

A00018

TEC-20

Hillsboro  
New Mexico  
Temperature/Depth Logs  
Lithologic Logs



AT Well No. 1124-1

Property-Project Hillsboro Depth Logged 74m  
 Map Hillsboro Scale 15' Date: Drilled 5/1/82 Logged 28/1/82  
 State NM County Sierra of NE of NE of Sec 5 T16S R7W  
 Instrument Enviro Lab Operator DP Elevation 5560 ft  
 Comments \_\_\_\_\_

JUSTIFY

Date Logged

| Proj No              | Well No                       | DA       | MO        | YR       | *        |
|----------------------|-------------------------------|----------|-----------|----------|----------|
| 1 2 3 4 5 6 7 8 9 10 | 11 12 13 14 15 16 17 18 19 20 |          |           |          |          |
| <u>1124</u>          | <u>128</u>                    | <u>1</u> | <u>82</u> | <u>C</u> | <u>M</u> |

\*19-Write F if Fahrenheit, 20-Write F if Feet

Card A

| Site Description  | Operator                      | Editor                        | DA             | MO             | YR        |
|---|-------------------------------|-------------------------------|----------------|----------------|-----------|
| 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 | 51 52 53 54 55 56 57 58 59 60 | 61 62 63 64 65 66 67 68 69 70 | 71 72 73 74 75 | 76 77 78 79 80 |           |
| <u>3.7 km NNW OF HILLSBORO</u>  | <u>DP</u>                     | <u>DP</u>                     | <u>5</u>       | <u>1</u>       | <u>82</u> |

(Approx. location, water well?, oil test?, etc.)

Card B

Scale Unit IN CM

Map Size (7.5, 15., 60.) 15.0

N Lat Degree 32. Min 45.0

Map Location \* \* W Long Degree 107. Min 45.0

Use decimals

Northing 35.9 Easting 25.5 Elev 5560.

Use decimals

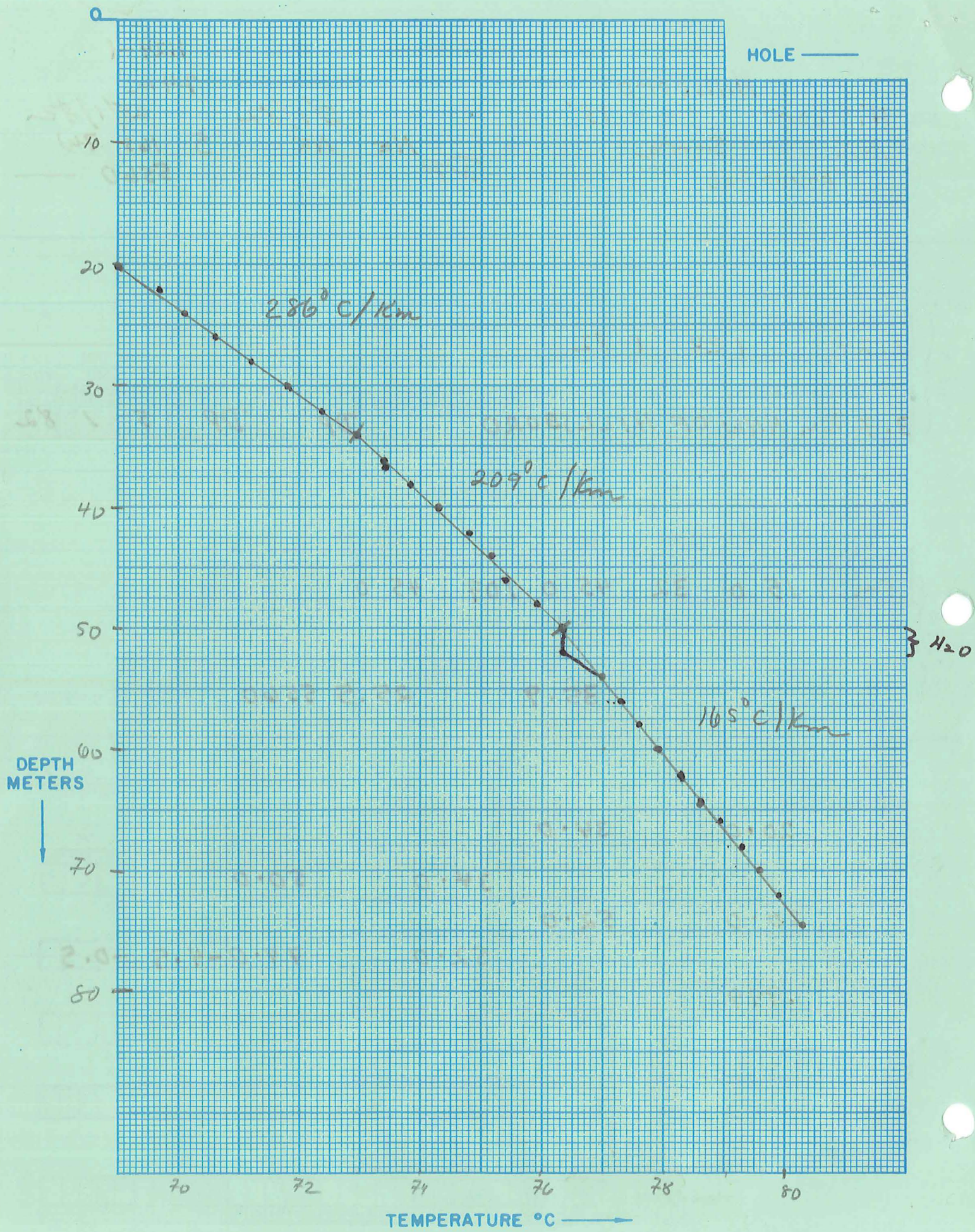
Write M if meters

Measure from SW corner of map; except AMS sheets measure from bottom center degree mark (W,-)(E,+)

| Segment    | Start | End  | Conductivity K | ΔK   | Best cond. (-K) | Downward extrapolations (-ΔK) |
|------------|-------|------|----------------|------|-----------------|-------------------------------|
| Segment 1  | 20.0  | 34.0 |                |      |                 |                               |
| Segment 2  | 34.0  | 50.0 |                |      |                 |                               |
| Segment 3  | 50.0  | 52.0 |                |      |                 |                               |
| Segment 4  | 52.0  | 74.0 | -4.5           | -0.5 |                 |                               |
| Segment 5  | .999  |      |                |      |                 |                               |
| Segment 6  |       |      |                |      |                 |                               |
| Segment 7  |       |      |                |      |                 |                               |
| Segment 8  |       |      |                |      |                 |                               |
| Segment 9  |       |      |                |      |                 |                               |
| Segment 10 |       |      |                |      |                 |                               |

After final segment Start = .999







Date Logged: \_\_\_\_\_

 $\Delta T$  Well No. 7124-1

| Depth<br>(meters) | Instr.<br>Reading | Temp.<br>°C | $\Delta T$ | Grad.<br>°C/km | K<br>(Est.) | H <sub>2</sub> O<br>Air | Lithology, etc. |
|-------------------|-------------------|-------------|------------|----------------|-------------|-------------------------|-----------------|
| 1                 |                   | 19.8        |            |                |             |                         |                 |
| 5                 |                   | 46.5        |            |                |             |                         |                 |
| 10                |                   | 61.4        |            |                |             |                         |                 |
| 12                |                   | 64.5        |            |                |             |                         |                 |
| 14                |                   | 65.9        |            |                |             |                         |                 |
| 16                |                   | 67.3        |            |                |             |                         |                 |
| 18                |                   | 68.2        |            |                |             |                         |                 |
| 20                |                   | 68.95       |            |                |             |                         |                 |
| 22                |                   | 69.7        |            |                |             |                         |                 |
| 24                |                   | 70.1        |            |                |             |                         |                 |
| 26                |                   | 70.6        |            |                |             |                         |                 |
| 28                |                   | 71.2        |            |                |             |                         |                 |
| 30                |                   | 71.8        |            |                |             |                         |                 |
| 32                |                   | 72.4        |            |                |             |                         |                 |
| 34                |                   | 72.95       |            |                |             |                         |                 |
| 36                |                   | 73.4        |            |                |             |                         |                 |
| 38                |                   | 73.85       |            |                |             |                         |                 |
| 40                |                   | 74.3        |            |                |             |                         |                 |
| 42                |                   | 74.8        |            |                |             |                         |                 |
| 44                |                   | 75.15       |            |                |             |                         |                 |
| 46                |                   | 75.3        |            |                |             |                         |                 |
| 48                |                   | 75.9        |            |                |             |                         |                 |
| 50                |                   | 76.3        |            |                |             |                         |                 |
| 52                |                   | 76.3        |            |                |             |                         |                 |
| 54                |                   | 77.0        |            |                |             |                         |                 |
| 56                |                   | 77.3        |            |                |             |                         |                 |
| 58                |                   | 77.6        |            |                |             |                         |                 |

K=Conductivity

page \_\_\_\_\_ of \_\_\_\_\_







LITHOLOGIC LOG

Project: Hillsboro

Hole: 1124-1

Elevation: 5560'

Date Drilled: 5/1/82

Location: NENE Sec 5 T16S R7W

Method: rotary-air

Geologist: Pilkington

Gamma: \_\_\_\_\_

| Depth (m) | Description  |
|-----------|--|
| 0- 6      | Alluvium - Very minor H <sub>2</sub> O along bedrock contact.  |
| 6-12      | Fanglomerate - Gray-green hydrothermally altered. The ash flow tuff fragments and matrix are both altered.   |
| 12-18     | Fanglomerate - Red-gray weakly altered. Feldspars and glass exhibit clay alteration.   |
| 18-91     | Fanglomerate - Unaltered red-brown very well cemented fragments of ash flow tuff up to 1.5 cm diameter in a matrix of crystal fragments in the sand size range. Some silica filled fractures very minor sulfides, probably all pyrite at 500 meters, a warm water entry. |



ΔT Well No. 1124-4

Property-Project Hillsboro Depth Logged 106 m

Map Hillsboro Scale 15' Date: Drilled 7/1/82 Logged 28/1/82

State NM County Sierra of SE of SW of Sec 4 T 16S R 7W

Instrument Enviro Lab Operator DP Elevation 5380 (ft/m)

Comments \_\_\_\_\_

JUSTIFY

Date Logged

| Proj No              | Well No                       | DA | MO | YR | *   |
|----------------------|-------------------------------|----|----|----|-----|
| 1 2 3 4 5 6 7 8 9 10 | 11 12 13 14 15 16 17 18 19 20 |    |    |    |     |
| 1124                 | 428                           | 7  | 1  | 82 | C M |

\*19-Write F if Fahrenheit, 20-Write F if Feet

Site Description

| Site Description              |                               |                               |                               |                         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Operator |    | Editor |   | DA | MO | YR |
|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|----------|----|--------|---|----|----|----|
| 21 22 23 24 25 26 27 28 29 30 | 31 32 33 34 35 36 37 38 39 40 | 41 42 43 44 45 46 47 48 49 50 | 51 52 53 54 55 56 57 58 59 60 | 61 62 63 64 65 66 67 68 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |          |    |        |   |    |    |    |
| 2.1 km N of HILLSBORO         |                               |                               |                               |                         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | DP       | DP | 7      | 1 | 82 |    |    |

(Approx. location, water well?, oil test?, etc.)

Map Location \*\*

| Scale Unit     | Map Size       | N Lat          | W Long         |
|----------------|----------------|----------------|----------------|
| IN             | (7.5, 15, 60)  | Degree         | Min            |
| CM             |                | Degree         | Min **         |
| 21 22 23 24 25 | 26 27 28 29 30 | 31 32 33 34 35 | 36 37 38 39 40 |
| cm             | 15.0           | 32. 45.0       | 107. 45.0      |

Measure from SW corner of map; except AMS sheets measure from bottom center degree mark (W,-)(E,+)

Use decimals

Northing

Easting

Elev

| Northing       |                |                |                |                |                |  |  |  |  | Easting |  |  |  |  |  |  |  |  |  | Elev  |  |  |  |  |  |  |  |  |  |
|----------------|----------------|----------------|----------------|----------------|----------------|--|--|--|--|---------|--|--|--|--|--|--|--|--|--|-------|--|--|--|--|--|--|--|--|--|
| 51 52 53 54 55 | 56 57 58 59 60 | 61 62 63 64 65 | 66 67 68 69 70 | 71 72 73 74 75 | 76 77 78 79 80 |  |  |  |  |         |  |  |  |  |  |  |  |  |  |       |  |  |  |  |  |  |  |  |  |
| 33.3           |                |                |                |                |                |  |  |  |  | 27.0    |  |  |  |  |  |  |  |  |  | 5380. |  |  |  |  |  |  |  |  |  |

Write M if meters

Use decimals

Segment 1 = Depths Start

Conductivity End K ΔK

Best cond. (-K)

Downward extrapolations (-ΔK)

|                |                |                |                |                |                |
|----------------|----------------|----------------|----------------|----------------|----------------|
| 21 22 23 24 25 | 26 27 28 29 30 | 31 32 33 34 35 | 36 37 38 39 40 | 41 42 43 44 45 | 46 47 48 49 50 |
|                | 10.0           |                | 30.0           |                |                |

Segment 2

Start →

|                |                |                |                |                |                |
|----------------|----------------|----------------|----------------|----------------|----------------|
| 51 52 53 54 55 | 56 57 58 59 60 | 61 62 63 64 65 | 66 67 68 69 70 | 71 72 73 74 75 | 76 77 78 79 80 |
|                | 30.0           |                | 50.0           |                |                |

Segment 3

|                |                |                |                |                |                |
|----------------|----------------|----------------|----------------|----------------|----------------|
| 21 22 23 24 25 | 26 27 28 29 30 | 31 32 33 34 35 | 36 37 38 39 40 | 41 42 43 44 45 | 46 47 48 49 50 |
|                | 50.0           |                | 54.0           |                |                |

Segment 4

Start →

|                |                |                |                |                |                |
|----------------|----------------|----------------|----------------|----------------|----------------|
| 51 52 53 54 55 | 56 57 58 59 60 | 61 62 63 64 65 | 66 67 68 69 70 | 71 72 73 74 75 | 76 77 78 79 80 |
|                | 54.0           |                | 60.0           |                |                |

Segment 5

|                |                |                |                |                |                |
|----------------|----------------|----------------|----------------|----------------|----------------|
| 21 22 23 24 25 | 26 27 28 29 30 | 31 32 33 34 35 | 36 37 38 39 40 | 41 42 43 44 45 | 46 47 48 49 50 |
|                | 60.0           |                | 64.0           |                |                |

Segment 6

Start →

|                |                |                |                |                |                |
|----------------|----------------|----------------|----------------|----------------|----------------|
| 51 52 53 54 55 | 56 57 58 59 60 | 61 62 63 64 65 | 66 67 68 69 70 | 71 72 73 74 75 | 76 77 78 79 80 |
|                | 64.0           |                | 74.0           |                |                |

Segment 7

|                |                |                |                |                |                |
|----------------|----------------|----------------|----------------|----------------|----------------|
| 21 22 23 24 25 | 26 27 28 29 30 | 31 32 33 34 35 | 36 37 38 39 40 | 41 42 43 44 45 | 46 47 48 49 50 |
|                | 74.0           |                | 80.0           |                |                |

Segment 8

Start →

|                |                |                |                |                |                |
|----------------|----------------|----------------|----------------|----------------|----------------|
| 51 52 53 54 55 | 56 57 58 59 60 | 61 62 63 64 65 | 66 67 68 69 70 | 71 72 73 74 75 | 76 77 78 79 80 |
|                | 80.0           |                | 106.0          | -4.5           | -0.5           |

Segment 9

|                |                |                |                |                |                |
|----------------|----------------|----------------|----------------|----------------|----------------|
| 21 22 23 24 25 | 26 27 28 29 30 | 31 32 33 34 35 | 36 37 38 39 40 | 41 42 43 44 45 | 46 47 48 49 50 |
|                | .999           |                |                |                |                |

Segment 10

Start →

|                |                |                |                |                |                |
|----------------|----------------|----------------|----------------|----------------|----------------|
| 51 52 53 54 55 | 56 57 58 59 60 | 61 62 63 64 65 | 66 67 68 69 70 | 71 72 73 74 75 | 76 77 78 79 80 |
|                |                |                |                |                |                |

After final segment

Start = .999



HOLE ———

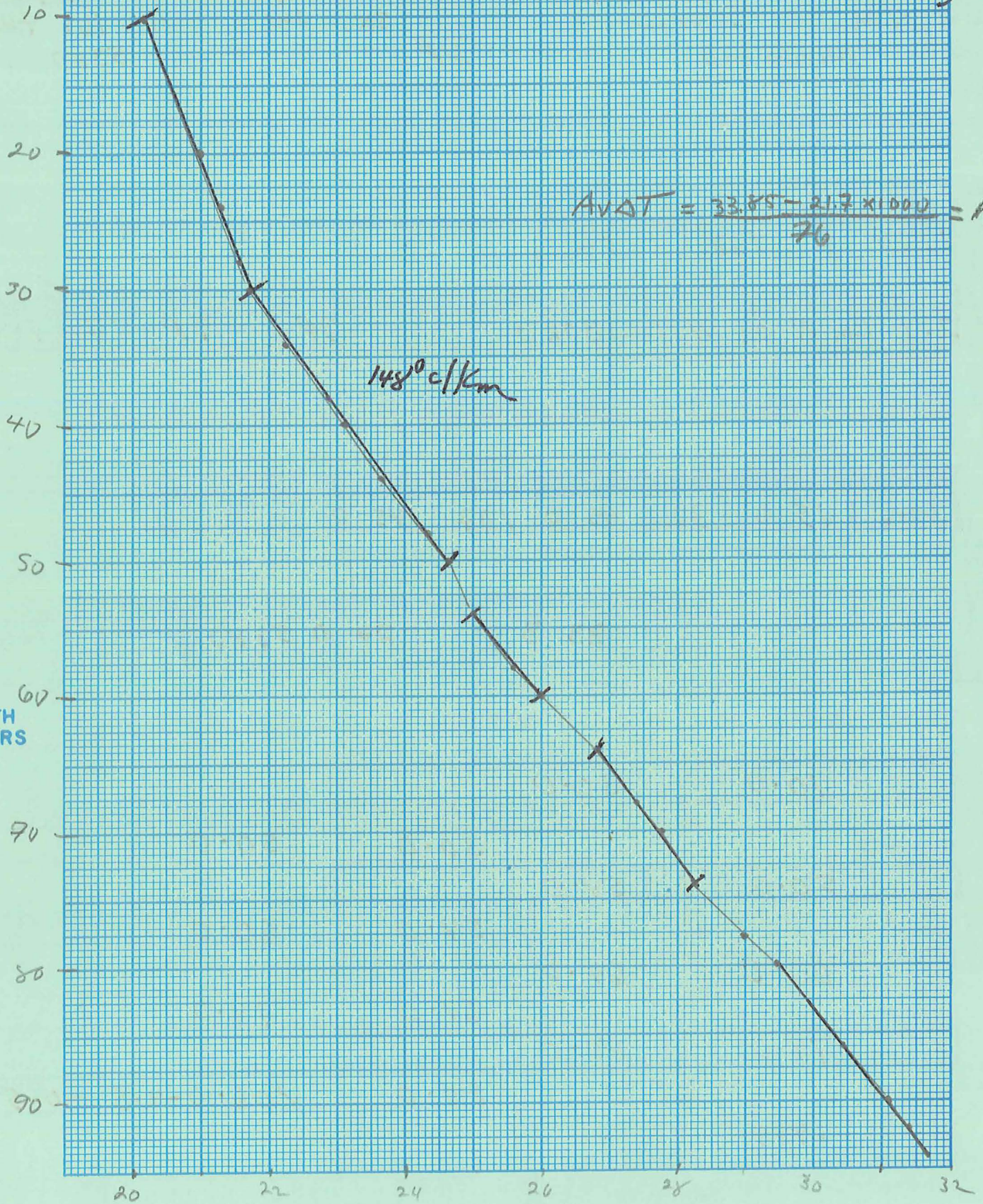
H<sub>2</sub>O

$$\Delta T = \frac{33.85 - 21.7 \times 1000}{76} = 160^\circ\text{C}$$

148° C/Km

DEPTH METERS

TEMPERATURE °C





Date Logged: 28/1/82 $\Delta T$  Well No. 1124-4

| Depth<br>(meters) | Instr.<br>Reading | Temp.<br>°C | $\Delta T$ | Grad.<br>°C/km | K<br>(Est.) | H <sub>2</sub> O<br>Air | Lithology, etc. |
|-------------------|-------------------|-------------|------------|----------------|-------------|-------------------------|-----------------|
| 1.0               |                   | 11.7        |            |                |             |                         |                 |
| 1.5               |                   | 12.0        |            |                |             |                         |                 |
| 2.0               |                   | 14.3        |            |                |             |                         |                 |
| 2.5               |                   | 16.2        |            |                |             |                         |                 |
| 3.0               |                   | 17.5        |            |                |             |                         |                 |
| 3.5               |                   | 18.4        |            |                |             |                         |                 |
| 4.0               |                   | 19.15       |            |                |             |                         |                 |
| 4.5               |                   | 19.5        |            |                |             |                         |                 |
| 5.0               |                   | 19.75       |            |                |             |                         |                 |
| 5.5               |                   | 19.9        |            |                |             |                         |                 |
| 6.0               |                   | 20.0        |            |                |             |                         |                 |
| 6.5               |                   | 20.1        |            |                |             |                         |                 |
| 7.0               |                   | 20.15       |            |                |             |                         |                 |
| 7.5               |                   | 20.15       |            |                |             |                         |                 |
| 8.0               |                   | 20.15       |            |                |             |                         |                 |
| 8.5               |                   | 20.15       |            |                |             |                         |                 |
| 9.0               |                   | 20.15       |            |                |             |                         |                 |
| 9.5               |                   | 20.15       |            |                |             |                         |                 |
| 10.0              |                   | 20.15       |            |                |             |                         |                 |
| 12.0              |                   | 20.25       |            |                |             |                         |                 |
| 14                |                   | 20.35       |            |                |             |                         |                 |
| 16                |                   | 20.55       |            |                |             |                         |                 |
| 18                |                   | 20.7        |            |                |             |                         |                 |
| 20                |                   | 21.0        |            |                |             |                         |                 |
| 22                |                   | 21.15       |            |                |             |                         |                 |
| 24                |                   | 21.3        |            |                |             |                         |                 |
| 26                |                   | 21.4        |            |                |             |                         |                 |

K=Conductivity



Date Logged: \_\_\_\_\_

 $\Delta T$  Well No. \_\_\_\_\_

| Depth<br>(meters) | Instr.<br>Reading | Temp.<br>°C | $\Delta T$ | Grad.<br>°C/km | K<br>(Est.) | H <sub>2</sub> O<br>Air | Lithology, etc. |
|-------------------|-------------------|-------------|------------|----------------|-------------|-------------------------|-----------------|
| 28                |                   | 21.55       |            |                |             |                         |                 |
| 30                |                   | 21.70       |            |                |             |                         |                 |
| 32                |                   | 22.0        |            |                |             |                         |                 |
| 34                |                   | 22.25       |            |                |             |                         |                 |
| 36                |                   | 22.55       |            |                |             |                         |                 |
| 38                |                   | 22.9        |            |                |             |                         |                 |
| 40                |                   | 23.1        |            |                |             |                         |                 |
| 42                |                   | 23.35       |            |                |             |                         |                 |
| 44                |                   | 23.65       |            |                |             |                         |                 |
| 46                |                   | 23.9        |            |                |             |                         |                 |
| 48                |                   | 24.35       |            |                |             |                         |                 |
| 50                |                   | 24.65       |            |                |             |                         |                 |
| 52                |                   | 24.80       |            |                |             |                         |                 |
| 54                |                   | 25.0        |            |                |             |                         |                 |
| 56                |                   | 25.45       |            |                |             |                         |                 |
| 58                |                   | 25.6        |            |                |             |                         |                 |
| 60                |                   | 26.0        |            |                |             |                         |                 |
| 62                |                   | 26.4        |            |                |             |                         |                 |
| 64                |                   | 26.8        |            |                |             |                         |                 |
| 66                |                   | 27.05       |            |                |             |                         |                 |
| 68                |                   | 27.4        |            |                |             |                         |                 |
| 70                |                   | 27.75       |            |                |             |                         |                 |
| 72                |                   | 28.05       |            |                |             |                         |                 |
| 74                |                   | 28.25       |            |                |             |                         |                 |
| 76                |                   | 28.6        |            |                |             |                         |                 |
| 78                |                   | 29.0        |            |                |             |                         |                 |
| 80                |                   | 29.45       |            |                |             |                         |                 |

K=Conductivity

page \_\_\_\_\_ of \_\_\_\_\_



Date Logged: \_\_\_\_\_

$\Delta T$  Well No. \_\_\_\_\_

| Depth<br>(meters) | Instr.<br>Reading | Temp.<br>$^{\circ}\text{C}$ | $\Delta T$ | Grad.<br>$^{\circ}\text{C}/\text{km}$ | K<br>(Est.) | H <sub>2</sub> O<br>Air | Lithology, etc. |
|-------------------|-------------------|-----------------------------|------------|---------------------------------------|-------------|-------------------------|-----------------|
| 82                |                   | 29.7                        |            |                                       |             |                         |                 |
| 84                |                   | 29.9                        |            |                                       |             |                         |                 |
| 86                |                   | 30.45                       |            |                                       |             |                         |                 |
| 88                |                   | 30.8                        |            |                                       |             |                         |                 |
| 90                |                   | 31.1                        |            |                                       |             |                         |                 |
| 92                |                   | 31.4                        |            |                                       |             |                         |                 |
| 94                |                   | 31.65                       |            |                                       |             |                         |                 |
| 96                |                   | 31.8                        |            |                                       |             |                         |                 |
| 98                |                   | 32.2                        |            |                                       |             |                         |                 |
| 100               |                   | 32.7                        |            |                                       |             |                         |                 |
| 102               |                   | 33.17                       |            |                                       |             |                         |                 |
| 104               |                   | 33.55                       |            |                                       |             |                         |                 |
| → 106             |                   | 33.85                       |            |                                       |             |                         |                 |
| 108               |                   |                             |            |                                       |             |                         |                 |
| 110               |                   |                             |            |                                       |             |                         |                 |
|                   |                   |                             |            |                                       |             |                         |                 |
|                   |                   |                             |            |                                       |             |                         |                 |
|                   |                   |                             |            |                                       |             |                         |                 |
|                   |                   |                             |            |                                       |             |                         |                 |
|                   |                   |                             |            |                                       |             |                         |                 |
|                   |                   |                             |            |                                       |             |                         |                 |
|                   |                   |                             |            |                                       |             |                         |                 |
|                   |                   |                             |            |                                       |             |                         |                 |
|                   |                   |                             |            |                                       |             |                         |                 |
|                   |                   |                             |            |                                       |             |                         |                 |
|                   |                   |                             |            |                                       |             |                         |                 |
|                   |                   |                             |            |                                       |             |                         |                 |
|                   |                   |                             |            |                                       |             |                         |                 |
|                   |                   |                             |            |                                       |             |                         |                 |

K=Conductivity



LITHOLOGIC LOG

Project: Hillsboro

Hole: 1124-4

Elevation: 5380'

Date Drilled: 7/1/82

Location: SESW Sec 4 T16S R7W

Method: rotary - air

Geologist: Pilkington

Gamma: \_\_\_\_\_

| Depth (m) | Description   |
|-----------|---|
| 0- 4      | Alluvium  |
| 4- 6      | Fanglomerate - Weathered pinkish-brown.   |
| 6- 18     | Fanglomerate - Gray to pink gray, bleached and weakly altered fanglomerate, probable clay development. Several seams of white clays from probable faults. From 5-10 meters the fractures contained cold waters @20°C. |
| 18-110    | Fanglomerate - Red-brown, well cemented fragments of ash flow tuff in a matrix of crystal fragments (sand size). Some silica fracture fillings.   |



ΔT Well No. 1124-6

Property-Project Hillsboro Depth Logged 104 m

Map Hillsboro Scale 15 Date: Drilled 1/8/85 Logged 3/7/85

State NM County Sierra, of of NE of SE of Sec 32 T 15 S R 7 W

Instrument NM Energy Inst Spafford Operator Dick Lohsee Elevation 5680 (ft/m)

Comments \_\_\_\_\_

JUSTIFY

Date Logged

| Proj No  | Well No | DA | MO | YR | * |
|--|---------|----|----|----|---|
| 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 |         |    |    |    |   |
| 1124   | 67      | 3  | 85 |    |   |

\*19-Write F if Fahrenheit, 20-Write F if Feet

Card A

| Site Description  |                           |                |    |                |     |          |    |          |    |       |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Operator |  |  |  |  | Editor |  |  |  |  | DA |  |  | MO |  |  | YR |  |
|---|---------------------------|----------------|----|----------------|-----|----------|----|----------|----|-------|----|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|----------|--|--|--|--|--------|--|--|--|--|----|--|--|----|--|--|----|--|
| 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 | 4.5 km North of Hillsboro | 51 52 53 54 55 | DL | 56 57 58 59 60 | /DP | 61 62 63 | 08 | 64 65 66 | 01 | 67 68 | 85 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |          |  |  |  |  |        |  |  |  |  |    |  |  |    |  |  |    |  |

(Approx. location, water well?, oil test?, etc.)

Map Location \*\*

| Scale Unit | Map Size        | N Lat    | W Long            |
|------------|-----------------|----------|-------------------|
| IN CM      | (7.5, 15., 60.) | Degree   | Min Degree Min ** |
| cm         | 15.             | 32. 45.0 | 107. 45.0         |

Use decimals

Measure from SW corner of map; except AMS sheets measure from bottom center degree mark (W-)(E,+)

| Northing  |      |                               |      |                               |       |                                |  |  |  |  |  |  |  |  | Easting |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Elev |  |  |  |  |  |  |  |  |  |
|---|------|-------------------------------|------|-------------------------------|-------|--------------------------------|--|--|--|--|--|--|--|--|---------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|------|--|--|--|--|--|--|--|--|--|
| 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 | 37.1 | 71 72 73 74 75 76 77 78 79 80 | 26.2 | 81 82 83 84 85 86 87 88 89 90 | 5680. | 91 92 93 94 95 96 97 98 99 100 |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |      |  |  |  |  |  |  |  |  |  |

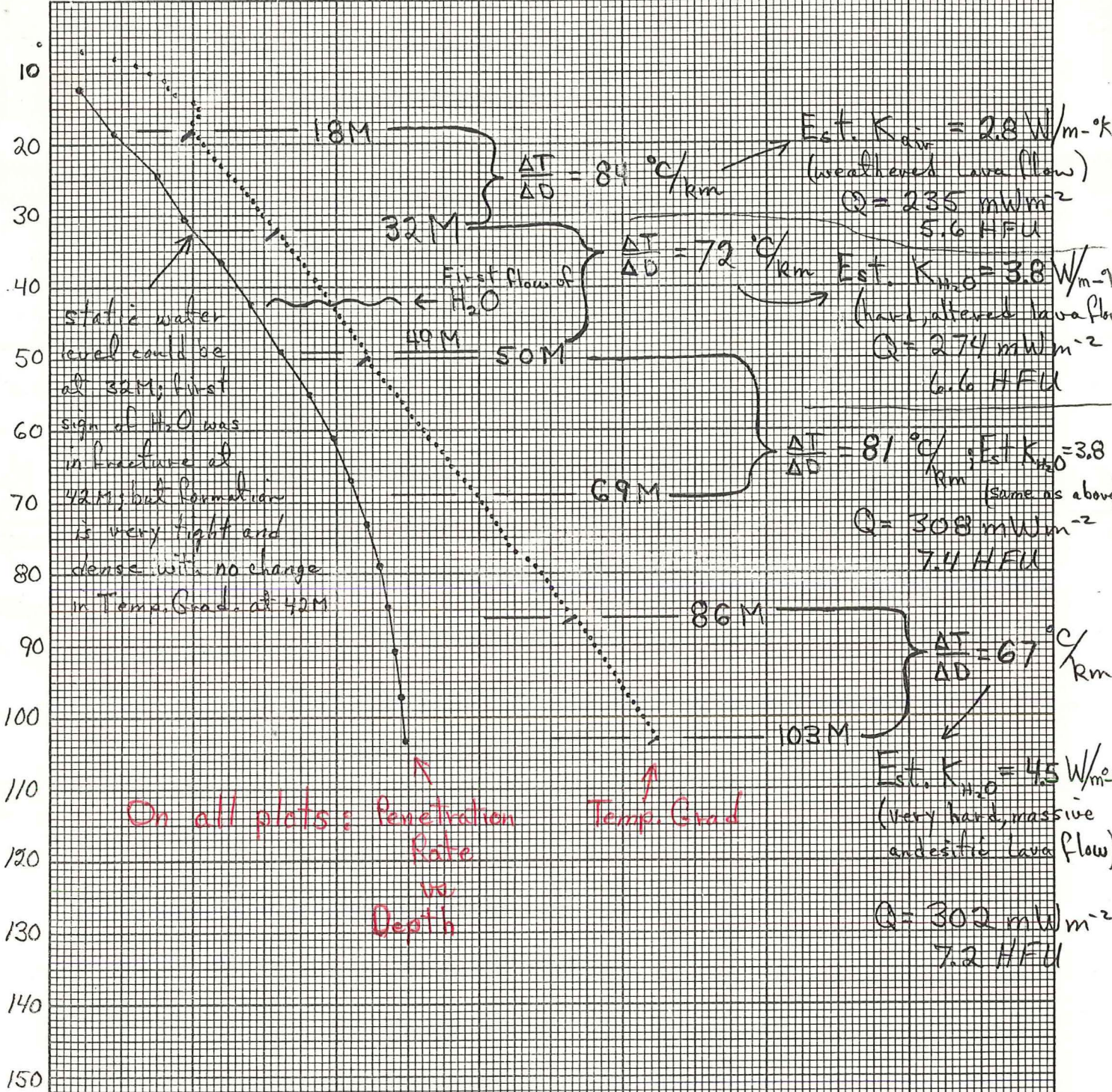
Use decimals

Write M if meters

| Segment    | Start | End  | Conductivity K | ΔK | Best cond. (-K) | Downward extrapolations (-ΔK) |
|------------|-------|------|----------------|----|-----------------|-------------------------------|
| Segment 1  | 18.0  | 32.0 |                |    |                 |                               |
| Segment 2  |       |      | 32.0           |    | 50.0            |                               |
| Segment 3  | 50.0  | 86.0 |                |    |                 |                               |
| Segment 4  |       |      | 86.0           |    | 103.0           | -4.5 -0.5                     |
| Segment 5  | .999  |      |                |    |                 |                               |
| Segment 6  |       |      |                |    |                 |                               |
| Segment 7  |       |      |                |    |                 |                               |
| Segment 8  |       |      |                |    |                 |                               |
| Segment 9  |       |      |                |    |                 |                               |
| Segment 10 |       |      |                |    |                 |                               |

After final segment Start = .999





Final Temp. Log (58 days)  
 logged by: R. Lohse  
 Probe: NMSU/Spallford  
 date: 3-7-85  
 time: 11:25 am  
 sunny, warm, ~70°F



S.R.C. Hillsboro Project

Hole #: 1124-6

Final Temp. log: Date, 3-7-85; Time, 11:25am  
Operator, R. Lohse; Probe, NMSU/Spafford;  
Weather, Sunny & warm ~ 70°F

| Depth (M) | Res.   | Temp. (°C) | ΔT  | Grad. |  |  |
|-----------|--------|------------|-----|-------|--|--|
| 1         | 110.68 | 13.06      |     |       |  |  |
| 2         | 107.10 | 13.96      |     |       |  |  |
| 3         | 103.86 | 14.80      |     |       |  |  |
| 4         | 99.21  | 16.04      |     |       |  |  |
| 5         | 95.59  | 17.03      |     |       |  |  |
| 6         | 92.68  | 17.86      |     |       |  |  |
| 7         | 90.62  | 18.46      |     |       |  |  |
| 8         | 89.11  | 18.90      |     |       |  |  |
| 9         | 88.15  | 19.19      |     |       |  |  |
| 10        | 87.46  | 19.40      |     |       |  |  |
| 11        | 86.83  | 19.59      |     |       |  |  |
| 12        | 86.60  | 19.66      |     |       |  |  |
| 13        | 86.29  | 19.75      |     |       |  |  |
| 14        | 85.39  | 20.03      |     |       |  |  |
| 15        | 85.18  | 20.09      |     |       |  |  |
| 16        | 85.23  | 20.08      |     |       |  |  |
| 17        | 85.54  | 19.98      |     |       |  |  |
| 18        | 85.45  | 20.01      | .03 |       |  |  |
| 19        | 85.18  | 20.09      | .08 |       |  |  |
| 20        | 84.99  | 20.15      | .06 |       |  |  |
| 21        | 84.74  | 20.23      | .08 |       |  |  |
| 22        | 84.51  | 20.30      | .07 |       |  |  |
| 23        | 84.18  | 20.41      | .11 |       |  |  |
| 24        | 83.83  | 20.51      | .10 |       |  |  |
| 25        | 83.54  | 20.61      | .10 |       |  |  |



(cont.)

S.R.C. Hillsboro Project

Hole #: 1124 - 6

| Depth (M) | Res.  | Temp.(°C) | $\Delta T$<br>(°C) | Grad.<br>(°C/km) |  |  |
|-----------|-------|-----------|--------------------|------------------|--|--|
| 26        | 83.29 | 20.69     | .08                |                  |  |  |
| 27        | 83.02 | 20.77     | .08                |                  |  |  |
| 28        | 82.74 | 20.86     | .09                |                  |  |  |
| 29        | 82.55 | 20.92     | .06                |                  |  |  |
| 30        | 82.32 | 20.99     | .07                |                  |  |  |
| 31        | 82.03 | 21.09     | .10                |                  |  |  |
| 32        | 81.70 | 21.19     | .10                |                  |  |  |
| 33        | 81.49 | 21.26     | .07                |                  |  |  |
| 34        | 81.29 | 21.32     | .06                |                  |  |  |
| 35        | 81.07 | 21.39     | .07                |                  |  |  |
| 36        | 80.80 | 21.48     | .09                |                  |  |  |
| 37        | 80.54 | 21.57     | .09                |                  |  |  |
| 38        | 80.37 | 21.62     | .05                |                  |  |  |
| 39        | 80.08 | 21.72     | .10                |                  |  |  |
| 40        | 79.90 | 21.78     | .06                |                  |  |  |
| 41        | 79.68 | 21.85     | .07                |                  |  |  |
| 42        | 79.49 | 21.91     | .06                |                  |  |  |
| 43        | 79.28 | 21.98     | .07                |                  |  |  |
| 44        | 79.08 | 22.04     | .06                |                  |  |  |
| 45        | 78.85 | 22.12     | .08                |                  |  |  |
| 46        | 78.62 | 22.20     | .08                |                  |  |  |
| 47        | 78.39 | 22.27     | .07                |                  |  |  |
| 48        | 78.16 | 22.35     | .08                |                  |  |  |
| 49        | 77.96 | 22.42     | .07                |                  |  |  |
| 50        | 77.88 | 22.44     | .02                |                  |  |  |



(cont.)

## S.R.C. Hillsboro Project

page 3

Hole #: 1124-6

| Depth (M) | Res.  | Temp. (°C) | $\Delta T$<br>(°C) | Grad.<br>(°C/km) |  |  |
|-----------|-------|------------|--------------------|------------------|--|--|
| 51        | 77.73 | 22.49      | .05                |                  |  |  |
| 52        | 77.45 | 22.59      | .10                |                  |  |  |
| 53        | 77.22 | 22.67      | .08                |                  |  |  |
| 54        | 76.98 | 22.75      | .08                |                  |  |  |
| 55        | 76.72 | 22.84      | .09                |                  |  |  |
| 56        | 76.46 | 22.92      | .08                |                  |  |  |
| 57        | 76.27 | 22.99      | .07                |                  |  |  |
| 58        | 76.08 | 23.05      | .06                |                  |  |  |
| 59        | 75.78 | 23.16      | .11                |                  |  |  |
| 60        | 75.56 | 23.23      | .07                |                  |  |  |
| 61        | 75.40 | 23.29      | .06                |                  |  |  |
| 62        | 75.09 | 23.40      | .11                |                  |  |  |
| 63        | 74.84 | 23.48      | .08                |                  |  |  |
| 64        | 74.63 | 23.56      | .08                |                  |  |  |
| 65        | 74.46 | 23.62      | .06                |                  |  |  |
| 66        | 74.17 | 23.72      | .10                |                  |  |  |
| 67        | 73.93 | 23.80      | .08                |                  |  |  |
| 68        | 73.70 | 23.88      | .08                |                  |  |  |
| 69        | 73.45 | 23.97      | .09                |                  |  |  |
| 70        | 73.25 | 24.04      | .07                |                  |  |  |
| 71        | 73.02 | 24.12      | .08                |                  |  |  |
| 72        | 72.82 | 24.19      | .07                |                  |  |  |
| 73        | 72.69 | 24.24      | .05                |                  |  |  |
| 74        | 72.48 | 24.32      | .08                |                  |  |  |
| 75        | 72.30 | 24.38      | .06                |                  |  |  |



(cont.)

## S.R.C. Hillsboro Project

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Hole #: 1124-6

| Depth (M) | Res.  | Temp. (°C) | $\Delta T$<br>(°C) | Grad.<br>(°C/km) |
|-----------|-------|------------|--------------------|------------------|
| 76        | 72.15 | 24.43      | .05                |                  |
| 77        | 71.90 | 24.52      | .09                |                  |
| 78        | 71.44 | 24.69      | .17                |                  |
| 79        | 71.19 | 24.78      | .09                |                  |
| 80        | 70.95 | 24.87      | .09                |                  |
| 81        | 70.76 | 24.94      | .07                |                  |
| 82        | 70.57 | 25.01      | .07                |                  |
| 83        | 70.38 | 25.08      | .07                |                  |
| 84        | 70.17 | 25.16      | .08                |                  |
| 85        | 69.98 | 25.23      | .07                |                  |
| 86        | 69.68 | 25.34      | .11                |                  |
| 87        | 69.49 | 25.41      | .07                |                  |
| 88        | 69.30 | 25.48      | .07                |                  |
| 89        | 69.13 | 25.54      | .06                |                  |
| 90        | 68.95 | 25.61      | .07                |                  |
| 91        | 68.76 | 25.68      | .07                |                  |
| 92        | 68.57 | 25.75      | .07                |                  |
| 93        | 68.40 | 25.82      | .07                |                  |
| 94        | 68.22 | 25.89      | .07                |                  |
| 95        | 68.05 | 25.95      | .06                |                  |
| 96        | 67.88 | 26.01      | .06                |                  |
| 97        | 67.71 | 26.08      | .07                |                  |
| 98        | 67.55 | 26.14      | .06                |                  |
| 99        | 67.37 | 26.21      | .07                |                  |
| 100       | 67.20 | 26.28      | .07                |                  |



(cont.)

# S.R.C. Hillsboro Project

Hole #: 1124-6

| Depth (M) | Res.  | Temp. (°C) | $\Delta T$<br>(°C) | Grad.<br>(°C/m) |  |
|-----------|-------|------------|--------------------|-----------------|--|
| 101       | 67.03 | 26.34      | .06                |                 |  |
| 102       | 66.83 | 26.42      | .08                |                 |  |
| 103       | 66.68 | 26.48      | .06                |                 |  |
| 104       |       |            |                    |                 |  |
| 105       |       |            |                    |                 |  |
| 106       |       |            |                    |                 |  |
| 107       |       |            |                    |                 |  |
| 108       |       |            |                    |                 |  |
| 109       |       |            |                    |                 |  |
| 110       |       |            |                    |                 |  |
| 111       |       |            |                    |                 |  |
| 112       |       |            |                    |                 |  |
| 113       |       |            |                    |                 |  |
| 114       |       |            |                    |                 |  |
| 115       |       |            |                    |                 |  |
| 116       |       |            |                    |                 |  |
| 117       |       |            |                    |                 |  |
| 118       |       |            |                    |                 |  |
| 119       |       |            |                    |                 |  |
| 120       |       |            |                    |                 |  |
| 121       |       |            |                    |                 |  |
| 122       |       |            |                    |                 |  |
| 123       |       |            |                    |                 |  |
| 124       |       |            |                    |                 |  |
| 125       |       |            |                    |                 |  |



Hillsboro 1124-6

| Depth (ft) | Description  |
|------------|--|
| 0 - 10     | Colluvium. Silt to 10-millimeter particle size, comprised uniformly of weathered volcanic rock, probably derived from adjacent/subjacent andesite. |
| 10 - 180   | Light-gray to medium-gray andesite of near uniform texture and exhibiting moderate degree of weathering.   |
| 180 - 340  | Light-gray, medium-gray, and medium-bluish-gray porphyritic andesite. Most samples exhibit some degree of propylitic alteration.                   |



ΔT Well No. 1124-7

Property-Project Hillsboro Depth Logged 153  
 Map Hillsboro Scale 15' Date: Drilled 1/25/85 Logged 3/7/85  
 State NM County Sierra, of SW of NW of Sec 6 T 16S R 7W  
 Instrument NMEnergy Inst Spafford Operator Dick Lohree Elevation 5440 (ft/m)  
 Comments \_\_\_\_\_

JUSTIFY

Card A

Date Logged

| Proj No              |  | Well No                       |  | Date Logged |    |    | Site Description       |  |  |  |  |  |  |  |  |  |  | Operator |  | Editor |  | Drilled |    |    |
|----------------------|--|-------------------------------|--|-------------|----|----|------------------------|--|--|--|--|--|--|--|--|--|--|----------|--|--------|--|---------|----|----|
| 1 2 3 4 5 6 7 8 9 10 |  | 11 12 13 14 15 16 17 18 19 20 |  | DA          | MO | YR |                        |  |  |  |  |  |  |  |  |  |  |          |  |        |  | DA      | MO | YR |
| 1124                 |  | 77                            |  | 3           | 7  | 85 | 4.0 km NW of Hillsboro |  |  |  |  |  |  |  |  |  |  | DL       |  | DD     |  | 25      | 01 | 85 |

\*19-Write F if Fahrenheit, 20-Write F if Feet

(Approx. location, water well?, oil test?, etc.)

Card B

Map Location \*\*

| Scale Unit |    | Map Size        |        | N Lat |        | W Long |    | Elev |   |
|------------|----|-----------------|--------|-------|--------|--------|----|------|---|
| IN         | CM | (7.5, 15., 60.) | Degree | Min   | Degree | Min    | ** |      |   |
| 15         |    | 15.             | 32.    | 45.0  | 107.   | 45.0   |    | 5440 | F |

Measure from SW corner of map; except AMS sheets measure from bottom center degree mark (W,-)(E,+)

Use decimals

Northering

| Northing |  |  | Easting |  |  | Elev |  |  |
|----------|--|--|---------|--|--|------|--|--|
| 34.7     |  |  | 22.2    |  |  | 5440 |  |  |

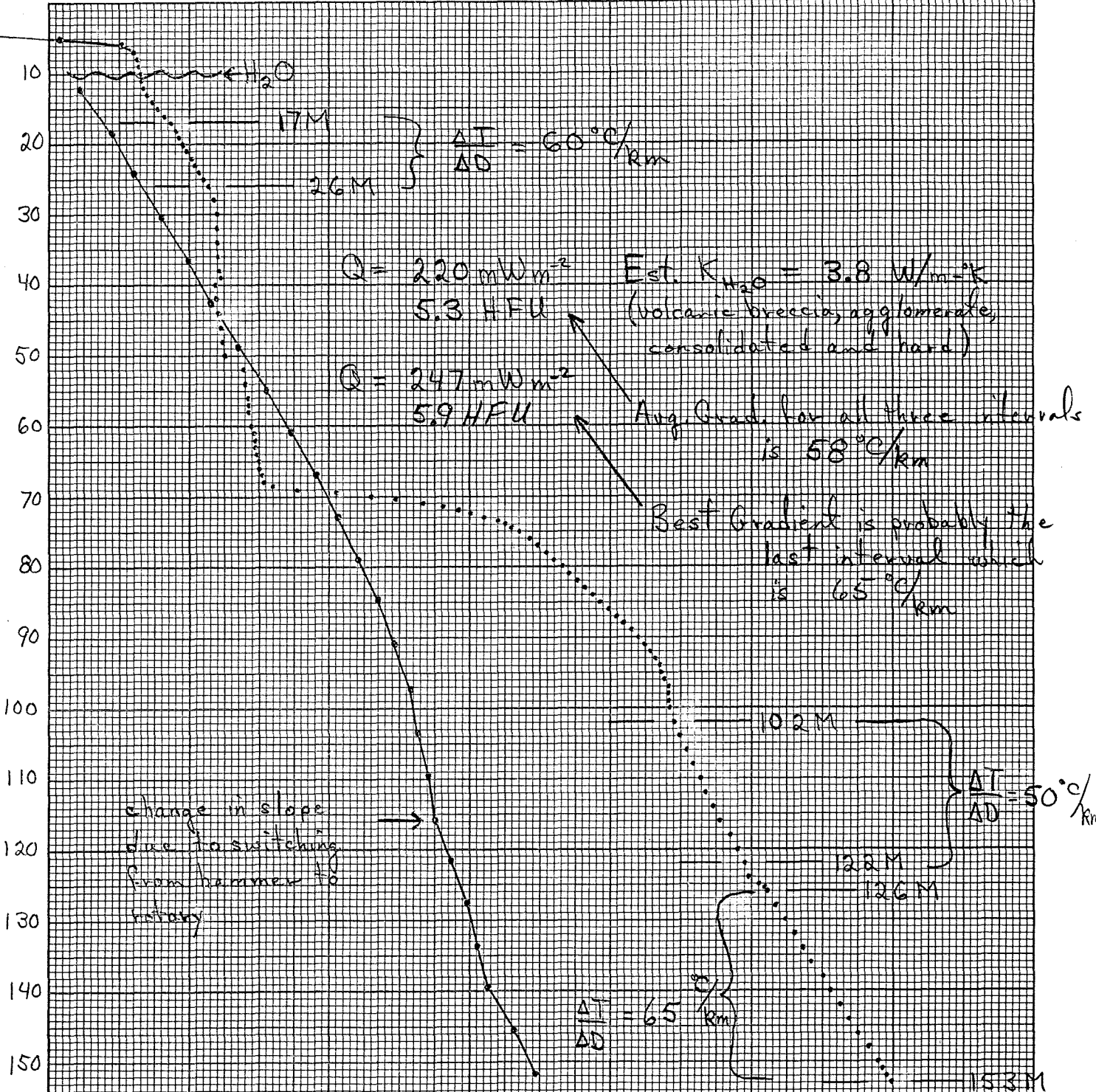
Use decimals

Write M if meters

| Segment            | Start | End   | Conductivity (K) | ΔK   | Best cond. (-K) | Downward extrapolations (-ΔK) |
|--------------------|-------|-------|------------------|------|-----------------|-------------------------------|
| Segment 1 = Depths | 102.0 | 122.0 |                  |      |                 |                               |
| Segment 2          |       |       | 122.0            |      | 126.0           |                               |
| Segment 3          | 126.0 | 153.0 |                  | -4.5 |                 | -0.5                          |
| Segment 4          |       |       |                  | .999 |                 |                               |
| Segment 5          |       |       |                  |      |                 |                               |
| Segment 6          |       |       |                  |      |                 |                               |
| Segment 7          |       |       |                  |      |                 |                               |
| Segment 8          |       |       |                  |      |                 |                               |
| Segment 9          |       |       |                  |      |                 |                               |
| Segment 10         |       |       |                  |      |                 |                               |

After final segment Start = .999





Final Temp. Log (41 days)  
 logged by: R. Lotse  
 probe: NMSU/Spallford  
 date: 3-7-85  
 time: 2:35 pm  
 partly cloudy, warm, ~75°F



S.R.C. Hillsboro Project

Hole #: 1124-7

Final Temp. log: Date, 3-7-85; Time, 2:35 pm  
Operator, R. Lohse; Probe, NMSU/Spafford;  
Weather, partly cloudy + warm ~ 75°F

| Depth (M) | Res.   | Temp. (°C) | ΔT  | Grad. |  |  |
|-----------|--------|------------|-----|-------|--|--|
| 1         | 112.48 | 12.61      |     |       |  |  |
| 2         | 109.59 | 13.33      |     |       |  |  |
| 3         | 102.91 | 15.05      |     |       |  |  |
| 4         | 96.74  | 16.71      |     |       |  |  |
| 5         | 91.58  | 18.18      |     |       |  |  |
| 6         | 88.57  | 19.06      |     |       |  |  |
| 7         | 88.09  | 19.21      |     |       |  |  |
| 8         | 87.88  | 19.27      |     |       |  |  |
| 9         | 87.81  | 19.29      |     |       |  |  |
| 10        | 87.74  | 19.31      |     |       |  |  |
| 11        | 87.72  | 19.32      |     |       |  |  |
| 12        | 87.61  | 19.35      |     |       |  |  |
| 13        | 87.45  | 19.40      |     |       |  |  |
| 14        | 87.14  | 19.49      |     |       |  |  |
| 15        | 87.00  | 19.54      | .17 |       |  |  |
| 16        | 86.59  | 19.66      |     |       |  |  |
| 17        | 86.29  | 19.75      | .15 |       |  |  |
| 18        | 86.12  | 19.81      |     |       |  |  |
| 19        | 85.93  | 19.86      | .11 |       |  |  |
| 20        | 85.73  | 19.92      |     |       |  |  |
| 21        | 85.57  | 19.97      | .12 |       |  |  |
| 22        | 85.35  | 20.04      |     |       |  |  |
| 23        | 85.19  | 20.09      | .11 |       |  |  |
| 24        | 85.01  | 20.15      |     |       |  |  |
| 25        | 84.82  | 20.21      | .14 |       |  |  |

(cont.)

S.R.C. Hillsboro Project

Hole #: 1124 - 7

| Depth (M) | Res.  | Temp.(°C) | $\Delta T$<br>(°C) | Grad.<br>(°C/km) |  |  |
|-----------|-------|-----------|--------------------|------------------|--|--|
| 26        | 84.56 | 20.29     |                    |                  |  |  |
| 27        |       |           | .08                |                  |  |  |
| 28        | 84.30 | 20.37     |                    |                  |  |  |
| 29        |       |           | .03                |                  |  |  |
| 30        | 84.20 | 20.40     |                    |                  |  |  |
| 31        |       |           | -                  |                  |  |  |
| 32        | 84.20 | 20.40     |                    |                  |  |  |
| 33        |       |           | .02                |                  |  |  |
| 34        | 84.13 | 20.42     |                    |                  |  |  |
| 35        |       |           | .01                |                  |  |  |
| 36        | 84.09 | 20.43     |                    |                  |  |  |
| 37        |       |           |                    |                  |  |  |
| 38        | 84.07 | 20.44     |                    |                  |  |  |
| 39        | 84.01 | 20.46     |                    |                  |  |  |
| 40        | 84.27 | 20.38     |                    |                  |  |  |
| 41        |       |           |                    |                  |  |  |
| 42        | 84.22 | 20.39     |                    |                  |  |  |
| 43        |       |           |                    |                  |  |  |
| 44        | 84.14 | 20.42     |                    |                  |  |  |
| 45        |       |           |                    |                  |  |  |
| 46        | 84.04 | 20.45     |                    |                  |  |  |
| 47        |       |           |                    |                  |  |  |
| 48        | 83.93 | 20.48     |                    |                  |  |  |
| 49        |       |           |                    |                  |  |  |
| 50        | 83.82 | 20.52     |                    |                  |  |  |



(cont.)

S.R.C. Hillsboro Project

Hole #: 1124-7

|                    | Depth (M) | Res.  | Temp. (°C) | ΔT (°C) | Grad. (°C/m) |  |  |
|--------------------|-----------|-------|------------|---------|--------------|--|--|
|                    | 51        |       |            |         |              |  |  |
|                    | 52        | 82.95 | 20.79      |         |              |  |  |
|                    | 53        |       |            |         |              |  |  |
|                    | 54        | 82.86 | 20.82      |         |              |  |  |
|                    | 55        |       |            |         |              |  |  |
|                    | 56        | 82.73 | 20.86      |         |              |  |  |
|                    | 57        | 82.69 | 20.87      |         |              |  |  |
|                    | 58        | 82.73 | 20.86      |         |              |  |  |
|                    | 59        |       |            |         |              |  |  |
|                    | 60        | 82.61 | 20.90      |         |              |  |  |
|                    | 61        | 82.52 | 20.93      |         |              |  |  |
|                    | 62        | 82.43 | 20.96 -    |         |              |  |  |
|                    | 63        | 82.41 | 20.96 +    |         |              |  |  |
|                    | 64        | 82.36 | 20.98      |         |              |  |  |
|                    | 65        | 82.27 | 21.01 -    |         |              |  |  |
|                    | 66        | 82.26 | 21.01 +    |         |              |  |  |
|                    | 67        | 82.15 | 21.05      |         |              |  |  |
| Meters Res. (feet) | 68        | 82.06 | 21.08      |         |              |  |  |
| 68.5 81.61         | (21.22)   | 69    | 80.54      | 21.57   |              |  |  |
| 69.5 78.88         | (22.11)   | 70    | 77.36      | 22.62   |              |  |  |
| 70.5 76.33         | (22.97)   | 71    | 75.20      | 23.36   |              |  |  |
| 71.5 74.43         | (23.63)   | 72    | 73.83      | 23.84   |              |  |  |
| 72.5 73.33         | (24.01)   | 73    | 72.79      | 24.21   |              |  |  |
| 73.5 72.23         | (24.41)   | 74    | 71.92      | 24.52   |              |  |  |
| 74.5 71.67         | (24.61)   | 75    | 71.35      | 24.72   |              |  |  |

(cont.)

## S.R.C. Hillsboro Project

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Hole #: 1124-7

| Depth (M) | Res.  | Temp. (°C) | $\Delta T$<br>(°C) | Grad.<br>(°C/km) |
|-----------|-------|------------|--------------------|------------------|
| 76        | 70.96 | 24.87      |                    |                  |
| 77        | 70.63 | 24.99      |                    |                  |
| 78        | 70.32 | 25.10      |                    |                  |
| 79        | 70.05 | 25.20      |                    |                  |
| 80        | 69.70 | 25.33      |                    |                  |
| 81        | 69.50 | 25.41      |                    |                  |
| 82        | 69.13 | 25.54      |                    |                  |
| 83        | 68.83 | 25.66      |                    |                  |
| 84        | 68.53 | 25.77      |                    |                  |
| 85        | 68.25 | 25.87      |                    |                  |
| 86        | 67.93 | 25.99      |                    |                  |
| 87        | 67.68 | 26.09      |                    |                  |
| 88        | 67.43 | 26.19      |                    |                  |
| 89        | 67.12 | 26.31      |                    |                  |
| 90        | 66.84 | 26.41      |                    |                  |
| 91        | 66.63 | 26.49      |                    |                  |
| 92        | 66.42 | 26.58      |                    |                  |
| 93        | 66.24 | 26.65      |                    |                  |
| 94        | 66.06 | 26.72      |                    |                  |
| 95        | 66.02 | 26.73      |                    |                  |
| 96        | 65.91 | 26.78      |                    |                  |
| 97        | 65.78 | 26.83      |                    |                  |
| 98        | 65.78 | 26.83      |                    |                  |
| 99        | 65.78 | 26.83      | .02                |                  |
| 100       | 65.72 | 26.85      |                    |                  |



(cont.)

## S.R.C. Hillsboro Project

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Hole #: 1124-7

|  | Depth (M) | Res.  | Temp. (°C) | $\Delta T$<br>(°C) | Grad.<br>(°C/km) |  |
|--|-----------|-------|------------|--------------------|------------------|--|
|  | 101       |       |            | .06                |                  |  |
|  | 102       | 65.56 | 26.91      |                    |                  |  |
|  | 103       |       |            | .08                |                  |  |
|  | 104       | 65.37 | 26.99      |                    |                  |  |
|  | 105       |       |            | .12                |                  |  |
|  | 106       | 65.07 | 27.11      |                    |                  |  |
|  | 107       |       |            | .08                |                  |  |
|  | 108       | 64.87 | 27.19      |                    |                  |  |
|  | 109       |       |            | .09                |                  |  |
|  | 110       | 64.65 | 27.28      |                    |                  |  |
|  | 111       |       |            | .09                |                  |  |
|  | 112       | 64.42 | 27.37      |                    |                  |  |
|  | 113       |       |            | .09                |                  |  |
|  | 114       | 64.19 | 27.46      |                    |                  |  |
|  | 115       |       |            | .10                |                  |  |
|  | 116       | 63.93 | 27.56      |                    |                  |  |
|  | 117       |       |            | .14                |                  |  |
|  | 118       | 63.59 | 27.70      |                    |                  |  |
|  | 119       |       |            | .11                |                  |  |
|  | 120       | 63.31 | 27.81      |                    |                  |  |
|  | 121       |       |            | .09                |                  |  |
|  | 122       | 63.11 | 27.90      |                    |                  |  |
|  | 123       |       |            | .05                |                  |  |
|  | 124       | 62.98 | 27.95      |                    |                  |  |
|  | 125       | 62.60 | 28.11      | .27                |                  |  |
|  | 125.5     | 62.42 | 28.18      |                    |                  |  |

(cont.)

## S.R.C. Hillsboro Project

page 6

Hole #: 1124-7

| Depth (M) | Res.  | Temp. (°C) | $\Delta T$<br>(°C) | Grad.<br>(°C/km) |
|-----------|-------|------------|--------------------|------------------|
| 126       | 62.33 | 28.22      |                    |                  |
| 127       |       |            | .14                |                  |
| 128       | 62.00 | 28.36      |                    |                  |
| 129       |       |            | .13                |                  |
| 130       | 61.68 | 28.49      |                    |                  |
| 131       |       |            | .12                |                  |
| 132       | 61.39 | 28.61      |                    |                  |
| 133       |       |            | .12                |                  |
| 134       | 61.11 | 28.73      |                    |                  |
| 135       |       |            | .13                |                  |
| 136       | 60.79 | 28.86      |                    |                  |
| 137       |       |            | .15                |                  |
| 138       | 60.45 | 29.01      |                    |                  |
| 139       |       |            | .11                |                  |
| 140       | 60.18 | 29.12      |                    |                  |
| 141       |       |            | .13                |                  |
| 142       | 59.88 | 29.25      |                    |                  |
| 143       |       |            | .13                |                  |
| 144       | 59.59 | 29.38      |                    |                  |
| 145       |       |            | .14                |                  |
| 146       | 59.25 | 29.52      |                    |                  |
| 147       |       |            | .14                |                  |
| 148       | 58.94 | 29.66      |                    |                  |
| 149       |       |            | .13                |                  |
| 150       | 58.64 | 29.79      |                    |                  |
| 151       | 58.50 | 29.85      | .13                |                  |
| 152       | 58.34 | 29.92      |                    |                  |
| 153       | 58.20 | 29.98      |                    |                  |



Hillsboro 1124-7

Depth (ft)

Description

---

0 - 500' TD Santa Fe Group alluvium. Silt, sand, and gravel. Clasts are predominantly intrusive and extrusive fragments. Various felsic compositions predominant. Basalt fragments are present, but minor. Textural variations from predominantly sand to predominantly gravel. Intervals at 30 to 90 feet and 470 to 500 feet are mostly sand-size material. Gravel predominates in all other samples.

Intact gravel clasts exhibiting weathered surfaces are mostly angular to subangular. Minor content of well-rounded gravel. Depositional environment is interpreted as alluvial fan, but may also contain thin fluvial-channel deposits.

Very-fine-grained metallic mineralization, probably pyrite, is present in many samples, but appears to be associated exclusively with basalt fragments. This mineralization is interpreted to have occurred within the basalt formation and not within the Santa Fe Group alluvium.

Samples from this hole are similar to hole 1124-9, but exhibit a greater heterogeneity of clast lithology.

ΔT Well No. 1124-8

Property-Project Hillsboro Depth Logged 152

Map Hillsboro Scale 15 Date: Drilled 1/11/85 Logged 3/7/85

State NM County Sierra, of NW of SW of Sec 4 T 16S R 7W

Instrument NM Energy Int Operator Dick Whise Elevation 5390 (ft/m)

Comments \_\_\_\_\_

**Card A**

JUSTIFY

Date Logged

| Proj No  | Well No | DA | MO | YR | *   |
|--|---------|----|----|----|-----|
| 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 |         |    |    |    |     |
| 1124   | 8       | 7  | 3  | 85 | C M |

\*19-Write F if Fahrenheit, 20-Write F if Feet

Site Description

| Operator  | Editor  | DA | MO | YR   |
|---|---|----|----|------|
| 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 | 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 |    |    |      |
| 2.6 Km North of Hillsboro   | DL  | DP | 7  | 3 85 |

(Approx. location, water well?, oil test?, etc.)

**Card B**

Map Location \*\*

Scale Unit N CM

Map Size (7.5, 15, 60) 15

N Lat Degree 32 Min 45.0

W Long Degree 107 Min 45.0

Use decimals

Measure from SW corner of map; except AMS sheets measure from bottom center degree mark (W,-)(E,+)

Northing 34.2

Easting 26.8

Elev 5390

Write M if meters

Use decimals

Segment 1 = Depths

| Start                         | End            | Conductivity K | ΔK             | Best cond. (-K) |
|-------------------------------|----------------|----------------|----------------|-----------------|
| 21 22 23 24 25 26 27 28 29 30 | 31 32 33 34 35 | 36 37 38 39 40 | 41 42 43 44 45 | 46 47 48 49 50  |
| 15.0                          | 50.0           |                |                |                 |

Segment 2

|                |                |                |                |                |                |
|----------------|----------------|----------------|----------------|----------------|----------------|
| 51 52 53 54 55 | 56 57 58 59 60 | 61 62 63 64 65 | 66 67 68 69 70 | 71 72 73 74 75 | 76 77 78 79 80 |
| 90.0           | 110.0          | 50.0           | 90.0           |                |                |

Segment 3

Segment 4

|       |       |      |      |  |
|-------|-------|------|------|--|
| 134.0 | 152.0 | -4.5 | -0.5 |  |
|-------|-------|------|------|--|

Segment 5

Segment 6

|     |
|-----|
| 999 |
|-----|

Segment 7

Segment 8

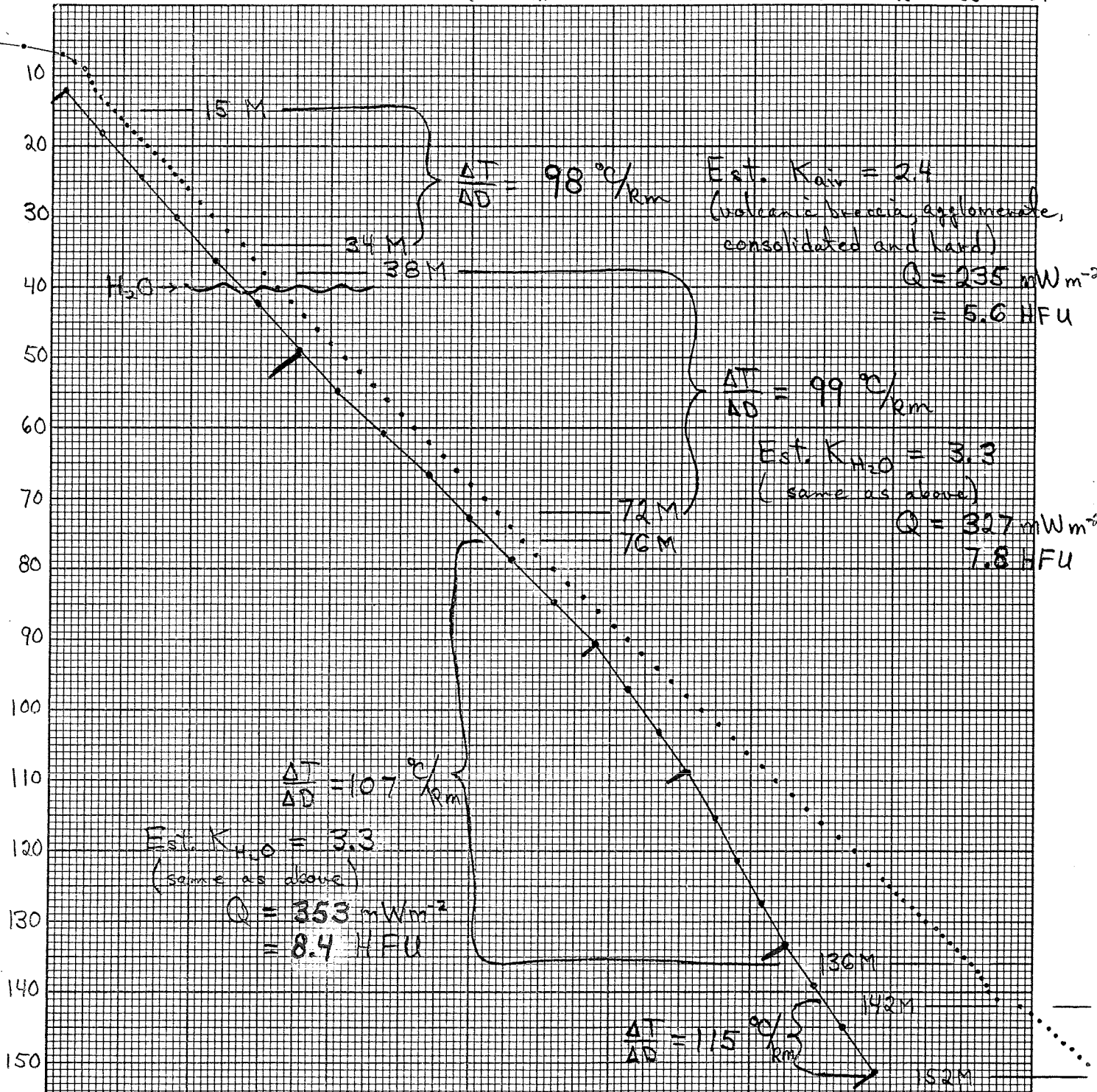
Segment 9

Segment 10

|                |                |                |                |                |                |
|----------------|----------------|----------------|----------------|----------------|----------------|
| 51 52 53 54 55 | 56 57 58 59 60 | 61 62 63 64 65 | 66 67 68 69 70 | 71 72 73 74 75 | 76 77 78 79 80 |
|----------------|----------------|----------------|----------------|----------------|----------------|

After final segment Start = .999





Final Temp. Log (55 days)  
 logged by: R. Lohse  
 probes: NMSU/Sealhard  
 date: 3-7-85  
 time: 12:55 pm  
 partly cloudy, warm, ~75°F

S.R.C. Hillsboro Project

Hole #: 1124-8

Final Temp. log: Date, 3-7-85; Time, 12:55pm

Operator, R. Lohse; Probe, NMSU/Spafford;

Weather, partly cloudy + warm ~ 75°F

| Depth (M) | Res.   | Temp. (°C) | $\Delta T$ | Grad. |  |  |
|-----------|--------|------------|------------|-------|--|--|
| 1         | 120.23 | 10.76      |            |       |  |  |
| 2         | 112.78 | 12.54      |            |       |  |  |
| 3         | 102.67 | 15.11      |            |       |  |  |
| 4         | 95.07  | 17.18      |            |       |  |  |
| 5         | 89.83  | 18.69      |            |       |  |  |
| 6         | 86.86  | 19.58      |            |       |  |  |
| 7         | 85.04  | 20.14      |            |       |  |  |
| 8         | 84.45  | 20.32      |            |       |  |  |
| 9         | 84.09  | 20.43      |            |       |  |  |
| 10        | 83.88  | 20.50      |            |       |  |  |
| 11        | 83.69  | 20.56      |            |       |  |  |
| 12        | 83.50  | 20.62      |            |       |  |  |
| 13        | 83.26  | 20.69      |            |       |  |  |
| 14        | 82.98  | 20.78      |            |       |  |  |
| 15        | 82.67  | 20.88      | .20        |       |  |  |
| 16        | 82.36  | 20.98      |            |       |  |  |
| 17        | 82.15  | 21.05      | .17        |       |  |  |
| 18        | 81.82  | 21.15      |            |       |  |  |
| 19        | 81.50  | 21.26      | .21        |       |  |  |
| 20        | 81.17  | 21.36      |            |       |  |  |
| 21        | 80.86  | 21.46      | .22        |       |  |  |
| 22        | 80.51  | 21.58      |            |       |  |  |
| 23        | 80.18  | 21.68      | .17        |       |  |  |
| 24        | 79.97  | 21.75      |            |       |  |  |
| 25        | 79.68  | 21.85      | .20        |       |  |  |



(cont.)

S.R.C. Hillsboro Project

Hole #: 1124 - 8

| Depth (M) | Res.  | Temp.(°C) | $\Delta T$<br>(°C) | Grad.<br>(°C/km) |  |  |
|-----------|-------|-----------|--------------------|------------------|--|--|
| 26        | 79.38 | 21.95     |                    |                  |  |  |
| 27        |       |           | .17                |                  |  |  |
| 28        | 78.86 | 22.12     |                    |                  |  |  |
| 29        |       |           | .17                |                  |  |  |
| 30        | 78.33 | 22.29     |                    |                  |  |  |
| 31        |       |           | .22                |                  |  |  |
| 32        | 77.68 | 22.51     |                    |                  |  |  |
| 33        |       |           | .23                |                  |  |  |
| 34        | 77.01 | 22.74     |                    |                  |  |  |
| 35        |       |           | .14                |                  |  |  |
| 36        | 76.58 | 22.88     |                    |                  |  |  |
| 37        |       |           | .17                |                  |  |  |
| 38        | 76.08 | 23.05     |                    |                  |  |  |
| 39        |       |           | .19                |                  |  |  |
| 40        | 75.53 | 23.24     |                    |                  |  |  |
| 41        |       |           | .19                |                  |  |  |
| 42        | 74.99 | 23.43     |                    |                  |  |  |
| 43        |       |           | .20                |                  |  |  |
| 44        | 74.42 | 23.63     |                    |                  |  |  |
| 45        |       |           | .19                |                  |  |  |
| 46        | 73.88 | 23.82     |                    |                  |  |  |
| 47        |       |           | .19                |                  |  |  |
| 48        | 73.33 | 24.01     |                    |                  |  |  |
| 49        |       |           | .21                |                  |  |  |
| 50        | 72.76 | 24.22     |                    |                  |  |  |

(cont.)

S.R.C. Hillsboro Project

Hole #: 1124-8

| Depth (M) | Res.  | Temp. (°C) | $\Delta T$ (°C) | Grad. (°C/km) |  |  |
|-----------|-------|------------|-----------------|---------------|--|--|
| 51        |       |            | .20             |               |  |  |
| 52        | 72.20 | 24.42      |                 |               |  |  |
| 53        |       |            | .19             |               |  |  |
| 54        | 71.67 | 24.61      |                 |               |  |  |
| 55        |       |            | .19             |               |  |  |
| 56        | 71.13 | 24.80      |                 |               |  |  |
| 57        |       |            | .20             |               |  |  |
| 58        | 70.58 | 25.00      |                 |               |  |  |
| 59        |       |            | .19             |               |  |  |
| 60        | 70.08 | 25.19      |                 |               |  |  |
| 61        |       |            | .21             |               |  |  |
| 62        | 69.51 | 25.40      |                 |               |  |  |
| 63        |       |            | .20             |               |  |  |
| 64        | 68.97 | 25.60      |                 |               |  |  |
| 65        |       |            | .19             |               |  |  |
| 66        | 68.47 | 25.79      |                 |               |  |  |
| 67        |       |            | .23             |               |  |  |
| 68        | 67.87 | 26.02      |                 |               |  |  |
| 69        |       |            | .20             |               |  |  |
| 70        | 67.35 | 26.22      |                 |               |  |  |
| 71        |       |            | .21             |               |  |  |
| 72        | 66.80 | 26.43      |                 |               |  |  |
| 73        |       |            | .15             |               |  |  |
| 74        | 66.41 | 26.58      |                 |               |  |  |
| 75        |       |            | .17             |               |  |  |



(cont.)

S.R.C. Hillsboro Project

Hole #: 1124-8

| Depth (M) | Res.  | Temp. (°C) | $\Delta T$<br>(°C) | Grad.<br>(°C/km) |
|-----------|-------|------------|--------------------|------------------|
| 76        | 65.97 | 26.75      |                    |                  |
| 77        |       |            | .21                |                  |
| 78        | 65.44 | 26.96      |                    |                  |
| 79        |       |            | .22                |                  |
| 80        | 64.89 | 27.18      |                    |                  |
| 81        |       |            | .22                |                  |
| 82        | 64.33 | 27.40      |                    |                  |
| 83        |       |            | .22                |                  |
| 84        | 63.80 | 27.62      |                    |                  |
| 85        |       |            | .21                |                  |
| 86        | 63.28 | 27.83      |                    |                  |
| 87        |       |            | .22                |                  |
| 88        | 62.74 | 28.05      |                    |                  |
| 89        |       |            | .20                |                  |
| 90        | 62.25 | 28.25      |                    |                  |
| 91        |       |            | .21                |                  |
| 92        | 61.74 | 28.46      |                    |                  |
| 93        |       |            | .22                |                  |
| 94        | 61.22 | 28.68      |                    |                  |
| 95        |       |            | .20                |                  |
| 96        | 60.74 | 28.88      |                    |                  |
| 97        |       |            | .21                |                  |
| 98        | 60.25 | 29.09      |                    |                  |
| 99        |       |            | .22                |                  |
| 100       | 59.74 | 29.31      |                    |                  |

(cont.)

S.R.C. Hillsboro Project

Hole # : 1124-8

| Depth (M) | Res.  | Temp. (°C) | $\Delta T$<br>(°C) | Grad.<br>(°C/km) |
|-----------|-------|------------|--------------------|------------------|
| 101       |       |            | .23                |                  |
| 102       | 59.22 | 29.54      |                    |                  |
| 103       |       |            | .23                |                  |
| 104       | 58.69 | 29.77      |                    |                  |
| 105       |       |            | .18                |                  |
| 106       | 58.28 | 29.95      |                    |                  |
| 107       |       |            | .21                |                  |
| 108       | 57.81 | 30.16      |                    |                  |
| 109       |       |            | .19                |                  |
| 110       | 57.38 | 30.35      |                    |                  |
| 111       |       |            | .23                |                  |
| 112       | 56.86 | 30.58      |                    |                  |
| 113       |       |            | .21                |                  |
| 114       | 56.40 | 30.79      |                    |                  |
| 115       |       |            | .21                |                  |
| 116       | 55.94 | 31.00      |                    |                  |
| 117       |       |            | .25                |                  |
| 118       | 55.40 | 31.25      |                    |                  |
| 119       |       |            | .23                |                  |
| 120       | 54.90 | 31.48      |                    |                  |
| 121       |       |            | .20                |                  |
| 122       | 54.49 | 31.68      |                    |                  |
| 123       |       |            | .21                |                  |
| 124       | 54.03 | 31.89      |                    |                  |
| 125       | 53.85 | 31.98      | .19                |                  |



(cont.)

## S.R.C. Hillsboro Project

page 6

Hole #: 1124-8

| Depth (M) | Res.  | Temp. (°C) | $\Delta T$<br>(°C) | Grad.<br>(°C/km) |
|-----------|-------|------------|--------------------|------------------|
| 126       | 53.65 | 32.08      |                    |                  |
| 127       | 53.44 | 32.18      | .23                |                  |
| 128       | 53.17 | 32.31      |                    |                  |
| 129       | 52.94 | 32.42      | .21                |                  |
| 130       | 52.73 | 32.52      |                    |                  |
| 131       | 52.48 | 32.64      | .20                |                  |
| 132       | 52.28 | 32.74      |                    |                  |
| 133       | 52.03 | 32.86      | .22                |                  |
| 134       | 51.84 | 32.96      |                    |                  |
| 135       | 51.63 | 33.06      | .19                |                  |
| 136       | 51.46 | 33.15      |                    |                  |
| 137       | 51.30 | 33.23      | .14                |                  |
| 138       | 51.17 | 33.29      |                    |                  |
| 139       | 51.08 | 33.34      | .10                |                  |
| 140       | 50.97 | 33.39      |                    |                  |
| 141       | 50.74 | 33.51      | .47                |                  |
| 142       | 50.05 | 33.86      |                    |                  |
| 143       | 49.77 | 34.00      | .26                |                  |
| 144       | 49.55 | 34.12      |                    |                  |
| 145       | 49.34 | 34.23      | .20                |                  |
| 146       | 49.12 | 34.34      |                    |                  |
| 147       | 48.92 | 34.45      | .23                |                  |
| 148       | 48.69 | 34.57      |                    |                  |
| 149       | 48.48 | 34.68      | .23                |                  |
| 150       | 48.26 | 34.80      |                    |                  |
| 151       | 48.07 | 34.90      | .21                |                  |
| 152       | 47.86 | 35.01      |                    |                  |
| 152.5     | 47.78 | 35.05      |                    |                  |

Hillsboro 1124-8

Depth (ft)

Description

---

0 - 500' TD Santa Fe Group alluvium. Partially consolidated gravel of fairly uniform texture and composition. Lithic fragments are weathered silicic volcanics probably derived from very local sources. Fragments are mostly pale-red to pale-reddish-brown and porphyritic. Compositional range of source rock is probably latite to rhyolite. Quartz phenocrysts are visible but minor in occurrence. Degree of weathering appears uniform through the entire section penetrated. Alteration to clays may have reduced bulk permeability to a low value: little formation water was produced during air-drilling.



ΔT Well No. 1124 - 9

Property-Project Hillsboro Depth Logged 152  
 Map Hillsboro Scale 15 Date: Drilled 1/31/85 Logged 3/7/85  
 State NM County Sierra, of of SW of NW of Sec 8 T16S R7W  
 Instrument NM Energy Inst staff Operator Dick Lohse Elevation 5580 (ft/m)  
 Comments \_\_\_\_\_

JUSTIFY

Card A

Date Logged

| Proj No                      | Well No                                    | DA  | MO | YR | * |
|------------------------------|--|---|----|----|---|
| 1 2 3 4 5 6 7 8 9 10<br>1124 | 11 12 13 14 15 16 17 18 19 20<br>907 03 85 | *19-Write F if Fahrenheit, 20-Write F if Feet |    |    |   |

Site Description

| Operator   | Editor                              | DA                                   | MO                                  | YR                               |
|--|-------------------------------------|--------------------------------------|-------------------------------------|----------------------------------|
| 21 22 23 24 25 26 27 28 29 30<br>2 Km NW of H1156040 | 31 32 33 34 35 36 37 38 39 40<br>DL | 41 42 43 44 45 46 47 48 49 50<br>DDP | 51 52 53 54 55 56 57 58 59 60<br>31 | 61 62 63 64 65 66 67 68<br>01 85 |

(Approx. location, water well?, oil test?, etc.)

Card B

Map Location \*\*

| Scale Unit          | Map Size               | N Lat                      | W Long                      |
|---------------------|------------------------|----------------------------|-----------------------------|
| 21 22 23 24 25<br>m | 26 27 28 29 30<br>15.0 | 31 32 33 34 35<br>32. 45.0 | 36 37 38 39 40<br>107. 45.0 |

Measure from SW corner of map; except AMS sheets measure from bottom center degree mark (W,-)(E,+)

Use decimals

| Northing                              | Easting                               | Elev                                  |
|---------------------------------------|---------------------------------------|---------------------------------------|
| 51 52 53 54 55 56 57 58 59 60<br>31.9 | 61 62 63 64 65 66 67 68 69 70<br>24.0 | 71 72 73 74 75 76 77 78 79 80<br>5580 |

Write M if meters

Use decimals

Segment 1 = Depths

| Start                                 | End                                   | Conductivity K                | ΔK | Best cond. (-K) | Downward extrapolations (-ΔK) |
|---------------------------------------|---------------------------------------|-------------------------------|----|-----------------|-------------------------------|
| 21 22 23 24 25 26 27 28 29 30<br>15.0 | 31 32 33 34 35 36 37 38 39 40<br>50.0 | 41 42 43 44 45 46 47 48 49 50 |    |                 |                               |

Segment 2

|                                       |                                       |                               |  |  |  |
|---------------------------------------|---------------------------------------|-------------------------------|--|--|--|
| 51 52 53 54 55 56 57 58 59 60<br>60.0 | 61 62 63 64 65 66 67 68 69 70<br>75.0 | 71 72 73 74 75 76 77 78 79 80 |  |  |  |
|---------------------------------------|---------------------------------------|-------------------------------|--|--|--|

Segment 3

|      |      |  |  |  |  |
|------|------|--|--|--|--|
| 66.0 | 75.0 |  |  |  |  |
|------|------|--|--|--|--|

Segment 4

|      |       |  |  |  |  |
|------|-------|--|--|--|--|
| 75.0 | 125.0 |  |  |  |  |
|------|-------|--|--|--|--|

Segment 5

|       |       |      |      |  |  |
|-------|-------|------|------|--|--|
| 125.0 | 152.0 | -4.5 | -0.5 |  |  |
|-------|-------|------|------|--|--|

Segment 6

|  |  |       |  |  |  |
|--|--|-------|--|--|--|
|  |  | 1.999 |  |  |  |
|--|--|-------|--|--|--|

Segment 7

|  |  |  |  |  |  |
|--|--|--|--|--|--|
|  |  |  |  |  |  |
|--|--|--|--|--|--|

Segment 8

|  |  |  |  |  |  |
|--|--|--|--|--|--|
|  |  |  |  |  |  |
|--|--|--|--|--|--|

Segment 9

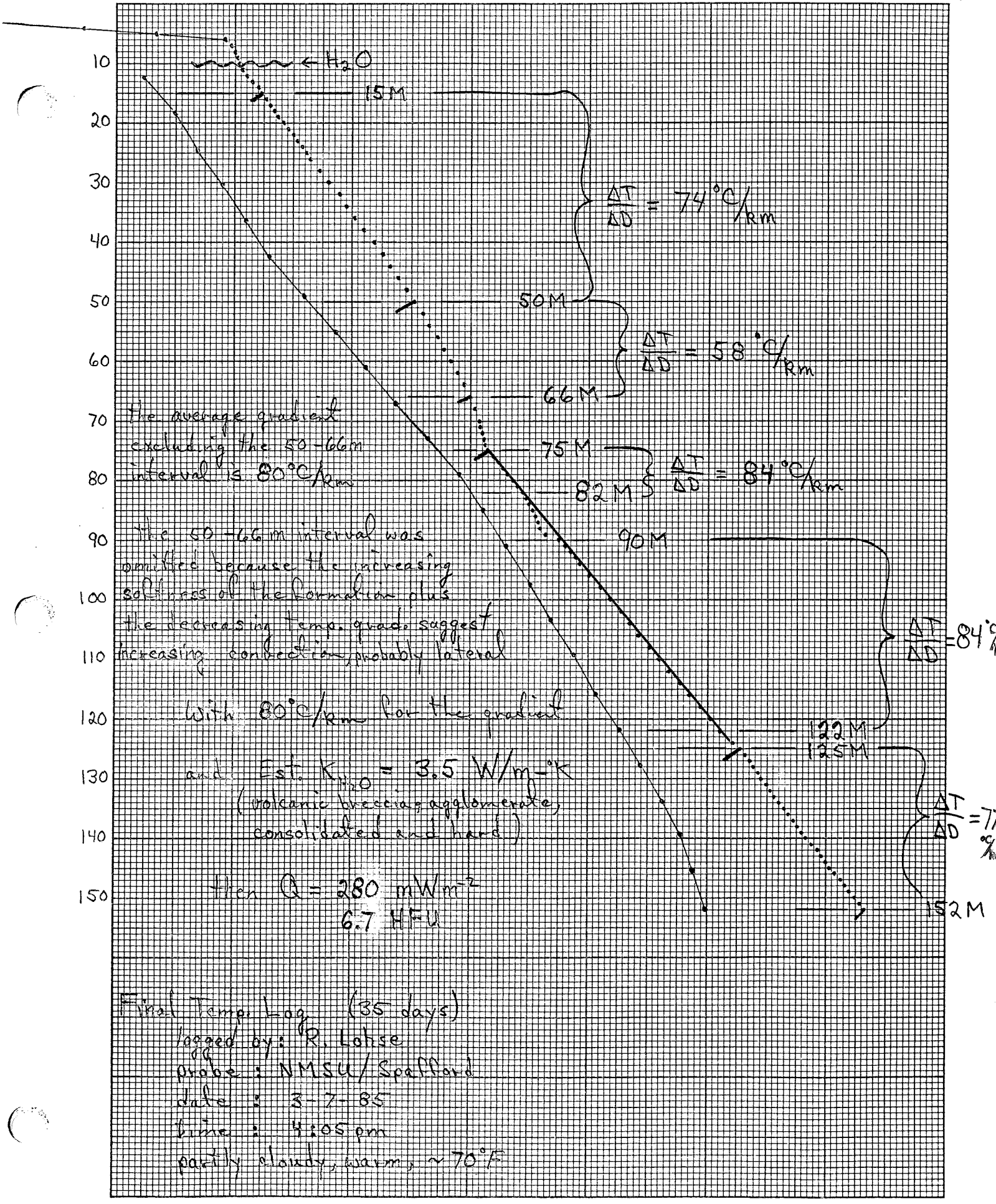
|  |  |  |  |  |  |
|--|--|--|--|--|--|
|  |  |  |  |  |  |
|--|--|--|--|--|--|

Segment 10

|  |  |  |  |  |  |
|--|--|--|--|--|--|
|  |  |  |  |  |  |
|--|--|--|--|--|--|

After final segment Start = .999







S.R.C. Hillsboro Project

Hole #: 1124-9

Final Temp. log: Date, 3-7-85; Time, 4:05pm  
Operator, R. Lokse; Probe, NMSU/Spafford;  
Weather, partly cloudy + warm ~ 70°F

| Depth (M) | Res.   | Temp. (°C) | ΔT  | Grad. |  |  |
|-----------|--------|------------|-----|-------|--|--|
| 1         | 114.99 | 12.00      |     |       |  |  |
| 2         | 107.28 | 13.91      |     |       |  |  |
| 3         | 100.09 | 15.80      |     |       |  |  |
| 4         | 94.09  | 17.46      |     |       |  |  |
| 5         | 89.85  | 18.68      |     |       |  |  |
| 6         | 85.93  | 19.86      |     |       |  |  |
| 7         | 85.60  | 19.96      |     |       |  |  |
| 8         | 85.41  | 20.02      |     |       |  |  |
| 9         | 85.29  | 20.06      |     |       |  |  |
| 10        | 85.18  | 20.09      |     |       |  |  |
| 11        | 85.01  | 20.15      |     |       |  |  |
| 12        | 84.77  | 20.22      |     |       |  |  |
| 13        | 84.52  | 20.30      |     |       |  |  |
| 14        | 84.14  | 20.42      |     |       |  |  |
| 15        | 83.97  | 20.47      | .14 |       |  |  |
| 16        | 83.74  | 20.54      |     |       |  |  |
| 17        | 83.51  | 20.62      | .15 |       |  |  |
| 18        | 83.26  | 20.69      |     |       |  |  |
| 19        | 83.01  | 20.77      | .16 |       |  |  |
| 20        | 82.78  | 20.85      |     |       |  |  |
| 21        | 82.56  | 20.92      | .16 |       |  |  |
| 22        | 82.25  | 21.01      |     |       |  |  |
| 23        | 82.05  | 21.08      | .15 |       |  |  |
| 24        | 81.80  | 21.16      |     |       |  |  |
| 25        | 81.58  | 21.23      | .14 |       |  |  |

(cont.)

S.R.C. Hillsboro Project

Hole #: 1124 - 9

| Depth (M) | Res.  | Temp.(°C) | $\Delta T$<br>(°C) | Grad.<br>(°C/km) |  |  |
|-----------|-------|-----------|--------------------|------------------|--|--|
| 26        | 81.35 | 21.30     |                    |                  |  |  |
| 27        |       |           | .16                |                  |  |  |
| 28        | 80.86 | 21.46     |                    |                  |  |  |
| 29        |       |           | .16                |                  |  |  |
| 30        | 80.37 | 21.62     |                    |                  |  |  |
| 31        |       |           | .16                |                  |  |  |
| 32        | 79.87 | 21.78     |                    |                  |  |  |
| 33        |       |           | .14                |                  |  |  |
| 34        | 79.45 | 21.92     |                    |                  |  |  |
| 35        |       |           | .15                |                  |  |  |
| 36        | 79.01 | 22.07     |                    |                  |  |  |
| 37        |       |           | .14                |                  |  |  |
| 38        | 78.57 | 22.21     |                    |                  |  |  |
| 39        |       |           | .18                |                  |  |  |
| 40        | 78.04 | 22.39     |                    |                  |  |  |
| 41        |       |           | .14                |                  |  |  |
| 42        | 77.63 | 22.53     |                    |                  |  |  |
| 43        |       |           | .11                |                  |  |  |
| 44        | 77.30 | 22.64     |                    |                  |  |  |
| 45        |       |           | .14                |                  |  |  |
| 46        | 76.90 | 22.78     |                    |                  |  |  |
| 47        |       |           | .15                |                  |  |  |
| 48        | 76.45 | 22.93     |                    |                  |  |  |
| 49        |       |           | .14                |                  |  |  |
| 50        | 76.03 | 23.07     |                    |                  |  |  |

(cont.)

S.R.C. Hillsboro Project

Hole #: 1124-9

| Depth (M) | Res.  | Temp. (°C) | ΔT (°C) | Grad. (°C/m) |  |  |
|-----------|-------|------------|---------|--------------|--|--|
| 51        |       |            | .13     |              |  |  |
| 52        | 75.66 | 23.20      |         |              |  |  |
| 53        |       |            | .11     |              |  |  |
| 54        | 75.35 | 23.31      |         |              |  |  |
| 55        |       |            | .13     |              |  |  |
| 56        | 74.96 | 23.44      |         |              |  |  |
| 57        |       |            | .10     |              |  |  |
| 58        | 74.68 | 23.54      |         |              |  |  |
| 59        |       |            | .12     |              |  |  |
| 60        | 74.32 | 23.66      |         |              |  |  |
| 61        |       |            | .12     |              |  |  |
| 62        | 73.98 | 23.78      |         |              |  |  |
| 63        |       |            | .11     |              |  |  |
| 64        | 73.68 | 23.89      |         |              |  |  |
| 65        |       |            | .11     |              |  |  |
| 66        | 73.36 | 24.00      |         |              |  |  |
| 67        |       |            | .08     |              |  |  |
| 68        | 73.13 | 24.08      |         |              |  |  |
| 69        |       |            | .07     |              |  |  |
| 70        | 72.95 | 24.15      |         |              |  |  |
| 71        | 72.89 | 24.17      | .05     |              |  |  |
| 72        | 72.80 | 24.20      |         |              |  |  |
| 73        | 72.73 | 24.23      | .05     |              |  |  |
| 74        | 72.66 | 24.25      |         |              |  |  |
| 75        | 72.53 | 24.30      | .05     |              |  |  |



(cont.)

S.R.C. Hillsboro Project

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Hole # : 1124 - 9

| Depth (M) | Res.  | Temp. (°C) | $\Delta T$ (°C) | Grad. (°C/km) |
|-----------|-------|------------|-----------------|---------------|
| 76        | 72.24 | 24.40      |                 |               |
| 77        | 72.01 | 24.48      | .15             |               |
| 78        | 71.83 | 24.55      |                 |               |
| 79        | 71.61 | 24.63      | .23             |               |
| 80        | 71.33 | 24.73      |                 |               |
| 81        | 71.13 | 24.80      | .16             |               |
| 82        | 70.90 | 24.89      |                 |               |
| 83        | 70.74 | 24.95      | .11             |               |
| 84        | 70.59 | 25.00      |                 |               |
| 85        | 70.40 | 25.07      | .12             |               |
| 86        | 70.27 | 25.12      |                 |               |
| 87        | 70.19 | 25.15      | .06             |               |
| 88        | 70.10 | 25.18      |                 |               |
| 89        | 69.85 | 25.28      | .33             |               |
| 90        | 69.22 | 25.51      |                 |               |
| 91        | 68.95 | 25.61      | .19             |               |
| 92        | 68.71 | 25.70      |                 |               |
| 93        | 68.50 | 25.78      | .16             |               |
| 94        | 68.30 | 25.86      |                 |               |
| 95        |       |            | .17             |               |
| 96        | 67.84 | 26.03      |                 |               |
| 97        |       |            | .18             |               |
| 98        | 67.37 | 26.21      |                 |               |
| 99        |       |            | .17             |               |
| 100       | 66.93 | 26.38      |                 |               |

(cont.)

S.R.C. Hillsboro Project

Hole # : 1124-9

|  | Depth (M) | Res.  | Temp. (°C) | $\Delta T$<br>(°C) | Grad.<br>(°C/km) |  |
|--|-----------|-------|------------|--------------------|------------------|--|
|  | 101       |       |            | .18                |                  |  |
|  | 102       | 66.49 | 26.55      |                    |                  |  |
|  | 103       |       |            | .15                |                  |  |
|  | 104       | 66.10 | 26.70      |                    |                  |  |
|  | 105       |       |            | .17                |                  |  |
|  | 106       | 65.68 | 26.87      |                    |                  |  |
|  | 107       |       |            | .16                |                  |  |
|  | 108       | 65.26 | 27.03      |                    |                  |  |
|  | 109       |       |            | .17                |                  |  |
|  | 110       | 64.84 | 27.20      |                    |                  |  |
|  | 111       |       |            | .16                |                  |  |
|  | 112       | 64.43 | 27.36      |                    |                  |  |
|  | 113       |       |            | .18                |                  |  |
|  | 114       | 63.98 | 27.54      |                    |                  |  |
|  | 115       |       |            | .17                |                  |  |
|  | 116       | 63.56 | 27.71      |                    |                  |  |
|  | 117       |       |            | .18                |                  |  |
|  | 118       | 63.13 | 27.89      |                    |                  |  |
|  | 119       |       |            | .16                |                  |  |
|  | 120       | 62.74 | 28.05      |                    |                  |  |
|  | 121       |       |            | .15                |                  |  |
|  | 122       | 62.37 | 28.20      |                    |                  |  |
|  | 123       |       |            | .23                |                  |  |
|  | 124       | 61.83 | 28.43      |                    |                  |  |
|  | 125       | 61.50 | 28.56      | .20                |                  |  |

(cont.)

## S.R.C. Hillsboro Project

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Hole #: 1124-9

| Depth (M) | Res.  | Temp. (°C) | $\Delta T$<br>(°C) | Grad.<br>(°C/km) |
|-----------|-------|------------|--------------------|------------------|
| 126       | 61.34 | 28.63      |                    |                  |
| 127       | 61.15 | 28.71      | .14                |                  |
| 128       | 61.02 | 28.77      |                    |                  |
| 129       | 60.82 | 28.85      | .13                |                  |
| 130       | 60.71 | 28.90      |                    |                  |
| 131       | 60.49 | 28.99      | .15                |                  |
| 132       | 60.35 | 29.05      |                    |                  |
| 133       | 60.18 | 29.12      | .15                |                  |
| 134       | 59.99 | 29.20      |                    |                  |
| 135       | 59.82 | 29.28      | .15                |                  |
| 136       | 59.66 | 29.35      |                    |                  |
| 137       | 59.46 | 29.43      | .16                |                  |
| 138       | 59.29 | 29.51      |                    |                  |
| 139       | 59.11 | 29.58      | .15                |                  |
| 140       | 58.94 | 29.66      |                    |                  |
| 141       | 58.70 | 29.76      | .19                |                  |
| 142       | 58.51 | 29.85      |                    |                  |
| 143       | 58.37 | 29.91      | .14                |                  |
| 144       | 58.18 | 29.99      |                    |                  |
| 145       | 58.01 | 30.07      | .17                |                  |
| 146       | 57.80 | 30.16      |                    |                  |
| 147       | 57.63 | 30.24      | .15                |                  |
| 148       | 57.46 | 30.31      |                    |                  |
| 149       | 57.30 | 30.38      | .17                |                  |
| 150       | 57.08 | 30.48      |                    |                  |
| 151       | 56.88 | 30.57      | .15                |                  |
| 152       | 56.75 | 30.63      |                    |                  |



Hillsboro 1124-9

Depth (ft)

Description

---

0 - 500' TD Santa Fe Group alluvium. Silt, sand, and gravel. Gravel-size material comprises approximately 75 percent of samples above 370 feet. Below 370 feet, samples are approximately half sand-size material and half gravel-size material. Sand fraction is composed of lithic fragments, feldspar grains, and quartz grains. Gravel fraction appears to be derived from one igneous source rock.

Lithic fragments are moderate-reddish-brown to dark-reddish-brown, pale-red-purple, and medium gray. Fragments exhibit moderate weathering but preserve some textural features. Most fragments are porphyritic, but a few are aphanitic. Altered feldspars are the most common phenocryst.

These sediments were probably derived from the Pollack Quartz Latite of Jicha (1954) and Hedlund (1977). Samples from this hole are similar to those from hole 1124-7, but exhibit less heterogeneity of lithology.

Depositional environment is interpreted to be alluvial fan.

ΔT Well No 1124-10

Property-Project Hillsboro Depth Logged 150

Map Hillsboro Scale 15 Date: Drilled 1/2/85 Logged 3/7/85

State NM County Sierra of SW of NW of Sec 10 T16S R7W

Instrument NM Energy Inst - Spalford Operator Dick Lohse Elevation 5380 (ft/m)

Comments \_\_\_\_\_

**JUSTIFY**

Date Logged

| Proj No  | Well No | DA | MO | YR | *   |
|--|---------|----|----|----|-----|
| 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 |         |    |    |    |     |
| 1124   | 1007    | 03 | 85 |    | C M |

\*19-Write F if Fahrenheit, 20-Write F if Feet

Site Description

| Operator  | Editor                        | DA       | MO    | YR       |
|---|-------------------------------|----------|-------|----------|
| 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 | 51 52 53 54 55 56 57 58 59 60 | 61 62 63 | 64 65 | 66 67 68 |
| 1.8 km NE of Hillsboro  | DL                            | LOP      | 2     | 1 85     |

(Approx. location, water well?, oil test?, etc.)

**Card B**

Map Location \*\*

| Scale Unit                    | Map Size                      | N Lat                         | W Long        |
|-------------------------------|-------------------------------|-------------------------------|---------------|
| 21 22 23 24 25 26 27 28 29 30 | 31 32 33 34 35 36 37 38 39 40 | 41 42 43 44 45 46 47 48 49 50 |               |
| IN CM                         | (7.5, 15., 60.)               | Degree Min                    | Degree Min ** |
| Fm                            | 15.                           | 32. 45.                       | 107. 45.0     |

Use decimals

Measure from SW corner of map; except AMS sheets measure from bottom center degree mark (W,-)(E,+)

| Northing                      | Easting                       | Elev                          |
|-------------------------------|-------------------------------|-------------------------------|
| 51 52 53 54 55 56 57 58 59 60 | 61 62 63 64 65 66 67 68 69 70 | 71 72 73 74 75 76 77 78 79 80 |
| 32.2                          | 29.3                          | 5380.                         |

Use decimals

Write M if meters

Segment 1 = Depths

| Start                         | End                           | Conductivity K                | ΔK   | Best cond. (-K) |
|-------------------------------|-------------------------------|-------------------------------|------|-----------------|
| 21 22 23 24 25 26 27 28 29 30 | 31 32 33 34 35 36 37 38 39 40 | 41 42 43 44 45 46 47 48 49 50 |      |                 |
| 15.0                          | 58.0                          | 4.5                           | -0.5 |                 |

Downward extrapolations (-ΔK)

Segment 2

|                               |                               |                               |
|-------------------------------|-------------------------------|-------------------------------|
| 51 52 53 54 55 56 57 58 59 60 | 61 62 63 64 65 66 67 68 69 70 | 71 72 73 74 75 76 77 78 79 80 |
|                               | .999                          |                               |

Segment 3

Segment 4

Segment 5

Segment 6

Segment 7

Segment 8

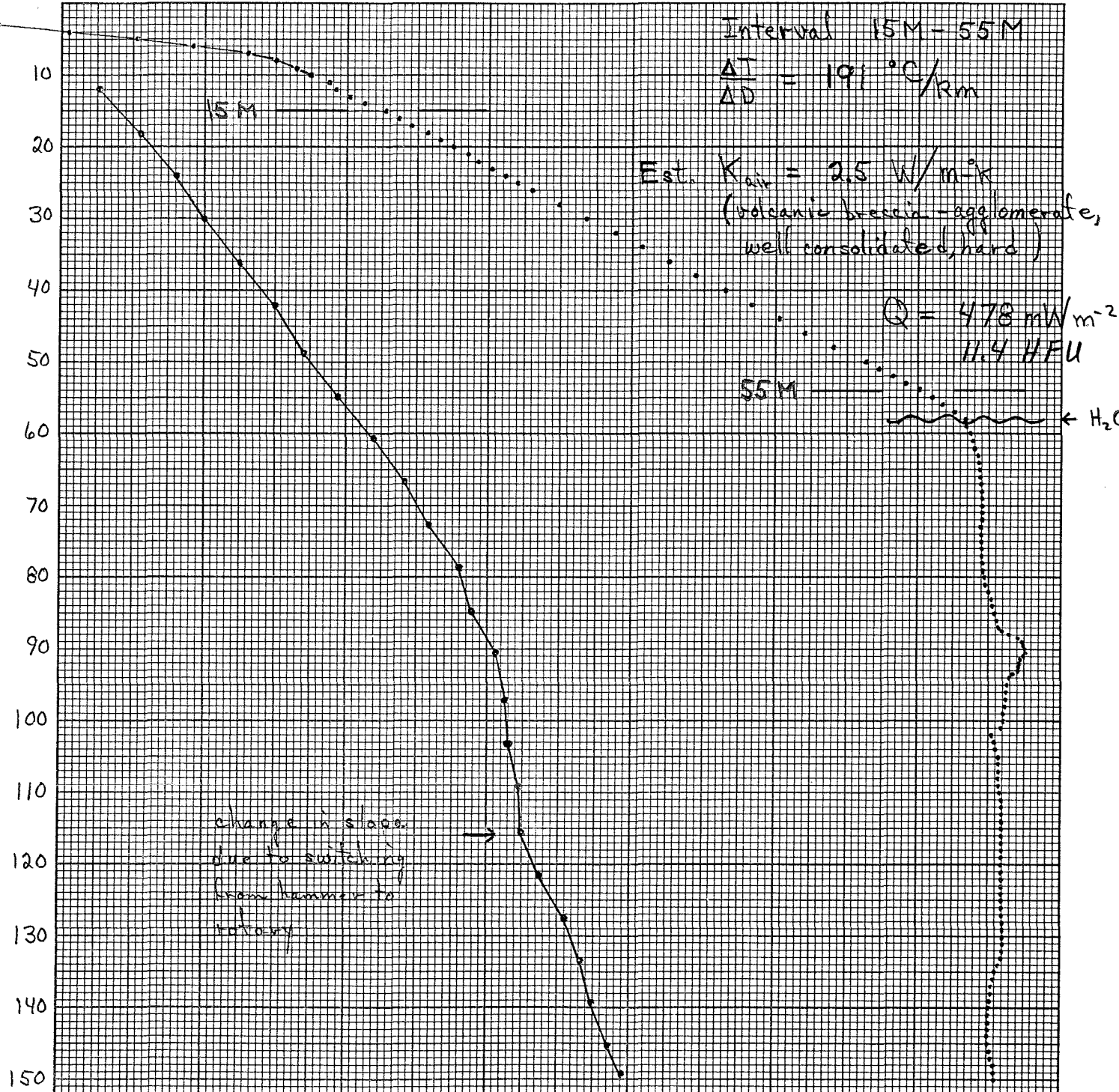
Segment 9

Segment 10

|                               |                               |                               |
|-------------------------------|-------------------------------|-------------------------------|
| 51 52 53 54 55 56 57 58 59 60 | 61 62 63 64 65 66 67 68 69 70 | 71 72 73 74 75 76 77 78 79 80 |
|-------------------------------|-------------------------------|-------------------------------|

After final segment Start = .999





Final Temp Log (64 days)  
 logged by: R. Lohse  
 probe: NMSU/Scaffold  
 date: 3-7-85  
 time: 5:20 pm  
 cloudy, cool, ~ 60°F



S.R.C. Hillsboro Project

Hole #: 1124-10

Final Temp. log: Date, 3-7-85; Time, 5:20pm  
Operator, R. Lohse; Probe, NMSU/Spafford;  
Weather, partly cloudy & cool ~ 60°F

| Depth (M) | Res.   | Temp. (°C) | $\Delta T$ | Grad. |
|-----------|--------|------------|------------|-------|
| 1         | 108.78 | 13.53      |            |       |
| 2         | 101.40 | 15.45      |            |       |
| 3         | 95.31  | 17.11      |            |       |
| 4         | 91.80  | 18.11      |            |       |
| 5         | 88.55  | 19.07      |            |       |
| 6         | 86.01  | 19.84      |            |       |
| 7         | 83.53  | 20.61      |            |       |
| 8         | 82.28  | 21.00      |            |       |
| 9         | 81.39  | 21.29      |            |       |
| 10        | 80.66  | 21.53      |            |       |
| 11        | 80.00  | 21.74      |            |       |
| 12        | 79.69  | 21.84      |            |       |
| 13        | 79.05  | 22.05      | 0.40       |       |
| 14        | 78.48  | 22.24      |            |       |
| 15        | 77.56  | 22.55      | 0.49       |       |
| 16        | 77.02  | 22.73      |            |       |
| 17        | 76.51  | 22.91      | 0.43       |       |
| 18        | 75.76  | 23.16      |            |       |
| 19        | 75.31  | 23.32      | 0.34       |       |
| 20        | 74.80  | 23.50      |            |       |
| 21        | 74.23  | 23.70      | 0.37       |       |
| 22        | 73.74  | 23.87      |            |       |
| 23        | 73.20  | 24.06      | 0.37       |       |
| 24        | 72.68  | 24.24      |            |       |
| 25        | 72.21  | 24.41      | 0.36       |       |

(cont.)

S.R.C. Hillsboro Project

Hole #: 1124-10

| Depth (M) | Res.  | Temp.(°C) | $\Delta T$<br>(°C) | Grad.<br>(°C/km) |  |  |
|-----------|-------|-----------|--------------------|------------------|--|--|
| 26        | 71.70 | 24.60     |                    |                  |  |  |
| 27        |       |           | 0.38               |                  |  |  |
| 28        | 70.65 | 24.98     |                    |                  |  |  |
| 29        |       |           | 0.37               |                  |  |  |
| 30        | 69.65 | 25.35     |                    |                  |  |  |
| 31        |       |           | 0.42               |                  |  |  |
| 32        | 68.54 | 25.77     |                    |                  |  |  |
| 33        |       |           | 0.37               |                  |  |  |
| 34        | 67.55 | 26.14     |                    |                  |  |  |
| 35        |       |           | 0.38               |                  |  |  |
| 36        | 66.56 | 26.52     |                    |                  |  |  |
| 37        |       |           | 0.37               |                  |  |  |
| 38        | 65.62 | 26.89     |                    |                  |  |  |
| 39        |       |           | 0.41               |                  |  |  |
| 40        | 64.60 | 27.30     |                    |                  |  |  |
| 41        |       |           | 0.37               |                  |  |  |
| 42        | 63.66 | 27.67     |                    |                  |  |  |
| 43        |       |           | 0.40               |                  |  |  |
| 44        | 62.69 | 28.07     |                    |                  |  |  |
| 45        |       |           | 0.35               |                  |  |  |
| 46        | 61.84 | 28.42     |                    |                  |  |  |
| 47        |       |           | 0.40               |                  |  |  |
| 48        | 60.90 | 28.82     |                    |                  |  |  |
| 49        |       |           | 0.46               |                  |  |  |
| 50        | 59.82 | 29.28     |                    |                  |  |  |

(cont.)

## S.R.C. Hillsboro Project

page 3

Hole #: 1124-10

| Depth (M) | Res.  | Temp. (°C) | $\Delta T$<br>(°C) | Grad.<br>(°C/km) |  |  |
|-----------|-------|------------|--------------------|------------------|--|--|
| 51        | 59.41 | 29.45      | 0.37               |                  |  |  |
| 52        | 58.97 | 29.65      |                    |                  |  |  |
| 53        | 58.54 | 29.83      | 0.38               |                  |  |  |
| 54        | 58.10 | 30.03      |                    |                  |  |  |
| 55        | 57.71 | 30.20      | 0.33               |                  |  |  |
| 56        | 57.36 | 30.36      |                    |                  |  |  |
| 57        | 57.01 | 30.51      | 0.32               |                  |  |  |
| 58        | 56.65 | 30.68      |                    |                  |  |  |
| 59        | 56.62 | 30.69      | 0.07               |                  |  |  |
| 60        | 56.49 | 30.75      |                    |                  |  |  |
| 61        | 56.42 | 30.78      | 0.06               |                  |  |  |
| 62        | 56.35 | 30.81      |                    |                  |  |  |
| 63        | 56.28 | 30.85      |                    |                  |  |  |
| 64        | 56.24 | 30.86      |                    |                  |  |  |
| 65        | 56.21 | 30.88-     |                    |                  |  |  |
| 66        | 56.19 | 30.88+     |                    |                  |  |  |
| 67        | 56.16 | 30.90      |                    |                  |  |  |
| 68        | 56.14 | 30.91-     |                    |                  |  |  |
| 69        | 56.13 | 30.91      |                    |                  |  |  |
| 70        | 56.13 | 30.91      |                    |                  |  |  |
| 71        | 56.14 | 30.91-     |                    |                  |  |  |
| 72        | 56.14 | 30.91-     |                    |                  |  |  |
| 73        | 56.15 | 30.90      |                    |                  |  |  |
| 74        | 56.16 | 30.90-     |                    |                  |  |  |
| 75        | 56.14 | 30.91-     |                    |                  |  |  |



(cont.)

# S.R.C. Hillsboro Project

Hole #: 1124-10

|                 | Depth (M) | Res.  | Temp. (°C) | ΔT (°C) | Grad. (°C/km) |
|-----------------|-----------|-------|------------|---------|---------------|
|                 | 76        | 56.13 | 30.91      |         |               |
|                 | 77        | 56.12 | 30.91 +    |         |               |
|                 | 78        | 56.10 | 30.92      |         |               |
|                 | 79        | 56.07 | 30.94      |         |               |
|                 | 80        | 56.03 | 30.96      |         |               |
|                 | 81        | 56.00 | 30.97      |         |               |
|                 | 82        | 55.92 | 31.01      |         |               |
|                 | 83        | 55.85 | 31.04      |         |               |
|                 | 84        | 55.80 | 31.07      |         |               |
|                 | 85        | 55.74 | 31.09      |         |               |
|                 | 86        | 55.69 | 31.12      |         |               |
| <sup>er.5</sup> | 87        | 55.64 | 31.14      |         |               |
| 87.5 55.56      | (31.18)   |       |            |         |               |
|                 | 88        | 55.32 | 31.29      |         |               |
| 88.5 55.06      | (31.41)   |       |            |         |               |
|                 | 89        | 54.93 | 31.47      |         |               |
| 89.5 54.90      | (31.48)   |       |            |         |               |
| * 90.5 54.82    | (31.52)   |       |            |         |               |
|                 | 91        | 54.89 | 31.49      |         |               |
| 91.5 54.97      | (31.45)   |       |            |         |               |
|                 | 92        | 54.99 | 31.44      |         |               |
| 92.5 55.02      | (31.43)   |       |            |         |               |
|                 | 93        | 55.03 | 31.42      |         |               |
| 93.5 55.22      | (31.33)   |       |            |         |               |
|                 | 94        | 55.30 | 31.30      |         |               |
|                 | 95        | 55.36 | 31.27      |         |               |
|                 | 96        | 55.40 | 31.25      |         |               |
|                 | 97        | 55.42 | 31.24      |         |               |
|                 | 98        | 55.45 | 31.23      |         |               |
|                 | 99        | 55.50 | 31.20      |         |               |
|                 | 100       | 55.46 | 31.22      |         |               |

(cont.)

# S.R.C. Hillsboro Project

Hole # : 1124-10

| Depth (M) | Res.  | Temp. (°C) | $\Delta T$<br>(°C) | Grad.<br>(°C/km) |
|-----------|-------|------------|--------------------|------------------|
| 101       | 55.56 | 31.18      |                    |                  |
| 102       | 55.88 | 31.03      |                    |                  |
| 103       | 55.77 | 31.08      |                    |                  |
| 104       | 55.71 | 31.11      |                    |                  |
| 105       | 55.62 | 31.15      |                    |                  |
| 106       | 55.62 | 31.15      |                    |                  |
| 107       | 55.62 | 31.15      |                    |                  |
| 108       | 55.62 | 31.15      |                    |                  |
| 109       | 55.59 | 31.16      |                    |                  |
| 110       | 55.55 | 31.18      |                    |                  |
| 111       | 55.54 | 31.19      |                    |                  |
| 112       |       |            |                    |                  |
| 113       |       |            |                    |                  |
| 114       |       |            |                    |                  |
| 115       |       |            |                    |                  |
| 116       |       |            |                    |                  |
| 117       |       |            |                    |                  |
| 118       |       |            |                    |                  |
| 119       |       |            |                    |                  |
| 120       |       |            |                    |                  |
| 121       |       |            |                    |                  |
| 122       |       |            |                    |                  |
| 123       |       |            |                    |                  |
| 124       |       |            |                    |                  |
| 125       | 55.54 | 31.19      |                    |                  |

(cont.)

S.R.C. Hillsboro Project

Hole #: 1124-10

| Depth (M) | Res.  | Temp. (°C) | $\Delta T$ (°C) | Grad. (°C/km) |
|-----------|-------|------------|-----------------|---------------|
| 126       | 55.52 | 31.20 -    |                 |               |
| 127       | 55.50 | 31.20 +    |                 |               |
| 128       | 55.48 | 31.21      |                 |               |
| 129       | 55.49 | 31.21 -    |                 |               |
| 130       | 55.49 | 31.21 -    |                 |               |
| 131       | 55.49 | 31.21 -    |                 |               |
| 132       | 55.51 | 31.20      |                 |               |
| 133       | 55.56 | 31.18      |                 |               |
| 134       | 55.64 | 31.14      |                 |               |
| 135       | 55.73 | 31.10      |                 |               |
| 136       | 55.76 | 31.08      |                 |               |
| 137       | 55.81 | 31.06      |                 |               |
| 138       | 55.84 | 31.05      |                 |               |
| 139       | 55.85 | 31.04      |                 |               |
| 140       | 55.86 | 31.04 -    |                 |               |
| 141       | 55.89 | 31.02      |                 |               |
| 142       | 55.90 | 31.02 -    |                 |               |
| 143       | 55.91 | 31.01      |                 |               |
| 144       | 55.92 | 31.01 -    |                 |               |
| 145       | 55.90 | 31.02      |                 |               |
| 146       | 55.85 | 31.04      |                 |               |
| 147       | 55.79 | 31.07      |                 |               |
| 148       | 55.73 | 31.10 -    |                 |               |
| 149       | 55.72 | 31.10      |                 |               |
| 150       | 55.71 | 31.11      |                 |               |



Hillsboro 1124-10

Depth (ft)

Description

---

0 - 30'

Poorly sorted coluvium consisting of volcanic rock fragments. Color and texture of rock fragments suggest derivation from the same volcanic agglomerate unit penetrated by this hole.

30 - 493' TD

Volcanic agglomerate. Pale-red to pale-reddish-purple. 50 to 75 percent volcanic rock fragments in a fine-grained to aphaenitic groundmass. Lithic fragments are of heterogeneous volcanic compositions, but most are porphyritic to aphanitic.

There is little evidence of hot emplacement. Formation is interpreted to be a series of volcanic mudflows. Silicification is evident in some fragments. Induration ranges from moderately to very indurated. Nearby outcrops of this formation are extremely well indurated.

Some aplitic fragments occur in the 10- to 80-foot interval. These do not occur within the matrix of the agglomerate, and are interpreted to represent a thin aplite vein.

Extent of weathering decreases towards the bottom of the hole. Alteration to clays appears to be relatively more developed between 290 and 310 feet. The freshest and most angular chips occur at the bottom of the hole, from 450 to 500 feet.