Culebra T Field Data Revised

Thickness from

Top of Culebra to Base of Vaca Triste (m)

Used to assist in estimating boundary of Salado dissolution

2130nw

2132nw

2130sw

2132se

2230sw

2232se

2330sw

2331se

2430sw

2430se

2431se

2432se

The estimated boundary of Salado dissolution is extended in this area based on the close relationship between the boundary of Nash Draw and upper Salado dissolution. In addition, the formation of breccia pipes just west of this line indicates upper Salado dissolution by the deformation of near-surface units and Rustler.
DWPowers 5/15/02

The boundary suggested for "incipient" Salado dissolution based on a slight change in the gradient of thickness has been removed. The Salado dissolution margin represents a distinctive change in thickness.
DWPowers 5/15/02

The boundary of this Salado dissolution re-entrant has been extended to the south based on additional oil & gas drillhole data obtained late in 2003.
DWPowers 1/3/03

The boundary for upper Salado dissolution has been redrawn to connect the area around P-14 as a part of the area of Salado dissolution rather than as an isolated area of "incipient" dissolution.
DWPowers 5/15/02

Dissolution Line 4/02

Revised Upper Salado Dissolution Line 1/03/03

General Thinning Trend

Approximate margin of upper Salado dissolution

Data for January 2003 revision are plotted with smaller dots with blue hues and lighter colored values. Reddish numbers are from potash drillholes; purple numbers are from oil and gas drillholes

3600000

3590000

3580000

3570000

3560000

3550000

600000

620000

640000

Gridlines are UTM Coordinates (meters) (NAD 27, Zone 13)

Information for the thickness is included in Source Table-B Revised.
Individual drillholes are identified on map Drillhole ID Numbers Revised.
Location and other data are provided in Source Tables-A and -B Revised.

Prepared by Dennis W. Powers, Ph.D., Consulting Geologist
for Task 1, AP-088.

January 2003

Information Only

Geophysical Log Cross-section A-A' in the Vicinity of H-9
Illustrating Dissolution of the Upper Salado Formation

A
Southwest

A'
Northeast

9329 9305 9372 9345 9253 9251 9367 9355 9330

Strong dissolution
of upper Salado

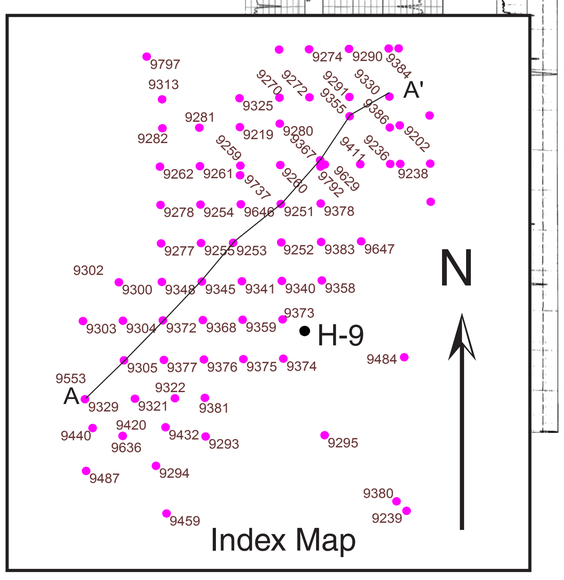
Slight dissolution
of upper Salado

Culebra base

top of Rustler

base of Rustler,
top of Salado

Vaca Triste



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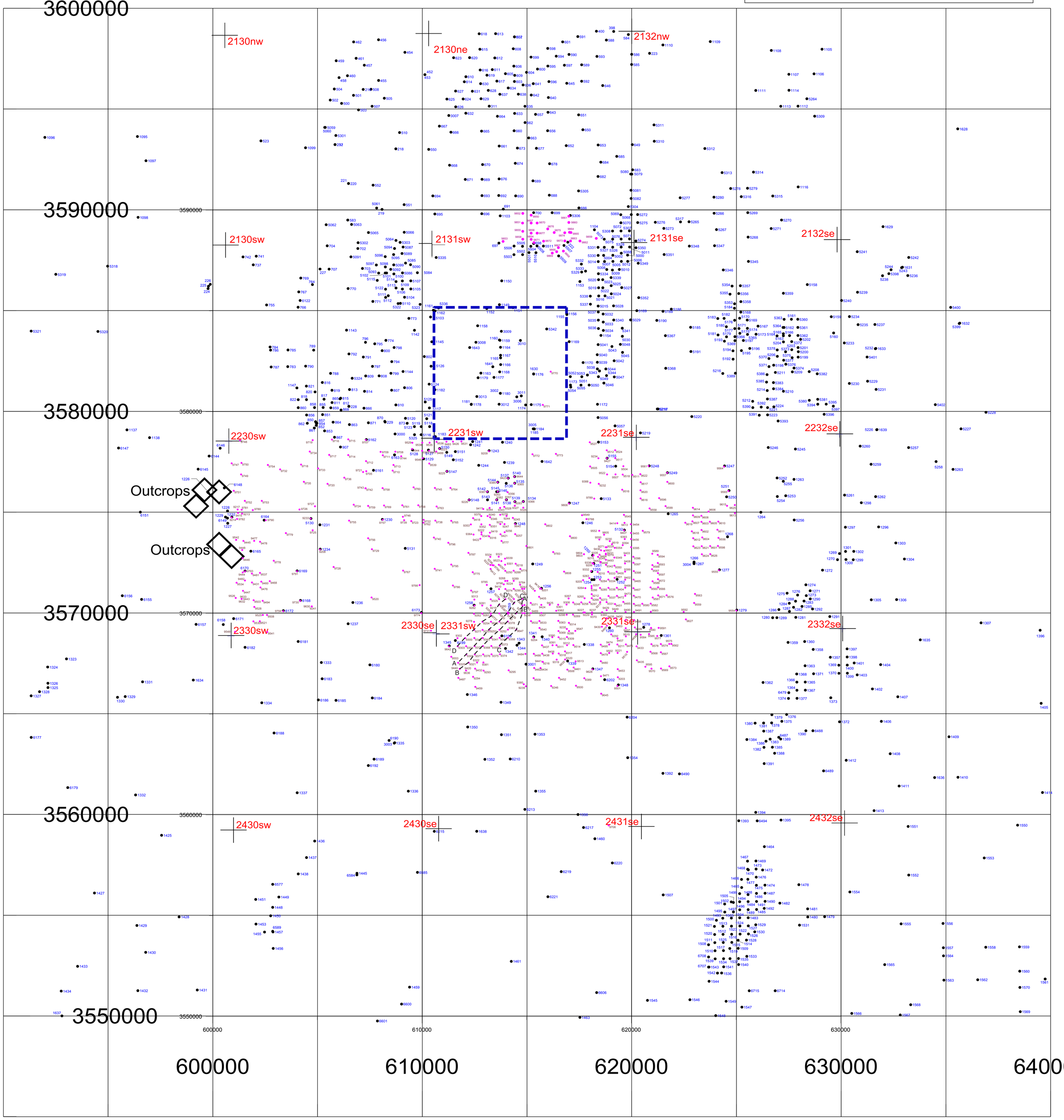
January, 2003

Information Only

Culebra T Field Data
Drillhole ID Numbers

Prepared by Dennis W. Powers, Ph.D., Consulting Geologist
for Addendum 2 of Task 1, AP-088
Location and other data for drillholes are available in Source Table-A Revised and Source Table-B included in the addendum.
January 2003



Information Only

Culebra T Field Data
Elevation of Top of Culebra (m amsl)

3600000

3590000

3580000

3570000

3560000

3550000

600000

620000

630000

640000

Data from April 2002 are shown by black dots and balck values. External data used April 2002 are represented by red X and green values. Data from geophysical logs from oil and gas wells added to this map are represented by blue dots and purple values. Data from potash drilling are represented by reddish dots and values. A value with ? is uncertain and does not significantly alter contours.

Not contoured-
limited data and
significant variability

Gridlines are UTM Coordinates (meters) (NAD 27, Zone 13)

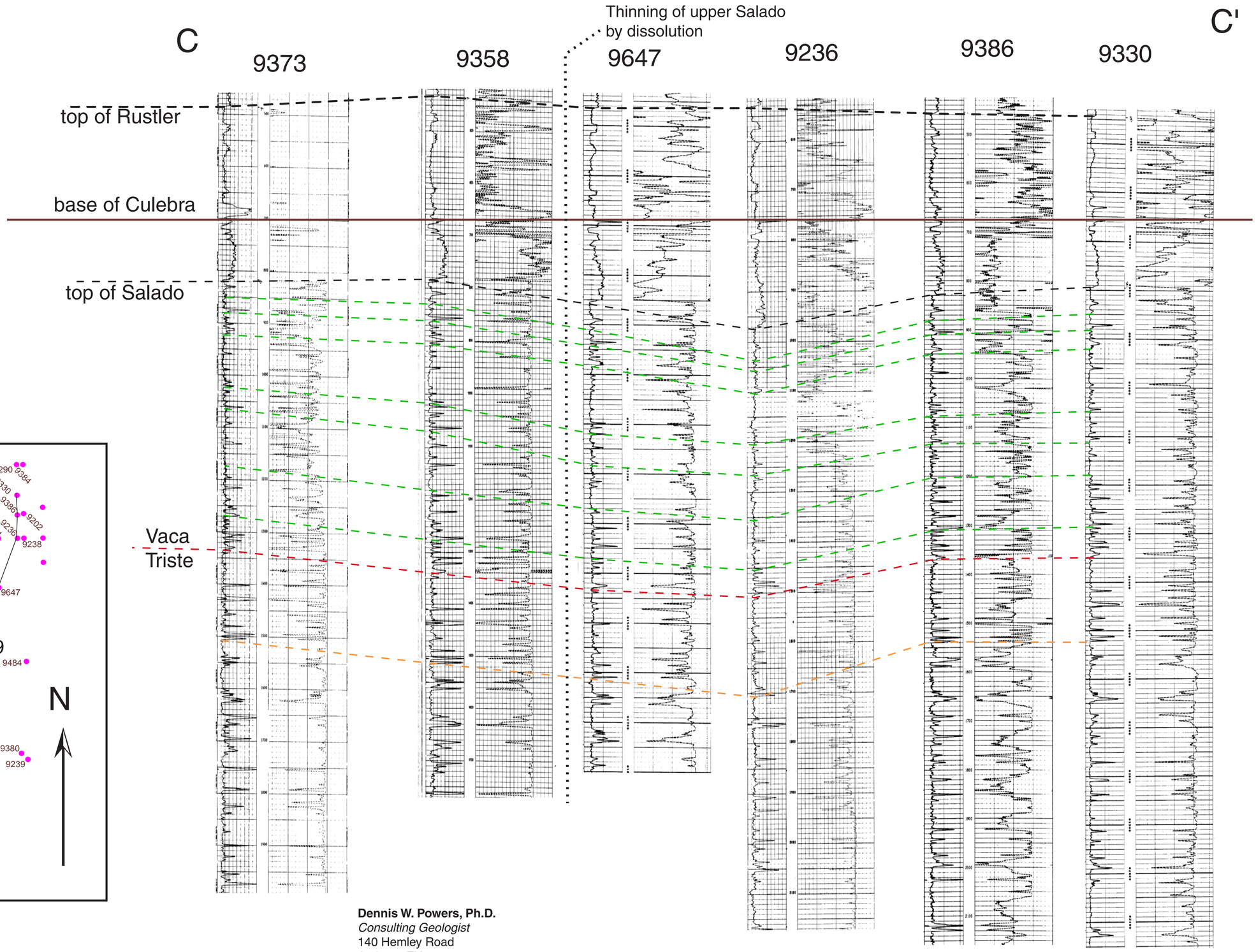
Information for the elevation is included in Source Table-B Revised. Individual drillholes are identified on map Drillhole ID Numbers. Location and other data are provided in Source Table-A Revised and Table-B Revised.

Prepared by Dennis W. Powers, Ph.D., Consulting Geologist
for Task 1, AP-088.

January 2003

Information Only

Geophysical Log Cross-section C-C' in the Vicinity of H-9
Illustrating Dissolution of the Upper Salado Formation



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Logs not uniformly scaled

Information Only

Geophysical Log Cross-section B-B' in the Vicinity of H-9
Illustrating Dissolution of the Upper Salado Formation

Southwest
~sec 5, T24S, R31E

Northeast
~sec 33, T23S, R31E

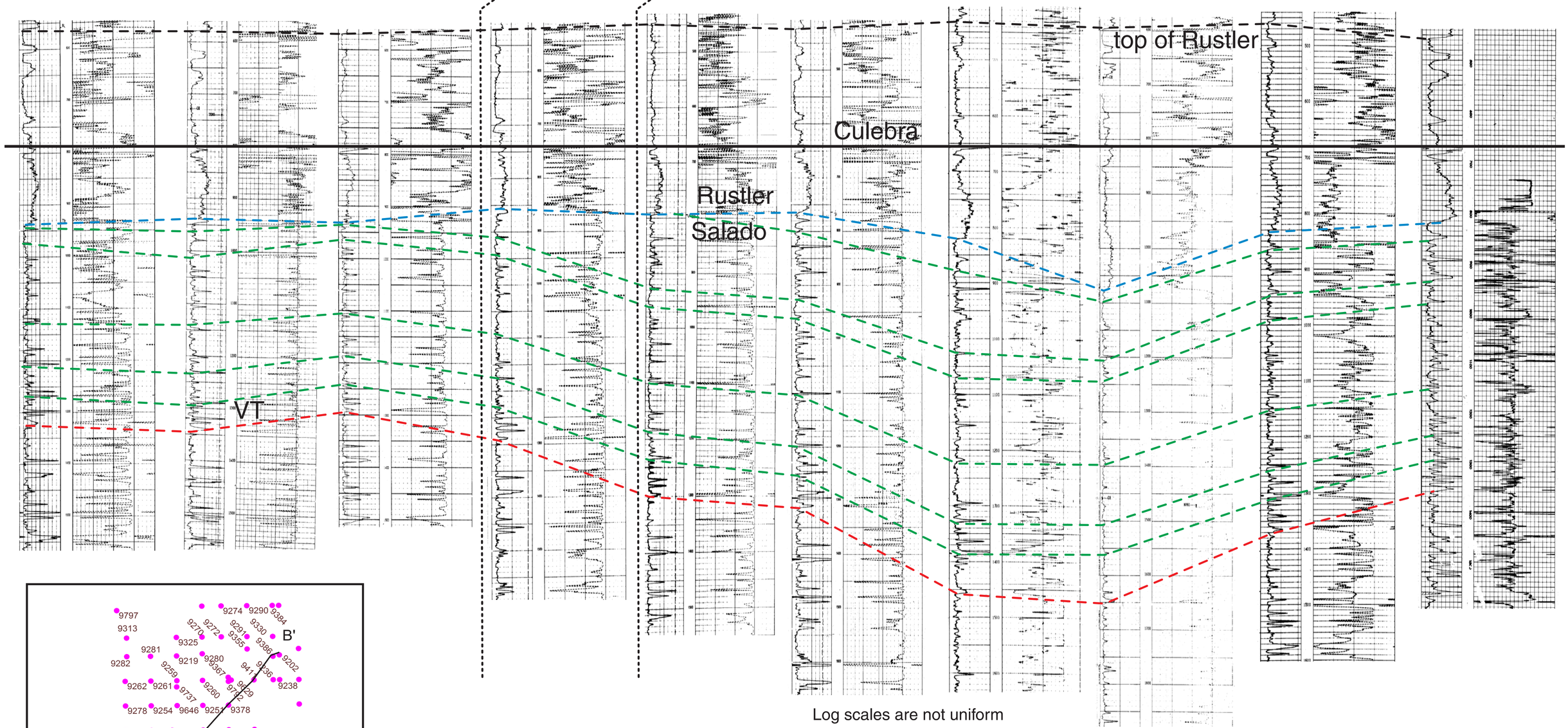
B

9440 9321 9377 9368 9341 9252 9378 9411 9386 9202

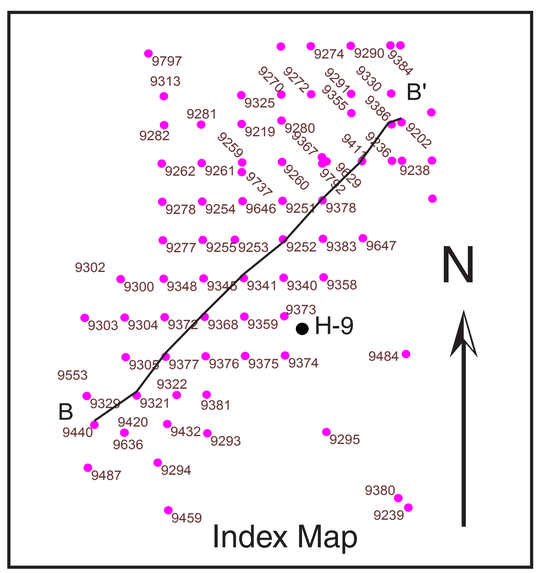
B"

Upper Salado strongly thinning to south

Upper Salado begins thinning to south



Log scales are not uniform



Cross-section B-B' runs through anomalously thick Culebra-VT interval with downdropped Culebra at 9411.

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January, 2003

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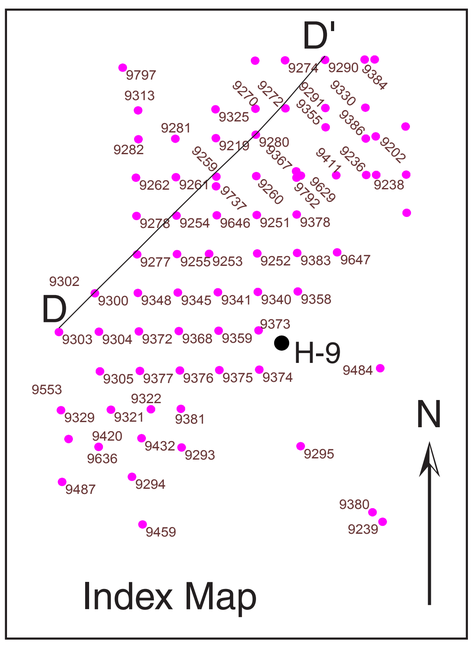
Geophysical Log Cross-section D-D' in the Vicinity of H-9
Illustrating Dissolution of the Upper Salado Formation



D

9303

9300

9277

Thinning of upper Salado
by dissolution

9254

9259

9280

9272

D'

Rustler top

base of Culebra

Rustler base

Salado top

Vaca
Triste

Logs not uniformly scaled

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