

CONFUSION PROJECT  
MILLARD COUNTY, UTAH

LOCATION AND ACCESS: The project site is located in west-central Utah, approximately 130 miles southwest of Provo. The site is reached from State Highway 50 via graded county roads. The site consists of two separate parcels totalling 15 sections.

LEASE POSITION: T17S, R15W, Sections 19, 20, 22, 27, 28,  
29, 30, 33 and 34  
T18S, R15W, Section 3  
T18S, R14W, Sections 3, 8, 9, 10 and 17

GEOHERMAL AND GEOLOGIC DESCRIPTION: Heat flow values, ranging from 4.4 HFU to 10.2 HFU, and thermal gradients, ranging from 147°C/km to 319°C/km, along with high Cl concentrations in ground water and numerous warm springs near the site, indicate a highly active hydrothermal system at shallow depth. The project site overlies two major range front faults forming the eastern and western boundaries of White Valley.

ENERGY MARKETING POTENTIAL: The project site lies within 120 miles of the Provo-Spanish Fork-Orem metropolitan area. The major agricultural center of Delta, which relies entirely on electrical pumping for irrigation, lies 40 miles to the east of the project site.

APPENDIX F. CONFUSION

PROJECT: Confusion, Utah. (Delta)

LOCATION: The property consists of two parcels, west of Delta, which are centered on  $113^{\circ} 30'$  WLong.,  $39^{\circ} 16'$  NLat. (T17S, R15W) in the Basin and Range Province of western Utah.

LEASE POSITION: Pending:

T17S, R15W Sections 19, 20, 22, 27, 28, 29, 30, 33 and 34

T18S, R15W Section 3

T18S, R14W Sections 3, 8, 9, 10 and 17

AVAILABLE DATA: Figure F-1: Several high heat flow values, ranging from 4.4 to 10.2 HFUs, have been measured in the area. Tule Spring to the north of the lease position is a known warm spring. Several other warm springs occur in the Tule Valley north and east of the lease position. These springs and surface water in the area display high chloride concentrations.

GENERALIZED GEOLOGY: The southeastern lease position (Figure F-1) overlies the western range front fault of the House Range. Several thousand feet of displacement have occurred along this fault exposing Cambrian sediments. Tertiary and Quaternary volcanic rocks are present in the area. Chalk Knolls, which parallels the House Mountains and divides the northwestern lease position, was caused by recent tectonic activity and may be representative of a minor vent. However, detailed field examination is necessary for more exact evaluation.

ASSESSMENT WORK COMPLETED: In April 1980 initial exploration was conducted which generated the data shown in Figure F-1. Preliminary work for the MX missile program has generated further data which should become available in the near future. No subsequent work has been accomplished.

PROPOSED ASSESSMENT WORK: Assessment should be coordinated with evaluation of other Utah properties and completed as soon as possible. One geologist performing a mercury survey and doing detailed geologic mapping could complete preliminary

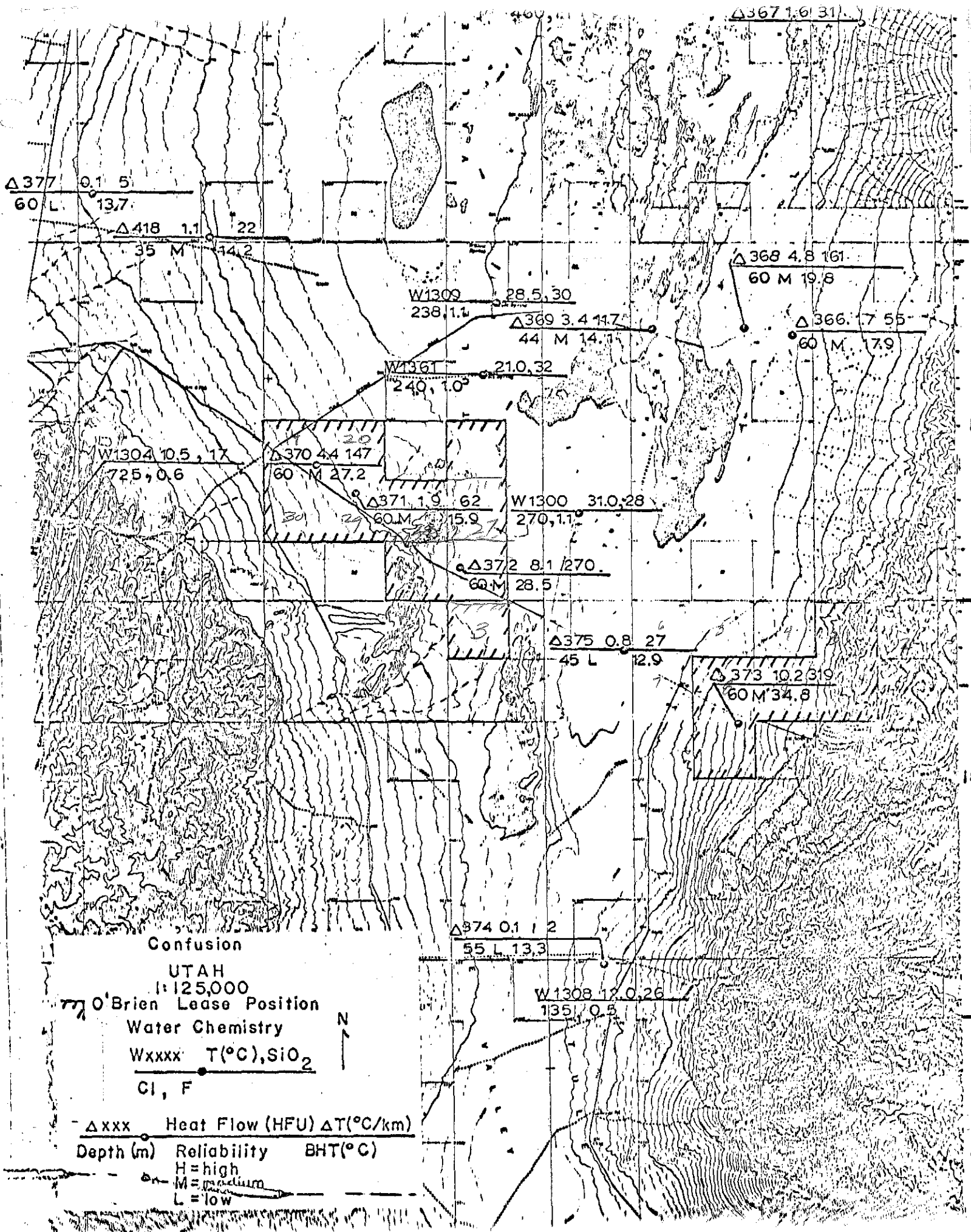
assessment in approximately thirteen days. This would include flagging 25-30 prospective drill sites. Available boreholes drilled for the MX program since initial exploration would be logged. Available aerial coverage could be used in mapping, or new coverage could be obtained at higher cost.

Drilling both prospects would take approximately five days, including two days' mobilization. Approximately three holes would be necessary for the southeastern prospect and two to three holes for the northwestern prospect. More holes may be necessary due to the complex heat flow pattern. Results of the mercury survey, geologic mapping and new MX borehole measurements will be necessary prior to drilling.

APPROXIMATE COSTS:

Geologic mapping, mercury survey and flagging  
(1 geologist x 13 days):

Salary	\$1,064
Room and board	468
Fuel	80
Air photos, maps and drafting	<u>60</u>
SUB-TOTAL	\$1,672
Drilling six 150' holes (\$5.50/ft. + \$2.50 mob.)	\$7,200
PVC, misc.	220
Salary (1 geologist x 5 days)	409
Room and board	80
Fuel	<u>40</u>
SUB-TOTAL	\$7,949
TOTAL	\$9,621



Confusion

UTAH  
 1:125,000

O'Brien Lease Position

Water Chemistry

Wxxx T(°C), SiO<sub>2</sub>

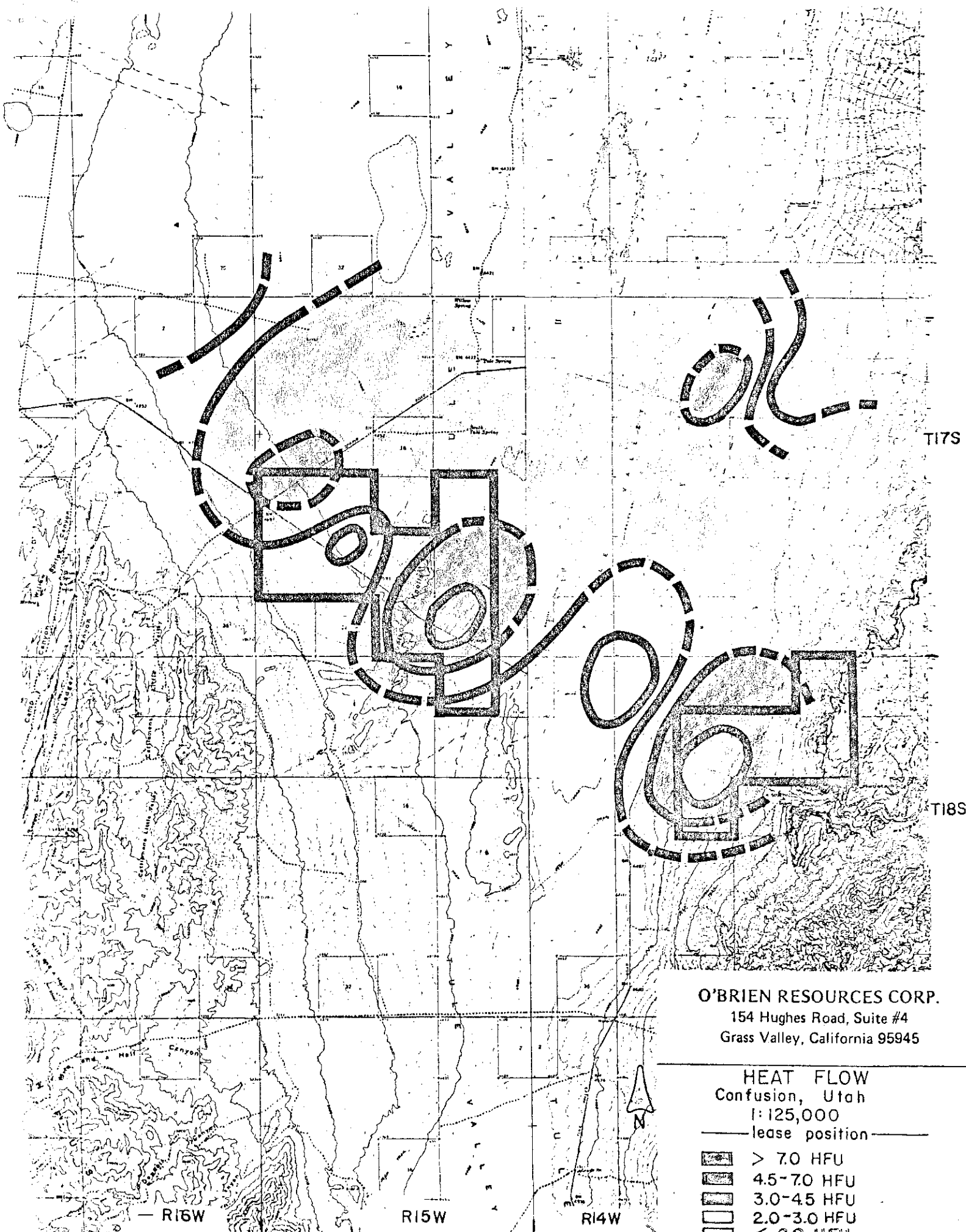
Cl, F



Δxxx Heat Flow (HFU) ΔT(°C/km)

Depth (m) Reliability BHT(°C)

H = high  
 M = medium  
 L = low








T17S

T18S

O'BRIEN RESOURCES CORP.  
 154 Hughes Road, Suite #4  
 Grass Valley, California 95945

HEAT FLOW  
 Confusion, Utah  
 1:125,000  
 — lease position —

-  > 7.0 HFU
-  4.5-7.0 HFU
-  3.0-4.5 HFU
-  2.0-3.0 HFU
-  < 2.0 HFU

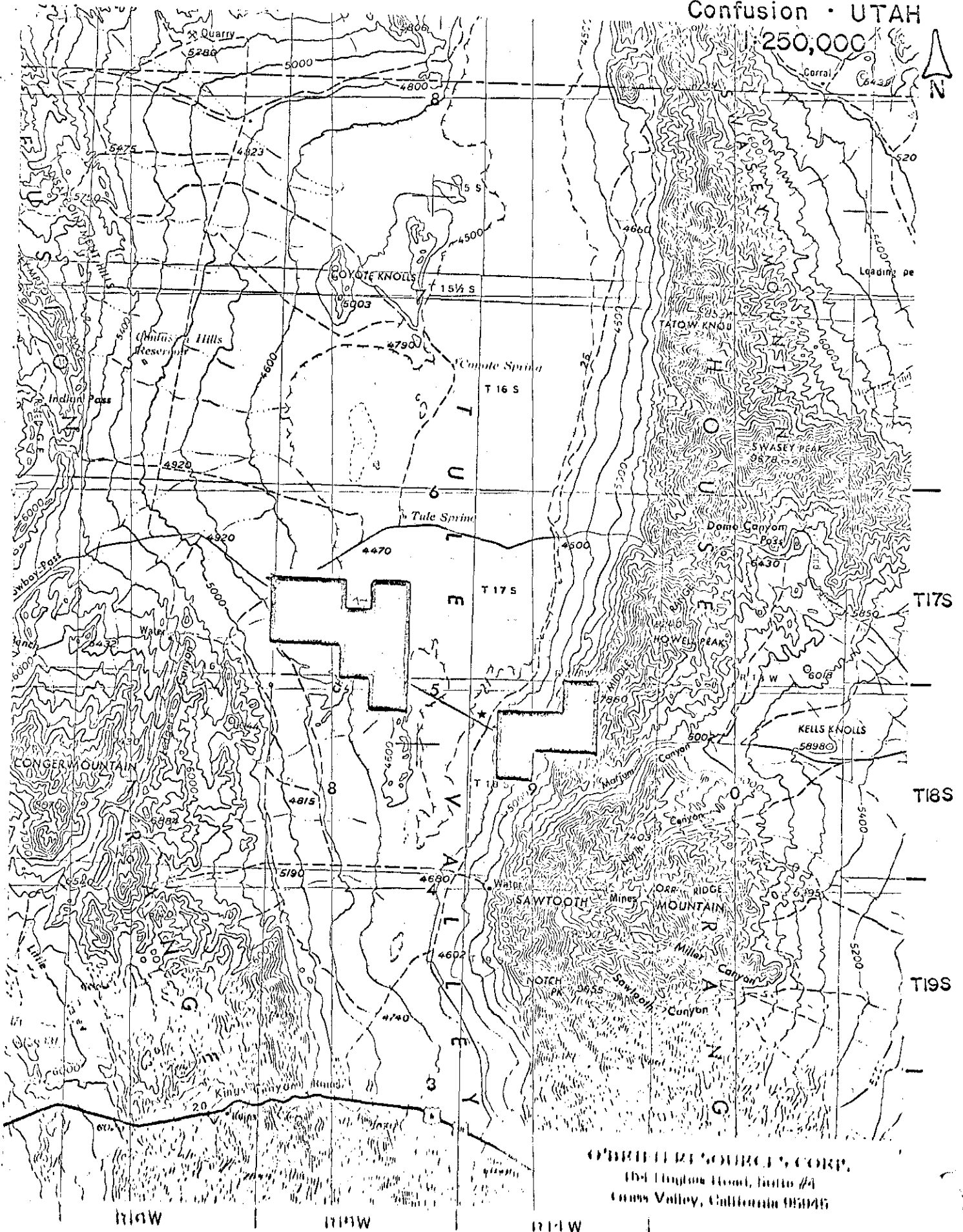
R16W

R15W

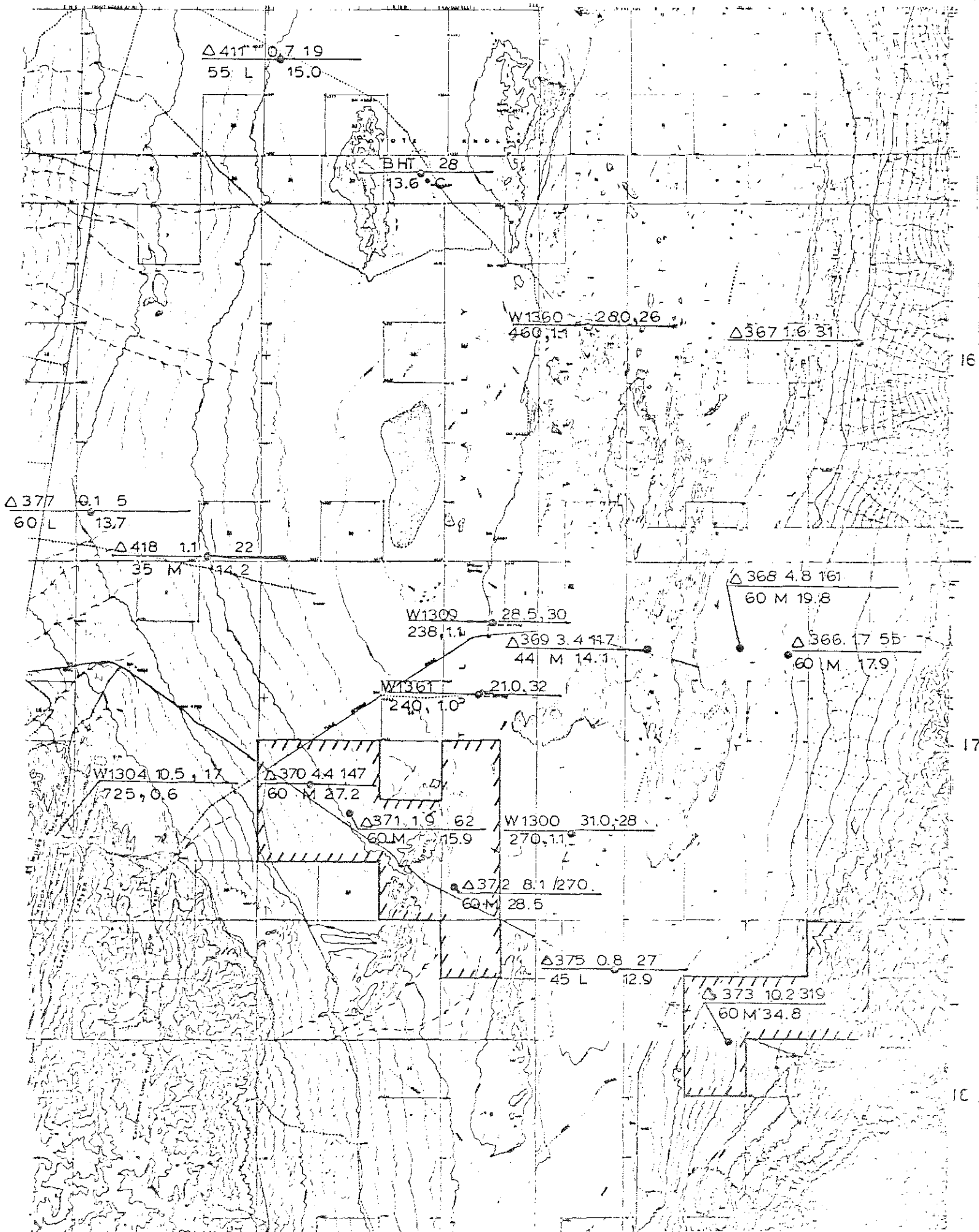
R14W

Confusion · UTAH

1:250,000



CHARTERED SURVEY, CORP.  
161 Douglas Road, Suite #4  
Crows Valley, California 95946



Heat Flow Data  
Confusion

$\frac{BHT \text{ at (m)}}{\Delta T \text{ } ^\circ\text{C}/\text{km}}$   $\odot$   $\frac{\Delta T \text{ } ^\circ\text{C}/\text{km}}{\text{H.F. or TCU}}$

Map No      Data Base  
                    No

Heat Flow Data

- |    |              |   |
|----|--------------|---|
| 1  |              | a. 19.71 at 57m<br>b. 90 $^\circ\text{C}/\text{km}$<br>c. 1.8 HFU at 2.0 TCU                  |
| 2  |              | a. 34.70 $^\circ\text{C}$ at 60m<br>b. 315 $^\circ\text{C}/\text{km}$<br>c. 6.3 at 2.0        |
| 3  |              | a. 31.74 at 45m<br>b. Isothermal<br>c. —  |
| 5  |              | a. 21.48 at 60m<br>b. 25 $^\circ\text{C}/\text{km}$<br>c. 0.5 at 2.0 TCU                      |
| 7  | $\Delta 374$ | a. 13.39 at 55m<br>b. Isothermal<br>c. —  |
| 8  | $\Delta 375$ | a. 12.89 at 45m<br>b. 27 $^\circ\text{C}/\text{km}$<br>c. 0.5 HFU at 2 TCU                    |
| 9  | $\Delta 368$ | a. 19.77 at 60m<br>b. 161 $^\circ\text{C}/\text{km}$<br>c. 3.2 HFU at 2.0 TCU                 |
| 10 | $\Delta 366$ | a. 17.93 $^\circ\text{C}$ at 60m<br>b. 55 $^\circ\text{C}/\text{km}$<br>c. 1.1 HFU at 2.0 TCU |
| 11 | $\Delta 367$ | a. 16.68 at 60<br>b. 31 $^\circ\text{C}$<br>c. 0.6 at 2.0 HFU                                 |



12  $\Delta 411$

- a. 14.99 at 55
- b.  $19^{\circ}\text{C}/\text{km}$
- c. 0.4 at 2.0 TCU

13 ~~\*~~

- a. 13.64 at 28 m
- b. —
- c. —

14  $\Delta 369$

- a.  $14.12^{\circ}\text{C}$  at 44 m
- b.  $117^{\circ}\text{C}/\text{km}$
- c. 2.3 at 2 TCU

15  $\Delta 370$

- a. 27.23 at 60
- b.  $147^{\circ}\text{C}/\text{km}$
- c. 3.0 at 2.0 TCU

16.  $\Delta 372$

- a. 28.45 at 60
- b.  $270^{\circ}\text{C}/\text{km}$
- c. 5.4 at 2 TCU

17  $\Delta 371$

- a. 15.90 at 60
- b.  $62^{\circ}\text{C}/\text{km}$
- c. 1.2 HFU at 2.0

18  $\Delta 418$

- a. 14.21 at 35
- b.  $22^{\circ}\text{C}/\text{km}$
- c. 0.4 at 2.0 TCU

19  $\Delta 377$

- a. 13.73 at 60
- b.  $5^{\circ}\text{C}/\text{km}$
- c. 0.1 at 2.0 HFU