GL05590
FILE_CAB__DRAWER_

Best Thermal Data
Field Sheets Wells 200-
299. Utah

Missing Wells 205, 211, 215,
219, 225, 226, 228, 229,
240, 246, 265, 290,
299.

A-43

THERMAL DATA - FIELD SHEETS

BEST 200-299

DATE	ISSUED TO

TEMPERATURE DEPTH LOG

ΔT Well No. 201

Property-Project OK Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY: → →

Proj No	Well No	Date Logged DA	MO	YR	*
779	201	06	06	76	CM

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

Site Description	Operator	Editor
1.6 KM WEST OF TWIN PEAK SPG	DP	KLH

Card B

Scale Unit in cm	Map Size (7.5, 15.,60)	Map Location Δ N Lat Degree	Min	W Long Degree	Min
CM	15.	38.	45.	112.	45.

Use decimals

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

Northing	Easting	Elev	
8-4	-2.05	5000.	F
8.2	1.85	5040.	

Use decimals

← Write M if meters

SEGMENT DEPTH

	Start	End	K	ΔK
C	10.0	40.0	-5.0	.5
D	54.0	76.0		-.5
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
C	40.0	54.0		
D	.999			
E				
F				
G				

Final Segment: Start = .999

Transient B-206

____ of ____

TEMPERATURE - DEPTH LOG

TEMP 29.0°C
TIME ~1400

Location 1 MILE S. OF DOG VLY Date 31-AUG-76

Map COVE FORT UT, 15"

Property THERMEX T 25S R 7W sec 12 NE¼ SW¼

Drill Hole SWU #6 B-206 Date Drilled 26-AUG-76 Elevation 5920 ft.

Instrument ____ Operator JEO

Comments 3/4" PVC PIPE. UPPER 37' IN MED-GRAY TO DK-GRAY ~~LS~~ DOLOMITIC L.S. REST OF HOLE IN L.S., DOLOMITE, & CALCAREOUS MARL, w CHERT ZONES. PROBABLY SEVIER RIVER FORMATION

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
1.0	4159	21.27			
1.5	4410	19.75			
2.0	4663	18.32			
2.5	4932	16.86			
3.0	5112	15.99			
3.5	5202	15.56			
4.0	5266	15.25			
4.5	5308	15.05			
5.0	5340	14.90			
5.5	5358	14.82			
6.0	5352	14.85			
6.5	5339	14.91			
7.0	5323	14.98			
7.5	5297	15.10			
8.0	5264	15.26			
8.5	5229	15.43			
9.0	5193	15.60			
9.5	5147	15.82			
10.0	5120	15.95			
10.5	5083	16.14			
11.0	5047	16.32			GRADIENT 30-90m 263°C/km
11.5	5012	16.49			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T _____ R _____ sec _____

Drill Hole B-206 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
12.0	4973	16.69			
12.5	4927	16.92			
13.0	4872	17.21			
13.5	4824	17.46			
14.0	4794	17.62			
14.5	4763	17.78			
15.0	4740	17.91			
15.5	4692	18.16			
16.0	4588	18.74			
16.5	4540	19.01			
17.0	4509	19.18			
17.5	4469	19.41			
18.0	4439	19.59			
18.5	4387	19.89			
19.0	4357	20.07			
19.5	4338	20.18			
20.0	4329	20.23			
22	4197	21.04			
24	4115	21.55			
26	4017	22.18			
28	3942	22.68			
30	3872	23.15			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

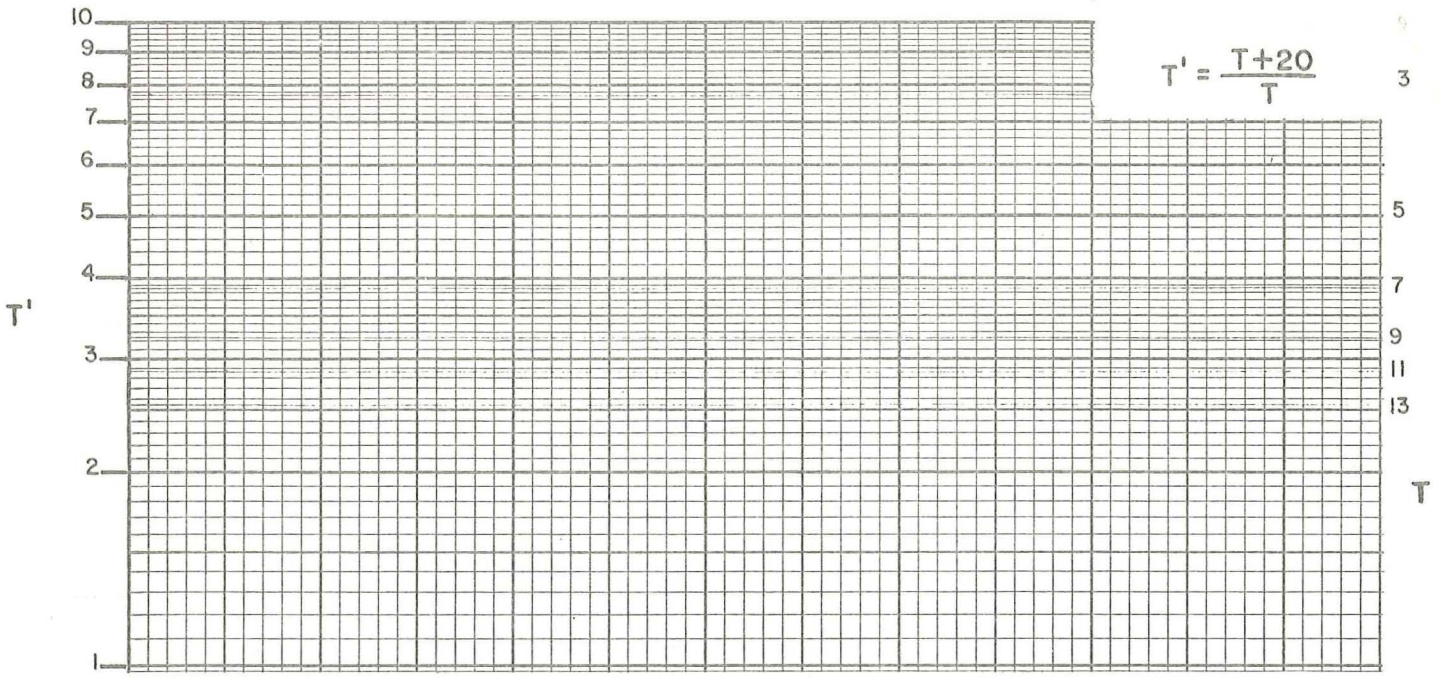
Property _____ T _____ R _____ sec _____

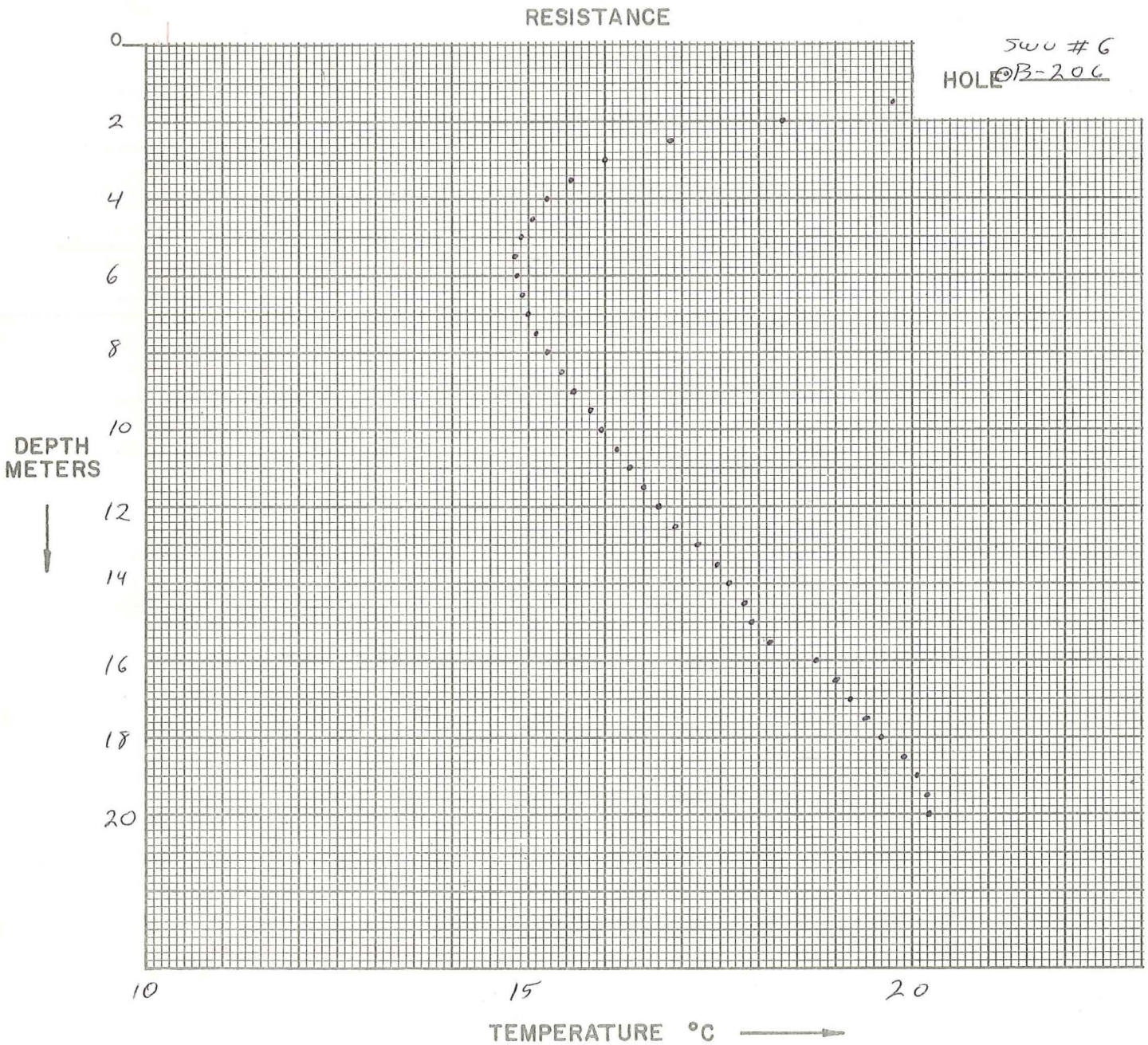
Drill Hole SWU #6 B-206 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
32	3806	23.60	0.45		
34	3744	24.04	0.44		
36	3685	24.46	0.42		
38	3632	24.85	0.39		
40	3572	25.29	0.44		
42	3503	25.81	0.52		
44	3431	26.37	0.56		
46	3354	26.99	0.62		
48	3300	27.43	0.44		
50	3213	28.16	0.73		
52	3161	28.60	0.44		
54	3083	29.29	0.31		
56	3028	29.79	0.50		
58	2958	30.43	0.64		
60	2889	31.09	0.66		
62	2838	31.59	0.50		
64	2769	32.28	0.69		
66	2719	32.79	0.51		
68	2656	33.45	0.66		
70	2614	33.91	0.46		
72	2559	34.51	0.60		


T' = T+20 / T
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13


RESISTANCE
SWU #6
HOLE B-206
DEPTH METERS
0
2
4
6
8
10
12
14
16
18
20
10
15
20
TEMPERATURE °C

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

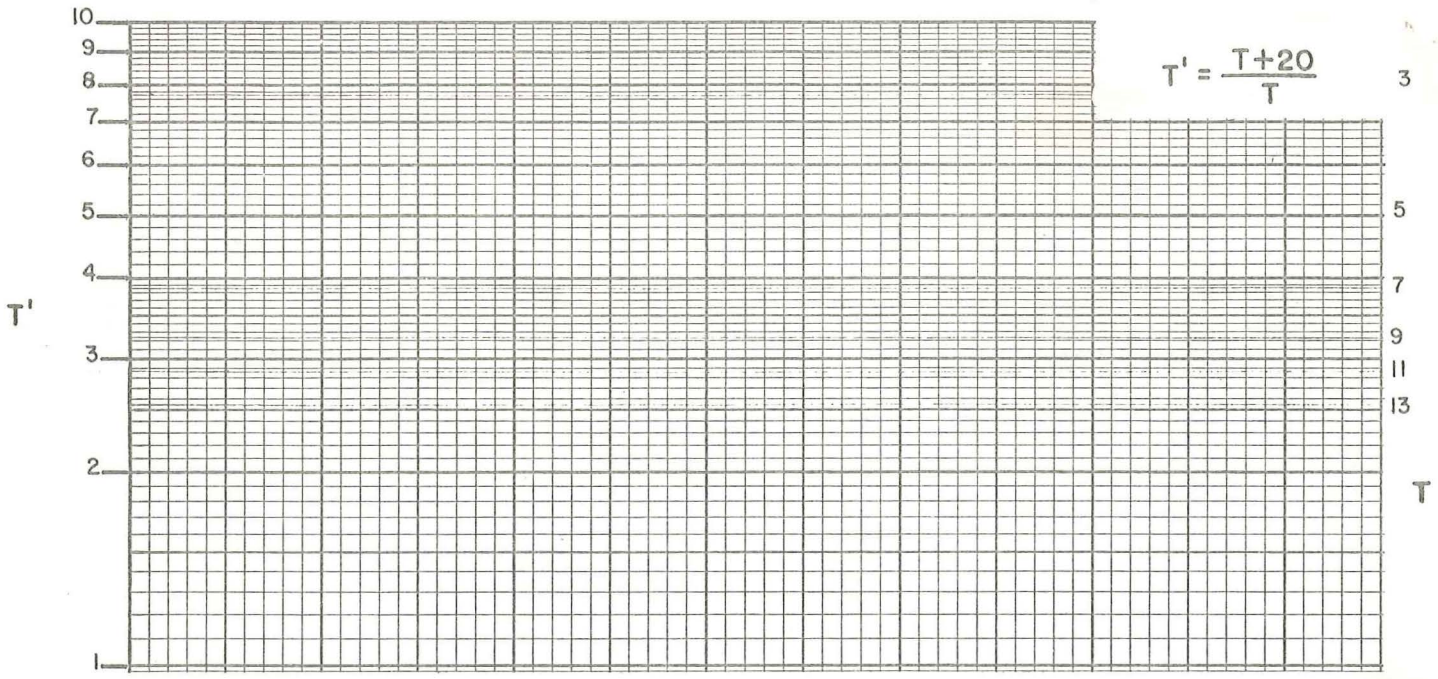
Property _____ T _____ R _____ sec _____

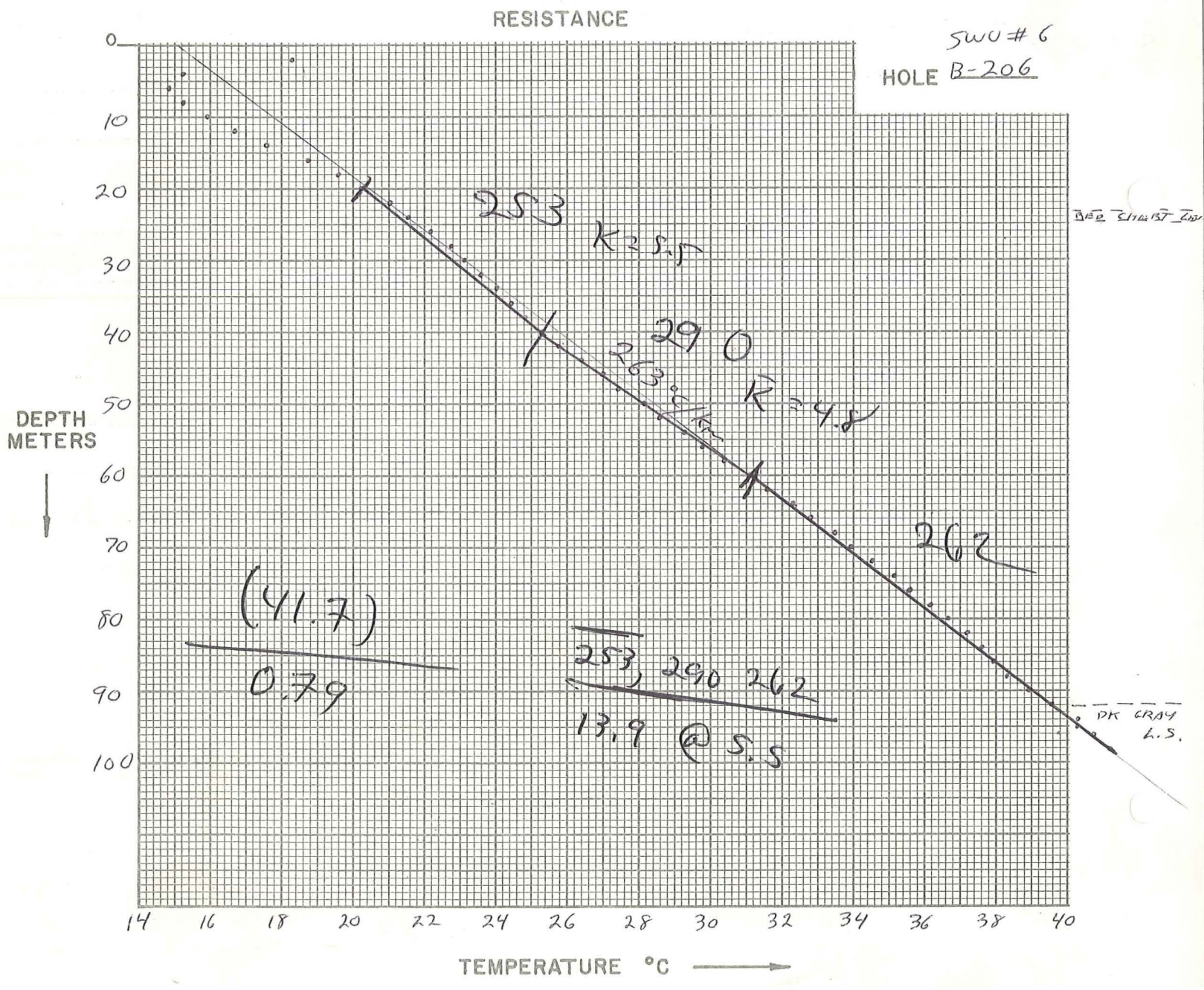
Drill Hole B-206 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
74	2503	35.15	0.64		
76	2463	35.61	0.46		
78	2411	36.22	0.51		
80	2373	36.68	0.46		
82	2331	37.20	0.52		
84	2298	37.62	0.42		
86	2274	37.93	0.31		
88	2244	38.31	0.38		
90	2197	38.94	0.63		
92	2151	39.56	0.62		
94	2105	40.20	0.64		
96	2068	40.73	0.53		
98	2035	41.21	0.48		A FEW INCHES SHORT OF 98m


T' = (T+20)/T
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13


RESISTANCE
SWU # 6
HOLE B-206
DEPTH METERS
TEMPERATURE °C
0
10
20
30
40
50
60
70
80
90
100
14
16
18
20
22
24
26
28
30
32
34
36
38
40
253 K = 5.5
290 K = 4.8
263 Ω/K
262
(41.7)
0.79
253, 290 262
13.9 @ 5.5
DK GRAY L.S.

TEMPERATURE - DEPTH LOG

Location North Side North Tunn Peak Date October 6 1976

Map Tabernacle Hill, Utah 15' Quad

Property OK T 23S R 8W sec NW¼ SE¼ 22

Drill Hole B-201 Date Drilled Sept 25, 1976 Elevation 5000 ft.

Instrument old unit Operator RO

Comments 3/4" PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
1.0	4548	18.96			
1.5	4420	19.69			
2.0	4350	20.11			
2.5	4322	20.27			
3.0	4325	20.25			
3.5	4430	19.65			
4.0	4495	19.265			
4.5	4585	18.750			
5.0	4648	18.400			
5.5	4709	18.075			
6.0	4760	17.80			
6.5	4797	17.600			
7.0	4815	17.500			
7.5	4826	17.450			
8.0	4826	17.450			
8.5	4817	17.495			
9.0	4804	17.565			
9.5	4782	17.680			
10.0	4758	17.810			
10.5	4727	17.975			
11.0	4672	18.295			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T ____ R ____ sec ____

Drill Hole _____ Date Drilled _____ Elevation ____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
11.5	4642	18.440			
12.0	4615	18.585			
12.5	4587	18.740			
13.0	4550	18.950			
13.5	4507	19.195			
14.0	4486	19.315			
14.5	4449	19.530			
15.0	4436	19.605			
15.5	4407	19.770			
16.0	4377	19.950			
16.5	4338	20.180			
17.0	4302	20.395			
17.5	4268	20.600			
18.0	4236	20.795			
18.5	4206	20.980			
19.0	4182	21.130			
19.5	4154	21.305			
20.0	4129	21.465			
22	4026	22.120	.655	327.5	
24	3918	22.835	.715	357.5	
26	3823	23.485	.650	325	
			.715	357.5	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T ____ R ____ sec ____

Drill Hole _____ Date Drilled _____ Elevation ____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
28	3721	24.200			
30	3627	24.880	.680	340	
32	3559	25.390	.510	255	
34	3469	26.075	.685	342.5	
36	3368	26.875	.800	400	
38	3256	27.790	.915	457.5	
40	3185	28.400	.610	305	
42	3135	28.825	.425	212.5	
44	3074	29.370	.555	277.5	
46	3019	29.865	.495	247.5	
48	2966	30.355	.490	245	
50	2919	30.800	.945	222.5	
52	2878	31.195	.395	197.5	
54	2841	31.555	.360	180	
56	2821	31.755	.200	100	
58	2803	31.930	.175	87.5	
60	2795	32.010	.080	40	
62	2791	32.055	.045	22.5	
64	2782	32.145	.090	45	
66	2782	32.145	—	—	
68	2782	32.145	—	—	
			-.015	-7	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

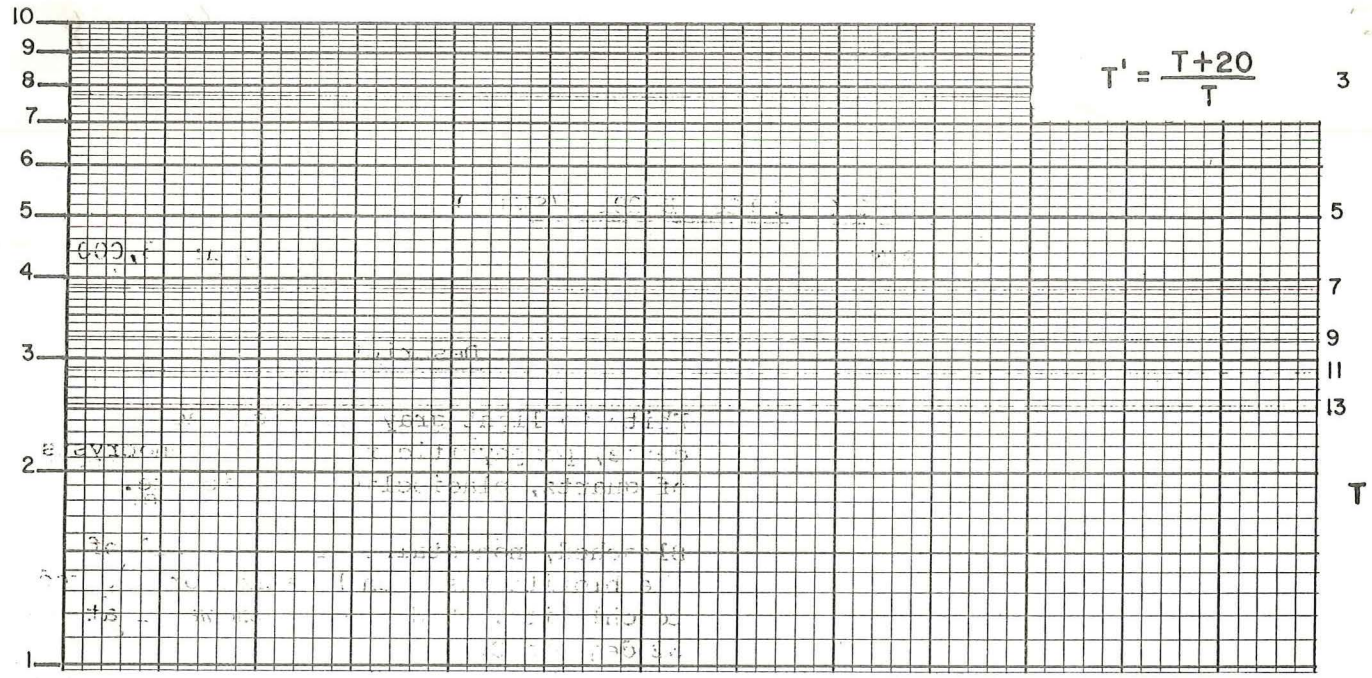
Property _____ T _____ R _____ sec _____

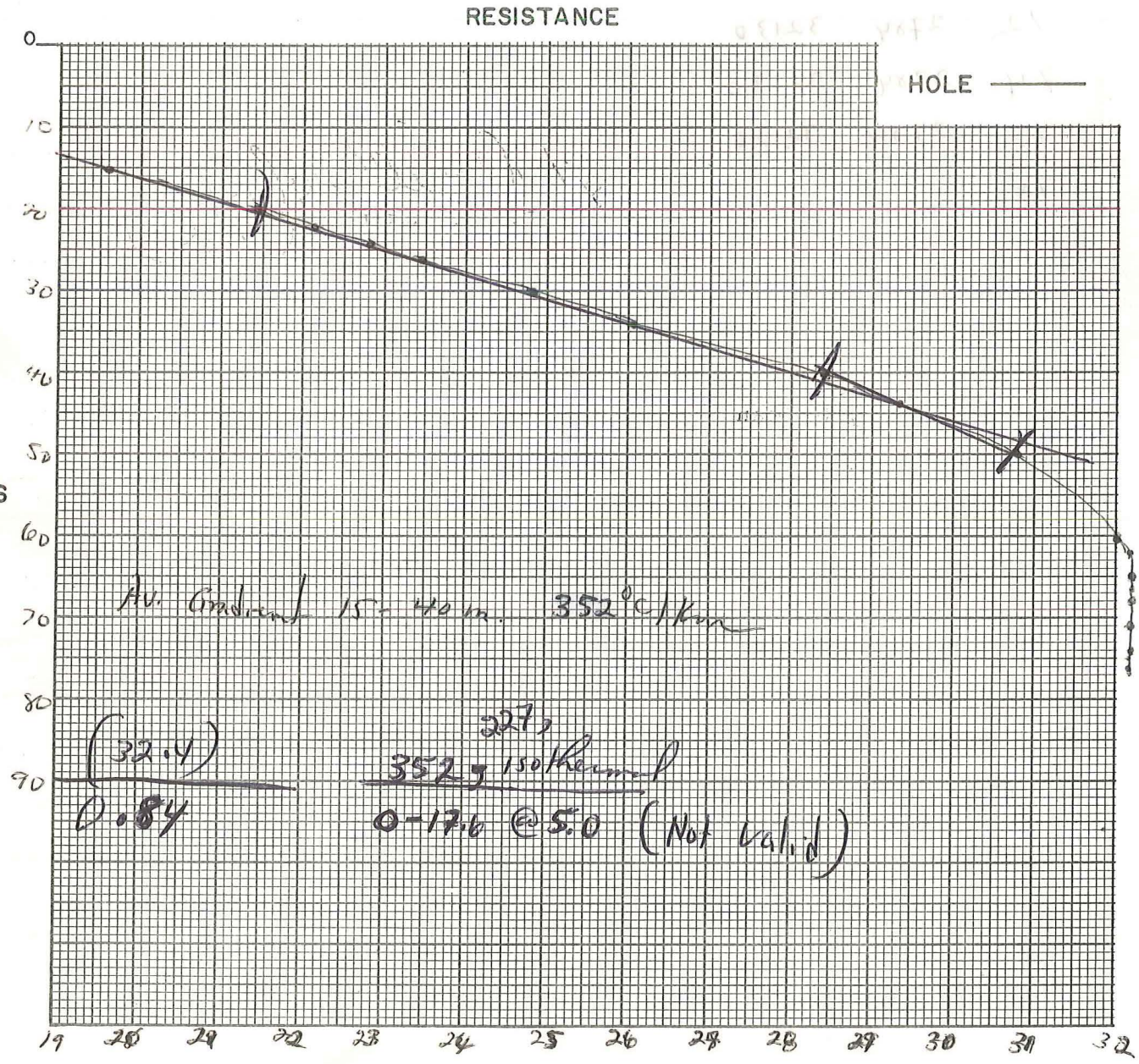
Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
70	2784	32.30			
72	2784	32.30			
74	2784	32.30			
76	2784	32.30			
78					


$T' = \frac{T+20}{T}$
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13


RESISTANCE
HOLE
DEPTH METERS
0
10
20
30
40
50
60
70
80
90
19
28
29
32
23
24
25
26
28
28
29
30
31
32
TEMPERATURE °C
Av. Grad. 15 - 40 m. 352°C/Km
(32.4)
0.84
227
352.5 150 Ka... P
0-17.6 @ 5.0 (Not Valid)

LITHOLOGIC LOG B-201 (SWU-1)

NW¼ SE¼ Sec 22 T23S R8W Elevation: 5,000'

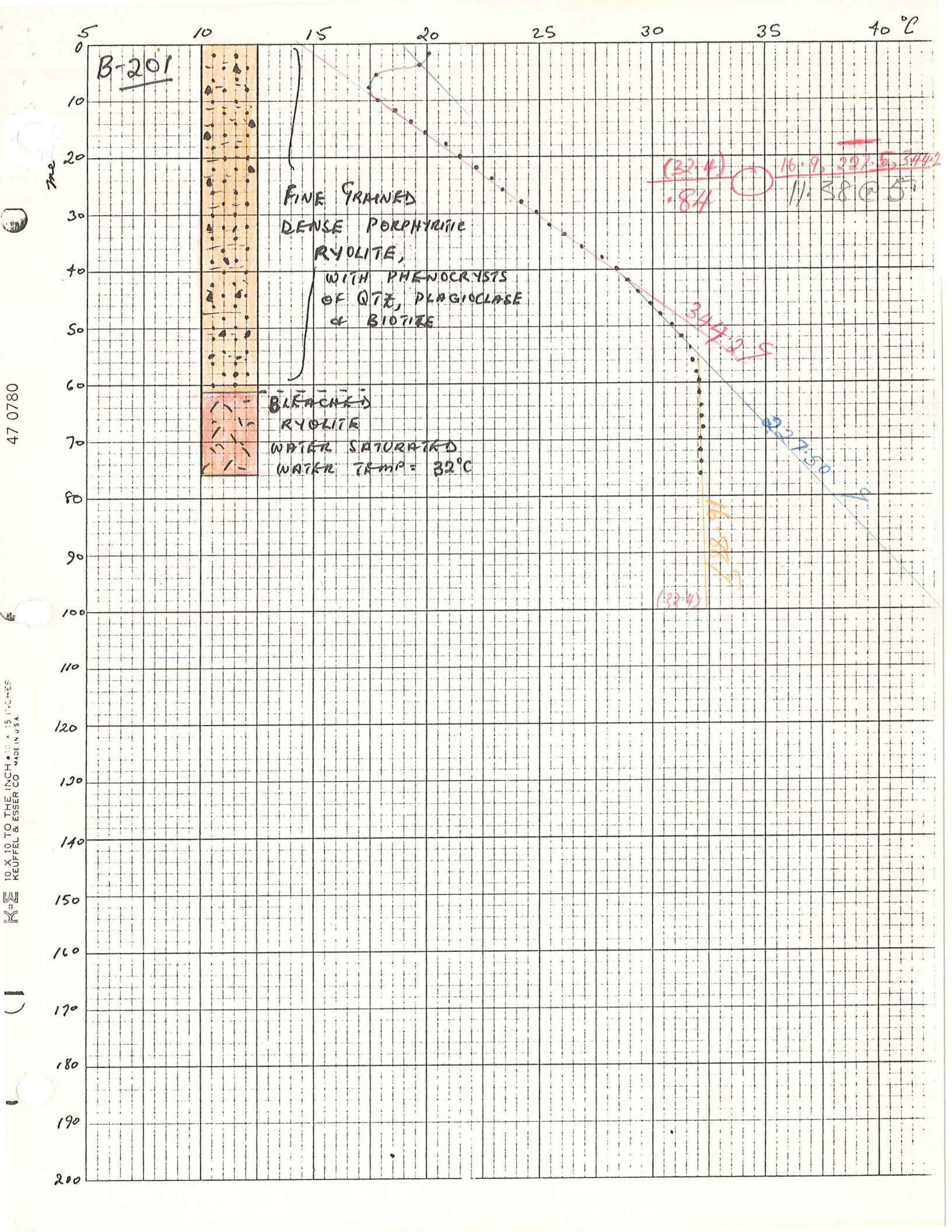
Depth	Description
0 - 61.7	White to light gray, fine-grained, dense, porphyritic rholite. Phenocrysts of quartz, placioclase and biotite.
61.7 - 76	Bleached, non-stained rhyolite all of the biotite has been bleached or altered to chlorite. Made 50-60 gpm water at 32 degrees C.

H. D. Pilkington

H. D. Pilkington

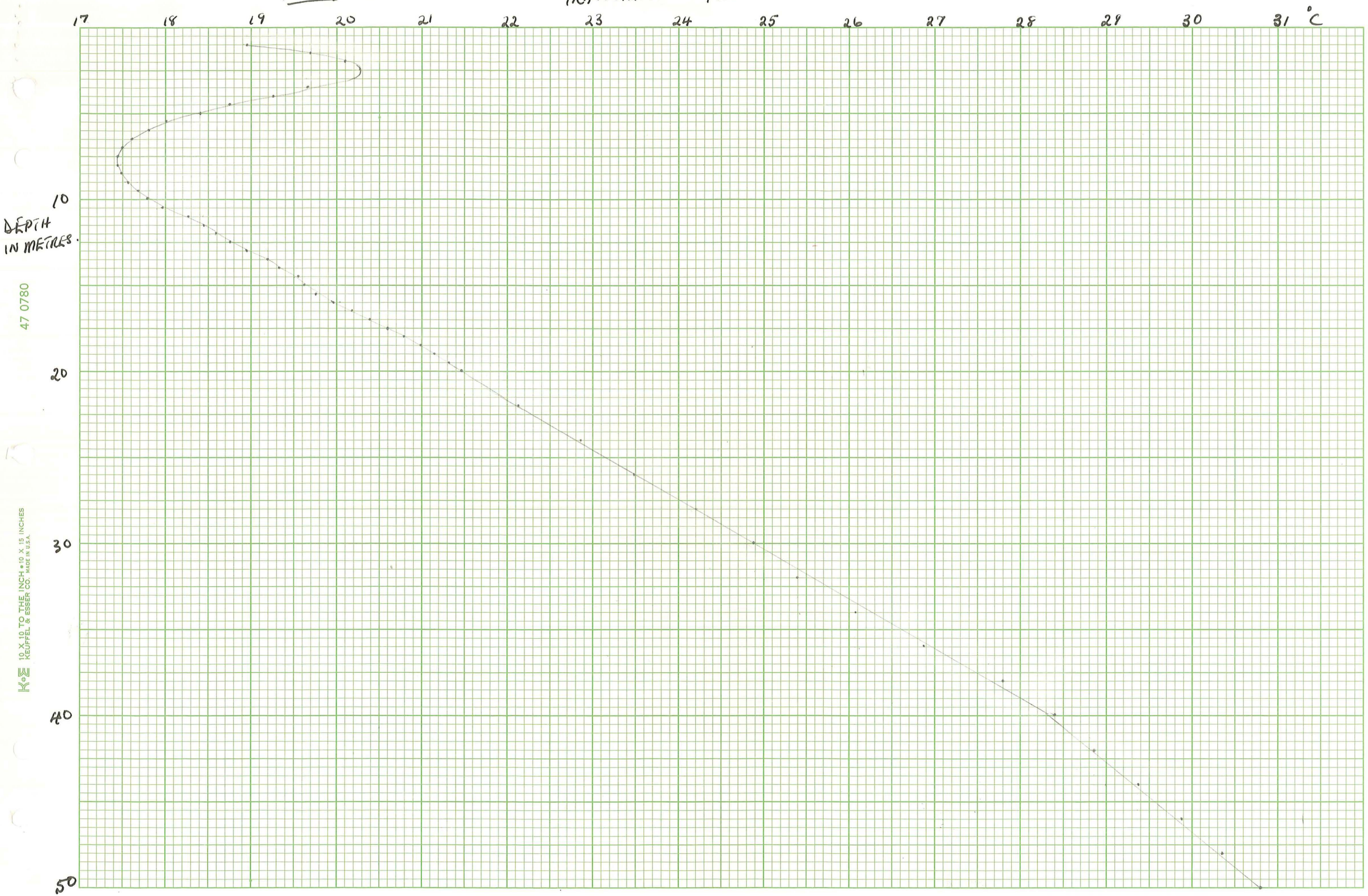
HDP:mmo

cc: Art Lange
Cheryl Caywood
John Deymonaz
File Copy to Dean


B-201
FINE GRAINED
DENSE PORPHYRITIC
RYOLITE,
WITH PHENOCRYSTS
OF QTZ, PLAGIOCLASE
& BIOTITE
BLEACHED
RYOLITE
WATER SATURATED
WATER TEMP = 32°C
(32.4)
.84
16.9, 22.5, 344.2
11.38@5
344.2 S
2.50
178.91
(32.4)
5
10
15
20
25
30
35
40 °C
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
180
190
200
meters

B-201

TRANSIENT PLOT



47 0780
K&E 10 X 10 TO THE INCH • 10 X 15 INCHES
KEUFFEL & ESSER CO. MADE IN U.S.A.

TEMPERATURE DEPTH LOG

ΔT Well No. 202

Property-Project OK Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →	Well No →	Date Logged DA →	MO →	YR	*
1 2 3 4	5 6 7 8 9 10	11 12 13	14 15 16	17 18	19 20
7 7 9	2 0 2	0 7	0 6	7 6	C M

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

Site Description	Operator	Editor
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
2.5 KM SSE OF TWIN PEAK SPRING	DP	MLH

Card B

Scale Unit in cm	Map Size (7.5, 15.,60)	Map Location Δ N Lat Degree	Min	W Long Degree	Min
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
CM	15.	38.	45.	112.	45.

Use decimals

Δ 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
4.6	5.7	4980.	F

← Write M if meters

SEGMENT DEPTH

	Start	End	K	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
C	1 8 1 0	9 5. 0	-5.0	-.5
D				
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
	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
C	.999			
D				
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location 1.5 mile South East of North Twin Peak Date Oct. 7, 1976

Map Tabernacle Hill, Utah 15' Quad

Property OK T 23S R 8W sec NW¼ NW¼ 36

Drill Hole B-202 Date Drilled Sept 27, 1976 Elevation 4980 ft.

Instrument Old Unit Operator DB

Comments ¾ PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
8.0	5451	14390			
8.5	5445	14,415			
9.0	5437	14,445			
9.5	5411	14,570			
10.0	5422	14525			
10.5	5438	14,450			
11.0	5464	14,330			
11.5	5493	14200			
12.0	5503	14150			
12.5	5502	14160			
13.0	5497	14180			
13.5	5494	14.195			
14.0	5498	14175			
14.5	5507	14135			
15.0	5509	14120			
15.5	5512	14,115			
16.0	5512	14.115			
16.5	5510	14.120			
17.0	5505	14130			
17.5	5506	14.140			
18.0	5503	14,155			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T _____ R _____ sec _____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
18.5	5499	14170			
19.0	5495	14190			
19.5	5492	14.205			
20.0	5490	14 210			
22	5478	14 260	.050	25	
24	5458	14.355	.095	47.5	
26	5434	14.465	.110	55	
28	5421	14525	.060	30	
30	5408	14585	060	30	
32	5394	14.650	.065	32.5	
34	5383	14.700	050	25	
36	5369	14765	.065	32.5	
38	5355	14.830	.065	325	
40	5341	14895	065	325	
42	5327	14.960	.065	325	
44	5314	15.025	.065	32.5	
46	5300	15090	.065	325	
48	5284	15165	.075	37.5	
50	5273	15215	.050	25	
52	5262	15270	.055	27.5	
54	5250	15325	.055	27.5	
			085	42.5	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

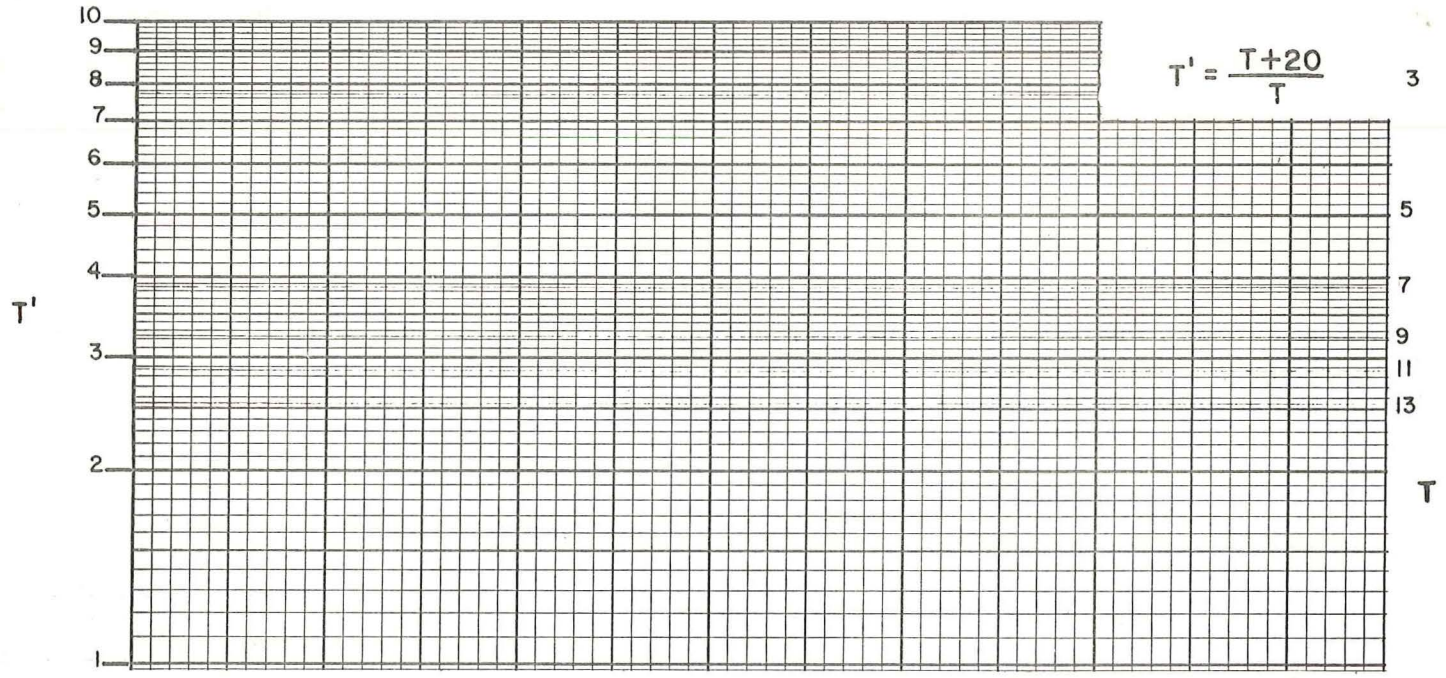
Property _____ T ____ R ____ sec ____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km	Avg.	Comments
56	5233	15410				
			.025	12.5		
58	5227	15435				
			040	20		
60	5219	15475				
			110	55		
62	5196	15585				
			020	10		
64	5192	15605				
			060	30		
66	5179	15665				
			065	32.5		
68	5166	15730				
			.070	35		
70	5152	15800				
			.065	325		
72	5138	15865				
			.110	55		
74	5116	15975				
			.035	17.5		
76	5109	16.010				
			030	15		
78	5103	16040				
			.035	17.5		
80	5096	16075				
			.070	35		
82	5081	16145				
			100	50		
84	5061	16245				
			.075	37.5		
86	5046	16320				
			045	22.5		
88	5037	16365				
			.030	15		
90	5031	16395				
			.045	225		
92	5022	16440				
			.025	12.5		
94	5017	16465				
			070	.70		
96	5003	16.535				



RESISTANCE

HOLE

DEPTH METERS

0
10
20
30
40
50
60
70
80
90
100

Av Gradient 15–95 = 30°C/km

16.7 / 6.21

30 / 1.5 @ 5.0

14 15 16 17

TEMPERATURE °C

LITHOLOGIC LOG B-202 (SWU-2)

NW¼ NW¼ Sec 36 T23S R8W Elevation: 4,980'

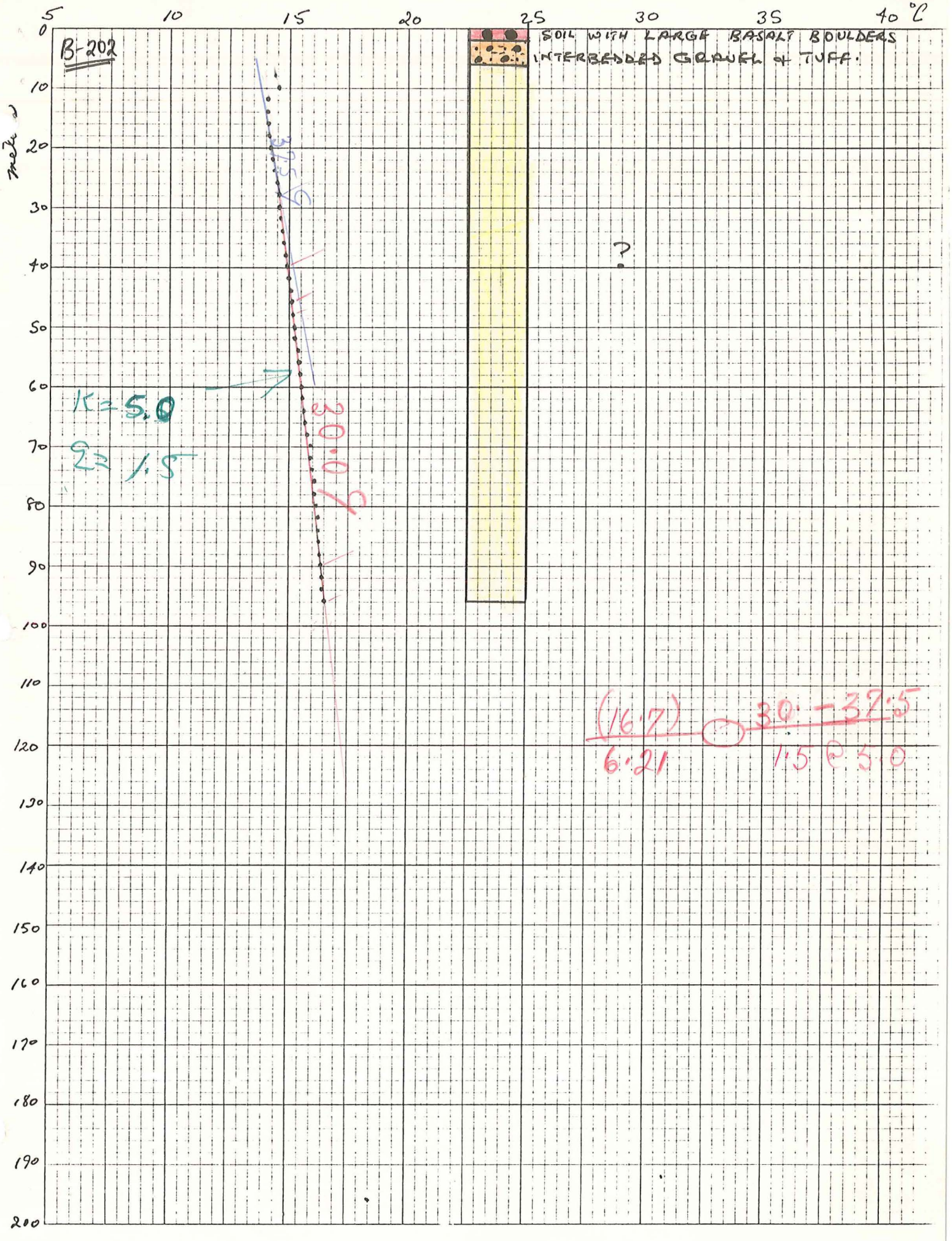
Depth	Description
0 - 2	Soil with large basalt boulders.
2 - 6.2	Interbedded gravel and reworked tuff.
6.2 - 95	No sample return. Probably Basalt

H. D. Pilkington

H. D. Pilkington

HDP:mmo

cc: Art Lange
Cheryl Caywood
John Deymonaz
File Copy to Dean



47 0780
10 X 10 TO THE INCH • 10 X 15 INCHES
KEUFFEL & ESSER CO MADE IN USA

TEMPERATURE DEPTH LOG

ΔT Well No. 203

Property-Project OK Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY: →

Proj No	Well No	Date Logged DA	MO	YR	*
1 2 3 4	5 6 7 8 9 10	11 12	13 14 15	16 17 18	19 20
7 7 9		2 0 3	0 6	8 6	C M

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

Site Description	Operator	Editor
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
1 . 0 K M S W O F S O U T H T W I N P E A K	D P	M L H

Card B

Scale Unit in cm	Map Size (7.5, 15., 60)	Map Location Δ N Lat Degree	Min	W Long Degree	Min
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
C M	7 . 5	3 8 .	3 7 . 5	1 1 2 .	5 2 . 5

Use decimals

Δ 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
5 0 . 9 5	3 5 . 2 5	5 3 0 0 .	F

← Write M if meters

Use decimals

SEGMENT DEPTH

	Start	End	K	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
C	1 6 . 0	6 6 . 0		
D	. 9 9 9			
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
	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
C	6 6 . 0	9 8 . 0	- 3 . 5	- . 5
D				
E				
F				
G				

Final Segment: Start = .999

203

TEMPERATURE - DEPTH LOG

Location South Side South Twin Peak Date Oct 6, 1976

Map Antelope Spring Utah 7½' Quad (Preliminary)

Property OK T 24S R 8W sec SE¼ SW¼ 8

Drill Hole B-203 Date Drilled Sept 24 Elevation 5300 ft.

Instrument Old Unit Operator DS

Comments ¾" PCV

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
4.0	4792	17.635			
4.5	4835	17.400			
5.0	4925	16.930			
5.5	5025	16.420			
6.0	5130	15.900			
6.5	5220	15.470			
7.0	5265	15.250			
7.5	5298	15.110			
8.0	5332	14.940			
8.5	5362	14.800			
9.0	5388	14.670			
9.5	5405	14.600			
10.0	5430	14.480			
10.5	5428	14.495			
11.0	5419	14.535			
11.5	5406	14.595			
12.0	5397	14.635			
12.5	5386	14.690			
13.0	5375	14.740			
13.5	5364	14.790			
14.0	5356	14.825			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T _____ R _____ sec _____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
14.5	5346	14.875			
15.0	5340	14.900			
15.5	5332	14.940			
16.0	5327	14.960			
16.5	5321	14.990			
17.0	5316	15.015			
17.5	5308	15.050			
18.0	5307	15.055			
18.5	5302	15.080			
19.0	5299	15.095			
19.5	5295	15.115			
20.0	5294	15.120	.080	40	
22	5277	15.200	.090	45	
24	5258	15.290	.060	30	
26	5245	15.350	.080	40	
28	5228	15.430	.115	57.5	
30	5204	15.545	.075	37.5	
32	5189	15.620	.080	40	
34	5172	15.700	.085	42.5	
36	5155	15.785	.095	47.5	
38	5137	15.870	.025	7.5	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T _____ R _____ sec _____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
40	5122	15.945			
42	5104	16.035	.090	45	
44	5088	16.115	.080	40	
46	5073	16.185	.070	35	
48	5054	16.280	.095	47.5	
50	5071	16.395	.115	57.5	
52	5013	16.485	.090	45	
54	4981	16.650	.165	82.5	
56	4967	16.720	.070	35	
58	4944	16.835	.115	57.5	
60	4938	16.865	.030	15	
62	4929	16.915	.050	25	
64	4911	17.005	.090	45	
66	4896	17.085	.080	40	
68	4879	17.170	.085	42.5	
70	4860	17.270	.100	50	
72	4841	17.370	.100	50	
74	4821	17.475	.105	52.5	
76	4801	17.580	.105	52.5	
78	4780	17.690	.110	55	
80	4761	17.795	.105	52.5	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

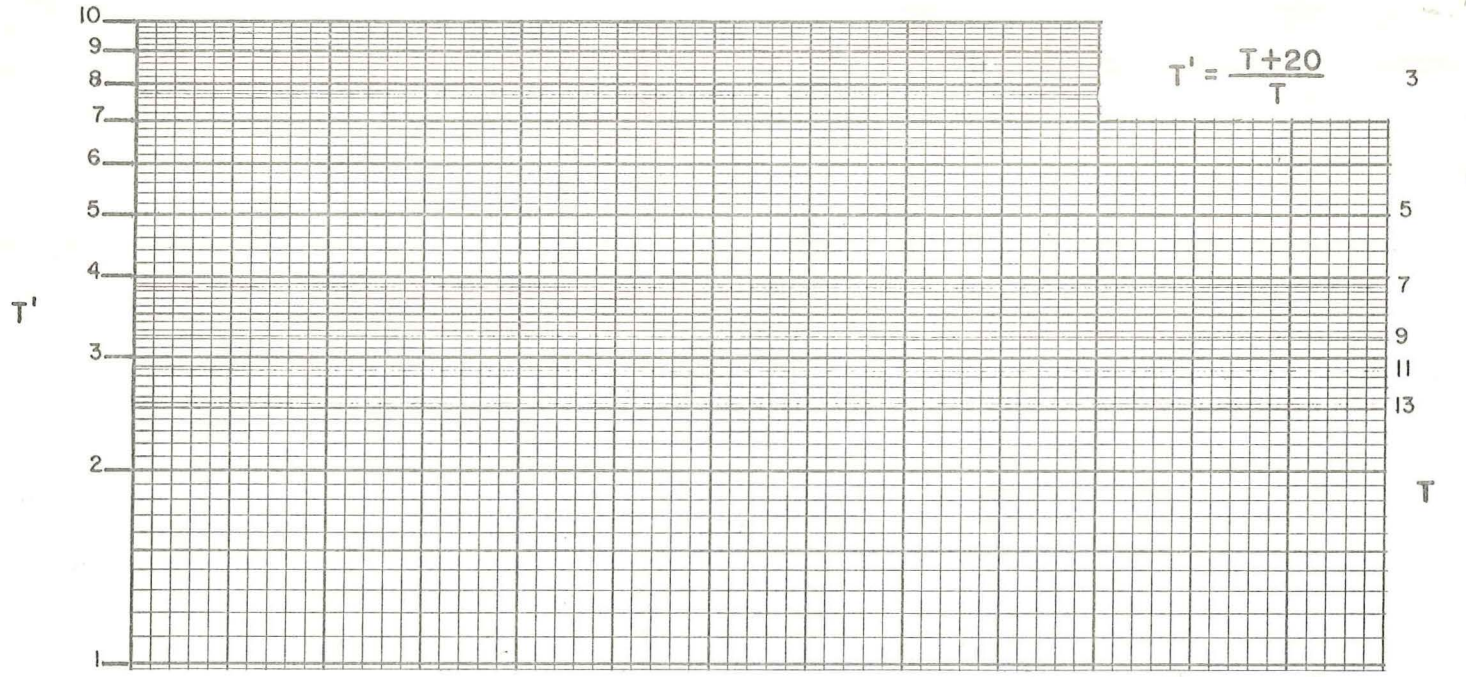
Property _____ T _____ R _____ sec _____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
82	4741	17.900			
84	4720	18.015	.115	57.5	
86	4702	18.110	.095	47.5	
88	4682	18.220	.110	55	
90	4663	18.325	.105	52.5	
92	4641	18.445	.120	60	
94	4625	18.535	.090	45	
96	4603	18.655	.120	60	
98	4586	18.750	.095	47.5	
100					



RESISTANCE

HOLE ——

DEPTH METERS

0
10
20
30
40
50
60
70
80
90
100

14 15 16 17 18 19 20

TEMPERATURE °C ——→

Au Gradient 30-98 m 47°C/Km

18.8
3.5 9

42.7, 47, 51.8
1.8 @ 3.5

LITHOLOGIC LOG B-203 (SWU-3)

SE¼ SW¼ Sec 8 T24S R8W Elevation: 5,300'

Depth (m)	Description
0 - 9.3	Gravel with some sand as a matrix. Fragments composed of rhyolite.
9.3 - 12.4	Iron stained, yellow-brown tuff.
12.3 - 32.4	Gray, fine-grained tuffaceous lake sediment.
32.4 - 41.7	Basalt gravels mixed with gray clayey tuffs.
41.7 - 49.4	Gray, fine-grained tuffaceous lake sediments.
49.4 - 63.3	Basalt.
63.3 - 98	Gray tuffaceous lake sediment.

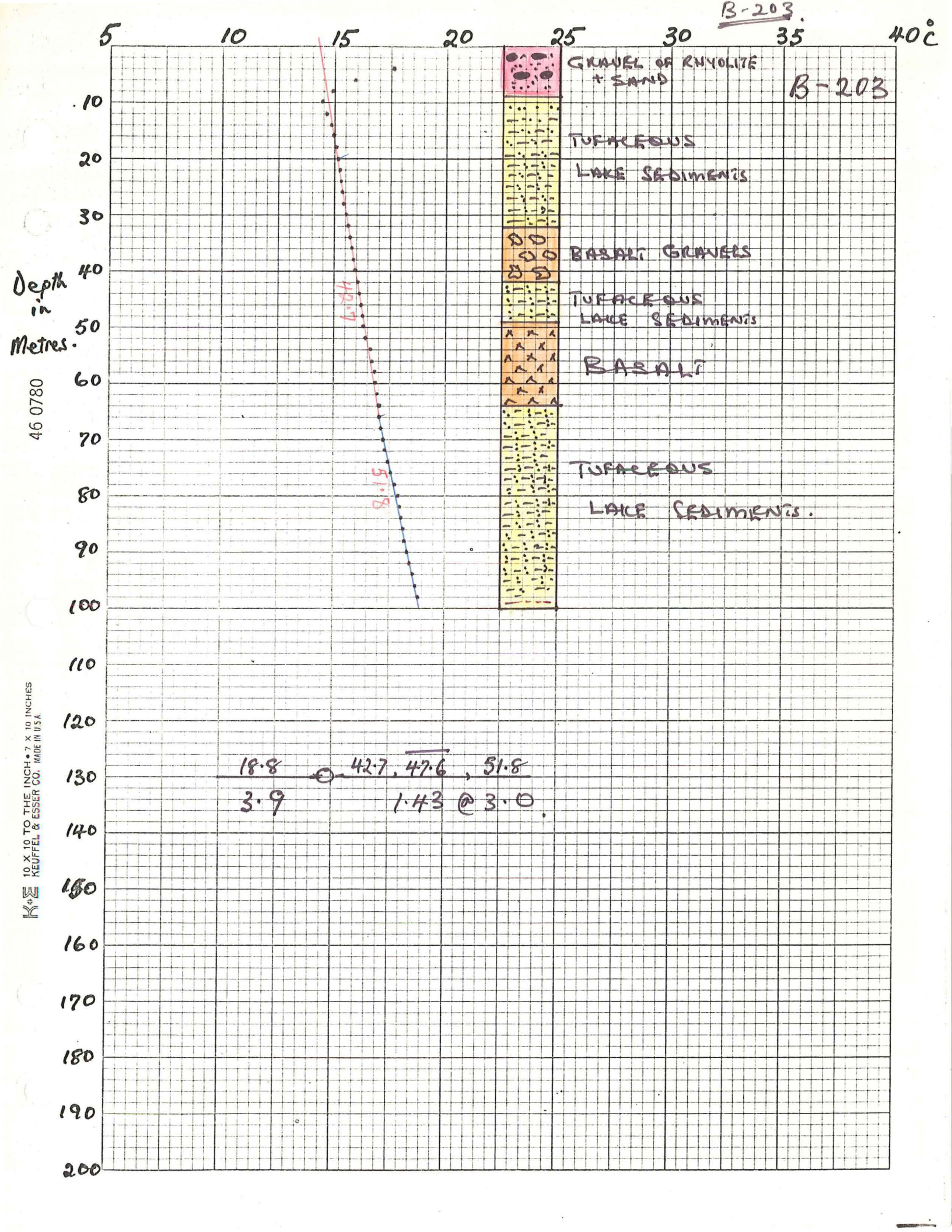
H. D. Pilkington (M.O.)

H. D. Pilkington

HDP:MMO

cc: Art Lange
Cheryl Caywood
John Deymonaz
File Copy to Dean

B-203.



46 0780

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TEMPERATURE DEPTH LOG

ΔT Well No. 204

Property-Project OK Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →				Well No →						Date Logged DA →		MO →		YR		*	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	7	7	9				2	0	4	1	0		0	C		7	6	C	M

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

| Site Description | | | | | |

TEMPERATURE - DEPTH LOG

Location 3 mi's North west of South Horse Hollow Res, Date October 10, 1976

Map Cove Fort Utah 15' Quad

Property O/C T 24 S R 7 W sec NE¼ SW¼ 29

Drill Hole B-204 Date Drilled Sept 28, 1976 Elevation 5840 ft.

Instrument Probe # 44 Operator DC

Comments 3/4" Pipe

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
1.0	103.6	16,325			
1.5	102.81	16,210			
2.0	101.40	16,030			
2.5	100.84	15,950			
3.0	103.02	16,365			
3.5	105.38	15,600			
4.0	108.63	14,825			
4.5	111.26	14,125			
5.0	113.02	13,660			
5.5	113.83	13,445			
6.0	113.93	13,420			
6.5	114.01	13,400			
7.0	113.85	13,440			
7.5	113.56	13,515			
8.0	113.15	13,625			
8.5	112.60	13,770			
9.0	112.23	13,865			
9.5	111.65	14,020			
10.0	111.18	14,145			
10.5	110.61	14,295			
11.0	110.19	14,145			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T ____ R ____ sec ____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
11.5	109.71	14.530			
12.0	109.38	14.625			
12.5	108.99	14.730			
13.0	106.70	14.810			
13.5	108.24	14.935			
14.0	107.96	15.010			
14.5	107.53	15.120			
15.0	107.32	15.180			
15.5	107.00	15.275			
16.0	106.79	15.325			
16.5	106.47	15.410			
17.0	106.17	15.495			
17.5	105.82	15.580			
18.0	105.63	15.645			
18.5	105.30	15.735			
19.0	105.03	15.805			
19.5	104.66	15.910			
20.0	107.37	15.990	.825	165	
25.0	101.42	16.815	1.875	295	
30.0	97.32	17.990	1.175	239	
35.6	93.27	19.185	1.20	134	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T ____ R ____ sec ____

Drill Hole _____ Date Drilled _____ Elevation ____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
40	91.05	19.855			
45	88.37	20.685	.830	165	
50	86.02	21.425	.740	148	
55	83.89	22.110	.685	137	
60	81.82	23.790	.685	137	
65	79.50	23.570	.780	156	
70	76.96	24.445	.875	175	
75	74.65	25.260	.815	163	
80	72.48	26.045	.785	157	
85	70.13	26.920	.875	175	
90	67.91	27.770	.850	170	
95	64.64	29.070	1.300	260	
99	64.21	29.245	.175	437	
99999.					

TEMPERATURE - DEPTH LOG

Location 3 mi's North west of South Horse Hollow Res. Date October 10, 1976

Map Cove Fort Utah 15' Quad

Property O/C T 24 S R 7 W sec NE¼ SW¼ 29

Drill Hole B-204 Date Drilled Sept 28, 1976 Elevation 5840 ft.

Instrument Probe # 44 Operator RB

Comments 3/4" PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
1.0	103.6	16,325			
1.5	102.81	16,516			
2.0	101.40	16,830			
2.5	100.84	16.950			
3.0	103.02	16,365			
3.5	105.78	15.600			
4.0	108.63	14,825			
4.5	111.26	14.125			
5.0	113.02	13.660			
5.5	113.83	13.445			
6.0	113.93	13.420			
6.5	114.01	13.400			
7.0	113.85	13.440			
7.5	113.56	13.515			
8.0	113.15	13625			
8.5	112.60	13.770			
9.0	112.23	13,865			
9.5	111.65	14.020			
10.0	111.18	14,145			
10.5	110.61	14 295			
11.0	110.17	14145			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T _____ R _____ sec _____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
11.5	109.71	14.530			
12.0	109.38	14.625			
12.5	108.99	14730			
13.0	108.70	14.810			
13.5	108.24	14.935			
14.0	107.96	15.010			
14.5	107.53	15 120			
15.0	107.32	15.180			
15.5	107.00	15 275			
16.0	106.79	15.325			
16.5	106.47	15.410			
17.0	106.17	15.495			
17.5	105.87	15580			
18.0	105.63	15.645			
18.5	105.30	15735			
19.0	105.03	15.805			
19.5	104.66	15910			
20.0	107.37	15.990	.825	165	
25.0	101.42	16.815	1.175	235	
30.0	97.32	17.990	1.195	239	
35.6	93.27	19 185	.670	134	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

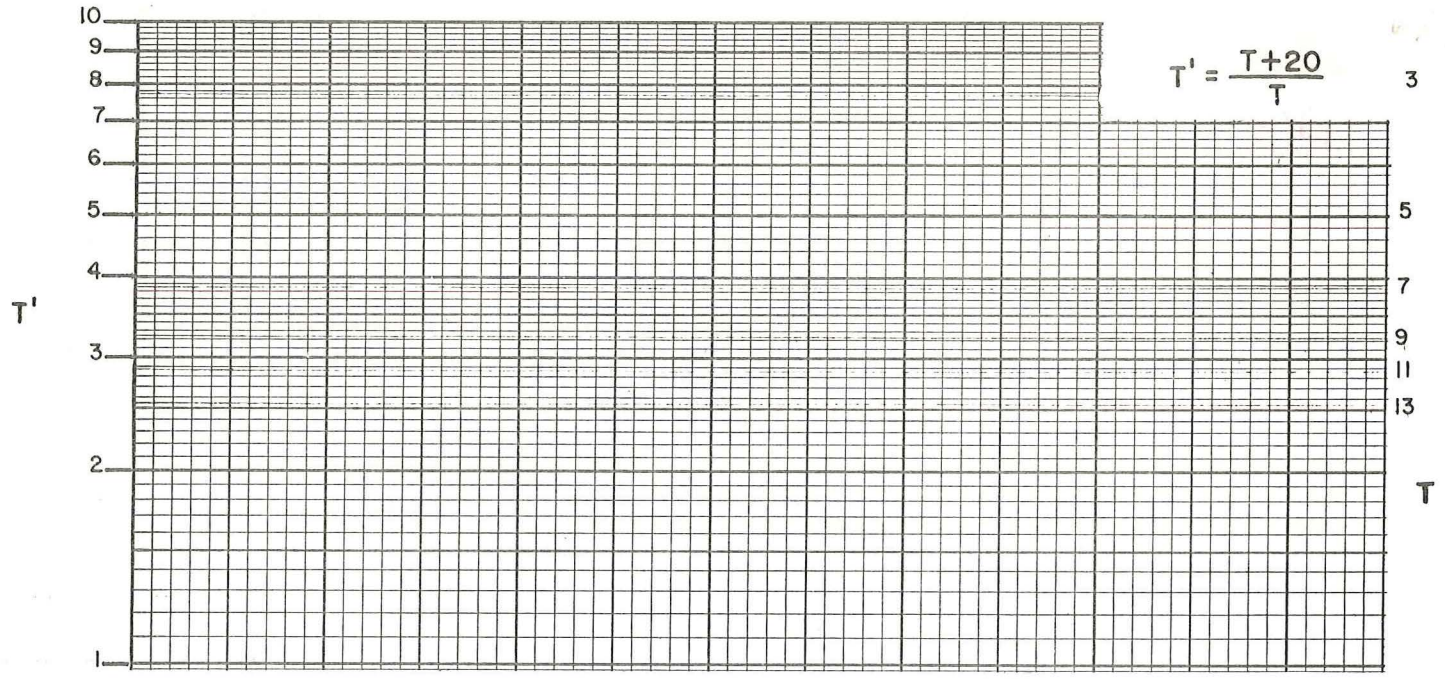
Property _____ T _____ R _____ sec _____

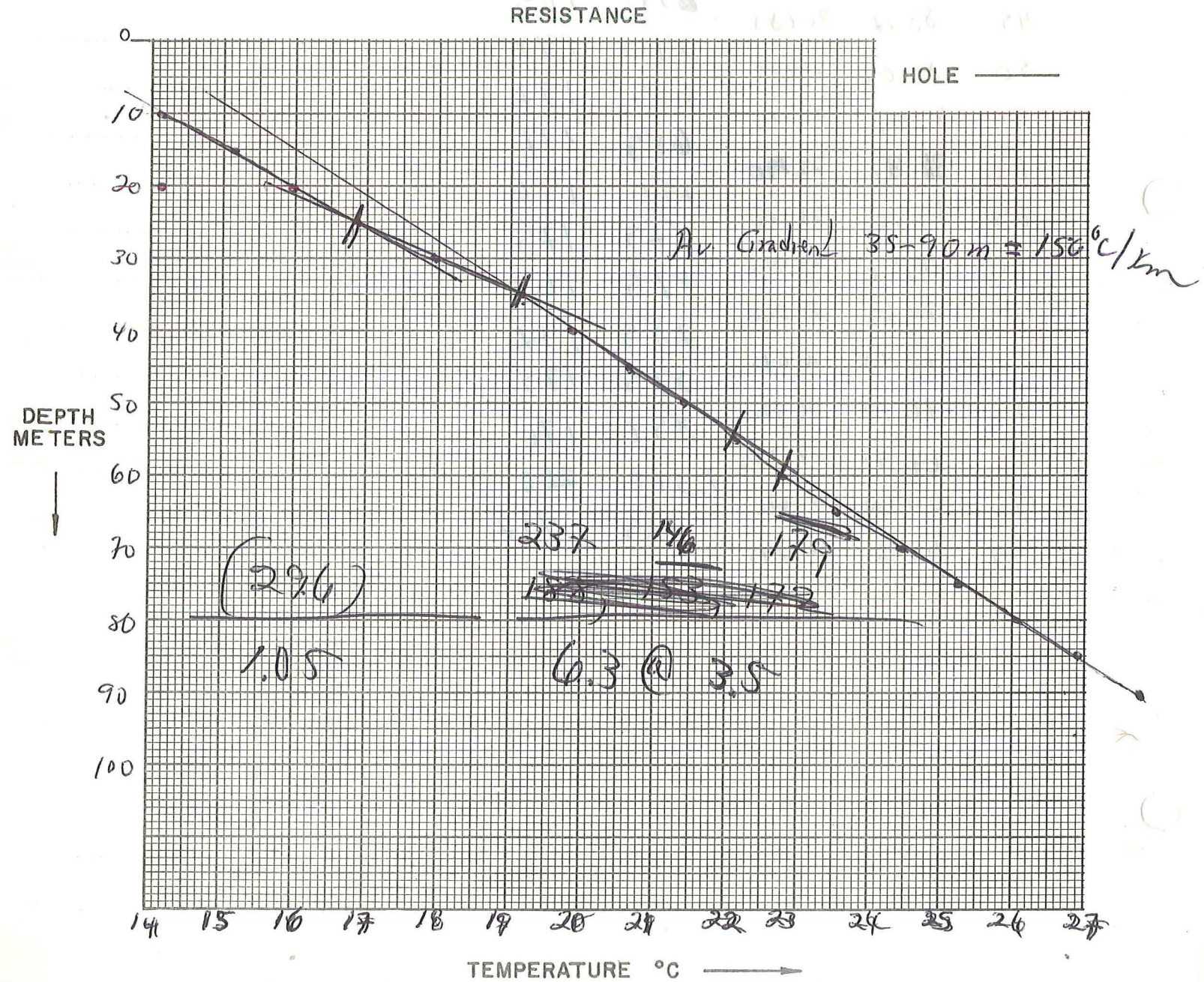
Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
40	91.05	19.855			
45	88.37	20.685	830	165	
50	86.02	21.425	740	148	
55	83.89	22.110	685	137	
60	81.82	22.790	685	137	
65	79.50	23.570	780	156	
70	76.96	24.445	875	175	
75	74.65	25.260	815	163	
80	72.48	26.045	785	157	
85	70.13	26.920	875	175	
90	67.91	27.770	850	170	
95	64.64	29.070	1,300	260	
99	64.21	29.245	175	437	


T' = T+20 / T
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13


RESISTANCE
HOLE
DEPTH METERS
0
10
20
30
40
50
60
70
80
90
100
14
15
16
17
18
19
20
21
22
23
24
25
26
27
TEMPERATURE °C
Av Gradient 35-90m = 150 °C/km
(224)
1.05
237
146
179
6.3 @ 3.5

Lithologic Log B-204 (SWU-4)

NE¼ SW¼ Sec 29 T 24 S R 7 W Elevation: 5,840'

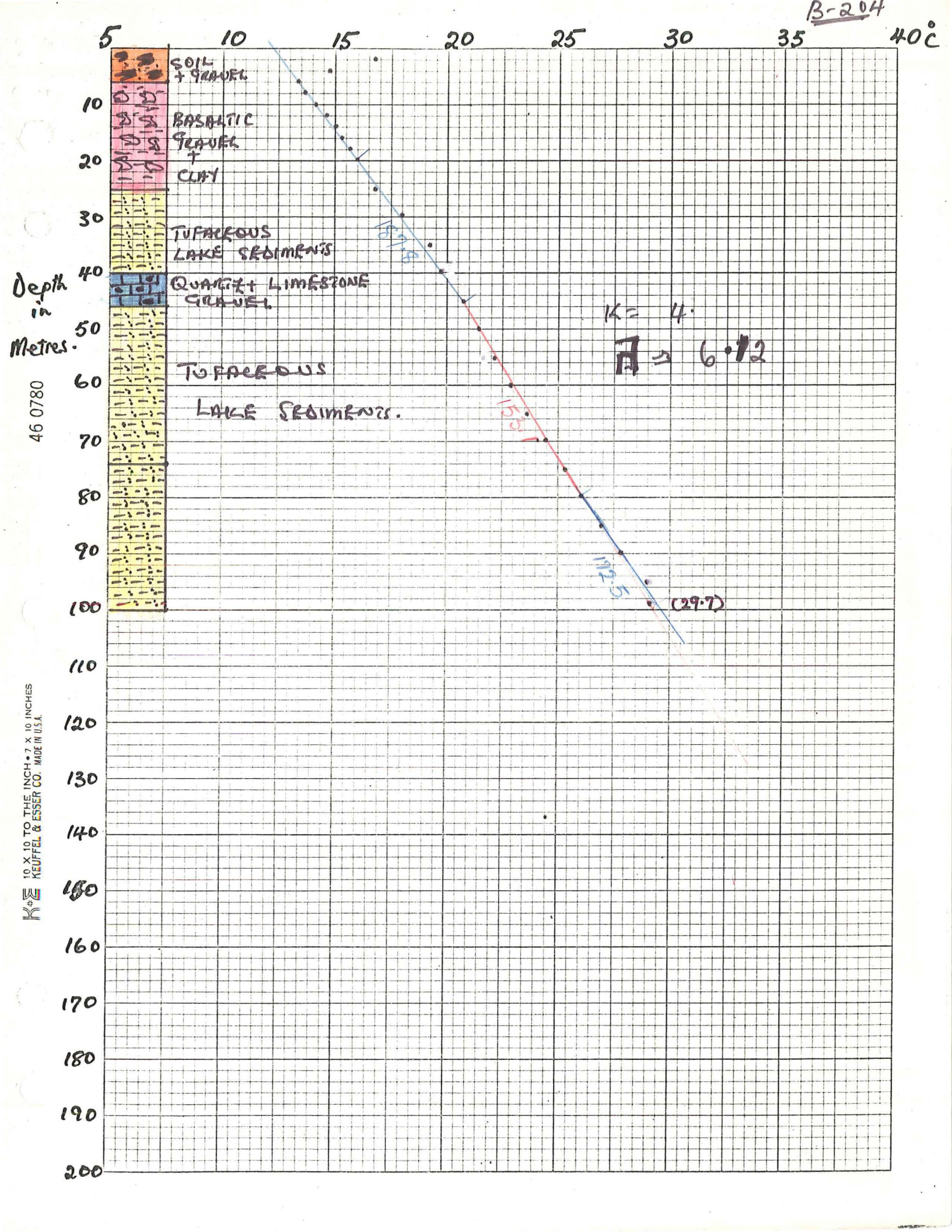
Depth (m)	Description
0 - 1.5	Soil, clayey with considerable lag gravels mixed in with the soil.
1.5 - 6.2	Light brown, very fine-grained sand or coarse silt.
6.2 - 12.4	Basaltic gravels with clayey matrix.
12.4 - 15.4	Light brown clay with minor gravel layers.
15.4 - 25	Pea gravel, fragments of quartzite, limestone, and volcanics with a matrix of clay plus sand.
25 - 40	Light brown tuffaceous lake sediments, tuffs are partially devitrified to clay.
40 - 46.3	Gravel composed of quartzite and limestone fragments in a matrix of clay.
46.3 - 74.1	Brown tuffaceous lake sediments, glase partially changed to clay.
74.1 - 99	Light gray, fine-grained tuffaceous lake sediments.

H. D. Pilkington

HDP:mmo

cc: Art Lange
Cheryl Caywood
File Copy to Dean

B-204



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TEMPERATURE DEPTH LOG

ΔT Well No. 206

Property-Project Phelmex Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →				Well No →						Date Logged DA →		MO →		YR		*	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	7	7	7				2	0	6	3	1		A	G		7	6	C	M

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

| Site Description | | | | | |

LITHOLOGIC LOG B-206

THERMEX 777

NE¼ SW¼ Sec 12 T25S R7W Elevation: 5,880'

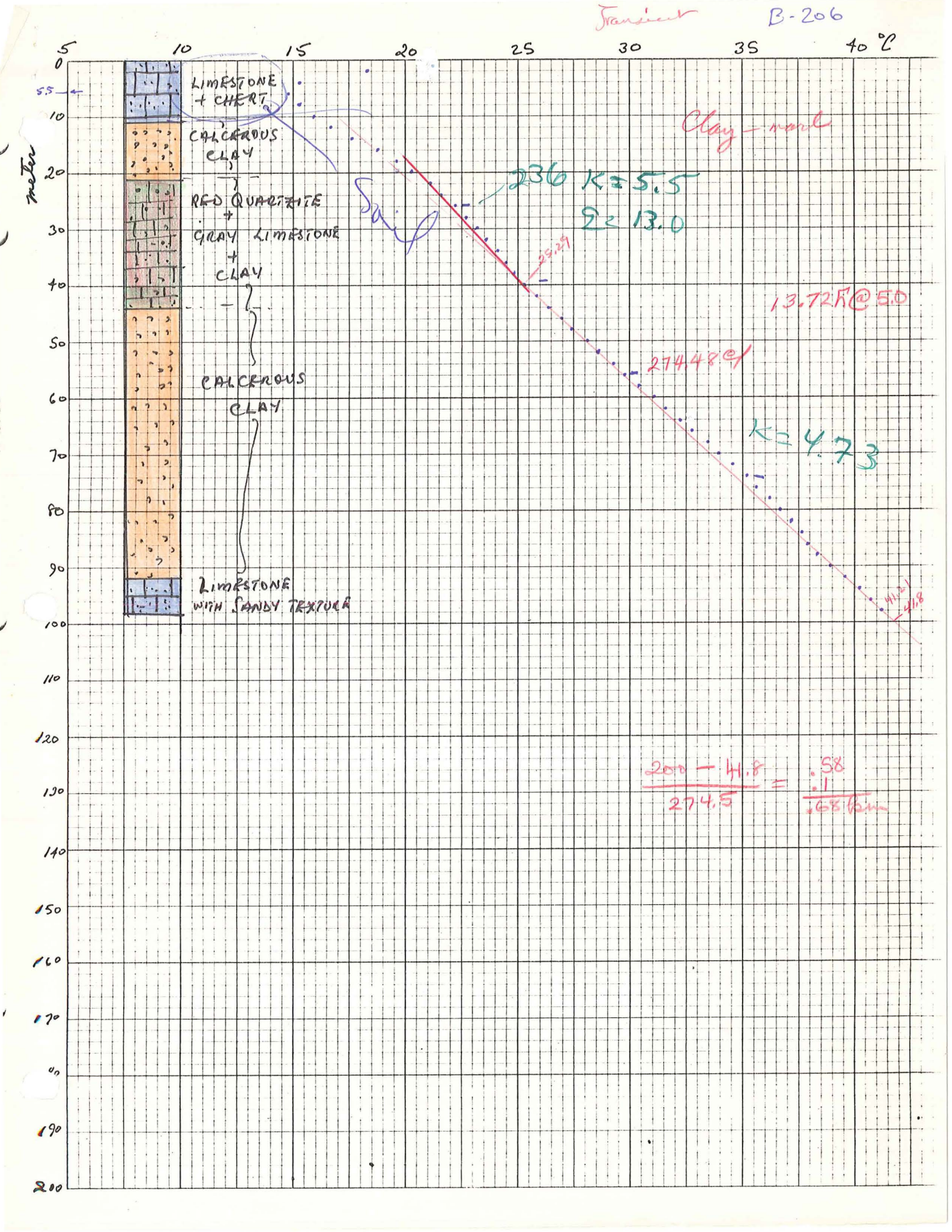
Depth (m)	Description
0 - 10.8	Mixed clay and limestone boulders of recent alluvial origin.
10.8 - 20	Greenish gray to gray clayey lake sediments.
20 - 22	Red fine-grained quartzite - Moenkopi Fm.
22 - 26	Gray limestone & calcareous shale.
26 - 27	Red very fine-grained quartzite.
27 - 45	Interbedded gray limestone and light gray calcareous shale.
45 - 93.5	Varigated red to pinkish shales with thin limestone layers.
93.5 - 100	Dark gray limestone, sandy textured, probably Kiabab limestone.

H. Dean Pilkington

HDP:mmo

cc: Art Lange
Cheryl Caywood
Mark Alldredge

Transient B-206



TEMPERATURE DEPTH LOG

ΔT Well No. 207

Property-Project Thermal Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →	Well No →	Date Logged DA →	MO →	YR	*
1 2 3 4	5 6 7 8 9 10	11 12	13 14 15	16 17 18	19 20
7 7 7	2 0 7	0 2	S P	7 6	C M

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

Site Description	Operator	Editor
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
3 . 9 K M N N E O F C O V E F O R T , U T A H	J E D	M L H

Card B

Map Location Δ

Scale Unit in cm	Map Size (7.5, 15., 60)	N Lat Degree	N Lat Min	W Long Degree	W Long Min
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
C M	1 5 .	3 8 .	3 0 .	1 1 2 .	4 5 .

Use decimals

Δ 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
2 3 . 7 2	2 6 . 1	6 3 5 0 .	F

Use decimals

← Write M if meters

SEGMENT DEPTH

	Start	End	K	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
C	1 5 . 0	2 8 . 0		
D	4 0 . 0	8 0 . 0	- 7 . 0	- . 5
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
	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
C	2 8 . 0	4 0 . 0		
D	. 9 9 9			
E				
F				
G				

Final Segment: Start = .999

B-207 _____ of _____

TEMPERATURE - DEPTH LOG

TEMP:
TIME: 1200

Location ~ 2 MILES S. OF DOG VALLEY Date 2-SEPT-76

Map COVE FORT UT 15''

Property THERMEX T 25S R 6W sec 18 NE¼SE¼

Drill Hole SWU #07 B-207 Date Drilled _____ Elevation 6350 ft.

Instrument _____ Operator JED

Comments 3/4" WATER FILLED PVC PIPE.

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
1	4418	19.71			
			-0.91		
1.5	4576	18.80			
			-0.80		
2.0	4723	18.00			
			-0.73		
2.5	4861	17.27			
			-0.74		
3.0	5004	16.53			
			-0.60		
3.5	5126	15.93			
			-0.40		
4.0	5208	15.53			
			-0.39		
4.5	5289	15.14			
			-0.26		
5.0	5344	14.88			
			-0.13		
5.5	5373	14.75			
			-0.03		
6.0	5378	14.72			
			0.01		
6.5	5377	14.73			
			0.03		
7.0	5371	14.76			
			0.05		
7.5	5359	14.81			
			0.08		
8.0	5343	14.89			
			0.09		
8.5	5324	14.98			
			0.12		
9.0	5297	15.10			
			0.09		
9.5	5279	15.19			
			0.12		
10.0	5254	15.31			
			0.12		
10.5	5228	15.43			GRADIENT 50-70m 255 °C/Km
			0.12		
11.0	5204	15.55			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T _____ R _____ sec _____

Drill Hole SWU#7 B-207 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
11.5	5177	15.68	0.13		
12.0	5151	15.80	0.12		
12.5	5123	15.94	0.14		
13.0	5098	16.06 ~~15.58~~	0.36		
13.5	5070	16.20	0.38		
14.0	5045	16.33	0.13		
14.5	5022	16.44	0.11		
15.0	4996	16.57	0.13		
15.5	4973	16.69	0.12		
16.0	4949	16.81	0.12		
16.5	4923	16.94	0.13		
17.0	4901	17.06	0.12		
17.5	4877	17.18	0.12		
18.0	4852	17.31	0.13		
18.5	4829	17.43	0.12		
19.0	4809	17.54	0.11		
19.5	4788	17.65	0.11		
20.0	4766	17.77	0.12		
22	4686	18.20	0.43		
24	4617	18.58	0.38		
26	4555	18.92	0.34		

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

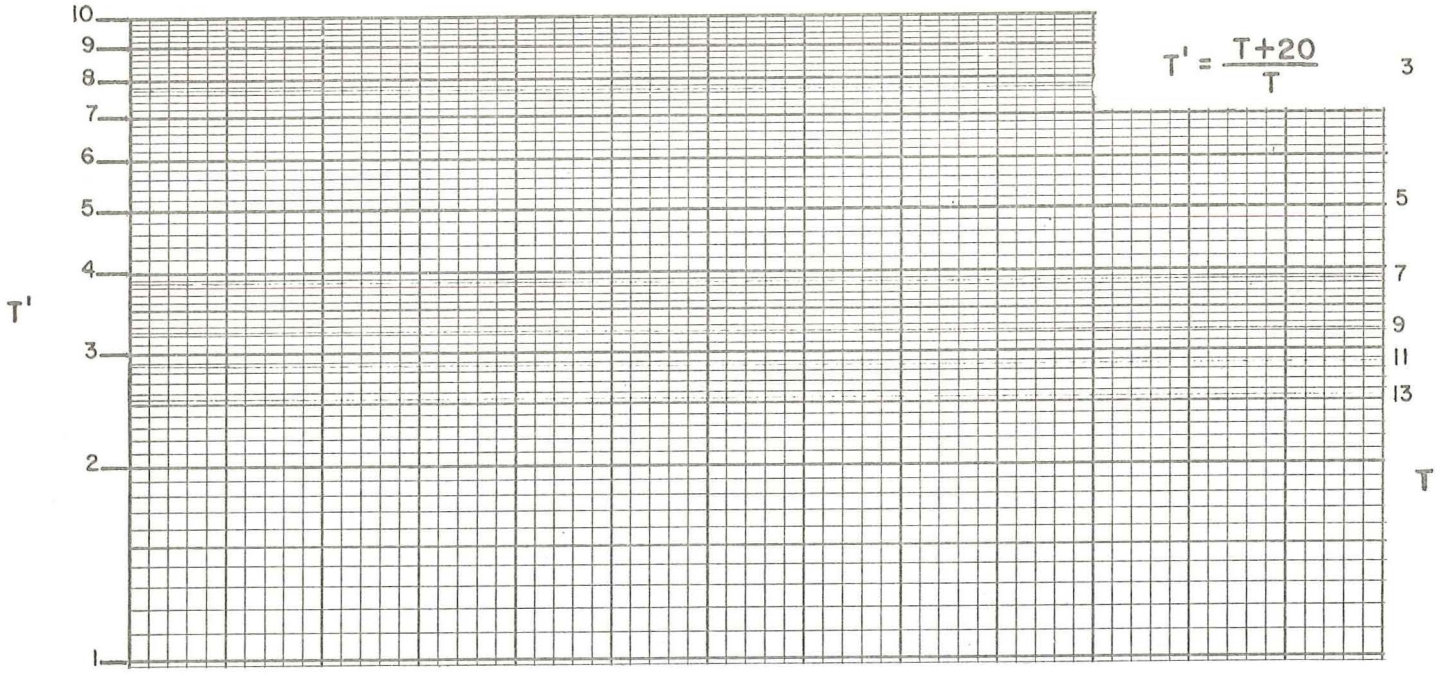
Property _____ T _____ R _____ sec _____

Drill Hole SWU#7 B-207 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
28	4482	19.32	0.40		
30	4359	20.05	0.73		
32	4207	20.97	0.92		
34	4083	21.75	0.78		
36	3964	22.53	0.72		
38	3859	23.24	0.71		
40	3780	23.78	0.54		
42	3713	24.26	0.48		
44	3651	24.71	0.45		
46	3583	25.22	0.51		
48	3511	25.75	0.53		
50	3432	26.36	0.61		
52	3363	26.91	0.55		
54	3300	27.43	0.52		
56	3237	27.95	0.52		
58	3172	28.51	0.56		
60	3113	29.02	0.51		
62	3057	29.52	0.50		
64	3003	30.01	0.49		
66	2948	30.53	0.52		
68	2899	30.99	0.46		


T' = T+20 / T
T'
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8
7
6
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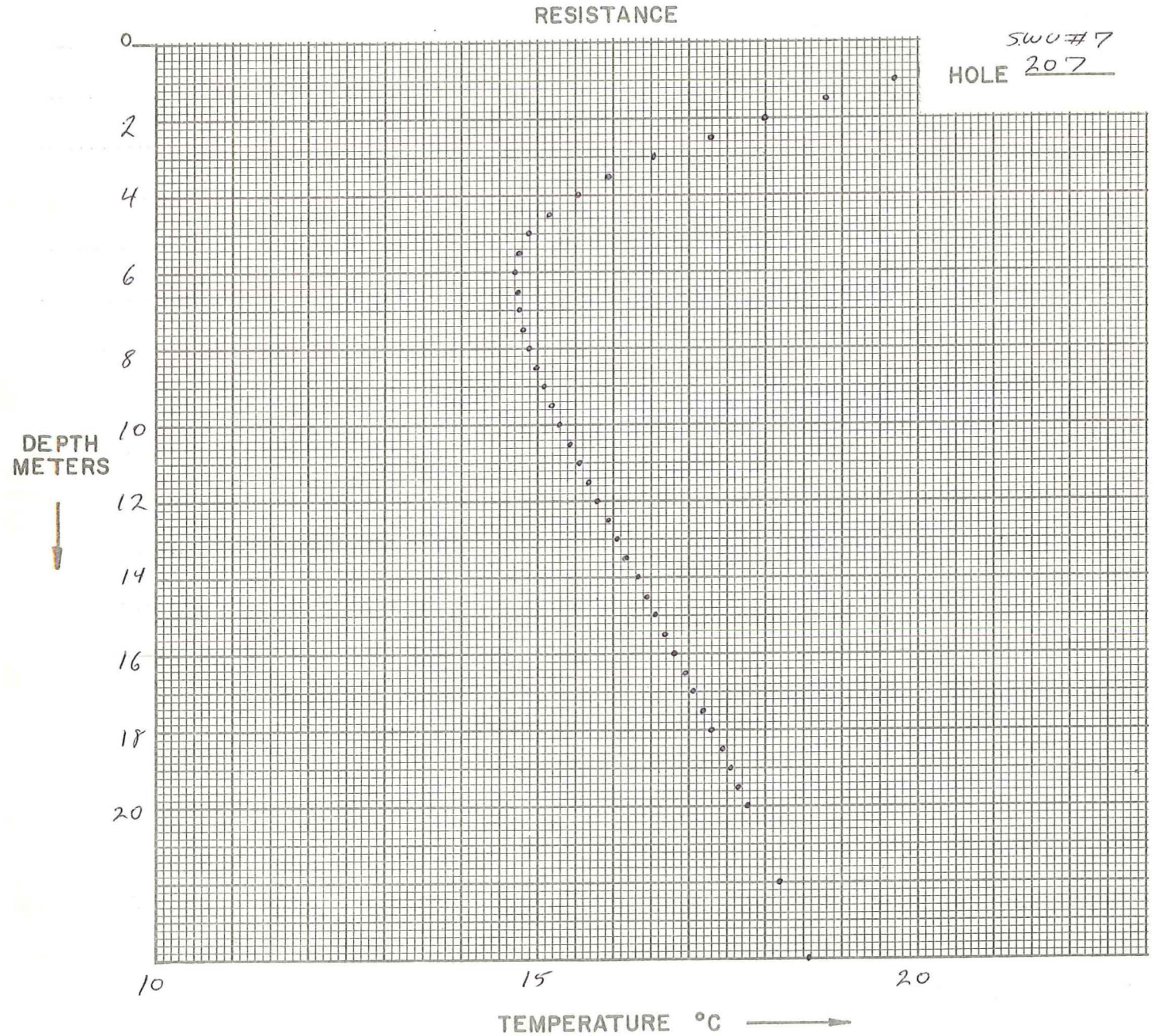
4
3
2
1
3
5
7
9
11
13


RESISTANCE
SWO#7
HOLE 207
DEPTH METERS
0
2
4
6
8
10
12
14
16
18
20
10
15
20
TEMPERATURE °C

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

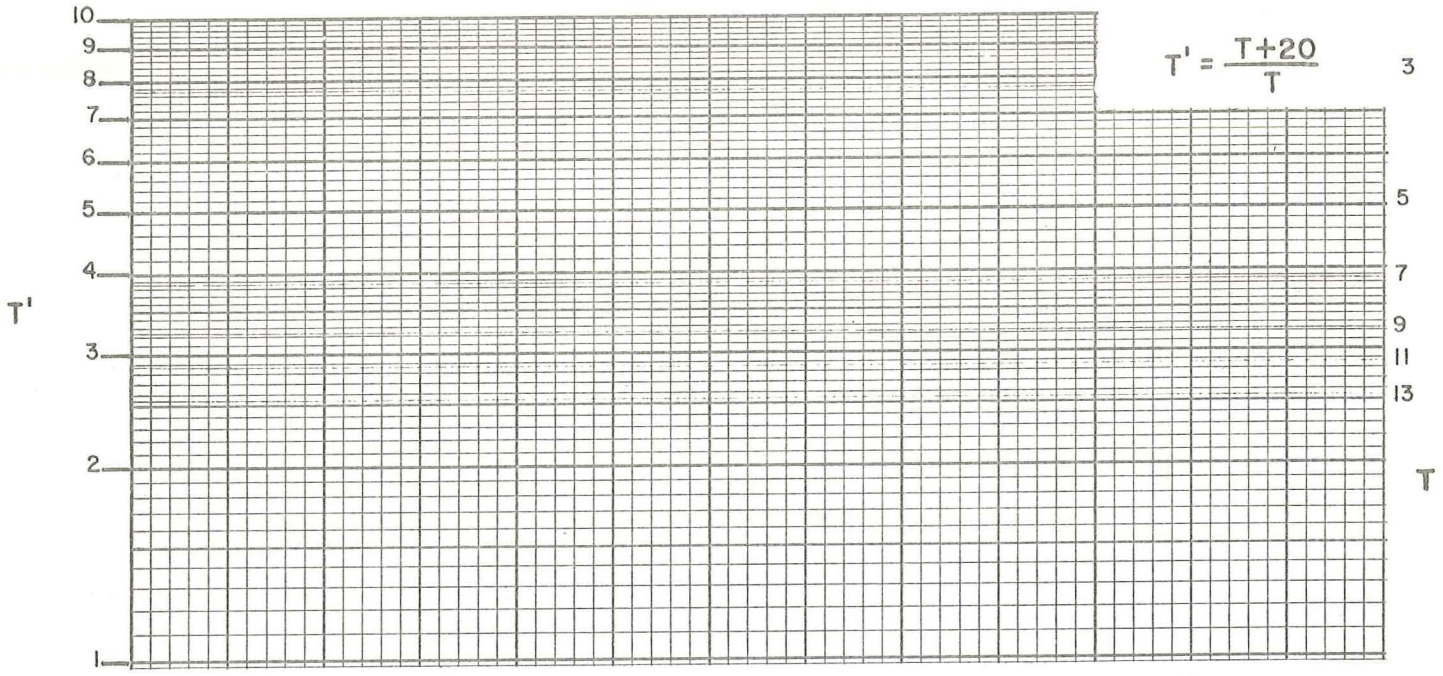
Property _____ T _____ R _____ sec _____

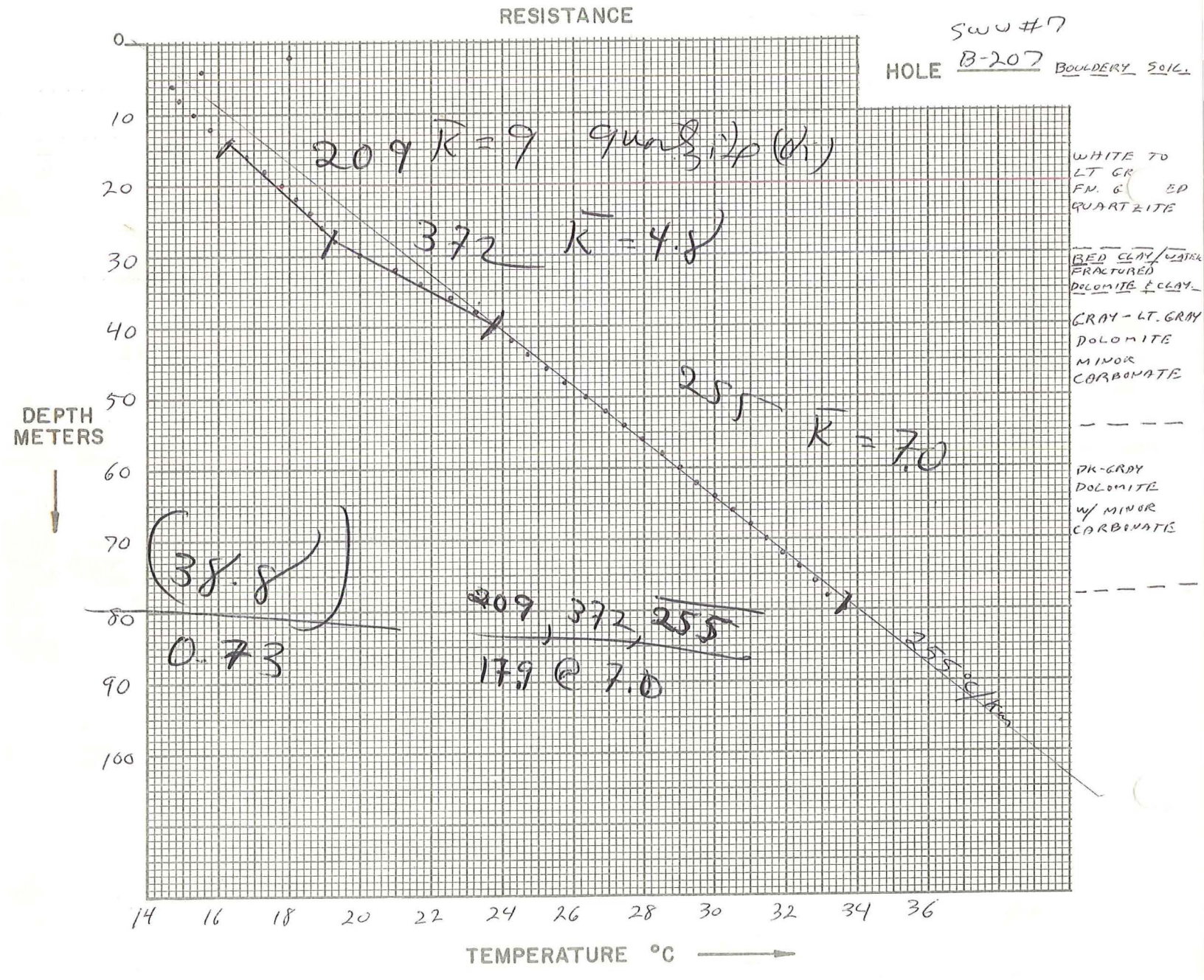
Drill Hole SWU #7 B-207 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
70	2851	31.46	0.47		
72	2805	31.91	0.45		
74	2761	32.36	0.45		
76	2717	32.81	0.45		
78	2679	33.21	0.40		
80	2637	33.66	0.45		


$T' = \frac{T+20}{T}$
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13


RESISTANCE
SWW #7
HOLE B-207 BOULDERY SOIL
209 K = 9 gw & 3.2 ρ (Ω)
372 K = 4.8
255 K = 7.0
(38.8)
0.73
209, 372, 255
179 @ 7.0
WHITE TO LT GR FN. G ED QUARTZITE
RED CLAY/WATER FRACTURED DOLOMITE & CLAY
GRAY - LT. GRAY DOLOMITE MINOR CARBONATE
DK-GRAY DOLOMITE W/ MINOR CARBONATE
DEPTH METERS
0
10
20
30
40
50
60
70
80
90
100
14
16
18
20
22
24
26
28
30
32
34
36
TEMPERATURE °C

LITHOLOGIC LOG B-207

THERMEX 777

NE¼ SE¼ Sec 18 T25S R6W Elevation: 6,350'

Depth (m)	Description
0 - 5	Alluvium - mixed boulders of weathered Belknap volcanics and gravel made up of limestone and volcanic fragments in a matrix of fine sand and clay.
5 - 6	Dolomitic limestone of Oquirrh Fm.
5 - 30	White, fine-grained, dense, highly fractured quartzite. 1 meter red clay at base makes about 1 gpm water.
30 - 86	Strongly fractured dark gray dolomitic limestone.

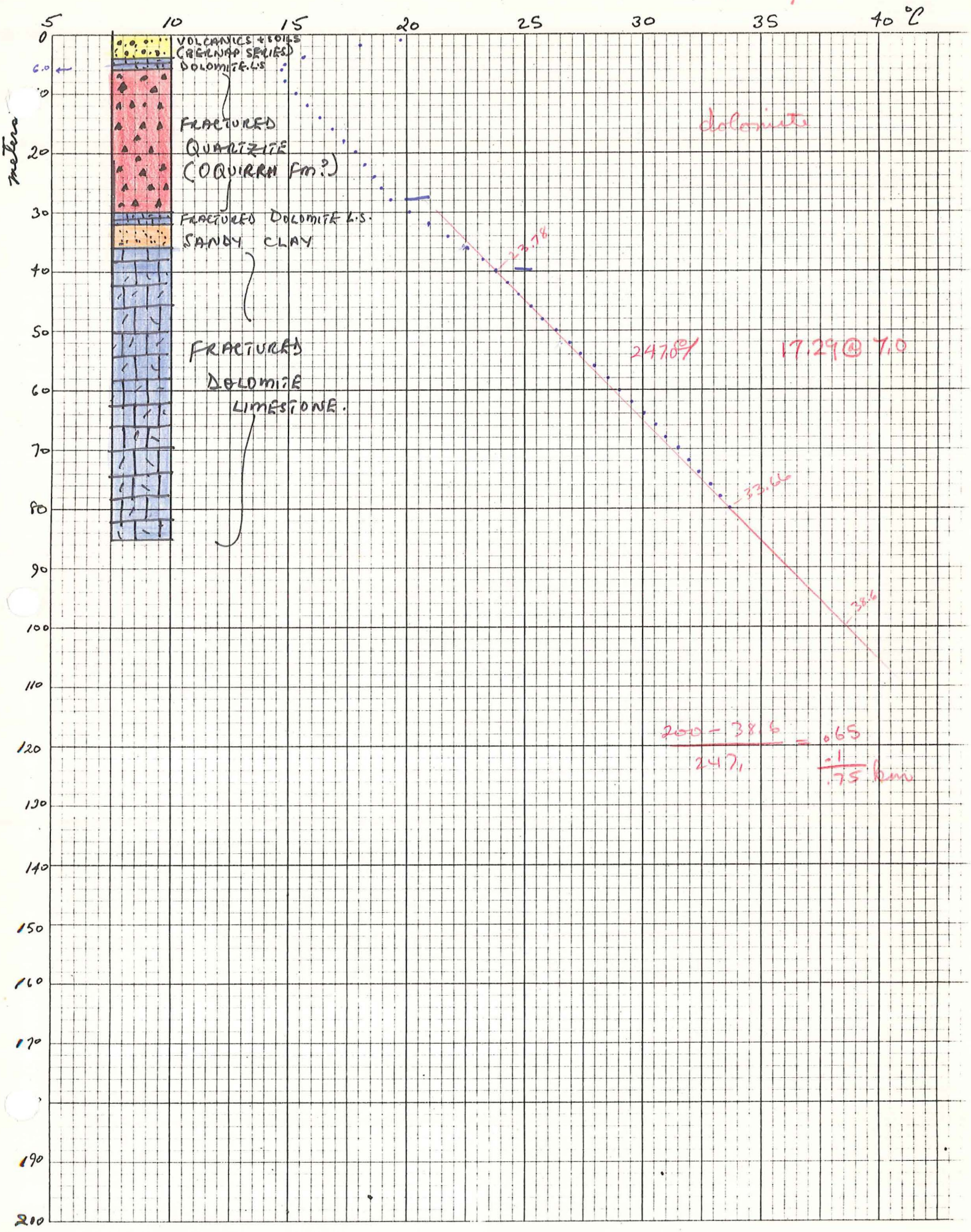
H. Dean Pilkington

H. Dean Pilkington

HDP:mmo

cc: Art Lange
Cheryl Caywood
Mark Alldredge

B-207


5
10
15
20
25
30
35
40 °C
0
6.0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
190
200
meters
VOLCANICS & SOILS
(CRETACEOUS SERIES)
DOLOMITE L.S.
FRACTURED
QUARTZITE
(COQUIRRH Fm?)
FRACTURED DOLOMITE L.S.
SANDY CLAY
FRACTURED
DOLOMITE
LIMESTONE.
dolomite
23.78
33.64
38.6
247 Ω
17.29 @ 7.0
200 - 38.6 / 247.1 = .65 / .1 / .75 km

TEMPERATURE DEPTH LOG

ΔT Well No. 208

Property-Project Phelmex Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

RT JUSTIFY:

Card A

Proj No →	Well No →	Date Logged DA →	MO →	YR	*
777	208	07	SP	76	CM

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

Site Description	Operator	Editor
2.5 KM NORTH OF COVE FORT	JED	HLH

Card B

Scale Unit in cm	Map Size (7.5, 15.,60)	Map Location Δ N Lat Degree	Min	W Long Degree	Min
CM	15.	38.	30.	112.	45.

Use decimals

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

Northing	Easting	Elev	
21.9	23.7	6100.	F

Use decimals

← Write M if meters

SEGMENT DEPTH

	Start	End	K	ΔK
C	18.0	40.0		
D	52.0	98.0	-5.5	-.5
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
C	40.0	52.0		
D	.999			
E				
F				
G				

Final Segment: Start = .999

B-208 ____ of ____

TEMPERATURE - DEPTH LOG

Location 2 MILES N. OF COVE FORT Date 7-SEPT-76

Map COVE FORT UT. 15"

Property THERMEX T 25S R 6W sec 19 SW¼ NW¼

Drill Hole SWU #8 B-208 Date Drilled 29-AUG-76 Elevation 6100 ft.

Instrument _____ Operator JED

Comments 3/4" WATER FILLED PVC PIPE.

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
1.5	4535	19.04			
2.0	4788	17.65	-0.90		
2.5	4960	16.75	-1.00		
3.0	5162	15.75	-0.55		
3.5	5277	15.20	-0.55		
4.0	5394	14.65	-0.33		
4.5	5466	14.32	-0.34		
5.0	5541	13.98	-0.20		
5.5	5586	13.78	-0.11		
6.0	5611	13.67	-0.03		
6.5	5619	13.64	0.01		
7.0	5615	13.65	0.08		
7.5	5598	13.73	0.13		
8.0	5568	13.86	0.16		
8.5	5533	14.02	0.22		
9.0	5484	14.24	0.16		
9.5	5440	14.40	0.16		
10.0	5397	14.64	0.17		
10.5	5359	14.81	0.25		
11.0	5306	15.06	0.26		GRADIENT 40-98m 303.8°C/Km
11.5	5251	15.32			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T _____ R _____ sec _____

Drill Hole B-208 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
12.0	5196	15.59	0.27		
12.5	5153	15.79	0.20		
13.0	5107	16.02	0.23		
13.5	5064	16.23	0.21		
14.0	5025	16.43	0.20		
14.5	4988	16.61	0.18		
15.0	4959	16.76	0.15		
15.5 ~~16.0~~	4926	16.93	0.17		
16.0	4896	17.08	0.15		
16.5 ~~17.0~~	4866	17.24	0.16		
17.0	4831	17.42	0.18		
17.5 ~~18.0~~	4803	17.59	0.17		
18.0	4768	17.76	0.17		
18.5 ~~19.0~~	4735	17.93	0.17		
19.0	4705	18.09	0.16		
19.5	4682	18.22	0.13		
20.0	4657	18.36	0.14		
22	4545	18.98	0.62		
24	4443	19.56	0.58		
26	4339	20.17	0.61		
28	4256	20.67	0.50		

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

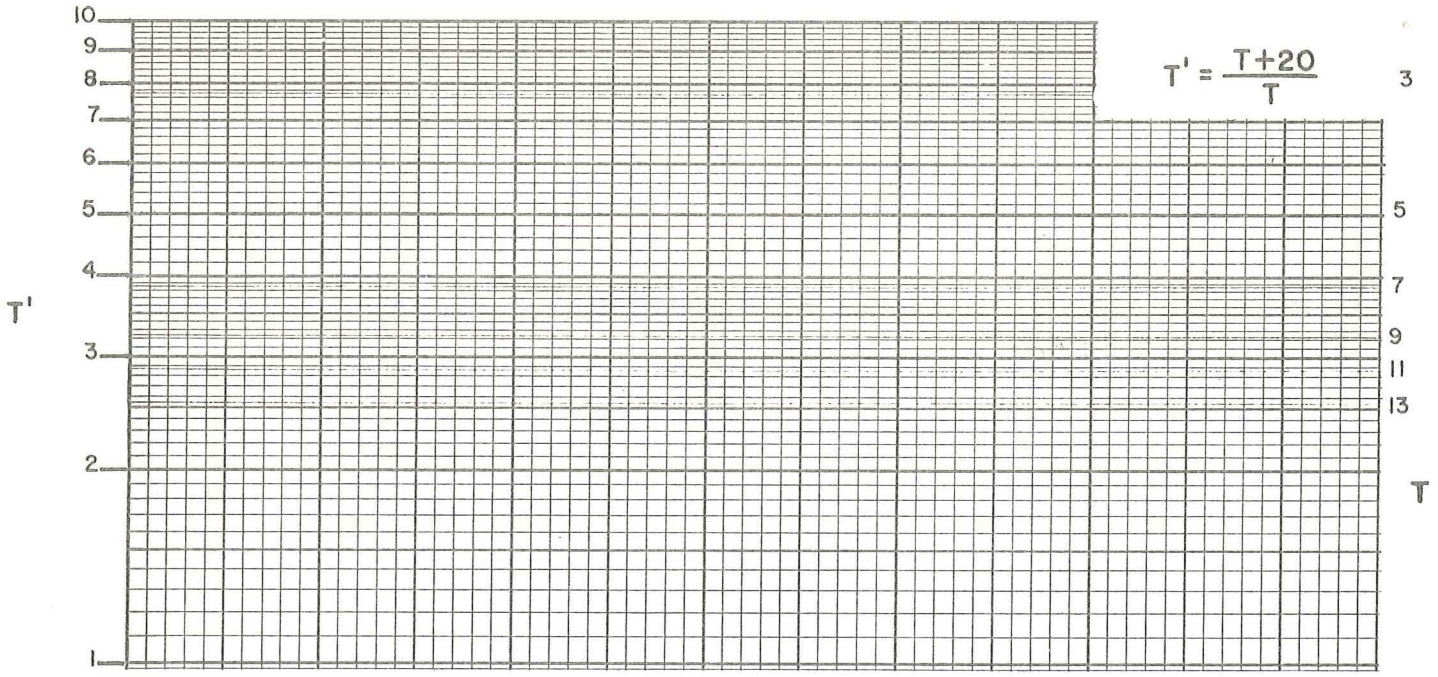
Property _____ T _____ R _____ sec _____

Drill Hole B-208 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
30	4183	21.12	0.45		
32	4100	21.65	0.53		
34	4023	22.14	0.49		
36	3941	22.68	0.54		
38	3863	23.21	0.53		
40	3796	23.67	0.46		
42	3676	24.52	0.85		
44	3579	25.24	0.72		
46	3499	25.85	0.61		
48	3410	26.54	0.69		
50	3332	27.17	0.63		
52	3252	27.83	0.67		
54	3171	28.52	0.69		
56	3118	28.98	0.46		
58	3042	29.66	0.68		
60	2976	30.26	0.60		
62	2906	30.93	0.67		
64	2856	31.41	0.48		
66	2781	32.15	0.74		
68	2725	32.73	0.58		
70	2674	33.26	0.47		


$T' = \frac{T+20}{T}$
T'
10
9
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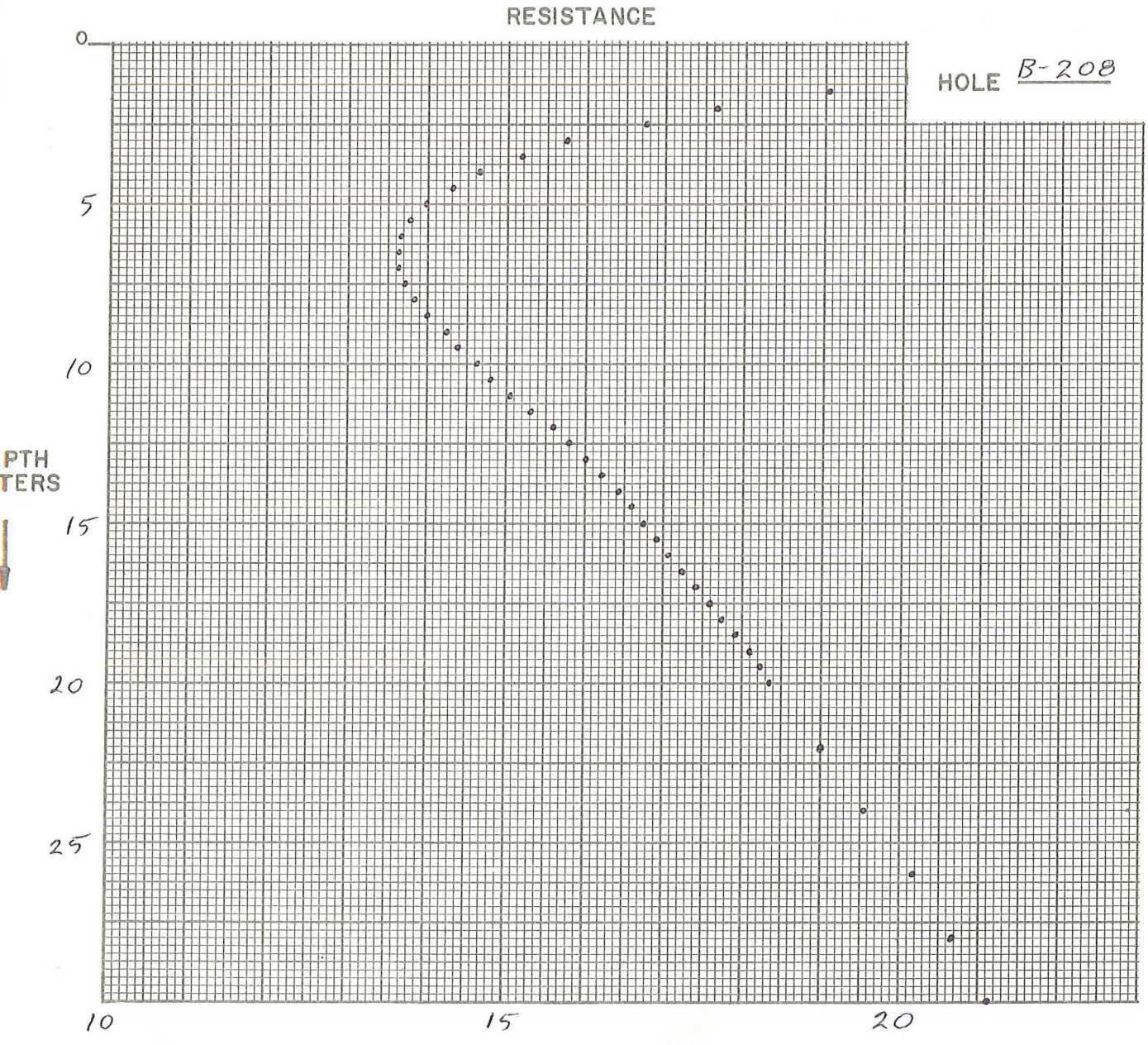
5
4
3
2
1
3
5
7
9
11
13
T


RESISTANCE
HOLE B-208
0
5
10
15
20
25
DEPTH METERS
10
15
20
TEMPERATURE °C

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

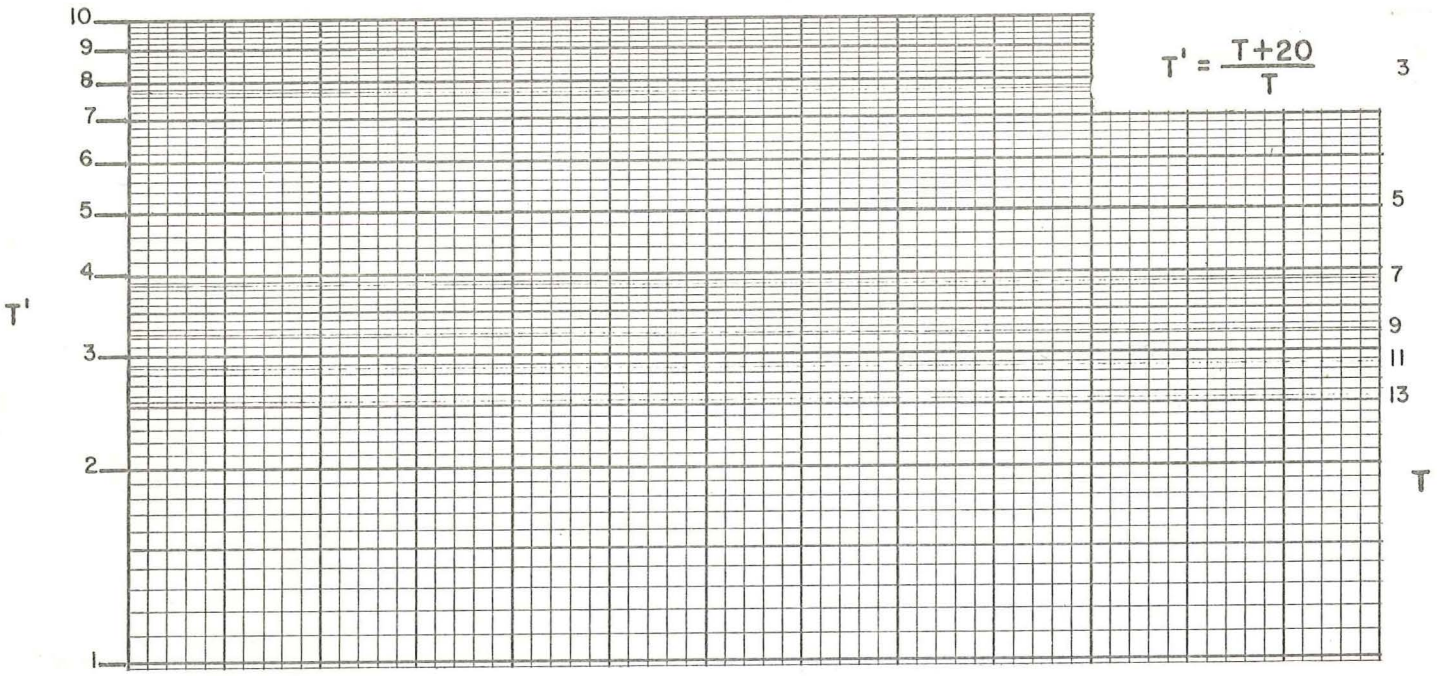
Property _____ T _____ R _____ sec _____

Drill Hole B-208 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
72	2621	33.83	0.57		
74	2557	34.53	0.70		
76	2505	35.12	0.41		
78	2452	35.74	0.62		
80	2392	36.45	0.71		
82	2360	36.84	0.39		
84	2333	37.18	0.34		
86	2279	37.86	0.68		
88	2226	38.55	0.69		
90	2188	39.06	0.51		
92	2141	39.70	0.64		
94	2106	40.19	0.49		
96	2065	40.78	0.59		
98	2030	41.29	0.51		



RESISTANCE

HOLE B-208

ALLUVIUM BOULDERS OF LMS + DOLOMITE

GRAY LIMESTONE

WEATHERED VOLCANICS + LIMESTONE

266

308

290

DEPTH METERS

0
10
20
30
40
50
60
70
80
90
100

10
15
20
25
30
35
40

TEMPERATURE °C

(41.8)
0.64

266, 308, 290
16.0 @ 5.5

303.8 ohms/km

LITHOLOGIC LOG B-208

THERMEX 777

SW¼ NW¼ Sec 19 T25S R6W Elevation: 6,100'

Depth (m)	Description
0 - 29.9	Alluvium composed of limestone cobbles and boulders in a matrix of calcareous sand and clay. The matrix makes up 40-60 percent of the volume. Small flow of water, 1-3 gpm at contact with bedrock.
29.9 - 50	Gray limestone probably Kiabab Fm.
50 - 99	Red, weathered fine-grained volcanics of the Belknap Series in fault contact with the overlying limestone.

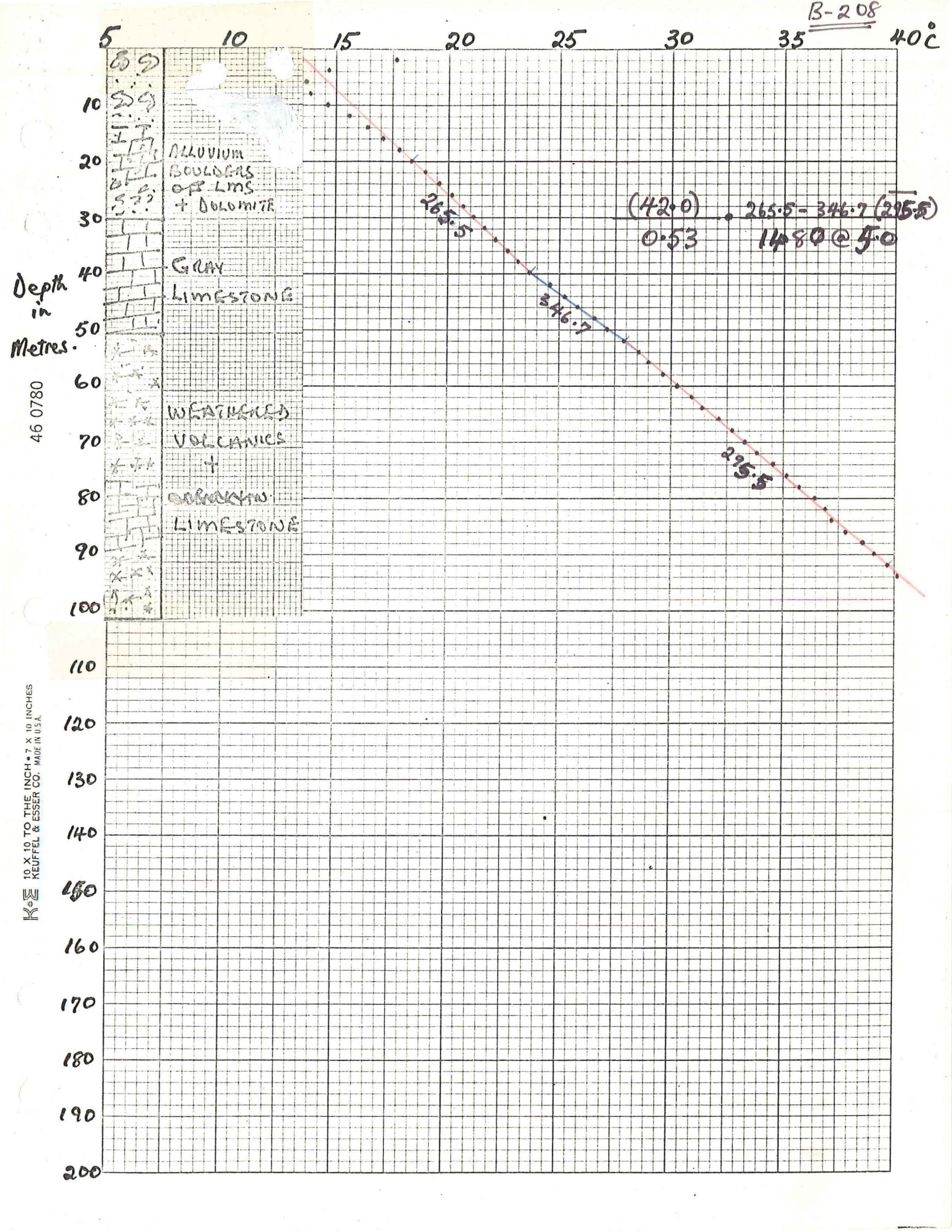
H. Dean Pilkington

H. Dean Pilkington

HDP:mmo

cc: Art Lange
Cheryl Caywood
Mark Alldredge

B-208



46 0780

10 X 10 TO THE INCH • 7 X 10 INCHES
KEUFFEL & ESSER CO. MADE IN U.S.A.

TEMPERATURE DEPTH LOG

ΔT Well No. 209

Property-Project Thermex Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →	Well No →	Date Logged DA →	MO →	YR	*
1 2 3 4	5 6 7 8 9 10	11 12	13 14 15	16 17 18	19 20
777	209	07	SP	76	CM

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

Site Description	Operator	Editor
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
2.0 KM NW OF COVE FORT, UTAH	JED	HLH

Card B

Scale Unit in cm	Map Size (7.5, 15.,60)	Map Location Δ N Lat Degree	Min	W Long Degree	Min
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
CM	15.	38.	30.	112.	45.

Use decimals

Δ 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
79-8	21.1	5950.	F

20,12

Use decimals

← Write M if meters

SEGMENT DEPTH

	Start	End	K	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
C	14.0	46.0	-4.0	-.5
D	.999			
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
	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
C	60.0	98.0		-.5
D				
E				
F				
G				

Final Segment: Start = .999

B-209 ____ of ____

TEMPERATURE - DEPTH LOG

Location 1 MILE N.W. OF COVE FORT Date 7-SEPT-76

Map COVE FORT UT, 15"

Property THERMEX T 25S R 7W sec 25 NW¼ NW¼

Drill Hole SWU #9 B-209 Date Drilled 2-SEPT-76 Elevation ~~6950~~ 5950 ft.

Instrument _____ Operator JEP

Comments 3/4" WATER FILLED PVC PIPE

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
1.5	4526	19.09			
2.0	4800	17.59			
2.5	5024	16.43			
3.0	5284	15.16	-1.27		
3.5	5449	14.40	-0.76		
4.0	5579	14.26	-0.14		
4.5	5673	13.40	-0.86		
5.0	5741	13.11	-0.29		
5.5	5774	12.96	-0.15		
6.0	5781	12.93	-0.03		
6.5	5758	13.03	0.10		
7.0	5745	13.09	0.06		
7.5	5726	13.17	0.08		
8.0	5711	13.24	0.07		
8.5	5689	13.33	0.09		
9.0	5653	13.49	0.16		
9.5	5604	13.70	0.21		
10.0	5568	13.86	0.16		
10.5	5533	14.02	0.16		
11.0	5499	14.17	0.15		
11.5	5478	14.27	0.10		

B-209 _____ of _____

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T _____ R _____ sec _____

Drill Hole B-209 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
12.0	5449	14.40	0.13		
12.5	5426	14.50	0.10		
13.0	5397	14.64	0.14		
13.5	5377	14.73	0.09		
14.0	5358	14.82	0.09		
14.5	5340	14.90	0.08		
15.0	5315	15.02	0.12		
15.5	5294	15.12	0.10		
16.0	5279	15.19	0.07		
16.5	5263	15.26	0.07		
17.0	5240	15.37	0.11		
17.5	5219	15.47	0.10		
18.0	5208	15.53	0.06		
18.5	5190	15.61	0.08		
19.0	5167	15.73	0.12		
19.5	5149	15.81	0.08		
20.0	5129	15.91	0.10		
22	5042	16.34	0.43		
24	4962	16.74	0.40		
26	4891	17.11	0.37		
28	4816	17.50	0.39		

B-209 _____ of _____

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

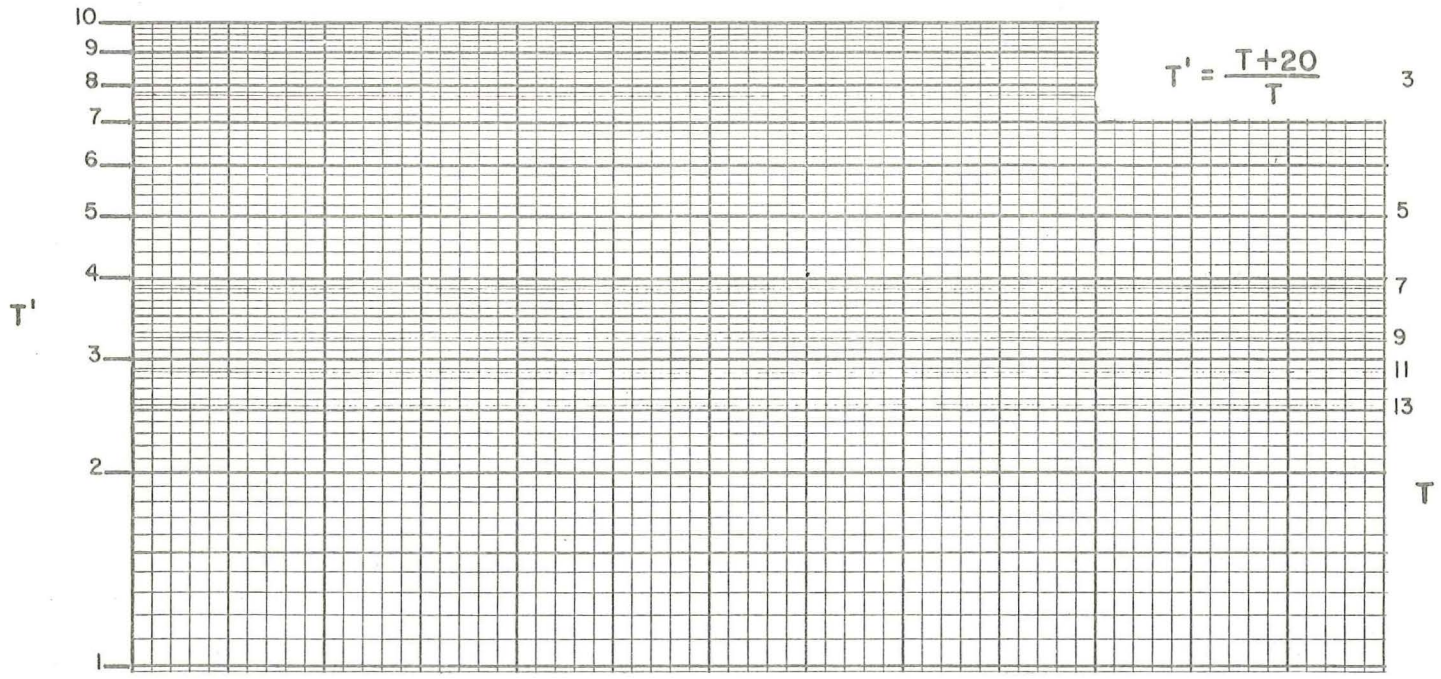
Property _____ T _____ R _____ sec _____

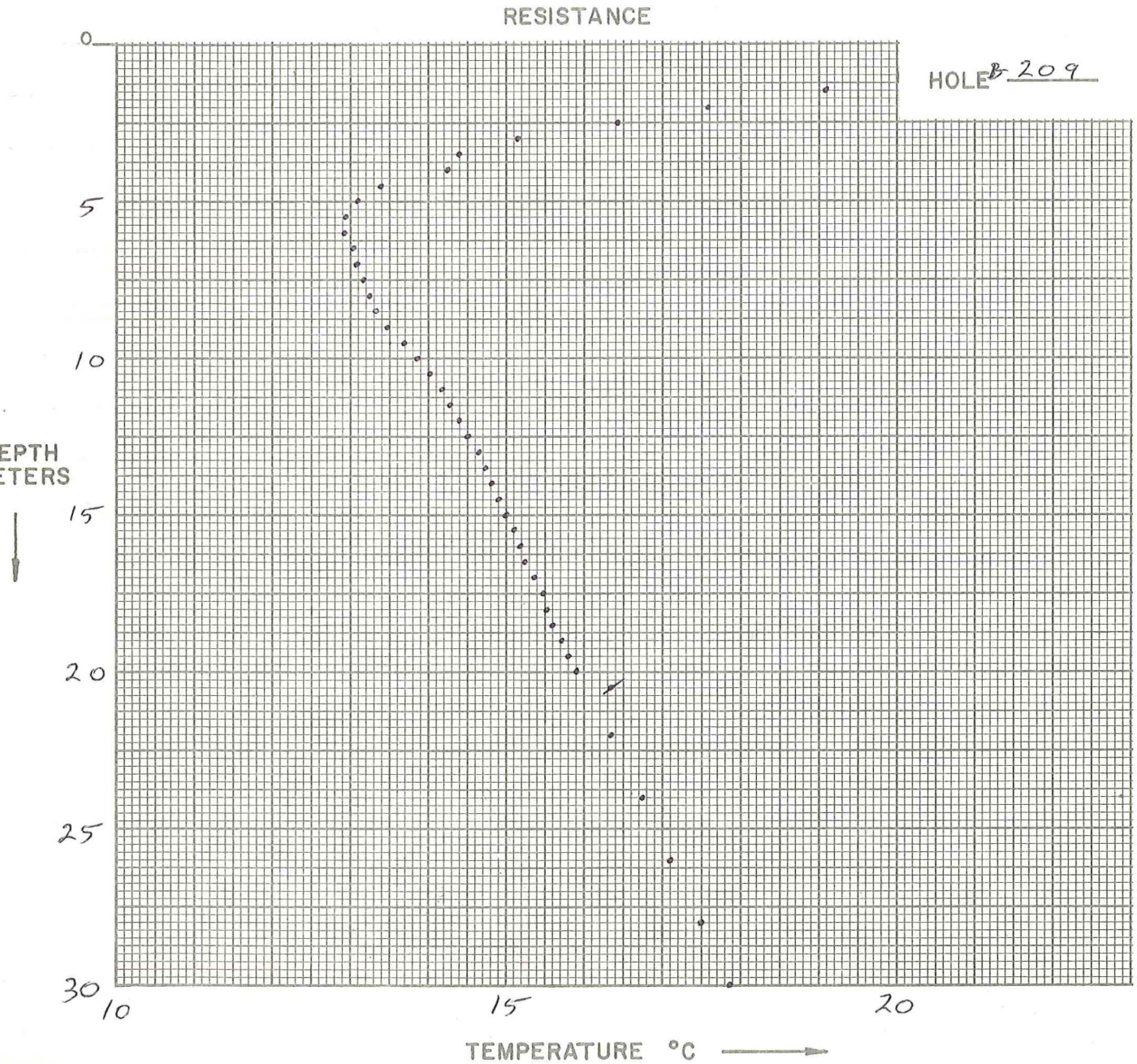
Drill Hole B-209 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
30	4746	17.87	0.37		
32	4673	18.27	0.40		
34	4602	18.66	0.39		
36	4535	19.04	0.38		
38	4470	19.41	0.37		
40	4395	19.84	0.43		
42	4305	20.38	0.54		
44	4243	20.75	0.37		
46	4171	21.20	0.45		
48	4137	21.41	0.21		
50	4096	21.67	0.26		
52	4090	21.71	0.04		
54	4093	21.69	-0.02		
56	4047	21.99	0.33		
58	3987	22.38	0.39		
60	3972	22.48	0.10		
62	3972	22.48	0.00		
64	3978	22.44	-0.04		
66	3979	22.43	-0.01		
68	3979	22.43	0.00		
70	3979	22.43	0.00		


$T' = \frac{T+20}{T}$
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13


RESISTANCE
HOLE # 209
DEPTH METERS
0
5
10
15
20
25
30
10
15
20
TEMPERATURE °C

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

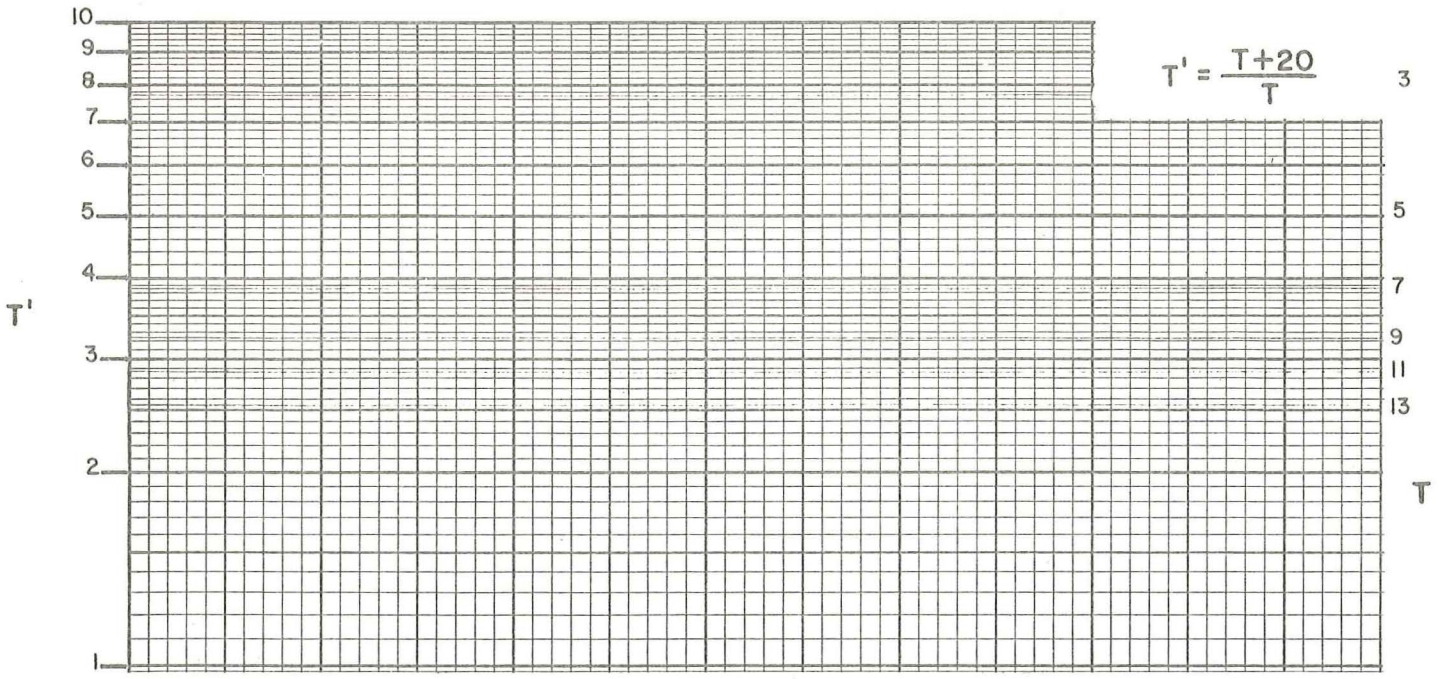
Property _____ T _____ R _____ sec _____

Drill Hole B-209 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
72	3979	22.43	0.00		
74	3981	22.42	0.01		
76	3980	22.42	0.00		
78	3974	22.46	0.04		
80	3971	22.48	0.02		
82	3966	22.52	0.04		
84	3963	22.54	0.02		
86	3960	22.56	0.02		
88	3957	22.58	0.02		
90	3955	22.59	0.01		
~~90~~	~~395~~				
92	3953	22.60	0.01		
94	3950	22.62	0.02		
96	3949	22.63	0.01		
98	3946	22.65	0.02		



RESISTANCE

HOLE B-209

0
10
20
30
40
50
60
70
80
90
100

DEPTH METERS

202

117

LOST CIRCULATION

(231)

0.93(?)

202, 117, 0

0-8.1 @ 4.0 (?)

0

12
15
20
25

TEMPERATURE °C

LITHOLOGIC LOG B-209

THERMEX 777

NW¼ NW¼ Sec 25 T25S R7W Elevation: 5,950'

Depth (m)	Description
0 - 3.7	Soil, wind blown sand and soil mixed with cobbles of Belknap volcanics, limestones, and quartzites.
3.7 - 34.6	Reddish-brown siltstones with some interbedded layers of gravel made up of volcanic fragments.
34.6 - 45.7	Buff to red-brown siltstones with varying amounts of carbonate cement.
45.7 - 99	No returns - drilled as if it might be a fractured and perhaps solutioned limestone.

H. Dean Pilkington

H. Dean Pilkington

HDP:mmo

cc: Art Lange
Cheryl Caywood
Mark Alldredge

B-209

158

48 - 134.4

7.2

5 10 15 20 25 30 35 40 °C

meter

0 6.0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200

$K = 4.0$

$Q = 8.0$

201.67 @

10.68 @ 5.0

15.91

20.75

22.48

4.47 @

22.65

22.7°

CALCAREOUS SEDIMENTS + VOLCANIC SANDSTONES

CALCAREOUS SILTSTONES

SILTSTONES

HARD LIMESTONE

TEMPERATURE DEPTH LOG

ΔT Well No. 210

Property-Project Rhetmex Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →	Well No →	Date Logged DA	MO →	YR	*
1 2 3 4	5 6 7 8 9 10	11 12	13 14 15	16 17 18	19 20
777	210	07	SP	76	CM

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

Site Description	Operator	Editor
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
1.6 KM EAST OF COVE FORT, UTAH	JED	HLH

Card B

Scale Unit in cm	Map Size (7.5, 15.,60)	Map Location △ N Lat Degree	Min	W Long Degree	Min
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
CM	15.	38.	30.	112.	45.

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
17.6	26.2	6120.		F

Use decimals ← Write M if meters

SEGMENT DEPTH

	Start	End	K	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
C	30.0	98.0	-5.0	-.5
D				
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
	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
C	.999			
D				
E				
F				
G				

Final Segment: Start = .999

TRANSIENT B-210 of

TEMPERATURE - DEPTH LOG

Location 1 MILE E. OF COVE FORT Date 7-SEPT-76

Map COVE FORT UT, 15"

Property THERMEX T 25S R 6W sec 32 NW¼ NW¼

Drill Hole SWU #10 B-210 Date Drilled 31-AUG-76 Elevation 6120 ft.

Instrument _____ Operator JEP

Comments 3/4" WATER FILLED PVC PIPE.

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
1.5	4620	18.56			
			-1.23		
2.0	4849	17.33			
			-0.97		
2.5	5039	16.36			
			-0.86		
3.0	5214	15.50			
			-0.65		
3.5	5350	14.85			
			-0.44		
4.0	5446	14.41			
			-0.24		
4.5	5500	14.17			
			-0.26		
5.0	5557	13.91			
			-0.15		
5.5	5590	13.76			
			-0.01		
6.0	5594	13.75			
			0.06		
6.5	5580	13.81			
			0.16		
7.0	5543	13.97			
			0.20		
7.5	5499	14.17			
			0.28		
8.0	5438	14.45			
			0.26		
8.5	5382	14.71			
			0.29		
9.0	5318	15.00			
			0.18		
9.5	5281	15.18			
			0.12		
10.0	5255	15.30			
			0.02		
10.5	5251	15.32			
			0.00		
11.0	5251	15.32			GRADIENT 48-98m 297.2°C/Km
			0.02		
11.5	5248	15.34			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T _____ R _____ sec _____

Drill Hole B-210 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
12.0	5242	15.36	0.02		
12.5	5232	15.41	0.05		
13.0	5222	15.46	0.05		
13.5	5209	15.52	0.06		
14.0	5185	15.64	0.12		
14.5	5163	15.74	0.10		
15.0	5130	15.91	0.17		
15.5	5109	16.01	0.10		
16.0	5081	16.15	0.14		
16.5	5050	16.30	0.15		
17.0	5020	16.45	0.15		
17.5	4987	16.62	0.17		
18.0	4946	16.83	0.21		
18.5	4911	17.01	0.18		
19.0	4866	17.24	0.23		
19.5	4839	17.38	0.14		
20.0	4800	17.59	0.21		
22	4668	18.30	0.71		
24	4540	19.01	0.71		
26	4434	19.61	0.60		
28	4319	20.29	0.68		

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

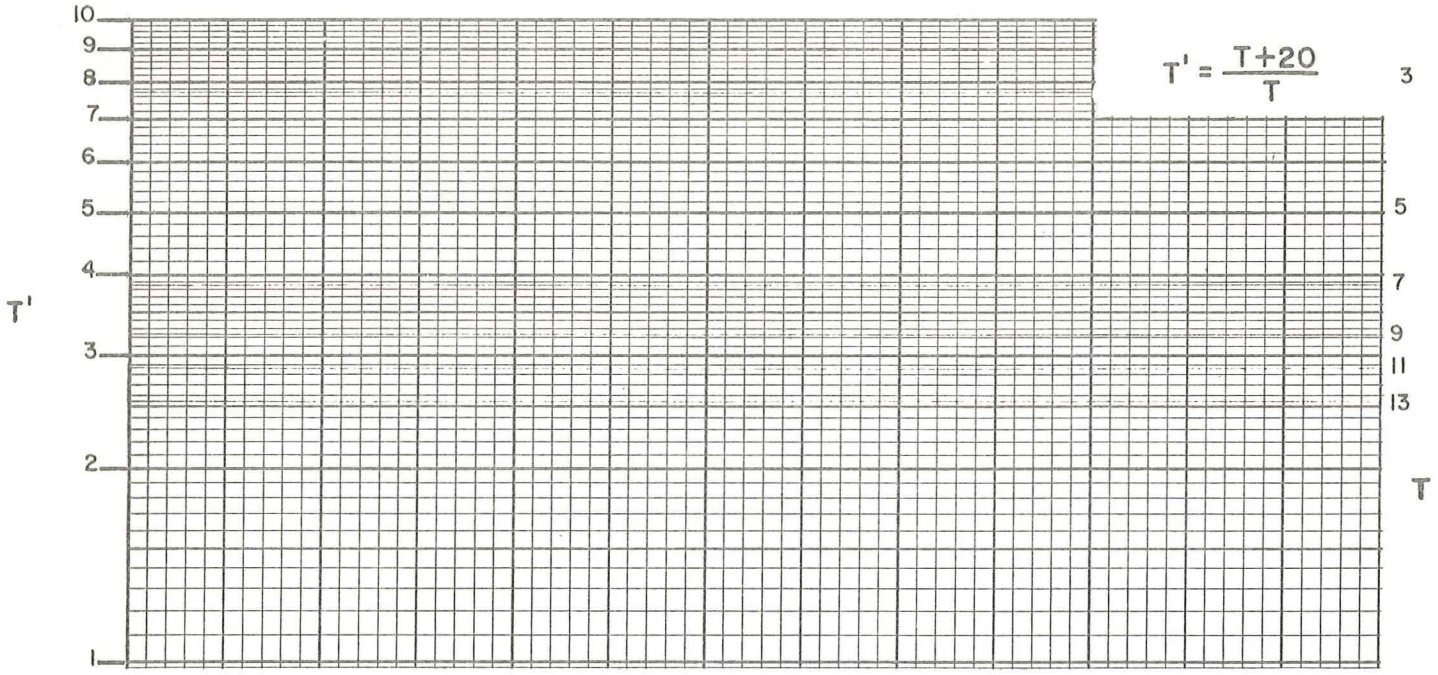
Property _____ T _____ R _____ sec _____

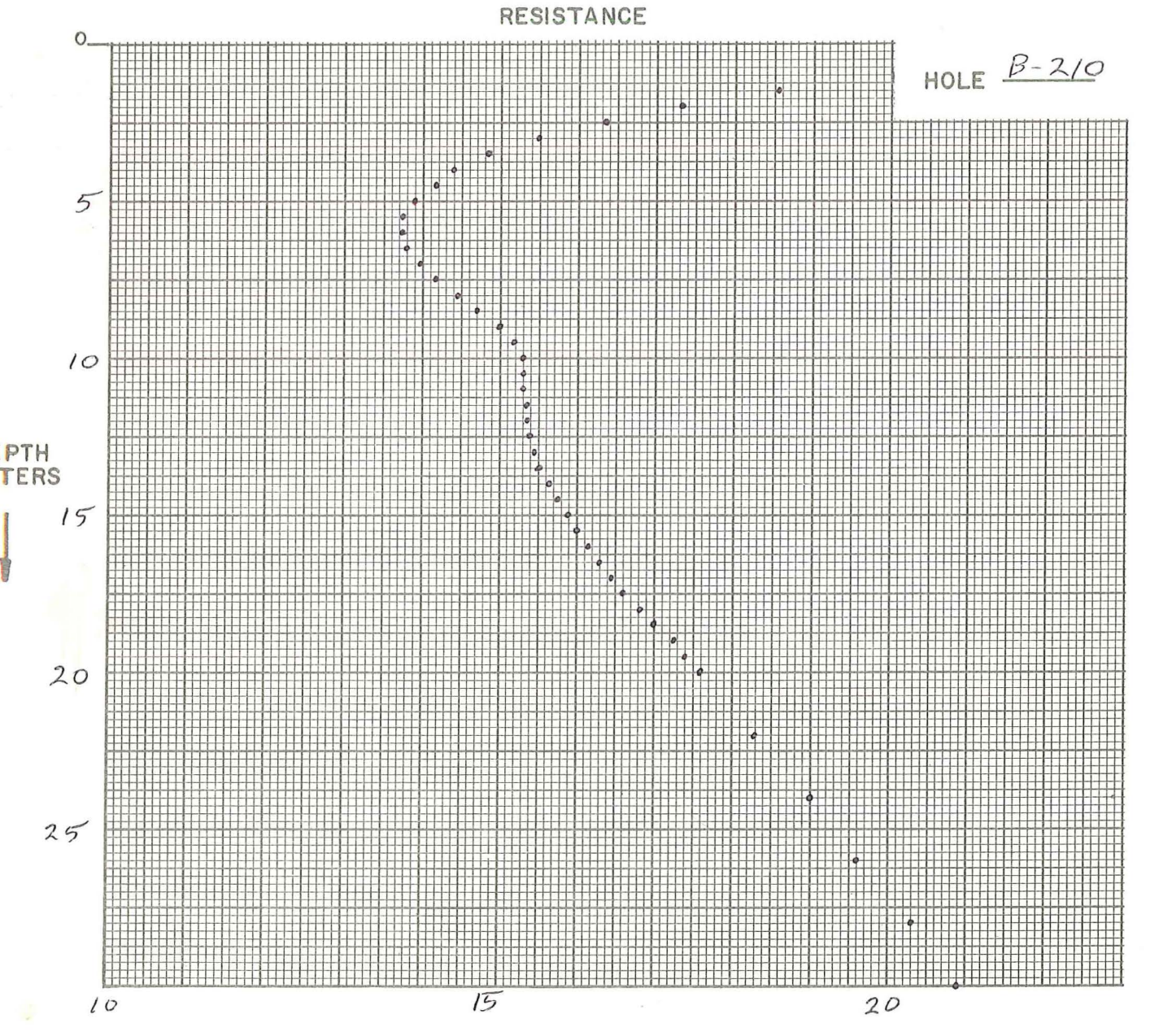
Drill Hole B-210 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
30	4222	20.88	0.59		
32	4121	21.51	0.63		
34	4025	22.13	0.62		
36	3928	22.77	0.64		
38	3835	23.40	0.63		
40	3752	23.98	0.58		
42	3670	24.57	0.59		
44	3592	25.14	0.57		
46	3507	25.78	0.64		
48	3432	26.37	0.59		
50	3349	27.03	0.66		
52	3277	27.62	0.59		
54	3220	28.10	0.48		
56	3153	28.67	0.57		
58	3088	29.24	0.57		
60	3025	2981	0.57		
62	2972	30.30	0.49		
64	2905	30.94	0.64		
66	2825	31.71	0.77		
68	2768	32.29	0.58		
70	2713	32.85	0.56		


10
9
8
7
6
5
4
3
2
1
T'
$T' = \frac{T+20}{T}$
3
5
7
9
11
13
T


RESISTANCE
0
5
10
15
20
25
DEPTH METERS
HOLE B-210
10
15
20
TEMPERATURE °C

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

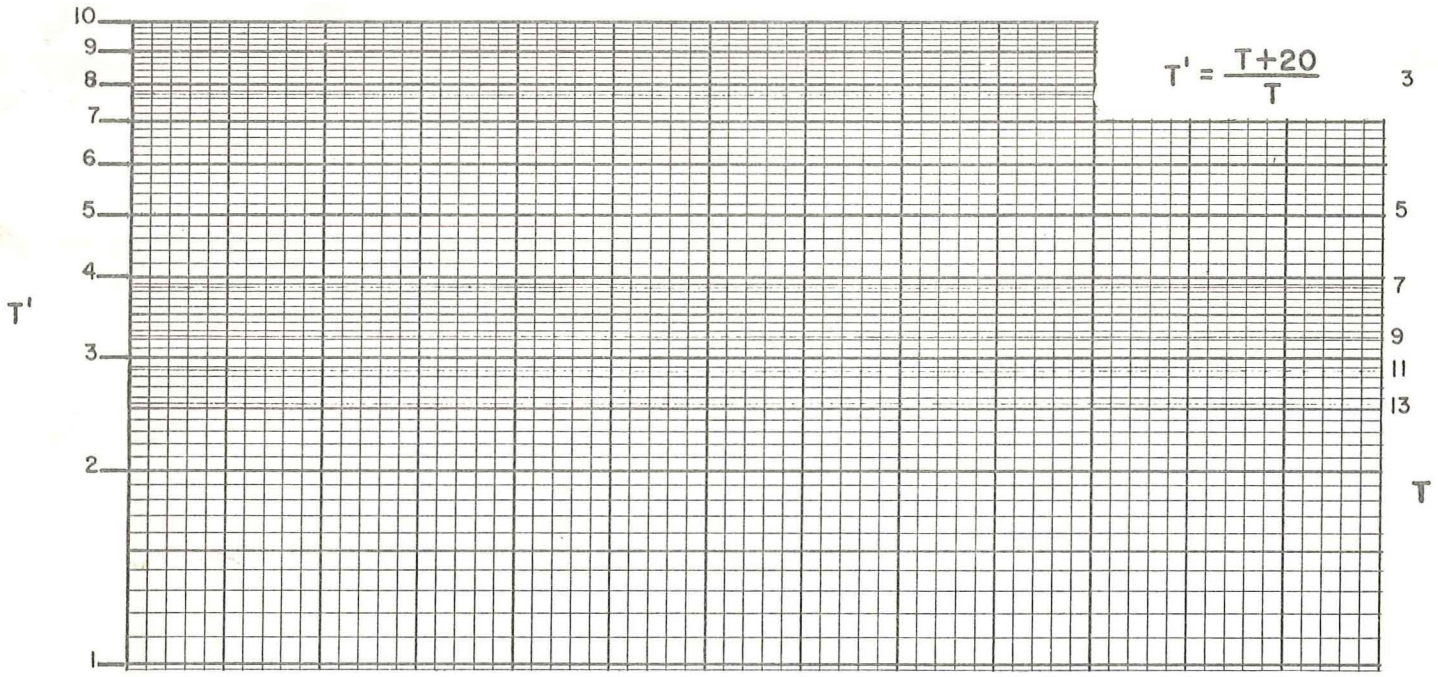
Property _____ T _____ R _____ sec _____

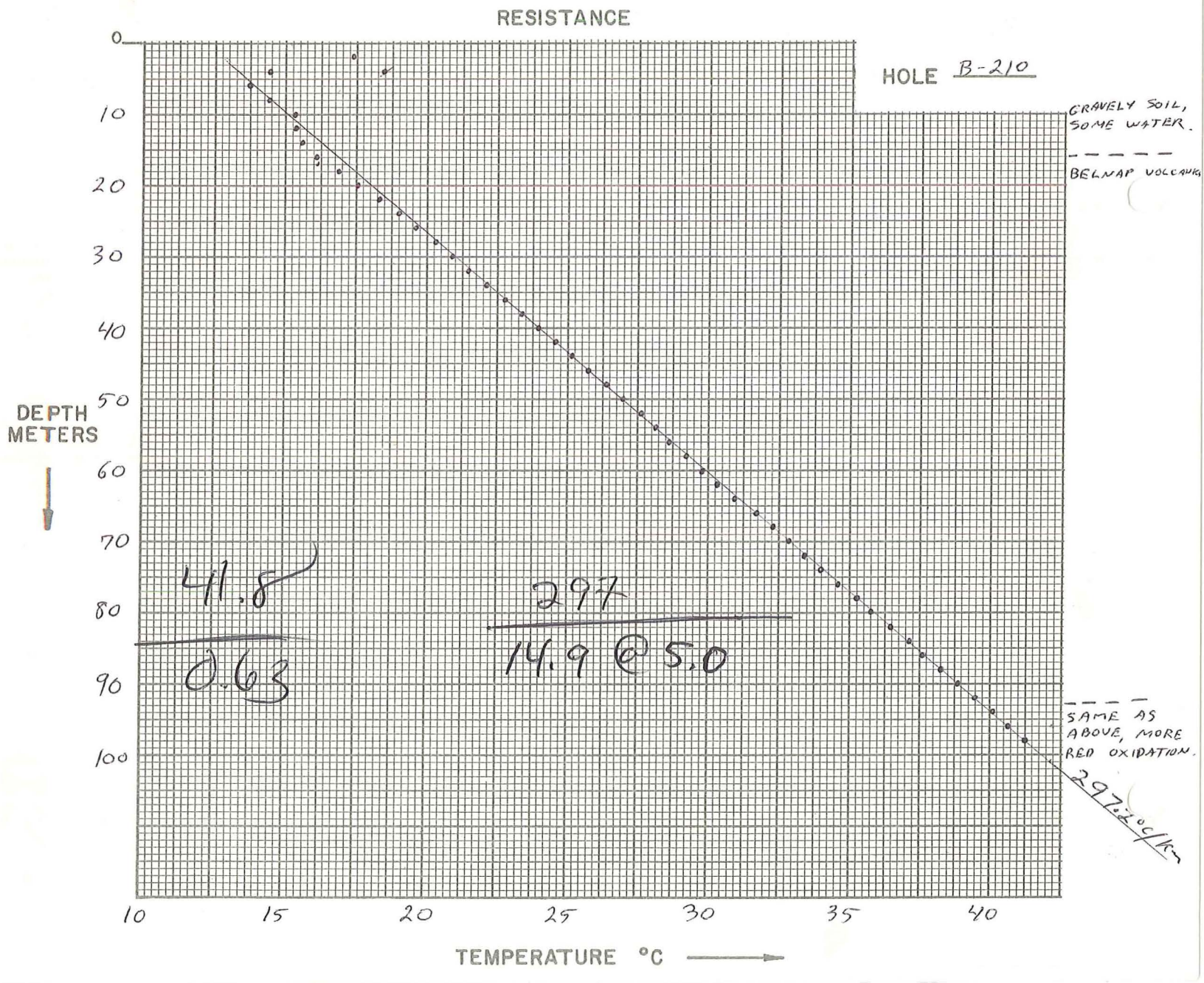
Drill Hole B-210 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
72	2658	33.43	0.58		
74	2604	34.01	0.58		
76	2547	34.65	0.64		
78	2496	35.23	0.58		
80	2450	35.76	0.53		
82	2396	36.40	0.64		
84	2339	37.10	0.70		
86	2297	37.63	0.53		
88	2249	38.25	0.62		
90	2204	38.84	0.59		
92	2159	39.45	0.61		
94	2114	40.08	0.63		
96	2072	40.68	0.60		
98	2034	41.23	0.55		


T' = (T+20)/T
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13


RESISTANCE
HOLE B-210
GRAVELY SOIL, SOME WATER.
BELNAP VOLCANICS
SAME AS ABOVE, MORE RED OXIDATION.
41.8
0.63
297
14.9 @ 5.0
29.7±2.0°C/Km
DEPTH METERS
0
10
20
30
40
50
60
70
80
90
100
10
15
20
25
30
35
40
TEMPERATURE °C

LITHOLOGIC LOG B-210

THERMEX 777

NW¼ NW¼ Sec 32 T25S R6W Elevation: 6,120'

Depth (m)	Description
0 - 16	Valley fill composed of sand, gravel and boulders. Rock fragments consist of limestone, quartzite, and Belknap volcanics.
16 - 99	Red, slightly weathered Belknap volcanics, a series of quartz latitic to rhyolitic flows, ash-flow tuffs, crystal tuffs.

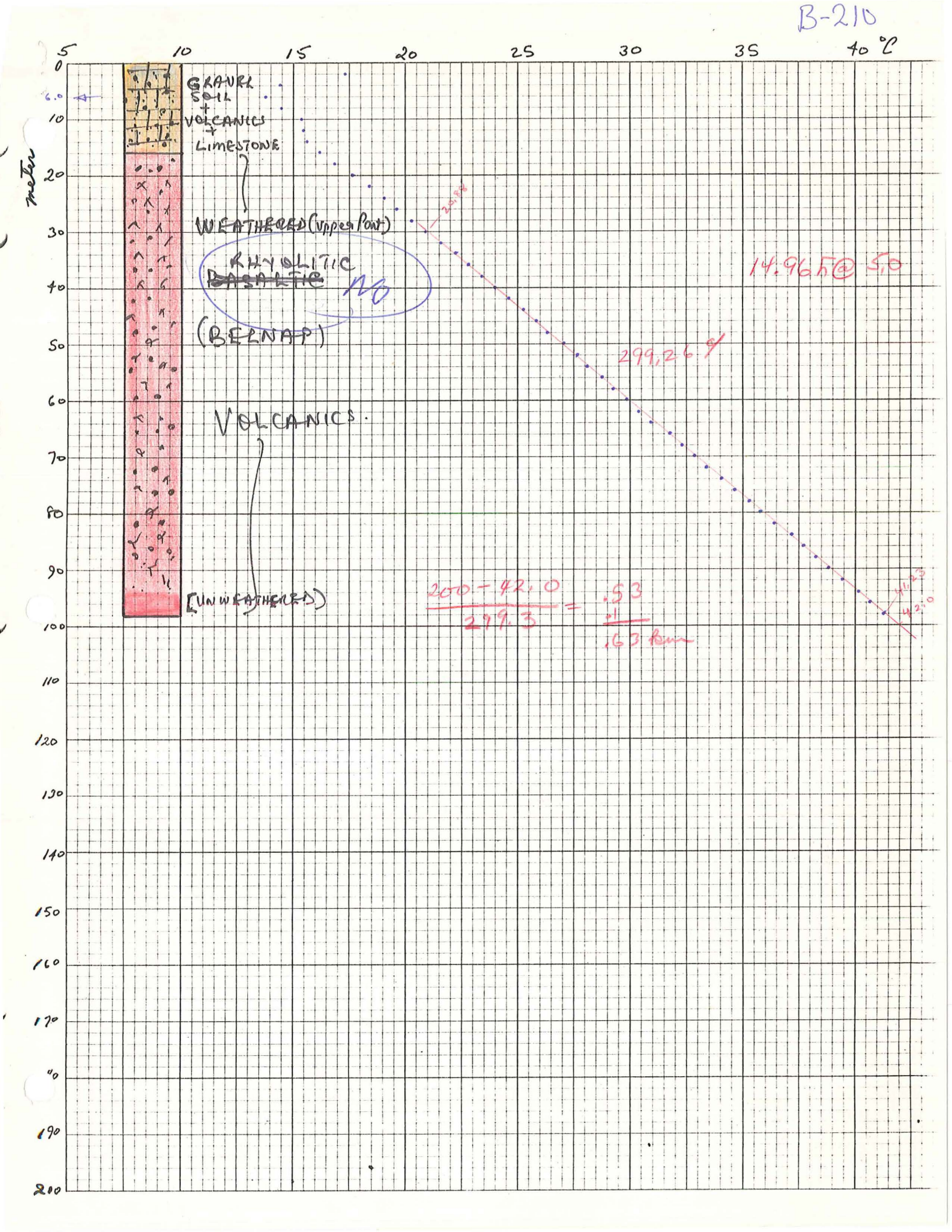
H. Dean Pilkington

H. Dean Pilkington

HDP:mmo

cc: Art Lange
Cheryl Caywood
Mark Alldredge

B-210


5
10
15
20
25
30
35
40 °C
meter
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
180
190
200
6.0
GRAVEL SOIL + VOLCANICS + LIMESTONE
WEATHERED (Upper Part)
RHYOLITIC
BASALTIC
NO
(BELNAP)
VOLCANICS
[UNWEATHERED]
14.965@ 50
299.26 ft
200 - 42.0 / 299.3 = .53 / .63 Bum
41°23
42°0

TEMPERATURE DEPTH LOG

ΔT Well No. 212

Property-Project Thermex Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →				Well No →						Date Logged DA →		MO →		YR		*	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
		7	7				2	1	2	0	7		S	P		7	6	C	M

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

| Site Description | | | | | |

Transient B-212 _____ of _____

TEMPERATURE - DEPTH LOG

TIME: 1230
TEMP:

Location 4 MILES S. OF COVE FORT Date 7-SEPT-76

Map COVE FORT UT, 15"

Property THERMEX T 26 S R 7W sec ~~14 CENTER~~ NW¼ SE¼ Sec 14

Drill Hole SWU #12 B-212 Date Drilled 2-SEPT-76 Elevation 6080 ft.

Instrument _____ Operator JED

Comments 3/4" WATER FILLED PVC PIPE

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
1.0	4714	18.05			
1.5	4957	16.77			
2.0	5215	15.49			
2.5	5422	14.52	- 0.97		
3.0	5653	13.49	- 1.03		
3.5	5832	12.72	- 0.77		
4.0	5978	12.11	- 0.61		
4.5	6083	11.69	- 0.42		
5.0	6141	11.45	- 0.24		
5.5	6164	11.36	- 0.09		
6.0	6140	11.46	0.10		
6.5	6082	11.69	0.23		
7.0	6030	11.90	0.21		
7.5	6018	11.95	0.05		
8.0	5998	12.03	0.08		
8.5	5973	12.13	0.10		
9.0	5893	12.46	0.33		
9.5	5856	12.62	0.16		
10.0	5831	12.72	0.10		
10.5	5787	12.91	0.19		
11.0	5744	13.09	0.18		GRADIENT 22-34.5m 244°c/km (?)

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

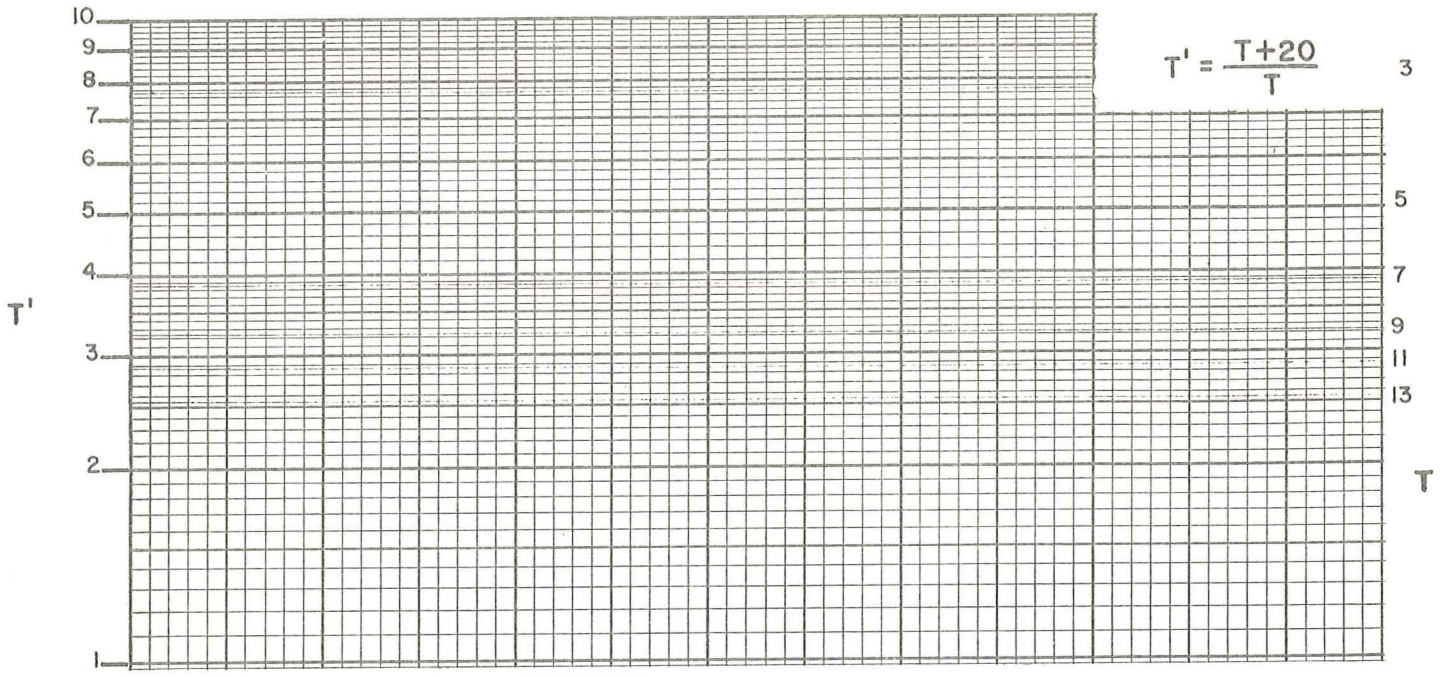
Property _____ T _____ R _____ sec _____

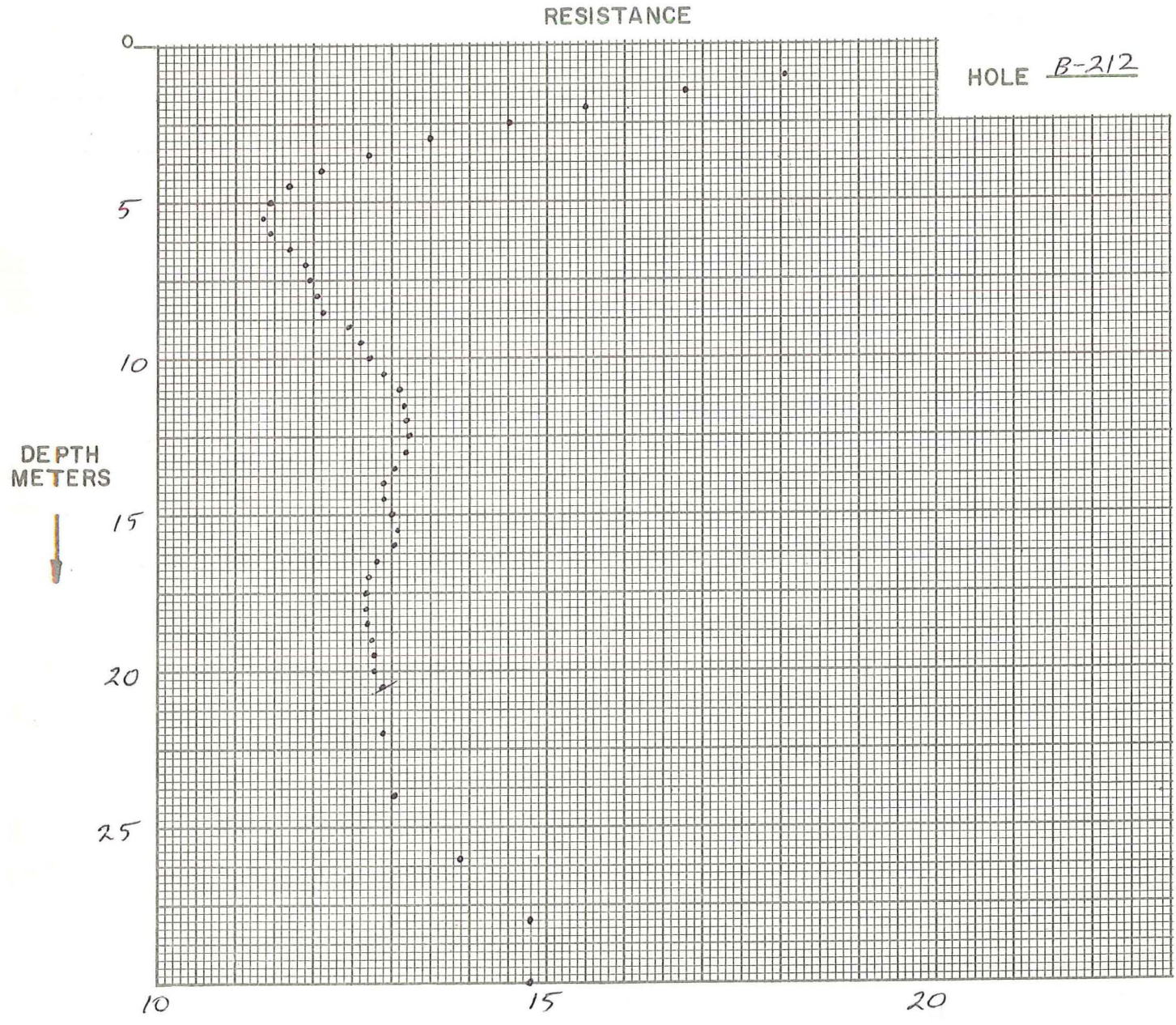
Drill Hole B-212 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
11.5	5729	13.16	0.07		
12.0	5719	13.20	0.04		
12.5	5713	13.23	0.03		
13.0	5723	13.18	-0.05		
13.5	5757	13.04	-0.14		
14.0	5788	12.90	-0.14		
14.5	5788	12.90	0.00		
15.0	5767	12.99	0.09		
15.5	5746	13.08	0.09		
16.0	5759	13.03	-0.05		
16.5	5809	12.82	-0.21		
17.0	5834	12.71	-0.11		
17.5	5840	12.68	-0.03		
18.0	5839	12.68	0.00		
18.5	5833	12.71	0.03		
19.0	5827	12.74	0.03		
19.5	5819	12.77	0.03		
20.0	5813	12.80	0.03		
22	5787	12.91	0.11		
24	5759	13.03	0.12		
26	5569	13.90	0.87		


$T' = \frac{T+20}{T}$
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13


RESISTANCE
HOLE B-212
DEPTH METERS
0
5
10
15
20
25
10
15
20
TEMPERATURE °C

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

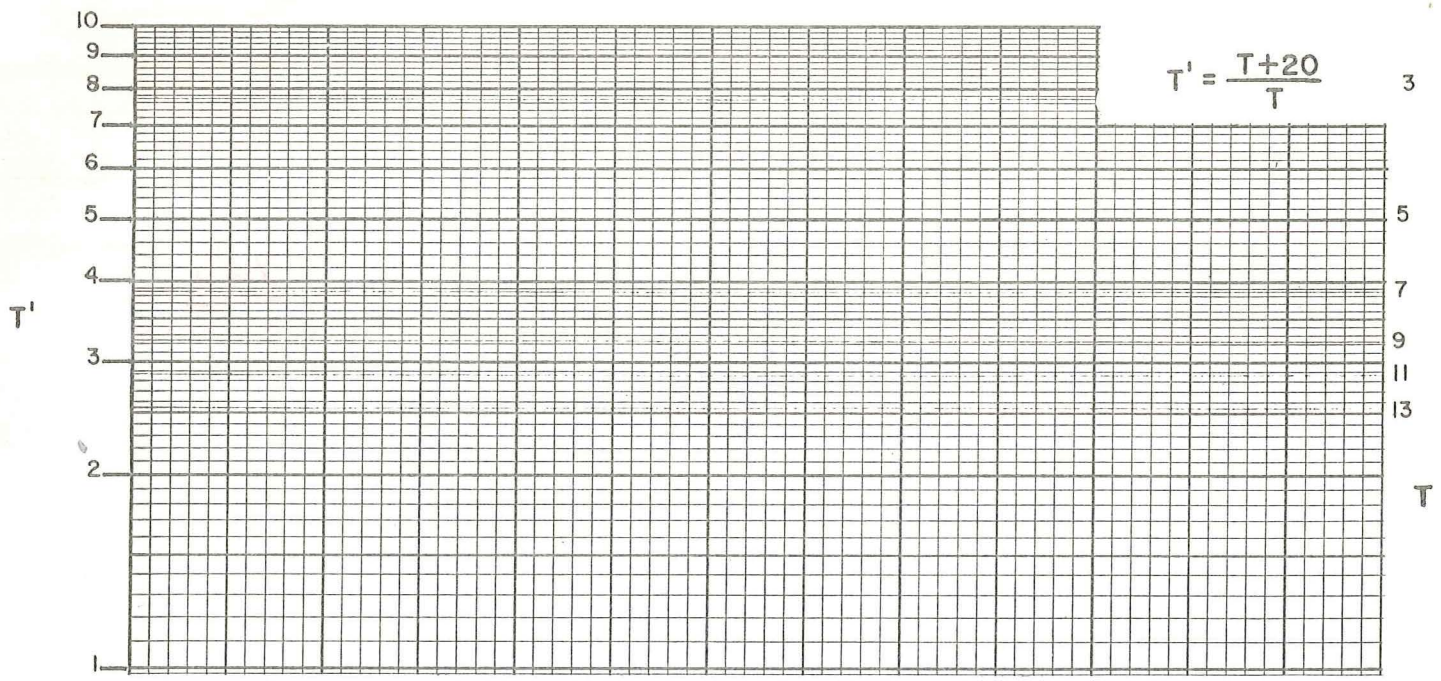
Property _____ T _____ R _____ sec _____

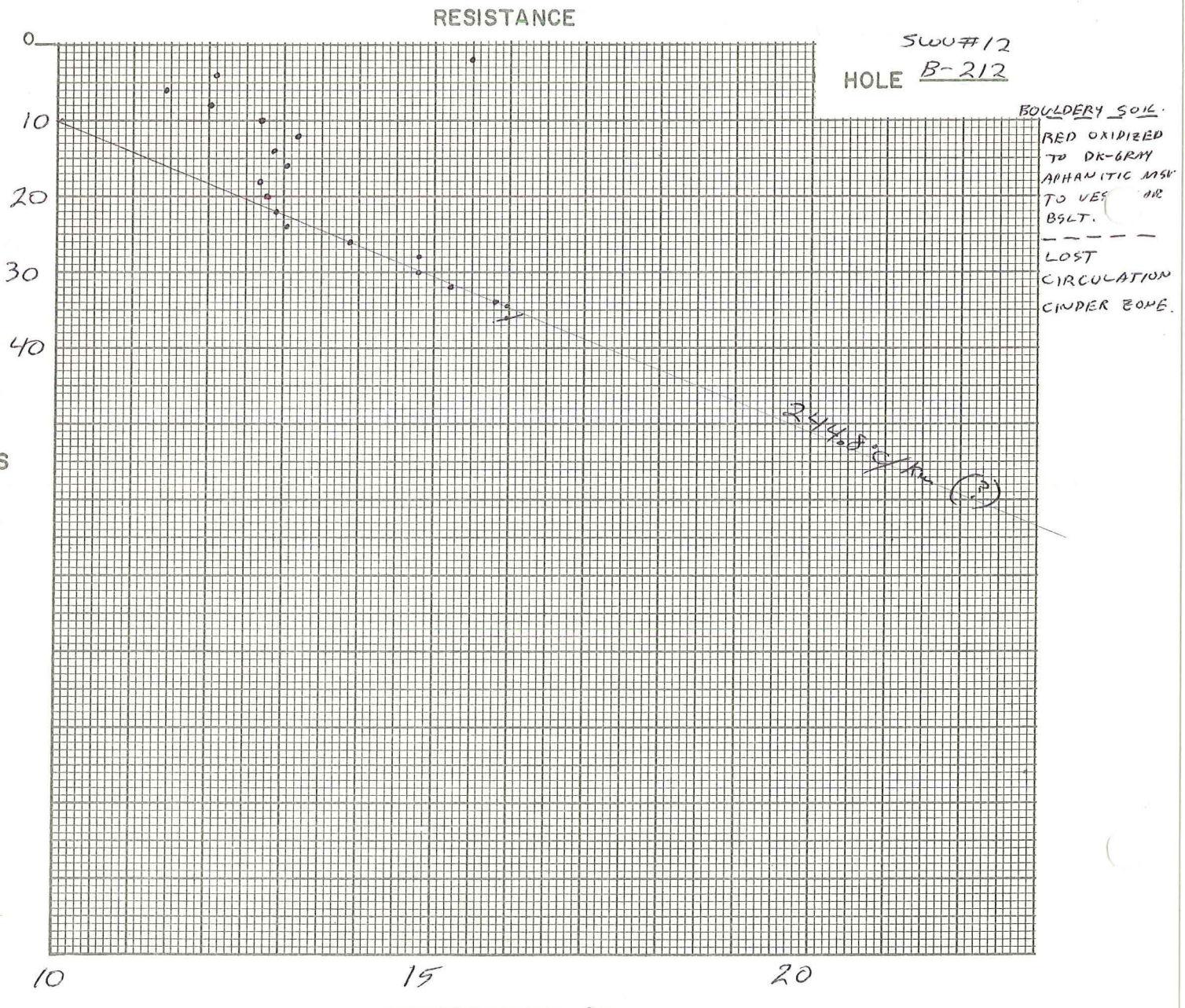
Drill Hole B-212 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
28	5359	14.81	0.91		
30	5359	14.81	0.00		
32	5272	15.22	0.41		
34	5145	15.83			
34.5	5116	15.97			


$T' = \frac{T+20}{T}$
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13


RESISTANCE
SWOT #12
HOLE B-212
BOULDERY SOIL.
RED OXIDIZED TO DK-GRAY APHANITIC MSV TO VES OR BSLT.
LOST CIRCULATION CINDER ZONE.
DEPTH METERS
0
10
20
30
40
10
15
20
TEMPERATURE °C

LITHOLOGIC LOG B-212

THERMEX 777

NW¼ SE¼ Sec 14 T26S R7W Elevation: 6,080'

Depth (m)	Description
0 - 10	Valley fill, mixture of soil and gravel, cobbles and boulders of basalt.
10 - 20	Vesicular basalt - red oxidized zones at top and bottom.
20 - 22	Red scoria or cinder zone with clay filling the voids.
22 - 27	Medium gray to black fine-grained dense basalt becomes oxidized and vesicular near base of flow.
27 - 39	No returns - probably an interflow cinder zone at top of internal and back into basalt flow.

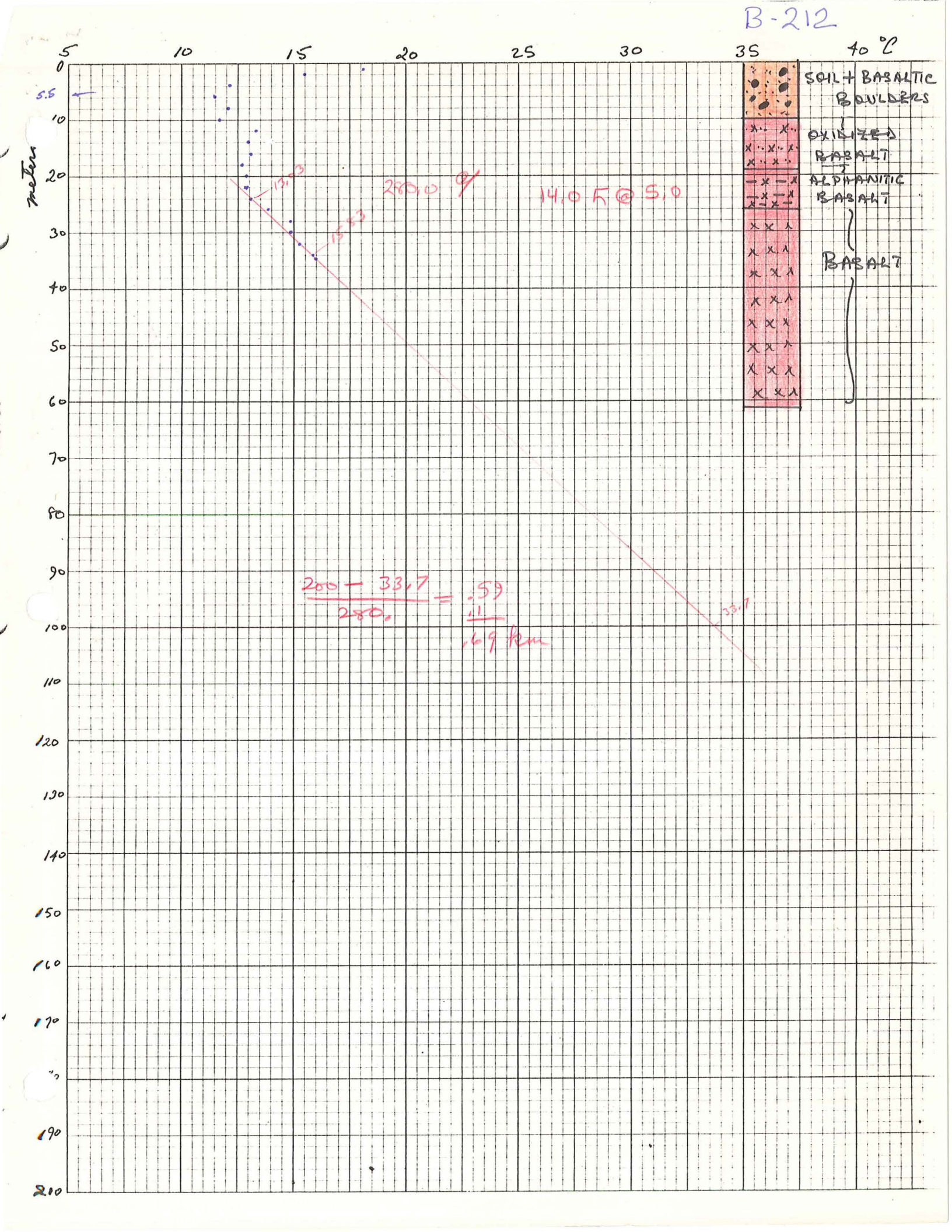
H. Dean Pilkington

H. Dean Pilkington

HDP:mmo

cc: Art Lange
Cheryl Caywood
Mark Alldredge

B-212


5
10
15
20
25
30
35
40 °C
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
180
190
200
210
meters
5.5
13.3
15.3
280.0 @
14.0 F @ 5.0
SOIL + BASALTIC BOULDERS
OXIDIZED BASALT
ALPHANITIC BASALT
BASALT
200 − 33.7 / 280. = .59
33.7
.69 km

TEMPERATURE DEPTH LOG

ΔT Well No. 213

Property-Project Lincoln Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

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
7 7 8	2 1 3	0 9	S P	7 6	C M

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

Site Description	Operator	Editor
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
7.3 KM NORTH OF ADAMSVILLE	DP	MLH

Card B

Scale Unit in cm	Map Size (7.5, 15., 60)	N Lat Degree	N Lat Min	W Long Degree	W Long Min
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
CM	15.	38.	15.	113.	00.

Use decimals

Map Location △

△ 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
12.9 → 12.5	28.45 → 28.5	6320.	F

← Write M if meters

SEGMENT DEPTH

	Start	End	K	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
C	18.0	99.0	-6.0	-.5
D				
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
	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
C	.999			
D				
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location 2 mile SE Cinder Crater Date Sept 9 1976

Map Adamsville Utah 15' Quad

Property Lincoln T 29S R 8W sec NE¼ NW¼ 6

Drill Hole B-213 (SWU-13) Date Drilled Sept 3, 1976 Elevation 6320 ft.

Instrument _____ Operator DB

Comments 3/4 PVC H2O level @ 7.5 m

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
1-7	—	—			air
8.0	6039	11.865			
8.5	6047	11.830			
9.0	6048	11.835			
9.5	6048	—			
10.0	6041	11.850			
10.5	6034	11.885			
11.0	6024	11.925			
11.5	6013	11.970			
12.0	6001	12.020			
12.5	5994	12.045			
13.0	5988	12.070			
13.5	5979	12.110			
14.0	5973	12.130			
14.5	5968	12.155			
15.0	5964	12.170			
15.5	5958	12.195			
16.0	5953	12.215			
16.5	5950	12.225			
17.0	5949	12.230			
17.5	5947	12.240			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T ____ R ____ sec ____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
18.0	5944	12.250			
18.5	5943	12.255	—	—	
19.0	5942	12.260	—	—	
19.5	5940	12.270	—	—	
20.0	5937	12.280	—	—	
22	5929	12.315	.035	17.5	
24	5915	12.370	055	27.5	
26	5916	12.370	—	—	
28	5903	12.420	.050	25.0	
30	5897	12445	025	12.5	
32	5891	12470	.025	12.5	
34	5884	12.500	.030	15.0	
36	5879	12520	.020	10.0	
38	5869	12.565	.045	22.5	
40	5864	12.585	.020	10.0	
42	5856	12620	.035	17.5	
44	5848	12.650	.030	15.0	
46	5842	12.675	.025	12.5	
48	5837	12.700	.025	12.5	
50	5833	12.715	.015	7.5	
52	5825	12.750	.035	17.5	
			.050	25.0	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T _____ R _____ sec _____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
54	5813	12.800			
56	5812	12.805	.005	2.5	
58	5804	12.835	.030	15.0	
60	5797	12.865	.030	15.0	
62	5793	12.885	.020	10.0	
64	5790	12.895	.010	5.0	
66	5782	12.930	.035	17.5	
68	5772	12.975	.045	22.5	
70	5765	13.005	.030	15.0	
72	5757	13.035	.030	15.0	
74	5751	13.065	.030	15.0	
76	5745	13.090	.025	12.5	
78	5739	13.115	.025	12.5	
80	5732	13.145	.030	15.0	
82	5727	13.165	.020	10.0	
84	5721	13.190	.025	12.5	
86	5731	13.225	.035	17.5	
88	5706	13.255	.030	15.0	
90	5701	13.280	.025	12.5	
92	5693	13.315	.035	17.5	
94	5689	13.330	.015	7.5	
			.025	12.5	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

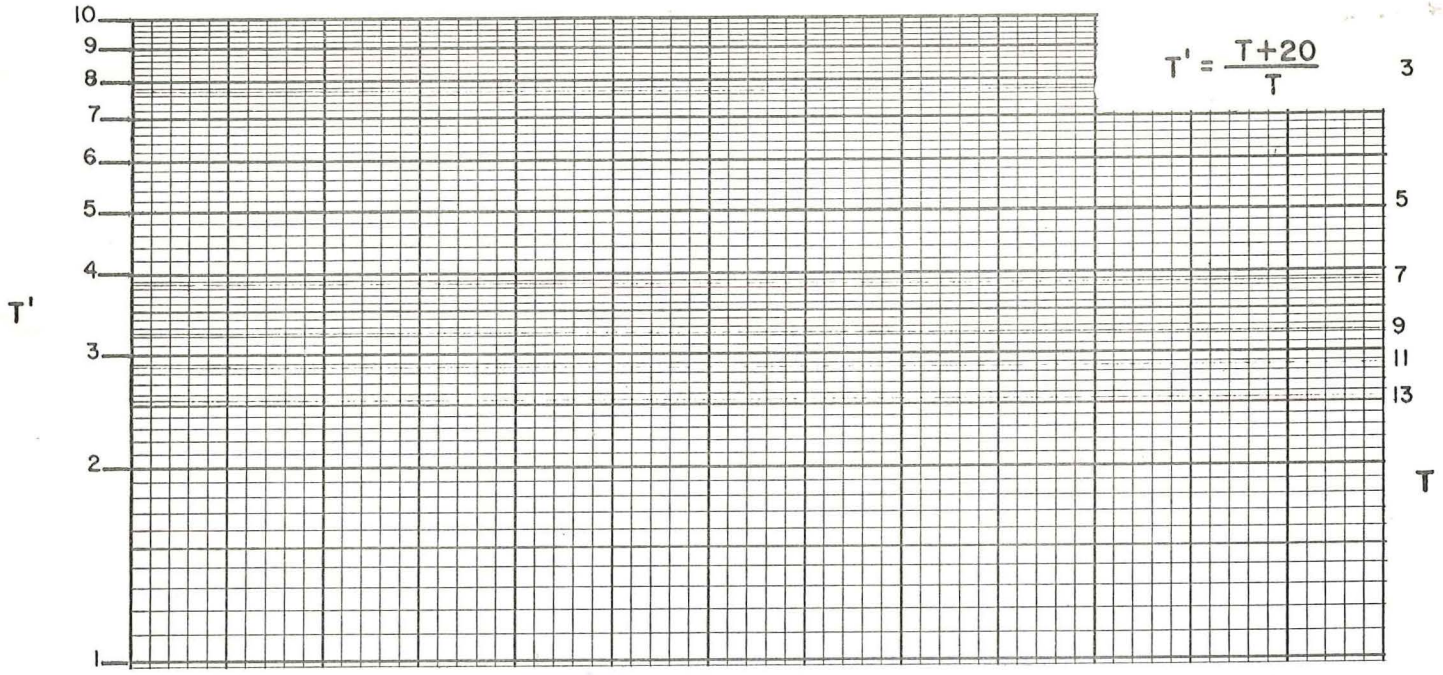
Property _____ T _____ R _____ sec _____

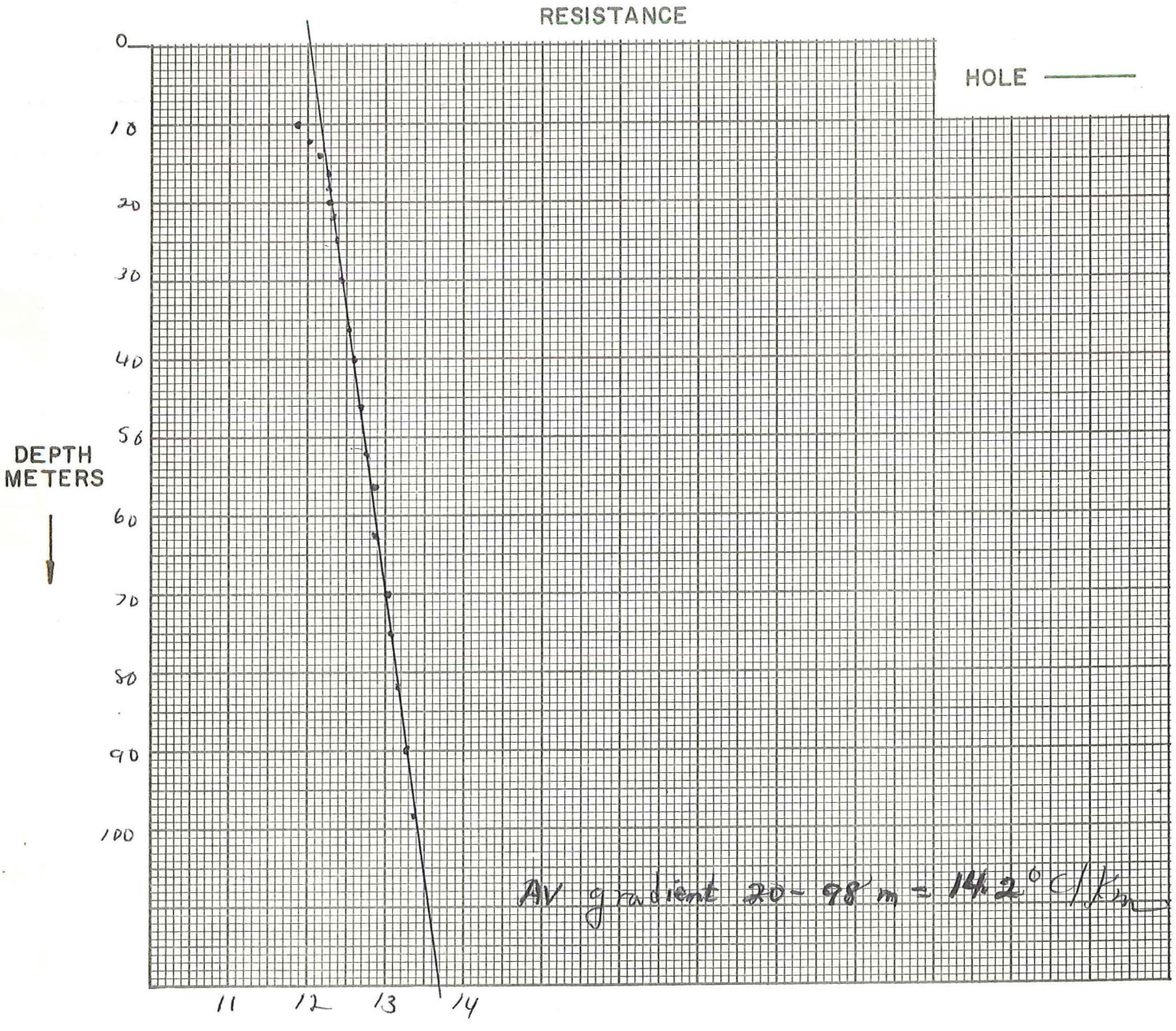
Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
96	5683	13.355	.030	15.0	
98	5676	13.385	.015	7.5	
99	5673	13.401			


$T' = \frac{T+20}{T}$
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13


RESISTANCE
HOLE
DEPTH METERS
0
10
20
30
40
50
60
70
80
90
100
11
12
13
14
TEMPERATURE °C
Av gradient 20 - 98 m = 14.2° C/km

LITHOLOGIC LOG B-213

LINCOLN 778

NE¼ NW¼ Sec 6 T29S R8W Elevation: 6,320'

Depth (m)	Description
0 - 10	Soil and boulders of weathered granite.
10 - 69	Light gray to buff sheared and altered calcareous rocks of the Kiabab Fm.
69 - 99	Medium-gray to reddish-gray sheared and altered limestone.

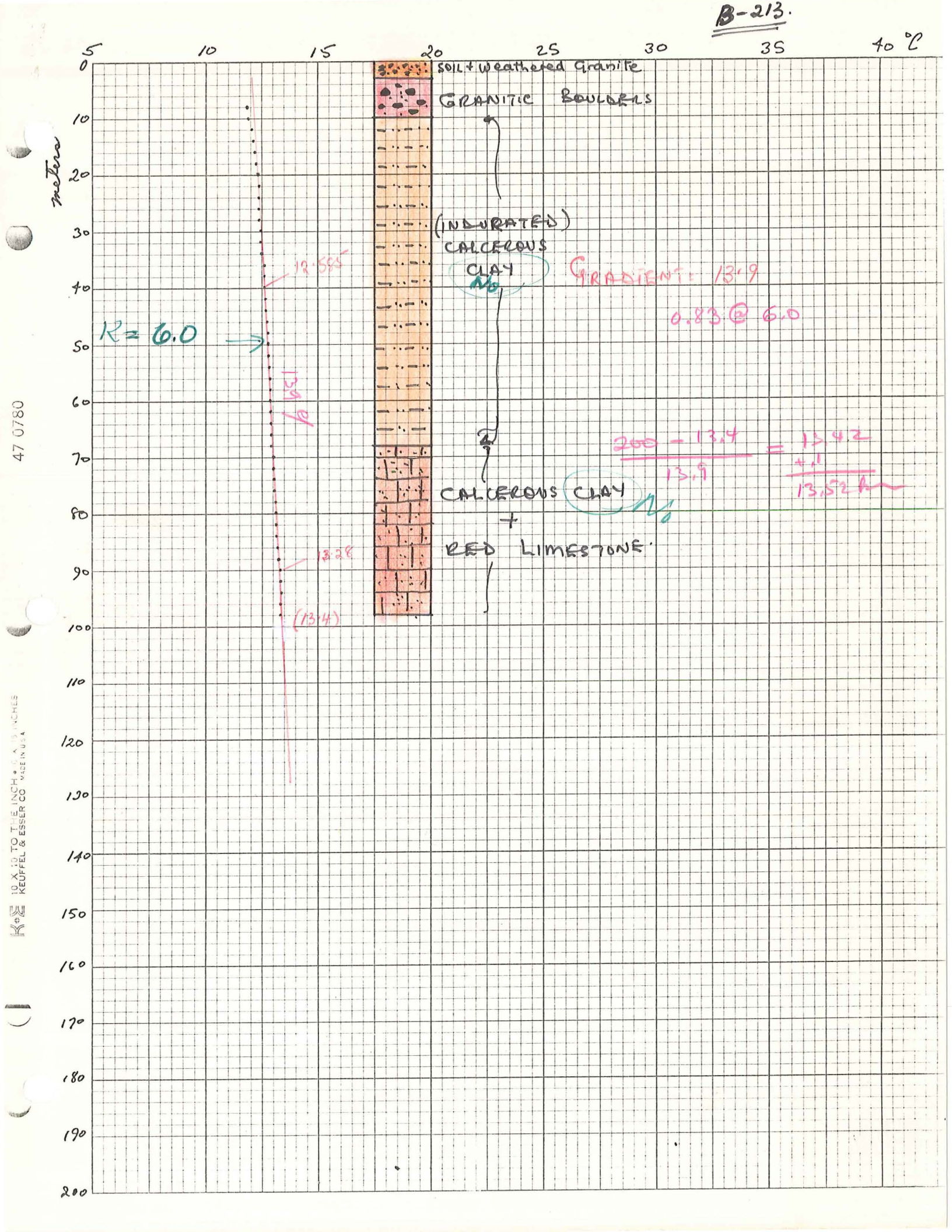
H. Dean Pilkington

H. Dean Pilkington

HDP:mmo

cc: Art Lange
Cheryl Caywood
Mark Alldredge

B-213.



47 0780
10 X 10 TO THE INCH • 6 X 6 INCHES
KEUFFEL & ESSER CO MADE IN USA

TEMPERATURE DEPTH LOG

ΔT Well No. 214

Property-Project Lincoln Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

RT JUSTIFY:

Card A

Proj No →				Well No →						Date Logged DA →		MO →		YR		*
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	7	7	8				2	1	4	0	4		0	C		7	6	C	M

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

| Site Description | | | | | |

TEMPERATURE - DEPTH LOG

Location Pass Road Date October 4, 1976

Map Adamsville Utah 15' Quad

Property Lincoln T 29S R 9W sec SW¼ SW¼ 2

Drill Hole B-214 Date Drilled Sept 21, 1976 Elevation _____ ft.

Instrument old unit Operator DP

Comments 1" iron pipe - drilled by Univ. of Utah took about 3 weeks in granit all the way

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
5	5808				
10	6344	10.665			
15	6395	10.470	.150	30	
20	6355	10.626	.215	43	
25	6299	10.835	.085	17	
30	6277	10.920	.050	10	
35	6264	10.970	.035	7	
40	6273	10.935	—		
45	6273	10.935	.260	52	
50	6207	11.195	.055	11	
55	6221	11.140	.100	20	
60	6246	11.040	.025	5	
65	6240	11.065	.075	15	
70	6221	11.140	.085	17	
75	6201	11.225	.165	35	
80	6157	11.390	.100	20	
85	6132	11.490	.095	19	
90	6109	11.585	.220	44	
95	6053	11.805	.180	36	
100	6009	11.985	.735	147	
105	5832	12.720	.135	27	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

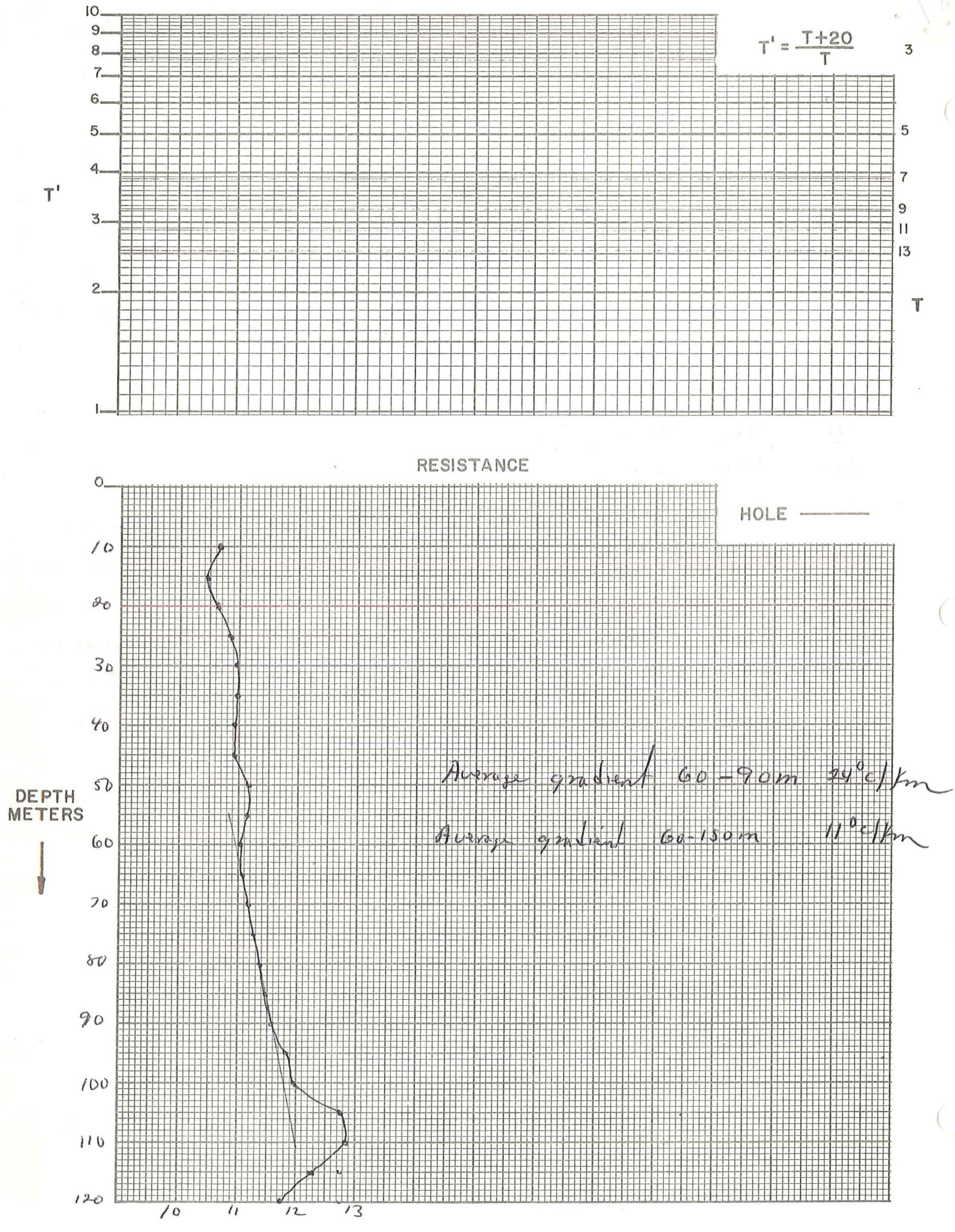
Property _____ T ____ R ____ sec ____

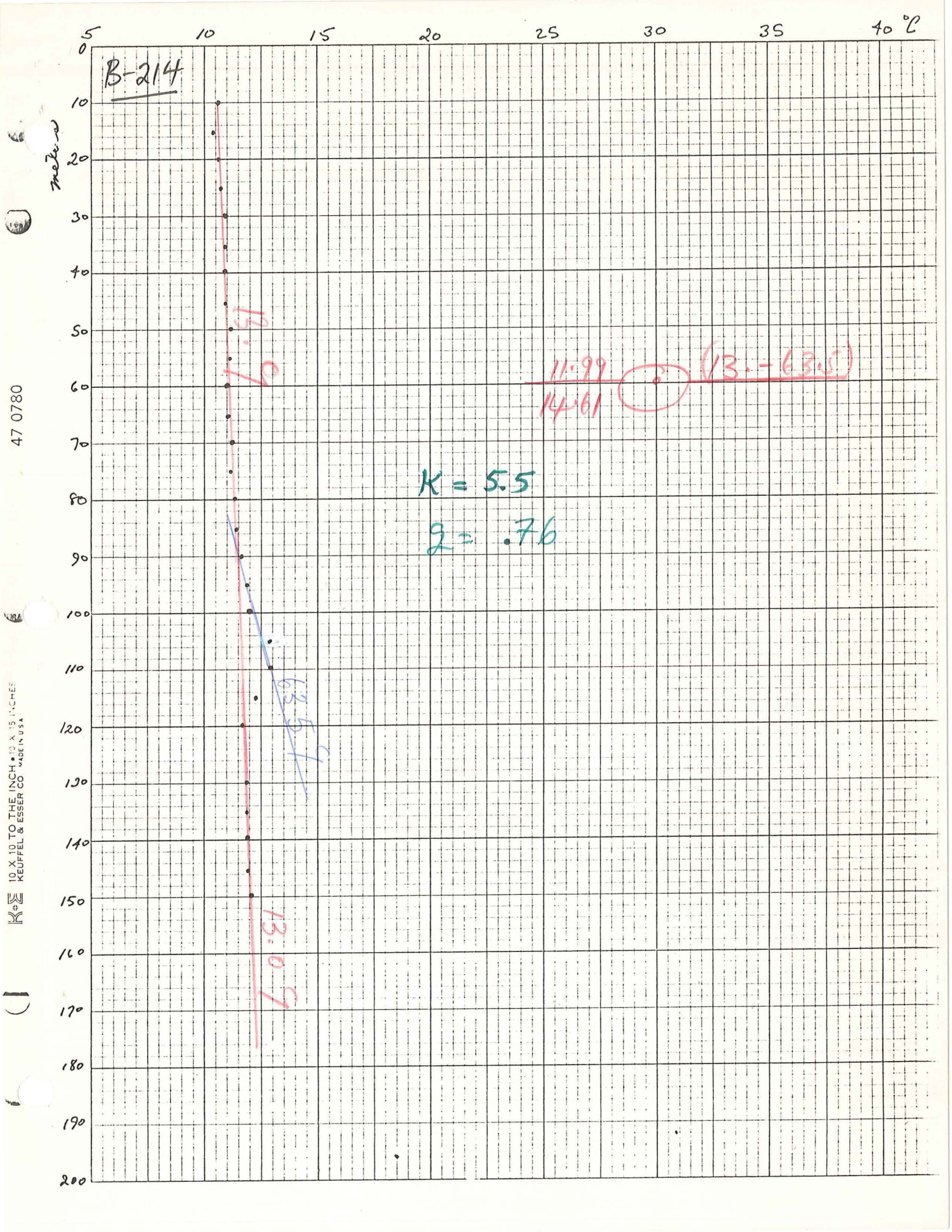
Drill Hole _____ Date Drilled _____ Elevation ____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
110	5800	12.855			
115	5942	12.260	-.595	-119	
120	6064	11.760	-.500	-100	
125	6064	~~11.760~~	—	—	
130	6053	11.810	.050	10	
135	6035	11.880	.070	14	
140	6023	11.930	.050	10	
145	6011	11.975	.045	9	
150	5998	12.030	.055	11	
155					


T' = (T+20)/T
T'
T
RESISTANCE
HOLE
DEPTH METERS
TEMPERATURE °C
Average gradient 60-90m 29°C/km
Average gradient 60-150m 11°C/km


B-214
5
10
15
20
25
30
35
40 °C
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
180
190
200
melting
11.99
14.61
(13. - 63.5)
K = 5.5
Q = .76
47 0780
10 X 10 TO THE INCH • 10 X 15 INCHES
KEUFFEL & ESSER CO MADE IN USA

TEMPERATURE DEPTH LOG

ΔT Well No. 216

Property-Project Lincoln Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →	Well No →	Date Logged DA →	MO →	YR	*
778	216	17	5P	76	CM

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

Site Description	Operator	Editor
7.6 KM NW OF ADAMSVILLE, UTAH	DP	MLH

Card B

Scale Unit in cm	Map Size (7.5, 15.,60)	Map Location Δ N Lat Degree	Min	W Long Degree	Min
CM	15.	38.	15.	113.	00.

Use decimals

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

Northing	Easting	Elev	
5.8	17.6	6720.	F

← Write M if meters

Use decimals

SEGMENT DEPTH

	Start	End	K	ΔK
C	20.0	63.0		
D	70.0	76.0		
E	.999			
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
C	63.0	70.0		
D	80.0	90.0	-5.0	-.5
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location One Mile NE of Lincoln Mine Date Sept 17, 1976

Map Adamsville Utah 15' Quadrangle

Property Lincoln T 29S R 9W sec SE¼ SW¼ 16

Drill Hole B-216 (SW¼-16) Date Drilled Sept 13, 1976 Elevation 6720 ft.

Instrument old unit Operator DJ

Comments

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
0.5	5067	16.210			
			.060		
1.0	5075	16.270			
			.485		
1.5	5155	15.785			
			.170		
2.0	5190	15.615			
			.515		
2.5	5298	15.100			
			.245		
3.0	5350	14.855			
			.280		
3.5	5410	14.575			
			.325		
4.0	5482	14.250			
			.395		
4.5	5570	13.855			
			.185		
5.0	5610	13.670			
			.390		
5.5	5701	13.280			
			.340		
6.0	5780	12.940			
			.340		
6.5	5860	12.600			
			.325		
7.0	5938	12.275			
			.275		
7.5	6005	12.000			
			.175		
8.0	6049	11.825			
			.105		
8.5	6074	11.720			
			.095		
9.0	6100	11.625			
			.125		
9.5	6130	11.500			
			.230		
10.0	6187	11.270			
			.630		
10.5	6350	10.640			
			.080		

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T _____ R _____ sec _____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
11.0	6370	10.560	.145		
11.5	6410	10.415	.115		
12.0	6440	10.300	.090		
12.5	6464	10.210	.070		
13.0	6483	10.140	.060		
13.5	6509	10.040	.040		
14.0	6520	10.000	.005		
14.5	6522	9.995	.010		
15.0	6525	9.985	.030		
15.5	6530	9.965	.010		
16.0	6533	9.955	.015		
16.5	6529	9.970	.015		
17.0	6525	9.985	.025		
17.5	6518	10.010	.010		
18.0	6515	10.020	.020		
18.5	6509	10.040	.015		
19.0	6503	10.065	.065		
19.5	6486	10.130	.030		
20.0	6476	10.160	.075	37.5	
22.0	6457	10.235	.040	20.0	
24.0	6446	10.275	.105	52.5	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T _____ R _____ sec _____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
26	6416	10.390			
			.045	22.5	
28	6404	10.435			
			.075	37.5	
30	6383	10.510			
			.050	40	
32	6363	10.590			
			090	45	
34	6340	10.680			
			.135	67.5	
36	6304	10.815			
			.090	45	
38	6281	10.905			
			030	15	
40	6273	10.935			
			.140	70	
42	6237	11.075			
			.105	52.5	
44	6209	11.180			
			.050	25	
46	6196	11.230			
			.155	77.5	
48	6159	11.385			
			.040	20	
50	6148	11.425			
			.100	50	
52	6123	11.525			
			.040	20	
54	6113	11.565			
			.105	52.5	
56	6087	11.670			
			.070	35	
58	6069	11.746			
			.050	25	
60	6057	11.790			
			.040	20	
62	6047	11.830			
			.080	40	
64	6027	11.910			
			.035	17.5	
66	6019	11.945			
			.045	22.5	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T ____ R ____ sec _____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
68	6005	11.990			
70	5997	12.035	.045	22.5	
72	5968	12.155	.120	60	
74	5953	12.215	.060	30	
76	5940	12.270	.055	27.5	
78	5952	12.220	-.050	-25	
80	5952	12.220	—	—	
82	5917	12.365	.145	72.5	
84	5992	12.445	.080	40	
86	5986	12.490	.045	22.5	
88	5950	12.515	.025	12.5	
90	5837	12.700	.185	92.5	
9999.					

TEMPERATURE - DEPTH LOG

Location One Mile NE of Lincoln Mine Date Sept 17, 1976

Map Adamsville Utah 15' Quadrangle

Property Lincoln T 29 S R 9 W sec SE¼ SW¼ 16

Drill Hole B-216 (SWM-16) Date Drilled Sept 13, 1976 Elevation 6720 ft.

Instrument old unit Operator RP

Comments

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
0.5	5067	16.210			
			.060		
1.0	5055	16.270			
			-.485		
1.5	5155	15.785			
			-.170		
2.0	5190	15.615			
			-.515		
2.5	5298	15.100			
			-.245		
3.0	5350	14.855			
			-.280		
3.5	5410	14.575			
			-.325		
4.0	5482	14.250			
			-.395		
4.5	5570	13.855			
			-.185		
5.0	5610	13.670			
			-.390		
5.5	5701	13.280			
			-.340		
6.0	5780	12.940			
			-.340		
6.5	5860	12.600			
			-.325		
7.0	5938	12.275			
			-.275		
7.5	6005	12.000			
			-.175		
8.0	6049	11.825			
			-.105		
8.5	6074	11.720			
			-.095		
9.0	6100	11.625			
			-.125		
9.5	6130	11.500			
			-.230		
10.0	6188	11.270			
			-.630		
10.5	6350	10.640			
			-.080		

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T _____ R _____ sec _____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
11.0	6370	10.560	-.145	~~.145~~	
11.5	6410	10.415	~~10.560~~ -.115	~~.115~~	
12.0	6440	10.300	~~10.415~~ -.090	~~.090~~	
12.5	6464	10.210	~~10.300~~ -.070	~~.070~~	
13.0	6483	10.140	~~10.210~~ -.100	~~.100~~	
13.5	6509	10.040	~~10.140~~ -.040		
14.0	6520	10.000	~~10.040~~ -.005		
14.5	6522	9.995	~~10.000~~ -.010		
15.0	6525	9.985	-.030		
15.5	6530	9.965	-.010		
16.0	6533	9.955	.015		
16.5	6529	9.970	.015		
17.0	6525	9.985	.025		
17.5	6518	10.010	.010		
18.0	6515	10.020	.020		
18.5	6509	10.040	.015		
19.0	6503	10.065	.065		
19.5	6486	10.130	.030		
20.0	6470	10.160	.075	37.5	
22.0	6457	10.235	.040	20.0	
24.0	6446	10.275	.115	57.5	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T _____ R _____ sec _____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
26	6416	10.390			
28	6404	10.435	.045	22.5	
30	6383	10.510	.075	37.5	
32	6363	10.590	.080	40	
34	6340	10.680	.090	45	
36	6304	10.815	.135	67.5	
38	6281	10.905	.090	45	
40	6273	10.935	.030	15	
42	6237	11.075	.140	70	
44	6209	11.180	.105	52.5	
46	6196	11.230	.050	25	
48	6159	11.385	.155	77.5	
50	6148	11.425	.040	20	
52	6123	11.525	.100	50	
54	6113	11.565	.040	20	
56	6087	11.670	.105	52.5	
58	6069	11.740	.070	35	
60	6057	11.790	.050	25	
62	6047	11.830	.040	20	
64	6027	11.910	.080	40	
66	6019	11.945	.035	175	
			.045	22.5	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

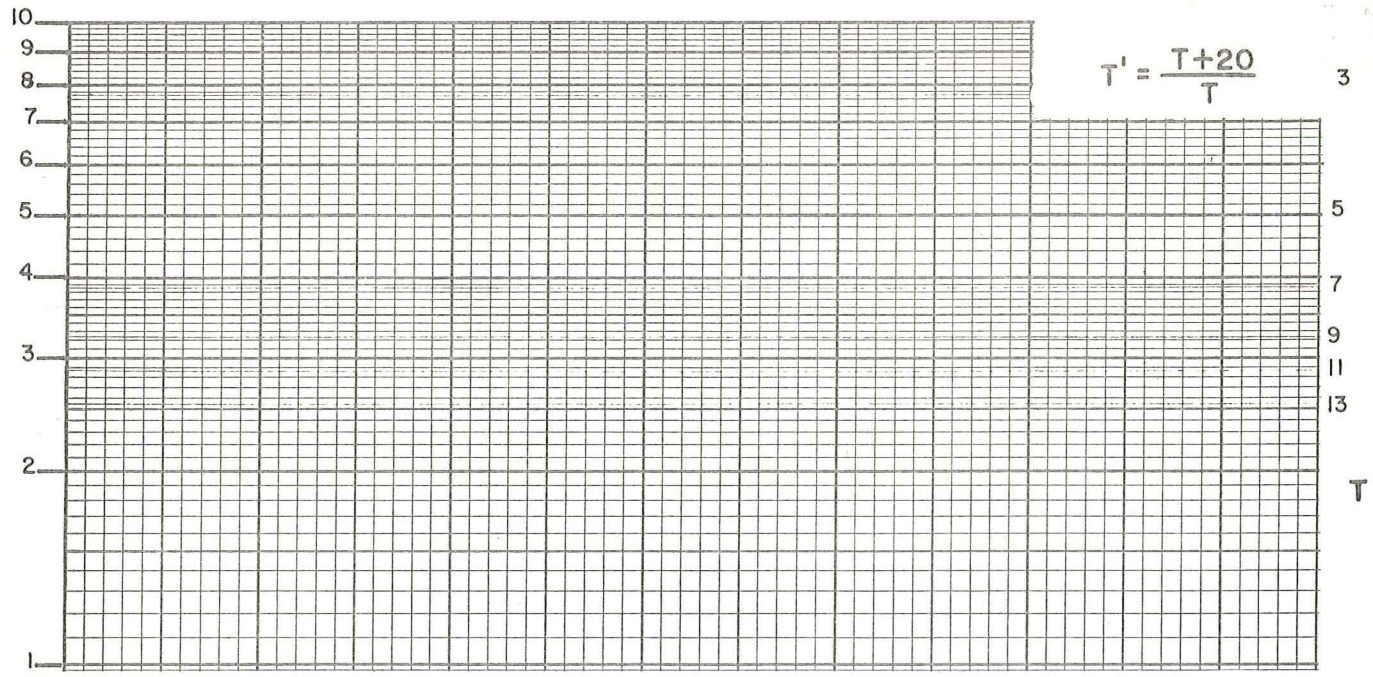
Property _____ T _____ R _____ sec _____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

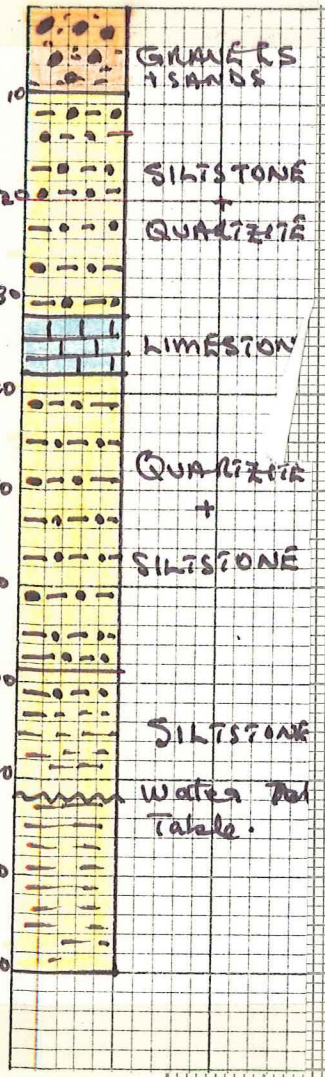
Comments _____

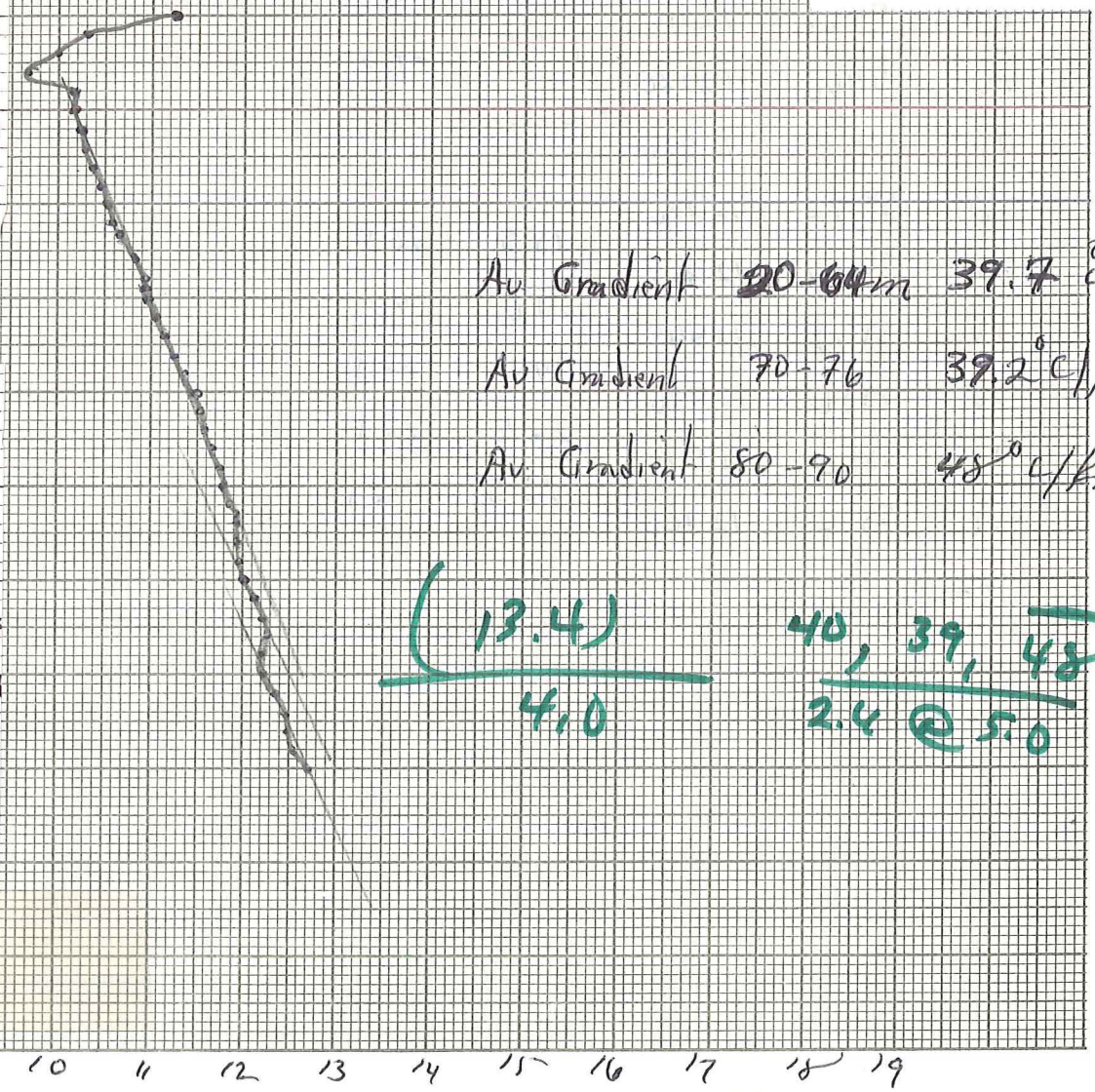
Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
68	6008	11.990			
70	5997	12.035	045	22.5	
72	5968	12.155	.120	60	
74	5953	12215	060	30	
76	5940	12270	055	27.5	
78	5952	12.220	-.050	-25	
80	5952	12.220	—	—	
82	5917	12.365	.145	72.5	
84	5897	12.445	080	40	
86	5886	12.490	045	22.5	
88	5880	12.515	025	12.5	
90	5837	12.700	.185	92.5	
92					



RESISTANCE

HOLE 216





Av Gradient 20-64m 39.7 °C/km

Av Gradient 70-76 39.2 °C/km

Av Gradient 80-90 48 °C/km

(13.4) / 4.0

40, 39, 48 / 2.4 @ 5.0

9 10 11 12 13 14 15 16 17 18 19

TEMPERATURE °C →

Lithologic Log B-216 (SWU-16)

SE¼ SW¼ Sec 16 T29S R9W — Elevation: 6720 Feet

Depth (M)	Description
0 - 9.3	Valley fill. Red to red-brown gravels and sands plus road fill.
9.3 - 20.1	Alternating layers of red-brown siltstone, gray-green siltstones and gray-green quartzite. Strongly fractured - Making about 5-6 gpm of water. Moenkopi formation.
20.1 - 32.4	Black to dark gray siltstones.
32.4 - 38.6	Alternating layers of gray, fine-grained, dense limestone and black, fine-grained limestone.
38.6 - 66.4	Gray quartzite with considerable pyrite disseminated throughout.
66.4 - 69.4	Alternating layers of gray-green quartzite and red-brown siltstones.
69.4 - 91.0	Red-brown siltstones; at 82 meters hit fracture zone with water flowing in at 10-12 gpm.

H. D. Pilkington

mo

cc: Art Lange

TEMPERATURE DEPTH LOG

ΔT Well No. 217

Property-Project Lincoln Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →	Well No →	Date Logged DA →	MO →	YR	*
1 2 3 4	5 6 7 8 9 10	11 12	13 14 15	16 17 18	19 20
7 7 8	2 1 7	1 4	S E P	7 6	C M

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

Site Description	Operator	Editor
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
1 . 6 K M W E S T O F B R A D S H A W M T N	D P	M L H

Card B

Scale Unit in cm	Map Size (7.5, 15.,60)	Map Location Δ N Lat Degree	Min	W Long Degree	Min
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
C M	1 5 .	3 8 .	1 5 .	1 1 3 .	0 0 .

Use decimals

Δ 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
9 . 0	1 0 . 2 5	6 1 6 0 .	F

← Write M if meters

Use decimals

SEGMENT DEPTH

	Start	End	K	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
C	1 6 . 0	6 8 . 0		
D	. 9 9 9			
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
	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
C	6 8 . 0	9 8 . 0	- 6 . 0	- . 5
D				
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location ¼ mile NW Cave Mine Date Sept 14, 1976

Map Adamsville Utah 15' Quadrangle

Property Lincoln T 29 S R 10 W sec NE¼ SW¼ 12

Drill Hole B-217 (SWU-17) Date Drilled Sept 10, 1976 Elevation 6160 ft.

Instrument old Operator DP

Comments

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
0.5	4334	20.205			
1.0	4273	20.570			
1.5	4275	20.560			
2.0	4436	19.605			
2.5	4586	18.750			
3.0	4764	17.775			
3.5	4945	16.830			
4.0	5112	15.995			
4.5	5229	15.425			
5.0	5359	14.815			
5.5	5454	14.375			
6.0	5538	13.995			
6.5	5616	13.650			
7.0	5681	13.365			
7.5	5725	13.175			
8.0	5759	13.030			
8.5	5779	12.945			
9.0	5789	12.900			
9.5	5795	12.875			
10.0	5795	12.875			
10.5	5792	12.890			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T ____ R ____ sec ____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
11.0	5786	12.915			
11.5	5779	12.945	—	—	
12.0	5769	12.985	.040	20	
12.5	5761	13.025	.040	20	
13.0	5753	13.055	.030	15	
13.5	5746	13.085	.030	15	
14.0	5740	13.110	.025	12.5	
14.5	5735	13.130	.020	10	
15.0	5731	13.155	.025	12.5	
15.5	5727	13.165	.010	5	
16.0	5722	13.190	.025	12.5	
16.5	5719	13.200	.010	5	
17.0	5715	13.220	.020	10	
17.5	5713	13.225	.005	2.5	
18.0	5710	13.240	.015	7.5	
18.5	5709	13.245	.005	2.5	
19.0	5709	13.245	—	—	
19.5	5707	13.250	.005	2.5	
20.0	5706	13.255	.005	2.5	
22	5703	13.270	.015	7.5	
24	5702	13.275	.005	2.5	
			.010	5	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T _____ R _____ sec _____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
26	5699	13285			
28	5695	13,305	.020	10	
30	5688	13335	.025	12.5	
32	5686	13,345	.010	5	
34	5682	13,360	.015	7.5	
36	5676	13,385	.025	12.5	
38	5672	13,405	.020	10	
40	5667	13,425	.020	10	
42	5662	13,450	.025	12.5	
44	5656	13,475	.025	12.5	
46	5651	13,495	.020	10	
48	5646	13,520	.025	12.5	
50	5641	13,540	.020	10	
52	5637	13,565	.020	10	
54	5632	13,580	.015	7.5	
56	5630	13,590	.010	5	
58	5627	13,600	.010	5	
60	5626	13,605	.005	2.5	
62	5625	13,610	005	2.5	
64	5622	13625	.015	7.5	
66	5618	13,640	.015	7.5	
			.030	15	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

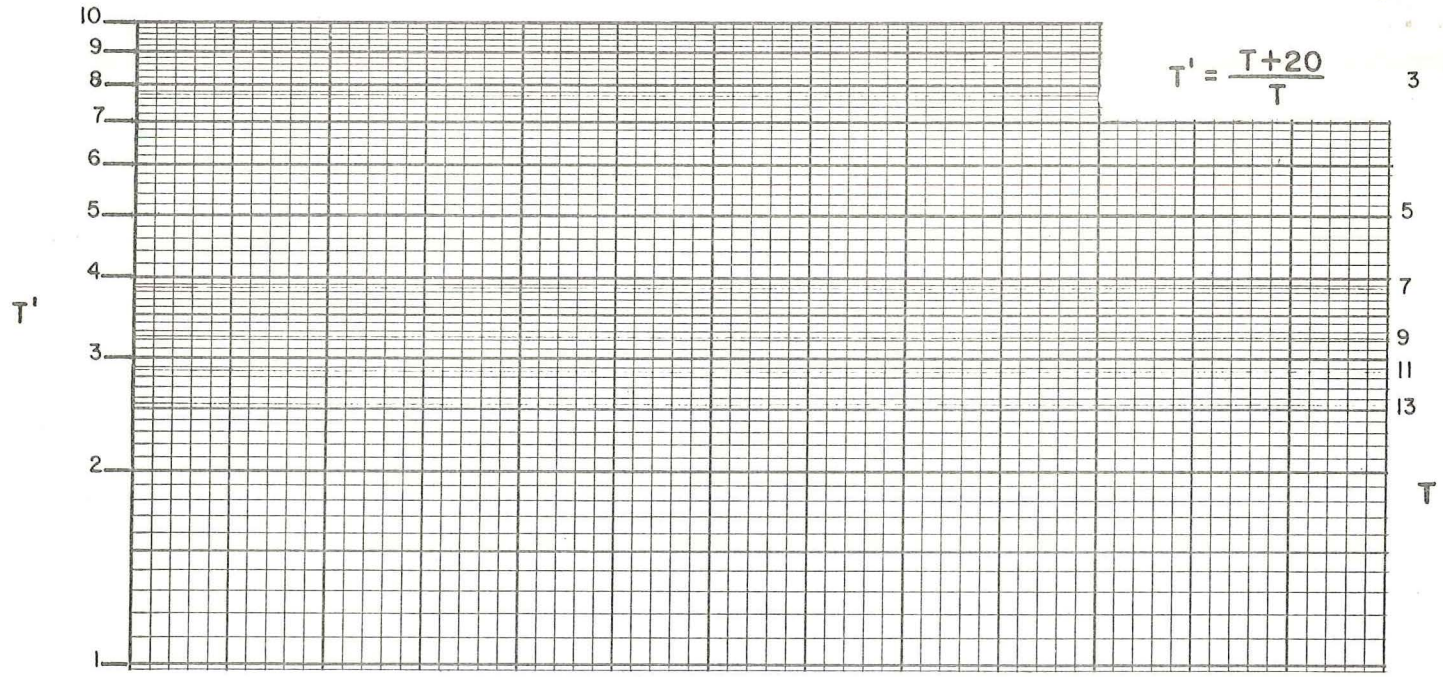
Property _____ T _____ R _____ sec _____

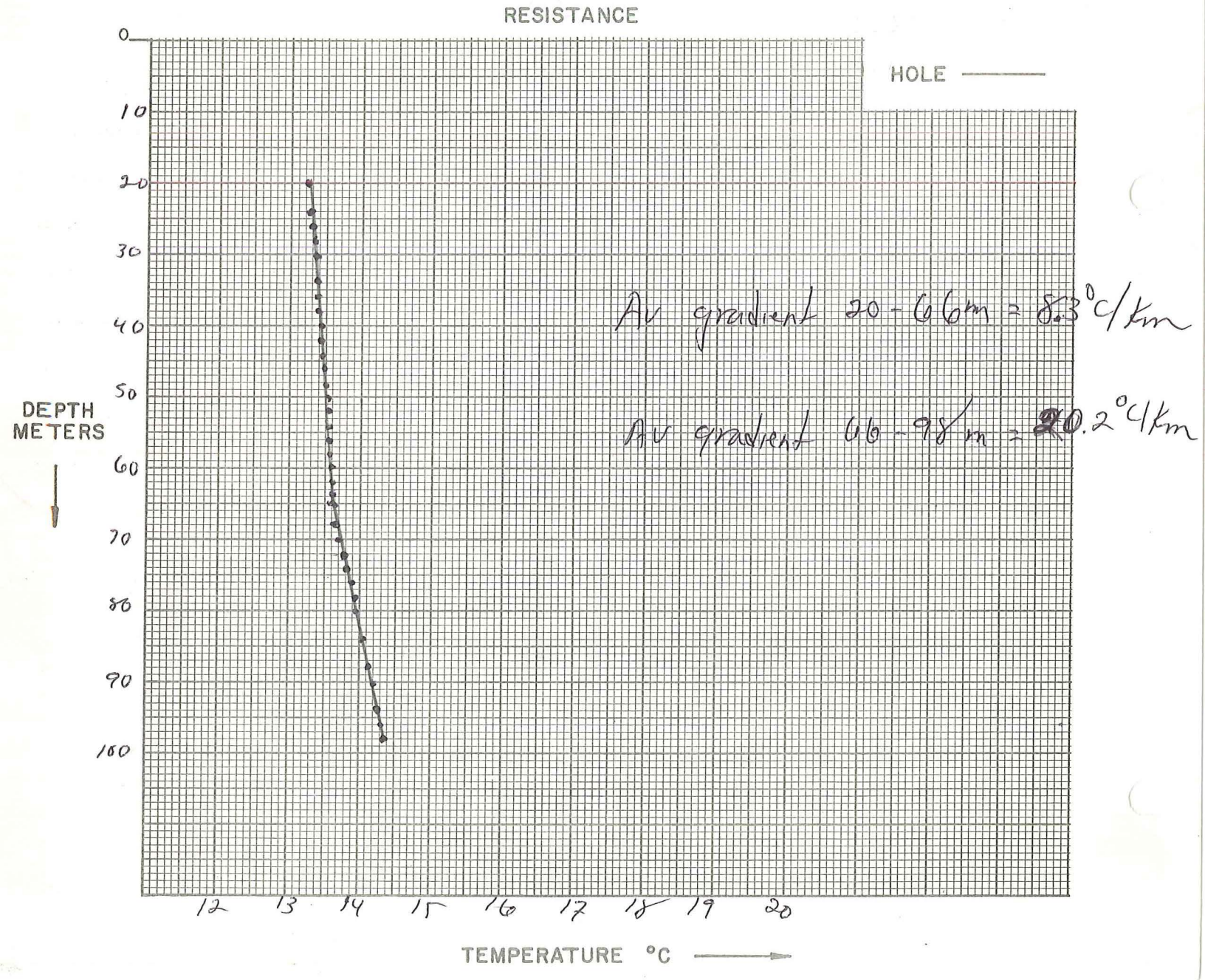
Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
68	5611	13.670			
70	5605	13.700	.030	15	
72	5587	13.780	.080	40	
74	5575	13.830	.050	25	
76	5559	13.900	.070	35	
78	5547	13.955	.055	27.5	
80	5538	13.995	.040	20	
82	5530	14.030	.035	17.5	
84	5521	14.070	.040	20	
86	5511	14.115	.045	22.5	
88	5502	14.160	.045	22.5	
90	5492	14.205	.045	22.5	
92	5482	14.250	045	22.5	
94	5474	14.285	.035	17.5	
96	5467	14.315	.030	15	
98	5459	14355	.040	20	


T' = T+20 / T
T'
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13
T


RESISTANCE
HOLE
DEPTH METERS
0
10
20
30
40
50
60
70
80
90
100
12
13
14
15
16
17
18
19
20
TEMPERATURE °C
Av gradient 20 - 66m = 8.3°C/km
Av gradient 66 - 98m = 20.2°C/km

Lithologic Log B-217 (SWU-17)

NE¼ SW¼ Sec 12 T29S R10W — Elevation: 6160 feet

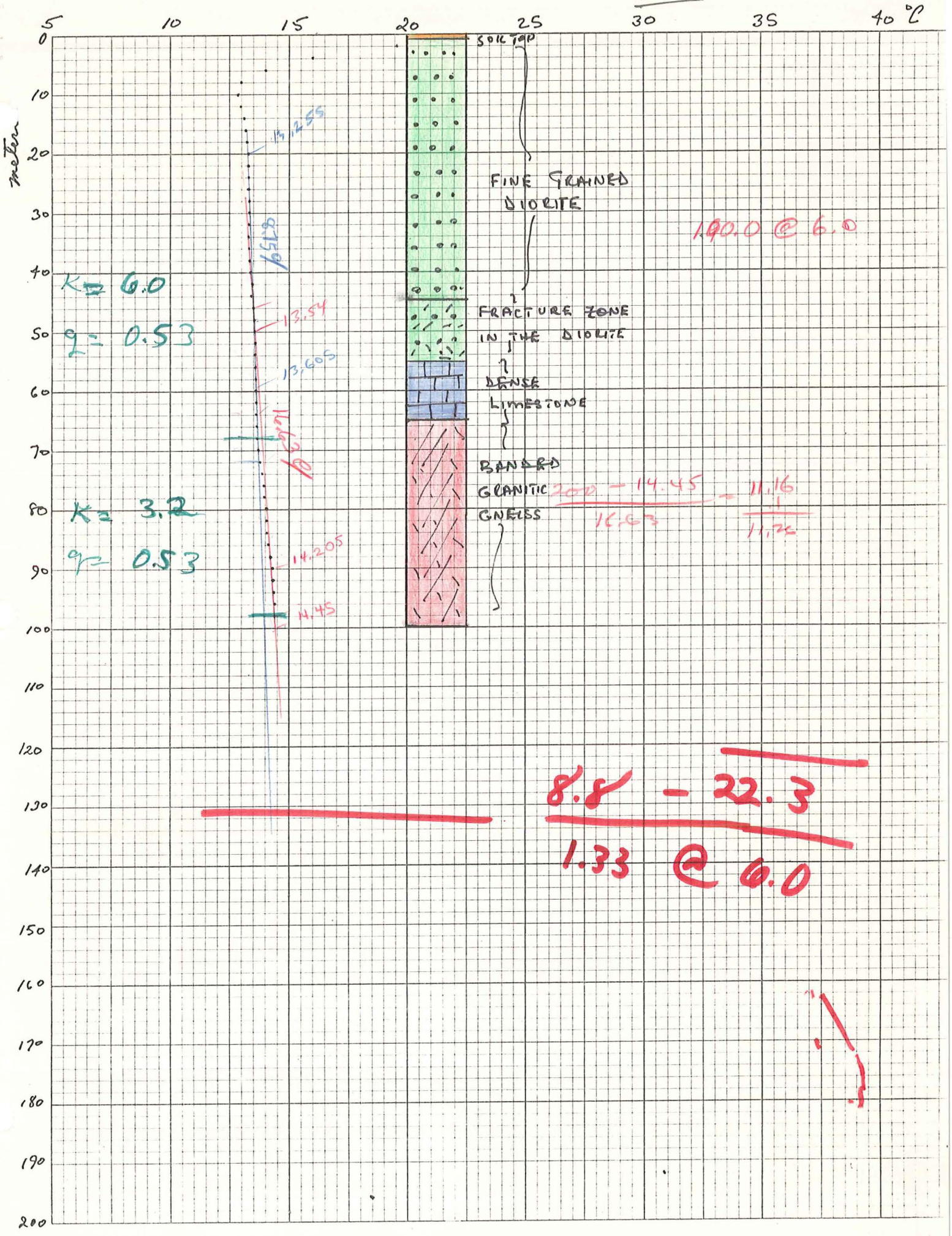
Depth (M)	Description
0 - 1	Soil and road fill.
1 - 45	Medium gray, fine-grained diorite. Plagioclase and hornblende the dominant minerals. Some iron stain.
45 - 46.5	Fracture Zone in the diorite with small quantity of water (made cuttings damp).
46.5 - 55.5	Medium gray, fresh, fine-grained diorite.
55.5 - 62	White, fine-grained dense limestone - a little water at contact with the diorite.
62 - 65	Gray, fine-grained dense limestone.
65 - 99	Banded gray, green, purple-green, fine-grained, granitic gneiss. The dominant minerals are plagioclase, chlorite and quartz.

H. D. Pilkington

mo

cc: Art Lange

B-217



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TEMPERATURE DEPTH LOG

ΔT Well No. 218

Property-Project Lincoln Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →				Well No →						Date Logged DA →		MO →		YR		*	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	7	7	8				2	1	8	1	5		S	P		7	6	C	M

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

Site Description																																									Operator		Editor								
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											
3	.	8		K	M		S	S	W		O	F		B	R	A	D	S	H	A	W	,		M	T	N							D	P	/	H	L	H											

Card B

Map Location △

Scale Unit in cm					Map Size (7.5, 15.,60)					N Lat Degree					Min					W Long Degree					Min					
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	
C	M					1	5	.			3	8	.			1	5	.			1	1	3	.			0	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	
						2	.	8	5						1	0	.	1	5	5	6	8	0	.					F	

Use decimals

← Write M if meters

SEGMENT DEPTH

	Start										End										K					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					
C	2	0	.	0							9	8	.	0							-	4	.	5		-	.	5							
D																																			
E																																			
F																																			
G																																			

Continue each card below.

SEGMENT DEPTH

	Start										End										K					ΔK									
	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					
C	.	9	9	9																															
D																																			
E																																			
F																																			
G																																			

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location 2 miles WSW Lincoln Mine Date September 15, 1976

Map Adamsville, Utah 15' Quad

Property Lincoln T 29 S R 10 W sec SE¼ SW¼ 24

Drill Hole B-218 (SW4-18) Date Drilled _____ Elevation 5680 ft.

Instrument old unit Operator DP

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
0.5	4198	21.030			
1.0	4260	20.650			
1.5	4384	19.905			
2.0	4627	18.520			
2.5	4794	17.615			
3.0	5022	16.447			
3.5	5153	15.795			
4.0	5328	14.960			
4.5	5428	14.495			
5.0	5518	14.085			
5.5	5563	13.885			
6.0	5612	13.665			
6.5	5634	13.570			
7.0	5649	13.505			
7.5	5651	13.495			
8.0	5644	13.525			
8.5	5633	13.575			
9.0	5615	13.655			
9.5	5604	13.700			
10.0	5588	13.775			
10.5	5576	13.825			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T ____ R ____ sec ____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
11.0	5559	13.900			
11.5	5550	13,946			
12.0	5538	13,995			
12.5	5530	14.030			
13.0	5520	14.075			
13.5	5513	14.110			
14.0	5505	14,145			
14.5	5500	14.165			
15.0	5493	14.200			
15.5	5488	14.220			
16.0	5481	14.255			
16.5	5475	14.280			
17.0	5469	14.305			
17.5	5464	14.330			
18.0	5457	14.360			
18.5	5452	14.385			
19.0	5446	14.410			
19.5	5441	14.430			
20.0	5435	14.460			
22	5409	14.580	.120	60	
24	5386	14.690	.110	55	
			.105	52.5	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T _____ R _____ sec _____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
26	5363	14795			
			.085	42.5	
28	5345	14.880			
			.080	40.0	
30	5328	14960			
			.085	42.5	
32	5309	15.045			
			.090	45	
34	5290	15135			
			.070	35	
36	5276	15205			
			.050	25	
38	5265	15.255			
			.055	27.5	
40	5253	15310			
			.060	30	
42	5241	15370			
			.075	37.5	
44	5225	15445			
			.075	37.5	
46	5210	15.520			
			.090	45	
48	5191	15610			
			.075	37.5	
50	5175	15685			
			.090	45	
52	5157	15775			
			.075	37.5	
54	5141	15.850			
			.065	32.5	
56	5128	15.915			
			.080	40	
58	5112	15.995			
			.075	37.5	
60	5097	16070			
			.070	35	
62	5083	16.140			
			.055	27.5	
64	5071	16.195			
			.055	27.5	
66	5060	16.250			
			.065	32.5	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

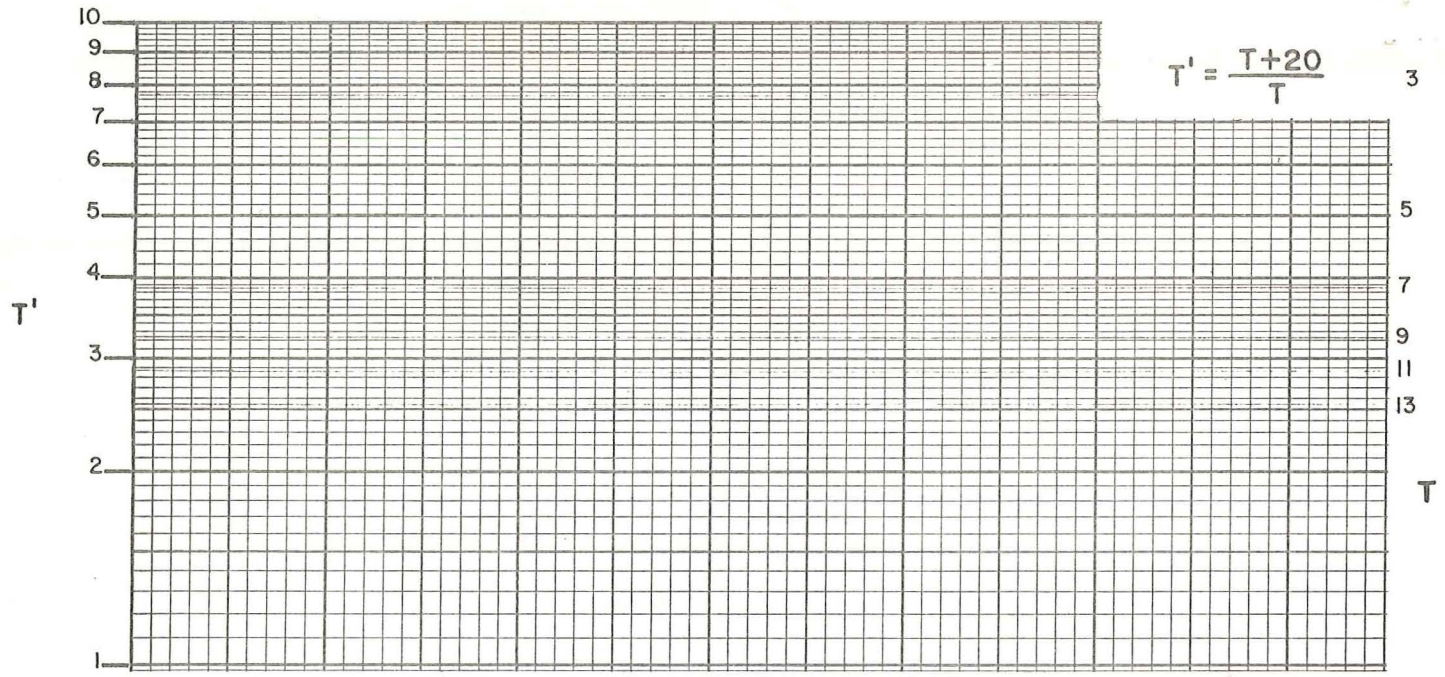
Property _____ T _____ R _____ sec _____

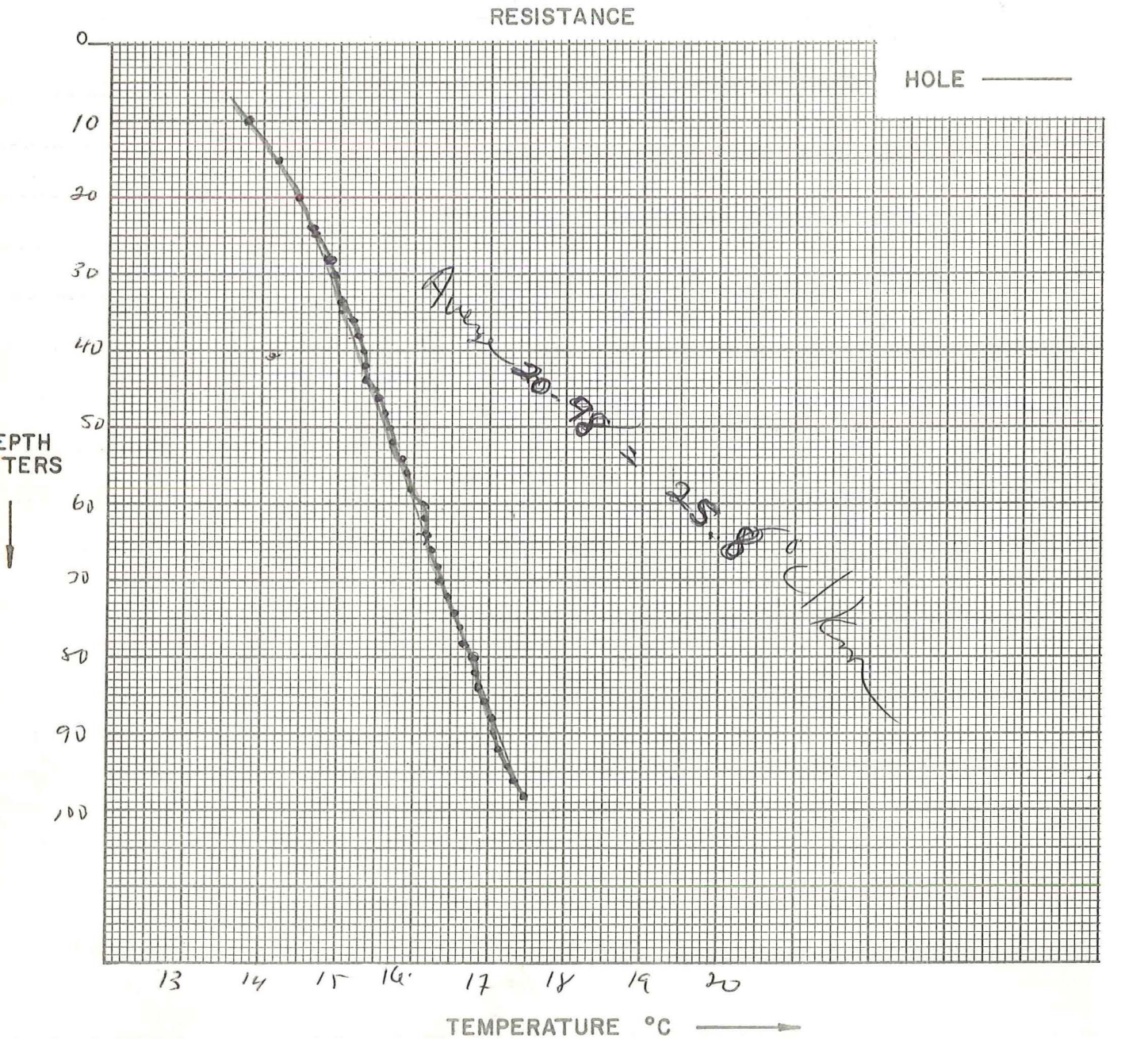
Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
68	5047	16.315			
70	5031	16.395	.080	40	
72	5017	16.465	.070	35	
74	5004	16.530	.065	32.5	
76	4988	16.615	.085	42.5	
78	4976	16.675	.060	30	
80	4963	16.740	.065	32.5	
82	4949	16.810	.070	35	
84	4935	16.885	.075	37.5	
86	4921	16.955	.070	35	
88	4907	17.025	.070	35	
90	4893	17.100	.075	37.5	
92	4878	17.175	.075	37.5	
94	4864	17.250	.075	37.5	
96	4849	17.330	.080	40	
98	4834	17.405	.075	37.5	


T' = (T+20)/T
T'
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13
T


RESISTANCE
HOLE
DEPTH METERS
0
10
20
30
40
50
60
70
80
90
100
13
14
15
16
17
18
19
20
TEMPERATURE °C

Lithologic Log B-218 (SWU-18)

SE¼ SW¼ Sec 24 T29S R10W — Elevation: 5680 feet

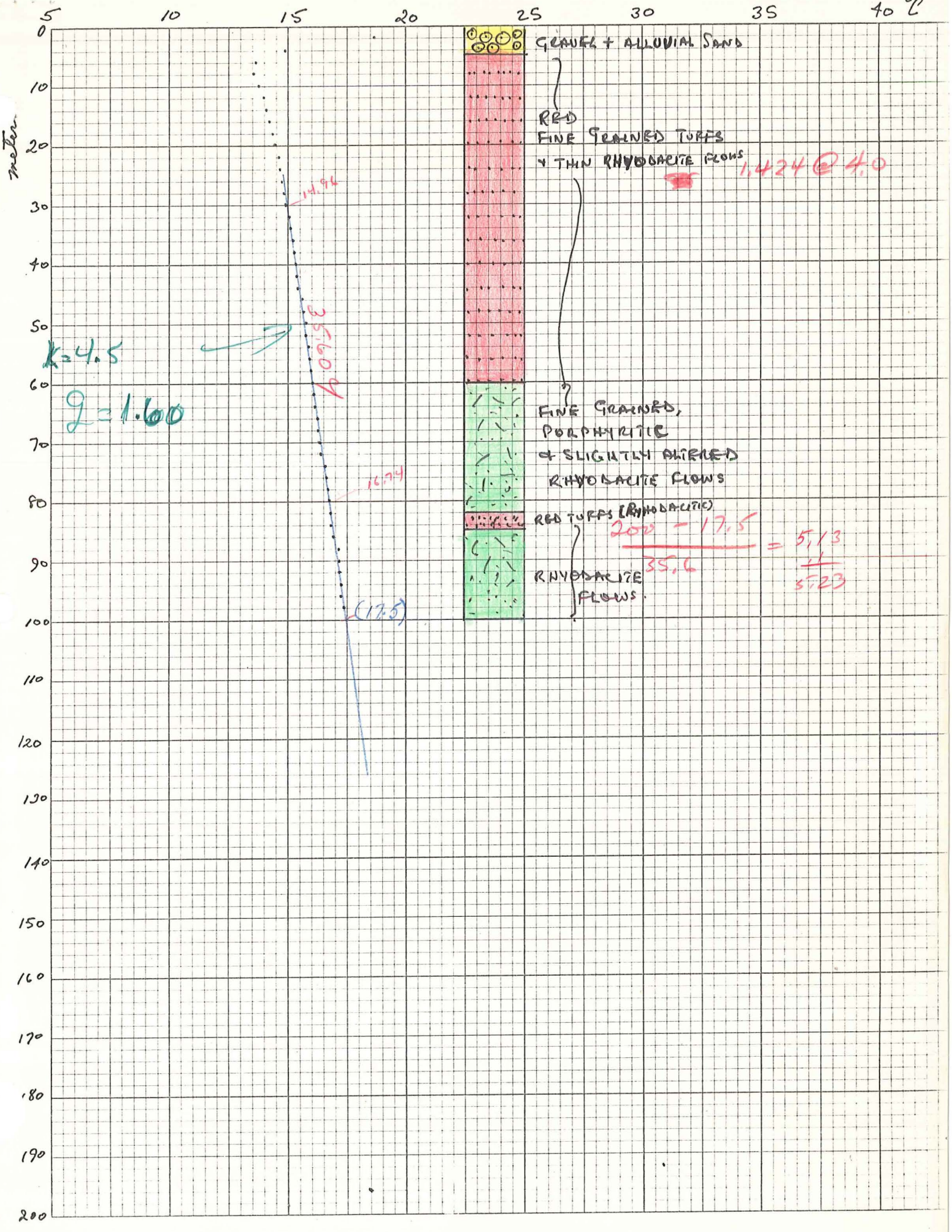
Depth (M)	Description
0 - 4.5	Valley fill - recent sand and gravel of alluvial fan.
4.5 - 8	Red-brown, fine-grained tuffs and thin flows of rhyodacitic composition.
8 - 9	Gray, clayey, altered tuff.
9 - 23	Yellow-brown to light red-brown tuffs of probable water laid origin.
23 - 26	Gray to gray-green tuff, altered to montmorillonite and weakly pyritized.
26 - 32	Alternating yellow-brown to red-brown tuffs and thin rhyodacite flows.
32 - 37	Gray to gray-green, altered and moderately pyritized tuff.
37 - 42	Alternating red-brown tuff and rhyodacite flows.
42 - 48	Gray to gray-green, altered and weakly mineralized (pyrite) tuff.
48 - 60	Red-brown to yellow-brown tuffs.
60 - 75	Gray, reddish-gray to green rhyodacite flows.
75 - 76	Dark gray to black, fine-grained porphyritic dacite.
76 - 82	Gray-green, slightly altered dacite flow.
82 - 85	Red tuff.
85 - 99	Gray-green, slightly altered rhyodacite flow.

H. D. Pilkington

mo

cc: Art Lange

B-218



47 0780

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TEMPERATURE DEPTH LOG

ΔT Well No. 220

Property-Project Lincoln Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →	Well No →	Date Logged DA →	MO →	YR	*
1 2 3 4	5 6 7 8 9 10	11 12	13 14 15	16 17 18	19 20
7 7 8	2 2 0	2 7	0 C	7 6	C M

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

Site Description	Operator	Editor
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
3.2 KM ESE OF ADAMSVILLE, UTAH	DP	MLH

Card B

Scale Unit in cm	Map Size (7.5, 15.,60)	Map Location Δ N Lat Degree	Min	W Long Degree	Min
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
CM	15.	38.	15.	113.	00.

Use decimals

Δ 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
0.45	23.9	5960.	F

← Write M if meters

Use decimals

SEGMENT DEPTH

	Start	End	K	ΔK
C	14.0	25.0	-2.2	.5
D	.999			
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
C	25.0	64.0		-.5
D				
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location 1 Mile West Minersville Reservoir Date Oct 27 1976

Map Adamsville, Utah 15' Quad

Property [redacted] Lincoln T 29S R 9W sec SW¼ SE¼ 13

Drill Hole B-220 Date Drilled Oct 15, 1976 Elevation 5960 ft.

Instrument Probe 39 Operator DS

Comments ¾ PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
1.0	104.32	15.285			
1.5	104.98	15.110			
2.0	102.16	15.865			
2.5	101.62	16.010			
3.0	101.13	16.145			
3.5	101.91	15.930			
4.0	103.47	15.510			
4.5	105.51	14.970			
5.0	107.38	14.510			
5.5	108.59	14.165			
6.0	109.75	13.870			
6.5	110.60	13.650			
7.0	111.07	13.530			
7.5	111.42	13.445			
8.0	111.55	13.410			
8.5	111.56	13.410			
9.0	111.49	13.425			
9.5	111.33	13.465			
10.0	111.14	13.515			
10.5	110.97	13.555			
11.0	110.76	13.606			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T _____ R _____ sec _____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
11.5	110.58	13.655			
12.0	110.39	13.705			
12.5	110.20	13.755			
13.0	110.04	13.795			
13.5	109.85	13.840			
14.0	109.72	13.875			
14.5	109.58	13.910			
15.0	109.46	13.940			
15.5	109.35	13.970			
16.0	109.23	14.000			
16.5	109.12	14.025			
17.0	109.02	14.055			
17.5	108.92	14.080			
18.0	108.83	14.105			
18.5	108.73	14.125			
19.0	108.63	14.155			
19.5	108.53	14.180			
20.0	108.42	14.205			
25	107.47	14.455	.250	50	
30	106.56	14.695	.240	48	
35	105.75	14905	.210	42	
			.210	42	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

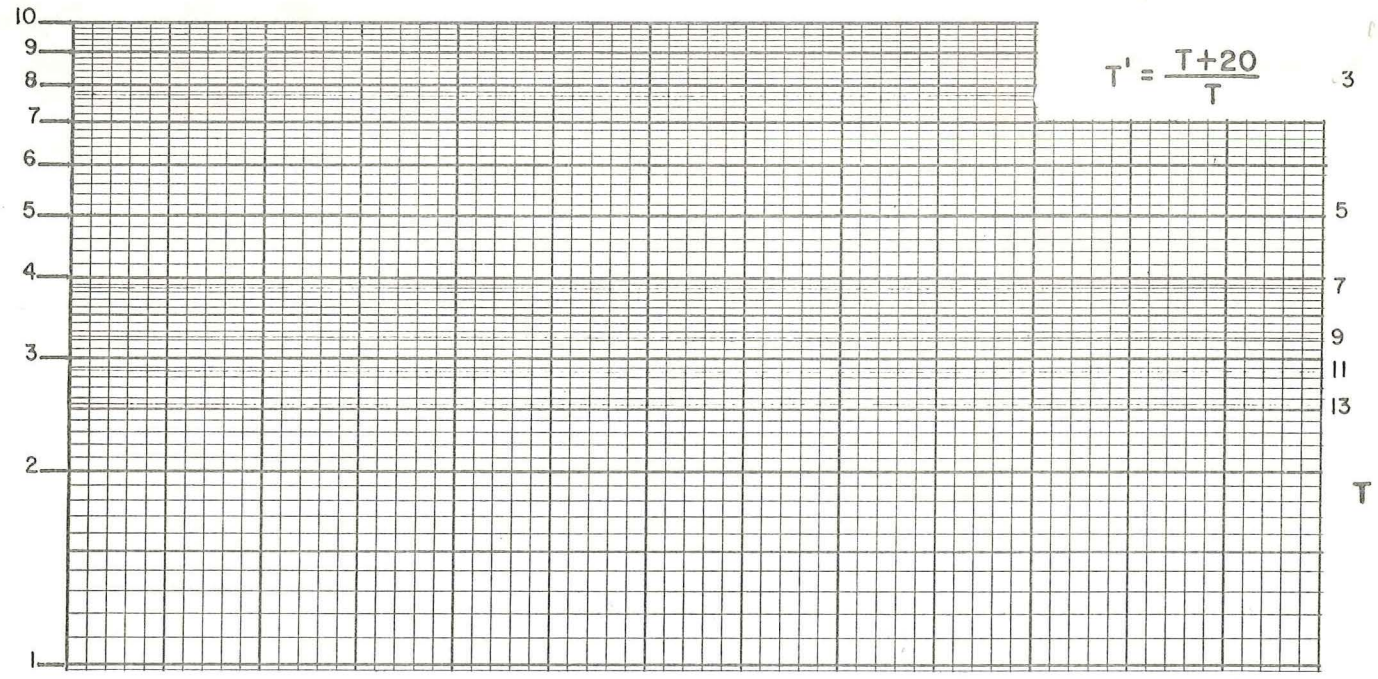
Property _____ T ____ R ____ sec ____

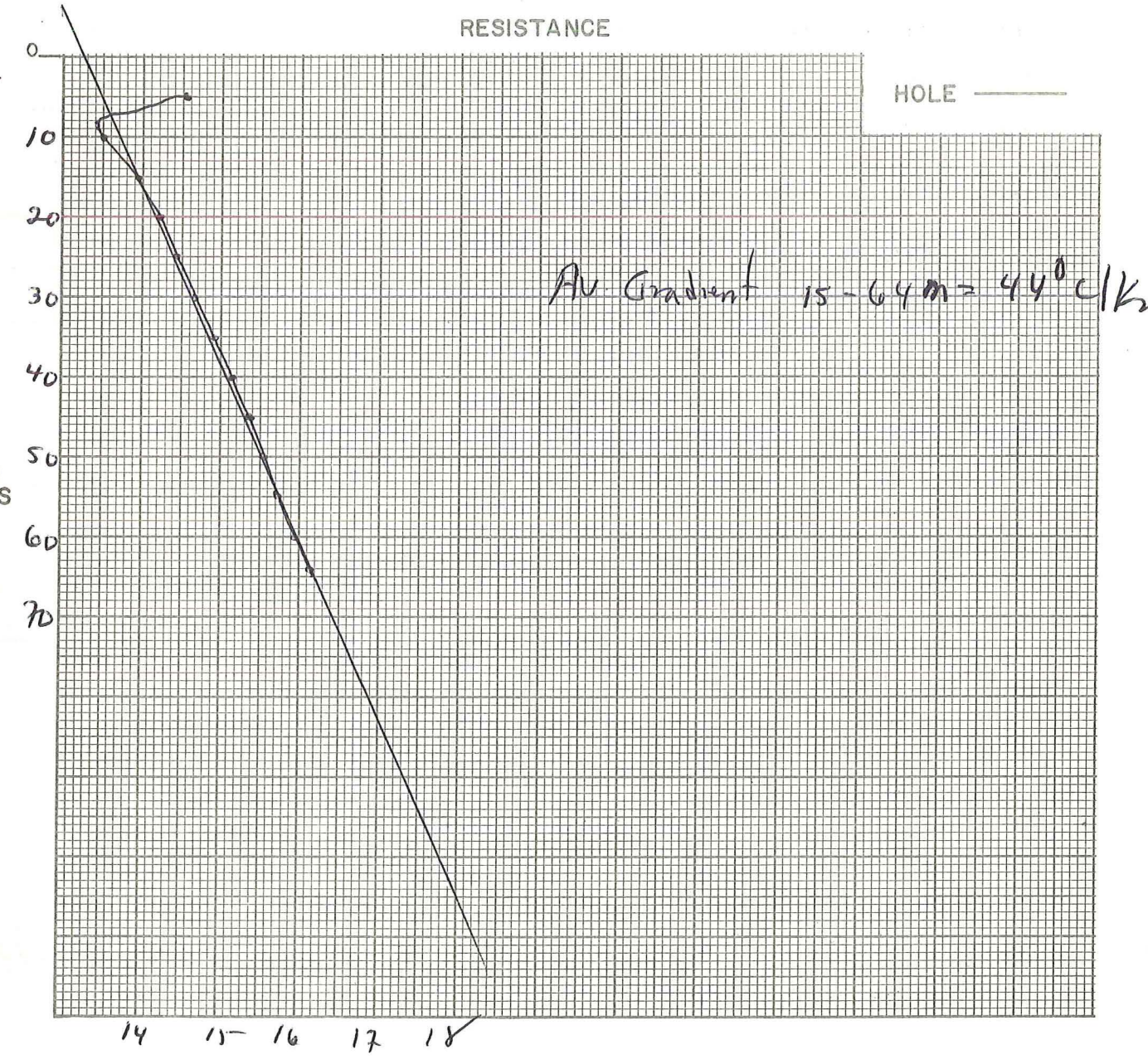
Drill Hole _____ Date Drilled _____ Elevation ____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
40	104.96	15115			
45	104.20	15315	200	40	
50	103.47	15510	.195	39	
55	102.72	15715	.205	41	
60	101.96	15915	200	40	
64	101.39	16075	160	40	


10
9
8
7
6
5
4
3
2
1
T'
$T' = \frac{T+20}{T}$
3
5
7
9
11
13
T


RESISTANCE
HOLE
0
10
20
30
40
50
60
70
DEPTH METERS
Av Gradient 15-64 m = 44° C/Km
14
15
16
17
18
TEMPERATURE °C

LITHOLOGIC LOG B-220

SW¼ SE¼ Sec 13 T29S R9W Elevation: 5,960'

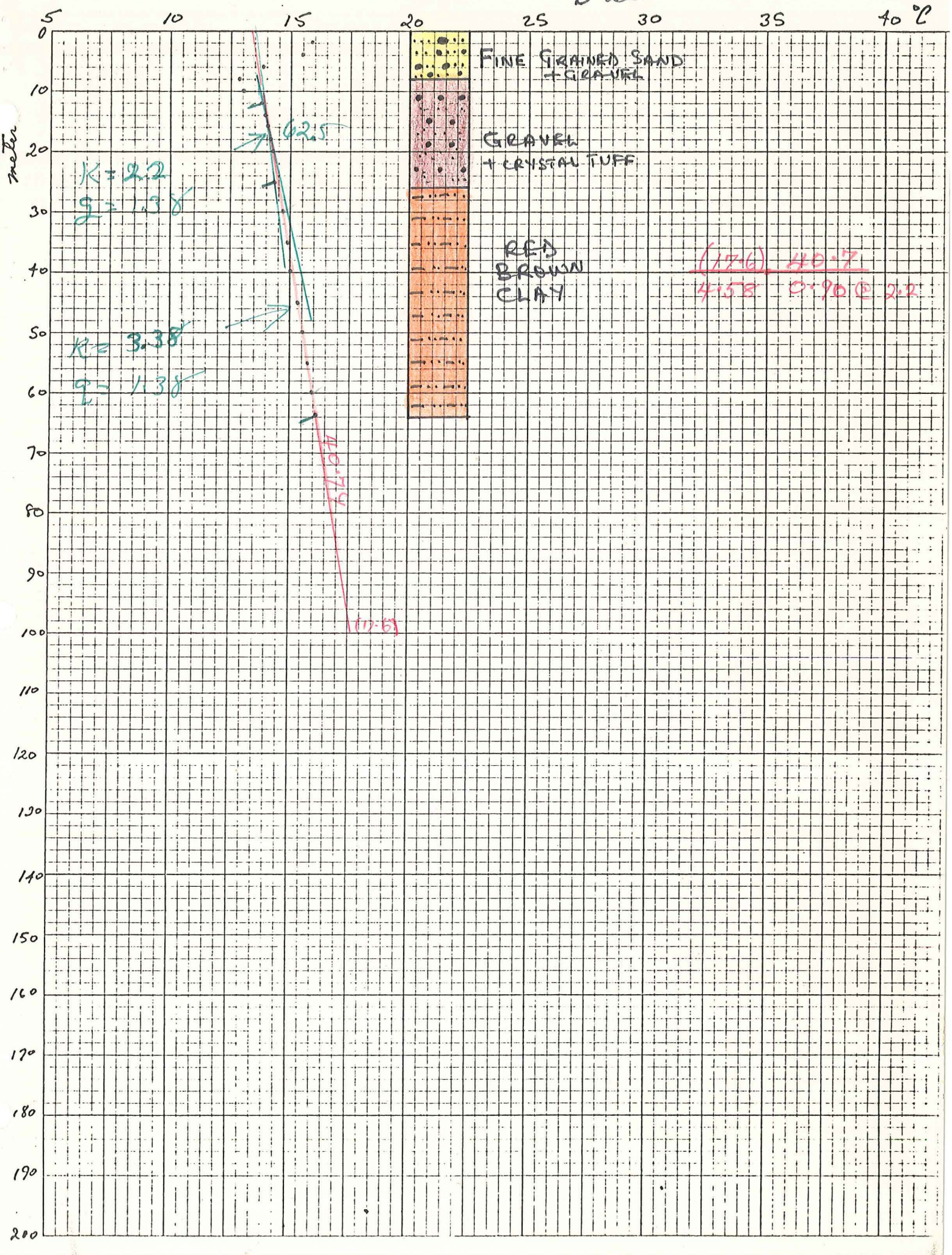
Depth (m)	Description
0 - 6	Gravel composed of fragments of red-brown crystal-lithic tuff with minor amounts of basalt in a sandy matrix.
6 - 8	Red-brown to light brown, fine-grained sand.
8 - 26	Gravel made up of fragments of red-brown cyrstal tuff.
26 - 65	Red-brown clay.

H. Dean Pilkington

HDP:mmo

cc: Art Lange
Cheryl Caywood
Mark Alldredge

B-220



47 0780

10 X 10 TO THE INCH
KEUFFEL & ESSER CO MADE IN U.S.A.

TEMPERATURE DEPTH LOG

ΔT Well No. 221

Property-Project Best Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →				Well No →						Date Logged DA →		MO →		YR		*	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	7	5	5				2	2	1	2	2		S	P		7	6	C	M

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

| Site Description | | | | | |

TEMPERATURE - DEPTH LOG

Location 2 mile South of Old Rambler Hill Date Sept 22 1976

Map Thermo Utah 15' Quadrangle

Property Best T 31 S R 12W sec NW¼SE¼ Sec 16

Drill Hole B-221 Date Drilled Sept 14, 1976 Elevation 5260 ft.

Instrument (SWH-21) old unit Operator RP

Comments water filled 3/4" PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
1.0	4516	19.140			
			-.140		
1.5	4541	19.000			
			-.635		
2.0	4655	18.365			
			-.795		
2.5	4803	17.570			
			-.755		
3.0	4948	16.815			
			-.205		
3.5	5109	16.010			
			-.625		
4.0	5238	15.385			
			-.675		
4.5	5382	14.710			
			-.430		
5.0	5475	14.280			
			-.365		
5.5	5556	13.915			
			-.290		
6.0	5621	13.625			
			-.176		
6.5	5660	13.455			
			-.090		
7.0	5681	13.365			
			-.030		
7.5	5688	13.335			
			.025		
8.0	5682	13.360			
			.085		
8.5	5663	13.445			
			.075		
9.0	5646	13.520			
			.085		
9.5	5626	13.605			
			.085		
10.0	5607	13.690			
			.100		
10.5	5584	13.790			
			.075		
11.0	5568	13.865			
			.080		

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T _____ R _____ sec _____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
11.5	5549	13.945			
			.075		
12.0	5533	14.020			
			.075		
12.5	5516	14.095			
			.070		
13.0	5500	14165			
			.060		
13.5	5487	14.225			
			.075		
14.0	5471	14.300			
			.060		
14.5	5457	14.360			
			.035		
15.0	5451	14.395			
			.035		
15.5	5442	14.430			
			.030		
16.0	5435	14.460			
			.035		
16.5	5428	14.495			
			.035		
17.0	5420	14.530			
			.025		
17.5	5415	14.555			
			.020		
18.0	5412	14.570			
			.030		
18.5	5405	14.600			
			.030		
19.0	5397	14.630			
			.040		
19.5	5390	14.670			
			.035		
20.0	5382	14.705			
			.170	85	
22.0	5346	14.875			
			.135	62.5	
24.0	5317	15.010			
			.135	62.5	
26.0	5288	15.145			
			.145	72.5	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T _____ R _____ sec _____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
28	5258	15.290			
30	5227	15.435	.145	72.5	
32	5198	15.575	.140	70.0	
34	5169	15.715	.140	70.0	
36	5142	15.845	.130	65.0	
38	5115	15.985	.140	70.	
40	5089	16.110	.125	62.5	
42	5064	16.230	.120	60.	
44	5040	16.350	.120	60	
46	5014	16.480	.130	65	
48	4991	16.600	.120	60	
50	4967	16.720	.120	60	
52	4942	16845	.125	62.5	
54	4918	16970	.125	62.5	
56	4894	17095	.125	66.5	
58	4870	17220	.115	57.5	
60	4846	17.345	.125	62.5	
62	4822	17470	.125	62.5	
64	4798	17.595	.125	62.5	
66	4774	17725	.170	85.	
68	4749	17855	.130	65.0	
			.120	60	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

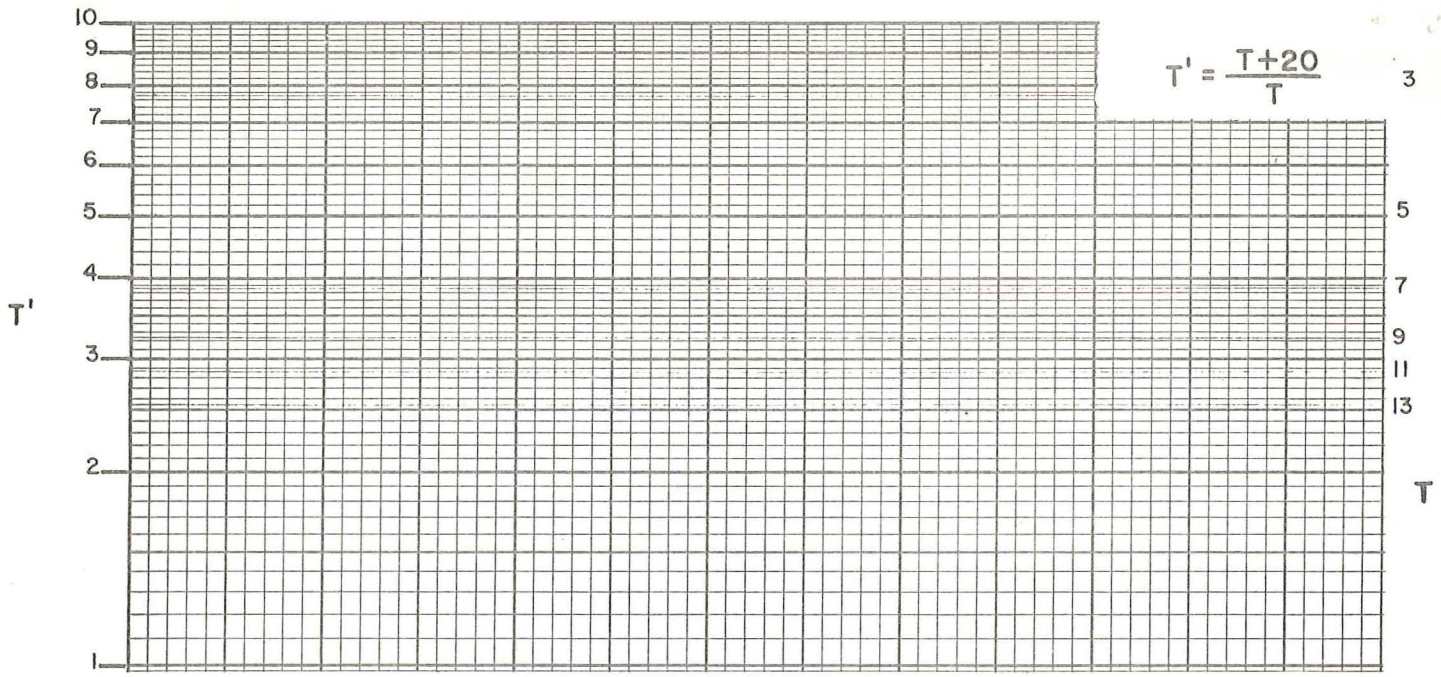
Property _____ T _____ R _____ sec _____

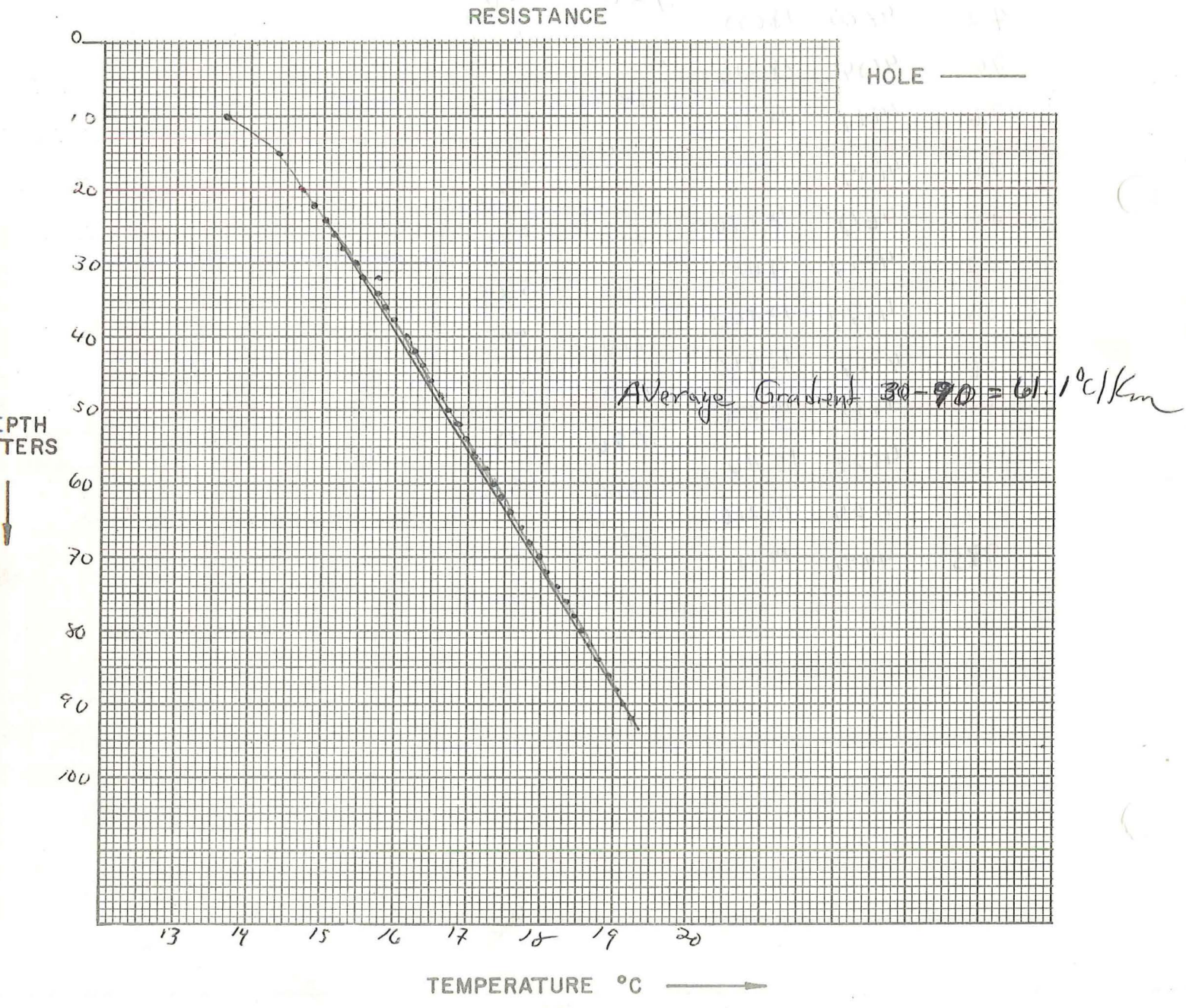
Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
70	4727	17.975			
72	4705	18.095	.120	60	
74	4684	18210	.115	57.5	
76	4661	18335	.125	62.5	
78	4639	18.455	.120	60	
80	4618	18.570	.115	57.5	
82	4597	18.685	.115	57.5	
84	4577	18800	.115	57.5	
86	4557	18910	.110	55	
88	4538	19.020	.110	55	
90	4522	19110	.090	45	
92	4504	19210	.100	50	
93.5	4491	19285	.075		


T' = T+20 / T
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13


RESISTANCE
HOLE
DEPTH METERS
0
10
20
30
40
50
60
70
80
90
100
13
14
15
16
17
18
19
20
TEMPERATURE °C
Average Gradient 30-90 = 61.1°C/Km

Lithologic Log B-221 (SWU-21)

NW¼ SE¼ Sec 16 T31S R12W Elevation: 5,260'

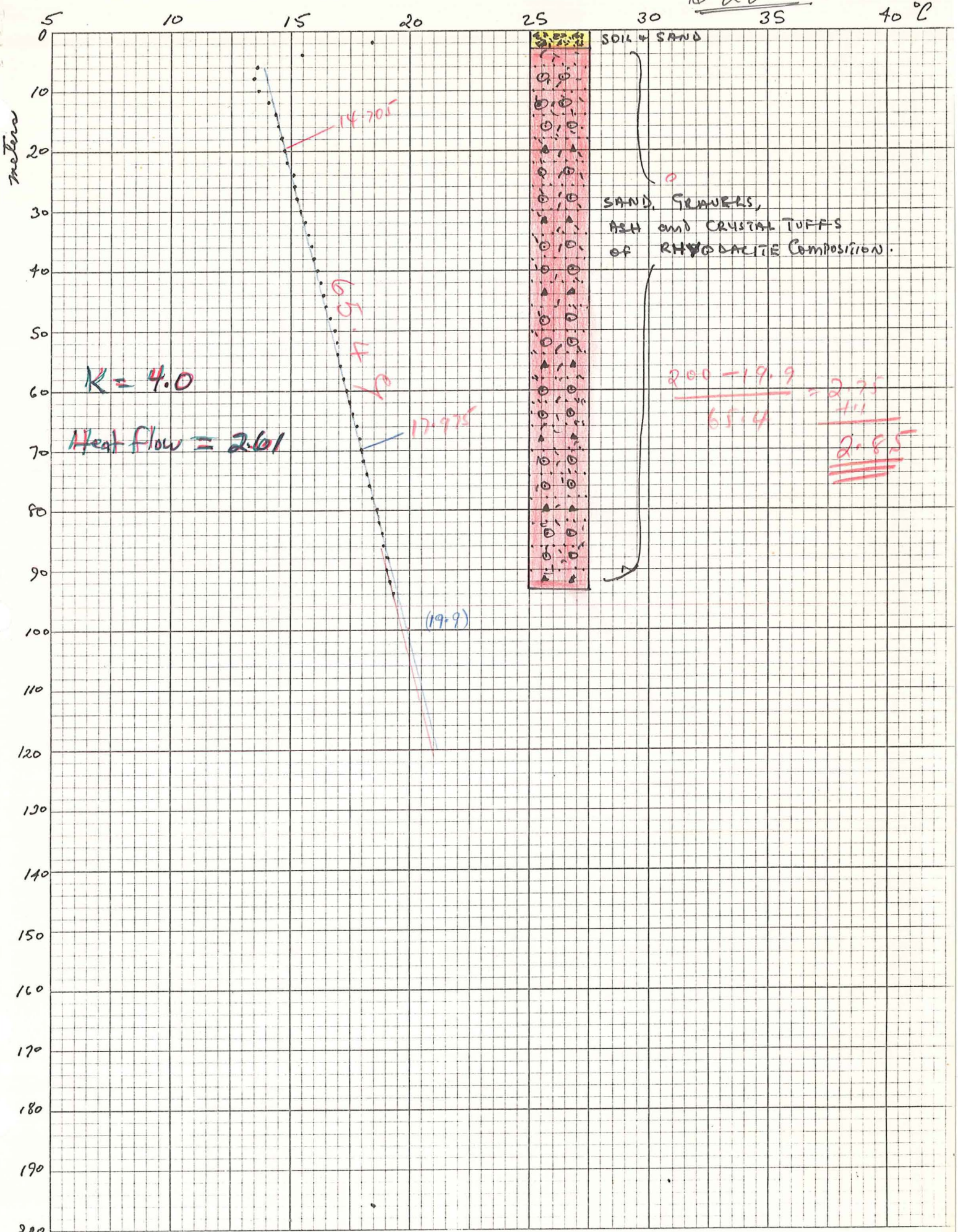
Depth (M)	Description
0 - 3	Soil, light-buff, fine-grained, mostly eolian sands with some lag gravels.
3 - 93	Sand, gravel and boulders of the valley fill - part of alluvial fan on the north side of the Black Mountains. The dominant rock type found in the gravels and boulders is reddish-gray to reddish-brown rhyodacite flows, ash flows, and crystal tuffs.

H. D. Pilkington

HDP:mmo

cc: Art Lange

B221



47 0780
10 X 10 TO THE INCH • 10 X 15 INCHES
KEUFFEL & ESSER CO MADE IN U.S.A.

TEMPERATURE DEPTH LOG

ΔT Well No. 222

Property-Project Best Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →				Well No →						Date Logged DA →		MO →		YR		*	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	7	5	5				2	2	2	0	5		0	C		7	C	C	M

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

| Site Description | | | | | |

TEMPERATURE - DEPTH LOG

Location ½ mile North Horse Valley Date Oct 5 1976

Map Thermo Utah 15' Quad

Property [redacted] Best T 31S R 11W sec SW¼ NW¼ 16

Drill Hole B-222 Date Drilled Sept 17 1976 Elevation 6000 ft.

Instrument old unit Operator DP

Comments ¾" PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
1.0	4831	17.420			
1.5	4820	17.480			
2.0	4892	17.105			
2.5	5048	16.310			
3.0	5183	15.650			
3.5	5333	14.935			
4.0	5465	14.325			
4.5	5587	13.700			
5.0	5684	13.350			
5.5	5762	13.010			
6.0	5830	12.725			
6.5	5867	12.570			
7.0	5889	12.480			
7.5	5897	12.445			
8.0	5894	12.460			
8.5	5883	12.505			
9.0	5865	12.580			
9.5	5845	12.665			
10.0	5825	12.750			
10.5	5805	12.835			
11.0	5781	12.935			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T _____ R _____ sec _____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
11.5	5756	13.040			
12.0	5737	13.125			
12.5	5716	13.215			
13.0	5700	13.285			
13.5	5686	13.345			
14.0	5669	13.415			
14.5	5651	13.495			
15.0	5643	13530			
15.5	5630	13.596			
16.0	5620	13630			
16.5	5609	13.680			
17.0	5599	13725			
17.5	5588	13,775			
18.0	5575	13.830			
18.5	5561	13.895			
19.0	5550	13.940			
19.5	5537	14.000			
20.0	5525	14.055	.225	112.5	
22	5475	14.280	.235	1175	
24	5424	14.515	.210	105	
26	5378	14.725	.220	110	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

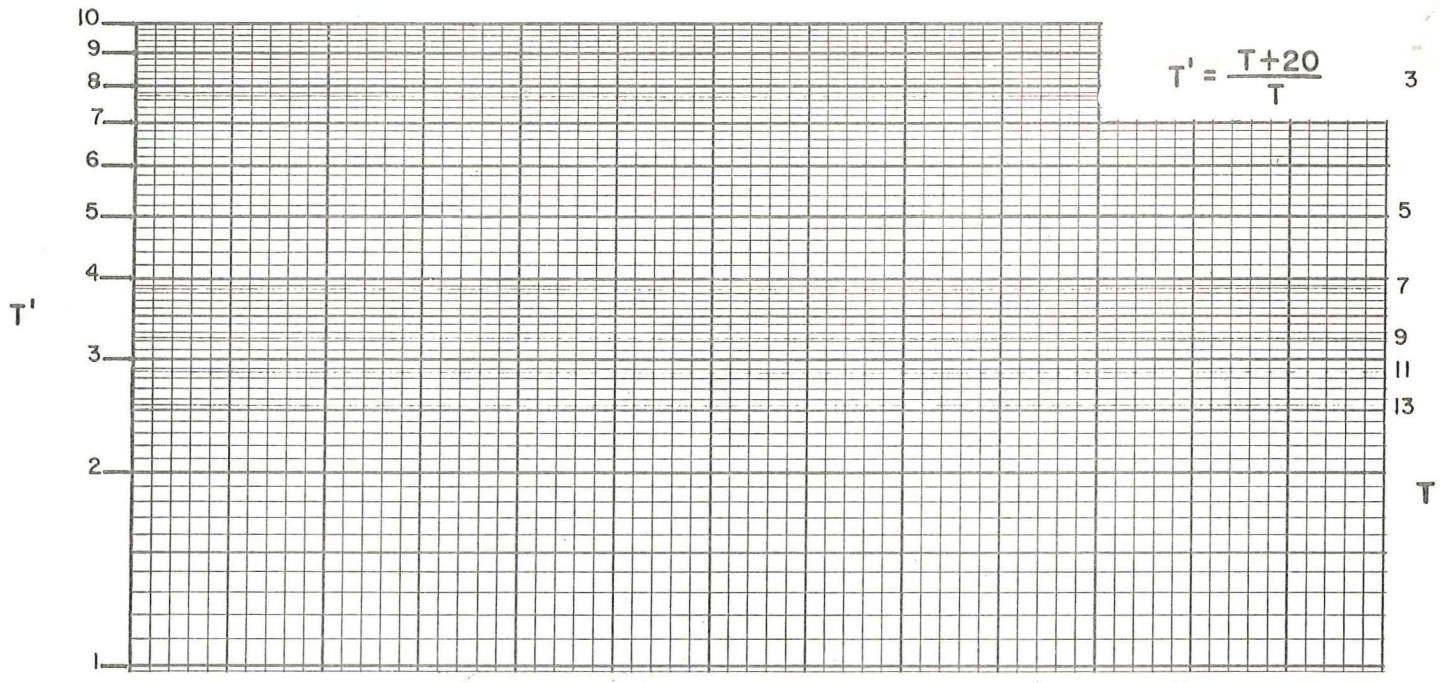
Property _____ T _____ R _____ sec _____

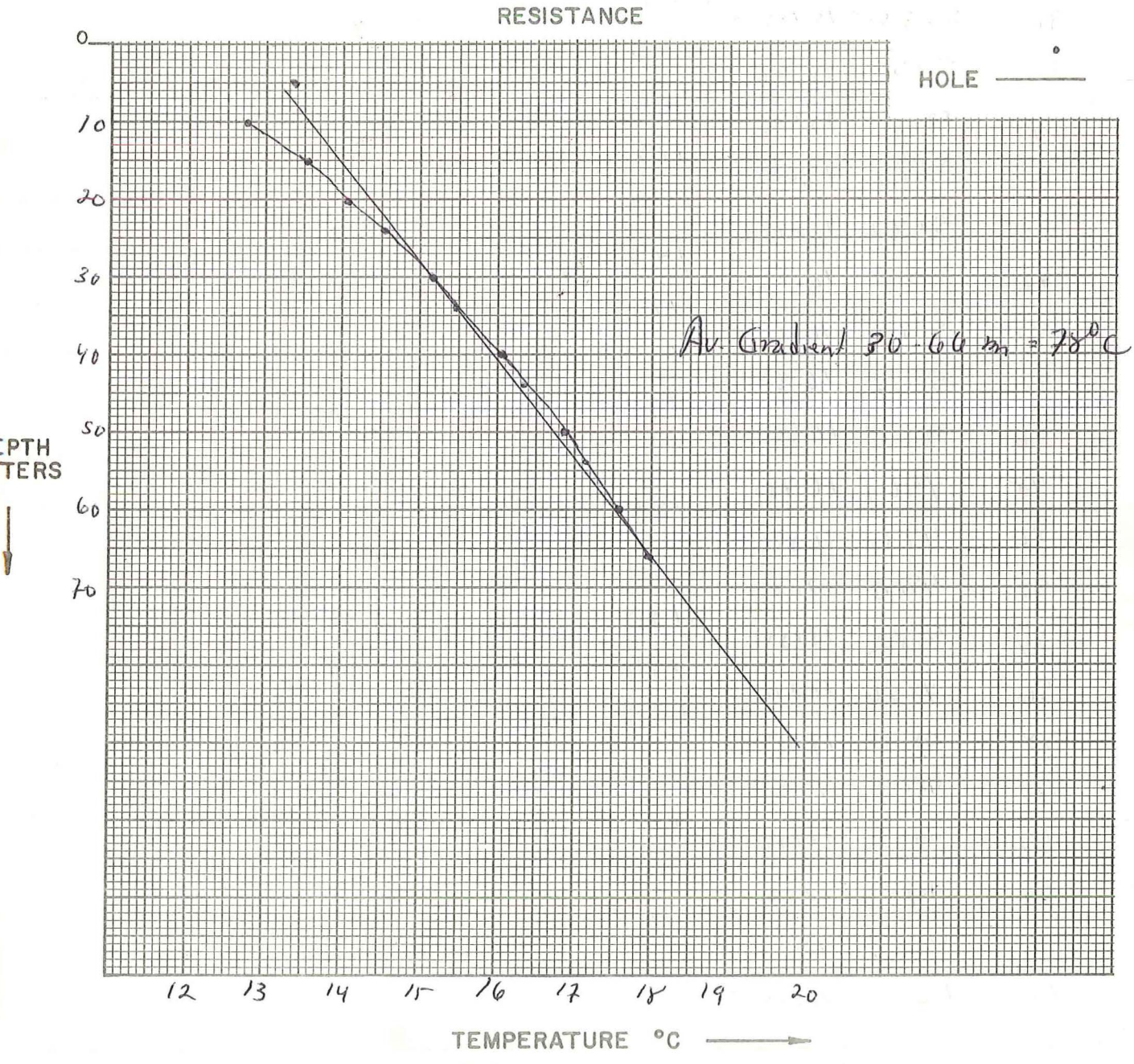
Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
28	5331	14.945			
30	5288	15.145	.200	100	
32	5255	15.300	.155	77.5	
34	5218	15.480	.180	90	
36	5179	15,665	.185	92.5	
38	5142	15845	.180	90	
40	5107	16.020	.175	87.5	
42	5068	16.210	.190	95	
44	5037	16,365	.155	77.5	
46	5000	16.550	.190	95	
48	4964	16735	.185	92.5	
50	4934	16.890	.155	77.5	
52	4908	17.020	.130	65	
54	4882	17155	.135	67.5	
56	4856	17.290	.135	67.5	
58	4832	17.415	.125	62.5	
60	4807	17.550	.135	67.5	
62	4782	17680	.130	65	
64	4756	17.820	.140	70	
66	4731	17.955	.135	67.5	
68	4709	18075	.120	60	


10
9
8
7
6
5
4
3
2
1
T'
$T' = \frac{T+20}{T}$
3
5
7
9
11
13
T


RESISTANCE
0
10
20
30
40
50
60
70
DEPTH METERS
HOLE
Av. Gradient 30-66 m = 78°C
12
13
14
15
16
17
18
19
20
TEMPERATURE °C

Lithologic Log B-222 (SWU-22)

SW¼ NW¼ Sec 16 T31S R11W Elevation: 6,000'

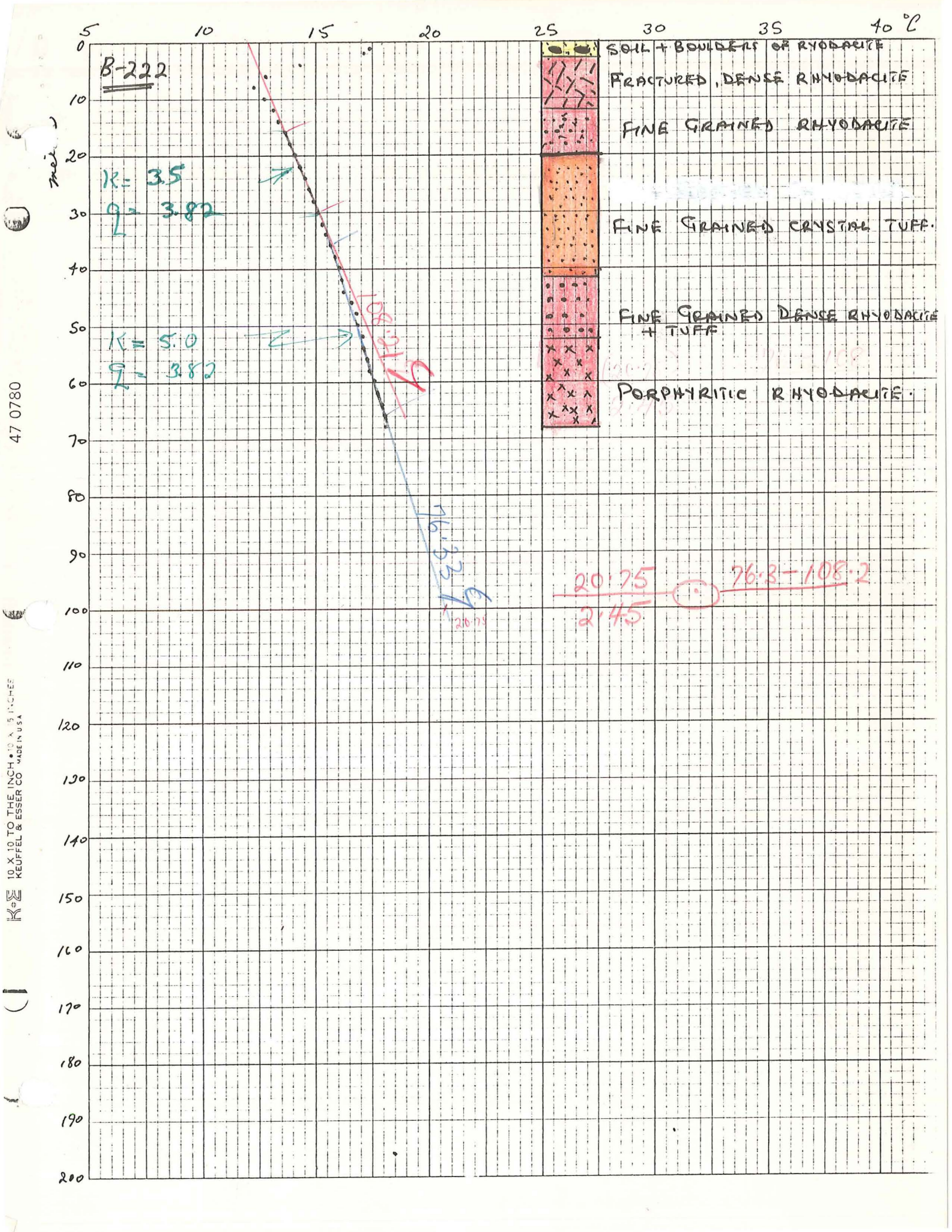
Depth (m)	Description
0 - 3	Soil, sandy with numerous boulders of rhyodacite.
3 - 12.4	Highly fractured, light pink to pink-gray, fine-grained, dense, rhyodacite.
12.4 - 20	Mottled pink and gray, fine-grained, dense rhyodacite.
20 - 41.7	Medium gray, fine-grainec crystal tuff. The matrix is partially to completely devitrified to a gray-green clay.
41.7 - 47.8	Red-brown, fine-grained, dense, rhyodacite.
47.8 - 52.5	Red to reddish-gray crystal tuff with matrix devitrified.
52.5 - 68	Dark gray, fine-grained to dense, porphyritic rhyodacite.

H. D. Pilkington (H.D.)

H. D. Pilkington

HDP:mmo

cc: Art Lange
Cheryl Caywood
John Deymonax
File Copy to Dean


B-222
K= 3.5
Q= 3.82
K= 5.0
Q= 3.82
SOIL + BOULDERS OF RHYODACITE
FRACTURED, DENSE RHYODACITE
FINE GRAINED RHYODACITE
FINE GRAINED CRYSTAL TUFF.
FINE GRAINED DENSE RHYODACITE + TUFF
PORPHYRITIC RHYODACITE.
20.75 / 2.45
76.3 - 106.2
5
10
15
20
25
30
35
40 °C
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
180
190
200

TEMPERATURE DEPTH LOG

ΔT Well No. 223

Property-Project Ok Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →	Well No →	Date Logged DA →	MO →	YR	*
1 2 3 4	5 6 7 8 9 10	11 12	13 14 15	16 17 18	19 20
7 7 9	2 2 3	0 5	0 C	7 6	C M

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

Site Description	Operator	Editor
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
4 . 6 kM SE OF BADGER PEAK	D P	/ H L H

Card B

Scale Unit in cm	Map Size (7.5, 15.,60)	Map Location Δ N Lat Degree	Min	W Long Degree	Min
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
C M	1 5 .	3 8 .	0 0 .	1 1 3 .	1 5 .

Use decimals

Δ 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
1 3 . 1	1 8 . 7	6 1 0 0 .	F

13,55 18.3

Use decimals

← Write M if meters

SEGMENT DEPTH

	Start	End	K	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
C	1 2 . 0	6 7 . 0	- 4 . 5	- . 5
D				
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
	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
C	. 9 9 9			
D				
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location ½ mile South of Horse Valley Date Oct 5 1976

Map Thermo Utah 15' Quad

Property OK T 31S R 11W sec SE¼ SW¼ 29

Drill Hole B-223 Date Drilled Sept 22, 1976 Elevation 6100 ft.

Instrument old unit Operator DS

Comments ¾" PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
1.0	5020	16.450			
1.5	4986	16.625			
2.0	4938	16.865			
2.5	5019	16.460			
3.0	5165	15.730			
3.5	5306	15.060			
4.0	5455	14.370			
4.5	5580	14.210			
5.0	5697	13.790			
5.5	5803	12.840			
6.0	5877	12.530			
6.5	5935	12.290			
7.0	5973	12.130			
7.5	6000	12.020			
8.0	6014	11.960			
8.5	6016	11.960			
9.0	6011	11.970			
9.5	6004	12.000			
10.0	5992	12.050			
10.5	5981	12.100			
11.0	5966	12.160			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T _____ R _____ sec _____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
11.5	5952	12.220			
12.0	5938	12.280			
12.5	5927	12.320			
13.0	5915	12.370			
13.5	5907	12.400			
14.0	5897	12.450			
14.5	5890	12.470			
15.0	5880	12.520			
15.5	5874	12.540			
16.0	5868	12.570			
16.5	5863	12.590			
17.0	5857	12.610			
17.5	5853	12.630			
18.0	5846	12.660			
18.5	5841	12.680			
19.0	5836	12.700			
19.5	5830	12.730			
20.0	5824	12.750			
22	5798	12.860	.110	55	
24	5774	12.960	.100	50	
26	5754	13.050	.090	45	
			.090	45	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

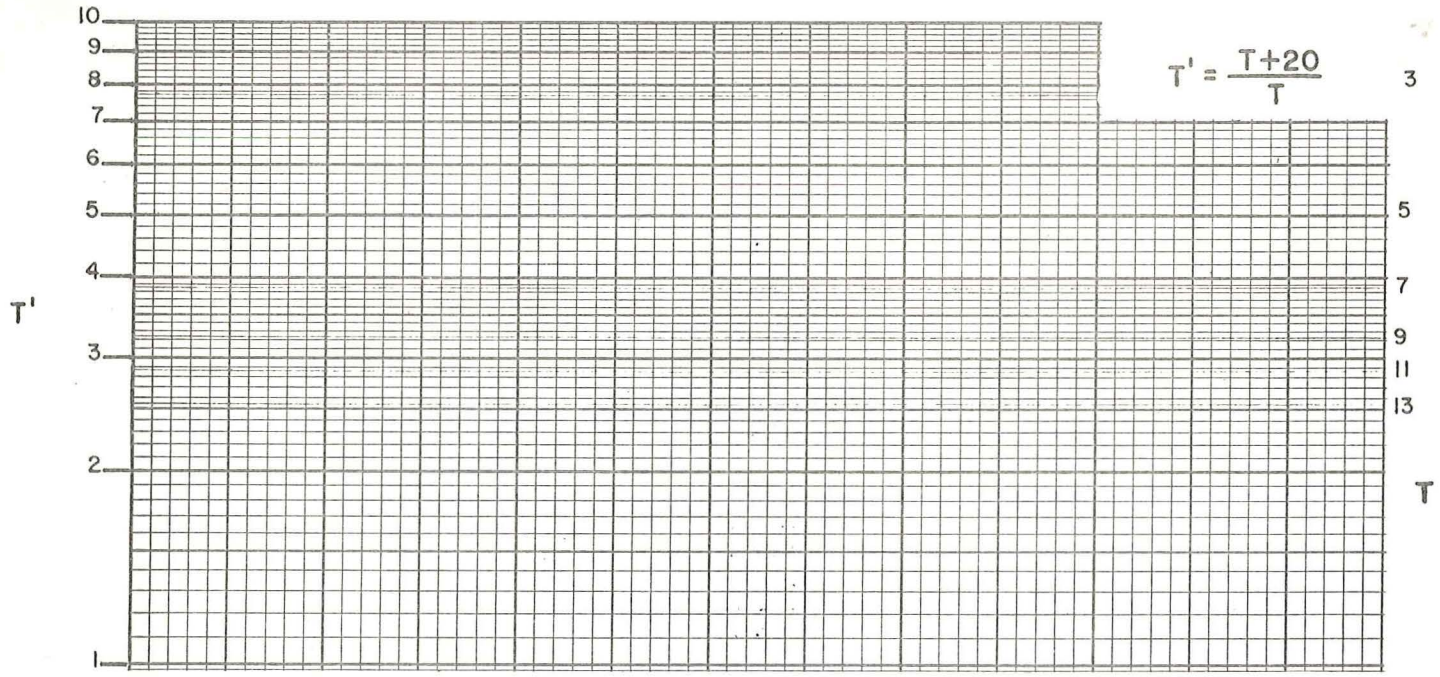
Property _____ T _____ R _____ sec _____

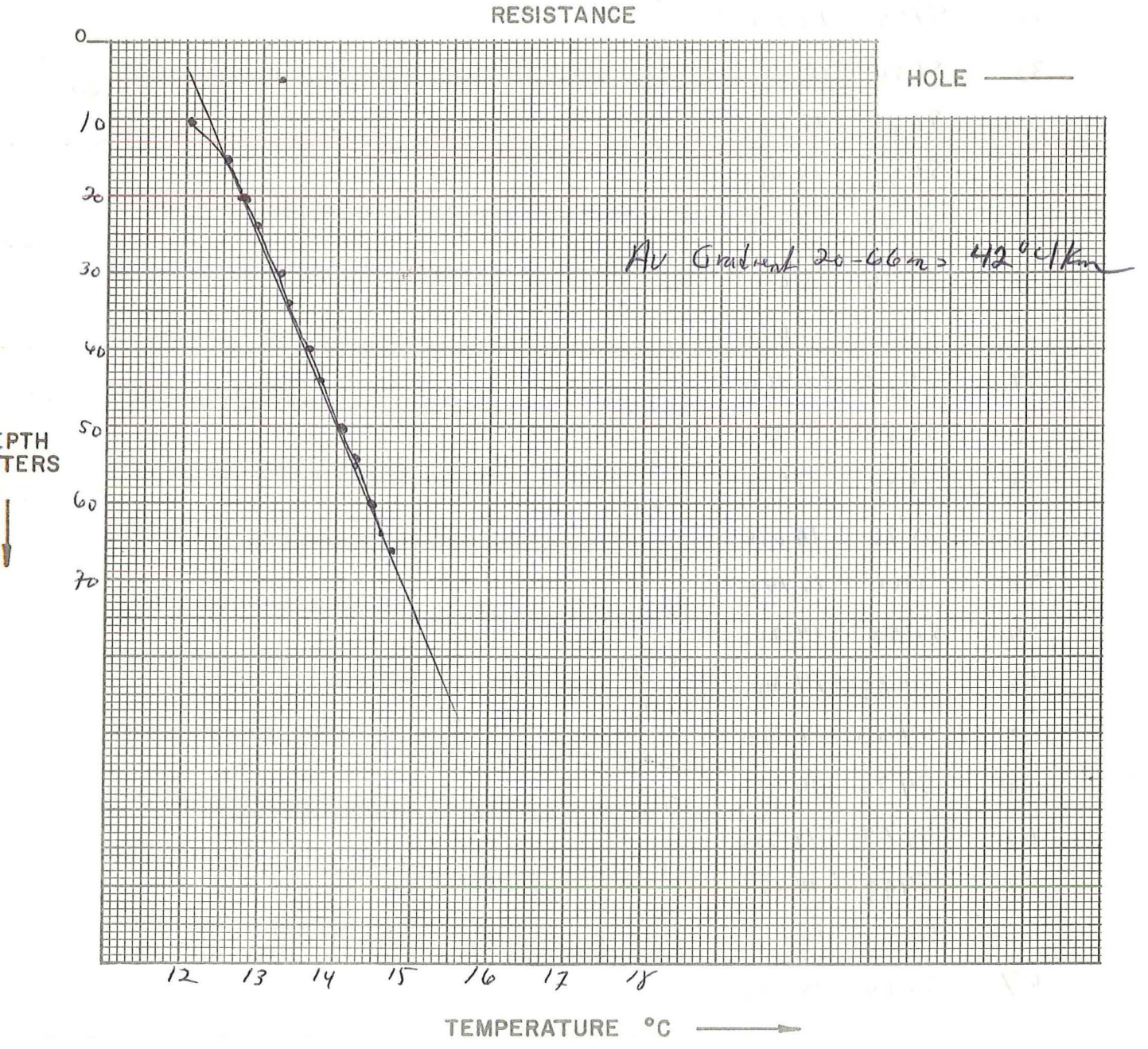
Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
28	5734	13.140			
			.090	45	
30	5713	13.230			
			.080	40	
32	5694	13.310			
			.080	40	
34	5675	13.390			
			.080	40	
36	5656	13.470			
			.060	30	
38	5643	13.530			
			.080	40	
40	5625	13.610			
			.070	35	
42	5608	13.680			
			.080	40	
44	5591	13.700			
			070	35	
46	5575	13.830			
			.100	50	
48	5552	13.930			
			.120	60	
50	5526	14.050			
			.090	45	
52	5506	14.140			
			.080	40	
54	5488	14.220			
			.090	45	
56	5468	14.310			
			.080	40	
58	5450	14.390			
			.090	45	
60	5432	14.480			
			070	35	
62	5415	14.550			
			.080	40	
64	5999	14.630			
			070	35	
66	5383	14.700			
			.040	40	
67	5374	14.740			


10
9
8
7
6
5
4
3
2
1
T'
$T' = \frac{T+20}{T}$
3
5
7
9
11
13
T


RESISTANCE
0
10
20
30
40
50
60
70
HOLE
Av Gradient 20-66m = 42°C/Km
DEPTH METERS
12
13
14
15
16
17
18
TEMPERATURE °C

Lithologic Log B-223 (SWU-23)

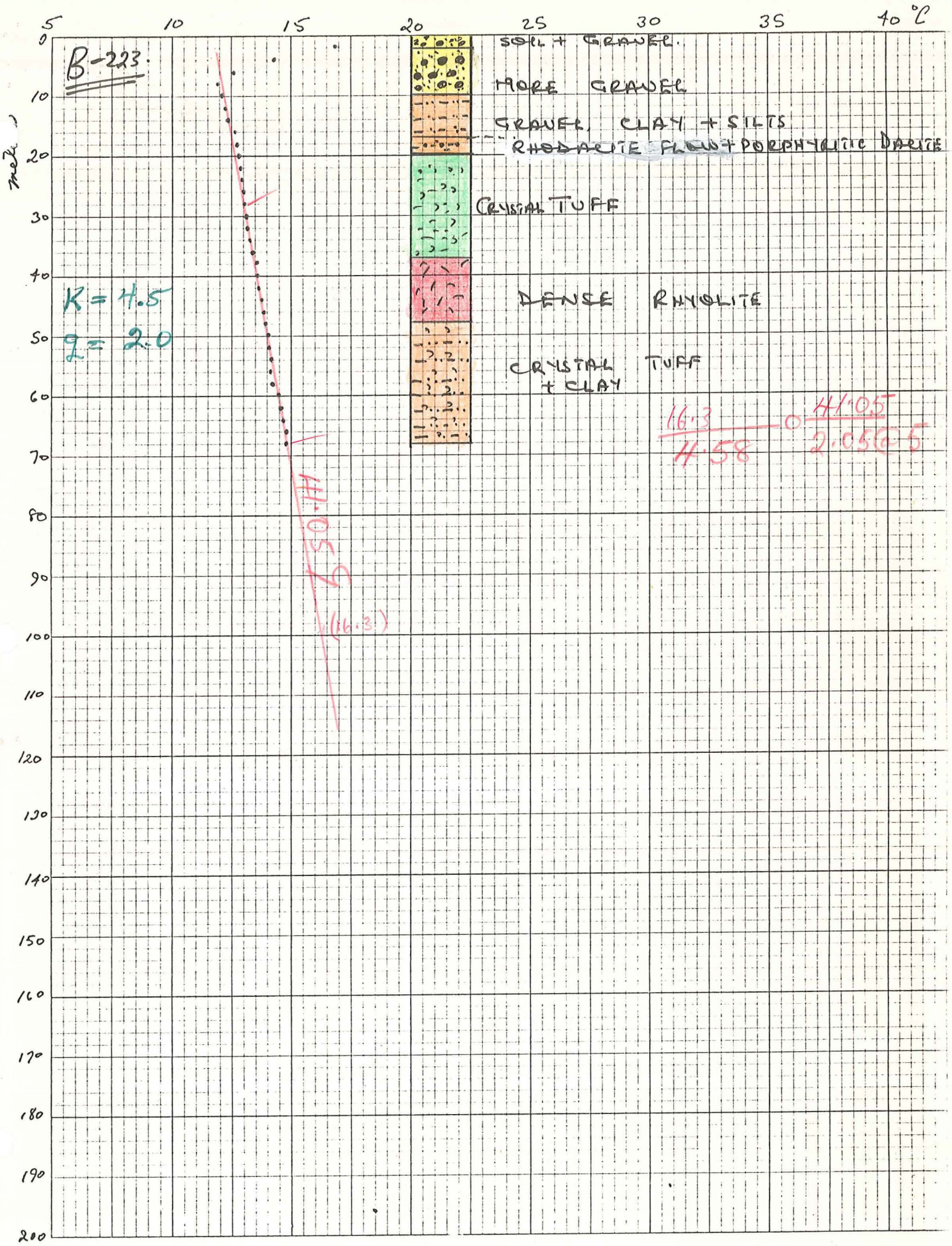
SE¼ SW¼ Sec 29 T31S R11W — Elevation: 6,100'

Depth (m)	Description
0 - 2	Soil, sandy with some lag gravel.
2 - 6.2	Mixed sand and gravel, but mostly gravel. Fragments mostly pink to red-brown rhyolite.
6.2 - 10.8	Mixed gravel, clay, and silt. The silt and clay probably occurs as matrix and also as descrete layers. The rock fragments in the gravels are gray, fine-grained porphyritic dacite.
10.8 - 12.4	Red-brown clay with minor gravels.
12.4 - 17.0	Mixed gravel and clay.
17 - 20	Alternating red-gray rhodacite flows and medium-gray porphyritic dacite.
20 - 37	Medium gray crystal tuff.
37 - 47.8	Pinkish-gray, somewhat moltled, fine-grained dense rhyolite.
47.8 - 68	Medium-gray, fine-grained crystal tuff. Much of the groundmass has devitrified to give a clay.

H. D. Pilkington (H.D.P.)

HDP:mmo

cc: Art Lange
Cheryl Caywood
John Deymonaz
File Copy to Dean



47 0780
10 X 10 TO THE INCH • 10 X 15 INCHES
KEUFFEL & ESSER CO MADE IN U.S.A.

TEMPERATURE DEPTH LOG

ΔT Well No. 224

Property-Project Rest Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

RT JUSTIFY:

Card A

Proj No →				Well No →						Date Logged DA →		MO →		YR		*
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	7	5	5				2	2	4	0	5		0	C		7	6	C	M

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

| Site Description | | | | | |

TEMPERATURE - DEPTH LOG

Location 2 mi. S southeast of Nine mile knoll Date October 5, 1976

Map Thermo Utah 15' Quad

Property Best T 30S R 11W sec SE¼ NW¼ 36

Drill Hole B-224 Date Drilled Sept 23, 1976 Elevation _____ ft.

Instrument O/D Unit Operator DP

Comments ¾" PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
10.0	5307	15.055			
10.5	5322	14.985			
11.0	5323	14.985			
11.5	5318	15.005			
12.0	5311	15.045			
12.5	5285	15.160			
13.0	5272	15.220			
13.5	5258	15.290			
14.0	5249	15.330			
14.5	5238	15.385			
15.0	5225	15.440			
15.5	5214	15.500			
16.0	5202	15.555			
16.5	5189	15.620			
17.0	5181	15.660			
17.5	5172	15.700			
18.0	5163	15.745			
18.5	5151	15.805			
19.0	5143	15.840			
19.5	5134	15.890			
20.0	5122	15.950			
			.210	105	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T _____ R _____ sec _____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
22	5079	16.160			
24	5038	16.360	.200	100	
26	5011	16.500	.140	70	
28	4975	16.680	.180	90	
30	4940	16.860	.180	90	
32	4907	17.030	.170	85	
34	4873	17.200	.170	85	
36	4838	17.390	.190	95	
38	4803	17.570	.160	80	
40	4770	17.750	.180	90	
42	4736	17.930	.180	90	
44	4703	18.100	.170	85	
46	4669	18.290	.190	95	
48	4637	18.470	.180	90	
50	4605	18.640	.170	85	
52	4576	18.800	.160	80	
54	4544	18.960	.160	80	
56	4524	19.100	.140	70	
58	4498	19.250	.150	75	
60	4472	19.390	.140	70	
62	4445	19.550	.160	80	
			.150	75	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

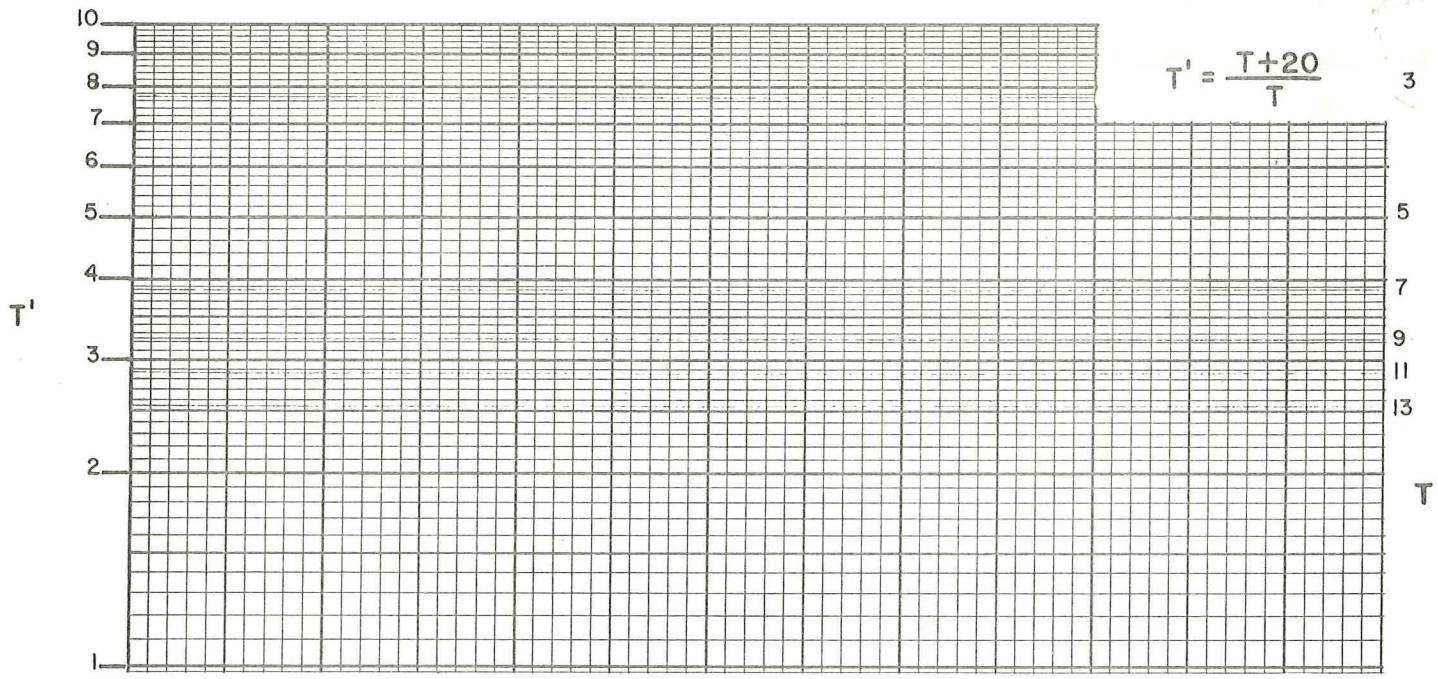
Property _____ T _____ R _____ sec _____

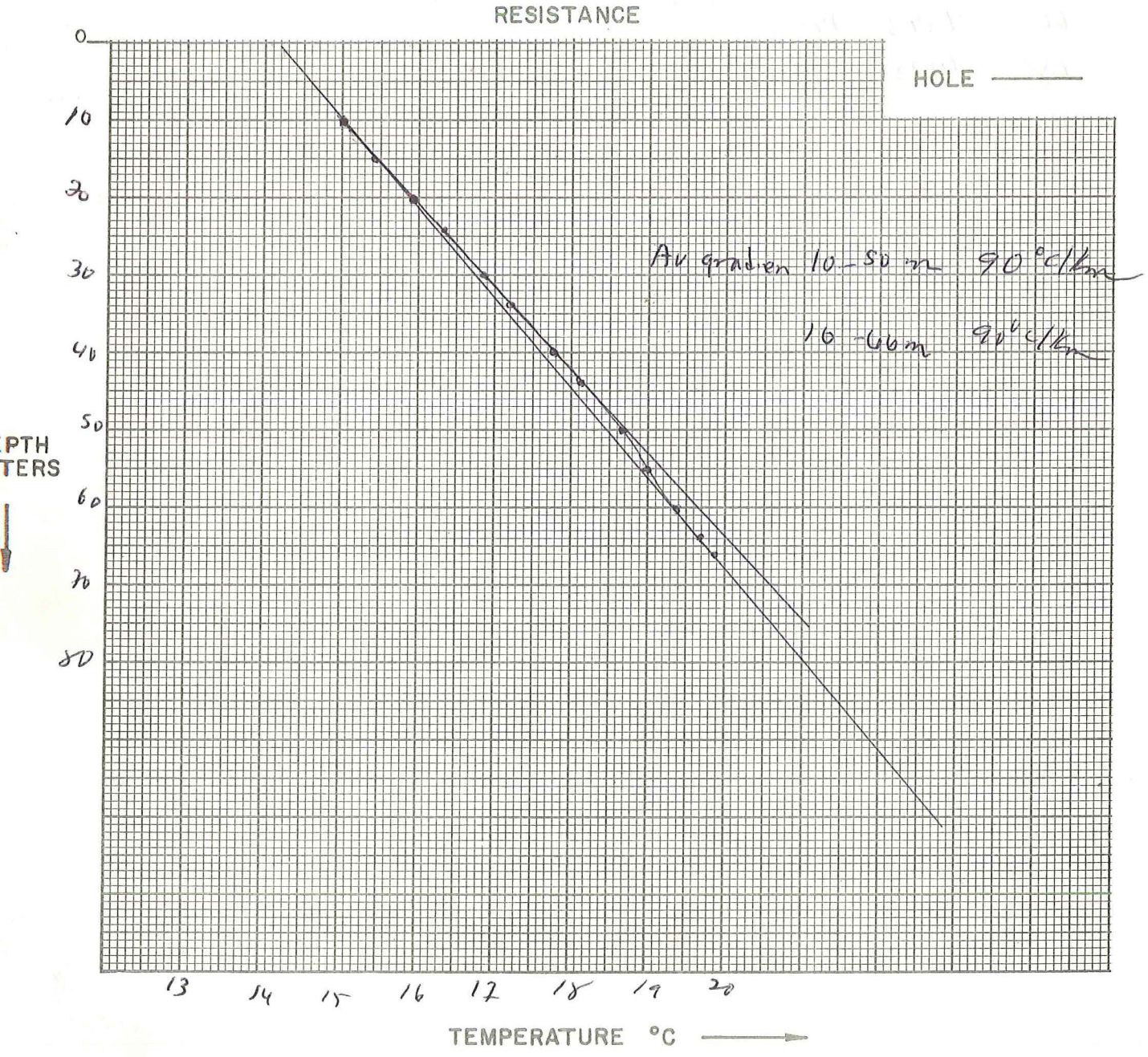
Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
64	4420	19.700			
			.150	75	
66	4393	19.850			
			.130	65	
68	4372	19.980			


T' = (T+20)/T
T'
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13
T


RESISTANCE
HOLE
Av gradien 10-50 m 90 °c/km
10-66m 90 °c/km
DEPTH METERS
0
10
20
30
40
50
60
70
80
13
14
15
16
17
18
19
20
TEMPERATURE °C

Lithologic Log B-224 (SWU-24)

SE¼ NW¼ Sec 36 T30S R11W Elevation: 5,400'

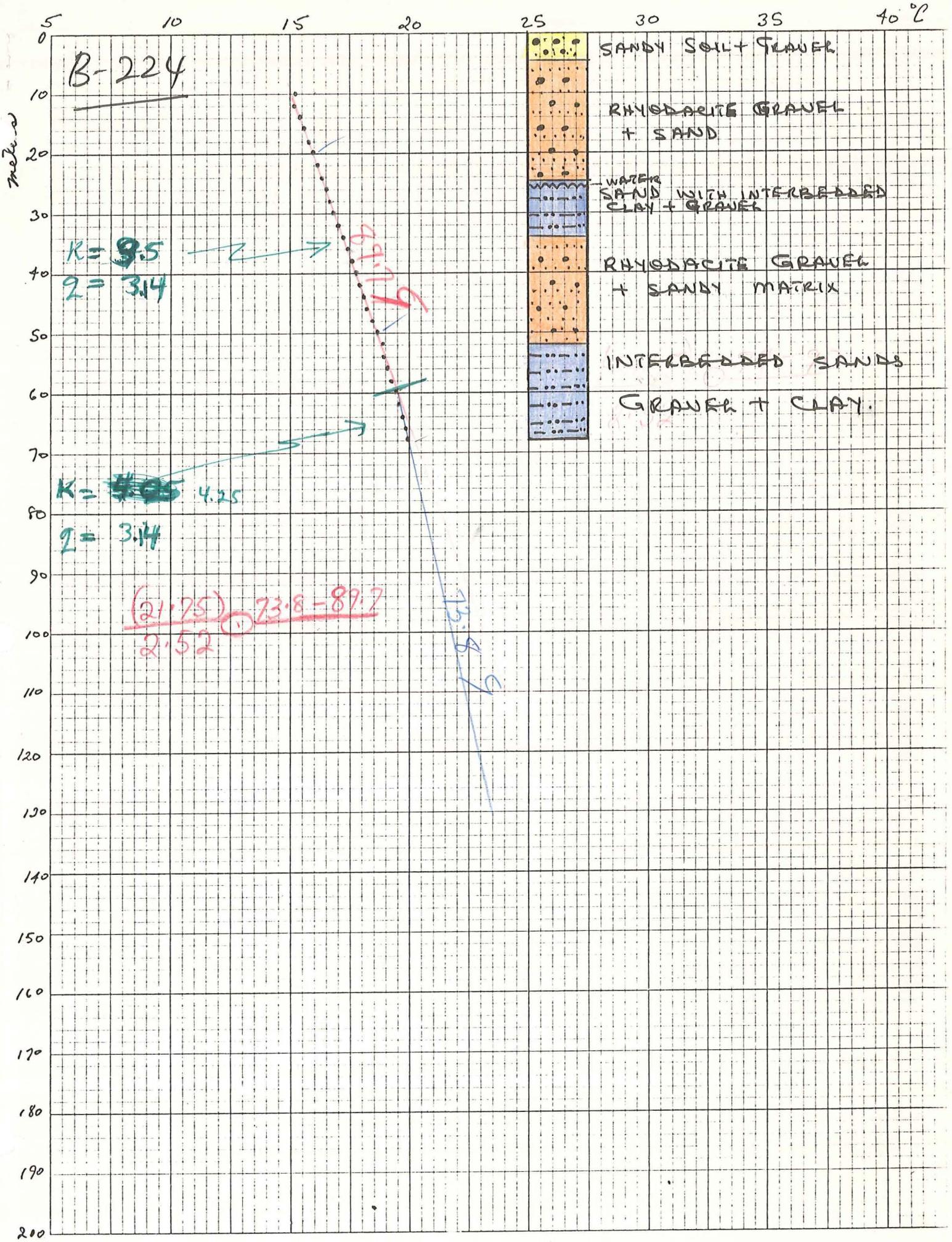
Depth (m)	Description
0 - 4.6	Sandy soil with some gravel.
4.6 - 24.7	Gravel composed of rhyodacite fragments in a sandy matrix.
24.7 - 34	Sand with some interbedded clay and gravel. Encountered water at 24.8m, Flow about 15 gpm.
34 - 52.5	Gravel made up of fragments of rhyodacite in a sandy matrix.
52.5 - 68	Interbedded sands, gravels, and clays in about equal amounts.

H. D. Pilkington (M.O.)

H. D. Pilkington

HDP:mmo

cc: Art Lange
Cheryl Caywood
John Deymonaz
File Copy to Dean



47 0780
10 X 10 TO THE INCH • 10 X 15 INCHES
KEUFFEL & ESSER CO MADE IN USA

TEMPERATURE DEPTH LOG

ΔT Well No. B-227

Property-Project OK-779 Depth Logged

Map Tabernacle Hill Scale 15' Date: Drilled 6 Oct 76 Logged 12 Oct 76

State Utah County Millard Section NENW 10 T 23S R 6W

Instrument Probe #44 Operator HDP Elevation 4740 ft.

Comments 3/4" PVC

COMPUTER PROCESSING

RT JUSTIFY:

Card A

Proj No →	Well No →	DA →	MO →	YR	*
779	227	12	10	76	CM

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

Site Description	Operator	Editor
2.5 KM S W OF HOT SPR		

Card B

Scale Unit in cm	Map Size (7.5, 15., 60)	N Lat Degree	N Lat Min	W Long Degree	W Long Min
CM	15.	38.	25.	112.	45.

Map Location Δ

Use decimals

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

Northing	Easting	Elev	
19.7	32.7	7720	F ← Write M if meters

SEGMENT DEPTH

	Start	End	K	ΔK
C	6.0	11.0		
D	15.5	17.5		
E	19.5	30.0	-3.0	-.5
F				
G				

Conti car

SEGMENT DEPTH

	Start	End	K	ΔK
C	11.0	15.5		
D	17.5	19.5		
E	.999			
F				
G				

Final Segment: Start = .9

Not on storage - RB 11/28/79

B227 1 of 2

TEMPERATURE - DEPTH LOG

Location 1½ miles SW Hatton Hot Spring Date October 12, 1976

Map Tabernacle Hill Utah 15' Quad

Property OK T 23S R 6W sec NE¼ NW¼ 10

Drill Hole B-227 Date Drilled October 6, 1976 Elevation 4740 ft.

Instrument Probe 44 Operator DP

Comments ¾" PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
1.0	84.62	21.875			
1.5	83.95	22.070			
2.0	83.91	22.105			
2.5	83.95	22.090			
3.0	84.88	21.790			
3.5	87.58	20.930			
4.0	89.62	20.295			
4.5	91.96	19.580			
5.0	93.55	19.100			
5.5	94.56	18.800			
6.0	94.65	18.775			
6.5	94.16	18.915			
7.0	94.02	18.960			
7.5	93.39	19.145			
8.0	93.02	19.260			
8.5	92.26	19.490			
9.0	92.52	19.715			
9.5	91.10	19.840			
10.0	90.69	19.965			
10.5	90.21	20.115			
11.0	90.00	20.180			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

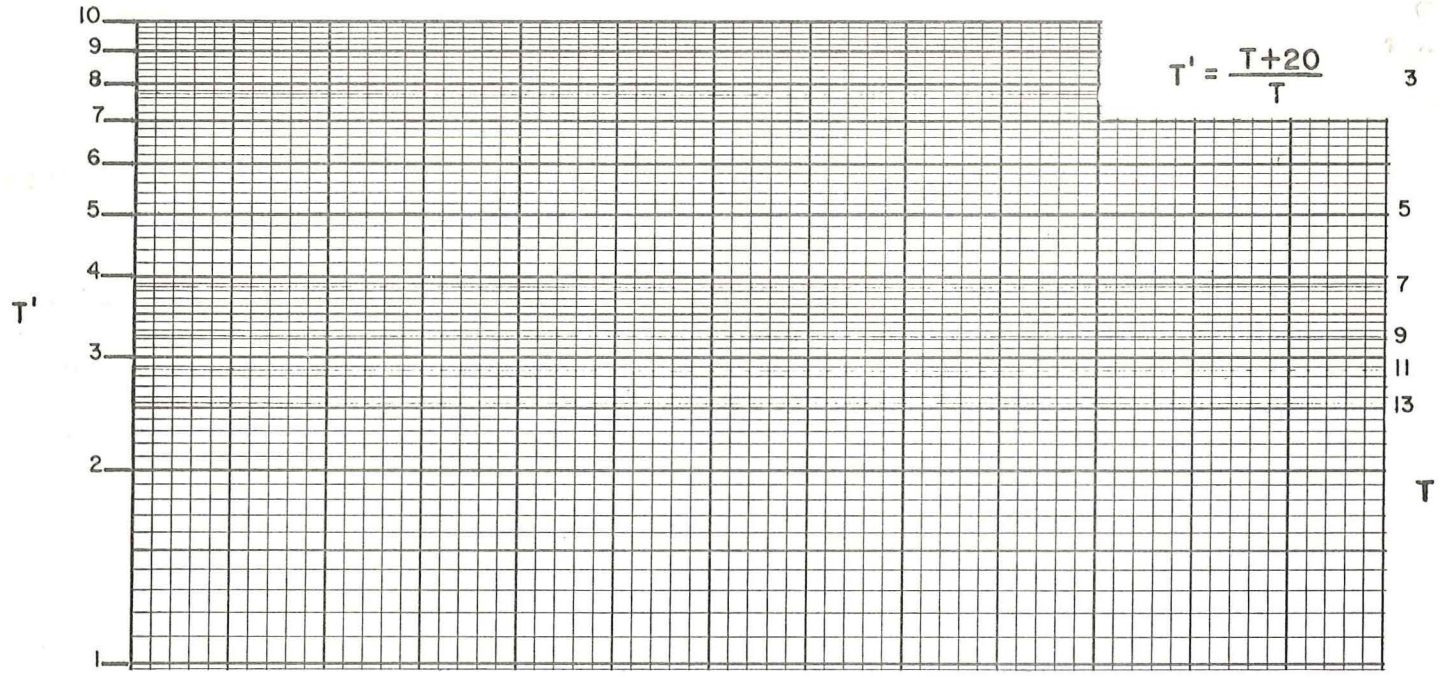
Property _____ T _____ R _____ sec _____

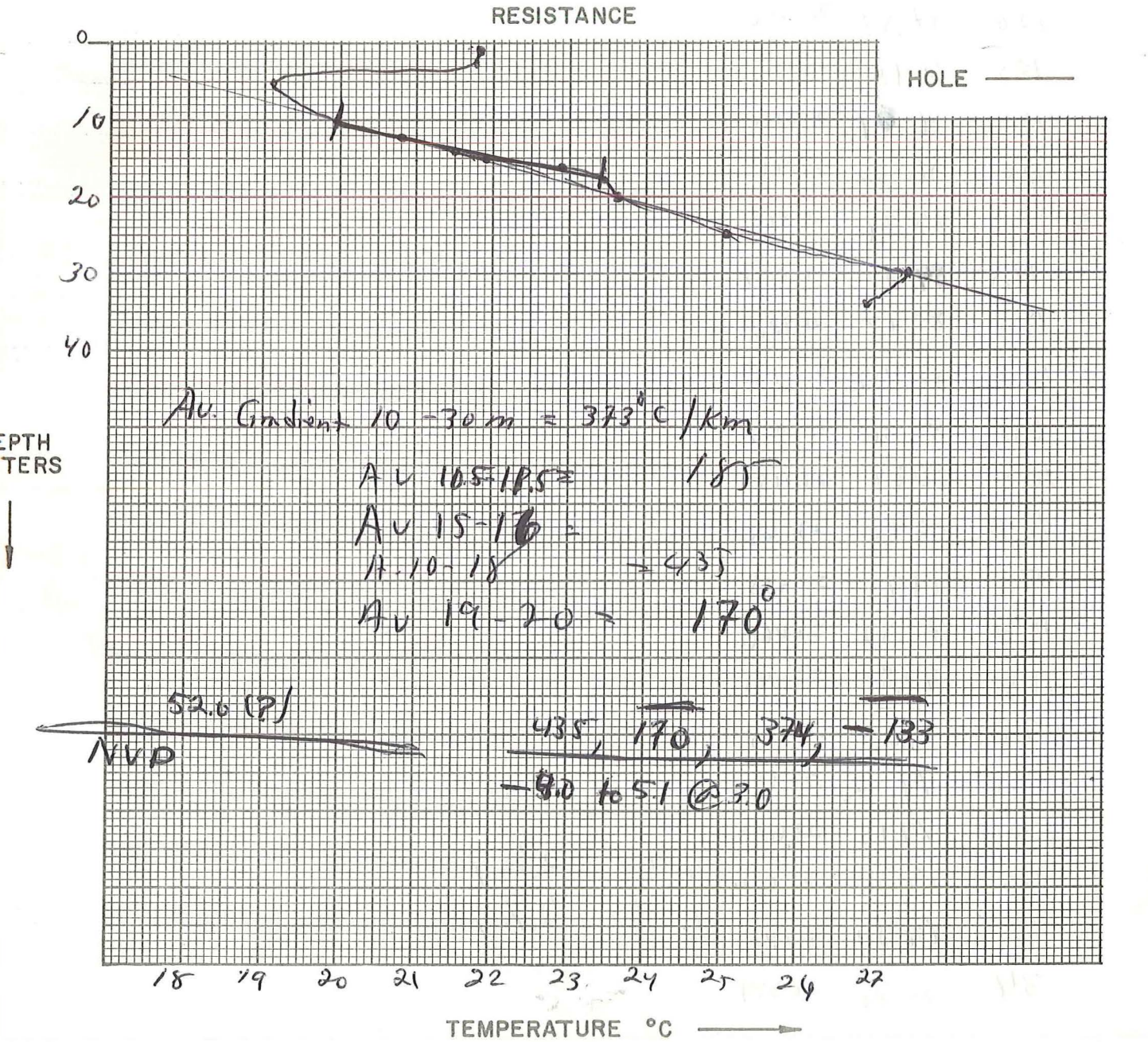
Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
11.5	89.58	20.310			
12.0	87.87	20.640			
12.5	86.76	21.190			
13.0	86.04	21.230			
13.5	86.37	21.715			
14.0	85.74	21.515			
14.5	84.77	21.825			
15.0	83.43	21.930			
15.5	82.02	22.720			
16.0	81.30	22.905			
16.5	80.89	23.115			
17.0	80.40	23.265			
17.5	79.90	23.435			
18.0	79.82	23.460			
18.5	79.89	23.445			
19.0	79.66	23.515			
19.5	79.42	23.595			
20.0	79.15	23.685			
25	75.30	25.030	1.345	269	
30	68.81	27.425	2.395	479	
34	70.20	26.895	-.530	-133	


T' = (T+20)/T
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13


RESISTANCE
HOLE
DEPTH METERS
0
10
20
30
40
Av. Gradient 10 - 30 m = 373° C / km
Av 10.5-18.5 = 185
Av 15-16 =
Av 10-18 = 435
Av 19-20 = 170°
52.6 (?)
NVP
435, 170, 374, -133
-9.0 to 51 @ 3.0
18
19
20
21
22
23
24
25
26
27
TEMPERATURE °C

B-227

Lithologic Log B-227 (SWU-27)

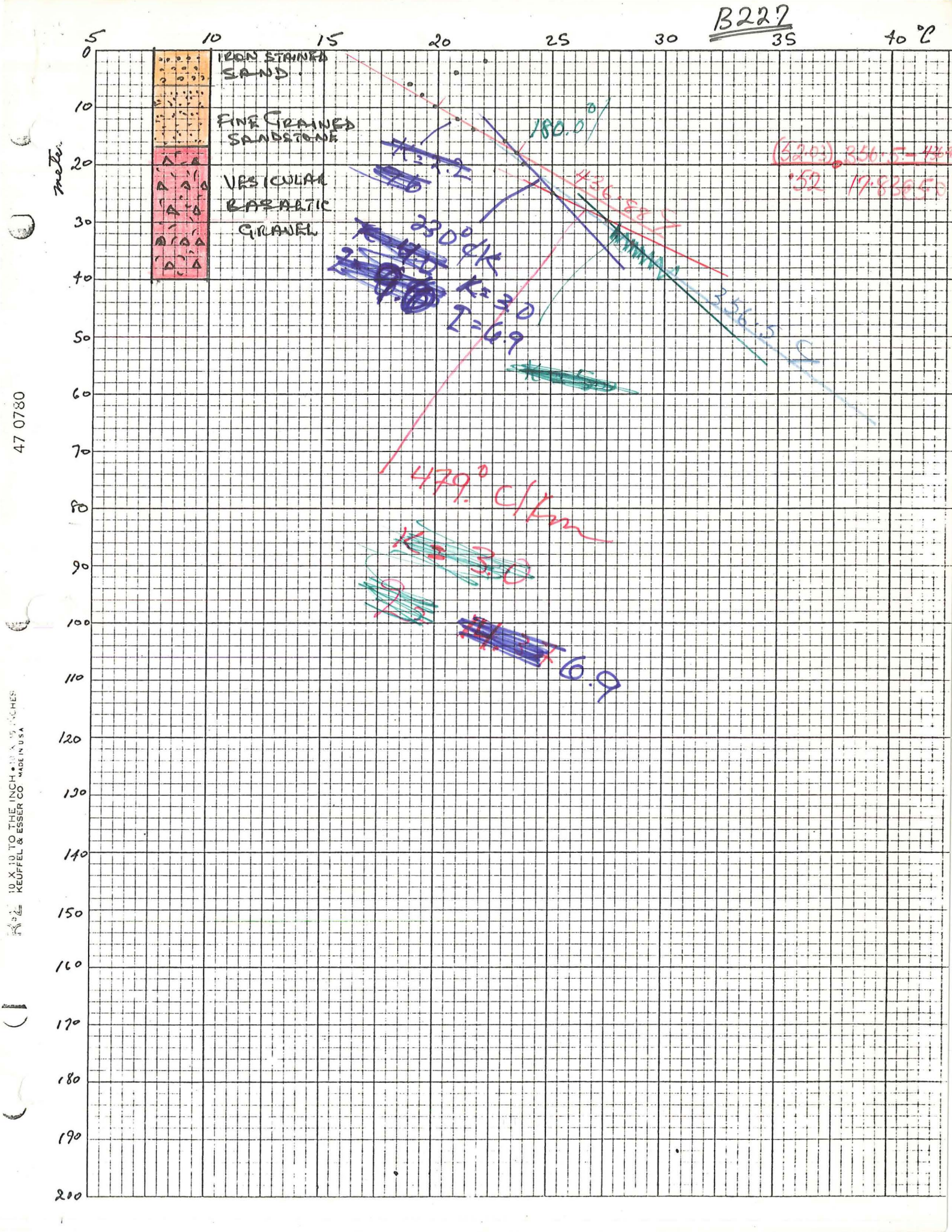
NE¼ NW¼ Sec 10 T23S R6W Elevation: 4,740'

Depth (m)	Description
0 - 6.2	Buff to pink, slightly iron stained, fine to very fine-grained sand.
6.2 - 17	Buff to light brown, very fine-grained sandstone.
17 - 26	Gravel with a clayey sand matrix. Fragments consist of white, red, and buff colored quartzite.
26 - 31	Pea gravel composed of fragments of quartzite in a matrix of clay.
31 - 35	Basalt gravel.
35 - 40	Dark gray, fine-grained, somewhat vesicular basalt.

H. Dean Pilkington

HDP:mmo

cc: Art Lange
Mark Alldredge
Cheryl Caywood


B227
5
10
15
20
25
30
35
40 °C
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
180
190
200
metres
IRON STAINED SAND
FINE GRAINED SANDSTONE
VESICULAR BASALTIC GRAVEL
180.0°
(520)
.52
436.88
356.5
230°
479.° C/Km
3.0
6.9
47 0780
10 X 10 TO THE INCH
KEUFFEL & ESSER CO MADE IN USA

TEMPERATURE DEPTH LOG

ΔT Well No. 230

Property-Project Boot Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →	Well No →	Date Logged DA →	MO →	YR	*
1 2 3 4	5 6 7 8 9 10	11 12 13	14 15 16	17 18	19 20
7 5 5	2 3 0	2 6	0 C	7 6	C M

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

Site Description	Operator	Editor
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
7 . 3 k M W E S T O F C O V E F O R T , U T A H	D P	/ H L H

Card B

Map Location Δ

Scale Unit in cm	Map Size (7.5, 15.,60)	N Lat Degree	N Lat Min	W Long Degree	W Long Min
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
C M	1 5 .	3 8 .	3 0 .	1 1 2 .	4 5 .

Use decimals

Δ 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
1 9 . 1 5	1 2 . 0 5	5 8 0 .	F

Write M if meters

18.6 Use decimals 10,85 5860.

SEGMENT DEPTH

	Start	End	K	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
C	1 5 . 0	2 5 . 0	- 5 . 0	. 5
D	. 9 9 9			
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
	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
C	2 5 . 0	6 0 . 0		- . 5
D				
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location 3 Miles NNW Cinder Crater Date October 26, 1976

Map Cove Fort, Utah 15' Quad

Property LVO T 25S R 7W sec SE¼ NW¼ 29

Drill Hole B-230 Date Drilled Oct 14, 1976 Elevation 5720 ft.

Instrument Probe 39 Operator RO

Comments 3/4" PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
2.0	107.71	13,880			
2.5	110.30	13,725			
3.0	111.42	13,440			
3.5	112.66	13,130			
4.0	113.84	12,835			
4.5	114.99	12,550			
5.0	116.08	12,285			
5.5	116.76	12,115			
6.0	117.07	12,045			
6.5	117.21	12,005			
7.0	117.14	12,025			
7.5	116.69	12,135			
8.0	116.26	12,240			
8.5	115.72	12,375			
9.0	115.17	12,510			
9.5	114.52	12,665			
10.0	113.83	12,835			
10.5	113.12	13,015			
11.0	112.63	13,140			
11.5	112.02	13,290			
12.0	111.44	13,435			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T ____ R ____ sec ____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
12.5	110.87	13.550			
13.0	110.37	13.710			
13.5	109.87	13.835			
14.0	109.50	13.930			
14.5	109.12	14.030			
15.0	108.67	14.145			
15.5	108.31	14.240			
16.0	107.99	14.320			
16.5	107.70	14.395			
17.0	107.50	14.450			
17.5	107.21	14.520			
18.0	106.98	14.580			
18.5	106.72	14.650			
19.0	106.45	14.720			
19.5	106.18	14.790			
20.0	105.93	14.860	.705	141	
25	103.27	15.565	.950	190	
30	99.78	16.515	1.225	245	
35	95.43	17.740	1.210	240	
40	91.31	18.940	1.265	253	
45	87.47	20.105	1.215	243	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

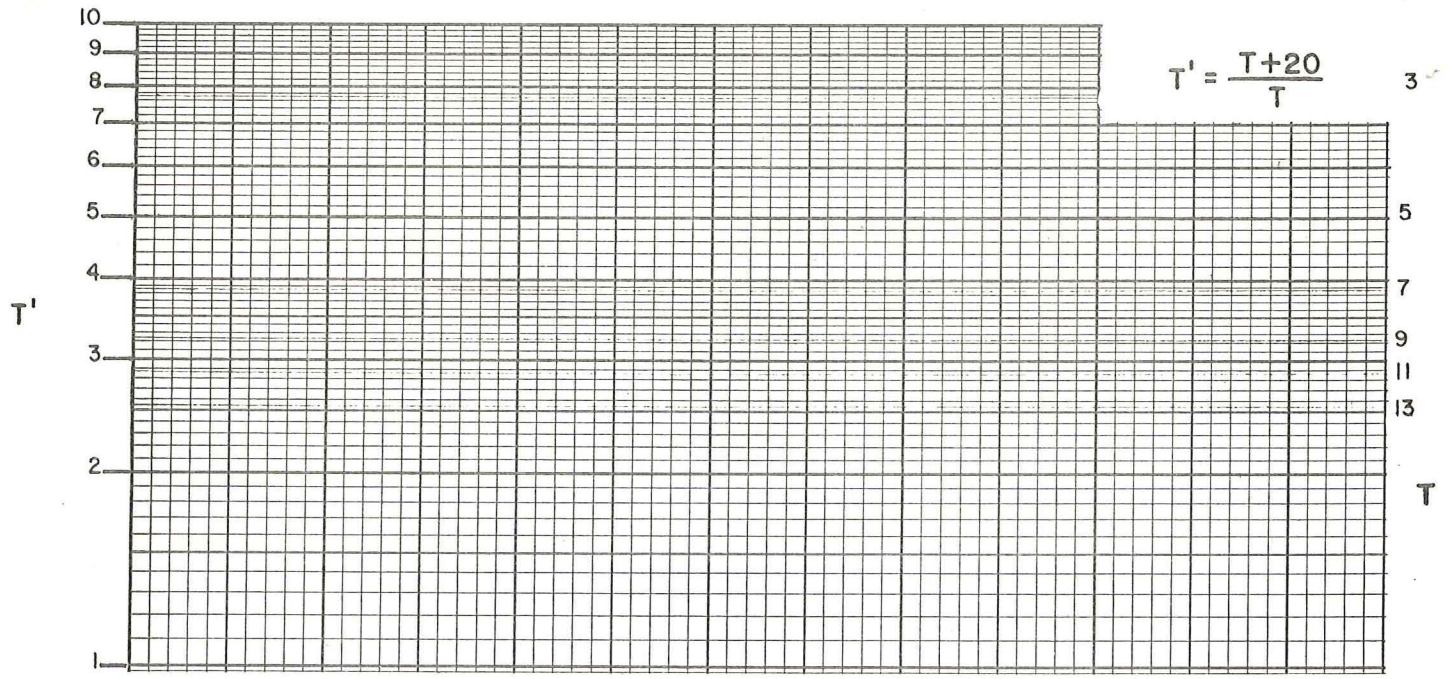
Property _____ T _____ R _____ sec _____

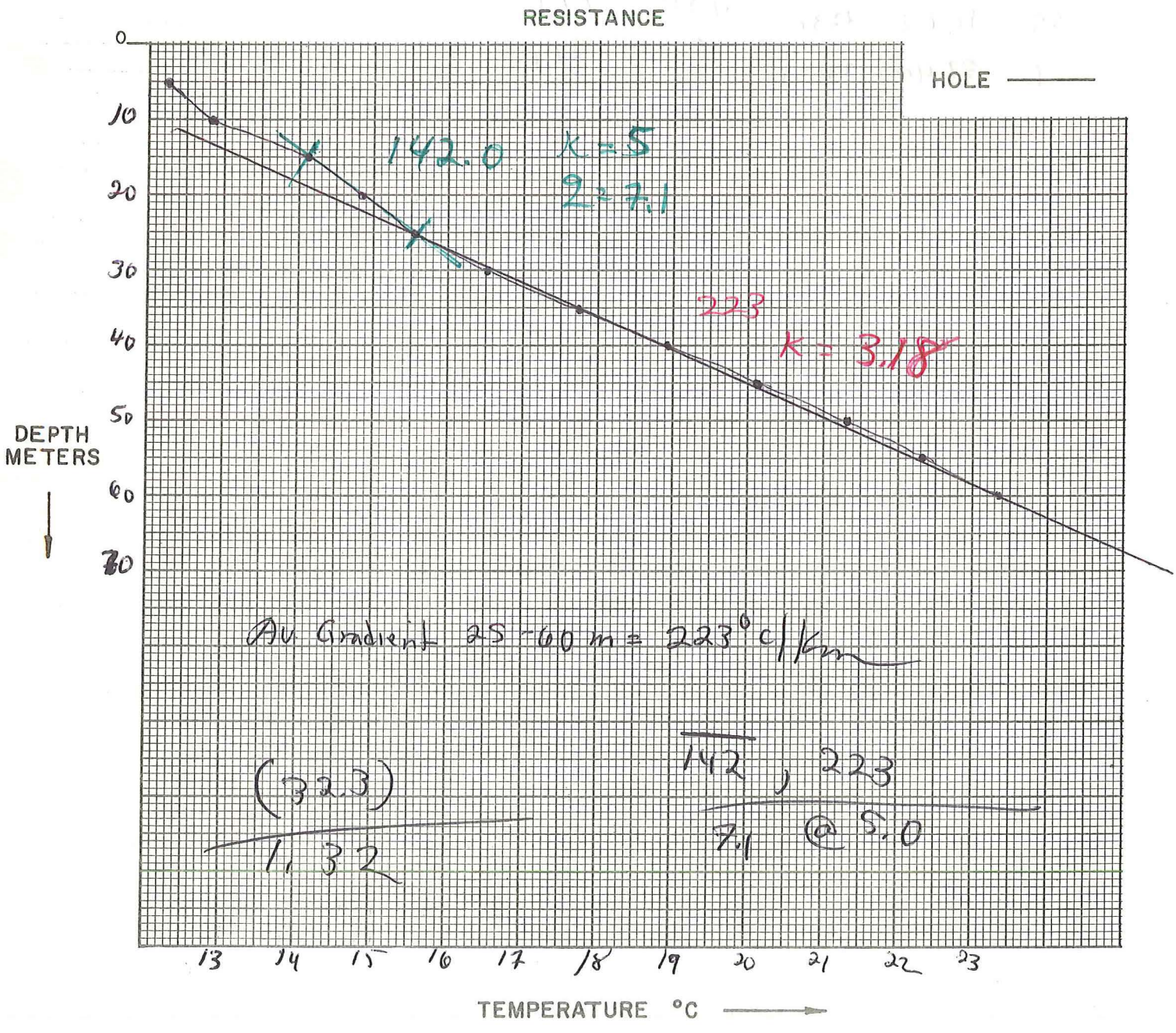
Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
50	53.62	21.320			
			.980	196	
55	50.62	22.300			
			1.055	211	
60	77.49	23.355			


$T' = \frac{T+20}{T}$
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13


RESISTANCE
HOLE
142.0
K = 5
2 = 7.1
223
K = 3.18
DEPTH METERS
0
10
20
30
40
50
60
70
Au Gradient 25-60 m = 223° c/km
(32.3)
1.32
142) 223
7.1 @ 5.0
13
14
15
16
17
18
19
20
21
22
23
TEMPERATURE °C

Lithologic Log B-230

SE¼ NW¼ Sec 29 T25S R7W Elevation: 5,780'

Depth (m)	Description
0 - 4.6	Soil mixed with varying amounts of lag gravels and sheet wash debris.
4.6 - 9.3	Gravel composed of fragments quartzite, limestone, basalt and Belknap volcanics.
9.3 - 26.0	Dark gray to black, fine-grained dense to slightly vesicular basalt.
26.0 - 62.0	Gravel made up of fragments of quartzite, limestone and Belknap volcanics set in a matrix of clay. Below 52m most of the fragments are red volcanics of the Belknap volcanics.

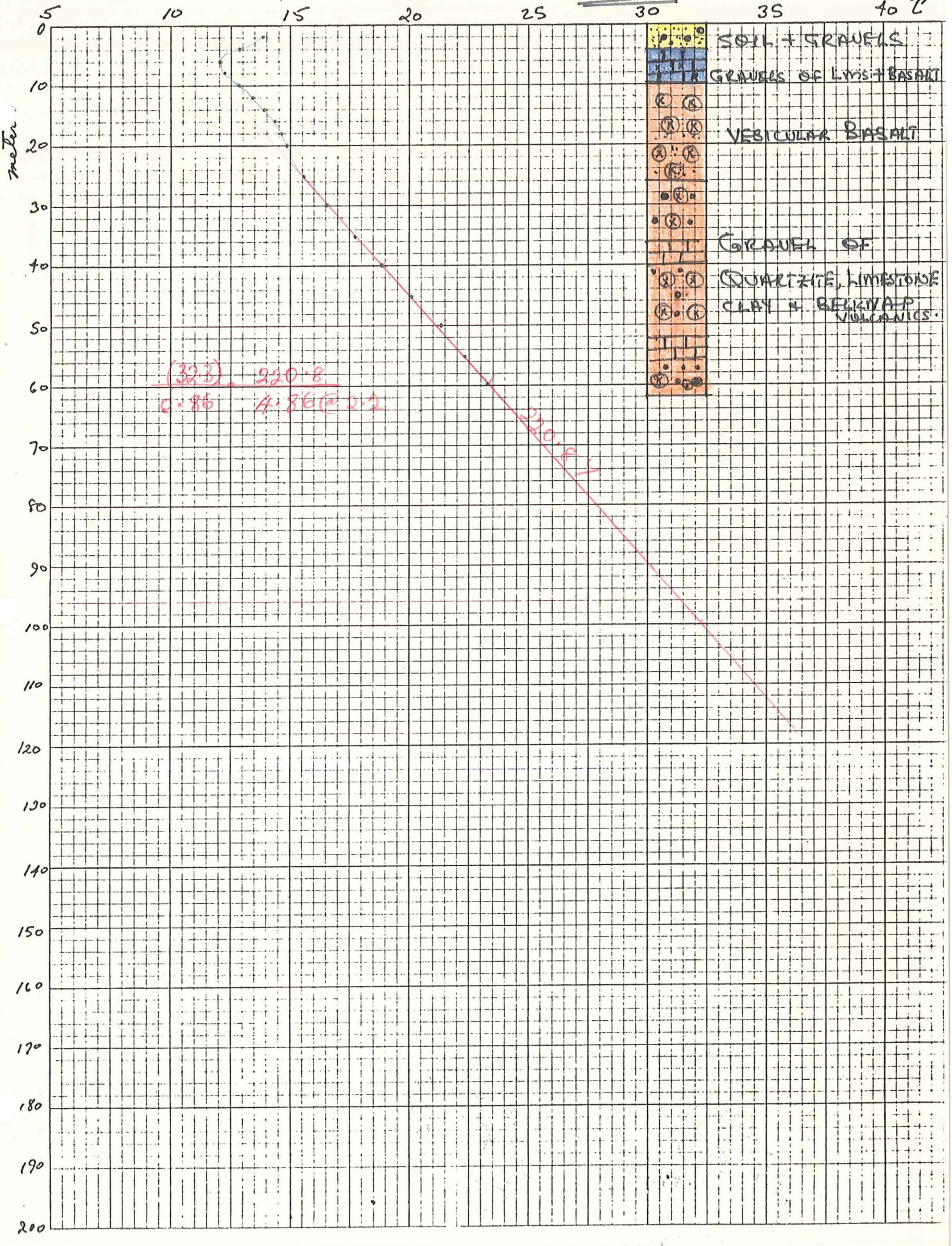
H. D. Pilkington (mo)

H. D. Pilkington
October 26, 1976

HDP:mmo

cc: Art Lange
Cheryl Caywood
File Copy to Dean
Mark Alldredge

B-230



47 0780

KEUFFEL & ESSER CO MADE IN U.S.A.

TEMPERATURE DEPTH LOG

ΔT Well No. 231

Property-Project Best Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →				Well No →						Date Logged DA →		MO →		YR		*	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	7	5	5				2	3	1	2	6		0	C		7	6	C	M

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

| Site Description | | | | | |

TEMPERATURE - DEPTH LOG

Location 3/4 mile West of Parish Reservoir Date Oct 26, 1976

Map Cove Fort, Utah 15' Quad

Property LVO T 25 S R 8W sec SE 1/4 SW 1/4 24

Drill Hole B-231 Date Drilled October 13, 1976 Elevation 5640 ft.

Instrument Probe 39 Operator RS

Comments 3/4" PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
1.0	108.46	14,195			
1.5	107.50	14,445			
2.0	106.53	14,700			
2.5	105.40	15,000			
3.0	104.93	15,120			
3.5	106.65	14,670			
4.0	108.59	14,165			
4.5	110.08	13,785			
5.0	111.12	13,515			
5.5	111.78	13,350			
6.0	112.23	13,240			
6.5	112.52	13,165			
7.0	112.62	13,140			
7.5	112.61	13,145			
8.0	112.49	13,175			
8.5	112.30	13,220			
9.0	112.09	13,275			
9.5	111.79	13,350			
10.0	111.50	13,420			
10.5	111.17	13,505			
11.0	110.85	13,585			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T ____ R ____ sec ____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
11.5	110.54	13.665			
12.0	110.17	13.760			
12.5	109.72	13.875			
13.0	109.41	13.955			
13.5	109.08	14.035			
14.0	108.80	14.110			
14.5	108.55	14.175			
15.0	108.27	14.250			
15.5	107.01	14.315			
16.0	107.72	14.380			
16.5	107.58	14.425			
17.0	107.29	14.500			
17.5	106.96	14.590			
18.0	106.68	14.660			
18.5	106.44	14.725			
19.0	106.21	14.785			
19.5	106.00	14.835			
20.0	105.77	14.900	.600	120	
25	103.51	15.500	.540	108	
30	101.52	16.040	.650	130	
35	99.14	16.690	.605	121	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

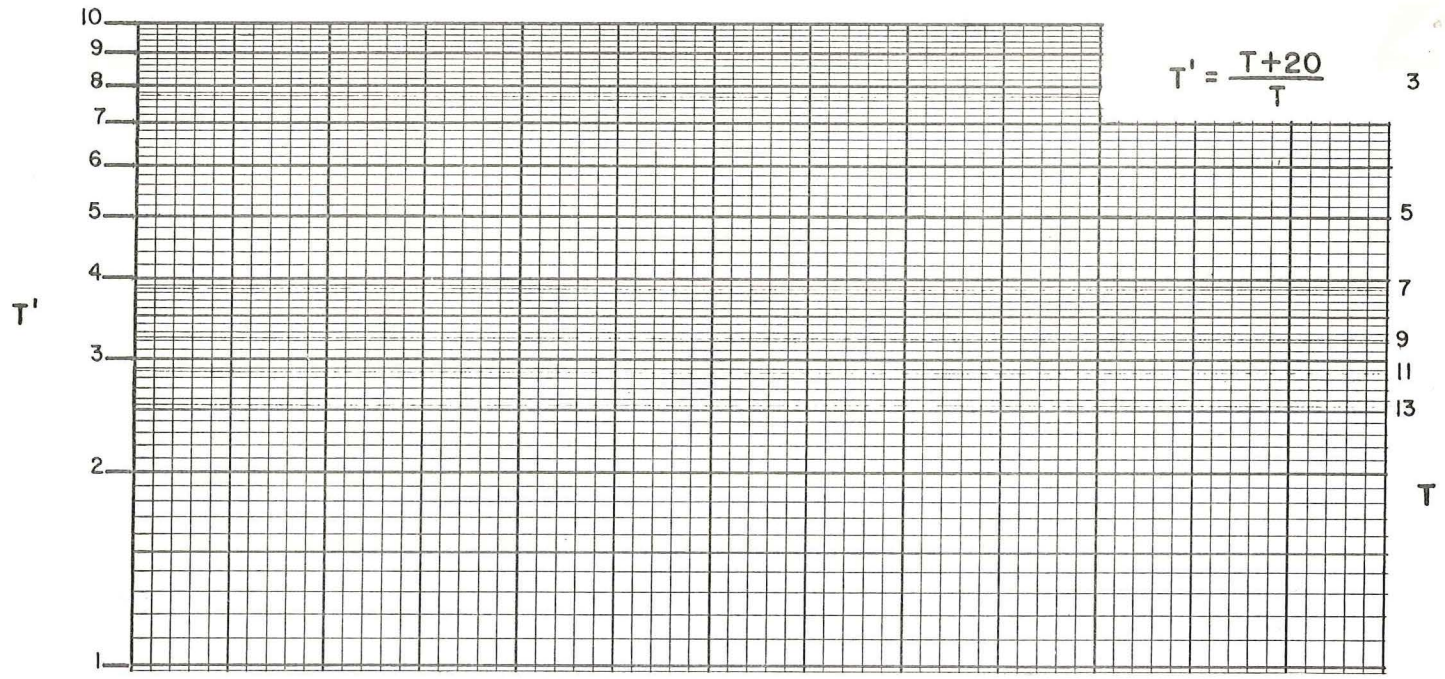
Property _____ T _____ R _____ sec _____

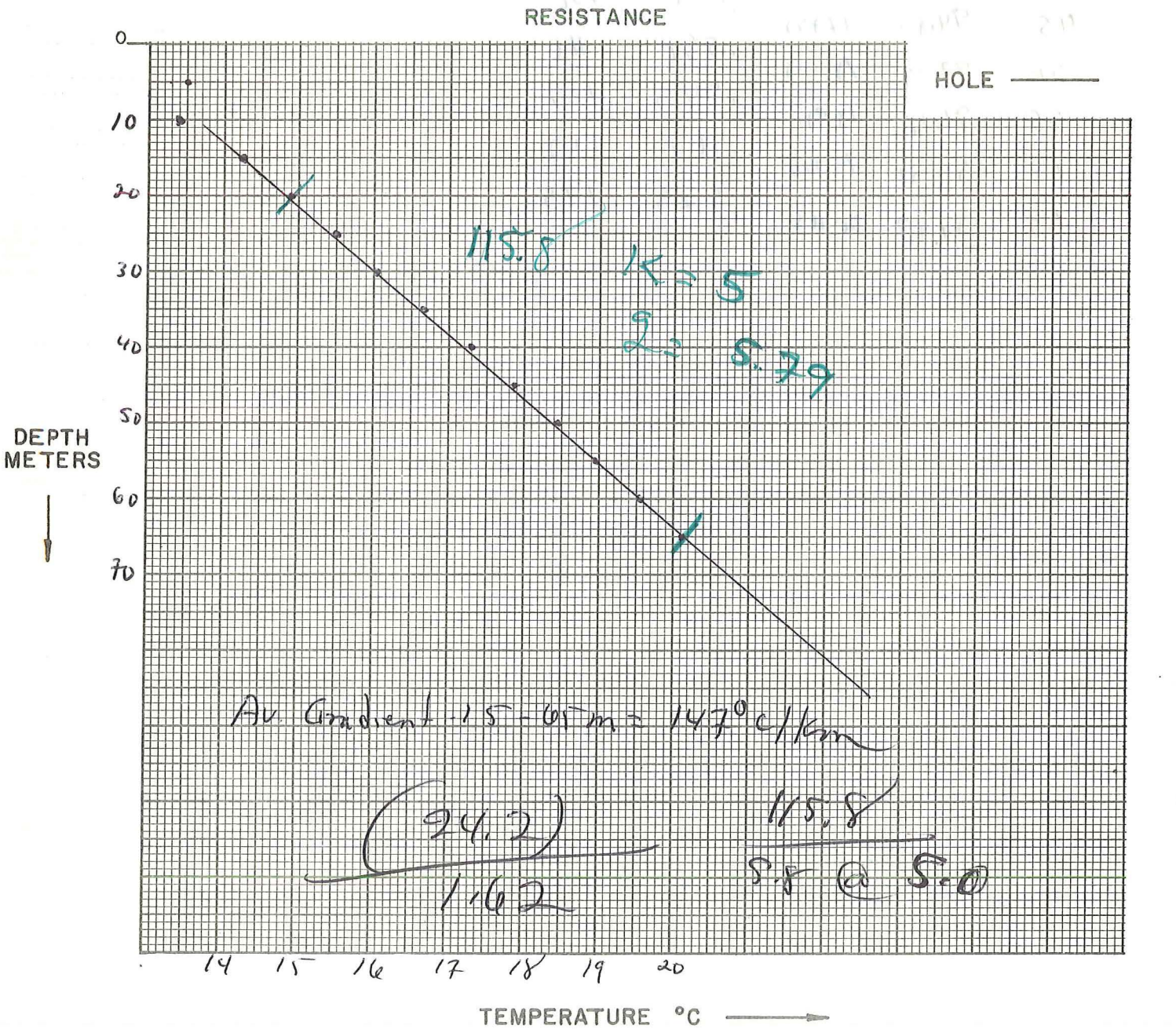
Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
40	96.95	17.295			
45	94.89	17.895	.600	120	
50	92.97	18.445	.550	110	
55	91.19	18.980	.545	109	
60	89.31	19.540	.560	112	
65	87.43	20.115	.575	115	


T' = (T+20)/T
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13


RESISTANCE
HOLE
DEPTH METERS
0
10
20
30
40
50
60
70
14
15
16
17
18
19
20
TEMPERATURE °C
115.8
K = 5
Q = 5.79
Av. Gradient 15 - 65 m ≈ 14.7° C/km
(24.2)
1.62
115.8
5.8 @ 5.0

Lithologic Log B-231

SE¼ SW¼ Sec 24 T25S R8W

Elevation: 5,645'

Depth (m)	Description
0 - 3	Brown to buff clayey soil.
3 - 34	Dark gray to black, fine-grained dense basalt. Iron stained interflow zones at 12m and 24 meters.
34 - 62	Brown clayey tuffaceous lake sediments.

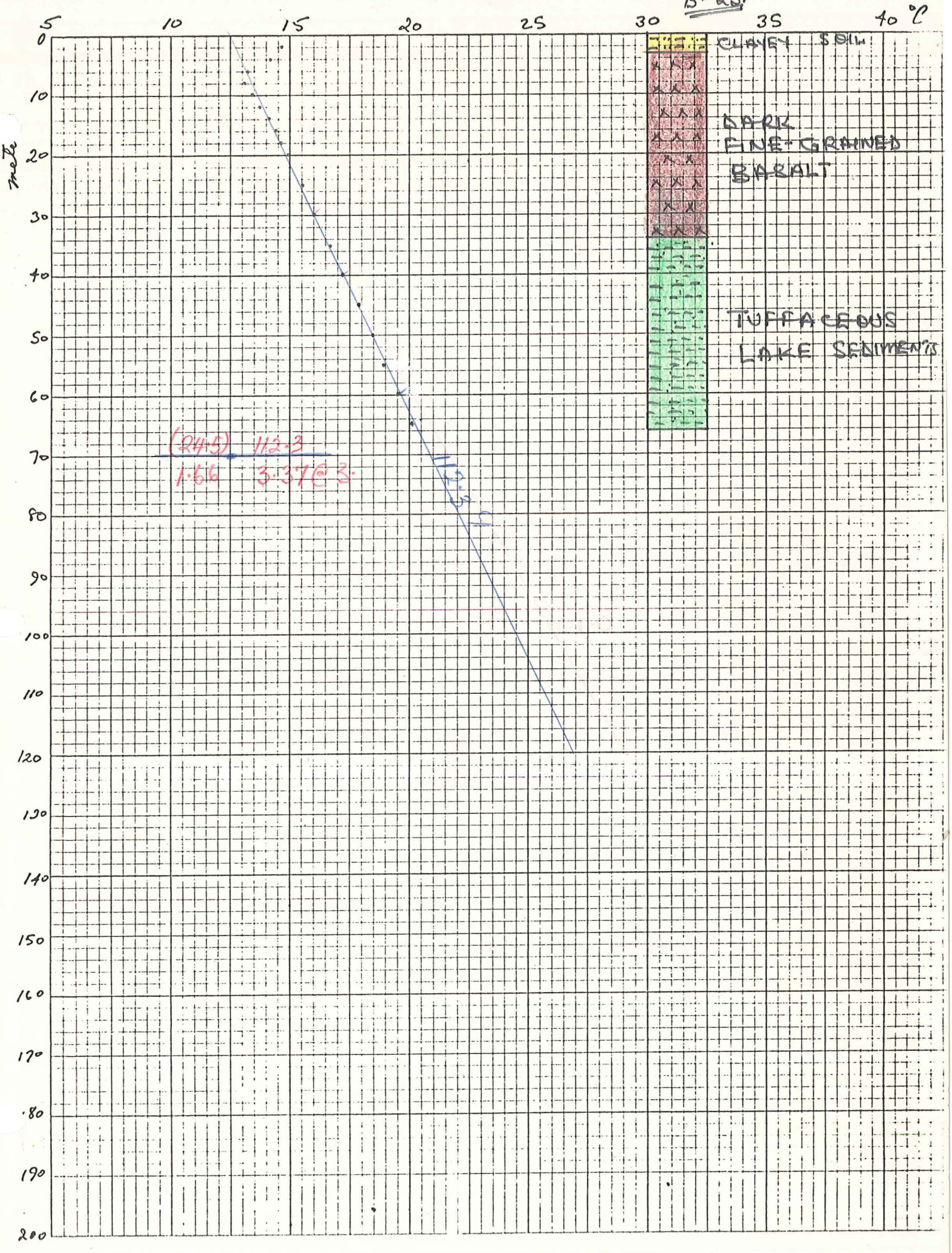
H. D. Pilkington (MC)

H. D. Pilkington
October 26, 1976

HDP:mmo

cc: Art Lange
Cheryl Caywood
Mark Alldredge
File copy to Dean

B-231



47 0780

KEUFFEL & ESSER CO

TEMPERATURE DEPTH LOG

ΔT Well No. 232

Property-Project Best Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

RT JUSTIFY:

Card A

Proj No →				Well No →						Date Logged DA →		MO →		YR		*	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	7	5	5				2	3	2	2	6		0	C		7	6	C	M

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

| Site Description | | | | | |

TEMPERATURE - DEPTH LOG

Location 5 Miles NW Cinder Crater Date October 26, 1976

Map Cove Fort, Utah 15' Quad

Property LVD T 25S R 8W sec NE¼SE¼ 27

Drill Hole B-232 Date Drilled Oct 13, 1976 Elevation 5635 ft.

Instrument Probe 39 Operator DS

Comments ¾" PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
2	103.06	15.620			
2.5	103.50	15.425			
3.0	105.62	14.935			
3.5	107.46	14.455			
4.0	109.36	13.965			
4.5	110.92	13.570			
5.0	112.25	13.235			
5.5	112.91	13.065			
6.0	113.43	12.940			
6.5	113.58	12.900			
7.0	113.49	12.925			
7.5	113.25	12.985			
8.0	112.85	13.080			
8.5	112.46	13.180			
9.0	111.97	13.305			
9.5	111.51	13.420			
10.0	111.16	13.520			
10.5	110.73	13.620			
11.0	110.28	13.730			
11.5	109.86	13.835			
12.0	109.46	13.940			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T _____ R _____ sec _____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
12.5	109.16	14,015			
13.0	108.90	14 085			
13.5	108.63	14155			
14.0	108.26	14,250			
14.5	108.03	14 310			
15.0	107,79	14 370			
15.5	107,62	14,415			
16.0	107.39	14,475			
16.5	107,21	14,525			
17.0	106.97	14,585			
17.5	106.74	14,645			
18.0	106.52	14,705			
18.5	106.37	14,745			
19.0	106.16	14800			
19.5	105.98	14,845			
20.0	105.83	14.885	.455	91	
25	104.11	15,340	.585	117	
30	101.92	15925	.370	74	
35	100 58	16 295	340	68	
40	99.34	16 635	.260	52	
45	98.40	16 895	.380	76	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

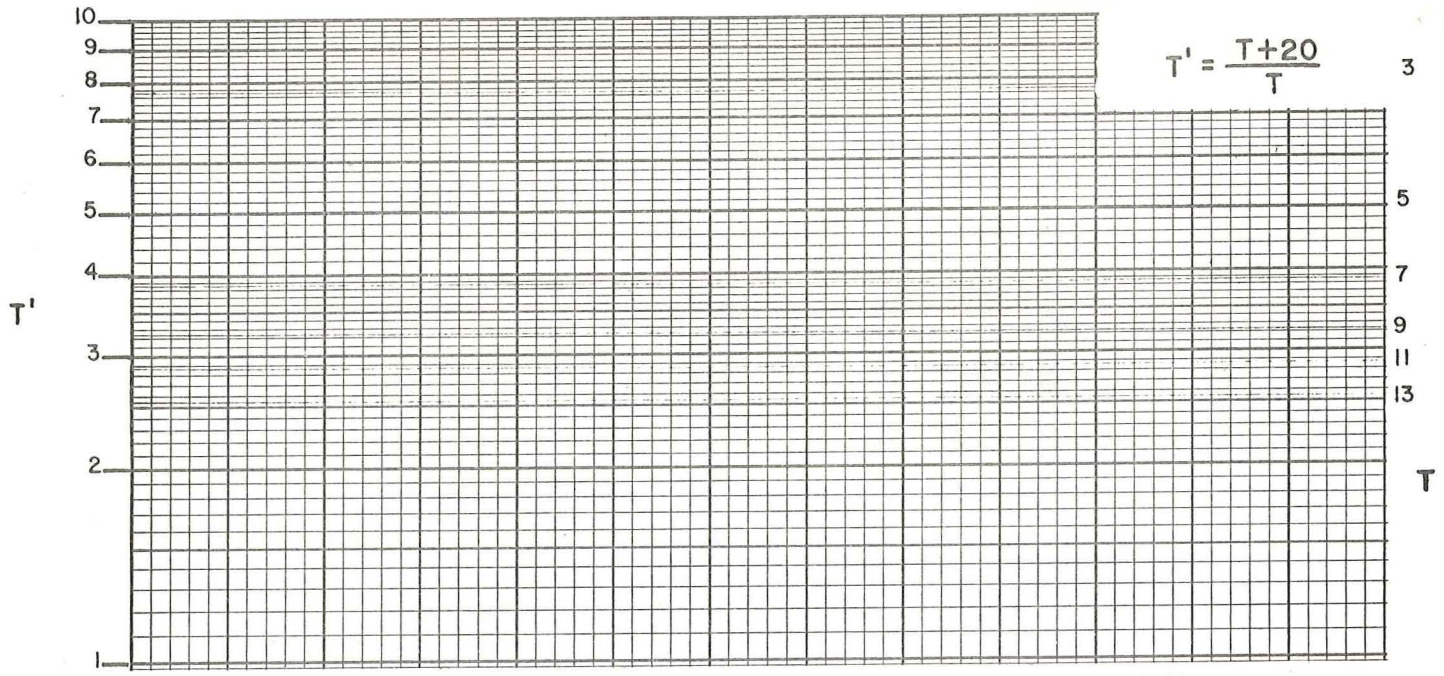
Property _____ T _____ R _____ sec _____

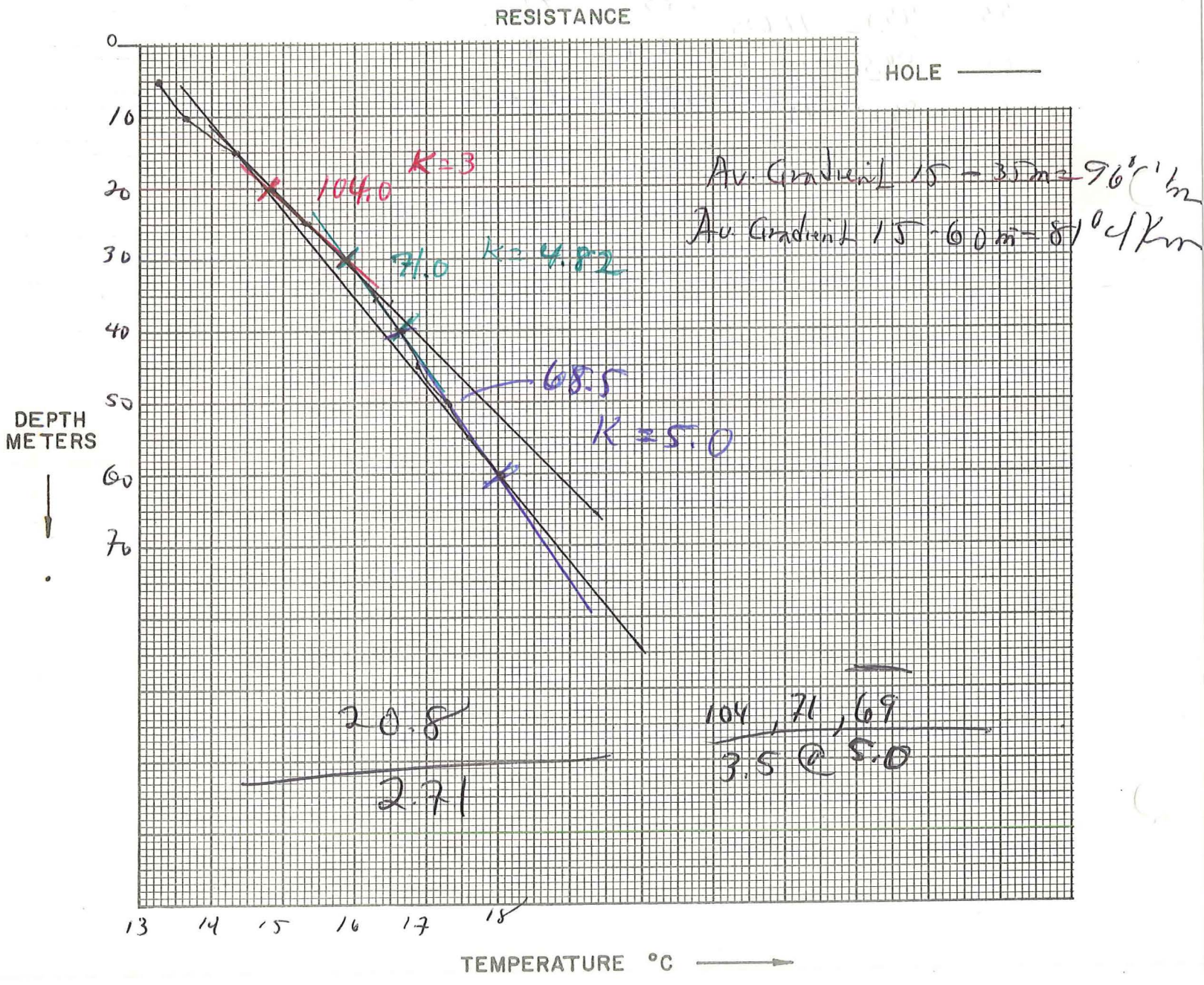
Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

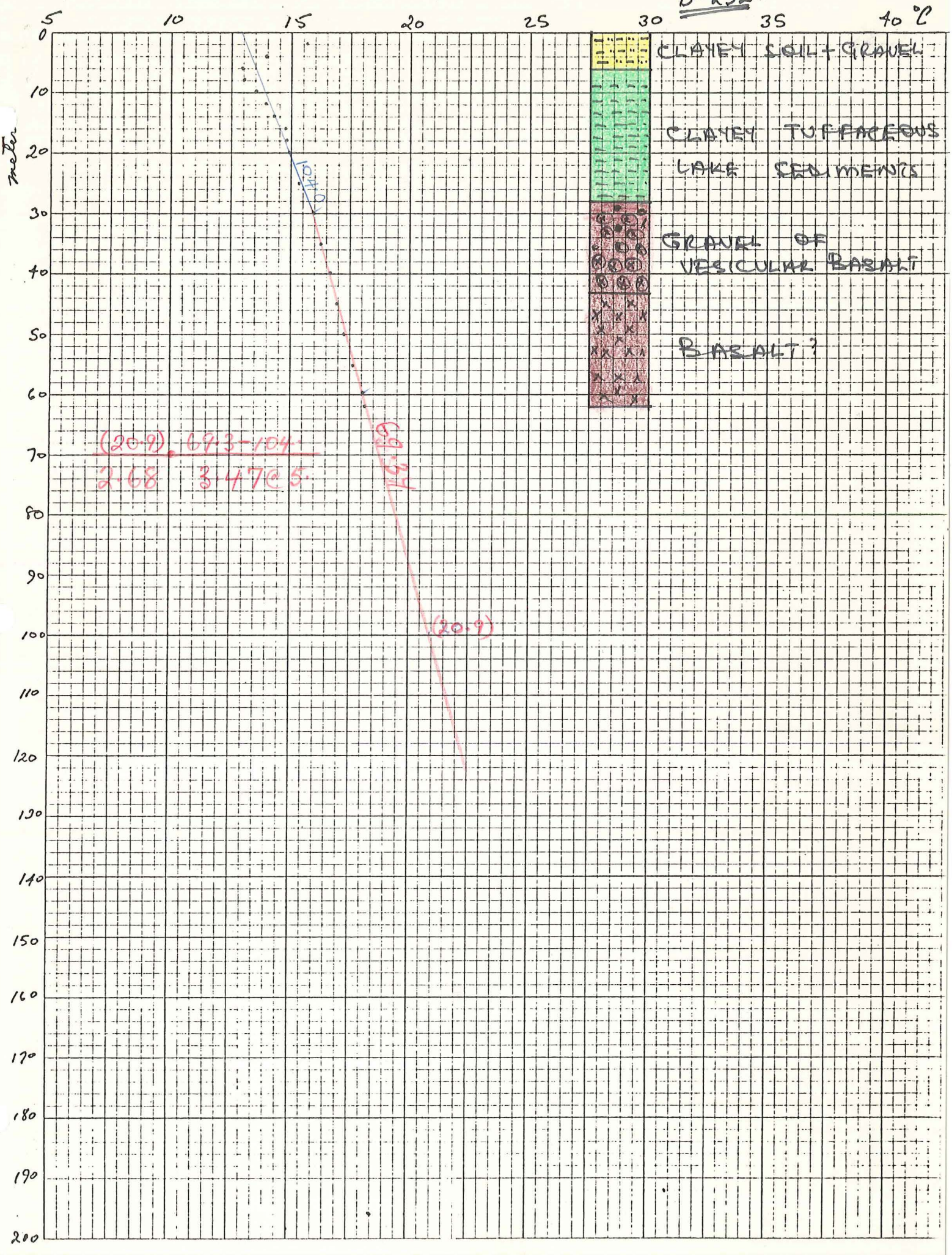
Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
50	97.05	17.275			
55	95.83	17.625	.350	70	
60	94.50	18.005	.380	76	
62	94.03	18.140	.135	67.5	


T' = T+20 / T
T'
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13
T


RESISTANCE
HOLE
DEPTH METERS
0
10
20
30
40
50
60
70
104.0
K=3
71.0
K=4.82
68.5
K=5.0
Av. Gradient 15 - 30 m = 96°C/Km
Av. Gradient 15 - 60 m = 81°C/Km
20.8
2.71
104, 71, 69
3.5 @ 5.0
13
14
15
16
17
18
TEMPERATURE °C

B-232.



4/0/80

10 X 10 TO THE INCH
KEUFFEL & ESSER CO MADE IN USA

TEMPERATURE DEPTH LOG

ΔT Well No. 233

Property-Project Best Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →	Well No →	Date Logged DA →	MO →	YR	*
1 2 3 4	5 6 7 8 9 10	11 12 13	14 15 16	17 18	19 20
7 5 5	2 3 3	2 6	0 6	7 6	C M

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

Site Description	Operator	Editor
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
2.4 KM NNW OF DANISH RESERVOIR	DP	HLH

Card B

Map Location Δ

Scale Unit in cm	Map Size (7.5, 15.,60)	N Lat Degree	N Lat Min	W Long Degree	W Long Min
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
CM	15.	38.	30.	112.	45.

Use decimals

Δ 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
24.35	6.5	5760.	F

Use decimals

← Write M if meters

SEGMENT DEPTH

	Start	End	K	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
C	25.0	60.0	-4.0	-.5
D				
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
	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
C	.999			
D				
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location 1½ miles north Danish Reservoir Date Oct 26, 1976

Map Cove Fort, Utah 15' Quad

Property LUO T 25 S R 8W sec SE¼ NW¼ 13

Drill Hole B-233 Date Drilled October 14, 1976 Elevation 5760 ft.

Instrument Probe 39 Operator DP

Comments 3/4" PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
1.0	106.07	14.820			
1.5	105.37	15.005			
2.0	104.57	15.220			
2.5	103.09	15.615			
3.0	103.95	15.385			
3.5	105.91	14.865			
4.0	108.34	14.230			
4.5	110.30	13.725			
5.0	111.69	13.375			
5.5	112.61	13.145			
6.0	113.16	13.005			
6.5	113.26	12.980			
7.0	113.15	13.010			
7.5	112.85	13.085			
8.0	112.34	13.210			
8.5	111.79	13.350			
9.0	111.00	13.545			
9.5	110.20	13.750			
10.0	109.36	13.965			
10.5	108.52	14.185			
11.0	107.74	14.385			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T ____ R ____ sec ____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
11.5	107.09	14.555			
12.0	106.29	14.760			
12.5	105.62	14.940			
13.0	104.93	15.120			
13.5	104.27	15.295			
14.0	103.63	15.470			
14.5	103.11	15.610			
15.0	102.61	15.745			
15.5	102.27	15.835			
16.0	101.89	15.935			
16.5	101.54	16.030			
17.0	101.09	16.155			
17.5	100.72	16.245			
18.0	100.47	16.325			
18.5	100.05	16.440			
19.0	99.65	16.550			
19.5	99.26	16.660			
20.0	98.81	16.780	.945	189	
25	95.47	17.725	.780	156	
30	92.79	18.505	.710	142	
35	9940	19.215	.690	138	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

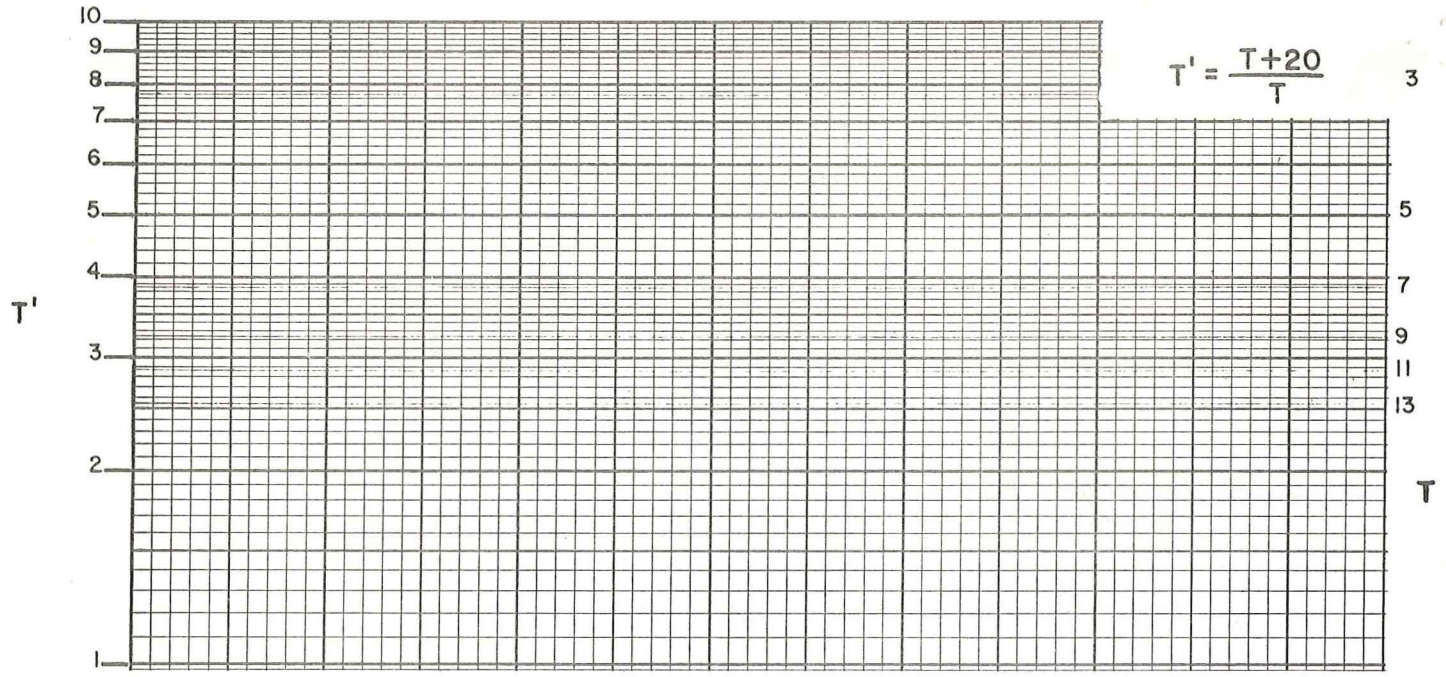
Property _____ T ____ R ____ sec ____

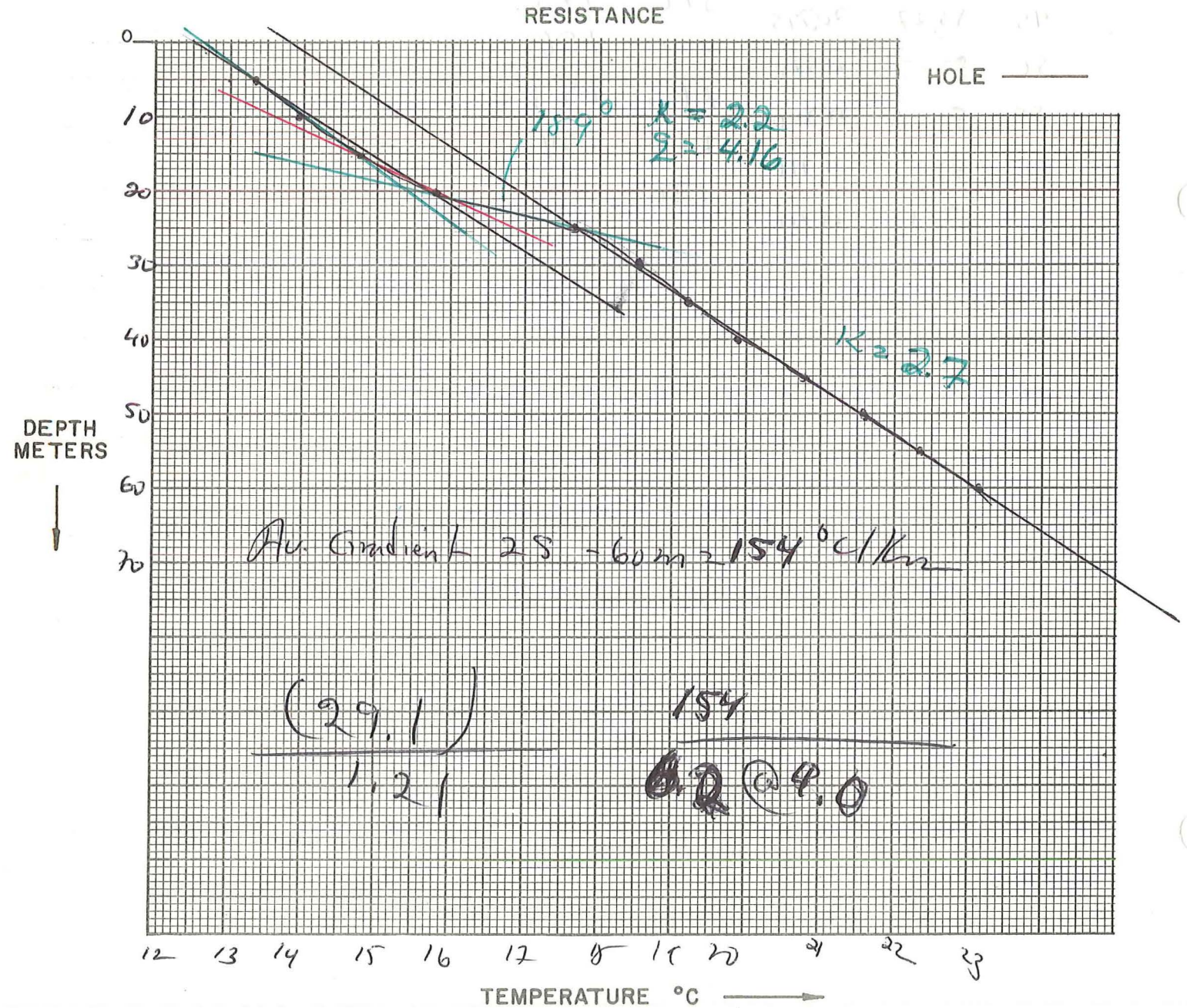
Drill Hole _____ Date Drilled _____ Elevation ____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
40	58.12	19.905			
			.890	178	
45	85.27	20.795			
			.780	156	
50	82.82	21.575			
			.765	153	
55	80.50	22.340			
			.770	154	
60	78.21	23.110			
			.120		
	77.86	23.230			


T' = (T+20)/T
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13


RESISTANCE
HOLE
DEPTH METERS
TEMPERATURE °C
0
10
20
30
40
50
60
70
12
13
14
15
16
17
18
19
20
21
22
23
K = 2.2
K = 2.7
Av. Gradient 25 - 60 m = 154 °C/Km
(29.1)
1.21
154
42 @ 8.0

Lithologic Log B-233

SE¼ NW¼ Sec 13 T25S R8W Elevation: 5,760'

Depth (m)	Description
0 - 1	Soil, clayey with some lag gravels.
1 - 25	Buff to light brown Tuffaceous Lake sediments.
25 - 27	Gray, fine to medium-grained sand with some gravel layers. The fragments are mostly basalt.
27 - 31	Gravel with fragments of quartzite, limestone and basalt.
31 - 38.5	Medium-gray crystal tuff, probably of rhyolitic composition.
38.5 - 48.0	Gravel composed of fragments of quartzite, limestone and Belknap volcanics.
48.0 - 62.0	Red-brown clayey matrix in a gravel made up of quartzite, limestone and Belknap volcanics.

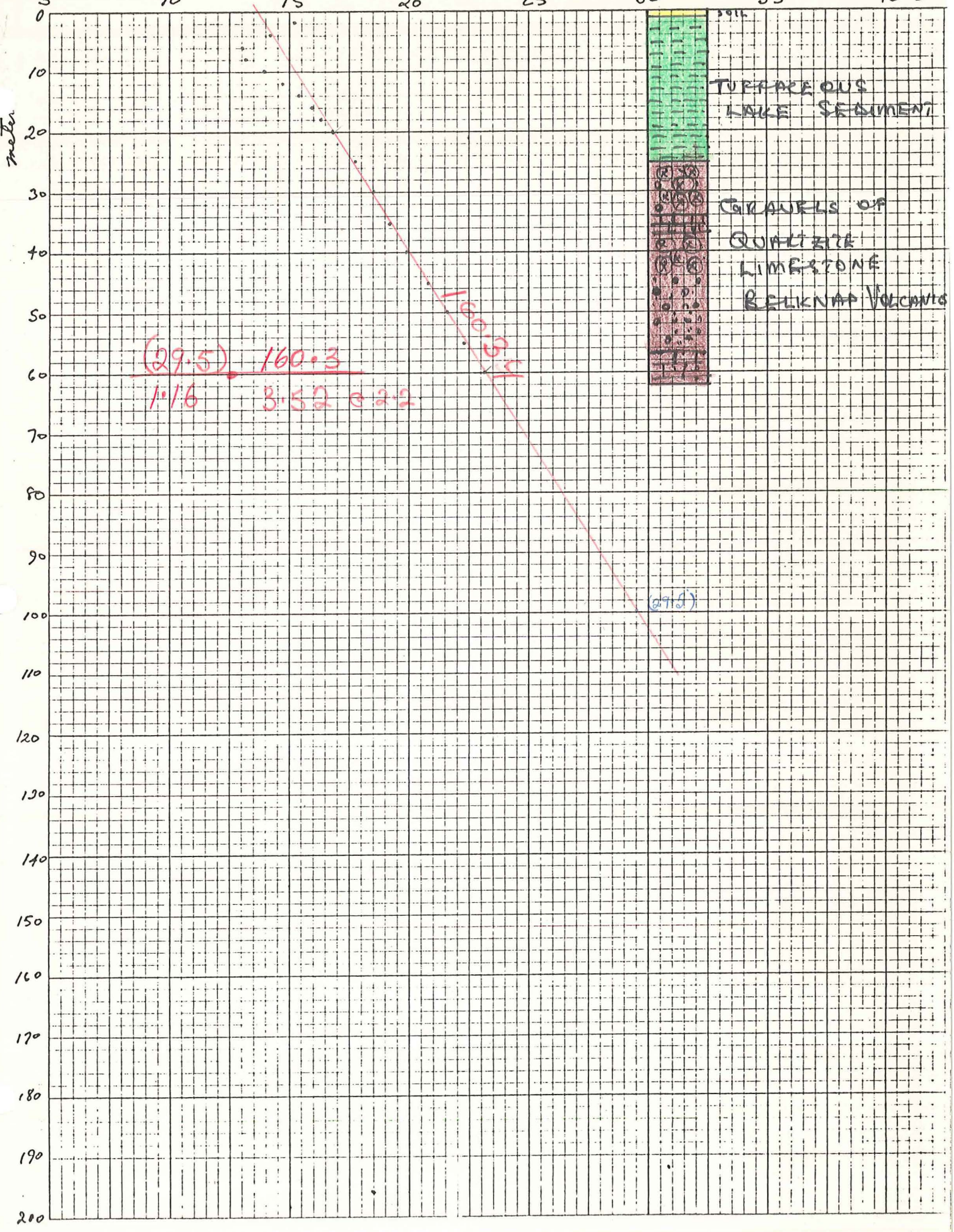
H. D. Pilkington (mmo.)

H. D. Pilkington
October 26, 1976

HDP:mmo

cc: Art Lange
Cheryl Caywood
Mark Alldredge
File copy to Dean

B-233.



47 0780

KEUFFEL & ESSER CO MADE IN USA

TEMPERATURE DEPTH LOG

ΔT Well No. 234

Property-Project Bast Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →				Well No →						Date Logged DA →		MO →		YR		*	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
		7	55				2	34		27			0	6		76		C	M

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

| Site Description | | | | | |

TEMPERATURE - DEPTH LOG

Location 2½ miles SW Whitesage Flat Date Oct 27, 1976

Map Cove Fort, Utah 15' Quad

Property Best T 24S R 7W sec SE¼ NW¼ 22

Drill Hole B-234 Date Drilled Oct 12, 1976 Elevation 5720 ft.

Instrument Probe 39 Operator DS

Comments ¾" PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
2.0	102.01	15.905			
2.5	100.97	16.190			
3.0	100.37	16.350			
3.5	100.90	16.205			
4.0	102.11	15.880			
4.5	103.45	15.515			
5.0	104.95	15.115			
5.5	106.17	14.795			
6.0	107.35	14.485			
6.5	108.38	14.220			
7.0	109.21	14.005			
7.5	109.83	13.845			
8.0	110.32	13.720			
8.5	110.66	13.635			
9.0	110.87	13.580			
9.5	110.98	13.555			
10.0	111.03	13.540			
10.5	110.98	13.555			
11.0	110.89	13.575			
11.5	110.70	13.625			
12.0	110.50	13.675			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T _____ R _____ sec _____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
12.5	110.31	13.725			
13.0	110.10	13.780			
13.5	109.89	13.830			
14.0	109.62	13.900			
14.5	109.40	13.955			
15.0	109.14	14.025			
15.5	108.93	14.075			
16.0	108.70	14.135			
16.5	108.47	14.195			
17.0	108.28	14.245			
17.5	108.12	14.285			
18.0	109.90	14.745			
18.5	107.74	14.385			
19.0	107.50	14.450			
19.5	107.40	14.470			
20.0	107.26	14.510	.380	76	
25	105.81	14.890	.350	70	
30	104.41	15.260	.385	77	
35	102.98	15.645	.380	76	
40	101.55	16.025	.335	67	
45	100.34	16.360	.375	75	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

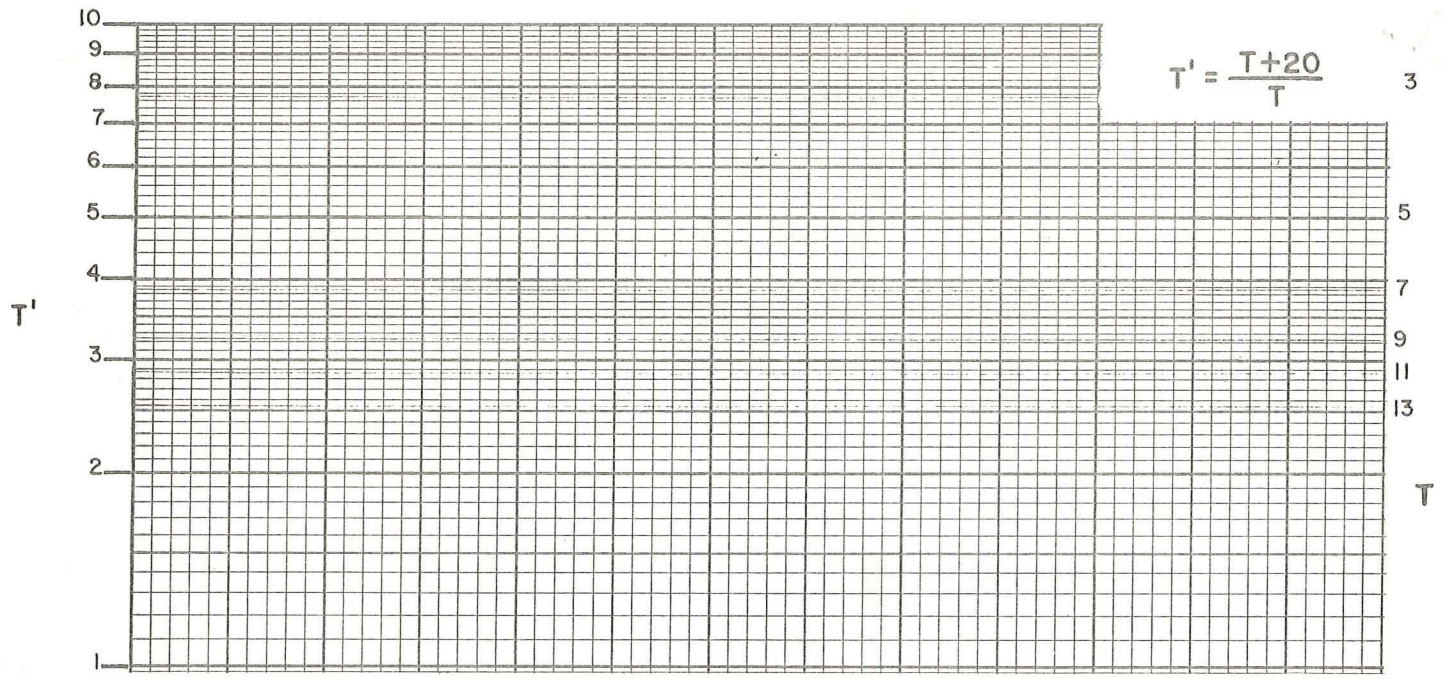
Property _____ T ____ R ____ sec ____

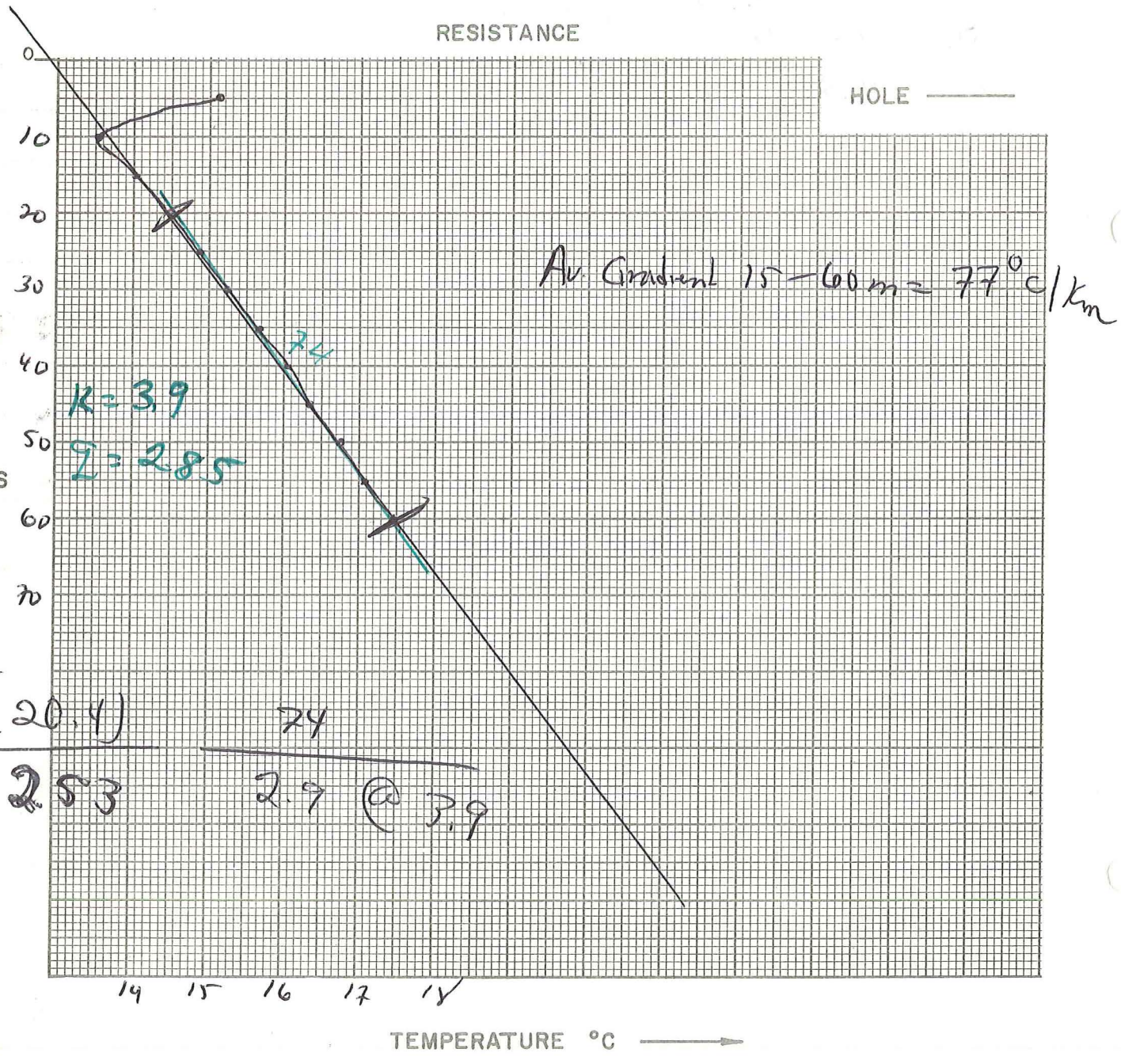
Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
50	98.98	16.735			
			.360	72	
55	97.70	17.095			
			.375	75	
60	96.37	17.470			


T' = (T+20)/T
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13


RESISTANCE
HOLE
DEPTH METERS
0
10
20
30
40
50
60
70
14
15
16
17
18
TEMPERATURE °C
Av. Gradient 15–60 m = 77° c/km
K = 3.9
Q = 2.85
(20.4)
2.53
24
2.7 @ 3.9

LITHOLOGIC LOG B-234

SE¼ NW¼ Sec 22 T24S R7W Elevation: 5,720'

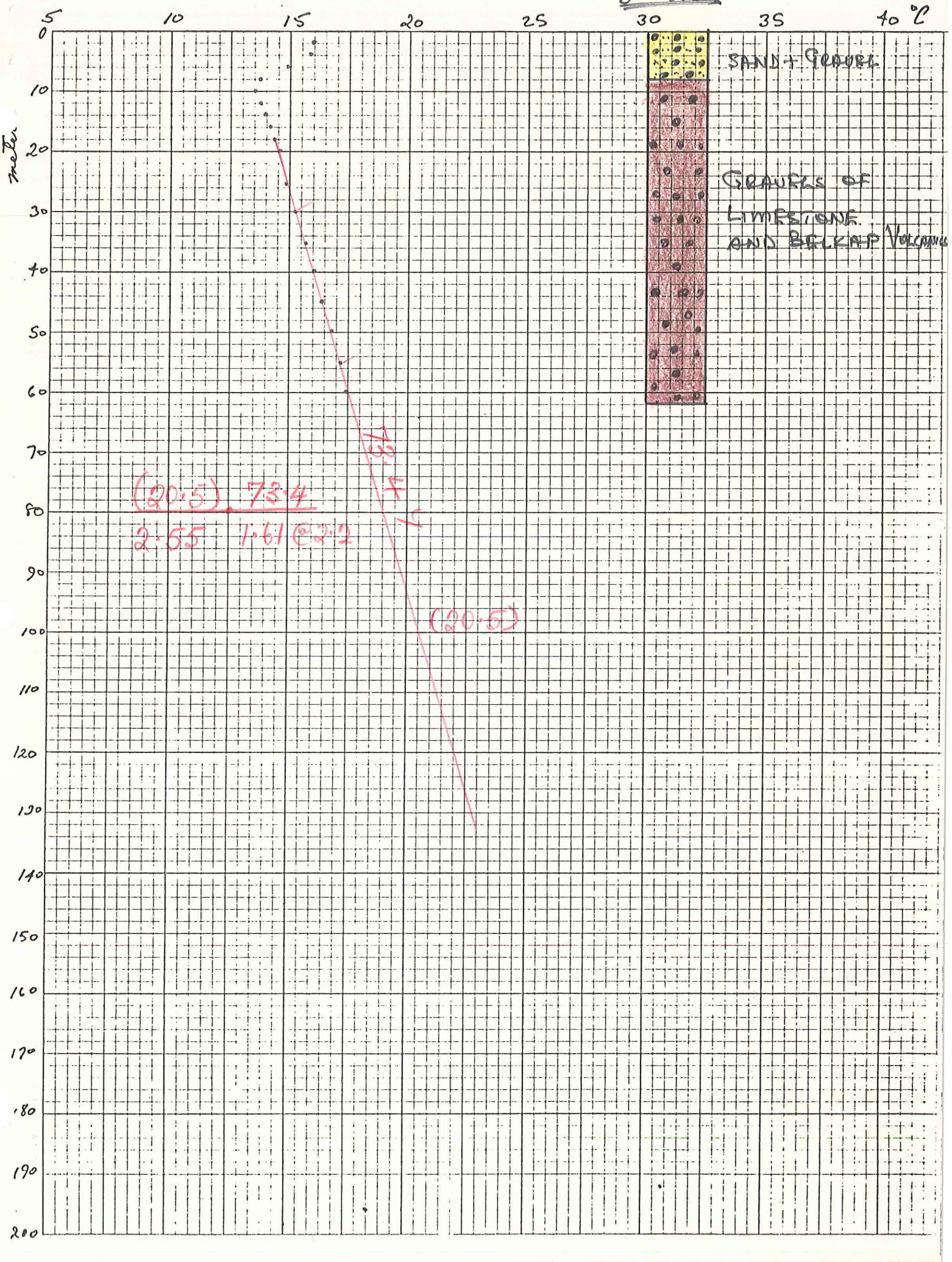
Depth (m)	Description
0 - 8	Mixture of sand with minor gravel.
8 - 62	Gravel composed of fragments of limestone and Belknap volcanics set in a clayey matrix.

H. Dean Pilkington

HDP:mmo

cc: Art Lange
Cheryl Caywood
Mark Alldredge

B-234



47 0780

KEUFFEL & ESSER CO MADE IN USA

TEMPERATURE DEPTH LOG

ΔT Well No. 235

Property-Project Best Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

RT JUSTIFY: →

Card A

Proj No	Well No	Date Logged DA	MO	YR	*
1 2 3 4	5 6 7 8 9 10	11 12	13 14 15	16 17 18	19 20
755	235	21	06	76	CM

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

Site Description	Operator	Editor
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
18.5 KM SSW OF TABERNACLE HILL	DP	MLH

Card B

Scale Unit in cm	Map Size (7.5, 15.,60)	Map Location △ N Lat Degree	Min	W Long Degree	Min
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
CM	15.	38.	45.	112.	45.

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
~~0215~~ .015 ~~0.30~~	~~28.55~~ 22.9	5020.	F

Use decimals ← Write M if meters

SEGMENT DEPTH

	Start	End	K	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
C	20.0	62.0	-3.5	-.5
D				
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
	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
C	.999			
D				
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location NW side White Sage Flat Date Oct 21, 1976

Map Tabernacle Hill, Utah 15' Quad

Property LVO T 24S R 7W sec NW¼ SE¼ Sec 1

Drill Hole B-235 Date Drilled Oct 12, 1976 Elevation 5020 ft.

Instrument Probe 44 Operator RS

Comments 3/4" PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
5	98.45	18,835			
6	98.05	17.775			
7	101.15	16.896			
8	103.55	16.205			
9	104.68	15.905			
10	105.02	15.810			
11	104.05	16.080			
11.5	104.41	15980			
12.0	104.59	15.930			
12.5	104.90	15.840			
13.0	105.05	15.800			
13.5	104.20	16.030			
14.0	104.84	15.870			
14.5	104.99	15.820			
15.0	104.92	15.835			
15.5	104.75	15.885			
16.0	104.84	15.860			
16.5	104.85	15850			
17.0	104.84	15.865			
17.5	104.77	15.880			
18.0	104.88	15.850			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

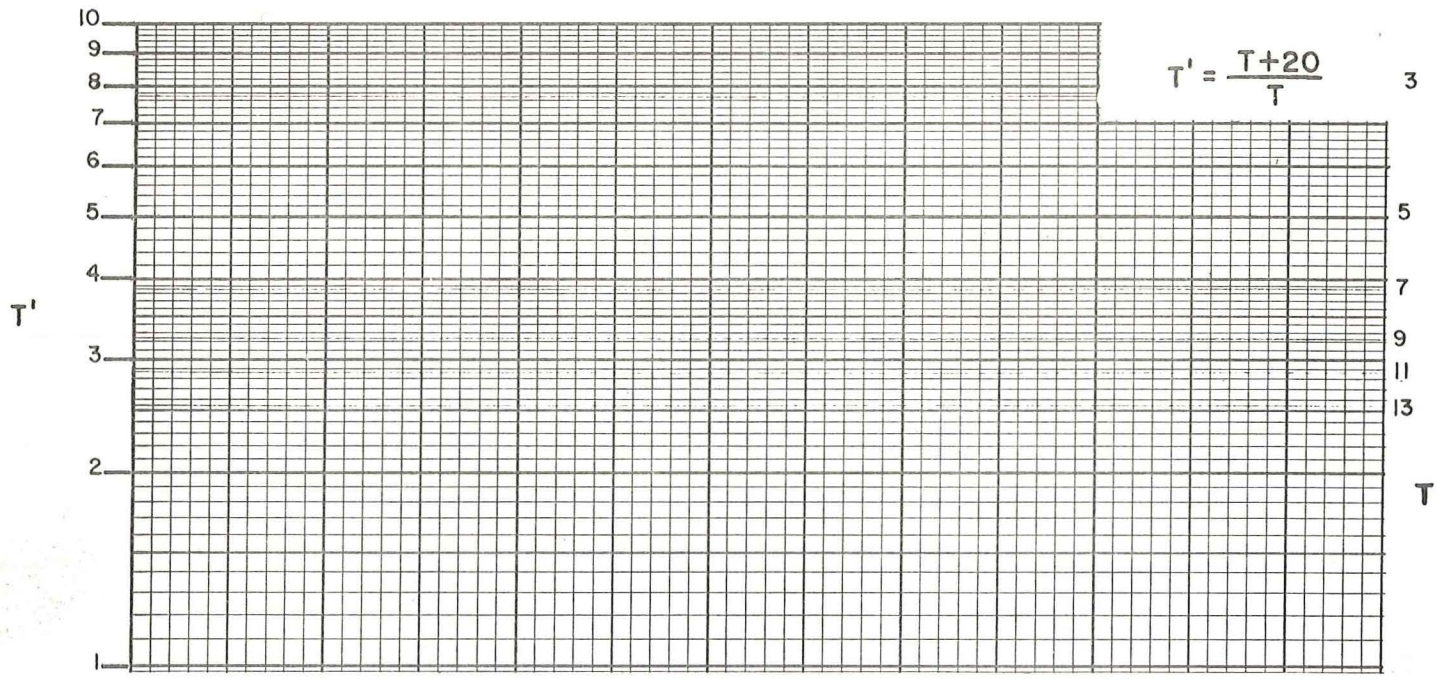
Property _____ T _____ R _____ sec _____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
18.5	104.86	15.855			
19.0	105.32	15725			
19.5	105.58	15655			
20.0	105.70	15.625			
25	105.07	15795	.170	34	
30	104.54	15.940	.145	29	
35	103.84	16135	.195	39	
40	103.38	16265	.130	26	
45	102.69	16.455	.190	38	
50	100.89	16980	.525	105	
55	100.69	17.020	.040	8	
60	99.99	17 220	.200	40	
62	99.68	17 338	.110	55	



RESISTANCE

HOLE

DEPTH METERS

0
10
20
30
40
50
60
70

Av. Gradient 20-62 m = 41° C/km

AV 20-45 = 33

AV 50-55 = 0

AV 55-62 = 41

Av 45-50 = 105

33, 105, 0, 41

1,4 @ 3.5

15 16 17 18 19

TEMPERATURE °C

Lithologic Lob B-235

NW¼ SE¼ Sec 1 T24S R7W Elevation: 5,020'

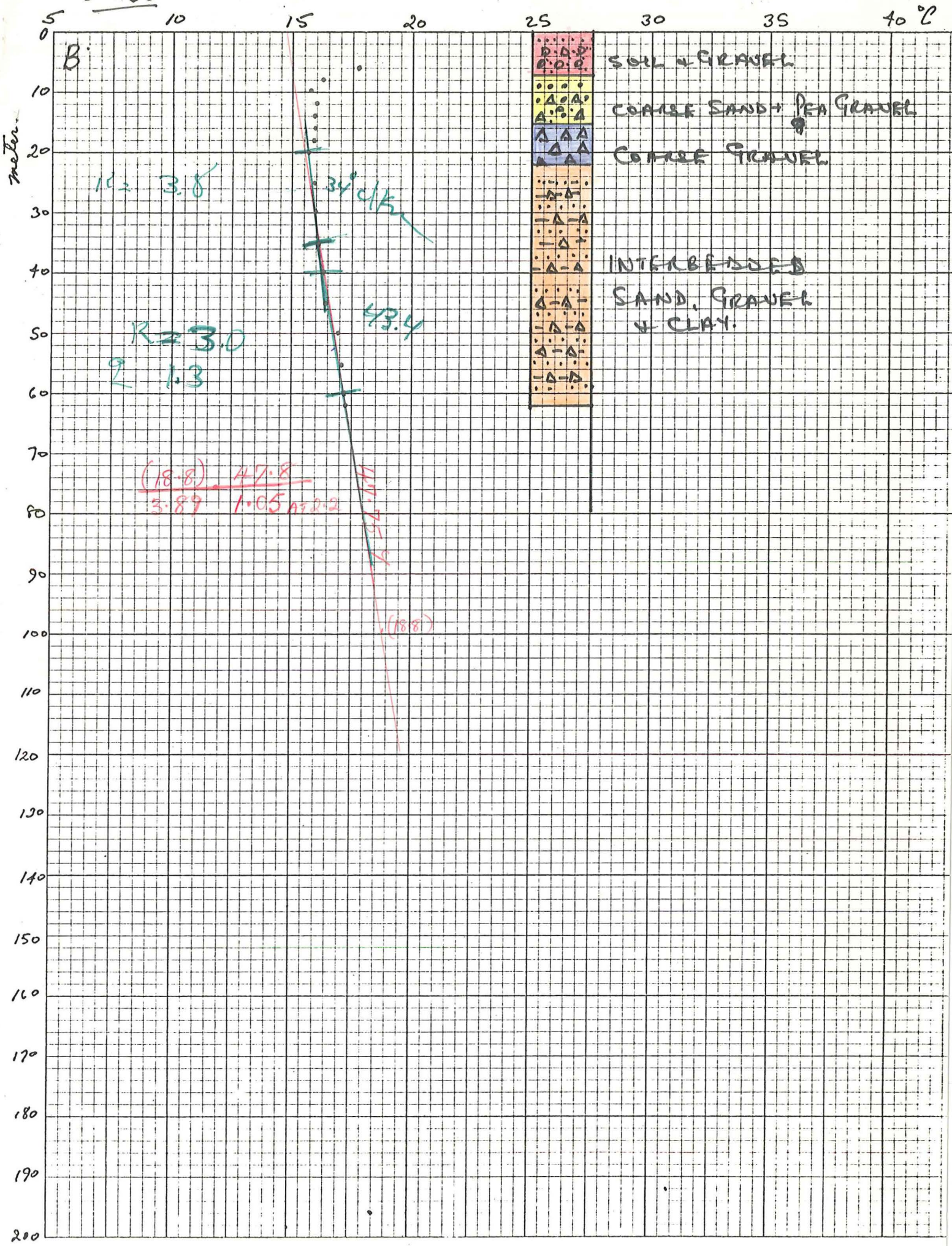
Depth (m)	Description
0 - 1	Mixture of soil and gravel.
1 - 7.7	Pea gravel, fragments of quartzite, limestone, and Belknap volcanics.
7.7 - 15.0	Mixture of coarse sand and pea gravel.
15.0 - 22.0	Coarse gravel, ½ to 1.0 inches in diameter, mixed fragments quartzite, limestone, volcanics.
22 - 62	Interbedded sand, gravel, and clay. The clay content increases with depth.

H. D. Pilkington (M.D.)
H. D. Pilkington
October 26, 1976

HDP:mmo

cc: Art Lange
Cheryl Caywood
Mark Alldredge
File copy to Dean

B-235.



47 0780

10 X 10 TO THE INCH • 10 X 15 INCHES
KEUFFEL & ESSER CO MADE IN U.S.A.

TEMPERATURE DEPTH LOG

ΔT Well No. 236

Property-Project Best Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

RT JUSTIFY:

Card A

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
7 5 5	2 3 6	1 0	0 6	7 6	C M

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

Site Description	Operator	Editor
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
1 2 . 0 K M N O R T H O F C O V E F O R T	D P	M L H

Card B

Scale Unit in cm	Map Size (7.5, 15.,60)	N Lat Degree	N Lat Min	W Long Degree	W Long Min
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
C M	1 5 .	3 8 .	3 0 .	1 1 2 .	4 5 .

Use decimals

Map Location △

△ 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
3 7 . 0	2 2 . 1 5	5 3 6 0 .	F

Use decimals

← Write M if meters

SEGMENT DEPTH

	Start	End	K	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
C	1 6 . 0	9 4 . 0	- 7 . 0	- . 5
D				
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
	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
C	. 9 9 9			
D				
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location Southwest Side Whito Sage Flat Date Oct 10, 1976

Map Cove Fort, Utah 15' Quad

Property LVO T 24S R 7W sec SE¼NW¼ 24

Drill Hole B-236 Date Drilled Sept 29, 1976 Elevation 5306 ft.

Instrument Probe 44 Operator RO

Comments ¾" PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
4.0	88.80	20.5 50			
4.5	90.35	20,070			
5.0	91.26	19,790			
5.5	92.15	19,525			
6.0	92.92	19,290			
6.5	93.68	19,060			
7.0	94.20	18,910			
7.5	94.74	18,745			
8.0	9502	18,665			
8.5	94.85	18,715			
9.0	95.65	18.770			
9.5	95.75	17,575			
10.0	98.19	17,735			
10.5	97.55	17.925			
11.0	96.65	18.185			
11.5	95.86	18.415			
12.0	95.09	18,645			
12.5	94.20	18905			
13.0	92.00	19.265			
13.5	92.56	19.400			
14.0	91.34	19.765			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T _____ R _____ sec _____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
14.5	90.46	20035			
15.0	89.85	20225			
15.5	89.27	20405			
16.0	88.07	20775			
16.5	87.20	21.050			
17.0	86.26	21345			
17.5	85.38	21.630			
18.0	84.84	21.805			
18.5	84.05	22.060			
19.0	83.65	22190			
19.5	82.82	22.460			
20.0	82.03	22.720	2.220	445	
25.	75.55	24.940	3.100	620	
30	69.81	27.040	1.220	245	
35	65.15	28.760	1.945	389	
40	60 48	30.505	2.195	439	
45	55.58	33.000	1.775	355	
50	51.89	34.775	2.015	403	
55	47.99	36.790	2.015	403	
60	44.38	38.805	1.930	386	
65	41.17	40735	2.035	407	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

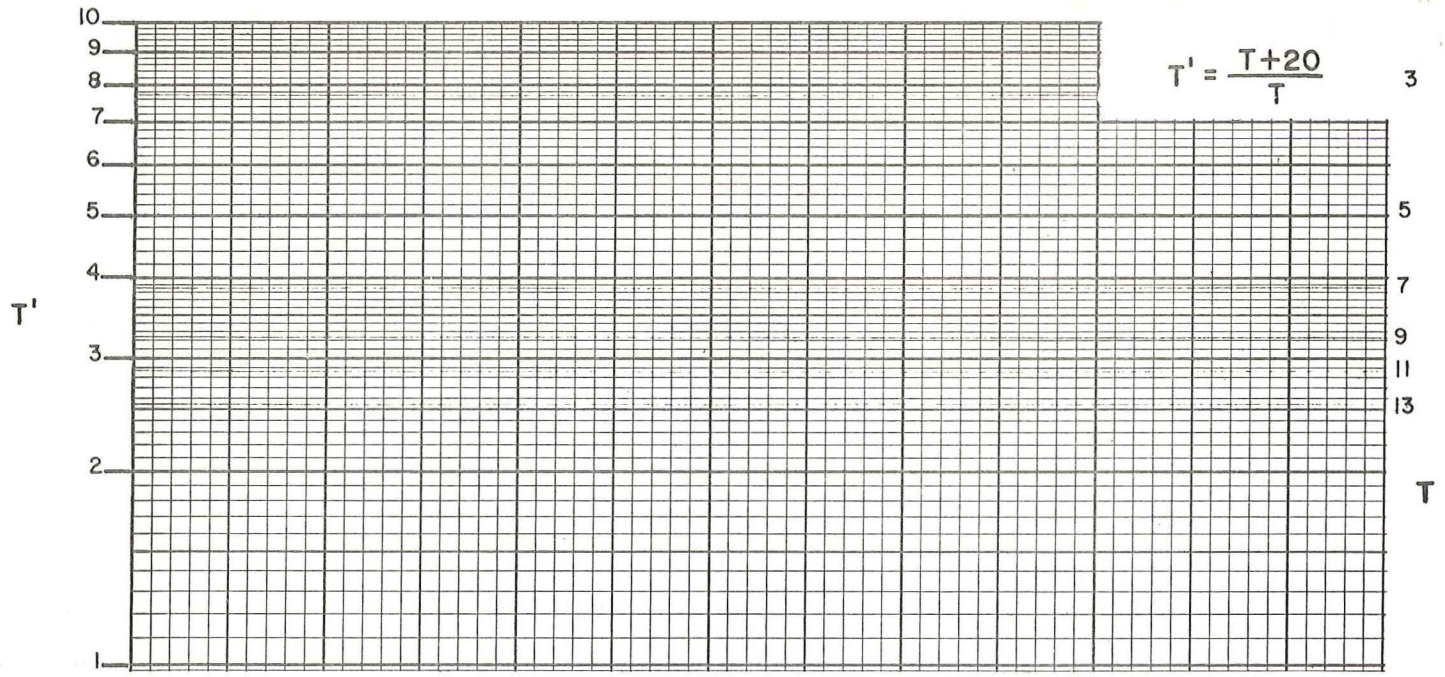
Property _____ T _____ R _____ sec _____

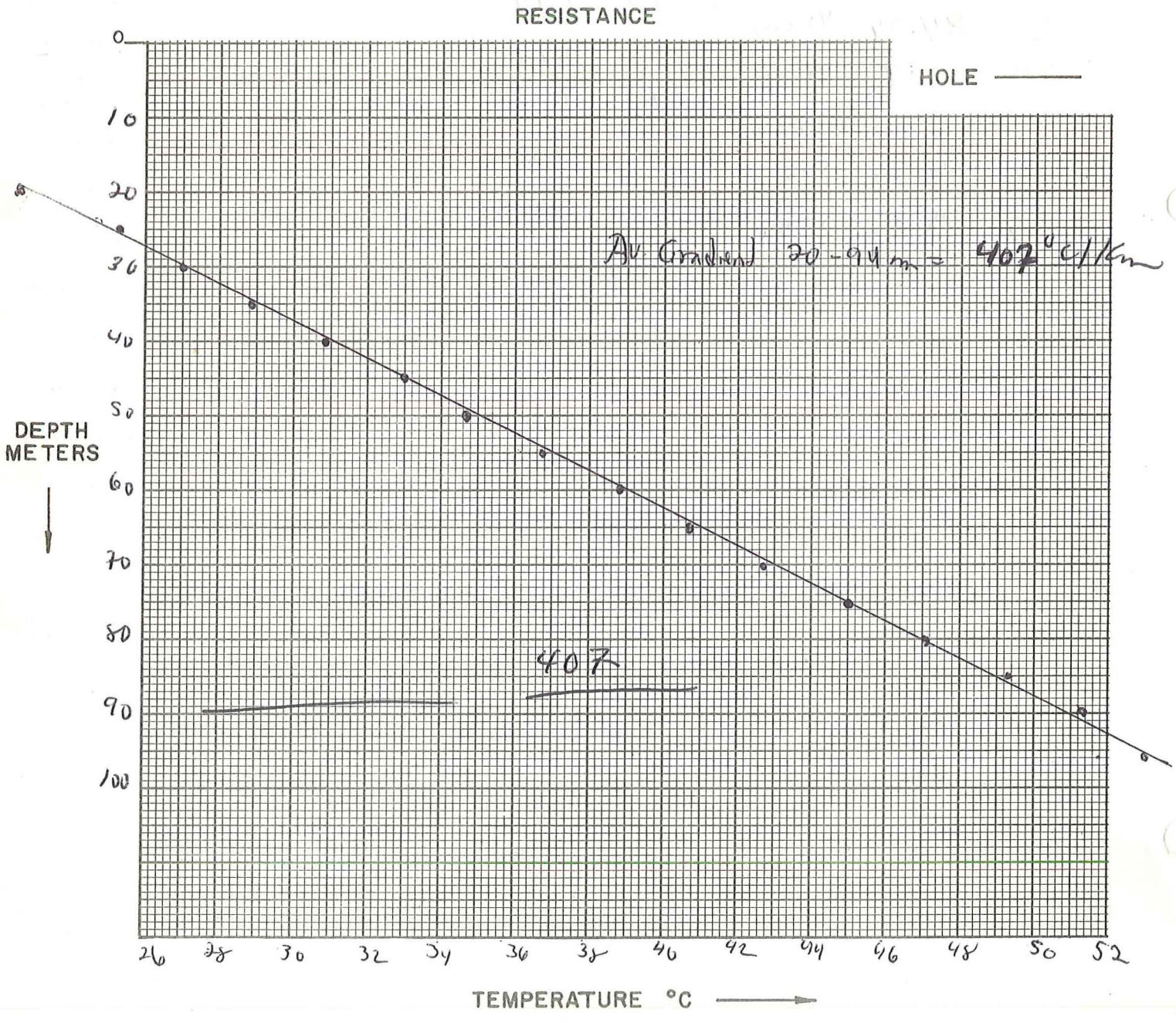
Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
70	38.06	42,760	2245	449	
75	84.89	45,005	1,985	397	
80	32.19	47.090	2240	448	
85	29.54	49330	2000	400	
90	27.37	51330	1,530	382	
94	25.82	52,860			


T' = (T+20)/T
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13


RESISTANCE
HOLE
Av. Gradient 20-94 m = 40.7° C/Km
40.7
DEPTH METERS
0
10
20
30
40
50
60
70
80
90
100
26
28
30
32
34
36
38
40
42
44
46
48
50
52
TEMPERATURE °C

Lithologic Log B-236 (SWU-36)

SE¼ NW¼ Sec 24 T24S R7W Elevation: 5,360'

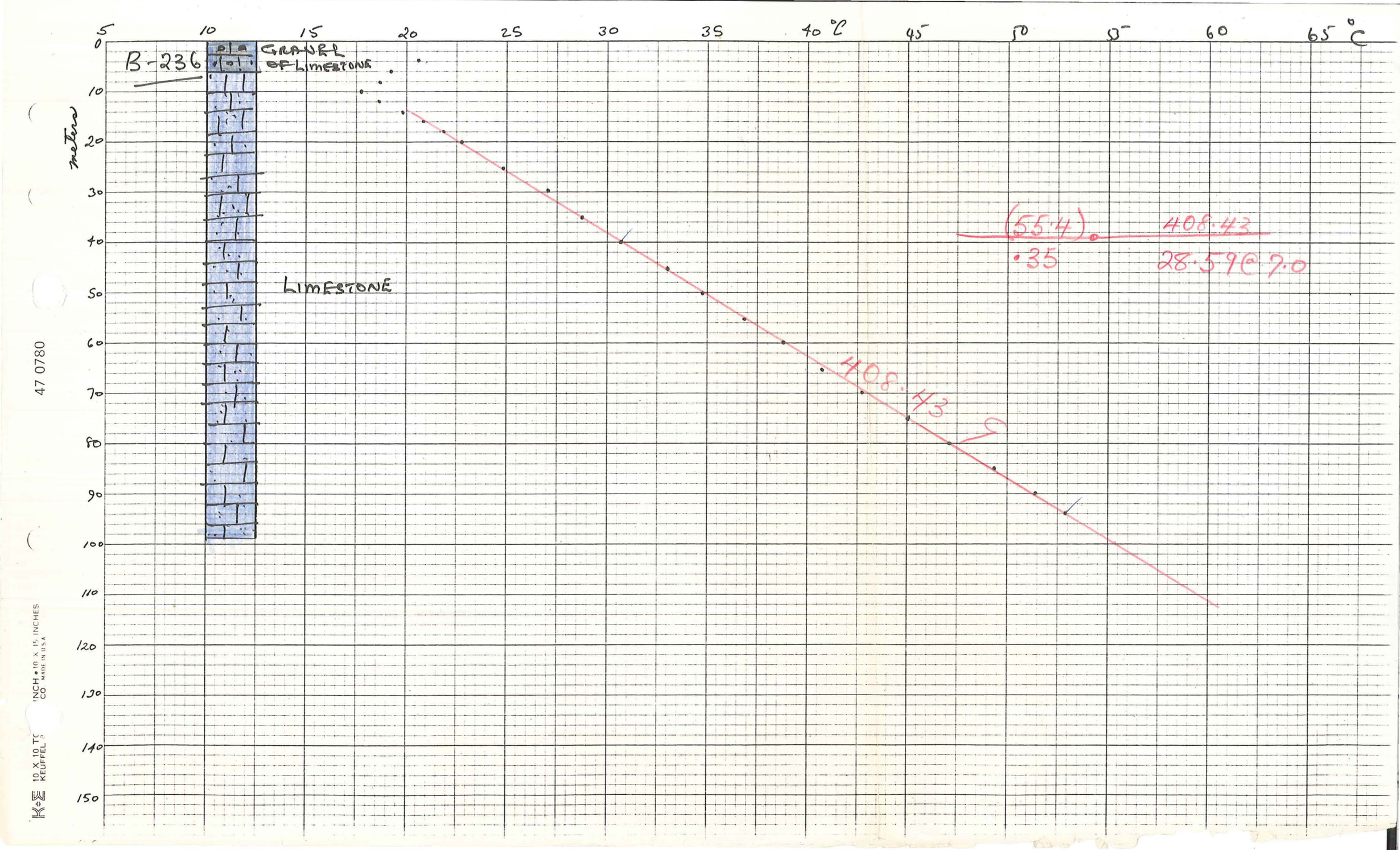
Depth (m)	Description
0 - 6.2	Gravel, composed of limestone fragments from sand size to boulders up to 12" diameter.
6.2 - 99	Limestone, probably pogonip, medium gray, somewhat oxized along joints.

H. D. Pilkington (M.O.)

H. D. Pilkington

HDP:mmo

cc: Art Lange
Cheryl Caywood
File Copy to Dean


B-236
GRAVEL OF LIMESTONE
LIMESTONE
meters
5 10 15 20 25 30 35 40 °C 45 50 55 60 65 °C
0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
(55.4)
.35
408.43
28.59@7.0
408.43
47 0780
10 X 10 TO INCH • 10 X 15 INCHES
KEUFFEL & ESSER CO MADE IN U.S.A.

TEMPERATURE DEPTH LOG

ΔT Well No. 237

Property-Project Best Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →				Well No →						Date Logged DA →		MO →		YR		*	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	7	5	5				2	3	7	1	0		0	C		7	C	C	M

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

| Site Description | | | | | |

TEMPERATURE - DEPTH LOG

Location SE side white Sage Flat Date October 10, 1976

Map Cove Fort Utah 15' Quad

Property LVO T 24S R 6W sec SE¼SW¼ 17

Drill Hole B-237 Date Drilled Sept 30, 1976 Elevation 5440 ft.

Instrument Probe #44 Operator DS

Comments ¾ PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
2.0	89.43	20.355			
2.5	91.44	19.740			
3.0	92.74	19.345			
3.5	93.82	18.575			
4.0	96.84	18.130			
4.5	98.15	17.750			
5.0	99.28	17.420			
5.5	100.05	17.030			
6.0	101.78	16.995			
6.5	102.98	16.320			
7.0	103.90	16.120			
7.5	104.88	15.850			
8.0	105.29	15.735			
8.5	105.62	15.645			
9.0	105.99	15.545			
9.5	106.22	15.480			
10.0	110.59	14.300			
10.5	110.50	14.325			
11.0	110.31	14.375			
11.5	110.18	14.410			
12.0	110.05	14.445			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T _____ R _____ sec _____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
12.5	109.85	14.500			
13.0	109.74	14.530			
13.5	109.57	14.575			
14.0	109.41	14.610			
14.5	109.27	14.655			
15.0	109.11	14.700			
15.5	108.95	14.740			
16.0	108.82	14.775			
16.5	108.66	14.815			
17.0	108.53	14.855			
17.5	108.36	14.900			
18.0	108.22	14.935			
18.5	108.06	14.980			
19.0	107.94	15.015			
19.5	107.80	15.050			
20.0	107.68	15.085	.345	69	
25.	106.41	15.430	.305	61	
30	105.30	15.735	.290	58	
35	104.25	16.025	.290	58	
40	103.21	16.315	.295	59	
45	102.15	16.610	.270	54	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

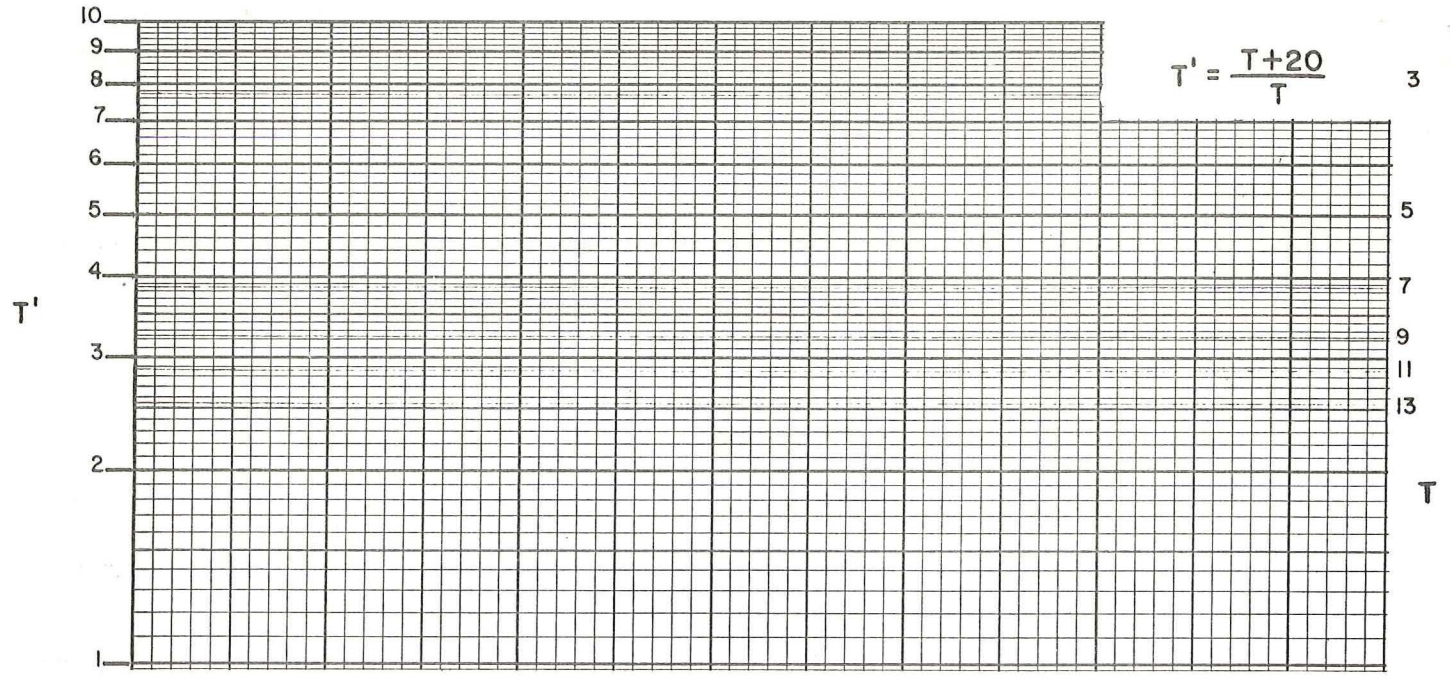
Property _____ T ____ R ____ sec ____

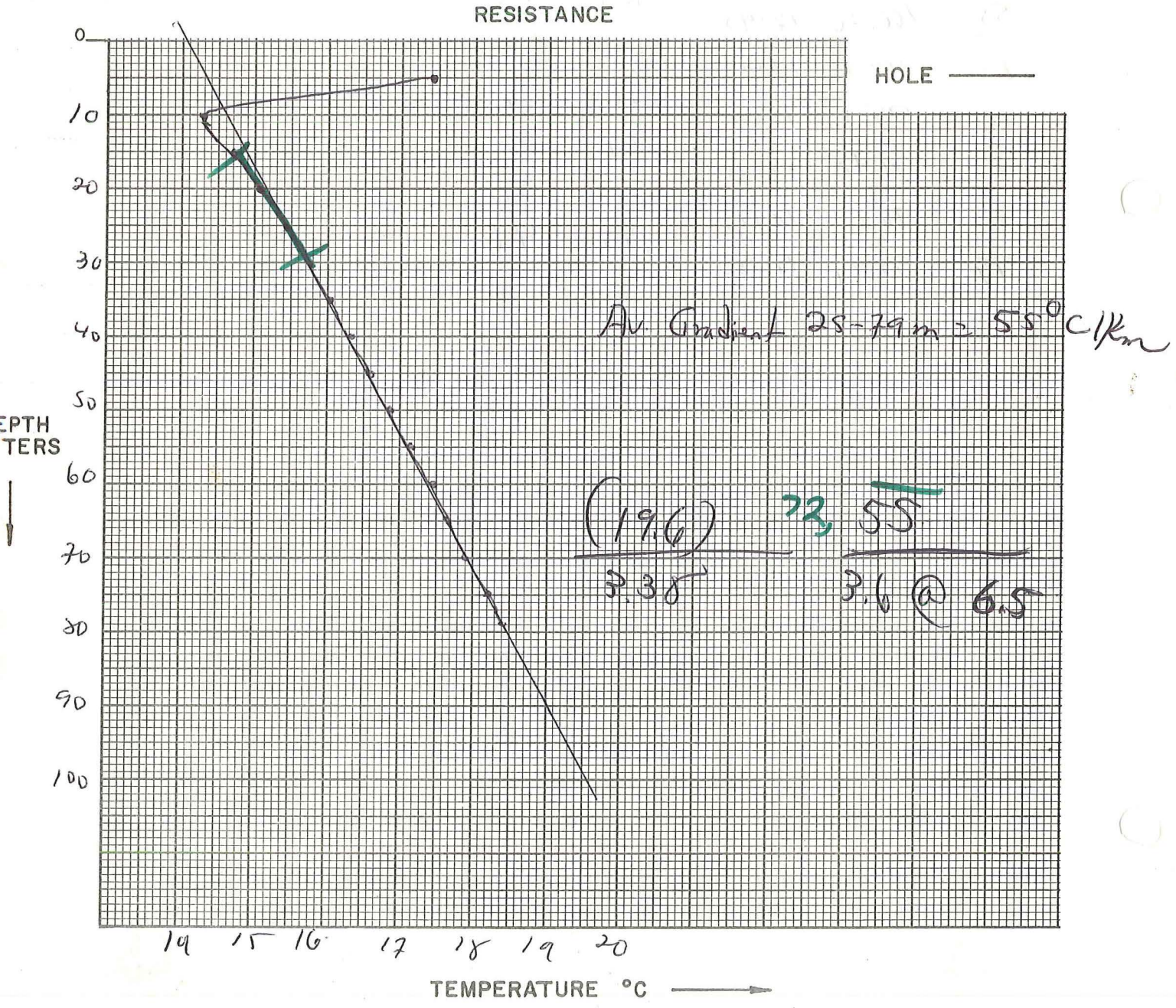
Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
50	101.19	16.880			
55	100.26	17145	.265	53	
60	99.32	17415	.270	54	
65	98.37	17685	.270	54	
70	97.48	17945	.260	52	
75	96.62	18195	.250	50	
~~80~~	95.99	18380	.185	46	


T' = (T+20)/T
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13


RESISTANCE
HOLE
DEPTH METERS
0
10
20
30
40
50
60
70
80
90
100
Av. Gradient 25-79m = 55°C/km
(19.6) / 3.38
22.55 / 3.6 @ 6.5
14
15
16
17
18
19
20
TEMPERATURE °C

Lithologic Log B-237 (SWU-37)

SE¼ SW¼ Sec 17 T24S R6W Elevation: 5,440'

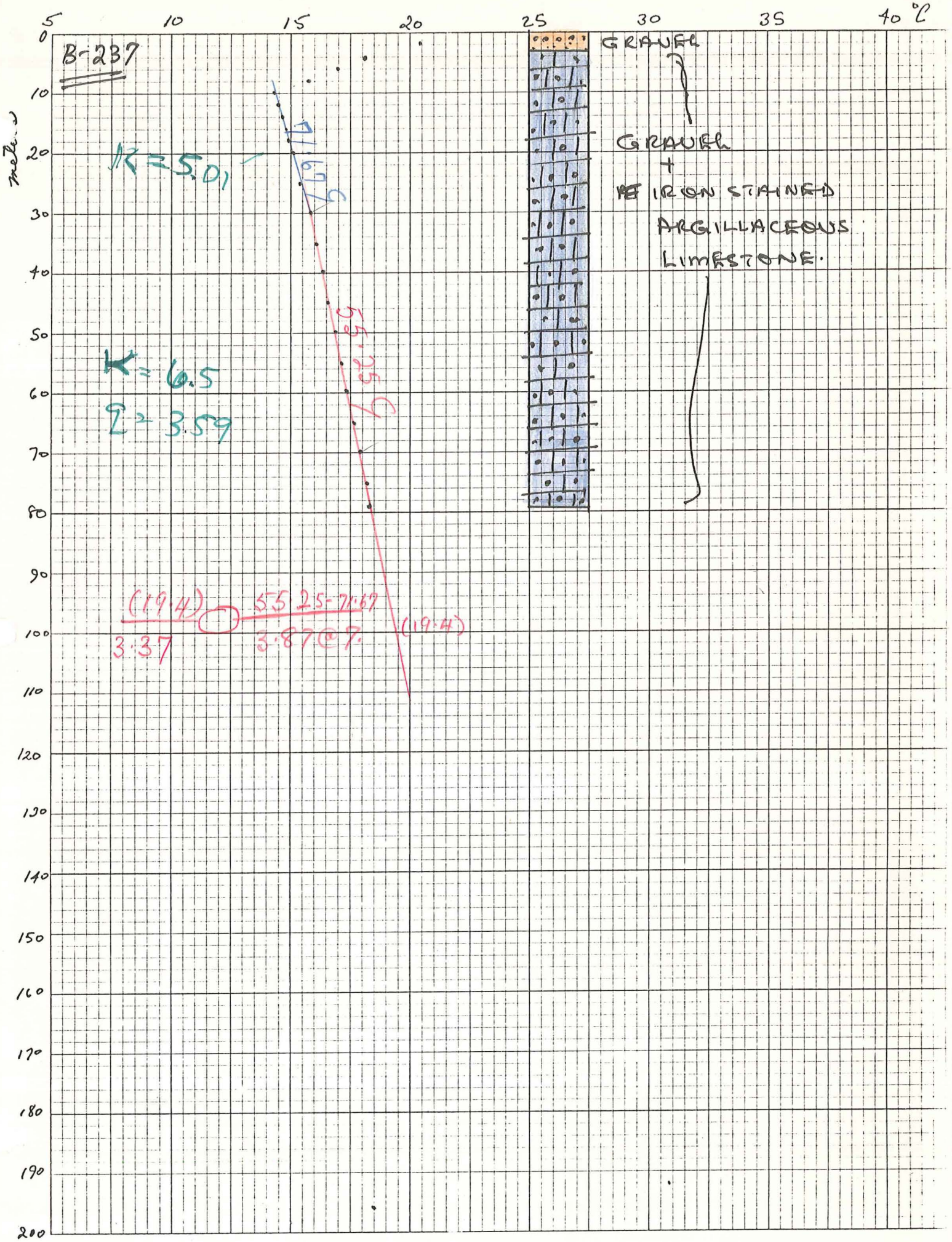
Depth (m)	Description
0 - 3	Gravel
3 - 97	Medium gray, fine-grained, dense- iron-stained at depth, gravely to argillaceous limestone of the pogonipls.

H. D. Pilkington (mmo)

H. D. Pilkington

HDP:mmo

cc: Art Lange
Cheryl Caywood
File Copy to Dean



47 0780
10 X 10 TO THE INCH • 10 X 15 INCHES
KEUFFEL & ESSER CO MADE IN U.S.A.

TEMPERATURE DEPTH LOG

ΔT Well No. 238

Property-Project Best Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

RT JUSTIFY:

Card A

Proj No →				Well No →						Date Logged DA →		MO →		YR		*	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	7	5	5				2	3	8	1	0		0	4		7	6	C	M

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

| Site Description | | | | | |

TEMPERATURE - DEPTH LOG

Location East Side White Sage Flat Date Oct 10, 1976

Map Tabernacle Hill, Utah 15' Quad

Property LVO T 24S R 6W sec SE¼ NE¼ 5

Drill Hole B-238 Date Drilled Oct 1, 1976 Elevation 5200 ft.

Instrument Mke #44 Operator RD

Comments 3/4 PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
15.0	110.46	14.335			
15.5	110.62	14.290			
16.0	110.66	14.280			
16.5	110.68	14.280			
17.0	110.68	14.280			
17.5	110.65	14.285			
18.0	110.59	14.300			
18.5	110.51	14.325			
19.0	110.39	14.355			
19.5	110.27	14.385			
20.0	110.13	14.425	.420	84	
25.0	108.57	14.845	.340	68	
30.	107.11	15.235	.350	70	
35	105.84	15.585	.275	55	
40	104.84	15.860	.285	57	
45	103.81	16.145	.290	58	
50	102.77	16.435	.285	57	
55	101.76	16.720	.275	55	
60	100.78	16.995	.275	55	
65	99.82	17.270	.275	55	
70	98.86	17.545	.270	54	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

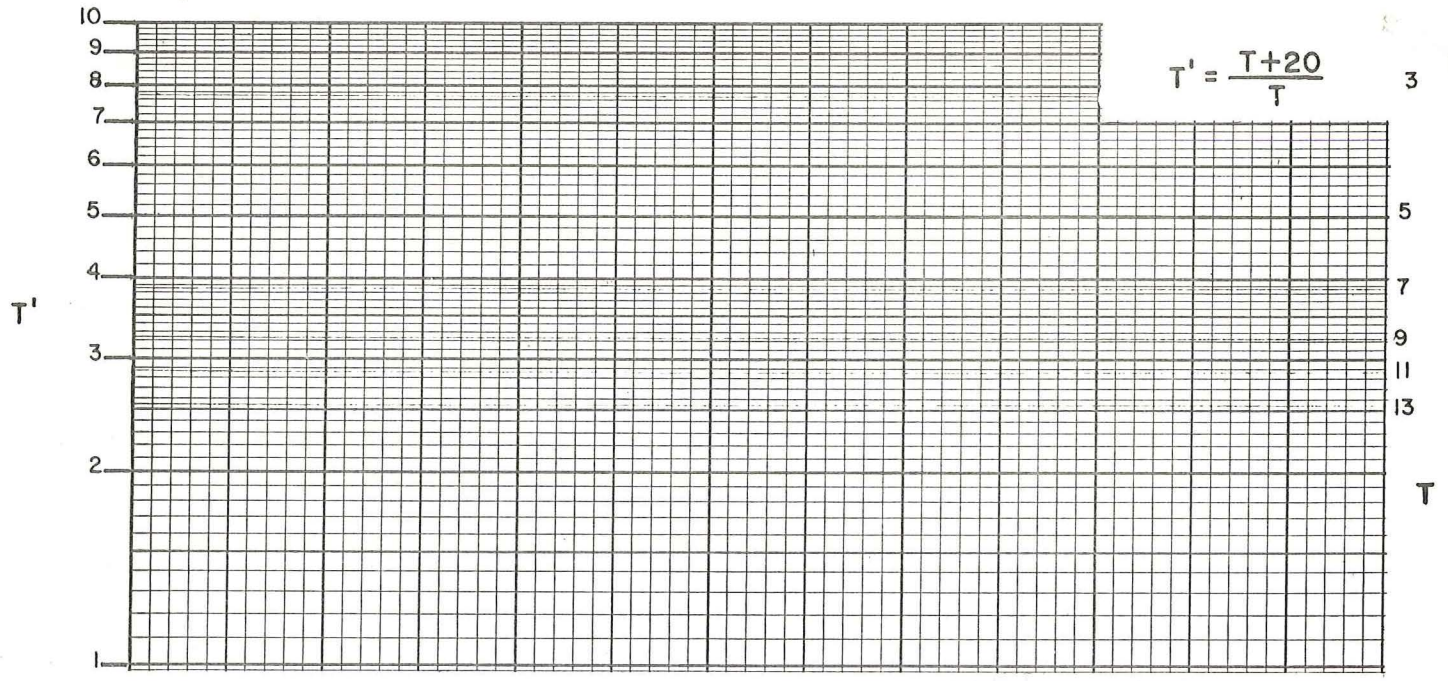
Property _____ T _____ R _____ sec _____

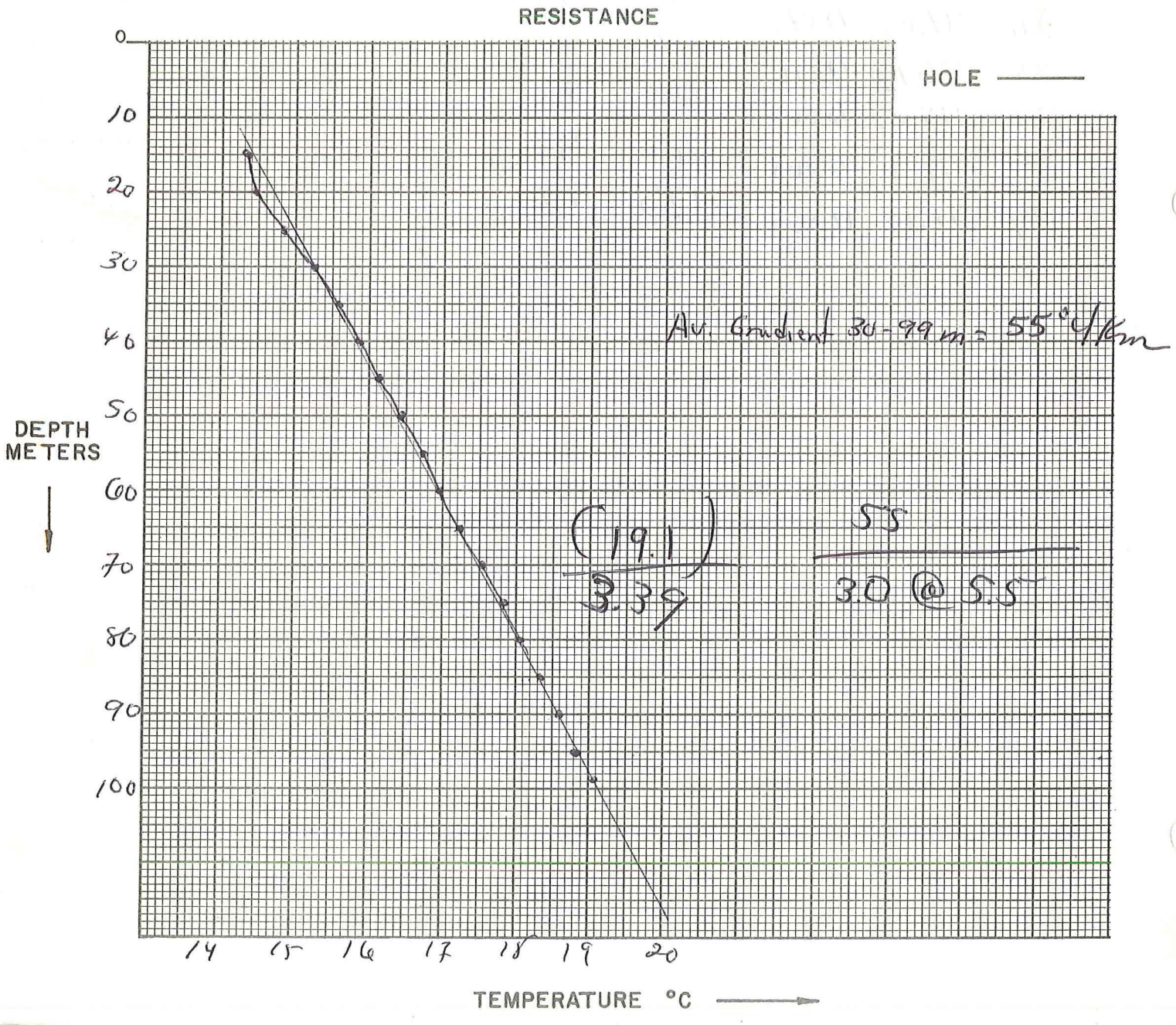
Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
75	97.93	17.815			
			.255	51	
80	97.03	18.070			
			.270	54	
85	96.13	18340			
			.265	53	
90	95.22	18605			
			.260	52	
95	94.35	18865			
			.195	49	
99	93.69	19.060			


T' = T+20 / T
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13


RESISTANCE
HOLE
DEPTH METERS
0
10
20
30
40
50
60
70
80
90
100
14
15
16
17
18
19
20
TEMPERATURE °C
Av. Gradient 30-99 m = 55 °C/km
(19.1) / 3.39
55 / 3.0 @ 5.5

Lithologic Log B-238 (SWU-38)

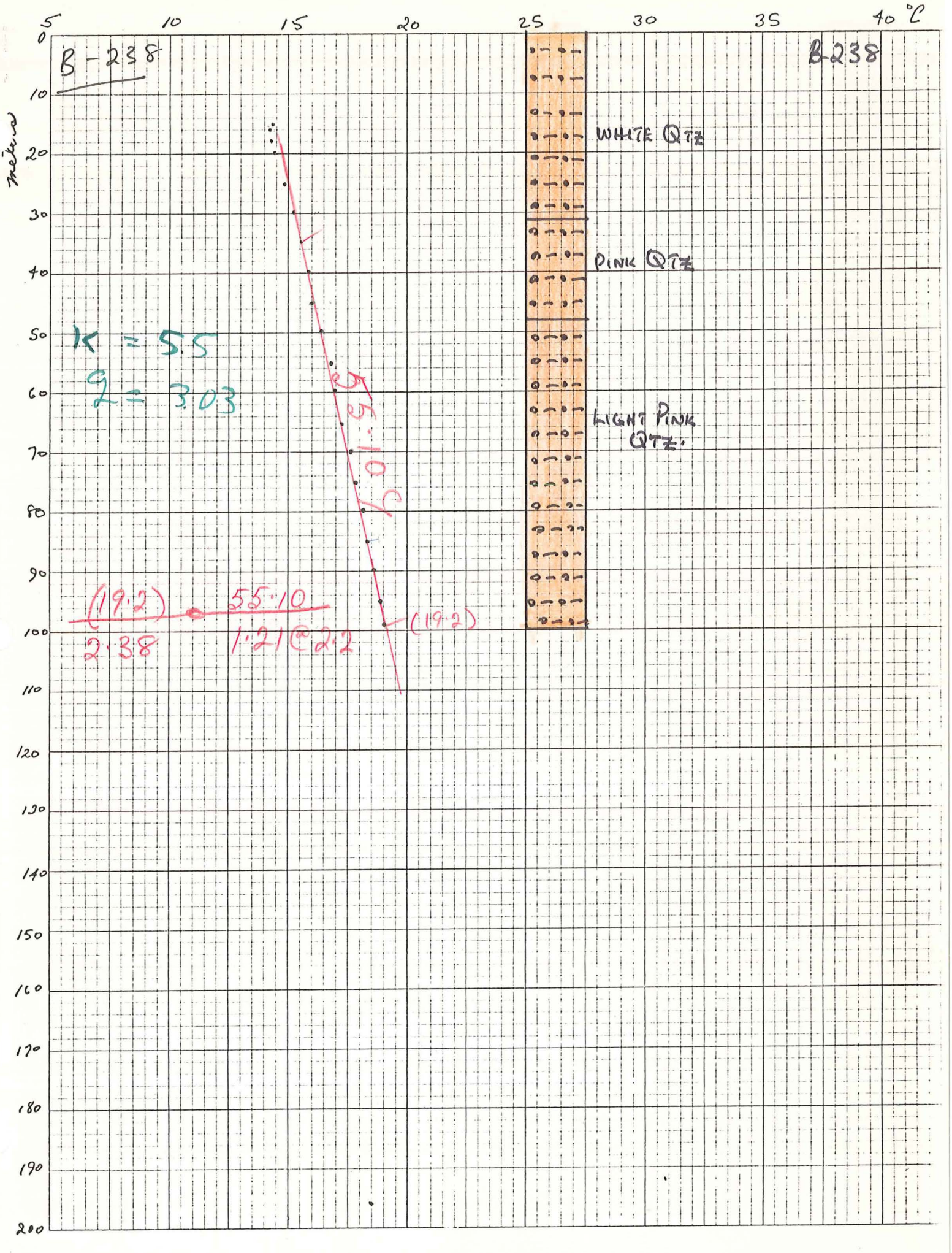
SE¼ NE¼ Sec 5 T24S R6W Elevation: 5,200'

Depth (m)	Description
0 - 31	White quartzite, well-rounded grains with 5:02 cement - either the tintic quartzite or the Prospect Mtn. quartzite.
31 - 48	Pink to red-brown quartzite.
48 - 99	Buff to light pink quartzite.

H. D. Pilkington

HDP:mmo

cc: Art Lange
Cheryl Caywood
File Copy to Dean



47 0780
10 X 10 TO THE INCH • 10 X 15 INCHES
KEUFFEL & ESSER CO MADE IN U.S.A.

TEMPERATURE DEPTH LOG

ΔT Well No. 239

Property-Project Rest Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →				Well No →						Date Logged DA →		MO →		YR		*	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	7	5	5				2	3	9	2	7		0	6		7	6	C	M

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

| Site Description | | | | | |

TEMPERATURE - DEPTH LOG

Location 3 Miles west Whitesage Flat Date Oct 27, 1976

Map Cove Fort, Utah 15' Quad

Property Best T 24S R 7W sec SW¼ NW¼ 10

Drill Hole B-239 Date Drilled Oct 11, 1976 Elevation 5275 ft.

Instrument Probe 39 Operator dp

Comments 3/4" PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
2.0	103.45	15.515			
2.5	103.10	15.610			
3.0	104.12	15.335			
3.5	105.69	14.920			
4.0	107.32	14.495			
4.5	108.90	14.085			
5.0	110.30	13.725			
5.5	111.51	13.420			
6.0	112.32	13.215			
6.5	113.00	13.045			
7.0	113.37	12.950			
7.5	113.65	12.880			
8.0	113.66	12.880			
8.5	113.54	12.910			
9.0	113.29	12.970			
9.5	113.04	13.035			
10.0	112.75	13.105			
10.5	112.36	13.205			
11.0	112.07	13.275			
11.5	111.70	13.375			
22.0	111.43	13.440			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T _____ R _____ sec _____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
12.5	111.16	13.510			
13.0	110.97	13.555			
13.5	110.70	13.625			
14.0	110.45	13.685			
14.5	110.19	13.755			
15.0	109.97	13.810			
15.5	109.79	13.855			
16.0	109.57	13.915			
16.5	109.35	13.970			
17.0	109.17	14.015			
17.5	109.00	14.060			
18.0	108.84	14.100			
18.5	108.66	14.145			
19.0	108.51	14.185			
19.5	108.33	14.235			
20.0	108.15	14.280	.410	82	
25	106.57	14.690	.560	112	
30	104.44	15.250	.475	95	
35	102.67	15.725	.390	78	
40	101.24	16.115	.400	80	
45	99.77	16.515	.365	73	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

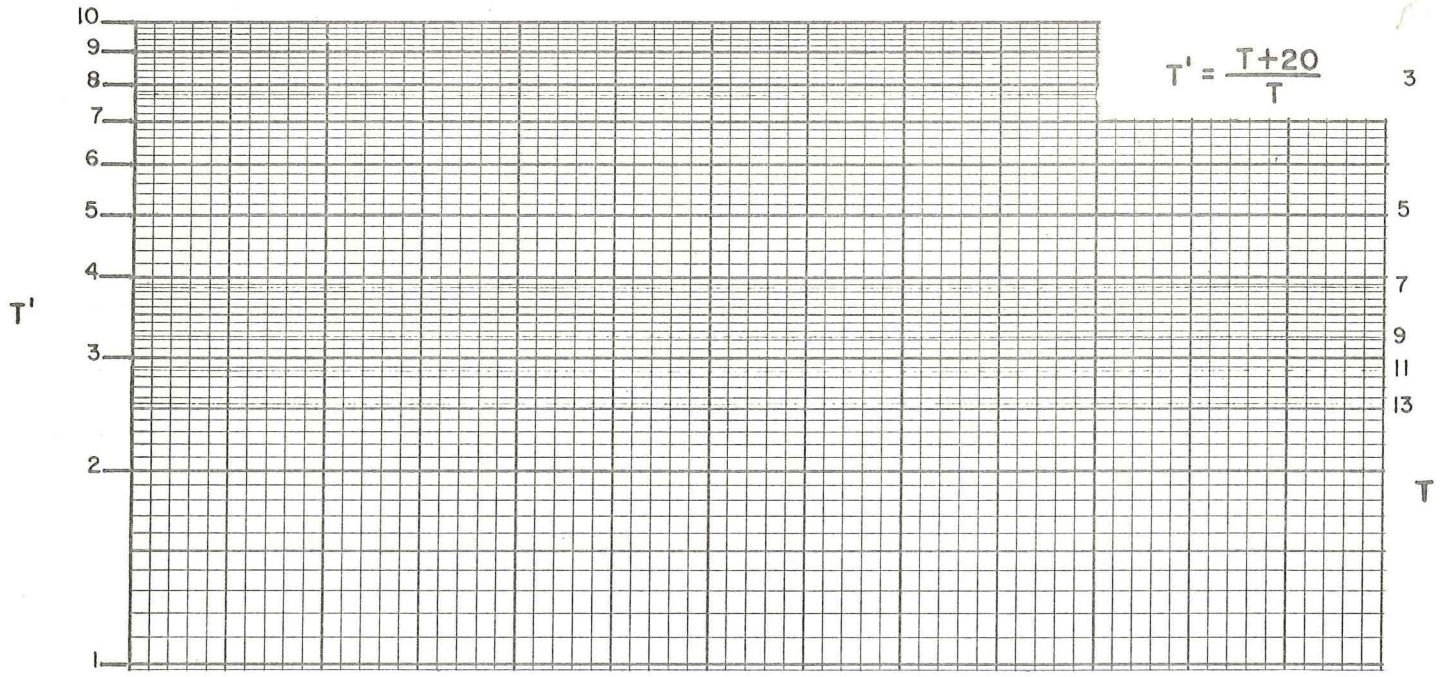
Property _____ T _____ R _____ sec _____

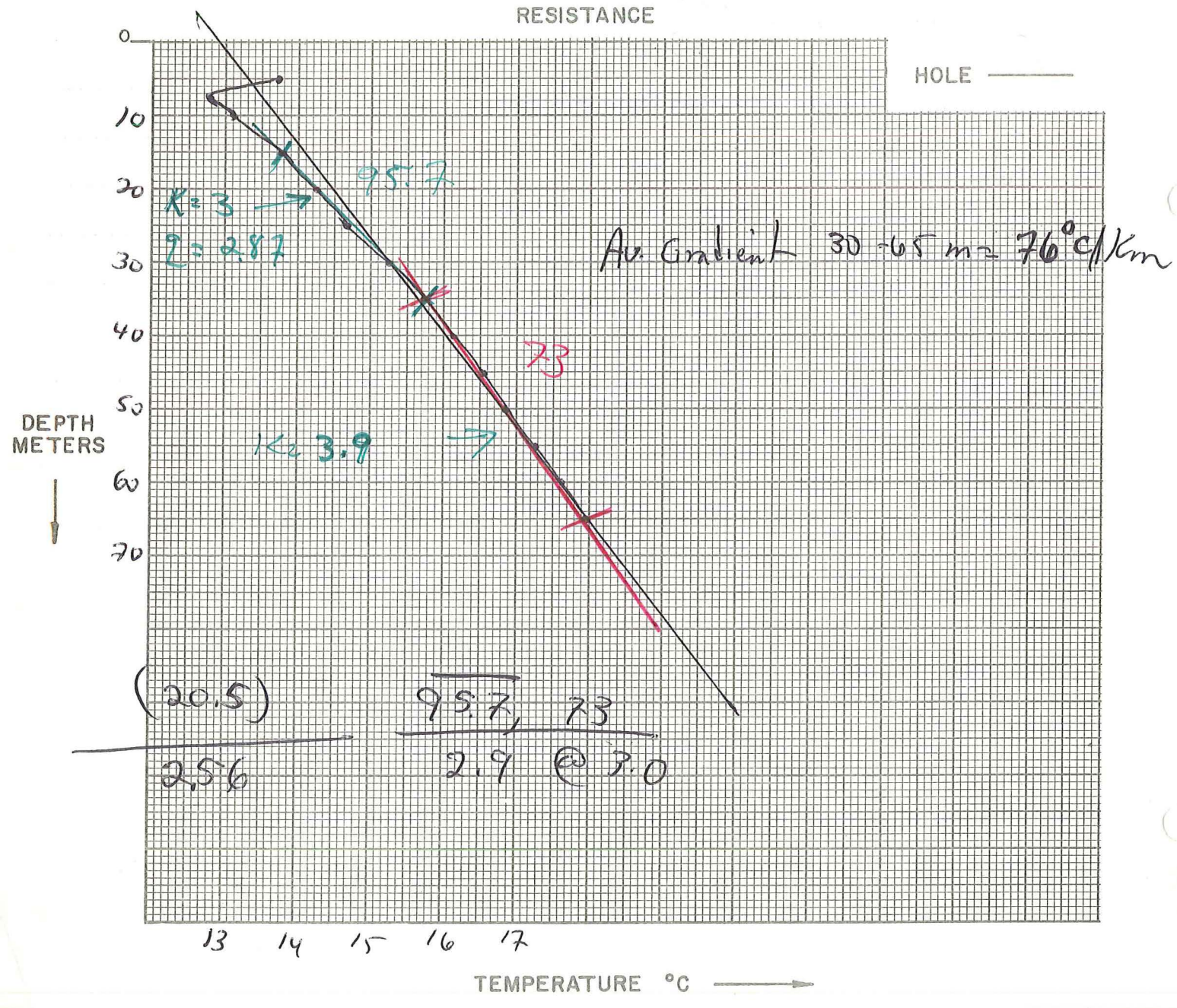
Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
50	98.46	16880			
			.375	75	
55	97.13	17255			
			.350	70	
60	95.89	17605			
			.310	62	
65	94.81	17915			
			045	.45	
66	94.66	17960			


10
9
8
7
6
5
4
3
2
1
T'
$T' = \frac{T+20}{T}$
3
5
7
9
11
13
T


RESISTANCE
HOLE
0
10
20
30
40
50
60
70
DEPTH METERS
K= 3
95.7
Av. Gradient 30-65 m = 76°C/Km
73
K= 3.9
(20.5)
95.7, 73
2.56
2.9 @ 3.0
13
14
15
16
17
TEMPERATURE °C

LITHOLOGIC LOG B-239

SW¼ NW¼ Sec 10 T24S R7W Elevation: 5,275'

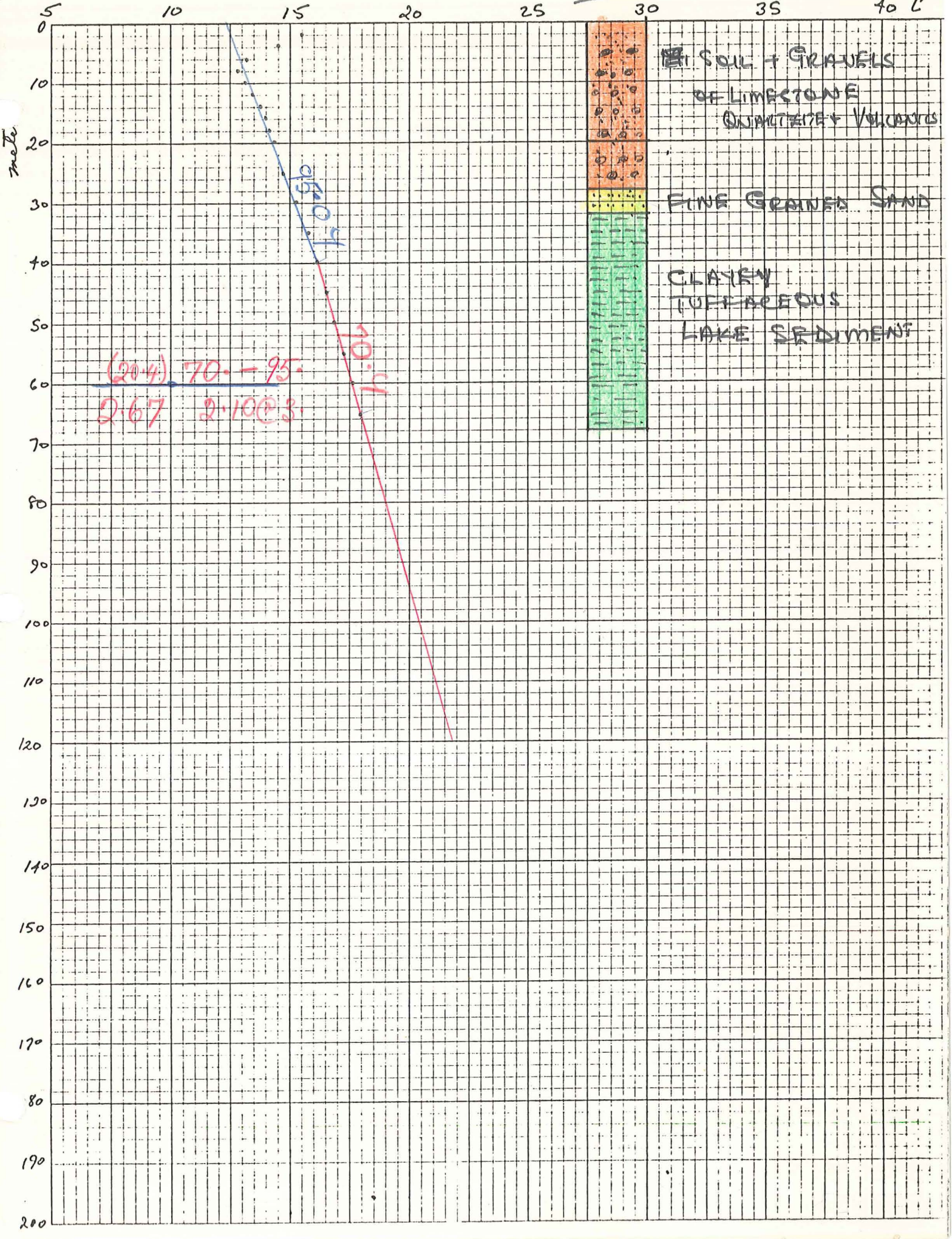
Depth (m)	Description
0 - 5	Mixed soil, sand and lag gravels.
5 - 11	Gravel with some interbedded sand. Fragments of limestone, quartzite and Belknap volcanics.
11 - 20	Light-brown to buff, very fine-grained sand.
20 - 28	Pea gravel made up of fragments of limestone, quartzite, basalt and some Belknap volcanics.
28 - 32	Red-brown to buff, fine-grained sand.
32 - 46	Gray-green to yellow-green clayey tuffaceous lake sediment.
46 - 68	Light brown to red-brown clayey tuffaceous lake sediment.

H. Dean Pilkington

HDP:mmo

cc: Art Lange
Cheryl Caywood
Mark Alldredge

B-239



47 0780

KEUFFEL & ESSER CO MADE IN U.S.A.

TEMPERATURE DEPTH LOG

ΔT Well No. 241

Property-Project Best Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →	Well No →	Date Logged DA →	MO →	YR	*
1 2 3 4	5 6 7 8 9 10	11 12	13 14 15	16 17 18	19 20
7 5 5	2 4 1	2 7	0 C	7 6	C M

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

Site Description	Operator	Editor
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
1 9 . 4 k M N W O F C O V E F O R T , U T A H	D P	M L H

Card B

Scale Unit in cm	Map Size (7.5, 15.,60)	Map Location △ N Lat Degree	Min	W Long Degree	Min
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
C M	1 5 .	3 8 .	3 0 .	1 1 2 .	4 5 .

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
3 9 . 5 5	1 . 2 5 7 2 2 .		F

Use decimals

← Write M if meters

SEGMENT DEPTH

	Start	End	K	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
C	1 4 . 0	6 6 . 0	- 5 . 0	- . 5
D				
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
	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
C	. 9 9 9			
D				
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location 2 miles SE of South Twin Peak Date October 27, 1976

Map Cove Fort, Utah 15' Quad

Property Best T 24 S R 8W sec NE¼SW¼ 15

Drill Hole B-241 Date Drilled Oct 11, 1976 Elevation 5720 ft.

Instrument Probe 39 Operator RJ

Comments 3/4" PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
1.0	108.96	14.070			
1.5	107.37	14.480			
2.0	106.23	14.780			
2.5	105.60	14.945			
3.0	107.08	14.555			
3.5	109.63	13.900			
4.0	111.57	13.405			
4.5	113.49	12.920			
5.0	115.05	12.535			
5.5	116.16	12.265			
6.0	117.00	12.060			
6.5	117.54	11.930			
7.0	117.81	11.865			
7.5	117.89	11.840			
8.0	117.86	11.850			
8.5	117.74	11.880			
9.0	117.52	11.935			
9.5	117.31	11.985			
10.0	117.02	12.055			
10.5	116.74	12.125			
11.0	116.39	12.210			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T _____ R _____ sec _____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
11.5	116.02	12.300			
12.0	115.66	12.385			
12.5	115.39	12.450			
13.0	115.06	12.535			
13.5	114.86	12.585			
14.0	114.67	12.630			
14.5	114.50	12.675			
15.0	114.32	12.720			
15.5	114.16	12.755			
16.0	113.96	12.805			
16.5	113.75	12.860			
17.0	113.57	12.905			
17.5	113.44	12.935			
18.0	113.30	12.970			
18.5	113.19	13.000			
19.0	113.06	13.030			
19.5	112.89	13.075			
20.0	112.75	13.110	.315	63	
25	111.49	13.425	.290	58	
30	110.35	13.715	.325	65	
35	109.07	14.040	.360	72	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

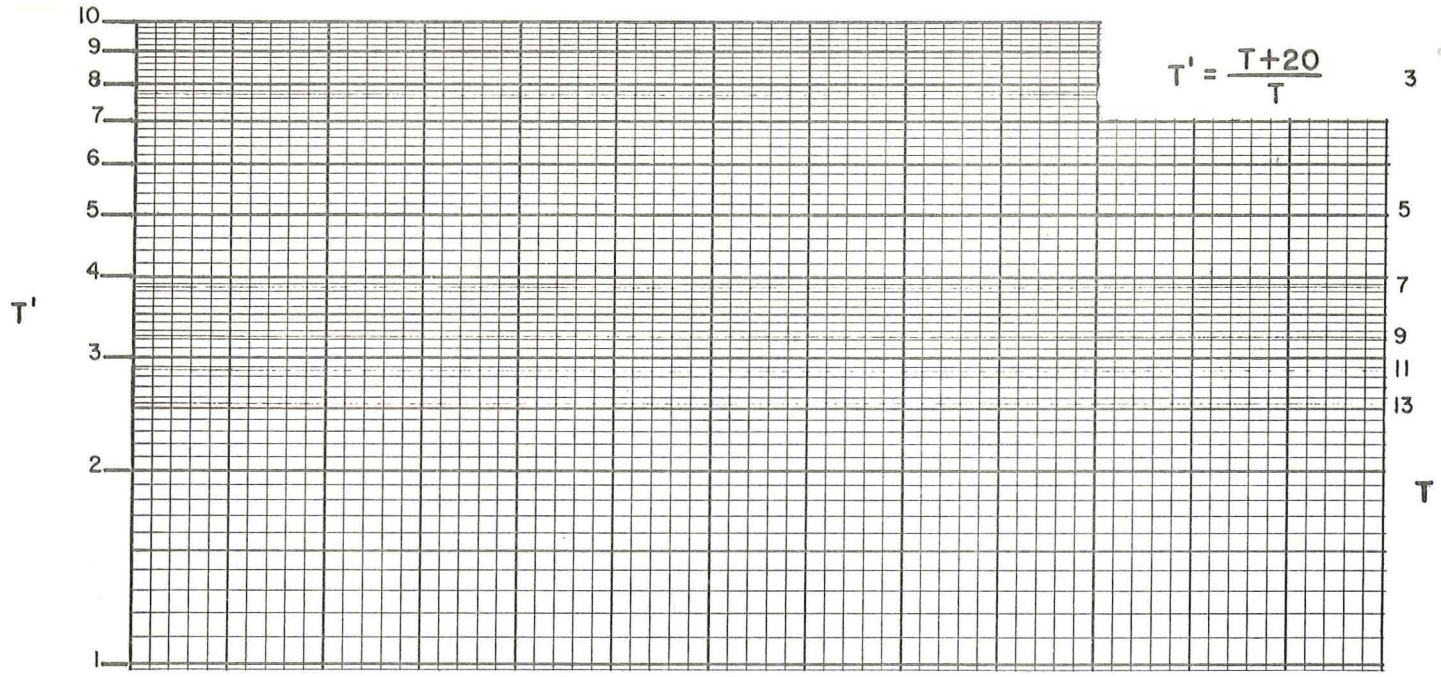
Property _____ T ____ R ____ sec ____

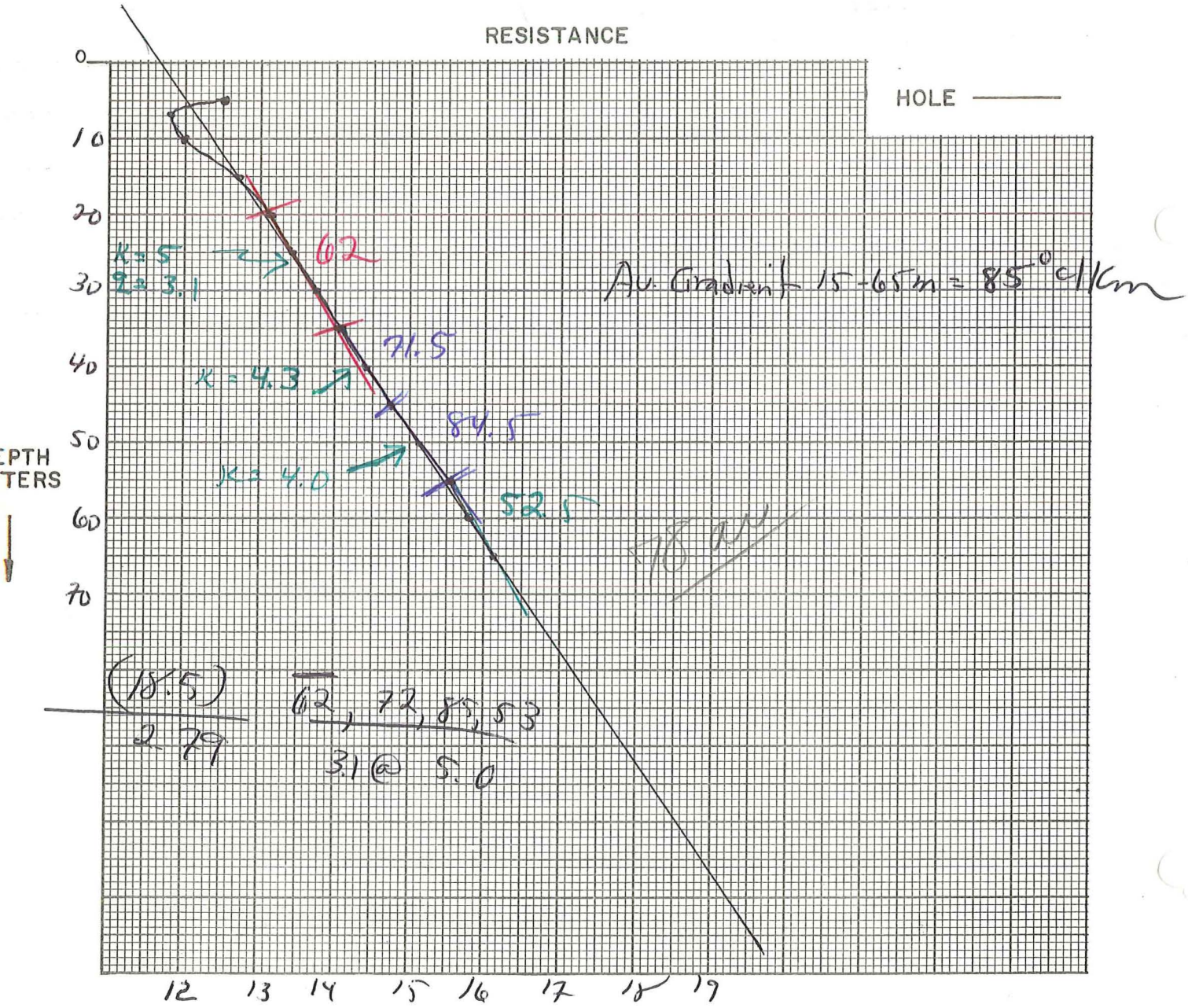
Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
46	107.67	14.406			
			.355	71	
45	106.32	14.755			
			.360	72	
50	104.95	15.115			
			.485	97	
55	103.13	15.600			
			.205	41	
60	102.38	15.805			
			.315	63	
65	101.21	16.120			
			050	50	
66	101.03	16.170			


T' = T+20 / T
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13


RESISTANCE
HOLE
DEPTH METERS
0
10
20
30
40
50
60
70
12
13
14
15
16
17
18
19
TEMPERATURE °C
K = 5
62
K = 4.3
71.5
84.5
K = 4.0
52.5
Av. Gradient 15-65m = 85° C/Km
(18.5) / 2.79
62, 72, 85, 53
3.1 @ 5.0

LITHOLOGIC LOG B-241

NE¼ SW¼ Sec 15 T24S R8W Elevation: 5,720'

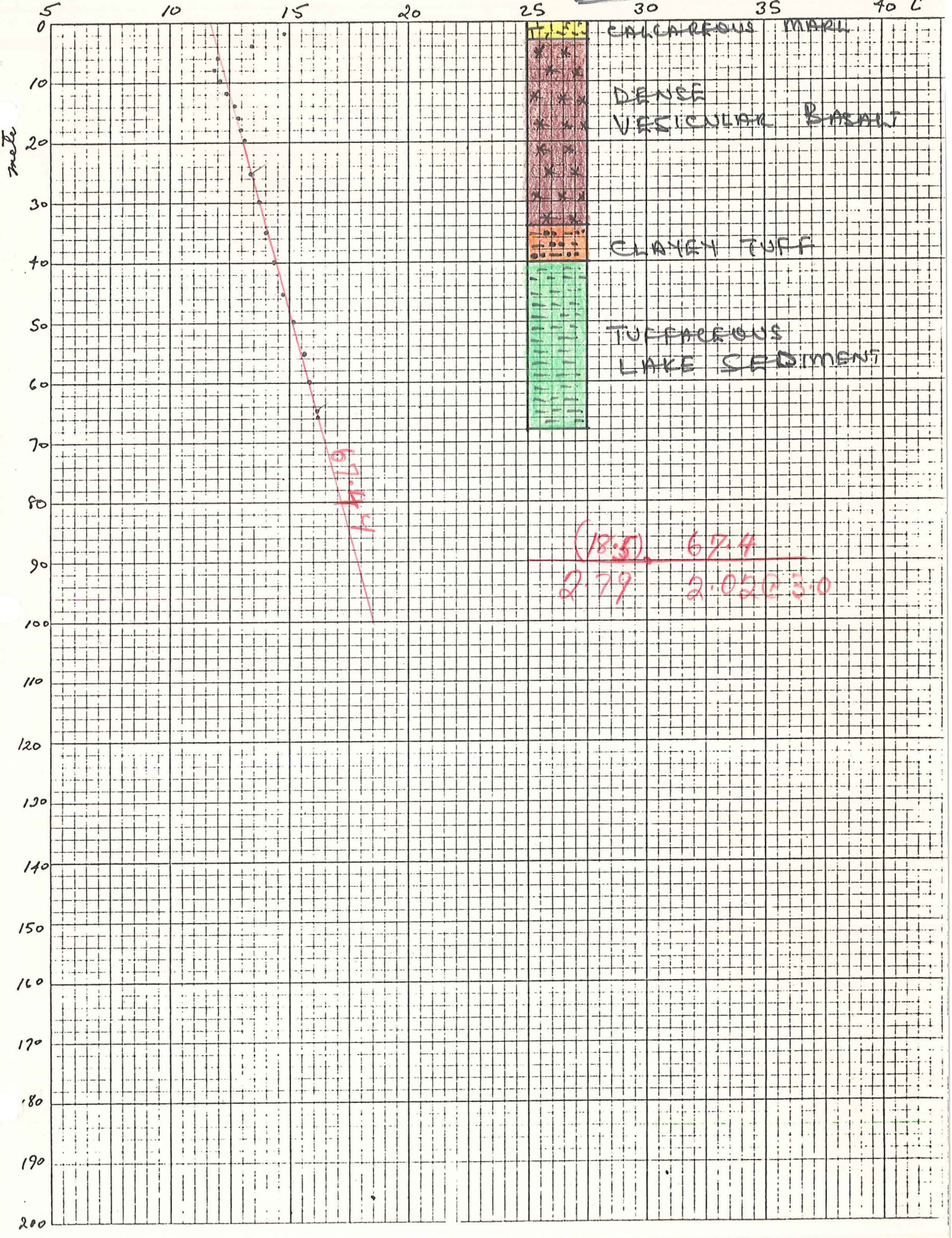
Depth (m)	Description
0 - 3	White to buff, calcareous marl, in part tuffaceous.
3 - 34	Medium-gray to black, fine-grained, dense, somewhat vesicular basalt.
34 - 40	Buff to yellow-brown clayey tuff of water laid origin.
40 - 63	Gray to blue-gray clayey tuffaceous lake sediment.
63 - 68	Yellow-brown clayey tuffaceous lake sediment. Some water at 67 meters.

H. Dean Pilkington

HDP:mmo

cc: Art Lange
Cheryl Caywood
Mark Alldredge

B-241



4/0/80

KEUFFEL & ESSER CO MADE IN USA

TEMPERATURE DEPTH LOG

ΔT Well No. 242

Property-Project Best Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

RT JUSTIFY:

Card A

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
755	242	27	0C	76	CM

Date Logged

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

Site Description	Operator	Editor
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
17.7 KM NW OF COVE FORT, UTAH	DP	MLH

Card B

Map Location △

Scale Unit in cm	Map Size (7.5, 15.,60)	N Lat Degree	N Lat Min	W Long Degree	W Long Min
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
CM	15.	38.	30.	112.	45.

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
42.4	8.8	5200.	F

Use decimals

← Write M if meters

SEGMENT DEPTH

	Start	End	K	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
C	20.0	35.0	-5.0	.5
D	.999			
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
	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
C	35.0	67.0		-.5
D				
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location West Side Lava Ridge Date Oct 27, 1976

Map Cove Fort Utah 15' Quad

Property Best T 24 S R 7W sec SwNy NwNy 7

Drill Hole B-242 Date Drilled Oct 10, 1976 Elevation 5200 ft.

Instrument Probe 39 Operator DP

Comments 3/4" PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
2.0	100.06	16.440			
2.5	99.21	16.675			
3.0	99.58	16.570			
3.5	101.73	15.980			
4.0	103.56	15.485			
4.5	105.54	14.960			
5.0	107.20	14.525			
5.5	108.52	14.185			
6.0	109.28	13.990			
6.5	109.87	13.835			
7.0	110.03	13.795			
7.5	109.95	13.815			
8.0	109.70	13.880			
8.5	109.35	13.970			
9.0	109.00	14.060			
9.5	108.67	14.145			
10.0	108.37	14.220			
10.5	108.07	14.300			
11.0	107.85	14.355			
11.5	107.60	14.420			
12.0	107.41	14.470			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T ____ R ____ sec ____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
12.5	107.25	14.510			
13.0	107.09	14.555			
13.5	106.92	14.595			
14.0	106.78	14.635			
14.5	106.61	14.680			
15.0	106.44	14.720			
15.5	106.24	14.775			
16.0	105.97	14.845			
16.5	105.72	14.915			
17.0	105.56	14.955			
17.5	105.41	14.995			
18.0	105.32	15.020			
18.5	105.14	15.065			
19.0	105.00	15105			
19.5	104.84	15.145			
20.0	104.70	15.185	.315	63	
25	103.52	15500	.255	51	
30	102.55	15755	.250	50	
35	101.65	16.005	.360	72	
40	100.33	16365	.400	80	
45	98.88	16765	.390	78	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

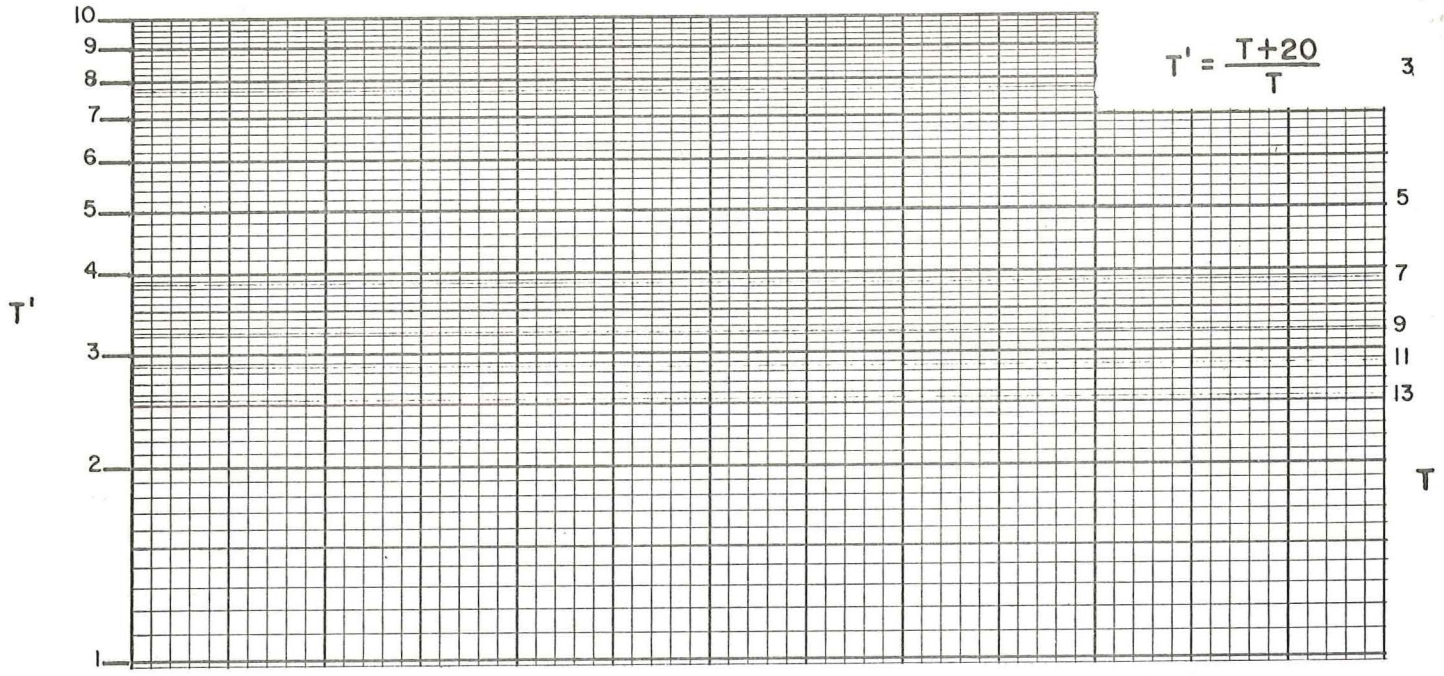
Property _____ T _____ R _____ sec _____

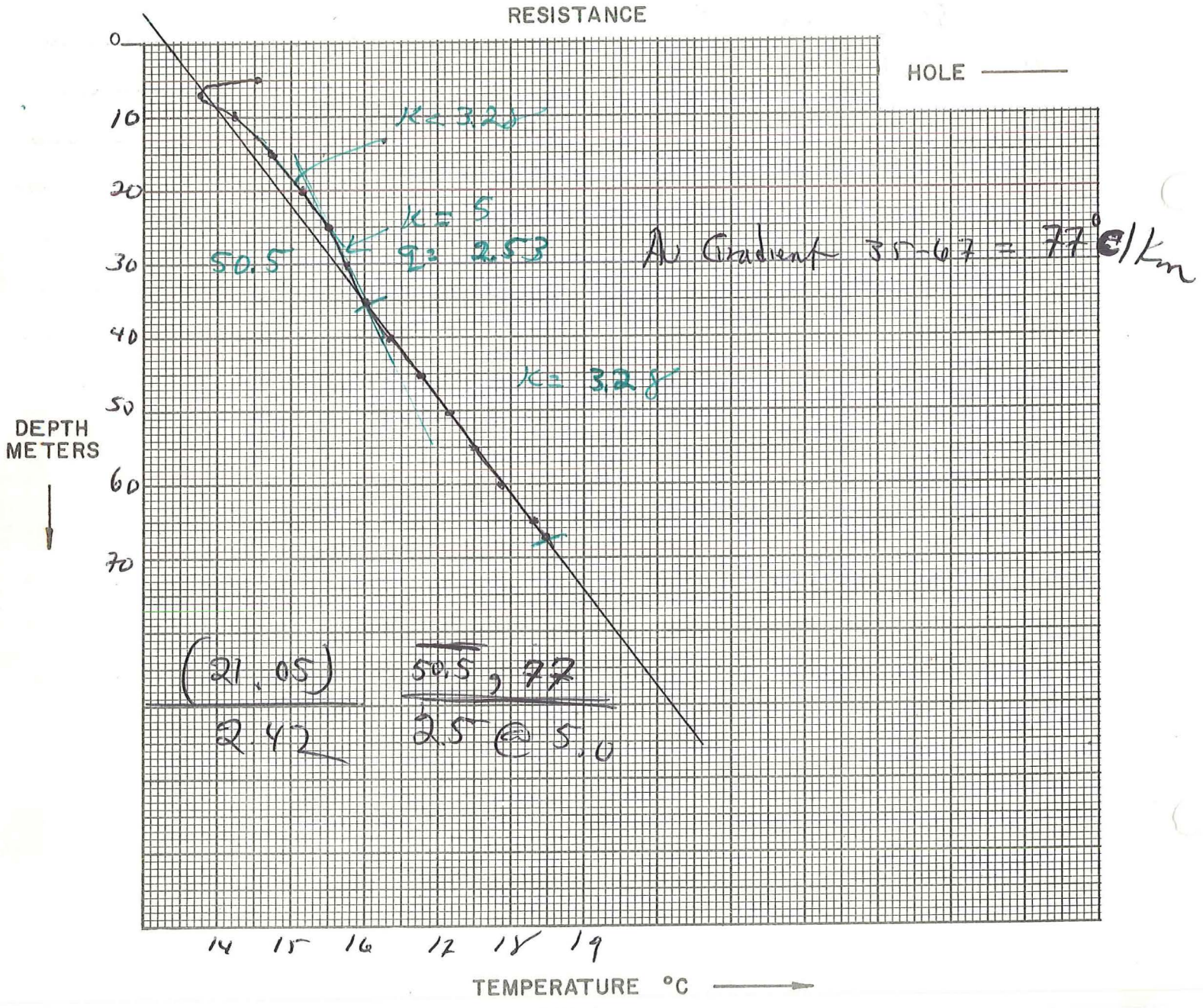
Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
50	97.48	17.155			
			.355	71	
55	96.23	17.510			
			.365	73	
60	94.95	17.875			
			.430	86	
65	93.47	18.305			
			.165	82.5	
67	92.90	18.470			


$T' = \frac{T+20}{T}$
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13


RESISTANCE
HOLE
DEPTH METERS
TEMPERATURE °C
0
10
20
30
40
50
60
70
14
15
16
17
18
19
K = 3.28
K = 5
Q = 2.53
50.5
K = 3.28
Av Gradient 35-67 = 77°C/Km
(21.05)
2.42
50.5, 77
2.5 @ 5.0

LITHOLOGIC LOG B-242

SW¼ NW¼ Sec 7 T24S R7W Elevation: 5,200'

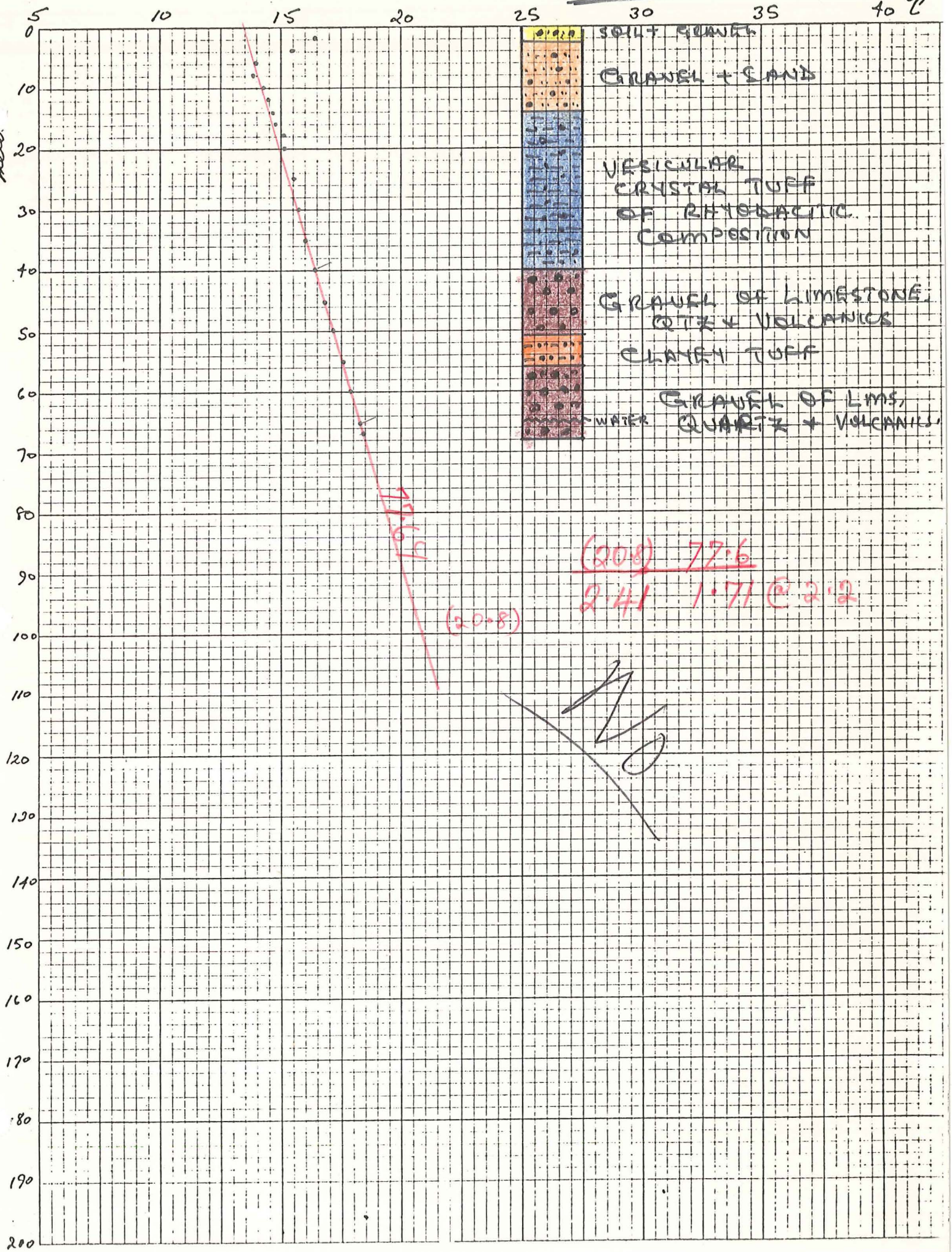
Depth (m)	Description
0 - 3	Soil with some lag gravel.
3 - 14	Mixed sand and gravel. Fragments of rhyolite and basalt.
14 - 25	Dark gray to red-brown, slightly vesicular crystal tuff - Probably of rhyodacitic composition.
25 - 40	Medium gray crystal tuff of rhyolitic composition. Bottom strongly oxidized.
40 - 51	Iron stained, fine-grained sand with some interlayered gravel. The gravel consists of limestone, quartzite and Belknap volcanics.
51 - 56	Buff to yellow-brown clayey tuff.
56 - 68	Gravel composed of basalt, limestone and Belknap volcanics in clay. Below 65m makes 5-10 gpm water.

H. Dean Pilkington

HDP:mmo

cc: Art Lange
Cheryl Caywood
Mark Alldredge

B-242.



47 0780

10 X 10 TO THE INCH
KEUFFEL & ESSER CO MADE IN USA

TEMPERATURE DEPTH LOG

ΔT Well No. 243

Property-Project Rest Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →				Well No →						Date Logged DA →		MO →		YR		*	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	7	5	5				2	4	3	2	1		0	C		7	6	C	M

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

| Site Description | | | | | |

TEMPERATURE - DEPTH LOG

Location 4 miles SSE of Black Point Date Oct 21, 1976

Map Tabernale Hill, Utah 15' Quad

Property LVO T 23S R 7W sec NW¼ SE¼ 33

Drill Hole B-243 Date Drilled October 9, 1976 Elevation 5140 ft.

Instrument Probe 44 Operator DP

Comments 3/4" PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
1	97.28	18.00			
2	96.30	18290			
2.5	95.92	18,400			
3.0	95.82	18,430			
3.5	97.88	17.830			
4.0	101.13	16900			
4.5	102.69	16,460			
5.0	103.96	16105			
5.5	105.99	15,495			
6.0	107.14	15 230			
6.5	107.96	15.005			
7.0	108.58	14,835			
7.5	109.15	14685			
8.0	109.47	14 600			
8.5	109.74	14,525			
9.0	109.62	14,560			
9.5	109.30	14645			
10.0	109.09	14,705			
10.5	108.87	14765			
11.0	108.69	14.810			
11.5	108.38	14.890			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T _____ R _____ sec _____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
12.0	108.35	14.905			
12.5	108.38	14895			
13.0	108.38	14.895			
13.5	108.34	14 905			
14.0	108.34	14 905			
14.5	108.15	14955			
15.0	108.20	14.945			
15.5	108.27	14.925			
16.0	108.25	14.930			
16.5	108.14	14.955			
17.0	108.13	14.960			
17.5	108.06	14.980			
18.0	107.99	15.000			
18.5	107.40	15160			
19.0	107 74	15.065			
19.5	107.71	15,075			
20.0	107.63	15.095			
25	106.41	15 930	.335	67	
30	105.48	15685	.255	51	
35	104.75	15.885	.206	40	
40	103.87	16.130	.245	49	
			.235	57	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

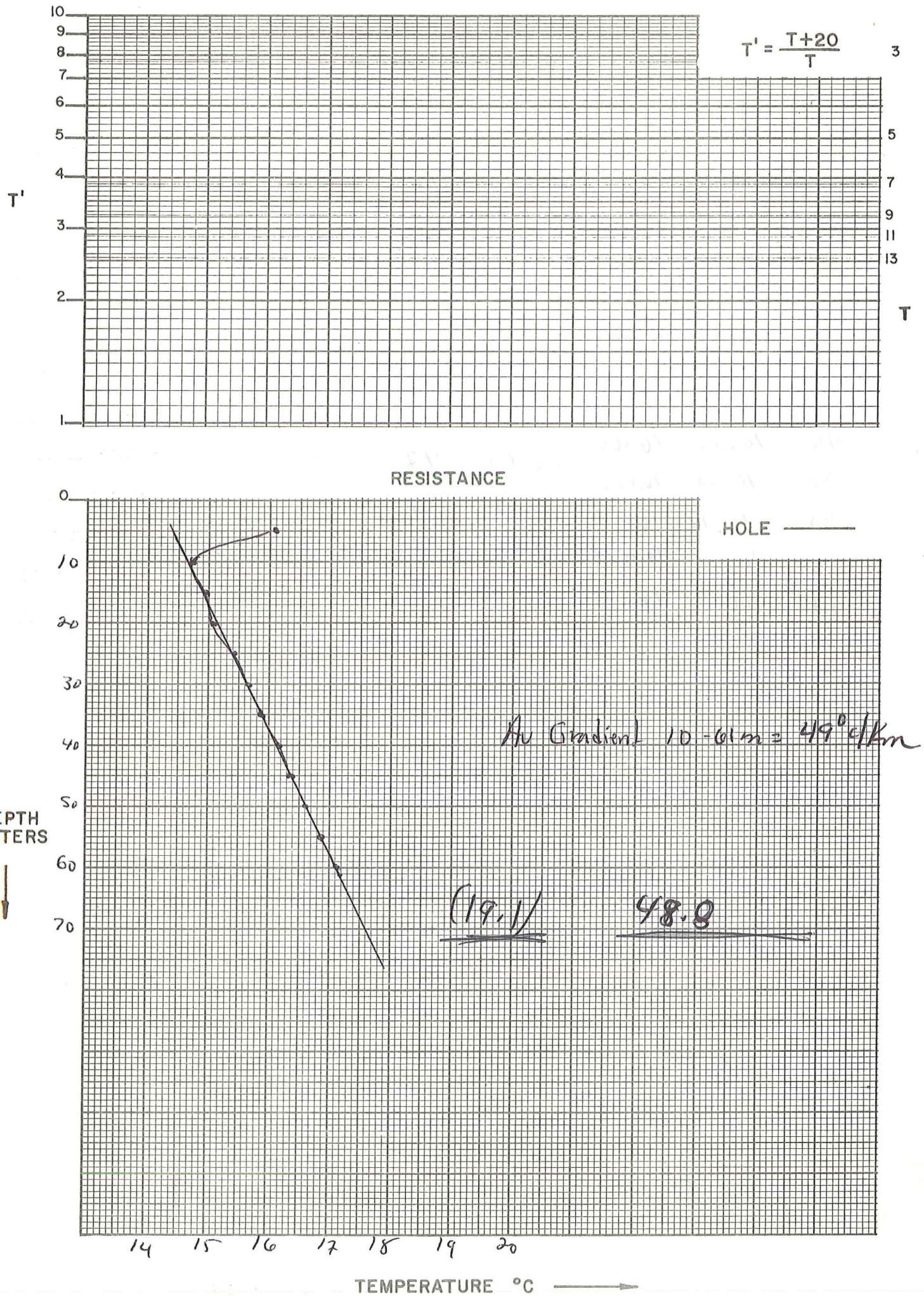
Property _____ T ____ R ____ sec ____

Drill Hole _____ Date Drilled _____ Elevation ____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
45	103.02	16.365			
			.235	47	
50	102.18	16.600			
			295	59	
55	101.14	16.895			
			.255	51	
60	100.24	17.150			
			045	45	
61	100.08	17.195			


T' = (T+20)/T
T'
T
RESISTANCE
HOLE
DEPTH METERS
TEMPERATURE °C
Av Gradient 10-61 m = 49° c/Km
(19.1)
48.8

Lithologic Log B-243

NW¼ SE¼ Sec 33 T23S R7W Elevation: 5,140'

Depth (m)	Description
0 - 1	Buff to pink-brown soil.
1 - 14	Light brown, fine-grained sand with minor gravel seam between 6 and 8m.
14 - 56	Gravel with fragments up to 1½ inches of white quartzite, red quartzite, limestone and chert. Below 29m fragments of Belknap volcanics begin.
56 - 62	Gravel in which the majority of the rock fragments are of Belknap volcanics.

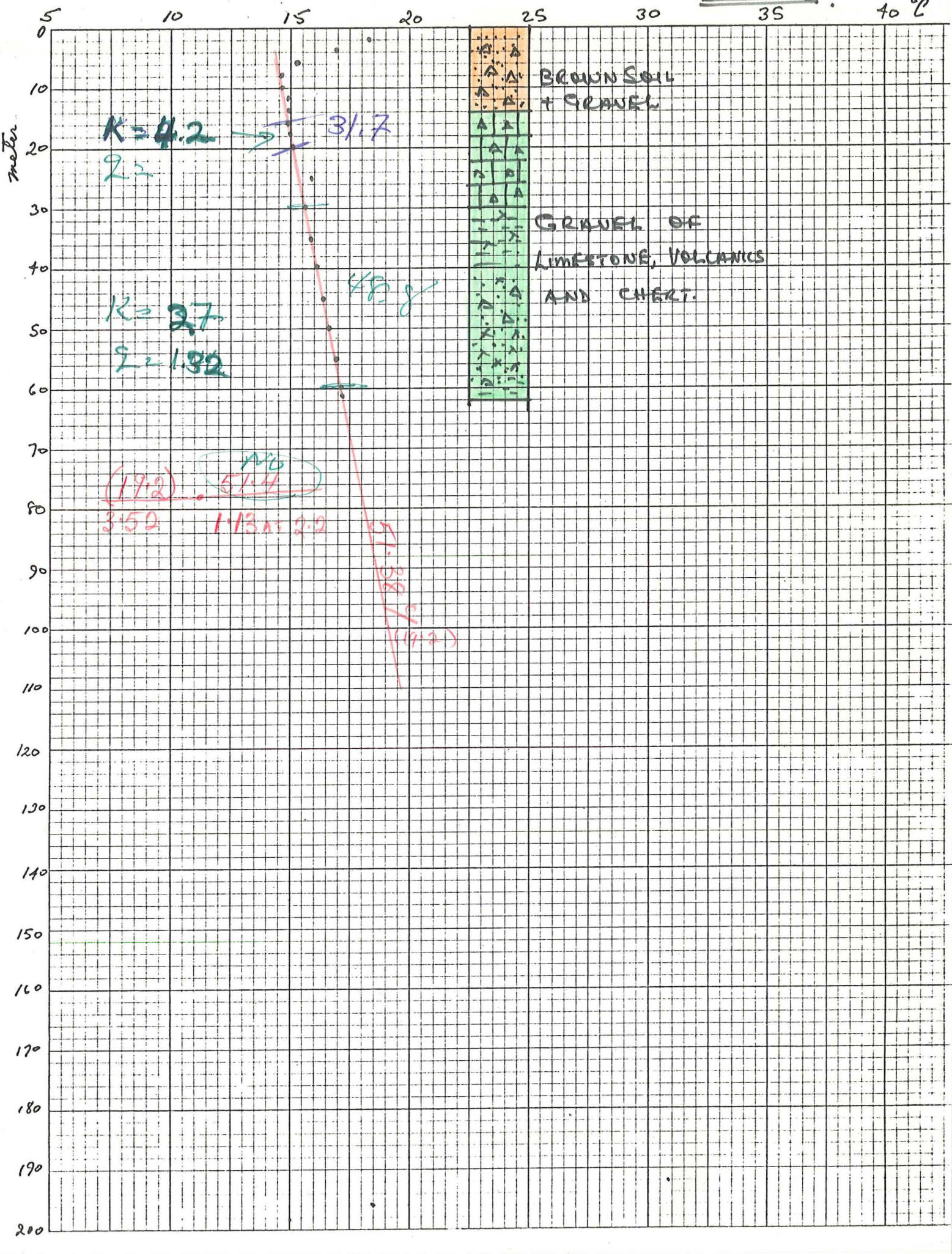
H. D. Pilkington (mc.)

H. D. Pilkington
October 26, 1976

HDP:mmo

cc: Art Lange
Cheryl Caywood
Mark Alldredge
File copy to Dean

B-243



47 0780
10 X 10 TO THE INCH • 5 X 5 TO THE INCH
KEUFFEL & ESSER CO MADE IN U.S.A.

TEMPERATURE DEPTH LOG

ΔT Well No. 244

Property-Project Best Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

RT JUSTIFY:

Card A

Proj No →	Well No →	Date Logged DA	MO	YR	*
1 2 3 4	5 6 7 8 9 10	11 12	13 14 15	16 17 18	19 20
7 5 5	2 4 4	2 1	0 6	7 6	C M

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

Site Description	Operator	Editor
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
1 9 · 5 k M S W O F T A B E R N A C L E H I L L	D P	M L H

Card B

Scale Unit in cm	Map Size (7.5, 15.,60)	Map Location △ N Lat Degree	Min	W Long Degree	Min
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
C M	1 5 ·	3 8 .	4 5 ·	1 1 2 .	4 5 ·

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
3 · 4 5	1 1 · 2 8	5 1 0 0 ·	F

← Write M if meters

SEGMENT DEPTH

	Start	End	K	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
C	2 0 · 0	6 1 · 0	- 4 . 0	- · 5
D				
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
	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
C	· 9 9 9			
D				
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location 2 miles South of Black Point Date October 26 1976

Map Tabernacle Hill, Utah 15' Quad

Property LVO T 23S R 7W sec SW¼ NW¼ 32

Drill Hole B-244 Date Drilled October 9, 1976 Elevation 5100 ft.

Instrument Probe 44 Operator DP

Comments 3/4" PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
13	108.09	14.970			
14	107.84	15.040			
15	107.88	15.030			
16	107.52	15.130			
16.1	107.69	15.095			
17.0	107.58	15.110			
17.5	107.49	15.170			
18.0	107.73	15.070			
18.5	107.76	15.060			
19.0	107.71	15.075			
19.5	107.53	15.125			
20	107.45	15.145			
25	106.09	15.520	.375	75	
30	104.93	15.835	.315	63	
35	104.04	16.085	.250	50	
40	103.07	16.355	.270	54	
45	102.11	16.620	.265	53	
50	101.29	16.855	.235	47	
55	100.33	17.125	.240	48	
60	99.00	17.505	.380	76	
61	98.80	17.890	.020		
99999					

TEMPERATURE - DEPTH LOG

Location 2 miles south of Black Point Date October 21, 1976

Map Tabernacle Hill, Utah 15' Quad

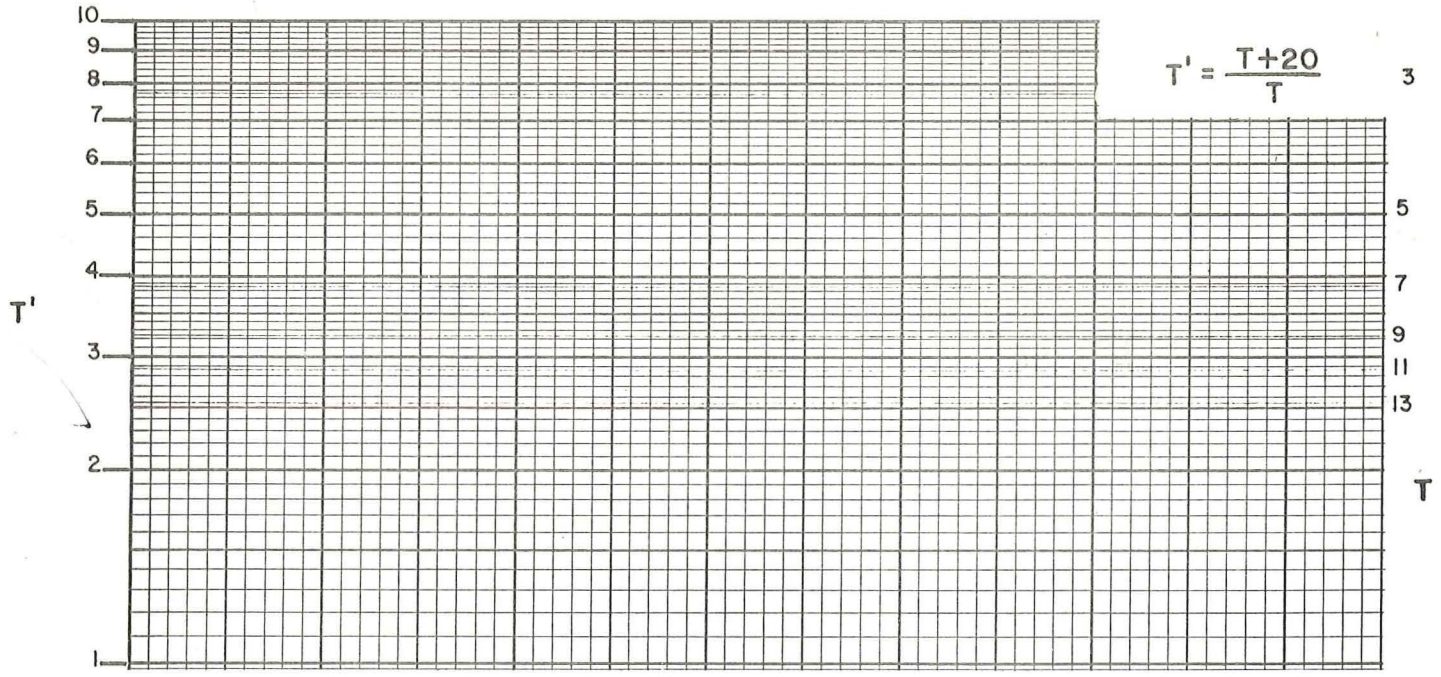
Property LVO T 23S R 7W sec SW1/4 NW1/4 32

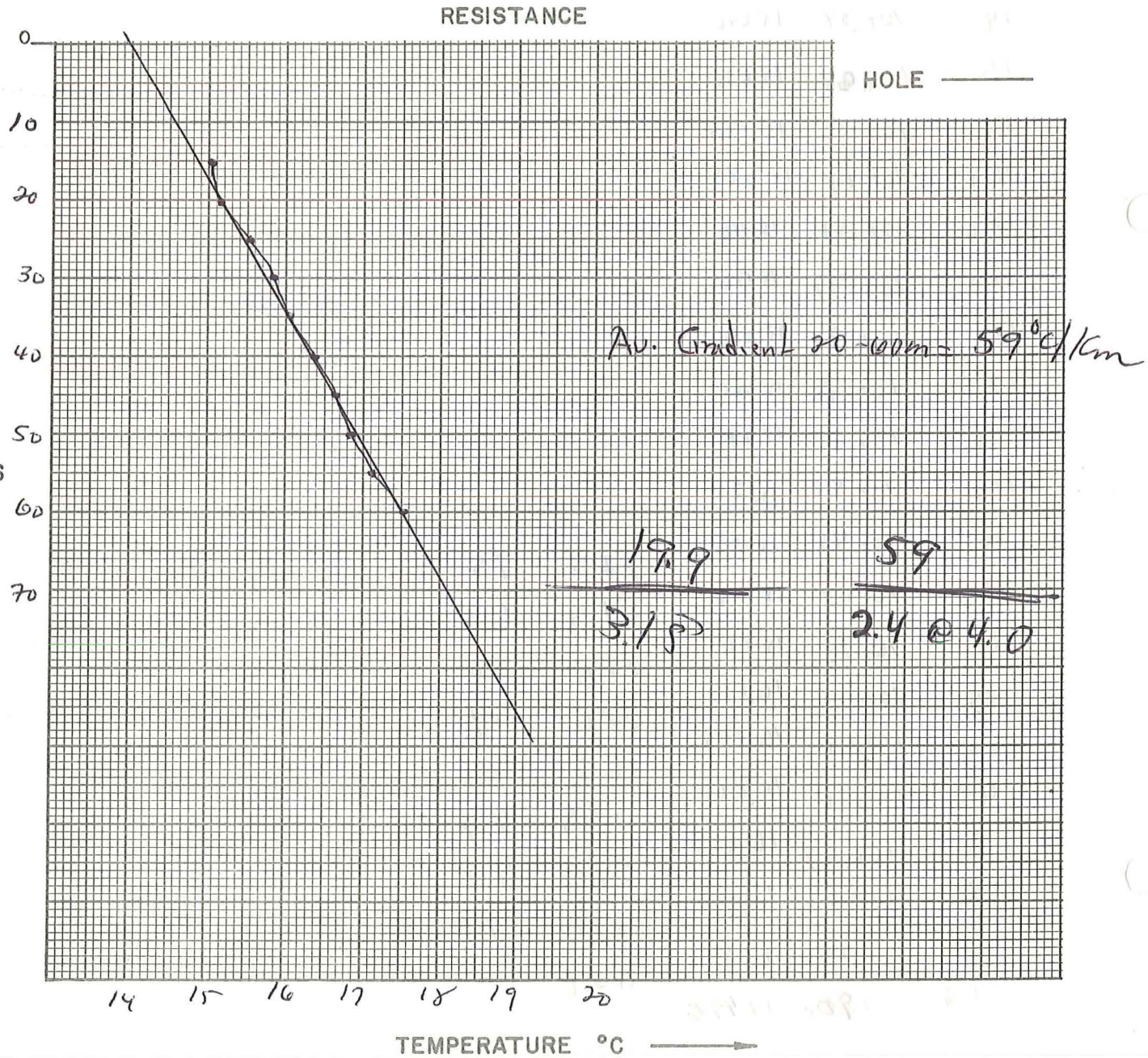
Drill Hole B-244 Date Drilled October 9, 1976 Elevation 5100 ft.

Instrument Probe 44 Operator DS

Comments 3/4" PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
13	108.09	14.970			
14	107.84	15.040			
15	107.88	15.030			
16	107.52	15.130			
16.5	107.64	15.095			
17.0	107.58	15.110			
17.5	107.49	15.130			
18.0	107.73	15.070			
18.5	107.76	15.060			
19.0	107.71	15.075			
19.5	107.53	15.125			
20	107.45	15.145			
25	106.09	15.520	.375	75	
30	104.93	15.835	.315	63	
35	104.04	16.085	.250	50	
40	103.07	16.355	.270	54	
45	102.11	16.620	.265	53	
50	101.29	16.855	.235	47	
55	100.33	17.125	.240	48	
60	99.00	17.505	.380	76	
65	98.83	17.990	.020		


T' = T+20 / T
T'
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13
T


RESISTANCE
HOLE
0
10
20
30
40
50
60
70
DEPTH METERS
Av. Gradient 20-60m = 5.9°C/Km
19.9
3.1 ⌀
5.9
2.4 @ 4.0
14
15
16
17
18
19
20
TEMPERATURE °C

Lithologic Log B-244

SW¼ NW¼ Sec 32 T23S R7W Elevation: 5,100'

Depth (m)	Description
0 - 4.6	Soil mixed with gravel.
4.6 - 10.8	Light brown, fine-grained sand.
10.8 - 17.0	Medium gray, fine-grained basaltic sands.
17.0 - 21.6	Medium-gray, fine-grained, clayey lake sediments.
21.6 - 34.0	Medimum brown to light brown, fine-grained sand.
34.0 - 62	Pea gravel with brown clay matrix. Rock fragments of quartzite and limestone.

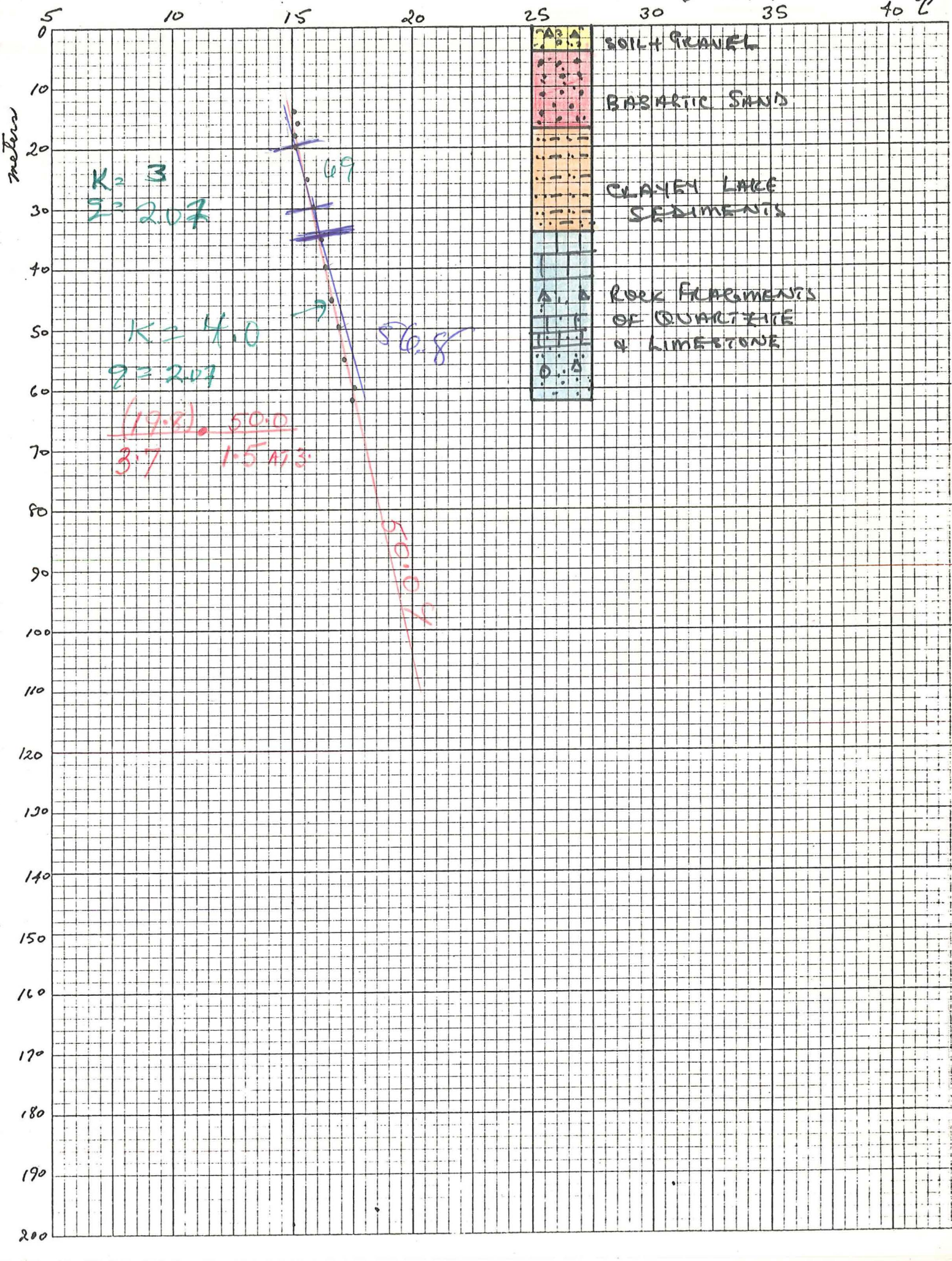
H. D. Pilkington (MO.)

H. D. Pilkington
October 26, 1976

HDP:mmo

cc: Art Lange
Cheryl Caywood
Mark Alldredge
File copy to Dean

B-244



47 0780

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TEMPERATURE DEPTH LOG

ΔT Well No. 245

Property-Project OK Depth Logged

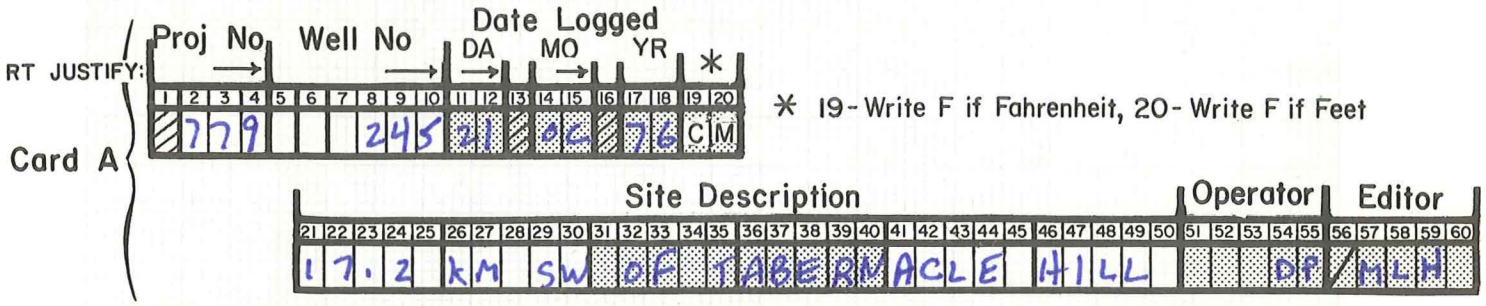
Map Scale Date: Drilled Logged

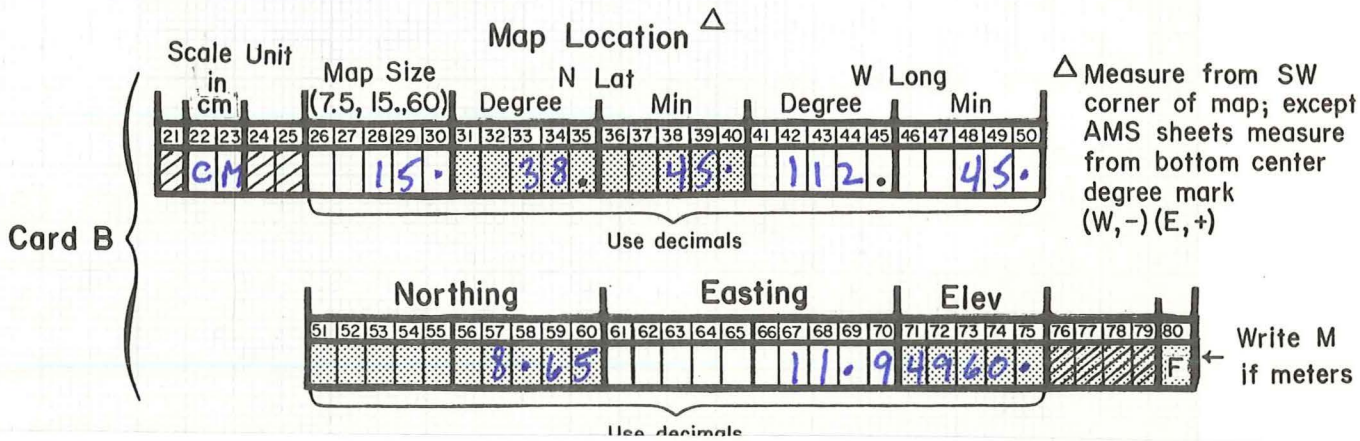
State County Section T R

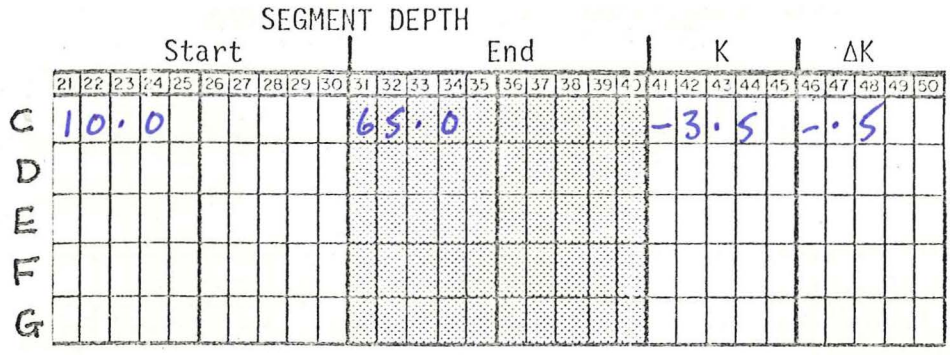
Instrument Operator Elevation ft.

Comments

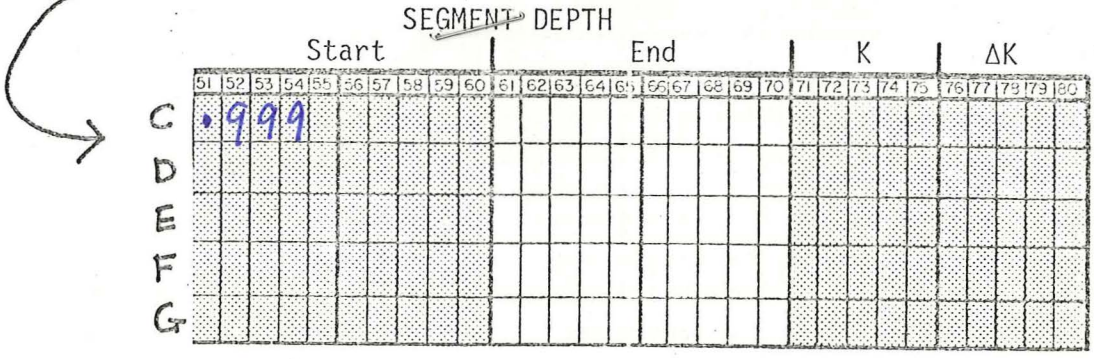
COMPUTER PROCESSING







Continue each card below.



Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location 1 miles south of Black Point Date October 21, 1976

Map Tabernacle Hill, Utah 15' Quad

Property OK T 23 S R 7W sec SW¼ NW¼ 20

Drill Hole B-245 Date Drilled October 8, 1976 Elevation 4960 ft.

Instrument Probe 44 Operator DP

Comments 3/4" PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
2	98.02	17.495			
3	99.38	17.395			
3.5	102.14	16.615			
4.0	103.89	16.125			
4.5	105.48	15.685			
5.0	106.58	15.380			
5.5	108.30	14.915			
6.0	109.80	14.515			
6.5	110.92	14.215			
7.0	111.50	14.055			
7.5	111.88	13.960			
8.0	111.97	13.935			
8.5	112.05	13.915			
9.0	112.03	13.920			
9.5	111.85	13.960			
10.0	111.71	14.005			
10.5	111.51	14.055			
11.0	111.39	14.090			
11.5	111.26	14125			
12.0	111.12	14.160			
12.5	110.92	14.215			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T ____ R ____ sec ____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
13	110.91	14.215			
13.5	110.79	14.250			
14.0	110.79	14.260			
14.5	110.77	14.250			
15.0	110.77	14.250			
15.5	110.73	14.265			
16.0	110.63	14.290			
16.5	110.58	14.305			
17.0	110.60	14.295			
17.5	110.56	14.305			
18.0	110.52	14.320			
18.5	110.49	14.325			
19.0	110.41	14.345			
19.5	110.42	14.345			
20.0	110.23	14.395			
25	109.74	14.525	.130	26	
30	109.21	14.670	.145	29	
35	108.68	14.815	.145	29	
40	107.86	15.035	.220	44	
45	107.67	15.085	.050	10	
50	107.03	15.260	.165	33	
			.145	29	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

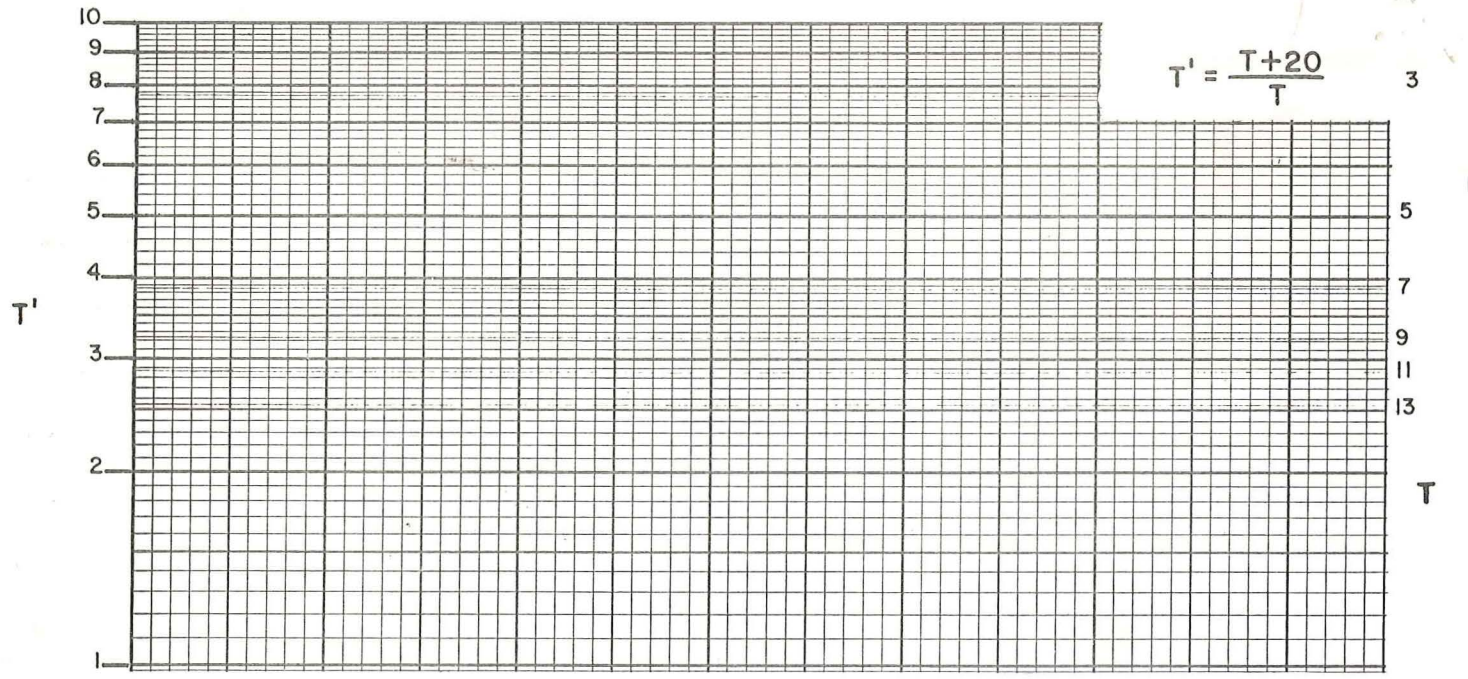
Property _____ T _____ R _____ sec _____

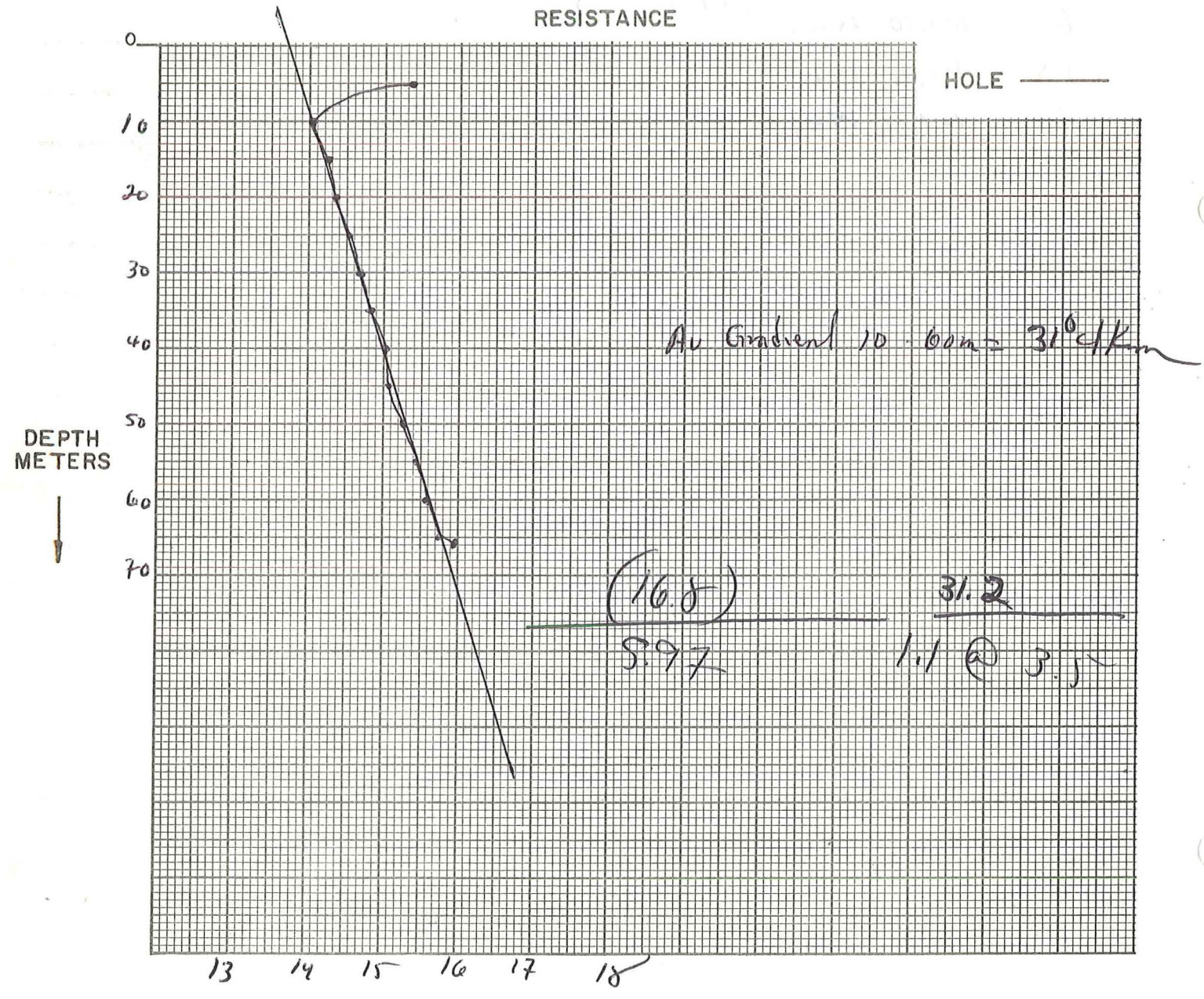
Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
55	106.50	15.405			
60	105.90	15.765	.166	32	
65	105.24	15.755	.216	42	
66	104.42	15.975	.220	44	


$T' = \frac{T+20}{T}$
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13


RESISTANCE
HOLE
0
10
20
30
40
50
60
70
DEPTH METERS
13
14
15
16
17
18
TEMPERATURE °C
Av Gradient 10 - 60m = 31°C/Km
(16.8)
5.97
31.2
1.1 @ 3.)

Lithologic Log B-245

SW¼ NW¼ Sec 20 T23S R7W Elevation: 4,960'

Depth (m)	Description
0 - 1	Soil.
1 - 4.6	Interbedded sand and gravel. The gravels are composed of quartzite, limestone and basalt fragments.
4.6 - 17.0	Buff to yellow-brown, fine-grained, clayey tuffaceous lake sediments.
17.0 - 32.4	Light brown, very fine-grained sand.
32.4 - 57.0	Gray, fine-grained, clayey tuffaceous lake sediments.
57.0 - 68	Pea gravel composed of quartzite and limestone fragments in a sandy matrix.

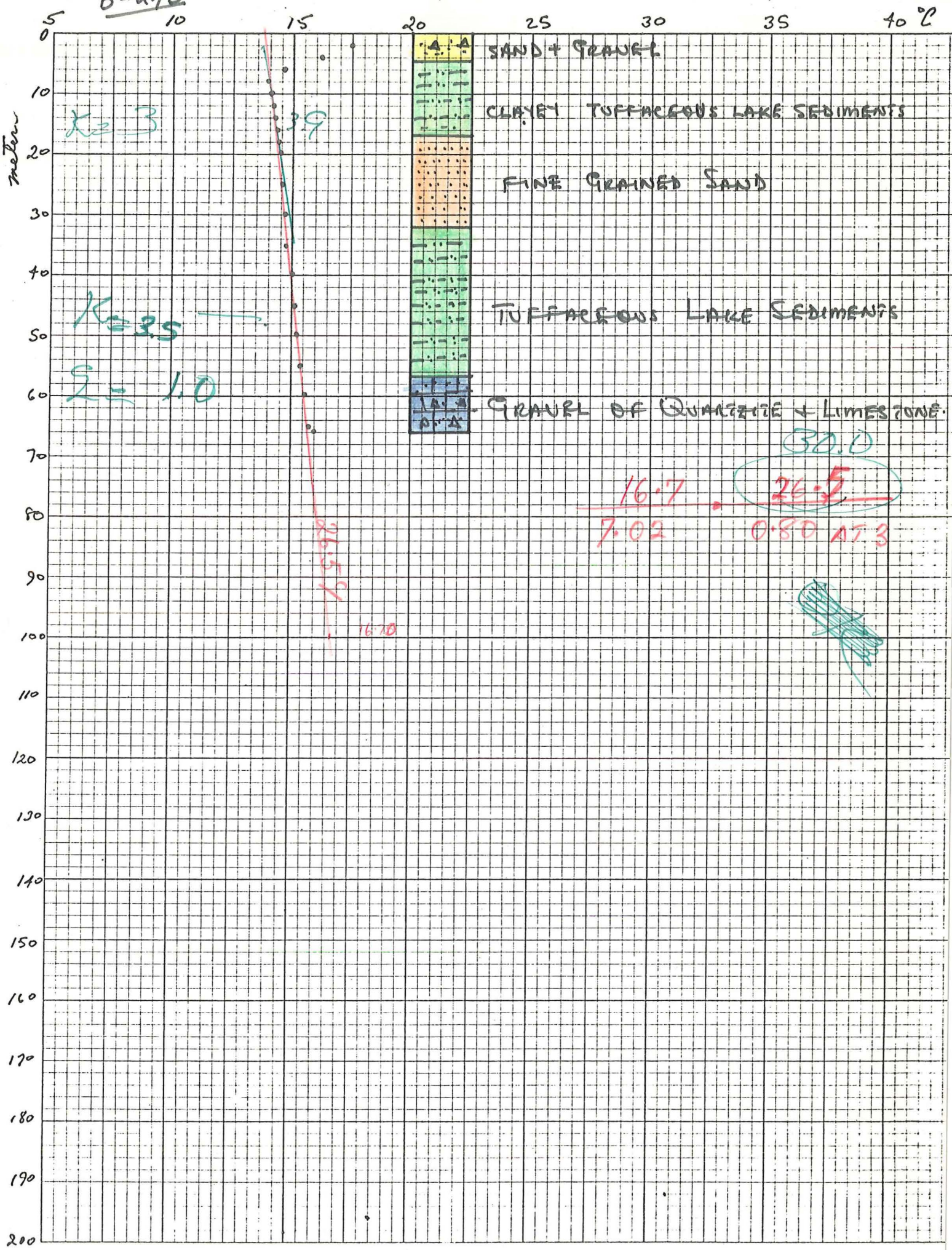
H. D. Pilkington

H. D. Pilkington
October 26, 1976

HDP:mmo

cc: Art Lange
Cheryl Caywood
Mark Alldredge
File copy to Dean

B-245



47 0780

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KEUFFEL & ESSER CO MADE IN USA

TEMPERATURE DEPTH LOG

ΔT Well No. 247

Property-Project Ok Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

RT JUSTIFY:

Card A

Proj No →	Well No →	Date Logged DA →	MO →	YR	*
1 2 3 4	5 6 7 8 9 10	11 12	13 14 15	16 17 18	19 20
7 7 9	2 4 7	1 2	0 C	7 6	C M

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

Site Description	Operator	Editor
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
1 1 . 3 k m S W O F T A B E R N A C L E H I L L	D P	/ M L H

Card B

Scale Unit in cm	Map Size (7.5, 15.,60)	Map Location △ N Lat Degree	Min	W Long Degree	Min
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
C M	1 5 .	3 8 .	4 5 .	1 1 2 .	4 5 .

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
1 3 . 5	2 0 . 0 5	4 9 0 1 .	F

← Write M if meters

SEGMENT DEPTH

	Start	End	K	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
C	1 4 . 0	4 0 . 0		
D	. 9 9 9			
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
	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
C	4 0 . 0	6 8 . 0	- 3 . 5	- . 5
D				
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location 3 Miles ENE of Black Point Date October 12, 1976

Map Tabernacle Hill, Utah 15' Quad

Property OK T 33 S R 7W sec SW¼ NE¼ 11

Drill Hole B-247 Date Drilled October 7, 1976 Elevation _____ ft.

Instrument Probe 44 Operator DO

Comments ¾ PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
5.0	105.85	15.580			
5.5	110.84	14.235			
6.0	111.97	13.935			
6.5	113.18	13.615			
7.0	113.59	13.505			
7.5	113.86	13.435			
8.0	113.90	13425			
8.5	113.84	13.445			
9.0	113.76	13465			
9.5	113.57	13515			
10.0	113.39	13.560			
10.5	113.22	13.605			
11.0	113.10	13635			
11.5	113.01	13.660			
12.0	112.92	13685			
12.5	112.68	13745			
13.0	112.49	13.800			
13.5	112.37	13830			
14.0	112.28	13855			
14.5	112.05	13.915			
15.0	111.95	13.940			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

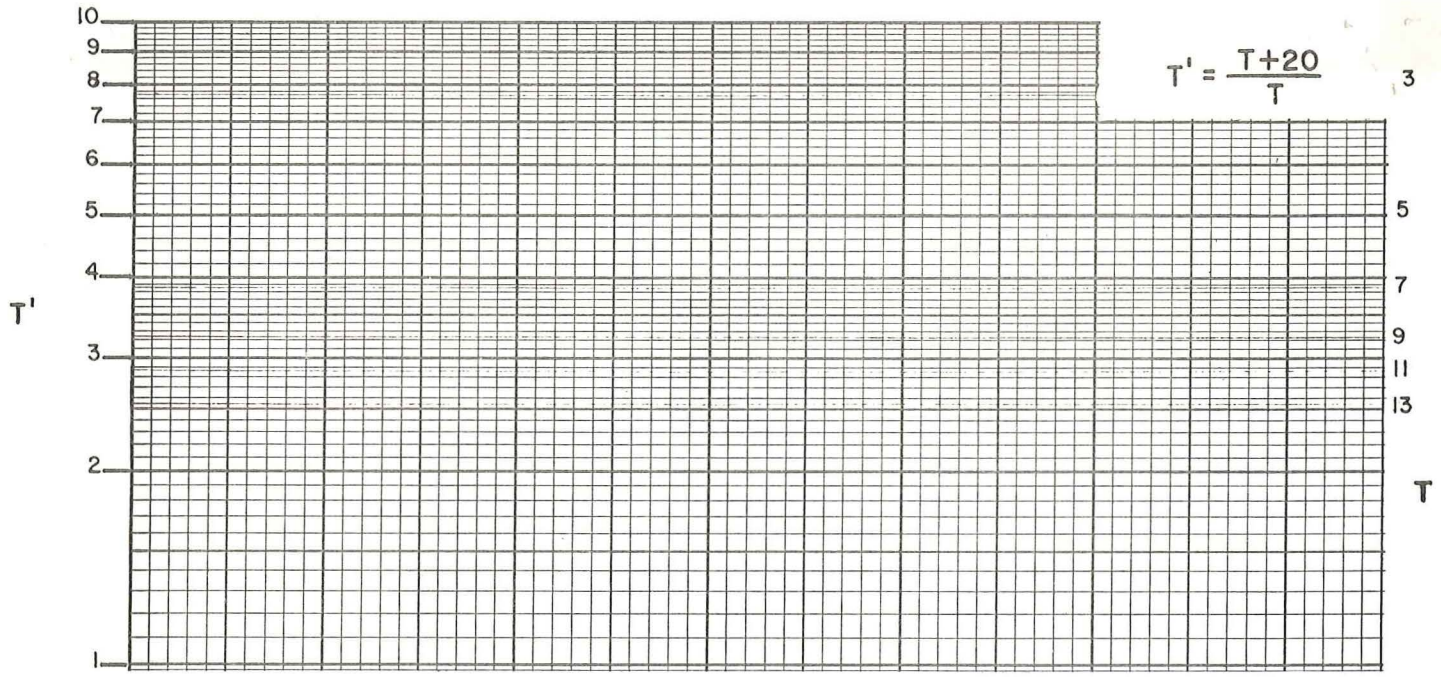
Property _____ T _____ R _____ sec _____

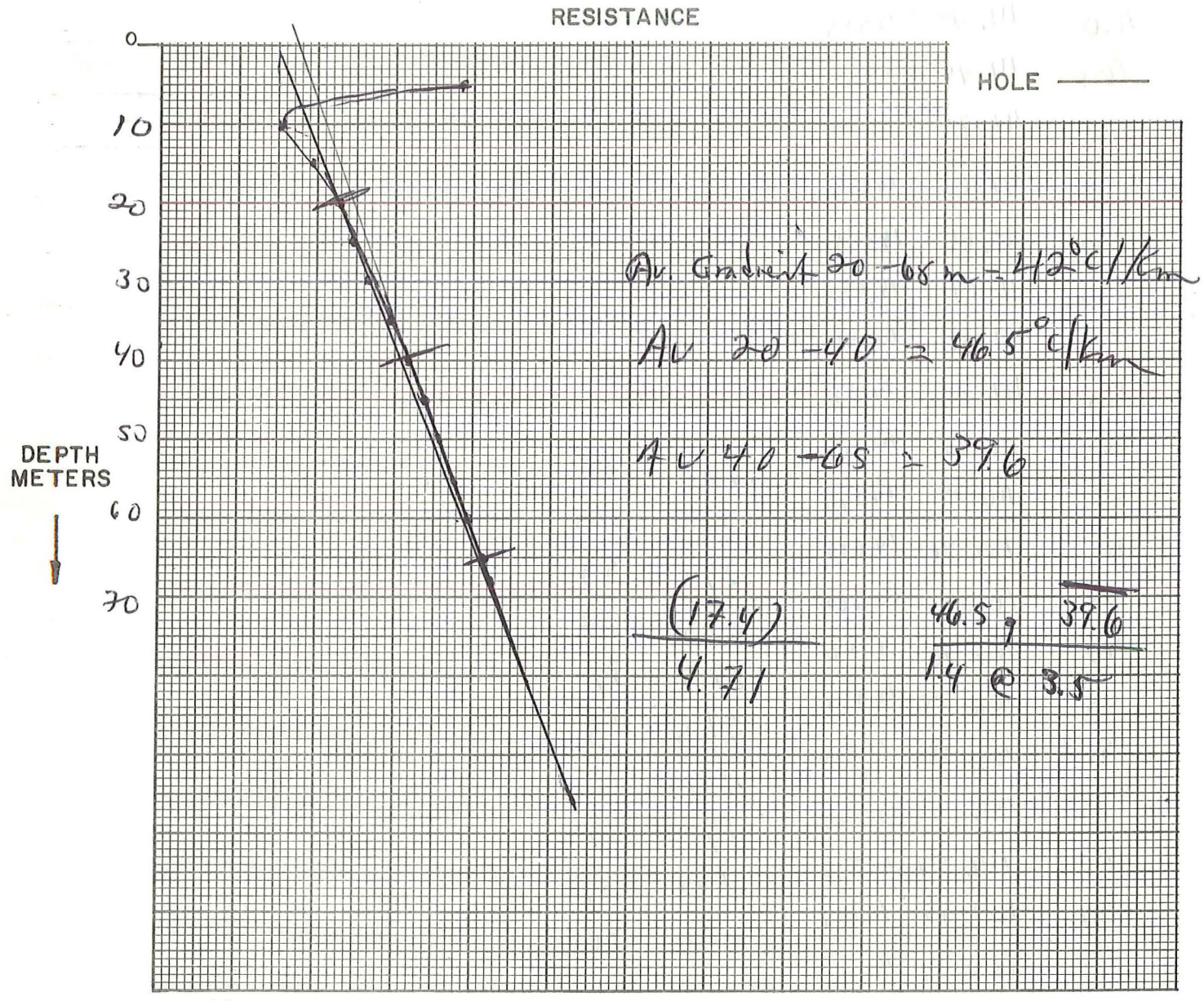
Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
15.5	111.83	13.970			
16.0	111.78	13.985			
16.5	111.74	13.995			
17.0	111.74	13.995			
17.5	111.67	14.015			
18.0	111.66	14.015			
18.5	111.61	14.030			
19.0	111.56	14.040			
19.5	111.03	14185			
20.0	110.93	14.210			
25	110.25	14390	.180	36	
30	109.41	14.615	.225	45	
35	108.33	14.905	.290	58	
40	107.48	15.140	.235	47	
45	106.75	15335	.195	39	
50	105.98	15550	.215	43	
55	105.28	15740	.190	38	
60	104.57	15935	.195	39	
65	103.87	16.130	.195	39	
68	103.59	16.210	.080	40	


$T' = \frac{T+20}{T}$
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13


RESISTANCE
HOLE
DEPTH METERS
0
10
20
30
40
50
60
70
Av. Gradient 20 - 68 m = 42°C/Km
Av 20 - 40 = 46.5°C/Km
Av 40 - 68 = 39.6
(17.4)
4.71
46.5 to 39.6
1.4 @ 3.5
13
14
15
16.0
17.
TEMPERATURE °C

Lithologic Log B-247 (SWU-47)

SW¼ NE¼ Sec 11 T23S R7W Elevation: 4,910'

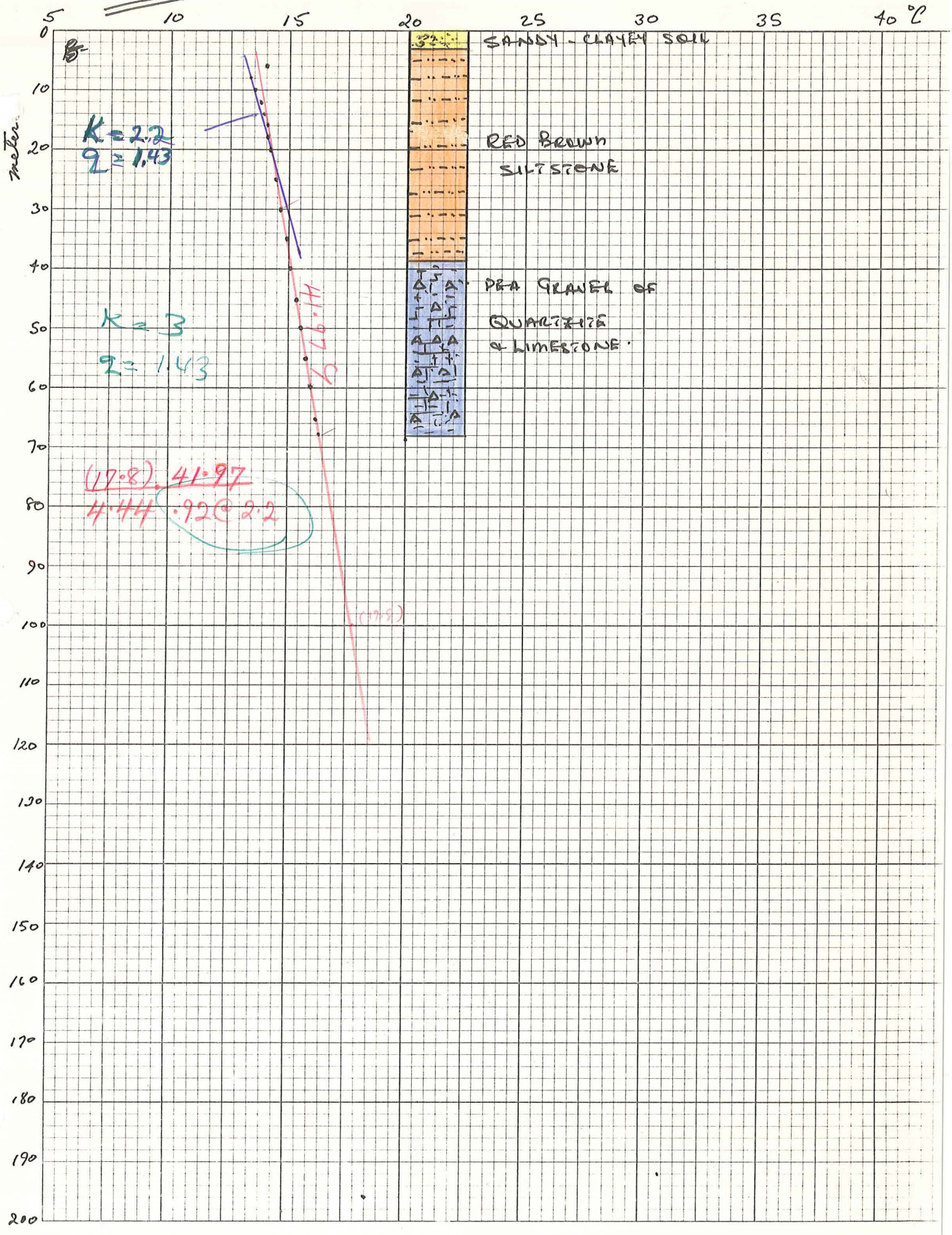
Depth (m)	Description
0 - 2	Sandy-clayey soil
2 - 3.1	Yellow-green, fine-grained clayey tuff.
3.1 - 12.4	Red brown siltstone.
12.4 - 38.6	Buff to red brown to yellow brown siltstone, clayey volcanic.
38.6 - 40.0	Red-brown, very fine-grained sand.
40 - 68	Fine-grained, pea gravel, clayey matrix - fragments of quartzite and limestone.

H. Dean Pilkington

HDP:mmo

cc: Art Lange
Mark Alldredge
Cheryl Caywood

B-247.



47 0780

10 X 10 TO THE INCH • 10 X 15 INCHES
KEUFFEL & ESSER CO MADE IN U.S.A.

TEMPERATURE DEPTH LOG

ΔT Well No. 248

Property-Project ok Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →	Well No →	Date Logged DA →	MO →	YR	*
1 2 3 4	5 6 7 8 9 10	11 12	13 14 15	16 17 18	19 20
7 7 9	2 4 8	1 2	0 6	7 6	C M

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

Site Description	Operator	Editor
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
1 3 · 6 k M S W D F T A B E R N A C L E H I L L	D P	/ M L H

Card B

Scale Unit in cm	Map Size (7.5, 15.,60)	Map Location △ N Lat Degree	Min	W Long Degree	Min
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
c M	1 5 ·	3 8 .	4 5 ·	1 1 2 .	4 5 ·

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
8 · 4 5	~~2 2 · 1~~	4 9 4 0 ·	F

← Write M if meters

22.2

SEGMENT DEPTH

	Start	End	K	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
C	2 0 · 0	5 5 · 0		
D	· 9 9 9			
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
	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
C	5 5 · 0	6 8 · 0	- 3 · 0	- · 5
D				
E				
F				
G				

Final Segment: Start = .999

B248

TEMPERATURE - DEPTH LOG

Location 5 Miles west of Black Rock Volcano Date October 12, 1976

Map Tabernacle Hill Utah 15' Quad

Property OIS T23S R7W sec SE¼ NW¼ 24

Drill Hole B-248 Date Drilled October 7, 1976 Elevation 4940 ft.

Instrument Probe 44 Operator DS

Comments ¾ PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
13.0	97.68	17.885			
13.5	98.36	17.695			
14.0	98.64	17.605			
14.5	98.77	17.570			
15.0	99.17	17.450			
15.5	99.57	17.340			
16.0	99.87	17.255			
16.5	100.03	17.210			
17.0	100.15	17.165			
17.5	100.39	17.105			
18.0	102.01	16.645			
18.5	102.25	16.580			
19.0	102.22	16.590			
19.5	102.22	16.590			
20.0	102.17	16.605	.210	42	
25	101.42	16.815	210	42	
30	100.68	17.025	350	70	
35	99.45	17.375	200	40	
40	98.84	17.575	205	41	
45	98.08	17.770	205	41	
50	97.37	17.975	220	44	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

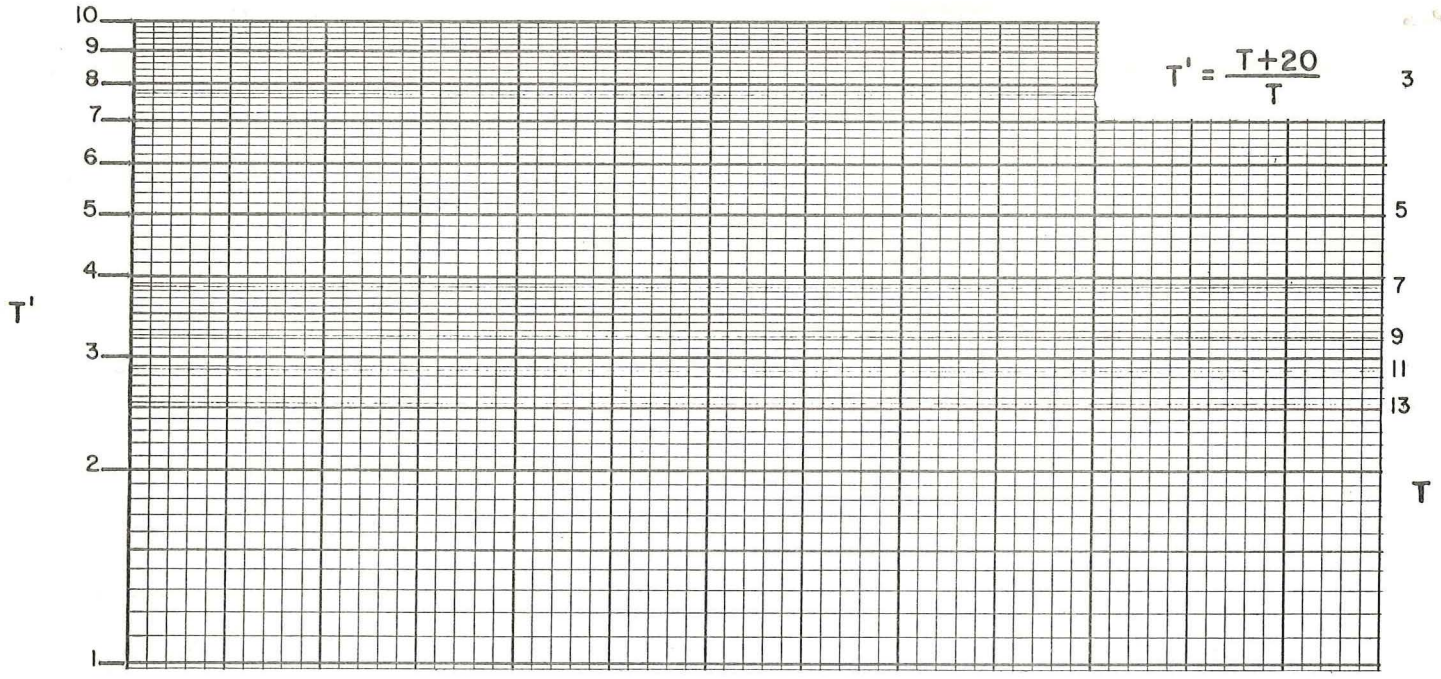
Property _____ T _____ R _____ sec _____

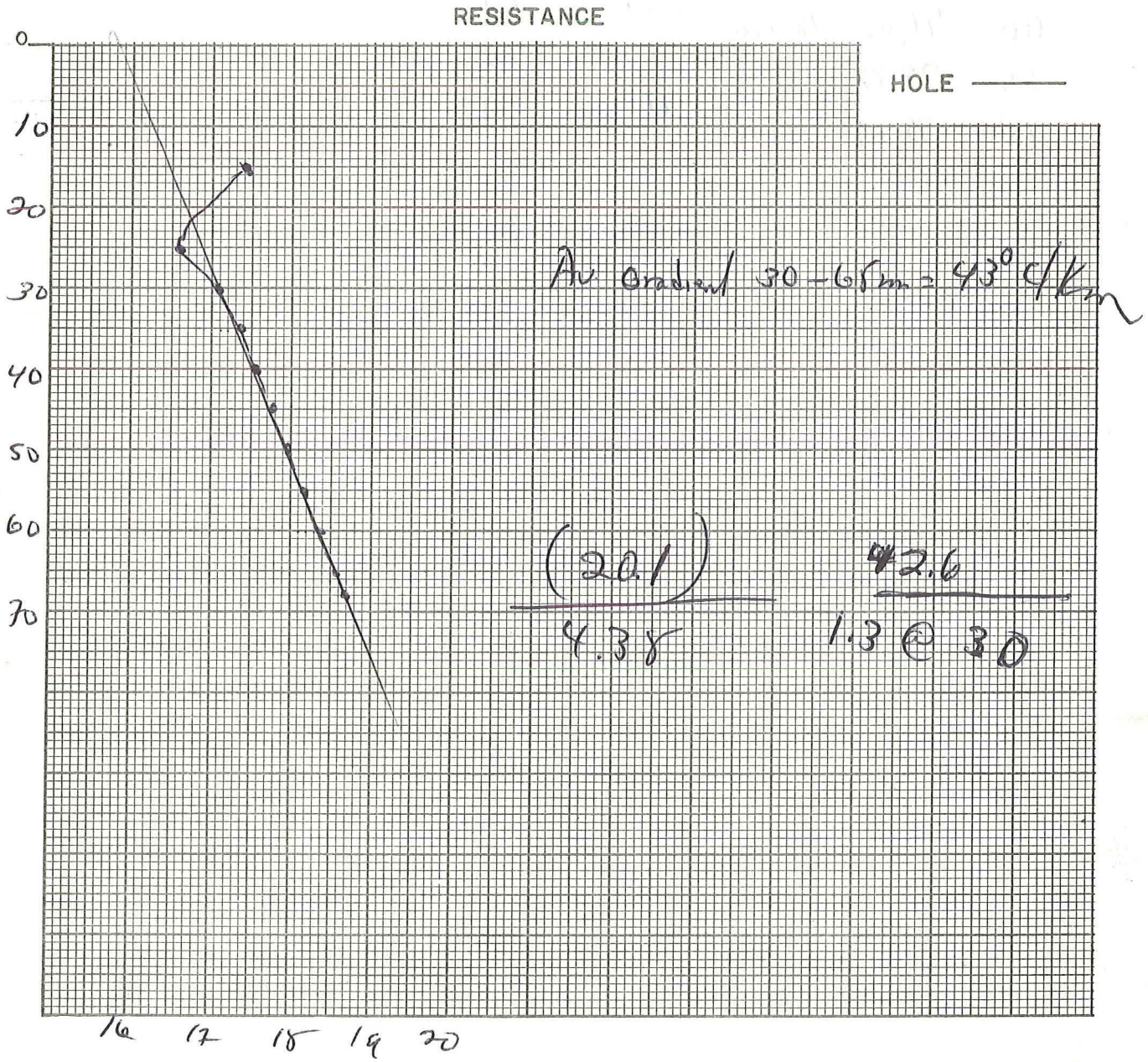
Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
55	96.61	18.195			
			.215	43	
60	96.02	18.370			
			.190	38	
65	95.37	18.560			
			.085	28	
68	95.09	18.645			


$T' = \frac{T+20}{T}$
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13


RESISTANCE
HOLE
DEPTH METERS
0
10
20
30
40
50
60
70
16
17
18
19
20
TEMPERATURE °C
Av Gradient 30-65m = 43° C/km
(20.1)
4.38
#2.6
1.3 @ 30

Lithologic Log B-248 (SWU-48)

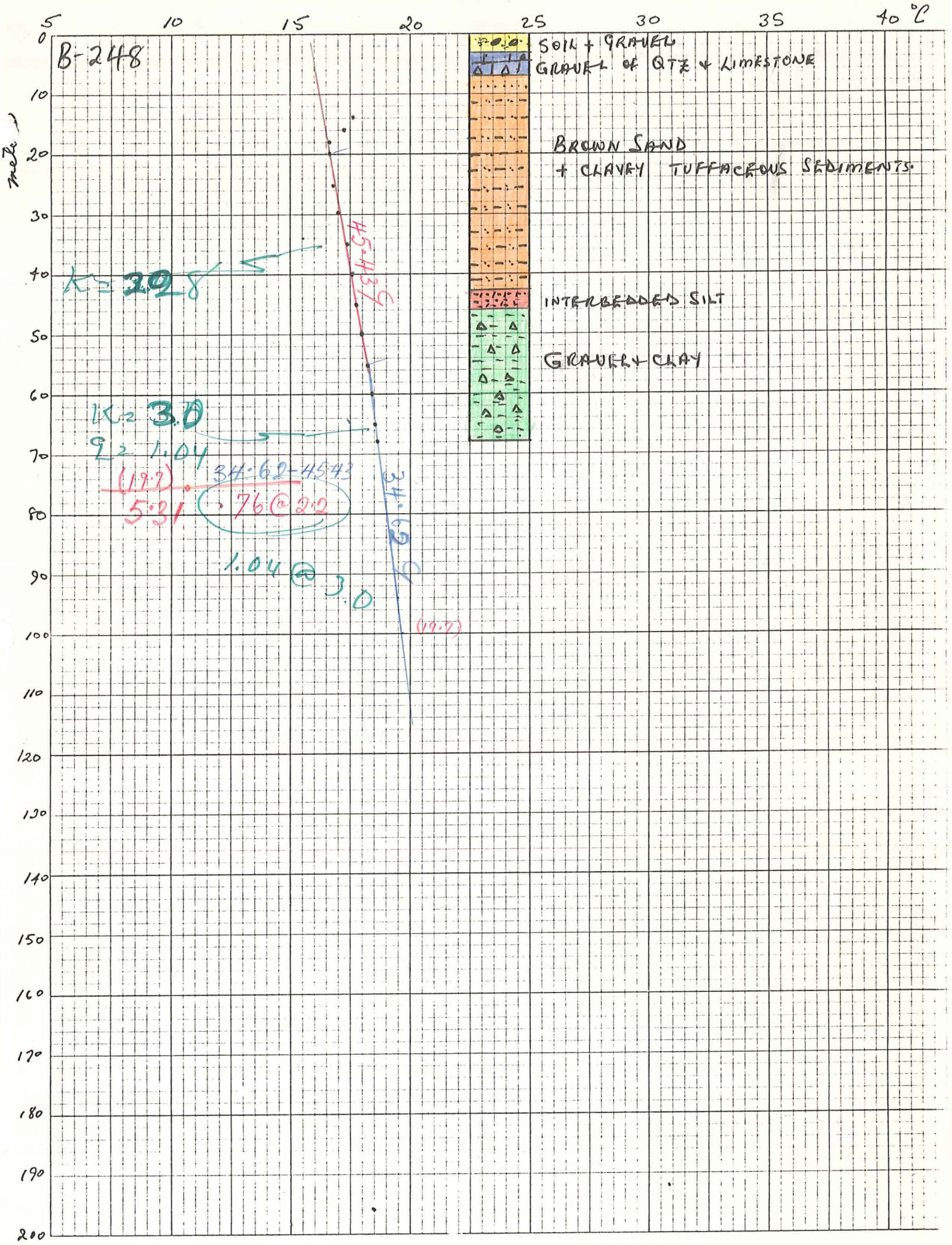
SE¼ NW¼ Sec 24 T23S R7W Elevation: 4,940'

Depth (m)	Description
0 - 3	Soil, clayey with some gravel.
3 - 7.7	Gravel, coarse, fragments of quartzite and limstone. Sandy clay matrix.
7.7 - 15	Light buff to light brown clayey tuffaceous sediment.
15 - 43	Fine-grained buff to pale brown sand.
43 - 46	Brown clay and interbedded silt.
46 - 49	Gravel, pea size up to 3/4 inch fragments, clayey matrix. Made a little water, 1-4 gpm.
49 - 52	Red-brown to pale brown clay.
52 - 68	Pea gravel, with clayey matrix; fragments mostly red siltstone some white, water at 5-10 gpm.

H. Dean Pilkington

HDP:mmo

cc: Art Lange
Mark Alldredge
Cheryl Caywood



47 0780

10 X 10 TO THE INCH • 5 X 5 INCHES
KEUFFEL & ESSER CO MADE IN USA

TEMPERATURE DEPTH LOG

ΔT Well No. 249

Property-Project Best Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

RT JUSTIFY:

Card A

Proj No →	Well No →	Date Logged DA →	MO →	YR	*
1 2 3 4	5 6 7 8 9 10	11 12	13 14 15	16 17 18	19 20
7 5 5	2 4 9	0 5	0 C	7 6	C M

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

Site Description	Operator	Editor
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
7.0 kM SSE OF THERMO. UTAH	DP	MLH

Card B

Scale Unit in cm	Map Size (7.5, 15.,60)	Map Location △ N Lat Degree	Min	W Long Degree	Min
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
CM	15.	38.	00.	113.	15.

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
27.95	15.25	5240.	F

← Write M if meters

Use decimals

SEGMENT DEPTH

	Start	End	K	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
C	8.0	69.0	-5.0	-.5
D				
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
	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
C	.999			
D				
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location 2 Miles Southwest of the Sink Date Oct 5, 1976

Map Thermo Utah 15' Quad

Property Best T 30 S R 12W sec SE¼ NE¼ 36

Drill Hole B-249 Date Drilled Sept 15, 1976 Elevation 5240 ft.

Instrument Old Unit Operator DO

Comments 3/4" PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
1.0	4731	17.955			
1.5	4675	18.255			
2.0	4638	18.460			
2.5	4606	18.630			
3.0	4678	18.250			
3.5	4805	17.500			
4.0	4933	16.890			
4.5	5042	16.340			
5.0	5130	15.905			
5.5	5217	15.485			
6.0	5271	15.225			
6.5	5316	15.015			
7.0	5342	14.890			
7.5	5372	14.750			
8.0	5386	14.690			
8.5	5390	14.670			
9.0	5388	14.680			
9.5	5382	14.705			
10.0	5373	14.750			
10.5	5361	14.805			
11.0	5353	14.840			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T ____ R ____ sec ____

Drill Hole _____ Date Drilled _____ Elevation ____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
11.5	5341	14.895			
12.0	5332	14.940			
12.5	5322	14.985			
13.0	5313	15.030			
13.5	5304	15.070			
14.0	5296	15.110			
14.5	5288	15.140			
15.0	5282	15.175			
15.5	5276	15.205			
16.0	5270	15.230			
16.5	5264	15.260			
17.0	5259	15.285			
17.5	5253	15.310			
18.0	5249	15.330			
18.5	5242	15.365			
19.0	5235	15400			
19.5	5230	15.420			
20.0	5224	15.450	.115	57.5	
22	5200	15565	.110	55	
24	5177	15675	.155	77.5	
26	5146	15830	.090	45	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

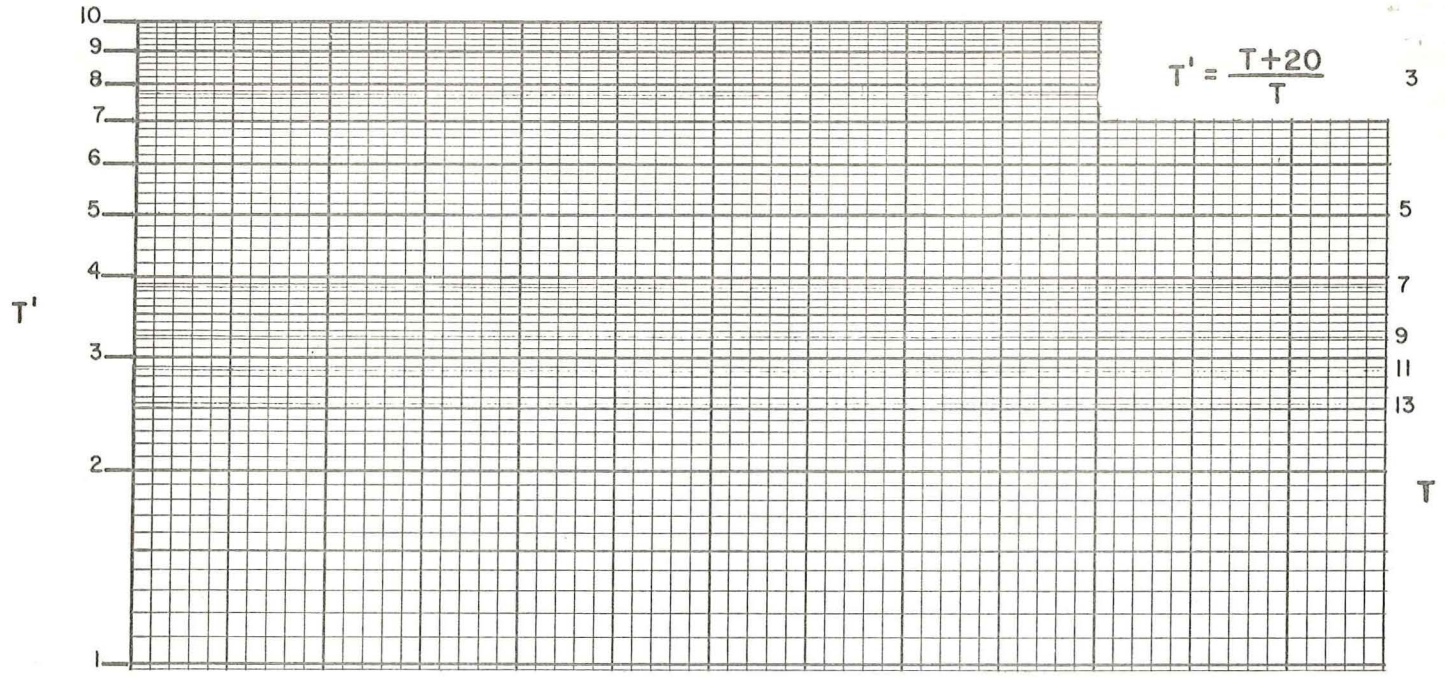
Property _____ T _____ R _____ sec _____

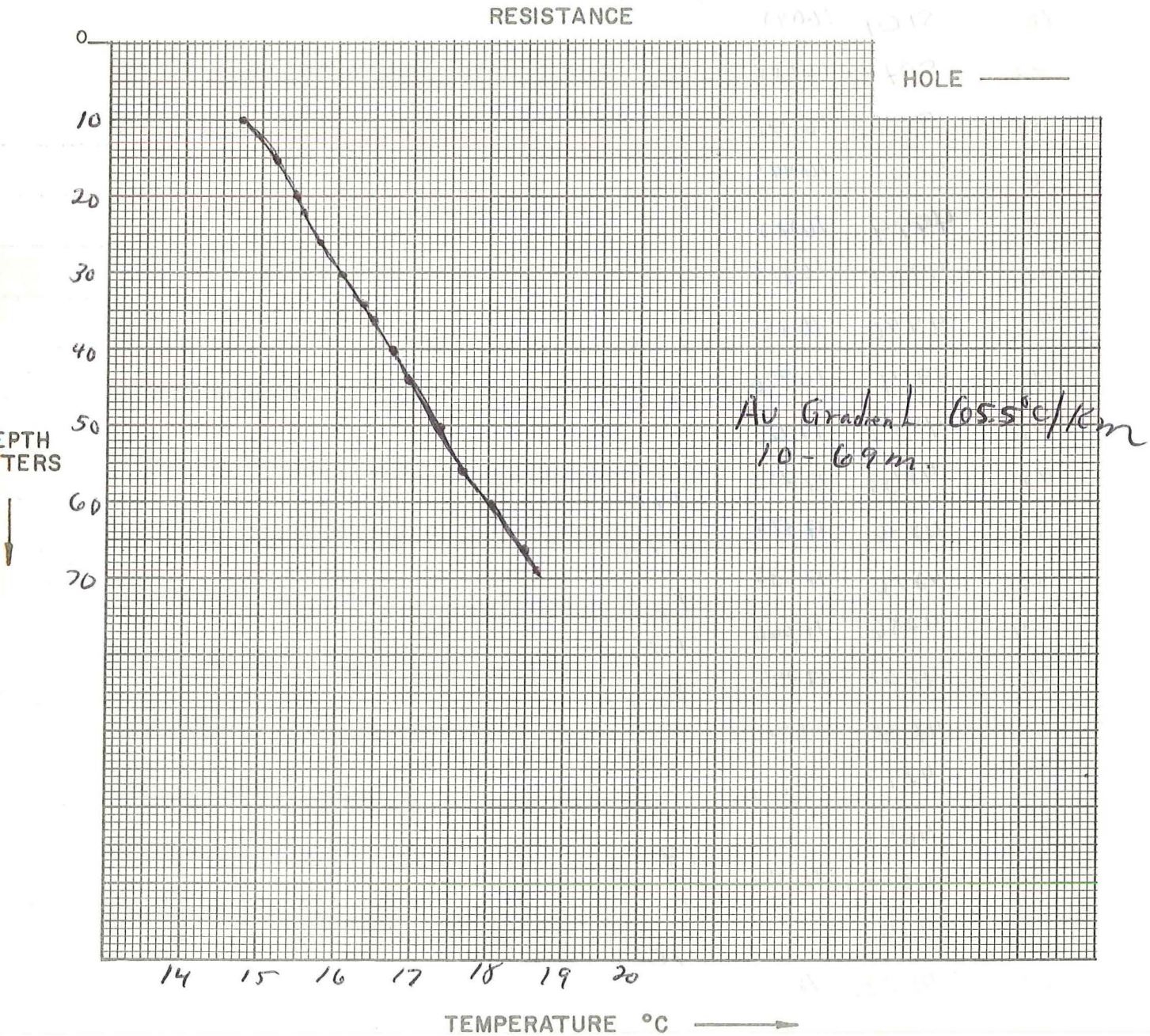
Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
28	5127	15.920			
			.125	62.5	
30	5101	16045			
			.140	70	
32	5073	16185			
			.135	67.5	
34	5046	16.320			
			.125	62.5	
36	5021	16445			
			.140	70	
38	4994	16585			
			.130	65	
40	4968	16715			
			.140	70	
42	4940	16.855			
			.135	67.5	
44	4914	16996			
			.130	65	
46	4889	17 120			
			.135	67.5	
48	4863	17255			
			.140	70	
50	4836	17 395			
			.140	70	
52	4810	17 535			
			.125	62.5	
54	4786	17.660			
			.135	67.5	
56	4761	17795			
			.125	62.5	
58	4737	17.920			
			.130	65	
60	4713	18.050			
			.130	65	
62	4689	18180			
			.175	87.5	
64	4657	18 355			
			.095	47.5	
66	4642	18.440			
			.105	52.5	
68	4623	18.545			
			.070	70	
69	4610	18.615			


$T' = \frac{T+20}{T}$
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13


RESISTANCE
HOLE
DEPTH METERS
0
10
20
30
40
50
60
70
14
15
16
17
18
19
20
TEMPERATURE °C
Av Gradient 65.5°C/km
10 - 69 m.

Lithologic Log B-249 (SWU-49)

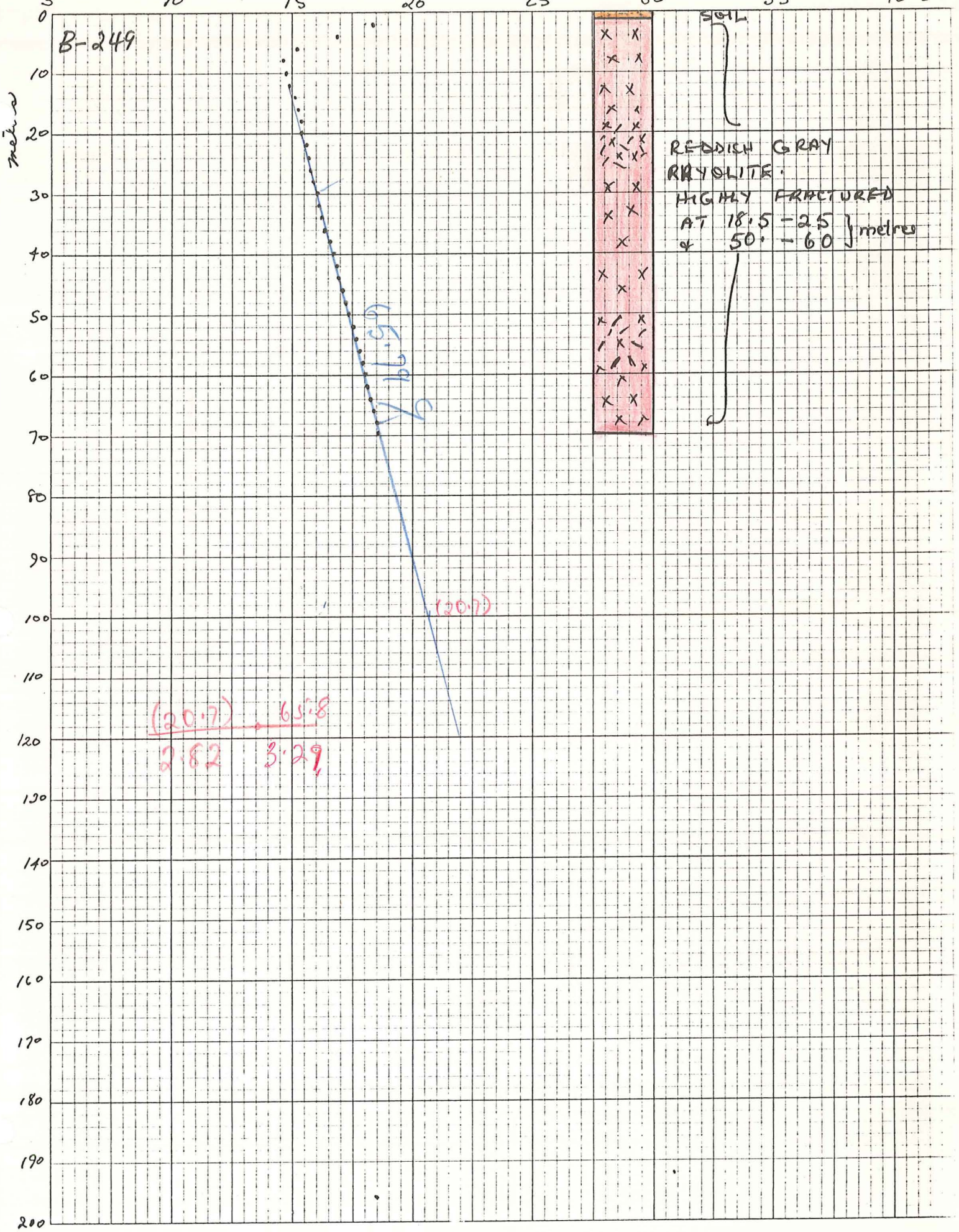
SE¼ NE¼ Sec 36 T30S R12W Elevation: 5,240'

Depth (m)	Description
0 - 1	Soil, mostly C horizon, containing large fragments of the underlying rhyolite.
1 - 70	Reddish-gray, fine-grained, dense rhyolite. At the outcrop, the rock shows a distinct flow banding or layering which strikes E-W and is nearly vertical. The rock was strongly fractured between 18.5 and 25 meters and also between 50 and 60 meters. Minor water was encountered in the fracture zones.

H. D. Pilkington

HDP:mmo

cc: Art Lange



47 0780
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KEUFFEL & ESSER CO MADE IN U.S.A.

TEMPERATURE DEPTH LOG

ΔT Well No. 250

Property-Project Best Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →	Well No →	Date Logged DA	MO	YR	*
1 2 3 4	5 6 7 8 9 10	11 12	13 14 15	16 17 18	19 20
7 5 5	2 5 0	0 5	0 C	7 6	C M

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

Site Description	Operator	Editor
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
8 . 0 K M S S W O F T H E R M O , U T A H	O P	M L H

Card B

Scale Unit in cm	Map Size (7.5, 15.,60)	Map Location Δ N Lat Degree	Min	W Long Degree	Min
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
C M	1 5 .	3 8 .	0 0 .	1 1 3 .	1 5 .

Use decimals

Δ 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
2 7 . 1 9 -3	4 . 3 5 0 5 0 .		F

4.0

← Write M if meters

SEGMENT DEPTH

	Start	End	K	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
C	1 6 . 0	5 6 . 0	- 3 . 5	. 5
D	. 9 9 9			
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
	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
C	5 6 . 0	6 8 . 0		- . 5
D				
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location 1 Mile west of Escalante Trail Date October 5, 1976

Map Thermo Utah 15' Quad

Property Best T 30S R 12W sec SW¼SE¼ 32

Drill Hole B-250 Date Drilled Sept 16, 1976 Elevation 5050 ft.

Instrument old unit Operator DP

Comments ¾" PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
1.0	4989	16.610			
1.5	4923	16.945			
2.0	4851	17.315			
2.5	4863	17.255			
3.0	4949	16.810			
3.5	5055	16.275			
4.0	5163	15.745			
4.5	5324	14.975			
5.0	5417	14.545			
5.5	5493	14.200			
6.0	5571	13.850			
6.5	5620	13.630			
7.0	5656	13.475			
7.5	5682	13.360			
8.0	5691	13.320			
8.5	5693	13.315			
9.0	5695	13.305			
9.5	5691	13.320			
10.0	5689	13.330			
10.5	5679	13375			
11.0	5644	13.525			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T ____ R ____ sec ____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
11.5	5630	13.590			
12.0	5620	13.630			
12.5	5607	13690			
13.0	5586	13750			
13.5	5565	13875			
14.0	5559	13900			
14.5	5552	13.935			
15.0	5551	13.940			
15.5	5549	13945			
16.0	5521	14.070			
16.5	5497	14.180			
17.0	5486	14.230			
17.5	5478	14.265			
18.0	5471	14300			
18.5	5465	14.325			
19.0	5459	14.355			
19.5	5452	14.385			
20.0	5445	14.415			
22	5404	14605	.190	95	
24	5349	14860	.255	127.5	
26	5308	15.050	.190	95	
			.215	107.5	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

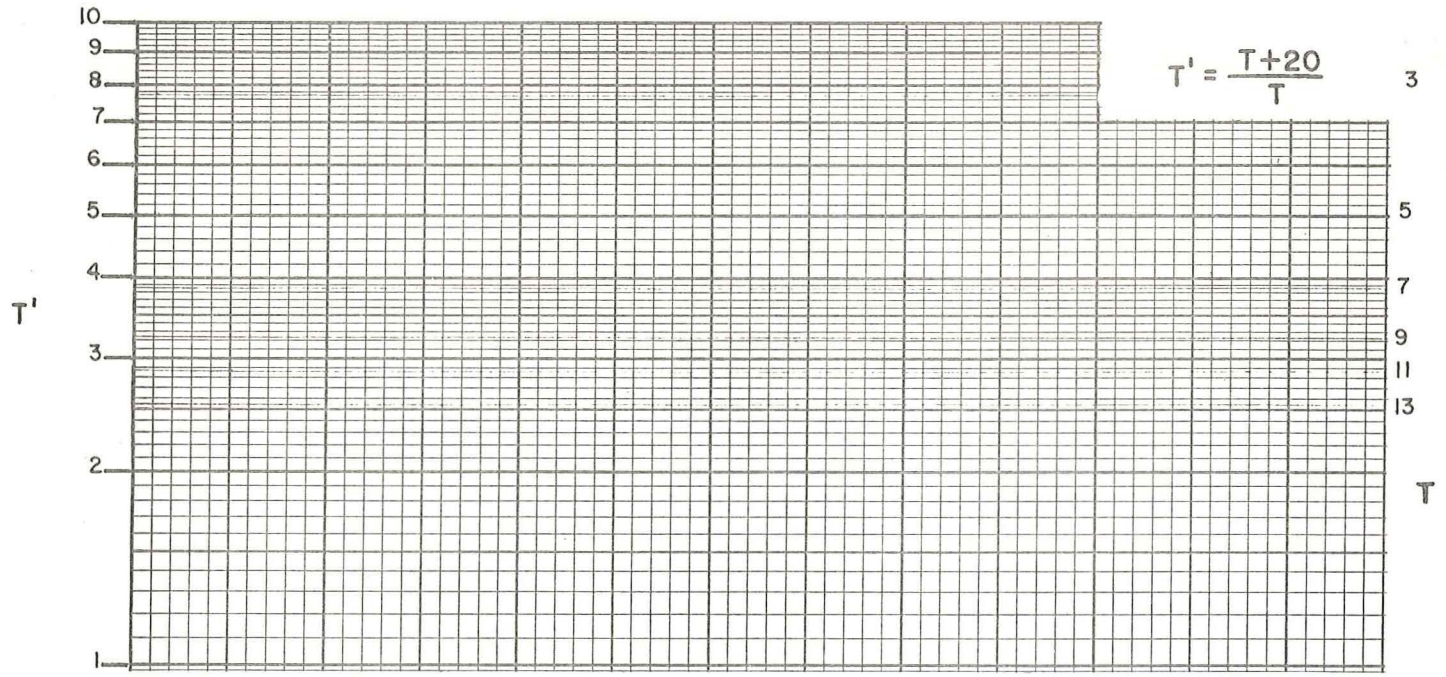
Property _____ T ____ R ____ sec ____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
28	5263	15.265			
30	5217	15485	.220	.110	
32	5170	15710	.225	112.5	
34	5121	15950	.240	120	
36	5084	16.135	.185	92.5	
38	5045	16,325	.190	95	
40	5018	16.485	.160	80	
42	4970	16.705	.220	110	
44	4925	16 935	.230	115	
46	4886	17.135	.200	100	
48	4848	17335	.200	100	
50	4808	17545	.210	105	
52	4769	17750	.205	102.5	
54	4732	17950	.200	100	
56	4697	18140	.190	95	
58	4643	18435	.195	97.5	
60	4558	18740	315	157.5	
62	4535	19,020	.280	140	
64	4493	19275	.255	127.5	
66	4447	19540	.265	132.5	
68	4408	19765	225	112.5	


$T' = \frac{T+20}{T}$
T'
10
9
8
7
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5
4
3
2
1
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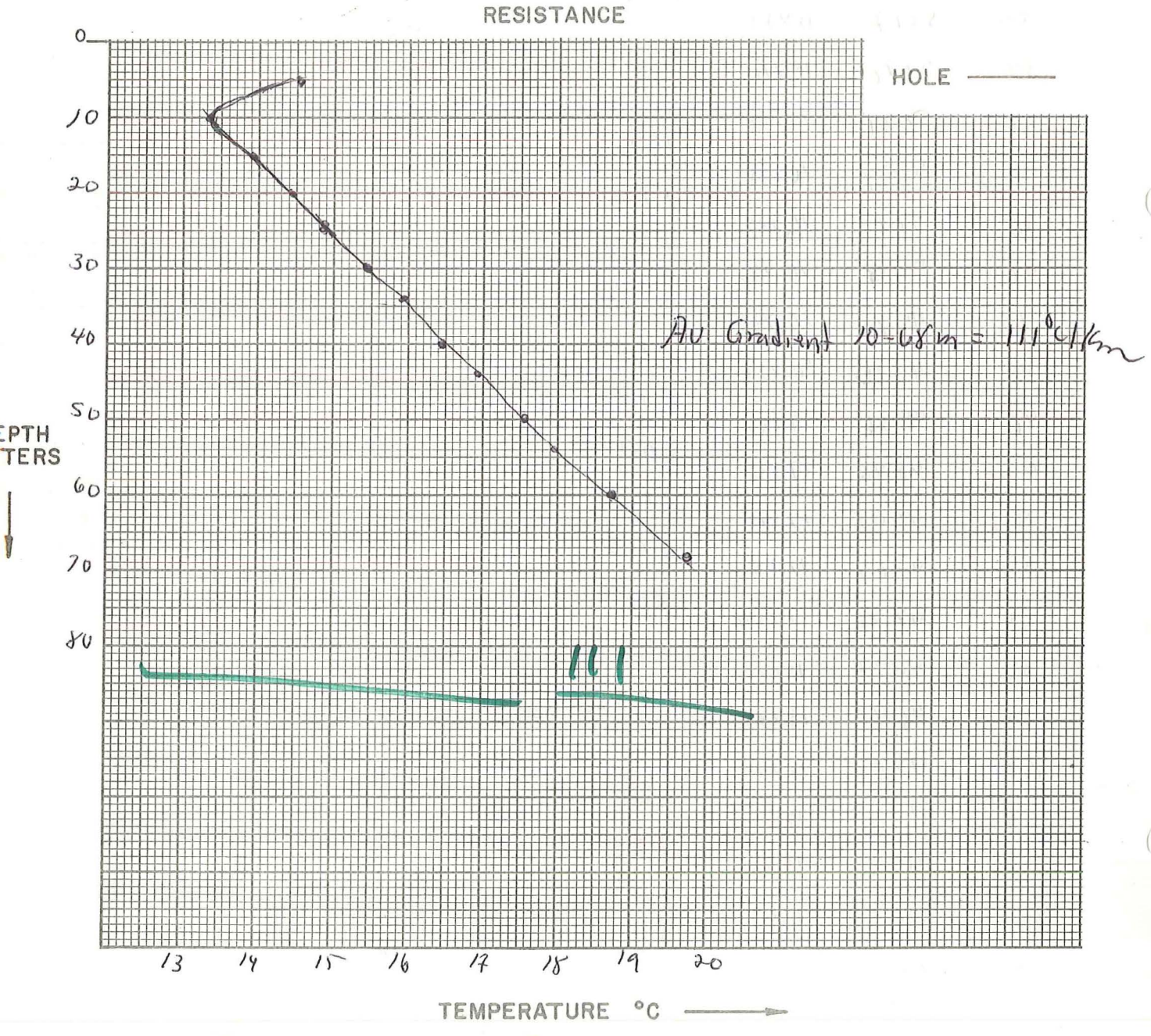
11
13
T


RESISTANCE
HOLE
0
10
20
30
40
50
60
70
80
DEPTH METERS
Au Gradient 10-68 m = 111°C/Km
111
13
14
15
16
17
18
19
20
TEMPERATURE °C

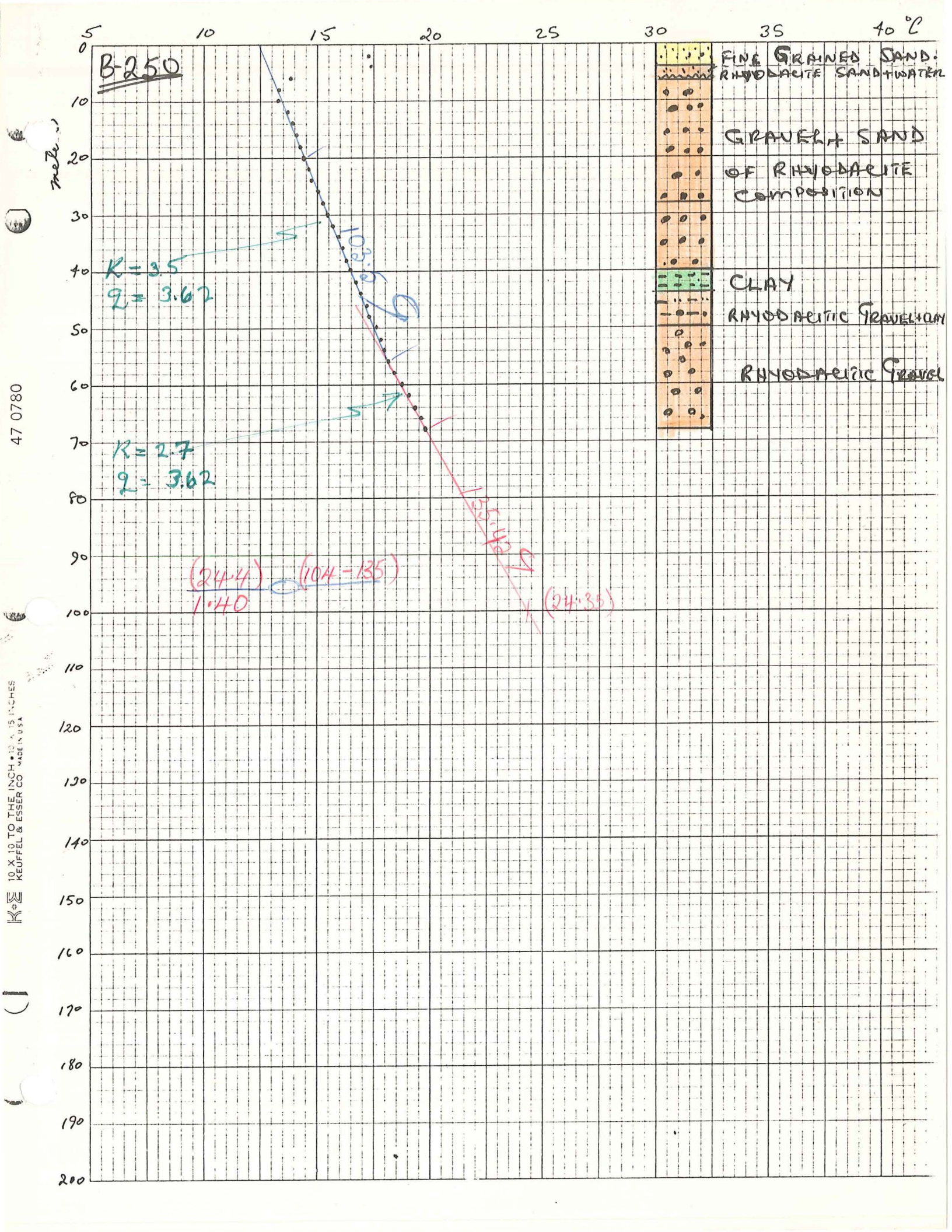
Lithologic Log B-250 (SWU-50)

SW¼ SE¼ Sec 32 T30S R12W Elevation: 5,050'

Depth (m)	Description
0 - 4.6	Light yellow-buff, very fine-grained, wind blown sand. An ancient dune now mostly in active and covered with desert vegetation.
4.6 - 6.2	Gravel, pea-sized, iron stained rhyodacite fragments in matrix of sand. The unit is water bearing - small flow of less than 5 gpm.
6.2 - 9.3	Yellow-brown to red-brown, coarse-grained sand. Mostly feldspar and quartz.
9.3 - 10.8	Pea gravel, red-brown; of rhyodacitic composition. Carries small quantity of water, probably less than 5 gpm.
10.8 - 29.3	Light brown, somewhat iron stained, medium-grained sand.
29.3 - 34.0	Alternating layers of sand and gravel. Thickness ranges from 0.2m to 1.5m for each layer. In general, the gravel layers are thicker than the sand units. From 30-34m water flow of 10-15 gpm.
34.0 - 40.0	Gravels of rhyodacitic composition, the gravels must be fairly coarse-grained, and probably contain some boulder sized materials.
40 - 43.2	Red-brown clay.
43.2 - 50.0	Rhyodacitic gravels with some interlayered red-brown clay seams.
50.0 - 60	Red-brown clay with thin gravel stringers.
60 - 68	Rhyodacitic gravels.

H. D. Pilkington

HDP:mmo
cc: Art Lange


B-250
5
10
15
20
25
30
35
40 °C
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
180
190
200
meters
FINE GRAINED SAND:
RHYODACITE SAND+WATER
GRAVEL + SAND
OF RHYODACITE
COMPOSITION
CLAY
RHYODACITIC GRAVEL+CLAY
RHYODACITIC GRAVEL
K = 3.5
Q = 3.62
K = 2.7
Q = 3.62
(24.4)
1.40
(104 - 135)
(24.35)
47 0780
10 X 10 TO THE INCH • 10 X 15 INCHES
KEUFFEL & ESSER CO MADE IN U.S.A.

TEMPERATURE DEPTH LOG

ΔT Well No. 251

Property-Project Best Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

RT JUSTIFY:

Card A

Proj No →				Well No →						Date Logged DA →		MO →		YR		*	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	7	5	5				2	5	1	0	5		0	C		7	6	C	M

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

| Site Description | | | | | |

TEMPERATURE - DEPTH LOG

Location 1 Mile East of Escalante Trail Date Oct 5, 1976

Map Thermo Utah 15' Quad

Property Best T 30S R 12W sec NW¼ NE¼ 34

Drill Hole B-251 Date Drilled Sept 16, 1976 Elevation 5090 ft.

Instrument old unit Operator DP

Comments ¾ PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
4.5	5158	15.770			
5.0	5169	15.715			
5.5	5195	15.590			
6.0	5225	15.445			
6.5	5245	15.350			
7.0	5276	15.205			
7.5	5283	15.170			
8.0	5287	15.150			
8.5	5292	15.129			
9.0	5276	15.205			
9.5	5256	15.300			
10.0	5235	15.400			
10.5	5215	15.495			
11.0	5197	15.580			
11.5	5158	15.770			
12.0	5090	16.105			
12.5	5056	16.270			
13.0	5026	16.420			
13.5	5000	16.550			
14.0	4969	16.710			
14.5	4936	16.880			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T ____ R ____ sec ____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
15.0	4905	17.035			
15.5	4870	17.220			
16.0	4847	17.340			
16.5	4842	17.365			
17.0	4820	17.480			
17.5	4783	17.675			
18.0	4730	17.960			
18.5	4688	18.185			
19.0	4650	18.395			
19.5	4636	18.470			
20.0	4625	18.530			
22	4584	18.760	.230	115	
24	4538	19.020	.260	130	
26	4496	19.255	.235	117.5	
28	4464	19.440	.185	92.5	
30	4425	19.665	.225	112.5	
32	4393	19.855	.190	95	
34	4338	20.180	.325	162.5	
36	4313	20.330	.250	125	
38	4274	20.565	.235	117.5	
40	4221	20.890	.335	167.5	
			.245	122.5	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

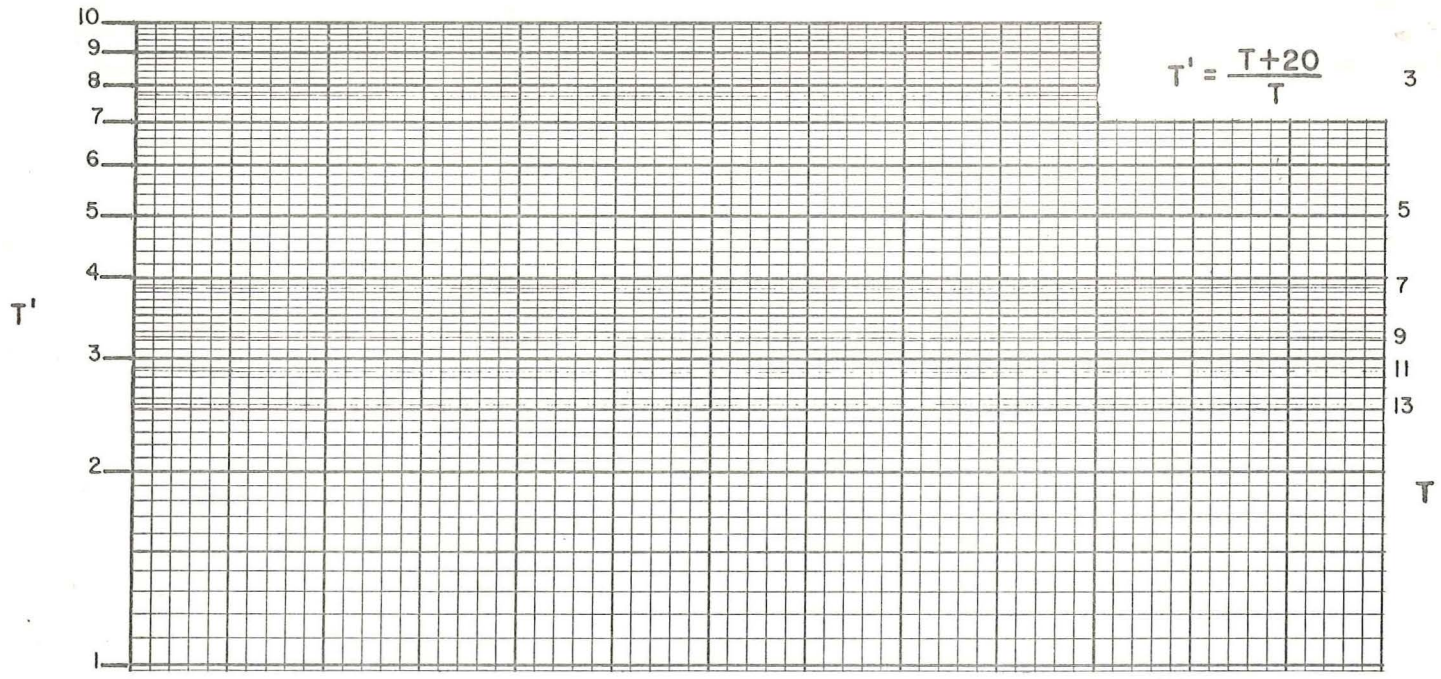
Property _____ T ____ R ____ sec ____

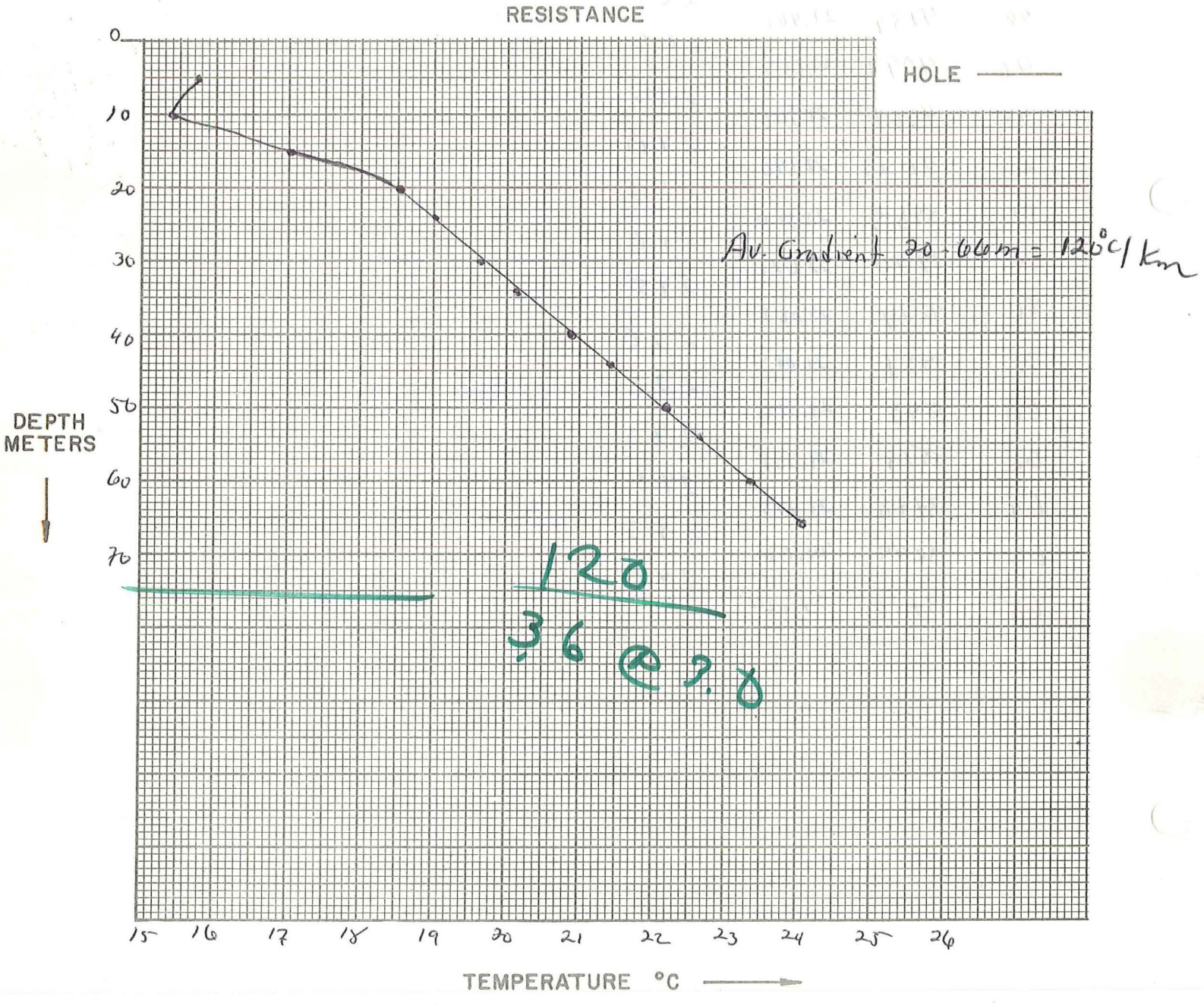
Drill Hole _____ Date Drilled _____ Elevation ____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
42	4181	21.135			
44	4139	21.400	.265	132.5	
46	4097	21.665	.265	132.5	
48	4060	21.900	.235	117.5	
50	4023	22.140	.240	120	
52	3985	22.390	.250	125	
54	3950	22.620	.230	115	
56	3914	22.865	.245	122.5	
58	3881	23.085	.220	110	
60	3848	23.310	.225	112.5	
62	3813	23.555	.245	122.5	
64	3778	23.795	.240	120	
66	3745	24.030	.235	117.5	
68	3718	24.220	.190		


T' = (T+20)/T
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13


RESISTANCE
HOLE
Av. Gradient 20-66m = 12.6°C/km
DEPTH METERS
0
10
20
30
40
50
60
70
120
3.6 @ 3.0
15
16
17
18
19
20
21
22
23
24
25
26
TEMPERATURE °C

Lithologic Log B-251 (SWU-51)

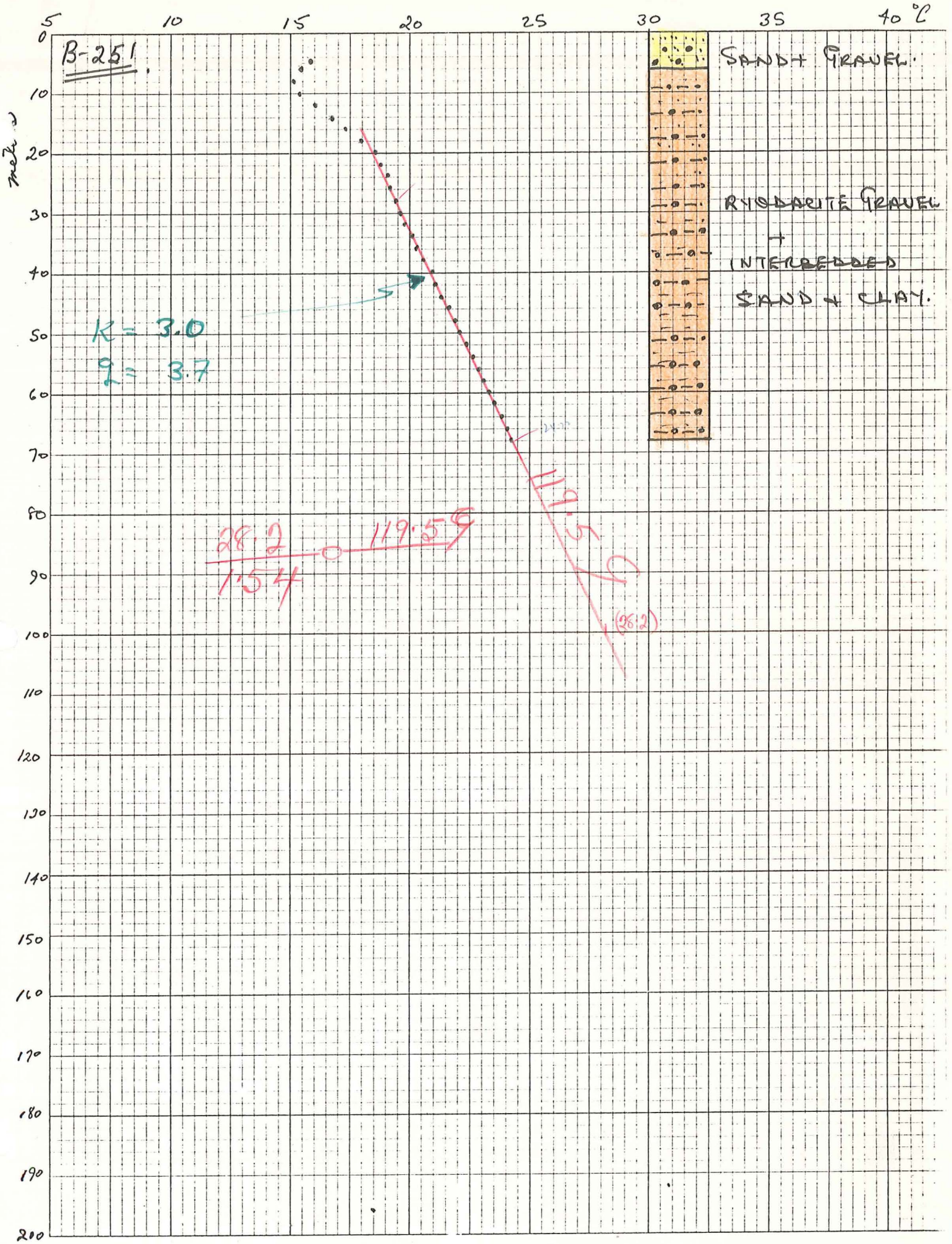
NW¼ NE¼ Sec 34 T30S R12W — Elevation: 5,090

Depth (m)	Description
0 - 4.6	Mixed sand and gravel of recent origin.
4.6 - 6.2	Yellow-brown to buff, medium-grained, sand with minor interbedded gravel.
6.2 - 7.7	Gravels, fine to coarse, composed of rhyodacite.
7.7 - 9.3	Mixed sand and gravel.
9.3 - 27.8	Rhyodacite gravels with some interbedded silts and clays.
27.8 - 44.8	Interbedded yellow-brown sand, clay, and rhyodacite gravels.
44.8 - 49.4	Rhyodacite gravel.
49.4 - 68.0	Rhyodacite gravel with interlayered sand and clay.

H. D. Pilkington (m.o.)

HDP:mmo

cc: Art Lange
Cheryl Caywood
John Deymonaz
File Copy for Dean



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10 X 10 TO THE INCH • 10 X 15 INCHES
KEUFFEL & ESSER CO MADE IN U.S.A.

TEMPERATURE DEPTH LOG

ΔT Well No. 252

Property-Project Best Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

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
7 5 5	2 5 2	0 5	N V	7 6	C M

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

Site Description	Operator	Editor
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
7 . 3 k M N N W O F B A B O O N P E A K	D P	/ H L H

Card B

Scale Unit in cm	Map Size (7.5, 15.,60)	Map Location Δ N Lat Degree	Min	W Long Degree	Min
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
C M	1 5 .	3 8 .	0 0 .	1 1 3 .	1 5 .

Use decimals

Δ 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
2 6 . 0	2 6 . 7	5 4 6 0 .	F

Use decimals

← Write M if meters

SEGMENT DEPTH

	Start	End	K	ΔK
C	1 2 . 0	2 5 . 0		
D	. 9 9 9			
E				
F				
G				

Continue each card below.

SEGMENT ~~DEPTH~~

	Start	End	K	ΔK
C	2 5 . 0	6 0 . 0	- 4 . 5	- . 5
D				
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location 1½ Mi. S North of Red Hill Date Nov 5, 1976

Map Thermo, Utah 15' Quad

Property LVO T 30S R 11W sec NE¼ NW¼ 2

Drill Hole B-252 Date Drilled Oct 25, 1976 Elevation 5460 ft.

Instrument Probe 39 Operator RP

Comments 3/4" PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
1.0	100.99	16.180			
1.5	99.67	16.540			
2.0	98.83	16.575			
2.5	98.01	17.000			
3.0	97.30	17.200			
3.5	97.91	17.030			
4.0	99.08	16.705			
4.5	100.43	16.330			
5.0	101.36	16.075			
5.5	101.91	15.925			
6.0	102.35	15.805			
6.5	102.51	15.765			
7.0	102.49	15.770			
7.5	102.27	15.820			
8.0	101.91	15.925			
8.5	101.40	16.065			
9.0	100.97	16.185			
9.5	100.43	16.330			
10.0	99.85	16.490			
10.5	99.24	16.655			
11.0	98.56	16.845			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T ____ R ____ sec ____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
11.5	98.10	16.975			
12.0	97.35	17.185			
12.5	96.83	17.335			
13.0	96.25	17.495			
13.5	95.74	17.645			
14.0	95.15	17.815			
14.5	94.53	17.990			
15.0	94.08	18.125			
15.5	93.58	18.260			
16.0	93.01	18.430			
16.5	92.64	18.540			
17.0	92.10	18.700			
12.5	91.63	18.840			
18.0	91.11	18.995			
18.5	90.66	19.130			
19.0	90.16	19.280			
19.5	89.79	19.415			
20.0	89.19	19.570	1.415	283	
25	84.65	20.985	1.405	281	
30	80.33	22.390	1.310	262	
35	76.48	23.700	1.185	237	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

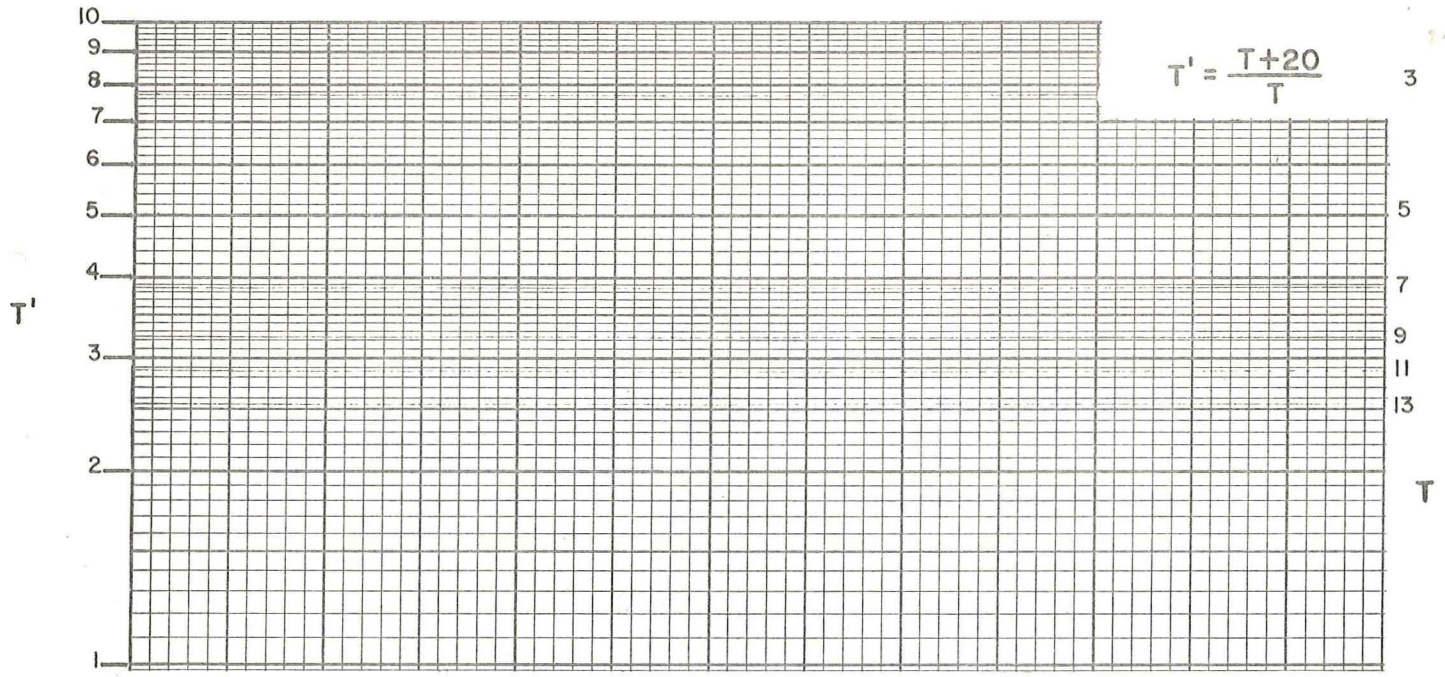
Property _____ T ____ R ____ sec ____

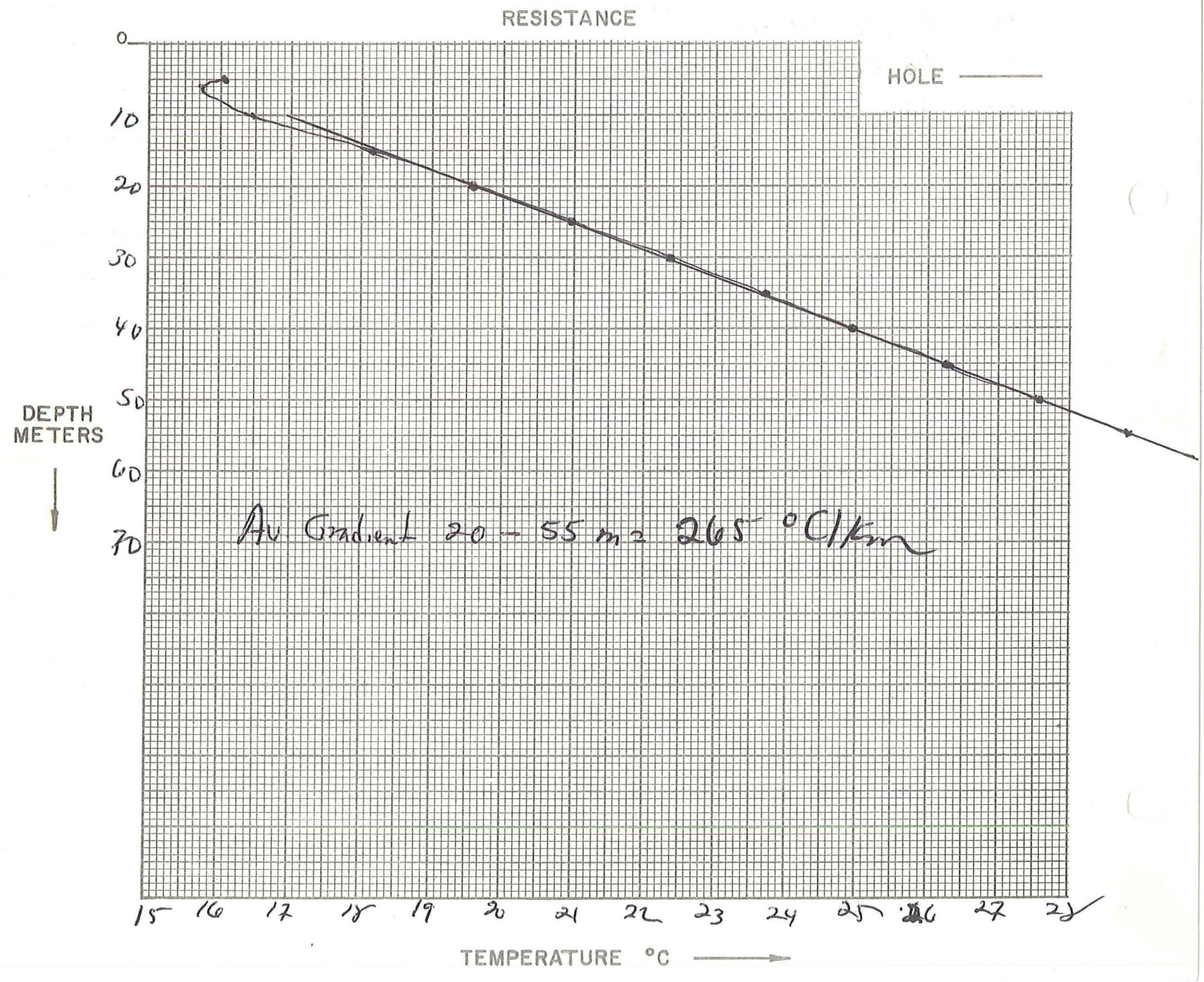
Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
40	72.88	24.985			
45	69.36	26.295	1.310	262	
50	66.06	27.585	1.280	256	
55	62.98	28.841	1.260	252	
60	6030	29.990	1.145	229	


T' = (T+20)/T
T'
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13
T


RESISTANCE
HOLE
DEPTH METERS
0
10
20
30
40
50
60
70
Av Gradient 20 – 55 m = 26.5 °C/km
15
16
17
18
19
20
21
22
23
24
25
26
27
28
TEMPERATURE °C

LITHOLOGIC LOG B-252

NE¼ NW¼ Sec 2 T30S R11W Elevation: 5,460'

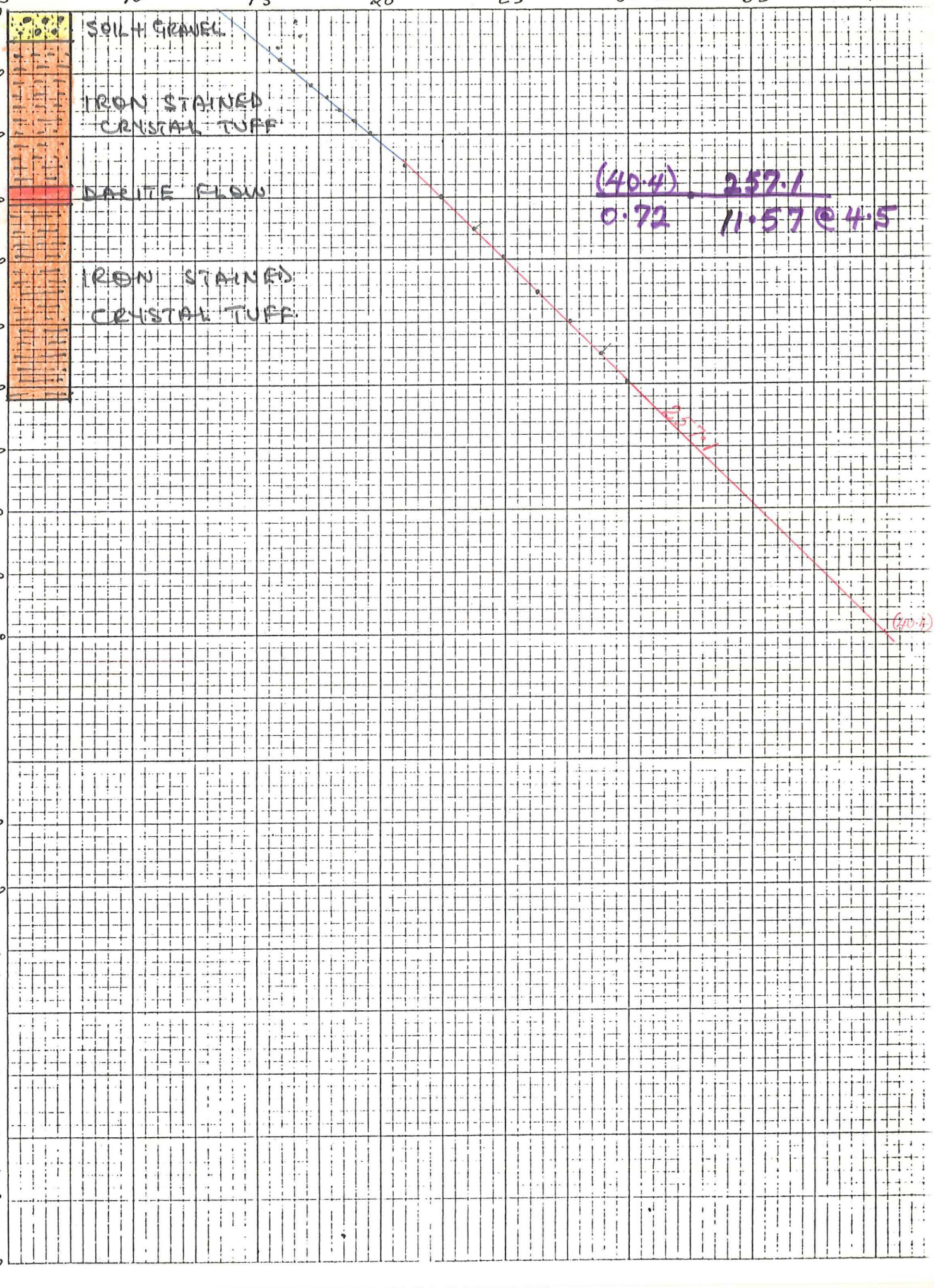
Depth (m)	Description
0 - 4.6	Mixed soil and gravel.
4.6 - 18.5	Iron stained, altered (celadonite and clay) crystal lithic tuff.
18.5 - 29	Slightly iron stained, gray-green, weakly altered (clay) crystal tuff.
29 - 31	Fine-grained, dense, medium-gray dacite flow.
31 - 52	Gray-green, fine-grained, slightly altered crystal tuff.
52 - 57	Medium brown, iron stained, fine-grained crystal lithic tuff.
57 - 62	Gray-green, fine-grained, slightly altered crystal tuff.

H. Dean Pilkington

HDP:mmo

cc: Art Lange
Cheryl Caywood
Mark Alldredge

B-252



47 0780

KEUFFEL & ESSER CO

TEMPERATURE DEPTH LOG

ΔT Well No. 253

Property-Project Best Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

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
7 5 5	2 5 3	0 4	N V	7 6	C M

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

Site Description	Operator	Editor
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
1 1 . 4 k M N O R T H O F C O V E F O R T	O P	M L H

Card B

Scale Unit in cm	Map Size (7.5, 15.,60)	Map Location Δ N Lat Degree	Min	W Long Degree	Min
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
C M	1 5 .	3 8 .	3 0 .	1 1 2 .	4 5 .

Use decimals

Δ 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
3 6 . 3	2 4 - 2	2 4 . 0	5 4 8 0 . F

Use decimals 36.35 23.85

← Write M if meters

SEGMENT DEPTH

	Start	End	K	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
C	2 0 . 0	7 5 . 0	- 7 . 0	- . 5
D				
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
	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
C	. 9 9 9			
D				
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location South side White Sage Flat Date Nov 4, 1976

Map Cove Fort, Utah 15' Quad

Property LVO T 24S R 6W sec NW¼SW¼ 19

Drill Hole B-253 Date Drilled Oct 25, 1976 Elevation 5480 ft.

Instrument Probe 39 Operator dp

Comments ¾" PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
3.0	99.46	16.595			
3.5	99.13	16.690			
4.0	99.31	16.640			
4.5	99.75	16.515			
5.0	100.14	16.410			
5.5	100.14	16.410			
6.0	99.43	16.605			
6.5	98.71	16.805			
7.0	97.69	17.090			
7.5	97.03	17.275			
8.0	96.15	17.525			
8.5	95.49	17.715			
9.0	94.46	18.015			
9.5	93.69	18.235			
10.0	92.87	18.475			
10.5	92.20	18.675			
11.0	90.97	19.035			
11.5	89.53	19.470			
12.0	89.20	19.570			
12.5	88.16	19.885			
13.0	87.24	20.170			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T _____ R _____ sec _____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
13.5	86.62	20,365			
14.0	85.90	20,595			
14.5	85.35	20,760			
15.0	84.95	20,885			
15.5	88.96	21,225			
16.0	83.46	21,365			
16.5	82.96	21,525			
17.0	82.35	21,725			
17.5	81.83	21,895			
18.0	81.28	22,075			
18.5	80.56	22,315			
19.0	80.16	22,445			
19.5	79.80	22,565			
20.0	79.24	22,755	1.500	300	
25	74.90	24,255	1.475	295	
30	70.86	25,730	1,510	302	
35	66.98	27,240	1,445	289	
40	63.36	28,685	1,420	284	
45	60.04	30,105	1.575	315	
50	56.55	31,680	1,365	275	
55	53.68	33,045	1515	305	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

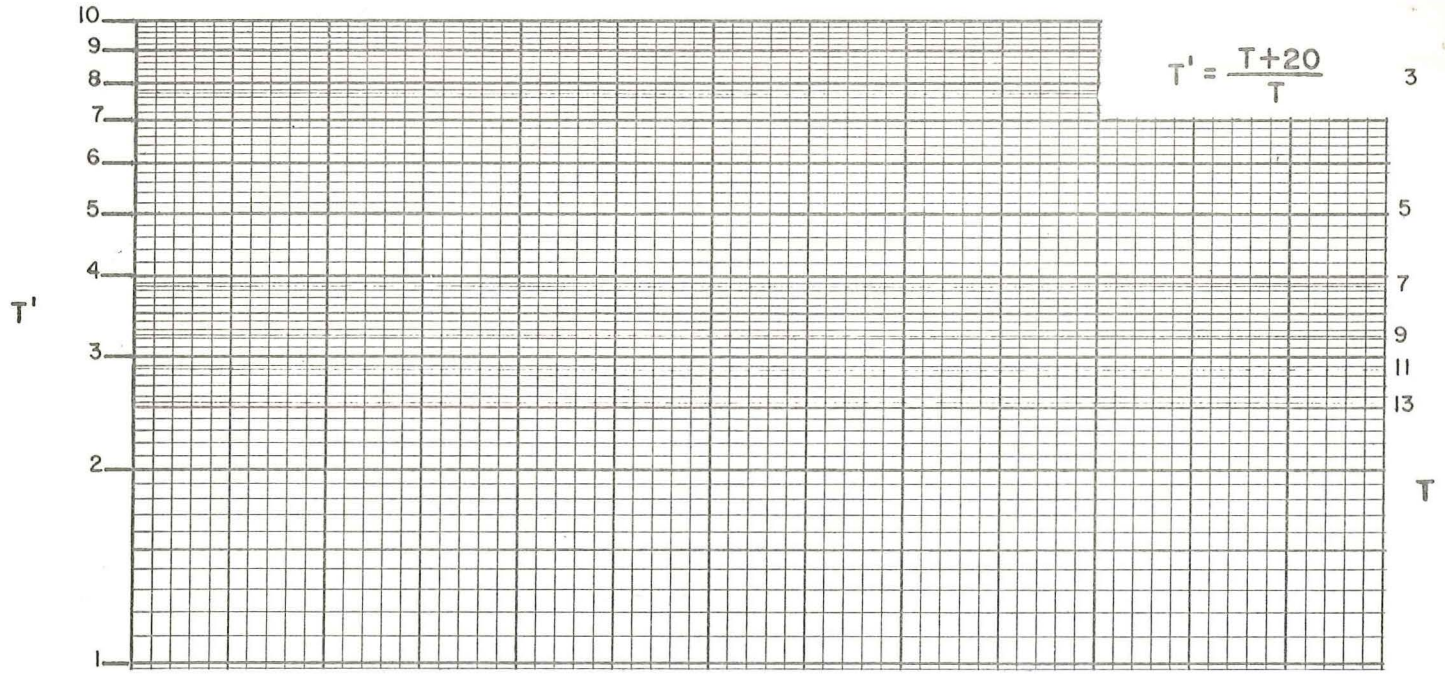
Property _____ T ____ R ____ sec ____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
60	50.68	34.560			
65	48.01	35.980	1.420	284	
70	45.28	37.520	1.540	308	
75	42.91	38.930	1.410	282	
80					


T' = (T+20)/T
T'
10
9
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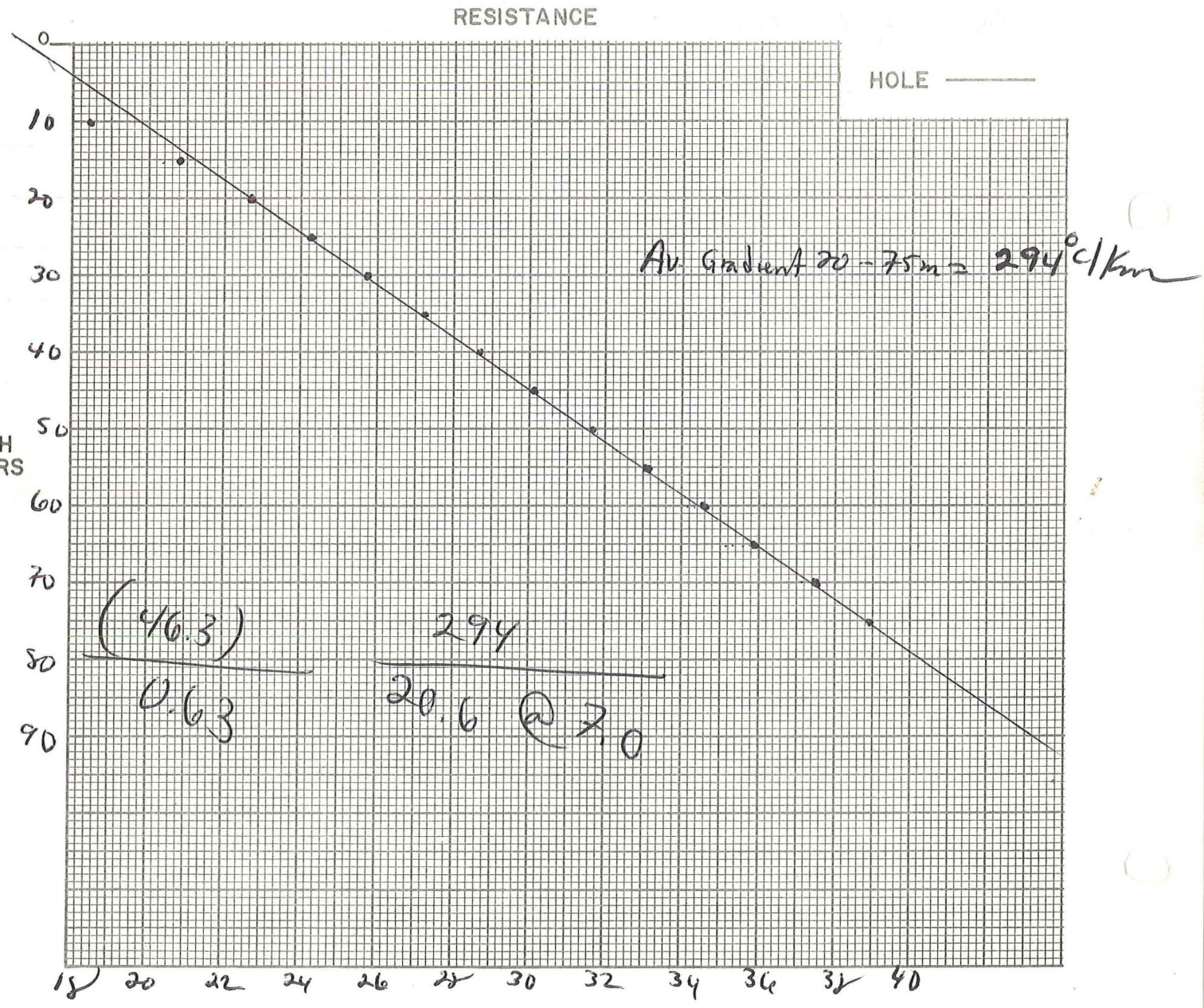
2
1
3
5
7
9
11
13
T


RESISTANCE
HOLE
DEPTH METERS
0
10
20
30
40
50
60
70
80
90
15
20
22
24
26
28
30
32
34
36
38
40
TEMPERATURE °C
Av. Gradient 20 - 75m = 29.4°C/Km
(46.3)
0.63
29.4
20.6 @ 70

LITHOLOGIC LOG B-253

NW¼ SW¼ Sec 19 T24S R6W Elevation: 5,480'

Depth (m)	Description
0 - 4	Soil.
4 - 77	Limestones medium gray to reddish-gray, fine-grained dense limestone.

@ 7.0

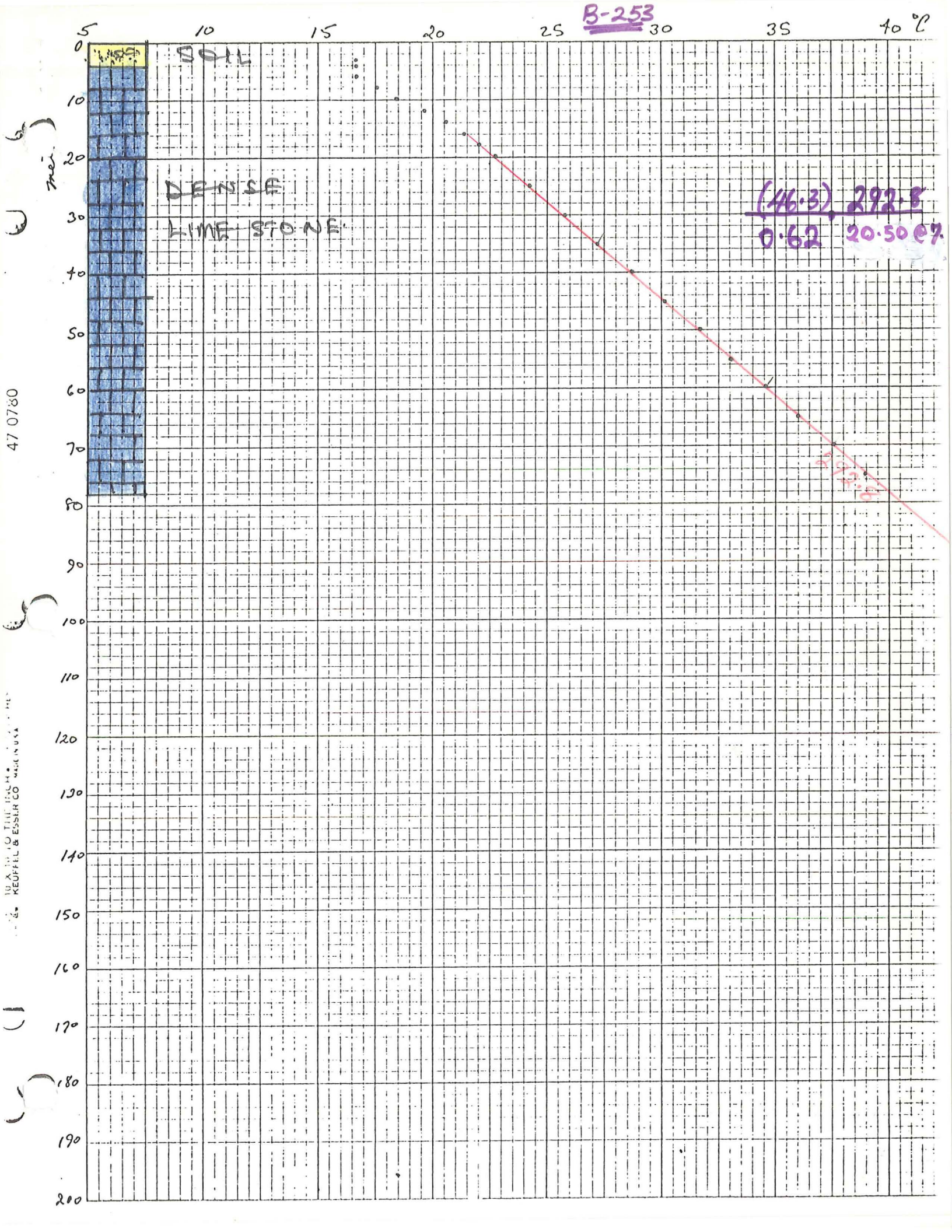
H. Dean Pilkington

H. Dean Pilkington

HDP:mmo

cc: Art Lange
Cheryl Caywood
Mark Alldredge

B-253


5
10
15
20
25
30
35
40 °C
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
180
190
200
SOIL
DENSE
LIME STONE
(46.3) 292.8
0.62 20.50 e7
47 0780
KEUFFEL & ESSER CO

TEMPERATURE DEPTH LOG

ΔT Well No. 254

Property-Project Best Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

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
7	5	5				2	5	4		0	3		N	V		7	6	C	M

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

| Site Description | | | | | |

TEMPERATURE - DEPTH LOG

Location 1 Mile South Tabernacle Hill Date Nov 3 1976

Map Tabernacle Hill, Utah 15' Quad

Property LVO T 22S R 6W sec NW¼NW¼ 22

Drill Hole B-254 Date Drilled Oct 28, 1976 Elevation 4710 ft.

Instrument Probe 39 Operator RP

Comments 3/4" PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
3.0	110.15	13.760			
3.5	111.24	13.485			
4.0	112.64	13.130			
4.5	113.81	12.840			
5.0	114.16	12.755			
5.5	114.10	12.770			
6.0	113.89	12.820			
6.5	113.70	12.870			
7.0	113.48	12.925			
7.5	113.20	12.990			
8.0	112.67	13.125			
8.5	112.36	13.205			
9.0	112.09	13.270			
9.5	111.76	13.355			
10.0	111.58	13.395			
10.5	111.35	13.455			
11.0	111.23	13.485			
11.5	111.07	13.530			
12.0	111.00	13.545			
12.5	110.98	13.550			
13.0	110.95	13.555			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

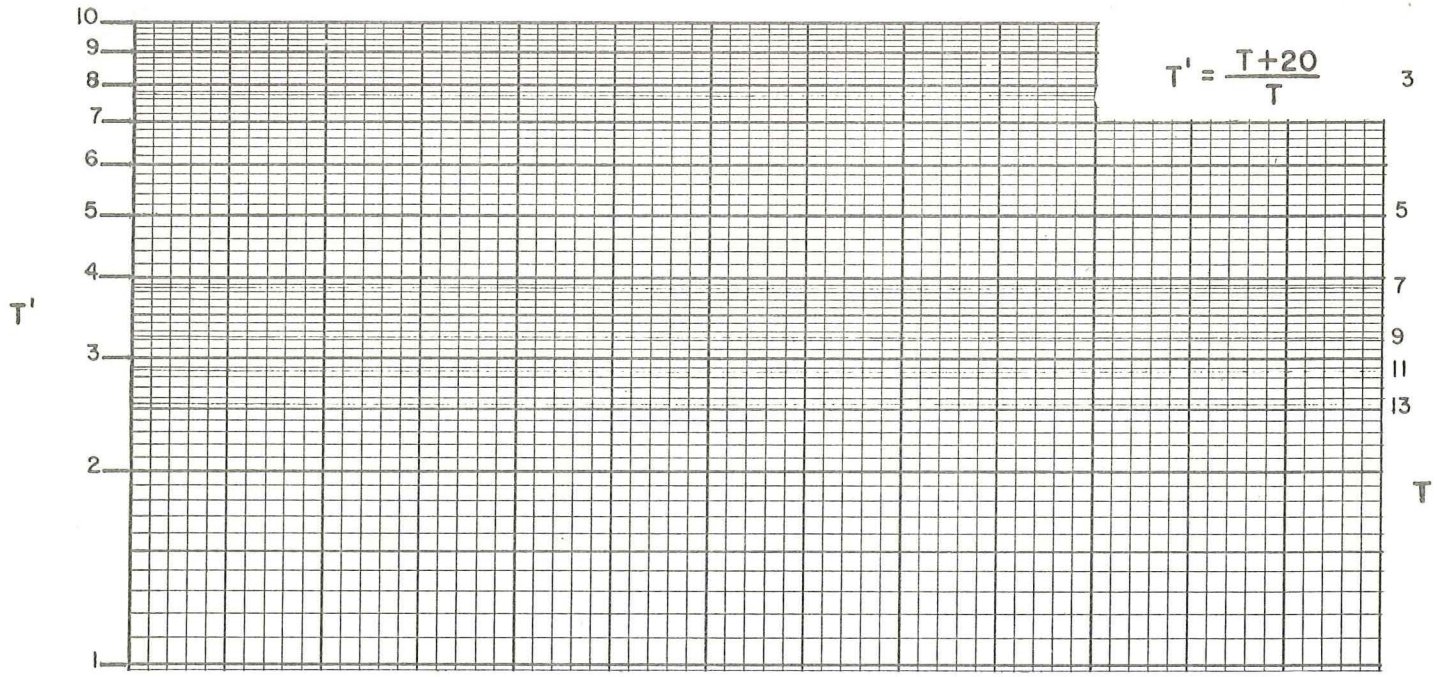
Property _____ T ____ R ____ sec ____

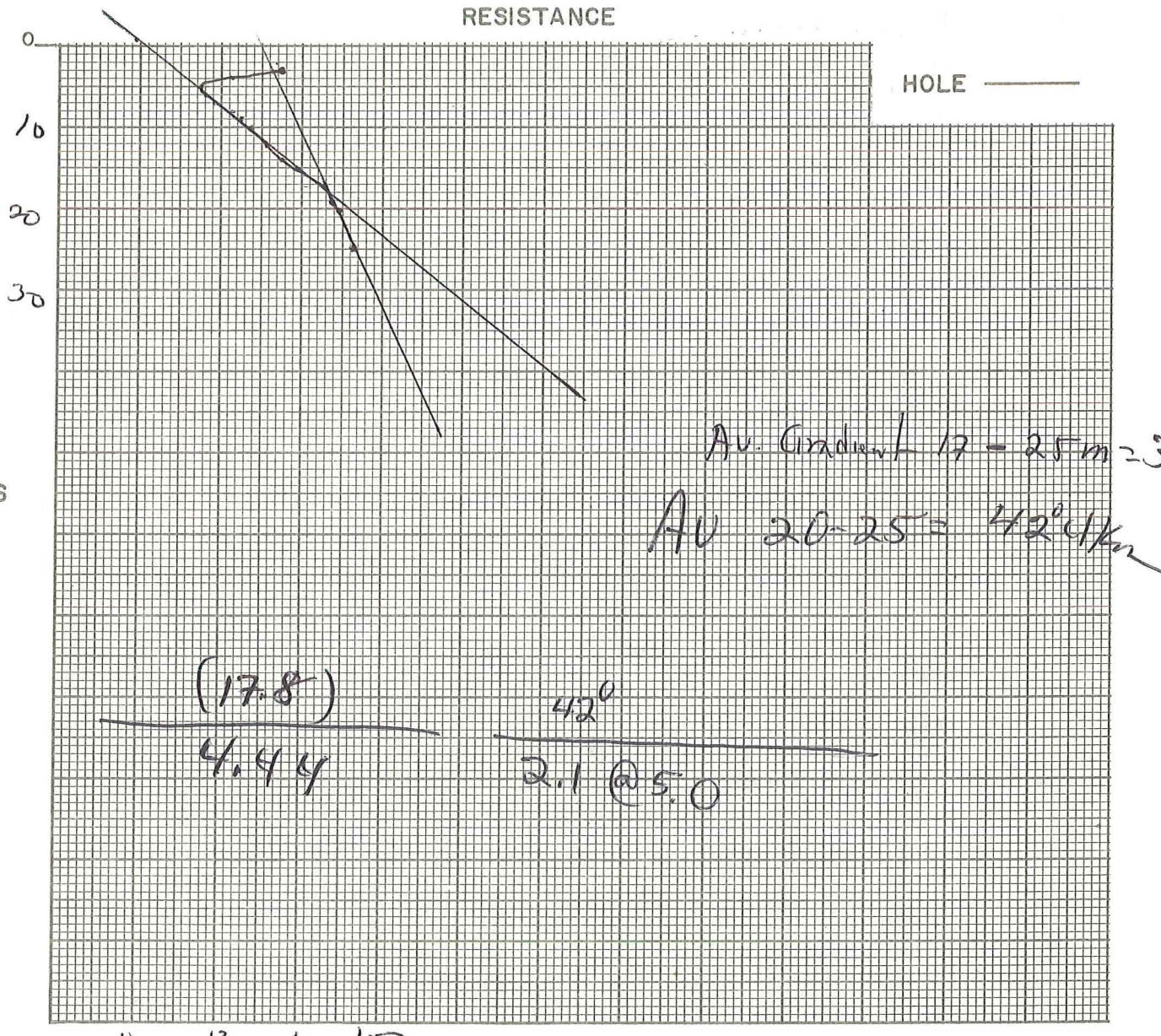
Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
13.5	110.63	13.640			
14.0	110.20	13.750			
14.5	109.84	13.840			
15.0	109.26	13.985	.085		
15.5	108.94	14.070	.070	140	
16.0	108.63	14.150	.075	150	
16.5	108.33	14.225	.075	150	
17.0	108.05	14.300	.025	50	
17.5	107.94	14.325	.015	30	
18.0	107.89	14.340	.020	40	
18.5	107.82	14.360	.015	30	
19.0	107.75	14.375	.015	30	
19.5	107.70	14.390	.015	30	
20.0	107.65	14.405	.210	42	
25	106.84	14.615	.060	60	
30	106.60	14.675			


$T' = \frac{T+20}{T}$
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13


RESISTANCE
HOLE
0
10
20
30
DEPTH METERS
12
13
14
15
TEMPERATURE °C
Av. Gradient 17 - 25 m = 39°C/km
Av 20-25 = 42°C/km
(17.8) / 4.44
42° / 2.1 @ 5.0

LITHOLOGIC LOG B-254

NW¼ NW¼ Sec 22 T22S R6W Elevation: 4,710'

Depth (m)	Description
0 - 6.2	Soil - mixture of wind blown sand and reworked lake sediments.
6.2 - 30	Basalt flow, fine-grained, dense, vesicular with interflow cinder zones - no returns below 26 meters due to porous nature of rock.

C4

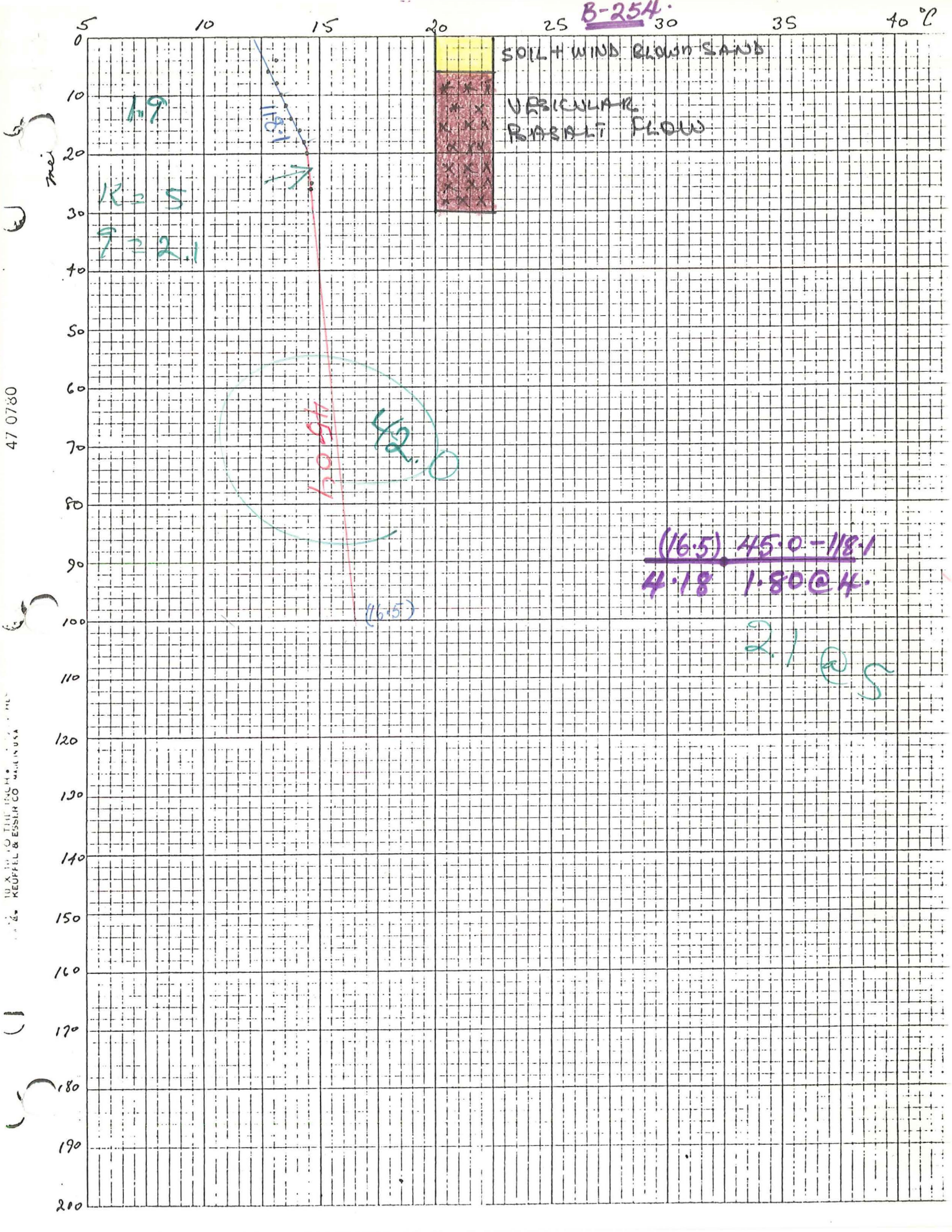
H. Dean Pilkington (MO)

H. Dean Pilkington

HDP:mmo

cc: Art Lange
Cheryl Caywood
Mark Alldredge

B-254.



47 0780

KEUFFEL & ESSER CO

TEMPERATURE DEPTH LOG

ΔT Well No. 255

Property-Project Best Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →	Well No →	Date Logged DA →	MO →	YR	*
1 2 3 4	5 6 7 8 9 10	11 12	13 14 15	16 17 18	19 20
755	255	03	NV	76	CM

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

Site Description	Operator	Editor
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
3.3 KM NW OF TABERNACLE HILL	DP	HLH

Card B

Scale Unit in cm	Map Size (7.5, 15.,60)	Map Location Δ N Lat Degree	Min	W Long Degree	Min
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
CM	15.	38.	45.	112.	45.

Use decimals

Δ 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
31.95	26.85	4690.	F

← Write M if meters

Use decimals

SEGMENT DEPTH

	Start	End	K	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
C	10.0	20.0		
D	.999			
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
	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
C	20.0	35.0	-5.0	-.5
D				
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location 2 miles NW Tabernacle Hill Date Nov 3

Map Tabernacle Hill, Utah 15' Quad

Property LVO T 22S R 6W sec SW¼ NW¼ 5

Drill Hole B-255 Date Drilled Oct 26, 1976 Elevation 4690 ft.

Instrument Probe 39 Operator DP

Comments 3/4" PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
4.0	112.15	13.255			
4.5	113.43	12.935			
5.0	115.15	12.505			
5.5	115.97	12.305			
6.0	116.45	12.190			
6.5	116.71	12.125			
7.0	116.97	12.060			
7.5	117.01	12.055			
8.0	116.95	12.065			
8.5	116.85	12.095			
9.0	116.63	12.145			
9.5	116.19	12.255			
10.0	115.39	12.450			
10.5	115.32	12.465			
11.0	115.32	12.465			
11.5	115.34	12.465			
12.0	115.29	12.476			
12.5	115.23	12.485			
13.0	115.16	12.505			
13.5	115.04	12.535			
14.0	114.91	12.565			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

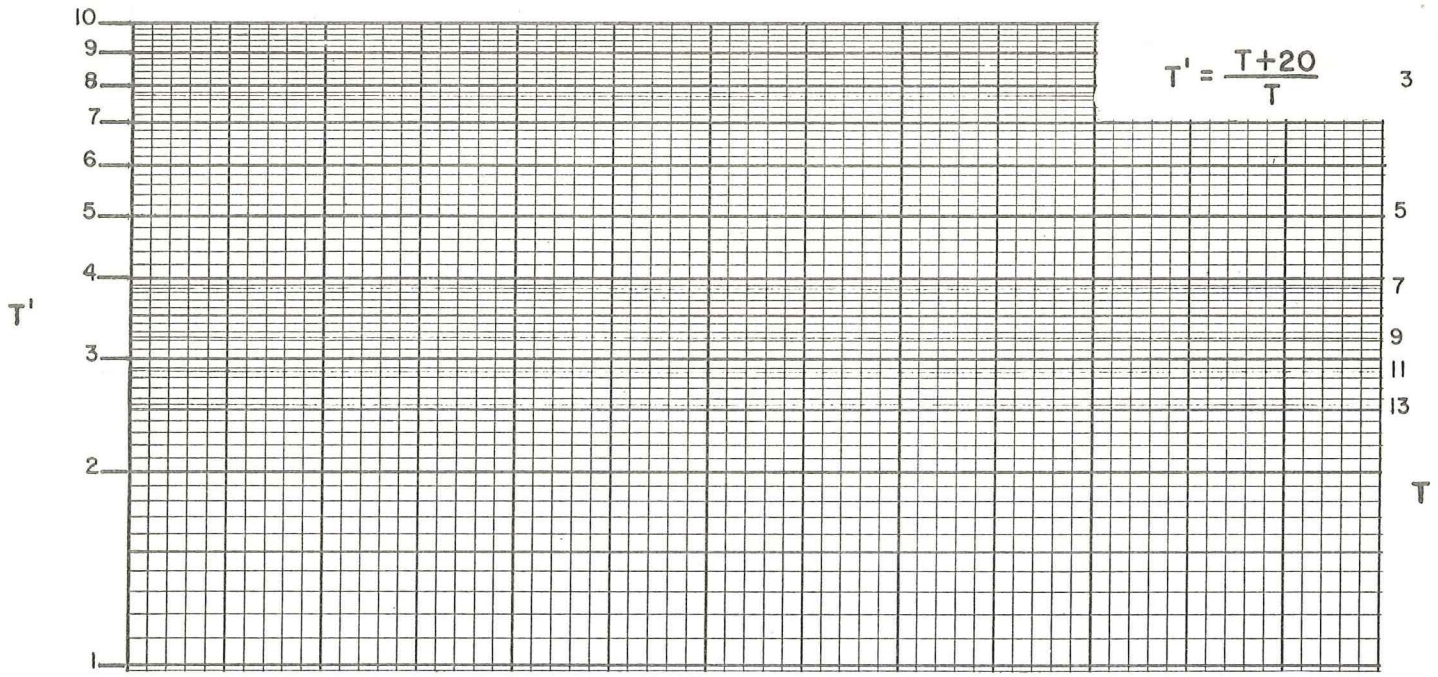
Property _____ T ____ R ____ sec ____

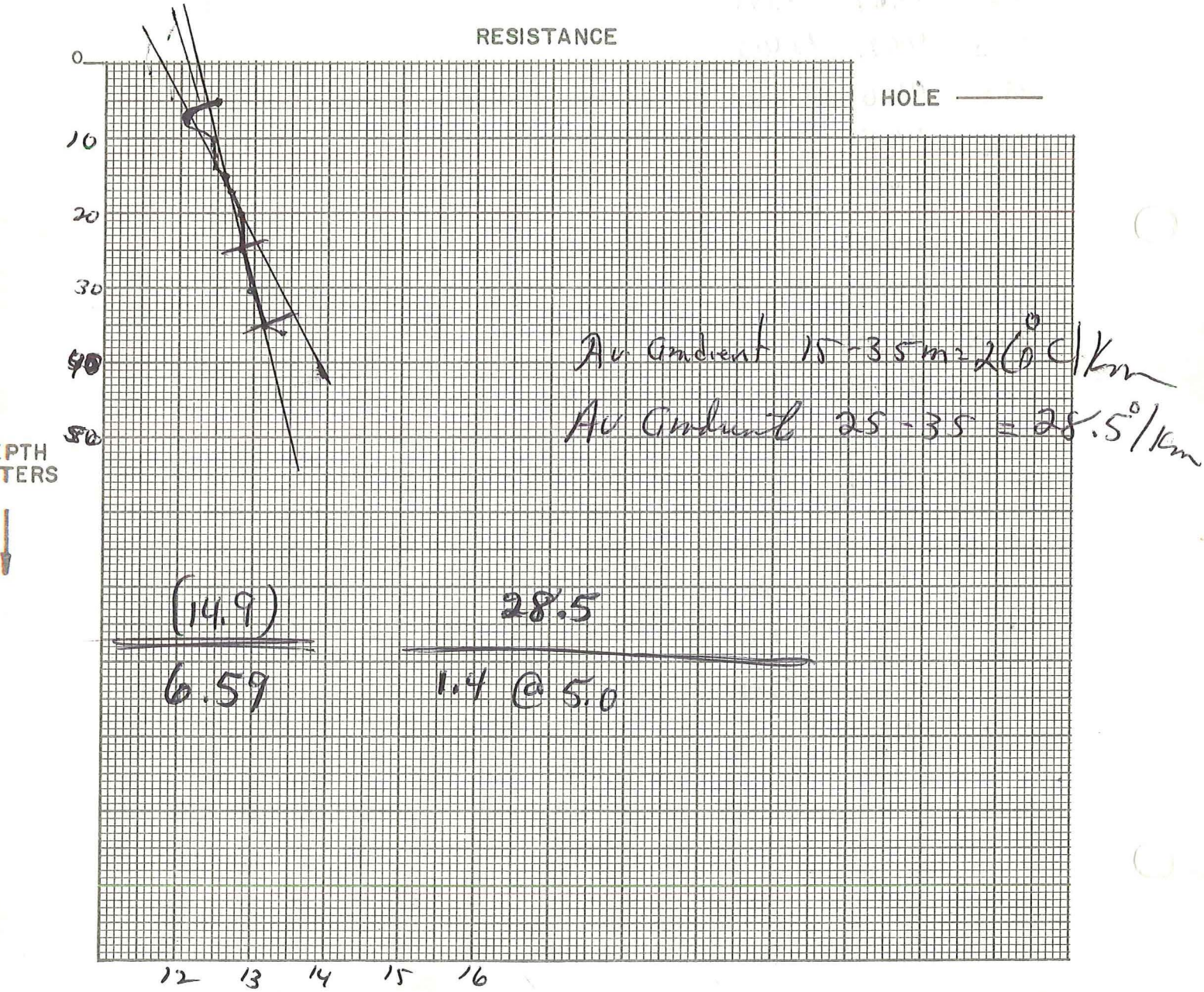
Drill Hole _____ Date Drilled _____ Elevation ____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
14.5	114.81	12,595			
15.0	114.71	12,615			
15.5	114.64	12,635			
16.0	114.54	12,660			
16.5	114.35	12705			
17.0	114.37	12700			
17.5	114.16	12,755			
18.0	114.06	12775			
18.5	114.03	12785			
19.0	114.00	12,795			
19.5	113.96	12,805			
20.0	113.95	12,805	.035	5	
25	113.81	12840	.140	28	
30	113.26	12,980	.145	29	
35	112.67	13125	.285	57	
36	111.52	13410			


10
9
8
7
6
5
4
3
2
1
T'
$T' = \frac{T+20}{T}$
3
5
7
9
11
13
T


RESISTANCE
HOLE
0
10
20
30
40
50
DEPTH METERS
Av Gradient 15-35 m = 26° C/Km
Av Gradient 25-35 = 28.5°/Km
(14.9)
6.59
28.5
1.4 @ 5.0
12
13
14
15
16
TEMPERATURE °C

LITHOLOGIC LOG B-255

SW¼ NW¼ Sec 5 T22S R6W Elevation: 4,690'

Depth (m)	Description
0 - 6.2	Soil - mixture of wind blown sand and reworked lake sediments.
6.2 - 25	Gray to light brown, fine-grained tuffaceous lake sediment.
25 - 39	Basalt and interflow cinder zones. The vesicular basalt and interflow cinders at 32m made 70 gpm water. @ 45

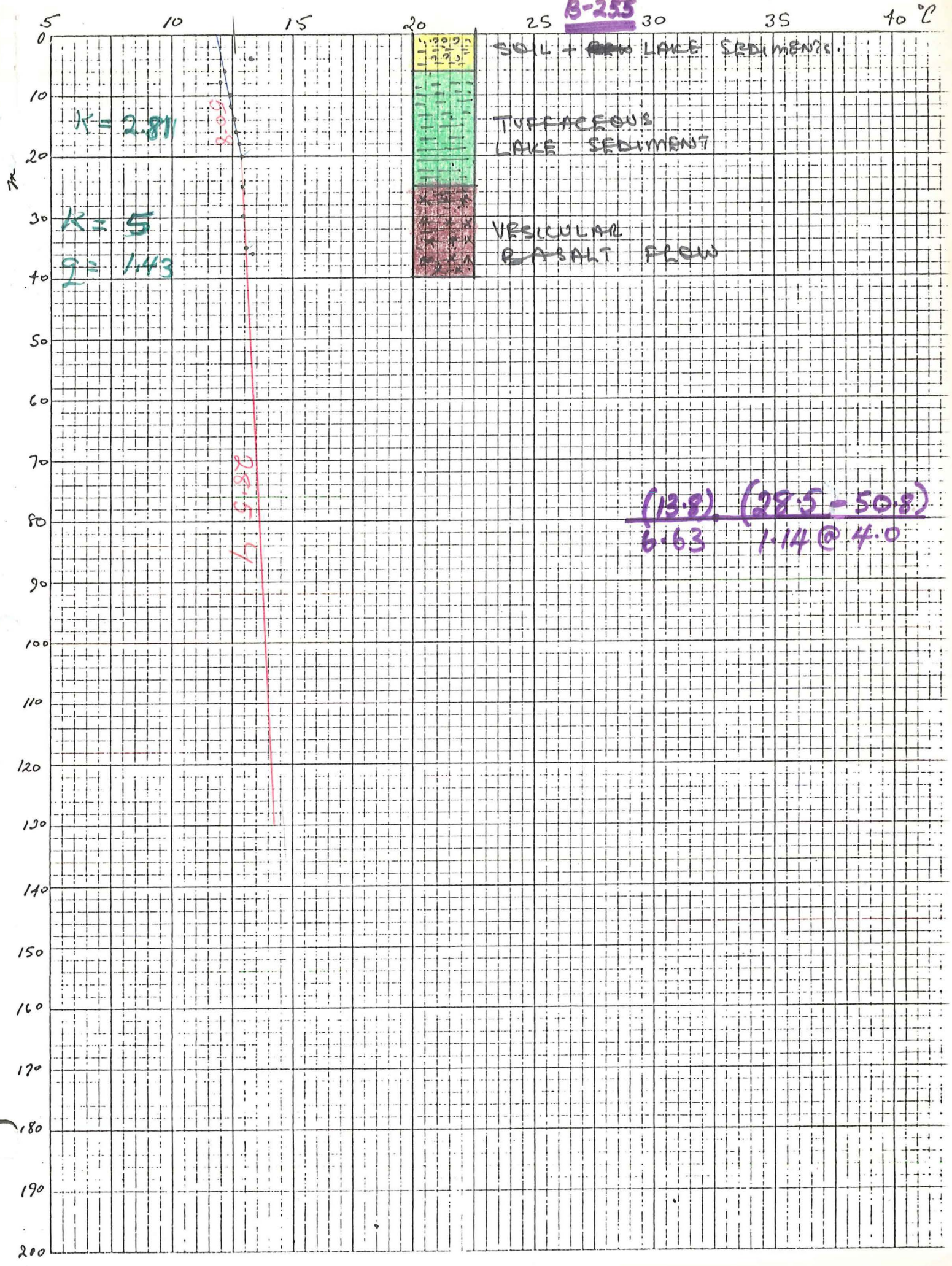
H. Dean Pilkington (MQ.)

H. Dean Pilkington

HDP:mmo

cc: Art Lange
Cheryl Caywood
Mark Alldredge

B-253



47 0780

KEUFFEL & ESSER CO. MADE IN USA

TEMPERATURE DEPTH LOG

ΔT Well No. 256

Property-Project BEST Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY: → →

Proj No	Well No	Date Logged DA	MO	YR	*
755	256	03	NV	76	CM

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

Site Description	Operator	Editor
3.9 KM NNW OF BLACK POINT	DP	HLH

Card B

Scale Unit in cm	Map Size (7.5, 15., 60)	Map Location Δ N Lat Degree	Min	W Long Degree	Min
CM	15.	38.	45.	112.	45.

Use decimals

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

Northing	Easting	Elev	
16.8	8.9	4773.	F

Use decimals

← Write M if meters

SEGMENT DEPTH

	Start	End	K	ΔK
C	10.0	55.0		
D	75.0	95.0	-4.0	-.5
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
C	55.0	75.0		
D	.999			
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location 2.½ mi's NW of Black Point Date Nov. 3, 1976

Map Tabernacle Hill, Utah 15' Quad

Property LVO T 23S R 7W sec NE¼ NW¼ 6

Drill Hole B-256 Date Drilled Oct 29, 1976 Elevation 4773 ft.

Instrument Probe 39 Operator RP

Comments ¾" PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
5.0	115.99	12.300			
5.5	117.82	12.030			
6.0	117.70	11.885			
6.5	118.21	11.760			
7.0	118.24	11.755			
7.5	118.50	11.695			
8.0	118.46	11.705			
8.5	118.37	11.725			
9.0	118.17	11.775			
9.5	117.99	11.815			
10.0	117.82	11.855			
10.5	117.72	11.880			
11.0	117.54	11.925			
11.5	117.38	11.965			
12.0	117.30	11.985			
12.5	117.26	11.995			
13.0	117.14	12.025			
13.5	117.08	12.035			
14.0	117.07	12.040			
14.5	116.97	12.065			
15.0	116.90	12.080			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T _____ R _____ sec _____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
15.5	116.86	12.090			
16.0	116.82	12.100			
16.5	116.82	12.100			
17.0	116.65	12.140			
17.5	116.66	12140			
18.0	116.50	12.180			
18.5	116.45	12.190			
19.0	116.38	12.210			
19.5	116.32	12225			
20.0	116.19	12.250			
25	115.48	12.430	.180	36	
30	114.72	12615	.185	37	
35	114.03	12785	.170	34	
40	113.23	12985	.200	40	
45	112.58	13.150	.165	33	
50	111.81	13.348	.190	38	
55	111.25	13480	.140	28	
60	110.39	13700	.220	44	
65	109.34	13965	.265	53	
70	108.43	14.200	.235	47	
75	107.50	14.445	.245	49	
			.230	46	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

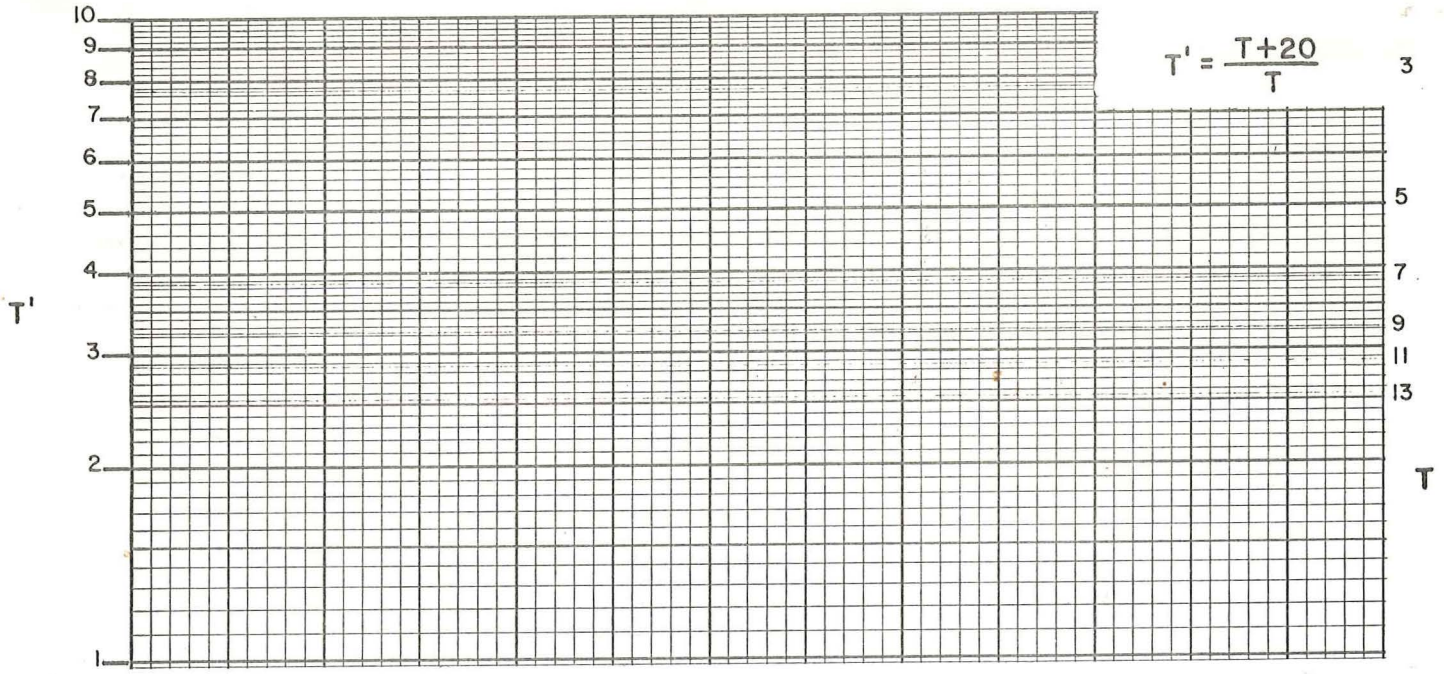
Property _____ T _____ R _____ sec _____

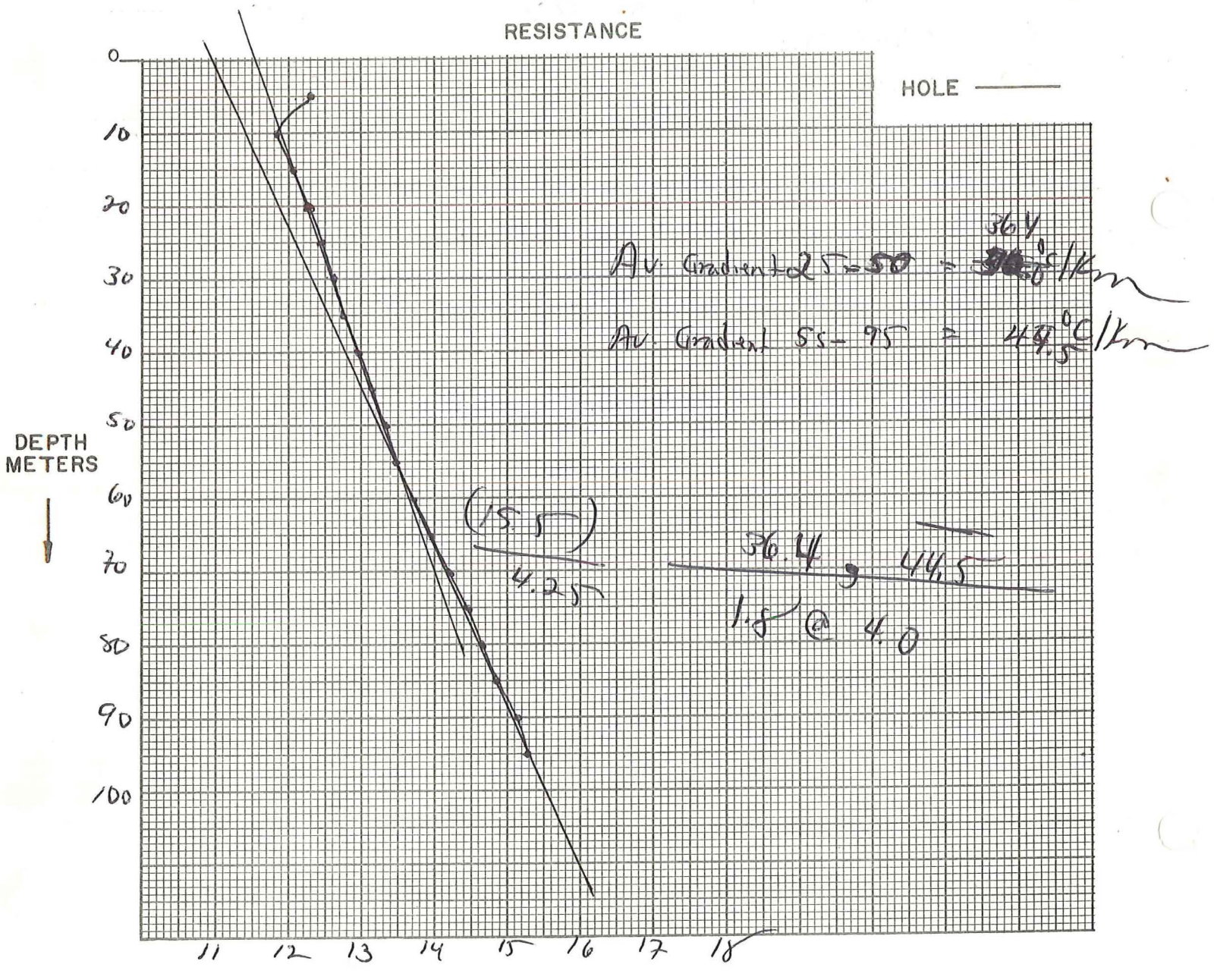
Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
80	106.01	14.675			
			.210	42	
85	105.82	14.885			
			.230	46	
90	104.93	15.115			
			.145	29	
95	104.39	15.260			
100					


T' = T+20 / T
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13


RESISTANCE
HOLE
DEPTH METERS
0
10
20
30
40
50
60
70
80
90
100
11
12
13
14
15
16
17
18
TEMPERATURE °C
Av. Gradient 25-50 = 36.4 °C/Km
Av. Gradient 55-95 = 44.5 °C/Km
(15.5)
4.25
36.4
44.5
1.5 @ 4.0

LITHOLOGIC LOG B-256

NE¼ NW¼ Sec 6 T23S R7W Elevation: 4,773'

Depth (m)	Description
0 - 4.6	Soil - mixture of wind blown sand and reworked lake sediments.
4.6 - 6.2	Light gray, fine-grained, tuffaceous lake sediment.
6.2 - 14.0	Light brown, fine-grained tuffaceous lake sediment.
14.0 - 154	Medium gray to blue-gray, fine-grained tuffaceous lake sediment. Made water between 131 and 136 meters at a rate of approximately 15-20 gpm.

4.0

H. Dean Pilkington (mmo.)

H. Dean Pilkington

HDP:mmo

cc: Art Lange
Cheryl Caywood
Mark Alldredge

B-256

5 10 15 20 25 30 35 40 °C

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200

Meters

SOIL - SAND + LACE SEDIMENTS

TUFFACEOUS LACE SEDIMENTS.

K = 5

K = 3.73

K = 4.0

I = 1.79

WATER ZONE 15-20 gpm

(15.5) 36.3 - 48.0 (44.2)

4.23 1.79 @ 4.0

47 0780

KEUFFEL & ESSER CO

TEMPERATURE DEPTH LOG

ΔT Well No. 257

Property-Project Nuclear Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY: → →

Proj No	Well No	Date Logged DA	MO	YR	*
777	257	16	AP	77	CM

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

Site Description	Operator	Editor
8.1 KM NORTH OF COVE FORT	JED	MLH

Card B

Scale Unit in cm	Map Size (7.5, 15.,60)	Map Location Δ N Lat Degree	Min	W Long Degree	Min
CM	15.	38.	30.	112.	45.

Use decimals

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

Northing	Easting	Elev	
31.0	23.75	5690.	F

31.2

Use decimals

← Write M if meters

SEGMENT DEPTH

	Start	End	K	ΔK
C	10.0	35.0		
D	.999			
E				
F				
G				

Continue each card below.

-8.6

SEGMENT DEPTH

	Start	End	K	ΔK
C	35.0	65.0	-7.0	-.5
D				
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location DOG VALLEY Date 16-APRIL-77

Map COVE FORT UT, 15''

Property THERMEX T 24 S R 6 W sec 31 SW¼ SW¼

Drill Hole B-257 777-2 Date Drilled 4-APRIL-77 Elevation 5690 ft.

Instrument # 39 Operator JED

Comments 3/4" WATER FILLED PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
3.0	12416	10.37	0.72		
3.5	12116	11.09	1.01		
4.0	11688	12.10	0.36		
4.5	11540	12.46	0.41		
5.0	11374	12.87	0.53		
5.5	11162	13.40	0.44		
6.0	10986	13.84	0.46		
6.5	10808	14.30	0.47		
7.0	10626	14.77	0.27		
7.5	10523	15.04	0.23		
8.0	10435	15.27	0.35		
8.5	10304	15.62	0.25		
9.0	10212	15.87	0.24		
9.5	10123	16.11	0.23		
10.0	10040	16.34	0.21		
10.5	9964	16.55	0.18		
11.0	9898	16.73	0.19		
11.5	9831	16.92	0.20		
12.0	9760	17.12	0.16		
12.5	9701	17.28	0.18		
13.0	9639	17.46			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T ____ R ____ sec ____

Drill Hole B-~~2~~257 777-2 Date Drilled _____ Elevation ____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
13.5	9570	17.65	0.19		
14.0	9507	17.83	0.18		
14.5	9457	17.98	0.15		
15.0	9390	18.17	0.19		
15.5	9321	18.37	0.20		
16.0	9256	18.56	0.19		
16.5	9200	18.73	0.17		
17.0	9140	18.91	0.18		
17.5	9081	19.08	0.17		
18.0	9016	19.28	0.20		
18.5	8958	19.45	0.17		
19.0	8889	19.66	0.21		
19.5	8825	19.86	0.20		
20.0	8761	20.05			
25	8156	21.97			
30	7692	23.54			
35	7226	25.20			
40	6821	26.73			
45	6485	28.06			
50	6192	29.28			
55	5854	30.76			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T ____ R ____ sec _____

Drill Hole B-257 727-2 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
60	5541	32.20	1.44	288	
65	5271	33.51	1.31	262	
99999.					

TEMPERATURE - DEPTH LOG

Location DOG VALLEY Date 16-APRIL-77

Map COVE FORT UT, 15''

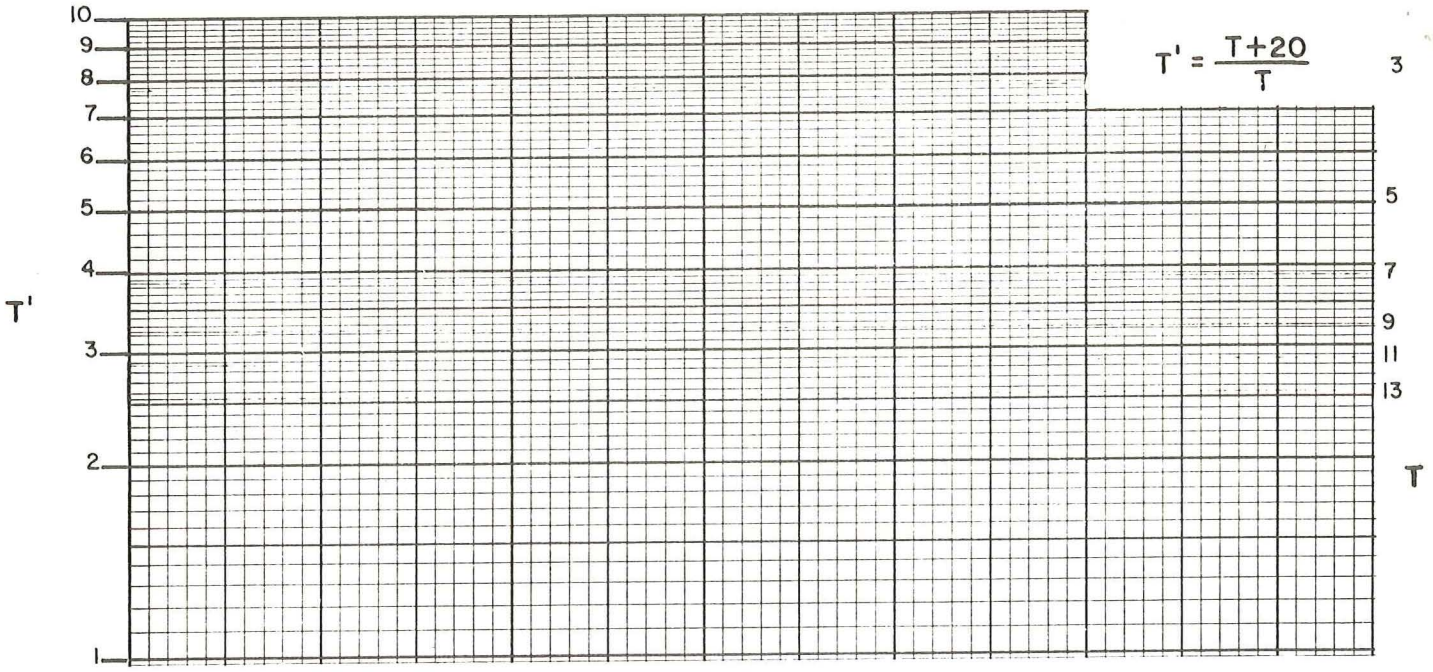
Property THERMEX T 24S R 6W sec 31 SW¼ SW¼

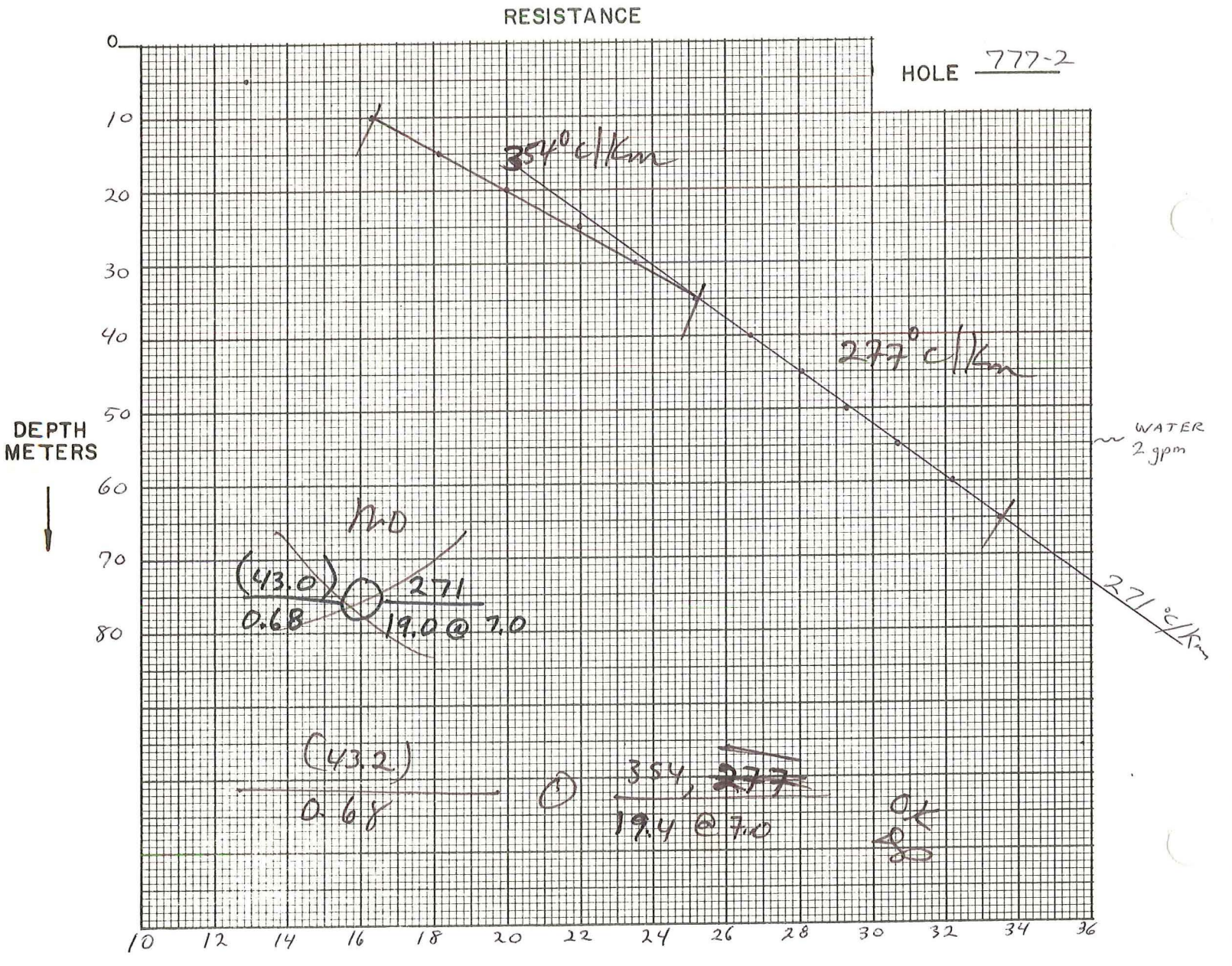
Drill Hole B-257 777-2 Date Drilled 4-APRIL-77 Elevation 5690 ft.

Instrument # 39 Operator JEB

Comments 3/4" WATER FILLED PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
3.0	12416	10.37	0.72		
3.5	12116	11.09	1.01		
4.0	11688	12.10	0.36		
4.5	11540	12.46	0.41		
5.0	11374	12.87	0.53		
5.5	11162	13.40	0.44		
6.0	10986	13.84	0.46		
6.5	10808	14.30	0.47		
7.0	10626	14.77	0.27		
7.5	10523	15.04	0.23		
8.0	10435	15.27	0.35		
8.5	10304	15.62	0.25		
9.0	10212	15.87	0.24		
9.5	10123	16.11	0.23		
10.0	10040	16.34	0.21		
10.5	9964	16.55	0.18		
11.0	9898	16.73	0.19		
11.5	9831	16.92	0.20		
12.0	9760	17.12	0.16		
12.5	9701	17.28	0.18		
13.0	9639	17.46			


T' = T+20 / T
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13


RESISTANCE
HOLE 777-2
354° c/Km
277° c/Km
271 °c/Km
WATER
2 gpm
DEPTH
METERS
H2O
(43.0)
0.68
271
19.0 @ 7.0
(43.2)
0.68
354, 277
19.4 @ 7.0
OK
80
0
10
20
30
40
50
60
70
80
10
12
14
16
18
20
22
24
26
28
30
32
34
36
TEMPERATURE °C

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T _____ R _____ sec _____

Drill Hole B-~~2~~ 257 777-2 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
13.5	9570	17.65	0.19		
14.0	9507	17.83	0.18		
14.5	9457	17.98	0.15		
15.0	9390	18.17	0.19		
15.5	9321	18.37	0.20		
16.0	9256	18.56	0.19		
16.5	9200	18.73	0.17		
17.0	91.40	18.91	0.18		
17.5	90.81	19.08	0.17		
18.0	90.16	19.28	0.20		
18.5	8958	19.45	0.17		
19.0	88.89	19.66	0.21		
19.5	8825	19.86	0.20		
20.0	8761	20.05			
25	8156	21.97			
30	7692	23.54			
35	7226	25.20			
40	6821	26.73			
45	6485	28.06			
50	6192	29.28			
55	5854	30.76			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

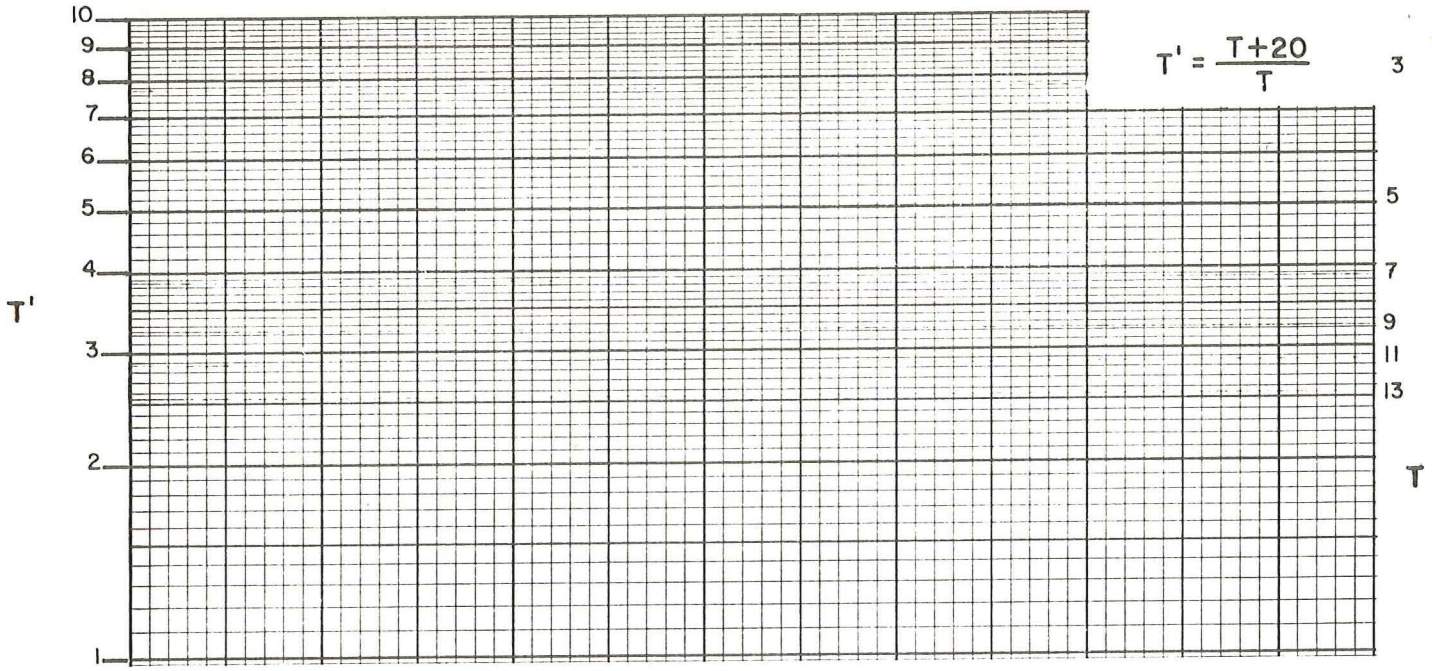
Property _____ T _____ R _____ sec _____

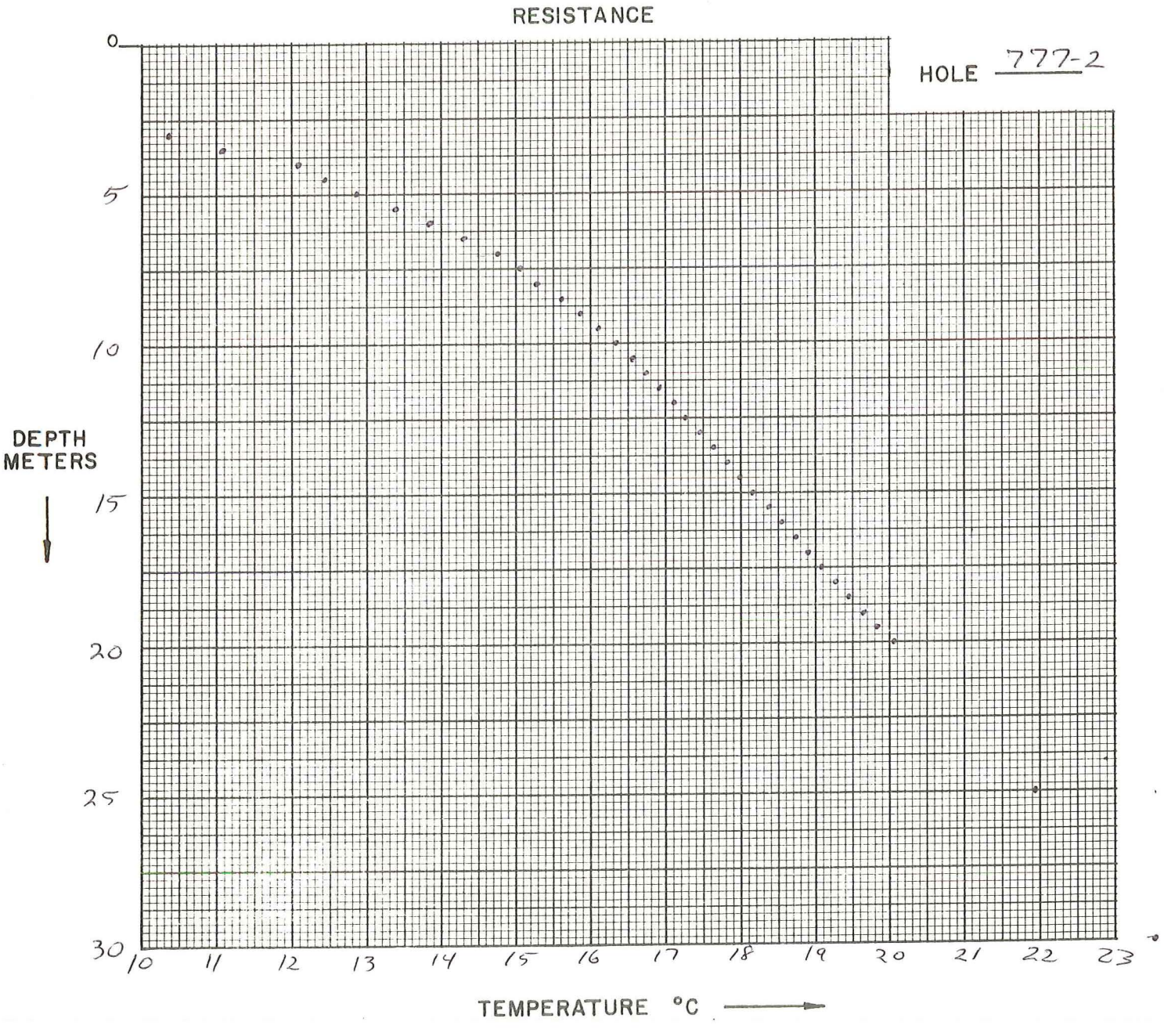
Drill Hole B-257 777-2 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
60	5541	3220	1.44	288	
65	5271	33.51	1.31	262	


T' = (T+20)/T
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13


RESISTANCE
HOLE 777-2
DEPTH METERS
0
5
10
15
20
25
30
10
11
12
13
14
15
16
17
18
19
20
21
22
23
TEMPERATURE °C

cc: Alldredge
Caywood
Klinge
Dayton

LITHOLOGIC LOG

PROPERTY: THERMEX B-257 (777-2)

SW¼ SW¼ Sec 31 T24S R6W

ELEVATION: 5,690'

Drilled 4/5/77

Feet (m)	DESCRIPTION
0 - 32	White to yellow-brown silty Alluvium with dark gray limestone pebbles and minor pebbles of altered andesite.
32 - 53	Dark gray Limestone with small veins of calcite. Small fractures filled with red clay.
55	Water - less than 3 gpm.
53 - 59	Limestone - dark gray, rexlized.
59 - 63	Dolomite(?) Limestone - dark gray.
59 - 67	Limestone - rexlized, fine-grained. Medium gray to brownish green. Heavy red Fe staining along fractures.

Transient & Relog

TEMPERATURE/DEPTH LOG

8258

ΔT Well No. 779-8

Property-Project OR Depth Logged 97m

Map Tabernacle Hill Scale 15" Date: Drilled Logged 28 June 77

State Utah County Millard Section 8 NW¼ NE¼ T 23S R 6W

Instrument #39 Operator DAB Elevation 4700 ft.

Comments 3/4" water filled PVC

COMPUTER PROCESSING

Card A

RT JUSTIFY:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	7	7	9			8	2	5	8	2	8		7	3		7	7	C	M

Proj No → | Well No → | Date Logged: DA → | MO → | YR | *

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

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
6	.	3		K	M		N	W			F																											D	P	

Site Description | Operator | Editor

Card B

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
							1	5	.			3	5	.	4	5	.				1	1	2	.	4	5	.			

Scale Unit in cm | Map Size (7.5, 15., 60) | Map Location △: N Lat Degree, Min | W Long Degree, Min

Use decimals

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

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
																2	7	.	7										F

Northing | Easting | Elev

Use decimals

← Write M if meters

SEGMENT DEPTH

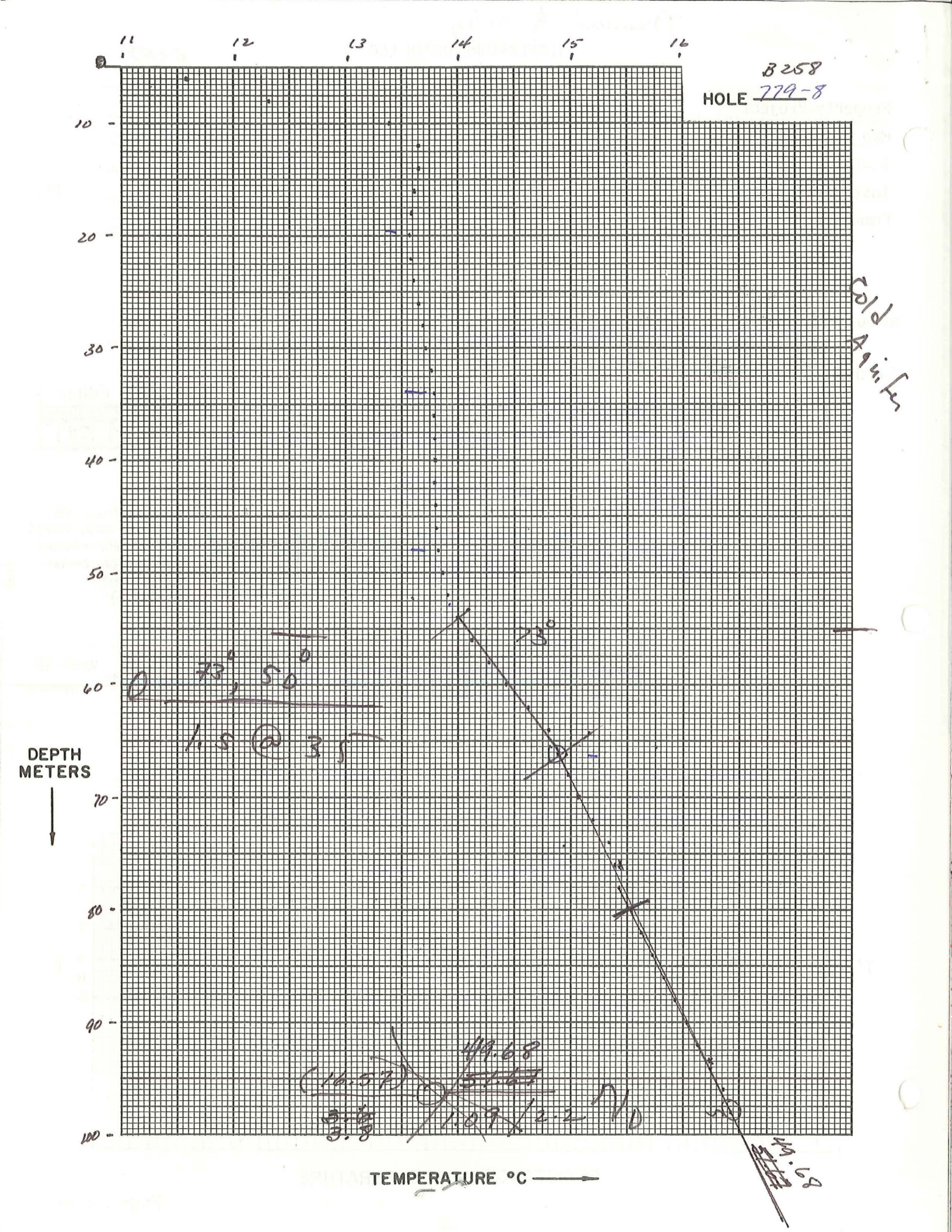
	Start										End										K					ΔK				
	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
C	5	4	.	0							6	6	.	0																
D	8	0	.	0							9	8	.	0																
E																														
F																														
G																														

Continue each card below.

SEGMENT DEPTH

	Start										End										K					ΔK				
	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
C	6	6	.	0							8	0	.	0							-	3	.	5		-	.	5		
D	.	9	9	9																										
E																														
F																														
G																														

Final Segment: Start = .999


11
12
13
14
15
16
HOLE B258 279-8
10
20
30
40
50
60
70
80
90
100
DEPTH METERS
TEMPERATURE °C
Cold Aquifer
73°
73° 50
1.5 @ 35
(16.57)
3.8
1.09 x 2.2 ND
49.68
49.68

Date Logged: June 28

8258
ΔT Well No. 779-8

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
2	109.99	13.81	2.26				
4	119.15	11.55	.0				
6	118.96	11.59	.04				
8	115.94	12.32	.73				
10	111.63	13.39	1.07				
12	110.62	13.65	.26				
14	110.61	13.65	.00				
16	110.78	13.61	.04				
18	110.90	13.58	.03				
20	110.93	13.57	.01				
22	110.87	13.58	.01				
24	110.76	13.61	.03				
26	110.61	13.65	.04				
28	110.46	13.69	.04				
30	110.35	13.72	.03				
32	110.16	13.76	.04				
34	110.06	13.79	.03				
36	110.09	13.78	.01				
38	110.09	13.78	.00				
40	110.07	13.79	.01				
42	110.06	13.79	.00				
44	110.03	13.80	.01				
46	109.98	13.81	.01				
48	109.90	13.83	.02				
50	109.78	13.86	.03				
52	109.58	13.91	.05				
54	109.24	14.00	.09				

K=Conductivity

B258

Date Logged: June 28 1977 ΔT Well No. 74-8

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
56	108.78	14.12	.12				
58	108.19	14.27	.15				
60	107.55	14.43	.16				
62	106.82	14.62	.19				
64	106.16	14.80	.18				
66	105.82	14.88	.08				
68	105.50	14.97	.09				
70	105.14	15.06	.09				
72	104.67	15.19	.13				
74	104.11	15.34	.15				
76	103.96	15.38	.04				
78	103.75	15.43	.05				
80	103.32	15.54	.11				
82	103.06	15.62	.08				
84	102.67	15.72	.10				
86	102.32	15.82	.10				
88	101.91	15.93	.11				
90	101.54	16.03	.10				
92	101.15	16.13	.10				
94	100.74	16.24	.11				
96	100.31	16.36	.12				
97	100.11	16.42	.06				
~98	99.94	16.46	.04				

K=Conductivity

TEMPERATURE - DEPTH LOG

Location 6 MILES W-NW OF KANOSH Date 14 April 77

Map FILMORE UT, 15'

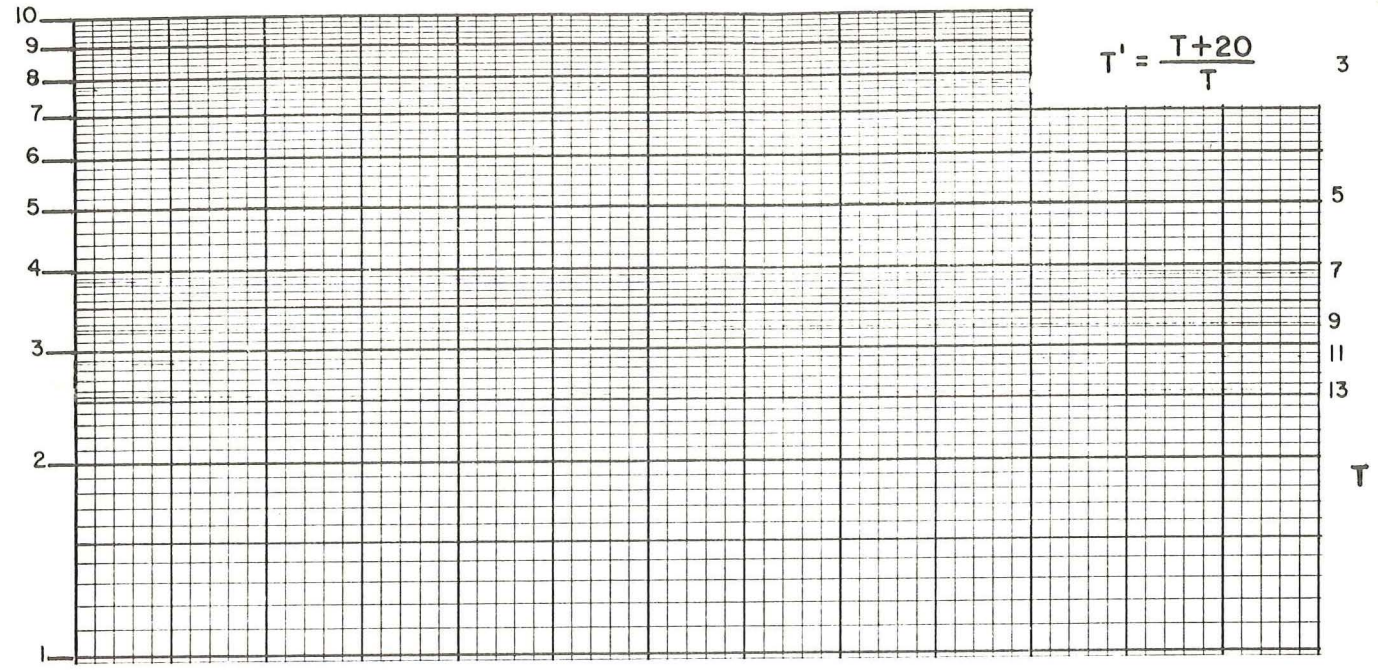
Property OK T 23S R 6W sec 8 NW¼NE¼

Drill Hole B-258 779-8 Date Drilled 6 Apr 77 Elevation 4700 ft.

Instrument Probe 39 Operator DAE

Comments 3/4" PVC water filled

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
2.0	124.62	10.26			
2.5	121.~~24~~ 58	10.97	.71		
3.0	118.41	11.73	.76		
3.5	117.06	12.05	.32		
4.0	115.82	12.35	.30		
4.5	114.40	12.70	.35		
5.0	113.22	12.99	.29		
5.5	112.32	13.22	.23		
6.0	111.17	13.51	.29		
6.5	110.~~25~~ 16	13.76	.25		
7.0	109.45	13.94	.18		
7.5	109.06	14.04	.10		
8.0	109.00	14.06	.02		
8.5	108.99	14.06	.00		
9.0	109.01	14.06	.00		
9.5	109.05	14.05	.01		
10.0	109.~~07~~ 06	14.04	.01		
10.5	109.10	14.03	.01		
11.0	109.15	14.02	.01		
11.5	109.18	14.01	.01		
12.0	109.23	14.00			



RESISTANCE

HOLE 779-8

DEPTH METERS

0
10
20
30
40
50
60
70
80
90
100

18°c/km
80°c/km
(—)
Isothermal (Ca)
89°c/km
Basalt
Cold.
47.3°c/km
16.5
3.98
47.3
1.04 @ 2.2
16.5
3.98
18, 80, 0, 89, 47
1.6 @ 3.5
OK

18
17
16
15
14
13
12
11

TEMPERATURE °C

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T _____ R _____ sec _____

Drill Hole B-258 779-8 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
12.5	109.27	13.99	.01		
13.0	109.37	13.96	.03		
13.5	109.51	13.93	.03		
14.0	109.72	13.88	.05		
14.5	109.87	13.84	.04		
15.0	109.96	13.81	.03		
15.5	110.02	13.80	.01		
16.0	110.05 ~~.06~~	13.79	.01		
16.5	110.09	13.78	.01		
17.0	110.11 ~~.10~~	13.78	.00		
17.5	110.11	13.78	.00		
18.0	110.11	13.78	.00		
13.5 ~~18.5~~	110.10	13.78	.00		
19.0 ~~.0~~	110.10	13.78	.00		
19.5	110.10	13.78	.00		
20.0	110.06	13.79	.01		
25.0	109.72	13.88	.09		
30.0	109.34	13.97	.09 8		
35.0	107.75 39	14.38	.41		
40.0	109.37	13.96	.42		
45.0	109.12	14.03 ~~14.03~~	.07		

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T _____ R _____ sec _____

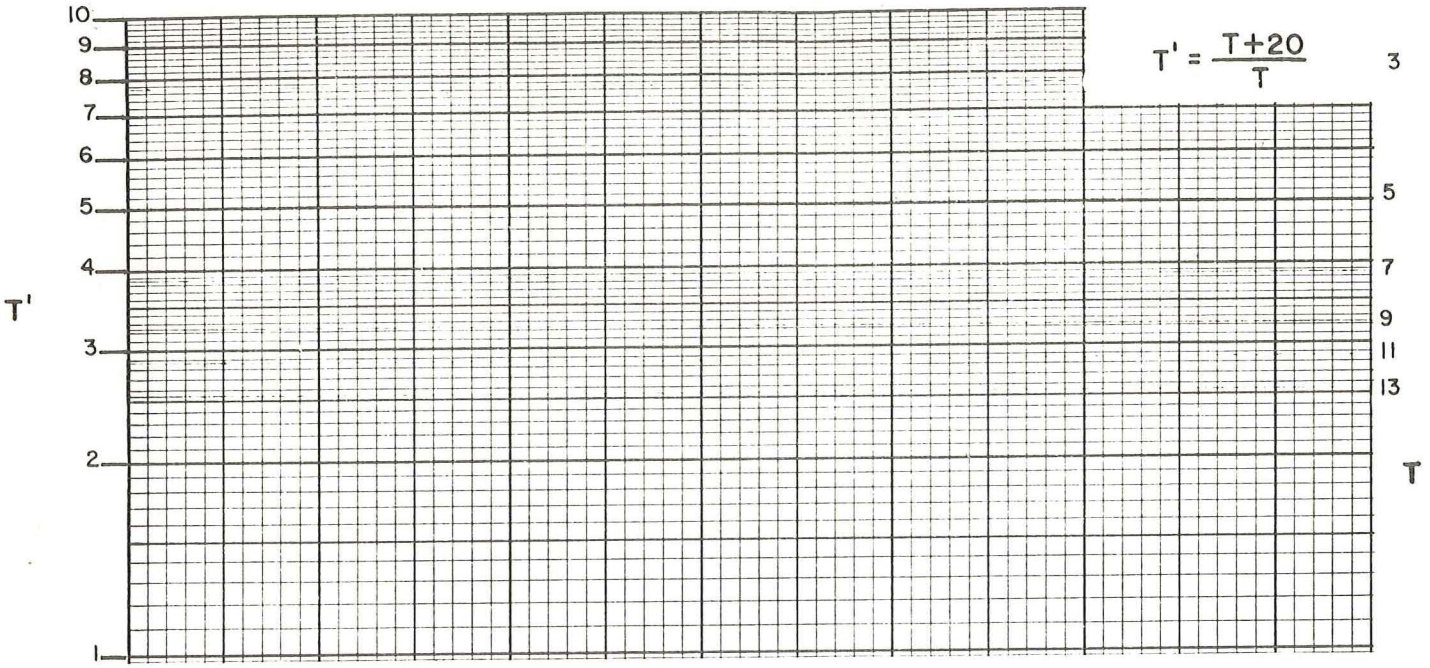
Drill Hole B-258 779-8 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
50.0	108.88	14.09	.06		
55.0	108.83	14.01	.01		
60.0	106.97	14.58	.57		
65.0	105.76	14.90	.32		
70.0	104.92	15.12	.22		
75.0	103.85	15.40	.28		
80.0	103.21	15.58	.18		
85.0	102.37	15.80	.22		
90.0	101.46	16.05	.25		
95.0	100.48	16.32	.27		
99.0	99.78	16.51	.19		

10-30-81



RESISTANCE

HOLE 779-8

DEPTH METERS

0
5
10
15
20
25
30

8 9 10 11 12 13 14

TEMPERATURE °C

cc: Hall
Lange
Deymonaz
Caywood

LITHOLOGIC LOG B-258 (779-8)

OK PROJECT

ELEVATION: 4,700'

NW¼ NE¼ Sec 8 T23S R6W

DATE DRILLED: 4/6/77

Depth (m)	DESCRIPTION
0 - 6	Qal Clayey Sand - subrounded; .5mm-3mm; 60% quartzite, 30% limestone, 10% Basalt(?)
6 - 9	Qal Clay - pale yellowish green
9 - 12	Qal Clay - blue gray
12 - 15	Qal Clayey Gravel - 40% silt-clay matrix; subrounded-angular; ave 10mm; 40% limestone, ~40% quartzite, 20% altered volcanic.
15 - 18	Qal Clay - reddish brown
18 - 21	Qal Clay - buff brown
21 - 27.5	Qal Sandy Clay - buff
'.5 - 38	Cinder - dark gray to red; amygdaloidal with quartz/calcite filling
38 - 60	Porpheritic Basalt - gray; less than 30% of rock consits of phenocrysts of plagioclase ave .5mm in size; small amt. of iron staining.
60 - 62	Cinder - dark gray with iron oxidation; highly fractured with clay filling.
62 - 70	Clayey Sand - subrounded-angular; .25mm-2mm; 50% basalt (?), 30% quartzite, 20% limestone
70 - 100	Gravel - w clay-silt matrix; subrounded;angular; ave 10mm; 50% quartzite, 40% dolomite, 10% altered volcanic rock.

TEMPERATURE DEPTH LOG

ΔT Well No. 259

Property-Project OK Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

RT JUSTIFY:

Card A

Proj No →	Well No →	DA →	MO →	YR	*
779	259	14	AP	77	CM

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

Site Description	Operator	Editor
7.8 KM NW OF MEADOW, UTAH	DAE	MLH

Card B

Scale Unit in cm	Map Size (7.5, 15.,60)	Map Location △ N Lat Degree	N Lat Min	W Long Degree	W Long Min
CM	15.	38.	45.	112.	30.

Use decimals

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

Northing	Easting	Elev	
30.5	2.1	4280.	F

Use decimals

← Write M if meters

SEGMENT DEPTH

	Start	End	K	ΔK
C	10.0	25.0		
D	35.0	70.0		
E	.999			
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
C	25.0	35.0		
D	70.0	95.0	-3.5	-.5
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location 1 mile N.E. of White Mt. Date 14 April 77

Map Fillmore Utah 15"

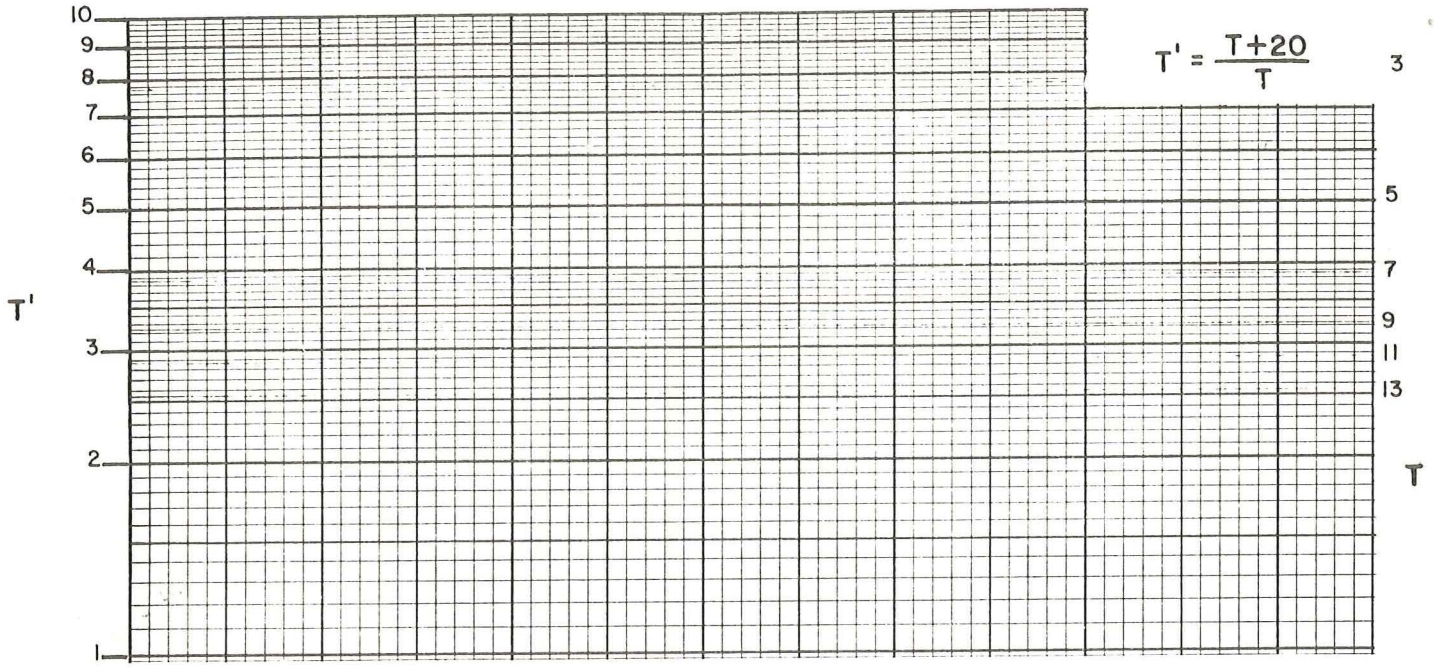
Property OK T 22S R 6W sec 1 SW¼ SW¼

Drill Hole B-259 779-12 Date Drilled 7 April 77 Elevation 4680 ft.

Instrument Probe 39 Operator DAE

Comments 3/4" PVC water filled

Depth (meters)	Instr. Reading 12709	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
~~2.0~~	~~126~~ ~~126~~				
2.5	120.75	11.17			
3.0	120.38	11.26	.09		
3.5	119.60	11.44	.18		
4.0	119.~~33~~ 22	11.53	.09		
4.5	118.77	11.64	.11		
5.0	118.40	11.73	.09		
5.5	118.03	11.82	.09		
6.0	117.73	11.89	.07		
6.5	117.52	11.94	.05		
7.0	117.31	11.99	.05		
7.5	117.16	12.03	.04		
8.0	117.04	12.~~03~~ 06	.03		
8.5	116.91	12.09	.03		
9.0	116.87	12.10	.01		
9.5	116.84	12.11	.01		
10.0	116.79	12.12	.01		
10.5	116.72	12.13	.01		
11.0	116.63	12.16	.03		
11.5	116.59	12.17	.01		
12.0	116.56	12.17	.00		



RESISTANCE

HOLE 779-12

34°C/Km

29°C/Km

36°C/Km

34.5°C/Km

H₂O

NO

(14.88) 34.5
5.5 0.8@2.2

(14.9) 34, 29, 36, 35
5.50 1.2@3.5 OK

DEPTH METERS

0
10
20
30
40
50
60
70
80
90
100

10
11
12
13
14
15
16

TEMPERATURE °C

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T _____ R _____ sec _____

Drill Hole B-259 779-12 Date Drilled _____ Elevation _____ ft.

Instrument Probe 39 Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
12.5	116.52	12.18			
			.01		
13.0	116.44	12.20			
			.02		
13.5	116.38	12.22			
			.02		
14.0	116.30	12.23			
			.01		
14.5	116.25	12.25			
			.02		
15.0	116.18	12.27			
			.02		
15.5	116.12	12.28			
			.01		
16.0	116.06 05	12.30			
			.02		
16.5	116.00	12.31			
			.01		
17.0	115.94	12.32			
			.01		
17.5	115.89	12.34			
			.02		
18.0	115.81	12.36			
			.02		
18.5	115.72	12.38			
			.02		
19.0	115.63	12.40			
			.02		
19.5	115.59	12.41			
			.01		
20.0	115.54	12.42			
			.01		
25.0	114.71	12.63			
			.21		
30.0	114.45	12.69			
			.03		
35.0	114.12	12.77			
			.08		
40.0	113.65	12.89			
			.12		
45.0	113.05	13.04			
			.15		

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T _____ R _____ sec _____

Drill Hole B-259 779-12 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
50	112.45	13.19			
			.15		
55	111.83	13.34			
			.15		
60	111.38	13.45			
			.11		
65	110.83	13.59			
			.14		
70	110.12	13.77			
			.18		
75	108.97	14.07			
			.30		
80	108.23	14.26			
			.19		
85	107.60	14.42			
			.16		
90	106.93	14.59			
			.17		
95	106.30	14.76			

cc: Hall
Lange
Deymonaz
Caywood

LITHOLOGIC LOG-B-259 (779-12)
OK Project

SW¼, SW¼, S1, T22S, R6W

ELEVATION: 4680

DATE DRILLED: 4/07/77

Depth (m)	DESCRIPTION
0-3	Qal Clay - buff yellow
3-6	Qal Clay - dark gray
6-9	Qal Clay - light gray
9-12	Qal Sand - angular - subrounded; ave. 1mm; consists mostly of quartz/ quartzite with some volcanics and limestone
12-15	Qal Clay - red brown
15-18	Qal Clay - dark gray
18-24	Qal Clay - dark gray; with traces of basalt particles
24-29	Qal Gravel - angular-rounded; 1mm - 2.5cm, ave. 5mm; consists of basalt, quartzite, and limestone
29-33	Qal Clay - light gray
33-37	Qal Sandy Clay - light gray
37-50	Qal Clay - reddish brown
50-52	Qal Sandy Clay - gray
52-58	Qal Gravel - with clay decreasing with depth; angular-rounded; mostly quartzite; ave. 5mm, 1mm - 25mm
58-70	Qal Gravel - angular-rounded; ave. 5mm; mostly quartzite and limestone
70-79	Qal Clay - light gray
79-85	Qal Clay - buff white (kaolinite?)
85-97.5	Qal Clay - red brown

TEMPERATURE DEPTH LOG

ΔT Well No. 260

Property-Project Ok Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

RT JUSTIFY:

Card A

Proj No →	Well No →	Date Logged DA →	MO →	YR	*
779	260	14	AP	77	CM

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

Site Description	Operator	Editor
14.7 KM S OF TABERNACLE HILL	JED	HLH

Card B

Scale Unit in cm	Map Size (7.5, 15.,60)	Map Location △ N Lat Degree	Min	W Long Degree	Min
CM	15.	38.	45.	112.	45.

Use decimals

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

Northing	Easting	Elev	
~~5.05~~ 5.0	~~32.9~~ 33.	50 H0.	F

Use decimals

← Write M if meters

SEGMENT DEPTH

	Start	End	K	ΔK
C	20.0	40.0		
D	.999			
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
C	40.0	55.0	-5.0	-.5
D				
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location 5 MILES W. OF KANOSH Date 14-APRIL-77

Map TABERNACLE HILL, UT, 15"

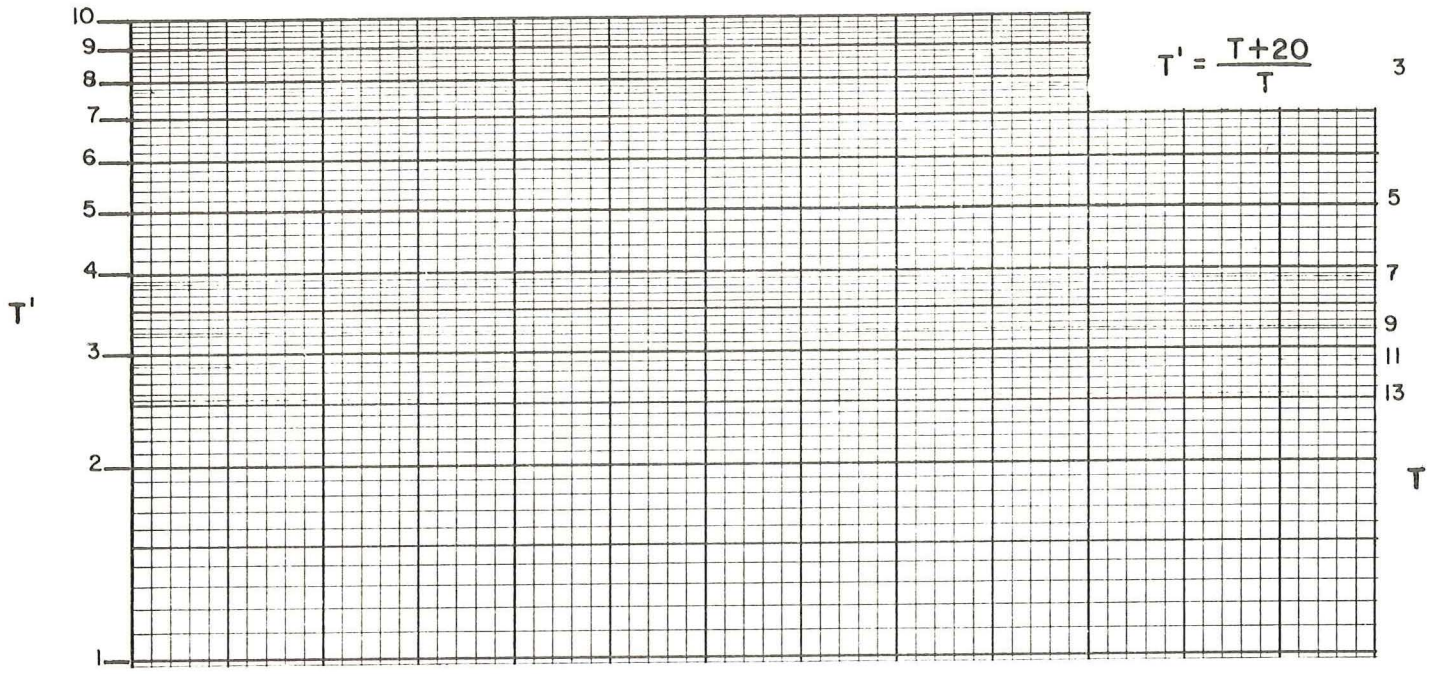
Property ~~DAVON~~ OK B-260 T 23S R 6W sec 27 NW¼ SE¼

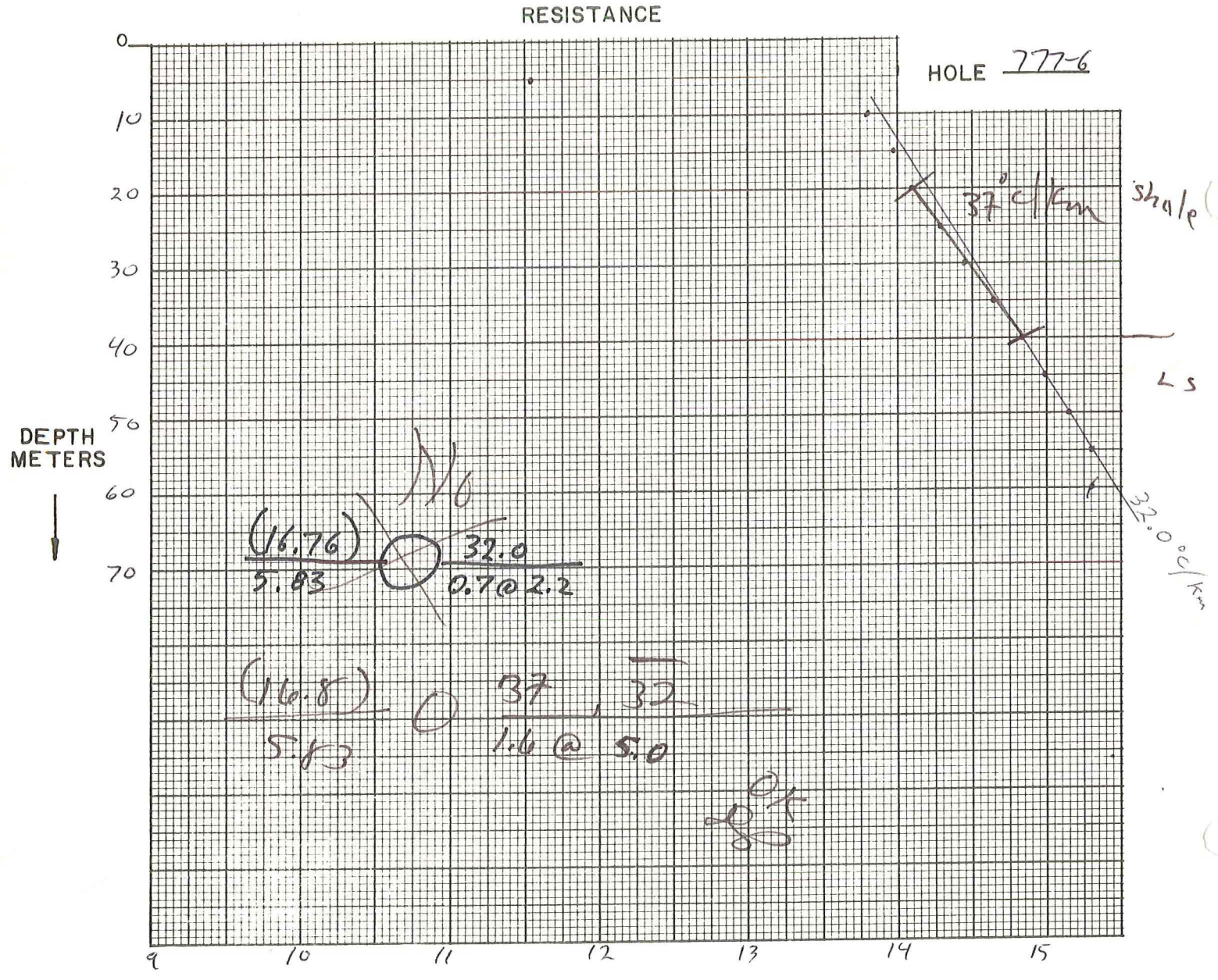
Drill Hole 779-6 Date Drilled 5-APRIL-77 Elevation 5040 ft.

Instrument #39 Operator JEO

Comments 3/4" WATER FILLED PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
2.0	129.55	9.14			
			0.33		
2.5	128.10	9.47			
			0.59		
3.0	125.50	10.06			
			0.37		
3.5	123.90	10.43			
			0.45		
4.0	122.00	10.88			
			0.33		
4.5	120.58	11.21			
			0.34		
5.0	119.16	11.55			
			0.29		
5.5	117.94	11.84			
			0.29		
6.0	116.72	12.13			
			0.34		
6.5	115.35	12.47			
			0.19		
7.0	114.59	12.66			
			0.28		
7.5	113.45	12.94			
			0.22		
8.0	112.56	13.16			
			0.22		
8.5	111.66	13.38			
			0.21		
9.0	110.84	13.59			
			0.12		
9.5	110.39	13.71			
			0.10		
10.0	109.99	13.81			
			0.07		
10.5	109.72	13.88			
			0.03		
11.0	109.57	13.91			
			0.03		
11.5	109.46	13.94			
			0.01		
12.0	109.41	13.95			


T' = T+20 / T
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13


RESISTANCE
HOLE 777-6
37° c/Km
shale
LS
32.0 °c/Km
DEPTH METERS
(16.76)
5.83
32.0
0.7 @ 2.2
(16.8)
5.83
37
1.6 @ 5.0
0
10
20
30
40
50
60
70
9
10
11
12
13
14
15
TEMPERATURE °C

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T ____ R ____ sec _____

Drill Hole B-260 779-6 Date Drilled _____ Elevation ____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
12.5	109.35	13.97			
13.0	109.33	13.97			
13.5	109.33	13.97			
14.0	109.35	13.97			
14.5	109.35	13.97			
15.0	109.36	13.97			
15.5	109.36	13.97			
16.0	109.34	13.97			
16.5	109.28	13.99			
17.0	109.25	14.00			
17.5	109.20	14.01			
18.0	109.14	14.02			
18.5	109.11	14.03			
19.0 ~~20~~	109.06	14.04			
19.5	108.99	14.06			
20.0	108.90	14.09			
25	108.14	14.28			
30	107.50	14.45			
35	106.72	14.65			
40	106.01	14.83			
45	105.41	14.99			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

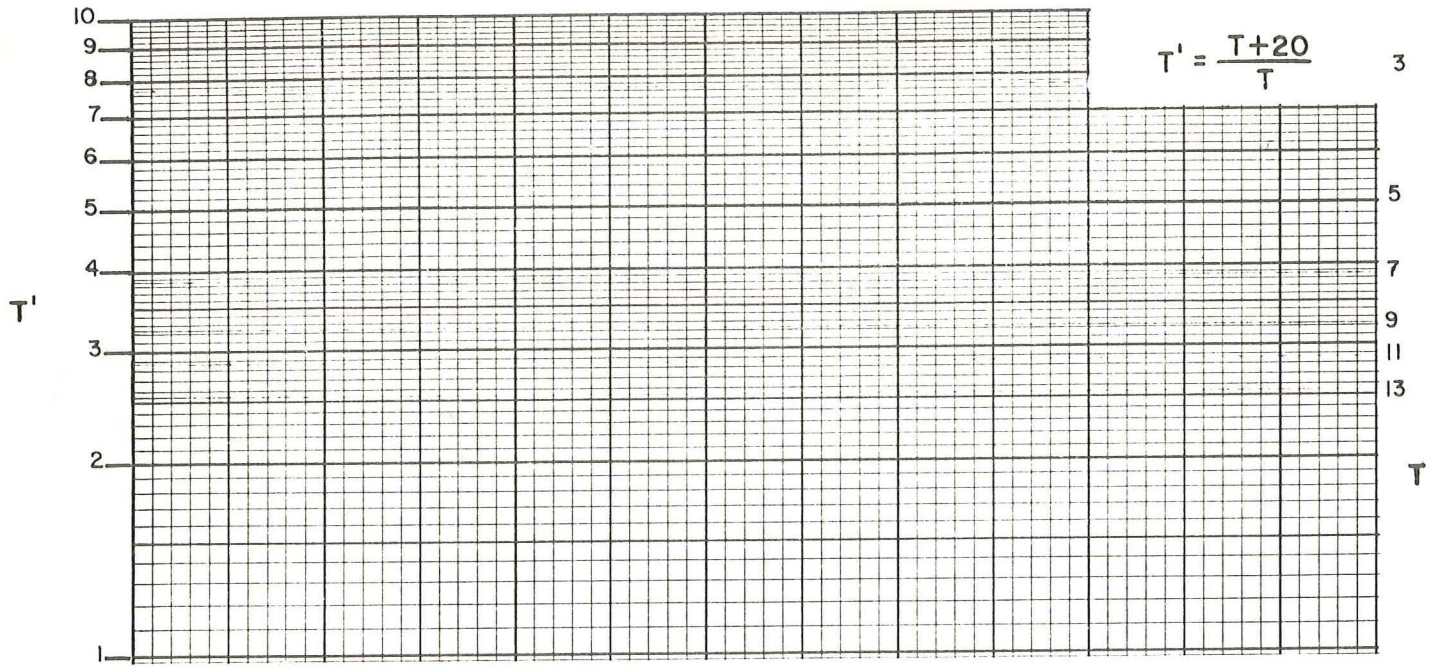
Property _____ T ____ R ____ sec _____

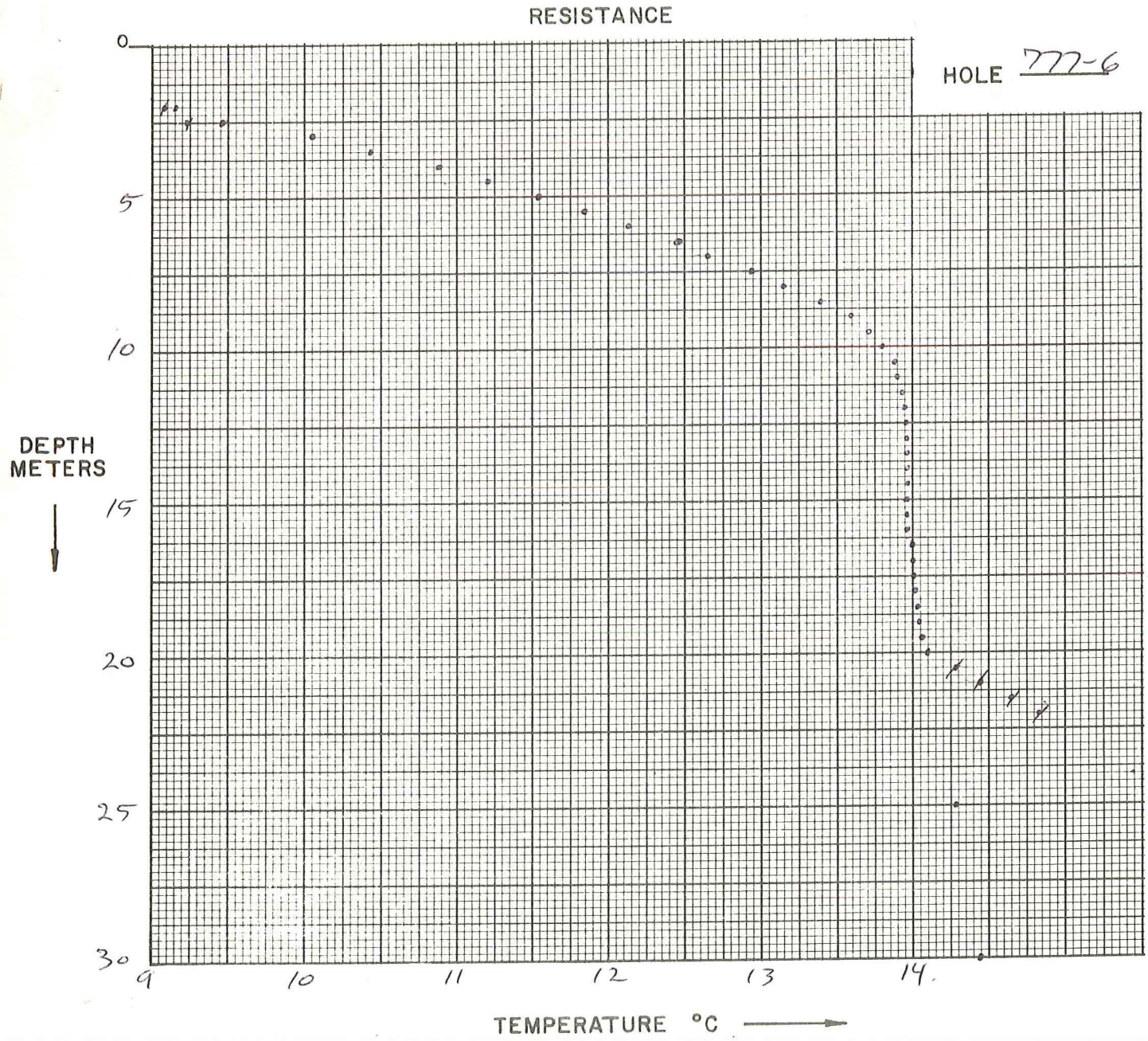
Drill Hole B-260 779-6 Date Drilled _____ Elevation ____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
50.0	104.79	15.16			
			.17		
(?) 55.0	104.20	15.31			
			.15		


$T' = \frac{T+20}{T}$
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13


RESISTANCE
HOLE 777-6
DEPTH METERS
0
5
10
15
20
25
30
9
10
11
12
13
14
TEMPERATURE °C

cc: Hall
Lange
Deymonaz
Caywood

LITHOLOGIC LOG B-260 (779-6)

OK PROJECT

NW¼ SE¼ Sec 27 T23S R6W

ELEVATION: 5,040'
DATE DRILLED: 4/5/77

Depth (m)	DESCRIPTION
0 - 17	Qal Gravel - clay to silt matrix; subrounded-angular; 5mm-30mm; ave ~12mm; 80% limestone, ~20% pink and white quartzite.
17 - 18	Qal Gravel - subrounded; ave 15mm; 90% limestone, 10% Quartzite.
18 - 27	Argillaceous shale - light gray; some iron oxidation; small amt. of bio.
27 - 37	Argillaceous shale - red brown
37 - 43	Argillaceous Limestone - light gray; small amt. of bio.
43 - 49	Limestone - white to dark gray; argrillaceous; highly fractured with secondary calcite, red calcareous clay and small amt. of chloritization.
49 - 52	Clay - red brown.
52 - 58	Limestone - repeat 140-160
- 64	Limestone - repeat 140-160 except some dolomitized.
64 - 76	Sandy Clay - buff with some iron oxidation.
76 - 95	Pebbly Clay - red and gray; ~30% pebbles.
95 - 99	Dolomite - gray; highly fractured with red calcareous clay filling and some secondary calcite.

TEMPERATURE DEPTH LOG

ΔT Well No. 261

Property-Project Nemex Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →	Well No →	Date Logged DA →	MO →	YR	*
1 2 3 4	5 6 7 8 9 10	11 12	13 14 15	16 17 18	19 20
7 7 7		2 6 1	1 6	A P	7 7	C M

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

Site Description	Operator	Editor
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
6 . 9 KM NNE OF COVE FORT, UTAH	JED	HLH

Card B

Scale Unit in cm	Map Size (7.5, 15.,60)	Map Location Δ N Lat Degree	Min	W Long Degree	Min
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
C M	1 5 .	3 8 .	3 0 .	1 1 2 .	4 5 .

Use decimals

Δ 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
2 8 . 7	2 6 . 2 5 8 6 0 .		F

Use decimals

← Write M if meters

SEGMENT DEPTH

	Start	End	K	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
C	1 0 . 0	6 5 . 0	- 6 . 0	- . 5
D				
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
	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
C:	. 9 9 9			
D				
E				
F				
G				

Final Segment: Start = .999

12
6.5

____ of ____

TEMPERATURE - DEPTH LOG

Location E. END OF DOG VLY Date 16-APRIL-77

Map COVE FORT, UT 15"

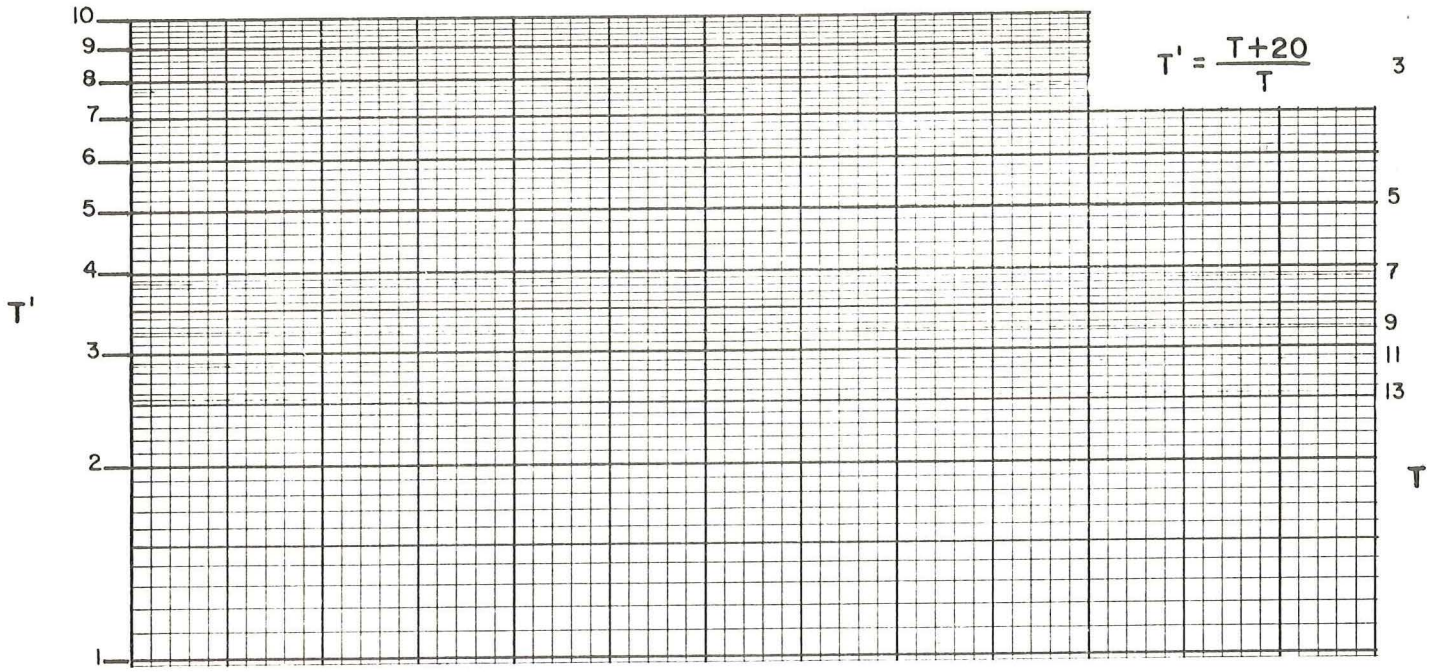
Property THERMEX T 25S R 6W sec 6 NE¼ SE¼

Drill Hole B-261 777-3 Date Drilled April 8, 1977 Elevation 5860 ft.

Instrument # 39 Operator JEG

Comments 3/4" WATER FILLED PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
2.0	12438	10.32			
			0.62		
2.5	12174	10.94			
			0.94		
3.0	11780	11.88			
			0.85		
3.5	11429	12.73			
			0.84		
4.0	11095	13.57			
			0.80		
4.5	10782	14.37			
			0.59		
5.0	10555	14.96			
			0.55		
5.5	10346	15.51			
			0.64		
6.0	10110	16.15			
			0.62		
6.5	9885	16.77			
			0.34		
7.0	9764	17.11			
			0.33		
7.5	9645	17.44			
8.0	9520	17.80			
8.5 ~~9.0~~	9374	18.22			
9.0 ~~9.5~~	9255	18.57			
9.5 ~~10.0~~	9114	18.98			
~~10.0~~ 10.0	9006	19.31			
10.5	8918	19.57			
11.0	8883	19.68			
11.5	8828	19.85			
12.0	8759	20.06			



RESISTANCE

HOLE 777-3

DEPTH METERS

0
10
20
30
40
50
60
70
80
90

35-55

279.5 °C/km

(45.15) 0.65 — 279.5 16.8 @ 6.0

ok

10 12 14 16 18 20 22 24 26 28 30 32 34 36

TEMPERATURE °C

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T _____ R _____ sec _____

Drill Hole B-261 777-3 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
12.5	8711	20.21			
13.0	8654	20.38	0.17		
13.5	8606	20.53	0.15		
14.0	8561	20.67	0.14		
14.5 ~~14.0~~	8522	20.80	0.13		
15.0	8474	20.95	0.15		
15.5	8427	21.10	0.15		
16.0	8379	21.25	0.15		
16.5	8332	21.40	0.15		
17.0	8274	21.59	0.19		
17.5	8220	21.77	0.18		
18.0	8175	21.91	0.14		
18.5	8134	22.05	0.14		
19.0	8094	22.18	0.13		
19.5	8051	22.32	0.14		
20	8012	22.45	0.13		
25	7500	24.21			
30	7093	25.69			
35	6778	26.90			
40	6439	28.25			
45	6105	29.65			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T ____ R ____ sec _____

Drill Hole B-261 777-3 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
50	5822	30.90			
55	5480	32.49			
60	5173	34.01			
65	4911	35.37			

cc: Allinder
Caywood
Long
Deymonaz
Hall

LITHOLOGIC LOG

PROPERTY: THERMEX B-261 (777-3)

NE¼ SE¼ Sec 6 T25S R6W

ELEVATION: 5,860'

Drilled 4/8/77

Feet (m)	DESCRIPTION
0 - 4	Alluvium - light brown, sandy, small amount of dark gray limestone.
4 - 13	Alluvium - considerable gravel, moist. Gravel of light gray chert, rexlized dolomite and brown argillaceous limestone.
13 - 23	Limestone - Brown, argillaceous with numerous small red stained small fractures (1-3mm). Some larger fractures containing clay. Cuttings approximately 20% clay. Trace of calcite xls.
23 - 32	Limestone - As above, but becoming less stained and more medium gray.
32 - 40	Limestone - Brownish - Argillaceous, fractured and stained as above. Partly rexlized.
40 - 67	Limestone - Medium gray to brown, partly rexlized. Minor amount of red stains along small fractures.

TEMPERATURE DEPTH LOG

ΔT Well No. 262

Property-Project Phelmex Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →				Well No →						Date Logged DA		MO		YR		*	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	7	7	7				2	6	2	1	6		A	P		7	7	C	M

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

| Site Description | | | | | |

24
4.5

____ of ____

TEMPERATURE - DEPTH LOG

Location 0.5 MILE N. OF DOG VLY Date 16-APRIL-77

Map COVE FORT UT, 15"

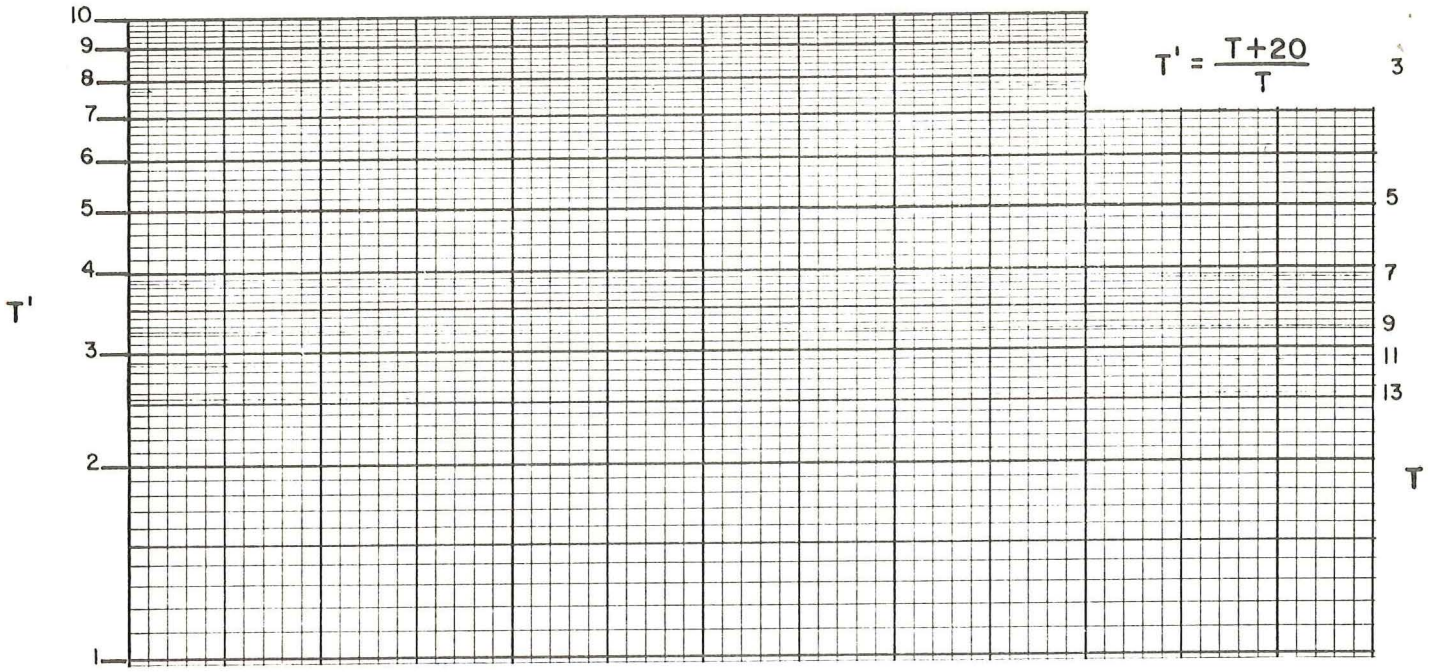
Property THERMEX T 24 S R 7W sec 36 NW¼ NE¼
B-262

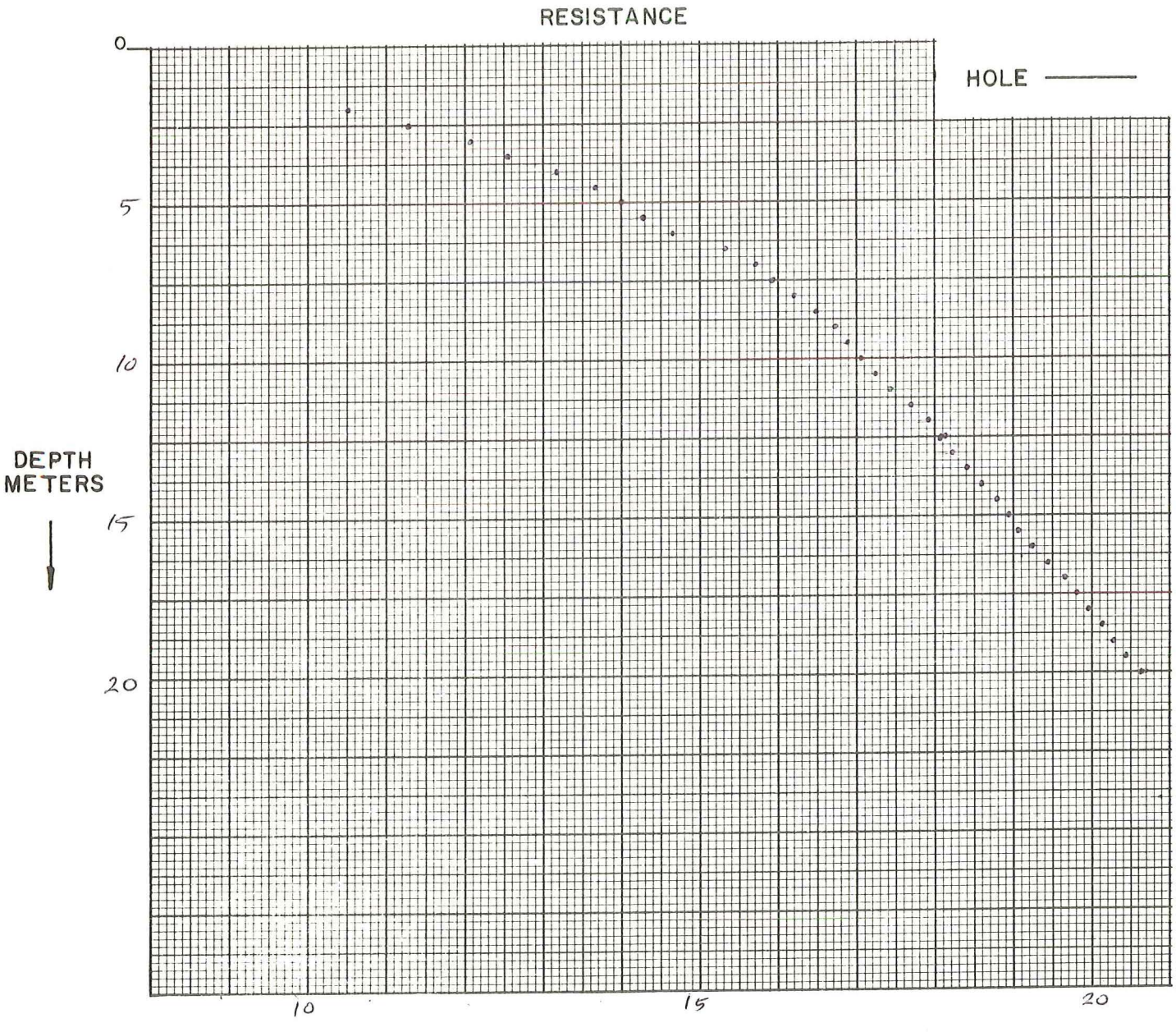
Drill Hole 777-1 Date Drilled 8-APRIL-77 Elevation 5780 ft.

Instrument # 39 Operator JED

Comments 3/4" WATER FILLED PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
2.0	123.52	10.52			
			0.77		
2.5	120.24	11.29			
			0.78		
3.0	117.00	12.07			
			0.48		
3.5	115.01	12.55			
			0.64		
4.0	112.44	13.19			
			0.48		
4.5	110.55	13.67			
			0.34		
5.0	109.20	14.01			
			0.28		
5.5	108.11	14.29			
			0.37		
6.0	106.68	14.66			
			0.67		
6.5	104.14	15.33			
			0.39		
7.0	102.67	15.72			
			0.23		
7.5	101.82	15.95			
			0.24		
8.0	100.94	16.19			
			0.29		
8.5	99.87	16.48			
			0.25		
9.0	98.97	16.73			
			0.15		
9.5	98.45	16.88			
			0.17		
10.0	97.85	17.05			
			0.20		
10.5	97.14	17.25			
			0.18		
11.0	96.49	17.43			
			0.28		
11.5	95.49	17.71			
			0.22		
12.0	94.75	17.93			


$T' = \frac{T+20}{T}$
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13


RESISTANCE
HOLE
DEPTH METERS
0
5
10
15
20
10
15
20
TEMPERATURE °C

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T _____ R _____ sec _____

Drill Hole B-262 777-1 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
12.5	94.25	18.07	0.14		
13.0	93.75	18.22	0.15		
13.5	93.09	18.41	0.19		
14.0	92.43	18.60	0.19		
14.5	91.75	18.80	0.20		
15.0	91.25	18.95	0.15		
15.5	90.88	19.06	0.11		
16.0	90.20	19.26	0.20		
16.5	8958	19.45	0.19		
17.0	8895	19.64	0.19		
17.5	8836	19.82	0.18		
18.0	8790	19.96	0.14		
18.5	8731	20.14	0.18		
19.0	8687	20.28	0.14		
19.5	86.35	20.44	0.16		
20.0	85.73	20.64	0.20		
25	80.67	22.27	1.63		
30	75.61	24.00	1.73		
35	71.65	25.43	1.43		
40	68.57	26.59	1.16		
45	65.26	27.90	1.31		

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

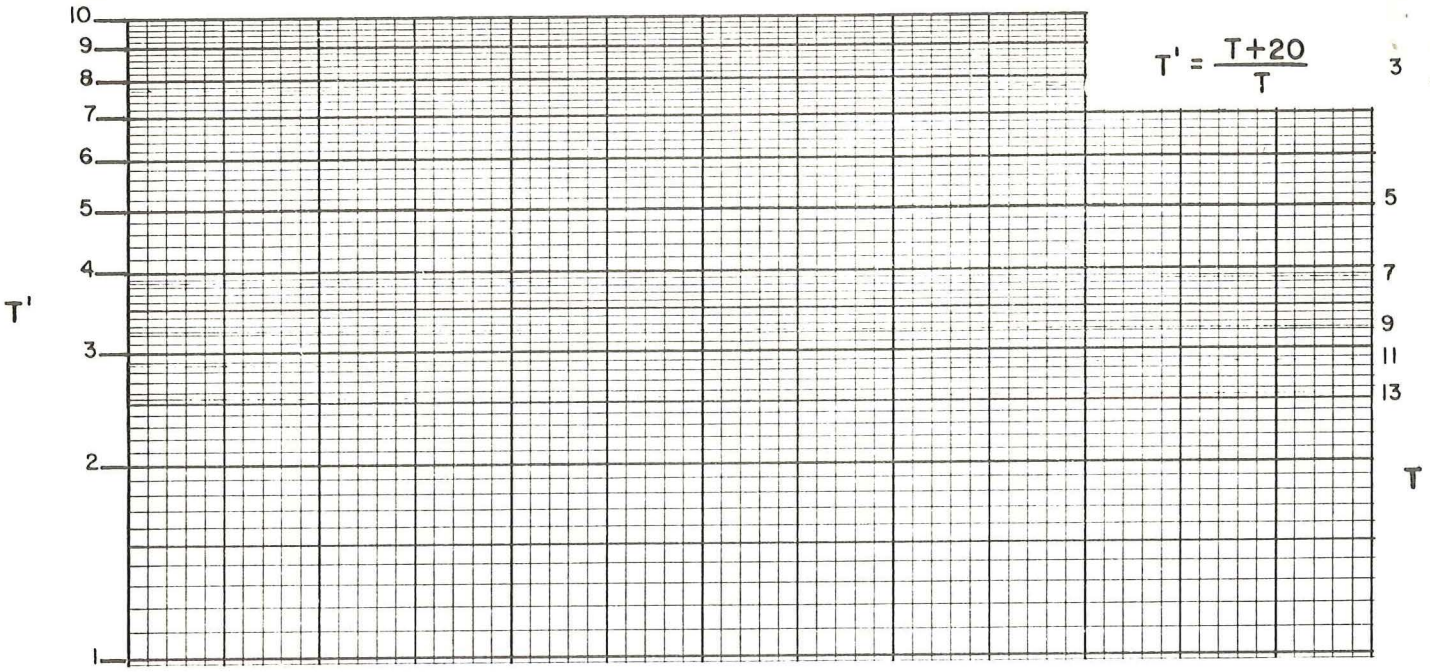
Property _____ T ____ R ____ sec _____

Drill Hole B-262 777-1 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
50	62.59	29.00	1.10	220	



RESISTANCE

B-262

HOLE 777-1

DEPTH METERS

TEMPERATURE °C

WATER < 1 gpm

35-50

348° c/Km

250° c/Km

(40.9) 0.77 — 238 — 15.5 @ 6.5

(41.5) .75 — 348 , 250 — 22.6 @ 9.1

OK

cc: Aldridge
Counsell
Hargis
Seymore

LITHOLOGIC LOG

PROPERTY: THERMEX B-262 (777-1)

NW¼ NE¼ Sec 36 T24S R7W

ELEVATION: 5,780'

Drilled 4/8/77

Feet (m)	DESCRIPTION
0 - 3	Alluvium - yellow-brown with angular limestone fragments.
3 - 14	Limestone - Dark gray to brownish, argillaceous. Small amount of tan fine-grained sandstone.
14 - 32	Limestone - As above with red staining and some tan to red argillaceous material. Some small calcite veins 1-5 mm.
24	Water - Less than 1 gpm.
32 - 38	Sandstone - Quartz 40-60%, calcareous (?) matrix, iron stained, fractured.
38 - 68	Lost circulation, fractured zone. Smooth and hard to 170.

TEMPERATURE DEPTH LOG

ΔT Well No. 263

Property-Project OK Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY: → →

Proj No	Well No	Date Logged DA	MO	YR	*
779	263	17	AP	77	CM

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

Site Description	Operator	Editor
5.0 KM NORTH OF KANOSH, UTAH	DOE	HLH

Card B

Scale Unit in cm	Map Size (7.5, 15.,60)	Map Location △ N Lat Degree	Min	W Long Degree	Min
CM	15.	38.	45.	112.	30.

Use decimals

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

Northing	Easting	Elev	
18.1	8.45	4800.	F

Use decimals 18.2 8.55

← Write M if meters

SEGMENT DEPTH

	Start	End	K	ΔK
C	55.0	65.0		
D	.999			
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
C	70.0	99.5	-3.5	-.5
D				
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location 1 1/4 mile NE of Hatton Date 17 April 77

Map Fillmore Utah 15"

Property DK T 22S R 5W sec 32 ~~NW 1/4~~ ~~SW 1/4~~ SE 1/4

Drill Hole B-263 779-11 Date Drilled 8 April 77 Elevation 4800 SW 1/4 ft.

Instrument Probe 39 Operator DAS

Comments 3/4" PVC water filled

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
2.0	134.65	8.01			
			.64		
2.5	131.74	8.65			
			.48		
3.0	129.57	9.13			
			.46		
3.5	127.~~56~~ 55	9.59			
			.48		
4.0	125.46	10.07			
			.50		
4.5	123.30	10.57			
			.39		
5.0	121.64	10.96			
			.29		
5.5	120.39	11.25			
			.23		
6.0	119.43	11.48			
			~~X~~.18		
6.5	118.70	11.66			
			.13		
7.0	118.16	11.79			
			.09		
7.5	117.79	11.88			
			.08		
8.0	117.43	11.96			
			.09		
8.5	117.07	12.05			
			.00		
9.0	117.06	12.05			
			.02		
9.5	117.15	12.03			
			.03		
10.0	117.27	12.00			
			.03		
10.5	117.39	11.97			
			.04		
11.0~~8~~	117.55	11.93			
			.04		
11.5	117.72	11.89			
12.0	117.88	11.85			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

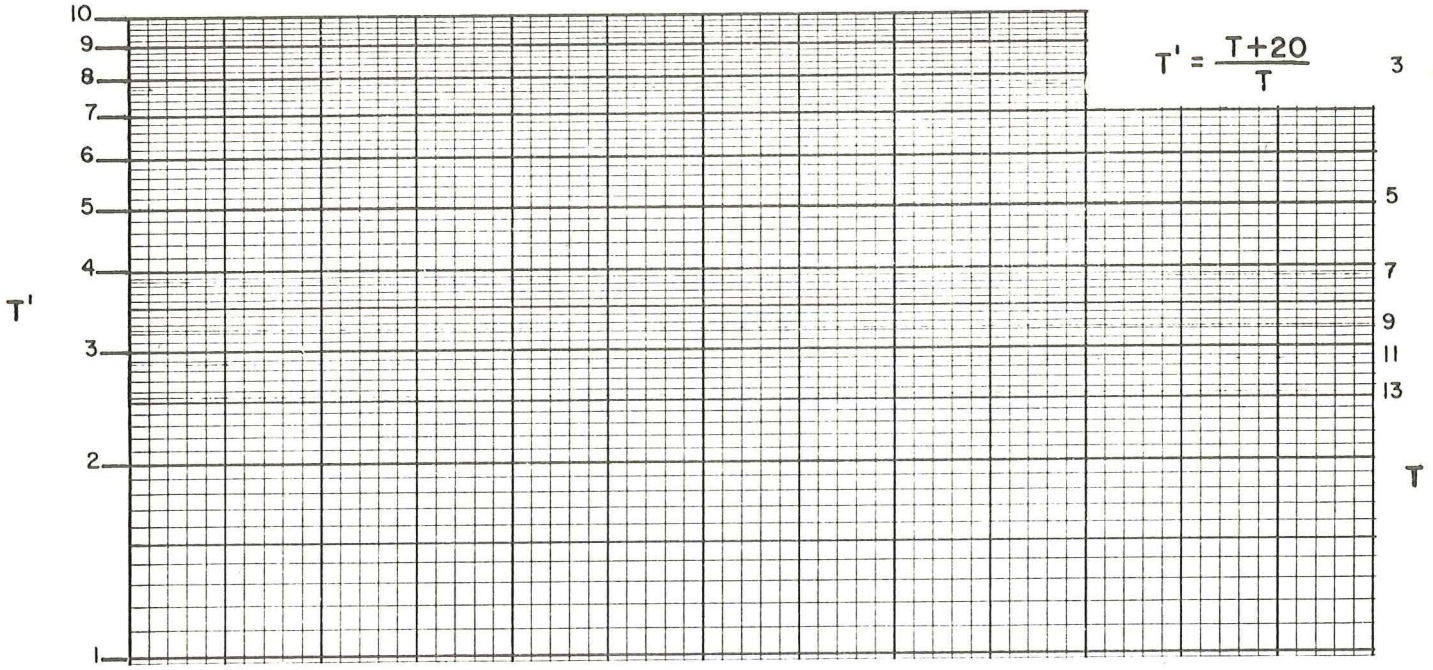
Property _____ T ____ R ____ sec ____

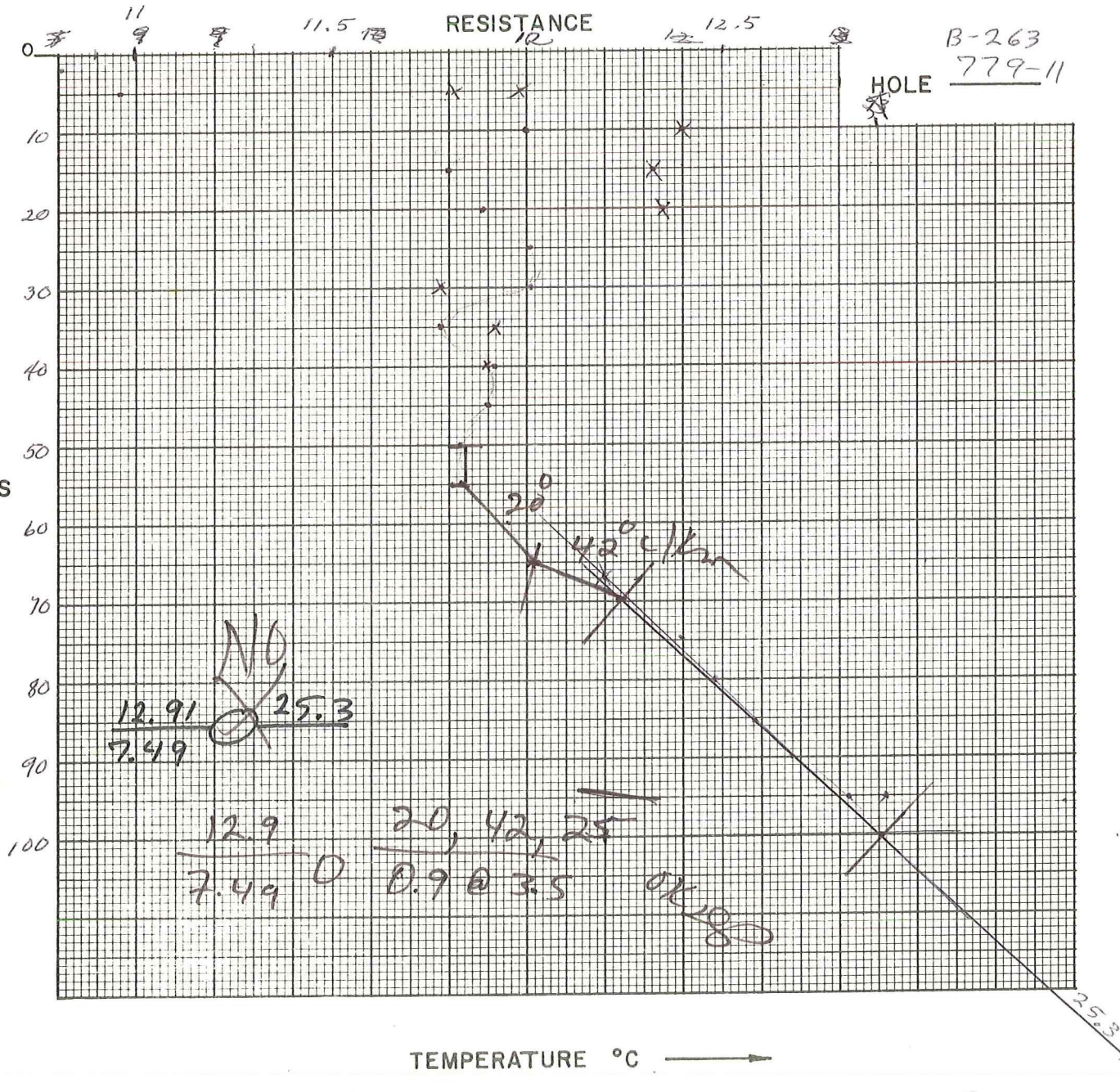
Drill Hole B-263 779-11 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
~~12~~ 15.5	118.06	11.81	.04		
13.0	118.16	11.79	.02		
13.5	118.13	11.79	.00		
14.0	118.13	11.79	.00		
14.5	118.11	11.80	.01		
15.0	118.09	11.80	.00		
15.5	118.08	11.81	.01		
16.0	118.05	11.81	.00		
16.5	118.03	11.82	.01		
17.0	117.98	11.83	.01		
17.5	117.91	11.85	.02		
18.0	117.87	11.86	.01		
18.5	117.~~84~~ 83	11.87	.01		
19.0	117.79	11.88	.01		
19.5	117.75	11.89	.01		
20.0	117.74	11.89	.00		
25.0	117.24	12.01	.02		
30.0	117.23	12.01	.00		
35.0	118.17	11.78	.04		
40.0	117.60	11.92	.02		
45.0	117.68	11.90			


T' = (T+20)/T
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13


RESISTANCE
11
11.5
12
12.5
B-263
779-11
HOLE
DEPTH METERS
0
10
20
30
40
50
60
70
80
90
100
TEMPERATURE °C
20°
42° c/km
NO
12.91
7.49
25.3
12.9
7.49
0
20, 42, 25
0.9 @ 3.5
25.3°c/km

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T ____ R ____ sec ____

Drill Hole B-263 779-11 Date Drilled _____ Elevation _____ ft.

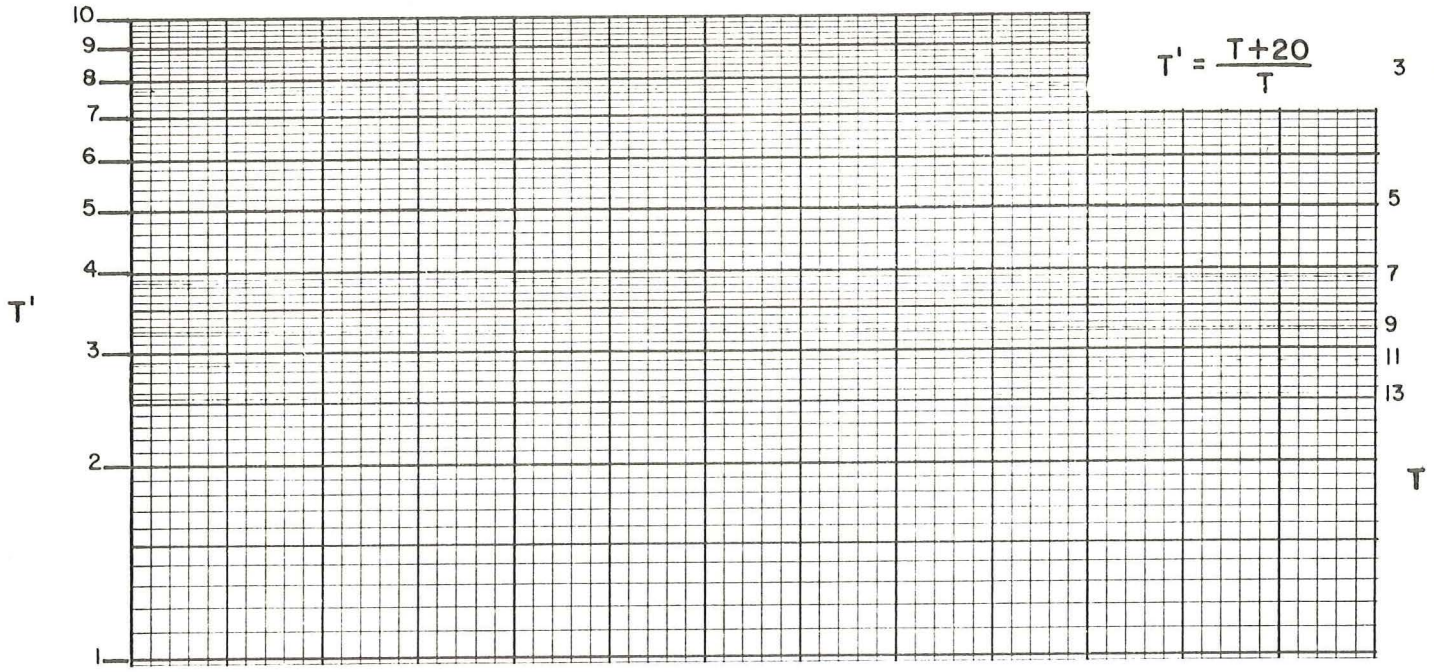
Instrument _____ Operator _____

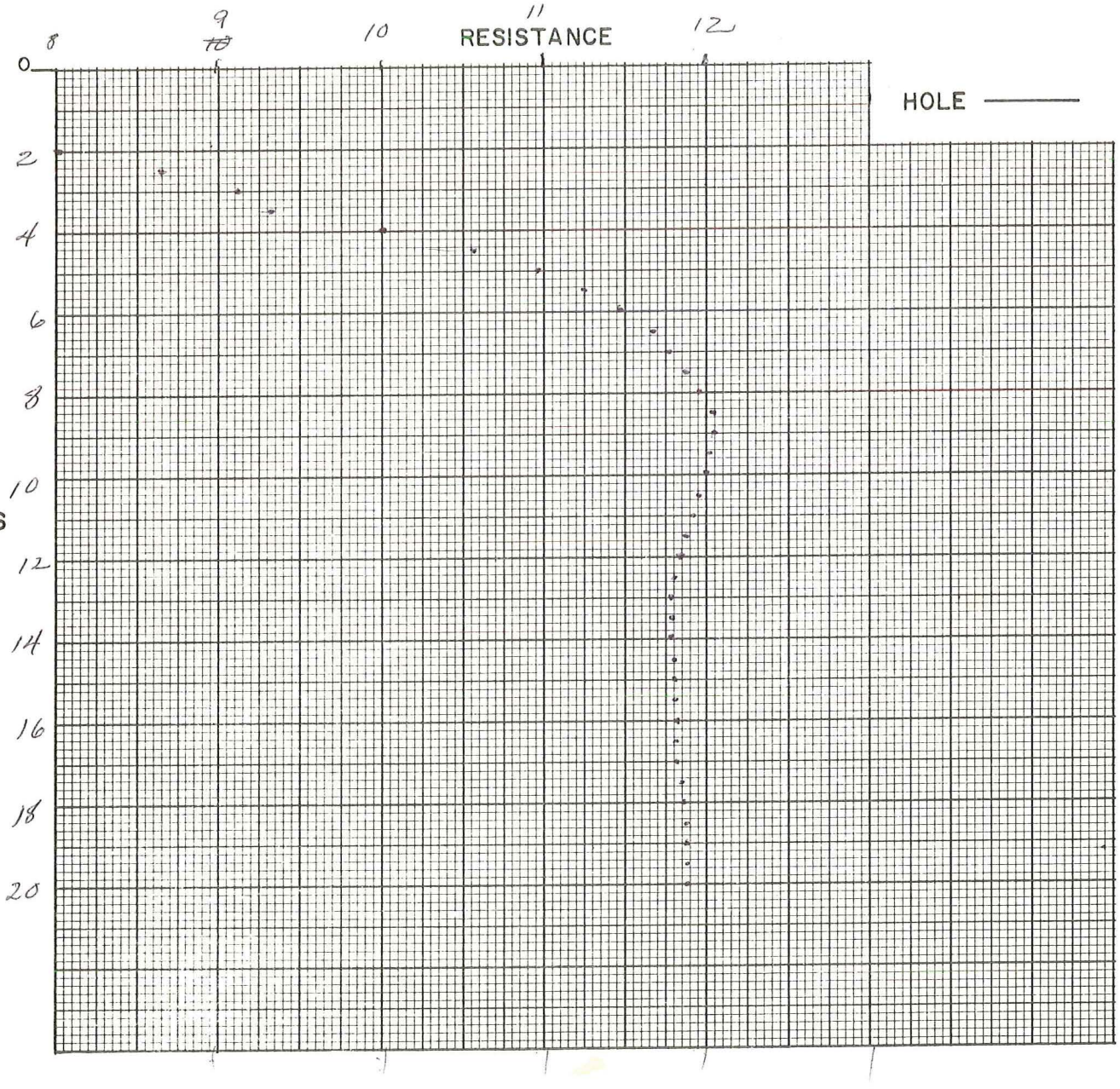
Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
50.0	117.97	11.83	.07		
55.0	117.97	11.83	.00		
60.0	117.44	11.96	.13		
65.0	117.15	12.03	.07		
70.0	116.29	12.24	.21		
75.0	115.63	12.40	.16		
80.0	115.29	12.48	.08		
85.0	114.91	12.58	.10		
90.0	114.49	12.68	.10		
95.0	113.91	12.82	.09		
99.5	113.54	12.91			

5.8

10.8°C/Km


$T' = \frac{T+20}{T}$
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13


RESISTANCE
8
9
10
11
12
0
2
4
6
8
10
12
14
16
18
20
HOLE
DEPTH METERS
TEMPERATURE °C

cc: Hall
Lange
Deymonaz
Caywood

LITHOLOGIC LOG B-263 (779-11)

OK PROJECT

ELEVATION: 4,800'

DATE DRILLED: 4/8/77

SW¼ SE¼ Sec 32 T22S R5W

Depth (m)	DESCRIPTION
0 - 12	Qal Clay - red brown
12 - 98	Qal Gravel - w clay and silt matrix; subrounded-angular; 2mm-15mm; ~60% pink and white quartzite, 30% limestone, 5% altered volcanic rock.

Transient & relog

TEMPERATURE DEPTH LOG

ΔT Well No. 779-10 (B 264)

Property-Project OK Depth Logged 90m

Map Fillmore) Scale 15" Date: Drilled Logged 28 June 77

State Utah County Millard Section 30 SE¼ SW¼ T 22S R 5W

Instrument #39 Operator DAB Elevation 4760 ft.

Comments 3/4" water filled PVC

COMPUTER PROCESSING

RT JUSTIFY:

Card A

Proj No →	Well No →	Date Logged DA →	MO →	YR	*
1 2 3 4	5 6 7 8 9 10	11 12	13 14 15	16 17 18	19 20
7 7 9	B 2 6 4	2 8	7 7	7 7	C M

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

Site Description	Operator	Editor
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
5 KM 5W 0F MEADOW	DAB	/ DP

Card B

Map Location △

Scale Unit in cm	Map Size (7.5, 15.,60)	N Lat Degree	N Lat Min	W Long Degree	W Long Min
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
C M	1 5.	3 8.	4 5.	1 1 2.	3 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
2 0. 4	5. 3	4 7 6 0	F

Use decimals

← Write M if meters

SEGMENT DEPTH

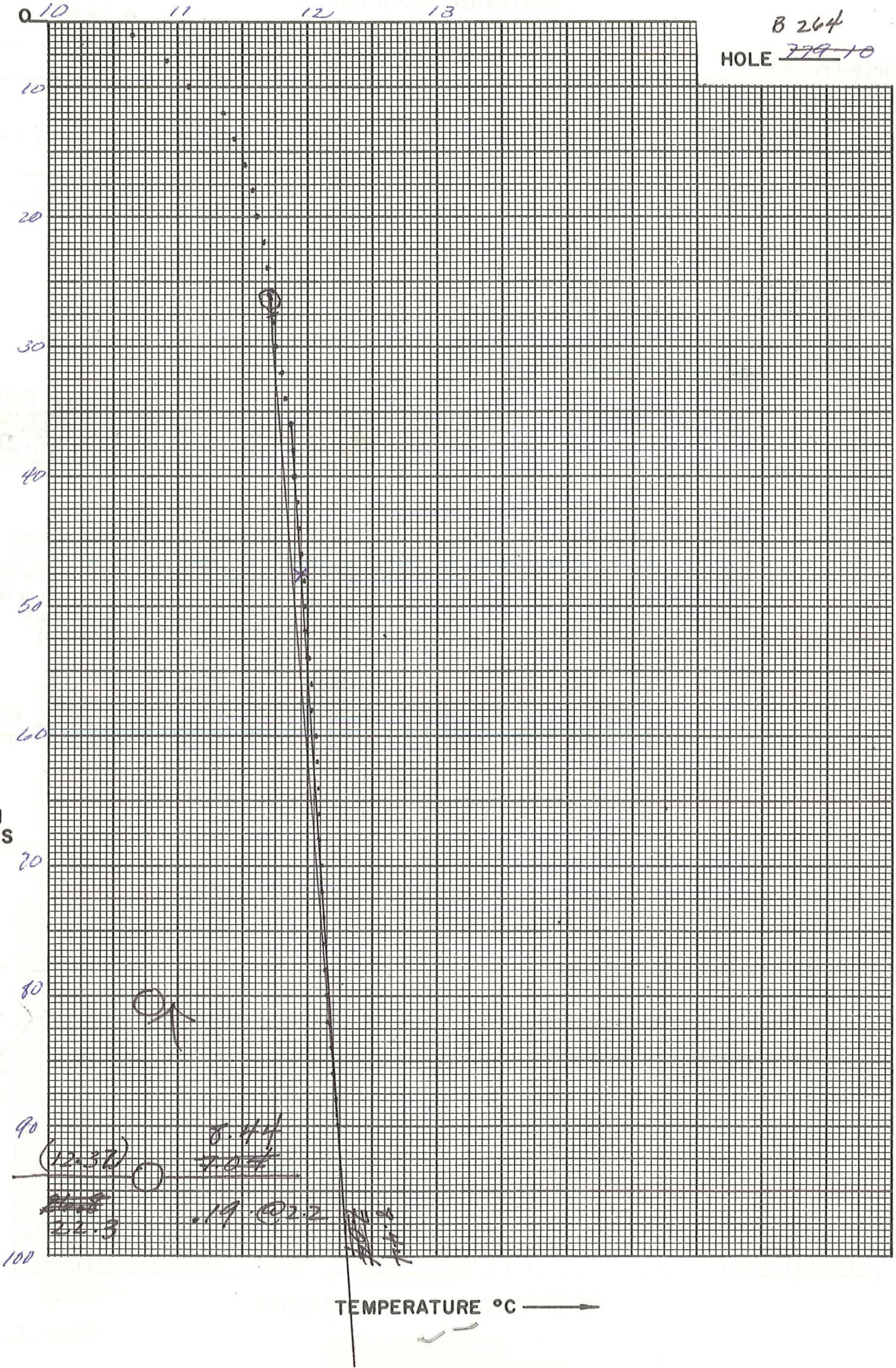
	Start	End	K	ΔK
C	22.0	36.0		
D	.999			
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
C	36.0	90.0	-2.2	-.5
D				
E				
F				
G				

Final Segment: Start = 999


0
10
11
12
13
B 264
HOLE 779-10
10
20
30
40
50
60
DEPTH METERS
20
80
90
(12.3Ø)
8.44
7.0Ø
.19 Ø2.2
22.3
100
TEMPERATURE °C

Date Logged: 28 June 77

ΔT Well No. B 264 779-10

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
2	120.70	11.18					
			.71				
4	123.72	10.47	.18				
6	122.96	10.65					
			.27				
8	121.81	10.92					
			.27				
10	120.65	11.19					
			.16				
12	119.97	11.35					
			.09				
14	119.60	11.44					
			.06				
16	119.30	11.51					
			.06				
18	119.04	11.57					
			.04				
20	118.91	11.61					
			.05				
22	118.69	11.66					
			.03				
24	118.57	11.69					
			.01				
26	118.50	11.70					
			.04				
28	118.36	11.74					
			.01				
30	118.31	11.75					
			.05				
32	118.11	11.80					
			.03				
34	117.96	11.83					
			.03				
36	117.85	11.86					
			.02				
38	117.77	11.88					
			.02				
40	117.68	11.90					
			.02				
42	117.60	11.92					
			.02				
44	117.54	11.94					
			.01				
46	117.49	11.95					
			.01				
48	117.43	11.96					
			.01				
50	117.38	11.97					
			.02				
52	117.32	11.99					
			.01				
54	117.28	12.00					

K=Conductivity

8264

Date Logged: 28 June 77

ΔT Well No. 779-10

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
56	117.21	12.02	.02				
58	117.15	12.03	.01				
60	117.03	12.06	.03				
62	116.97	12.07	.01				
64	116.93	12.08	.01				
66	116.92	12.09	.01				
68	116.89	12.09	.00				
70	116.84	12.11	.02				
72	116.81	12.11	.00				
74	116.78	12.12	.01				
76	116.74	12.13	.01				
78	116.69	12.14	.01				
80	116.65	12.15	.01				
82	116.60	12.16	.01				
84	116.51	12.19	.03				
86	116.45	12.20	.01				
88	116.37	12.22	.02				
90	116.27	12.24	.02				

K=Conductivity

TEMPERATURE - DEPTH LOG

Location 3 miles west of Meadow Date 17 April 77

Map Fillmore, Utah 15"

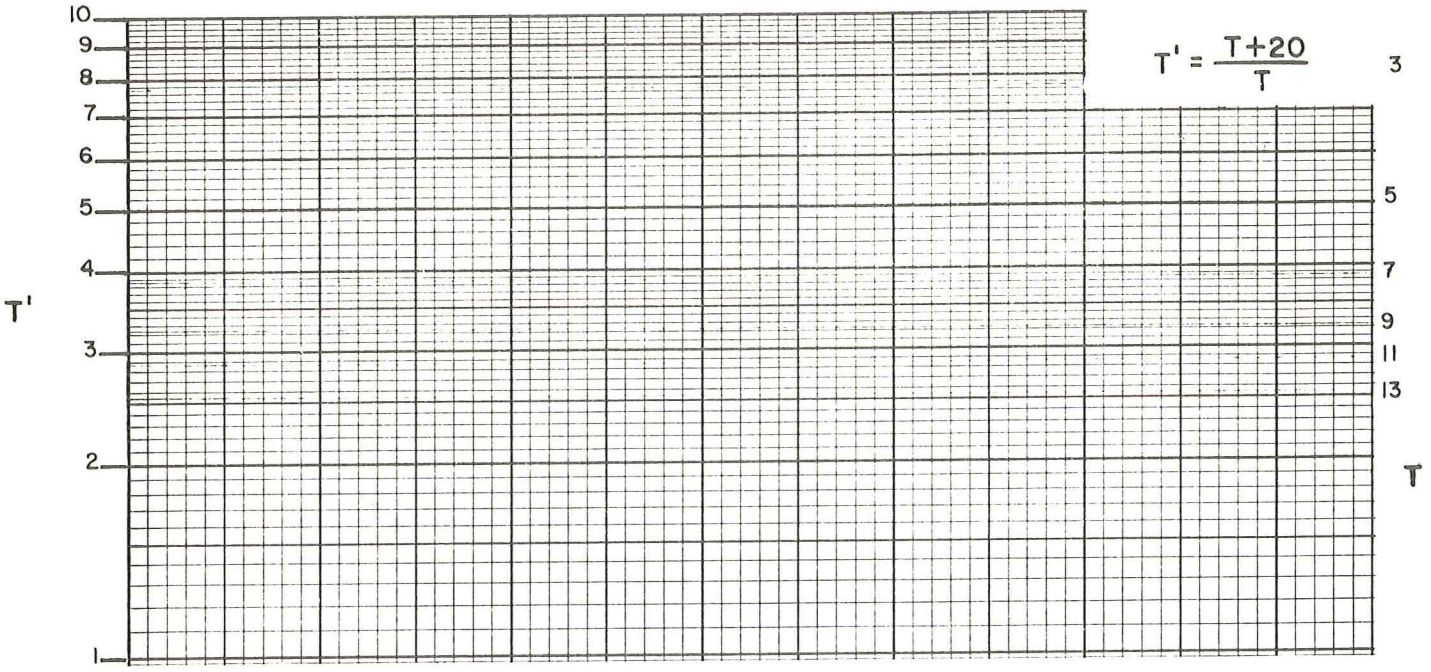
Property T 22S R 5W sec 30 SE 1/4 SW 1/4

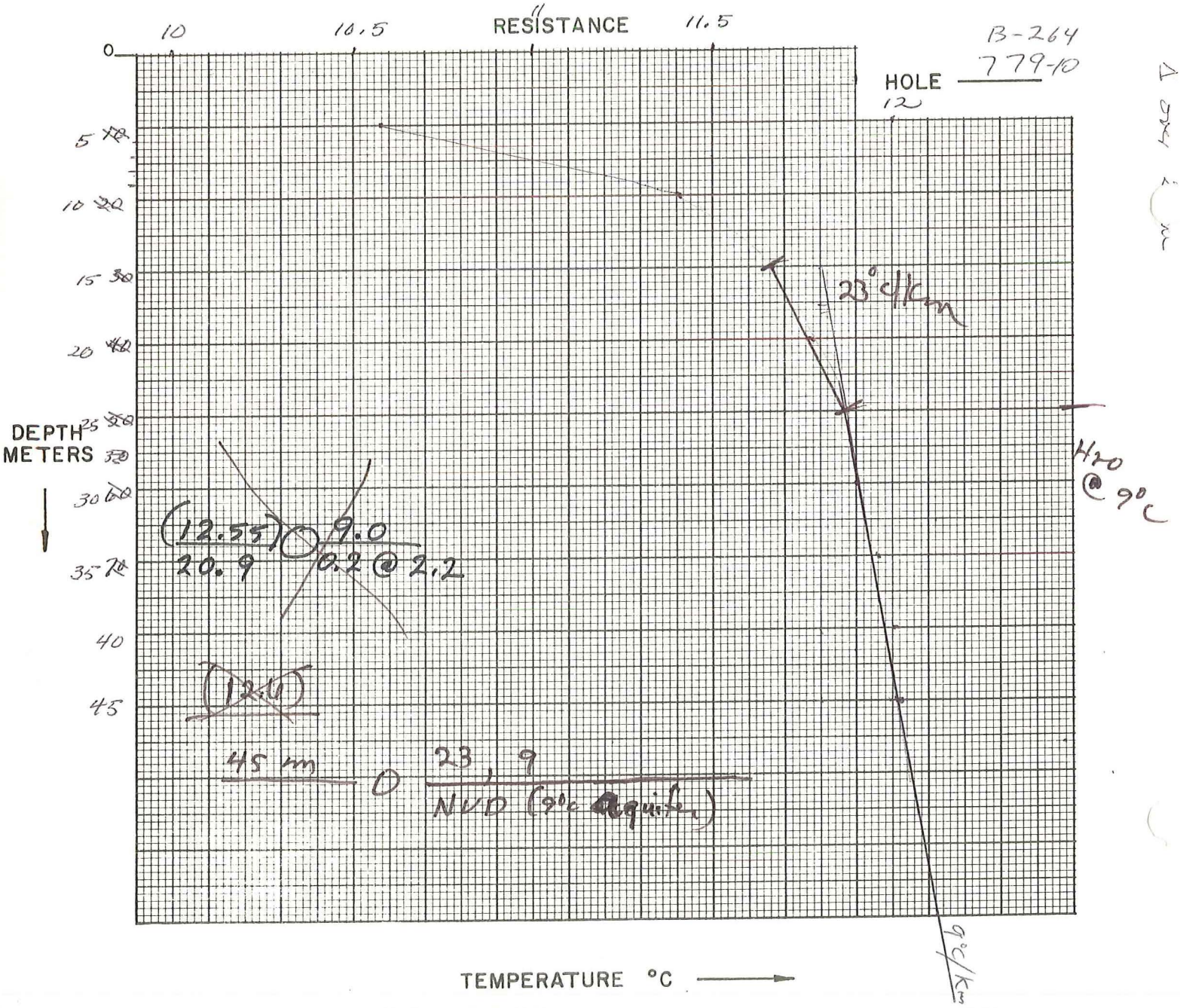
Drill Hole B-264 779-10 Date Drilled 9 April 77 Elevation 4760 ft.

Instrument Probe 39 Operator DAB

Comments 3/4" PVC water filled

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
2.0	128.02	9.48			
2.5	~~125.57~~ .12 44	10.15	.67		
3.0	124.67	10.25	.10		
3.5	124.49	10.29	.04		
4.0	124.09	10.39	.10		
4.5	123.70	10.48	.09		
5.0	123.25	10.58	.10		
5.5	122.60	10.73	.15		
6.0	122.17	10.83	.10		
6.5	121.75	10.93	.10		
7.0	121.33	11.03	.10		
7.5	121.01	11.11	.08		
8.0	120.88	11.14	.03		
8.5	120.52	11.22	.08		
9.0	120.10	11.32	.10		
9.5	119.91	11.37	.05		
10.0	119.72	11.41	.04		
10.5	119.57	11.45	.04		
11.0	119.43	11.48	.03		
11.5	119.25	11.52	.04		
12.0	119.15	11.55	.03		


$T' = \frac{T+20}{T}$
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13


RESISTANCE
10
10.5
11
11.5
B-264
779-10
HOLE
12
DEPTH METERS
0
5
10
15
20
25
30
35
40
45
23°C/Km
H2O @ 9°C
(12.55) 9.0
20.9 0.2 @ 2.2
(12.6)
45 m
23, 9
NVD (9°c aquifer)
9°C/Km
TEMPERATURE °C

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

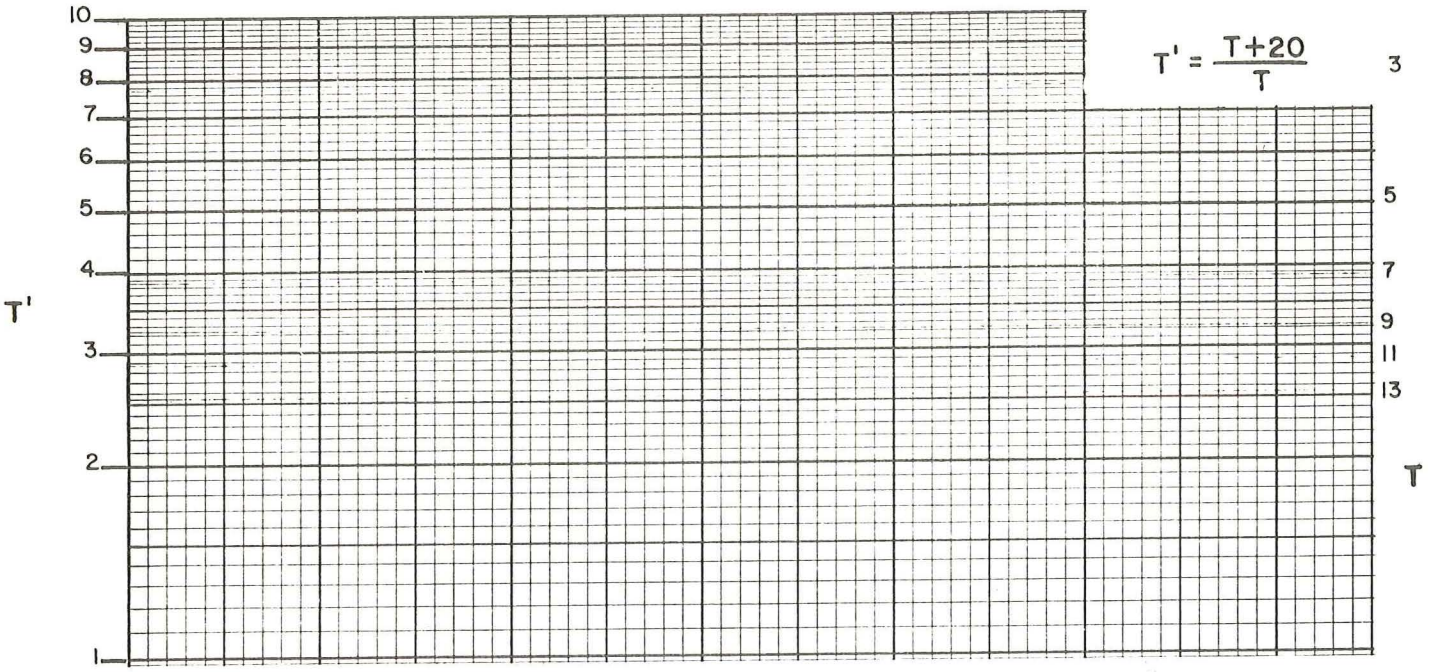
Property _____ T _____ R _____ sec _____

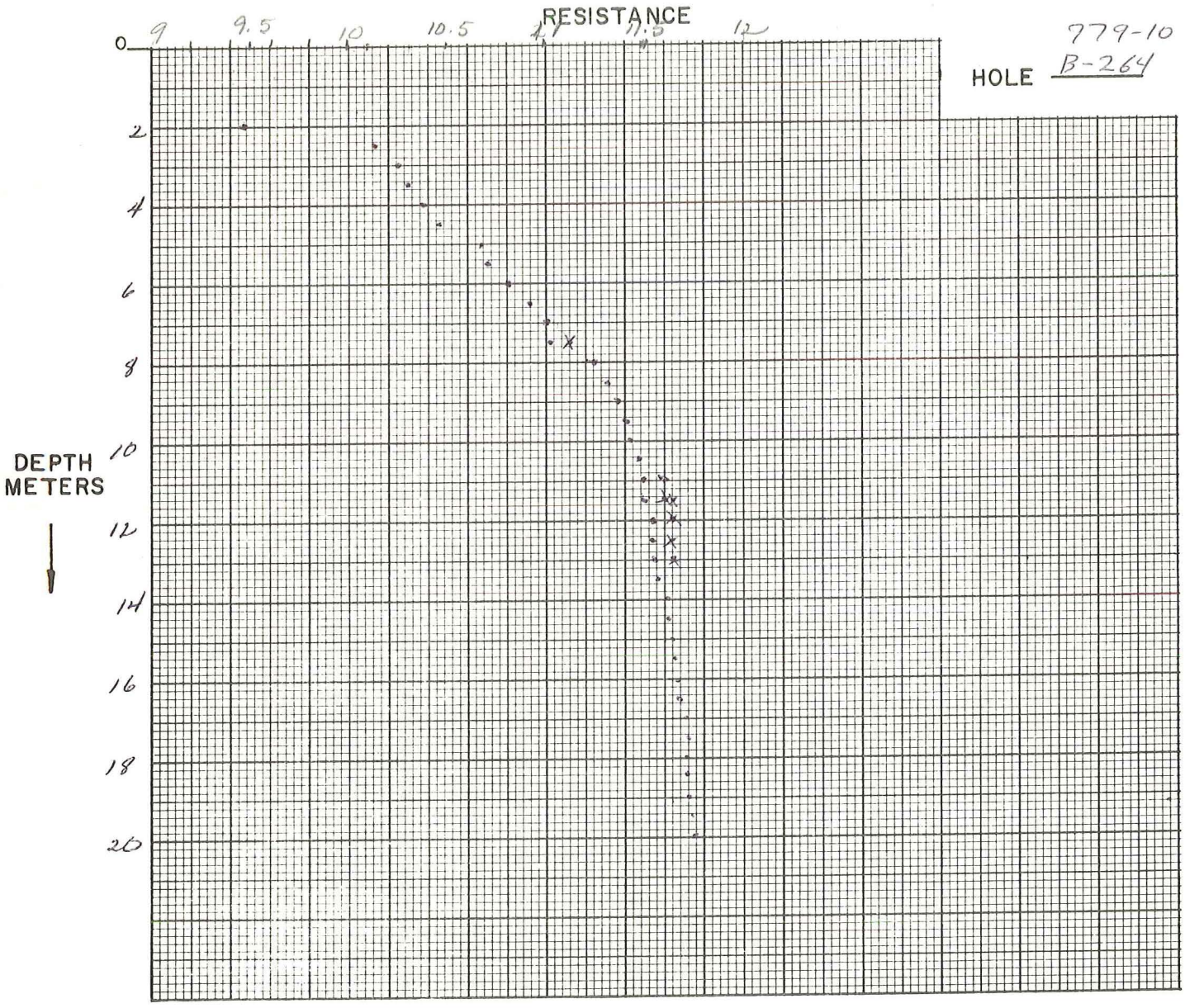
Drill Hole B-264 779-10 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
12.5	119.10	11.56			
13.0	119.08	11.57			
13.5	119.01	11.58			
14.0	118.91	11.61			
14.5	118.82	11.63			
15.0	118.76	11.64			
15.5	118.69	11.66			
16.0	118.65	11.67			
16.5	118.58	11.69			
17.0	118.52	11.70			
17.5	118.46	11.71			
18.0	118.40	11.73			
18.5	118.37	11.75			
19.0	118.32	11.75			
19.5	118.29	11.76			
20.0	118.24	11.77			
25.0	117.83	11.87			
30.0	117.69	11.90			
35.0	117.45	11.96			
40.0	117.18	12.02			
45.0	117.08	12.05			
47.0	116.99	12.07			


T' = (T+20)/T
T'
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13
T


RESISTANCE
9
9.5
10
10.5
11
11.5
12
779-10
HOLE B-264
DEPTH METERS
0
2
4
6
8
10
12
14
16
18
20
TEMPERATURE °C

cc: Hall
Lange
Deymonaz
Caywood

LITHOLOGIC LOG B-264 (779-10)

OK PROJECT

ELEVATION: 4,760'

SE¼ SW¼ Sec 30 T22S R5W

DATE DRILLED: 4/9/77

Depth (m)	DESCRIPTION
0 - 3	Qal Clay - buff
3 - 9	Qal Clay - gray; fossiliferous
9 - 24	Qal Quartzite Gravel - subrounded; ave. 15mm; 80% white and pink quartzite, 10% white and gray limestone, 10% volcanic rock.
24 - 27.5	Qal Quartzite Gravel - repeat 30-80 except ave. size 3mm; water present at 80'.
27.5 - 67	Qal Quartzite Gravel - repeat 30-80
67 - 85	Qal Quartzite Gravel - repeat 30-80 except ave size 3mm.
85 - 98	Qal Quartzite Gravel - repeat 30-80

TEMPERATURE DEPTH LOG

ΔT Well No. 266

Property-Project OK Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →	Well No →	Date Logged DA →	MO →	YR	*
1 2 3 4	5 6 7 8 9 10	11 12	13 14 15	16 17 18	19 20
7 7 9	2 6 6	2 1	A P	7 7	C M

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

Site Description	Operator	Editor
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
6.0 KM WEST OF BLACK POINT		OAE/MLH

Card B

Scale Unit in cm	Map Size (7.5, 15.,60)	Map Location Δ N Lat Degree	Min	W Long Degree	Min
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
C M	1 5.	3 8.	4 5.	1 1 2.	4 5.

Use decimals

Δ 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
1 0. 7 5	2. 3 4 8 2 0.		F

Use decimals

← Write M if meters

Note change on p. 1 over

SEGMENT DEPTH

	Start	End	K	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
C	2 5. 0	5 0. 0		
D	6 0. 0	7 5. 0		
E	.9 9 9			
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
	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
C	5 0. 0	6 0. 0		
D	7 5. 0	9 9. 0	-3. 5	-. 5
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location 1 1/2 mile north of twin peaks Date 21 April 77

Map Tabernacle Hill ~~Quad~~ Utah 15"

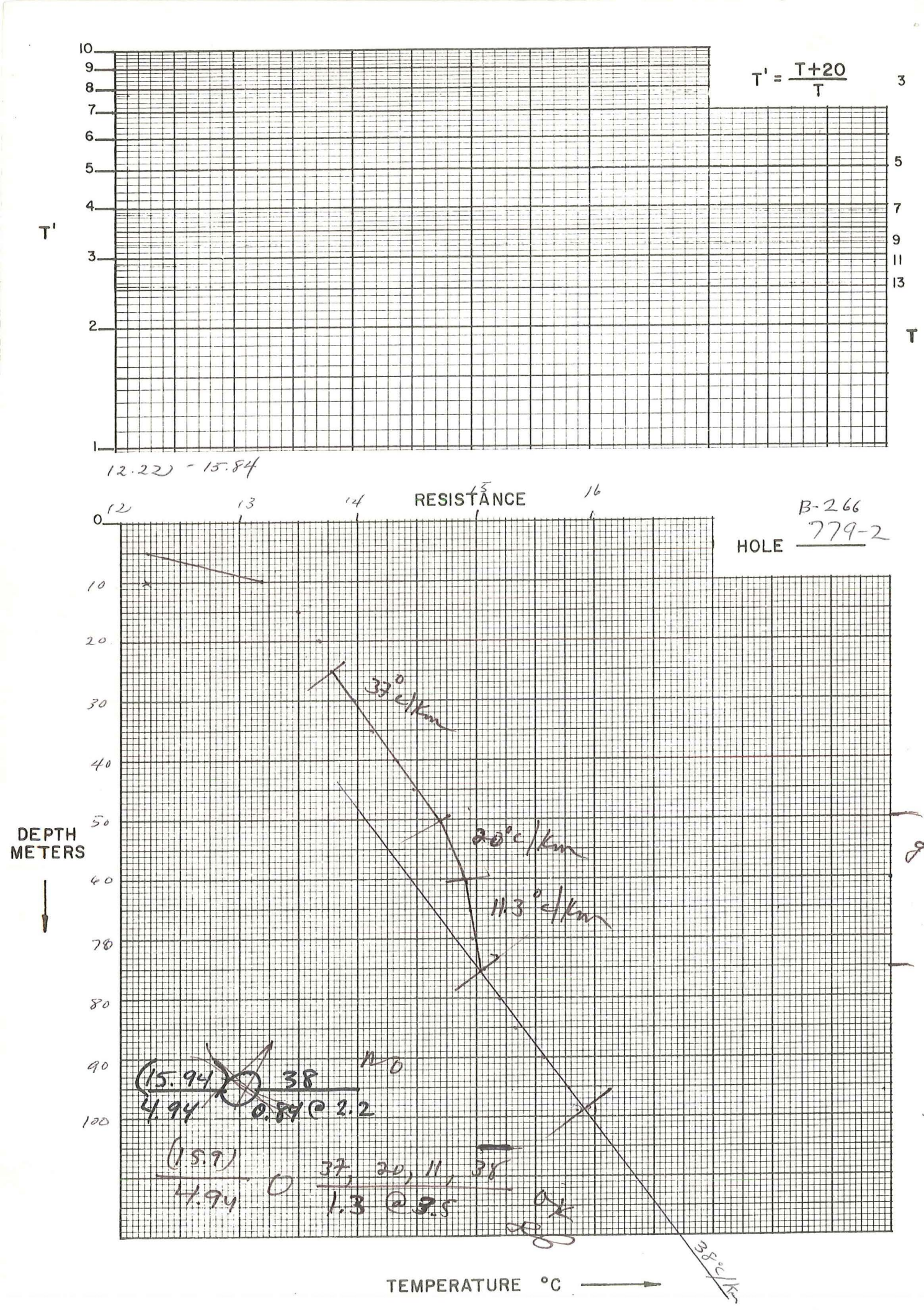
Property OK T 23S R 8W sec 15 NW 1/4 S ~~W~~ E 1/4

Drill Hole B-266 779-2 Date Drilled 13 April 77 Elevation 4820 ft.

Instrument Probe 39 Operator DAE

Comments 3/4" PVC water filled

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
2.0	127.04	9.71			
			.44		
2.5	125.12	10.15			
			.39		
3.0	123.44	10.54			
			.47		
3.5	121.42	11.01			
			.45		
4.0	119.50	11.46			
			.37		
4.5	117.91 ~~118.02~~	11.83			
			.39		
5.0	116.37	12.22			
			.32		
5.5	115.04	12.54			
			.26		
6.0	113.99	12.80			
			.18		
6.5	113.26	12.98			
			.11		
7.0	112.84	13.09			
			.05		
7.5	112.62	13.14			
			.04		
8.0	112.52	13.17			
			.01		
8.5	112.47	13.18			
			.02		
9.0	112.40	13.20			
			.00		
9.5	112.38	13.20			
			.00		
10.0	112.40	13.20			
			.01		
10.5	112.~~36~~ 35	13.21			
			.03		
11.0	112.23	~~12.24~~ 13.24			
			.05		
11.5	111.92	13.29			
			.12		
12.0	111.57	13.41			


T' = T+20 / T
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13
12.22) - 15.84
RESISTANCE
12
13
14
15
16
B-266
HOLE 779-2
0
10
20
30
40
50
60
70
80
90
100
DEPTH METERS
37° c/km
20° c/km
11.3° c/km
ground H2O
(15.94) 38
4.94 0.84 @ 2.2
(15.9)
4.94 0
37, 20, 11, 38
1.3 @ 3.5
38° c/km
TEMPERATURE °C

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T ____ R ____ sec ____

Drill Hole 13-266 779-2 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
12.5	111.41	13.45	.04		
13.0	111.36	13.46	.01		
13.5	111.34	13.46	.01		
14.0	111.30	13.47	.01		
14.5	111.28	13.48	.01		
15.0	111.20	13.50	.04		
15.5	111.15	13.54	.04		
16.0	111.10	13.52	.02		
16.5	111.05	13.54	.02		
17.0	110.97	13.56	.02		
17.5	110.89	13.58	.02		
18.0	110.79	13.60	.02		
18.5	110.71	13.62	.03		
19.0	110.60	13.65	.02		
19.5	110.53	13.67	.01		
20.0	110.47	13.68	.10		
25.0	110.10	13.78	.21		
30.0	109.28	13.99	.13		
35.0	108.78	14.12	.19		
40.0	108.03	14.31	.17		
45.0	107.38	14.48			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

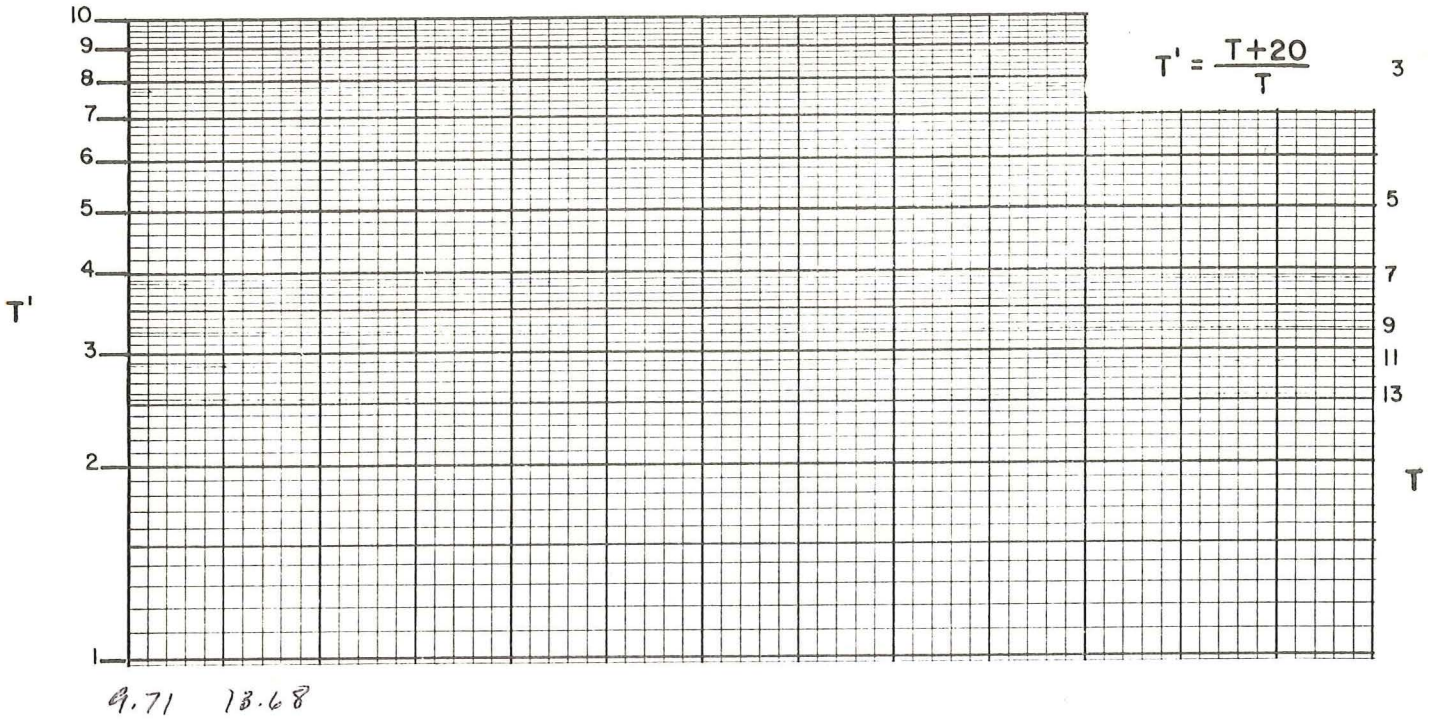
Property _____ T ____ R ____ sec ____

Drill Hole B-266 779-2 Date Drilled _____ Elevation _____ ft.

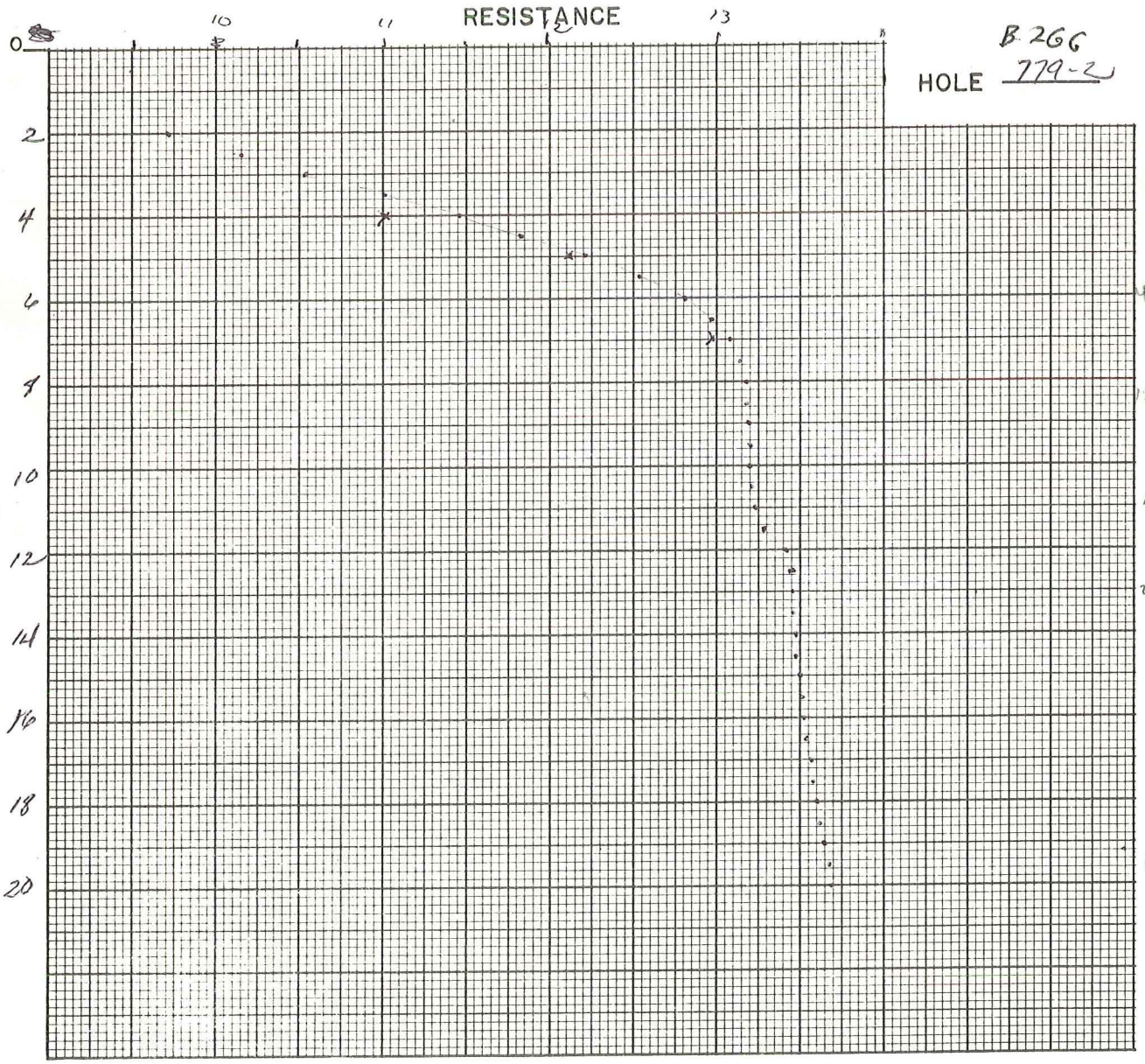
Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
50.0	106.53	14.70			
			.22		
55.0	106.23	14.78			
			.08		
60.0	105.77	14.90			
			.12		
65.0	105.55	14.95			
			.05		
70.0	105.50	14.97			
			.02		
75	105.10	15.07			
			.10		
80	104.61	15.20			
			.13		
85	104.13	15.33			
			.13		
90	103 ~~.28~~ .28	15.56			
			.23		
95.0	102.48	15.77			
			.21		
~~100.0~~					
			.07		
(?) 99.0	102.23 ~~102.29~~	15.84			



9.71 13.68



B 266
HOLE 779-2

2' clay
2'-40' clay
40-120' sandy clay
120-140' clay & sand
140' - Sand + water
240-

cc: Hall
Lange
Deymonaz
Caywood

LITHOLOGIC LOG B-266 (779-2)

OK PROJECT

ELEVATION: 4,820'

NW¼ SE¼ Sec 15 T23S R8W

DATE DRILLED: 4/13/77

Depth (m)	DESCRIPTION
0 - 6	Qal Sandy Clay - buff
6 - 12	Qal Clayey Gravel - w 45% clay matrix; subrounded; 1mm-30mm; ave 5mm; ~85% rhyolite, ~10% travertine, ~5% feldspar, bi, hb and obsidian.
12 - 18	Qal Sandy Clay - buff
18 - 24	Qal Clay - blue gray
24 - 37	Qal Sandy Clay - buff
37 - 43	Qal Sand - 20% clay matrix; angular; 1mm-5mm, ave 2mm; ~75% rhyolite, ~20% travertine, ~5% feldspar, bio, and obsidian.
43 - 46	Qal Sand - repeat (120-140) except less clay and ave size less than .5mm. Water ~ 15-25 gpm.
46 - 73	Qal Clayey Sand - ~45% clay; pale green; angular; 2mm-15mm; ~80% rhyolite, ~15% travertine, ~5% feldspar and biotite.
73 - 76	No sample
76 - 99	Qal Clayey Sand - 40% clay matrix; buff; very fine.

TEMPERATURE DEPTH LOG

ΔT Well No. 267

Property-Project Thermex Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →	Well No →	DA →	MO →	YR	*
777	267	03	MY	77	CM

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

Site Description	Operator	Editor
3.0 KM EAST OF COVE FORT	JEO	MLH

Card B

Map Location Δ

Scale Unit in cm	Map Size (7.5, 15.,60)	N Lat Degree	N Lat Min	W Long Degree	W Long Min
CM	15.	38.	30.	112.	45.

Use decimals

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

Northing	Easting	Elev	
18.5	28.35	6240.	F

← Write M if meters

SEGMENT DEPTH

	Start	End	K	ΔK
C	15.0	40.0		
D	.999			
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
C	45.0	55.0	-6.1	-.5
D				
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location 1.8 MILES E. OF COVE FORT Date 3-MAY-77

Map COVE FORT, UT 15"

Property THERMEX T 25S R 6W sec 29 NE¼ SE¼

Drill Hole B-267 777-11 Date Drilled 13 April 1977 Elevation 6240 ft.

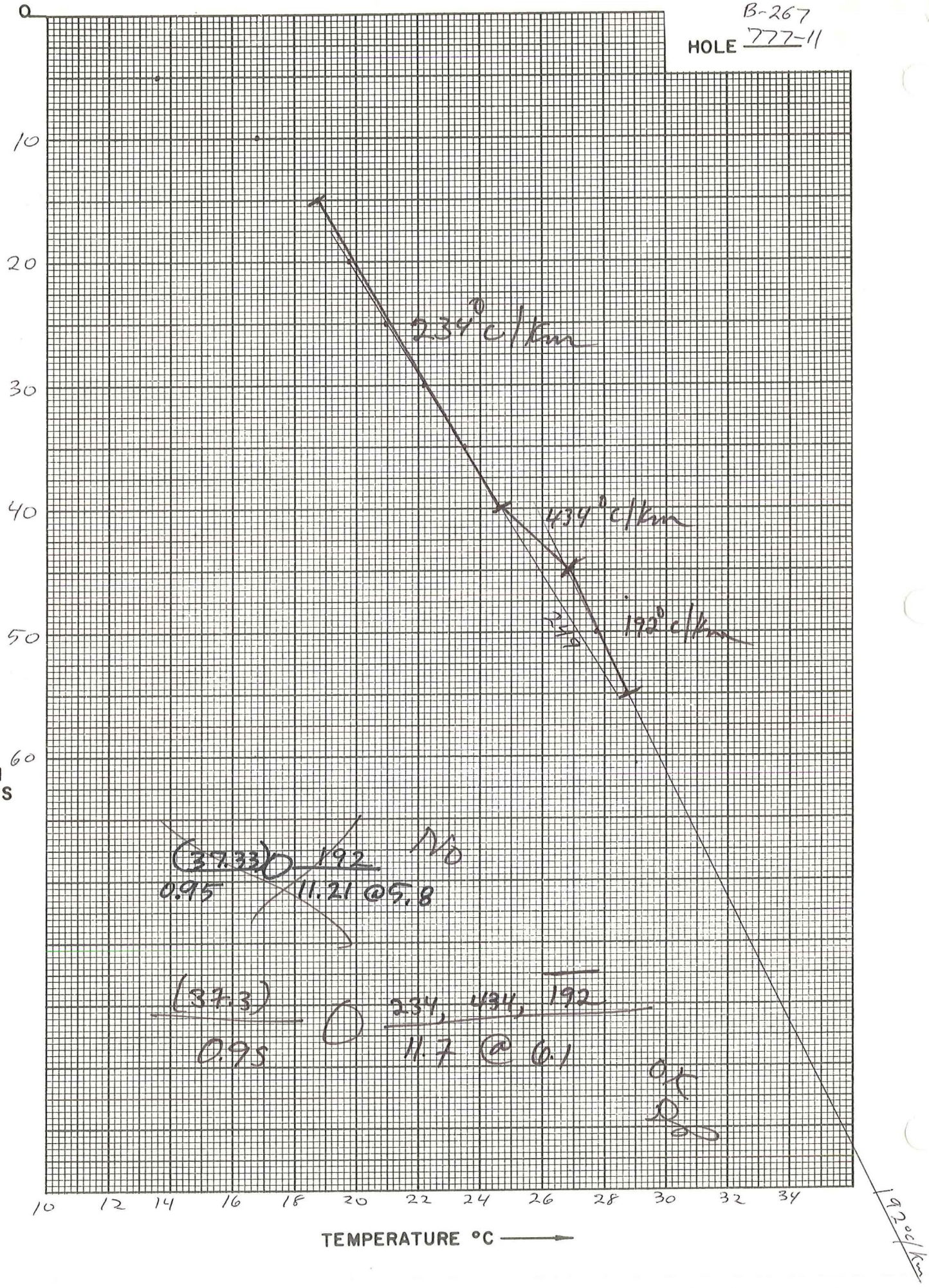
Instrument # 39 Operator JEO

Comments 3/4" WATER FILLED PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
5	11090	13.58			
			3.23		
10	9870	16.81			
			1.95	390	
15	9190	18.76			
			0.98	196	
20	8862	19.74			
			1.12	224	
25	8503	20.86			
			1.36	272	
30	8081	22.22			
			1.28	256	
35	7703	23.50			
			1.10	220	
40	7390	24.60			
			2.17	434	
45	6811	26.77			
			0.98	196	
50	6562	27.75			
			0.94	188	
55	6333	28.69			

B-267

HOLE 777-11



cc: Hall
Lange
Deymonaz
Caywood

LITHOLOGIC LOG B-267 (777-11)

Thermex Project

ELEVATION: 6,240'

NE¼ SE¼ Sec 29 T25S R6W

DATE DRILLED: 4/13/77

Depth (m)	DESCRIPTION
0 - 8	Qal - dark to medium brown. Gravel of light gray porph. andesite.
8 - 11	Latite - yellow-brown stained and altered, fine granular G.M. fresh K-spar and altered H.B.
11 - 17	Latite - light gray altered
17 - 20	Latite - as above with yellow-brown staining. Fractured.
20 - 35	Latite - as above, but light gray. Fractured.
35 - 44	Latite - bluish-gray. Phenos of fresh K-spar and H.B. in blue-gray G,M, (K=4.5-5.0) Fractured
44 - 68	Latite - as above with several small zones of red stained and altered material. Becoming slightly less porphyritic with depth. Fractured (K=4.5-5.0)

TEMPERATURE DEPTH LOG

ΔT Well No. 268

Property-Project Thermex Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →	Well No →	Date Logged DA →	MO →	YR	*
1 2 3 4	5 6 7 8 9 10	11 12	13 14 15	16 17 18	19 20
7 7 7	2 6 8	0 3	M Y	7 7	C M

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

Site Description	Operator	Editor
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
4 . 1 K M S W O F S O L P H U R D A L E	J E D	M L H

Card B

Scale Unit in cm	Map Size (7.5, 15.,60)	Map Location Δ N Lat Degree	Min	W Long Degree	Min
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
C M	1 5 .	3 8 .	3 0 .	1 1 2 .	4 5 .

Use decimals

Δ 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
4 . 8	2 0 . 7 6 1 6 0 .		F

Use decimals

← Write M if meters

SEGMENT DEPTH

	Start	End	K	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
C	1 5 . 0	6 0 . 0	- 5 . 0	- . 5
D				
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
	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
C	. 9 9 9			
D				
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location 5 MILES S. OF COVE FORT. Date 3-MAY-77

Map COVE FORT, UT 15''

Property THERMEX T 26 S R 7 W sec 23 SE¼ SE¼

Drill Hole B-268 777-10 Date Drilled 15-APRIL-77 Elevation 6160 ft.

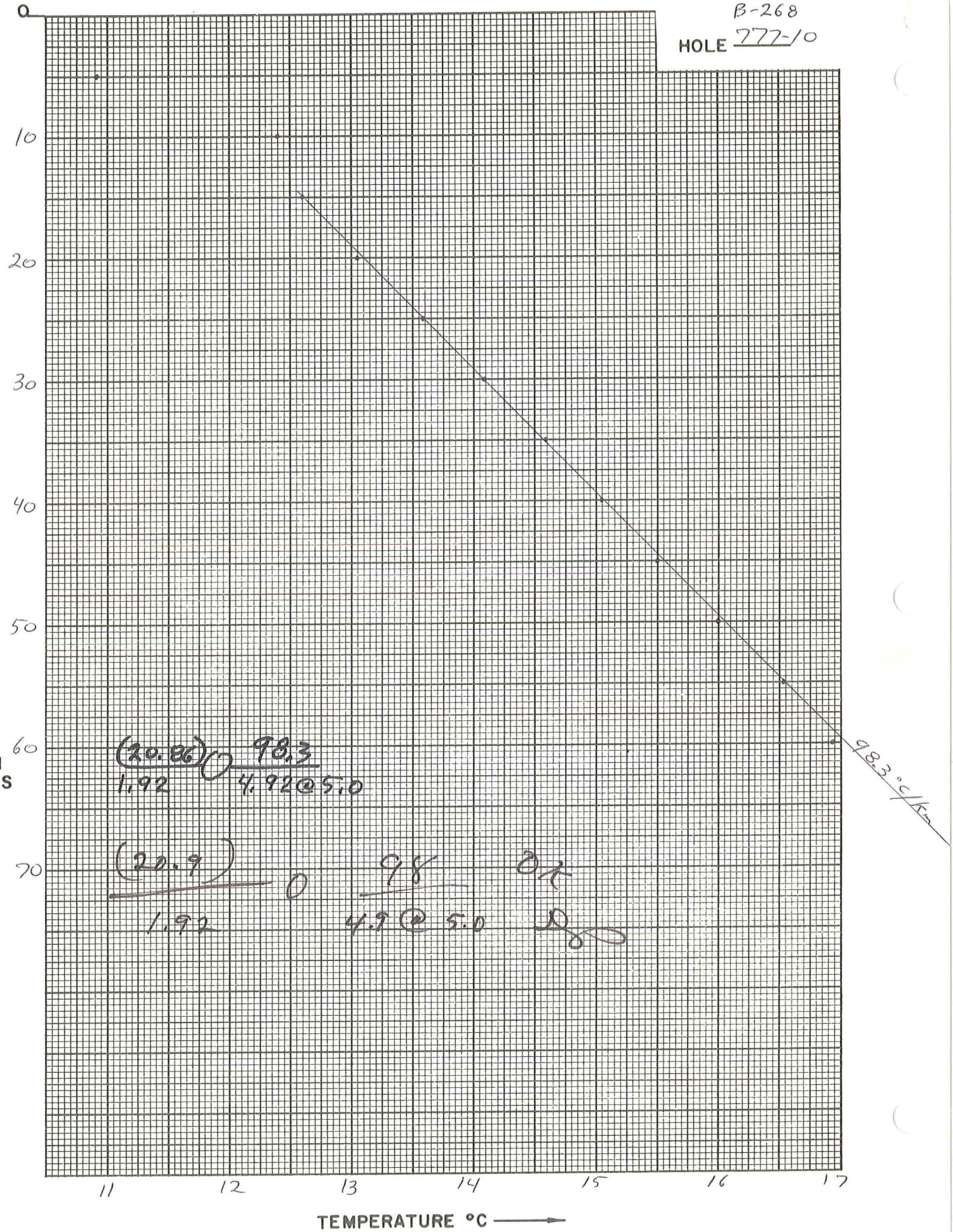
Instrument # 39 Operator JED

Comments 3/4" WATER FILLED PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
5	12183	10.92			
10	11570	12.39	0.21	42	
15	11481	12.60	0.46	92	
20	11295	13.06	0.52	104	
25	11091	13.58	0.50	100	
30	10893	14.08	0.50	100	
35	10699	14.58	0.46	92	
40	10522	15.04	0.47	94	
45	10345	15.51	0.49	98	
50	10166	16.00	0.53	106	
55	9972	16.53	0.40	80	
60	9826	16.93			

B-268

HOLE 272-10



cc: Hall
Lange
Deymonaz
Caywood

LITHOLOGIC LOG B-268 (777-10)

Thermex Project

ELEVATION: 6,160'

DATE DRILLED: 4/15/77

SE¼ SE¼ Sec 23 T26S R7W

Depth (m)	DESCRIPTION
0 - 6	Qal - sand
6 - 52	Qal - gravels with alternating silt and clay matrix.
52 - 68	Latite - porphyritic, altered phenos of feldspar in aphanitic groundmass.

TEMPERATURE DEPTH LOG

ΔT Well No. 269

Property-Project Thermex Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

RT JUSTIFY:

Card A

Proj No →	Well No →	Date Logged DA →	MO →	YR	*
1 2 3 4	5 6 7 8 9 10	11 12	13 14 15	16 17 18	19 20
7 7 7	2 6 9	0 3	M Y	7 7	C M

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

Site Description	Operator	Editor
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
1 . 5 K M S W O F S U L P H U R D A L E	J E D	M Z H

Card B

Scale Unit in cm	Map Size (7.5, 15.,60)	Map Location Δ N Lat Degree	Min	W Long Degree	Min
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
C M	1 5 .	3 8 .	3 0 .	1 1 2 .	4 5 .

Use decimals

Δ 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
9 . 7	2 2 . 5	6 2 4 0 .	F

Use decimals

← Write M if meters

SEGMENT DEPTH

	Start	End	K	ΔK
C	10.0	20.0		
D	.999			
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
C	50.0	63.5	-5.0	-.5
D				
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location 4 MILES S. OF COVE FORT Date 3-MAY-77

Map COVE FORT, UT 15"

Property THERMEX B-269 T 26S R 7W sec 13 SW¼ NE¼

Drill Hole 777-9 Date Drilled 15-APRIL-77 Elevation 6240 ft.

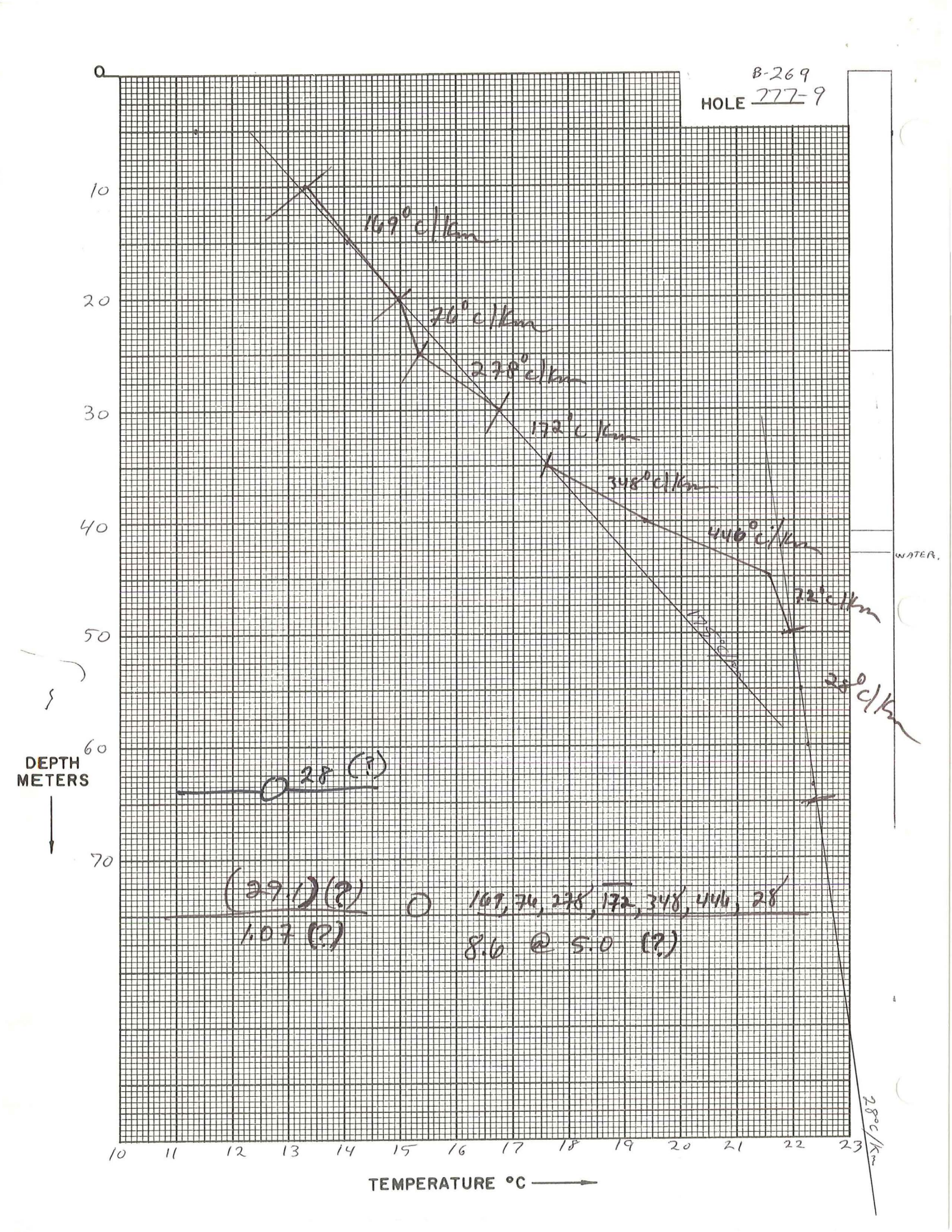
Instrument # 39 Operator JEO

Comments 3/4" WATER FILLED PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
5	12000	11.35			
10	11208	13.28	1.93	386	
15	10905	14.05	0.77	154	
20	10552	14.97	0.92	184	
25	10220	15.35	0.38	76	
30	9896	16.74	1.39	278	
35	9588	17.60	0.86	172	
40	8996	19.34	1.74	348	
45	8279	21.57	2.23	446	
50	8170	21.93	0.36	72	
55	8112	22.12	0.19	38	
60	8068	22.26	0.14	28	
63.5(?)	8045	22.34	0.08		

B-269

HOLE 277-9



cc: Hall
Lange
Deymonaz
Caywood

LITHOLOGIC LOG B-269 (777-9)

Thermex Project

ELEVATION: 6,240'

DATE DRILLED: 4/15/77

SW¼ NE¼ Sec 13 T26S R7W

Depth (m)	DESCRIPTION
6 - 8	XL-lithic Tuff - light gray to brown, moderately altered (K=5.0-5.5)
8 - 41	Rhyolite - porphyritic, pinkish-gray with XLS of plag, and H.B.
41 - 43	XL-Tuff - white, well indurated. XLS of feldspar, and biotite. Minor pink staining.
43 - 68	XL-Tuff - as above with numerous small bands of dark gray rhyolite (K=5.0)

TEMPERATURE DEPTH LOG

ΔT Well No. 270

Property-Project Thermex Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →	Well No →	Date Logged DA →	MO →	YR	*
1 2 3 4	5 6 7 8 9 10	11 12	13 14 15	16 17 18	19 20
777	270	03	MY	77	CM

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

Site Description	Operator	Editor
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
2.1 KM NE OF COVE FORT, UTAH	JEO	MLH

Card B

Map Location Δ: Scale Unit in cm	Map Size (7.5, 15.,60)	N Lat Degree	N Lat Min	W Long Degree	W Long Min
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
CM	15.	38.	30.	112.	45.

Use decimals

Δ 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
20.35	26.1	6480		F

Use decimals

← Write M if meters

SEGMENT DEPTH

	Start	End	K	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
C	10.0	20.0			
D	55.0	64.0		-6.0	-.5
E					
F					
G					

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
	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
C	20.0	55.0		
D	.999			
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location 1.3 MILES NE OF COVE FORT Date 3-MAY-77

Map COVE FORT UT 15'

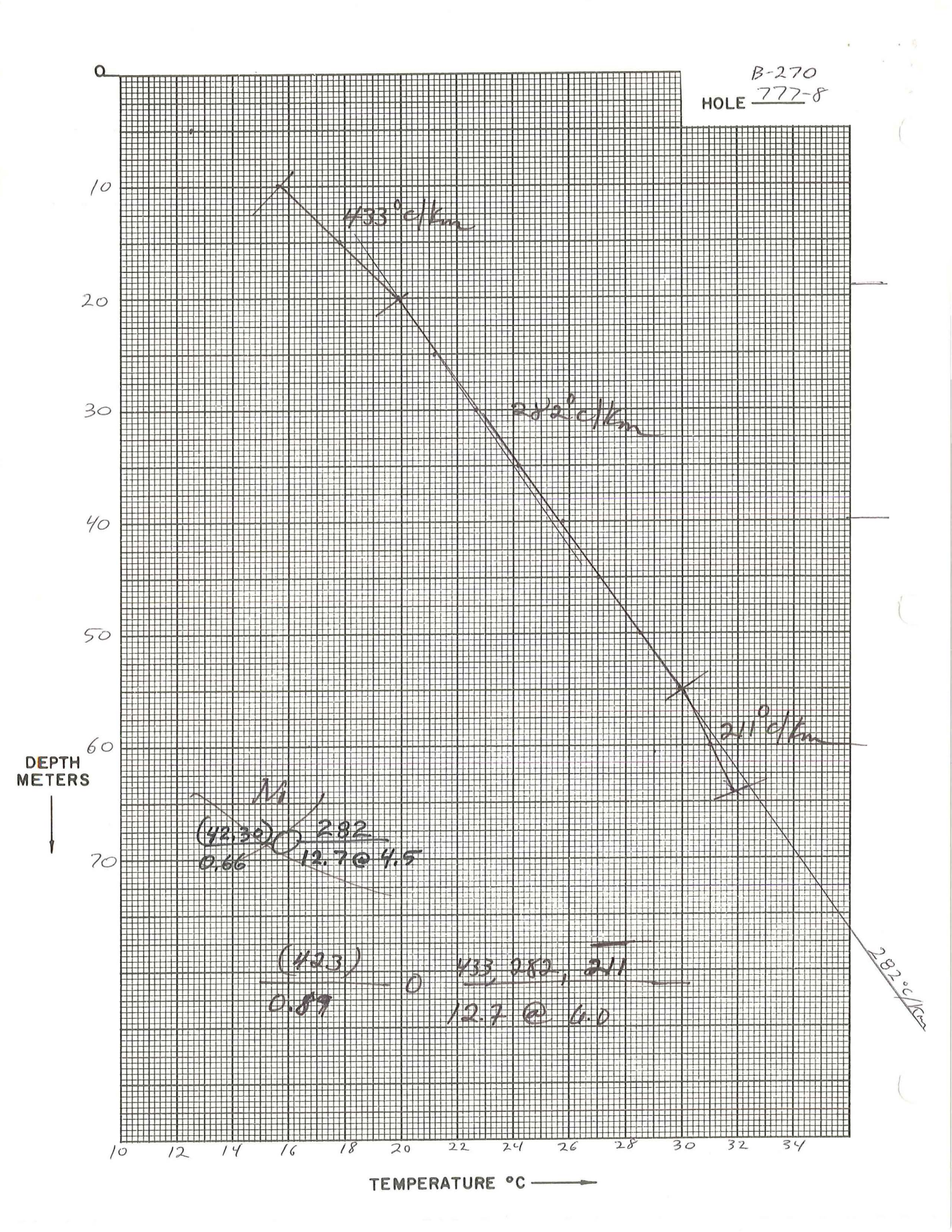
Property THERMEX B-270 T 25S R 6W sec 19 SE¼ SE¼

Drill Hole 77-8 Date Drilled 14-APRIL-77 Elevation 6480 ft.

Instrument #39 Operator JEW

Comments 3/4" WATER FILLED PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
5	11529	12.48			
			3.26		
10	10299	15.64			
			2.21	442	
15	9501	17.85			
			2.02	404	
20	8820	19.87			
			1.33	266	
25	8394	21.20			
			1.48	296	
30	7944	22.68			
			1.55	310	
35	7495	24.23			
			1.58	316	
40	7062	25.81			
			1.24	248	
45	6738	27.05			
			1.40	280	
50	6391	28.45			
			1.42	282	
55	6054	29.87			
			1.15	230	
60	5796	31.02			
			0.75		
64	5633	31.77			


B-270
HOLE 772-8
0
10
20
30
40
50
60
70
DEPTH METERS
433°c/km
282°c/km
211°c/km
282°c/km
(42,39)
0.66
2.82
12.7 @ 4.5
(423)
0.89
433, 282, 211
12.7 @ 4.0
10
12
14
16
18
20
22
24
26
28
30
32
34
TEMPERATURE °C

cc: Hall
Lange
Deymonaz
Caywood

LITHOLOGIC LOG B-270 (777-8)

Thermex Project

ELEVATION: 6,680'

SE¼ SE¼ Sec 19 T25S R6W

DATE DRILLED: 4/14/77

Depth (m)	DESCRIPTION
0 - 2	Qal - reddish-brown with gravels of L.S. and altered volcanics.
2 - 14	Rhyolite - aphanitic with trace of feldspar phenos, mostly altered (K=5.0-5.5)
14 - 19	Clay - yellow brown with frags of rexlized L.S.
19 - 40	Quartzite - fractured. (K=6.5)
40 - 60	Clay - light gray to yellow. Hard with lenses of dark gray rexlized L.S. (K=4.5-5.0)
60 - 68	L.S. - light gray, fine grained, rexlized.

TEMPERATURE DEPTH LOG

ΔT Well No. 271

Property-Project Thermex Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

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
7 7 7	2 7 1	0 3	M Y	7 7	C M

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

Site Description	Operator	Editor
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
1 • 8 K M N O R T H O F S U L P H U R D A L E	J E D	M L H

Card B

Scale Unit in cm	Map Size (7.5, 15.,60)	Map Location Δ N Lat Degree	Min	W Long Degree	Min
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
C M	1 5 •	3 8 .	3 0 •	1 1 2 .	4 5 •

Use decimals

Δ 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
1 3 • 5 5	2 3 • 5	6 1 3 0 •	F

13.95

Use decimals

← Write M if meters

SEGMENT DEPTH

	Start	End	K	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
C	2 5 • 0	5 0 • 0	- 3 • 5	• 5
D	6 0 • 0	7 0 • 0		
E	• 9 9 9			
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
	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
C	5 0 • 0	6 0 • 0		
D	7 5 • 0	9 0 • 0		- • 5
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location 1/2 MILES S. OF COVE FORT Date 3-MAY-77

Map COVE FORT, UT 15"

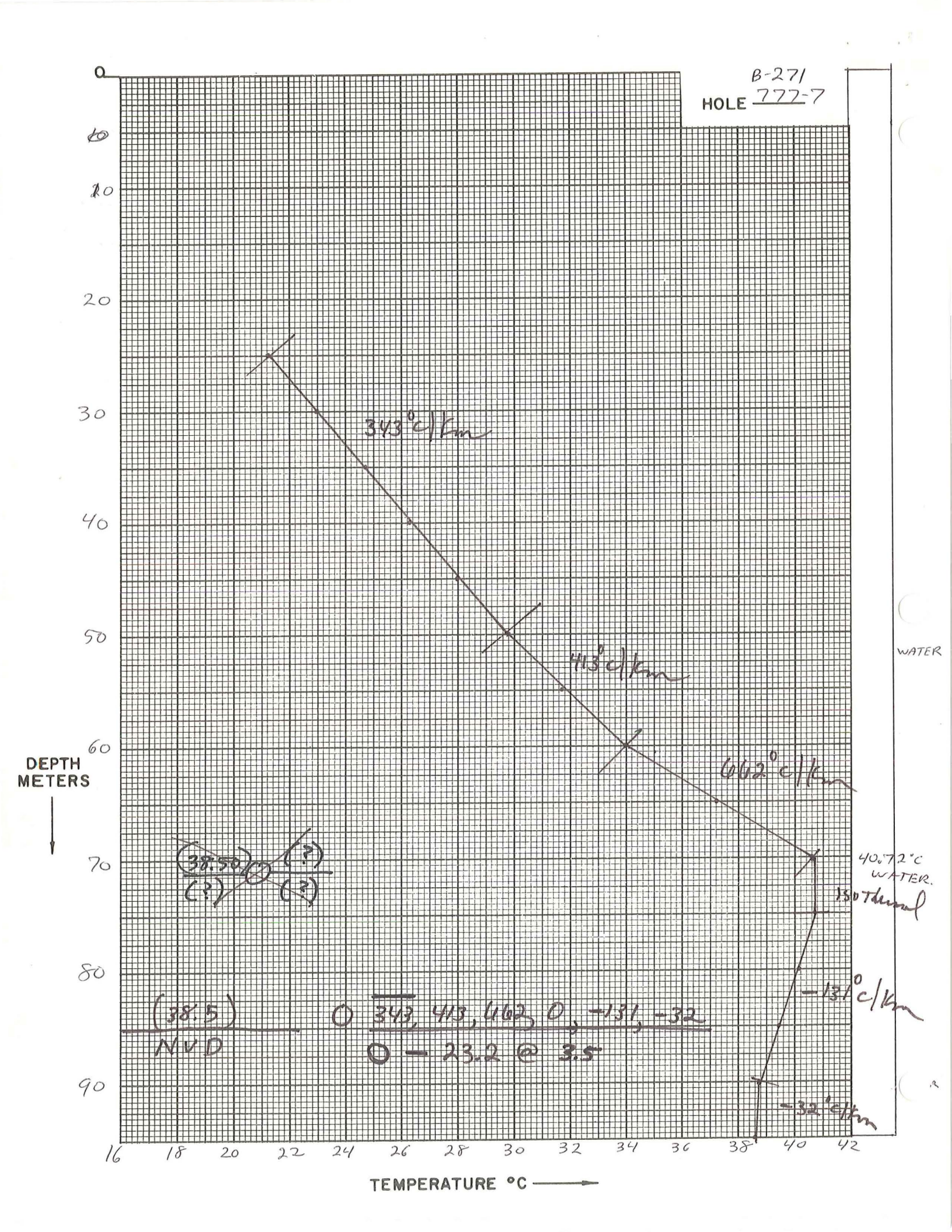
Property THERMEX B-271 T 26 S R 7 W sec 1 NE¼ SE¼

Drill Hole 77-7 Date Drilled 14-APRIL-77 Elevation 6130 ft.

Instrument # 39 Operator JEO

Comments 3/4" WATER FILLED PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
25	8384	21.24			
			1.75	350	
30	7851	22.99			
			1.74	348	
35	7356	24.73			
			1.55	310	
40	6937	26.28			
			1.74	348	
45	6495	28.02			
			1.80	360	
50	6066	2982			
			1.91	382	
55	5641	31.73			
			2.22	444	
60	5185	33.95			
			3.26	652	
65	4580	37.21			
			3.36	672	
70	4030	40.57			
			0.15	30	
75	4008	40.72			WARM AQUIFER
			-0.48	-96	
80	4097	40.14			
			-0.71	-142	
85	4208	39.43			
			-0.68	-136	
90	4319	38.75			
			-0.16	-32	
95	4345	38.59			


B-271
HOLE 772-7
0
10
20
30
40
50
60
70
80
90
DEPTH METERS
3.43° c/km
4.13° c/km
6.62° c/km
WATER
40.72°C WATER.
1.50 Thermal
-13.1° c/km
-32.1° c/km
(38.5)
NVD
(38.50)
(?)
(?)
(?)
O 343, 413, 662, 0, -131, -32
O — 23.2 @ 3.5
16
18
20
22
24
26
28
30
32
34
36
38
40
42
TEMPERATURE °C

cc: Hall
Lange
Deymonaz
Caywood

LITHOLOGIC LOG B-271 (777-7)

Thermex Project

ELEVATION: 6,130'

DATE DRILLED: 4/14/77

NE¼ SE¼ Sec 1 T26S R7W

Depth (m)	DESCRIPTION
0 - 14	Qal - With basaltic gravels and small amt. of silicic rock.
14 - 30	Qal - gravels of rhyolites and tuffs with lesser amts. of basalt, in silty/sandy matrix.
30 - 91	Qal - as above with increasing amts. of L.S. and dolomite frags (up to 70%). Small flow of water, approximately 1-2 gpm between 52 and 56 meters. Similar flow of water at 91mm.
91 - 99	Qal - as above.

TEMPERATURE DEPTH LOG

ΔT Well No. 272

Property-Project Thermex Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →	Well No →	Date Logged DA →	MO →	YR	*
1 2 3 4	5 6 7 8 9 10	11 12	13 14 15	16 17 18	19 20
777	272	03	MY	77	CM

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

Site Description	Operator	Editor
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
4.9 KM ~~NNW~~ NNE OF COVE FORT, UTAH	JED	HLH

Card B

Map Location Δ: Scale Unit in cm	Map Size (7.5, 15.,60)	N Lat Degree	N Lat Min	W Long Degree	W Long Min
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
CM	15.	38.	30.	112.	45.

Use decimals

Δ 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
25.65	~~25.85~~ 26.1	6220.	F

Use decimals 26.25

← Write M if meters

SEGMENT DEPTH

	Start	End	K	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
C	10.0	40.0		
D	.999			
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
	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
C	40.0	65.0	-5.4	-.5
D				
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location 3 MILES N. OF COVE FORT Date 3-MAY-77

Map COVE FORT, UT, 15"

Property THERMEX B-272 T 25S R 6W sec 7 SE¼ SE¼

Drill Hole 77-5 Date Drilled 12-APRIL-77 Elevation 6220 ft.

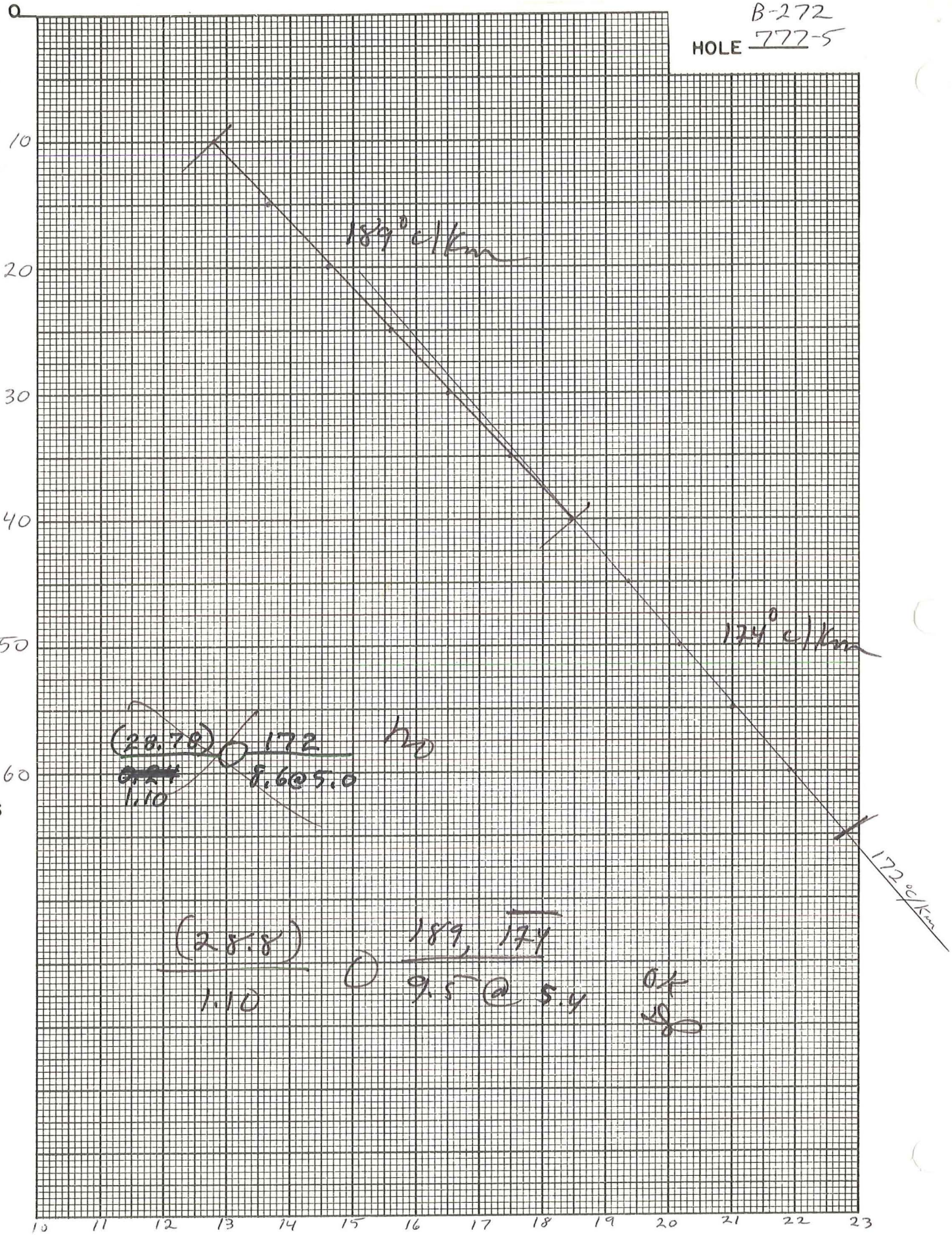
Instrument #39 Operator JEO

Comments 3/4" WATER FILLED PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
10	11411	12.78			
15	11065	13.64	0.86	172	
20	10681	14.63	0.99	198	
25	10318	15.59	0.96	192	
30	9975	16.52	0.93	186	
35	9625	17.50	0.98	196	
40	9294	18.45	0.95	190	
45	8993	19.34	0.89	178	
50	8721	20.17	0.83	166	
55	8451	21.02	0.85	170	
60	8170	21.93	0.91	182	
65	7920	22.76	0.83	166	

B-272

HOLE 772-5



cc: Ball
Lange
Deymonaz
Caywood

LITHOLOGIC LOG B-272 (777-5)

Thermex Project

ELEVATION: 6,220'

SE¼ SE¼ Sec 7 T25S R6W

DATE DRILLED: 4/12/77

Depth (m)	DESCRIPTION
0 - 20	Latite - porphyritic, XLS of plag and mafics altered to kaolin and chlorite respectively. G.M. mostly altered to red clay. Clay ~ 80%
20 - 59	Latite - porphyritic, XLS of feldspar and bio in white to reddish tuffaceous matrix. Matrix 75%, becoming slightly lighter with depth (K=4.5-5.0)
59 - 68	Latite - as above with red matrix.

TEMPERATURE DEPTH LOG

ΔT Well No. 273

Property-Project Phelps Dodge Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

RT JUSTIFY:

Card A

Proj No →	Well No →	Date Logged DA →	MO →	YR	*
1 2 3 4	5 6 7 8 9 10	11 12	13 14 15	16 17 18	19 20
777	273	03	MY	77	CM

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

Site Description	Operator	Editor
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
0.4 KM EAST OF COVE FORT, UTAH	JED	MLH

Card B

Map Location △

Scale Unit in cm	Map Size (7.5, 15.,60)	N Lat Degree	N Lat Min	W Long Degree	W Long Min
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
CM	15.	38.	30.	112.	45.

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
18.15	24.15	6040.		F

Use decimals

← Write M if meters

SEGMENT DEPTH

	Start	End	K	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
C	10.0	20.0		
D	.999			
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
	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
C	20.0	65.0	-5.4	-.5
D				
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location 0.2 MILES E. OF COVE FORT Date 3-MAY-77

Map COVE FORT, UT 15'

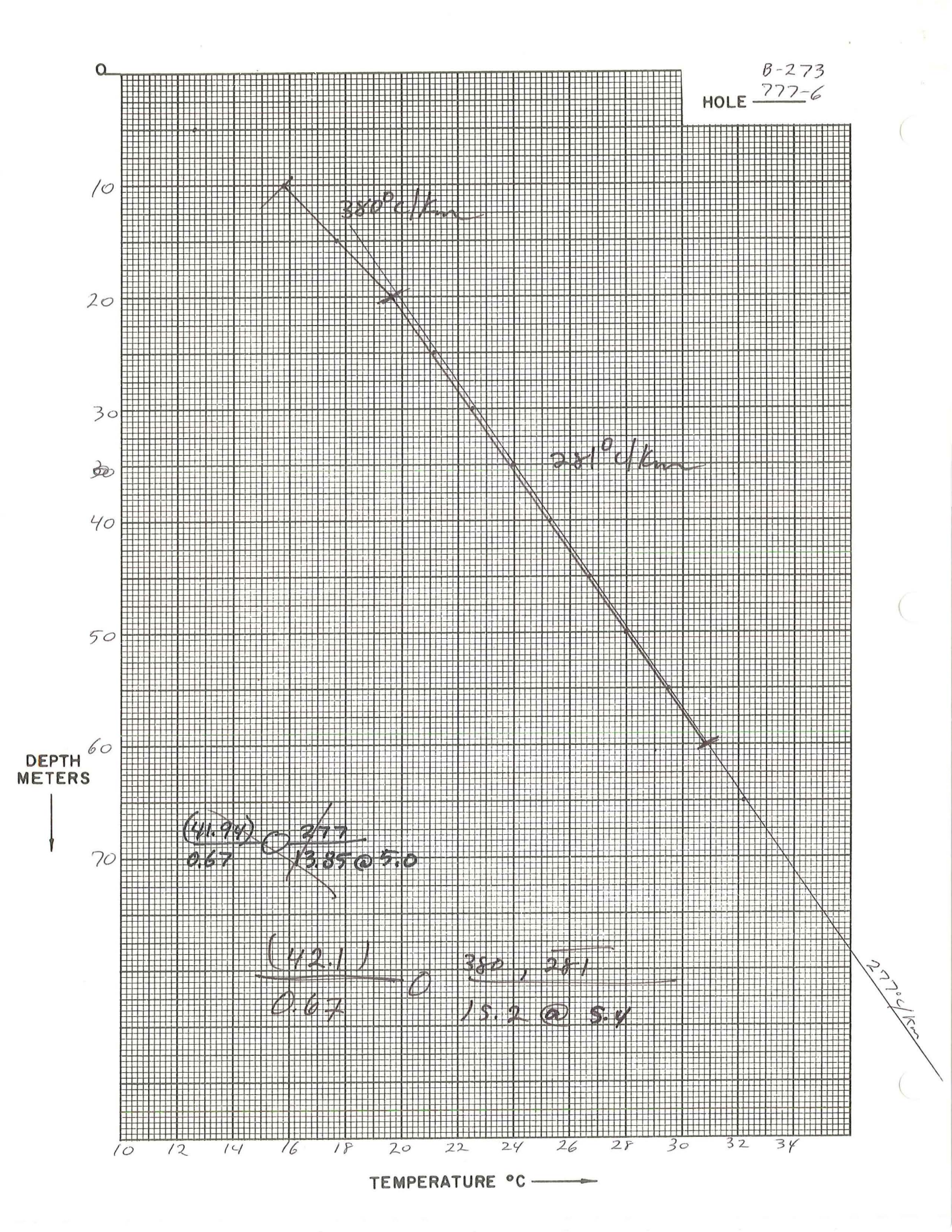
Property THERMEX T 24 S R 6W sec 30 SW¼ SW¼

Drill Hole B-273 777-6 Date Drilled 13-APRIL-77 Elevation 6040 ft.

Instrument # 39 Operator JEO

Comments 3/4" WATER FILLED PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
5	11479	12.61			
			3.21		
10	10231	15.82			
			1.93	386	
15	9535	17.75			
			1.87	374	
20	8901	19.62			
			1.53	306	
25	8412	21.15			
			1.41	282	
30	7980	22.56			
			1.38	276	
35	7577	23.94			
			1.36	272	
40	7198	25.30			
			1.40	280	
45	6828	26.70			
			1.31	262	
50	6498	28.01			
			1.44	2.88	
55	6153	29.45			
			1.39	278	
60	5835	30.84			
			1.40	280	
65	5533	32.24			


B-273
HOLE 777-6
0
10
20
30
40
50
60
70
DEPTH METERS
380° c/km
281° c/km
277° c/km
(41.94) 0 277
0.67 13.85 @ 5.0
(42.11) 0 380, 281
0.67 15.2 @ 5.4
10 12 14 16 18 20 22 24 26 28 30 32 34
TEMPERATURE °C

cc: Hall
Lange
Deymonaz
Caywood

LITHOLOGIC LOG B-273 (777-6)

Thermex Project

ELEVATION: 6,040'

DATE DRILLED: 4/13/77

SW¼ SW¼ Sec 30 T24S R6W

Depth (m)	DESCRIPTION
0 - 5	Qal - yellow-brown silty with gravels of weathered volcanics and L.S.
5 - 26	Andesite - porphyritic, light gray to reddish. Feldspars and matrix almost completely altered. Becoming better indurated with depth.
26 - 50	Andesite - porphyritic, medium gray with altered plag & trace of bio. Zones of silicification. Some poorly indurated tuffaceous material. Occasional small fractures with red iron staining. (K=4.5-5.0)
50 - 59	Andesite - as above with trace of pyrite.
59 - 63	Andesite - greenish-gray, aphanitic to slightly prophyritic. Partly silicified, very dense (K=6) Pyrite 1-2%.
63 - 67	Andesite - as above, but lighter color and less pyrite.

TEMPERATURE DEPTH LOG

ΔT Well No. 274

Property-Project Best Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

RT JUSTIFY:

Card A

Proj No →	Well No →	Date Logged DA →	MO →	YR	*
1 2 3 4	5 6 7 8 9 10	11 12 13	14 15 16	17 18	19 20
7 5 5	2 7 4	0 5	M Y	7 7	C M

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

| Site Description | | |

TEMPERATURE - DEPTH LOG

Location 5 MILES E-SE OF THERMO H.S. Date May 5, 1977

Map Thermo Ut 15' Quad

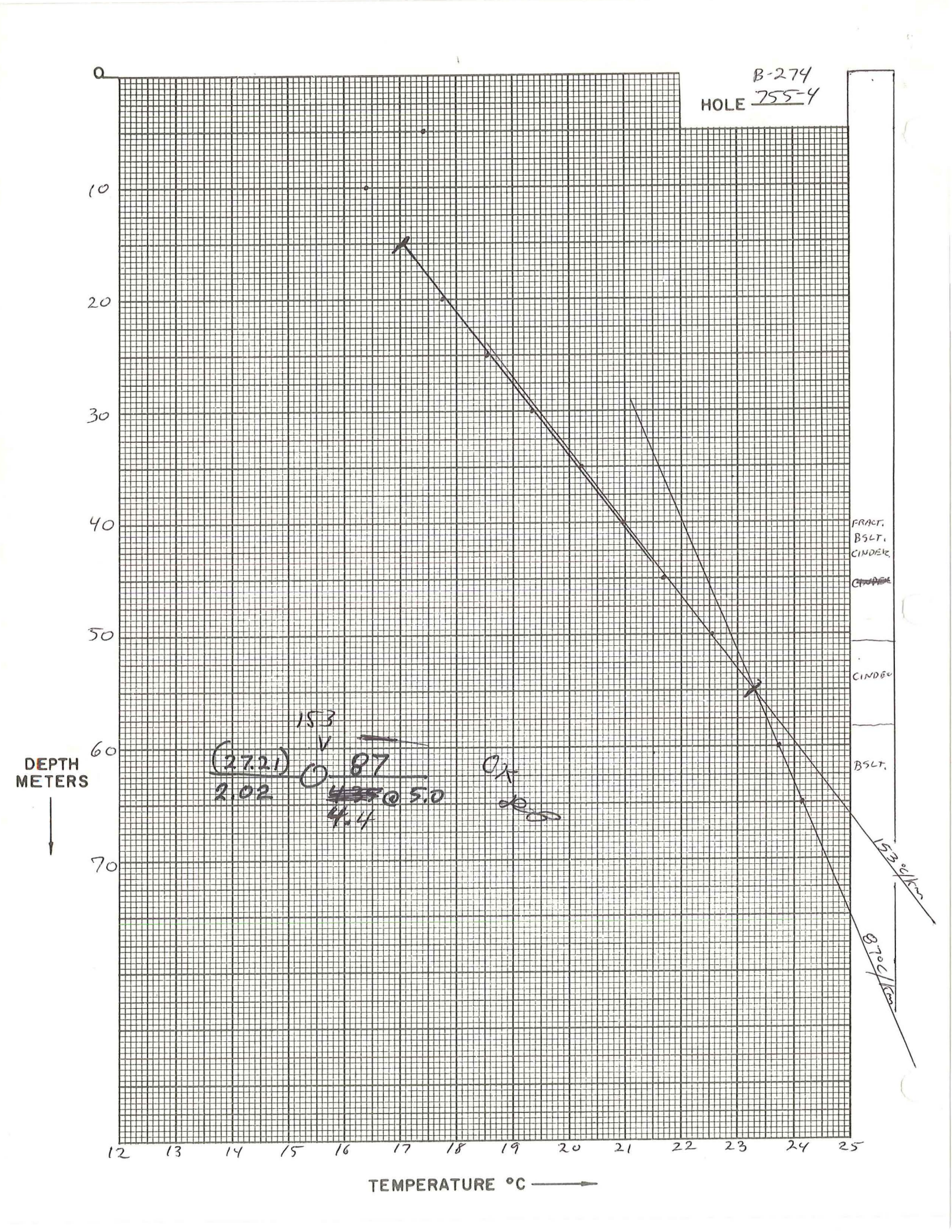
Property BEST T 30 S R 11 W sec 32 SW¼ NE¼

Drill Hole B-274 / 755-4 Date Drilled 21-APRIL-77 Elevation 5200 ft.

Instrument #39 Operator DO & JED

Comments ¾" PVC filled w/ H2O

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
5	96.48	17.43			
10	100.17	16.40	1.03		
15	97.87	17.04	.66	132	
20	95.29	17.77	.73	146	
25	92.64	18.54	.77	154	
30	89.90	19.35	.81	162	
35	87.06	20.22	.87	174	
40	84.67	20.97	.75	150	
45	82.39	21.70	.73	146	
50	79.86	22.54	.84	168	
55	77.63	23.29	.75	150	
60	76.40	23.72	.43	86	
65	75.13	24.16	.43	86	


B-274
HOLE 755-4
0
10
20
30
40
50
60
70
DEPTH METERS
12
13
14
15
16
17
18
19
20
21
22
23
24
25
TEMPERATURE °C
FRACT. BSLT. CINDER
CINDER
BSLT.
153 V
(27.2)
2.02
87
5.0
4.4
153°C/km
87°C/km

cc: Hall
Lange
Deymonaz
Caywood

LITHOLOGIC LOG B-274 (755-4)

Best Project

ELEVATION: 5,200'

SW¼ NE¼ Sec 32 T30S R11W

DATE DRILLED: 4/21/77

Depth (m)	DESCRIPTION
0 - 8	Qal - 50-60% Basalt gravels in silt/sand matrix.
8 - 53	Basalt - Dark gray aphanitic to slightly porphyritic
53 - 54	Basalt - As above, but more fractured, some red cinder.
54 - 61	Cinder - Red, mixed granular, dark gray basalt. Lost circulation zone, dry. (K=2.84)
61 - 67	Basalt - Dark gray aphanitic, fractured. Some cinder slough.

TEMPERATURE DEPTH LOG

ΔT Well No. 275

Property-Project Twin Peaks Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →	Well No →	Date Logged DA →	MO →	YR	*
1 2 3 4	5 6 7 8 9 10	11 12	13 14 15	16 17 18	19 20
806	275	02	MY	77	CM

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

Site Description	Operator	Editor
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
10.2 KM NW OF COVE FORT, UTAH	JED	MLH

Card B

Scale Unit in cm	Map Size (7.5, 15.,60)	Map Location △ N Lat Degree	Min	W Long Degree	Min
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
CM	15.	38.	30.	112.	45.

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
33.05	17.15	6120.	F

Use decimals

← Write M if meters

SEGMENT DEPTH

	Start	End	K	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
C	20.0	40.0		
D	.999			
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
	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
C	40.0	75.0	-3.4	-.5
D				
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location 3 MILES N.W. OF DOG VLY Date 2-MAY-77

Map COVE FORT UT, 15"

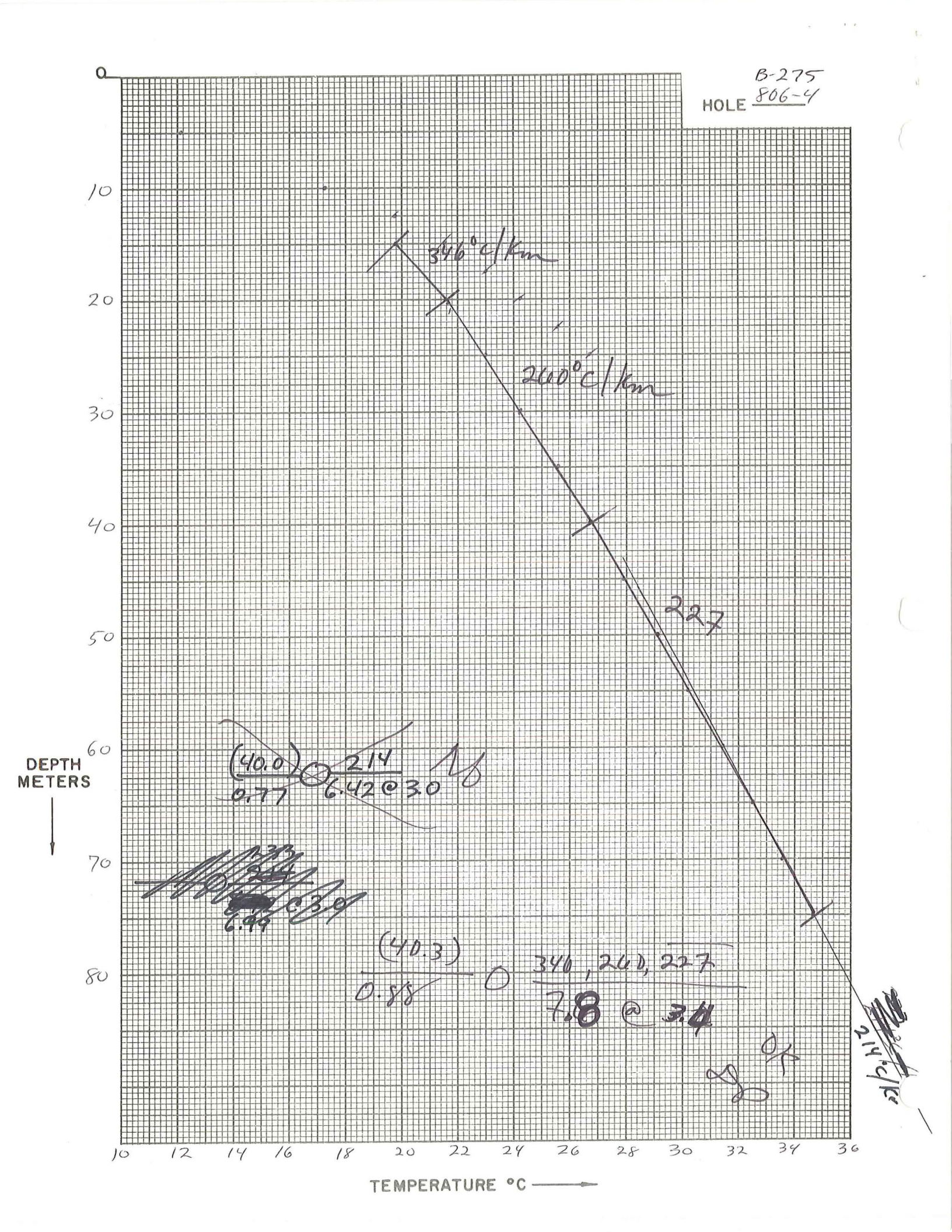
Property TWIN PKS B-275 T 24S R 7W sec 27 SE¼ SW¼

Drill Hole 806-4 Date Drilled 20-APRIL-77 Elevation 6120 ft.

Instrument #39 Operator JSD

Comments 3/4" WATER FILLED PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
5	11675	12.13			
			5.11		
10	9715	17.24			
			2.54	108	
15	8850	19.78			
			1.73	346	
20	8297	21.51			
			1.50	300	
25	7845	23.01			
			1.26	252	
30	7485	24.27			
			1.30	260	
35	7127	25.57			
			1.14	228	
40	6826	26.71			
			1.21	242	
45	6519	27.92			
			1.17	234	
50	6238	29.09			
			1.13	226	
55	5976	30.22			
			1.22	244	
60	5705	31.44			
			1.06	212	
65	5479	32.50			
			1.07	214	
70	5260	33.57			
			1.08	216	
75	5049	34.65			


B-275
HOLE 806-4
0
10
20
30
40
50
60
70
80
DEPTH METERS
346°C/Km
240°C/Km
227
(40.0)
0.77
214
6.42@30
(40.3)
0.88
346, 240, 227
7.8 @ 34
214°C/Km
10
12
14
16
18
20
22
24
26
28
30
32
34
36
TEMPERATURE °C

cc: Hall
Lange
Deymonaz
Caywood

LITHOLOGIC LOG B-275 (806-4)

TWIN PEAKS PROJECT

ELEVATION: 6,120'

DATE DRILLED: 4/20/77

SE¼ SW¼ Sec 27 T24S R7W

Depth (m)	DESCRIPTION
0 - 3	Qal Alluvium - clay and silt with some pebbles; buff.
3 - 12	Qal Alluvicum - clay and silt; buff.
12 - 15	Qal Pebbly Clay - 15% pebbles, buff
15 - 19	Qal Pebbly silt - 20% pebbles; buff
19 - 22	Qal Gravel - less than 10% clay and silt; rounded-angular; ave size 3mm; mostly quartzite and altered volcanics.
22 - 25	Qal Gravel - subrounded; ave size 13mm; mostly quartzite and altered volcanics with some limestone and gray tuff.
25 - 37	Qal Gravel - repeat 70-80 except ave size 5mm.
[illegible] - 52	Qal Gravel - subrounded;angular; ave size 5mm; mostly altered red and light gray volcanics with some quartzite and limestone.
52 - 74	Qal Gravel - repeat 120-170 except ave size 3mm

TEMPERATURE DEPTH LOG

ΔT Well No. 276

Property-Project OK Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →	Well No →	Date Logged DA →	MO →	YR	*
779	276	18	MY	77	CM

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

Site Description	Operator	Editor
2.5 KM NE OF PINNACLE PASS	JED	HLH

Card B

Scale Unit in cm	Map Size (7.5, 15., 60)	Map Location △ N Lat Degree	Min	W Long Degree	Min
CM	7.5	38.	30.	112.	52.5

Use decimals

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

Northing	Easting	Elev	
33.8	33.3	5750.	F

Use decimals

← Write M if meters

Card C

SEGMENT DEPTH

Start	End	K	ΔK
25.0	95.0		

Card D

Start	End	K	ΔK
.999			

Continue each card below.

Card E

SEGMENT DEPTH

Start	End	K	ΔK
95.0	150.0	-4.5	-.5

Card F

Card G

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location 11 MILES W. OF COVE FORT. Date ~~2-MAY-77~~ 18-May-77

Map PINNACLE PASS UT, 7½"

Property OK B-276 T 26 S R 8W sec 5 SW¼ SW¼

Drill Hole 779-~~20~~ Date Drilled ~~May~~ 7 1977 Elevation 5750 ft.

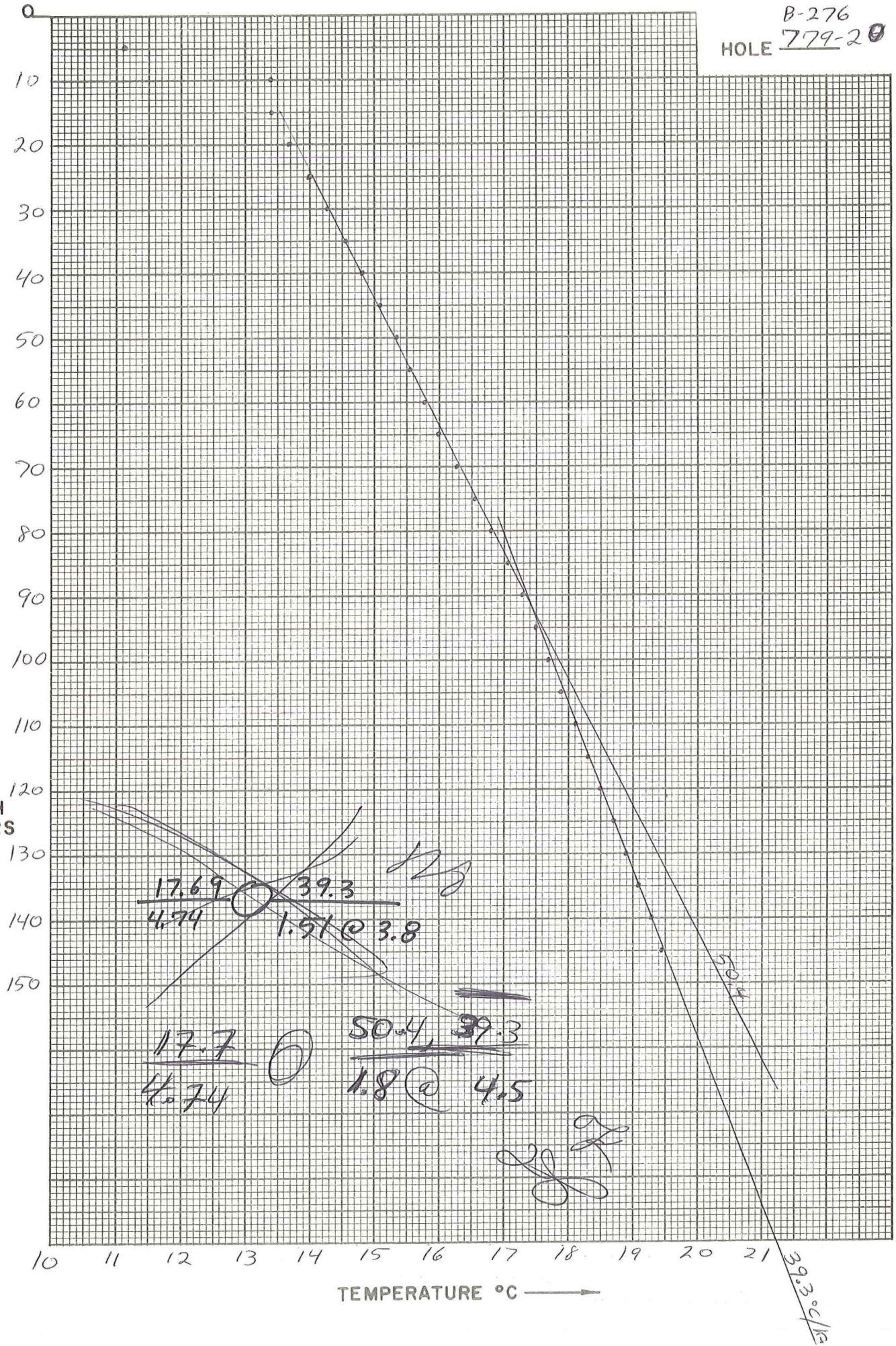
Instrument # 39 Operator JE10

Comments WATER FILLED 3/4" PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
5	12095	11.12			
			2.30		
10	11153	13.42			
			0.00		
15	11151	13.42			
			0.25	50	
20	11052	13.67			
			0.32	64	
25	10927	13.99			
			0.28	56	
30	10819	14.27			
			0.27	54	
35	10713	14.54			
			0.29	58	
40	10605	14.83			
			0.26	52	
45	10505	15.09			
			0.26	52	
50	10406	15.35			
			0.20	40	
55	10330	15.55			
			0.22	44	
60	10247	15.78			
			0.21	42	
65	10168	15.99			
			0.26	52	
70	10072	16.25			
			0.29	58	
75	9968	16.54			
			0.28	56	
80	9866	16.82			
			0.24	48	
85	9781	17.06			
			0.25	50	
90	9691	17.31			
			0.18	36	
95	9629	17.49			
			0.20	40	
100	9556	17.69			
			0.21	42	
105	9483	17.90			

B-276

HOLE 779-2



TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T ____ R ____ sec ____

Drill Hole B-276 779-20 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
110	9414	18.10	0.20	40	
115	9344	18.31	0.21	42	
120	9275	18.51	0.20	40	
125	9211	18.70	0.19	38	
130	9147	18.89	0.19	38	
135	9082	19.08	0.19	38	
140	9016	19.28	0.20	40	
145	8957	19.45	0.17	34	
150(?)	8907	19.61	0.16	32	

cc: Hall
Lange
Deymonaz
Caywood

LITHOLOGIC LOG B-276 (779-20)

OK Project

ELEVATION: 5,750'

SW¼ SW¼ Sec 5 T26S R8W

DATE DRILLED: 4/21/77

Depth (m)	DESCRIPTION
0 - 10	Qal Alluvium - clay, silt, and pebbles; mostly quartz monsonite.
10 - 30	Qal Gravelly Sand - buff; angular; ave 1.5mm; mostly quartz monzonite with some basalt.
30 - 80	Qal Gravel - light gray; angular; mostly quartz monzonite with some basalt and welded tuff particles.
80 - 90	Qal Gravel - repeat 30-80 except ~15% clay
90 - 500	Qal Gravel - repeat 30-80 except silt less than 15%.

TEMPERATURE DEPTH LOG

ΔT Well No. 277

Property-Project Ok Depth Logged

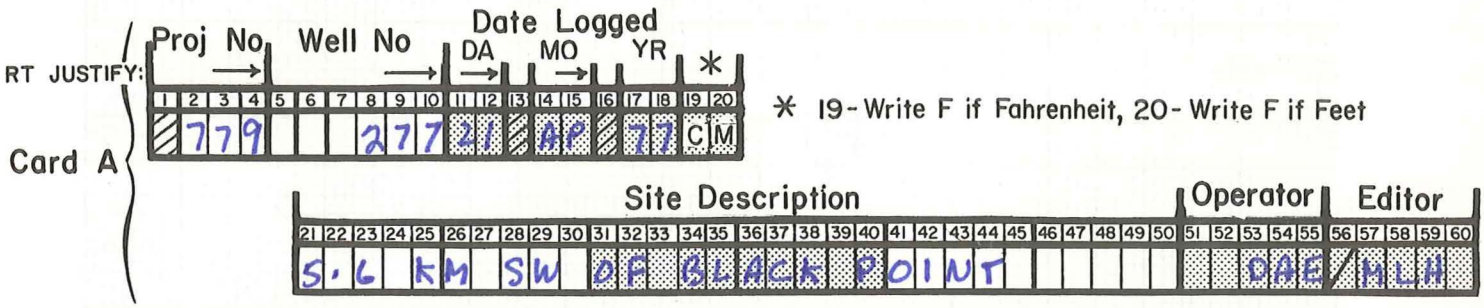
Map Scale Date: Drilled Logged

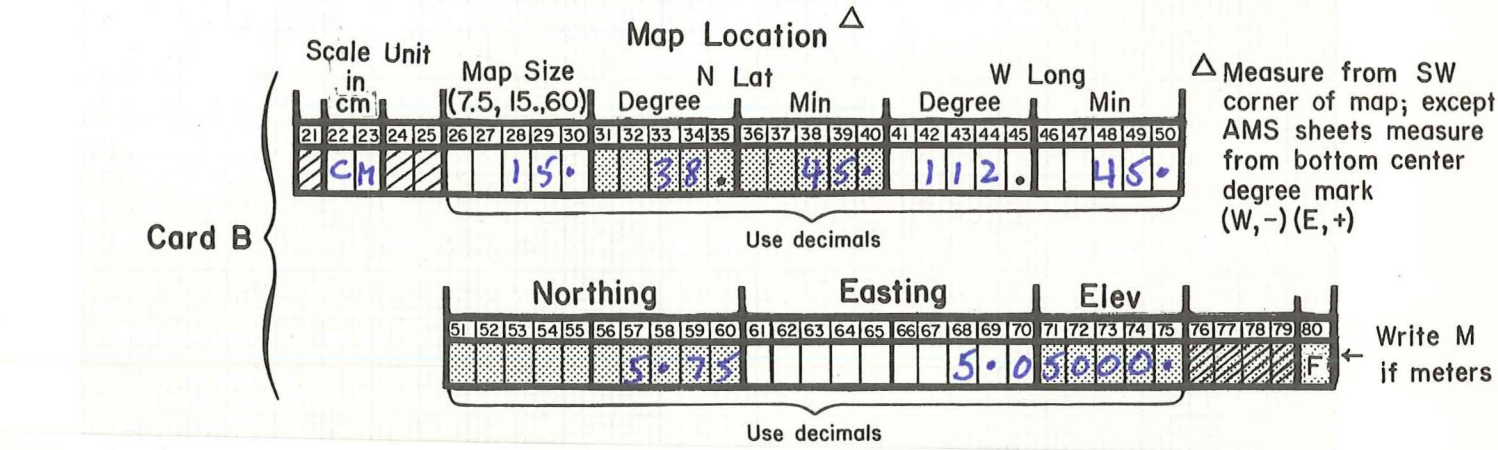
State County Section T R

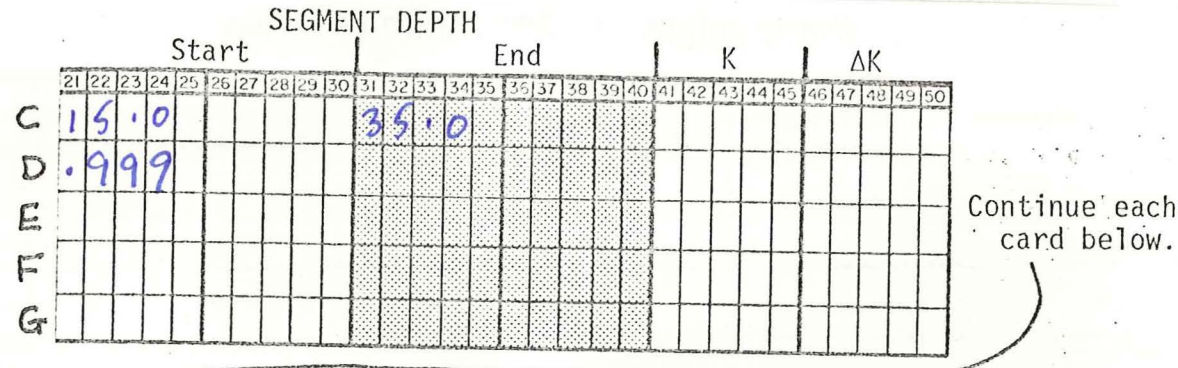
Instrument Operator Elevation ft.

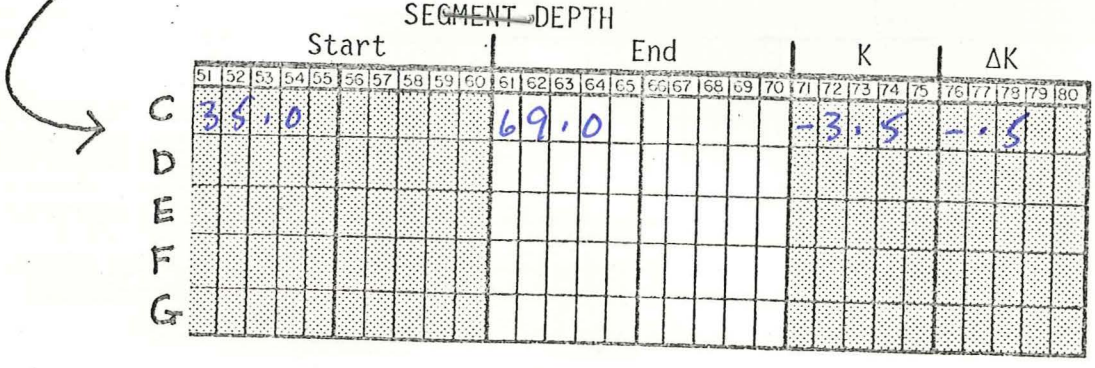
Comments

COMPUTER PROCESSING









Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location 1 mile east of Twin Peaks Date 21 April 77

Map Tabernacle Hill Utah 15"

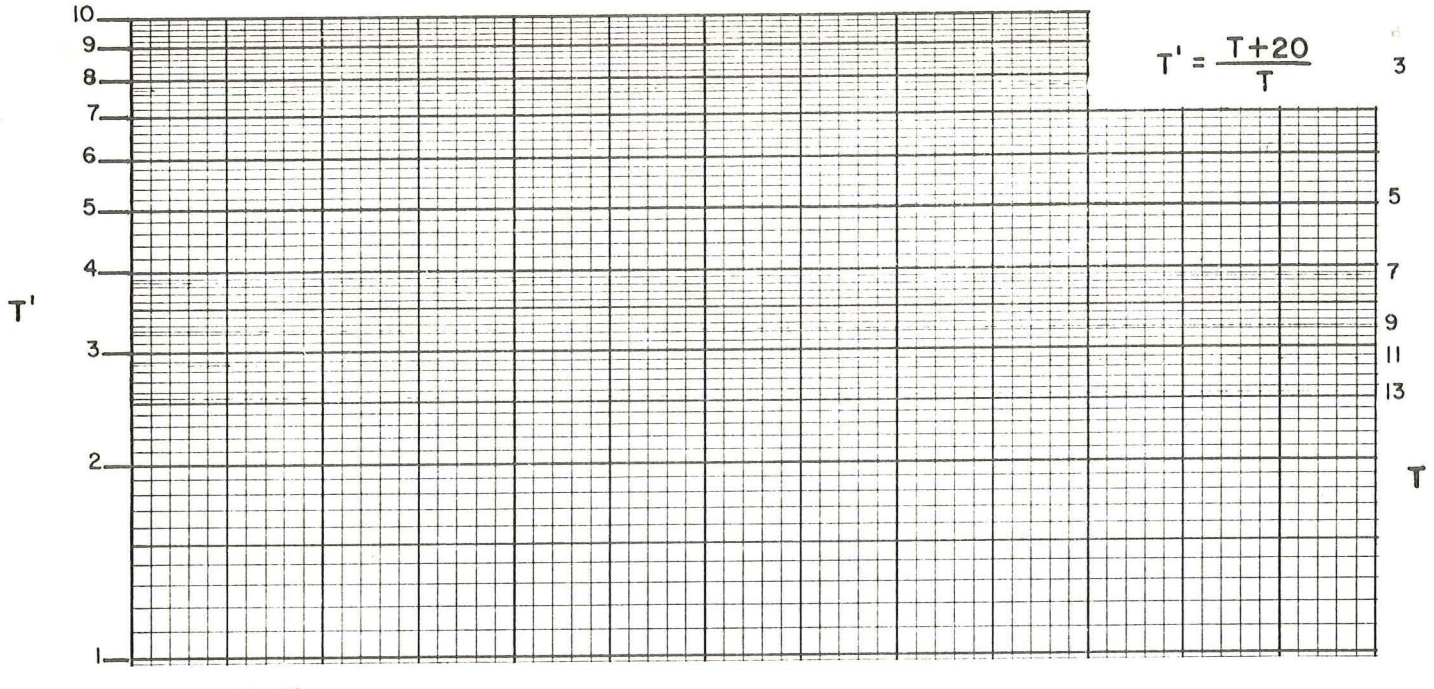
Property OK T 23S R 8W sec ~~35~~ 26 NE¼ SW¼

Drill Hole B-27 779-5 Date Drilled 13 April 77 Elevation 5000 ft.

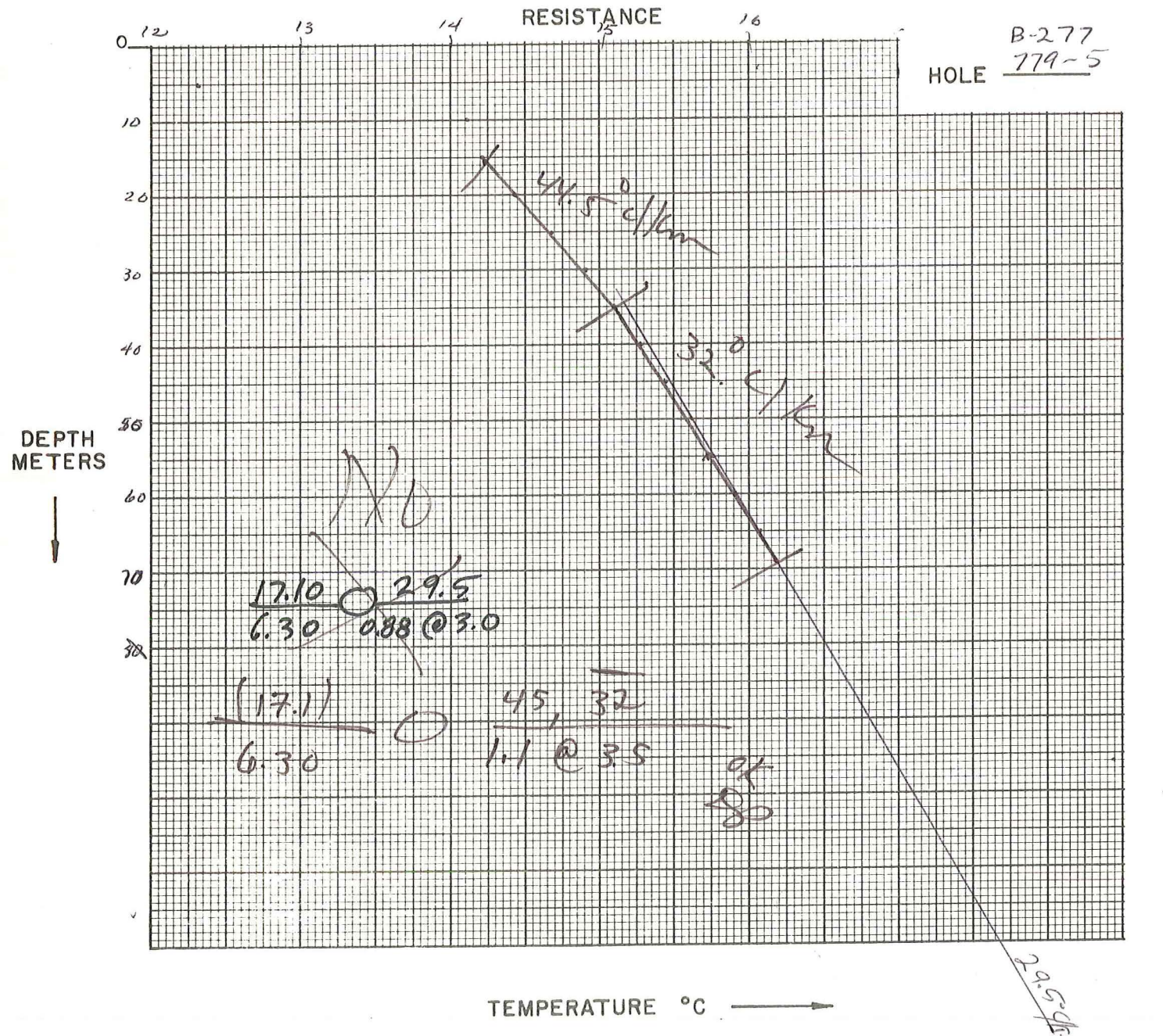
Instrument Probe 39 Operator DAB

Comments 3/4" water filled PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
2.0	127.97	9.50	.21		
2.5	127.~~78~~ 04	9.71	.67		
3.0	124.11	10.38	.53		
3.5	121.86	10.91	.64		
4.0	119.14	11.55	.34		
4.5	117.74	11.89	.42		
5.0	116.00	12.31	.21		
5.5~~8~~	115.12	12.52	.18		
6.0	114.39	12.70	.20		
6.5	113.59	12.90	.34		
7.0	112.22	13.24	.34		
7.5	110.91	13.57	.25		
8.0	109.92	13.82	.15		
8.5	109.~~36~~ 5	13.97	.07		
9.0	109.08	14.04	.03		
9.5	108.96	14.07	.04		
10.0	108.80	14.11	.03		
10.5	108.69	14.14	.01		
11.0	108.71	14.13	.00		
11.5	108.72	14.13	.01		
12.0	108.70	14.14			


T' = T+20 / T
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13

12.31 - 16 18


RESISTANCE
12
13
14
15
16
0
10
20
30
40
50
60
70
80
HOLE B-277 779-5
DEPTH METERS
TEMPERATURE °C
44.5° C/Km
32.0° C/Km
29.5°C
17.10 ○ 29.5
6.30 0.88 @3.0
(17.1) ○ 45, 32
6.30 1.1 @ 35
OK

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T _____ R _____ sec _____

Drill Hole B-277 779-5 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
12.5	108.69	14.14			
			.00		
13.0	108.64	14.13			
			.01		
13.5	108.63	14.15			
			.00		
14.0	108.56	14.17			
			.02		
14.5	108.52	14.18			
			.01		
15.0	108.41	14.21			
			.03		
15.5	108.25	14.25			
			.04		
16.0	108.14	14.28			
			.03		
16.5	108.12	14.29			
			.01		
17.0	108.04	14.31			
			.02		
17.5	107.98	14.32			
			.01		
18.0	107.88	14.35			
			.03		
18.5	107.79	14.37			
			.02		
19.0	107.69	14.40			
			.03		
~~20.0~~ 19.5	107.59	14.42			
			.02		
20.0	107.53	14.44			
			.02		
25.0	106.63	14.67			
			.23		
30.0	105.73	14.91			
			.24		
35.0	105.01	15.10			
			.19		
40.0	104.31	15.28			
			.18		
45.0	103.68	15.45			
			.17		

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

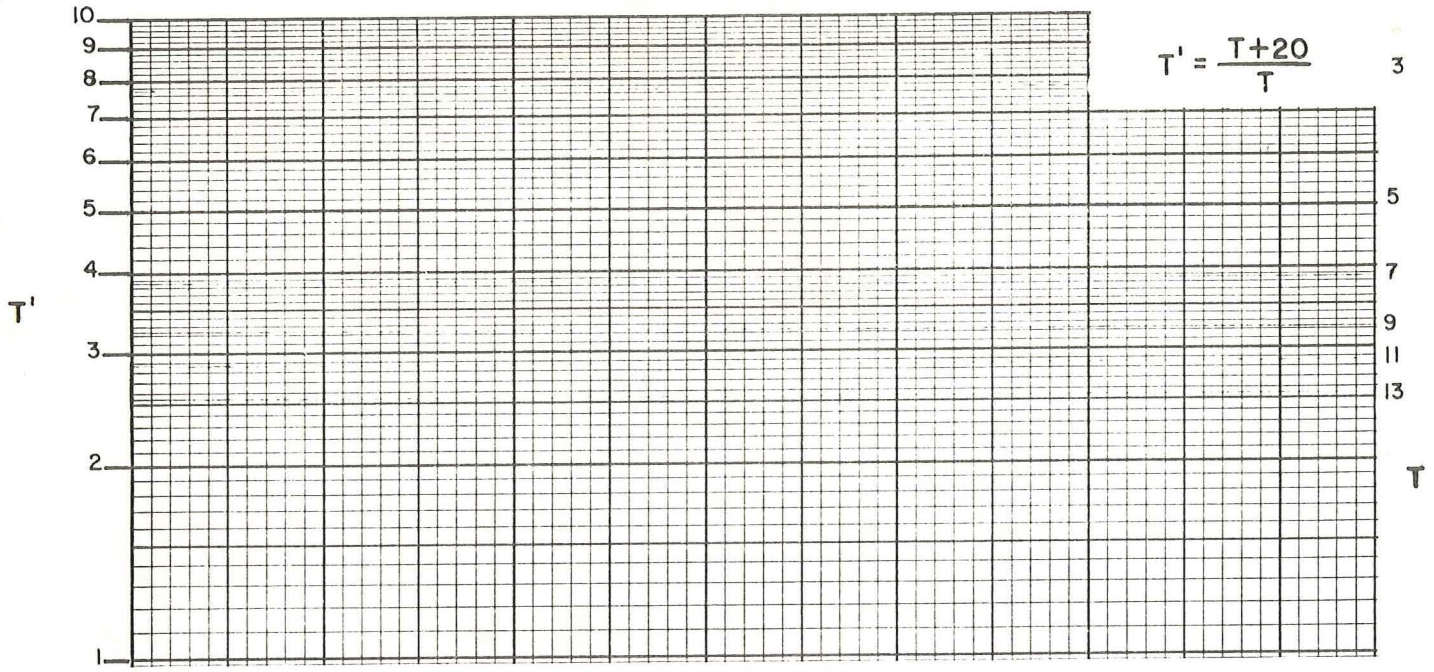
Property _____ T ____ R ____ sec ____

Drill Hole B-277 779-5 Date Drilled _____ Elevation _____ ft.

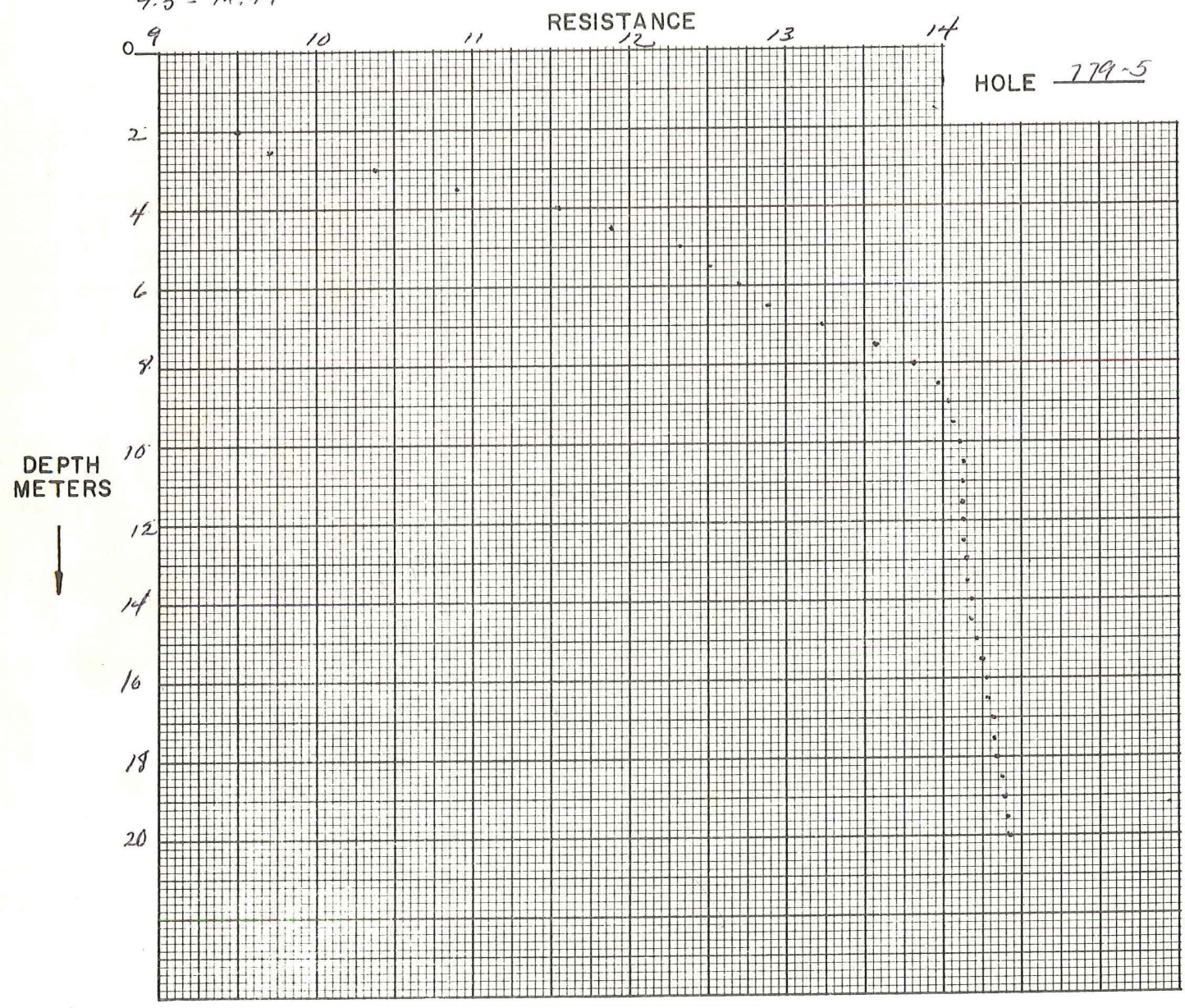
Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
50.0	103.06	15.62	.17		
55.0	102.52	15.76	.14		
60.0	101.96	15.91	.15		
65.0	101.37	16.07	.16		
69.0	100.98	16.18	.09		


T' = (T+20)/T
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13

9.5 - 14.44


RESISTANCE
9
10
11
12
13
14
0
2
4
6
8
10
12
14
16
18
20
HOLE 779-5
DEPTH METERS
TEMPERATURE °C

cc: Hall
Lange
Deymonaz
Caywood

LITHOLOGIC LOG B-277 (779-5)

OK PROJECT

ELEVATION: 5,000'

NE¼ SW¼ Sec 26 T23S R8W

DATE DRILLED: 4/13/77

Depth (m)	DESCRIPTION
0 - 9	Qal Gravel - light gray w iron staining; rounded-angular; 90% rhyolite, 10% feldspar, bio and hb.
9 - 15	Qal Sand - light gray; subrounded-angular; ave 2mm; 90% rhyolite, 10% feldspar, bio and hb.
15 - 18	Qal Gravel - light gray; 20% clay matrix; ave 4 mm; subrounded; 90% rhyolite, 10% feldspar, quartz, bio and hb.
18 - 21	Qal Sandy Clay - buff
21 - 27.5	Qal Sand - repeat (30-50)
27.5 - 33.5	Qal Sandy Clay - buff
33.5 - 61	Qal Clayey Sand - 30-40% clay matrix; 1mm-10mm; subrounded-angular; 90% rhyolite.
43 - 49	Water
61 - 64	Qal Clayey Sand - repeat 110-200 except range 1mm-5mm.
64 - 68	Qal Sandy Clay - blue gray

TEMPERATURE DEPTH LOG

ΔT Well No. 278

Property-Project Best Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

RT JUSTIFY:

Card A

Proj No →	Well No →	Date Logged DA →	MO →	YR	*
1 2 3 4	5 6 7 8 9 10	11 12	13 14 15	16 17 18	19 20
755	278	01	MY	77	CM

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

Site Description	Operator	Editor
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
2.1 KM SW OF MONUMENT PEAK	JED	MLH

Card B

Scale Unit in cm	Map Size (7.5, 15.,60)	Map Location Δ N Lat Degree	Min	W Long Degree	Min
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
CM	15.	38.	00.	113.	15.

Use decimals

Δ 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
10.1	7.3	5770.	F

Use decimals

← Write M if meters

SEGMENT DEPTH

	Start	End	K	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
C	25.0	65.0	-4.5	-.5
D				
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
	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
C	.999			
D				
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location 1.5 MILES W. OF MONUMENT PK Date 1-MAY-77

Map THERMO UT, 15"

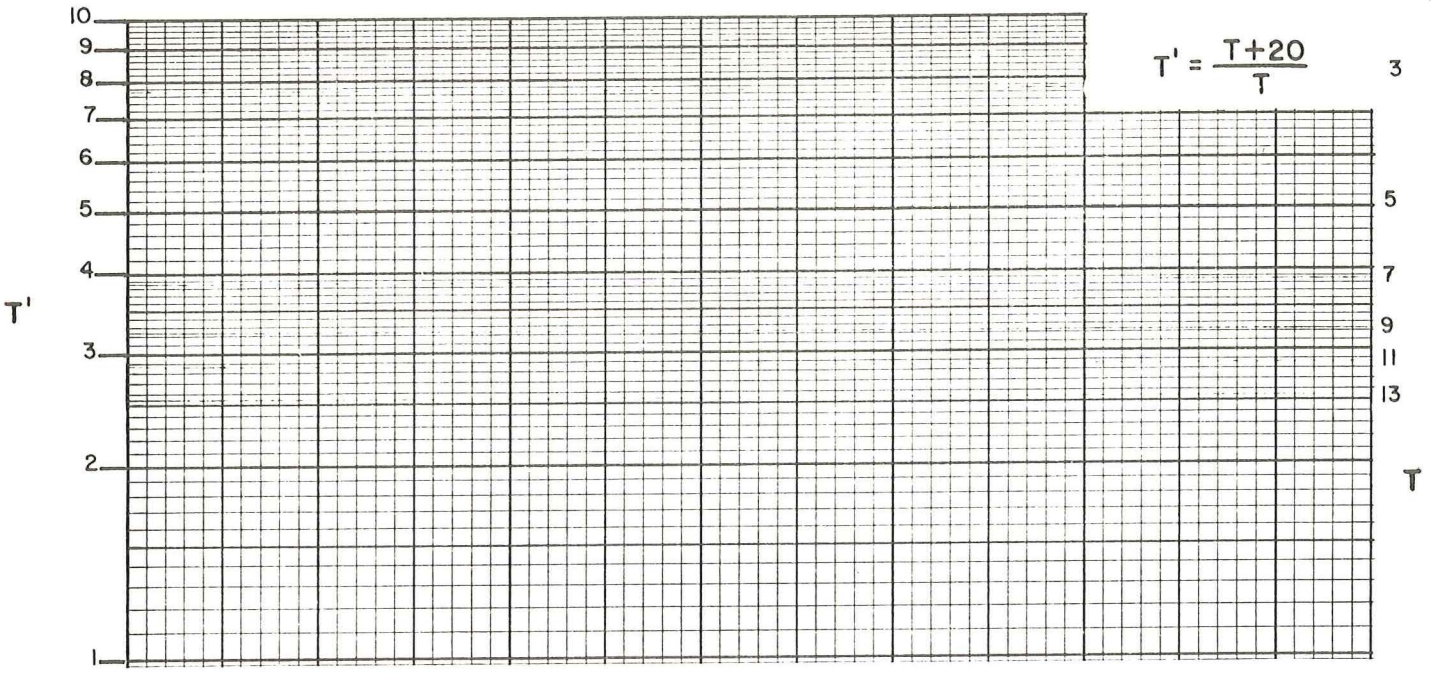
Property BEST B-278 T 31 S R 12 W sec 33 SE¼ SE¼

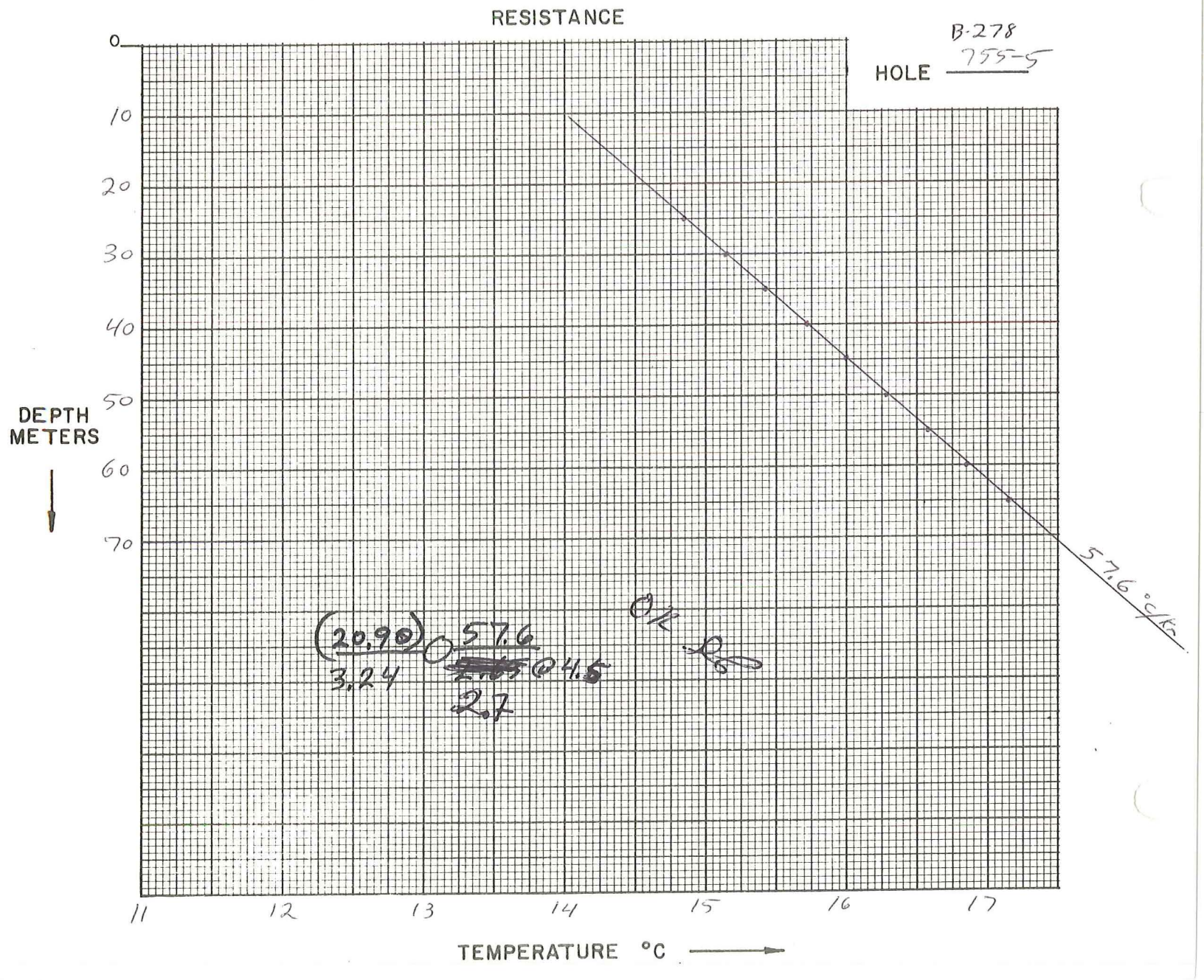
Drill Hole 755-5 Date Drilled 20-APRIL-77 Elevation 5770 ft.

Instrument #39 Operator JED

Comments 3/4" WATER FILLED PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
25	10596	14.85			
			0.29	58	
30	10486	15.14			
			0.28	56	
35	10380	15.42			
			0.30	60	
40	10269	15.72			
			0.27	54	
45	10168	15.99			
			0.30	60	
50	10058	16.29			
			0.29	58	
55	9954	16.58			
			0.28	56	
60	9853	16.86			
			0.30	60	
65	9746	17.16			


$T' = \frac{T+20}{T}$
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13


RESISTANCE
HOLE B-278 755-5
DEPTH METERS
0
10
20
30
40
50
60
70
11
12
13
14
15
16
17
TEMPERATURE °C
57.6 °C/Km
(20,90) 57.6
3,24 @4.5
2.7
Ø Z ~ 2.6

cc: Hall
Lange
Deymonaz
Caywood

LITHOLOGIC LOG B-278 (755-5)

Best Project

ELEVATION: 5,770'

SE¼ SE¼ Sec 33 T31S R12W

DATE DRILLED: 4/20/77

Depth (m)	DESCRIPTION
0 - 5	Welded XL-Tuff - red, oxidized.
5 - 5.5	Welded XL-Tuff - as above with small zones of red ash.
5.5 - 8	XL-Tuff - Moderately well indurated with abundant red clay.
8 - 29	XL-Tuff - red oxidized, intermittent dry clay zones. Small zones of extreme alteration. Hard-soft, hard, etc.
29 - 67	Rhyolite - XL-bearing with numerous zones of red to yellow-brown clays. Often occurring every foot or two.

TEMPERATURE DEPTH LOG

ΔT Well No. 279

Property-Project Best Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →	Well No →	Date Logged DA →	MO →	YR	*
1 2 3 4	5 6 7 8 9 10	11 12	13 14 15	16 17 18	19 20
7 5 5	2 7 9	0 1	M Y	7 7	C M

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

Site Description	Operator	Editor
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
2 . 4 K M N E O F B A D G E R P E A K	J E D	M L H

Card B

Map Location Δ: Scale Unit in cm	Map Size (7.5, 15.,60)	N Lat Degree	N Lat Min	W Long Degree	W Long Min
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
C M	1 5 .	3 8 .	0 0 .	1 1 3 .	1 5 .

Use decimals

Δ 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
2 1 . 3	1 6 . 6 5	5 7 0 0 .	F

Use decimals 16.8

← Write M if meters

SEGMENT DEPTH

	Start	End	K	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
C	1 0 . 0	3 0 . 0		
D	5 5 . 0	6 5 . 0		- . 5
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
	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
C	3 0 . 0	5 5 . 0	- 6 . 5	. 5
D	. 9 9 9			
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location HOT SPRINGS CANYON Date 1-MAY-77

Map THERMO UT, 15"

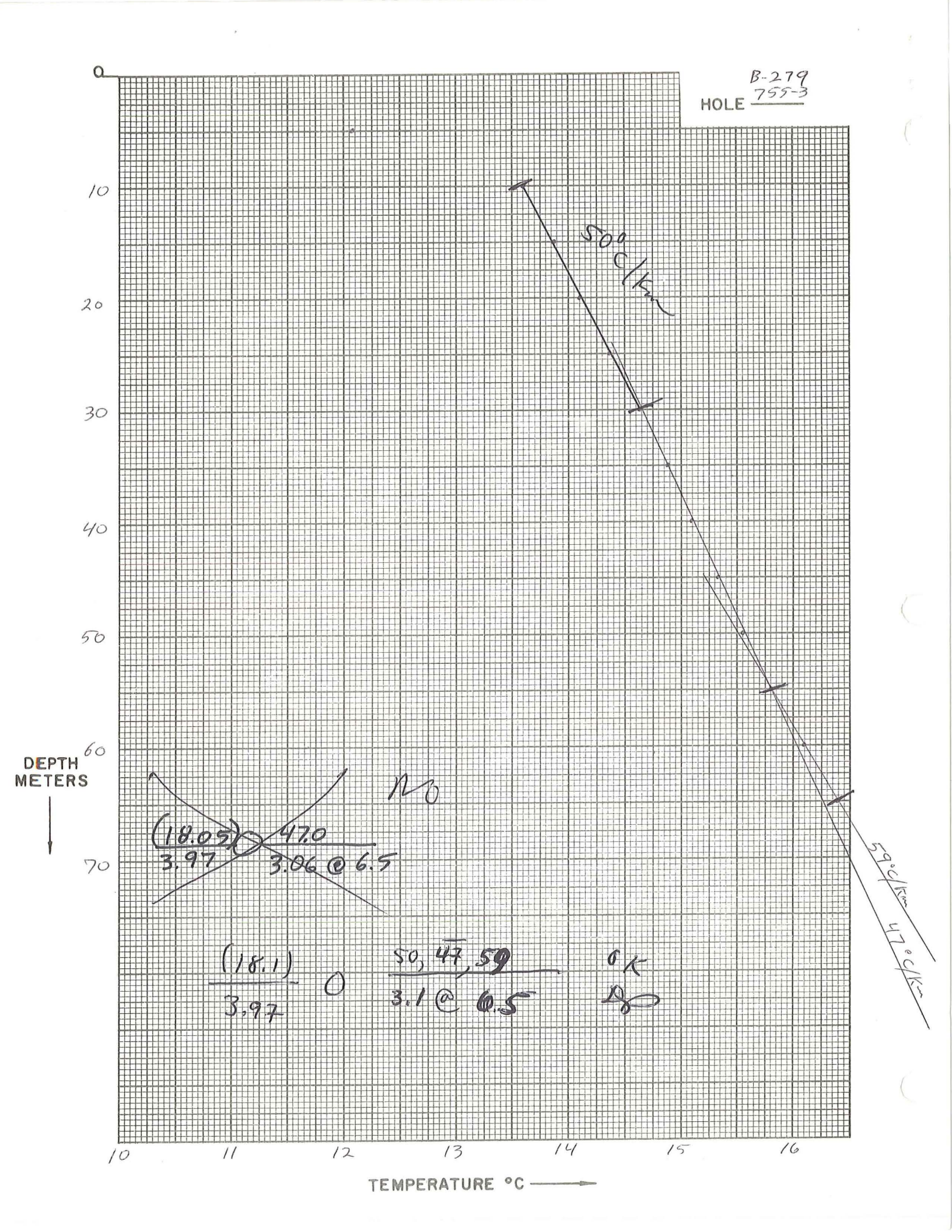
Property BEST T 31S R 11W sec 7 SE¼ SW¼

Drill Hole B-279 755-3 Date Drilled 27-APRIL-77 Elevation 5700 ft.

Instrument #39 Operator JEO

Comments 3/4 WATER FILLED PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
5	11700	12.07			
			1.55		
10	11075	13.62			
			0.25	50	
15	10976	13.87			
			0.24	48	
30	10883	14.11			
			0.26	52	
25	10779	14.37			
			0.26	52	
30	10681	14.63			
			0.24	48	
35	10589	14.87			
			0.23	46	
40	10500	15.10			
			0.23	46	
45	10414	15.33			
			0.23	46	
50	10328	15.56			
			0.25	50	
55	10235	15.81			
			0.29	58	
60	10129	16.10			
			0.30	60	
65	10018	16.40			


B-279
HOLE 755-3
0
10
20
30
40
50
60
70
DEPTH METERS
50°C/Km
59°C/Km
47°C/Km
NO
(18.05)
3.97
47.0
3.06 @ 6.5
(18.1)
3.97
50, 47, 59
3.1 @ 6.5
OK
10
11
12
13
14
15
16
TEMPERATURE °C

cc: Hall
Lange
Deymonaz
Caywood

LITHOLOGIC LOG B-279 (755-3)

Best Property

ELEVATION: 5,700'

SE¼ SW¼ Sec 7 T31S R11W

DATE DRILLED: 4/27/77

Depth (m)	DESCRIPTION
0 - 5	Qal - yellow-brown silt with frags of red to gray latite prorphry.
5 - 7	Latite - gray aphanitic
7 - 14	Latite - gray to red prophyritic.
14 - 32	Latite - gray XL-bearing to aphanitic
32 - 40	Latite - as above, but more reddish.
40 - 44	Latite - red oxidized and altered.
44 - 53	Latite - reddish-gray, XL-bearing, Large feldspar XLS. (K=6.5-7.0)
53 - 67	Obsidian - Dark gray, highly fractured, partly devitrified, devitrification increases with depth. 85% at 220'

TEMPERATURE DEPTH LOG

ΔT Well No. 280

Property-Project Best Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

RT JUSTIFY:

Card A

Proj No →				Well No →						Date Logged DA →		MO →		YR		*	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	7	5	5				2	8	0	1	1		M	Y		7	7	C	M

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

| Site Description | | | | | |

TEMPERATURE - DEPTH LOG

Location 2 MILES NE OF MONUMENT PK Date 10-MAY-77

Map THERMO UT, 15"

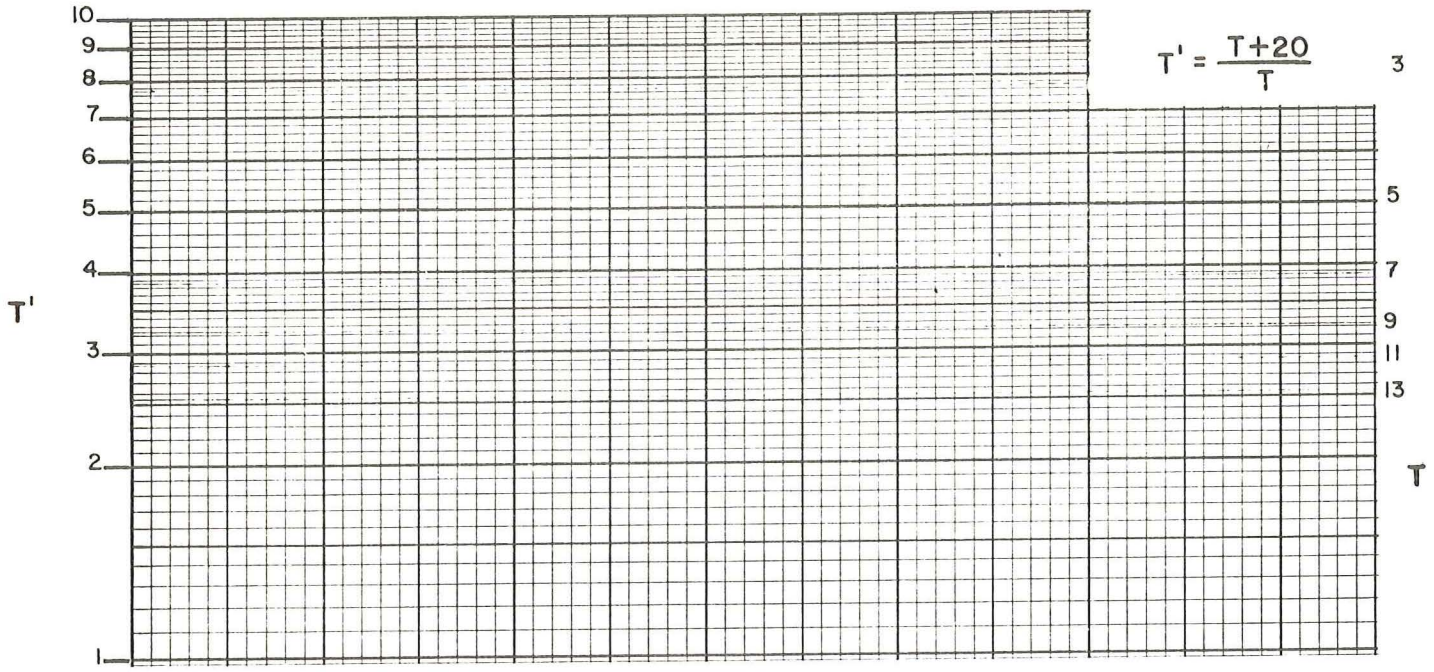
Property BEST B-280 T 31 S R 12 W sec 25 NE¼ SE¼

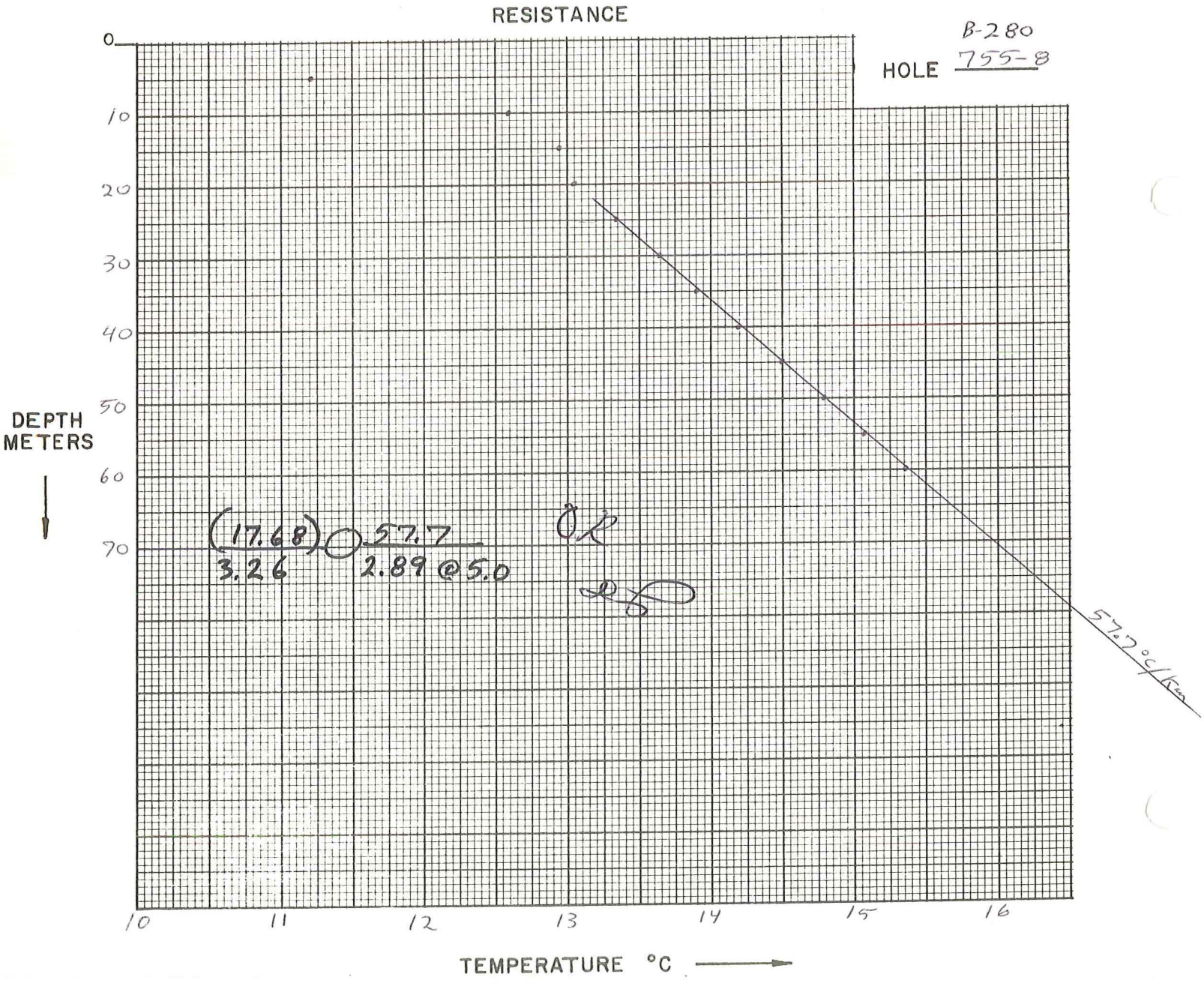
Drill Hole 755-8 Date Drilled 29-APRIL-77 Elevation 6160 ft.

Instrument # 39 Operator JED

Comments 3/4" WATER FILLED PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
5	12053	11.22			
			1.38		
10	11482	12.60			
			0.36	72	
15	11337	12.96			
			0.08	16	
20	11303	13.04			
			0.31	62	
25	11181	13.35			
			0.30	60	
30	11062	13.65			
			0.25	50	
35	10964	13.90			
			0.31	62	
40	10843	14.21			
			0.30	60	
45	10724	14.51			
			0.29	58	
50	10616	14.80			
			0.27	54	
55	10513	15.07			
			0.30	60	
60	10398	15.37			
64(?)	10295				


$T' = \frac{T+20}{T}$
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13


RESISTANCE
B-280
HOLE 755-8
DEPTH METERS
0
10
20
30
40
50
60
70
10
11
12
13
14
15
16
TEMPERATURE °C
(17.68) 57.7
3.26 2.89 @5.0
Ok
57.7°C/Km

cc: Hall
Lange
Deymonaz
Caywood

LITHOLOGIC LOG B-280 (755-8)

Best Project

ELEVATION: 6,160'

NE¼ SW¼ Sec 25 T31S R12W

DATE DRILLED: 4/29/77

Depth (m)	DESCRIPTION
0 - 5	Latite - Porphry, red oxidized partly silicified. Phenos of plag & K-spar 15%. Biotite and H.B. 5%, mafics altering to chlorite.
5 - 11	Latite Breccia - base of flow. Angular frags of XL latite as above in red aphanitic matrix.
11 - 23	Latite - as 0-15.
23 - 26	Clay - yellow-brown with angular frags of latite.
26 - 29	XL-Tuff - gray to red, poorly indurated.
29 - 48	Tuff - greenish-gray, altered. Red staining along fractures.
48 - 67	XL-Tuff - greenish-gray to red moderately well indurated. XLS of feldspar and biotite (K=5.0-5.5)

TEMPERATURE DEPTH LOG

ΔT Well No. 281

Property-Project Best Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →				Well No →						Date Logged DA →		MO →		YR		*	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	7	5	5				2	8	1	0	1		M	Y		7	7	C	M

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

| Site Description | | | | | |

TEMPERATURE - DEPTH LOG

Location 2 MILES S-SE OF MONUMENT PR Date 1-MAY-77

Map THERMO UT, 15"

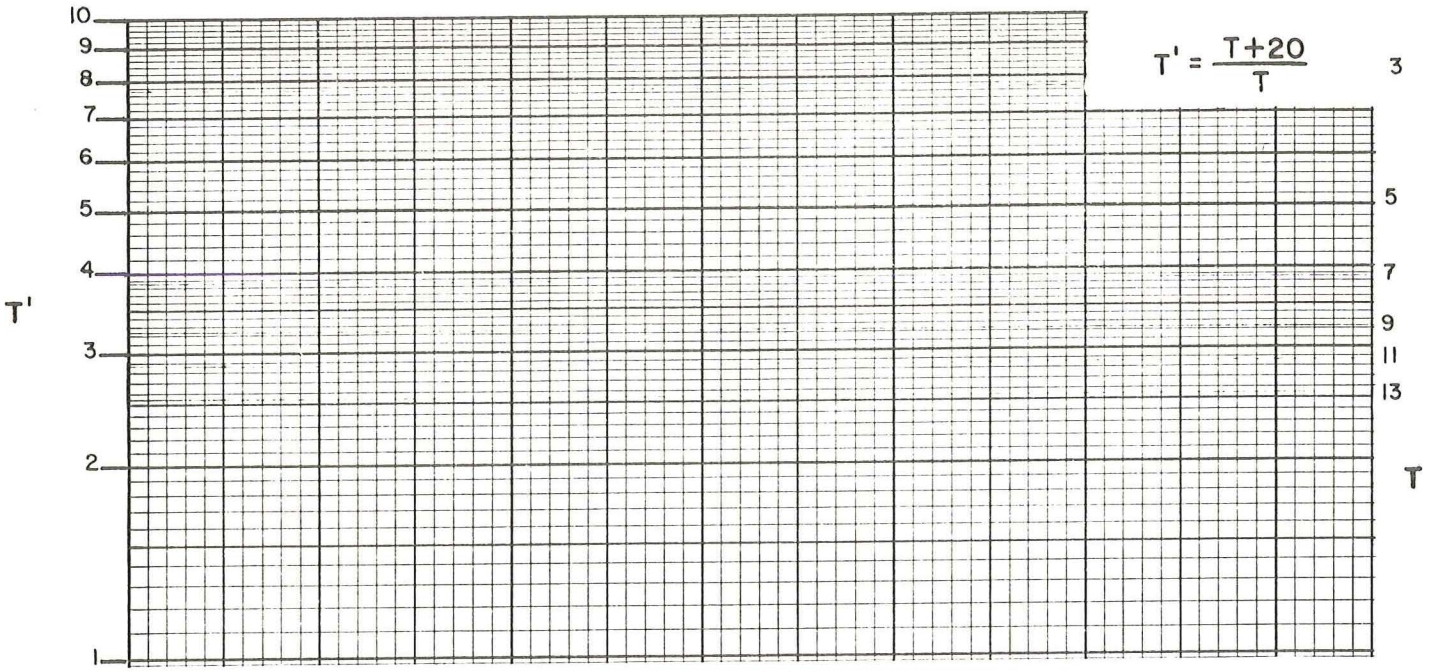
Property BEST B-281 T 32S R 12W sec 2 SE¼ SW¼

Drill Hole 755-9 Date Drilled 20-APRIL-77 Elevation 5750 ft.

Instrument # 39 Operator JEO

Comments 3/4" WATER FILLED PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
5	11653	12.18			
10	10768	14.40	0.39	78	
15	10617	14.79	0.46	92	
20	10446	15.25	0.52	104	
25	10269	15.72	0.41	82	
30	10115	16.13	0.49	98	
35	9938	16.62	0.44	88	
40	9780	17.06	0.41	82	
45	9633	17.47	0.44	88	
50	9479	17.91	0.49	98	
55	9311	18.40	0.44	88	
60	9163	18.84	0.42	84	
65	9021	19.26	0.42	84	
70	8881	19.68	0.49	98	
75	8722	20.17	0.43	86	
80	8583	20.60	0.49	98	
85	8429	21.09			
90	8301	21.50			



RESISTANCE

HOLE B-281 755-9

DEPTH METERS

0
10
20
30
40
50
60
70
80
90
100

10 11 12 13 14 15 16 17 18 19 20 21 22

TEMPERATURE °C

(22.40) 88.7
2.10 4.44@5.0

OK

88.7 °C/Km

cc: Hall
Lange
Deymonaz
Caywood

LITHOLOGIC LOG B-281 (755-9)

Best Project

ELEVATION:5,750'

SE¼ SW¼ Sec 2 T32S R12W

DATE DRILLED: 4/20/77

Depth (m)	DESCRIPTION
0 - 15	Gravel - 40-50% silty matrix. Gravel primarily dark gray aphanitic rhyolite with few small XLS of plags sanidine and quartz. (K=3.0-3.5)
15 - 47	XL-Welded Tuff - reddish-brown with 10-15% phenos of feldspar altered to kaolin and mafics to chlorite. Small amount of quartz. Minor quartz filled vesicles.
41 - 47	Fractured (K=5.0-5.5)
47 - 52	XL-Welded Tuff - as above, but larger phenos and some flow banding. Feldspars 50-70% altered.
52 - 56	XL-Tuff - white to brown, poorly indurated. Mostly altered to clay (K=4.0-4.5)
56 - 59	XL-Tuff - as above with brown. (K=4.0=4.5)
59 - 69	XL-Tuff - as above with red oxidized and containing lithic frags.
69 - 72	Obsidian - fractured, partly devitrified. Base of flow.
72 - 75	XL-Tuff - brown, poorly indurated.
75 - 79	Welded Tuff - medium-gray with red staining.
79 - 91	Welded XL-Tuff - red stained, dense (K=5.5-6.0)

TEMPERATURE DEPTH LOG

ΔT Well No. 282

Property-Project Ok Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

RT JUSTIFY:

Card A

Proj No →				Well No →						Date Logged DA →		MO →		YR		*	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
		7	7	9			2	8	2	2	1		A	P		7	7	C	M

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

| Site Description | | | | | |

TEMPERATURE - DEPTH LOG

Location 6 mi. West of Kanosh Date 21 April 77

Map Tabernacle Hill 15"

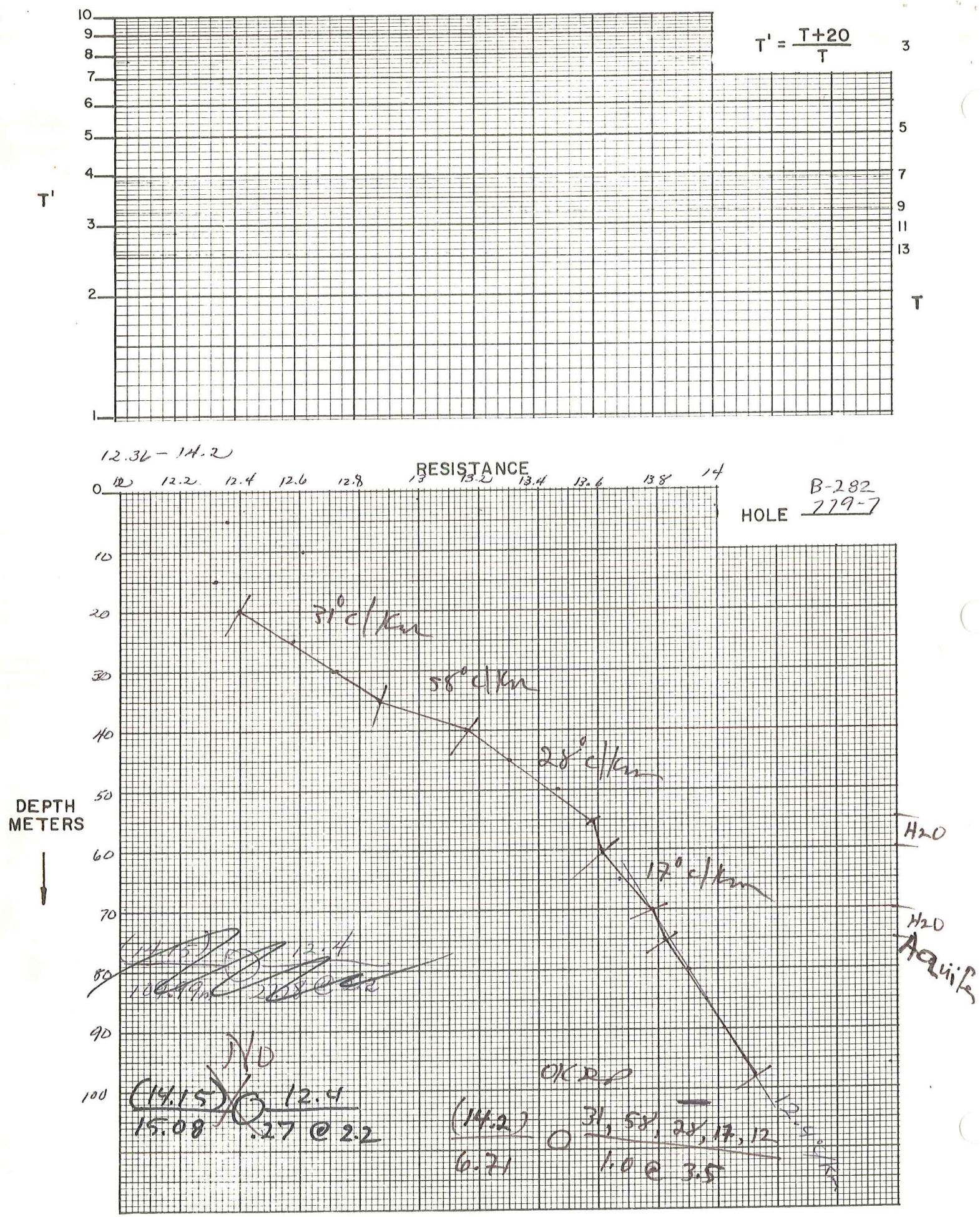
Property T 23S R 6W sec 21 SW¼ NE¼

Drill Hole B-282 779-7 Date Drilled 5 April 77 Elevation 4760 ft.

Instrument Probe 39 Operator DAB

Comments PVC 3/4" water filled

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
2.0	126.36	9.86			
			.59		
2.5	123.83	10.45			
			.57		
3.0	121.~~42~~ 36	11.02			
			.39		
3.5	119.73	11.41			
			.33		
4.0	118.36	11.74			
			.32		
4.5	117.01	12.06			
			.30		
5.0	115.79	12.36			
			.31		
5.5	114.53	12.67			
			.16		
6.0	113.87	12.83			
			.03		
6.5	113.77	12.86			
			.02		
7.0	113.83	12.84			
			.00		
7.5	113.84	12.84			
			.03		
8.0	113.95	12.81			
			.03		
8.5	114.14	12.77			
			.05		
9.0	114.31	12.72			
			.05		
9.5	114.53	12.67			
			.06		
10.0	114.78	12.61			
			.05		
10.5	114.99	12.56			
			.04		
11.0	115.14	12.52			
			.03		
11.5	115.27	12.49			
			.04		
12.0	115.42	12.45			
			.04		
12.5	115.58	12.41			


T' = (T+20)/T
T'
T
RESISTANCE
HOLE B-282 229-7
DEPTH METERS
TEMPERATURE °C
31° c/Km
58° c/Km
28° c/Km
17° c/Km
12° c/Km
H2O
H2O
Aquife
12.36 - 14.2
(14.15) 12.4
15.08 .27 @ 2.2
(14.2) 31, 58, 28, 17, 12
6.71 1.0 @ 3.5

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T ____ R ____ sec ____

Drill Hole B-282 7799-7 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
13.0	115.72	12.38			
			.03		
13.5	115.81	12.36			
			.02		
14.0	115.87	12.34			
			.02		
14.5	115.92	12.33			
			.01		
15.0	115.94	12.32			
			.01		
15.5	115.99	12.31			
			.01		
16.0	115.99	12.31			
			.00		
16.5	115.99	12.31			
			.00		
17.0	115.96	12.32			
			.01		
17.5	115.91	12.33			
			.01		
18.0	115.84	12.35			
			.01		
18.5	115.78	12.36			
			.01		
19.0	115.74	12.37			
			.02		
19.5	115.71	12.39			
			.01		
20.0	115.61	12.40			
			.02		
25.0	114.91	12.58			
			.14		
30.0	114.32	12.72			
			.15		
35.0	113.27	12.87			
			.29		
40.0	112.55	13.16			
			.14		
45.0	111.99	13.30			
			.17		
50.0	111.33	13.47			
		58	.11		

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

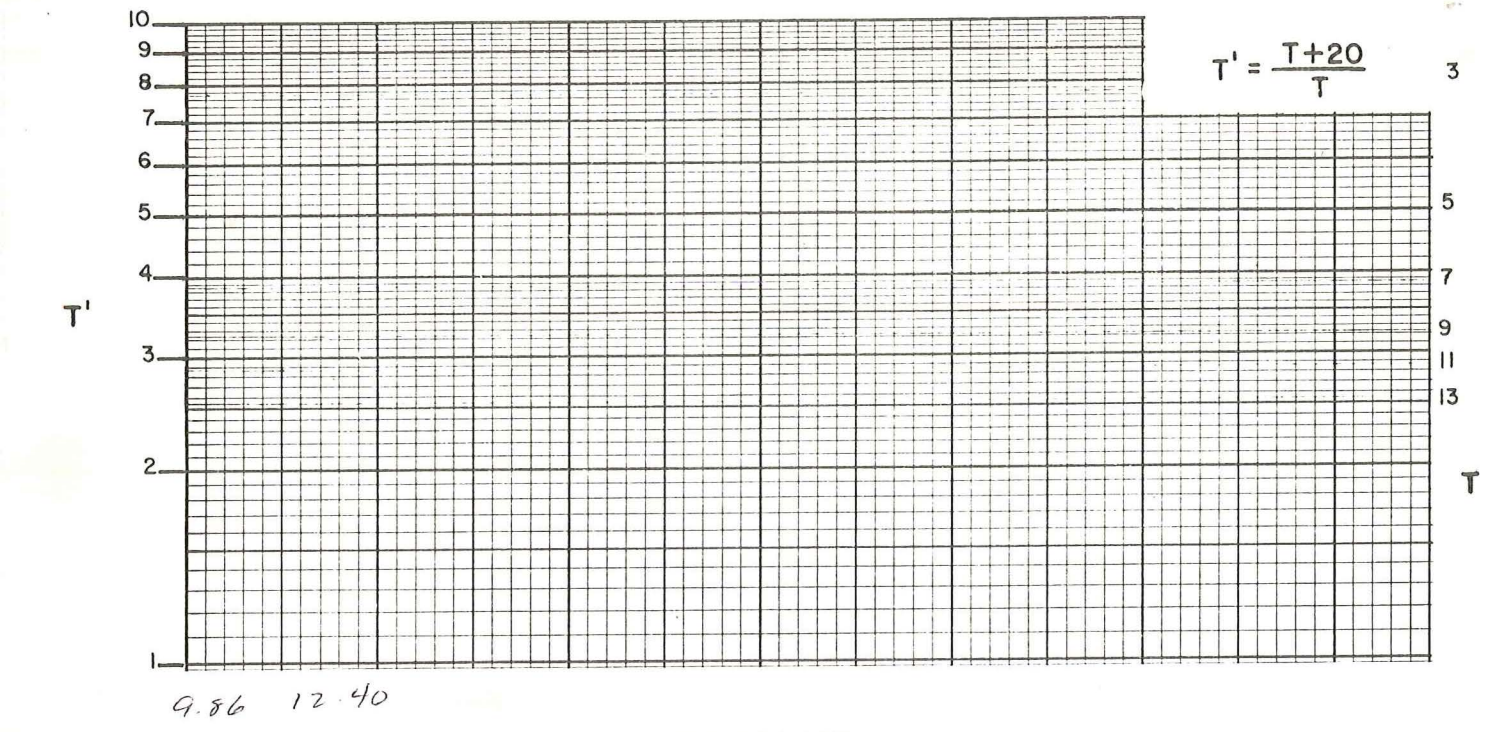
Property _____ T ____ R ____ sec ____

Drill Hole B-282 779-7 Date Drilled _____ Elevation _____ ft.

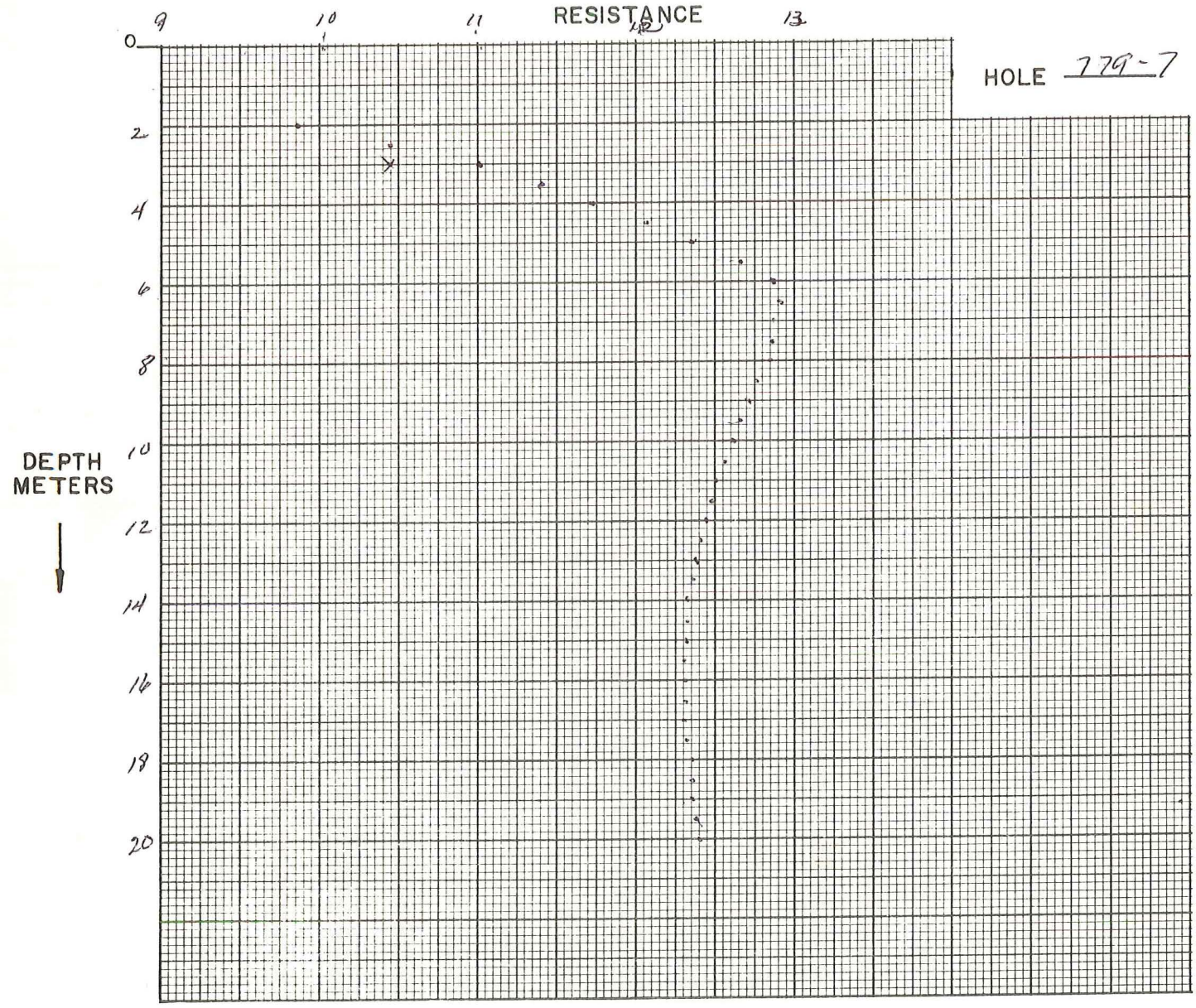
Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
55.0	110.90	13.58			
			.03		
60.0	110.75	13.61			
			.06		
65.0	110.54	13.67			
			.11		
70.0	110.11	13.78			
			.04		
75.0	109.94	13.82			
			.08		
80.0	109.64	13.90			
			.06		
85.0	109.38	13.96			
			.06		
90.0	109.14	14.02			
			.07		
95.0	108.87	14.09			
			.03		
98.0	108.76	14.12			


T' = T+20 / T
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13

9.86 12.40


RESISTANCE
9
10
11
12
13
HOLE 779-7
DEPTH METERS
0
2
4
6
8
10
12
14
16
18
20
TEMPERATURE °C

cc: Hall
Lange
Deymonaz
Caywood

LITHOLOGIC LOG B-282 (779-7)

OK PROJECT

ELEVATION: 4,760'

SW¼ NE¼ Sec 21 T23S R6W

DATE DRILLED: 4/5/77

Depth (m)	DESCRIPTION
0 - 18	Qal Sandy Clay - buff brown
18 - 76	Qal Gravel - w clay - silt matrix; subrounded-angular; 2mm-30mm; ave ~12mm; ~60% pink and white quartzite, 30% dolomite, 10% basalt (?).
76 - 98	Qal Gravel - with clay-silt matrix; subrounded-angular; 2mm-30mm; ave 4mm; ~40% limestone/dolomite, 30% quartzite, 30% mudstone (?)

Transient Log

B 283

TEMPERATURE DEPTH LOG

ΔT Well No. 821-9

Property-Project Burning Stone / Depth Logged 67 m

Map Frisco Scale 15 Date: Drilled ____ Logged 11 June 77

State Utah County Beaver Section 8 NE¼ NE¼ T 29S R 13W

Instrument #39 Operator DAB Elevation 6000 ft.

Comments 3/4" water filled PVC

COMPUTER PROCESSING

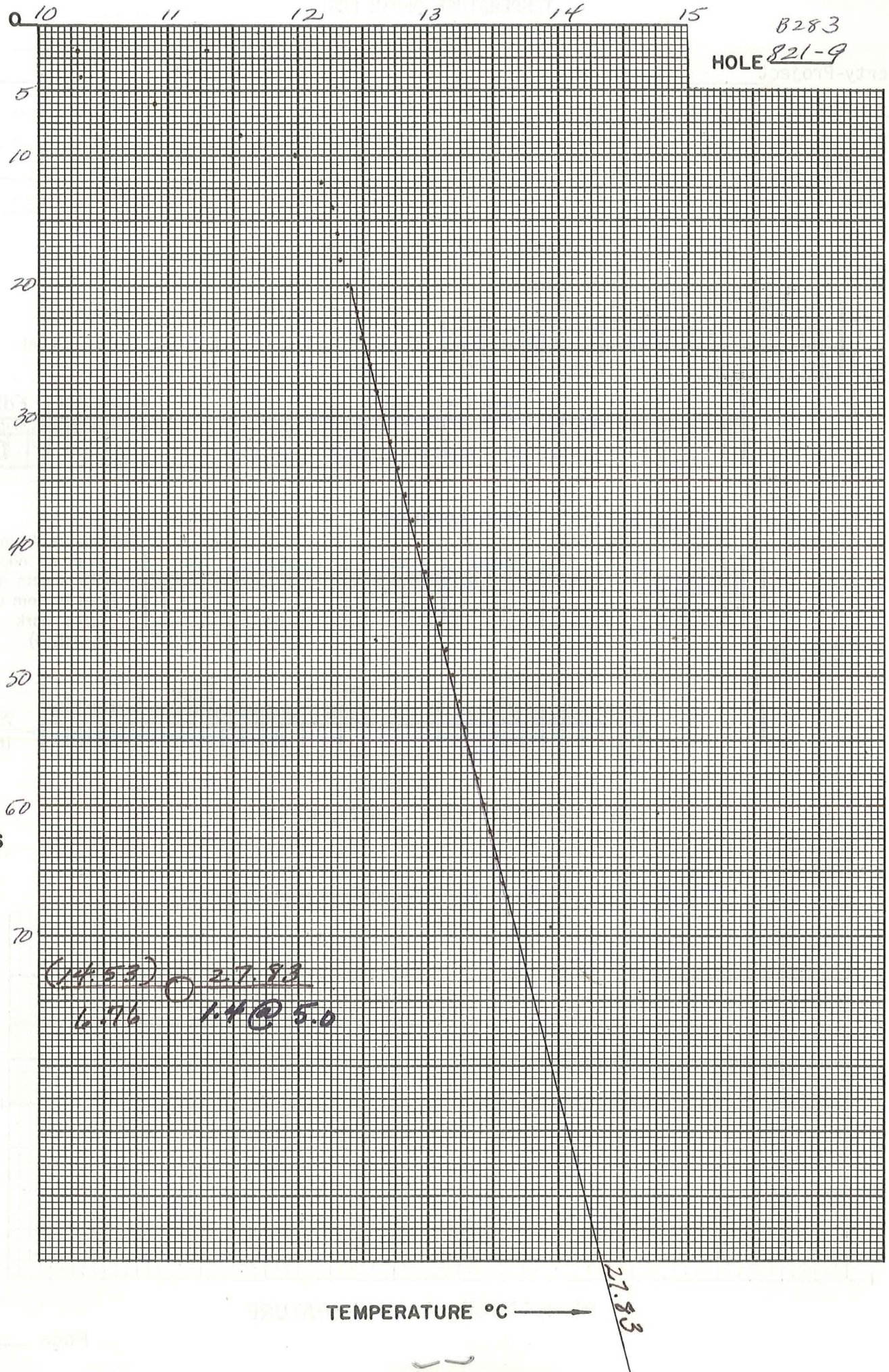
Card A

RT JUSTIFY:

Proj No →				Well No →						Date Logged DA →		MO →		YR		*	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
8	2	1			B	2	8	3		1	1		7	7		7	7	C	M

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

| Site Description | | | | | |


B283
HOLE 821-9
0
10
11
12
13
14
15
5
10
20
30
40
50
60
70
DEPTH METERS
TEMPERATURE °C
(14.53) 2.7.83
6.76 1.1 @ 5.0
27.83

B 283

Date Logged: 11 June 77

ΔT Well No. 821-9

821-9

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
2	120.20	11.30	.97				
4	124.33	10.33	.57				
6	121.89	10.90	.66				
8	119.11	11.56	.42				
10	117.36	11.98	.21				
12	116.51	12.19	.07				
14	116.20	1226	.04				
16	116.05	12.30	.03 ~~.23~~				
18	115.90	12.33	.05				
20	115.70	12.38	.07				
22	115.43	12.45	.04				
24	115.24	~~12.49~~ 12.49	.06				
26	115.03	12.55	.05				
28	114.80	12.60	.06				
30	114.59	12.66	.05				
32	114.35	12.71	.06				
34	114.11	12.77	.06				
36	113.89	12.83	.05				
38	113.69	12.88	.05				
40	113.48	12.93	.05				
42	113.27	12.98	.05				
44	113.06	13.03	.06				
46	112.84	13.09	.05				
48	112.64	13.14	.05				
50	112.44	13.19	.05				
52	112.25	13.24	.04				
54	112.06	13.28					

K=Conductivity

Date Logged: 11 Je 77

8283
ΔT Well No. 821-9

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
56	111.86	13.33	.05				
58	111.67	13.38	.05				
60	111.47	13.43	.05				
62	111.27	13.48	.05				
64	111.07	13.53	.05				
66	110.87	13.58	.02				
67	110.78	13.60					

K=Conductivity

TEMPERATURE - DEPTH LOG

Location 3 MILES E. OF BRIMSTONE MINE Date 7-MAY-77

Map FRISCO UT, 15"

Property BURNING STONE T 29S R 13W sec 8 NE¼ NE¼

Drill Hole B-283 821-9 Date Drilled 5-MAY-77 Elevation 6020 ft.

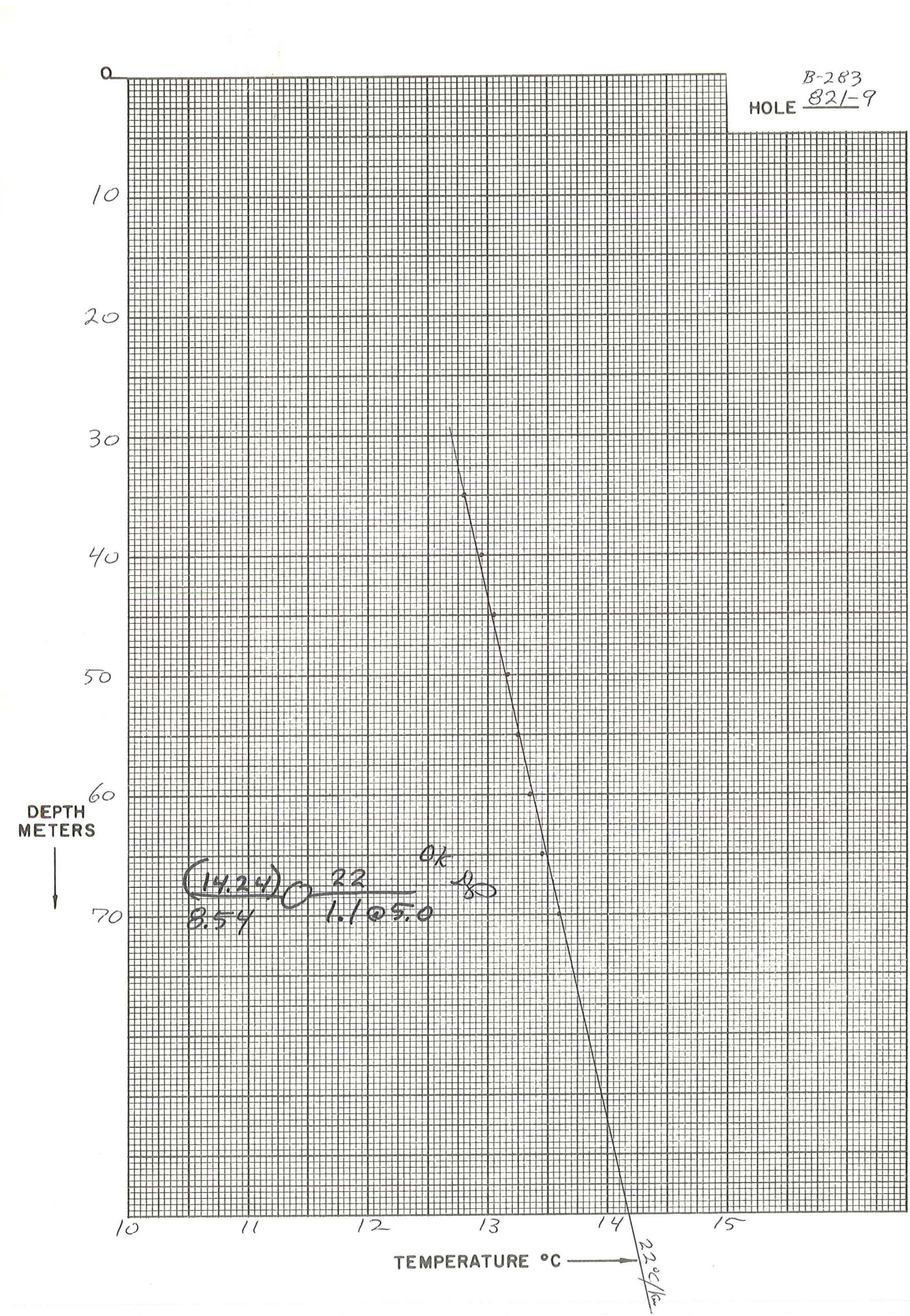
Instrument # 39 Operator JEO

Comments 3/4" WATER FILLED PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
35	11398	12.91			
			0.13	26	
40	11344	12.94			
			0.11	22	
45	11302	13.05			
			0.12	24	
50	11253	13.17			
			0.08	16	
55	11221	13.25			
			0.09	18	
60	11183	13.34			
			0.11	22	
65	11142	13.45			
			0.13	26	
70	11091	13.58			

B-283

HOLE 821-9



Transient Log

TEMPERATURE DEPTH LOG

ΔT Well No. 8284 821-4

Property-Project Burning Stone Depth Logged 67m

Map Frisco Scale 15 Date: Drilled Logged 14 June 77

State Utah County Beaver Section 18 SE¼ NE¼ T 29S R 13W

Instrument #39 Operator DAB Elevation 5760 ft.

Comments 3/4" water filled pvc

COMPUTER PROCESSING

RT JUSTIFY:

Card A

Proj No	Well No	Date Logged DA	MO	YR	*
821	8284				CM

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

Site Description	Operator	Editor
6.5 KM SOUTH OF MANTI LOPE PEAK		DP

Card B

Scale Unit in cm	Map Size (7.5, 15.,60)	N Lat Degree	N Lat Min	W Long Degree	W Long Min
cm	15.	39.	15.	113.	30.

Use decimals

Map Location △

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

Northing	Easting	Elev	
6.8	21.5	5760	F

7.0 21.7 5760.

Use decimals

← Write M if meters

SEGMENT DEPTH

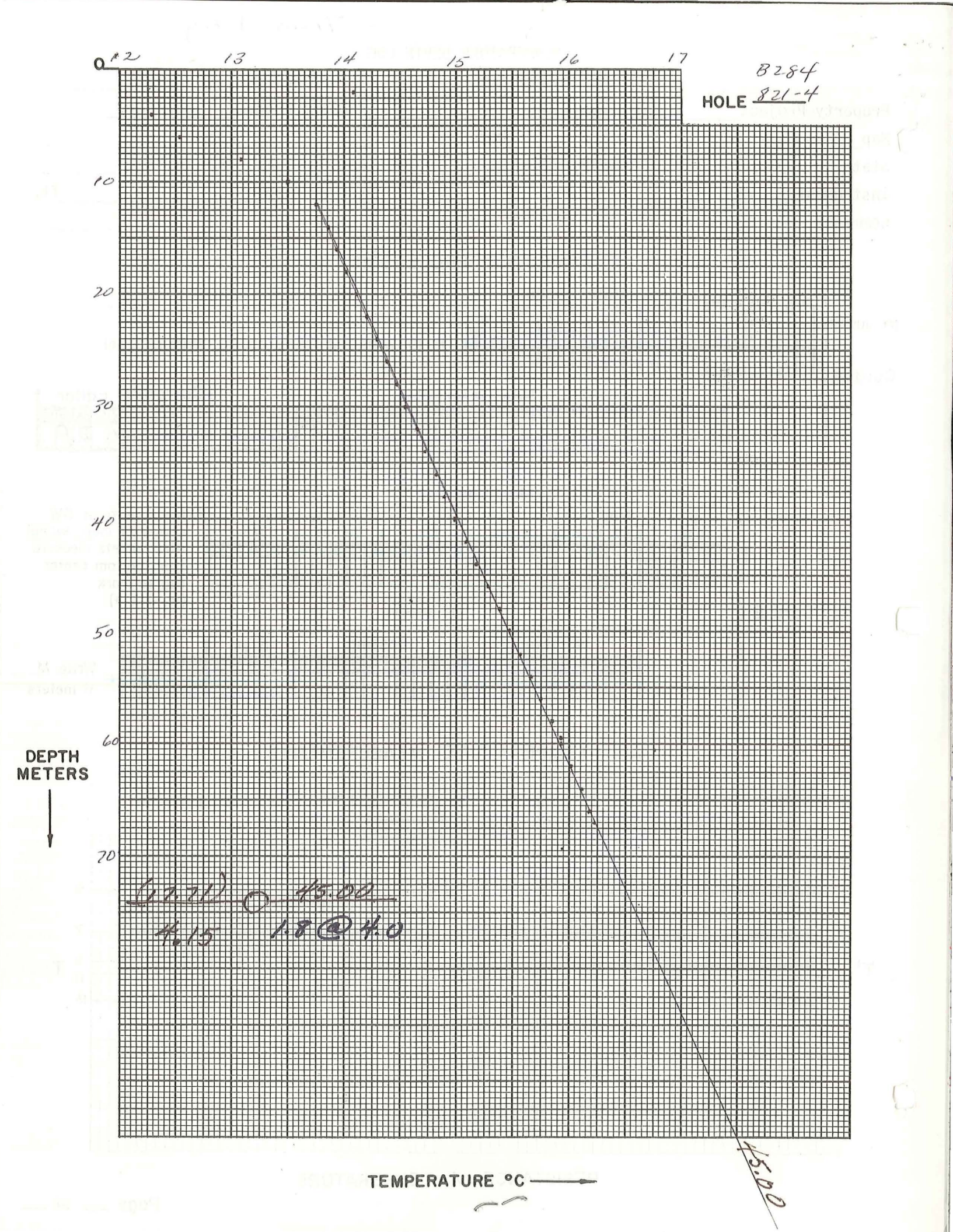
	Start	End	K	ΔK
C	14.0	67.0	-4.0	-.5
D				
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
C	.999			
D				
E				
F				
G				

Final Segment: Start = .999


12
13
14
15
16
17
B284
HOLE 821-4
10
20
30
40
50
60
70
DEPTH METERS
45.00
#15 1.8 @ 4.0
45.00
TEMPERATURE °C

Date Logged: 14 June 77

B 284
ΔT Well No. 821-4

821-4

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
2	108.88	14.09	1.81				
4	116.14	12.28	.26				
6	115.06	12.54	.55				
8	112.52	13.09	.41				
10	111.19	13.50	.25				
12	110.22	13.75	.11				
14	109.77	13.86	.08				
16	109.48	13.94	.08				
18	109.15	14.02	.09				
20	108.82	14.11	.09				
22	108.47	14.20	.09				
24	108.11	14.29	.09				
26	107.77	14.38	.09				
28	107.42	14.47	.08				
30	107.10	14.55	.10				
32	106.76	14.65	.07				
34	106.45	14.72	.10				
36	106.05	14.82	.07				
38	105.78	14.89	.10				
40	105.43	14.99	.10				
42	105.05	15.09	.08				
44	104.72	15.17	.11				
46	104.32	15.28	.10				
48	103.94	15.38	.09				
50	103.60	15.47	.09				
52	103.26	15.56	.10				
54	102.90	15.66					

K=Conductivity

Date Logged: 14 Je 77

8284
ΔT Well No. 821-4

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
56	102.58	15.75	.09				
58	102.20	15.85	.10				
60	101.89	15.93	.05				
62	101.59	16.01	.08				
64	101.24	16.11	.10				
66	100.97	16.18	.07				
67	10081	16.23	.05				

TEMPERATURE - DEPTH LOG

Location 2 MILES S.E. OF BURNINGSTONE MINE Date 7-MAY-77

Map FRISCO UT, 15"

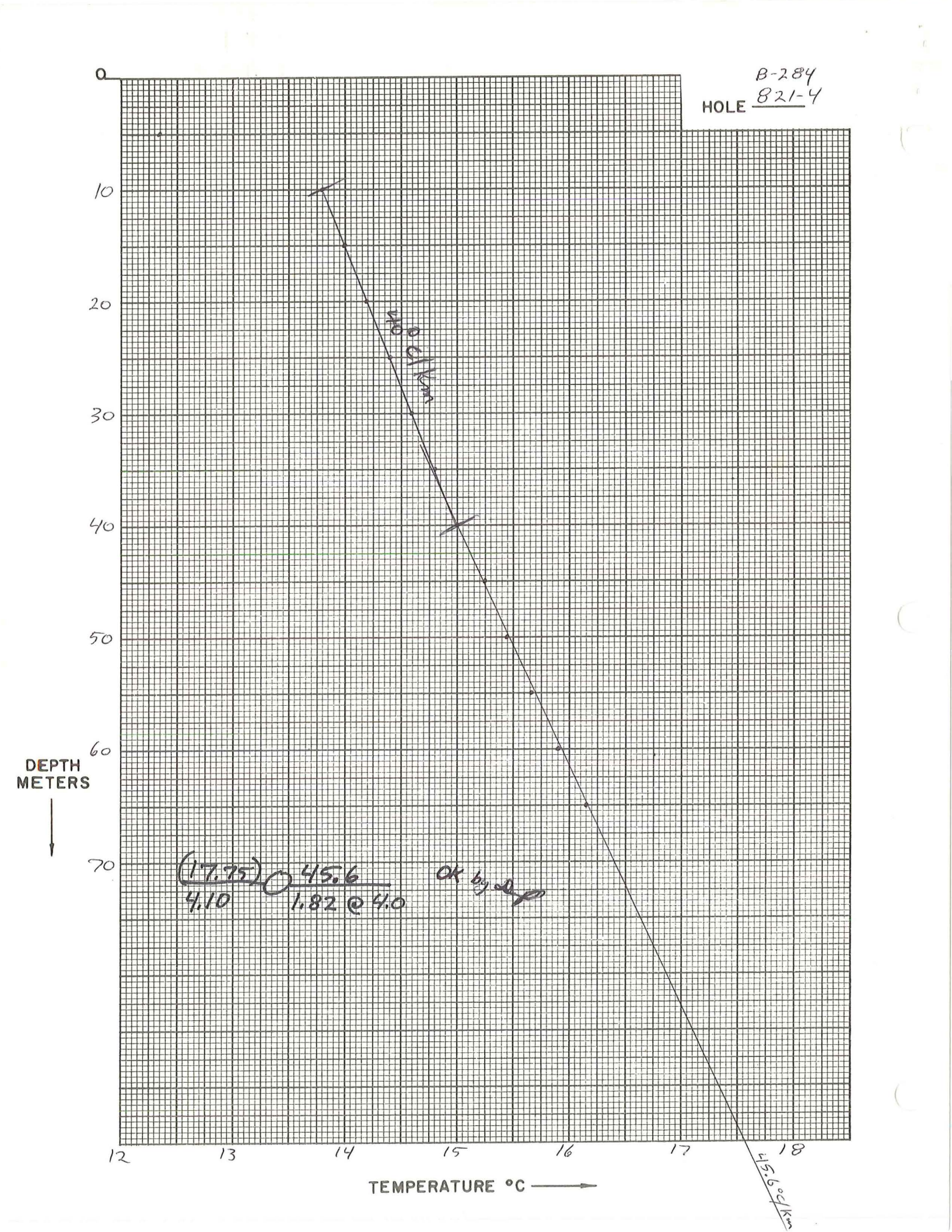
Property BURNING STONE B-284 T 29S R 13W sec 18 SE¼ NE¼

Drill Hole 821-4 Date Drilled 4-MAY-77 Elevation 5760 ft.

Instrument # 39 Operator JED

Comments 3/4" WATER FILLED PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
5	11581	12.36			
			1.43	286	
10	11006	13.79			
			0.22	44	
15	10919	14.01			
			0.17	34	
20	10854	14.18			
			0.20	40	
25	10775	14.38			
			0.20	40	
30	10699	14.58			
			0.23	46	
35	10613	14.81			
			0.20	40	
40	10536	15.01			
			0.24	48	
45	10446	15.25			
			0.19	38	
50	10372	15.44			
			0.23	46	
55	10285	15.67			
			0.24	48	
60	10197	15.91			
			0.21	42	
65	10109	16.15			


B-284
HOLE 821-4
0
10
20
30
40
50
60
70
DEPTH METERS
12
13
14
15
16
17
18
TEMPERATURE °C
780 C/Km
45.6 °C/Km
(17.75) / 4.10 = 45.6 / 1.82 @ 4.0
ok by

Transient Log

B-285

TEMPERATURE DEPTH LOG

ΔT Well No. 821-6

Property-Project Burning Stone) Depth Logged 68m.

Map Frisco Scale 15" Date: Drilled _____ Logged 14 June 77

State Utah County Beaver Section 18 SE¼NE¼ T 29S R 13W

Instrument #39 Operator DAB Elevation 5845 ft.

Comments 3/4" water filled PVC

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →				Well No →						Date Logged DA →		MO →		YR		*	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	8	2	1			B	2	8	5	1	4		6	1		7	7	C	M

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

Site Description																																															Operator					Editor				
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													
6	.	1		KM	S	5	W			A	M	S		2	0	P	S			E	A	C								2	1	8										D	P											

KM

Card B

Scale Unit in cm					Map Size (7.5, 15.,60)					Map Location △ N Lat Degree					Min					W Long Degree					Min				
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
							1	5	.						3	5	.	4	5			1	1	3	.	3	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
							9	4								2	0	.	6										F

9.4 20.6

Use decimals

← Write M if meters

SEGMENT DEPTH

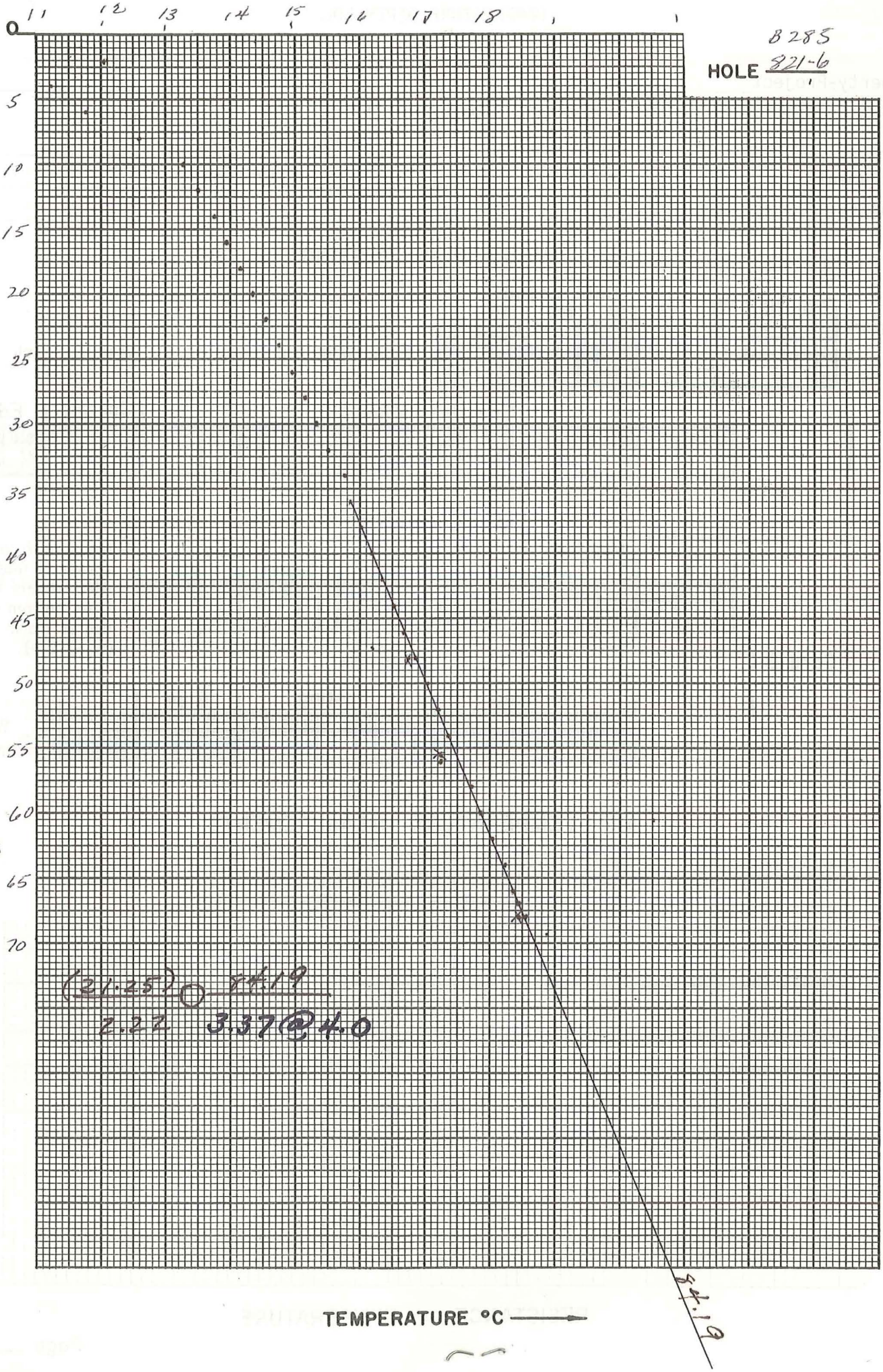
	Start										End										K					ΔK				
	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
C	1	4	.	0							3	4	.	0																
D	.	9	9	9																										
E																														
F																														
G																														

Continue each card below.

SEGMENT DEPTH

	Start										End										K					ΔK				
	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
C	3	6	.	0							6	8	.	0							-	4	.	0		-	.	5		
D																														
E																														
F																														
G																														

Final Segment: Start = .999


B285
HOLE 821-6
11
12
13
14
15
16
17
18
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
DEPTH METERS
TEMPERATURE °C
(21.25) 84.19
2.22 3.37@4.0
84.19

8285

Date Logged: 14 June 77

ΔT Well No. 821-6

821-6

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
2	~~117.09~~ ~~116.9~~	12.04	.82				
4	120.54	11.22	.65				
6	117.81	11.87	.73				
8	114.80	12.60	.54				
10	112.65	13.14	.37				
12	~~111.16~~ ~~110.80~~	13.51	.16				
14	110.20	13.77	.18				
16	109.44	13.95	.21				
18	108.62	14.16	.18				
20	107.91	14.34	.20				
22	107.14	14.54	.22				
24	106.31	14.76	.21				
26	105.51	14.97	.18				
28	104.82	15.15	.18				
30	104.14	15.33	.19				
32	103.47	15.51	.17				
34	102.84	15.68	.18				
36	~~102.16~~ ~~101.55~~	15.86	.16				
38	101.58	16.02	.16				
40	100.99	16.18	.16				
42	100.39	16.34	.17				
44	99.76	16.51	.18				
46	99.12	16.69	.17				
48	98.50	16.86	.17				
50	97.89	17.03	.18				
52	97.26	17.21	.16				
54	96.69	17.37					

K=Conductivity

B 285

Date Logged: 14 Je 77

ΔT Well No. 821-6

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
56	96.12	17.25	.46				
58	95.50 49	17.75 71	.5				
60	94.93	17 87	.16				
62	94.33	18 04	.17				
64	93.72	18 22	.18				
66	93.13	18 39	.17				
67	92.87	18 47	.08				
68	92.69	18 52	.05				

TEMPERATURE - DEPTH LOG

Location 1.5 MILES E. OF BRIMSTONE MINE Date 7-MAY-77

Map FRISCO UT, 15"

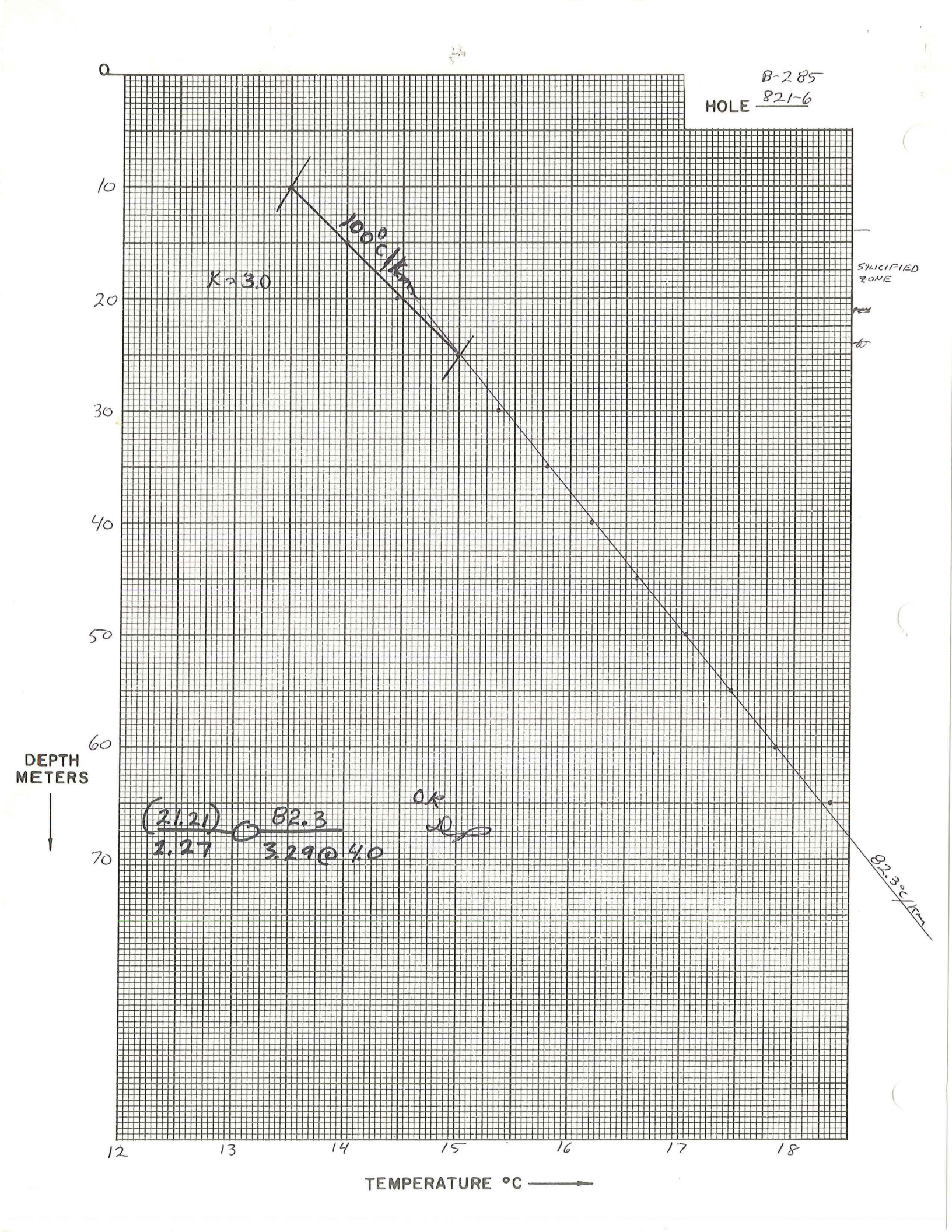
Property BURNINGSTONE T 29S R 13 W sec 7 SE¼ NW¼

Drill Hole B-28S 821-6 Date Drilled 4-MAY-77 Elevation 5920 ft.

Instrument # 39 Operator JED

Comments 3/4" WATER FILLED PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
10	11124	13.49			
			0.52		
15	10921	14.01			
			0.44	88	
20	10748	14.45			
			0.53	106	
25	10545	14.98			
			0.38	76	
30	10402	15.36			
			0.44	88	
35	10240	15.80			
			0.38	76	
40	10100	16.18			
			0.42	84	
45	9945	16.60			
			0.43	86	
50	9790	17.03			
			0.41	82	
55	9644	17.44			
			0.42	84	
60	9499	17.86			
			0.47	94	
65	9336	18.33			


HOLE B-285 821-6
0
10
20
30
40
50
60
70
DEPTH METERS
100°C/km
K=3.0
SILICIFIED ZONE
(21.21) / 2.27 = 82.3 / 3.29 @ 4.0
OK
82.3°C/km
12
13
14
15
16
17
18
TEMPERATURE °C

Transient Log
B-286

TEMPERATURE DEPTH LOG

ΔT Well No. 821-7

Property-Project Burning Stone Depth Logged 55 m

Map Frisco, Ut Scale 15 Date: Drilled _____ Logged 11 June 77

State Utah County Beaver Section 6 SW¼ NW¼ T 29S R 13W

Instrument #39 Operator DAB Elevation 5720 ft.

Comments 3/4" water filled PVC

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →	Well No →	Date Logged DA →	MO →	YR	*
1 2 3 4	5 6 7 8 9 10	11 12	13 14 15	16 17 18	19 20
8 2 1	B 2 8 6	1 1	7 6	7 7	C M

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

Site Description	Operator	Editor
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
S KM SW AN T6 L-P3 PZ4K	CAZ	I DP

4

Card B

Scale Unit in cm	Map Size (7.5, 15.,60)	Map Location △ N Lat Degree	Min	W Long Degree	Min
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
c m	1 5.	3 7.	5.	1 1 3.	3 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
12.0	19.7	5720.	F

Use decimals 20,55

← Write M if meters

SEGMENT DEPTH

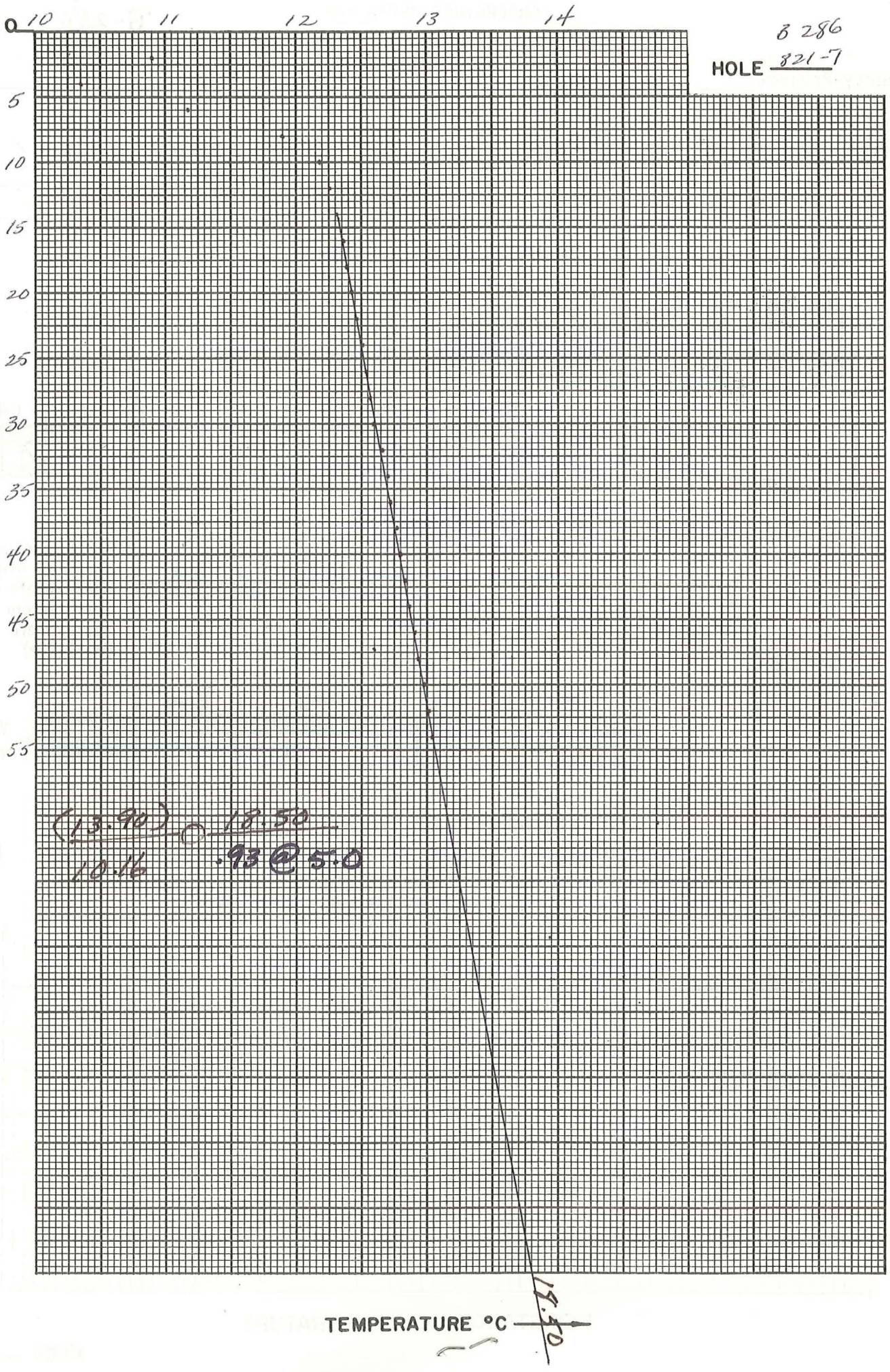
	Start	End	K	ΔK
	21 22 23 24 25 26 27 28 29 30	31 32 33 34 35 36 37 38 39 40	41 42 43 44 45	46 47 48 49 50
C	14.0	55.0	-5.0	-.5
D				
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
	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
C	.999			
D				
E				
F				
G				

Final Segment: Start = .999


0
10
11
12
13
14
HOLE 821-7
B 286
5
10
15
20
25
30
35
40
45
50
55
DEPTH METERS
(13.90) - 18.50
10.16 .93 @ 5.0
13.40
TEMPERATURE °C

Date Logged: 11 June 77

ΔT Well No. 821-7 B-286

821-37

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
2	121.89	10.90					
			.55				
4	124.26	10.35					
			.83				
6	120.73	11.18					
			.72				
8	117.67	11.90					
			.28				
10	116.55	12.18					
			.08				
12	116.22	12.26					
			.05				
14	115.98	12.31					
			.05				
16	115.80	12.36					
			.03				
18	115.65	12.39					
			.04				
20	115.49	12.43					
			.04				
22	115.35	12.47					
			.04				
24	115.19	12.51					
			.03				
26	115.06	12.54					
			.03				
28	114.92	12.57					
			.03				
30	114.81	12.60					
			.06				
32	114.59	12.66					
			.04				
34	114.42	12.70					
			.03				
36	114.27	12.73					
			.04				
38	114.13	12.77					
			.03				
40	113.99	12.80					
			.04				
42	113.84	12.84					
			.03				
44	113.71	12.87					
			.04				
46	113.56	12.91					
			.03				
48	113.43	12.94					
			.04				
50	113.28	12.98					
			.03				
52	113.15	13.01					
			.04				
54	113.01	13.05					

K=Conductivity

B 286

Date Logged: 11 June 77

ΔT Well No. 821-7

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
~55	11297	13.06	.01				

TEMPERATURE - DEPTH LOG

Location 1.5 MILES N.E. OF BRIMSTONE MINE Date 7-MAY-77

Map FRISCO UT, 15"

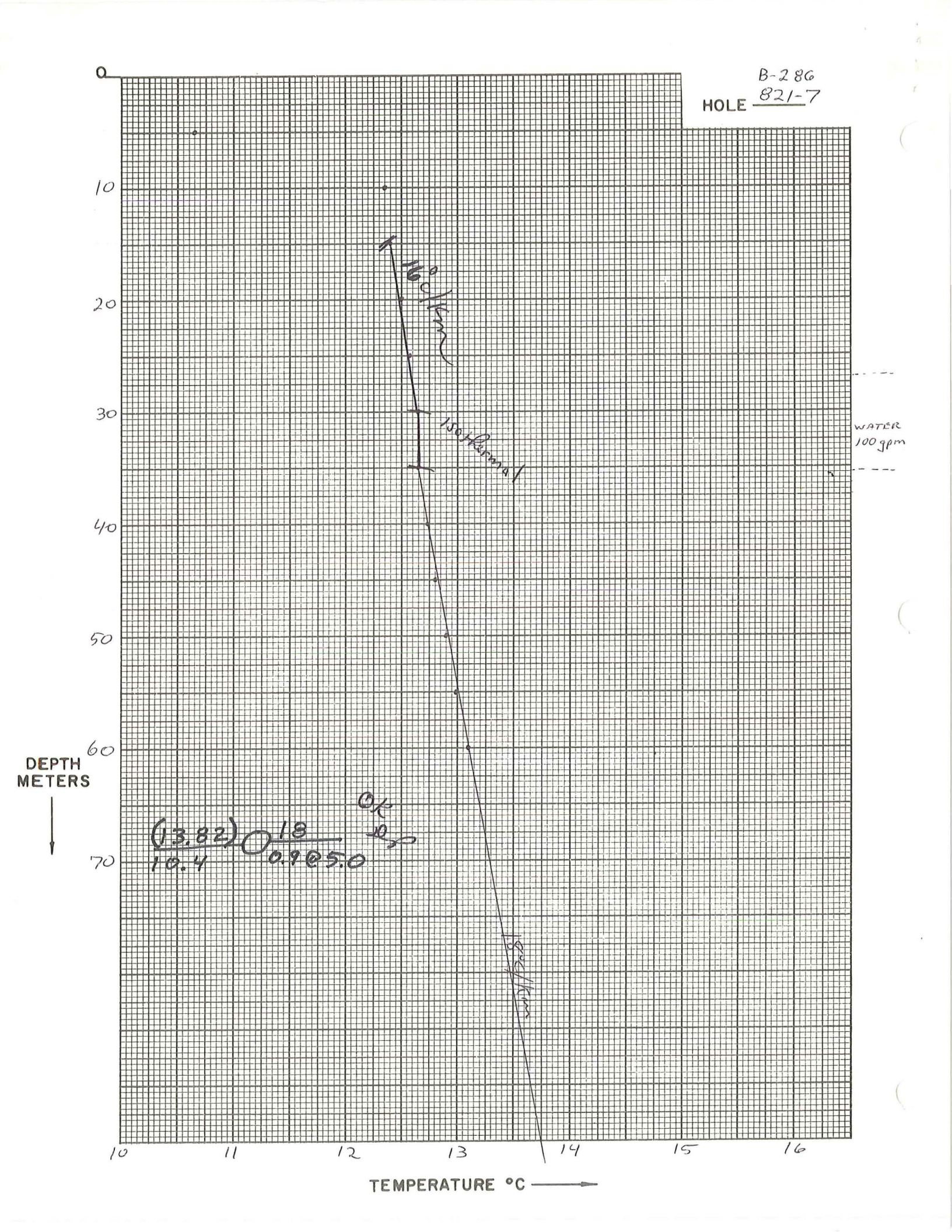
Property BURNINGSTONE B-286 T 29 S R 13 W sec 6 NW¼ SW¼

Drill Hole 821-7 Date Drilled 3-MAY-77 Elevation 5700 ft.

Instrument # 39 Operator JEO

Comments 3/4" WATER FILLED PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
5	12292	10.66			
10	11586	12.35	0.06	12	
15	11558	12.41	0.08	16	
20	11525	12.49	0.08	16	
25	11494	12.57	0.08	16	
30	11462	12.65	0.00	0	
35	11462	12.65	0.08	16	
40	11428	12.73	0.08	16	
45	11397	12.81	0.09	18	
50	11362	12.90	0.08	16	
55	11327	12.98	0.12	24	
60	11281	13.10			


B-286
HOLE 821-7
0
10
20
30
40
50
60
70
DEPTH METERS
10
11
12
13
14
15
16
TEMPERATURE °C
WATER 100 gpm
160°/km
150°/km
(13.82) 18 / 10.4 0.9 @ 5.0
Ok 10.0

TEMPERATURE DEPTH LOG

ΔT Well No. 287

Property-Project OK Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

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
779	287	03	MY	77	CM

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

Site Description	Operator	Editor
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
11.6 kM SSW OF COVE FORT, UTAH	JED	MLH

Card B

Scale Unit in cm	Map Size (7.5, 15.,60)	Map Location △ N Lat Degree	Min	W Long Degree	Min
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
CM	15.	38.	30.	112.	45.

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
0.2	18.6	6240.	F

Use decimals

← Write M if meters

SEGMENT DEPTH

	Start	End	K	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
C	10.0	26.0		
D	65.0	95.0	-4.2	-.4
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
	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
C	25.0	60.0		
D	.999			
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location 7 MILES S. OF COVE FORT Date 3-MAY-77

Map COVE FORT, UT 15"

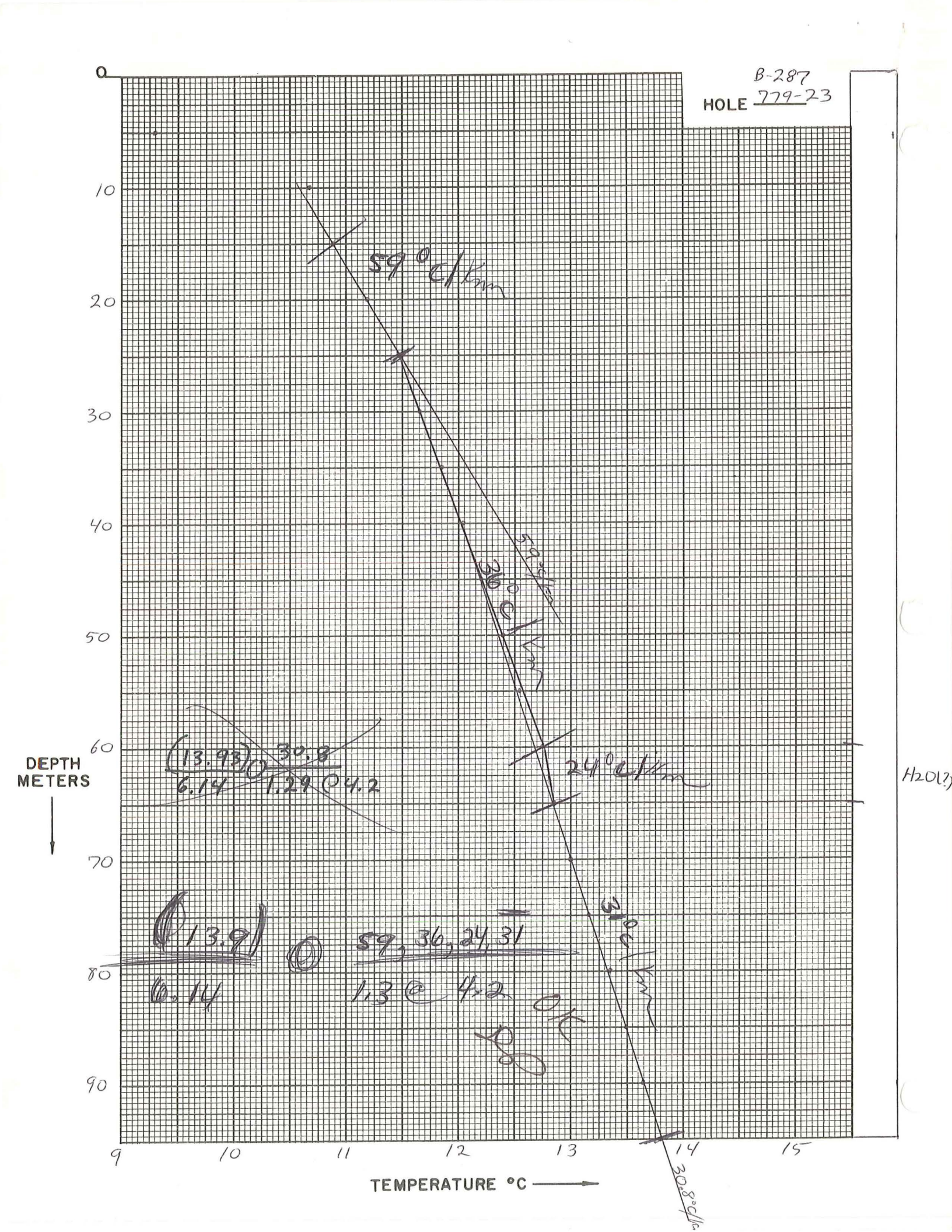
Property ~~THERMEX OK~~ B-287 T 26S R 7W sec 35 SW¼ SW¼

Drill Hole 779-23 Date Drilled _____ Elevation 6240 ft.

Instrument #39 Operator JEO

Comments 3/4" WATER FILLED PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
5	12884	9.30			
			1.37		
10	12286	10.67			
			0.21	42	
15	12198	10.88			
			0.21	42	
20	12066	11.19			
			0.28	56	
25	11947	11.47			
			0.19	38	
30	11868	11.66			
			0.19	38	
35	11789	11.85			
			0.18	36	
40	11715	12.03			
			0.17	34	
45	11647	12.20			
			0.19	38	
50	11569	12.39			
			0.15	30	
55	11508	12.54			
			0.20	40	
60	11424	12.74			
			0.12	24	
65	11379	12.86			
			0.15	30	
70	11316	13.01			
			0.16	32	
75	11252	13.17			
			0.16	32	
80	11189	13.33			
			0.15	30	
85	11130	13.48			
			0.15	30	
90	11071	13.63			
			0.15	30	
95	11009	13.78			


B-287
HOLE 279-23
0
10
20
30
40
50
60
70
80
90
DEPTH METERS
59°C/km
36°C/km
24°C/km
30°C/km
(13.9) @ 30.8
6.14 1.29 @ 4.2
(13.9) @ 59, 36, 24, 31
6.14 1.3 @ 4.2
9
10
11
12
13
14
15
TEMPERATURE °C
30.8°C/km

cc: Hall
Lange
Deymonaz
Caywood

LITHOLOGIC LOG B-287 (779-23)

OK PROJECT

ELEVATION: 6,240'

DATE DRILLED:

SW¼ SW¼ Sec 35 T26S R7W

Depth (m)	DESCRIPTION
0 - 3	Qal Alluvium - clay and silt; brown
3 - 12	Qal Pebbly Sand - ~ 30% pebbles; brown, angular; less than 1mm-5mm, ave 1mm; mostly qtz and feldspar.
12 - 28	Qal Gravel - gray; angular-subangular; 1mm-10mm; ave 3mm; mostly red and white-gray tuff.
28 - 37	Qal Gravel - repeat (40-90) except mostly white-gray tuff.
37 - 62	Qal Gravel - repeat (90-120)
62 - 99	Qal Gravel - gray; angular-subangular; ave size 3mm; mostly gray-white tuff with altered volcanics.

TEMPERATURE DEPTH LOG

ΔT Well No. 288

Property-Project Best Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →				Well No →						Date Logged DA →		MO →		YR		*	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
		7	5	5			2	8	8	0	5		M	K		7	7	C	M

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

| Site Description | | | | | |

TEMPERATURE - DEPTH LOG

Location 9 MILES S.E. OF THERMO H.S Date 5 MAY-77

Map THERMO UT, 15"

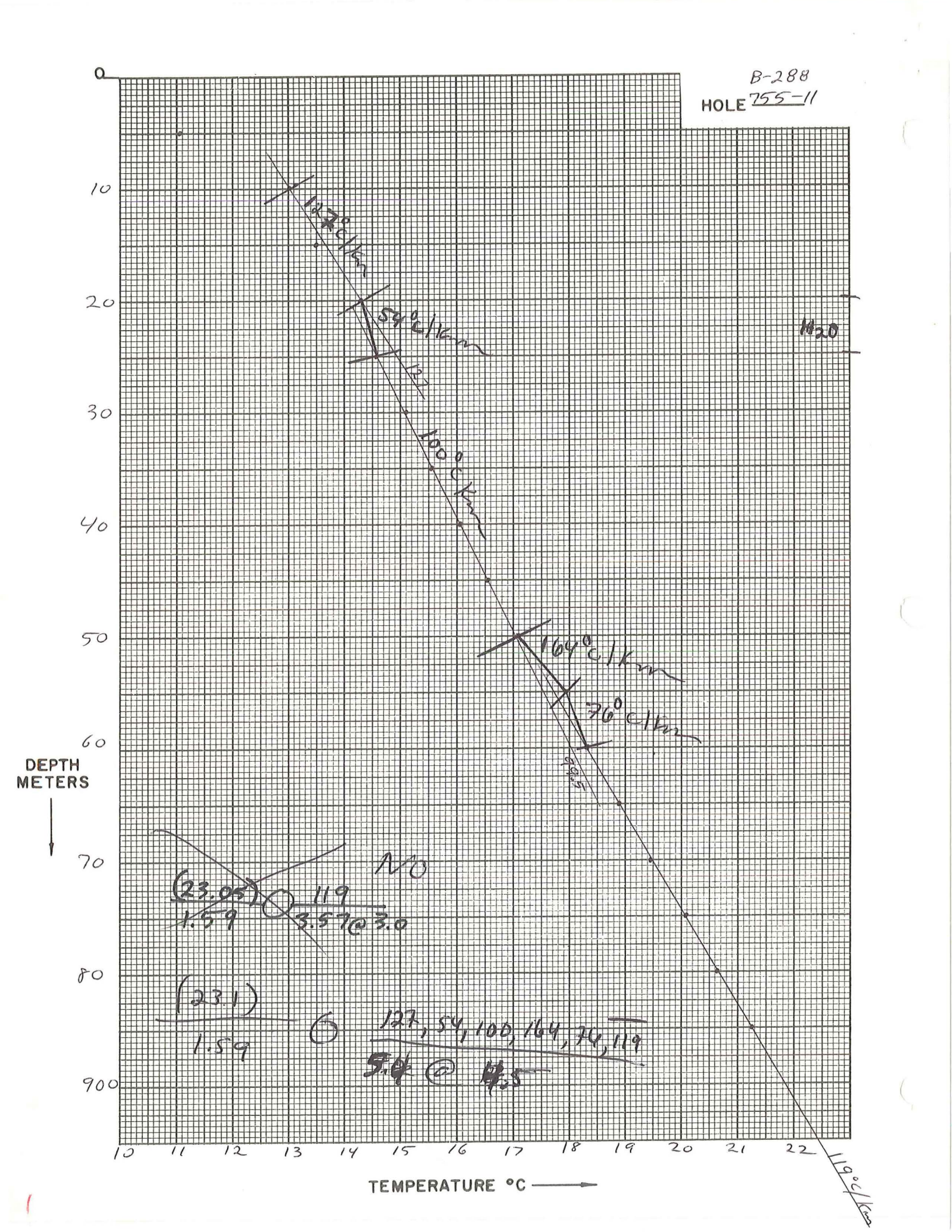
Property BEST B-288 T 31S R 11W sec 14 NW¼ NW¼

Drill Hole 755-11 Date Drilled 1 April 77 Elevation 5900 ft.

Instrument #39 Operator DEYMONAZ & PILKINGTON

Comments 3/4" WATER FILLED PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
5	12133	11.04			
			1.99		
10	11307	13.03			
			0.46	92	
15	11124	13.49			
			0.81	162	
~~20~~	10808	14.30			
			0.27	54	
~~25~~	10702	14.57			
			0.55	110	
~~30~~	10494	15.12			
			0.42	84	
35 ~~45~~	10326	15.56			
			0.48	96	
40 ~~50~~	10151	16.04			
			0.52	104	
45 ~~55~~	9959	16.56			
			0.56	112	
50 ~~60~~	9760	17.12			
			0.82	164	
55	9471	17.94			
			0.38	76	
60	9340	18.32			
			0.56	112	
65	9148	18.88			
			0.58	116	
70	8953	19.46			
			0.62	124	
75	8752	20.08			
			0.58	116	
80	8565	20.66			
			0.60	120	
85	8375	21.26			


B-288
HOLE 755-11
0
10
20
30
40
50
60
70
80
900
DEPTH METERS
10
11
12
13
14
15
16
17
18
19
20
21
22
TEMPERATURE °C
H2O
127°C/Km
54°C/Km
100°C/Km
164°C/Km
76°C/Km
119°C/Km
NO
(23.05)
1.59
119
3.57 @ 3.0
(23.1)
1.59
6
127, 54, 100, 164, 76, 119

cc: Hall
Lange
Deymonaz
Caywood

LITHOLOGIC LOG B-288 (755-11)

BEST PROJECT

ELEVATION: 5,900'

NW¼ NW¼ Sec 14 T31S R11W

DATE DRILLED: 4/1/77

Depth (m)	DESCRIPTION
0 - 30	Qal - Gravels in sandy matrix. Gravels of latite, tuff and minor silicified material. Gravel 40-60%
30 - 99	Xtl Tuff - mostly dark gray latite.

TEMPERATURE DEPTH LOG

ΔT Well No. 289

Property-Project Best Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

RT JUSTIFY:

Card A

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
7 5 5	2 8 9	0 5	M Y	7 7	C M

Date Logged

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

| Site Description | | |

TEMPERATURE - DEPTH LOG

Location 6.5 MILES E-SE OF THERMO H.S. Date 5-MAY-77

Map THERMO UT, 15'

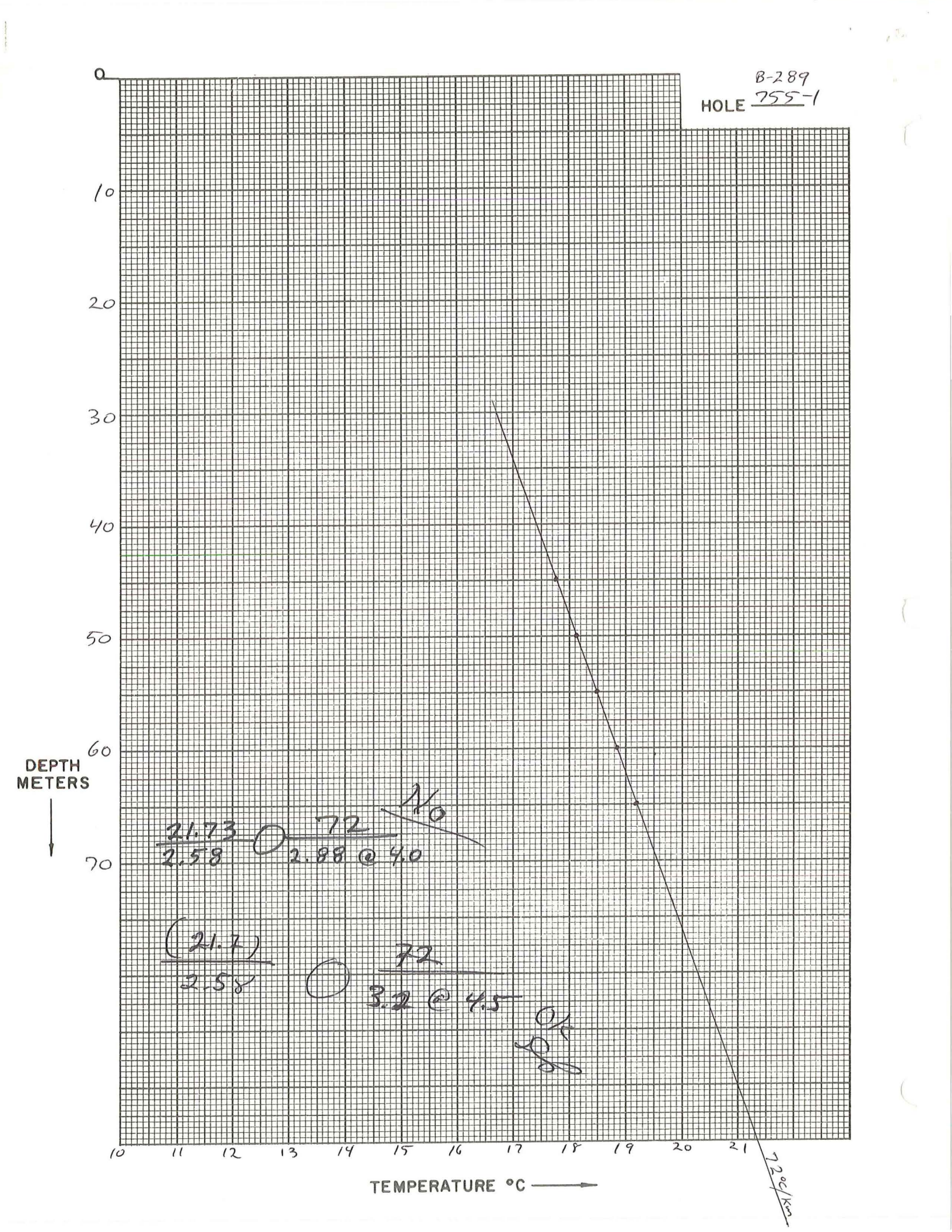
Property BEST B-289 T 30S R 11W sec 34 NW 1/4 SW 1/4

Drill Hole 755-1 Date Drilled 28 April 77 Elevation 5320 ft.

Instrument # 39 Operator DEYMONAZ - PILKINGTON

Comments 3/4" WATER FILLED PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
45	9528	17.77			
			0.36	72	
50	9402	18.13			
			0.37	74	
55	9278	18.50			
			0.35	70	
60	9160	18.85			
			0.36	72	
65	9037	19.21			


B-289
HOLE 755-1
0
10
20
30
40
50
60
70
DEPTH METERS
10
11
12
13
14
15
16
17
18
19
20
21
TEMPERATURE °C
21.73
2.58
72
2.88 @ 4.0
NO
(21.7)
2.58
72
3.2 @ 4.5
OK
72°C/km

cc: Hall
Lange
Deymonaz
Caywood

LITHOLOGIC LOG B-289 (755-1)

Best Project

ELEVATION: 5,320'

NW¼ SW¼ Sec 34 T30S R11W

DATE DRILLED: 4/28/77

Depth (m)	DESCRIPTION
0 - 10	Qal - silt and sand with minor cobbles of BSLT.
10 - 14	Tuff - gray-green, poorly indurated. XLS of feldspar altered to clay, 20% XL
14 - 23	Basalt - Dark gray aphanitic to slightly porp. Moderate chlorite alteration.
23 - 30	Basalt - Broken with cinders and yellow clay
30 - 46	Basalt - as above, but less cinder and zones of brown tuff (K=4.0)
46 - 50	Basalt - as above, but red oxidized.
50 - 63	Basalt - as 97-150
63 - 67	Basalt - as 150-.65

TEMPERATURE DEPTH LOG

ΔT Well No. 291

Property-Project Best

Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →	Well No →	Date Logged DA →	MO →	YR	*
1 2 3 4	5 6 7 8 9 10	11 12	13 14 15	16 17 18	19 20
7 5 5	2 9 1	0 5	M Y	7 7	C M

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

Site Description	Operator	Editor
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
4 . 7 k M N E O F B A D G E R P E A K	J E D	M L H

Card B

Scale Unit in cm	Map Size (7.5, 15.,60)	Map Location Δ N Lat Degree	Min	W Long Degree	Min
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
C M	1 5 .	3 8 .	0 0 .	1 1 3 .	1 5 .

Use decimals

Δ 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
2 1 . 6 5	2 0 . 6 5	5 8 0 0 .	F

Write M if meters

22.7 Use decimals 20.85

SEGMENT DEPTH

	Start	End	K	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
C	1 0 . 0	3 0 . 0		
D	. 9 9 9			
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
	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
C	3 0 . 0	6 5 . 0	- 4 . 5	- . 5
D				
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location 5.5 MILES SE OF THERMO H.S. Date 5-MAY-77

Map THERMO UT, 15"

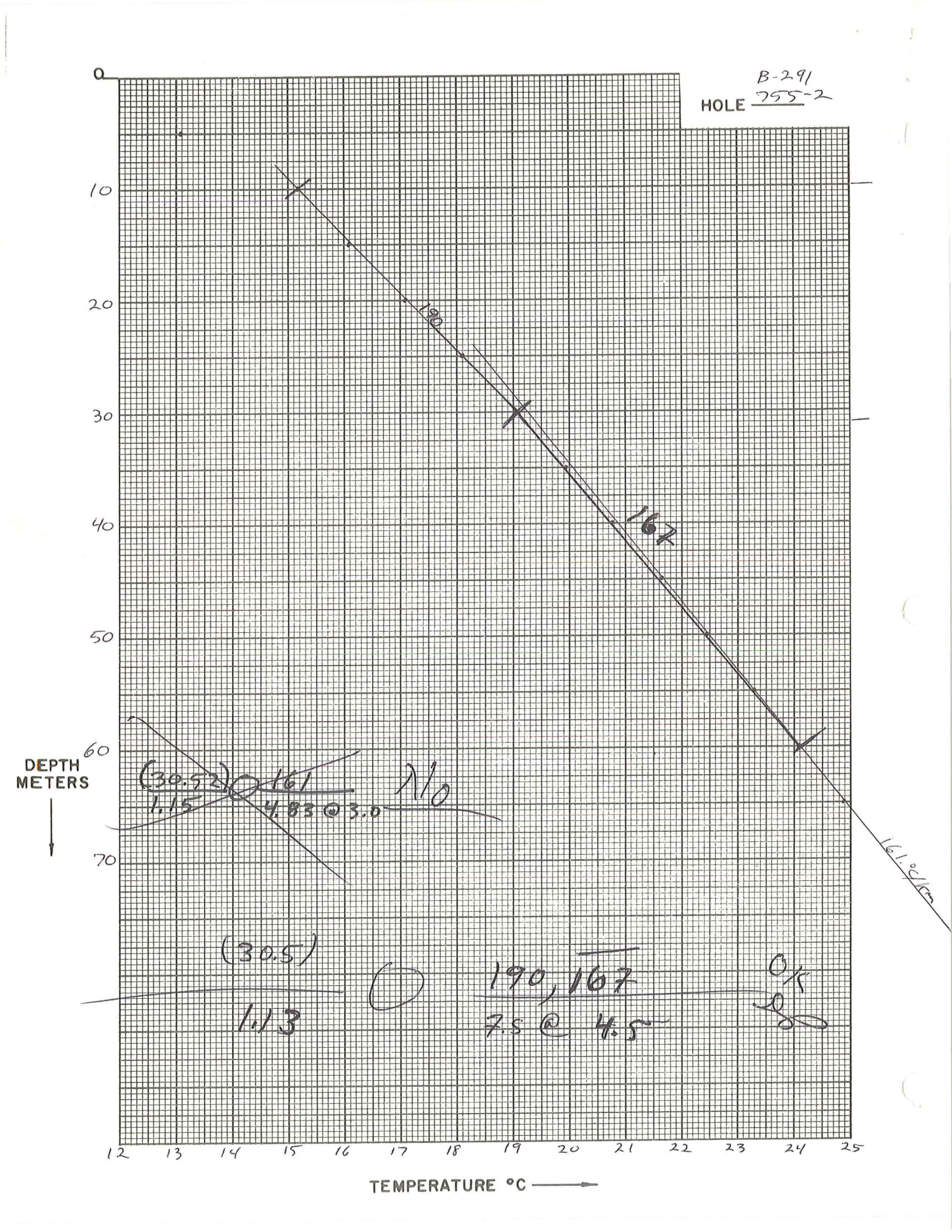
Property BEST B-291 T 31 S R 11 W sec 9 NW¼ SW¼

Drill Hole 755-2 Date Drilled 28 April 77 Elevation 5800 ft.

Instrument #39 Operator DEYMONAZ-PILKINGTON

Comments 3/4" WATER FILLED PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
5	11289	13.08			
			2.01		
10	10472	15.18			
			0.92	184	
15	10128	16.10			
			0.98	196	
20	9773	17.08			
			1.01	202	
25	9419	18.09			
			0.94	188	
30	9099	19.03			
			0.90	180	
35	8801	19.93			
			0.84	168	
40	8531	20.77			
			0.88	176	
45	8254	21.65			
			0.80	160	
50	8011	22.45			
			0.84	168	
55	7764	23.29			
			0.80	160	
60	7535	24.09			
			0.79	158	
65	7314	24.88			


B-291
HOLE 755-2
0
10
20
30
40
50
60
70
DEPTH METERS
190
167
161 °C/km
(30.5)
1.15
4.83 @ 3.0
N/0
(30.5)
1.13
0
190, 167
7.5 @ 4.5
0K
12
13
14
15
16
17
18
19
20
21
22
23
24
25
TEMPERATURE °C

cc: Hall
Lange
Deymonaz
Caywood

LITHOLOGIC LOG B-291 (755-2)

Best Property

ELEVATION: 5,800'

NW¼ SW¼ Sec 9 T31S R11W

DATE DRILLED: 4/28/77

Depth (m)	DESCRIPTION
0 - 7	Qal - Large angular fragments of yellow-brown to dark gray; XL-bearing welded tuff (latitic)
7 - 11	XL-Tuff - Dark gray, altered feldspar phenos, vitric groundmass.
11 - 31	XL-Tuff - as above with 30-40% altered feldspar phenos. Minor Fe staining along fractures.
31 - 67	Tuff - Light gray to pink, partly silicified. Zones of Red Fe staining. (K=6.5-7.0) High

TEMPERATURE DEPTH LOG

ΔT Well No. 292

Property-Project Twin Peaks Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

RT JUSTIFY:

Card A

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
	8	0	6				2	9	2	0	2		M	Y		7	7	C	M

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

| Site Description | | | | | |

TEMPERATURE - DEPTH LOG

Location 2 MILES S.E. OF LAVA RIDGE Date 2-MAY-77

Map COVE FORT, UT 15"

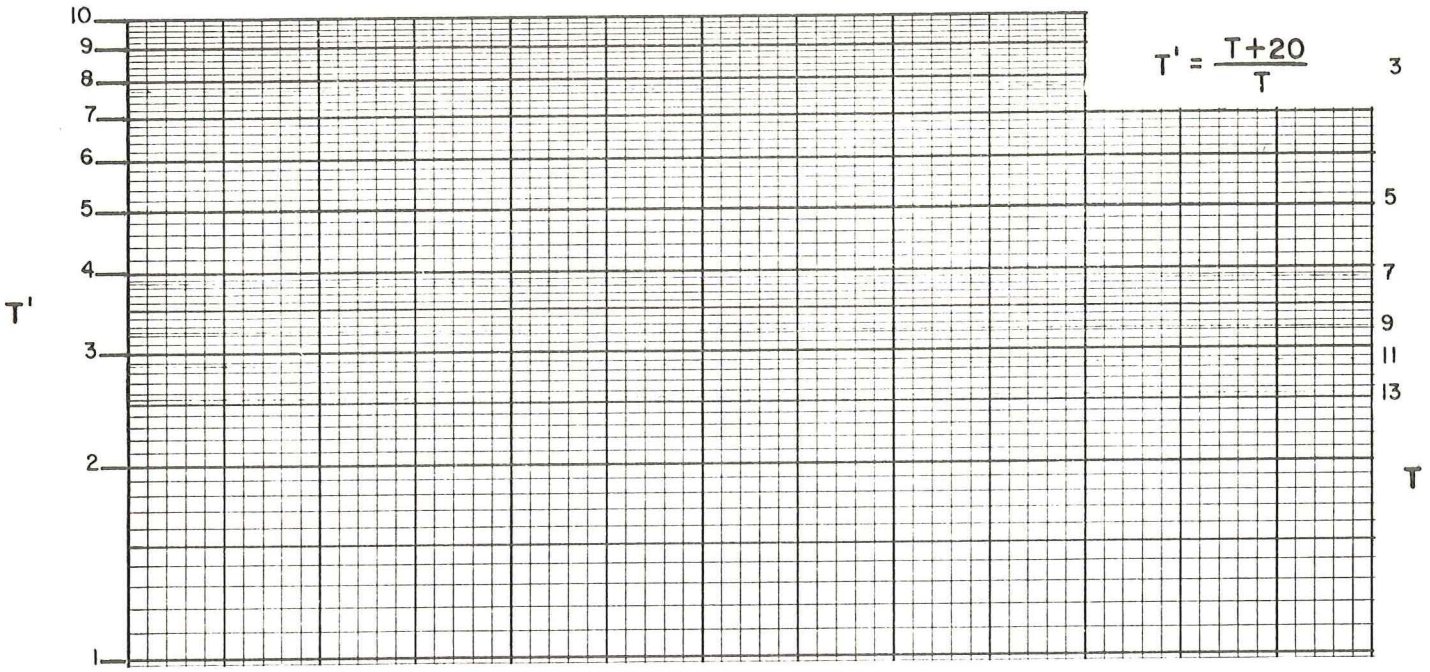
Property TWIN PKS T 24S R 7W sec 21 NW¼ NW¼

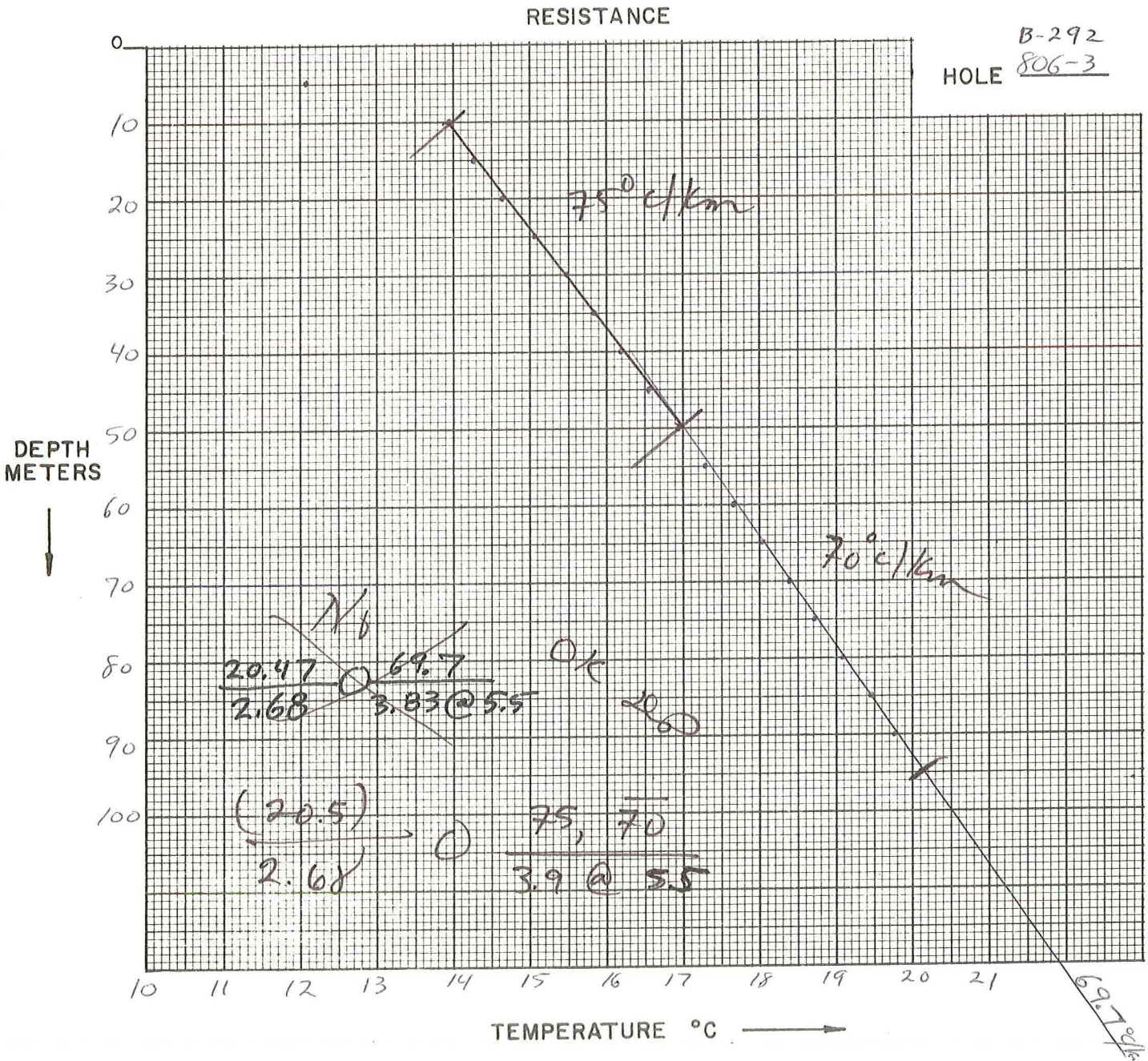
Drill Hole B-292 806-3 Date Drilled Elevation 5780 ft.

Instrument #39 Operator JED

Comments 3/4" WATER FILLED PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
5	11700	12.07			
			1.83		
10	10949	13.94			
			0.33		
15	10818	14.27			
			0.39	78	
20	10669	14.66			
			0.41	82	
25	10511	15.07			
			0.41	82	
30	10356	15.48			
			0.35	70	
35	10228	1583			
			0.37	74	
40	10090	16.20			
			0.36	72	
45	9960	16.56			
			0.37	74	
50	9826	16.93			
			0.37	74	
55	9696	17.30			
			0.37	74	
60	9566	17.67			
			0.36	72	
65	9439	18.03			
			0.36	72	
70	9315	18.39			
			0.34	68	
75	9198	18.73			
			0.36	72	
80	9077	1909			
			0.36	72	
85	8958	19.45			
			0.33	66	
90	8851	19.78			
			0.34	68	
95	8738	20.12			


T' = (T+20)/T
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13


RESISTANCE
B-292
HOLE 806-3
DEPTH METERS
0
10
20
30
40
50
60
70
80
90
100
75° c/km
70° c/km
20.47
2.68
69.7
3.83@5.5
Ok
20.0
(20.5)
2.68
75, 70
3.9 @ 5.5
69.7 c/km
10
11
12
13
14
15
16
17
18
19
20
21
TEMPERATURE °C

cc: Hall
Lange
Deymonaz
Caywood

LITHOLOGIC LOG B=292 (806-3)

TWIN PEAKS PROJECT

ELEVATION: 5,780'

NW¼ NW¼ Sec 21 T24S R7W

DATE DRILLED: 4/20/77

Depth (m)	DESCRIPTION
0 - 9	Qal Gravel - less than 15% clay and silts; angular-subrounded; ave size 4mm; mostly gray and white limestone with some basalt? and quartzite.
9 - 12	Qal Gravel - angular-subrounded; ave. size 4mm; mostly gray and white limestone with basalt, red welded tuff, quartzite and qtz. monzonite?
12 - 15	Qal Gravel - repeat 30-40 except ave size 2mm.
15 - 22	Qal Gravel - angular-subangular; ave size 3mm; mostly quartzite with limestone and weathered volcanics.
22 - 25	Qal Pebbly Sand - buff; ave size less than 1 mm; angular; mostly quartzite.
25 - 43	Qal Gravel - angular-subangular; ave size 3mm; mostly weathered volcanics with quartzite.
43 - 56	Qal Gravel - angular-subangular; ave size 4-5mm; mostly quartzite and limestone.
56 - 68	Qal Gravel - repeat 80-140.
68 - 86	Qal Gravel - repeat 140-180 except ave size 2mm.
86 - 99	Qal Gravel - repeat 140-180.

TEMPERATURE DEPTH LOG

ΔT Well No. 293

Property-Project Twin Peaks Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →	Well No →	Date Logged DA →	MO →	YR	*
1 2 3 4	5 6 7 8 9 10	11 12	13 14 15	16 17 18	19 20
8 0 6	2 9 3	0 2	M Y	7 7	C M

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

Site Description	Operator	Editor
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
9 4 K M N N W O F D A N I S H R E S E R V O I R	J E D	H L H

8.3 NORTH OF DANISH RES

Card B

Map Location Δ: Scale Unit in cm	Map Size (7.5, 15.,60)	N Lat Degree	N Lat Min	W Long Degree	W Long Min
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
C M	1 5.	3 8.	3 0.	1 1 2.	4 5.

Use decimals

Δ 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
3 4 . 1 5	7 . 9 5	5 7 2 5.	F

Use decimals ← Write M if meters

SEGMENT DEPTH

	Start	End	K	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
C	4 0 . 0	6 0 . 0	- 4 . 0	- . 5
D				
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
	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
C	. 9 9 9			
D				
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location 2.9 Miles south Lava Ridge Date 2-MAY-77

Map COVE FORT, UT 15'

Property TWIN PKS T 24S R 8W sec 25 SE¼ SE¼

Drill Hole B-293 806-2 Date Drilled 18 April 77 Elevation 5725 ft.

Instrument #39 Operator JEO

Comments 3/4" WATER FILLED PVC

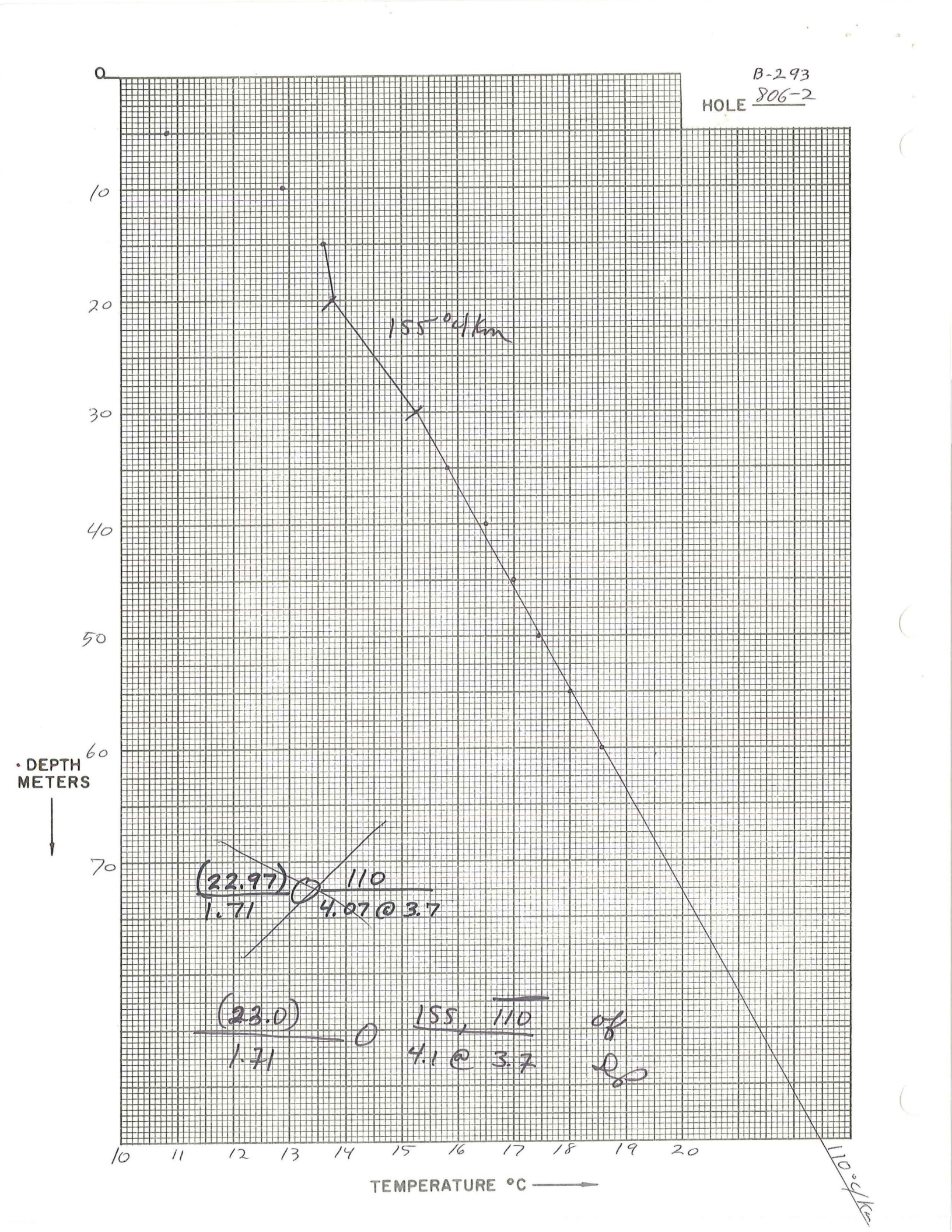
S

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
5	12230	10.81			
10	11368	12.88	2.07		
15	11085	13.59	0.71		
20	11035	13.72	0.13		
25		14.78		155	
30	10436	15.27			
35	10230	15.82	0.55	110	
40	9986	16.49	0.67	134	
45	9802	17.00	0.51	102	
50	9642	17.45	0.45	90	
55	9444	18.02	0.57	114	
60	9252	18.57	0.55	110	

15.27 / 15.72 / 55 / 1.45 .775

B-293

HOLE 806-2



TEMPERATURE - DEPTH LOG

Location 2.5 mi. South of Lava Ridge Date 26 April 77

Map Cove Fort, Utah 15"

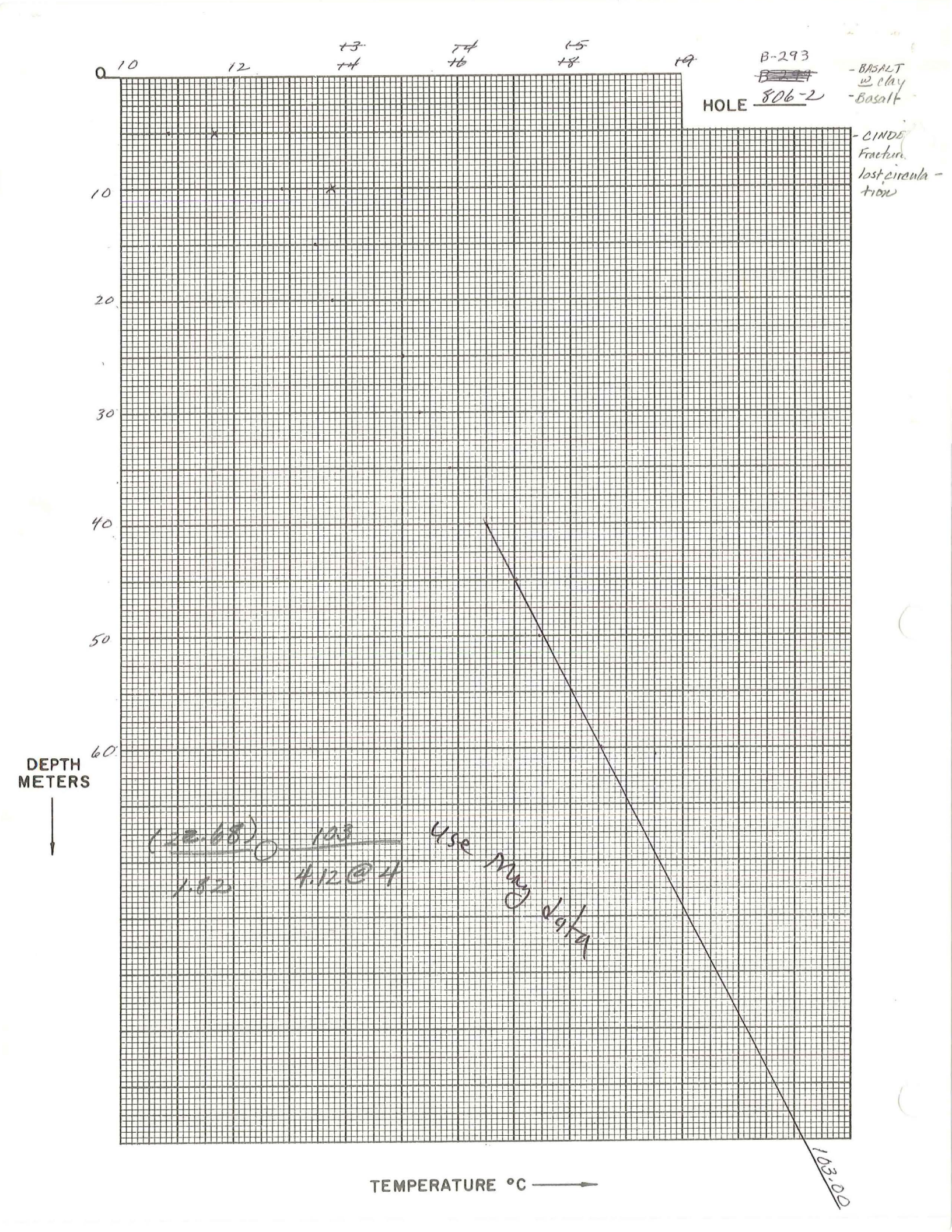
Property TWIN PKS T 24S R 8W sec 25 NE 1/4 SE 1/4

Drill Hole 806-2 (B-~~2~~293) Date Drilled 18 April 77 Elevation 5720 ft.

Instrument Probe 39 Operator DAE

Comments 3/4" PVC water filled

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
5	122.16	10.84			
			2.05		
10	113.66	12.89			
			.59		
15	111.29	13.48			
			.25		
20	110.31	13.73			
			.29		
25	105.32	15.02			
			.32		
30	104.15	15.33			
			.51		
35	102.23	15.84			
			.66		
40	99.79	16.50			
			.54		
45	97.86	17.04			
			.41		
50	96.40	17.45			
			.58		
55	94.39	18.03			
			.53		
60	92.55	18.56			
			.16		
~62	92.02	18.72			


10
12
+3
+4
+4
+6
+5
+8
+9
B-293
HOLE 806-2
- BASALT w clay
- Basalt
- CINDE
Fractur
lost circula-
tion
10
20
30
40
50
60
DEPTH METERS
TEMPERATURE °C
103.00
Use Mud data

cc: Hall
Lange
Deymonaz
Caywood

LITHOLOGIC LOG B-293 (806-2)

Twin Peaks Project

ELEVATION: 5,725'

DATE DRILLED: 4/18/77

SE¼ SE¼ Sec 25 T24S R8W

Depth (m)	DESCRIPTION
0 - 3	Basalt - dark gray; top few feet consist of a buff colored clay; vesicular ave 1mm, some are clay filled and some are qtz filled.
3 - 6	Basalt - gray; vesicular with less than 5% clay filled, ave size 1mm.
6 - 68	Entered fractured cinder zone and lost circula-tion

TEMPERATURE DEPTH LOG

ΔT Well No. 294

Property-Project Twin Peaks Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

RT JUSTIFY:

Card A

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
	8	0	6				2	9	4	0	2		M	Y		7	7	C	M

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

| Site Description | | | | | |

TEMPERATURE - DEPTH LOG

Location 3 MILES S.W. OF LAVA RIDGE Date 2-MAY-77

Map COVE FORT UT, 15'

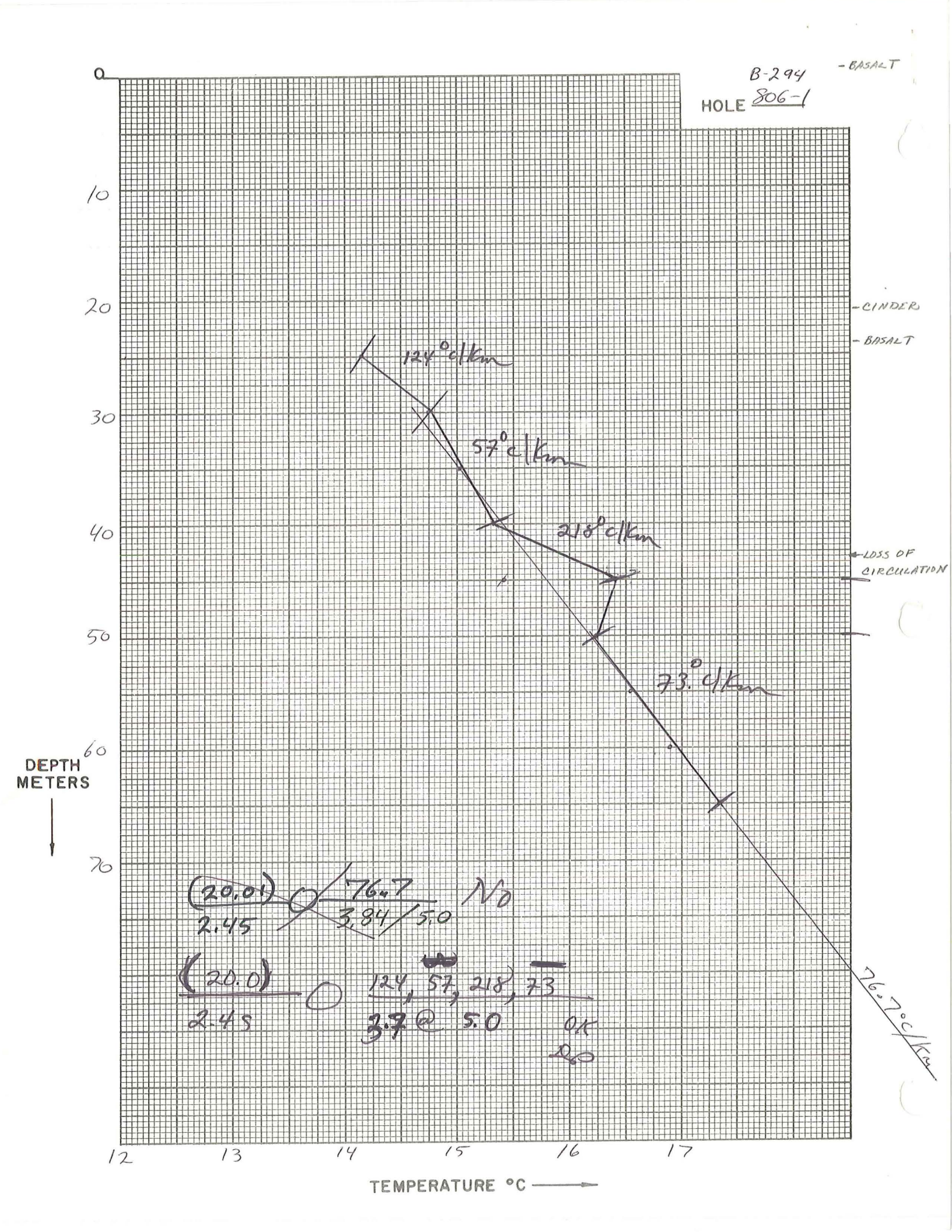
Property ~~TWIN PKS.~~ B-294 T 24S R 8W sec 26 NE¼ NE¼

Drill Hole 806-1 Date Drilled 16-APRIL-77 Elevation 5740 ft.

Instrument #39 Operator JEL

Comments 3/4" WATER FILLED PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
~~10~~					
25	10870	14.14			
30	10632	14.76	0.62	124	
35	10526	15.03	0.27	54	
40	10416	15.33	0.30	60	
45	10010	16.42	1.09	218	
50	10082	16.23	-0.19	-38	
55	9967	16.54	0.31	62	
60	9837	16.90	0.36	72	
65	9684	17.33	0.43	86	


B-294
HOLE 806-1
- BASALT
- CINDER
- BASALT
124° c/km
57° c/km
218° c/km
73° c/km
76.7° c/km
← LOSS OF CIRCULATION
DEPTH METERS
TEMPERATURE °C
0
10
20
30
40
50
60
70
12
13
14
15
16
17
(20.0) / 2.45 ○ 76.7 / 3.84 / 5.0 NO
(20.0) / 2.45 ○ 124, 57, 218, 73 / 3.7 @ 5.0 OK NO

cc: Hall
Lange
Deymonaz
Caywood

LITHOLOGIC LOG B-294 (806-1)

Twin Peaks Project

ELEVATION: 5,700'

NE¼ NE¼ Sec 26 T24S R8W

DATE DRILLED: 4/16/77

Depth (m)	DESCRIPTION
0 - 3	Basalt - dark gray; vesicular ave size 1-2mm; small amt. of fracturing with secondary calcite/quartz, clay, and iron oxidation.
3 - 6	Basalt - gray; aphanitic, small amt. of vesiculation.
6 - 9	Basalt - reddish dark gray; small amt. of vesiculation; fractured with iron oxidation.
9 - 15	Basalt - reddish gray
15 - 21	Basalt - reddish gray; vesicular ave size 1-2mm
21 - 24	Cinder - black, red; vesicular ave size 2mm; fractured with clay filling and iron oxidation.
24 - 27.5	Basalt - dark gray w iron staining; vesicular ave size 1.5mm, some amygdaloidal with calcite filling; highly fractured with calcite and clay filling and some iron staining.
27.5 - 30	Basalt - repeat 80-90 except not as vesicular
30 - 33.5	Basalt - dark gray; slightly porpheritic w lathes of plagiodase ave .5mm, small amt. of fracturing accompanied by iron staining.
33.5 - 43	Basalt - dark gray; porpheritic w lathes of plag. ave .2mm; small amt. of vesiculation w growths of secondary quartz/calcite; small amt. of fracturing with iron staining.
43 - 68	Loss of circulation in basalt.

TEMPERATURE DEPTH LOG

ΔT Well No. 295

Property-Project OK Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →	Well No →	Date Logged DA →	MO →	YR	*
729	295	02	MY	77	CM

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

Site Description	Operator	Editor
6.8 KM SW OF BLACK POINT	JEO	MLH

Card B

Scale Unit in cm	Map Size (7.5, 15., 60)	Map Location △ N Lat Degree	N Lat Min	W Long Degree	W Long Min
CM	15.	38.	45.	112.	45.

Use decimals

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

Northing	Easting	Elev	
3.5	4.05	5030.	F

Use decimals

← Write M if meters

SEGMENT DEPTH

	Start	End	K	ΔK
C	35.0	60.0		
D	.999			
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
C	60.0	95.0	-3.5	-.5
D				
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location 1 MILE S.E. OF TWIN PKS. Date 2-MAY-77

Map TABERNACLE HILL, UT 15"

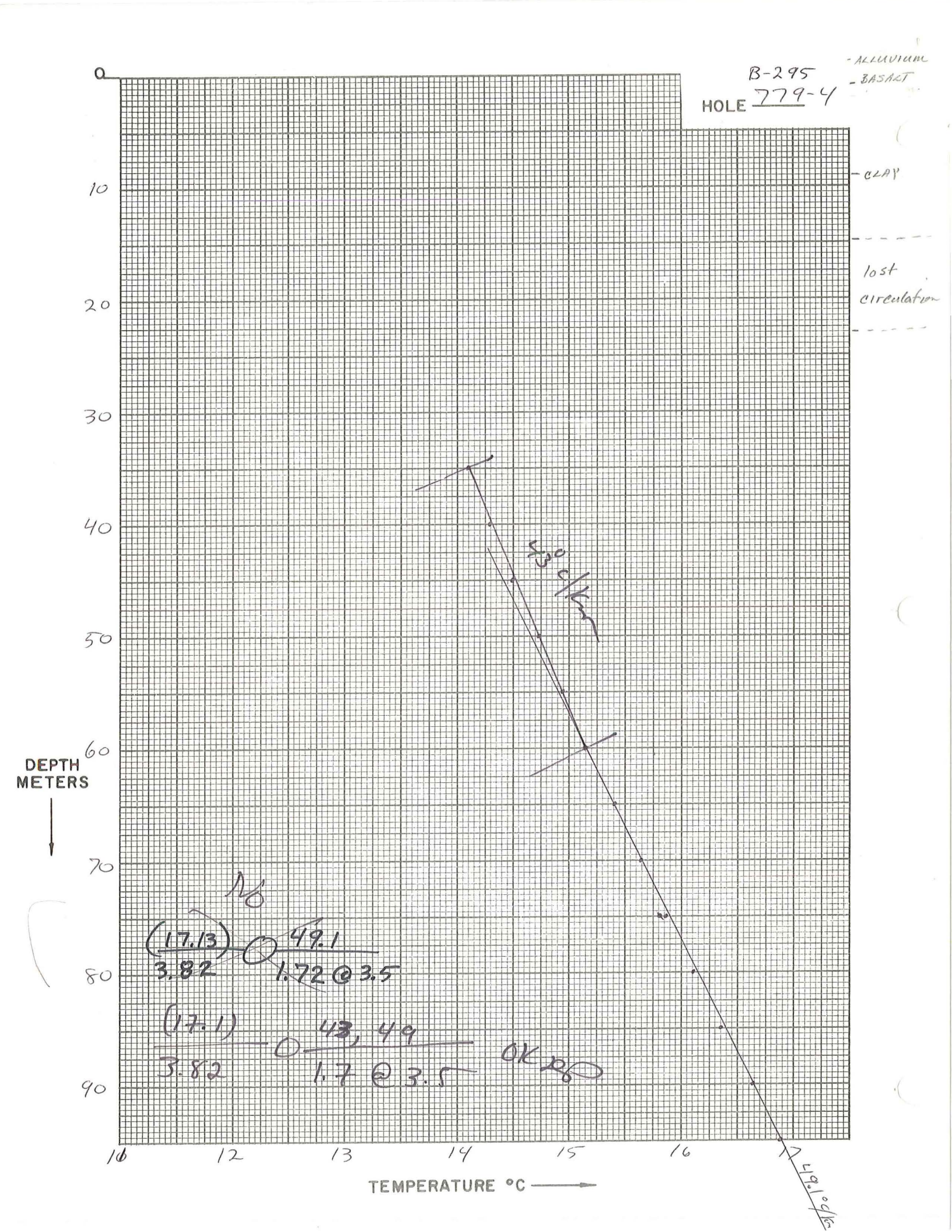
Property OK B-295 T 23 S R 8 W sec 35 NE¼ SW¼

Drill Hole 779-4 Date Drilled 12-APRIL-77 Elevation 5030 ft.

Instrument #39 Operator JEO

Comments 3/4" WATER FILLED PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
5	9055	19.16			
10	9455	17.98			
15					
20					
25					
30					
35	10891	14.09			
40	10813	14.29	0.20	40	
45	10730	14.50	0.21	42	
50	10642	14.73	0.23	46	
55	10561	14.94	0.21	42	
60	10477	15.16	0.20	40	
65	10385	15.41	0.25	50	
70	10290	15.66	0.25	50	
75	10214	1587	0.21	42	
80	10121	16.12	0.25	50	
85	10028	16.37	0.25	50	
90	9935	16.63	0.26	52	
95	9844	16.88	0.25	50	


B-295
HOLE 779-4
- ALLUVIUM
- BASALT
- CLAY
lost circulation
0
10
20
30
40
50
60
70
80
90
DEPTH METERS
10
12
13
14
15
16
17
TEMPERATURE °C
43° C/Km
(17.13)
3.82
49.1
1.72 @ 3.5
(17.1)
3.82
43, 49
1.7 @ 3.5
OK
49.1 °C/Km

cc: Hall
Lange
Deymonaz
Caywood

LITHOLOGIC LOG B-295 (779-4)

OK PROJECT

ELEVATION: 5,030'

NE¼ SW¼ Sec 35 T23S R8W

DATE DRILLED: 4/12/77

Depth (m)	DESCRIPTION
0 - 3	Qal Alluvium - pebbly to silty clay
3 - 6	Basalt - dark gray; highly fractured w iron/manganese staining and clay filling; some vesiculation.
6 - 27.5	Clay - pale green
15 - 23	Lost circulation
27.5 - 43	Clay - pale blue
43 - 99	Clay - blue gray

TEMPERATURE DEPTH LOG

ΔT Well No. 296

Property-Project OK Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →	Well No →	Date Logged DA →	MO →	YR	*
1 2 3 4	5 6 7 8 9 10	11 12 13	14 15 16	17 18	19 20
7 7 9	2 9 6	0 2	M Y	7 7	C M

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

Site Description	Operator	Editor
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
1 2 . 6 K M N W O F C O V E F O R T , U T A H	T E D	H L H

Card B

Scale Unit in cm	Map Size (7.5, 15.,60)	Map Location Δ N Lat Degree	Min	W Long Degree	Min
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
C M	1 5 .	3 8 .	3 0 .	1 1 2 .	4 5 .

Use decimals

Δ 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
3 0 . 9 5	8 . 1 5	5 7 2 5 .	F

30,75

Use decimals

← Write M if meters

SEGMENT DEPTH

	Start	End	K	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
C	2 0 . 0	4 0 . 0		
D	. 9 9 9			
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
	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
C	4 0 . 0	6 0 . 0	- 3 . 7	- . 5
D				
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location 7½ MILES S-SE OF TWIN PKS Date 2-MAY-77

Map COVE FORT UT, 15"

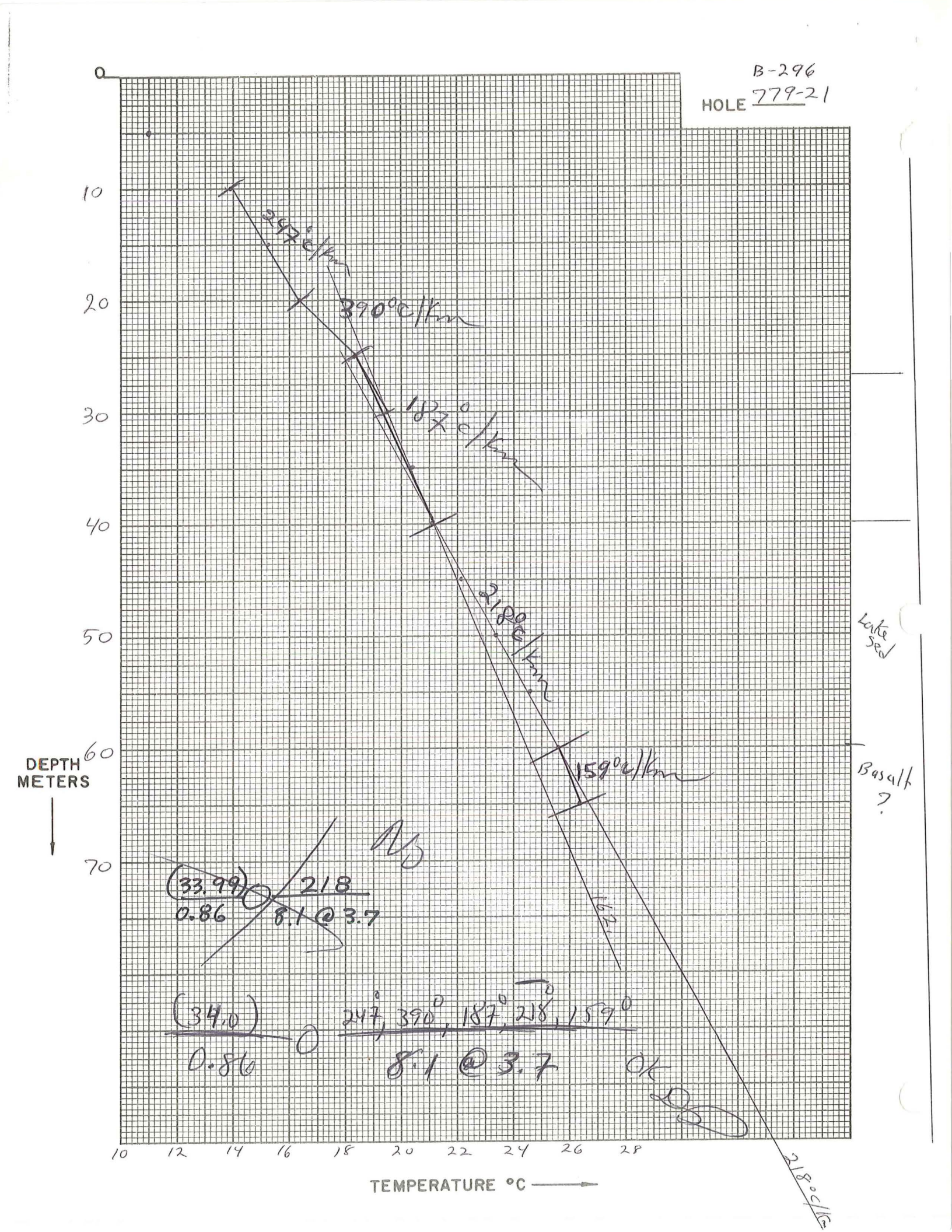
Property OK T 24S R 7W sec 31 SW¼ SW¼

Drill Hole B-296 779-21 Date Drilled _____ Elevation 5725 ft.

Instrument # 39 Operator JED

Comments 3/4" WATER FILLED PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
5	12150	10.99			
			2.89		
10	10972	13.88			
			1.38	276	
15	10440	15.26			
			1.09	218	
20	10036	16.35			
			1.95	390	
25	9345	18.30			
			1.18	236	
30	8949	19.48			
			0.90	180	
35	8654	20.38			
			0.72	144	
40	8426	21.10			
			1.04	208	
45	8105	22.14			
			1.25	250	
50	7735	23.39			
			1.23	246	
55	7387	24.62			
			0.95	190	
60	7127	25.57			
			0.79	159	
65	6917	26.36			


B-296
HOLE 279-21
0
10
20
30
40
50
60
70
DEPTH METERS
10
12
14
16
18
20
22
24
26
28
TEMPERATURE °C
247°c/km
390°c/km
187°c/km
218°c/km
159°c/km
218°c/km
Lake Sed
Basalt ?
(33.99)
0.86
218
8.1 @ 3.7
(34.0)
0.86
247°, 390°, 187°, 218°, 159°
8.1 @ 3.7
OK

cc: Hall
Lange
Deymonaz
Caywood

LITHOLOGIC LOG B-296 (779-21)

OK Project

ELEVATION: 5,725'

SW¼ SW¼ Sec 31 T24S R7W

DATE DRILLED: 4/19/77

Depth (m)	DESCRIPTION
0 - 6	Qal Clayey Gravel - with 35% clay matrix; subrounded-angular; .5mm-15mm; 65% basalt, 35% limestone.
6 - 12	Qal Silty Sand - with 45% silt matrix; subrounded; .5mm-10mm, ave 1mm; 55% limestone, 45% basalt.
12 - 15	Qal Clayey Gravel - 40% clay, subrounded-angular; ave 2mm; 85% basalt, 15% limestone.
15 - 19	Basalt - dark gray; fracture filled with clay; slightly propheritic.
19 - 22	Pebbly Sand - 40% silt matrix; ave 2mm, .25mm-3mm; 90% basalt, 10% limestone
22 - 28	Cinder - dark gray w iron staining/oxidation; vesicules range from 1mm-2mm; fractured with calcite(?) and clay filling; small amt. of chloritic(?) staining.
- 37	Basalt - gray with iron/mang. staining; 60% light felsic, 40% mafic minerals with some alteration to iron oxides and chloritization.
37 - 40	Basalt - gray
40 - 43	Cinder - dark gray with iron oxidation; vesicules ave 1mm; fracture filled with clay.
43 - 68	Gravel - Less than 15% clay; subrounded-angular; 1mm-7mm; 60% basalt, 25% chert, 15% limestone (?).

TEMPERATURE DEPTH LOG

ΔT Well No. 297

Property-Project OK Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →	Well No →	Date Logged DA →	MO →	YR	*
1 2 3 4	5 6 7 8 9 10	11 12 13	14 15 16	17 18	19 20
779	297	23	AP	77	CM

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

Site Description	Operator	Editor
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
8.2 KM SW OF BLACK POINT	ODE	MLH

Card B

Scale Unit in cm	Map Size (7.5, 15.,60)	Map Location △ N Lat Degree	Min	W Long Degree	Min
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
CM	15.	38.	45.	112.	45.

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
4.5	0.25	5160.	F

← Write M if meters

Use decimals

SEGMENT DEPTH

	Start	End	K	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
C	25.0	60.0		
D	.999			
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	7 End	K	ΔK
	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
C	60.0	97.0	-5.5	-.5
D				
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location 1/2 mi south of Twin Peaks Date 23 April 77

Map Tabernacle Hill Ut 15'

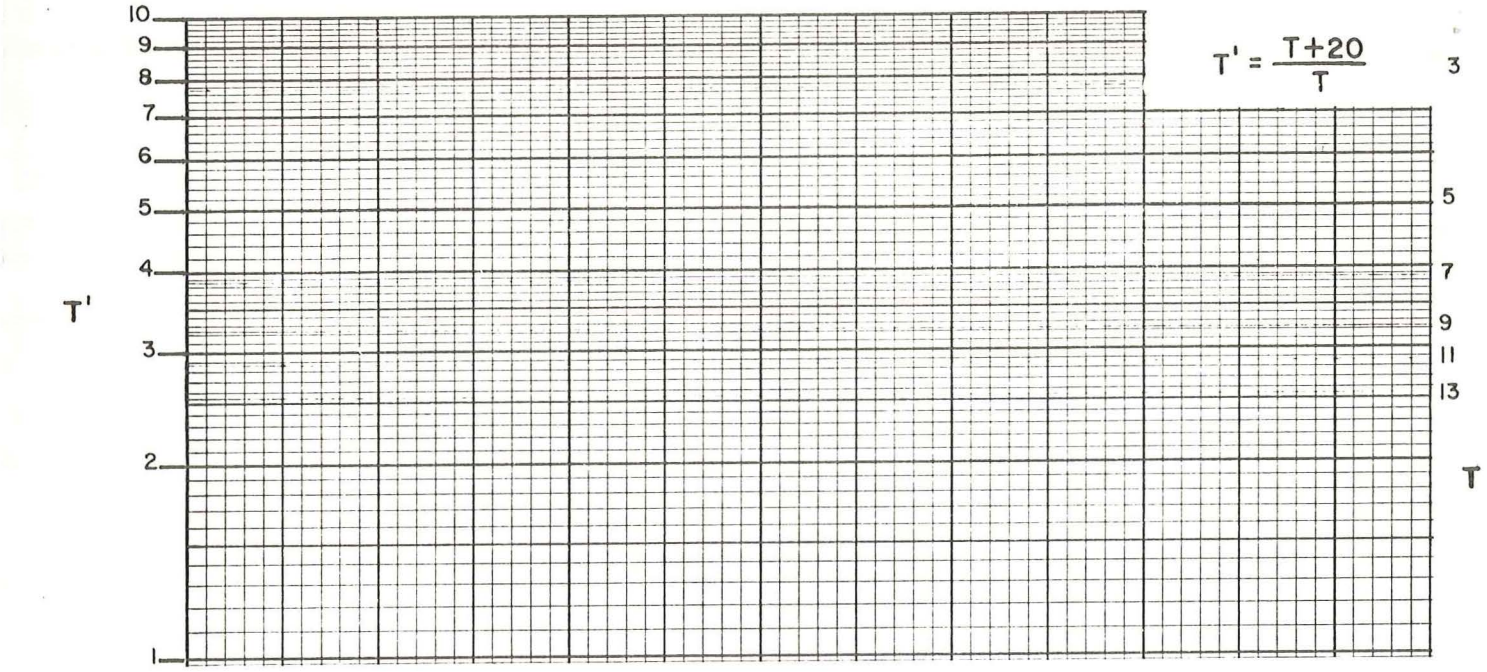
Property Ok B-297 T 23S R 8W sec 34 NW¼ NW¼

Drill Hole 779-1 Date Drilled 14 April 77 Elevation 5160 ft.

Instrument Probe 39 Operator DAE

Comments 3/4" water filled PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
2.0	115.38	12.46			
			.33		
2.5	114.04	12.79			
			.28		
3.0	112.91	13.07			
			.33		
3.5	111.61	13.40			
			.28		
4.0	110.47	13.68			
			.35		
4.5	109.13	14.03			
			.21		
5.0	107.76	14.38			
			.28		
5.5	106.66	14.66			
			.37		
6.0	105.28	15.03			
			.37		
6.5	103.88	15.40			
			.23		
7.0	102.99	15.63			
			.09		
7.5	102.68	15.72			
			.18		
8.0	102.00	15.90			
			.17		
8.5	101.37	16.07			
			.11		
9.0	100.76	16.24			
			.19		
9.5	100.07	16.43			
			.20		
10.0	99.34	16.63			
			.11		
10.5	98.93	16.74			
			.08		
11.0	98.66	16.82			
			.09		
11.5	98.33	16.91			
			.08		
12.0	98.04	16.99			
			.07		



14.38-30.09

RESISTANCE

17 18 19 20 21 22 23 24 25 26 27 28 29 30

B-297 – ALLUVIUM

HOLE 779-1

~~138.28°/km~~

169° c/km

– Rhyolite

140°c/km

5.6 @ 4

NO

30.72

130.14

(30.7)

1.31

0

169° ~~140°~~

77 @ 5.5

OK

DEPTH METERS

TEMPERATURE °C

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T _____ R _____ sec _____

Drill Hole B-297 779-1 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
12.5	97.78	17.06	.08		
13.0	97.52	17.14	.06		
13.5	97.30	17.20	.07		
14.0	97.06	17.27	.06		
14.5	96.82	17.33	.11		
15.0	96.44	17.44	.05		
15.5	96.25	17.49	.07		
16.0	96.02	17.56	.07		
16.5	95.77	17.63	.08		
17.0	95.51	17.71	.07		
17.5	95.25	17.78	.08		
18.0	94.96	17.86	.08		
18.5	94.70	17.94	.08		
19.0	94.42	18.02	.07		
19.5	94.16	18.09	.09		
20.0	93.85	18.18	.92		
25.0	90.75	19.10	.82		
30.0	88.03	19.92	.86		
35.0	85.27	20.78	.92		
40.0	82.71	21.60	.80		
45.0	80.27	22.40	.80		

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

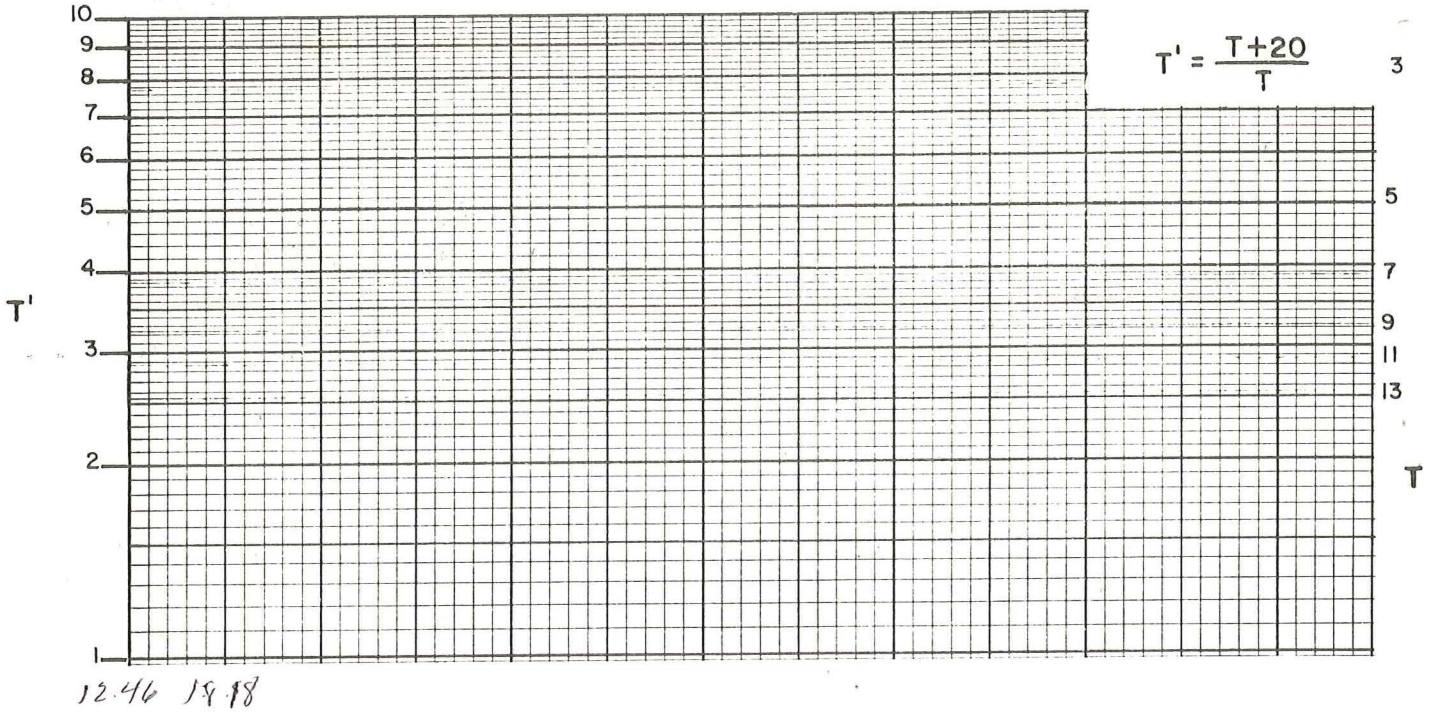
Property _____ T ____ R ____ sec ____

Drill Hole B-297 779-1 Date Drilled _____ Elevation _____ ft.

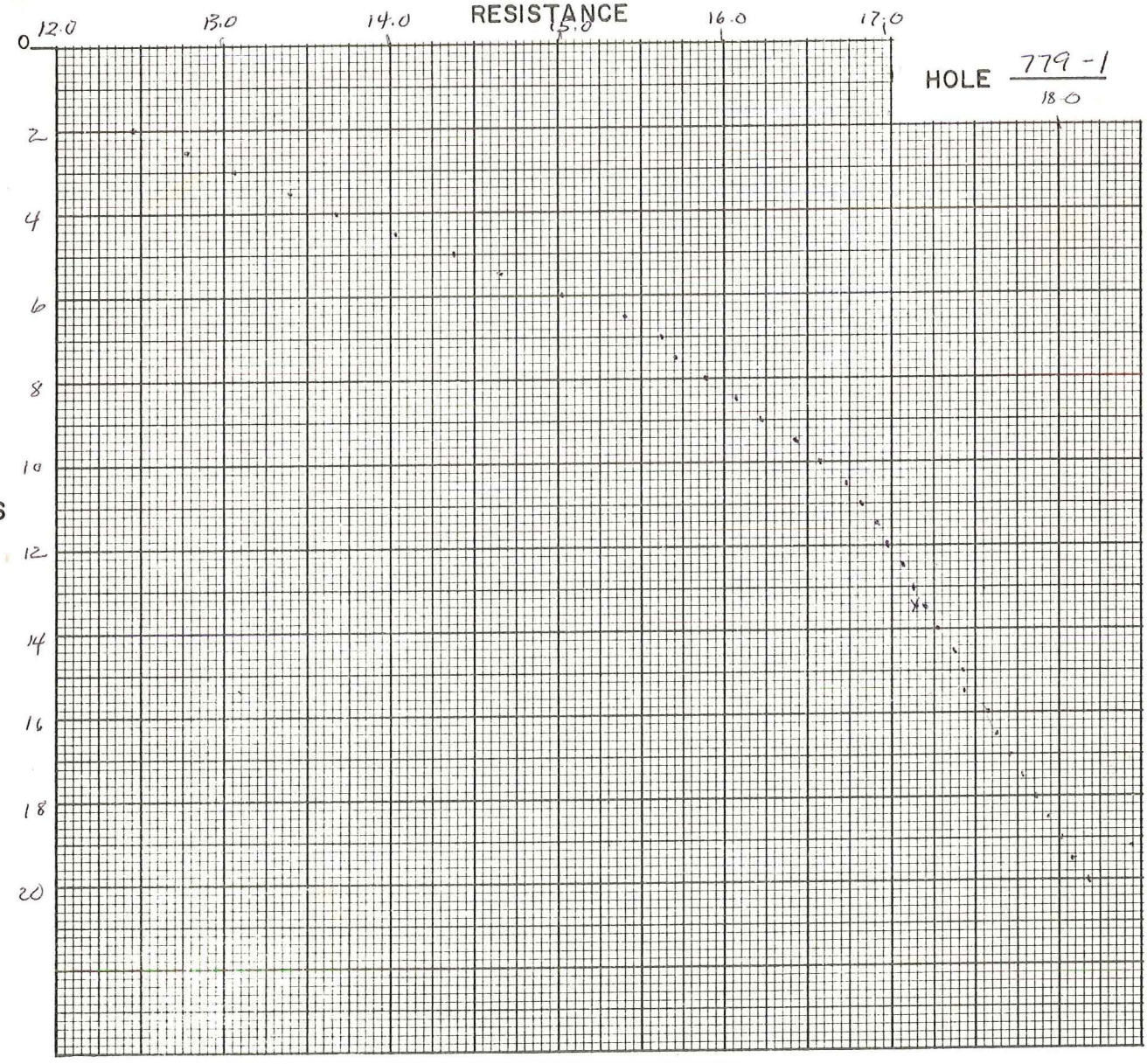
Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
50.0	77.89	23.20			
			.96		
55.0	75.15	24.16			
			.85		
60.0	72.78	25.01			
			.81		
65.0	70.58	25.82			
			.75		
70.0	68.62	26.57			
			.75		
75.0	66.95	27.22			
			.69		
80.0	65.21	27.91			
			.71		
85.0	63.48	28.62			
			.56		
90.0	62.15	29.18			
			.67		
95.0	60.58	29.85			
97.0	60.03	30.09			


$T' = \frac{T+20}{T}$
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13

12.46 18.18


RESISTANCE
12.0
13.0
14.0
15.0
16.0
17.0
HOLE 779-1
18.0
0
2
4
6
8
10
12
14
16
18
20
DEPTH METERS
TEMPERATURE °C

cc: Hall
Lange
Deymonaz
Caywood

LITHOLOGIC LOG B-297 (779-1)

OK PROJECT

ELEVATION: 5,160'

NW¼ NW¼ Sec 34 T23S R8W

DATE DRILLED: 4/14/77

Depth (m)	DESCRIPTION
0 - 3	Qal Clayey Sand - buff; 35% clay matrix; subrounded-angular; .5mm-2mm; 50% quartz, 45% rhyolite, 5% hornblend(?).
3 - 6	Qal Porphyritic Rhyolite - gravel fractured and filled with clay and secondary quartz; phenocrysts make up ~ 30% of rock and consist of K-spar, plagioclase and qtz; K-spar ~ 25-30%; plagioclase 30%, qtz 25%, hornblendor px 10-20%.
6 - 12	Sand - buff; subrounded; .25-1mm; 50% smokey and colorless quartz; 40% feldspar, 10% hb(?)
12 - 15	Clayey Sand - 35% clay matrix; angular; .25mm-2mm; 45% quartz; 35% feldspar, 15% rhyolite, 5% hornblend and biotite.
15 - 18	Clayey Gravel - 40% clay matrix; subrounded; 2mm-4mm; rhyolitic
18 - 36.5	Clayey Sand - buff; subrounded-angular; .25mm-1mm; 40% quartz, 30% feldspar, 20% rhyolite, 10% hornblend and biotite; 35% clay matrix.
36.5 - 39.5	Gravelly sand - 30% clay matrix; .25-5mm; subrounded-angular; 40% quartz, 30% fledpar, 20% rhyolite, 10% hornblend and biotite.
39.5 - 99.0	Porphyritic Rhyolite - repeat 10-20 except less fracturing and alteration with depth.

TEMPERATURE DEPTH LOG

ΔT Well No. 298

Property-Project OK Depth Logged

Map Scale Date: Drilled Logged

State County Section T R

Instrument Operator Elevation ft.

Comments

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No →	Well No →	DA →	MO →	YR	*
779	298	30	AP	77	CM

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

Site Description	Operator	Editor
9.9 KM SW OF BLACK POINT	JEO	HLH

Card B

Scale Unit in cm	Map Size (7.5, 15.,60)	Map Location Δ N Lat Degree	Min	W Long Degree	Min
CM	15.	38.	45.	112.	45.

Use decimals

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

Northing	Easting	Elev	
-0.03	0.97	5200.	F

Use decimals .15

← Write M if meters

SEGMENT DEPTH

	Start	End	K	ΔK
C	10.0	30.0		
D	45.0	65.0	-5.5	-.5
E				
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
C	35.0	45.0		
D	.999			
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location 2 miles South of Twin Peaks Date 24 April 77

Map Tabernacle Hill Utah 15"

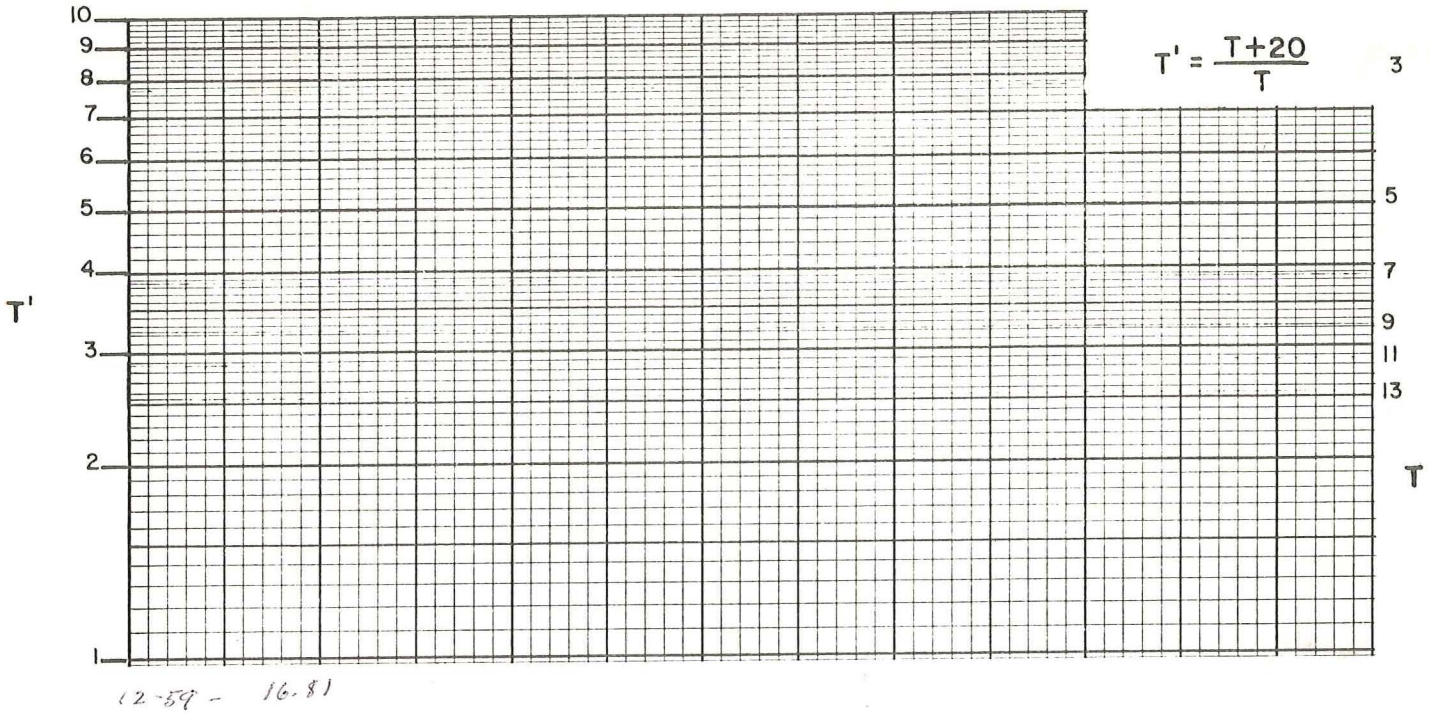
Property ____ T 24S R 8WW sec 1 NE¼ SW¼

Drill Hole B-298 779-3 Date Drilled 15 April 77 Elevation 5200 ft.

Instrument Probe 39 Operator DAE

Comments 3/4" PVC waterfilled

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
2.0	127.16	9.68	.70		
2.5	~~124.11~~	10.38	.62		
3.0	121.44	11.00	.49		
3.5	119.82	11.49	.27		
4.0	~~118.64~~ 118.25	11.76	.43		
4.5	116.49	12.19	.40		
5.0	~~115.~~ 114.84	12.59	.29		
5.5	113.70	12.88	.19		
6.0	112.92	13.07	.23		
6.5	111.98	13.30	.21		
7.0	111.15	13.51	.25		
7.5	110.16	13.76	.11		
8.0	109.73	13.87	.07		
8.5	109.46	13.94	.04		
9.0	109.32	13.98	.03		
9.5	109.21	14.01	.00		
10.0	109.19	14.01	.04		
10.5	109.05	14.05	.01		
11.0	108.98	14.06	.03		
11.5	108.89	14.09	.02		
12.0	108.82	14.11	.02		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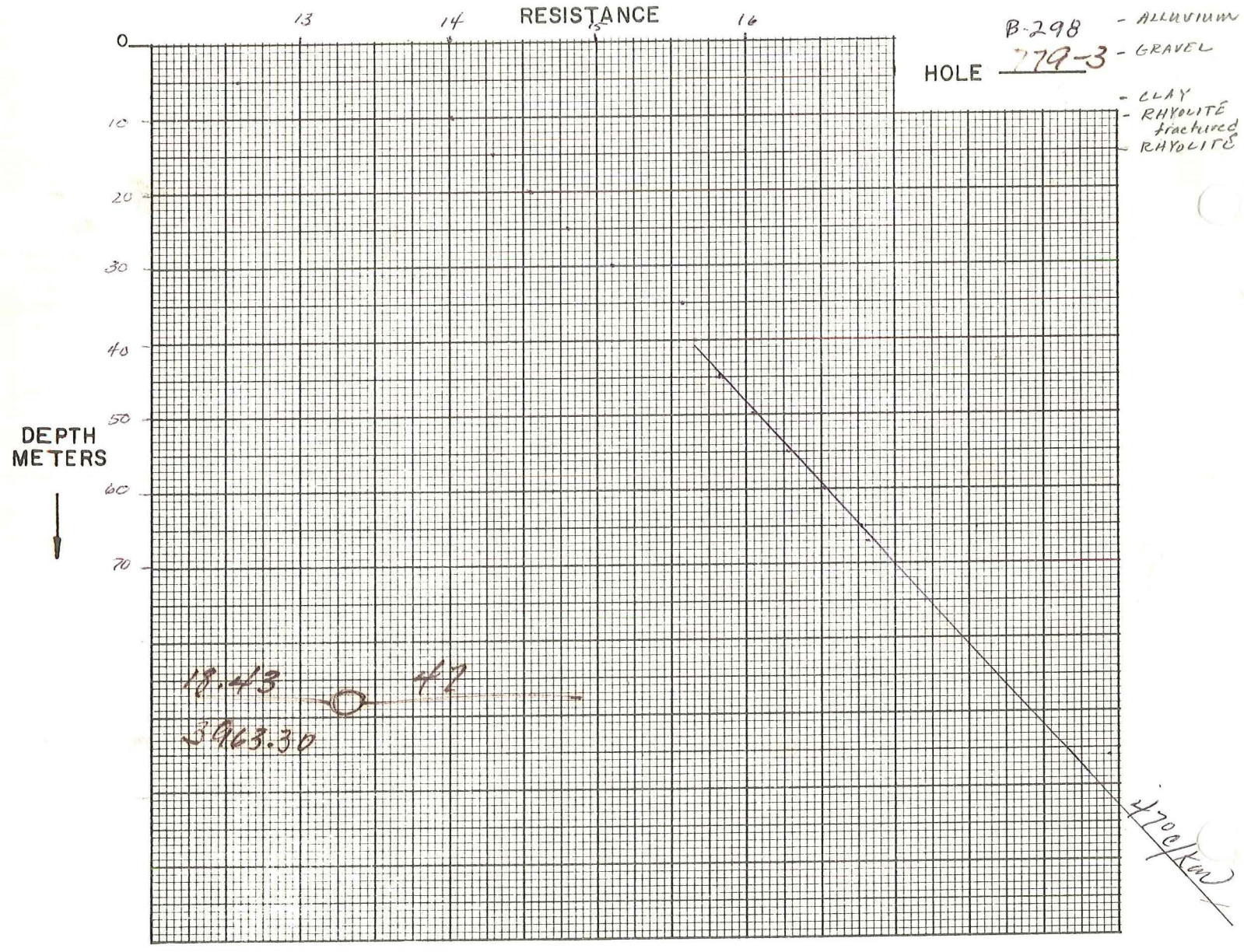
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13

12-59 - 16.81


RESISTANCE
13
14
16
HOLE B-298 279-3
- ALLUVIUM
- GRAVEL
- CLAY
- RHYOLITE fractured
- RHYOLITE
DEPTH METERS
0
10
20
30
40
50
60
70
18.43
3963.30
42
420 c/km
TEMPERATURE °C

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T ____ R ____ sec _____

Drill Hole B-298 779-3 Date Drilled _____ Elevation ____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
12.5	108.74	14.13			
			.02		
13.0	108.65	14.15			
			.04		
13.5	108.48	14.19			
			.05		
14.0	108.29	14.24			
			.03		
14.5	108.20	14.27			
			.03		
15.0	108.08	14.30			
			.03		
15.5	107.94	14.33			
			.01		
16.0	107.91	14.34			
			.01		
16.5	107.86	14.35			
			.04		
17.0	107.72	14.39			
			.04		
17.5	107.55	14.43			
			.06		
18.0	107.33	14.49			
			.00		
18.5	107.34	14.49			
			.02		
19.0	107.25	14.51			
			.02		
19.5	107.16	14.53			
			.02		
20.0	107.08	14.55			
			.27		
25.0	106.07	14.82			
			.30		
30.0	104.93	15.12			
			.45		
35.0	103.22	15.57			
			.09		
40.0	102.91	15.66			
			.18		
45.0	102.24	15.84			
			.21		

107.34

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

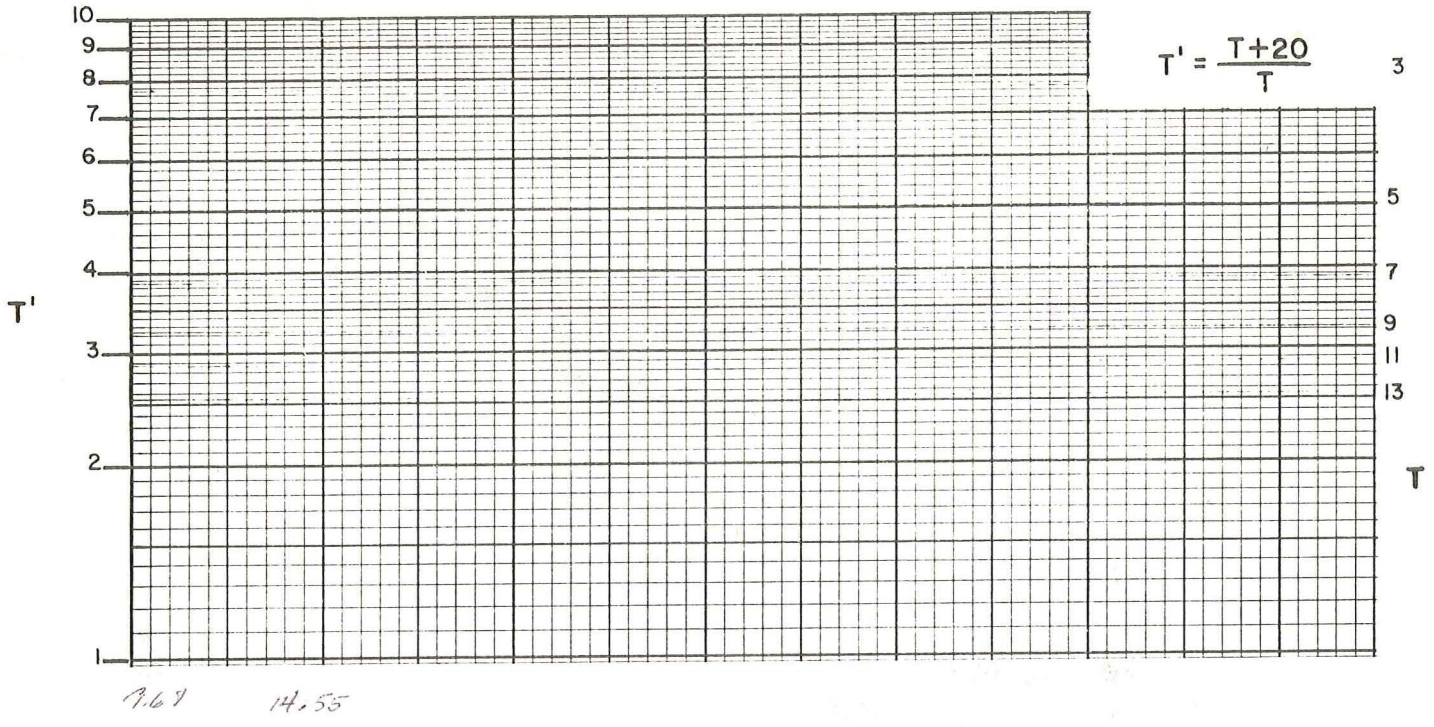
Property _____ T ____ R ____ sec _____

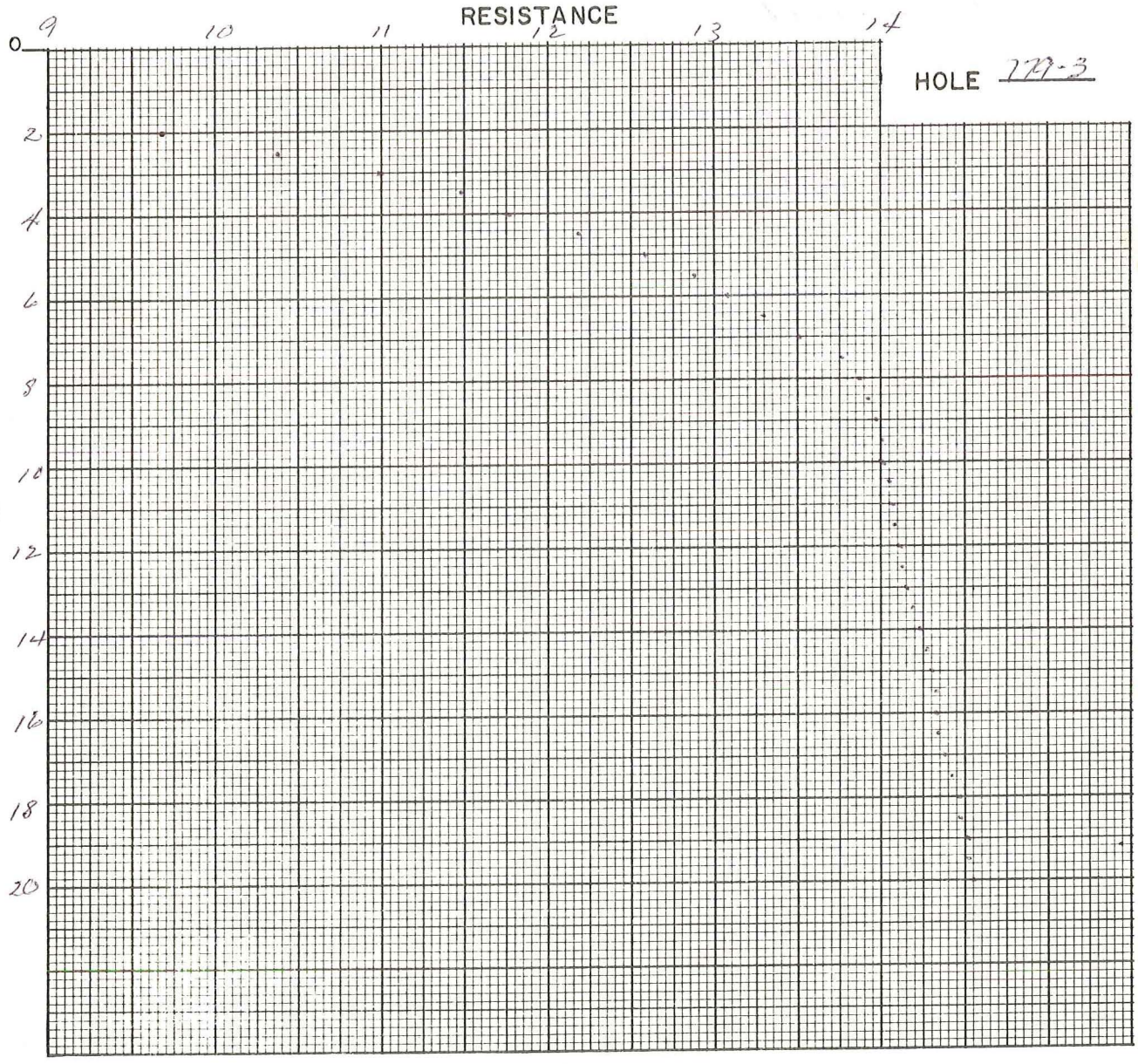
Drill Hole B-298 779-3 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
50.0	101.46	16.05			
			.23		
55.0	100.61	16.28			
			.24		
60.0	99.73	16.52			
			.26		
65.0	98.81	16.78			
			.03		
67.0	98.72	16.81			


$T' = \frac{T+20}{T}$
T'
T
10
9
8
7
6
5
4
3
2
1
3
5
7
9
11
13
9.67
14.55


RESISTANCE
9
10
11
12
13
14
0
2
4
6
8
10
12
14
16
18
20
HOLE 77-3
DEPTH METERS
TEMPERATURE °C

2 S. TWIN PK

TEMPERATURE - DEPTH LOG

Location 2 MILES S. OF TWIN PKS Date 30-APRIL-77 ~~2-MAY-77~~

Map TABERNACLE

Property OK T 24S R 8W sec 1 NE¼ SW¼

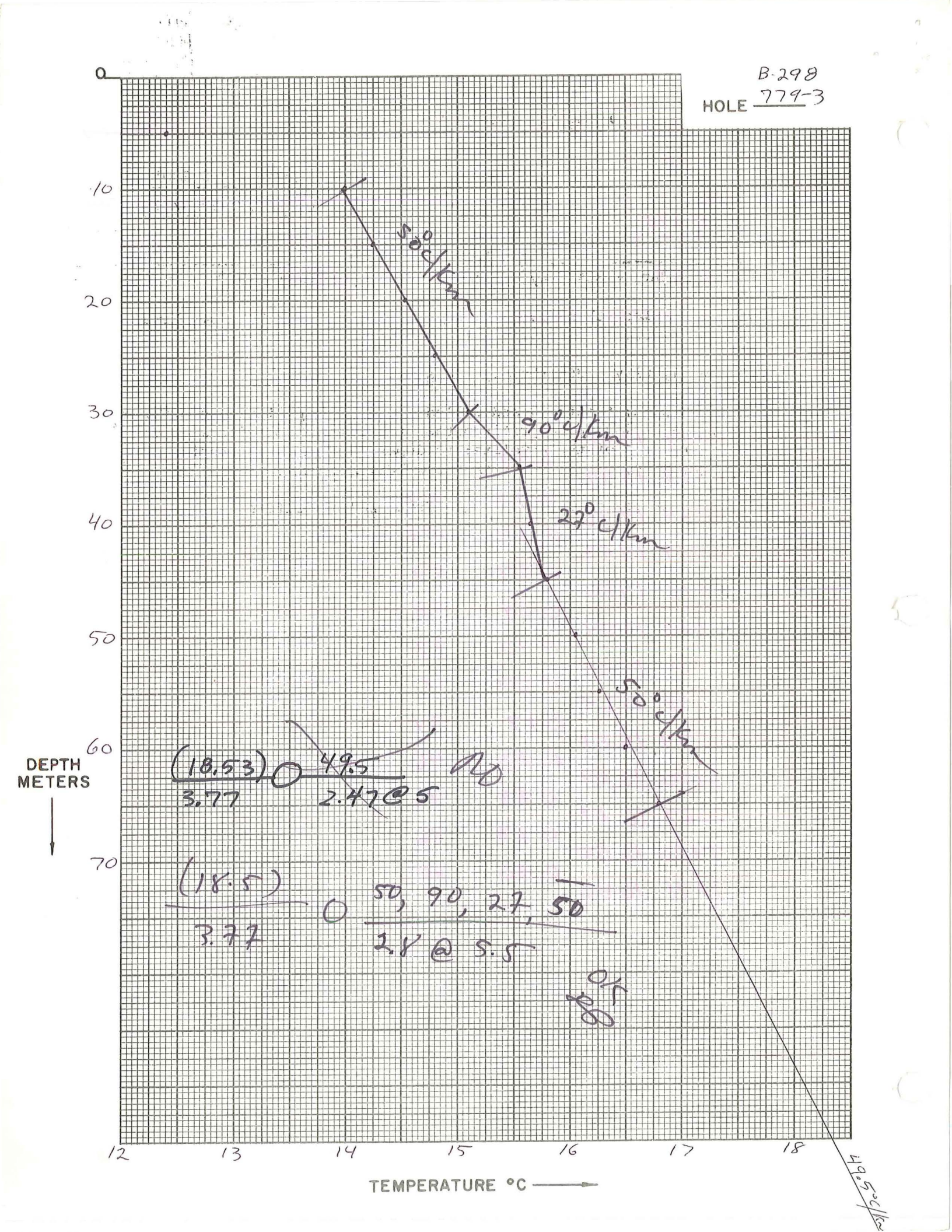
Drill Hole B-298 779-3 Date Drilled 15-APRIL-77 Elevation 5200 ft.

Instrument #39 Operator JED

Comments 3/4" WATER FILLED PVC

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
5	11559	12.41			
			1.58		
10	10928	13.99			
			0.27	54	
15	10824	14.26			
			0.27	54	
20	10719	14.53			
			0.27	54	
25	10616	14.80			
			0.29	58	
30	10503	15.09			
			0.46	92	
35	10331	15.55			
			0.09	18	
40	10298	15.64			
			0.17	34	
45	10234	15.81			
			0.23	46	
50	10150	16.04			
			0.23	46	
55	10067	16.27			
			0.23	46	
60	9980	16.50			
			0.30	60	
65	9871	16.80			

B-298
HOLE 779-3



cc: Hall
Lange
Deymonaz
Caywood

LITHOLOGIC LOG B-298 (779-3)

OK PROJECT

ELEVATION: 5,200'

NE¼ SW¼ Sec 1 T24S K8W

DATE DRILLED: 4/15/77

Depth (m)	DESCRIPTION
0 - 6	Qal Clayey Sand - 30% clay or silt; .5mm-5mm; rhyolitic
6 - 9	Qal Gravel - Less than 10% clay; buff; subrounded=angular; 3mm-25mm; mostly rhyolite.
9 - 12	Qal Gravelly Clay - 30% rhyolitic gravel; buff
12 - 15	Rhyolite - pink; fractured and filled with clay and silica; shows iron/manganese staining; porphyritic potash feldspar and plagioclase ave 5mm and make up ~30% of the rhyolite; feldspars in general approximate 60% of the rhyolite, quartz 25%, hornblend 10%, biotite 5%.
15 - 64	Rhyolite - repeat 40-50, but not as fractured and altered.