
| DH36 | 03/19/90 | 10:36 | 0.80 | 1903.442 | 14.050 | 0.000 | 323.94 | Brine probably left in hole. |
| DH36 | 03/21/90 | 10:16 | 0.57 | 1905.428 | 1.986 | 0.085 | 324.51 | Combined with 0.80 liters from 03/19/90. Used 1.37 liters for calculation. |
| DH36 | 04/04/90 | 09:09 | 1.08 | 1919.381 | 13.953 | 0.077 | 325.59 | |
| DH36 | 04/10/90 | 08:34 | 0.97 | 1925.357 | 5.976 | 0.162 | 326.56 | |
| DH36 | 04/17/90 | 10:17 | 0.85 | 1932.428 | 7.071 | 0.120 | 327.41 | |
| DH36 | 04/24/90 | 09:14 | 0.86 | 1939.385 | 6.957 | 0.000 | 328.27 | |
| DH36 | 04/25/90 | 08:45 | 0.57 | 1940.365 | 0.980 | 0.180 | 328.84 | Combined with 0.86 liters from 04/27/90. Used 1.43 liters for calculation. |
| DH36 | 05/02/90 | 10:24 | 1.37 | 1947.433 | 7.068 | 0.194 | 330.21 | |
| DH36 | 05/09/90 | 08:35 | 0.68 | 1954.358 | 6.925 | 0.098 | 330.89 | |
| DH36 | 05/16/90 | 08:45 | 0.78 | 1961.365 | 7.007 | 0.111 | 331.67 | |
| DH36 | 05/17/90 | 07:50 | 0.17 | 1962.326 | 0.961 | 0.177 | 331.84 | |
| DH36 | 05/23/90 | 12:02 | 0.68 | 1968.501 | 6.175 | 0.110 | 332.52 | |
| DH36 | 05/31/90 | 08:38 | 0.85 | 1976.360 | 7.859 | 0.108 | 333.37 | |
| DH36 | 06/01/90 | 11:00 | 0.15 | 1977.458 | 1.098 | 0.137 | 333.52 | Repaired sampler, evacuated hole. |
| DH36 | 06/06/90 | 08:47 | 0.45 | 1982.366 | 4.908 | 0.092 | 333.97 | |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| DH36 | 06/14/90 | 08:38 | 0.82 | 1990.360 | 7.994 | 0.103 | 334.79 | |
| DH36 | 06/20/90 | 09:53 | 0.59 | 1996.412 | 6.052 | 0.097 | 335.38 | |
| DH36 | 06/28/90 | 08:38 | 0.88 | 2004.360 | 7.948 | 0.111 | 336.26 | |
| DH36 | 07/17/90 | 10:52 | 0.41 | 2023.453 | 19.093 | 0.000 | 336.67 | |
| DH36 | 07/18/90 | 10:20 | 0.62 | 2024.431 | 0.978 | 0.051 | 337.29 | Combined with 0.41 liters from 07/17/90. Used 1.03 liters for calculation. |
| DH36 | 07/25/90 | 09:45 | 0.61 | 2031.406 | 6.975 | 0.087 | 337.90 | |
| DH36 | 08/01/90 | 10:38 | 0.61 | 2038.443 | 7.037 | 0.087 | 338.51 | |
| DH36 | 12/12/90 | 09:47 | 11.54 | 2171.408 | 132.965 | 0.087 | 350.05 | First evacuation since 08/07/90. |
| DH36 | 12/19/90 | 11:22 | 3.61 | 2178.474 | 140.030 | 0.108 | 353.66 | Combined with 11.54 liters from 12/12/90. Brine stored in fractures may have drained into hole. Used 140.03 days, 15.15 liters. |
| DH36 | 01/09/91 | 09:50 | 2.34 | 2199.410 | 20.936 | 0.112 | 356.00 | |
| DH36 | 01/16/91 | 08:35 | 0.73 | 2206.358 | 6.948 | 0.105 | 356.73 | |
| DH36 | 01/23/91 | 08:35 | 0.54 | 2213.358 | 7.000 | 0.077 | 357.27 | |
| DH36 | 02/13/91 | 10:30 | 1.90 | 2234.438 | 21.080 | 0.090 | 359.17 | |
| DH36 | 02/20/91 | 10:30 | 0.58 | 2241.438 | 7.000 | 0.083 | 359.75 | |
| DH36 | 02/27/91 | 09:58 | 0.32 | 2248.415 | 6.977 | 0.046 | 360.07 | |
| DH36 | 03/07/91 | 09:45 | 0.02 | 2256.406 | 0.000 | 0.000 | 360.09 | Partial evacuation. |
| DH36 | 03/20/91 | 10:07 | 2.72 | 2269.422 | 0.000 | 0.000 | 362.81 | Partial evacuation. First evacuation with bailer, second with pump. Sampler malfunctioning. |
| DH36 | 03/21/91 | 08:30 | 0.38 | 2270.354 | 21.939 | 0.141 | 363.19 | Combined with 0.02 liters from 03/07/91 and 2.72 liters from 03/20/91. Repaired sampler. |
| DH36 | 03/28/91 | 10:40 | 0.90 | 2277.444 | 7.090 | 0.127 | 364.09 | |
| DH36 | 04/10/91 | 8:25 | 0.87 | 2290.337 | 0.000 | 0.000 | 364.96 | Partial evacuation. |
| DH36 | 04/11/91 | 08:55 | 0.64 | 2291.372 | 13.928 | 0.108 | 365.60 | Combined with 0.87 liters from 04/10/91. |
| DH36 | 04/17/91 | 10:34 | 0.63 | 2297.440 | 6.068 | 0.104 | 366.23 | |
| DH36 | 04/24/91 | 09:15 | 0.52 | 2304.385 | 6.945 | 0.075 | 366.75 | |
| DH36 | 05/01/91 | 09:26 | 0.65 | 2311.393 | 7.008 | 0.093 | 367.40 | |
| DH36 | 05/08/91 | 08:37 | 0.42 | 2318.359 | 6.966 | 0.060 | 367.82 | |
| DH36 | 05/15/91 | 09:14 | 0.62 | 2325.385 | 0.000 | 0.000 | 368.44 | Partial evacuation. |
| DH36 | 05/29/91 | 09:30 | 2.75 | 2339.396 | 21.037 | 0.160 | 371.19 | Combined with 0.62 liters from 05/15/91. |
| DH36 | 06/05/91 | 13:50 | 0.52 | 2346.576 | 7.180 | 0.072 | 371.71 | |
| DH36 | 06/12/91 | 10:20 | 0.60 | 2353.431 | 6.855 | 0.088 | 372.31 | |
| DH36 | 06/19/91 | 14:10 | 0.53 | 2360.590 | 7.159 | 0.074 | 372.84 | |
| DH36 | 06/26/91 | 08:55 | 0.58 | 2367.372 | 6.782 | 0.086 | 373.42 | |
| DH36 | 07/11/91 | 10:26 | 0.70 | 2382.435 | 15.063 | 0.046 | 374.12 | |
| DH36 | 07/17/91 | 09:35 | 0.59 | 2388.399 | 0.000 | 0.000 | 374.71 | Partial evacuation. |
| DH36 | 07/18/91 | 09:59 | 0.52 | 2389.416 | 6.981 | 0.159 | 375.23 | Combined with 0.59 liters from 07/17/91. |
| DH36 | 07/30/91 | 10:35 | 0.60 | 2401.441 | 0.000 | 0.000 | 375.83 | Partial evacuation. |
| DH36 | 07/31/91 | 09:35 | 0.72 | 2402.399 | 0.000 | 0.000 | 376.55 | Partial evacuation. |
| DH36 | 08/01/91 | 10:30 | 0.83 | 2403.438 | 0.000 | 0.000 | 377.38 | Partial evacuation. |
| DH36 | 08/02/91 | 10:00 | 0.54 | 2404.417 | 15.001 | 0.179 | 377.92 | Combined with 0.60 liters from 07/30/91, 0.72 liters from 07/31/91, and 0.83 liters from 08/01/91. |
| DH36 | 08/08/91 | 09:23 | 0.51 | 2410.391 | 0.000 | 0.000 | 378.43 | Some brine may have been left in hole. |
| DH36 | 08/14/91 | 10:04 | 1.63 | 2416.419 | 12.000 | 0.178 | 380.06 | Combined with 0.51 liters from 08/08/91. Used bailer. |
| DH36 | 08/21/91 | 11:00 | 0.55 | 2423.458 | 0.000 | 0.000 | 380.61 | Partial evacuation. |
| DH36 | 08/22/91 | 10:00 | 0.53 | 2424.417 | 7.998 | 0.135 | 381.14 | Combined with 0.55 liters from 08/21/91 |
| DH36 | 08/28/91 | 09:50 | 0.98 | 2430.410 | 5.993 | 0.164 | 382.12 | |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| DH36 | 09/25/91 | 11:25 | 3.12 | 2458.476 | 28.066 | 0.111 | 385.24 | |
| DH36 | 10/23/91 | 09:50 | 3.25 | 2486.410 | 27.934 | 0.116 | 388.49 | |
| DH36 | 11/20/91 | 11:10 | 3.00 | 2514.465 | 28.055 | 0.107 | 391.49 | |
| DH36 | 12/18/91 | 09:25 | 2.55 | 2542.392 | 27.927 | 0.091 | 394.04 | |
| DH37 | 12/05/84 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Approximate date this part of Room G excavated. |
| DH37 | 01/26/85 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Uphole drilled 1/25/85 to 1/26/85. |
| DH37 | 02/05/85 | 11:15 | NA | 35.469 | 1.000 | 0.000 | 0.00 | Started to drip. |
| DH37 | 03/05/85 | 10:10 | 00.06 | 63.424 | 28.955 | 0.002 | 0.06 | Stalactite in collecting container. |
| DH37 | 03/12/85 | 10:00 | 00.06 | 70.417 | 6.993 | 0.009 | 0.12 | Salt crystals in collecting container. |
| DH37 | 03/26/85 | 09:50 | NA | 84.410 | 13.993 | 0.000 | 0.12 | Trace, none collected. |
| DH37 | 04/17/85 | 13:30 | 00.06 | 106.562 | 36.145 | 0.002 | 0.18 | |
| DH37 | 04/23/85 | 11:41 | 00.04 | 112.487 | 5.925 | 0.007 | 0.22 | |
| DH37 | 04/30/85 | 10:50 | 00.03 | 119.451 | 6.964 | 0.004 | 0.25 | |
| DH37 | 05/07/85 | 09:45 | 00.06 | 126.406 | 6.955 | 0.009 | 0.31 | |
| DH37 | 05/14/85 | 10:37 | 00.07 | 133.442 | 7.036 | 0.010 | 0.38 | |
| DH37 | 05/21/85 | 10:31 | 00.06 | 140.438 | 6.996 | 0.009 | 0.44 | |
| DH37 | 05/29/85 | 10:00 | 00.06 | 148.417 | 7.979 | 0.008 | 0.50 | |
| DH37 | 06/04/85 | 11:22 | 00.05 | 154.474 | 6.057 | 0.008 | 0.55 | |
| DH37 | 06/11/85 | 10:32 | 00.05 | 161.439 | 6.965 | 0.007 | 0.60 | |
| DH37 | 06/18/85 | 10:05 | 00.08 | 168.420 | 6.981 | 0.011 | 0.68 | Stalactites in collecting container. |
| DH37 | 06/25/85 | 10:44 | 00.05 | 175.447 | 7.027 | 0.007 | 0.73 | |
| DH37 | 07/02/85 | 11:00 | 00.04 | 182.458 | 7.011 | 0.006 | 0.77 | |
| DH37 | 07/09/85 | 11:00 | 00.03 | 189.458 | 7.000 | 0.004 | 0.80 | |
| DH37 | 07/16/85 | 11:40 | 00.06 | 196.486 | 7.028 | 0.009 | 0.86 | |
| DH37 | 07/24/85 | 10:33 | 00.06 | 204.440 | 7.954 | 0.008 | 0.92 | |
| DH37 | 07/30/85 | 10:11 | 00.02 | 210.424 | 5.984 | 0.003 | 0.94 | |
| DH37 | 08/06/85 | 10:32 | 00.01 | 217.439 | 7.015 | 0.001 | 0.95 | |
| DH37 | 08/14/85 | 10:49 | 00.02 | 225.451 | 8.012 | 0.002 | 0.97 | |
| DH37 | 08/20/85 | 10:56 | 00.03 | 231.456 | 6.005 | 0.005 | 1.00 | |
| DH37 | 08/28/85 | 09:55 | 00.04 | 239.413 | 7.957 | 0.005 | 1.04 | |
| DH37 | 09/04/85 | 10:21 | 00.02 | 246.431 | 7.018 | 0.003 | 1.06 | |
| DH37 | 09/10/85 | 10:14 | 00.03 | 252.426 | 5.995 | 0.005 | 1.09 | |
| DH37 | 09/17/85 | 09:35 | 00.02 | 259.399 | 6.973 | 0.003 | 1.11 | |
| DH37 | 09/24/85 | 09:45 | 00.02 | 266.406 | 7.007 | 0.003 | 1.13 | |
| DH37 | 10/01/85 | 09:50 | 00.01 | 273.410 | 7.004 | 0.001 | 1.14 | |
| DH37 | 10/15/85 | 10:10 | 00.01 | 287.424 | 14.014 | 0.001 | 1.15 | |
| DH37 | 10/23/85 | 10:17 | 00.02 | 295.428 | 8.004 | 0.002 | 1.17 | |
| DH37 | 10/29/85 | 09:35 | 00.02 | 301.399 | 5.971 | 0.003 | 1.19 | |
| DH37 | 07/01/86 | 14:00 | 00.02 | 546.583 | 245.184 | 0.000 | 1.21 | |
| DH37 | 11/05/86 | 11:22 | NA | 673.474 | 126.891 | 0.000 | 1.21 | Dry. |
| DH37 | 11/20/86 | 12:25 | NA | 688.517 | 141.934 | 0.000 | 1.21 | Dry, not collected. |
| DH37 | 12/30/86 | 12:00 | NA | 728.500 | 181.917 | 0.000 | 1.21 | |
| DH37 | 02/03/87 | NA: | NA | 763.000 | 216.417 | 0.000 | 1.21 | |
| DH37 | 03/06/87 | 11:05 | NA | 794.462 | 247.879 | 0.000 | 1.21 | Dry. |
| DH37 | 03/30/87 | 11:10 | 0.00 | 818.465 | 24.003 | 0.000 | 1.21 | Dry. |
| DH37 | 05/07/87 | 11:27 | 0.00 | 856.477 | 62.015 | 0.000 | 1.21 | Dry. |
| DH37 | 06/18/87 | 12:05 | 0.00 | 898.503 | 104.041 | 0.000 | 1.21 | Dry. |
| DH37 | 07/28/87 | 10:53 | 0.00 | 938.453 | 143.991 | 0.000 | 1.21 | Dry. |
| DH37 | 09/01/87 | 10:45 | 0.00 | 973.448 | 34.995 | 0.000 | 1.21 | Dry. |
| DH37 | 10/20/87 | 11:35 | 0.00 | 1022.480 | 49.032 | 0.000 | 1.21 | Dry. |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| DH37 | 11/19/87 | 11:05 | 0.00 | 1052.460 | 29.980 | 0.000 | 1.21 | Dry. |
| DH37 | 01/04/88 | 11:35 | 0.00 | 1098.480 | 46.020 | 0.000 | 1.21 | Dry. |
| DH37 | 02/08/88 | 11:40 | 0.00 | 1133.490 | 35.010 | 0.000 | 1.21 | Dry. |
| DH37 | 03/29/88 | 11:35 | 0.00 | 1183.480 | 49.990 | 0.000 | 1.21 | Dry. |
| DH37 | 07/12/88 | 08:50 | 0.00 | 1288.370 | 104.890 | 0.000 | 1.21 | Dry. |
| DH37 | 09/27/88 | 10:45 | 0.00 | 1365.450 | 77.080 | 0.000 | 1.21 | Dry. |
| DH37 | 12/13/88 | 09:55 | 0 | 1442.410 | 76.960 | 0.000 | 1.21 | Dry. |
| DH37 | 03/14/89 | 10:00 | 0 | 1533.417 | 91.004 | 0.000 | 1.21 | Hole dry. |
| DH37 | 04/06/89 | 09:45 | 0 | 1556.406 | 22.989 | 0.000 | 1.21 | Hole dry. |
| DH37 | 04/20/89 | 09:35 | 0 | 1570.399 | 13.993 | 0.000 | 1.21 | Hole dry. |
| DH37 | 05/17/89 | 10:20 | 0 | 1597.431 | 27.032 | 0.000 | 1.21 | Hole dry. |
| DH37 | 06/06/89 | 10:10 | 0 | 1617.424 | 19.993 | 0.000 | 1.21 | Hole dry. |
| DH37 | 06/29/89 | 10:30 | 0 | 1640.438 | 23.014 | 0.000 | 1.21 | Hole dry. |
| DH37 | 07/25/89 | 09:55 | 0 | 1666.413 | 25.975 | 0.000 | 1.21 | Hole dry. |
| DH37 | 08/16/89 | 09:55 | 0 | 1688.413 | 22.000 | 0.000 | 1.21 | Hole dry. |
| DH37 | 08/28/89 | 10:20 | 0 | 1700.431 | 12.018 | 0.000 | 1.21 | Collecting device removed. |
| DH37 | 12/13/89 | 11:00 | 0 | 1807.458 | 107.027 | 0.000 | 1.21 | Hole dry. |
| DH37 | 01/10/90 | 10:09 | 0.0 | 1835.423 | 27.965 | 0.000 | 1.21 | Dry. |
| DH37 | 01/24/90 | 10:00 | 0.0 | 1849.417 | 13.994 | 0.000 | 1.21 | Dry. |
| DH37 | 02/07/90 | 10:30 | 0.0 | 1863.438 | 14.021 | 0.000 | 1.21 | Dry. |
| DH37 | 02/21/90 | 09:47 | 0.0 | 1877.408 | 13.970 | 0.000 | 1.21 | Dry. |
| DH37 | 03/05/90 | 09:25 | 0.0 | 1889.392 | 11.984 | 0.000 | 1.21 | Dry. |
| DH37 | 03/19/90 | 11:30 | 0.0 | 1903.479 | 14.087 | 0.000 | 1.21 | Dry. |
| DH37 | 03/21/90 | 10:30 | 0.0 | 1905.438 | 1.959 | 0.000 | 1.21 | Dry. |
| DH37 | 04/04/90 | 09:37 | 0.0 | 1919.401 | 13.963 | 0.000 | 1.21 | Dry. |
| DH37 | 04/10/90 | 08:36 | 0.0 | 1925.358 | 5.957 | 0.000 | 1.21 | Dry. |
| DH37 | 04/17/90 | 10:17 | 0.0 | 1932.428 | 7.070 | 0.000 | 1.21 | Dry. |
| DH37 | 04/24/90 | 09:30 | 0.0 | 1939.396 | 6.968 | 0.000 | 1.21 | Dry. |
| DH37 | 05/02/90 | 10:30 | 0.0 | 1947.438 | 8.042 | 0.000 | 1.21 | Dry. |
| DH37 | 05/09/90 | 08:43 | 0.0 | 1954.363 | 6.925 | 0.000 | 1.21 | Dry. |
| DH37 | 05/16/90 | 08:45 | 0.0 | 1961.365 | 7.002 | 0.000 | 1.21 | Dry. |
| DH37 | 05/23/90 | 12:03 | 0.0 | 1968.502 | 7.137 | 0.000 | 1.21 | Dry. |
| DH37 | 05/31/90 | 08:40 | 0.0 | 1976.361 | 7.859 | 0.000 | 1.21 | Dry. |
| DH37 | 06/06/90 | 09:40 | 0.0 | 1982.403 | 6.042 | 0.000 | 1.21 | Dry. |
| DH37 | 06/14/90 | 08:35 | 0.0 | 1990.358 | 7.955 | 0.000 | 1.21 | Dry. |
| DH37 | 06/20/90 | 09:35 | 0.0 | 1996.399 | 6.041 | 0.000 | 1.21 | Dry. |
| DH37 | 06/28/90 | 08:38 | 0.0 | 2004.360 | 7.961 | 0.000 | 1.21 | Dry. |
| DH37 | 07/17/90 | 10:59 | 0.0 | 2023.458 | 19.098 | 0.000 | 1.21 | Dry. |
| DH37 | 07/25/90 | 09:33 | 0.0 | 2031.398 | 7.940 | 0.000 | 1.21 | Dry. |
| DH37 | 08/01/90 | 10:38 | 0.0 | 2038.443 | 7.045 | 0.000 | 1.21 | Dry. |
| DH37 | 03/28/91 | 10:40 | 0.00 | 2277.444 | 239.001 | 0.000 | 1.21 | Dry. |
| DH37 | 04/10/91 | 8:25 | 0.00 | 2290.337 | 12.893 | 0.000 | 1.21 | Dry. |
| DH37 | 04/17/91 | 10:36 | 0.00 | 2297.442 | 7.105 | 0.000 | 1.21 | Dry. |
| DH37 | 05/01/91 | 09:22 | 0.00 | 2311.390 | 13.948 | 0.000 | 1.21 | Dry. |
| DH37 | 05/08/91 | 08:30 | 0.00 | 2318.354 | 6.964 | 0.000 | 1.21 | Dry. |
| DH37 | 05/15/91 | 09:10 | 0.00 | 2325.382 | 7.028 | 0.000 | 1.21 | Dry. |
| DH37 | 05/29/91 | 09:45 | 0.00 | 2339.406 | 14.024 | 0.000 | 1.21 | Dry. |
| DH37 | 06/05/91 | 13:45 | 0.00 | 2346.573 | 7.167 | 0.000 | 1.21 | Dry. |
| DH37 | 06/12/91 | 10:18 | 0.00 | 2353.429 | 6.856 | 0.000 | 1.21 | Dry. |
| DH37 | 06/19/91 | 13:56 | 0.00 | 2360.581 | 7.152 | 0.000 | 1.21 | Dry. |
| DH37 | 06/26/91 | 09:01 | 0.00 | 2367.376 | 6.795 | 0.000 | 1.21 | Dry. |
| DH37 | 07/11/91 | 10:35 | 0.00 | 2382.441 | 15.065 | 0.000 | 1.21 | Dry. |
| DH37 | 07/17/91 | 09:30 | 0.00 | 2388.396 | 5.955 | 0.000 | 1.21 | Dry. |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| DH37 | 07/30/91 | 10:20 | 0.00 | 2401.431 | 13.035 | 0.000 | 1.21 | Dry. |
| DH37 | 08/14/91 | 10:38 | 0.00 | 2416.443 | 15.012 | 0.000 | 1.21 | Dry. |
| DH37 | 08/21/91 | 10:55 | 0.00 | 2423.455 | 7.012 | 0.000 | 1.21 | Dry. |
| DH37 | 08/28/91 | 10:20 | 0.00 | 2430.431 | 6.976 | 0.000 | 1.21 | Dry. |
| DH37 | 09/04/91 | 11:20 | 0.00 | 2437.472 | 7.041 | 0.000 | 1.21 | Dry. |
| DH37 | 09/11/91 | 11:50 | 0.00 | 2444.493 | 7.021 | 0.000 | 1.21 | Dry. |
| DH37 | 09/18/91 | 09:25 | 0.00 | 2451.392 | 6.899 | 0.000 | 1.21 | Dry. |
| DH37 | 09/25/91 | 12:00 | 0.00 | 2458.500 | 7.108 | 0.000 | 1.21 | Dry. |
| DH37 | 10/02/91 | 11:11 | 0.00 | 2465.466 | 6.966 | 0.000 | 1.21 | Dry. |
| DH37 | 10/16/91 | 09:30 | 0.00 | 2479.396 | 13.930 | 0.000 | 1.21 | Dry. |
| DH37 | 10/23/91 | 09:50 | 0.00 | 2486.410 | 7.014 | 0.000 | 1.21 | Dry. |
| DH37 | 10/31/91 | 09:50 | 0.00 | 2494.410 | 8.000 | 0.000 | 1.21 | Dry. |
| DH37 | 11/06/91 | 10:10 | 0.00 | 2500.424 | 6.014 | 0.000 | 1.21 | Dry. |
| DH37 | 11/13/91 | 09:25 | 0.00 | 2507.392 | 6.968 | 0.000 | 1.21 | Dry. |
| DH37 | 11/20/91 | 11:10 | 0.00 | 2514.465 | 7.073 | 0.000 | 1.21 | Dry. |
| DH37 | 11/27/91 | 09:45 | 0.00 | 2521.406 | 6.941 | 0.000 | 1.21 | Dry. |
| DH37 | 12/04/91 | 09:52 | 0.00 | 2528.411 | 7.005 | 0.000 | 1.21 | Dry. |
| DH37 | 12/11/91 | 09:55 | 0.00 | 2535.413 | 7.002 | 0.000 | 1.21 | Dry. |
| DH38 | 12/05/84 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Approximate date this part of Room G excavated. |
| DH38 | 01/26/85 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Downhole drilled 1/25/85 to 1/26/85. |
| DH38 | 01/28/85 | 09:00 | NA | 27.375 | 1.000 | 0.000 | 0.00 | Dry. |
| DH38 | 02/05/85 | 11:15 | NA | 35.469 | 9.094 | 0.000 | 0.00 | Wet at bottom. |
| DH38 | 02/19/85 | 12:10 | 00.80 | 49.507 | 23.132 | 0.035 | 0.80 | Brine and fine muck. |
| DH38 | 02/26/85 | 10:45 | 01.26 | 56.448 | 6.941 | 0.182 | 2.06 | Brine and fine muck. |
| DH38 | 03/05/85 | 10:00 | 00.45 | 63.417 | 6.969 | 0.065 | 2.51 | |
| DH38 | 03/12/85 | 10:00 | 00.39 | 70.417 | 7.000 | 0.056 | 2.90 | |
| DH38 | 03/20/85 | 10:37 | 00.45 | 78.442 | 8.025 | 0.056 | 3.35 | |
| DH38 | 03/26/85 | 09:50 | 00.36 | 84.410 | 5.968 | 0.060 | 3.71 | |
| DH38 | 04/02/85 | 10:25 | 00.41 | 91.434 | 7.024 | 0.058 | 4.12 | Some muck. |
| DH38 | 04/10/85 | 10:31 | 00.44 | 99.438 | 8.004 | 0.055 | 4.56 | |
| DH38 | 04/17/85 | 13:30 | 00.41 | 106.562 | 7.124 | 0.058 | 4.97 | |
| DH38 | 04/23/85 | 11:41 | 00.34 | 112.487 | 5.925 | 0.057 | 5.31 | |
| DH38 | 04/30/85 | 11:05 | 00.39 | 119.462 | 6.975 | 0.056 | 5.70 | |
| DH38 | 05/07/85 | 09:50 | 00.42 | 126.410 | 6.948 | 0.060 | 6.12 | |
| DH38 | 05/14/85 | 10:45 | 00.41 | 133.448 | 7.038 | 0.058 | 6.53 | |
| DH38 | 05/21/85 | 10:35 | 00.41 | 140.441 | 6.993 | 0.059 | 6.94 | |
| DH38 | 05/29/85 | 11:35 | 00.47 | 148.483 | 8.042 | 0.058 | 7.41 | |
| DH38 | 06/04/85 | 11:25 | 00.35 | 154.476 | 5.993 | 0.058 | 7.76 | |
| DH38 | 06/11/85 | 10:35 | 00.40 | 161.441 | 6.965 | 0.057 | 8.16 | |
| DH38 | 06/18/85 | 10:09 | 00.39 | 168.423 | 6.982 | 0.056 | 8.55 | |
| DH38 | 06/25/85 | 10:50 | 00.42 | 175.451 | 7.028 | 0.060 | 8.97 | |
| DH38 | 07/02/85 | 11:00 | 00.44 | 182.458 | 7.007 | 0.063 | 9.41 | |
| DH38 | 07/09/85 | 11:05 | 00.43 | 189.462 | 7.004 | 0.061 | 9.84 | |
| DH38 | 07/16/85 | 11:45 | 00.43 | 196.490 | 7.028 | 0.061 | 10.27 | Brine effervences. |
| DH38 | 07/24/85 | 10:35 | 00.49 | 204.441 | 7.951 | 0.062 | 10.76 | |
| DH38 | 07/30/85 | 10:14 | 00.38 | 210.426 | 5.985 | 0.063 | 11.14 | |
| DH38 | 08/06/85 | 10:34 | 00.42 | 217.440 | 7.014 | 0.060 | 11.56 | |
| DH38 | 08/14/85 | 10:51 | 00.49 | 225.452 | 8.012 | 0.061 | 12.05 | |
| DH38 | 08/20/85 | 11:02 | 00.37 | 231.460 | 6.008 | 0.062 | 12.42 | |
| DH38 | 08/28/85 | 10:00 | 00.51 | 239.417 | 7.957 | 0.064 | 12.93 | |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| DH38 | 09/04/85 | 10:23 | 00.44 | 246.433 | 7.016 | 0.063 | 13.37 | |
| DH38 | 09/10/85 | 10:19 | 00.39 | 252.430 | 5.997 | 0.065 | 13.76 | |
| DH38 | 09/17/85 | 09:37 | 00.44 | 259.401 | 6.971 | 0.063 | 14.20 | |
| DH38 | 09/24/85 | 09:45 | 00.44 | 266.406 | 7.005 | 0.063 | 14.64 | |
| DH38 | 10/01/85 | 09:53 | 00.44 | 273.412 | 7.006 | 0.063 | 15.08 | |
| DH38 | 10/08/85 | 10:38 | 00.46 | 280.443 | 7.031 | 0.065 | 15.54 | |
| DH38 | 10/15/85 | 10:15 | 00.44 | 287.427 | 6.984 | 0.063 | 15.98 | |
| DH38 | 10/23/85 | 10:20 | 00.49 | 295.431 | 8.004 | 0.061 | 16.47 | |
| DH38 | 10/29/85 | 09:40 | 00.39 | 301.403 | 5.972 | 0.065 | 16.86 | |
| DH38 | 11/05/85 | 09:14 | 00.43 | 308.385 | 6.982 | 0.062 | 17.29 | |
| DH38 | 11/13/85 | 10:00 | 00.52 | 316.417 | 8.032 | 0.065 | 17.81 | |
| DH38 | 11/21/85 | 11:29 | 00.47 | 324.478 | 8.061 | 0.058 | 18.28 | |
| DH38 | 11/26/85 | 11:20 | 00.33 | 329.472 | 4.994 | 0.066 | 18.61 | |
| DH38 | 12/03/85 | 13:30 | 00.42 | 336.562 | 7.090 | 0.059 | 19.03 | .37 liters for chem anal. #3. |
| DH38 | 12/10/85 | 12:30 | 00.41 | 343.521 | 6.959 | 0.059 | 19.44 | |
| DH38 | 01/23/86 | 11:20 | 02.70 | 387.472 | 43.951 | 0.061 | 22.14 | Entry restricted since 12/10/85 due to mining activities. |
| DH38 | 01/31/86 | 12:10 | 00.53 | 395.507 | 8.035 | 0.066 | 22.67 | |
| DH38 | 02/12/86 | 10:50 | 00.75 | 407.451 | 11.944 | 0.063 | 23.42 | |
| DH38 | 02/19/86 | 11:40 | 00.43 | 414.486 | 7.035 | 0.061 | 23.85 | |
| DH38 | 02/28/86 | 13:15 | 00.37 | 423.552 | 9.066 | 0.041 | 24.22 | Lost substantial volume due to break in suction line. Brine flowed back down into hole. |
| DH38 | 03/06/86 | 10:35 | 00.45 | 429.441 | 5.889 | 0.076 | 24.67 | |
| DH38 | 03/13/86 | 10:05 | 00.43 | 436.420 | 6.979 | 0.062 | 25.10 | |
| DH38 | 03/26/86 | 10:10 | 00.59 | 449.424 | 13.004 | 0.045 | 25.69 | |
| DH38 | 04/02/86 | 09:35 | 00.58 | 456.399 | 6.975 | 0.083 | 26.27 | |
| DH38 | 04/08/86 | 09:40 | 00.35 | 462.403 | 6.004 | 0.058 | 26.62 | |
| DH38 | 04/16/86 | 12:10 | 00.50 | 470.507 | 8.104 | 0.062 | 27.12 | |
| DH38 | 04/24/86 | 10:12 | 00.47 | 478.425 | 7.918 | 0.059 | 27.59 | |
| DH38 | 04/30/86 | 10:50 | 00.35 | 484.451 | 6.026 | 0.058 | 27.94 | |
| DH38 | 05/06/86 | 10:14 | 00.31 | 490.426 | 5.975 | 0.052 | 28.25 | |
| DH38 | 05/13/86 | 11:05 | 00.41 | 497.462 | 7.036 | 0.058 | 28.66 | |
| DH38 | 05/20/86 | 11:05 | 00.40 | 504.462 | 7.000 | 0.057 | 29.06 | |
| DH38 | 05/27/86 | 15:40 | 00.38 | 511.653 | 7.191 | 0.053 | 29.44 | |
| DH38 | 06/03/86 | 10:05 | 00.44 | 518.420 | 6.767 | 0.065 | 29.88 | |
| DH38 | 06/10/86 | 11:22 | 00.43 | 525.474 | 7.054 | 0.061 | 30.31 | |
| DH38 | 06/17/86 | 10:50 | 00.37 | 532.451 | 6.977 | 0.053 | 30.68 | Sample for brine chemistry, #23. |
| DH38 | 06/24/86 | 10:52 | 00.50 | 539.453 | 7.002 | 0.071 | 31.18 | |
| DH38 | 07/01/86 | 14:01 | 00.40 | 546.584 | 7.131 | 0.056 | 31.58 | |
| DH38 | 07/08/86 | 10:30 | 00.38 | 553.438 | 6.854 | 0.055 | 31.96 | |
| DH38 | 07/16/86 | 10:34 | 00.43 | 561.440 | 8.002 | 0.054 | 32.39 | |
| DH38 | 07/22/86 | 09:58 | 00.35 | 567.415 | 5.975 | 0.059 | 32.74 | |
| DH38 | 07/29/86 | 10:40 | 00.38 | 574.444 | 7.029 | 0.054 | 33.12 | |
| DH38 | 08/05/86 | 11:10 | 00.39 | 581.465 | 7.021 | 0.056 | 33.51 | |
| DH38 | 08/12/86 | 10:30 | 00.40 | 588.438 | 6.973 | 0.057 | 33.91 | |
| DH38 | 08/19/86 | 11:30 | 00.41 | 595.479 | 7.041 | 0.058 | 34.32 | |
| DH38 | 08/26/86 | 10:32 | 00.36 | 602.439 | 6.960 | 0.052 | 34.68 | Static level not measured. |
| DH38 | 09/04/86 | 10:35 | 00.49 | 611.441 | 9.002 | 0.054 | 35.17 | |
| DH38 | 09/09/86 | 10:00 | 00.30 | 616.417 | 4.976 | 0.060 | 35.47 | Sample # 25. |
| DH38 | 09/16/86 | 10:11 | 00.38 | 623.424 | 7.007 | 0.054 | 35.85 | |
| DH38 | 09/23/86 | 10:10 | 00.37 | 630.424 | 7.000 | 0.053 | 36.22 | |
| DH38 | 10/01/86 | 12:07 | 00.43 | 638.505 | 8.081 | 0.053 | 36.65 | |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| DH38 | 10/08/86 | 11:30 | 00.36 | 645.479 | 6.974 | 0.052 | 37.01 | |
| DH38 | 10/14/86 | 11:45 | 00.35 | 651.490 | 6.011 | 0.058 | 37.36 | |
| DH38 | 11/05/86 | 11:26 | 1.10 | 673.476 | 21.986 | 0.050 | 38.46 | |
| DH38 | 11/20/86 | 12:27 | 00.82 | 688.519 | 15.043 | 0.055 | 39.28 | |
| DH38 | 12/30/86 | 12:15 | 01.87 | 728.510 | 39.991 | 0.047 | 41.15 | Brown color, pH. 5.89. |
| DH38 | 02/03/87 | 13:15 | 01.72 | 763.552 | 35.042 | 0.049 | 42.87 | T=29.7c, T 28.5, pH 6.21. |
| DH38 | 03/06/87 | 11:05 | 1.58 | 794.462 | 30.910 | 0.051 | 44.45 | |
| DH38 | 03/30/87 | 11:13 | 1.17 | 818.467 | 24.005 | 0.049 | 45.62 | |
| DH38 | 05/07/87 | 11:20 | 1.89 | 856.472 | 38.005 | 0.050 | 47.51 | |
| DH38 | 06/17/87 | 10:45 | 1.91 | 897.448 | 0.000 | 0.000 | 49.42 | Samples removed for chemistry, #106A, #109A, #109B. Some brine left in hole, no calculation. |
| DH38 | 06/18/87 | 12:05 | 0.16 | 898.503 | 42.031 | 0.049 | 49.58 | Calculated using 2.07 liters (1.91 l. 6/17/87 plus 0.16 l. 6/18/87). |
| DH38 | 07/28/87 | 10:53 | 1.88 | 938.453 | 39.950 | 0.047 | 51.46 | Sample collected for chemistry #106. |
| DH38 | 09/01/87 | 10:45 | 1.70 | 973.448 | 34.995 | 0.049 | 53.16 | Collected for chemistry, sample #152 A&B. |
| DH38 | 10/20/87 | 11:40 | 2.29 | 1022.490 | 49.042 | 0.047 | 55.45 | |
| DH38 | 11/19/87 | 11:05 | 1.42 | 1052.460 | 29.970 | 0.047 | 56.87 | Collected for chemistry, sample 230. |
| DH38 | 01/04/88 | 11:35 | 2.05 | 1098.480 | 46.020 | 0.045 | 58.92 | |
| DH38 | 02/08/88 | 11:40 | 1.48 | 1133.490 | 35.010 | 0.042 | 60.40 | Collected for chemistry, sample #258, #259 & #260. |
| DH38 | 03/29/88 | 11:30 | 2.10 | 1183.480 | 49.990 | 0.042 | 62.50 | Collected for chemistry, sample #363 - #366. |
| DH38 | 05/05/88 | 09:55 | 1.70 | 1220.410 | 36.930 | 0.046 | 64.20 | Sampled for Sandia PA. |
| DH38 | 05/12/88 | 11:20 | 0.31 | 1227.470 | 7.060 | 0.044 | 64.51 | Sampled for Sandia PA. |
| DH38 | 07/12/88 | 08:45 | 2.44 | 1288.360 | 60.890 | 0.040 | 66.95 | Collected for chemistry, sample #417 - #421. |
| DH38 | 07/28/88 | 10:20 | 0.88 | 1304.430 | 16.070 | 0.055 | 67.83 | Sampled for Sandia PA. |
| DH38 | 09/27/88 | 10:30 | 1.92 | 1365.440 | 61.010 | 0.031 | 69.75 | Collected for chemistry, sample #533 - #536. |
| DH38 | 12/13/88 | 09:55 | 3.45 | 1442.410 | 76.970 | 0.045 | 73.20 | Collected for chemistry, sample #582 - #587. |
| DH38 | 03/14/89 | 09:55 | 3.25 | 1533.413 | 91.000 | 0.036 | 76.45 | Sample saved for chemistry, sample #696 - 701. |
| DH38 | 04/06/89 | 09:45 | 1.03 | 1556.406 | 22.993 | 0.045 | 77.48 | No sample taken. |
| DH38 | 04/20/89 | 09:35 | 0.75 | 1570.399 | 13.993 | 0.054 | 78.23 | |
| DH38 | 05/17/89 | 10:05 | 1.11 | 1597.420 | 27.021 | 0.041 | 79.34 | |
| DH38 | 06/06/89 | 10:00 | 0.70 | 1617.417 | 19.997 | 0.035 | 80.04 | Sample saved for chemistry. |
| DH38 | 06/29/89 | 10:30 | 0.64 | 1640.438 | 23.021 | 0.028 | 80.68 | |
| DH38 | 07/25/89 | 10:27 | 0.92 | 1666.435 | 25.997 | 0.035 | 81.60 | |
| DH38 | 08/16/89 | 09:57 | 0.81 | 1688.415 | 21.980 | 0.037 | 82.41 | Sample not saved. |
| DH38 | 09/12/89 | 09:20 | 1.16 | 1715.389 | 26.974 | 0.043 | 83.57 | Sample saved for chemistry. |
| DH38 | 12/13/89 | 10:55 | 3.20 | 1807.435 | 92.046 | 0.035 | 86.77 | Sample saved for chemistry, sample #899. |
| DH38 | 01/10/90 | 10:03 | 1.00 | 1835.419 | 27.964 | 0.036 | 87.77 | |
| DH38 | 01/24/90 | 10:10 | 0.21 | 1849.424 | 14.005 | 0.015 | 87.98 | |
| DH38 | 02/07/90 | 10:30 | 0.48 | 1863.438 | 14.014 | 0.034 | 88.46 | |
| DH38 | 03/05/90 | 09:18 | 0.53 | 1889.388 | 25.950 | 0.020 | 88.99 | |
| DH38 | 03/13/90 | 14:00 | NA | 1897.583 | 0.000 | 0.000 | 88.99 | Installed sampler. |
| DH38 | 03/19/90 | 11:30 | 0.61 | 1903.479 | 14.091 | 0.000 | 89.60 | Hole not completely evacuated. |
| DH38 | 03/21/90 | 10:30 | 0.57 | 1905.438 | 1.959 | 0.073 | 90.17 | Combined with 0.61 from 03/19/90. Used 1.18 liters for calculation. |
| DH38 | 04/04/90 | 09:37 | 0.62 | 1919.401 | 13.963 | 0.044 | 90.79 | |
| DH38 | 04/10/90 | 08:56 | 0.34 | 1925.372 | 5.971 | 0.057 | 91.13 | |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| DH38 | 04/17/90 | 10:39 | 0.23 | 1932.444 | 7.072 | 0.033 | 91.36 | |
| DH38 | 04/24/90 | 09:30 | 0.27 | 1939.396 | 6.952 | 0.039 | 91.63 | |
| DH38 | 05/02/90 | 10:47 | 0.32 | 1947.449 | 8.053 | 0.040 | 91.95 | |
| DH38 | 05/09/90 | 09:08 | 0.23 | 1954.381 | 6.932 | 0.033 | 92.18 | |
| DH38 | 05/16/90 | 09:35 | 0.25 | 1961.399 | 7.018 | 0.036 | 92.43 | |
| DH38 | 05/23/90 | 12:03 | 0.25 | 1968.502 | 7.103 | 0.035 | 92.68 | |
| DH38 | 05/31/90 | 09:04 | 0.28 | 1976.378 | 7.876 | 0.036 | 92.96 | |
| DH38 | 06/06/90 | 09:40 | 0.22 | 1982.403 | 6.025 | 0.037 | 93.18 | |
| DH38 | 06/14/90 | 08:53 | 0.27 | 1990.370 | 7.967 | 0.034 | 93.45 | |
| DH38 | 06/20/90 | 09:49 | 0.22 | 1996.409 | 6.039 | 0.036 | 93.67 | |
| DH38 | 06/28/90 | 09:15 | 0.29 | 2004.385 | 7.976 | 0.036 | 93.96 | |
| DH38 | 07/17/90 | 11:30 | 0.50 | 2023.479 | 19.094 | 0.000 | 94.46 | |
| DH38 | 07/18/90 | 10:40 | 0.20 | 2024.444 | 0.965 | 0.035 | 94.66 | Combined with 0.50 liters from 07/17/90. Used 0.07 liters for calculation. |
| DH38 | 07/25/90 | 09:42 | 0.30 | 2031.404 | 6.960 | 0.043 | 94.96 | |
| DH38 | 08/01/90 | 10:30 | 0.14 | 2038.438 | 7.034 | 0.020 | 95.10 | |
| DH38 | 03/07/91 | 09:30 | 5.55 | 2256.396 | 0.000 | 0.000 | 100.65 | Some brine may have been left in hole. Access denied due to unsound back. Sampler still functioning after 5 months. Rock bolting in "G |
| DH38 | 03/20/91 | 09:51 | 1.67 | 2269.410 | 230.972 | 0.031 | 102.32 | Combined with 5.55 liters from 03/07/91. First evacuation with bailer, second with pump. Brine probably draining from fractures/storag |
| DH38 | 03/28/91 | 10:32 | 0.52 | 2277.439 | 8.029 | 0.065 | 102.84 | |
| DH38 | 04/10/91 | 8:34 | 0.40 | 2290.336 | 0.000 | 0.000 | 103.24 | Partial evacuation. |
| DH38 | 04/11/91 | 08:50 | 0.03 | 2291.368 | 13.929 | 0.031 | 103.27 | Combined with 0.40 liters from 04/10/91. |
| DH38 | 04/17/91 | 10:36 | 0.10 | 2297.442 | 6.074 | 0.016 | 103.37 | |
| DH38 | 04/24/91 | 09:15 | 0.34 | 2304.385 | 6.943 | 0.049 | 103.71 | |
| DH38 | 05/01/91 | 09:22 | 0.23 | 2311.390 | 7.005 | 0.033 | 103.94 | |
| DH38 | 05/08/91 | 08:30 | 0.23 | 2318.354 | 6.964 | 0.033 | 104.17 | |
| DH38 | 05/15/91 | 09:10 | 0.23 | 2325.382 | 7.028 | 0.033 | 104.40 | |
| DH38 | 05/29/91 | 09:45 | 0.46 | 2339.406 | 14.024 | 0.033 | 104.86 | |
| DH38 | 06/05/91 | 13:45 | 0.18 | 2346.573 | 7.167 | 0.025 | 105.04 | |
| DH38 | 06/12/91 | 10:15 | 0.27 | 2353.427 | 6.854 | 0.039 | 105.31 | |
| DH38 | 06/19/91 | 13:54 | 0.25 | 2360.579 | 7.152 | 0.035 | 105.56 | |
| DH38 | 06/26/91 | 09:01 | 0.00 | 2367.376 | 0.000 | 0.000 | 105.56 | No Vacuum, clamp failed. |
| DH38 | 07/11/91 | 10:35 | 0.58 | 2382.441 | 21.862 | 0.027 | 106.14 | |
| DH38 | 07/17/91 | 09:30 | 0.31 | 2388.396 | 5.955 | 0.052 | 106.45 | |
| DH38 | 07/30/91 | 10:20 | 0.45 | 2401.431 | 13.035 | 0.035 | 106.90 | |
| DH38 | 08/08/91 | 09:18 | 0.32 | 2410.388 | 8.957 | 0.036 | 107.22 | |
| DH38 | 08/14/91 | 10:35 | 0.22 | 2416.441 | 6.053 | 0.036 | 107.44 | |
| DH38 | 08/21/91 | 10:55 | 0.23 | 2423.455 | 7.014 | 0.033 | 107.67 | |
| DH38 | 08/28/91 | 10:20 | 0.17 | 2430.431 | 6.976 | 0.024 | 107.84 | |
| DH38 | 09/04/91 | 11:18 | 0.25 | 2437.471 | 7.040 | 0.036 | 108.09 | |
| DH38 | 09/11/91 | 11:50 | 0.23 | 2444.493 | 7.022 | 0.033 | 108.32 | |
| DH38 | 09/18/91 | 09:20 | 0.26 | 2451.389 | 6.896 | 0.038 | 108.58 | |
| DH38 | 09/25/91 | 12:00 | 0.25 | 2458.500 | 7.111 | 0.035 | 108.83 | |
| DH38 | 10/02/91 | 11:09 | 0.23 | 2465.465 | 6.965 | 0.033 | 109.06 | |
| DH38 | 10/16/91 | 09:30 | 0.46 | 2479.396 | 13.931 | 0.033 | 109.52 | |
| DH38 | 10/23/91 | 09:45 | 0.16 | 2486.406 | 0.000 | 0.000 | 109.68 | Some brine may have been left in hole. Hose broke, lost vacuum. |
| DH38 | 10/31/91 | 09:43 | 0.45 | 2494.405 | 15.009 | 0.041 | 110.13 | Combined with 0.16 liters from 10/23/91. |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| DH38 | 11/06/91 | 10:07 | 0.22 | 2500.422 | 6.017 | 0.037 | 110.35 | |
| DH38 | 11/13/91 | 09:25 | 0.24 | 2507.392 | 6.970 | 0.034 | 110.59 | |
| DH38 | 11/20/91 | 11:15 | 0.24 | 2514.469 | 7.077 | 0.034 | 110.83 | |
| DH38 | 11/27/91 | 09:55 | 0.24 | 2521.413 | 6.944 | 0.035 | 111.07 | |
| DH38 | 12/04/91 | 09:52 | 0.24 | 2528.411 | 6.998 | 0.034 | 111.31 | |
| DH38 | 12/11/91 | 09:35 | 0.22 | 2535.399 | 6.988 | 0.031 | 111.53 | |
| DH38 | 12/18/91 | 09:20 | 0.00 | 2542.389 | 0.000 | 0.000 | 111.53 | Some brine may have been left in hole. Vacuum gone. |
| DH38 | 12/23/91 | 08:45 | 0.37 | 2547.365 | 11.966 | 0.031 | 111.90 | |
| DH39 | 12/13/84 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Approximate date that part of Room G was excavated. |
| DH39 | 01/24/85 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Uphole drilled. |
| DH39 | 02/05/85 | 11:15 | NA | 35.469 | 1.000 | 0.000 | 0.00 | Moist, no stalactites. |
| DH39 | 02/26/85 | 10:25 | NA | 56.434 | 21.965 | 0.000 | 0.00 | Wet, none collected, back wet in 1.5 ft circle. |
| DH39 | 03/12/85 | 10:00 | NA | 70.417 | 35.948 | 0.000 | 0.00 | Trace, salt crystals in container. |
| DH39 | 03/26/85 | 09:55 | NA | 84.413 | 49.944 | 0.000 | 0.00 | Trace, none collected. |
| DH39 | 05/07/85 | 09:37 | 00.01 | 126.401 | 91.932 | 0.000 | 0.01 | |
| DH39 | 05/29/85 | 11:30 | 00.03 | 148.479 | 22.078 | 0.001 | 0.04 | Stalactites in sample. |
| DH39 | 11/05/86 | 11:10 | NA | 673.465 | 524.986 | 0.000 | 0.04 | Dry. |
| DH39 | 11/20/86 | NA: | NA | 688.000 | 539.521 | 0.000 | 0.04 | Dry, not collected. |
| DH39 | 12/30/86 | 11:45 | NA | 728.490 | 580.011 | 0.000 | 0.04 | |
| DH39 | 02/03/87 | NA: | NA | 763.000 | 614.521 | 0.000 | 0.04 | |
| DH39 | 03/06/87 | 11:00 | NA | 794.458 | 645.979 | 0.000 | 0.04 | Dry. |
| DH39 | 03/30/87 | 11:05 | 0.00 | 818.462 | 24.004 | 0.000 | 0.04 | Dry. |
| DH39 | 05/07/87 | 11:20 | 0.00 | 856.472 | 62.014 | 0.000 | 0.04 | Dry. |
| DH39 | 06/18/87 | 12:00 | 0.00 | 898.500 | 104.042 | 0.000 | 0.04 | Dry. |
| DH39 | 07/28/87 | 11:03 | 0.00 | 938.460 | 144.002 | 0.000 | 0.04 | Dry. |
| DH39 | 09/01/87 | 10:21 | 0.00 | 973.431 | 34.971 | 0.000 | 0.04 | Dry. |
| DH39 | 10/20/87 | 11:33 | 0.00 | 1022.480 | 49.049 | 0.000 | 0.04 | Dry. |
| DH39 | 11/19/87 | 11:00 | 0.00 | 1052.460 | 29.980 | 0.000 | 0.04 | Dry. |
| DH39 | 01/04/88 | 11:35 | 0.00 | 1098.480 | 46.020 | 0.000 | 0.04 | Dry. |
| DH39 | 02/08/88 | 11:35 | 0.00 | 1133.480 | 35.000 | 0.000 | 0.04 | Dry. |
| DH39 | 03/29/88 | 11:30 | 0.00 | 1183.480 | 50.000 | 0.000 | 0.04 | Dry. |
| DH39 | 07/12/88 | 08:45 | 0.00 | 1288.360 | 104.880 | 0.000 | 0.04 | Dry. |
| DH39 | 09/27/88 | 10:30 | 0.00 | 1365.440 | 77.080 | 0.000 | 0.04 | Dry. |
| DH39 | 12/13/88 | 09:50 | 0 | 1442.410 | 76.970 | 0.000 | 0.04 | Dry. |
| DH39 | 03/14/89 | 09:50 | 0 | 1533.410 | 91.000 | 0.000 | 0.04 | No sample collected, hole dry. |
| DH39 | 04/06/89 | 09:50 | 0 | 1556.410 | 23.000 | 0.000 | 0.04 | Hole dry. |
| DH39 | 04/20/89 | 09:20 | 0 | 1570.389 | 13.979 | 0.000 | 0.04 | Hole dry. |
| DH39 | 05/17/89 | 10:05 | 0 | 1597.420 | 27.031 | 0.000 | 0.04 | Hole dry. |
| DH39 | 06/06/89 | 10:00 | 0 | 1617.417 | 19.997 | 0.000 | 0.04 | Hole dry. |
| DH39 | 06/29/89 | 10:25 | 0 | 1640.434 | 23.017 | 0.000 | 0.04 | Hole dry. |
| DH39 | 07/25/89 | 09:55 | 0 | 1666.413 | 25.979 | 0.000 | 0.04 | Hole dry. |
| DH39 | 08/16/89 | 09:55 | 0 | 1688.413 | 22.000 | 0.000 | 0.04 | Hole dry. |
| DH39 | 08/28/89 | 10:15 | 0 | 1700.427 | 12.014 | 0.000 | 0.04 | Collecting device removed. |
| DH39 | 12/13/89 | 10:25 | 0 | 1807.434 | 107.007 | 0.000 | 0.04 | Hole dry. |
| DH39 | 01/10/90 | 10:00 | 0.0 | 1835.417 | 27.983 | 0.000 | 0.00 | Dry. |
| DH39 | 01/24/90 | 10:00 | 0.0 | 1849.417 | 14.000 | 0.000 | 0.00 | Dry. |
| DH39 | 02/07/90 | 10:30 | 0.0 | 1863.438 | 14.021 | 0.000 | 0.00 | Dry. |
| DH39 | 02/21/90 | 09:46 | 0.0 | 1877.407 | 13.969 | 0.000 | 0.00 | Dry. |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| DH39 | 03/05/90 | 09:18 | 0.0 | 1889.388 | 11.981 | 0.000 | 0.00 | Dry. |
| DH39 | 03/19/90 | 11:25 | 0.0 | 1903.476 | 14.088 | 0.000 | 0.00 | Dry. |
| DH39 | 03/21/90 | 10:25 | 0.0 | 1905.434 | 1.958 | 0.000 | 0.00 | Dry. |
| DH39 | 04/04/90 | 09:31 | 0.0 | 1919.397 | 13.963 | 0.000 | 0.00 | Dry. |
| DH39 | 04/10/90 | 08:36 | 0.0 | 1925.358 | 5.961 | 0.000 | 0.00 | Dry. |
| DH39 | 04/17/90 | 10:39 | 0.0 | 1932.444 | 7.086 | 0.000 | 0.00 | Dry. |
| DH39 | 04/24/90 | 09:30 | 0.0 | 1939.396 | 6.952 | 0.000 | 0.00 | Dry. |
| DH39 | 05/02/90 | 10:30 | 0.0 | 1947.438 | 8.042 | 0.000 | 0.00 | Dry. |
| DH39 | 05/09/90 | 08:44 | 0.0 | 1954.364 | 6.926 | 0.000 | 0.00 | Dry. |
| DH39 | 05/16/90 | 09:25 | 0.0 | 1961.392 | 7.028 | 0.000 | 0.00 | Dry. |
| DH39 | 05/23/90 | 12:06 | 0.0 | 1968.504 | 7.112 | 0.000 | 0.00 | Dry. |
| DH39 | 05/31/90 | 09:02 | 0.0 | 1976.376 | 7.872 | 0.000 | 0.00 | Dry. |
| DH39 | 06/06/90 | 09:39 | 0.0 | 1982.402 | 6.026 | 0.000 | 0.00 | Dry. |
| DH39 | 06/14/90 | 08:51 | 0.0 | 1990.369 | 7.967 | 0.000 | 0.00 | Dry. |
| DH39 | 06/20/90 | 09:33 | 0.0 | 1996.398 | 6.029 | 0.000 | 0.00 | Dry. |
| DH39 | 06/28/90 | 08:38 | 0.0 | 2004.360 | 7.962 | 0.000 | 0.00 | Dry. |
| DH39 | 07/17/90 | 11:00 | 0.0 | 2023.458 | 19.098 | 0.000 | 0.00 | Dry. |
| DH39 | 07/25/90 | 09:34 | 0.0 | 2031.399 | 7.941 | 0.000 | 0.00 | Dry. |
| DH39 | 08/01/90 | 10:30 | 0.0 | 2038.438 | 7.039 | 0.000 | 0.00 | Dry. |
| DH39 | 03/20/91 | 09:24 | 0.00 | 2269.392 | 230.954 | 0.000 | 0.00 | Dry. |
| DH39 | 03/28/91 | 10:17 | 0.00 | 2277.428 | 8.036 | 0.000 | 0.00 | Dry. |
| DH39 | 04/10/91 | 8:34 | 0.00 | 2290.336 | 12.908 | 0.000 | 0.00 | Dry. |
| DH39 | 04/17/91 | 10:22 | 0.00 | 2297.432 | 7.096 | 0.000 | 0.00 | Dry. |
| DH39 | 04/24/91 | 09:12 | 0.00 | 2304.383 | 6.951 | 0.000 | 0.00 | Dry. |
| DH39 | 05/01/91 | 09:22 | 0.00 | 2311.390 | 7.007 | 0.000 | 0.00 | Dry. |
| DH39 | 05/08/91 | 08:29 | 0.00 | 2318.353 | 6.963 | 0.000 | 0.00 | Dry. |
| DH39 | 05/15/91 | 09:02 | 0.00 | 2325.376 | 7.023 | 0.000 | 0.00 | Dry. |
| DH39 | 05/29/91 | 09:40 | 0.00 | 2339.403 | 14.027 | 0.000 | 0.00 | Dry. |
| DH39 | 06/05/91 | 13:47 | 0.00 | 2346.574 | 7.171 | 0.000 | 0.00 | Dry. |
| DH39 | 06/12/91 | 10:12 | 0.00 | 2353.425 | 6.851 | 0.000 | 0.00 | Dry. |
| DH39 | 06/19/91 | 13:55 | 0.00 | 2360.580 | 7.155 | 0.000 | 0.00 | Dry. |
| DH39 | 06/26/91 | 09:05 | 0.00 | 2367.378 | 6.798 | 0.000 | 0.00 | Dry. |
| DH39 | 07/11/91 | 10:40 | 0.00 | 2382.444 | 15.066 | 0.000 | 0.00 | Dry. |
| DH39 | 07/17/91 | 09:27 | 0.00 | 2388.394 | 5.950 | 0.000 | 0.00 | Dry. |
| DH39 | 08/14/91 | 10:38 | 0.00 | 2416.443 | 28.049 | 0.000 | 0.00 | Dry. |
| DH39 | 08/21/91 | 10:50 | 0.00 | 2423.451 | 7.008 | 0.000 | 0.00 | Dry. |
| DH39 | 08/28/91 | 10:15 | 0.00 | 2430.427 | 6.976 | 0.000 | 0.00 | Dry. |
| DH39 | 09/04/91 | 11:15 | 0.00 | 2437.469 | 7.042 | 0.000 | 0.00 | Dry. |
| DH39 | 09/11/91 | 11:45 | 0.00 | 2444.490 | 7.021 | 0.000 | 0.00 | Dry. |
| DH39 | 09/18/91 | 09:20 | 0.00 | 2451.389 | 6.899 | 0.000 | 0.00 | Dry. |
| DH39 | 09/25/91 | 11:55 | 0.00 | 2458.497 | 7.108 | 0.000 | 0.00 | Dry. |
| DH39 | 10/02/91 | 11:09 | 0.00 | 2465.465 | 6.968 | 0.000 | 0.00 | Dry. |
| DH39 | 10/16/91 | 09:25 | 0.00 | 2479.392 | 13.927 | 0.000 | 0.00 | Dry. |
| DH39 | 10/23/91 | 09:45 | 0.00 | 2486.406 | 7.014 | 0.000 | 0.00 | Dry. |
| DH39 | 10/31/91 | 09:43 | 0.00 | 2494.405 | 7.999 | 0.000 | 0.00 | Dry. |
| DH39 | 11/06/91 | 10:05 | 0.00 | 2500.420 | 6.015 | 0.000 | 0.00 | Dry. |
| DH39 | 11/13/91 | 09:30 | 0.00 | 2507.396 | 6.976 | 0.000 | 0.00 | Dry. |
| DH39 | 11/20/91 | 11:15 | 0.00 | 2514.469 | 7.073 | 0.000 | 0.00 | Dry. |
| DH39 | 11/27/91 | 09:55 | 0.00 | 2521.413 | 6.944 | 0.000 | 0.00 | Dry. |
| DH39 | 12/04/91 | 09:50 | 0.00 | 2528.410 | 6.997 | 0.000 | 0.00 | Dry. |
| DH40 | 12/13/84 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Approximate date this part of Room G |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | excavated. |
| DH40 | 01/25/85 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Downhole drilled 1/24/85 to 1/25/85. |
| DH40 | 01/28/85 | 09:00 | NA | 27.375 | 1.000 | 0.000 | 0.00 | Dry. |
| DH40 | 02/05/85 | 11:15 | NA | 35.469 | 9.094 | 0.000 | 0.00 | Moist at bottom. |
| DH40 | 03/12/85 | 10:10 | NA | 70.424 | 44.049 | 0.000 | 0.00 | Moist muck. |
| DH40 | 03/26/85 | 09:55 | NA | 84.413 | 58.038 | 0.000 | 0.00 | Moist muck. |
| DH40 | 04/17/85 | 13:30 | 00.98 | 106.562 | 80.187 | 0.012 | 0.98 | Brine, muck, and oil. |
| DH40 | 04/23/85 | 11:33 | 00.26 | 112.481 | 5.919 | 0.044 | 1.24 | Brine and muck. |
| DH40 | 04/30/85 | 10:49 | 00.11 | 119.451 | 6.970 | 0.016 | 1.35 | Feel something spongy in bottom of hole. |
| DH40 | 05/07/85 | 09:42 | 00.10 | 126.404 | 6.953 | 0.014 | 1.45 | |
| DH40 | 05/14/85 | 10:40 | 00.09 | 133.444 | 7.040 | 0.013 | 1.54 | |
| DH40 | 05/21/85 | 10:26 | 00.07 | 140.435 | 6.991 | 0.010 | 1.61 | |
| DH40 | 05/29/85 | 11:30 | 00.08 | 148.479 | 8.044 | 0.010 | 1.69 | |
| DH40 | 06/04/85 | 11:15 | 00.10 | 154.469 | 5.990 | 0.017 | 1.79 | Contained a lot of salt muck. |
| DH40 | 06/11/85 | 10:30 | 00.05 | 161.438 | 6.969 | 0.007 | 1.84 | |
| DH40 | 06/18/85 | 10:01 | 00.09 | 168.417 | 6.979 | 0.013 | 1.93 | |
| DH40 | 06/25/85 | 11:00 | 00.08 | 175.458 | 7.041 | 0.011 | 2.01 | |
| DH40 | 07/02/85 | 11:00 | 00.09 | 182.458 | 7.000 | 0.013 | 2.10 | |
| DH40 | 07/09/85 | 10:45 | 00.12 | 189.448 | 6.990 | 0.017 | 2.22 | |
| DH40 | 07/16/85 | 11:38 | 00.09 | 196.485 | 7.037 | 0.013 | 2.31 | |
| DH40 | 07/24/85 | 10:31 | 00.07 | 204.438 | 7.953 | 0.009 | 2.38 | |
| DH40 | 07/30/85 | 10:08 | 00.07 | 210.422 | 5.984 | 0.012 | 2.45 | |
| DH40 | 08/06/85 | 10:20 | 00.06 | 217.431 | 7.009 | 0.009 | 2.51 | |
| DH40 | 08/14/85 | 10:43 | 00.07 | 225.447 | 8.016 | 0.009 | 2.58 | |
| DH40 | 08/20/85 | 10:50 | 00.05 | 231.451 | 6.004 | 0.008 | 2.63 | |
| DH40 | 08/28/85 | 09:53 | 00.08 | 239.412 | 7.961 | 0.010 | 2.71 | |
| DH40 | 09/04/85 | 10:18 | 00.03 | 246.429 | 7.017 | 0.004 | 2.74 | |
| DH40 | 09/10/85 | 10:11 | 00.04 | 252.424 | 5.995 | 0.007 | 2.78 | |
| DH40 | 09/17/85 | 09:31 | 00.03 | 259.397 | 6.973 | 0.004 | 2.81 | |
| DH40 | 09/24/85 | 09:40 | 00.06 | 266.403 | 7.006 | 0.009 | 2.87 | |
| DH40 | 10/01/85 | 09:47 | 00.06 | 273.408 | 7.005 | 0.009 | 2.93 | |
| DH40 | 10/08/85 | 10:32 | 00.04 | 280.439 | 7.031 | 0.006 | 2.97 | |
| DH40 | 10/15/85 | 10:05 | 00.09 | 287.420 | 6.981 | 0.013 | 3.06 | |
| DH40 | 10/23/85 | 10:13 | 00.04 | 295.426 | 8.006 | 0.005 | 3.10 | |
| DH40 | 10/29/85 | 09:32 | 00.07 | 301.397 | 5.971 | 0.012 | 3.17 | |
| DH40 | 11/05/85 | 09:10 | 00.04 | 308.382 | 6.985 | 0.006 | 3.21 | |
| DH40 | 11/13/85 | 09:55 | 00.07 | 316.413 | 8.031 | 0.009 | 3.28 | |
| DH40 | 11/21/85 | 11:24 | 00.02 | 324.475 | 8.062 | 0.002 | 3.30 | |
| DH40 | 12/03/85 | 13:20 | 00.08 | 336.556 | 12.081 | 0.007 | 3.38 | |
| DH40 | 12/10/85 | 12:40 | 00.04 | 343.528 | 6.972 | 0.006 | 3.42 | |
| DH40 | 01/23/86 | 11:25 | 00.24 | 387.476 | 43.948 | 0.005 | 3.66 | Entry restricted since 12/10/85 due to mining activities. |
| DH40 | 01/31/86 | 12:10 | 00.02 | 395.507 | 8.031 | 0.002 | 3.68 | |
| DH40 | 02/19/86 | 11:20 | 00.14 | 414.472 | 18.965 | 0.007 | 3.82 | |
| DH40 | 02/28/86 | 13:10 | 00.05 | 423.549 | 9.077 | 0.006 | 3.87 | |
| DH40 | 03/13/86 | 10:00 | 00.02 | 436.417 | 12.868 | 0.002 | 3.89 | |
| DH40 | 04/24/86 | 10:05 | 00.13 | 478.420 | 42.003 | 0.003 | 4.02 | |
| DH40 | 05/20/86 | 11:05 | 00.10 | 504.462 | 26.042 | 0.004 | 4.12 | |
| DH40 | 06/03/86 | 09:58 | 00.20 | 518.415 | 13.953 | 0.014 | 4.32 | |
| DH40 | 09/16/86 | 10:05 | 00.34 | 623.420 | 105.005 | 0.003 | 4.66 | Did not collect for several months. |
| DH40 | 11/05/86 | 11:18 | 0.27 | 673.471 | 50.051 | 0.005 | 4.93 | |
| DH40 | 11/20/86 | NA: | NA | 688.000 | 14.529 | 0.000 | 4.93 | Not sampled. |
| DH40 | 12/30/86 | 12:00 | 00.25 | 728.500 | 55.029 | 0.005 | 5.18 | Very dirty, pH 6.00. |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| DH40 | 02/03/87 | 13:00 | 00.13 | 763.542 | 35.042 | 0.004 | 5.31 | Only 1 bottle. |
| DH40 | 03/06/87 | 10:55 | 0.09 | 794.455 | 30.913 | 0.003 | 5.40 | |
| DH40 | 03/30/87 | 11:05 | 0.10 | 818.462 | 24.007 | 0.004 | 5.50 | |
| DH40 | 06/18/87 | 12:00 | 0.19 | 898.500 | 80.038 | 0.002 | 5.69 | |
| DH40 | 09/01/87 | 10:25 | 0.16 | 973.434 | 74.934 | 0.002 | 5.85 | |
| DH40 | 10/20/87 | 11:33 | | 1022.480 | 0.000 | 0.000 | 5.85 | Not sampled. No calculation. |
| DH40 | 11/19/87 | 11:00 | | 1052.460 | 0.000 | 0.000 | 5.85 | Did not collect. No calculation. |
| DH40 | 01/04/88 | 11:35 | | 1098.480 | 0.000 | 0.000 | 5.85 | Did not sample. |
| DH40 | 02/08/88 | 11:30 | 0.55 | 1133.480 | 160.046 | 0.003 | 6.40 | Collected for chemistry, sample #257. |
| DH40 | 03/29/88 | 11:25 | 0.14 | 1183.480 | 50.000 | 0.003 | 6.54 | Collected for chemistry, sample #326. |
| DH40 | 05/12/88 | 11:40 | 0.20 | 1227.490 | 44.010 | 0.005 | 6.74 | Sampled for Sandia PA. |
| DH40 | 07/12/88 | 08:40 | 0.15 | 1288.360 | 60.870 | 0.002 | 6.89 | |
| DH40 | 09/27/88 | 10:25 | 0.21 | 1365.430 | 77.070 | 0.003 | 7.10 | Collected for chemistry, sample #532. |
| DH40 | 12/13/88 | 09:45 | 0.12 | 1442.410 | 76.980 | 0.002 | 7.22 | |
| DH40 | 03/15/89 | 10:35 | Trace | 1534.441 | 0.000 | 0.000 | 7.22 | No sample. Trace of brine found. |
| DH40 | 04/06/89 | 09:50 | 0.27 | 1556.410 | 114.004 | 0.002 | 7.49 | |
| DH40 | 04/20/89 | 09:20 | 0.09 | 1570.389 | 13.979 | 0.006 | 7.58 | |
| DH40 | 05/17/89 | 10:00 | 0.30 | 1597.417 | 27.028 | 0.011 | 7.88 | |
| DH40 | 06/06/89 | 09:55 | 0.12 | 1617.413 | 19.996 | 0.006 | 8.00 | Sample not saved. |
| DH40 | 06/29/89 | 10:25 | Trace | 1640.434 | 0.000 | 0.000 | 8.00 | Trace of brine found. |
| DH40 | 07/25/89 | 10:18 | 0.07 | 1666.429 | 49.016 | 0.001 | 8.07 | |
| DH40 | 08/16/89 | 09:49 | 0.06 | 1688.409 | 21.980 | 0.003 | 8.13 | Sample not saved. |
| DH40 | 09/12/89 | 09:10 | Trace | 1715.382 | 0.000 | 0.000 | 8.13 | Trace of fluid in hole. Sample not saved. |
| DH40 | 12/13/89 | 10:25 | 0.20 | 1807.434 | 119.025 | 0.002 | 8.33 | Sample not saved. |
| DH40 | 01/10/90 | 09:50 | 0.08 | 1835.410 | 27.976 | 0.003 | 8.41 | |
| DH40 | 03/05/90 | 09:10 | 0.50 | 1889.382 | 53.972 | 0.009 | 8.91 | |
| DH40 | 03/13/90 | 13:30 | NA | 1897.562 | 0.000 | 0.000 | 8.91 | Installed sampler. |
| DH40 | 03/19/90 | 11:25 | 0.09 | 1903.476 | 14.094 | 0.000 | 9.00 | Brine probably left in hole. |
| DH40 | 03/21/90 | 10:25 | 0.02 | 1905.434 | 1.958 | 0.007 | 9.02 | Combined with 0.09 liters from 03/19/90. Used 0.11 liters for calculation. |
| DH40 | 04/04/90 | 09:31 | 0.03 | 1919.397 | 13.963 | 0.002 | 9.05 | |
| DH40 | 05/02/90 | 10:41 | 0.09 | 1947.445 | 28.048 | 0.003 | 9.14 | |
| DH40 | 05/16/90 | 09:26 | 0.07 | 1961.393 | 13.948 | 0.005 | 9.21 | |
| DH40 | 06/14/90 | 11:19 | 0.13 | 1990.472 | 29.079 | 0.004 | 9.34 | |
| DH40 | 06/20/90 | 09:40 | 0.02 | 1996.403 | 5.931 | 0.003 | 9.36 | |
| DH40 | 06/28/90 | 09:00 | 0.03 | 2004.375 | 7.972 | 0.004 | 9.39 | |
| DH40 | 07/17/90 | 11:17 | 0.10 | 2023.470 | 19.095 | 0.005 | 9.49 | |
| DH40 | 03/20/91 | 09:24 | 0.72 | 2269.392 | 0.000 | 0.000 | 10.21 | Some brine may have been left in hole. First sampling in a long time. First evacuation with bailer, second with pump. |
| DH40 | 03/28/91 | 10:17 | 0.54 | 2277.428 | 253.958 | 0.005 | 10.75 | Combined with 0.72 liters from 03/20/91. |
| DH40 | 04/10/91 | 8:40 | 0.10 | 2290.333 | 12.905 | 0.008 | 10.85 | |
| DH40 | 04/17/91 | 10:22 | 0.04 | 2297.432 | 7.099 | 0.006 | 10.89 | |
| DH40 | 05/01/91 | 09:20 | 0.10 | 2311.389 | 13.957 | 0.007 | 10.99 | |
| DH40 | 05/29/91 | 09:50 | 0.16 | 2339.410 | 28.021 | 0.006 | 11.15 | |
| DH40 | 06/26/91 | 09:05 | 0.17 | 2367.378 | 27.968 | 0.006 | 11.32 | |
| DH40 | 07/11/91 | 10:40 | 0.11 | 2382.444 | 15.066 | 0.007 | 11.43 | |
| DH40 | 08/08/91 | 09:15 | 0.18 | 2410.385 | 27.941 | 0.006 | 11.61 | |
| DH40 | 08/21/91 | 10:50 | 0.10 | 2423.451 | 13.066 | 0.008 | 11.71 | |
| DH40 | 09/18/91 | 09:15 | 0.14 | 2451.385 | 27.934 | 0.005 | 11.85 | |
| DH40 | 09/25/91 | 11:55 | 0.13 | 2458.497 | 7.112 | 0.018 | 11.98 | |
| DH40 | 10/16/91 | 09:25 | 0.15 | 2479.392 | 20.895 | 0.007 | 12.13 | |
| DH40 | 10/23/91 | 09:40 | 0.07 | 2486.403 | 7.011 | 0.010 | 12.20 | |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| DH40 | 11/13/91 | 09:30 | 0.14 | 2507.396 | 20.993 | 0.007 | 12.34 | |
| DH40 | 11/27/91 | 10:00 | 0.10 | 2521.417 | 14.021 | 0.007 | 12.44 | |
| DH40 | 12/11/91 | 09:40 | 0.11 | 2535.403 | 13.986 | 0.008 | 12.55 | |
| DH41 | 12/30/84 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Approximate date this part of Room G excavated. |
| DH41 | 01/24/85 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Uphole drilled 1/23/85 to 1/24/85. |
| DH41 | 02/05/85 | 11:15 | NA | 35.469 | 1.000 | 0.000 | 0.00 | Moist, no stalactites. |
| DH41 | 03/26/85 | 10:05 | NA | 84.420 | 49.951 | 0.000 | 0.00 | Trace, none collected. |
| DH41 | 05/07/85 | 09:21 | 00.01 | 126.390 | 91.921 | 0.000 | 0.01 | |
| DH41 | 05/29/85 | 10:00 | 00.01 | 148.417 | 22.027 | 0.000 | 0.02 | Trace. |
| DH41 | 07/24/85 | 10:13 | 00.01 | 204.426 | 56.009 | 0.000 | 0.03 | |
| DH41 | 08/20/85 | 12:00 | 00.01 | 231.500 | 27.074 | 0.000 | 0.04 | Trace. |
| DH41 | 08/28/85 | 09:35 | 00.02 | 239.399 | 7.899 | 0.003 | 0.06 | |
| DH41 | 09/17/85 | 09:20 | 00.01 | 259.389 | 19.990 | 0.001 | 0.07 | |
| DH41 | 02/19/86 | 11:20 | 00.05 | 414.472 | 155.083 | 0.000 | 0.12 | Lots of salt crystals and lumps of clay in container. |
| DH41 | 11/05/86 | 11:00 | NA | 673.458 | 258.986 | 0.000 | 0.12 | Dry. Funnel has been removed, salt crust on collar. |
| DH41 | 11/20/86 | 12:07 | NA | 688.505 | 274.033 | 0.000 | 0.12 | Dry. |
| DH41 | 12/30/86 | 12:50 | NA | 728.535 | 314.063 | 0.000 | 0.12 | |
| DH41 | 02/03/87 | NA: | NA | 763.000 | 348.528 | 0.000 | 0.12 | |
| DH41 | 03/05/87 | 10:55 | NA | 793.455 | 378.983 | 0.000 | 0.12 | Crusty. |
| DH41 | 03/30/87 | 11:00 | 0.00 | 818.458 | 25.003 | 0.000 | 0.12 | Dry. |
| DH41 | 05/07/87 | 11:09 | 0.00 | 856.465 | 63.010 | 0.000 | 0.12 | Dry. |
| DH41 | 06/18/87 | 11:56 | 0.00 | 898.497 | 105.042 | 0.000 | 0.12 | Dry. |
| DH41 | 07/28/87 | 11:03 | 0.00 | 938.460 | 145.005 | 0.000 | 0.12 | Dry. |
| DH41 | 09/01/87 | 10:15 | 0.00 | 973.427 | 34.967 | 0.000 | 0.12 | Dry. |
| DH41 | 10/20/87 | 11:28 | 0.00 | 1022.480 | 49.053 | 0.000 | 0.12 | Dry. |
| DH41 | 11/19/87 | 10:55 | 0.00 | 1052.450 | 29.970 | 0.000 | 0.12 | Dry. |
| DH41 | 01/04/88 | 11:35 | 0.00 | 1098.480 | 46.030 | 0.000 | 0.12 | Dry. |
| DH41 | 02/08/88 | 11:20 | 0.00 | 1133.470 | 34.990 | 0.000 | 0.12 | Dry. |
| DH41 | 03/29/88 | 11:20 | 0.00 | 1183.470 | 50.000 | 0.000 | 0.12 | Dry. |
| DH41 | 07/12/88 | 08:40 | 0.00 | 1288.360 | 104.890 | 0.000 | 0.12 | Dry. |
| DH41 | 09/27/88 | 10:20 | 0.00 | 1365.430 | 77.070 | 0.000 | 0.12 | Dry. |
| DH41 | 12/13/88 | 09:45 | 0 | 1442.410 | 76.980 | 0.000 | 0.12 | Dry. |
| DH41 | 04/06/89 | 09:55 | 0 | 1556.413 | 114.007 | 0.000 | 0.12 | Hole dry. |
| DH41 | 04/20/89 | 09:10 | 0 | 1570.382 | 13.969 | 0.000 | 0.12 | Hole dry. |
| DH41 | 05/17/89 | 10:00 | 0 | 1597.417 | 27.035 | 0.000 | 0.12 | Hole dry. |
| DH41 | 06/06/89 | 09:55 | 0 | 1617.413 | 19.996 | 0.000 | 0.12 | Hole dry. |
| DH41 | 06/29/89 | 10:15 | 0 | 1640.427 | 23.014 | 0.000 | 0.12 | Hole dry. |
| DH41 | 07/25/89 | 09:55 | 0 | 1666.413 | 25.986 | 0.000 | 0.12 | Hole dry. |
| DH41 | 08/16/89 | 09:55 | 0 | 1688.413 | 22.000 | 0.000 | 0.12 | Hole dry. |
| DH41 | 08/28/89 | 10:15 | 0 | 1700.427 | 12.014 | 0.000 | 0.12 | Collecting device removed. |
| DH41 | 12/13/89 | 10:03 | 0 | 1807.419 | 106.992 | 0.000 | 0.12 | Hole dry. |
| DH41 | 01/10/90 | 09:45 | 0.0 | 1835.406 | 27.987 | 0.000 | 0.12 | Dry. |
| DH41 | 01/24/90 | 10:00 | 0.0 | 1849.417 | 14.011 | 0.000 | 0.12 | Dry. |
| DH41 | 02/07/90 | 10:30 | 0.0 | 1863.438 | 14.021 | 0.000 | 0.12 | Dry. |
| DH41 | 02/21/90 | 09:45 | 0.0 | 1877.406 | 13.968 | 0.000 | 0.12 | Dry. |
| DH41 | 03/05/90 | 09:08 | 0.0 | 1889.381 | 11.975 | 0.000 | 0.12 | Dry. |
| DH41 | 03/19/90 | 11:12 | 0.0 | 1903.467 | 14.086 | 0.000 | 0.12 | Dry. |
| DH41 | 03/21/90 | 10:23 | 0.0 | 1905.433 | 1.966 | 0.000 | 0.12 | Dry. |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| DH41 | 04/04/90 | 09:14 | 0.0 | 1919.385 | 13.952 | 0.000 | 0.12 | Dry. |
| DH41 | 04/10/90 | 08:36 | 0.0 | 1925.358 | 5.973 | 0.000 | 0.12 | Dry. |
| DH41 | 04/17/90 | 10:29 | 0.0 | 1932.437 | 7.079 | 0.000 | 0.12 | Dry. |
| DH41 | 04/24/90 | 09:26 | 0.0 | 1939.393 | 6.956 | 0.000 | 0.12 | Dry. |
| DH41 | 05/02/90 | 10:30 | 0.0 | 1947.438 | 8.045 | 0.000 | 0.12 | Dry. |
| DH41 | 05/09/90 | 09:45 | 0.0 | 1954.406 | 6.968 | 0.000 | 0.12 | Dry. |
| DH41 | 05/16/90 | 09:11 | 0.0 | 1961.383 | 6.977 | 0.000 | 0.12 | Dry. |
| DH41 | 05/23/90 | 12:06 | 0.0 | 1968.504 | 7.121 | 0.000 | 0.12 | Dry. |
| DH41 | 05/31/90 | 09:01 | 0.0 | 1976.376 | 7.872 | 0.000 | 0.12 | Dry. |
| DH41 | 06/06/90 | 09:30 | 0.0 | 1982.396 | 6.020 | 0.000 | 0.12 | Dry. |
| DH41 | 06/14/90 | 08:48 | 0.0 | 1990.367 | 7.971 | 0.000 | 0.12 | Dry. |
| DH41 | 06/20/90 | 09:35 | 0.0 | 1996.399 | 6.032 | 0.000 | 0.12 | Dry. |
| DH41 | 06/28/90 | 08:38 | 0.0 | 2004.360 | 7.961 | 0.000 | 0.12 | Dry. |
| DH41 | 07/17/90 | 11:02 | 0.0 | 2023.460 | 19.100 | 0.000 | 0.12 | Dry. |
| DH41 | 07/25/90 | 09:43 | 0.0 | 2031.405 | 7.945 | 0.000 | 0.12 | Dry. |
| DH41 | 08/01/90 | 10:25 | 0.0 | 2038.434 | 7.029 | 0.000 | 0.12 | Dry. |
| DH41 | 03/28/91 | 10:17 | 0.00 | 2277.428 | 238.994 | 0.000 | 0.12 | Dry. |
| DH41 | 04/10/91 | 8:46 | 0.00 | 2290.338 | 12.910 | 0.000 | 0.12 | Dry. |
| DH41 | 04/17/91 | 10:19 | 0.00 | 2297.430 | 7.092 | 0.000 | 0.12 | Dry. |
| DH41 | 04/24/91 | 09:10 | 0.00 | 2304.382 | 6.952 | 0.000 | 0.12 | Dry. |
| DH41 | 05/01/91 | 09:12 | 0.00 | 2311.383 | 7.001 | 0.000 | 0.12 | Dry. |
| DH41 | 05/08/91 | 08:24 | 0.00 | 2318.350 | 6.967 | 0.000 | 0.12 | Dry. |
| DH41 | 05/15/91 | 09:02 | 0.00 | 2325.376 | 7.026 | 0.000 | 0.12 | Dry. |
| DH41 | 05/29/91 | 09:55 | 0.00 | 2339.413 | 14.037 | 0.000 | 0.12 | Dry. |
| DH41 | 06/05/91 | 13:45 | 0.00 | 2346.573 | 7.160 | 0.000 | 0.12 | Dry. |
| DH41 | 06/12/91 | 10:10 | 0.00 | 2353.424 | 6.851 | 0.000 | 0.12 | Dry. |
| DH41 | 06/19/91 | 13:35 | 0.00 | 2360.566 | 7.142 | 0.000 | 0.12 | Dry. |
| DH41 | 06/26/91 | 09:10 | 0.00 | 2367.382 | 6.816 | 0.000 | 0.12 | Dry. |
| DH41 | 07/11/91 | 10:49 | 0.00 | 2382.451 | 15.069 | 0.000 | 0.12 | Dry. |
| DH41 | 07/17/91 | 09:22 | 0.00 | 2388.390 | 5.939 | 0.000 | 0.12 | Dry. |
| DH41 | 08/14/91 | 10:35 | 0.00 | 2416.441 | 28.051 | 0.000 | 0.12 | Dry. |
| DH41 | 08/21/91 | 10:40 | 0.00 | 2423.444 | 7.003 | 0.000 | 0.12 | Dry. |
| DH41 | 08/28/91 | 10:10 | 0.00 | 2430.424 | 6.980 | 0.000 | 0.12 | Dry. |
| DH41 | 09/04/91 | 11:10 | 0.00 | 2437.465 | 7.041 | 0.000 | 0.12 | Dry. |
| DH41 | 09/11/91 | 11:40 | 0.00 | 2444.486 | 7.021 | 0.000 | 0.12 | Dry. |
| DH41 | 09/18/91 | 09:15 | 0.00 | 2451.385 | 6.899 | 0.000 | 0.12 | Dry. |
| DH41 | 09/25/91 | 11:52 | 0.00 | 2458.494 | 7.109 | 0.000 | 0.12 | Dry. |
| DH41 | 10/02/91 | 11:00 | 0.00 | 2465.458 | 6.964 | 0.000 | 0.12 | Dry. |
| DH41 | 10/16/91 | 09:15 | 0.00 | 2479.385 | 13.927 | 0.000 | 0.12 | Dry. |
| DH41 | 10/23/91 | 09:31 | 0.00 | 2486.397 | 7.012 | 0.000 | 0.12 | Dry. |
| DH41 | 10/31/91 | 09:42 | 0.00 | 2494.404 | 8.007 | 0.000 | 0.12 | Dry. |
| DH41 | 11/06/91 | 10:03 | 0.00 | 2500.419 | 6.015 | 0.000 | 0.12 | Dry. |
| DH41 | 11/13/91 | 09:35 | 0.00 | 2507.399 | 6.980 | 0.000 | 0.12 | Dry. |
| DH41 | 11/20/91 | 11:20 | 0.00 | 2514.472 | 7.073 | 0.000 | 0.12 | Dry. |
| DH41 | 11/27/91 | 10:05 | 0.00 | 2521.420 | 6.948 | 0.000 | 0.12 | Dry. |
| DH41 | 12/04/91 | 09:50 | 0.00 | 2528.410 | 6.990 | 0.000 | 0.12 | Dry. |
| DH41 | 12/11/91 | 09:35 | 0.00 | 2535.399 | 6.989 | 0.000 | 0.12 | Dry. |
| DH42 | 12/30/84 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Approximate date this part of Room G excavated. |
| DH42 | 01/23/85 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Downhole drilled. |
| DH42 | 01/28/85 | 09:00 | NA | 27.375 | 1.000 | 0.000 | 0.00 | Moist muck at the bottom. |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| DH42 | 02/05/85 | 11:15 | 00.27 | 35.469 | 9.094 | 0.030 | 0.27 | First time collected. |
| DH42 | 02/11/85 | 11:00 | 00.30 | 41.458 | 5.989 | 0.050 | 0.57 | |
| DH42 | 02/19/85 | 13:10 | 00.33 | 49.549 | 8.091 | 0.041 | 0.90 | |
| DH42 | 02/26/85 | 10:45 | 00.26 | 56.448 | 6.899 | 0.038 | 1.16 | |
| DH42 | 03/05/85 | 10:00 | 00.28 | 63.417 | 6.969 | 0.040 | 1.44 | |
| DH42 | 03/12/85 | 10:20 | 00.25 | 70.431 | 7.014 | 0.036 | 1.69 | |
| DH42 | 03/20/85 | 10:54 | 00.25 | 78.454 | 8.023 | 0.031 | 1.94 | Valve leaked, some brine drained back down hole. |
| DH42 | 03/26/85 | 10:06 | 00.28 | 84.421 | 5.967 | 0.047 | 2.22 | |
| DH42 | 04/02/85 | 10:45 | 00.26 | 91.448 | 7.027 | 0.037 | 2.48 | |
| DH42 | 04/10/85 | 10:45 | 00.29 | 99.448 | 8.000 | 0.036 | 2.77 | |
| DH42 | 04/17/85 | 13:30 | 00.24 | 106.562 | 7.114 | 0.034 | 3.01 | |
| DH42 | 04/23/85 | 13:23 | 00.04 | 112.558 | 5.996 | 0.007 | 3.05 | Significant volume of brine drained back down hole. |
| DH42 | 04/30/85 | 10:31 | 00.38 | 119.438 | 6.880 | 0.055 | 3.43 | |
| DH42 | 05/07/85 | 09:25 | 00.33 | 126.392 | 6.954 | 0.047 | 3.76 | |
| DH42 | 05/14/85 | 10:30 | 00.25 | 133.438 | 7.046 | 0.035 | 4.01 | |
| DH42 | 05/21/85 | 10:17 | 00.26 | 140.428 | 6.990 | 0.037 | 4.27 | |
| DH42 | 05/29/85 | 10:10 | 00.30 | 148.424 | 7.996 | 0.038 | 4.57 | |
| DH42 | 06/04/85 | 10:45 | 00.22 | 154.448 | 6.024 | 0.037 | 4.79 | |
| DH42 | 06/11/85 | 10:10 | 00.25 | 161.424 | 6.976 | 0.036 | 5.04 | |
| DH42 | 06/18/85 | 09:53 | 00.25 | 168.412 | 6.988 | 0.036 | 5.29 | |
| DH42 | 06/25/85 | 11:15 | 00.25 | 175.469 | 7.057 | 0.035 | 5.54 | |
| DH42 | 07/02/85 | 11:00 | 00.24 | 182.458 | 6.989 | 0.034 | 5.78 | |
| DH42 | 07/09/85 | 10:30 | 00.25 | 189.438 | 6.980 | 0.036 | 6.03 | |
| DH42 | 07/16/85 | 11:08 | 00.25 | 196.464 | 7.026 | 0.036 | 6.28 | Brine effervesces. |
| DH42 | 07/24/85 | 10:19 | 00.28 | 204.430 | 7.966 | 0.035 | 6.56 | |
| DH42 | 07/30/85 | 09:57 | 00.22 | 210.415 | 5.985 | 0.037 | 6.78 | |
| DH42 | 08/06/85 | 10:13 | 00.26 | 217.426 | 7.011 | 0.037 | 7.04 | |
| DH42 | 08/14/85 | 10:59 | 00.27 | 225.458 | 8.032 | 0.034 | 7.31 | |
| DH42 | 08/20/85 | 10:45 | 00.21 | 231.448 | 5.990 | 0.035 | 7.52 | |
| DH42 | 08/28/85 | 09:45 | 00.29 | 239.406 | 7.958 | 0.036 | 7.81 | |
| DH42 | 09/04/85 | 10:12 | 00.25 | 246.425 | 7.019 | 0.036 | 8.06 | |
| DH42 | 09/10/85 | 09:56 | 00.21 | 252.414 | 5.989 | 0.035 | 8.27 | |
| DH42 | 09/17/85 | 09:26 | 00.28 | 259.393 | 6.979 | 0.040 | 8.55 | |
| DH42 | 09/24/85 | 09:37 | 00.24 | 266.401 | 7.008 | 0.034 | 8.79 | |
| DH42 | 10/01/85 | 09:44 | 00.24 | 273.406 | 7.005 | 0.034 | 9.03 | |
| DH42 | 10/08/85 | 10:25 | 00.23 | 280.434 | 7.028 | 0.033 | 9.26 | |
| DH42 | 10/15/85 | 10:00 | 00.23 | 287.417 | 6.983 | 0.033 | 9.49 | |
| DH42 | 10/23/85 | 10:07 | 00.26 | 295.422 | 8.005 | 0.032 | 9.75 | |
| DH42 | 10/29/85 | 09:16 | 00.24 | 301.386 | 5.964 | 0.040 | 9.99 | |
| DH42 | 11/05/85 | 09:05 | 00.22 | 308.378 | 6.992 | 0.031 | 10.21 | |
| DH42 | 11/13/85 | 09:46 | 00.26 | 316.407 | 8.029 | 0.032 | 10.47 | |
| DH42 | 11/21/85 | 10:53 | 00.26 | 324.453 | 8.046 | 0.032 | 10.73 | |
| DH42 | 11/26/85 | 10:59 | 00.16 | 329.458 | 5.005 | 0.032 | 10.89 | |
| DH42 | 12/03/85 | 13:10 | 00.20 | 336.549 | 7.091 | 0.028 | 11.09 | Sample for chem. anal. #2. |
| DH42 | 12/10/85 | 12:50 | 00.22 | 343.535 | 6.986 | 0.031 | 11.31 | |
| DH42 | 01/23/86 | 11:30 | 01.32 | 387.479 | 43.944 | 0.030 | 12.63 | Entry restricted since 12/10/85 due to mining activities. |
| DH42 | 01/31/86 | 12:05 | 00.30 | 395.503 | 8.024 | 0.037 | 12.93 | |
| DH42 | 02/12/86 | 10:35 | 00.38 | 407.441 | 11.938 | 0.032 | 13.31 | |
| DH42 | 02/19/86 | 11:10 | 00.22 | 414.465 | 7.024 | 0.031 | 13.53 | |
| DH42 | 02/28/86 | 13:00 | 00.31 | 423.542 | 9.077 | 0.034 | 13.84 | |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| DH42 | 03/06/86 | 10:30 | 00.17 | 429.438 | 5.896 | 0.029 | 14.01 | |
| DH42 | 03/13/86 | 09:53 | 00.21 | 436.412 | 6.974 | 0.030 | 14.22 | |
| DH42 | 03/26/86 | 10:00 | 00.39 | 449.417 | 13.005 | 0.030 | 14.61 | |
| DH42 | 04/02/86 | 09:25 | 00.20 | 456.392 | 6.975 | 0.029 | 14.81 | |
| DH42 | 04/08/86 | 09:30 | 00.20 | 462.396 | 6.004 | 0.033 | 15.01 | |
| DH42 | 04/16/86 | 11:55 | 00.24 | 470.497 | 8.101 | 0.030 | 15.25 | |
| DH42 | 04/24/86 | 09:55 | 00.21 | 478.413 | 7.916 | 0.027 | 15.46 | |
| DH42 | 04/30/86 | 10:41 | 00.17 | 484.445 | 6.032 | 0.028 | 15.63 | |
| DH42 | 05/06/86 | 10:10 | 00.19 | 490.424 | 5.979 | 0.032 | 15.82 | |
| DH42 | 05/13/86 | 10:00 | 00.20 | 497.417 | 6.993 | 0.029 | 16.02 | |
| DH42 | 05/20/86 | 11:00 | 00.20 | 504.458 | 7.041 | 0.028 | 16.22 | |
| DH42 | 05/27/86 | 15:35 | 00.20 | 511.649 | 7.191 | 0.028 | 16.42 | |
| DH42 | 06/03/86 | 09:50 | 00.20 | 518.410 | 6.761 | 0.030 | 16.62 | |
| DH42 | 06/10/86 | 11:13 | 00.17 | 525.467 | 7.057 | 0.024 | 16.79 | |
| DH42 | 06/17/86 | 10:40 | 00.20 | 532.444 | 6.977 | 0.029 | 16.99 | Sample for brine chemistry, #22. |
| DH42 | 06/24/86 | 10:40 | 00.18 | 539.444 | 7.000 | 0.026 | 17.17 | |
| DH42 | 07/01/86 | 13:45 | 00.20 | 546.573 | 7.129 | 0.028 | 17.37 | |
| DH42 | 07/08/86 | 10:22 | 00.20 | 553.432 | 6.859 | 0.029 | 17.57 | |
| DH42 | 07/16/86 | 10:15 | 00.30 | 561.427 | 7.995 | 0.038 | 17.87 | |
| DH42 | 07/22/86 | 09:50 | 00.16 | 567.410 | 5.983 | 0.027 | 18.03 | |
| DH42 | 07/29/86 | 10:25 | 00.20 | 574.434 | 7.024 | 0.028 | 18.23 | |
| DH42 | 08/05/86 | 11:00 | 00.22 | 581.458 | 7.024 | 0.031 | 18.45 | |
| DH42 | 08/12/86 | 10:20 | 00.20 | 588.431 | 6.973 | 0.029 | 18.65 | |
| DH42 | 08/19/86 | 11:20 | 00.18 | 595.472 | 7.041 | 0.026 | 18.83 | |
| DH42 | 08/26/86 | 10:25 | 00.20 | 602.434 | 6.962 | 0.029 | 19.03 | Static level not measured. |
| DH42 | 09/04/86 | 10:20 | 00.25 | 611.431 | 8.997 | 0.028 | 19.28 | |
| DH42 | 09/09/86 | 09:46 | 00.14 | 616.407 | 4.976 | 0.028 | 19.42 | Sample # 24. |
| DH42 | 09/16/86 | 09:52 | 00.20 | 623.411 | 7.004 | 0.029 | 19.62 | |
| DH42 | 09/23/86 | 09:58 | 00.15 | 630.415 | 7.004 | 0.021 | 19.77 | |
| DH42 | 10/01/86 | 12:03 | 00.36 | 638.502 | 8.087 | 0.045 | 20.13 | |
| DH42 | 10/08/86 | 10:55 | 00.15 | 645.455 | 6.953 | 0.022 | 20.28 | |
| DH42 | 10/14/86 | 11:19 | 00.15 | 651.472 | 6.017 | 0.025 | 20.43 | |
| DH42 | 11/05/86 | 11:07 | 0.52 | 673.463 | 21.991 | 0.024 | 20.95 | |
| DH42 | 11/20/86 | 12:10 | 00.33 | 688.507 | 15.044 | 0.022 | 21.28 | |
| DH42 | 12/30/86 | 11:45 | 00.78 | 728.490 | 39.983 | 0.020 | 22.06 | 0.50 liters for sample, pH 5.91. |
| DH42 | 02/03/87 | 12:50 | 00.85 | 763.535 | 35.045 | 0.024 | 22.91 | T=29.8c, T 28.8, pH 6.23. |
| DH42 | 03/06/87 | 10:45 | 0.68 | 794.448 | 30.913 | 0.022 | 23.59 | |
| DH42 | 03/30/87 | 11:00 | 0.53 | 818.458 | 24.010 | 0.022 | 24.12 | |
| DH42 | 05/07/87 | 11:15 | 0.90 | 856.469 | 38.011 | 0.024 | 25.02 | Brine effervesces. |
| DH42 | 06/17/87 | 10:35 | 0.91 | 897.441 | 0.000 | 0.000 | 25.93 | Samples removed for chemistry, #112A, #112B, wood fragments in hole. Some brine left in hole, no calculation. |
| DH42 | 06/18/87 | 11:56 | 0.10 | 898.497 | 42.028 | 0.024 | 26.03 | Calculated using 1.01 liters (0.91 l. 6/17/87 plus 0.10 l. 6/18/87). |
| DH42 | 07/28/87 | 11:10 | 0.94 | 938.465 | 39.968 | 0.024 | 26.97 | |
| DH42 | 09/01/87 | 10:15 | 0.79 | 973.427 | 34.962 | 0.023 | 27.76 | Collected for chemistry, sample #151 A&B. |
| DH42 | 10/20/87 | 11:31 | 1.29 | 1022.480 | 49.053 | 0.026 | 29.05 | |
| DH42 | 11/19/87 | 10:55 | 0.75 | 1052.450 | 29.970 | 0.025 | 29.80 | Collected for chemistry, sample #229. |
| DH42 | 01/04/88 | 11:30 | 1.13 | 1098.480 | 46.030 | 0.025 | 30.93 | |
| DH42 | 02/08/88 | 11:20 | 0.75 | 1133.470 | 34.990 | 0.021 | 31.68 | Collected for chemistry, sample #255 & #256. |
| DH42 | 03/29/88 | 11:20 | 1.10 | 1183.470 | 50.000 | 0.022 | 32.78 | Collected for chemistry, sample #323 - #325. |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| DH42 | 05/05/88 | 09:30 | 0.75. | 1220.400 | 36.930 | 0.020 | 33.53 | Sampled for Sandia PA. |
| DH42 | 05/12/88 | 09:45 | 0.13 | 1227.410 | 7.010 | 0.019 | 33.66 | Sampled for Sandia PA. |
| DH42 | 07/12/88 | 08:35 | 1.15 | 1288.360 | 60.950 | 0.019 | 34.81 | Collected for chemistry, sample #415 & #416. |
| DH42 | 07/28/88 | 10:10 | 0.34 | 1304.420 | 16.060 | 0.021 | 35.15 | Sampled for Sandia PA. |
| DH42 | 09/27/88 | 10:20 | 0.66 | 1365.430 | 61.010 | 0.011 | 35.81 | Collected for chemistry, sample #530 & #531. |
| DH42 | 12/13/88 | 09:38 | 1.71 | 1442.400 | 76.970 | 0.022 | 37.52 | Collected for chemistry. sample #628 - #631. |
| DH42 | 03/15/89 | 10:30 | 1.50 | 1534.438 | 92.037 | 0.016 | 39.02 | Sample saved for chemistry, sample #722 - 724. |
| DH42 | 04/06/89 | 10:10 | 0.54 | 1556.424 | 21.986 | 0.025 | 39.56 | |
| DH42 | 04/20/89 | 09:10 | 0.50 | 1570.382 | 13.958 | 0.036 | 40.06 | |
| DH42 | 05/17/89 | 09:45 | 0.66 | 1597.406 | 27.024 | 0.024 | 40.72 | |
| DH42 | 06/06/89 | 09:50 | 0.41 | 1617.410 | 20.004 | 0.020 | 41.13 | Sample saved for chemistry. |
| DH42 | 06/29/89 | 10:20 | 0.35 | 1640.431 | 23.021 | 0.015 | 41.48 | |
| DH42 | 07/25/89 | 10:10 | 0.55 | 1666.424 | 25.993 | 0.021 | 42.03 | Sample saved for Sandia brine study. |
| DH42 | 08/16/89 | 09:40 | 0.36 | 1688.403 | 21.979 | 0.016 | 42.39 | Sample not saved. |
| DH42 | 09/12/89 | 09:00 | 0.35 | 1715.375 | 26.972 | 0.013 | 42.74 | Sample saved for chemistry. |
| DH42 | 12/13/89 | 10:03 | 1.50 | 1807.419 | 92.044 | 0.016 | 44.24 | Sample saved for chemistry, sample #898. |
| DH42 | 01/10/90 | 09:45 | 0.70 | 1835.406 | 27.987 | 0.025 | 44.94 | |
| DH42 | 01/24/90 | 09:57 | 0.27 | 1849.415 | 14.009 | 0.019 | 45.21 | |
| DH42 | 02/07/90 | 10:23 | 0.34 | 1863.433 | 14.018 | 0.024 | 45.55 | |
| DH42 | 02/21/90 | 10:19 | 0.32 | 1877.430 | 13.997 | 0.023 | 45.87 | |
| DH42 | 03/05/90 | 09:00 | 0.36 | 1889.375 | 11.945 | 0.030 | 46.23 | |
| DH42 | 03/13/90 | 12:00 | NA | 1897.500 | 0.000 | 0.000 | 46.23 | Installed sampler. |
| DH42 | 03/19/90 | 11:12 | 0.06 | 1903.467 | 14.092 | 0.000 | 46.29 | Brine probably left in hole. |
| DH42 | 03/21/90 | 10:23 | 0.08 | 1905.433 | 1.966 | 0.008 | 46.37 | Combined with 0.06 liters from 03/19/90. Used 0.14 liters for calculation. |
| DH42 | 04/04/90 | 09:24 | 0.24 | 1919.392 | 13.959 | 0.017 | 46.61 | |
| DH42 | 04/10/90 | 08:43 | 0.14 | 1925.363 | 5.971 | 0.023 | 46.75 | |
| DH42 | 04/17/90 | 10:29 | 0.14 | 1932.437 | 7.074 | 0.020 | 46.89 | |
| DH42 | 04/24/90 | 09:26 | 0.13 | 1939.393 | 6.956 | 0.019 | 47.02 | |
| DH42 | 05/02/90 | 10:39 | 0.15 | 1947.444 | 8.051 | 0.019 | 47.17 | |
| DH42 | 05/09/90 | 09:01 | 0.13 | 1954.376 | 6.932 | 0.019 | 47.30 | |
| DH42 | 05/16/90 | 09:11 | 0.13 | 1961.383 | 7.007 | 0.019 | 47.43 | |
| DH42 | 05/23/90 | 12:08 | 0.14 | 1968.506 | 7.123 | 0.020 | 47.57 | |
| DH42 | 05/31/90 | 08:59 | 0.13 | 1976.374 | 7.868 | 0.017 | 47.70 | |
| DH42 | 06/06/90 | 09:37 | 0.13 | 1982.401 | 6.027 | 0.022 | 47.83 | |
| DH42 | 06/14/90 | 08:46 | 0.16 | 1990.365 | 7.964 | 0.020 | 47.99 | |
| DH42 | 06/20/90 | 09:35 | 0.12 | 1996.399 | 6.034 | 0.020 | 48.11 | |
| DH42 | 06/28/90 | 08:55 | 0.15 | 2004.372 | 7.973 | 0.019 | 48.26 | |
| DH42 | 07/17/90 | 11:08 | 0.31 | 2023.464 | 19.092 | 0.016 | 48.57 | |
| DH42 | 07/25/90 | 09:40 | 0.20 | 2031.403 | 7.939 | 0.025 | 48.77 | |
| DH42 | 08/01/90 | 10:20 | 0.15 | 2038.431 | 7.028 | 0.021 | 48.92 | |
| DH42 | 03/28/91 | 10:06 | 3.02 | 2277.421 | 0.000 | 0.000 | 51.94 | Some brine may have been left in hole. First sampling in a long time. Sampler still functioning. |
| DH42 | 04/10/91 | 8:46 | 0.90 | 2290.338 | 0.000 | 0.000 | 52.84 | Partial evacuation. |
| DH42 | 04/11/91 | 08:42 | 0.50 | 2291.363 | 252.930 | 0.017 | 53.34 | Combined with 3.02 liters from 03/28/91 and 0.90 liters from 04/10/91. |
| DH42 | 04/17/91 | 10:17 | 0.11 | 2297.428 | 6.065 | 0.018 | 53.45 | |
| DH42 | 04/24/91 | 09:05 | 0.12 | 2304.378 | 6.950 | 0.017 | 53.57 | |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| DH42 | 05/01/91 | 09:11 | 0.12 | 2311.383 | 7.005 | 0.017 | 53.69 | |
| DH42 | 05/08/91 | 08:24 | 0.12 | 2318.350 | 6.967 | 0.017 | 53.81 | |
| DH42 | 05/15/91 | 09:02 | 0.12 | 2325.376 | 7.026 | 0.017 | 53.93 | |
| DH42 | 05/29/91 | 09:55 | 0.27 | 2339.413 | 14.037 | 0.019 | 54.20 | |
| DH42 | 06/05/91 | 13:40 | 0.14 | 2346.569 | 7.156 | 0.020 | 54.34 | |
| DH42 | 06/12/91 | 10:07 | 0.12 | 2353.422 | 6.853 | 0.018 | 54.46 | |
| DH42 | 06/19/91 | 13:35 | 0.13 | 2360.566 | 7.144 | 0.018 | 54.59 | |
| DH42 | 06/26/91 | 09:10 | 0.12 | 2367.382 | 6.816 | 0.018 | 54.71 | |
| DH42 | 07/11/91 | 10:49 | 0.27 | 2382.451 | 15.069 | 0.018 | 54.98 | |
| DH42 | 07/17/91 | 09:22 | 0.11 | 2388.390 | 5.939 | 0.019 | 55.09 | |
| DH42 | 07/30/91 | 10:15 | 0.30 | 2401.427 | 13.037 | 0.023 | 55.39 | |
| DH42 | 08/08/91 | 09:10 | 0.24 | 2410.382 | 8.955 | 0.027 | 55.63 | |
| DH42 | 08/14/91 | 10:33 | 0.16 | 2416.440 | 6.058 | 0.026 | 55.79 | |
| DH42 | 08/21/91 | 10:45 | 0.17 | 2423.448 | 7.008 | 0.024 | 55.96 | |
| DH42 | 08/28/91 | 10:10 | 0.24 | 2430.424 | 6.976 | 0.034 | 56.20 | |
| DH42 | 09/04/91 | 11:10 | 0.18 | 2437.465 | 7.041 | 0.026 | 56.38 | |
| DH42 | 09/11/91 | 11:40 | 0.16 | 2444.486 | 7.021 | 0.023 | 56.54 | |
| DH42 | 09/18/91 | 09:10 | 0.18 | 2451.382 | 6.896 | 0.026 | 56.72 | |
| DH42 | 09/25/91 | 11:52 | 0.15 | 2458.494 | 7.112 | 0.021 | 56.87 | |
| DH42 | 10/02/91 | 11:00 | 0.15 | 2465.458 | 6.964 | 0.022 | 57.02 | |
| DH42 | 10/16/91 | 09:15 | 0.26 | 2479.385 | 13.927 | 0.019 | 57.28 | |
| DH42 | 10/23/91 | 09:31 | 0.16 | 2486.397 | 7.012 | 0.023 | 57.44 | |
| DH42 | 11/06/91 | 10:03 | 0.28 | 2500.419 | 14.022 | 0.020 | 57.72 | |
| DH42 | 11/13/91 | 09:35 | 0.15 | 2507.399 | 6.980 | 0.021 | 57.87 | |
| DH42 | 11/20/91 | 11:20 | 0.14 | 2514.472 | 7.073 | 0.020 | 58.01 | |
| DH42 | 11/27/91 | 10:05 | 0.13 | 2521.420 | 6.948 | 0.019 | 58.14 | |
| DH42 | 12/04/91 | 09:52 | 0.12 | 2528.411 | 6.991 | 0.017 | 58.26 | |
| DH42 | 12/11/91 | 09:35 | 0.10 | 2535.399 | 6.988 | 0.014 | 58.36 | |
| DH42 | 12/18/91 | 09:15 | 0.13 | 2542.385 | 6.986 | 0.019 | 58.49 | |
| DH42 | 12/23/91 | 08:40 | 0.10 | 2547.361 | 4.976 | 0.020 | 58.59 | |
| DH42A | 12/30/84 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Approximate date this part of Room G excavated. |
| DH42A | 01/25/85 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Downhole drilled (re-drill of DH42) to recover core from 20 to 40 ft. |
| DH42A | 01/28/85 | 09:00 | NA | 27.375 | 1.000 | 0.000 | 0.00 | Brine in hole. |
| DH42A | 02/05/85 | 11:15 | 00.85 | 35.469 | 9.094 | 0.093 | 0.85 | First time collected. |
| DH42A | 02/11/85 | 11:00 | 00.99 | 41.458 | 5.989 | 0.165 | 1.84 | |
| DH42A | 02/19/85 | 12:10 | 01.45 | 49.507 | 8.049 | 0.180 | 3.29 | |
| DH42A | 02/26/85 | 10:45 | 01.18 | 56.448 | 6.941 | 0.170 | 4.47 | |
| DH42A | 03/05/85 | 10:00 | 01.24 | 63.417 | 6.969 | 0.178 | 5.71 | |
| DH42A | 03/12/85 | 10:20 | 01.29 | 70.431 | 7.014 | 0.184 | 7.00 | |
| DH42A | 03/20/85 | 11:00 | 01.45 | 78.458 | 8.027 | 0.181 | 8.45 | |
| DH42A | 03/26/85 | 10:10 | 01.07 | 84.424 | 5.966 | 0.179 | 9.52 | |
| DH42A | 04/02/85 | 10:45 | 01.15 | 91.448 | 7.024 | 0.164 | 10.67 | |
| DH42A | 04/10/85 | 10:45 | 01.45 | 99.448 | 8.000 | 0.181 | 12.12 | |
| DH42A | 04/17/85 | 13:30 | 01.32 | 106.562 | 7.114 | 0.186 | 13.44 | |
| DH42A | 04/23/85 | 13:23 | 01.07 | 112.558 | 5.996 | 0.178 | 14.51 | |
| DH42A | 04/30/85 | 10:23 | 01.35 | 119.433 | 6.875 | 0.196 | 15.86 | |
| DH42A | 05/07/85 | 09:23 | 01.39 | 126.391 | 6.958 | 0.200 | 17.25 | |
| DH42A | 05/14/85 | 10:25 | 01.34 | 133.434 | 7.043 | 0.190 | 18.59 | |
| DH42A | 05/21/85 | 10:14 | 01.29 | 140.426 | 6.992 | 0.184 | 19.88 | |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| DH42A | 05/29/85 | 10:30 | 01.28 | 148.438 | 8.012 | 0.160 | 21.16 | |
| DH42A | 06/04/85 | 10:50 | 01.03 | 154.451 | 6.013 | 0.171 | 22.19 | |
| DH42A | 06/11/85 | 10:15 | 01.19 | 161.427 | 6.976 | 0.171 | 23.38 | |
| DH42A | 06/18/85 | 09:51 | 01.18 | 168.410 | 6.983 | 0.169 | 24.56 | |
| DH42A | 06/25/85 | 11:05 | 01.16 | 175.462 | 7.052 | 0.164 | 25.72 | |
| DH42A | 07/02/85 | 11:00 | 01.12 | 182.458 | 6.996 | 0.160 | 26.84 | |
| DH42A | 07/09/85 | 10:25 | 01.12 | 189.434 | 6.976 | 0.161 | 27.96 | Gas effervescing from sample. |
| DH42A | 07/16/85 | 11:10 | 01.11 | 196.465 | 7.031 | 0.158 | 29.07 | Brine effervesces. |
| DH42A | 07/24/85 | 10:25 | 01.23 | 204.434 | 7.969 | 0.154 | 30.30 | |
| DH42A | 07/30/85 | 09:54 | 00.94 | 210.412 | 5.978 | 0.157 | 31.24 | |
| DH42A | 08/06/85 | 10:10 | 01.05 | 217.424 | 7.012 | 0.150 | 32.29 | |
| DH42A | 08/14/85 | 10:33 | 01.11 | 225.440 | 8.016 | 0.138 | 33.40 | |
| DH42A | 08/20/85 | 10:14 | 00.92 | 231.426 | 5.986 | 0.154 | 34.32 | |
| DH42A | 08/28/85 | 09:40 | 01.17 | 239.403 | 7.977 | 0.147 | 35.49 | |
| DH42A | 09/04/85 | 10:10 | 00.99 | 246.424 | 7.021 | 0.141 | 36.48 | |
| DH42A | 09/10/85 | 09:55 | 00.83 | 252.413 | 5.989 | 0.139 | 37.31 | |
| DH42A | 09/17/85 | 09:25 | 00.92 | 259.392 | 6.979 | 0.132 | 38.23 | |
| DH42A | 09/24/85 | 09:25 | 00.94 | 266.392 | 7.000 | 0.134 | 39.17 | |
| DH42A | 10/01/85 | 09:40 | 00.93 | 273.403 | 7.011 | 0.133 | 40.10 | |
| DH42A | 10/08/85 | 10:24 | 00.96 | 280.433 | 7.030 | 0.137 | 41.06 | |
| DH42A | 10/15/85 | 10:15 | 00.81 | 287.427 | 6.994 | 0.116 | 41.87 | |
| DH42A | 10/23/85 | 10:10 | 01.02 | 295.424 | 7.997 | 0.128 | 42.89 | |
| DH42A | 10/29/85 | 09:20 | 00.75 | 301.389 | 5.965 | 0.126 | 43.64 | |
| DH42A | 11/05/85 | 09:00 | 00.86 | 308.375 | 6.986 | 0.123 | 44.50 | |
| DH42A | 11/13/85 | 09:44 | 01.03 | 316.406 | 8.031 | 0.128 | 45.53 | |
| DH42A | 11/21/85 | 10:50 | 00.94 | 324.451 | 8.045 | 0.117 | 46.47 | |
| DH42A | 11/26/85 | 10:55 | 00.61 | 329.455 | 5.004 | 0.122 | 47.08 | |
| DH42A | 12/03/85 | 13:05 | 00.78 | 336.545 | 7.090 | 0.110 | 47.86 | Sample for chem. anal. #1. |
| DH42A | 12/10/85 | 12:50 | 00.86 | 343.535 | 6.990 | 0.123 | 48.72 | |
| DH42A | 01/23/86 | 11:40 | 05.13 | 387.486 | 43.951 | 0.117 | 53.85 | Entry restricted since 12/10/85 due to mining activities. |
| DH42A | 01/31/86 | 12:00 | 00.92 | 395.500 | 8.014 | 0.115 | 54.77 | |
| DH42A | 02/12/86 | 10:40 | 01.36 | 407.444 | 11.944 | 0.114 | 56.13 | |
| DH42A | 02/19/86 | 11:15 | 00.80 | 414.469 | 7.025 | 0.114 | 56.93 | |
| DH42A | 02/28/86 | 12:55 | 00.90 | 423.538 | 9.069 | 0.099 | 57.83 | |
| DH42A | 03/06/86 | 10:25 | 00.70 | 429.434 | 5.896 | 0.119 | 58.53 | |
| DH42A | 03/13/86 | 09:48 | 00.73 | 436.408 | 6.974 | 0.105 | 59.26 | |
| DH42A | 03/26/86 | 09:40 | 01.39 | 449.403 | 12.995 | 0.107 | 60.65 | |
| DH42A | 04/02/86 | 09:20 | 00.80 | 456.389 | 6.986 | 0.115 | 61.45 | |
| DH42A | 04/08/86 | 09:28 | 00.63 | 462.394 | 6.005 | 0.105 | 62.08 | |
| DH42A | 04/16/86 | 11:50 | 00.89 | 470.493 | 8.099 | 0.110 | 62.97 | |
| DH42A | 04/24/86 | 09:50 | 00.67 | 478.410 | 7.917 | 0.085 | 63.64 | |
| DH42A | 04/30/86 | 10:36 | 00.76 | 484.442 | 6.032 | 0.126 | 64.40 | |
| DH42A | 05/06/86 | 10:00 | 00.55 | 490.417 | 5.975 | 0.092 | 64.95 | |
| DH42A | 05/13/86 | 10:00 | 00.73 | 497.417 | 7.000 | 0.104 | 65.68 | |
| DH42A | 05/20/86 | 11:00 | 00.70 | 504.458 | 7.041 | 0.099 | 66.38 | |
| DH42A | 05/27/86 | 15:35 | 00.65 | 511.649 | 7.191 | 0.090 | 67.03 | |
| DH42A | 06/03/86 | 09:50 | 00.66 | 518.410 | 6.761 | 0.098 | 67.69 | |
| DH42A | 06/10/86 | 11:15 | 00.54 | 525.469 | 7.059 | 0.076 | 68.23 | |
| DH42A | 06/17/86 | 10:31 | 00.65 | 532.438 | 6.969 | 0.093 | 68.88 | Sample for brine chemistry, #21. |
| DH42A | 06/24/86 | 10:45 | 00.63 | 539.448 | 7.010 | 0.090 | 69.51 | |
| DH42A | 07/01/86 | 13:50 | 00.71 | 546.576 | 7.128 | 0.100 | 70.22 | |
| DH42A | 07/08/86 | 10:25 | 00.63 | 553.434 | 6.858 | 0.092 | 70.85 | |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| DH42A | 07/16/86 | 10:00 | 00.66 | 561.417 | 7.983 | 0.083 | 71.51 | |
| DH42A | 07/22/86 | 09:48 | 00.61 | 567.408 | 5.991 | 0.102 | 72.12 | |
| DH42A | 07/29/86 | 10:25 | 00.71 | 574.434 | 7.026 | 0.101 | 72.83 | |
| DH42A | 08/05/86 | 10:55 | 00.66 | 581.455 | 7.021 | 0.094 | 73.49 | |
| DH42A | 08/12/86 | 10:23 | 00.63 | 588.433 | 6.978 | 0.090 | 74.12 | |
| DH42A | 08/19/86 | 11:22 | 00.68 | 595.474 | 7.041 | 0.097 | 74.80 | |
| DH42A | 08/26/86 | 10:28 | 00.68 | 602.436 | 6.962 | 0.098 | 75.48 | Static level not measured. |
| DH42A | 09/04/86 | 10:25 | 00.71 | 611.434 | 8.998 | 0.079 | 76.19 | Valve broke off and left in hole after collecting most of brine. Some brine left in hole. |
| DH42A | 09/09/86 | 09:40 | 00.07 | 616.403 | 4.969 | 0.014 | 76.26 | Bottom obstructed by object in hole. Sample # 23. |
| DH42A | 09/16/86 | 09:59 | 00.95 | 623.416 | 7.013 | 0.135 | 77.21 | |
| DH42A | 09/23/86 | 10:02 | 00.60 | 630.418 | 7.002 | 0.086 | 77.81 | |
| DH42A | 10/01/86 | 11:57 | 00.43 | 638.498 | 8.080 | 0.053 | 78.24 | |
| DH42A | 10/08/86 | 10:55 | 00.81 | 645.455 | 6.957 | 0.116 | 79.05 | |
| DH42A | 10/14/86 | 11:24 | 00.56 | 651.475 | 6.020 | 0.093 | 79.61 | |
| DH42A | 11/05/86 | 11:04 | 1.94 | 673.461 | 21.986 | 0.088 | 81.55 | |
| DH42A | 11/20/86 | 12:08 | 01.40 | 688.506 | 15.045 | 0.093 | 82.95 | |
| DH42A | 12/31/86 | 11:30 | 02.91 | 729.479 | 40.973 | 0.071 | 85.86 | 0.99 liters for sample, pH 5.86. |
| DH42A | 02/03/87 | 12:35 | 03.15 | 763.524 | 34.045 | 0.093 | 89.01 | T=29.8c, T 28.9, pH 6.20. |
| DH42A | 03/06/87 | 10:45 | 2.61 | 794.448 | 30.924 | 0.084 | 91.62 | |
| DH42A | 03/30/87 | 10:56 | 2.52 | 818.456 | 24.008 | 0.101 | 94.14 | |
| DH42A | 05/07/87 | 11:10 | 3.17 | 856.465 | 38.009 | 0.083 | 97.31 | |
| DH42A | 06/17/87 | 10:30 | 2.94 | 897.438 | 0.000 | 0.000 | 100.25 | Samples removed for chemistry. #113A, #113B, #115A, #115B, #118A, #118B. Approx. 0.01 liter spilled. Some brine left in hole, no calc. |
| DH42A | 06/18/87 | 11:54 | 0.11 | 898.496 | 42.031 | 0.073 | 100.36 | Calculated using 3.05 liters (2.94 l. 6/17/87 plus 0.11 l. 6/18/87). |
| DH42A | 07/28/87 | 11:03 | 3.07 | 938.460 | 39.964 | 0.077 | 103.43 | |
| DH42A | 09/01/87 | 10:08 | 2.69 | 973.422 | 34.962 | 0.077 | 106.12 | Collected for chemistry, sample #154 A&B and Sample #150 A&B. Both samples effervesce. |
| DH42A | 10/20/87 | 11:28 | 3.73 | 1022.480 | 49.058 | 0.076 | 109.85 | |
| DH42A | 11/19/87 | 10:55 | 2.17 | 1052.450 | 29.970 | 0.072 | 112.02 | Collected for chemistry, sample #228 & #233. |
| DH42A | 01/04/88 | 11:25 | 3.28 | 1098.480 | 46.030 | 0.071 | 115.30 | |
| DH42A | 02/08/88 | 11:10 | 2.47 | 1133.470 | 34.990 | 0.071 | 117.77 | Collected for chemistry, sample #250, #251, #252, #253, & #254. |
| DH42A | 03/29/88 | 11:15 | 3.57 | 1183.470 | 50.000 | 0.071 | 121.34 | Collected for chemistry, sample #316 - #322. |
| DH42A | 05/05/88 | 09:00 | 2.38 | 1220.380 | 36.910 | 0.064 | 123.72 | Sampled for Sandia PA. |
| DH42A | 05/12/88 | 09:40 | 0.50 | 1227.400 | 7.020 | 0.071 | 124.22 | Sampled for Sandia PA. |
| DH42A | 07/12/88 | 08:30 | 4.06 | 1288.350 | 60.950 | 0.067 | 128.28 | Collected for chemistry, sample #407 - #414. |
| DH42A | 07/28/88 | 10:15 | 1.25 | 1304.430 | 16.080 | 0.078 | 129.53 | Sampled for Sandia PA. |
| DH42A | 09/14/88 | 08:45 | 3.00 | 1352.360 | 47.930 | 0.063 | 132.53 | |
| DH42A | 09/27/88 | 10:10 | 1.07 | 1365.420 | 13.060 | 0.082 | 133.60 | Collected for chemistry, sample #528 & #529. |
| DH42A | 12/13/88 | 09:35 | 7.95 | 1442.400 | 76.980 | 0.103 | 141.55 | Collected for chemistry, sample #618 - #627. |
| DH42A | 03/15/89 | 10:00 | 5.82 | 1534.417 | 92.018 | 0.063 | 147.37 | Sample saved for chemistry, sample #714 - |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

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| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| DH42A | 04/06/89 | 10:15 | 1.44 | 1556.427 | 22.010 | 0.065 | 148.81 | |
| DH42A | 04/20/89 | 09:00 | 0.75 | 1570.375 | 13.948 | 0.054 | 149.56 | |
| DH42A | 05/17/89 | 09:45 | 1.91 | 1597.406 | 27.031 | 0.071 | 151.47 | |
| DH42A | 06/06/89 | 09:45 | 1.30 | 1617.406 | 20.000 | 0.065 | 152.77 | Sample saved for chemistry. |
| DH42A | 06/29/89 | 10:15 | 1.35 | 1640.427 | 23.021 | 0.059 | 154.12 | |
| DH42A | 07/25/89 | 10:05 | 1.51 | 1666.420 | 25.993 | 0.058 | 155.63 | Sample saved for Sandia brine study. |
| DH42A | 08/16/89 | 09:31 | 1.48 | 1688.397 | 21.977 | 0.067 | 157.11 | Sample saved for Sandia brine study. |
| DH42A | 09/12/89 | 08:50 | 1.63 | 1715.368 | 26.971 | 0.060 | 158.74 | Sample saved for chemistry. |
| DH42A | 12/13/89 | 09:20 | 5.28 | 1807.389 | 92.021 | 0.057 | 164.02 | Sample saved for chemistry, sample #897. |
| DH42A | 01/10/90 | 09:36 | 1.95 | 1835.400 | 28.011 | 0.070 | 165.97 | |
| DH42A | 01/24/90 | 09:52 | 0.75 | 1849.411 | 14.011 | 0.054 | 166.72 | |
| DH42A | 02/07/90 | 10:20 | 0.95 | 1863.431 | 14.020 | 0.068 | 167.67 | |
| DH42A | 02/21/90 | 09:56 | 0.81 | 1877.414 | 13.983 | 0.058 | 168.48 | |
| DH42A | 03/05/90 | 08:47 | 0.68 | 1889.366 | 11.952 | 0.057 | 169.16 | |
| DH42A | 03/13/90 | 11:36 | NA | 1897.483 | 0.000 | 0.000 | 169.16 | Installed sampler. |
| DH42A | 03/19/90 | 11:07 | 0.51 | 1903.463 | 14.097 | 0.000 | 169.67 | Partial evacuation. |
| DH42A | 03/21/90 | 10:21 | 0.28 | 1905.431 | 1.968 | 0.049 | 169.95 | Combined with 0.51 liters from 03/19/90. Used 0.79 liters for calculation. |
| DH42A | 04/04/90 | 09:14 | 0.60 | 1919.385 | 13.954 | 0.043 | 170.55 | |
| DH42A | 04/10/90 | 08:40 | 0.58 | 1925.361 | 5.976 | 0.097 | 171.13 | |
| DH42A | 04/17/90 | 10:19 | 0.38 | 1932.430 | 7.069 | 0.054 | 171.51 | |
| DH42A | 04/24/90 | 09:18 | 0.42 | 1939.388 | 6.958 | 0.060 | 171.93 | |
| DH42A | 05/02/90 | 10:32 | 0.51 | 1947.439 | 8.051 | 0.063 | 172.44 | |
| DH42A | 05/09/90 | 08:48 | 0.39 | 1954.367 | 6.928 | 0.056 | 172.83 | |
| DH42A | 05/16/90 | 09:07 | 0.43 | 1961.380 | 7.013 | 0.061 | 173.26 | |
| DH42A | 05/23/90 | 12:08 | 0.40 | 1968.506 | 7.126 | 0.056 | 173.66 | |
| DH42A | 05/31/90 | 08:47 | 0.46 | 1976.366 | 7.860 | 0.059 | 174.12 | |
| DH42A | 06/06/90 | 09:30 | 0.34 | 1982.396 | 6.030 | 0.056 | 174.46 | |
| DH42A | 06/14/90 | 08:38 | 0.39 | 1990.360 | 7.964 | 0.049 | 174.85 | |
| DH42A | 06/20/90 | 09:33 | 0.45 | 1996.398 | 6.038 | 0.075 | 175.30 | |
| DH42A | 06/28/90 | 08:50 | 0.45 | 2004.368 | 7.970 | 0.056 | 175.75 | |
| DH42A | 07/17/90 | 11:04 | 0.56 | 2023.461 | 19.093 | 0.000 | 176.31 | Partial evacuation. |
| DH42A | 07/18/90 | 10:30 | 0.48 | 2024.438 | 0.977 | 0.052 | 176.79 | Combined with 0.56 liters from 07/17/90. Used 1.04 liters for calculation. |
| DH42A | 07/25/90 | 09:37 | 0.43 | 2031.401 | 6.963 | 0.062 | 177.22 | |
| DH42A | 08/01/90 | 10:18 | 0.50 | 2038.429 | 7.028 | 0.071 | 177.72 | |
| DH42A | 03/28/91 | 09:40 | 18.89 | 2277.403 | 0.000 | 0.000 | 196.61 | Some brine may have been left in hole. First sampling in a long time. |
| DH42A | 04/10/91 | 8:46 | 0.89 | 2290.338 | 0.000 | 0.000 | 197.50 | Partial evacuation. |
| DH42A | 04/11/91 | 08:30 | 0.14 | 2291.354 | 252.920 | 0.079 | 197.64 | Combined with 18.89 liters from 03/28/91 and 0.89 liters from 04/10/91. |
| DH42A | 04/17/91 | 10:15 | 0.35 | 2297.427 | 6.073 | 0.058 | 197.99 | |
| DH42A | 04/24/91 | 09:05 | 0.40 | 2304.378 | 6.951 | 0.058 | 198.39 | |
| DH42A | 05/01/91 | 09:10 | 0.40 | 2311.382 | 7.004 | 0.057 | 198.79 | |
| DH42A | 05/08/91 | 08:19 | 0.34 | 2318.347 | 6.965 | 0.049 | 199.13 | |
| DH42A | 05/15/91 | 08:58 | 0.40 | 2325.374 | 7.027 | 0.057 | 199.53 | |
| DH42A | 05/29/91 | 09:56 | 0.65 | 2339.414 | 14.040 | 0.046 | 200.18 | |
| DH42A | 06/05/91 | 13:35 | 0.47 | 2346.566 | 7.152 | 0.066 | 200.65 | |
| DH42A | 06/12/91 | 10:00 | 0.53 | 2353.417 | 6.851 | 0.077 | 201.18 | |
| DH42A | 06/19/91 | 13:30 | 0.41 | 2360.563 | 7.146 | 0.057 | 201.59 | |
| DH42A | 06/26/91 | 09:16 | 0.39 | 2367.386 | 6.823 | 0.057 | 201.98 | |
| DH42A | 07/11/91 | 10:45 | 0.55 | 2382.448 | 15.062 | 0.037 | 202.53 | |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| DH42A | 07/17/91 | 09:20 | 0.58 | 2388.389 | 0.000 | 0.000 | 203.11 | Partial evacuation. |
| DH42A | 07/18/91 | 09:50 | 0.11 | 2389.410 | 0.000 | 0.000 | 203.22 | Partial evacuation. |
| DH42A | 07/30/91 | 10:10 | 0.42 | 2401.424 | 18.976 | 0.059 | 203.64 | Combined with 0.58 liters from 07/17 and 0.11 liters from 07/18/91. |
| DH42A | 08/08/91 | 09:05 | 0.47 | 2410.378 | 8.954 | 0.052 | 204.11 | |
| DH42A | 08/14/91 | 10:30 | 0.45 | 2416.438 | 6.060 | 0.074 | 204.56 | |
| DH42A | 08/21/91 | 10:40 | 0.38 | 2423.444 | 7.006 | 0.054 | 204.94 | |
| DH42A | 08/28/91 | 09:58 | 0.39 | 2430.415 | 6.971 | 0.056 | 205.33 | |
| DH42A | 09/04/91 | 11:00 | 0.53 | 2437.458 | 7.043 | 0.075 | 205.86 | |
| DH42A | 09/11/91 | 11:35 | 0.39 | 2444.483 | 7.025 | 0.056 | 206.25 | |
| DH42A | 09/18/91 | 09:00 | 0.40 | 2451.375 | 6.892 | 0.058 | 206.65 | |
| DH42A | 09/25/91 | 11:50 | 0.31 | 2458.493 | 7.118 | 0.044 | 206.96 | |
| DH42A | 10/02/91 | 11:07 | 0.41 | 2465.463 | 6.970 | 0.059 | 207.37 | |
| DH42A | 10/16/91 | 09:10 | 0.43 | 2479.382 | 13.919 | 0.031 | 207.80 | |
| DH42A | 10/23/91 | 09:30 | 0.43 | 2486.396 | 7.014 | 0.061 | 208.23 | |
| DH42A | 10/31/91 | 09:40 | 0.50 | 2494.403 | 8.007 | 0.062 | 208.73 | |
| DH42A | 11/06/91 | 10:00 | 0.36 | 2500.417 | 6.014 | 0.060 | 209.09 | |
| DH42A | 11/13/91 | 09:39 | 0.28 | 2507.402 | 6.985 | 0.040 | 209.37 | |
| DH42A | 11/20/91 | 11:24 | 0.44 | 2514.475 | 7.073 | 0.062 | 209.81 | |
| DH42A | 11/27/91 | 10:05 | 0.33 | 2521.420 | 6.945 | 0.048 | 210.14 | |
| DH42A | 12/04/91 | 09:52 | 0.40 | 2528.411 | 6.991 | 0.057 | 210.54 | |
| DH42A | 12/11/91 | 09:30 | 0.38 | 2535.396 | 6.985 | 0.054 | 210.92 | |
| DH42A | 12/18/91 | 09:10 | 0.41 | 2542.382 | 6.986 | 0.059 | 211.33 | |
| DH42A | 12/23/91 | 08:35 | 0.37 | 2547.358 | 4.976 | 0.074 | 211.70 | |
| DHP401 | 10/29/86 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Drift excavated at S1950/E1320. |
| DHP401 | 01/06/87 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Uphole drilling initiated 12/08/86, stopped on 12/09/86 at 27.9 ft. Drilling resumed 1/02/87 and completed 1/06/87. |
| DHP401 | 03/06/87 | 09:15 | 0.12 | 794.385 | 1.000 | 0.000 | 0.12 | First time collected. |
| DHP401 | 03/30/87 | 09:15 | 0.06 | 818.385 | 24.000 | 0.003 | 0.18 | |
| DHP401 | 04/22/87 | 11:10 | 0.17 | 841.465 | 23.080 | 0.007 | 0.35 | Stalactite growth beside funnel. |
| DHP401 | 06/11/87 | 10:00 | 0.38 | 891.417 | 49.952 | 0.008 | 0.73 | Sample removed for chemistry #105A. |
| DHP401 | 07/28/87 | 10:15 | 0.27 | 938.427 | 47.010 | 0.006 | 1.00 | Sample collected for chemistry sample #105. Clay accumulation in container. |
| DHP401 | 09/01/87 | 08:55 | 0.32 | 973.372 | 34.945 | 0.009 | 1.32 | Collected for chemistry, sample #105 |
| DHP401 | 09/16/87 | 09:15 | | 988.385 | 0.000 | 0.000 | 1.32 | 0.01 l in jar, not removed. No calculation. |
| DHP401 | 11/16/87 | 08:50 | 0.59 | 1049.370 | 75.998 | 0.008 | 1.91 | Collected for chemistry, sample #196. Combined with sample #238 and split to form samples #396, #397, & #398 on 03/30/88. |
| DHP401 | 02/09/88 | 09:00 | 0.43 | 1134.380 | 85.010 | 0.005 | 2.34 | Collected for chemistry, sample #238. Combined with #196 and split to form samples #396, #397 & #398 on 3/30/88. |
| DHP401 | 03/07/88 | 10:00 | 0.02 | 1161.420 | 27.040 | 0.001 | 2.36 | Removed collecting device. |
| DHP401 | 03/29/88 | 09:00 | | 1183.380 | 0.000 | 0.000 | 2.36 | No collecting device. |
| DHP401 | 07/12/88 | 13:50 | | 1288.580 | 0.000 | 0.000 | 2.36 | No funnel. |
| DHP401 | 09/27/88 | 13:00 | 0.00 | 1365.540 | 0.000 | 0.000 | 2.36 | None collected. |
| DHP401 | 10/13/88 | 10:00 | | 1381.420 | 0.000 | 0.000 | 2.36 | Installed funnel and collection bottle. |
| DHP401 | 12/13/88 | 10:50 | 0 | 1442.450 | 281.030 | 0.000 | 2.36 | Dry. |
| DHP401 | 04/20/89 | 13:05 | 0 | 1570.545 | 128.094 | 0.000 | 2.36 | Hole dry. |
| DHP401 | 05/17/89 | 09:00 | 0 | 1597.375 | 26.830 | 0.000 | 2.36 | Hole dry. |
| DHP401 | 06/29/89 | 09:10 | 0 | 1640.382 | 43.007 | 0.000 | 2.36 | Hole dry. |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| DHP401 | 08/16/89 | 09:00 | 0 | 1688.375 | 47.993 | 0.000 | 2.36 | Hole dry. |
| DHP401 | 11/15/89 | 10:25 | 0 | 1779.434 | 91.059 | 0.000 | 2.36 | Hole dry. |
| DHP401 | 12/12/89 | 12:25 | 0 | 1806.517 | 27.083 | 0.000 | 2.36 | Hole dry. |
| DHP401 | 03/05/90 | 12:10 | 0.0 | 1889.507 | 82.990 | 0.000 | 2.36 | Dry. |
| DHP401 | 03/21/90 | 09:10 | 0.0 | 1905.382 | 15.875 | 0.000 | 2.36 | Dry. |
| DHP401 | 04/11/90 | 10:23 | 0.0 | 1926.433 | 21.051 | 0.000 | 2.36 | Dry. |
| DHP401 | 05/02/90 | 09:35 | 0.0 | 1947.399 | 20.966 | 0.000 | 2.36 | Dry. |
| DHP401 | 05/08/90 | 10:10 | 0.0 | 1953.424 | 6.025 | 0.000 | 2.36 | Dry. |
| DHP401 | 05/17/90 | 09:14 | 0.0 | 1962.385 | 8.961 | 0.000 | 2.36 | Dry. |
| DHP401 | 05/23/90 | 13:40 | 0.0 | 1968.569 | 6.184 | 0.000 | 2.36 | Dry. |
| DHP401 | 06/06/90 | 08:53 | 0.0 | 1982.370 | 13.801 | 0.000 | 2.36 | Dry. |
| DHP401 | 06/14/90 | 11:00 | 0.0 | 1990.458 | 8.088 | 0.000 | 2.36 | Dry. |
| DHP401 | 06/20/90 | 10:31 | 0.0 | 1996.438 | 5.980 | 0.000 | 2.36 | Dry. |
| DHP401 | 07/17/90 | 09:37 | 0.0 | 2023.401 | 26.963 | 0.000 | 2.36 | Dry. |
| DHP401 | 07/25/90 | 11:26 | 0.0 | 2031.476 | 8.075 | 0.000 | 2.36 | Dry. |
| DHP401 | 08/07/90 | 09:20 | 0.0 | 2044.389 | 12.913 | 0.000 | 2.36 | Dry. |
| DHP401 | 08/16/90 | 08:54 | 0.0 | 2053.371 | 8.982 | 0.000 | 2.36 | Dry. |
| DHP401 | 08/22/90 | 11:20 | 0.0 | 2059.472 | 6.101 | 0.000 | 2.36 | Dry. |
| DHP401 | 08/29/90 | 11:32 | 0.0 | 2066.481 | 7.009 | 0.000 | 2.36 | Dry. |
| DHP401 | 09/05/90 | 10:28 | 0.0 | 2073.436 | 6.955 | 0.000 | 2.36 | Dry. |
| DHP401 | 09/12/90 | 08:40 | 0.0 | 2080.361 | 6.925 | 0.000 | 2.36 | Dry. |
| DHP401 | 10/20/90 | 10:20 | 0 | 0.000 | 0.000 | 0.000 | 0.00 | Dry. |
| DHP401 | 12/20/90 | 10:05 | 0. | 0.000 | 0.000 | 0.000 | 0.00 | Dry. |
| DHP401 | 03/20/91 | 13:37 | 0.00 | 2269.567 | 90.147 | 0.000 | 2.36 | Dry. |
| DHP401 | 04/10/91 | 12:20 | 0.00 | 2290.514 | 20.947 | 0.000 | 2.36 | Dry. |
| DHP401 | 05/01/91 | 10:40 | 0.00 | 2311.444 | 20.930 | 0.000 | 2.36 | Dry. |
| DHP401 | 05/08/91 | 09:20 | 0.00 | 2318.389 | 6.945 | 0.000 | 2.36 | Dry. |
| DHP401 | 05/15/91 | 11:09 | 0.00 | 2325.465 | 7.076 | 0.000 | 2.36 | Dry. |
| DHP401 | 06/19/91 | 16:07 | 0.00 | 2360.672 | 35.207 | 0.000 | 2.36 | Dry. |
| DHP401 | 06/26/91 | 10:25 | 0.00 | 2367.434 | 6.762 | 0.000 | 2.36 | Dry. |
| DHP401 | 07/17/91 | 11:12 | 0.00 | 2388.467 | 21.033 | 0.000 | 2.36 | Dry. |
| DHP401 | 08/14/91 | 11:10 | 0.00 | 2416.465 | 27.998 | 0.000 | 2.36 | Dry. |
| DHP401 | 09/18/91 | 10:20 | 0.00 | 2451.431 | 34.966 | 0.000 | 2.36 | Dry. |
| DHP401 | 09/25/91 | 12:48 | 0.00 | 2458.533 | 7.102 | 0.000 | 2.36 | Dry. |
| DHP401 | 10/23/91 | 10:55 | 0.00 | 2486.455 | 27.922 | 0.000 | 2.36 | Dry. |
| DHP401 | 10/31/91 | 11:28 | 0.00 | 2494.478 | 8.023 | 0.000 | 2.36 | Dry. |
| DHP401 | 11/13/91 | 09:15 | 0.00 | 2507.385 | 12.907 | 0.000 | 2.36 | Dry. |
| DHP401 | 12/04/91 | 09:10 | 0.00 | 2528.382 | 20.997 | 0.000 | 2.36 | Dry. |
| DHP402A | 10/29/86 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Drift excavated at S1950/E1320. |
| DHP402A | 12/05/86 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Downhole completed. |
| DHP402A | 03/06/87 | 09:40 | 0.14 | 794.403 | 1.000 | 0.000 | 0.14 | First time sampled. |
| DHP402A | 03/30/87 | 09:15 | 0.00 | 818.385 | 23.982 | 0.000 | 0.14 | |
| DHP402A | 04/22/87 | 11:24 | 0.03 | 841.475 | 47.072 | 0.001 | 0.17 | Bailer stuck in hole. Hole appears offset or blocked at the 45 foot level. There may be a rock bolt or piece of rod in the hole. |
| DHP402A | 07/08/87 | 00:00 | NA | 918.000 | 0.000 | 0.000 | 0.17 | Horizontal pilot hole for Room 7 of the first Waste Storage Panel started just north of this location, drilled with brine. |
| DHP402A | 07/16/87 | 09:20 | 0.00 | 926.389 | 0.000 | 0.000 | 0.17 | Hole entirely filled with brine from drilling the pilot /gas release hole for the last room of the first panel. |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| DHP402A | 07/28/87 | 10:20 | 17.50 | 938.431 | 0.000 | 0.000 | 17.67 | Removed 17.5 liters of brine from hole, mostly drilling fluid. No calculation. |
| DHP402A | 07/29/87 | 09:10 | 15.00 | 939.382 | 0.000 | 0.000 | 32.67 | Drilling brine removed from hole. Partial evacuation, brine left in hole, no calculation. |
| DHP402A | 08/16/87 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 32.67 | Brine from the AIS sump spread in Panel 1 to assist in the reconstitution of loose muck on the floor. |
| DHP402A | 08/20/87 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 32.67 | Brine from the AIS sump spread in Panel 1 to assist in the reconstitution of loose muck on the floor. |
| DHP402A | 10/01/87 | 00:00 | NA | 1003.000 | 0.000 | 0.000 | 32.67 | Approximate date the salt muck stockpile was placed at the east end of S1950, covering the collar of this hole. |
| DHP402A | 07/12/88 | 13:50 | | 1288.580 | 0.000 | 0.000 | 32.67 | Muck piled over hole, could not collect. |
| DHP402A | 08/19/88 | 10:00 | 57.25 | 1326.420 | 387.989 | 0.186 | 89.92 | Collected for chemistry, sample #492 - #497. Used 72.25 liters for calculation (15.0 on 7/29 + 57.25 on 8/19). |
| DHP402A | 08/30/88 | 11:00 | 42.75 | 1337.460 | 11.040 | 3.872 | 132.67 | Depth of water 28.8 feet below floor. Bottom of hole at 44.3 feet. 5.7 feet of salt on bottom of hole. |
| DHP402A | 09/15/88 | 10:00 | 0.24 | 1353.420 | 0.000 | 0.000 | 132.91 | Not fully evacuated. Don't use for calculation. Sampled for bacteriology. |
| DHP402A | 09/22/88 | 09:00 | 63.75 | 1360.380 | 22.920 | 2.781 | 196.66 | Hole evacuated to 44.2' level. Chemistry samples #498 - #503. |
| DHP402A | 09/27/88 | 13:00 | | 1365.540 | 0.000 | 0.000 | 196.66 | None collected. |
| DHP402A | 10/18/88 | 13:45 | 45 | 1386.570 | 26.190 | 1.718 | 241.66 | Some moisture could have entered hole due to water spread for dust control |
| DHP402A | 11/15/88 | 10:30 | 40.65 | 1414.440 | 27.870 | 1.459 | 282.31 | Evacuated to 43.75 foot level. Lip or obstruction near bottom of hole prevents additional evacuation. |
| DHP402A | 12/13/88 | 10:50 | 6.0 | 1442.450 | 0.000 | 0.000 | 288.31 | Collected for chemistry, sample #606 - #617. Not fully evacuated, some brine left in hole. Don't use for calculation. |
| DHP402A | 12/29/88 | 12:00 | 43.60 | 1458.500 | 44.060 | 1.126 | 331.91 | Used 49.6 liters for calculation (6.0 on 12/13 + 43.6 on 12/29). |
| DHP402A | 01/04/89 | 13:30 | 13.5 | 1464.562 | 6.062 | 2.227 | 345.41 | Complete evacuation to 43.3 ft. level. Strong odor of diesel from hole and bailer. |
| DHP402A | 01/20/89 | 10:30 | 19 | 1480.438 | 15.876 | 1.197 | 364.41 | Volume removed includes 2.5 gallons of brine introduced to hole by Intera. |
| DHP402A | 02/28/89 | 11:50 | 12.1 | 1519.493 | 39.055 | 0.310 | 376.51 | Hole open to 44.2 feet. |
| DHP402A | 04/06/89 | 13:30 | 1.19 | 1556.562 | 37.069 | 0.032 | 377.70 | Sample removed from above packer. |
| DHP402A | 04/20/89 | 13:05 | NA | 1570.545 | 0.000 | 0.000 | 377.70 | Level measured at 33.1 feet. |
| DHP402A | 04/26/89 | 10:30 | NA | 1576.438 | 0.000 | 0.000 | 377.70 | Level of brine at 27.2 feet. |
| DHP402A | 04/27/89 | 10:00 | 49.00 | 1577.417 | 20.855 | 2.350 | 426.70 | Hole bottom measured at 44.3 feet. |
| DHP402A | 05/17/89 | 09:00 | 33 | 1597.375 | 19.958 | 1.653 | 459.70 | Fluid level at 44.6 feet. |
| DHP402A | 06/20/89 | 10:00 | NA | 1631.417 | 0.000 | 0.000 | 459.70 | Fluid measured at 39.8 feet. Hole not evacuated. |
| DHP402A | 06/29/89 | 09:00 | NA | 1640.375 | 0.000 | 0.000 | 459.70 | Measured hole fluid level at 37.6 feet. |
| DHP402A | 07/24/89 | 09:50 | 24 | 1665.410 | 68.035 | 0.353 | 483.70 | Sample saved for Intera brine study. Hole pumped to fluid level of 41.1 feet. |
| DHP402A | 08/16/89 | 09:00 | NA | 1688.375 | 0.000 | 0.000 | 483.70 | Sample not obtained. Fluid level at 36.5 feet. |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| DHP402A | 08/23/89 | 11:45 | NA | 1695.490 | 0.000 | 0.000 | 483.70 | Observed fluid level at 35.4 feet. Not sampled. |
| DHP402A | 09/12/89 | 12:30 | 6.30 | 1715.521 | 50.111 | 0.126 | 490.00 | Partial collection for chemistry. |
| DHP402A | 10/02/89 | 11:00 | 25.5 | 1735.458 | 19.937 | 1.279 | 515.50 | Sample saved for Intera brine study. |
| DHP402A | 11/15/89 | 10:30 | 16 | 1779.438 | 43.980 | 0.364 | 531.50 | Sample saved for Intera brine study. |
| DHP402A | 12/13/89 | 12:12 | 15.62 | 1807.508 | 28.070 | 0.556 | 547.12 | Sample saved for chemistry and for Intera brine study, sample #901. |
| DHP402A | 03/22/90 | 08:53 | 4.0 | 1906.370 | 0.000 | 0.000 | 547.12 | Hole not completely evacuated. |
| DHP402A | 03/26/90 | 09:25 | 7.0 | 1910.392 | 0.000 | 0.000 | 547.12 | Hole not completely evacuated. |
| DHP402A | 05/31/90 | 10:03 | 0.0 | 1976.419 | 168.911 | 0.000 | 547.12 | Hole not sampled, water level at 36.0 feet. |
| DHP402A | 06/20/90 | 10:31 | 15.0 | 1996.440 | 20.019 | 0.749 | 562.12 | 2 liters foer BSEP, 0.25 liters for Sandia (did not include in calculation). Partial evacuation. |
| DHP402A | 10/05/90 | 09:30 | 2.250 | 2103.396 | 106.958 | 0.000 | 564.37 | Partial evacuation. |
| DHP402A | 11/14/90 | 10:20 | 0.0 | 2143.430 | 35.989 | 0.000 | 564.37 | Hole not sampled, water level at 34.2 feet. |
| DHP402A | 12/20/90 | 10:05 | 40.7 | 2179.420 | 35.989 | 0.299 | 605.07 | Combined with 2.0 liters from 10/05/90. Used 42.7 liters for calculation. |
| DHP402A | 02/20/91 | 13:00 | 2.0 | 2241.542 | 0.000 | 0.000 | 607.07 | Partial evacuation. |
| DHP402A | 03/11/91 | 10:45 | 12.72 | 2260.448 | 0.000 | 0.000 | 619.79 | Partial evacuation. Removed for Sandia study. |
| DHP402A | 03/27/91 | 10:27 | 5.20 | 2276.435 | 97.015 | 0.205 | 624.99 | Combined with 2.0 liters from 02/20/91 and 12.72 liters from 03/11/91. Sample given to INTERA. |
| DHP402A | 07/11/91 | 10:00 | 2.00 | 2382.417 | 0.000 | 0.000 | 626.99 | Partial evacuation. |
| DHP402A | 09/18/91 | 10:15 | 0.06 | 2451.427 | 0.000 | 0.000 | 627.05 | Collected over two week period. |
| DHP402A | 09/25/91 | 12:43 | 2.0 | 2458.530 | 182.095 | 0.022 | 629.05 | Combined with 2.0 liters from 07/11/91 and 0.06 liters from 09/18/91. |
| GSEEP | 11/21/84 | | | 0.000 | 0.000 | 0.000 | 0.00 | Approximate date this part of Room G excavated. |
| GSEEP | 08/28/85 | | | 0.000 | 0.000 | 0.000 | 0.00 | Noticed damp area on floor at this location. |
| GSEEP | 11/12/85 | 1 | | 0.000 | 0.000 | 0.000 | 0.00 | Damp area on floor near S. rib approx. E1140 (45 ft. E. of DH35) and at E1149. Crusted moist area is about 4 ft. by 4 ft., has increased |
| GSEEP | 11/12/85 | 2 | | 0.000 | 0.000 | 0.000 | 0.00 | noticeably in size over last two months. Damp area covers 16 ft. E-W, 13 ft. N-S across width of Room G. |
| GSEEP | 11/12/85 | 3 | | 0.000 | 0.000 | 0.000 | 0.00 | Many weeps on lower 3 ft. of S. rib. Brine is seeping out of air pipe support hole. |
| GSEEP | 11/26/85 | 12:00 | 03.00 | 329.500 | 1.000 | 0.000 | 3.00 | First time collection. Dug out salt. |
| GSEEP | 12/03/85 | 12:00 | 01.50 | 336.500 | 7.000 | 0.214 | 4.50 | Partial removal. Collected .05 liters for chem. anal. #5. |
| GSEEP | 12/04/85 | 12:00 | 01.13 | 337.500 | 1.000 | 1.130 | 5.63 | |
| GSEEP | 12/10/85 | 12:00 | 01.80 | 343.500 | 6.000 | 0.300 | 7.43 | |
| GSEEP | 01/23/86 | 12:00 | 00.50 | 387.500 | 44.000 | 0.011 | 7.93 | Lots of salt in pool. |
| GSEEP | 01/31/86 | 12:00 | 00.94 | 395.500 | 8.000 | 0.117 | 8.87 | |
| GSEEP | 02/12/86 | 12:00 | 02.23 | 407.500 | 12.000 | 0.186 | 11.10 | Pumped twice. |
| GSEEP | 02/19/86 | 12:00 | 02.14 | 414.500 | 7.000 | 0.306 | 13.24 | |
| GSEEP | 02/28/86 | 12:00 | 01.95 | 423.500 | 9.000 | 0.217 | 15.19 | Partial removal. No pump, scooped with beaker. |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| GSEEP | 03/04/86 | 11:20 | 02.62 | 427.472 | 3.972 | 0.660 | 17.81 | |
| GSEEP | 03/06/86 | 10:50 | 02.07 | 429.451 | 1.979 | 1.046 | 19.88 | |
| GSEEP | 03/13/86 | 11:46 | 03.23 | 436.490 | 7.039 | 0.459 | 23.11 | Collected three times. |
| GSEEP | 03/26/86 | 10:20 | 03.00 | 449.431 | 12.941 | 0.232 | 26.11 | |
| GSEEP | 04/02/86 | 10:00 | 02.68 | 456.417 | 6.986 | 0.384 | 28.79 | |
| GSEEP | 04/08/86 | 10:00 | 02.50 | 462.417 | 6.000 | 0.417 | 31.29 | |
| GSEEP | 04/16/86 | 12:00 | 02.24 | 470.500 | 8.083 | 0.277 | 33.53 | |
| GSEEP | 04/24/86 | 10:30 | 02.35 | 478.438 | 7.938 | 0.296 | 35.88 | |
| GSEEP | 04/30/86 | 11:00 | 02.40 | 484.458 | 6.020 | 0.399 | 38.28 | |
| GSEEP | 05/06/86 | 10:30 | 02.49 | 490.438 | 5.980 | 0.416 | 40.77 | |
| GSEEP | 05/13/86 | 11:20 | 02.66 | 497.472 | 7.034 | 0.378 | 43.43 | |
| GSEEP | 05/20/86 | 11:20 | 02.44 | 504.472 | 7.000 | 0.349 | 45.87 | |
| GSEEP | 05/27/86 | 15:30 | 03.11 | 511.646 | 7.174 | 0.434 | 48.98 | |
| GSEEP | 06/03/86 | 10:40 | 03.31 | 518.444 | 6.798 | 0.487 | 52.29 | |
| GSEEP | 06/10/86 | 11:38 | 03.21 | 525.485 | 7.041 | 0.456 | 55.50 | |
| GSEEP | 06/17/86 | 11:15 | 03.11 | 532.469 | 6.984 | 0.445 | 58.61 | Sample for brine chemistry, #20. |
| GSEEP | 06/24/86 | 11:00 | 04.60 | 539.458 | 6.989 | 0.658 | 63.21 | Very humid air in workings. |
| GSEEP | 07/01/86 | 14:00 | 05.43 | 546.583 | 7.125 | 0.762 | 68.64 | Very humid last week, rain on surface. |
| GSEEP | 07/08/86 | 10:50 | 04.14 | 553.451 | 6.868 | 0.603 | 72.78 | |
| GSEEP | 07/16/86 | 10:50 | 03.32 | 561.451 | 8.000 | 0.415 | 76.10 | |
| GSEEP | 07/22/86 | 10:15 | 02.29 | 567.427 | 5.976 | 0.383 | 78.39 | |
| GSEEP | 07/29/86 | 10:45 | 02.68 | 574.448 | 7.021 | 0.382 | 81.07 | |
| GSEEP | 08/05/86 | 11:20 | 02.60 | 581.472 | 7.024 | 0.370 | 83.67 | |
| GSEEP | 08/12/86 | 10:45 | 03.67 | 588.448 | 6.976 | 0.526 | 87.34 | |
| GSEEP | 08/19/86 | 11:40 | 03.90 | 595.486 | 7.038 | 0.554 | 91.24 | |
| GSEEP | 08/26/86 | 11:00 | 03.73 | 602.458 | 6.972 | 0.535 | 94.97 | |
| GSEEP | 09/04/86 | 10:55 | 05.15 | 611.455 | 8.997 | 0.572 | 100.12 | Last week has been humid and rainy. |
| GSEEP | 09/09/86 | 10:00 | 03.70 | 616.417 | 4.962 | 0.746 | 103.82 | |
| GSEEP | 09/16/86 | 10:25 | 03.82 | 623.434 | 7.017 | 0.544 | 107.64 | |
| GSEEP | 09/23/86 | 10:20 | 04.29 | 630.431 | 6.997 | 0.613 | 111.93 | |
| GSEEP | 10/01/86 | 12:24 | 03.70 | 638.517 | 8.086 | 0.458 | 115.63 | |
| GSEEP | 10/08/86 | 10:45 | 03.80 | 645.448 | 6.931 | 0.548 | 119.43 | |
| GSEEP | 10/08/86 | 14:57 | 01.87 | 645.623 | 0.175 | 10.690 | 121.30 | Second collection for this day. Use (3.80 + 1.87)/(6.931 + 0.175) = 0.798 l/day. |
| GSEEP | 10/10/86 | 09:16 | 01.24 | 647.386 | 1.763 | 0.703 | 122.54 | |
| GSEEP | 10/14/86 | 11:10 | 02.19 | 651.465 | 4.079 | 0.537 | 124.73 | |
| GSEEP | 11/05/86 | 10:45 | 4.44 | 673.448 | 21.983 | 0.202 | 129.17 | First time 3.74 liters, second time 0.70 liters. |
| GSEEP | 11/20/86 | 12:02 | 03.84 | 688.501 | 15.053 | 0.255 | 133.01 | |
| GSEEP | 12/30/86 | 12:50 | 04.44 | 728.535 | 40.034 | 0.111 | 137.45 | |
| GSEEP | 02/03/87 | 13:45 | 03.45 | 763.573 | 35.038 | 0.098 | 140.90 | T=30.3c, pH 6.06, T 28.1. |
| GSEEP | 03/06/87 | 11:30 | 3.0 | 794.479 | 30.906 | 0.097 | 143.90 | |
| GSEEP | 03/30/87 | 11:34 | 2.51 | 818.482 | 24.003 | 0.105 | 146.41 | |
| GSEEP | 05/07/87 | 11:48 | 3.31 | 856.492 | 38.010 | 0.087 | 149.72 | |
| GSEEP | 06/30/87 | 10:00 | 12.24 | 910.417 | 53.925 | 0.227 | 161.96 | |
| GSEEP | 07/16/87 | 10:30 | 11.66 | 926.438 | 16.021 | 0.728 | 173.62 | |
| GSEEP | 07/23/87 | 09:20 | 3.87 | 933.389 | 6.951 | 0.557 | 177.49 | |
| GSEEP | 07/28/87 | 11:35 | 2.36 | 938.483 | 5.094 | 0.463 | 179.85 | |
| GSEEP | 08/07/87 | 09:15 | 5.33 | 948.385 | 9.902 | 0.538 | 185.18 | |
| GSEEP | 08/12/87 | 10:12 | 2.80 | 953.425 | 5.040 | 0.556 | 187.98 | |
| GSEEP | 08/24/87 | 08:46 | 6.53 | 965.365 | 11.940 | 0.547 | 194.51 | |
| GSEEP | 09/01/87 | 11:00 | 5.26 | 973.458 | 8.093 | 0.650 | 199.77 | Collected for chemistry, sample #164 A&B, #166 A&B, #169 A&B, #165 A&B, #168 A&B. |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| GSEEP | 09/11/87 | 09:00 | 5.03 | 983.375 | 9.917 | 0.507 | 204.80 | |
| GSEEP | 09/16/87 | 09:33 | 2.42 | 988.398 | 5.023 | 0.482 | 207.22 | |
| GSEEP | 09/25/87 | 08:55 | 4.12 | 997.372 | 8.974 | 0.459 | 211.34 | Sump drilled to facilitate accumulation of brine. |
| GSEEP | 10/01/87 | 12:15 | 2.81 | 1003.510 | 6.138 | 0.458 | 214.15 | |
| GSEEP | 10/08/87 | 10:25 | 2.97 | 1010.430 | 6.920 | 0.429 | 217.12 | |
| GSEEP | 10/16/87 | 10:41 | 3.37 | 1018.450 | 8.020 | 0.420 | 220.49 | |
| GSEEP | 10/20/87 | 11:59 | 2.06 | 1022.500 | 4.050 | 0.509 | 222.55 | |
| GSEEP | 11/12/87 | 10:41 | 10.21 | 1045.450 | 22.950 | 0.445 | 232.76 | |
| GSEEP | 11/19/87 | 11:35 | 2.90 | 1052.480 | 7.030 | 0.413 | 235.66 | Collected for chemistry, sample #202, #219 & #231. |
| GSEEP | 12/07/87 | 12:50 | 7.02 | 1070.530 | 18.050 | 0.389 | 242.68 | Collected for chemistry, sample #239. |
| GSEEP | 01/04/88 | 12:10 | 16.11 | 1098.510 | 27.980 | 0.576 | 258.79 | |
| GSEEP | 01/20/88 | 11:25 | 8.68 | 1114.480 | 15.970 | 0.544 | 267.47 | |
| GSEEP | 02/08/88 | 12:15 | 9.58 | 1133.510 | 19.030 | 0.503 | 277.05 | Collected for chemistry, sample #271, #272, #273, #274, #275, #276, #277, #278, #279, #280, #281, #282, #283, #284, #285, & #286. |
| GSEEP | 02/25/88 | 10:40 | 11.87 | 1150.440 | 16.930 | 0.701 | 288.92 | |
| GSEEP | 03/09/88 | 10:18 | 7.35 | 1163.430 | 12.990 | 0.566 | 296.27 | |
| GSEEP | 03/17/88 | 11:20 | 4.45 | 1171.470 | 8.040 | 0.553 | 300.72 | |
| GSEEP | 03/29/88 | 11:45 | 5.42 | 1183.490 | 12.020 | 0.451 | 306.14 | Collected for chemistry, sample #327 - #337. |
| GSEEP | 04/15/88 | 11:01 | 7.43 | 1200.460 | 16.970 | 0.438 | 313.57 | |
| GSEEP | 05/05/88 | 10:10 | 9.34 | 1220.420 | 19.960 | 0.468 | 322.91 | Sampled for Sandia PA. |
| GSEEP | 05/12/88 | 09:30 | 3.55 | 1227.400 | 6.980 | 0.509 | 326.46 | Sampled for Sandia PA. |
| GSEEP | 06/09/88 | 08:45 | 12.00 | 1255.360 | 27.960 | 0.429 | 338.46 | Removed for Sandia PA. |
| GSEEP | 06/16/88 | 09:43 | 4.13 | 1262.400 | 7.040 | 0.587 | 342.59 | Sampled for Sandia PA. |
| GSEEP | 06/30/88 | 08:30 | 6.00 | 1276.350 | 13.950 | 0.430 | 348.59 | Sampled for Sandia PA. |
| GSEEP | 07/12/88 | 09:00 | 6.40 | 1288.380 | 12.030 | 0.532 | 354.99 | Collected for chemistry, sample #437 - #448. |
| GSEEP | 07/28/88 | 10:30 | 11.35 | 1304.440 | 16.060 | 0.707 | 366.34 | Sampled for Sandia PA. |
| GSEEP | 08/11/88 | 10:00 | 12.02 | 1318.420 | 13.980 | 0.860 | 378.36 | Sampled for Sandia PA. |
| GSEEP | 08/25/88 | 09:07 | 6.72 | 1332.380 | 13.960 | 0.481 | 385.08 | Hole covered with tight fitting brattice cloth. Sampled for Sandia PA. |
| GSEEP | 09/08/88 | 14:48 | 7.31 | 1346.620 | 14.240 | 0.513 | 392.39 | Sampled for Sandia PA. |
| GSEEP | 09/14/88 | 08:30 | 3.00 | 1352.350 | 5.730 | 0.524 | 395.39 | |
| GSEEP | 09/27/88 | 10:50 | 6.45 | 1365.450 | 13.100 | 0.492 | 401.84 | Collected for chemistry, sample #545 - #556. |
| GSEEP | 10/18/88 | 10:22 | 10.20 | 1386.430 | 20.980 | 0.486 | 412.04 | |
| GSEEP | 11/10/88 | 09:08 | 12.62 | 1409.380 | 22.950 | 0.550 | 424.66 | Smell of urine in sample and coming from hole. |
| GSEEP | 12/13/88 | 10:20 | 17.81 | 1442.430 | 33.050 | 0.539 | 442.47 | Collected for chemistry, sample #564 - #569. Sample effervesces and brine feels warmer than usual. |
| GSEEP | 01/10/89 | 13:30 | 17.38 | 1470.562 | 28.131 | 0.618 | 459.85 | Sample saved for Sandia brine study. |
| GSEEP | 02/09/89 | 10:22 | 19.5 | 1500.432 | 29.870 | 0.653 | 479.35 | Sample saved for Sandia brine study. |
| GSEEP | 03/01/89 | 10:00 | 3.90 | 1520.417 | 0.000 | 0.000 | 483.25 | Partial collection for J. Francke. |
| GSEEP | 03/14/89 | 12:45 | 19.57 | 1533.531 | 33.099 | 0.709 | 502.82 | Sample saved for chemistry, sample #672 - 683. Add 3.9 l collected 3/01/90 to 19.57 l. Use 23.47 l for calculation. |
| GSEEP | 04/06/89 | 08:56 | 16.35 | 1556.372 | 22.841 | 0.716 | 519.17 | 16 liters of sample saved for Sandia brine study. |
| GSEEP | 04/20/89 | 08:45 | 10.43 | 1570.365 | 13.993 | 0.745 | 529.60 | Sample saved for Sandia brine study. |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| GSEEP | 05/17/89 | 09:40 | 19.72 | 1597.403 | 27.038 | 0.729 | 549.32 | Sample saved for Sandia brine study. |
| GSEEP | 06/06/89 | 09:40 | 14.52 | 1617.403 | 20.000 | 0.726 | 563.84 | Sample saved for chemistry. Extra saved for Sandia brine study. |
| GSEEP | 06/29/89 | 10:01 | 15.95 | 1640.417 | 23.014 | 0.693 | 579.79 | Sample saved for Sandia brine study. |
| GSEEP | 07/06/89 | 09:00 | 4.67 | 1647.375 | 6.958 | 0.671 | 584.46 | Sample saved for Sandia brine study. |
| GSEEP | 07/25/89 | 09:30 | 12.60 | 1666.396 | 19.021 | 0.662 | 597.06 | Sample saved for Sandia brine study. |
| GSEEP | 08/16/89 | 09:15 | 14.73 | 1688.385 | 21.989 | 0.670 | 611.79 | Sample saved for Sandia brine study. |
| GSEEP | 09/12/89 | 08:30 | 18.68 | 1715.354 | 26.969 | 0.693 | 630.47 | Sample saved for chemistry. |
| GSEEP | 10/11/89 | 09:47 | 17.70 | 1744.408 | 29.054 | 0.609 | 648.17 | Sample saved for Sandia brine study. |
| GSEEP | 11/15/89 | 09:30 | 21.44 | 1779.396 | 34.988 | 0.613 | 669.61 | Sample saved for Sandia brine study. |
| GSEEP | 12/13/89 | 09:13 | 16.30 | 1807.384 | 27.988 | 0.582 | 685.91 | Sample saved for Sandia brine study, sample #896. |
| GSEEP | 01/10/90 | 09:21 | 16.40 | 1835.390 | 28.006 | 0.586 | 702.31 | |
| GSEEP | 01/24/90 | 09:19 | 9.0 | 1849.388 | 13.998 | 0.643 | 711.31 | |
| GSEEP | 02/07/90 | 10:07 | 9.0 | 1863.422 | 14.034 | 0.641 | 720.31 | |
| GSEEP | 02/21/90 | 09:40 | 8.32 | 1877.403 | 13.981 | 0.595 | 728.63 | |
| GSEEP | 03/21/90 | 09:49 | 16.55 | 1905.409 | 28.006 | 0.591 | 745.18 | |
| GSEEP | 04/24/90 | 11:16 | 20.33 | 1939.469 | 34.060 | 0.597 | 765.51 | |
| GSEEP | 05/23/90 | 11:51 | 16.66 | 1968.494 | 29.025 | 0.574 | 782.17 | |
| GSEEP | 06/06/90 | 12:30 | 10.50 | 1982.521 | 14.000 | 0.750 | 792.67 | |
| GSEEP | 06/20/90 | 08:56 | 15.72 | 1996.372 | 27.878 | 0.564 | 808.39 | |
| GSEEP | 07/25/90 | 08:50 | 15.0 | 2031.368 | 34.996 | 0.429 | 823.39 | |
| GSEEP | 12/11/90 | 10:30 | 2.0 | 2170.438 | 139.070 | 0.000 | 825.39 | Partial removal. First time sampled since 07/25/90. |
| GSEEP | 12/13/90 | 08:56 | 49.89 | 2172.372 | 1.930 | 0.368 | 875.28 | Combined with 2.0 liters from 12/11/90. Used 51.89 liters for calculation. |
| GSEEP | 12/20/90 | 08:23 | 0.0 | 2179.349 | 147.981 | 0.000 | 875.28 | Could not sample. |
| GSEEP | 01/23/91 | 09:30 | 26.14 | 2213.396 | 182.028 | 0.429 | 901.42 | Combined with 2.0 liters from 12/11/90 and 49.89 liters from 12/13/90. |
| GSEEP | 02/27/91 | 09:52 | 17.6 | 2248.411 | 35.015 | 0.503 | 919.02 | |
| GSEEP | 03/11/91 | 08:20 | 6.9 | 2260.347 | 11.936 | 0.578 | 925.92 | Removed out of cycle for Sandia biology study. |
| GSEEP | 03/20/91 | 10:10 | 2.02 | 2269.424 | 0.000 | 0.000 | 927.94 | Partial evacuation. First evacuation with bailer, second with pump. |
| GSEEP | 03/21/91 | 08:45 | 3.17 | 2270.365 | 10.018 | 0.518 | 931.11 | Combined with 2.02 liters from 03/20/91. |
| GSEEP | 04/24/91 | 09:02 | 15.85 | 2304.376 | 34.011 | 0.466 | 946.96 | |
| GSEEP | 05/29/91 | 09:06 | 15.72 | 2339.379 | 35.003 | 0.449 | 962.68 | |
| GSEEP | 06/26/91 | 08:50 | 12.0 | 2367.368 | 27.989 | 0.429 | 974.68 | |
| GSEEP | 07/11/91 | 10:20 | 2.25 | 2382.431 | 0.000 | 0.000 | 976.93 | Partial evacuation. |
| GSEEP | 07/31/91 | 09:30 | 11.72 | 2402.396 | 35.028 | 0.399 | 988.65 | Combined with 2.25 liters from 07/11/91. |
| GSEEP | 08/28/91 | 09:15 | 11.40 | 2430.385 | 27.989 | 0.407 | 1000.05 | |
| GSEEP | 09/25/91 | 11:20 | 2.0 | 2458.472 | 0.000 | 0.000 | 1002.05 | Some brine may have been left in hole. |
| GSEEP | 10/23/91 | 09:55 | 15.0 | 2486.413 | 56.028 | 0.303 | 1017.05 | Combined with 2 liters from 10/23/91. |
| GSEEP | 11/27/91 | 09:40 | 10.0 | 2521.403 | 34.990 | 0.286 | 1027.05 | |
| GSEEP | 12/10/91 | 10:30 | 1.7 | 2534.438 | 0.000 | 0.000 | 1028.75 | Partial removal for Sandia 1. |
| OH20 | 09/03/85 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Approximated date this part of drift excavated. |
| OH20 | 03/29/89 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Horizontal hole drilled 3/28/89 to 3/29/89. Hole drilled with brine . Fluorescien added to drilling fluid. |
| OH20 | 03/30/89 | 11:00 | NA | 1549.458 | 0.000 | 0.000 | 0.00 | New hole, Installed collecting device. Hole |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | dry. |
| OH20 | 04/18/89 | 09:45 | 0 | 1568.406 | 18.948 | 0.000 | 0.00 | Device left with 50 centibars suction. |
| OH20 | 04/26/89 | 09:50 | 0 | 1576.410 | 8.004 | 0.000 | 0.00 | Device left with 50 centibars suction. |
| OH20 | 06/05/89 | 09:00 | 0.31 | 1616.375 | 39.965 | 0.008 | 0.31 | First time sample recovered from this hole. Sample colored with Fluorescien dye. Replaced collecting device. Sample saved for chemistry. |
| OH20 | 06/20/89 | 08:30 | 0.03 | 1631.354 | 14.979 | 0.002 | 0.34 | |
| OH20 | 07/06/89 | 11:00 | 0.02 | 1647.458 | 16.104 | 0.001 | 0.36 | Collecting device retained vacuum. Sample collected for chemistry. |
| OH20 | 08/09/89 | 10:00 | 0.29 | 1681.417 | 33.959 | 0.009 | 0.65 | Sample collected for chemistry. Pumped collecting device, repaired hose end. |
| OH20 | 08/23/89 | 11:22 | 0.16 | 1695.474 | 14.057 | 0.011 | 0.81 | Sample collected for chemistry. Still yellowish green in color. |
| OH20 | 09/14/89 | 11:05 | 0.21 | 1717.462 | 21.988 | 0.010 | 1.02 | Sample saved for chemistry. |
| OH20 | 10/02/89 | 11:20 | 0.27 | 1735.472 | 18.010 | 0.015 | 1.29 | Sample saved for chemistry. |
| OH20 | 10/20/89 | 11:25 | 0.26 | 1753.476 | 18.004 | 0.014 | 1.55 | Sample saved for chemistry, sample #855. |
| OH20 | 11/10/89 | 10:18 | 0.29 | 1774.429 | 20.953 | 0.014 | 1.84 | Sample saved for chemistry, sample #868. |
| OH20 | 11/29/89 | 13:00 | 0.37 | 1793.542 | 19.113 | 0.019 | 2.21 | Sample saved for chemistry, sample #876. |
| OH20 | 12/12/89 | 10:06 | 0.20 | 1806.421 | 12.879 | 0.016 | 2.41 | Sample saved for chemistry, sample #888. |
| OH20 | 01/04/90 | 11:52 | 0.27 | 1829.494 | 23.073 | 0.012 | 2.68 | |
| OH20 | 01/17/90 | 09:59 | 0.21 | 1842.416 | 12.922 | 0.016 | 2.89 | |
| OH20 | 01/31/90 | 10:38 | 0.21 | 1856.443 | 14.027 | 0.015 | 3.10 | |
| OH20 | 02/13/90 | 10:40 | 0.18 | 1869.444 | 13.001 | 0.014 | 3.28 | |
| OH20 | 02/27/90 | 12:28 | 0.24 | 1883.519 | 14.075 | 0.017 | 3.52 | |
| OH20 | 03/05/90 | 11:12 | 0.20 | 1889.467 | 5.948 | 0.034 | 3.72 | |
| OH20 | 03/21/90 | 09:30 | 0.08 | 1905.396 | 15.929 | 0.005 | 3.80 | |
| OH20 | 04/04/90 | 12:04 | 0.18 | 1919.503 | 14.107 | 0.013 | 3.98 | |
| OH20 | 04/10/90 | 10:06 | 0.11 | 1925.421 | 5.918 | 0.019 | 4.09 | |
| OH20 | 05/02/90 | 10:03 | 0.10 | 1947.419 | 21.998 | 0.005 | 4.19 | |
| OH20 | 05/09/90 | 09:24 | 0.09 | 1954.392 | 6.973 | 0.013 | 4.28 | |
| OH20 | 05/16/90 | 11:55 | 0.07 | 1961.497 | 7.105 | 0.010 | 4.35 | |
| OH20 | 05/23/90 | 13:09 | 0.18 | 1968.548 | 7.051 | 0.026 | 4.53 | |
| OH20 | 05/31/90 | 09:43 | 0.09 | 1976.405 | 7.857 | 0.011 | 4.62 | |
| OH20 | 06/06/90 | 11:45 | 0.08 | 1982.490 | 6.085 | 0.013 | 4.70 | |
| OH20 | 06/14/90 | 10:27 | 0.09 | 1990.435 | 7.945 | 0.011 | 4.79 | |
| OH20 | 06/28/90 | 10:42 | 0.18 | 2004.446 | 14.011 | 0.013 | 4.97 | |
| OH20 | 07/17/90 | 09:14 | 0.24 | 2023.385 | 18.939 | 0.000 | 5.21 | |
| OH20 | 07/18/90 | 11:10 | 0.01 | 2024.465 | 1.080 | 0.012 | 5.22 | Combined with 0.24 liters from 07/17/90. Used 0.25 liters for calculation. |
| OH20 | 07/25/90 | 10:20 | 0.09 | 2031.431 | 6.966 | 0.013 | 5.31 | |
| OH20 | 08/01/90 | 11:20 | 0.09 | 2038.472 | 7.041 | 0.013 | 5.40 | |
| OH20 | 08/07/90 | 10:13 | 0.08 | 2044.426 | 5.954 | 0.013 | 5.48 | |
| OH20 | 08/16/90 | 10:13 | 0.11 | 2053.426 | 9.000 | 0.012 | 5.59 | |
| OH20 | 08/22/90 | 10:56 | 0.08 | 2059.456 | 6.030 | 0.013 | 5.67 | |
| OH20 | 08/29/90 | 10:33 | 0.09 | 2066.440 | 6.984 | 0.013 | 5.76 | |
| OH20 | 09/05/90 | 10:44 | 0.09 | 2073.447 | 7.007 | 0.013 | 5.85 | |
| OH20 | 09/12/90 | 09:10 | 0.08 | 2080.382 | 6.935 | 0.012 | 5.93 | |
| OH20 | 09/25/90 | 11:52 | 0.14 | 2093.494 | 13.112 | 0.000 | 6.07 | Partial evacuation. |
| OH20 | 09/26/90 | 10:10 | 0.09 | 2094.424 | 0.930 | 0.016 | 6.16 | Combined with 0.14 liters from 09/25/90. Used 0.23 liters for calculation. |
| OH20 | 10/03/90 | 09:10 | 0.06 | 2101.382 | 6.958 | 0.009 | 6.22 | |
| OH20 | 10/10/90 | 10:31 | 0.08 | 2108.438 | 7.056 | 0.011 | 6.30 | |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| OH20 | 10/18/90 | 09:37 | 0.09 | 2116.401 | 7.963 | 0.011 | 6.39 | |
| OH20 | 10/24/90 | 11:45 | 0.07 | 2122.490 | 6.089 | 0.011 | 6.46 | |
| OH20 | 10/31/90 | 11:00 | 0.09 | 2129.458 | 6.968 | 0.013 | 6.55 | |
| OH20 | 11/07/90 | 11:37 | 0.08 | 2136.484 | 7.026 | 0.011 | 6.63 | |
| OH20 | 11/14/90 | 10:50 | 0.09 | 2143.451 | 6.967 | 0.013 | 6.72 | |
| OH20 | 11/28/90 | 11:37 | 0.16 | 2157.484 | 14.033 | 0.011 | 6.88 | |
| OH20 | 12/05/90 | 09:40 | 0.09 | 2164.403 | 6.919 | 0.013 | 6.97 | |
| OH20 | 12/13/90 | 10:00 | 0.10 | 2172.417 | 8.014 | 0.012 | 7.07 | |
| OH20 | 12/20/90 | 10:47 | 0.09 | 2179.449 | 7.032 | 0.013 | 7.16 | |
| OH20 | 01/09/91 | 10:40 | 0.20 | 2199.444 | 19.995 | 0.010 | 7.36 | |
| OH20 | 01/16/91 | 13:04 | 0.10 | 2206.544 | 7.100 | 0.014 | 7.46 | |
| OH20 | 01/23/91 | 10:44 | 0.08 | 2213.447 | 6.903 | 0.012 | 7.54 | |
| OH20 | 01/30/91 | 09:20 | 0.10 | 2220.389 | 6.942 | 0.014 | 7.64 | |
| OH20 | 02/13/91 | 12:05 | 0.15 | 2234.503 | 14.114 | 0.011 | 7.79 | |
| OH20 | 02/20/91 | 11:00 | 0.08 | 2241.458 | 6.955 | 0.012 | 7.87 | |
| OH20 | 02/27/91 | 11:10 | 0.09 | 2248.465 | 7.007 | 0.013 | 7.96 | |
| OH20 | 03/07/91 | 10:45 | 0.08 | 2256.448 | 7.983 | 0.010 | 8.04 | |
| OH20 | 03/20/91 | 12:51 | 0.15 | 2269.535 | 13.087 | 0.011 | 8.19 | |
| OH20 | 03/28/91 | 12:34 | 0.10 | 2277.524 | 7.989 | 0.013 | 8.29 | |
| OH20 | 04/10/91 | 09:44 | 0.14 | 2290.406 | 12.882 | 0.011 | 8.43 | |
| OH20 | 04/17/91 | 11:10 | 0.09 | 2297.465 | 7.059 | 0.013 | 8.52 | |
| OH20 | 04/24/91 | 10:05 | 0.09 | 2304.420 | 6.955 | 0.013 | 8.61 | |
| OH20 | 05/01/91 | 10:10 | 0.09 | 2311.424 | 7.004 | 0.013 | 8.70 | |
| OH20 | 05/08/91 | 09:10 | 0.09 | 2318.382 | 6.958 | 0.013 | 8.79 | |
| OH20 | 05/15/91 | 10:45 | 0.08 | 2325.448 | 7.066 | 0.011 | 8.87 | |
| OH20 | 05/29/91 | 10:33 | 0.15 | 2339.440 | 13.992 | 0.011 | 9.02 | |
| OH20 | 06/05/91 | 13:13 | 0.09 | 2346.551 | 7.111 | 0.013 | 9.11 | |
| OH20 | 06/12/91 | 09:15 | 0.08 | 2353.385 | 6.834 | 0.012 | 9.19 | |
| OH20 | 06/19/91 | 15:45 | 0.09 | 2360.656 | 7.271 | 0.012 | 9.28 | |
| OH20 | 06/26/91 | 08:20 | 0.08 | 2367.347 | 6.691 | 0.012 | 9.36 | |
| OH20 | 07/11/91 | 11:54 | 0.16 | 2382.496 | 15.149 | 0.011 | 9.52 | |
| OH20 | 07/17/91 | 10:36 | 0.06 | 2388.442 | 5.946 | 0.010 | 9.58 | |
| OH20 | 07/30/91 | 10:50 | 0.14 | 2401.451 | 13.009 | 0.011 | 9.72 | |
| OH20 | 08/08/91 | 09:45 | 0.10 | 2410.406 | 8.955 | 0.011 | 9.82 | |
| OH20 | 08/14/91 | 11:00 | 0.07 | 2416.458 | 6.052 | 0.012 | 9.89 | |
| OH20 | 08/21/91 | 11:25 | 0.15 | 2423.476 | 7.018 | 0.021 | 10.04 | |
| OH20 | 08/28/91 | 10:55 | 0.07 | 2430.455 | 6.979 | 0.010 | 10.11 | |
| OH20 | 09/04/91 | 11:30 | 0.08 | 2437.479 | 7.024 | 0.011 | 10.19 | |
| OH20 | 09/11/91 | 12:15 | 0.09 | 2444.510 | 7.031 | 0.013 | 10.28 | |
| OH20 | 09/18/91 | 09:35 | 0.08 | 2451.399 | 6.889 | 0.012 | 10.36 | |
| OH20 | 09/25/91 | 10:37 | 0.02 | 2458.442 | 7.043 | 0.003 | 10.38 | |
| OH20 | 10/02/91 | 11:48 | 0.10 | 2465.492 | 7.050 | 0.014 | 10.48 | |
| OH20 | 10/16/91 | 10:50 | 0.11 | 2479.451 | 13.959 | 0.008 | 10.59 | |
| OH20 | 10/23/91 | 12:41 | 0.09 | 2486.528 | 7.077 | 0.013 | 10.68 | |
| OH20 | 10/31/91 | 11:55 | 0.08 | 2494.497 | 7.969 | 0.010 | 10.76 | |
| OH20 | 11/06/91 | 11:50 | 0.11 | 2500.493 | 5.996 | 0.018 | 10.87 | |
| OH20 | 11/13/91 | 11:14 | 0.14 | 2507.468 | 6.975 | 0.020 | 11.01 | |
| OH20 | 11/20/91 | 11:55 | 0.15 | 2514.497 | 7.029 | 0.021 | 11.16 | |
| OH20 | 11/27/91 | 10:15 | 0.04 | 2521.427 | 6.930 | 0.006 | 11.20 | |
| OH20 | 12/04/91 | 12:05 | 0.09 | 2528.503 | 7.076 | 0.013 | 11.29 | |
| OH20 | 12/11/91 | 11:15 | 0.10 | 2535.469 | 6.966 | 0.014 | 11.39 | |
| OH20 | 12/18/91 | 10:20 | 0.04 | 2542.431 | 6.962 | 0.006 | 11.43 | |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| OH21 | 09/03/85 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Approximate date this part of drift excavated. |
| OH21 | 12/12/88 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Horizontal hole drilled 12/12/88 to 12/19/88. Hole drilled with brine. Fluorescien added to drilling fluid. |
| OH21 | 02/06/89 | 10:00 | NA | 1497.417 | 0.000 | 0.000 | 0.00 | New hole, Installed collecting device @ 53' in hole. Hole dry. |
| OH21 | 02/14/89 | 09:25 | 0 | 1505.392 | 7.975 | 0.000 | 0.00 | Hole plugged with foam. Hole holding vacuum at approx. 50 centibars. |
| OH21 | 02/21/89 | 10:30 | 0 | 1512.438 | 7.046 | 0.000 | 0.00 | Holding vacuum. |
| OH21 | 02/28/89 | 10:50 | 0 | 1519.451 | 7.013 | 0.000 | 0.00 | Holding vacuum. |
| OH21 | 03/01/89 | 11:45 | NA | 1520.490 | 0.000 | 0.000 | 0.00 | Device left with approximately 70 centibars suction. |
| OH21 | 03/08/89 | 09:45 | 0 | 1527.406 | 7.955 | 0.000 | 0.00 | Device left with approximately 50 centibars suction. |
| OH21 | 03/15/89 | 11:35 | 0 | 1534.483 | 7.077 | 0.000 | 0.00 | Hole dry. |
| OH21 | 03/30/89 | 10:20 | 0 | 1549.431 | 14.948 | 0.000 | 0.00 | Hole dry. |
| OH21 | 04/18/89 | 09:50 | 0 | 1568.410 | 18.979 | 0.000 | 0.00 | Device left with approximately 50 centibars suction. |
| OH21 | 04/26/89 | 09:55 | 0 | 1576.413 | 8.003 | 0.000 | 0.00 | Device left with approximately 50 centibars suction. |
| OH21 | 06/05/89 | 09:10 | 0 | 1616.382 | 39.969 | 0.000 | 0.00 | Hole dry, no vacuum in collecting device. Removed and replaced collecting device. |
| OH21 | 06/20/89 | 08:40 | 0 | 1631.361 | 14.979 | 0.000 | 0.00 | Hole dry. |
| OH21 | 07/06/89 | 11:10 | 0 | 1647.465 | 16.104 | 0.000 | 0.00 | Hole dry. Collecting device retained vacuum. |
| OH21 | 08/09/89 | 10:05 | 0 | 1681.420 | 33.955 | 0.000 | 0.00 | Hole dry. Pumped collecting device, repaired hose ends. |
| OH21 | 08/23/89 | 11:20 | 0 | 1695.472 | 14.052 | 0.000 | 0.00 | Hole dry. |
| OH21 | 10/02/89 | 11:25 | 0 | 1735.476 | 40.004 | 0.000 | 0.00 | Hole dry. |
| OH21 | 10/20/89 | 11:25 | 0 | 1753.476 | 18.000 | 0.000 | 0.00 | Hole dry. |
| OH21 | 11/10/89 | 10:20 | 0 | 1774.431 | 20.955 | 0.000 | 0.00 | Hole dry. |
| OH21 | 11/29/89 | 12:52 | 0 | 1793.536 | 19.105 | 0.000 | 0.00 | Hole dry. |
| OH21 | 12/12/89 | 10:10 | 0 | 1806.424 | 12.888 | 0.000 | 0.00 | Dry. Reseat collection device (leaking). |
| OH21 | 03/28/91 | 12:45 | 0.00 | 2277.531 | 471.107 | 0.000 | 0.00 | Air blowing through tube. |
| OH21 | 04/24/91 | 10:07 | 0.00 | 2304.422 | 26.891 | 0.000 | 0.00 | Air blowing through tube. |
| OH21 | 07/17/91 | 10:36 | 0.00 | 2388.442 | 84.020 | 0.000 | 0.00 | Air blowing through tube. |
| OH21 | 09/25/91 | 10:35 | 0.00 | 2458.441 | 69.999 | 0.000 | 0.00 | Dry. Air blowing through tube. Sampler under vacuum. |
| OH21 | 10/31/91 | 11:48 | 0.00 | 2494.492 | 36.051 | 0.000 | 0.00 | Dry. |
| OH22 | 09/03/85 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Approximate date this part of drift excavated. |
| OH22 | 12/19/88 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Horizontal hole drilled 12/12/88 to 12/19/88. Hole drilled with brine. Fluorescien added to drilling fluid. |
| OH22 | 02/06/89 | 11:00 | NA | 1497.458 | 0.000 | 0.000 | 0.00 | New hole, Installed collecting device @ 52.4' in hole. Hole dry. |
| OH22 | 02/14/89 | 09:20 | 0 | 1505.389 | 7.931 | 0.000 | 0.00 | Hole plugged with foam. Hole holding vacuum at approx. 50 centibars. |
| OH22 | 02/21/89 | 10:40 | 0 | 1512.444 | 7.055 | 0.000 | 0.00 | Holding vacuum. |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| OH22 | 02/28/89 | 10:50 | 0 | 1519.451 | 7.007 | 0.000 | 0.00 | Not holding vacuum. |
| OH22 | 03/01/89 | 11:00 | NA | 1520.458 | 0.000 | 0.000 | 0.00 | Device left with approximately 70 centibars suction. |
| OH22 | 03/08/89 | 09:45 | 0 | 1527.406 | 7.955 | 0.000 | 0.00 | Device left with approximately 50 centibars suction. |
| OH22 | 03/15/89 | 11:35 | 0 | 1534.483 | 7.077 | 0.000 | 0.00 | Hole dry. |
| OH22 | 03/30/89 | 10:22 | 0 | 1549.432 | 14.949 | 0.000 | 0.00 | Hole dry. |
| OH22 | 04/18/89 | 09:55 | 0 | 1568.413 | 18.981 | 0.000 | 0.00 | Device left with approximately 50 centibars suction. |
| OH22 | 04/26/89 | 10:00 | 0 | 1576.417 | 8.004 | 0.000 | 0.00 | Device left with approximately 50 centibars suction. |
| OH22 | 06/05/89 | 09:20 | 0 | 1616.389 | 39.972 | 0.000 | 0.00 | Hole dry, no vacuum on collecting device. Removed and replaced collecting device. |
| OH22 | 06/20/89 | 08:45 | Trace | 1631.365 | 0.000 | 0.000 | 0.00 | Trace of brine found in hole. |
| OH22 | 07/06/89 | 11:20 | 0 | 1647.472 | 31.083 | 0.000 | 0.00 | Hole dry. Collecting device retained vacuum. |
| OH22 | 08/09/89 | 10:10 | 0 | 1681.424 | 33.952 | 0.000 | 0.00 | Hole dry. Pumped collecting device, repaired hose ends. |
| OH22 | 08/23/89 | 11:20 | 0 | 1695.472 | 14.048 | 0.000 | 0.00 | Hole dry. |
| OH22 | 10/02/89 | 11:23 | 0 | 1735.474 | 40.002 | 0.00 | 0.00 | Hole dry. |
| OH22 | 10/20/89 | 11:25 | 0 | 1753.476 | 18.002 | 0.000 | 0.00 | Hole dry. |
| OH22 | 11/10/89 | 10:22 | 0 | 1774.432 | 20.956 | 0.000 | 0.00 | Hole dry. |
| OH22 | 11/29/89 | 12:55 | 0 | 1793.538 | 19.106 | 0.000 | 0.00 | Hole dry. |
| OH22 | 12/12/89 | 10:12 | 0 | 1806.425 | 12.887 | 0.000 | 0.00 | Dry. Reseat collection device (leaking). |
| OH22 | 03/28/91 | 12:45 | 0.00 | 2277.531 | 471.106 | 0.000 | 0.00 | Air blowing through tube. |
| OH22 | 04/24/91 | 10:09 | 0.00 | 2304.423 | 26.892 | 0.000 | 0.00 | Air blowing through tube. |
| OH22 | 07/17/91 | 10:38 | 0.00 | 2388.443 | 84.020 | 0.000 | 0.00 | Air blowing through tube. |
| OH22 | 09/25/91 | 10:34 | 0.02 | 2458.440 | 0.000 | 0.000 | 0.02 | Some brine may have been left in hole. |
| OH22 | 10/23/91 | 12:40 | 0.57 | 2486.528 | 98.090 | 0.006 | 0.59 | Removed and replaced collection device. Combined with .02 liters from 09/25/91. |
| OH22 | 10/31/91 | 11:48 | Trace | 2494.492 | 7.964 | 0.000 | 0.59 | |
| OH22 | 11/13/91 | 11:10 | 0.00 | 2507.465 | 12.973 | 0.000 | 0.59 | Dry. Air only. |
| OH22 | 12/04/91 | 11:55 | Trace | 2528.497 | 21.032 | 0.000 | 0.59 | |
| OH23 | 12/08/85 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Approximate date this part of drift excavated. |
| OH23 | 02/06/89 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Horizontal hole drilled 2/6/89. Hole drilled with brine. Fluorescien added to drilling fluid. |
| OH23 | 02/07/89 | 14:00 | NA | 1498.583 | 0.000 | 0.000 | 0.00 | New hole, installed collecting device @ 153' in hole. Hole dry. |
| OH23 | 02/14/89 | 09:08 | 0 | 1505.381 | 6.798 | 0.000 | 0.00 | Hole plugged with foam. Hole holding vacuum at approx. 50 centibars. |
| OH23 | 02/21/89 | 10:00 | 0.00 | 1512.417 | 7.036 | 0.000 | 0.00 | Holding vacuum. |
| OH23 | 02/28/89 | 10:00 | 0.43 | 1519.417 | 7.000 | 0.061 | 0.43 | Sample clear, warm and effervescent. |
| OH23 | 03/08/89 | 09:30 | 0.30 | 1527.396 | 7.979 | 0.038 | 0.73 | Device left with approximately 50 centibars suction. |
| OH23 | 03/15/89 | 11:45 | 0.21 | 1534.490 | 7.094 | 0.030 | 0.94 | Sample saved for chemistry, sample #671. |
| OH23 | 03/30/89 | 10:15 | 0.52 | 1549.427 | 14.937 | 0.035 | 1.46 | Sample saved for chemistry. |
| OH23 | 04/04/89 | 09:30 | 0.10 | 1554.396 | 4.969 | 0.020 | 1.56 | Sample saved for chemistry. Device left with approximately 50 centibars suction. Outer 75 feet (approx.) of hole dry. |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| OH23 | 04/18/89 | 09:55 | 0.10 | 1568.413 | 14.017 | 0.007 | 1.66 | No sample. Device left with approximately 50 centibars suction. |
| OH23 | 04/26/89 | 09:35 | 0.15 | 1576.399 | 7.986 | 0.019 | 1.81 | Device left with approximately 50 centibars suction. Combined sample saved for chemistry. |
| OH23 | 06/05/89 | 09:30 | 0.35 | 1616.396 | 39.997 | 0.009 | 2.16 | Sample saved for chemistry. |
| OH23 | 06/20/89 | 08:50 | 0.62 | 1631.368 | 14.972 | 0.041 | 2.78 | |
| OH23 | 07/06/89 | 11:30 | 0.37 | 1647.479 | 16.111 | 0.023 | 3.15 | Collecting device retained vacuum. Sample saved for chemistry. |
| OH23 | 08/09/89 | 10:15 | 0.76 | 1681.427 | 33.948 | 0.022 | 3.91 | Sample saved for chemistry. Pumped collecting device. |
| OH23 | 08/23/89 | 11:13 | 0.35 | 1695.467 | 14.040 | 0.025 | 4.26 | Sample saved for chemistry. |
| OH23 | 09/14/89 | 11:14 | 0.51 | 1717.468 | 22.001 | 0.023 | 4.77 | Sample saved for chemistry. |
| OH23 | 10/02/89 | 11:30 | 0.36 | 1735.479 | 18.011 | 0.020 | 5.13 | Sample saved for chemistry. |
| OH23 | 10/20/89 | 11:35 | 0.46 | 1753.483 | 18.004 | 0.026 | 5.59 | Sample saved for chemistry, sample #856. |
| OH23 | 11/10/89 | 10:24 | NA | 1774.433 | 0.000 | 0.000 | 5.59 | Collecting device exploded in hole due to overpressuring during sampling. |
| OH23 | 11/15/89 | 09:00 | NA | 1779.375 | 0.000 | 0.000 | 5.59 | Reinstalled collecting device. |
| OH23 | 11/29/89 | 12:51 | 0.26 | 1793.535 | 40.052 | 0.006 | 5.85 | Sample saved for chemistry, sample #875. |
| OH23 | 12/12/89 | 09:52 | 0.13 | 1806.411 | 12.876 | 0.010 | 5.98 | Sample saved for chemistry, sample #887. Reseat collecting device (leaking). |
| OH23 | 01/04/90 | 11:57 | 0.11 | 1829.498 | 23.087 | 0.005 | 6.09 | |
| OH23 | 01/17/90 | 09:20 | 0.23 | 1842.389 | 12.891 | 0.018 | 6.32 | |
| OH23 | 03/26/90 | 09:15 | 0.60 | 1910.385 | 67.996 | 0.000 | 6.92 | Brine probably left in hole. |
| OH23 | 04/04/90 | 11:53 | 0.58 | 1919.495 | 9.110 | 0.000 | 7.50 | Brine probably left in hole. |
| OH23 | 04/10/90 | 09:39 | 0.33 | 1925.402 | 5.907 | 0.018 | 7.83 | Combined with 0.60 liters from 03/26/90 and 0.58 liters from 04/04/90. Used 1.51 liters for calculation. |
| OH23 | 04/24/90 | 08:46 | 0.29 | 1939.365 | 13.963 | 0.021 | 8.12 | |
| OH23 | 05/02/90 | 09:52 | 0.17 | 1947.411 | 8.046 | 0.021 | 8.29 | |
| OH23 | 05/09/90 | 09:32 | 0.15 | 1954.397 | 6.986 | 0.021 | 8.44 | |
| OH23 | 05/16/90 | 11:45 | 0.17 | 1961.490 | 7.093 | 0.024 | 8.61 | |
| OH23 | 05/23/90 | 13:07 | 0.13 | 1968.547 | 7.057 | 0.018 | 8.74 | |
| OH23 | 05/31/90 | 09:35 | 0.16 | 1976.399 | 7.852 | 0.020 | 8.90 | |
| OH23 | 06/06/90 | 11:40 | 0.12 | 1982.486 | 6.087 | 0.020 | 9.02 | |
| OH23 | 06/14/90 | 10:35 | 0.17 | 1990.441 | 7.955 | 0.021 | 9.19 | |
| OH23 | 06/28/90 | 10:36 | 0.38 | 2004.442 | 14.001 | 0.027 | 9.57 | |
| OH23 | 07/17/90 | 09:04 | 0.33 | 2023.378 | 18.936 | 0.000 | 9.90 | |
| OH23 | 07/18/90 | 11:05 | 0.10 | 2024.462 | 1.084 | 0.021 | 10.00 | Combined with 0.33 liters from 07/17/90. Used 0.43 liters for calculation. |
| OH23 | 07/25/90 | 10:15 | 0.10 | 2031.427 | 6.965 | 0.014 | 10.10 | |
| OH23 | 08/01/90 | 11:15 | 0.14 | 2038.469 | 7.042 | 0.020 | 10.24 | |
| OH23 | 08/07/90 | 09:58 | 0.14 | 2044.415 | 5.946 | 0.024 | 10.38 | |
| OH23 | 08/16/90 | 09:42 | 0.15 | 2053.404 | 8.989 | 0.017 | 10.53 | |
| OH23 | 08/22/90 | 10:51 | 0.10 | 2059.452 | 6.048 | 0.017 | 10.63 | |
| OH23 | 08/29/90 | 10:30 | 0.15 | 2066.438 | 6.986 | 0.021 | 10.78 | |
| OH23 | 09/05/90 | 10:40 | 0.17 | 2073.444 | 7.006 | 0.024 | 10.95 | |
| OH23 | 09/12/90 | 09:00 | 0.10 | 2080.375 | 6.931 | 0.014 | 11.05 | |
| OH23 | 09/25/90 | 11:42 | 0.21 | 2093.488 | 13.113 | 0.000 | 11.26 | |
| OH23 | 09/26/90 | 09:53 | 0.06 | 2094.412 | 0.924 | 0.019 | 11.32 | Combined with 0.21 liters from 09/25/90. Used 0.27 liters for calculation. |
| OH23 | 10/03/90 | 09:05 | 0.11 | 2101.378 | 6.966 | 0.016 | 11.43 | |
| OH23 | 10/10/90 | 10:22 | 0.13 | 2108.432 | 7.054 | 0.018 | 11.56 | |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| OH23 | 10/18/90 | 09:30 | 0.15 | 2116.396 | 7.964 | 0.019 | 11.71 | |
| OH23 | 10/24/90 | 11:30 | 0.10 | 2122.479 | 6.083 | 0.016 | 11.81 | |
| OH23 | 10/31/90 | 10:53 | 0.11 | 2129.453 | 6.974 | 0.016 | 11.92 | |
| OH23 | 11/07/90 | 11:40 | 0.10 | 2136.486 | 7.033 | 0.014 | 12.02 | |
| OH23 | 11/14/90 | 10:45 | 0.13 | 2143.448 | 6.962 | 0.019 | 12.15 | |
| OH23 | 11/28/90 | 11:32 | 0.22 | 2157.481 | 14.033 | 0.016 | 12.37 | |
| OH23 | 12/05/90 | 09:35 | 0.10 | 2164.399 | 6.918 | 0.014 | 12.47 | |
| OH23 | 12/13/90 | 10:15 | 0.14 | 2172.427 | 8.028 | 0.017 | 12.61 | |
| OH23 | 12/20/90 | 10:30 | 0.10 | 2179.438 | 7.011 | 0.014 | 12.71 | |
| OH23 | 01/09/91 | 10:48 | 0.24 | 2199.450 | 0.000 | 0.000 | 12.95 | Some brine may have been left in hole. |
| OH23 | 01/16/91 | 13:15 | 0.43 | 2206.552 | 27.114 | 0.025 | 13.38 | Combined with 0.24 liters from 01/09/91. Collection device replaced on 01/10/91. |
| OH23 | 01/23/91 | 10:50 | 0.08 | 2213.451 | 6.899 | 0.012 | 13.46 | |
| OH23 | 01/30/91 | 09:01 | 0.12 | 2220.376 | 6.925 | 0.017 | 13.58 | |
| OH23 | 02/13/91 | 12:15 | 0.20 | 2234.510 | 14.134 | 0.014 | 13.78 | |
| OH23 | 02/20/91 | 11:20 | 0.12 | 2241.472 | 6.962 | 0.017 | 13.90 | |
| OH23 | 02/27/91 | 11:15 | 0.11 | 2248.469 | 6.997 | 0.016 | 14.01 | |
| OH23 | 03/07/91 | 10:50 | 0.11 | 2256.451 | 7.982 | 0.014 | 14.12 | |
| OH23 | 03/20/91 | 12:50 | 0.21 | 2269.535 | 13.084 | 0.016 | 14.33 | |
| OH23 | 03/28/91 | 12:15 | 0.12 | 2277.510 | 7.975 | 0.015 | 14.45 | |
| OH23 | 04/10/91 | 09:55 | 0.20 | 2290.413 | 12.903 | 0.016 | 14.65 | |
| OH23 | 04/17/91 | 10:59 | 0.11 | 2297.458 | 7.045 | 0.016 | 14.76 | |
| OH23 | 04/24/91 | 10:10 | 0.07 | 2304.424 | 6.966 | 0.010 | 14.83 | |
| OH23 | 05/01/91 | 10:05 | 0.12 | 2311.420 | 6.996 | 0.017 | 14.95 | |
| OH23 | 05/08/91 | 09:15 | 0.06 | 2318.385 | 6.965 | 0.009 | 15.01 | |
| OH23 | 05/15/91 | 11:00 | 0.13 | 2325.458 | 7.073 | 0.018 | 15.14 | |
| OH23 | 05/29/91 | 10:28 | 0.04 | 2339.436 | 13.978 | 0.003 | 15.18 | |
| OH23 | 06/05/91 | 13:10 | 0.04 | 2346.549 | 7.113 | 0.006 | 15.22 | |
| OH23 | 06/12/91 | 09:00 | 0.02 | 2353.375 | 6.826 | 0.003 | 15.24 | |
| OH23 | 06/19/91 | 15:35 | 0.43 | 2360.649 | 7.274 | 0.059 | 15.67 | |
| OH23 | 06/26/91 | 08:15 | 0.10 | 2367.344 | 6.695 | 0.015 | 15.77 | |
| OH23 | 07/11/91 | 12:05 | 0.23 | 2382.503 | 15.159 | 0.015 | 16.00 | |
| OH23 | 07/17/91 | 10:40 | 0.09 | 2388.444 | 5.941 | 0.015 | 16.09 | |
| OH23 | 07/30/91 | 10:45 | 0.18 | 2401.448 | 13.004 | 0.014 | 16.27 | |
| OH23 | 08/08/91 | 09:42 | 0.14 | 2410.404 | 8.956 | 0.016 | 16.41 | |
| OH23 | 08/14/91 | 11:30 | 0.13 | 2416.479 | 6.075 | 0.021 | 16.54 | |
| OH23 | 08/21/91 | 11:20 | 0.12 | 2423.472 | 6.993 | 0.017 | 16.66 | |
| OH23 | 08/28/91 | 10:50 | 0.07 | 2430.451 | 6.979 | 0.010 | 16.73 | |
| OH23 | 09/04/91 | 11:35 | 0.14 | 2437.483 | 7.032 | 0.020 | 16.87 | |
| OH23 | 09/11/91 | 12:10 | 0.04 | 2444.507 | 7.024 | 0.006 | 16.91 | |
| OH23 | 09/18/91 | 09:30 | 0.16 | 2451.396 | 6.889 | 0.023 | 17.07 | |
| OH23 | 09/25/91 | 10:30 | 0.09 | 2458.438 | 7.042 | 0.013 | 17.16 | |
| OH23 | 10/02/91 | 11:44 | 0.10 | 2465.489 | 7.051 | 0.014 | 17.26 | |
| OH23 | 10/16/91 | 10:57 | 0.16 | 2479.456 | 13.967 | 0.011 | 17.42 | |
| OH23 | 10/23/91 | 12:35 | 0.11 | 2486.524 | 7.068 | 0.016 | 17.53 | |
| OH23 | 10/31/91 | 11:40 | 0.08 | 2494.486 | 7.962 | 0.010 | 17.61 | |
| OH23 | 11/06/91 | 12:03 | 0.09 | 2500.502 | 6.016 | 0.015 | 17.70 | |
| OH23 | 11/13/91 | 11:00 | 0.05 | 2507.458 | 6.956 | 0.007 | 17.75 | |
| OH23 | 11/20/91 | 11:50 | 0.16 | 2514.493 | 7.035 | 0.023 | 17.91 | |
| OH23 | 11/27/91 | 10:30 | 0.10 | 2521.438 | 6.945 | 0.014 | 18.01 | |
| OH23 | 12/04/91 | 11:50 | 0.10 | 2528.493 | 7.055 | 0.014 | 18.11 | |
| OH23 | 12/11/91 | 11:30 | 0.09 | 2535.479 | 6.986 | 0.013 | 18.20 | |
| OH23 | 12/18/91 | 11:00 | 0.07 | 2542.458 | 6.979 | 0.010 | 18.27 | |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| OH24 | 12/08/85 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Approximate date this part of drift excavated. |
| OH24 | 03/06/89 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Horizontal hole drilled 3/2/89 to 3/6/89. |
| OH24 | 03/08/89 | 09:50 | NA | 1527.410 | 0.000 | 0.000 | 0.00 | New hole. Installed collecting device. Hole dry. |
| OH24 | 03/15/89 | 11:45 | 0 | 1534.490 | 7.080 | 0.000 | 0.00 | Hole dry. |
| OH24 | 03/30/89 | 10:25 | 0 | 1549.434 | 14.944 | 0.000 | 0.00 | Hole dry. |
| OH24 | 04/18/89 | 10:00 | 0 | 1568.417 | 18.983 | 0.000 | 0.00 | Device left with approximately 50 centibars suction. |
| OH24 | 04/26/89 | 09:40 | 0 | 1576.403 | 7.986 | 0.000 | 0.00 | Device left with approximately 50 centibars suction. |
| OH24 | 06/05/89 | 09:40 | 0.05 | 1616.403 | 40.000 | 0.001 | 0.05 | First time sample recovered. No vacuum in collecting device. Collecting device removed and replaced. |
| OH24 | 06/20/89 | 09:00 | 0.03 | 1631.375 | 14.972 | 0.002 | 0.08 | |
| OH24 | 07/06/89 | 11:40 | 0.01 | 1647.486 | 16.111 | 0.001 | 0.09 | Collecting device retained vacuum. Sample saved for chemistry. |
| OH24 | 08/09/89 | 10:20 | 0 | 1681.431 | 33.945 | 0.000 | 0.09 | Hole dry. Pumped collecting device. |
| OH24 | 08/23/89 | 11:18 | 0 | 1695.471 | 14.040 | 0.000 | 0.09 | Hole dry. |
| OH24 | 10/02/89 | 11:35 | 0 | 1735.483 | 40.012 | 0.000 | 0.09 | Hole dry. |
| OH24 | 10/20/89 | 11:35 | 0 | 1753.483 | 18.000 | 0.000 | 0.09 | Hole dry. |
| OH24 | 11/10/89 | 10:26 | 0 | 1774.435 | 20.952 | 0.000 | 0.09 | Hole dry. |
| OH24 | 11/29/89 | 12:58 | 0 | 1793.540 | 19.105 | 0.000 | 0.09 | Hole dry. |
| OH24 | 12/12/89 | 09:54 | 0 | 1806.412 | 12.872 | 0.000 | 0.09 | Hole dry. Reseat collecting device (leaking). |
| OH24 | 04/10/90 | 09:46 | 0.09 | 1925.407 | 118.995 | 0.001 | 0.18 | |
| OH24 | 04/24/90 | 08:46 | 0.03 | 1939.365 | 13.958 | 0.002 | 0.21 | |
| OH24 | 05/02/90 | 09:55 | NA | 1947.413 | 0.000 | 0.000 | 0.21 | Trace. |
| OH24 | 08/10/90 | 09:40 | NA | 2047.403 | 0.000 | 0.000 | 0.21 | Cleaned, checked, and reinstalled vacuum up to 50 centibars. Checked in one hour. Sampler holding vacuum. |
| OH24 | 04/24/91 | 10:12 | 0.00 | 2304.425 | 0.000 | 0.000 | 0.21 | Air blowing through tube. |
| OH24 | 07/17/91 | 10:45 | 0.00 | 2388.448 | 0.000 | 0.000 | 0.21 | Air blowing through tube. |
| OH24 | 09/25/91 | 10:18 | 0.00 | 2458.429 | 0.000 | 0.000 | 0.21 | Air blowing through tube. |
| OH24 | 10/23/91 | 12:30 | 0.53 | 2486.521 | 547.156 | 0.001 | 0.74 | Replaced broken collection device. Used 547.156 days. |
| OH24 | 10/31/91 | 11:42 | Trace | 2494.488 | 7.967 | 0.000 | 0.74 | Hole wet at 25 feet. |
| OH24 | 11/13/91 | 11:05 | 0.02 | 2507.462 | 12.974 | 0.002 | 0.76 | |
| OH24 | 12/04/91 | 11:45 | Trace | 2528.490 | 21.028 | 0.000 | 0.76 | |
| OH25 | 12/08/85 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Approximate date this part of drift excavated. |
| OH25 | 03/27/89 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Horizontal hole drilled on 3/27/89. |
| OH25 | 03/30/89 | 10:27 | 0 | 1549.435 | 1549.430 | 0.000 | 0.00 | Hole dry. |
| OH25 | 04/18/89 | 10:05 | 0 | 1568.420 | 18.985 | 0.000 | 0.00 | Device left with approximately 50 centibars suction. |
| OH25 | 04/26/89 | 09:45 | 0 | 1576.406 | 7.986 | 0.000 | 0.00 | Device left with approximately 50 centibars suction. |
| OH25 | 06/05/89 | 09:50 | 0 | 1616.410 | 40.004 | 0.000 | 0.00 | Hole dry, no vacuum on collecting device. Collecting device removed and replaced. |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| OH25 | 06/20/89 | 09:10 | 0 | 1631.382 | 14.972 | 0.000 | 0.00 | Hole dry. |
| OH25 | 07/06/89 | 11:40 | 0.01 | 1647.486 | 16.104 | 0.001 | 0.01 | Collecting device retained vacuum. Sample saved for chemistry. |
| OH25 | 08/09/89 | 10:25 | 0 | 1681.434 | 33.948 | 0.000 | 0.01 | Hole dry. |
| OH25 | 08/23/89 | 11:18 | 0 | 1695.471 | 14.037 | 0.000 | 0.01 | Hole dry. |
| OH25 | 10/02/89 | 11:35 | 0 | 1735.483 | 40.012 | 0.000 | 0.01 | Hole dry. |
| OH25 | 10/20/89 | 11:35 | 0 | 1753.483 | 18.000 | 0.000 | 0.01 | Hole dry. |
| OH25 | 11/10/89 | 10:30 | 0 | 1774.438 | 20.955 | 0.000 | 0.01 | Hole dry. |
| OH25 | 11/29/89 | 13:02 | 0 | 1793.543 | 19.105 | 0.000 | 0.01 | Hole dry. |
| OH25 | 12/12/89 | 09:58 | 0 | 1806.415 | 12.872 | 0.000 | 0.01 | Hole dry. Reseat collecting device (leaking). |
| OH25 | 08/10/90 | 09:50 | NA | 2047.410 | 0.000 | 0.000 | 0.01 | Dry. Cleaned, checked, and reinstalled vacuum up to 50 centibars. Checked in one hour. Sampler holding vacuum. |
| OH25 | 04/24/91 | 10:14 | 0.00 | 2304.426 | 498.011 | 0.000 | 0.01 | Air blowing through tube. |
| OH25 | 07/17/91 | 10:47 | 0.00 | 2388.449 | 84.023 | 0.000 | 0.01 | Air blowing through tube. |
| OH25 | 09/25/91 | 10:15 | 0.06 | 2458.427 | 69.978 | 0.001 | 0.07 | |
| OH25 | 10/31/91 | 11:42 | 0.00 | 2494.488 | 36.061 | 0.000 | 0.07 | Dry. Hole wet at 30 feet. |
| OH26 | 08/05/86 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Approximate date this part of drift excavated. |
| OH26 | 03/27/89 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Horizontal hole drilled on 3/27/89. Hole drilled with brine. Fluorescien added to drilling fluid. |
| OH26 | 03/30/89 | 10:00 | NA | 1549.417 | 0.000 | 0.000 | 0.00 | New hole, Installed collecting device. Hole dry. |
| OH26 | 04/18/89 | 10:10 | 0 | 1568.424 | 19.007 | 0.000 | 0.00 | Device left with approximately 50 centibars suction. |
| OH26 | 04/26/89 | 09:15 | 0 | 1576.385 | 7.961 | 0.000 | 0.00 | Device left with approximately 50 centibars suction. |
| OH26 | 06/05/89 | 10:00 | 0.20 | 1616.417 | 40.032 | 0.005 | 0.20 | First time sample recovered. Collecting device removed and replaced. Sample saved for chemistry. |
| OH26 | 06/20/89 | 09:15 | 0.05 | 1631.385 | 14.968 | 0.003 | 0.25 | |
| OH26 | 07/06/89 | 11:50 | 0.49 | 1647.493 | 16.108 | 0.030 | 0.74 | Collecting device retained vacuum. Sample saved for chemistry. |
| OH26 | 08/09/89 | 10:30 | 0.67 | 1681.438 | 33.945 | 0.020 | 1.41 | Sample saved for chemistry. |
| OH26 | 08/23/89 | 10:30 | 0.55 | 1695.438 | 14.000 | 0.039 | 1.96 | Sample saved for chemistry. |
| OH26 | 09/14/89 | 11:21 | 0.51 | 1717.473 | 22.035 | 0.023 | 2.47 | Sample saved for chemistry. |
| OH26 | 10/02/89 | 11:40 | 0.56 | 1735.486 | 18.013 | 0.031 | 3.03 | Sample saved for chemistry. |
| OH26 | 10/20/89 | 11:45 | 0.45 | 1753.490 | 18.004 | 0.025 | 3.48 | Sample saved for chemistry, sample #857. |
| OH26 | 11/10/89 | 11:04 | 0.48 | 1774.461 | 20.971 | 0.023 | 3.96 | Sample saved for chemistry, sample #866. |
| OH26 | 11/29/89 | 12:40 | 0.32 | 1793.528 | 19.067 | 0.017 | 4.28 | Sample saved for chemistry, sample #874. |
| OH26 | 12/12/89 | 09:38 | 0.32 | 1806.401 | 12.873 | 0.025 | 4.60 | Sample saved for chemistry, sample #885. |
| OH26 | 01/04/90 | 12:05 | 0.23 | 1829.503 | 23.102 | 0.010 | 4.83 | |
| OH26 | 01/17/90 | 08:58 | 0.36 | 1842.374 | 12.871 | 0.028 | 5.19 | |
| OH26 | 01/31/90 | 10:54 | 0.26 | 1856.454 | 14.080 | 0.018 | 5.45 | |
| OH26 | 02/13/90 | 11:30 | 0.26 | 1869.479 | 13.025 | 0.020 | 5.71 | |
| OH26 | 02/27/90 | 12:46 | 0.21 | 1883.532 | 14.053 | 0.015 | 5.92 | Brine probably left in hole. |
| OH26 | 03/05/90 | 11:27 | 0.26 | 1889.477 | 5.945 | 0.044 | 6.18 | |
| OH26 | 03/21/90 | 09:26 | 0.18 | 1905.393 | 15.916 | 0.011 | 6.36 | |
| OH26 | 04/04/90 | 11:49 | 0.28 | 1919.492 | 14.099 | 0.020 | 6.64 | Brine probably left in hole. |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| OH26 | 04/10/90 | 09:17 | 0.22 | 1925.387 | 5.895 | 0.037 | 6.86 | |
| OH26 | 04/24/90 | 08:33 | 0.19 | 1939.356 | 13.969 | 0.014 | 7.05 | |
| OH26 | 05/02/90 | 09:45 | 0.24 | 1947.406 | 8.050 | 0.030 | 7.29 | |
| OH26 | 05/09/90 | 09:46 | 0.21 | 1954.407 | 7.001 | 0.030 | 7.50 | |
| OH26 | 05/16/90 | 11:30 | 0.15 | 1961.479 | 7.072 | 0.021 | 7.65 | |
| OH26 | 05/23/90 | 13:03 | 0.12 | 1968.544 | 7.065 | 0.017 | 7.77 | |
| OH26 | 05/31/90 | 09:29 | 0.14 | 1976.395 | 7.851 | 0.018 | 7.91 | |
| OH26 | 06/06/90 | 11:35 | 0.14 | 1982.483 | 6.088 | 0.023 | 8.05 | |
| OH26 | 06/14/90 | 10:42 | 0.14 | 1990.446 | 7.963 | 0.018 | 8.19 | |
| OH26 | 06/28/90 | 10:27 | 0.16 | 2004.435 | 13.989 | 0.011 | 8.35 | |
| OH26 | 07/17/90 | 08:56 | 0.18 | 2023.372 | 18.937 | 0.000 | 8.53 | |
| OH26 | 07/18/90 | 11:00 | 0.28 | 2024.458 | 1.086 | 0.023 | 8.81 | Combined with 0.18 liters 07/17/90. Used 0.46 liters for calculation. |
| OH26 | 07/25/90 | 10:07 | 0.05 | 2031.422 | 6.964 | 0.007 | 8.86 | Brine probably left in hole. |
| OH26 | 08/01/90 | 11:05 | 0.25 | 2038.462 | 7.040 | 0.036 | 9.11 | |
| OH26 | 08/07/90 | 09:40 | 0.11 | 2044.403 | 5.941 | 0.019 | 9.22 | |
| OH26 | 08/16/90 | 09:18 | 0.12 | 2053.387 | 8.984 | 0.013 | 9.34 | |
| OH26 | 08/22/90 | 10:44 | 0.10 | 2059.447 | 6.060 | 0.017 | 9.44 | |
| OH26 | 08/29/90 | 10:23 | 0.11 | 2066.433 | 6.986 | 0.016 | 9.55 | |
| OH26 | 09/05/90 | 10:34 | 0.11 | 2073.440 | 7.007 | 0.016 | 9.66 | |
| OH26 | 09/12/90 | 08:45 | 0.10 | 2080.365 | 6.925 | 0.014 | 9.76 | |
| OH26 | 09/25/90 | 11:26 | 0.19 | 2093.476 | 13.111 | 0.000 | 9.95 | |
| OH26 | 09/26/90 | 09:48 | 0.10 | 2094.408 | 0.932 | 0.020 | 10.05 | Combined with 0.19 liters from 09/25/90. Used 0.29 liters for calculation. |
| OH26 | 10/03/90 | 08:55 | 0.10 | 2101.372 | 6.964 | 0.014 | 10.15 | |
| OH26 | 10/10/90 | 10:14 | 0.11 | 2108.426 | 7.054 | 0.016 | 10.26 | |
| OH26 | 10/18/90 | 09:25 | 0.13 | 2116.392 | 7.966 | 0.016 | 10.39 | |
| OH26 | 10/24/90 | 11:16 | 0.11 | 2122.469 | 6.077 | 0.018 | 10.50 | |
| OH26 | 10/31/90 | 10:43 | 0.12 | 2129.447 | 6.978 | 0.017 | 10.62 | |
| OH26 | 11/07/90 | 11:43 | 0.13 | 2136.488 | 7.041 | 0.018 | 10.75 | |
| OH26 | 11/14/90 | 10:40 | 0.10 | 2143.444 | 6.956 | 0.014 | 10.85 | |
| OH26 | 11/28/90 | 11:20 | 0.21 | 2157.472 | 14.028 | 0.015 | 11.06 | |
| OH26 | 12/05/90 | 09:30 | 0.14 | 2164.396 | 6.924 | 0.020 | 11.20 | |
| OH26 | 12/13/90 | 10:20 | 0.13 | 2172.431 | 8.035 | 0.016 | 11.33 | |
| OH26 | 12/20/90 | 10:20 | 0.11 | 2179.431 | 7.000 | 0.016 | 11.44 | |
| OH26 | 01/09/91 | 10:50 | 0.29 | 2199.451 | 20.020 | 0.014 | 11.73 | |
| OH26 | 01/16/91 | 13:25 | 0.13 | 2206.559 | 7.108 | 0.018 | 11.86 | |
| OH26 | 01/23/91 | 10:55 | 0.17 | 2213.455 | 6.896 | 0.025 | 12.03 | |
| OH26 | 01/30/91 | 08:36 | 0.11 | 2220.358 | 6.903 | 0.016 | 12.14 | |
| OH26 | 02/13/91 | 12:20 | 0.18 | 2234.514 | 14.156 | 0.013 | 12.32 | |
| OH26 | 02/20/91 | 11:25 | 0.12 | 2241.476 | 6.962 | 0.017 | 12.44 | |
| OH26 | 02/27/91 | 11:20 | 0.11 | 2248.472 | 6.996 | 0.016 | 12.55 | |
| OH26 | 03/07/91 | 10:55 | 0.11 | 2256.455 | 7.983 | 0.014 | 12.66 | |
| OH26 | 03/20/91 | 12:43 | 0.19 | 2269.530 | 13.075 | 0.015 | 12.85 | |
| OH26 | 03/28/91 | 11:53 | 0.11 | 2277.495 | 7.965 | 0.014 | 12.96 | |
| OH26 | 04/10/91 | 10:02 | 0.20 | 2290.418 | 12.923 | 0.015 | 13.16 | |
| OH26 | 04/17/91 | 10:54 | 0.12 | 2297.454 | 7.036 | 0.017 | 13.28 | |
| OH26 | 04/24/91 | 10:25 | 0.12 | 2304.434 | 6.980 | 0.017 | 13.40 | |
| OH26 | 05/01/91 | 10:00 | 0.10 | 2311.417 | 6.983 | 0.014 | 13.50 | |
| OH26 | 05/08/91 | 09:20 | 0.10 | 2318.389 | 6.972 | 0.014 | 13.60 | |
| OH26 | 05/15/91 | 11:10 | 0.08 | 2325.465 | 7.076 | 0.011 | 13.68 | |
| OH26 | 05/29/91 | 10:18 | 0.19 | 2339.429 | 13.964 | 0.014 | 13.87 | |
| OH26 | 06/05/91 | 13:07 | 0.14 | 2346.547 | 7.118 | 0.020 | 14.01 | |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| OH26 | 06/12/91 | 08:57 | 0.17 | 2353.373 | 6.826 | 0.025 | 14.18 | |
| OH26 | 06/19/91 | 15:22 | 0.16 | 2360.640 | 7.267 | 0.022 | 14.34 | |
| OH26 | 06/26/91 | 08:12 | 0.10 | 2367.342 | 6.702 | 0.015 | 14.44 | |
| OH26 | 07/11/91 | 12:08 | 0.19 | 2382.506 | 15.164 | 0.013 | 14.63 | |
| OH26 | 07/17/91 | 11:00 | 0.10 | 2388.458 | 5.952 | 0.017 | 14.73 | |
| OH26 | 07/30/91 | 10:40 | 0.06 | 2401.444 | 0.000 | 0.000 | 14.79 | Partial evacuation. |
| OH26 | 07/31/91 | 09:45 | 0.14 | 2402.406 | 13.948 | 0.014 | 14.93 | Combined with 0.06 liters from 07/30/91. |
| OH26 | 08/08/91 | 09:39 | 0.15 | 2410.402 | 7.996 | 0.019 | 15.08 | |
| OH26 | 08/14/91 | 11:35 | 0.11 | 2416.483 | 6.081 | 0.018 | 15.19 | |
| OH26 | 08/21/91 | 11:17 | 0.13 | 2423.470 | 6.987 | 0.019 | 15.32 | |
| OH26 | 08/28/91 | 10:46 | 0.09 | 2430.449 | 6.979 | 0.013 | 15.41 | |
| OH26 | 09/04/91 | 11:40 | 0.09 | 2437.486 | 7.037 | 0.013 | 15.50 | |
| OH26 | 09/11/91 | 12:05 | 0.05 | 2444.503 | 7.017 | 0.007 | 15.55 | |
| OH26 | 09/18/91 | 09:25 | 0.13 | 2451.392 | 6.889 | 0.019 | 15.68 | |
| OH26 | 09/25/91 | 09:56 | 0.11 | 2458.414 | 7.022 | 0.016 | 15.79 | |
| OH26 | 10/02/91 | 11:40 | 0.10 | 2465.486 | 7.072 | 0.014 | 15.89 | |
| OH26 | 10/16/91 | 11:00 | 0.10 | 2479.458 | 13.972 | 0.007 | 15.99 | |
| OH26 | 10/23/91 | 10:25 | 0.15 | 2486.434 | 6.976 | 0.022 | 16.14 | |
| OH26 | 10/31/91 | 11:39 | 0.13 | 2494.485 | 8.051 | 0.016 | 16.27 | |
| OH26 | 11/06/91 | 12:08 | 0.06 | 2500.506 | 6.021 | 0.010 | 16.33 | |
| OH26 | 11/13/91 | 10:50 | 0.07 | 2507.451 | 6.945 | 0.010 | 16.40 | |
| OH26 | 11/20/91 | 11:43 | 0.13 | 2514.488 | 7.037 | 0.018 | 16.53 | |
| OH26 | 11/27/91 | 10:36 | 0.09 | 2521.442 | 6.954 | 0.013 | 16.62 | |
| OH26 | 12/04/91 | 11:30 | 0.08 | 2528.479 | 7.037 | 0.011 | 16.70 | |
| OH26 | 12/11/91 | 11:45 | 0.09 | 2535.490 | 7.011 | 0.013 | 16.79 | |
| OH26 | 12/18/91 | 11:05 | 0.12 | 2542.462 | 6.972 | 0.017 | 16.91 | |
| OH27 | 08/05/86 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Approximate date this part of drift excavated. |
| OH27 | 04/17/89 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Horizontal hole drilled 4/13/89 to 4/17/89. |
| OH27 | 04/18/89 | 10:15 | 0 | 1568.427 | 1568.430 | 0.000 | 0.00 | Device left with approximately 50 centibars suction. |
| OH27 | 04/26/89 | 09:25 | 0 | 1576.392 | 7.965 | 0.000 | 0.00 | Device left with approximately 50 centibars suction. |
| OH27 | 06/05/89 | 10:10 | 0 | 1616.424 | 40.032 | 0.000 | 0.00 | Hole dry. Collecting device removed and replaced. |
| OH27 | 06/20/89 | 09:20 | 0 | 1631.389 | 14.965 | 0.000 | 0.00 | Hole dry. |
| OH27 | 07/06/89 | 11:55 | 0.02 | 1647.497 | 16.108 | 0.001 | 0.02 | Collecting device retained vacuum. Sample saved for chemistry. |
| OH27 | 08/09/89 | 10:35 | Trace | 1681.441 | 0.000 | 0.000 | 0.02 | Trace of brine found. |
| OH27 | 08/23/89 | 10:57 | Trace | 1695.456 | 0.000 | 0.000 | 0.02 | Trace of fluid in hole. No sample. |
| OH27 | 10/02/89 | 11:45 | 0 | 1735.490 | 87.993 | 0.000 | 0.02 | Hole dry. |
| OH27 | 10/20/89 | 11:45 | 0 | 1753.490 | 18.000 | 0.000 | 0.02 | Hole dry. |
| OH27 | 11/10/89 | 11:14 | 0 | 1774.468 | 20.978 | 0.000 | 0.02 | Hole dry. |
| OH27 | 11/29/89 | 12:45 | 0 | 1793.531 | 19.063 | 0.000 | 0.02 | Hole dry. |
| OH27 | 12/12/89 | 09:40 | 0 | 1806.403 | 12.872 | 0.000 | 0.02 | Hole dry. |
| OH27 | 04/24/90 | 08:52 | 0.17 | 1939.369 | 132.966 | 0.001 | 0.19 | |
| OH27 | 08/10/90 | 09:30 | NA | 2047.396 | 0.000 | 0.000 | 0.19 | Cleaned, checked, and reinstalled vacuum up to 50 centibars. Checked in one hour. Sampler holding vacuum. |
| OH27 | 04/24/91 | 10:27 | 0.00 | 2304.435 | 365.066 | 0.000 | 0.19 | Air blowing through tube. |
| OH27 | 07/17/91 | 11:03 | 0.00 | 2388.460 | 84.025 | 0.000 | 0.19 | Air blowing through tube. |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| OH27 | 09/25/91 | 09:56 | 0.00 | 2458.414 | 69.954 | 0.000 | 0.19 | Air blowing through tube. |
| OH27 | 10/31/91 | 11:40 | 0.00 | 2494.486 | 36.072 | 0.000 | 0.19 | Dry. No vacuum. Hole wet at 15 feet. |
| OH27A | 08/05/86 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Approximate date this part of drift excavated. |
| OH27A | 04/04/89 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Horizontal hole drilled on 4/4/89. |
| OH27A | 04/18/89 | 10:20 | 0 | 1568.431 | 1568.430 | 0.000 | 0.00 | Device left with approximately 50 centibars suction. |
| OH27A | 04/26/89 | 09:20 | 0.21 | 1576.389 | 7.958 | 0.026 | 0.21 | Device left with approximately 50 centibars suction. Sample not saved. |
| OH27A | 05/17/89 | 09:10 | 0.08 | 1597.382 | 20.993 | 0.004 | 0.29 | Sample not saved. |
| OH27A | 06/05/89 | 10:20 | 0 | 1616.431 | 19.049 | 0.000 | 0.29 | Hole dry. Collecting device removed and replaced. |
| OH27A | 06/20/89 | 09:25 | 0 | 1631.392 | 14.961 | 0.000 | 0.29 | Hole dry. |
| OH27A | 07/06/89 | 11:55 | 0 | 1647.497 | 16.105 | 0.000 | 0.29 | Hole dry. Collecting device retained vacuum. |
| OH27A | 08/09/89 | 10:40 | 0 | 1681.444 | 33.947 | 0.000 | 0.29 | Hole dry. |
| OH27A | 08/23/89 | 10:50 | 0 | 1695.451 | 14.007 | 0.000 | 0.29 | Hole dry. |
| OH27A | 10/02/89 | 11:45 | 0 | 1735.490 | 40.039 | 0.000 | 0.29 | Hole dry. |
| OH27A | 10/20/89 | 11:45 | 0 | 1753.490 | 18.000 | 0.000 | 0.29 | Hole dry. |
| OH27A | 11/10/89 | 11:14 | 0 | 1774.468 | 20.978 | 0.000 | 0.29 | Hole dry. |
| OH27A | 11/29/89 | 12:48 | 0 | 1793.533 | 19.065 | 0.000 | 0.29 | Hole dry. |
| OH27A | 12/12/89 | 09:40 | 0 | 1806.403 | 12.870 | 0.000 | 0.29 | Hole dry. |
| OH28 | 08/05/86 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Approximate date this part of drift excavated. |
| OH28 | 04/12/89 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Horizontal hole drilled 4/11/89 to 4/12/89. |
| OH28 | 04/18/89 | 10:25 | 0 | 1568.434 | 1568.430 | 0.000 | 0.00 | Device left with approximately 50 centibars suction. |
| OH28 | 04/26/89 | 09:30 | 0 | 1576.396 | 7.962 | 0.000 | 0.00 | Device left with approximately 50 centibars suction. |
| OH28 | 06/05/89 | 10:30 | 0.08 | 1616.438 | 40.042 | 0.002 | 0.08 | First time sample recovered. Collecting device removed and replaced. Sample saved for chemistry. |
| OH28 | 06/20/89 | 09:30 | 0.03 | 1631.396 | 14.958 | 0.002 | 0.11 | |
| OH28 | 07/06/89 | 12:00 | 0 | 1647.500 | 16.104 | 0.000 | 0.11 | Hole dry. Collecting device retained vacuum. |
| OH28 | 08/09/89 | 10:45 | 0 | 1681.448 | 33.948 | 0.000 | 0.11 | Hole dry. |
| OH28 | 08/23/89 | 10:46 | 0 | 1695.449 | 14.001 | 0.000 | 0.11 | Hole dry. |
| OH28 | 10/02/89 | 11:50 | 0.05 | 1735.493 | 40.044 | 0.001 | 0.16 | Sample saved for chemistry. |
| OH28 | 10/20/89 | 11:45 | 0 | 1753.490 | 17.997 | 0.000 | 0.16 | Hole dry. |
| OH28 | 11/10/89 | 11:10 | 0.07 | 1774.465 | 20.975 | 0.003 | 0.23 | Sample saved for chemistry, sample #867. |
| OH28 | 11/29/89 | 12:48 | 0 | 1793.533 | 19.068 | 0.000 | 0.23 | Hole dry. |
| OH28 | 12/12/89 | 09:48 | 0.10 | 1806.408 | 12.875 | 0.008 | 0.33 | Sample saved for chemistry, sample #886. |
| OH28 | 04/10/90 | 09:36 | 0.14 | 1925.400 | 118.992 | 0.001 | 0.47 | |
| OH28 | 04/24/90 | 08:36 | 0.18 | 1939.358 | 13.958 | 0.013 | 0.65 | |
| OH28 | 05/02/90 | 09:35 | 0.01 | 1947.399 | 8.041 | 0.001 | 0.66 | |
| OH28 | 05/09/90 | 09:40 | NA | 1954.403 | 0.000 | 0.000 | 0.66 | Trace. |
| OH28 | 05/16/90 | 11:38 | 0.02 | 1961.485 | 14.086 | 0.001 | 0.68 | |
| OH28 | 05/31/90 | 09:33 | 0.01 | 1976.398 | 14.913 | 0.001 | 0.69 | |
| OH28 | 08/07/90 | 09:42 | 0.10 | 2044.404 | 68.006 | 0.001 | 0.79 | |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| OH28 | 08/10/90 | 09:10 | NA | 2047.382 | 0.000 | 0.000 | 0.79 | Cleaned, checked, and reinstalled vacuum up to 50 centibars. Checked in one hour. Sampler holding vacuum. |
| OH28 | 09/12/90 | 08:40 | 0.04 | 2080.361 | 35.957 | 0.001 | 0.83 | |
| OH28 | 09/26/90 | 09:50 | 0.05 | 2094.410 | 14.049 | 0.004 | 0.88 | |
| OH28 | 11/28/90 | 11:28 | 0.08 | 2157.478 | 63.068 | 0.001 | 0.96 | |
| OH28 | 12/20/90 | 10:27 | 0.07 | 2179.435 | 21.957 | 0.003 | 1.03 | |
| OH28 | 01/30/91 | 08:51 | 0.07 | 2220.369 | 40.934 | 0.002 | 1.10 | |
| OH28 | 03/20/91 | 11:55 | 0.18 | 2269.497 | 49.128 | 0.004 | 1.28 | |
| OH28 | 03/28/91 | 11:45 | 0.01 | 2277.490 | 7.993 | 0.001 | 1.29 | |
| OH28 | 04/24/91 | 10:29 | 0.00 | 2304.437 | 26.947 | 0.000 | 1.29 | Air blowing through tube. |
| OH28 | 07/11/91 | 12:08 | 0.00 | 2382.506 | 78.069 | 0.000 | 1.29 | Dry. |
| OH28 | 07/17/91 | 11:07 | 0.00 | 2388.463 | 5.957 | 0.000 | 1.29 | Air blowing through tube. |
| OH28 | 09/25/91 | 09:56 | 0.00 | 2458.414 | 69.951 | 0.000 | 1.29 | Air blowing through tube. |
| OH28 | 10/23/91 | 10:27 | 0.27 | 2486.435 | 28.021 | 0.010 | 1.56 | First time successfull collection since 03/20/91. Used 216.94 days and .28 liters to calculate flow rate. |
| OH28 | 10/31/91 | 11:36 | 0.00 | 2494.483 | 8.048 | 0.000 | 1.56 | Dry. No Vacuum. Hole wet at 25 feet. |
| OH28 | 11/13/91 | 10:55 | 0.02 | 2507.455 | 12.972 | 0.002 | 1.58 | |
| OH28 | 12/04/91 | 11:35 | Trace | 2528.483 | 21.028 | 0.000 | 1.58 | |
| OH45 | 05/08/89 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Approximate date this part of underground core storage room excavated. |
| OH45 | 06/15/89 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Horizontal hole drilled 6/9/89 to 6/15/89. |
| OH45 | 06/23/89 | 11:00 | NA | 1634.458 | 0.000 | 0.000 | 0.00 | New hole. Installed collecting device. |
| OH45 | 08/09/89 | 14:00 | 0 | 1681.583 | 47.125 | 0.000 | 0.00 | No vacuum, reinstalled collecting device. Hole dry. |
| OH45 | 08/23/89 | 11:30 | 0.45 | 1695.479 | 13.896 | 0.032 | 0.45 | First time hole sampled. Sample saved for chemistry. |
| OH45 | 09/12/89 | 12:35 | 0.15 | 1715.524 | 20.045 | 0.007 | 0.60 | Sample saved for chemistry. |
| OH45 | 10/02/89 | 12:15 | 0.13 | 1735.510 | 19.986 | 0.007 | 0.73 | Sample saved for chemistry. |
| OH45 | 10/20/89 | 11:10 | 0.11 | 1753.465 | 17.955 | 0.006 | 0.84 | Sample saved for chemistry, sample #852. |
| OH45 | 11/10/89 | 10:20 | 0.13 | 1774.431 | 20.966 | 0.006 | 0.97 | Sample saved for chemistry, sample #863. |
| OH45 | 11/29/89 | 13:11 | 0.11 | 1793.549 | 19.118 | 0.006 | 1.08 | Sample saved for chemistry, sample #878. |
| OH45 | 12/12/89 | 10:19 | 0.08 | 1806.430 | 12.881 | 0.006 | 1.16 | Sample saved for chemistry, sample #889. Sample bubbling. |
| OH45 | 01/04/90 | 11:41 | 0.14 | 1829.487 | 23.057 | 0.006 | 1.30 | |
| OH45 | 01/17/90 | 11:54 | 0.08 | 1842.496 | 13.009 | 0.006 | 1.38 | |
| OH45 | 01/31/90 | 11:08 | 0.01 | 1856.464 | 13.968 | 0.001 | 1.39 | |
| OH45 | 02/13/90 | 10:54 | 0.01 | 1869.454 | 12.990 | 0.001 | 1.40 | |
| OH45 | 02/27/90 | 12:56 | 0.11 | 1883.539 | 14.085 | 0.008 | 1.51 | Removed and replaced sampler. |
| OH45 | 03/05/90 | 11:45 | 0.08 | 1889.490 | 5.951 | 0.013 | 1.59 | |
| OH45 | 03/21/90 | 11:34 | NA | 1905.482 | 0.000 | 0.000 | 0.43 | Trace. |
| OH45 | 04/10/90 | 10:28 | NA | 1925.436 | 0.000 | 0.000 | 0.43 | Trace. |
| OH45 | 05/02/90 | 09:12 | 0.06 | 1947.383 | 57.893 | 0.001 | 1.65 | |
| OH45 | 05/09/90 | 10:03 | NA | 1954.419 | 0.000 | 0.000 | 0.49 | Trace. |
| OH45 | 05/17/90 | 09:20 | 0.05 | 1962.389 | 15.006 | 0.003 | 1.70 | |
| OH45 | 05/23/90 | 13:10 | 0.01 | 1968.549 | 6.160 | 0.002 | 1.71 | |
| OH45 | 06/14/90 | 10:15 | 0.01 | 1990.427 | 21.878 | 0.000 | 1.72 | Brine probably left in hole. |
| OH45 | 07/17/90 | 11:58 | 0.46 | 2023.499 | 33.072 | 0.014 | 2.18 | |
| OH45 | 08/07/90 | 08:50 | NA | 2044.368 | 0.000 | 0.000 | 1.02 | Trace. Could not sample. Brine probably left in hole. |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| OH45 | 08/29/90 | 12:01 | 0.27 | 2066.501 | 43.002 | 0.006 | 2.45 | |
| OH45 | 09/13/90 | 10:40 | 0.02 | 2081.444 | 14.943 | 0.001 | 2.47 | |
| OH45 | 10/18/90 | 10:14 | 0.05 | 2116.426 | 34.982 | 0.001 | 2.52 | |
| OH45 | 02/13/91 | 12:40 | Trace | 2234.528 | 118.102 | 0.000 | 2.52 | Did not save. |
| OH45 | 03/21/91 | 10:30 | 0.80 | 2270.438 | 35.910 | 0.004 | 3.32 | Repaired and reinstalled sampler. Used 189 days and .85 liters. |
| OH45 | 03/28/91 | 11:21 | 0.00 | 2277.473 | 7.035 | 0.000 | 3.32 | Air blowing through tube. |
| OH45 | 04/10/91 | 12:15 | 0.00 | 2290.510 | 13.037 | 0.000 | 3.32 | Dry. |
| OH45 | 05/01/91 | 10:30 | 0.11 | 2311.438 | 20.928 | 0.005 | 3.43 | |
| OH45 | 05/08/91 | 09:35 | 0.00 | 2318.399 | 6.961 | 0.000 | 3.43 | Air blowing through tube. |
| OH45 | 07/18/91 | 10:20 | 0.14 | 2389.431 | 71.032 | 0.002 | 3.57 | |
| OH45 | 08/14/91 | 11:15 | 0.05 | 2416.469 | 27.038 | 0.002 | 3.62 | |
| OH45 | 09/25/91 | 12:10 | 0.19 | 2458.507 | 42.038 | 0.005 | 3.81 | |
| OH45 | 10/23/91 | 10:09 | 0.11 | 2486.423 | 27.916 | 0.004 | 3.92 | |
| OH45 | 10/31/91 | 11:36 | 0.06 | 2494.483 | 8.060 | 0.007 | 3.98 | |
| OH45 | 11/13/91 | 10:36 | 0.05 | 2507.442 | 12.959 | 0.004 | 4.03 | |
| OH45 | 12/04/91 | 11:40 | 0.08 | 2528.486 | 21.044 | 0.004 | 4.11 | |
| OH45 | 12/18/91 | 11:07 | 0.02 | 2542.463 | 13.977 | 0.001 | 4.13 | |
| OH46 | 05/08/89 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Approximate date this part of underground core storage room excavated. |
| OH46 | 06/20/89 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Downhole drilled 6/16/89 to 6/20/89. |
| OH46 | 07/06/89 | 11:30 | NA | 1647.479 | 0.000 | 0.000 | 0.00 | First day of observation for hole, blown dry. |
| OH46 | 07/25/89 | 10:48 | 0.28 | 1666.450 | 18.971 | 0.015 | 0.28 | First time hole sampled. Sample yellow-with wood chips and other debris. Hydrocarbon odor (diesel lubricant?). |
| OH46 | 08/16/89 | 10:05 | 0.68 | 1688.420 | 21.970 | 0.031 | 0.96 | Sample saved for chemistry. |
| OH46 | 09/12/89 | 12:35 | 0.47 | 1715.524 | 27.104 | 0.017 | 1.43 | Sample saved for chemistry. |
| OH46 | 10/02/89 | 12:30 | 0.05 | 1735.521 | 19.997 | 0.003 | 1.48 | Sample saved for chemistry. |
| OH46 | 10/20/89 | 11:10 | 0.57 | 1753.465 | 17.944 | 0.032 | 2.05 | Sample saved for chemistry, sample #853. |
| OH46 | 11/10/89 | 10:30 | 0.68 | 1774.438 | 20.973 | 0.032 | 2.73 | Sample saved for chemistry, sample #865. |
| OH46 | 11/29/89 | 13:15 | 0.53 | 1793.552 | 19.114 | 0.028 | 3.26 | Sample saved for chemistry, sample #879. |
| OH46 | 12/12/89 | 10:20 | 0.46 | 1806.431 | 12.879 | 0.036 | 3.72 | Sample saved for chemistry, sample #890. |
| OH46 | 01/04/90 | 11:44 | 0.45 | 1829.489 | 23.058 | 0.020 | 4.17 | |
| OH46 | 01/17/90 | 11:58 | 0.25 | 1842.499 | 13.010 | 0.019 | 4.42 | |
| OH46 | 01/31/90 | 11:12 | 0.25 | 1856.467 | 13.968 | 0.018 | 4.67 | |
| OH46 | 02/13/90 | 11:16 | 0.22 | 1869.469 | 13.002 | 0.017 | 4.89 | |
| OH46 | 02/27/90 | 13:10 | 0.27 | 1883.549 | 14.080 | 0.019 | 5.16 | Brine probably left in hole. |
| OH46 | 03/05/90 | 11:54 | 0.27 | 1889.496 | 5.947 | 0.045 | 5.43 | |
| OH46 | 03/21/90 | 11:34 | 0.13 | 1905.482 | 15.986 | 0.008 | 5.56 | Brine probably left in hole. |
| OH46 | 04/11/90 | 10:33 | 0.32 | 1926.440 | 20.958 | 0.015 | 5.88 | |
| OH46 | 05/02/90 | 09:10 | 0.25 | 1947.382 | 20.942 | 0.012 | 6.13 | Brine probably left in hole. |
| OH46 | 05/08/90 | 10:05 | 0.15 | 1953.420 | 6.038 | 0.025 | 6.28 | |
| OH46 | 05/17/90 | 09:30 | 0.14 | 1962.396 | 8.976 | 0.016 | 6.42 | |
| OH46 | 05/23/90 | 13:30 | 0.10 | 1968.562 | 6.166 | 0.016 | 6.52 | |
| OH46 | 06/14/90 | 10:01 | 0.32 | 1990.417 | 21.855 | 0.015 | 6.84 | |
| OH46 | 06/28/90 | 11:06 | 0.20 | 2004.462 | 14.045 | 0.014 | 7.04 | |
| OH46 | 07/17/90 | 11:50 | 0.30 | 2023.493 | 19.031 | 0.016 | 7.34 | |
| OH46 | 07/25/90 | 10:50 | 0.15 | 2031.451 | 7.958 | 0.019 | 7.49 | |
| OH46 | 08/07/90 | 08:50 | 0.19 | 2044.368 | 12.917 | 0.015 | 7.68 | |
| OH46 | 08/16/90 | 10:30 | 0.17 | 2053.438 | 9.070 | 0.019 | 7.85 | |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| OH46 | 08/22/90 | 11:05 | 0.11 | 2059.462 | 6.024 | 0.018 | 7.96 | |
| OH46 | 08/29/90 | 11:45 | 0.11 | 2066.490 | 7.028 | 0.016 | 8.07 | |
| OH46 | 09/05/90 | 11:04 | 0.12 | 2073.461 | 6.971 | 0.017 | 8.19 | |
| OH46 | 09/13/90 | 10:42 | 0.12 | 2081.446 | 7.985 | 0.015 | 8.31 | |
| OH46 | 09/28/90 | 10:10 | 0.22 | 2096.424 | 14.978 | 0.015 | 8.53 | |
| OH46 | 10/18/90 | 09:52 | 0.26 | 2116.411 | 19.987 | 0.013 | 8.79 | |
| OH46 | 02/13/91 | 12:50 | 0.74 | 2234.535 | 118.124 | 0.006 | 9.53 | |
| OH46 | 02/27/91 | 11:05 | 0.55 | 2248.462 | 13.927 | 0.039 | 10.08 | |
| OH46 | 03/20/91 | 13:37 | 0.58 | 2269.567 | 21.105 | 0.027 | 10.66 | |
| OH46 | 03/28/91 | 11:21 | 0.19 | 2277.473 | 7.906 | 0.024 | 10.85 | |
| OH46 | 04/10/91 | 12:15 | 0.15 | 2290.510 | 13.037 | 0.012 | 11.00 | |
| OH46 | 04/17/91 | 11:21 | 0.28 | 2297.473 | 6.963 | 0.040 | 11.28 | |
| OH46 | 05/01/91 | 10:30 | 0.18 | 2311.438 | 13.965 | 0.013 | 11.46 | |
| OH46 | 05/08/91 | 08:59 | 0.09 | 2318.374 | 6.936 | 0.013 | 11.55 | |
| OH46 | 05/15/91 | 10:48 | 0.09 | 2325.450 | 7.076 | 0.013 | 11.64 | |
| OH46 | 06/12/91 | 09:45 | 0.29 | 2353.406 | 27.956 | 0.010 | 11.93 | |
| OH46 | 06/19/91 | 15:57 | 0.10 | 2360.665 | 7.259 | 0.014 | 12.03 | |
| OH46 | 06/26/91 | 10:00 | 0.10 | 2367.417 | 6.752 | 0.015 | 12.13 | |
| OH46 | 07/11/91 | 10:20 | 0.20 | 2382.431 | 15.014 | 0.013 | 12.33 | |
| OH46 | 07/17/91 | 11:04 | 0.08 | 2388.461 | 6.030 | 0.013 | 12.41 | |
| OH46 | 07/30/91 | 11:00 | 0.16 | 2401.458 | 12.997 | 0.012 | 12.57 | |
| OH46 | 08/08/91 | 09:50 | 0.13 | 2410.410 | 8.952 | 0.015 | 12.70 | |
| OH46 | 08/14/91 | 10:45 | 0.08 | 2416.448 | 6.038 | 0.013 | 12.78 | |
| OH46 | 08/28/91 | 11:11 | 0.17 | 2430.466 | 14.018 | 0.012 | 12.95 | |
| OH46 | 09/18/91 | 09:40 | 0.26 | 2451.403 | 20.937 | 0.012 | 13.21 | |
| OH46 | 09/25/91 | 12:35 | 0.15 | 2458.524 | 7.121 | 0.021 | 13.36 | |
| OH46 | 10/16/91 | 10:45 | 0.22 | 2479.448 | 20.924 | 0.011 | 13.58 | |
| OH46 | 10/23/91 | 10:10 | 0.12 | 2486.424 | 6.976 | 0.017 | 13.70 | |
| OH46 | 10/31/91 | 11:30 | 0.10 | 2494.479 | 8.055 | 0.012 | 13.80 | |
| OH46 | 11/06/91 | 12:10 | 0.09 | 2500.507 | 6.028 | 0.015 | 13.89 | |
| OH46 | 11/13/91 | 10:36 | 0.08 | 2507.442 | 6.935 | 0.012 | 13.97 | |
| OH46 | 11/27/91 | 10:11 | 0.14 | 2521.424 | 13.982 | 0.010 | 14.11 | |
| OH46 | 12/04/91 | 11:45 | 0.11 | 2528.490 | 7.066 | 0.016 | 14.22 | |
| OH46 | 12/18/91 | 10:25 | 0.15 | 2542.434 | 13.944 | 0.011 | 14.37 | |
| OH47 | 05/08/89 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Approximate date this part of underground core storage room excavated. |
| OH47 | 07/06/89 | 00:00 | NA | 0.000 | 0.000 | 0.000 | 0.00 | Uphole drilled 6/28/89 to 7/6/89. |
| OH47 | 08/09/89 | 14:30 | NA | 1681.604 | 0.000 | 0.000 | 0.00 | Installed funnel and collection bottle. Start collection date from 08/09/89. |
| OH47 | 08/16/89 | 10:05 | ? | 1688.420 | 6.816 | 0.000 | 0.00 | First time hole sampled. Sample saved for chemistry. |
| OH47 | 08/30/89 | 10:30 | 0.35 | 1702.438 | 14.018 | 0.025 | 0.35 | Sample saved for chemistry (combined). |
| OH47 | 09/14/89 | 10:55 | 0.48 | 1717.455 | 15.017 | 0.032 | 0.83 | Sample saved for chemistry. |
| OH47 | 10/20/89 | 11:10 | 0.60 | 1753.465 | 36.010 | 0.017 | 1.43 | Sample saved for chemistry, sample #854. |
| OH47 | 11/10/89 | 10:25 | 0.28 | 1774.434 | 20.969 | 0.013 | 1.71 | Sample saved for chemistry, sample #864 |
| OH47 | 11/29/89 | 13:06 | 0.18 | 1793.546 | 19.112 | 0.009 | 1.89 | Sample saved for chemistry, sample #877. |
| OH47 | 12/12/89 | 10:25 | 0.12 | 1806.434 | 12.888 | 0.009 | 2.01 | Sample saved for chemistry, sample #891. |
| OH47 | 01/04/90 | 11:40 | 0.24 | 1829.486 | 23.052 | 0.010 | 2.25 | |
| OH47 | 01/17/90 | 11:59 | 0.13 | 1842.499 | 13.013 | 0.010 | 2.38 | |
| OH47 | 01/31/90 | 11:15 | 0.11 | 1856.469 | 13.970 | 0.008 | 2.49 | |
| OH47 | 02/13/90 | 11:20 | 0.09 | 1869.472 | 13.003 | 0.007 | 2.58 | |

# BRINE ACCUMULATION DATA TABLE
## Data through December 31, 1991

| LOCATION | DATE | TIME | LITERS REMOVED | DAYS SINCE 1/1/85 | DAYS USED FOR CALCULATION | LITERS PER DAY | CUMULATIVE LITERS COLLECTED | REMARKS |
|---|---|---|---|---|---|---|---|---|
| OH47 | 02/27/90 | 13:30 | 0.12 | 1883.562 | 14.090 | 0.009 | 2.70 | |
| OH47 | 03/05/90 | 11:57 | 0.09 | 1889.498 | 5.936 | 0.015 | 2.79 | |
| OH47 | 03/21/90 | 11:41 | 0.11 | 1905.487 | 15.989 | 0.007 | 2.90 | |
| OH47 | 04/11/90 | 10:30 | 0.05 | 1926.438 | 20.951 | 0.002 | 2.95 | |
| OH47 | 05/02/90 | 08:55 | 0.08 | 1947.372 | 20.934 | 0.004 | 3.03 | |
| OH47 | 05/08/90 | 10:07 | 0.09 | 1953.422 | 6.050 | 0.015 | 3.12 | |
| OH47 | 05/17/90 | 09:25 | 0.02 | 1962.392 | 8.970 | 0.002 | 3.14 | |
| OH47 | 05/23/90 | 13:30 | 0.01 | 1968.562 | 6.170 | 0.002 | 3.15 | |
| OH47 | 06/14/90 | 10:08 | 0.13 | 1990.422 | 21.860 | 0.006 | 3.28 | |
| OH47 | 07/17/90 | 11:42 | 0.08 | 2023.487 | 33.065 | 0.002 | 3.36 | |
| OH47 | 08/07/90 | 08:56 | 0.05 | 2044.372 | 20.885 | 0.002 | 3.41 | |
| OH47 | 08/22/90 | 11:07 | 0.04 | 2059.463 | 15.091 | 0.003 | 3.45 | |
| OH47 | 08/29/90 | 11:47 | 0.02 | 2066.491 | 7.028 | 0.003 | 3.47 | Red-brown mud in collection bottle, cleaned out. |
| OH47 | 09/05/90 | 10:45 | NA | 2073.448 | 0.000 | 0.000 | 3.47 | Trace. |
| OH47 | 09/13/90 | 10:45 | 0.15 | 2081.448 | 14.957 | 0.010 | 3.62 | |
| OH47 | 10/18/90 | 09:54 | 0.13 | 2116.412 | 34.964 | 0.004 | 3.75 | |
| OH47 | 02/13/91 | 12:55 | 0.10 | 2234.538 | 118.125 | 0.001 | 3.85 | |
| OH47 | 02/20/91 | 13:25 | Trace | 2241.559 | 7.021 | 0.000 | 3.85 | Did not save. |
| OH47 | 03/20/91 | 13:37 | 0.00 | 2269.567 | 28.008 | 0.000 | 3.85 | Dry. |
| OH47 | 03/28/91 | 11:21 | 0.00 | 2277.473 | 7.906 | 0.000 | 3.85 | Dry. |
| OH47 | 04/10/91 | 12:15 | 0.00 | 2290.510 | 13.037 | 0.000 | 3.85 | Dry. |
| OH47 | 05/01/91 | 10:30 | 0.00 | 2311.438 | 20.928 | 0.000 | 3.85 | Dry. |
| OH47 | 05/08/91 | 08:59 | 0.00 | 2318.374 | 6.936 | 0.000 | 3.85 | Dry. |
| OH47 | 06/19/91 | 10:00 | 0.00 | 2360.417 | 42.043 | 0.000 | 3.85 | Dry. |
| OH47 | 06/19/91 | 16:00 | 0.00 | 2360.667 | 0.250 | 0.000 | 3.85 | Dry. |
| OH47 | 07/17/91 | 11:04 | 0.00 | 2388.461 | 27.794 | 0.000 | 3.85 | Dry. |
| OH47 | 08/14/91 | 10:45 | 0.00 | 2416.448 | 27.987 | 0.000 | 3.85 | Dry. |
| OH47 | 09/25/91 | 12:35 | 0.00 | 2458.524 | 42.076 | 0.000 | 3.85 | Dry. |
| OH47 | 10/23/91 | 10:10 | 0.00 | 2486.424 | 27.900 | 0.000 | 3.85 | Dry. |
| OH47 | 10/31/91 | 11:28 | 0.00 | 2494.478 | 8.054 | 0.000 | 3.85 | Dry. |
| OH47 | 11/13/91 | 10:36 | 0.00 | 2507.442 | 12.964 | 0.000 | 3.85 | Dry. |
| OH47 | 12/04/91 | 11:45 | 0.00 | 2528.490 | 21.048 | 0.000 | 3.85 | Dry. |

# APPENDIX B
# GRAPHS OF BRINE ACCUMULATION DATA

# APPENDIX B
# GRAPHS OF BRINE ACCUMULATION DATA

This appendix contains graphs of data presented in Appendix A for selected locations. As described in Deal and Case (1987), much of the variability in the quantity of brine collected resulted from limitations of the collection techniques, rather than variations in the actual inflow of brine from bedrock at the collecting locations. As a result, plotting of the inflow data from the data tables (Appendix A) results in an irregular plot that implies variations in inflow which, in fact, do not exist. The graphed data included in this report were processed and plotted with Microsoft® Excel® using an 11-point moving average to smooth the line, unless otherwise stated. The smoothed data reflect trends in the body of the curve that are representative of the brine seepage rates, while still showing variations that are probably the result of collection techniques.

At the beginning and end of each curve, moving average smoothing projects the calculated trend. As a result, initial and ending values tend to be distorted by the moving average smoothing program. To correct the distortion caused by the moving average smoothing, the smoothed data are replaced by the actual data for the first and last few data points prior to plotting. Additional discussion of the collection and data handling is provided in Deal and Case (1987).

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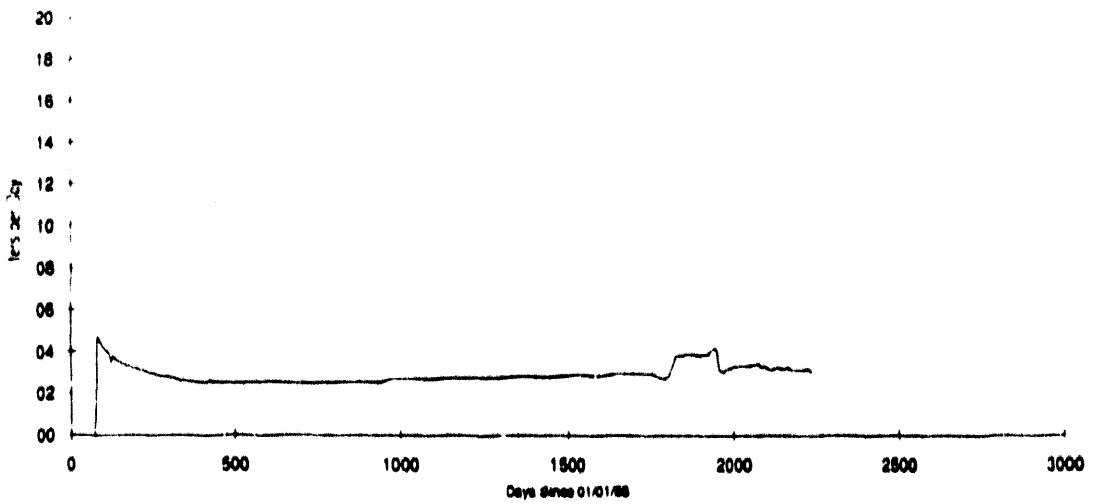
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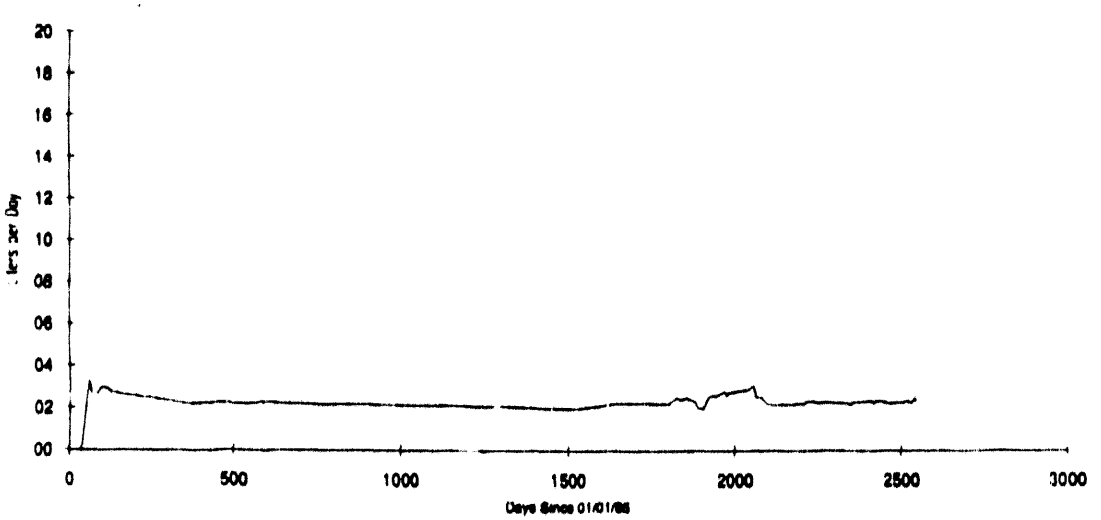
Days Since 01/01/88

A3X01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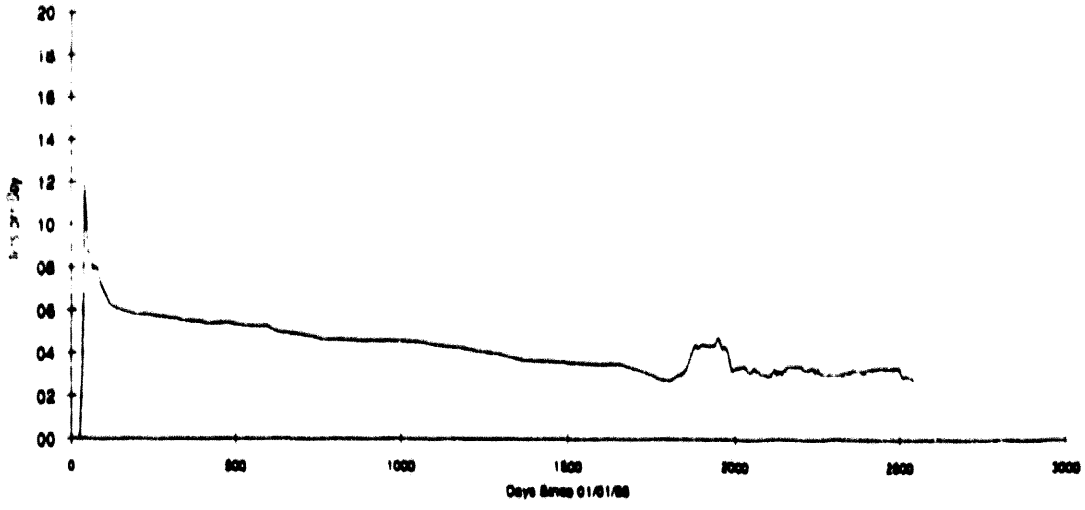
BX01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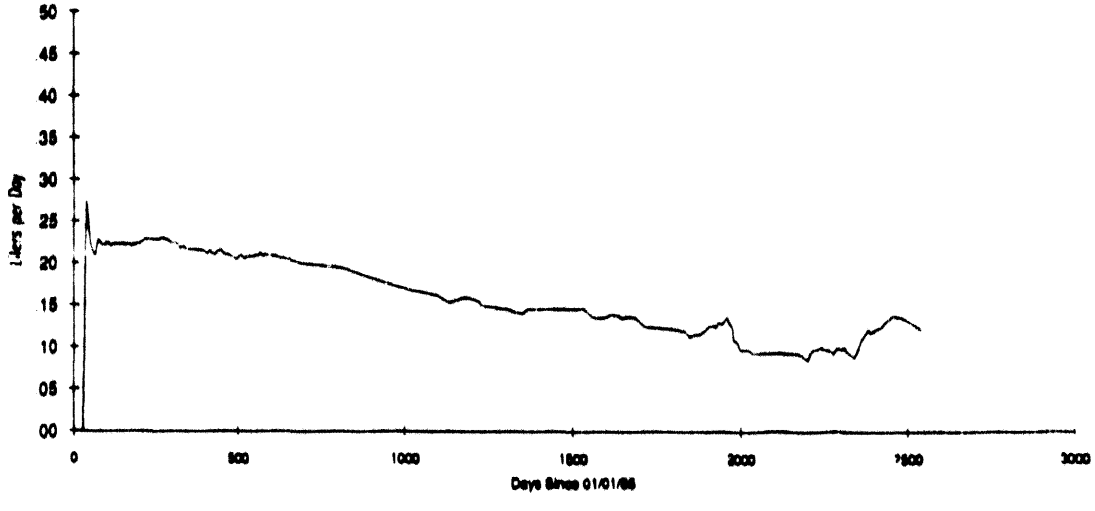
Days Since 01/01/88

DH36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Liters per Day
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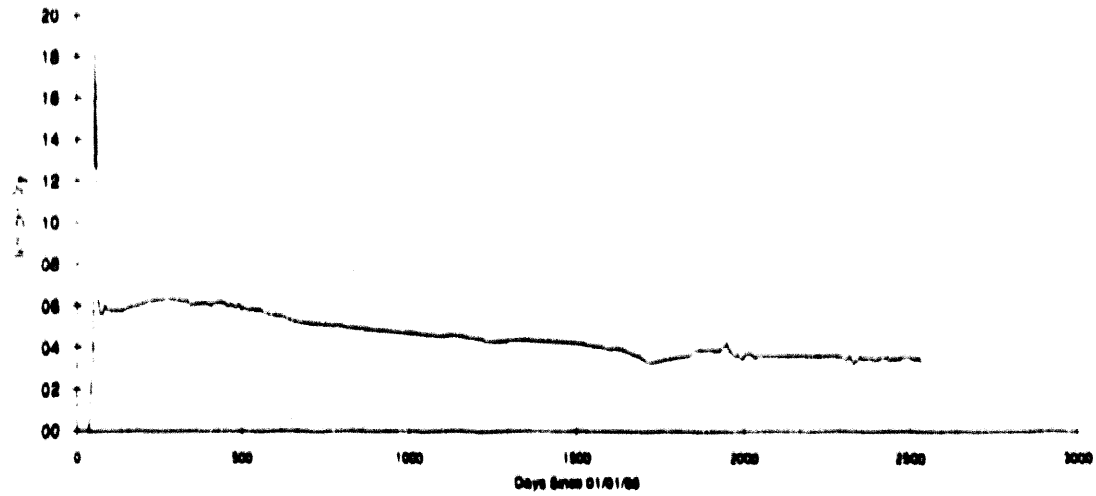
3000
Days Since 01/01/88

DH38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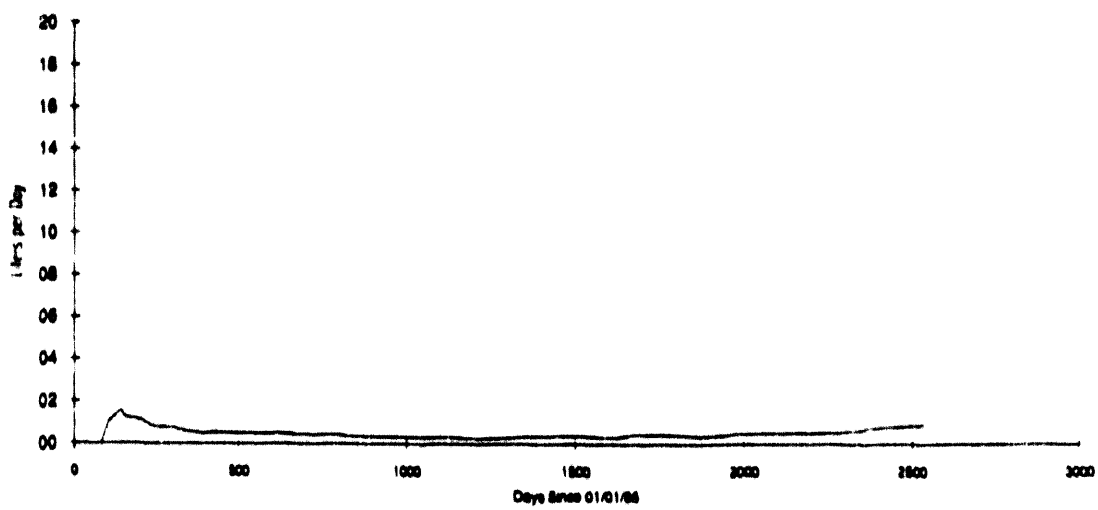
DH40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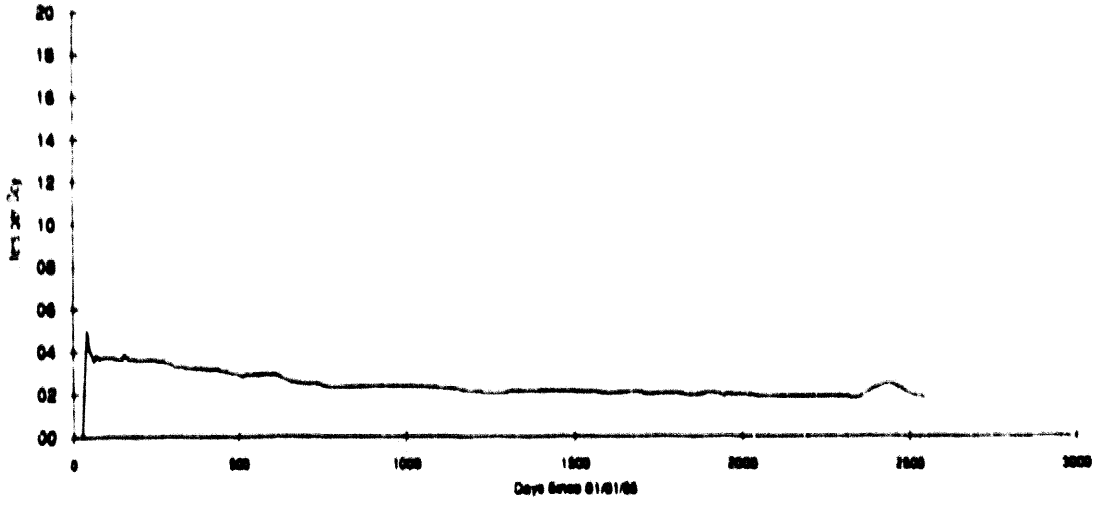
DH42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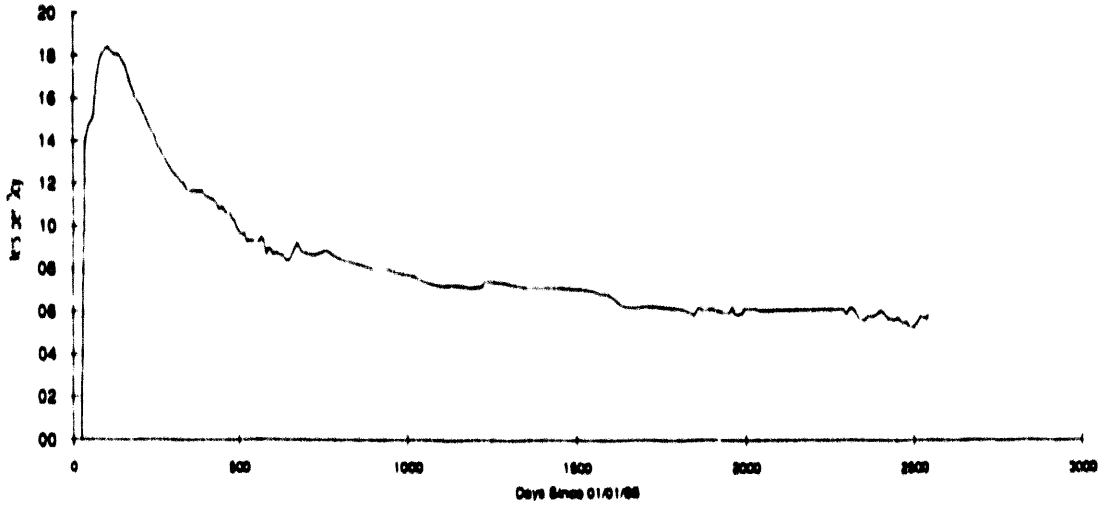
DH42A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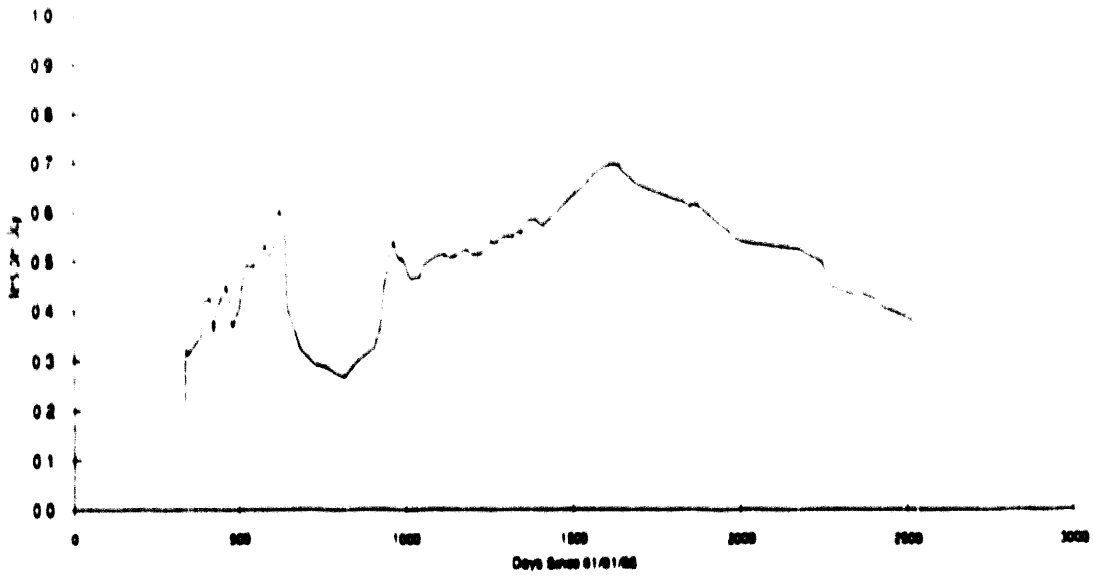
QSEEP

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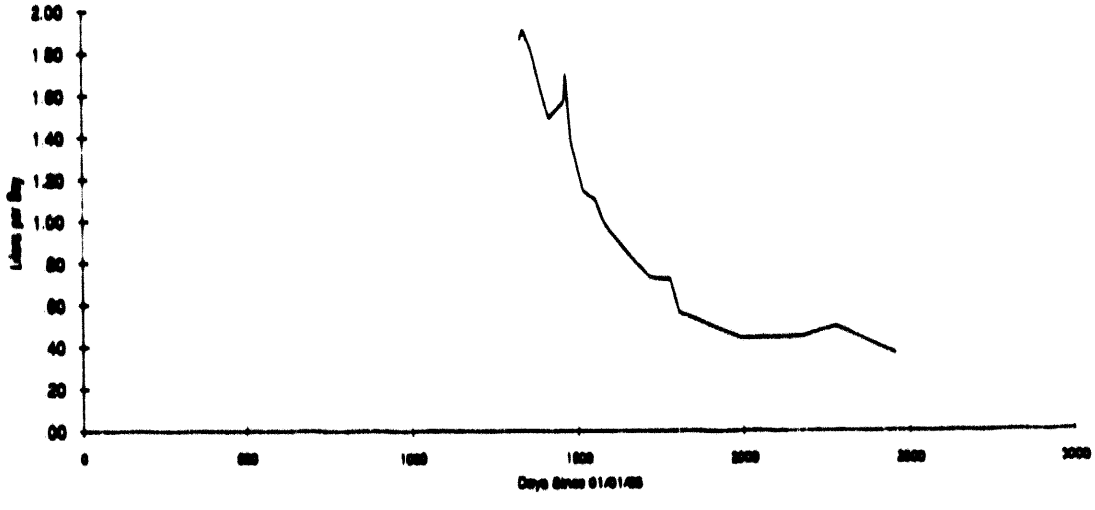

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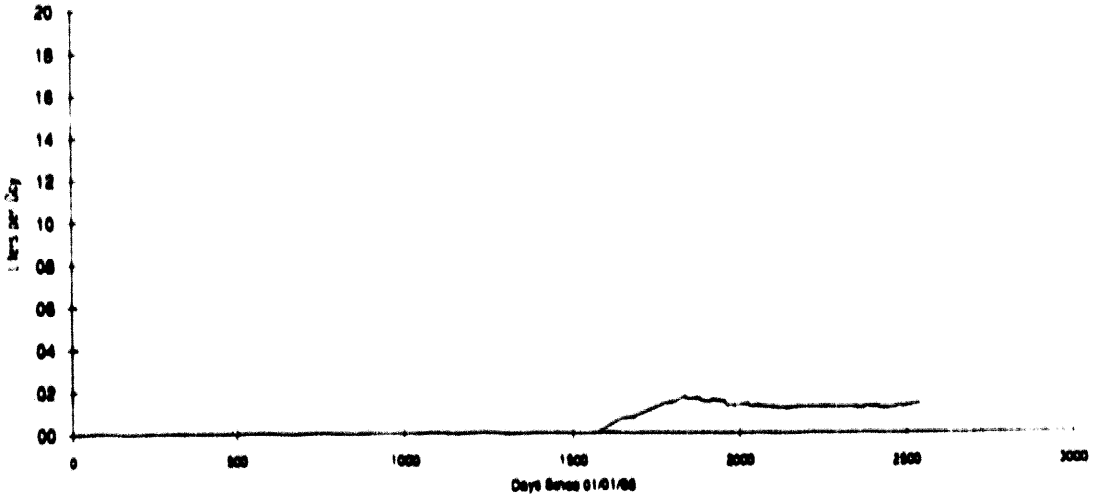
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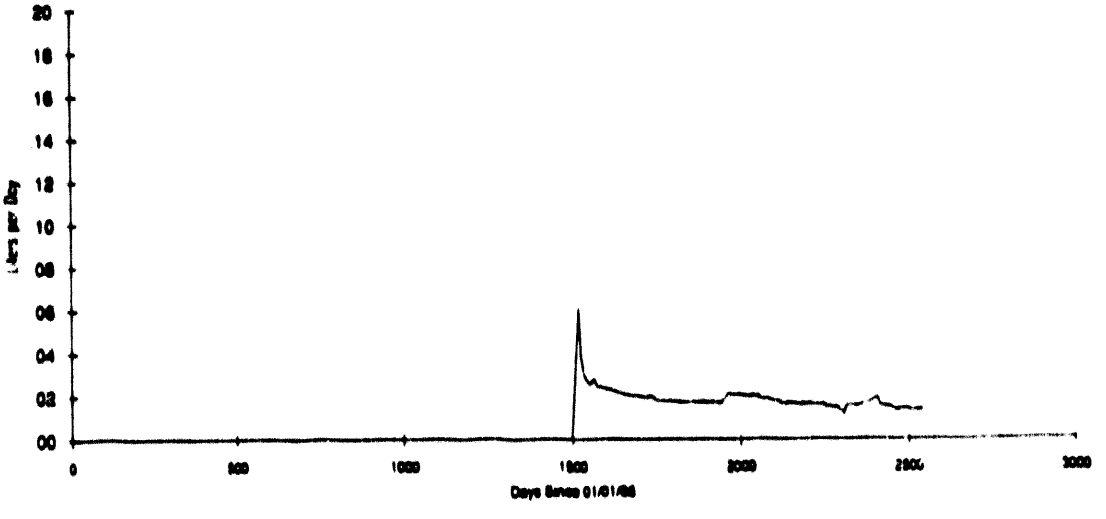
Days Since 01/01/86

OH23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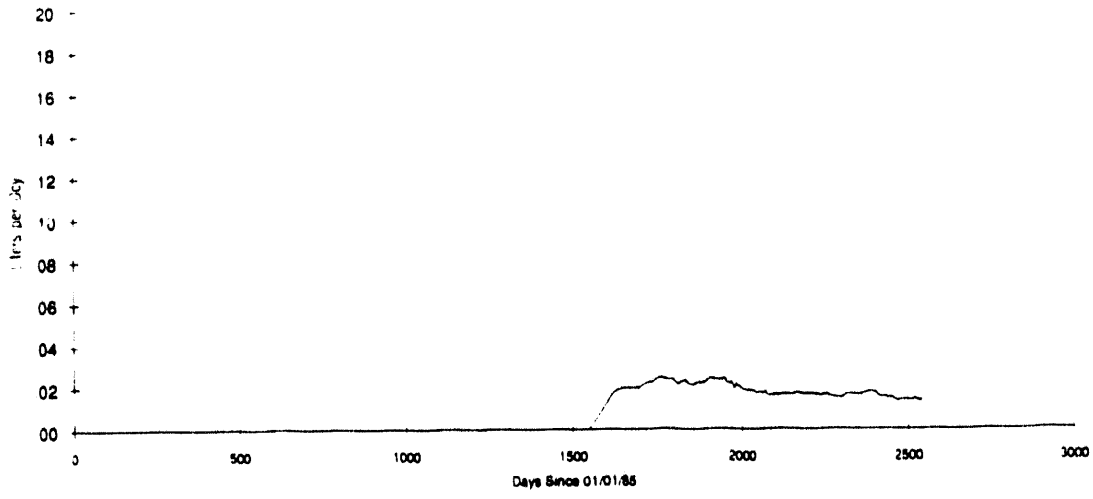
Days Since 01/01/86

OH26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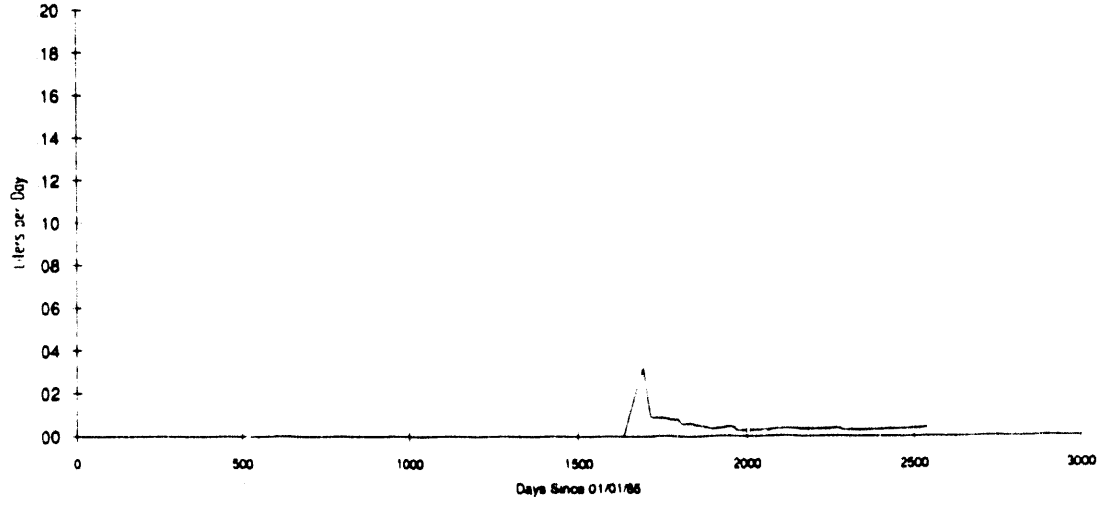
OH45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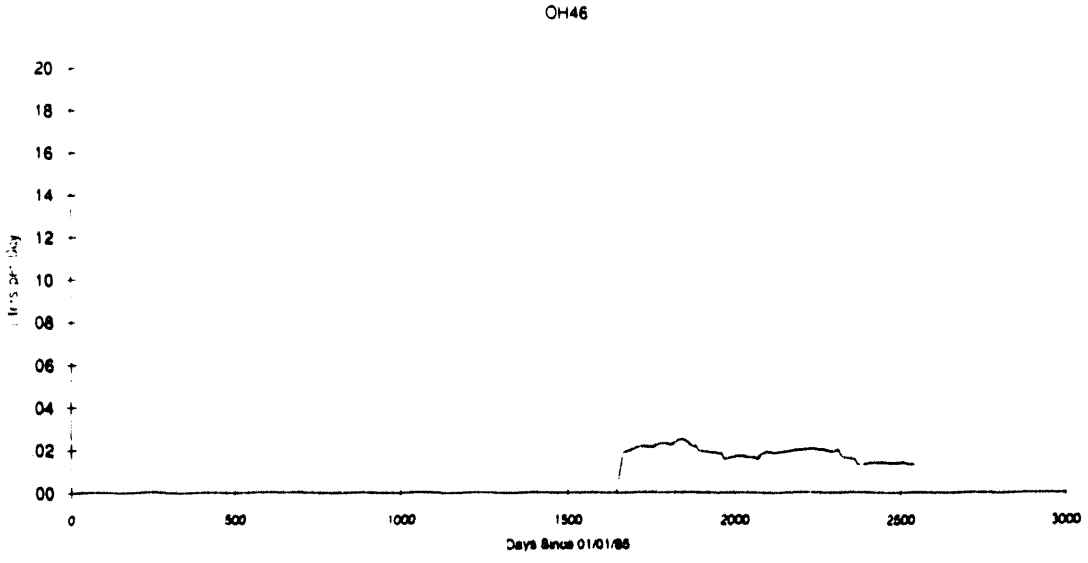
Days Since 01/01/85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1500
2000
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3000
Days Since 01/01/86

# APPENDIX C
# 1991 ANALYTICAL RESULTS

# TABLE C-1
# ANALYTICAL RESULTS

| SAMPLE NUMBER | HOLE NUMBER & DIRECTION | | LAB | DATE | pH[a] (s.u.) | SG[b] (g/cm$^3$) | TDS[c] (mg/L) | EXT ALK[d] (mg/L) | TIC[e] (mg/L) | TOC[e] (mg/L) | Br (mg/L) | Cl (mg/L) | F (mg/L) | I (mg/L) | NO3 (mg/L) | NH4 (mg/L) | P (mg/L) | SO4 (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3430 | A1X01 | DN | IT | 04/08/91 | 6.1 | 1.23 | 357000 | 980 | 5 | NA | 1600 | 180000 | 9 | 15 | < 0.09 | 140 | NA | 16000 |
| 3429 | A1X01 | DN | UNC | 04/08/91 | 6.2 | 1.21 | 196000 | 988 | 3.0 | 5 | 1510 | 196000 | 6.4 | 15.0 | 0.5 | 161 | < 0.1 | 17500 |
| 3432 | A1X02 | UP | IT | 04/08/91 | 5.8 | 1.23 | 347000 | 790 | < 5 | NA | 2300 | 182000 | 8 | 12 | < 0.09 | 130 | NA | 19000 |
| 3696 | A1X02 | UP | IT | 07/07/91 | 5.3 | 1.26 | 360000 | 1100 | < 5 | NA | 2500 | 190000 | 10 | 16 | < 0.09 | 130 | NA | 28000 |
| 3431 | A1X02 | UP | UNC | 04/08/91 | 5.9 | 1.21 | 199000 | 771 | < 2.5 | 5 | 1920 | 199000 | 6.2 | 14.2 | 0.8 | 171 | < 0.1 | 20800 |
| 3695 | A1X02 | UP | UNC | 07/07/91 | 5.3 | 1.24 | 434000 | 1070 | < 2.5 | 20 | 2830 | 211000 | 8.2 | 11.7 | 0.5 | 134 | < 0.1 | 26600 |
| 4011 | A1X02 | UP | UNC | 10/16/91 | 5.3 | 1.24 | 436000 | 1220 | < 2.5 | 20 | 2810 | 207000 | 10.3 | 14.3 | 1.2 | 151 | 0.1 | 30900 |
| 3426 | A3X01 | DN | IT | 04/08/91 | 6.0 | 1.23 | 341000 | 1000 | 5 | NA | 1600 | 191000 | 6 | 13 | 0.09 | 140 | NA | 16000 |
| 3694 | A3X01 | DN | IT | 07/07/91 | 6.1 | 1.23 | 340000 | 1020 | < 5 | NA | 1200 | 190000 | 8.3 | 14 | < 0.09 | 170 | NA | 17000 |
| 3425 | A3X01 | DN | UNC | 04/08/91 | 6.2 | 1.20 | 199000 | 982 | < 2.5 | 25 | 1520 | 199000 | 7.1 | 16.0 | 0.4 | 149 | < 0.1 | 17400 |
| 3693 | A3X01 | DN | UNC | 07/07/91 | 6.1 | 1.23 | 391000 | 1010 | 3.6 | 25 | 1560 | 198000 | 7.6 | 9.5 | 0.5 | 120 | < 0.1 | 17400 |
| 4012 | A3X01 | DN | UNC | 10/16/91 | 6.2 | 1.22 | 376000 | 980 | 4.1 | 30 | 1550 | 196000 | 7.4 | 13.5 | 0.9 | 141 | < 0.1 | 16900 |
| 3428 | BX01 | DN | IT | 04/08/91 | 6.1 | 1.23 | 354000 | 880 | 5 | NA | 1600 | 181000 | 8 | 13 | < 0.09 | 140 | NA | 15000 |
| 3692 | BX01 | DN | IT | 07/07/91 | 6.1 | 1.22 | 350000 | 890 | < 5 | NA | 1200 | 180000 | 8.2 | 15 | < 0.09 | 110 | NA | 16000 |
| 3427 | BX01 | DN | UNC | 04/08/91 | 6.1 | 1.21 | 196000 | 891 | 3.6 | 15 | 1450 | 196000 | 6.0 | 15.4 | 0.5 | 147 | < 0.1 | 17000 |
| 3691 | BX01 | DN | UNC | 07/07/91 | 6.1 | 1.23 | 388000 | 878 | 4.6 | 20 | 1500 | 202000 | 6.4 | 10.3 | 0.7 | 130 | < 0.1 | 17200 |
| 4010 | BX01 | DN | UNC | 10/16/91 | 6.1 | 1.22 | 377000 | 870 | 4.1 | 20 | 1610 | 199000 | 7.0 | 13.7 | 0.7 | 175 | < 0.1 | 17900 |
| 3416 | DH36 | DN | IT | 04/08/91 | 6.1 | 1.23 | 336000 | 840 | 5 | NA | 1700 | 191000 | 2 | 16 | 0.13 | 150 | NA | 15000 |
| 3683 | DH36 | DN | IT | 07/07/91 | 6.2 | 1.23 | 350000 | 850 | < 5 | NA | 1300 | 180000 | 5.8 | 18 | < 0.09 | 140 | NA | 16000 |
| 3415 | DH36 | DN | UNC | 04/08/91 | 6.2 | 1.21 | 381000 | 842 | 5.1 | 41 | 1450 | 194000 | 4.6 | 17.4 | 0.5 | 174 | < 0.1 | 16600 |
| 3682 | DH36 | DN | UNC | 07/07/91 | 6.1 | 1.23 | 384000 | 848 | 3.0 | 20 | 1480 | 200000 | 4.9 | 10.3 | 0.5 | 116 | < 0.1 | 16500 |
| 4007 | DH36 | DN | UNC | 10/16/91 | 6.2 | 1.21 | 368000 | 820 | 4.6 | 10 | 1490 | 199000 | 4.8 | 16.0 | 0.8 | 257 | < 0.1 | 16200 |
| 3414 | DH36a | DN | IT | 04/08/91 | 6.1 | 1.22 | 337000 | 830 | 5 | NA | 1600 | 206000 | 5 | 15 | 0.18 | 150 | NA | 15000 |
| 3413 | DH36a | DN | UNC | 04/08/91 | 6.2 | 1.22 | 378000 | 833 | < 2.5 | 25 | 1430 | 194000 | 4.3 | 16.5 | 0.8 | 163 | < 0.1 | 16300 |
| 3681 | DH36a | DN | UNC | 07/07/91 | 6.1 | 1.23 | 387000 | 852 | 3.0 | 25 | 1480 | 199000 | 4.8 | 10.5 | 0.8 | 121 | < 0.1 | 16400 |
| 3418 | DH38 | DN | IT | 04/08/91 | 6.2 | 1.23 | 310000 | 940 | 5 | NA | 1600 | 214000 | 5 | 18 | < 0.09 | 150 | NA | 15000 |
| 3689 | DH38 | DN | IT | 07/07/91 | 6.3 | 1.22 | 350000 | NA | 5 | NA | 1200 | 180000 | 5.2 | 18 | < 0.09 | 140 | NA | 16000 |

[a] s.u. = standard units
[b] Specific Gravity
[c] Total Disolved Solids
[d] Extended Alkalinity measured to an endpoint pH of 2.5 and reported as equivalent bicarbonate ($HCO_3$).
[e] TIC and TOC are reported as equivalent bicarbonate.
NA Not available.

# TABLE C-1
## ANALYTICAL RESULTS

| SAMPLE NUMBER | HOLE NUMBER & DIRECTION | | LAB | DATE | Al (mg/L) | As (mg/L) | B (mg/L) | Ba (mg/L) | Ca (mg/L) | Cs (mg/L) | Fe (mg/L) | K (mg/L) | Mg (mg/L) | Mn (mg/L) | Na (mg/L) | Rb (mg/L) | Si (mg/L) | Sr (mg/L) | CHARGE BALANCE (percent) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3430 | A1X01 | DN | IT | 04/08/91 | NA | NA | 1600 | NA | 410 | NA | 5 | 16800 | 25600 | 3 | 77200 | NA | 0.5 | 1.8 | 4.11 |
| 3429 | A1X01 | DN | UNC | 04/08/91 | 0.068 | 0.002 | 1310 | 0.102 | 229 | 0.299 | < 0.50 | 15100 | 22700 | 1.87 | 77000 | 18 | 1.11 | 1.63 | -2.72 |
| 3432 | A1X02 | UP | IT | 04/08/91 | NA | NA | 1200 | NA | 350 | NA | 4 | 13800 | 26600 | 6.5 | 61300 | NA | 0.5 | 6.9 | -3.21 |
| 3696 | A1X02 | UP | IT | 07/07/91 | NA | NA | 2100 | NA | 250 | NA | 5 | 19500 | 48000 | 5.0 | 51400 | NA | 0.6 | 4.9 | 5.55 |
| 3431 | A1X02 | UP | UNC | 04/08/91 | < 0.05 | 0.01 | 1230 | 0.052 | 234 | 0.307 | < 0.50 | 13800 | 31300 | 4.47 | 67000 | 20.8 | 1.15 | 5.79 | -1.92 |
| 3695 | A1X02 | UP | UNC | 07/07/91 | 0.101 | 0.01 | 1980 | 0.026 | 211 | 0.439 | < 0.50 | 16200 | 43000 | 5.00 | 46000 | 24.4 | 1.41 | 4.25 | -4.76 |
| 4011 | A1X02 | UP | UNC | 10/16/91 | 0.06 | 0.008 | 2110 | 0.051 | 180 | 0.691 | < 0.50 | 23900 | 48000 | 5.14 | 43000 | 33.6 | 1.84 | 2.00 | -0.76 |
| 3426 | A3X01 | DN | IT | 04/08/91 | NA | NA | 1300 | NA | 360 | NA | < 3 | 14700 | 20500 | 1.7 | 72100 | NA | 0.7 | 2.2 | -4.93 |
| 3694 | A3X01 | DN | IT | 07/07/91 | NA | NA | 1600 | NA | 310 | NA | < 3 | 17900 | 24200 | 1.3 | 88400 | NA | 0.6 | 2.4 | 4.68 |
| 3425 | A3X01 | DN | UNC | 04/08/91 | < 0.05 | < 0.001 | 1280 | 0.07 | 245 | 0.312 | < 0.50 | 15000 | 22900 | 1.38 | 77000 | 18.4 | 1.75 | 2.24 | -3.28 |
| 3693 | A3X01 | DN | [illegible] | 07/07/91 | < 0.05 | 0.005 | 1490 | 0.057 | 241 | 0.359 | < 0.05 | 14600 | 22500 | 1.42 | 75000 | 15.9 | 1.57 | 1.96 | -4.22 |
| 4012 | A3X01 | DN | [illegible] | 10/16/91 | < 0.05 | < 0.001 | 1540 | 0.088 | 255 | 0.384 | < 0.50 | 17100 | 23800 | 1.39 | 76000 | 16.1 | 1.94 | 1.73 | -1.74 |
| 3428 | BX01 | DN | IT | 04/08/91 | NA | NA | 1300 | NA | 440 | NA | 3 | 15900 | 20100 | 1.9 | 80700 | NA | 0.5 | 2.5 | 1.27 |
| 3692 | BX01 | DN | IT | 07/07/91 | NA | NA | 1500 | NA | 280 | NA | < 3 | 16700 | 22600 | 1.2 | 82000 | NA | 0.4 | 2.3 | 3.77 |
| 3427 | BX01 | DN | UNC | 04/08/91 | < 0.05 | 0.001 | 1250 | 0.046 | 251 | 0.265 | < 0.50 | 15000 | 21900 | 1.26 | 80000 | 17.6 | 1.17 | 1.96 | -2.05 |
| 3691 | BX01 | DN | UNC | 07/07/91 | < 0.05 | 0.006 | 1450 | 0.03 | 252 | 0.329 | < 0.05 | 15100 | 21500 | 1.28 | 78000 | 15.4 | 1.15 | 1.87 | -4.54 |
| 4010 | BX01 | DN | UNC | 10/16/91 | < 0.05 | 0.002 | 1520 | 0.046 | 273 | 0.358 | < 0.50 | 17200 | 24600 | 1.92 | 76000 | 16.6 | 1.51 | 2.33 | -2.01 |
| 3416 | DH36 | DN | IT | 04/08/91 | NA | NA | 1400 | NA | 400 | NA | < 3 | 17400 | 17500 | 1.2 | 76700 | NA | 0.9 | 1.6 | -4.50 |
| 3683 | DH36 | DN | IT | 07/07/91 | NA | NA | 1400 | NA | 350 | NA | < 3 | 17500 | 17400 | 1.0 | 81200 | NA | 1.0 | 1.4 | -0.11 |
| 3415 | DH36 | DN | UNC | 04/08/91 | < 0.05 | 0.004 | 1370 | 0.056 | 299 | 0.201 | < 0.50 | 17100 | 18800 | 1.05 | 85000 | 16 | 1.98 | 1.33 | -1.33 |
| 3682 | DH36 | DN | UNC | 07/07/91 | < 0.05 | 0.009 | 1540 | 0.057 | 296 | 0.265 | < 0.50 | 16700 | 18300 | 0.98 | 85000 | 14.3 | 2.39 | 1.25 | -3.20 |
| 4007 | DH36 | DN | UNC | 10/16/91 | < 0.05 | 0.007 | 1590 | 0.046 | 304 | 0.28 | < 0.50 | 19400 | 18100 | 0.93 | 81000 | 14.6 | 2.58 | 1.18 | -3.99 |
| 3414 | DH36a | DN | IT | 04/08/91 | NA | NA | 1400 | NA | 310 | NA | < 3 | 17300 | 17000 | 0.9 | 82000 | NA | 1.0 | 1.6 | -6.33 |
| 3413 | DH36a | DN | UNC | 04/08/91 | 0.106 | 0.01 | 1370 | 0.032 | 298 | 0.194 | < 0.50 | 16900 | 18500 | 0.96 | 86000 | 15.8 | 2.14 | 1.39 | -1.16 |
| 3681 | DH36a | DN | UNC | 07/07/91 | < 0.05 | 0.01 | 1520 | 0.035 | 290 | 0.259 | < 0.50 | 16900 | 17900 | 0.95 | 84000 | 14.2 | 2.25 | 1.38 | -3.58 |
| 3418 | DH38 | DN | IT | 04/08/91 | NA | NA | 1300 | NA | 320 | NA | < 3 | 17000 | 16500 | 0.9 | 79700 | NA | 0.8 | 1.0 | -9.51 |
| 3689 | DH38 | DN | IT | 07/07/91 | NA | NA | 1500 | NA | 330 | NA | < 3 | 18600 | 18300 | 0.8 | 88600 | NA | 0.8 | 1.0 | 3.78 |

NA Not available.

# TABLE C-1
## ANALYTICAL RESULTS

| SAMPLE NUMBER | HOLE NUMBER & DIRECTION | | LAB | DATE | pH[a] (s.u.) | SG[b] (g/cm$^3$) | TDS[c] (mg/L) | EXT ALK[d] (mg/L) | TIC[e] (mg/L) | TOC[e] (mg/L) | Br (mg/L) | Cl (mg/L) | F (mg/L) | I (mg/L) | NO3 (mg/L) | NH4 (mg/L) | P (mg/L) | SO4 (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3417 | DH38 | DN | UNC | 04/08/91 | 6.2 | 1.21 | 375000 | 915 | 4.6 | 41 | 1420 | 195000 | 4.6 | 17.6 | 0.5 | 171 | < 0.1 | 16200 |
| 3688 | DH38 | DN | UNC | 07/07/91 | 6.3 | 1.23 | 381000 | 1040 | 6.6 | 15 | 1460 | 202000 | 5.2 | 11.7 | 0.5 | 144 | < 0.1 | 16000 |
| 4008 | DH38 | DN | UNC | 10/16/91 | 6.3 | 1.22 | 369000 | 1010 | 6.1 | 10 | 1450 | 197000 | 4.9 | 15.9 | 1.0 | 161 | < 0.1 | 15600 |
| 3420 | DH40 | DN | IT | 04/08/91 | 6.3 | 1.23 | 338000 | 1340 | 15 | NA | 1900 | 198000 | 5 | 19 | 0.35 | 170 | NA | 16000 |
| 3419 | DH40 | DN | UNC | 04/08/91 | 6.4 | 1.22 | 384000 | 1318 | 14.2 | 91 | 1530 | 197000 | 5.1 | 18.2 | 0.9 | 179 | < 0.1 | 16600 |
| 3690 | DH40 | DN | UNC | 07/07/91 | 6.4 | 1.22 | 377000 | 1210 | 7.1 | 76 | 1510 | 195000 | 5.2 | 11.4 | 1.2 | 133 | 0.2 | 16500 |
| 4019 | DH40 | DN | UNC | 10/16/91 | 6.5 | 1.21 | 370000 | 1180 | 7.6 | 56 | 1530 | 196000 | 5.1 | 15.7 | 1.0 | 168 | 0.2 | 16000 |
| 3422 | DH42 | DN | IT | 04/08/91 | 6.2 | 1.23 | 333000 | 950 | 5 | NA | 1600 | 179000 | 5 | 16 | 0.09 | 180 | NA | 15000 |
| 3687 | DH42 | DN | IT | 07/07/91 | 6.3 | 1.23 | 350000 | 930 | < 5 | NA | 1300 | 180000 | 5.8 | 17 | < 0.22 | 120 | NA | 16000 |
| 3421 | DH42 | DN | UNC | 04/08/91 | 6.3 | 1.22 | 378000 | 930 | 4.1 | 30 | 1430 | 198000 | 4.3 | 16.4 | 0.8 | 171 | < 0.1 | 16100 |
| 3686 | DH42 | DN | UNC | 07/07/91 | 6.2 | 1.23 | 382000 | 1030 | 4.1 | 46 | 1460 | 200000 | 4.4 | 12.0 | 0.8 | 151 | 0.2 | 16000 |
| 4009 | DH42 | DN | UNC | 10/16/91 | 6.3 | 1.21 | 366000 | 900 | 4.1 | 25 | 1440 | 194000 | 4.8 | 15.8 | 0.6 | 165 | 0.1 | 15400 |
| 3424 | DH42A | DN | IT | 04/08/91 | 6.1 | 1.23 | 340000 | 870 | 5 | NA | 1500 | 200000 | 5 | 17 | < 0.09 | 170 | NA | 16000 |
| 3685 | DH42A | DN | IT | 07/07/91 | 6.2 | 1.23 | 330000 | 930 | < 5 | NA | 1200 | 180000 | 5.2 | 18 | < 0.09 | 140 | NA | 16000 |
| 3423 | DH42A | DN | UNC | 04/08/91 | 6.2 | 1.21 | 373000 | 872 | 6.1 | 20 | 1400 | 195000 | 4.1 | 17.7 | 0.5 | 176 | < 0.1 | 15800 |
| 3684 | DH42A | DN | UNC | 07/07/91 | 6.2 | 1.23 | 383000 | 933 | 5.1 | 20 | 1450 | 198000 | 4.3 | 11.6 | 1.0 | 115 | < 0.1 | 15900 |
| 4006 | DH42A | DN | UNC | 10/16/91 | 6.2 | 1.22 | 369000 | 950 | 4.6 | 20 | 1440 | 198000 | 4.8 | 15.9 | 0.9 | 166 | < 0.1 | 15500 |
| 3412 | DHP402A | DN | IT | 04/08/91 | 6.0 | 1.23 | 328000 | 770 | 5 | NA | 1600 | 200000 | [illegible] | 12 | < 0.09 | 130 | NA | 17000 |
| 3677 | DHP402A | DN | IT | 07/07/91 | 6.1 | 1.23 | 350000 | 770 | < 5 | NA | 1200 | 170000 | [illegible] | 19 | < 0.09 | 120 | NA | 18000 |
| 3411 | DHP402A | DN | UNC | 04/08/91 | 6.1 | 1.22 | 380000 | 787 | 3.0 | 15 | 1530 | 193000 | [illegible] | 12.7 | 0.4 | 159 | < 0.1 | 18800 |
| 3676 | DHP402A | DN | UNC | 07/07/91 | 6.0 | 1.23 | 395000 | 780 | 4.1 | 25 | 1570 | 201000 | 6.6 | 7.9 | 1.8 | 105 | < 0.1 | 17800 |
| 4014 | DHP402A | DN | UNC | 10/16/91 | 6.1 | 1.21 | 378000 | 790 | 4.6 | < 5 | 1590 | 199000 | 7.1 | 12.1 | 0.6 | 124 | < 0.1 | 17400 |
| 3410 | DHP402Aa | DN | IT | 04/08/91 | 6.0 | 1.22 | 340000 | 700 | 5 | NA | 1800 | 198000 | 6 | 12 | < 0.09 | 130 | NA | 16000 |
| 3409 | DHP402Aa | DN | UNC | 04/08/91 | 6.1 | 1.22 | 388000 | 720 | < 2.5 | 30 | 1530 | 195000 | 6.4 | 12.3 | 0.8 | 159 | < 0.1 | 18000 |
| 3680 | DHP402Aa | DN | UNC | 07/07/91 | 6.0 | 1.23 | 390000 | 726 | 3.0 | 20 | 1550 | 198000 | 6.4 | 8.3 | 0.3 | 114 | < 0.1 | 17800 |
| 4002 | FLRPDL | | UNC | 10/16/91 | 7.4 | 1.21 | 357000 | 415 | 133 | 198 | 592 | 189000 | 3.2 | 0.2 | 18.2 | 18.8 | 1.1 | 23800 |
| 4001 | FLRPDL | | UNC | 10/16/91 | 7.4 | 1.22 | 357000 | 464 | 158 | 224 | 614 | 188000 | 3.6 | 0.2 | 23.2 | 21.3 | 0.2 | 21400 |

[a] s.u. = standard units
[b] Specific Gravity
[c] Total Disolved Solids
[d] Extended Alkalinity measured to an endpoint pH of 2.5 and reported as equivalent bicarbonate ($HCO_3$).
[e] TIC and TOC are reported as equivalent bicarbonate.
NA Not available.

# TABLE C-1
## ANALYTICAL RESULTS

| SAMPLE NUMBER | HOLE NUMBER & DIRECTION | | LAB | DATE | Al (mg/L) | As (mg/L) | B (mg/L) | Ba (mg/L) | Ca (mg/L) | Cs (mg/L) | Fe (mg/L) | K (mg/L) | Mg (mg/L) | Mn (mg/L) | Na (mg/L) | Rb (mg/L) | Si (mg/L) | Sr (mg/L) | CHARGE BALANCE (percent) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3417 | DH38 | DN | UNC | 04/08/91 | < 0.05 | 0.003 | 1290 | 0.051 | 288 | 0.192 | < 0.50 | 16800 | 18000 | 0.94 | 86000 | 15.7 | 1.75 | 0.80 | -1.78 |
| 3688 | DH38 | DN | UNC | 07/07/91 | < 0.05 | 0.002 | 1500 | 0.032 | 293 | 0.246 | < 0.05 | 17100 | 17200 | 0.86 | 84000 | 14.1 | 1.72 | 0.81 | -4.71 |
| 4008 | DH38 | DN | UNC | 10/16/91 | < 0.05 | < 0.001 | 1560 | 0.042 | 304 | 0.265 | < 0.50 | 19200 | 17800 | 0.87 | 82000 | 14.3 | 2.36 | 0.74 | -3.31 |
| 3420 | DH40 | DN | IT | 04/08/91 | NA | NA | 1400 | NA | 350 | NA | < 3 | 17300 | 16700 | 1.2 | 78000 | NA | 1.0 | 0.8 | -6.59 |
| 3419 | DH40 | DN | UNC | 04/08/91 | < 0.05 | < 0.001 | 1350 | 0.032 | 299 | 0.194 | 0.63 | 17600 | 18400 | 1.13 | 83000 | 16.2 | 2.34 | 0.61 | -3.07 |
| 3690 | DH40 | DN | UNC | 07/07/91 | 0.058 | 0.002 | 1490 | 0.125 | 276 | 0.236 | < 0.50 | 16300 | 19000 | 1.17 | 84000 | 14 | 2.44 | 0.48 | -2.04 |
| 4019 | DH40 | DN | UNC | 10/16/91 | < 0.05 | < 0.001 | 1580 | 0.176 | 308 | 0.267 | < 0.50 | 18900 | 18500 | 1.63 | 82000 | 14.8 | 3.48 | 0.67 | -2.72 |
| 3422 | DH42 | DN | IT | 04/08/91 | NA | NA | 1400 | NA | 330 | NA | < 3 | 17400 | 16200 | 1.1 | 82000 | NA | 0.6 | 1.2 | -0.34 |
| 3687 | DH42 | DN | IT | 07/07/91 | NA | NA | 1500 | NA | 330 | NA | < 3 | 19100 | 18000 | 1.0 | 87500 | NA | 0.9 | 0.9 | 3.11 |
| 3421 | DH42 | DN | UNC | 04/08/91 | < 0.05 | 0.007 | 1290 | 0.071 | 292 | 0.178 | < 0.50 | 17200 | 17500 | 1.01 | 87000 | 15.7 | 1.58 | 0.87 | -2.37 |
| 3686 | DH42 | DN | UNC | 07/07/91 | < 0.05 | 0.008 | 1480 | 0.03 | 298 | 0.238 | < 0.05 | 17000 | 17300 | 1.06 | 84000 | 13.8 | 2.09 | 0.82 | -4.19 |
| 4009 | DH42 | DN | UNC | 10/16/91 | < 0.05 | 0.003 | 16[illegible] | 0.1 | 316 | 0.253 | < 0.50 | 19300 | 18000 | 0.98 | 86000 | 14.1 | 2.13 | 0.83 | -0.82 |
| 3424 | DH42A | DN | IT | 04/08/91 | NA | NA | 1300 | NA | 310 | NA | < 3 | 17100 | 16000 | 0.9 | 84000 | NA | 0.9 | 1.1 | -5.12 |
| 3685 | DH42A | DN | IT | 07/07/91 | NA | NA | 1500 | NA | 330 | NA | < 3 | 18700 | 17400 | 0.8 | 86300 | NA | 0.8 | 0.7 | 2.15 |
| 3423 | DH42A | DN | UNC | 04/08/91 | < 0.05 | 0.004 | 1300 | 0.042 | 295 | 0.176 | < 0.50 | 17000 | 17800 | 0.93 | 89000 | 15.7 | 1.97 | 0.83 | -0.65 |
| 3684 | DH42A | DN | UNC | 07/07/91 | < 0.05 | 0.004 | 1520 | 0.052 | 297 | 0.241 | < 0.50 | 17200 | 17400 | 0.92 | 87000 | 14 | 1.97 | 0.80 | -2.40 |
| 4006 | DH42A | DN | UNC | 10/16/91 | < 0.05 | < 0.001 | 1550 | 0.04 | 301 | 0.246 | < 0.50 | 19500 | 17200 | 0.88 | 84000 | 13.9 | 2.70 | 0.76 | -3.12 |
| 3412 | DHP402A | DN | IT | 04/08/91 | NA | NA | 1300 | NA | 400 | NA | 4 | 15300 | 24900 | 2.2 | 80500 | NA | 0.2 | 3.4 | -0.56 |
| 3677 | DHP402A | DN | IT | 07/07/91 | NA | NA | 1300 | NA | 370 | NA | 9 | 15100 | 29600 | 2.1 | 82100 | NA | < 0.2 | 3.4 | 10.45 |
| 3411 | DHP402A | DN | UNC | 04/08/91 | < 0.05 | 0.001 | 1120 | 0.032 | 276 | 0.299 | 0.64 | 13900 | 24800 | 1.70 | 76000 | 17.2 | 0.55 | 2.81 | -1.32 |
| 3676 | DHP402A | DN | UNC | 07/07/91 | < 0.05 | 0.006 | 1310 | 0.065 | 267 | 0.349 | 4.82 | 14000 | 24200 | 1.75 | 77000 | 15.6 | 0.59 | 2.56 | -3.07 |
| 4014 | DHP402A | DN | UNC | 10/16/91 | < 0.05 | < 0.001 | 1110 | 0.044 | 274 | 0.383 | 0.65 | 15300 | 24400 | 1.66 | 76000 | 15.7 | 1.41 | 2.21 | -2.48 |
| 3410 | DHP402Aa | DN | IT | 04/08/91 | NA | NA | 1300 | NA | 470 | NA | 5 | 15300 | 24800 | 3.8 | 83100 | NA | < 0.2 | 5.8 | 0.97 |
| 3409 | DHP402Aa | DN | UNC | 04/08/91 | < 0.05 | < 0.001 | 1160 | 0.08 | 304 | 0.299 | 2.83 | 13900 | 24500 | 2.69 | 77000 | 17.1 | < 0.5 | 4.23 | -1.47 |
| 3680 | DHP402Aa | DN | UNC | 07/07/91 | < 0.05 | 0.006 | 1280 | 0.087 | 304 | 0.058 | 5.83 | 13500 | 24000 | 2.67 | 96000 | 15.4 | < 0.5 | 4.20 | 4.19 |
| 4002 | FLRPDL | | UNC | 10/16/91 | < 0.05 | < 0.001 | 124 | 0.065 | 322 | 0.076 | < 0.50 | 8410 | 11800 | 1.00 | 96000 | 11.4 | 1.20 | 14.3 | -4.13 |
| 4001 | FLRPDL | | UNC | 10/16/91 | 0.068 | < 0.001 | 126 | 0.031 | 328 | 0.08 | < 0.50 | 8220 | 12300 | 1.05 | 99000 | 11.6 | 1.23 | 14.4 | -1.94 |

NA Not available.

# TABLE C-1
## ANALYTICAL RESULTS

| SAMPLE NUMBER | HOLE NUMBER & DIRECTION | | LAB | DATE | pH[a] (s.u.) | SG[b] (g/cm$^3$) | TDS[c] (mg/L) | EXT ALK[d] (mg/L) | TIC[e] (mg/L) | TOC[e] (mg/L) | Br (mg/L) | Cl (mg/L) | F (mg/L) | I (mg/L) | NO3 (mg/L) | NH4 (mg/L) | P (mg/L) | SO4 (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4000 | FLRPDL | | UNC | 10/16/91 | 7.4 | 1.22 | 361000 | 450 | 151 | 188 | 622 | 190000 | 3.6 | 0.4 | 23.4 | 17.6 | 0.2 | 21700 |
| 3408 | GSEEP | DN | IT | 04/08/91 | 6.3 | 1.23 | 339000 | 900 | 10 | NA | 1700 | 198000 | 4 | 17 | < 0.09 | 170 | NA | 29000 |
| 3679 | GSEEP | DN | IT | 07/07/91 | 6.3 | 1.24 | 360000 | 920 | < 5 | NA | 1400 | 170000 | 6.1 | 22 | < 0.09 | 160 | NA | 31000 |
| 3407 | GSEEP | DN | UNC | 04/08/91 | 6.4 | 1.22 | 383000 | 894 | 3.6 | 25 | 1340 | 189000 | 3.2 | 16.9 | 0.5 | 182 | < 0.1 | 28000 |
| 3678 | GSEEP | DN | UNC | 07/07/91 | 6.3 | 1.23 | 377000 | 885 | 3.0 | 10 | 1390 | 190000 | 3.9 | 12.0 | 0.7 | 141 | < 0.1 | 27700 |
| 4013 | GSEEP | DN | UNC | 10/16/91 | 6.4 | 1.22 | 372000 | 900 | 4.1 | < 5 | 1400 | 189000 | 4.4 | 19.0 | 0.6 | 171 | 0.2 | 27100 |
| 3442 | OH20 | HZ | IT | 04/08/91 | 5.9 | 1.23 | 330000 | 670 | < 5 | NA | 1500 | 182000 | 5 | 14 | 0.40 | 130 | NA | 16000 |
| 3704 | OH20 | HZ | IT | 07/07/91 | 6.0 | 1.23 | 370000 | NA | < 5 | NA | 1600 | 180000 | 5.3 | 13 | 0.13 | 140 | NA | 18000 |
| 3433 | OH20 | HZ | UNC | 04/08/91 | 6.0 | 1.21 | 198000 | 662 | 3.6 | 41 | 1450 | 198000 | 3.9 | 15.5 | 1.1 | 133 | < 0.1 | 17400 |
| 3703 | OH20 | HZ | UNC | 07/07/91 | 6.0 | 1.22 | 384000 | 1480 | 3.6 | 36 | 1480 | 199000 | 4.8 | 10.7 | 1.0 | 123 | < 0.1 | 17000 |
| 4017 | OH20 | HZ | UNC | 10/16/91 | 6.1 | 1.22 | 375000 | 670 | 4.1 | 41 | 1520 | 197000 | 4.8 | 14.2 | 1.1 | 135 | 0.1 | 16900 |
| 3435 | OH23 | HZ | IT | 04/08/91 | 6.0 | 1.22 | 340000 | 660 | 5 | NA | 1700 | 174000 | 6 | 13 | 0.27 | 140 | NA | 16000 |
| 3702 | OH23 | HZ | IT | 07/07/91 | 6.0 | 1.23 | 370000 | NA | < 5 | NA | 1200 | 170000 | 6.7 | 13 | < 0.09 | 180 | NA | 16000 |
| 3434 | OH23 | HZ | UNC | 04/08/91 | 6.1 | 1.21 | 192000 | 671 | 3.0 | 41 | 1470 | 192000 | 4.0 | 14.5 | 1.0 | 144 | < 0.1 | 16500 |
| 3701 | OH23 | HZ | UNC | 07/07/91 | 6.0 | 1.22 | 383000 | 644 | 4.1 | 30 | 1510 | 196000 | 4.2 | 9.3 | 0.6 | 123 | < 0.1 | 16100 |
| 4016 | OH23 | HZ | UNC | 10/16/91 | 6.1 | 1.21 | 367000 | 620 | 3.6 | 25 | 1510 | 195000 | 4.8 | 13.1 | 0.9 | 136 | < 0.1 | 15900 |
| 3437 | OH26 | HZ | IT | 04/08/91 | 6.0 | 1.22 | 347000 | 720 | 5 | NA | 2000 | 182000 | 4 | 16 | 0.22 | 130 | NA | 16000 |
| 3700 | OH26 | HZ | IT | 07/07/91 | 6.1 | 1.22 | 340000 | 740 | < 5 | NA | 1400 | 180000 | 6.2 | 15 | < 0.09 | 120 | NA | 16000 |
| 3436 | OH26 | HZ | UNC | 04/08/91 | 6.1 | 1.22 | 375000 | 723 | 3.6 | 61 | 1470 | 192000 | 4.6 | 15.9 | 0.7 | 160 | < 0.1 | 16200 |
| 3699 | OH26 | HZ | UNC | 07/07/91 | 6.0 | 1.23 | 385000 | 726 | 3.6 | 46 | 1520 | 196000 | 4.6 | 10.5 | 0.7 | 114 | < 0.1 | 15900 |
| 4015 | OH26 | HZ | UNC | 10/16/91 | 6.1 | 1.21 | 366000 | 680 | 4.1 | 51 | 1520 | 194000 | 4.9 | 14.5 | 1.1 | 130 | 0.1 | 15900 |
| 3441 | OH28 | DN | UNC | 04/08/91 | 6.1 | 1.21 | 370000 | 699 | 3.0 | 46 | 1450 | 192000 | 5.8 | 12.9 | 1.0 | 146 | 0.6 | 16500 |
| 3438 | OH45 | HZ | UNC | 04/08/91 | 6.2 | 1.22 | 387000 | 833 | 3.0 | 56 | 1500 | 196000 | 4.6 | 15.1 | 0.8 | 157 | < 0.1 | 16500 |
| 4020 | OH45 | HZ | UNC | 10/16/91 | 6.3 | 1.21 | 370000 | 870 | 9.7 | 81 | 1580 | 197000 | 5.5 | 14.7 | 1.2 | 141 | 0.1 | 16500 |
| 3440 | OH46 | DN | IT | 04/08/91 | 6.1 | 1.23 | 342000 | 900 | 5 | NA | 1700 | 186000 | 5 | 15 | 0.13 | 140 | NA | 15000 |
| 3698 | OH46 | DN | IT | 07/07/91 | 6.2 | 1.23 | 340000 | NA | < 5 | NA | 1600 | 180000 | 6.1 | 15 | < 0.09 | 130 | NA | 16000 |
| 3439 | OH46 | DN | UNC | 04/08/91 | 6.2 | 1.22 | 381000 | 903 | 4.6 | 36 | 1540 | 193000 | 5.0 | 14.5 | 0.6 | 151 | < 0.1 | 16300 |

[a] s.u. = standard units
[b] Specific Gravity
[c] Total Disolved Solids
[d] Extended Alkalinity measured to an endpoint pH of 2.5 and reported as equivalent bicarbonate ($HCO_3$).
[e] TIC and TOC are reported as equivalent bicarbonate.
NA Not available.

# TABLE C-1
## ANALYTICAL RESULTS

| SAMPLE NUMBER | HOLE NUMBER & DIRECTION | | LAB | DATE | Al (mg/L) | As (mg/L) | B (mg/L) | Ba (mg/L) | Ca (mg/L) | Cs (mg/L) | Fe (mg/L) | K (mg/L) | Mg (mg/L) | Mn (mg/L) | Na (mg/L) | Rb (mg/L) | Si (mg/L) | Sr (mg/L) | CHARGE BALANCE (percent) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4000 | FLRPDL | | UNC | 10/16/91 | 0.213 | 0.001 | 258 | 0.189 | 310 | 0.096 | < 0.50 | 9230 | 13200 | 1.05 | 99000 | 12.2 | 1.65 | 12.8 | -1.59 |
| 3408 | GSEEP | DN | IT | 04/08/91 | NA | NA | 1500 | NA | 320 | NA | < 3 | 14000 | 14500 | 0.7 | 101000 | NA | 0.5 | 2.5 | -2.17 |
| 3679 | GSEEP | DN | IT | 07/07/91 | NA | NA | 1400 | NA | 260 | NA | < 3 | 13300 | 13600 | 0.6 | 92600 | NA | 0.5 | 2.5 | 0.24 |
| 3407 | GSEEP | DN | UNC | 04/08/91 | < 0.05 | 0.009 | 1380 | 0.015 | 240 | 0.126 | < 0.5 | 12900 | 14400 | 0.60 | 95000 | 13.3 | 1.10 | 1.98 | -2.47 |
| 3678 | GSEEP | DN | UNC | 07/07/91 | < 0.05 | 0.01 | 1580 | 0.019 | 239 | 0.192 | < 0.50 | 13100 | 14100 | 0.60 | 93000 | 12.3 | 1.21 | 2.01 | -3.61 |
| 4013 | GSEEP | DN | UNC | 10/16/91 | < 0.05 | 0.005 | 1460 | 0.029 | 252 | 0.204 | < 0.50 | 14100 | 14700 | 0.59 | 95000 | 12.3 | 1.61 | 1.83 | -1.83 |
| 3442 | OH20 | HZ | IT | 04/08/91 | NA | NA | 1400 | NA | 380 | NA | < 3 | 16600 | 21600 | 2.0 | 92700 | NA | 0.6 | 2.0 | 6.43 |
| 3704 | OH20 | HZ | IT | 07/07/91 | NA | NA | 1500 | NA | 390 | NA | < 3 | 17700 | 23500 | 2.0 | 91800 | NA | 0.6 | 2.0 | 7.80 |
| 3433 | OH20 | HZ | UNC | 04/08/91 | < 0.05 | 0.003 | 1170 | 0.041 | 334 | 0.223 | < 0.50 | 15000 | 21100 | 1.95 | 83000 | 17.6 | 1.36 | 1.69 | -1.96 |
| 3703 | OH20 | HZ | UNC | 07/07/91 | 0.054 | 0.006 | 1360 | 0.174 | 323 | 0.26 | < 0.50 | 14900 | 19900 | 1.86 | 78000 | 14.7 | 1.33 | 1.61 | -5.10 |
| 4017 | OH20 | HZ | UNC | 10/16/91 | < 0.05 | 0.001 | 1390 | 0.102 | 337 | 0.287 | < 0.50 | 15600 | 21700 | 1.94 | 80000 | 15.3 | 1.91 | 1.45 | -2.22 |
| 3435 | OH23 | HZ | IT | 04/08/91 | NA | NA | 1300 | NA | 450 | NA | 3 | 15700 | 19800 | 2.5 | 76800 | NA | 0.9 | 1.2 | 1.12 |
| 3702 | OH23 | HZ | IT | 07/07/91 | NA | NA | 1500 | NA | 320 | NA | < 3 | 16400 | 22700 | 1.8 | 83300 | NA | 0.7 | 1.3 | 7.07 |
| 3434 | OH23 | HZ | UNC | 04/08/91 | 0.051 | 0.002 | 1210 | 0.138 | 279 | 0.229 | < 0.50 | 15000 | 21800 | 1.70 | 79000 | 17.9 | 2.28 | 0.97 | -1.42 |
| 3701 | OH23 | HZ | UNC | 07/07/91 | 0.079 | 0.005 | 1370 | 0.094 | 276 | 0.263 | < 0.50 | 14300 | 21000 | 1.67 | 78000 | 15 | 1.75 | 0.93 | -3.45 |
| 4016 | OH23 | HZ | UNC | 10/16/91 | 0.062 | 0.001 | 1380 | 0.045 | 283 | 0.286 | < 0.50 | 15100 | 21300 | 1.63 | 78000 | 15.2 | 2.06 | 0.85 | -2.76 |
| 3437 | OH26 | HZ | IT | 04/08/91 | NA | NA | 1400 | NA | 440 | NA | < 3 | 16100 | 22100 | 2.3 | 80200 | NA | 0.5 | 1.2 | 2.10 |
| 3700 | OH26 | HZ | IT | 07/07/91 | NA | NA | 1500 | NA | 320 | NA | < 3 | 16600 | 22900 | 1.7 | 83700 | NA | 0.4 | 1.1 | 4.60 |
| 3436 | OH26 | HZ | UNC | 04/08/91 | 0.121 | < 0.001 | 1160 | 0.122 | 278 | 0.224 | < 0.50 | 14700 | 21200 | 1.54 | 78000 | 17.6 | 1.16 | 1.15 | -2.27 |
| 3699 | OH26 | HZ | UNC | 07/07/91 | 0.144 | 0.004 | 1350 | 0.105 | 276 | 0.268 | < 0.50 | 14400 | 20500 | 1.58 | 76000 | 14.9 | 0.98 | 0.88 | -4.58 |
| 4015 | OH26 | HZ | UNC | 10/16/91 | < 0.05 | < 0.001 | 1390 | 0.095 | 280 | 0.275 | < 0.50 | 15100 | 21900 | 1.60 | 78000 | 14.7 | 1.53 | 0.76 | -2.09 |
| 3441 | OH28 | DN | UNC | 04/08/91 | 0.055 | 0.002 | 1170 | 0.14 | 265 | 0.215 | < 0.50 | 14300 | 21200 | 2.26 | 78000 | 17 | 1.82 | 0.82 | -2.42 |
| 3438 | OH45 | HZ | UNC | 04/08/91 | < 0.05 | 0.002 | 1230 | 0.051 | 283 | 0.214 | < 0.50 | 16300 | 21100 | 1.64 | 83000 | 17.6 | 1.33 | 2.78 | -1.09 |
| 4020 | OH45 | HZ | UNC | 10/16/91 | < 0.05 | < 0.001 | 1390 | 0.102 | 301 | 0.276 | < 0.50 | 16300 | 20800 | 1.60 | 77000 | 15.1 | 1.87 | 2.28 | -3.87 |
| 3440 | OH46 | DN | IT | 04/08/91 | NA | NA | 1500 | NA | 480 | NA | 4 | 17700 | 24100 | 2.2 | 116000 | NA | 0.4 | 1.9 | 14.58 |
| 3698 | OH46 | DN | IT | 07/07/91 | NA | NA | 1600 | NA | 340 | NA | < 3 | 18400 | 25300 | 1.8 | 93700 | NA | 0.4 | 1.6 | 10.05 |
| 3439 | OH46 | DN | UNC | 04/08/91 | < 0.05 | < 0.001 | 1290 | 0.06 | 279 | 0.228 | < 0.50 | 16300 | 21000 | 1.43 | 82000 | 17.8 | 0.99 | 1.64 | -0.80 |

NA Not available.

# TABLE C-1
# ANALYTICAL RESULTS

| SAMPLE NUMBER | HOLE NUMBER & DIRECTION | | LAB | DATE | pH[a] (s.u.) | SG[b] (g/cm$^3$) | TDS[c] (mg/L) | EXT ALK[d] (mg/L) | TIC[e] (mg/L) | TOC[e] (mg/L) | Br (mg/L) | Cl (mg/L) | F (mg/L) | I (mg/L) | NO3 (mg/L) | NH4 (mg/L) | P (mg/L) | SO4 (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3697 | OH46 | DN | UNC | 07/07/91 | 6.1 | 1.23 | 389000 | 976 | 4.1 | 25 | 1600 | 194000 | 5.5 | 10.5 | 0.7 | 100 | < 0.1 | 16600 |
| 4018 | OH46 | DN | UNC | 10/16/91 | 6.2 | 1.21 | 365000 | 930 | 5.6 | 20 | 1590 | 194000 | 5.5 | 14.5 | 1.6 | 140 | < 0.1 | 15800 |

[a] s.u. = standard units
[b] Specific Gravity
[c] Total Disolved Solids
[d] Extended Alkalinity measured to an endpoint pH of 2.5 and reported as equivalent bicarbonate ($HCO_3$).
[e] TIC and TOC are reported as equivalent bicarbonate.
NA Not available.

# TABLE C-1
## ANALYTICAL RESULTS

| SAMPLE NUMBER | HOLE NUMBER & DIRECTION | LAB | DATE | Al (mg/L) | As (mg/L) | B (mg/L) | Ba (mg/L) | Ca (mg/L) | Cs (mg/L) | Fe (mg/L) | K (mg/L) | Mg (mg/L) | Mn (mg/L) | Na (mg/L) | Rb (mg/L) | Si (mg/L) | Sr (mg/L) | CHARGE BALANCE (percent) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3697 | OH46 DN | UNC | 07/07/91 | 0.093 | 0.006 | 1430 | 0.128 | 263 | 0.269 | < 0.50 | 15700 | 20300 | 1.45 | 75000 | 15 | 1.09 | 1.05 | -4.53 |
| 4018 | OH46 DN | UNC | 10/16/91 | < 0.05 | < 0.001 | 1440 | 0.038 | 285 | 0.291 | < 0.50 | 16900 | 20800 | 1.25 | 78000 | 15.1 | 1.74 | 1.43 | -2.51 |

NA Not available.

# END

# DATE FILMED

12/16/93