

DRILL HOLE DATA SHEET

Hole Number: L-1

Type of Hole: Shallow thermal gradient well

Location: County Lake State California

Description NW $\frac{1}{4}$ NW $\frac{1}{4}$  Section 27 Township 10N

Range 7W Meridian MDM Elevation 1,630'

Surface Ownership: Fee - Norman B. Livermore (620-3024)

Minerals Ownership: Fee - Norman B. Livermore (620-3024)

Date of: Spud in 8-19-75 Drilling Completed 8-21-75

Completion 9-3-75 Abandonment 3-26-76

Depth: Permitted 170 m Actual 330'

Drilling Information: Lith Log and Temperature/Depth log attached

Water Encountered: None

Bond Number                      Agency Permit Number                      AMAX Permit Number

Federal		
State	BND 2-02-60-14	N/A
County	N/A	N/A
		CA-OG-2001
		CA-LA-PC-3001

Activity                      Date                      By                      Cost of Survey Support Cost

Drilled	8/19 thru 8/21/75	Pitcher Drilling Company	
TG Logging	9/23/75	AMAX	

Total \_\_\_\_\_

LITHOLOGIC LOG

PROPERTY: LIVERMORE 1  
Sec. 27 T10N R7W

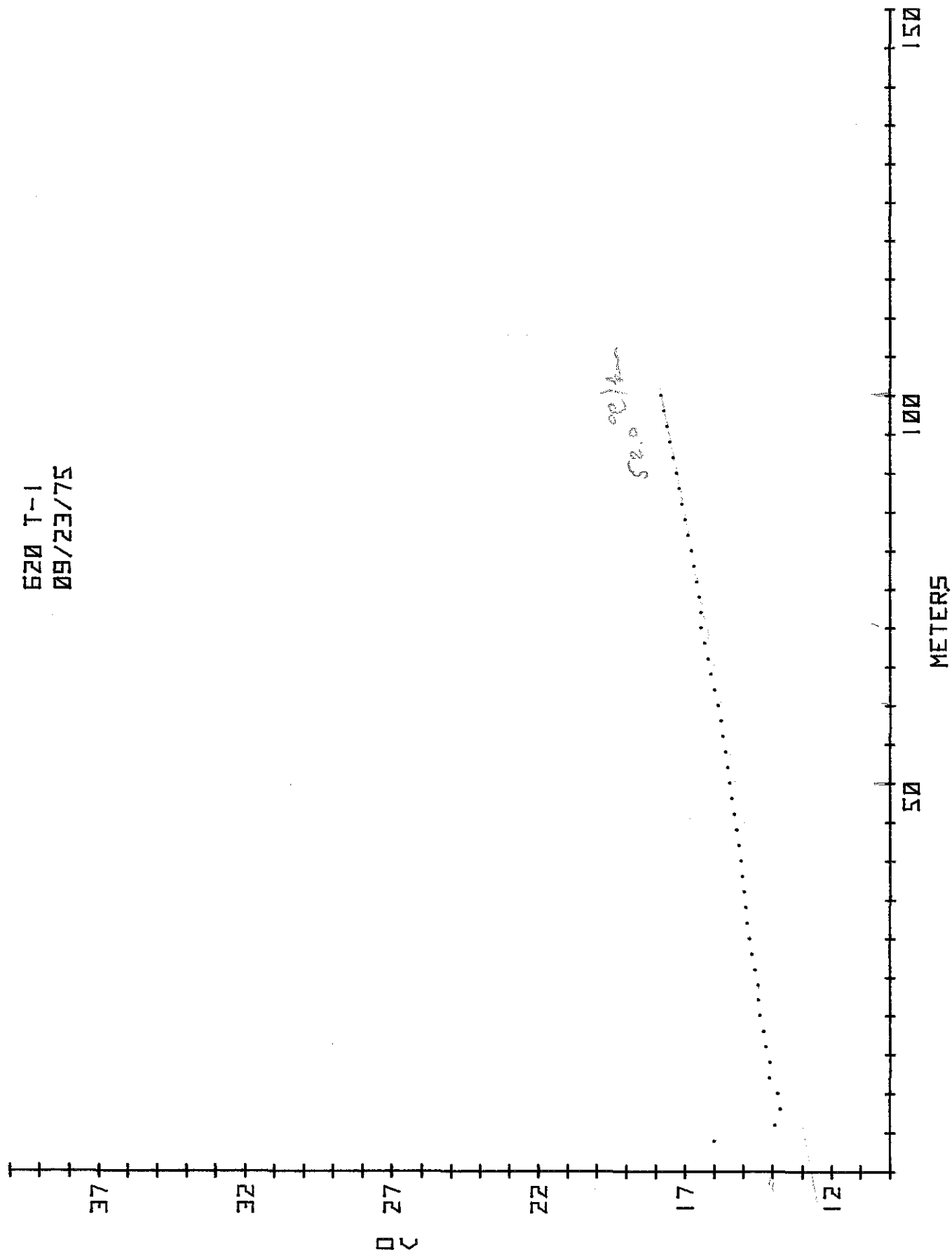
ELEVATION: 1630'  
Drilled 8-21-75

Feet	Description
0-5'	Clay
5-32	Brown tuff (leached?)
32-215	Green to gray tuff
215-219	Quartz vein with diss. pyrite
219-250	Tuff
250-330	Serpentine

TEMPERATURE VS DEPTH LOG FOR WELL-620 T-1  
09/23/75 L-1

DEPTH METERS	TEMPERATURE DEGREES C	GRADIENT C/KM
4	16.025	-1042.5
6	15.94	-100
8	15.74	52.5
10	15.845	125
12	14.635	15
14	14.135	55
16	14.735	48.5
18	14.54	51.5
20	14.455	59
22	14.515	5
24	14.525	52.5
26	14.53	47.5
28	14.725	48
30	14.585	52.5
32	14.37	57.5
34	14.925	56
36	14.925	57
38	15.285	52.5
40	15.1	55
42	15.17	42.5
44	15.235	45
46	15.235	54.5
48	15.24	48
50	15.49	53
52	15.45	54.5
54	15.525	45
56	15.515	55
58	15.585	52.5
60	15.54	54.5
62	15.525	52.5
64	15.53	59
66	15.53	54.5
68	15.545	54.5
70	15.47	54.5
72	15.475	55.5
74	15.52	45
76	15.51	55
78	15.51	55
80	15.51	52.5
82	15.515	55
84	15.515	52.5
86	15.42	47.5
88	15.215	55
90	15.515	52.5
92	15.42	55
94	15.53	52.5
96	15.525	55
98	15.535	55
100	15.555	176.55

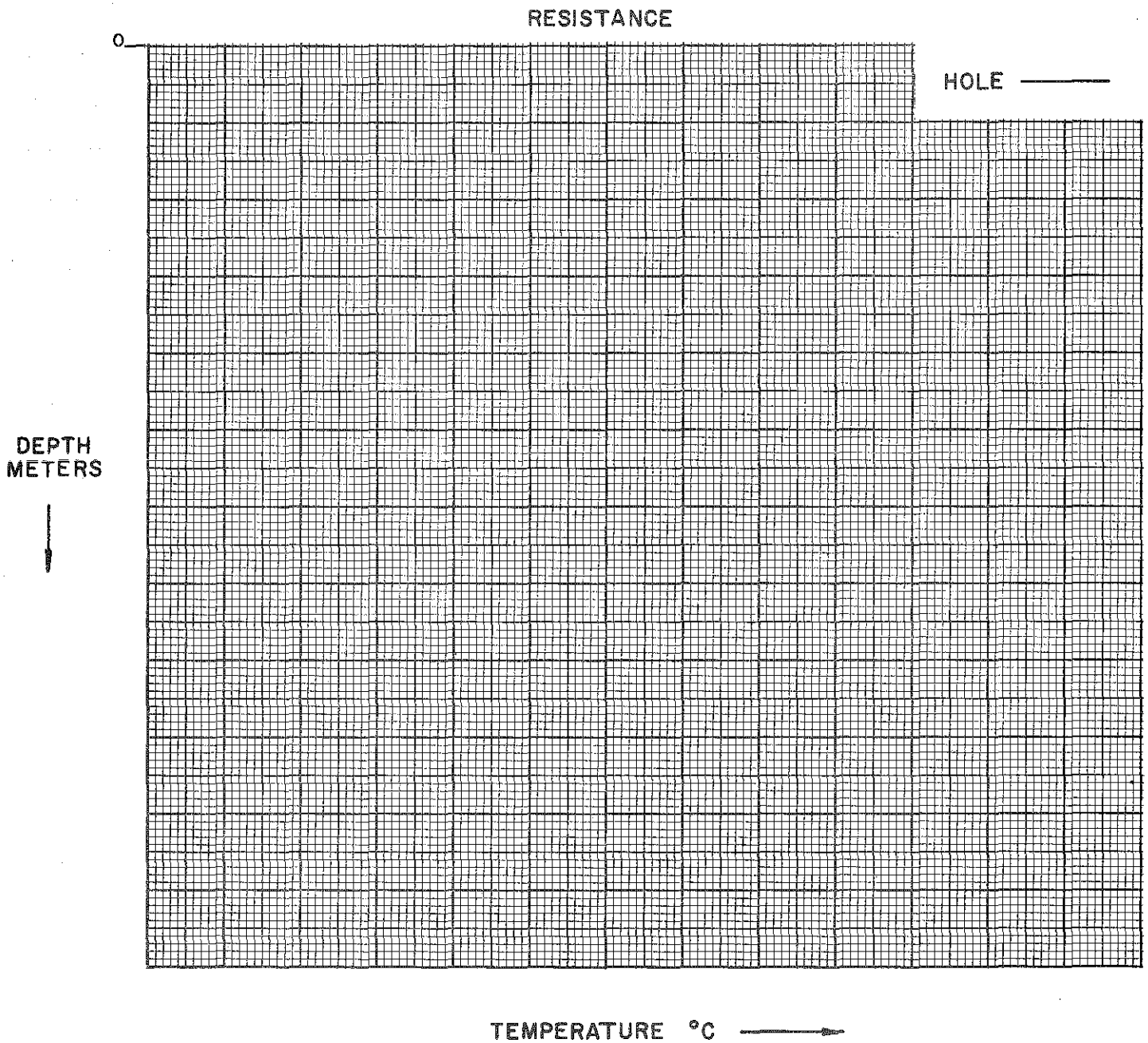
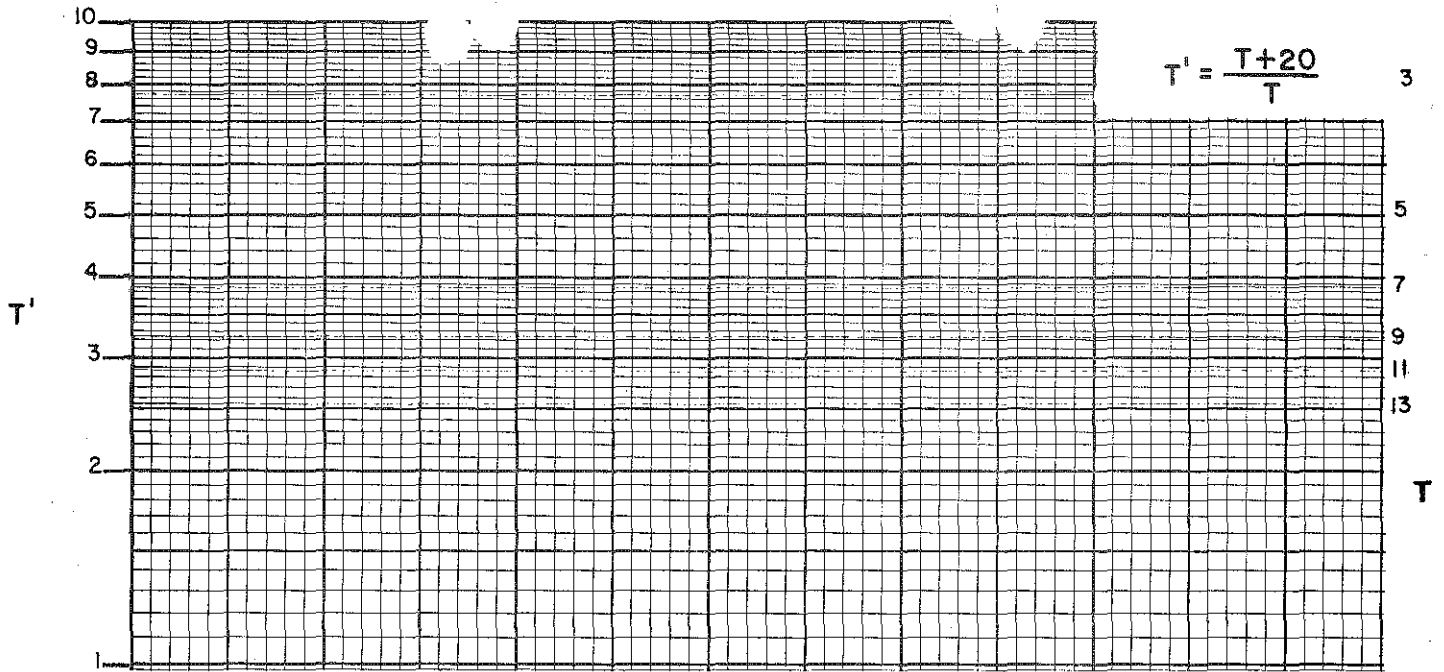
620 T-1  
09/23/75



TEMPERATURE - DEPTH LOG

Location MIDDLE TOWN, CALIF Date 7/1/75  
 Map Detent Reservoir, Calif.  
 Property LIVERMORE (SAWT) T 10N R 7 W sec 27  
 Drill Hole L-1 Date Drilled 8/21/75 Elevation 1680 ft.  
 Instrument PROBE Operator SM E. J. D.  
 Comments pipe 47 cm above ground  
Second run

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
4	5134	15.835			
6	5552	13.305		-99.0	
8	5607	13.696		-107.5	
10	5589	13.770		40	
12	5531	14.025		127.5	
14	5524	14.060		17.5	
16	5494	14.195		67.5	
18	5476	14.275		40.0	
20	5449	14.400		62.5	
22	5434	14.465		32.5	
24	5429	14.490		12.5	
26	5410	14.575		42.5	
28	5390	14.670		47.5	
30	5373	14.750		40.0	
32	5359	14.815		32.5	(32m-100m) AVE
34	5345	14.880		32.5	43.8 °C/Km
36	5332	14.940		32.0	
38	5316	15.015		37.5	
40	5306	15.060		22.5	
42	5291	15.130		35.0	
44	5273	15.215		42.5	



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## TEMPERATURE - DEPTH LOG

Location \_\_\_\_\_ Date \_\_\_\_\_

Map \_\_\_\_\_

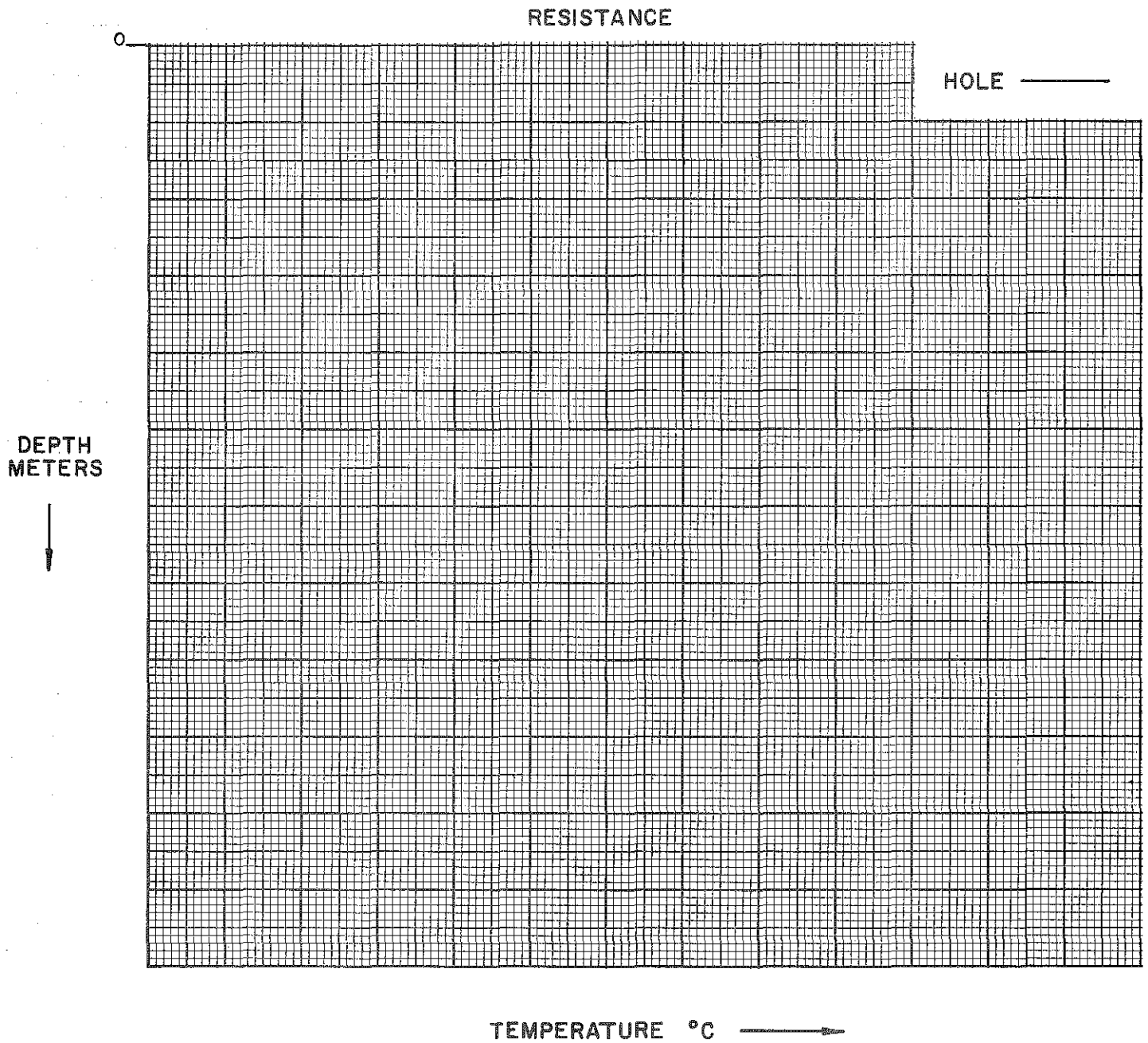
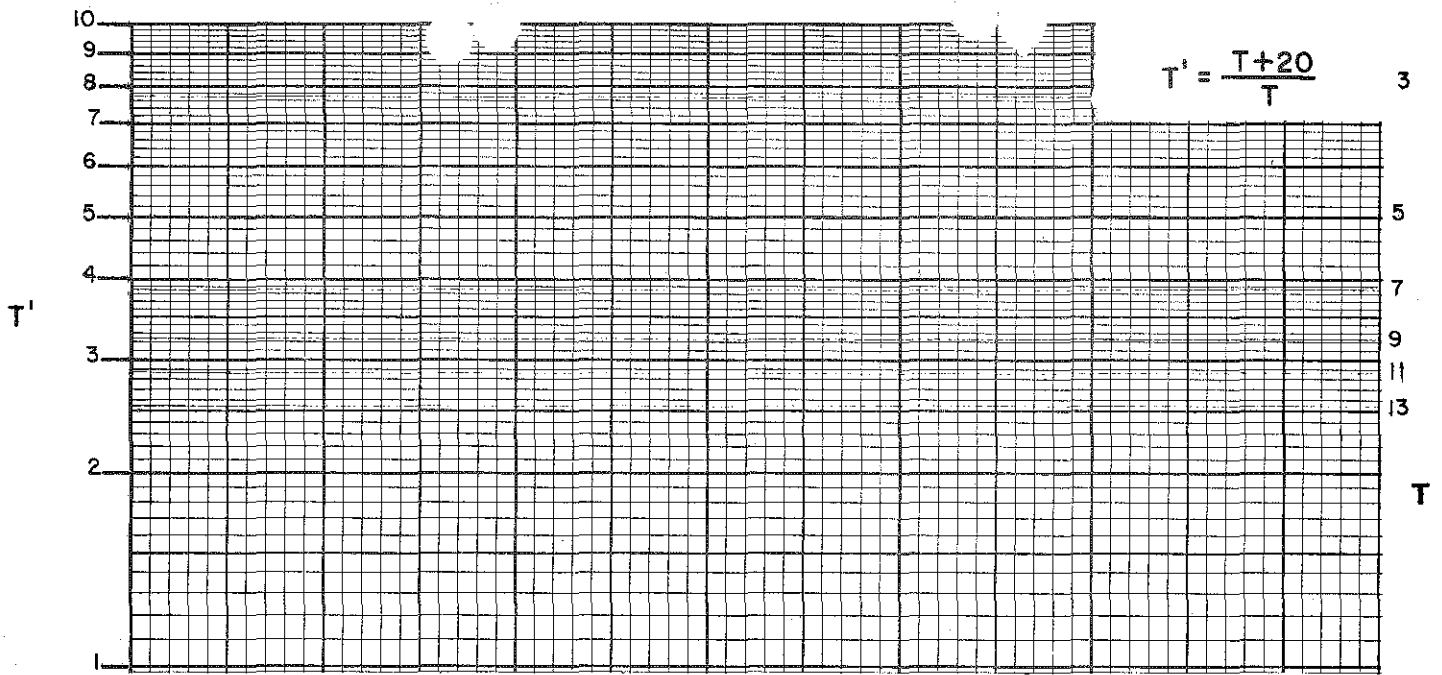
Property \_\_\_\_\_ T \_\_\_\_\_ R \_\_\_\_\_ sec \_\_\_\_\_

Drill Hole L-1 Date Drilled \_\_\_\_\_ Elevation \_\_\_\_\_ ft.

Instrument \_\_\_\_\_ Operator \_\_\_\_\_

Comments \_\_\_\_\_

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
46	5226	15.300			
48	5241	15.370		35	
50	5224	15.450		40	
52	5210	15.520		35	
54	5194	15.595		37.5	
56	5176	15.622		42.5	
58	5159	15.765		42.3	
60	5137	15.870		52.5	
62	5114	15.985		57.5	
64	5092	16.095		55.0	
66	5070	16.200		52.5	
68	5048	16.310		55.0	
70	5026	16.420		55.0	
72	5019	16.485		17.5	
74	5009	16.505		25.0	
76	4992	16.590		42.5	
78	4972	16.695		52.5	
80	4951	16.800		52.5	
82	4931	16.905		52.5	
84	4911	17.005		50.0	





TEMPERATURE - DEPTH LOG

Location CALISTOGA, CALIF Date 9/1/75

Map DESERT RESERVE

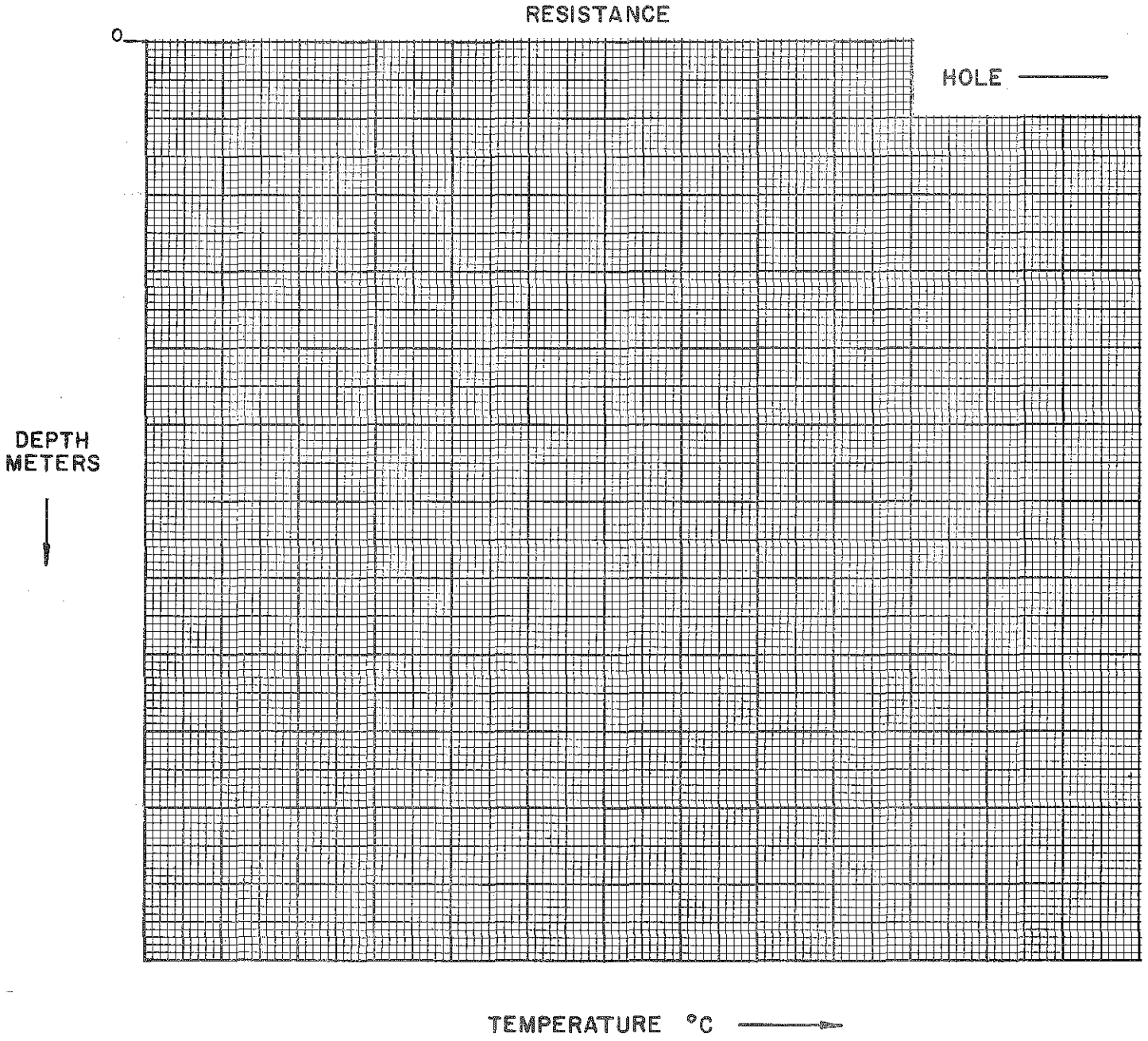
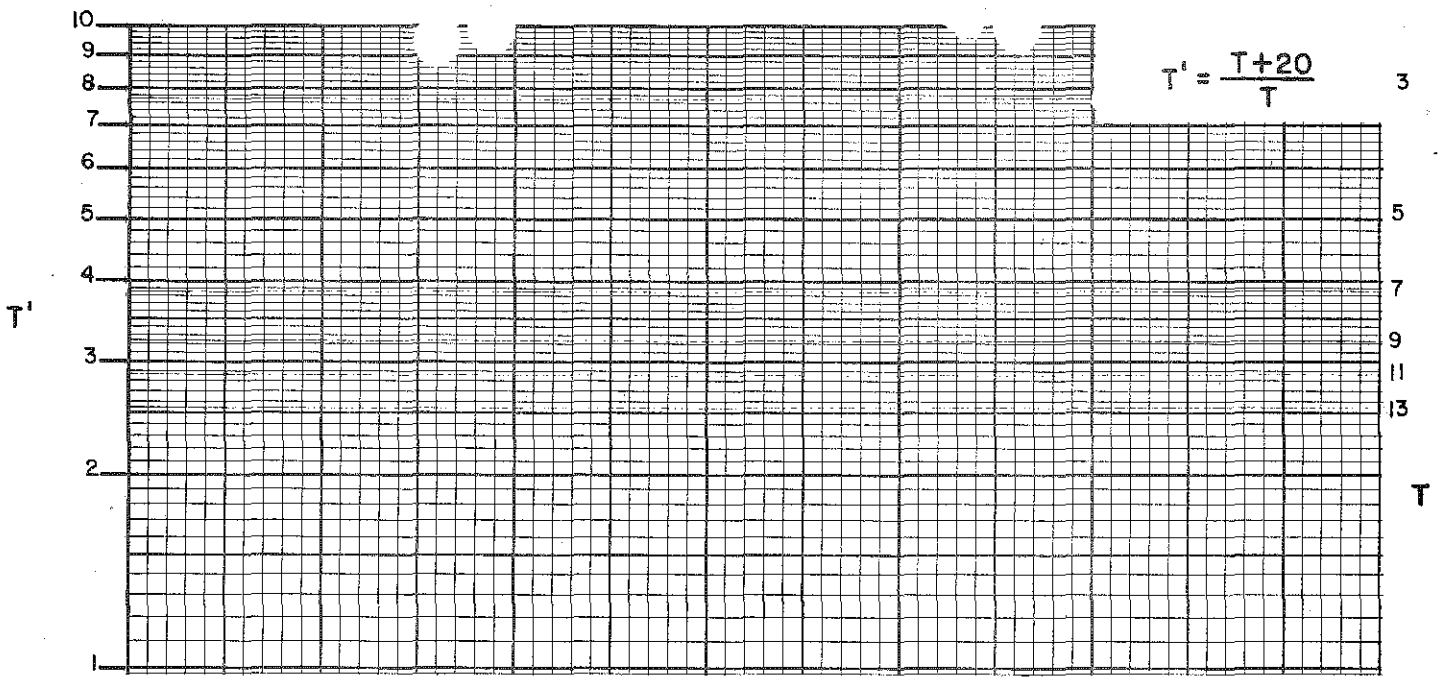
Property LIVERMORE (GALT) T 10N R 7W sec 27

Drill Hole L-1 Date Drilled 8/31/75 Elevation 1680 ft.

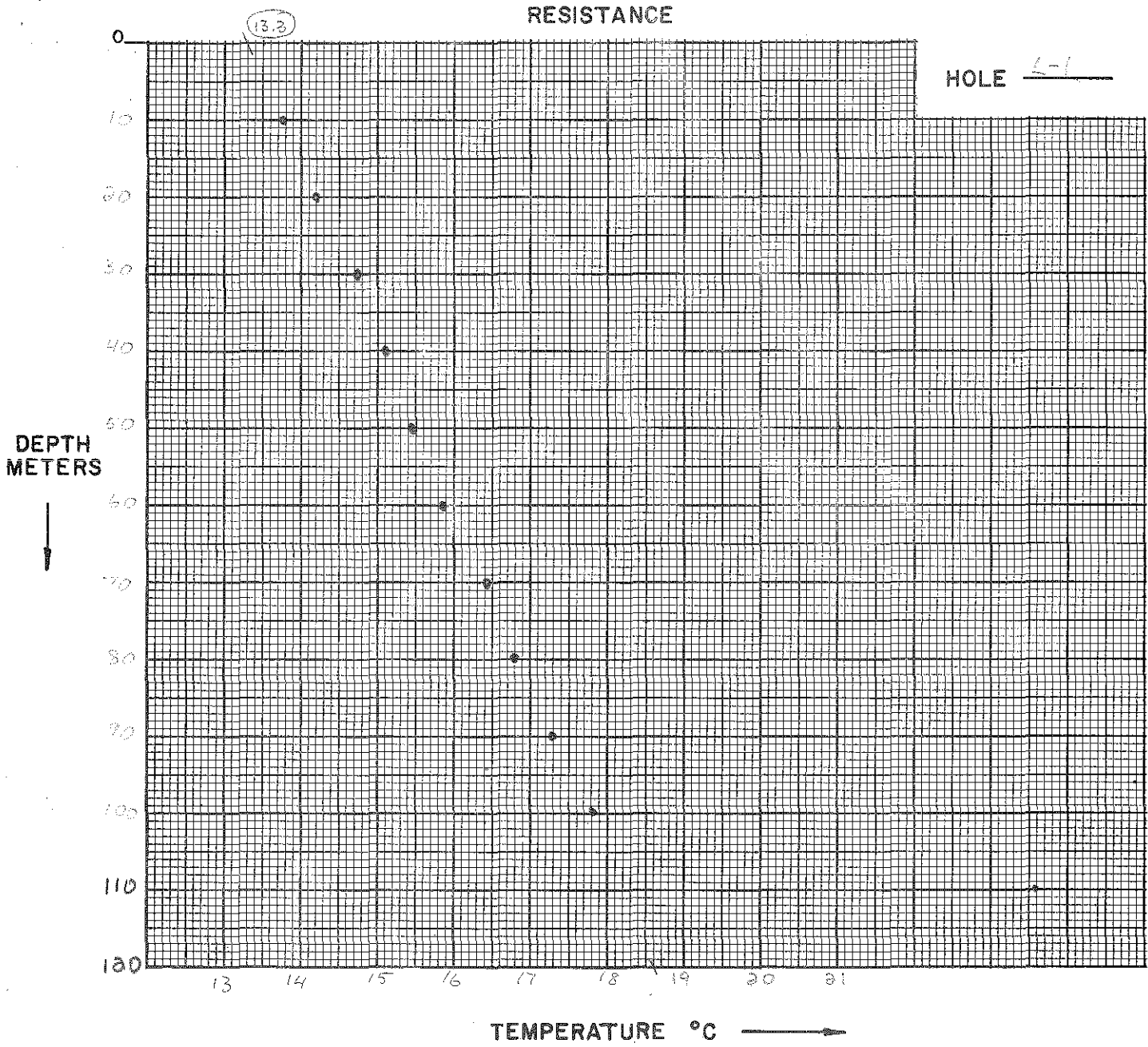
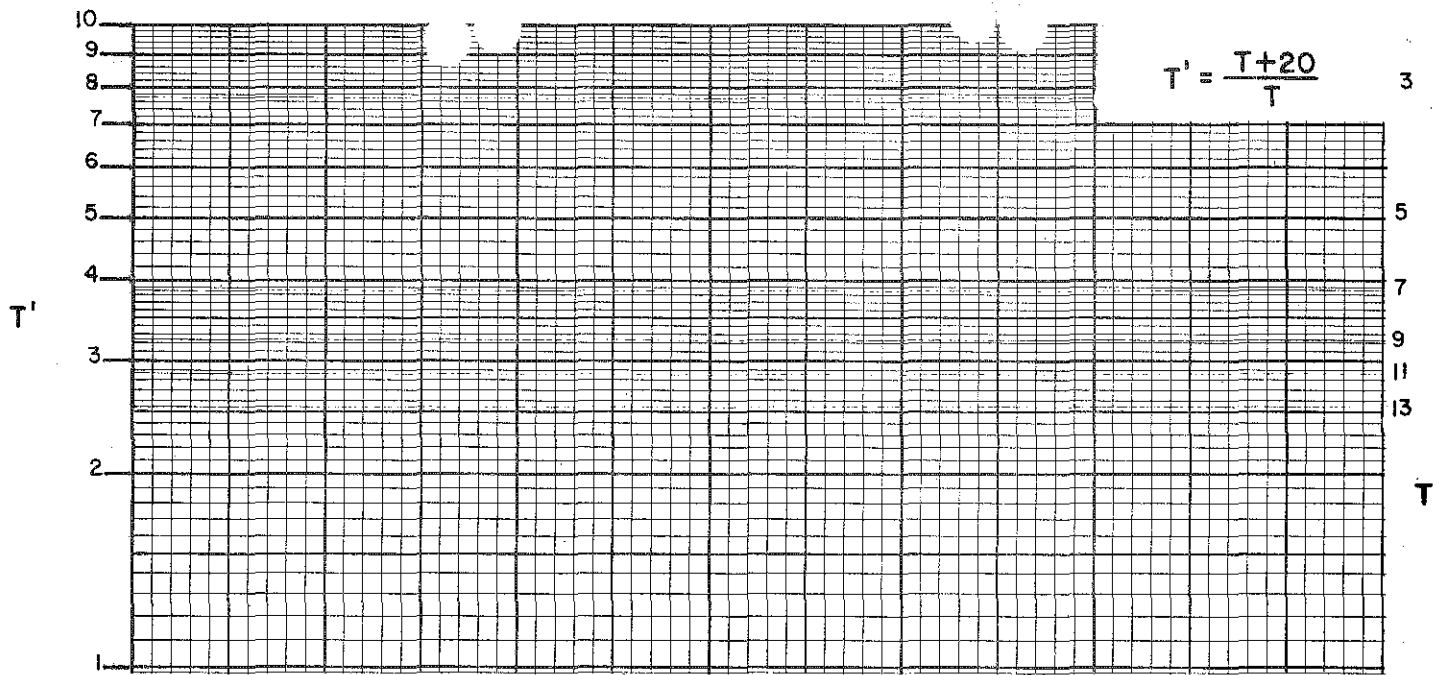
Instrument PROBE Operator JM

Comments \_\_\_\_\_

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
2	—				
4	5106	16.525			
6	5551	13.940		-1042.5	
8	5595	13.740		-100	
10	5572	13.845		52.5	
12	5516	14.095		125	
14	5509	14.125		5	
16	5480	14.255		65	
18	5462	14.340		42.5	
20	5437	14.435		37.5	
22	5424	14.515		30	
24	5421	14.525		5	
26	5398	14.630		52.5	
28	5378	14.725		47.5	
30	5361	14.805		40	32m - 100m AVE
32	5347	14.870		32.5 ←	44.7 °C/Km
34	5325	14.925		27.5	
36	5322	14.985		30	
38	5307	15.055		35	
40	5298	15.100		22.5	
42	5283	15.170		25	







TEMPERATURE - DEPTH LOG

Location \_\_\_\_\_ Date \_\_\_\_\_

Map \_\_\_\_\_

Property \_\_\_\_\_ T \_\_\_\_\_ R \_\_\_\_\_ sec \_\_\_\_\_

Drill Hole L-1 Date Drilled \_\_\_\_\_ Elevation \_\_\_\_\_ ft.

Instrument \_\_\_\_\_ Operator \_\_\_\_\_

Comments \_\_\_\_\_

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
44	5265	5.855	40.5		
46	5248	5.885	40		
48	5222	5.910	37.5		
50	5216	5.990	40		
52	5203	6.050	30		
54	5188	6.125	37.5		
56	5169	6.215	45		
58	5151	6.305	45		
60	5139	6.410	52.5		
62	5126	6.525	57.5		
64	5114	6.650	52.5		
66	5104	6.780	50		
68	5091	6.915	57.5		
70	5076	7.060	62.5		
72	5065	7.215	52.5		
74	5056	7.380	52.5		
76	4989	7.610	45		
78	4969	7.710	50		
80	4949	7.810	50		
82	4929	7.915	52.5		
84	4909	8.015	50		

