



GL05596
FILE_CAB_DRAWER_

Amax Thermal Data Field Sheets
Vale. Oregon. Temperature
Depth Log, Well 201-219
301-310, NV-1 → NV-18,
71-72, BC 108 → BC 112
114 → BC-120

A-43

Vale

THERMAL DATA - FIELD SHEETS

VALE

DATE	ISSUED TO

SOUTH VALE ~~DEPTH~~ DRILL HOLE DEPTHS.

HOLE NO	DEPTH in Metres.
V-1	44ms
V-2	13ms
V-3	50
V-4	50
V-5	50
V-6	50
V-7	21ms.
V-8	50
V-9	47
V-10	34
V-11	28
V-12	30
V-13	30
V-14	30
V-15	30
V-16	30
V-17	30
V-18	30
V-19	30
$\Delta V - 101$	150
$\Delta V - 102$	40ms.
$\Delta V - 103$	65
$\Delta V - 104$	135
$\Delta V - 105$	115ms.
$\Delta V - 106$	70
$\Delta V - 107$	175
$\Delta V - 108$	80
$\Delta V - 109$	120
$\Delta V - 110$	150
$\Delta V - 111$	
$\Delta V - 112$	
$\Delta V - 115$	
$\Delta V - 116$	
V-77-1	62ms.
V-77-2	61ms.

ΔV Holes are not Amax Holes.

HOLE NO	DATA.
V-18	$\frac{(23.4)}{2.08} \cdot \frac{96.1}{2.9 @ 3.0}$
AV-109	$\frac{(20.4)}{2.58} \cdot \frac{51, 72^*, 81}{2.3 @ 3.0}$
AV-110	$\frac{(24.5)}{2.00} \cdot \frac{100}{3.0 @ 3.0}$
V-8	$\frac{(22.0)}{2.31} \cdot \frac{65.5, 97^*, 104}{2.9 @ 3.0}$
AV-112	$\frac{(21.2)}{2.78} \cdot \frac{72.0}{2.2 @ 3.0}$
V-9	$\frac{(18.3)}{3.96} \cdot \frac{36.0 - 50.5^*}{2.5 @ 5.0}$
V-10	$\frac{(18.4)}{3.47} \cdot \frac{37.5^* - 64.4}{2.3 @ 6.0}$

VALE (SOUTH) GEOCHEMICAL DATA.

HOLE NO	DATA	HOLE NO	DATA
V-1	$\frac{(25.8)}{1.69} \cdot \frac{118.4}{3.6 @ 3.0}$	Δ V-107	$\frac{(25.7)}{1.72} \cdot \frac{100, 116^* - 134}{3.5 @ 3.0}$
Δ V-116	$\frac{(31.0)}{1.1} \cdot \frac{180 - 225}{5.4 @ 3.0}$	Δ V-101	$\frac{(22.6)}{2.13} \cdot \frac{91.5^* - 94.8}{2.8 @ 3.0}$
V-19	$\frac{(21.1)}{2.55} \cdot \frac{78.3}{2.4 @ 3.0}$	Δ V-106	$\frac{(34.9)}{1.04} \cdot \frac{193^* - 216}{5.8 @ 3.0}$
V-6	No DATA.	V-4	$\frac{(23.2)}{2.22} \cdot \frac{90.1}{2.7 @ 3.0}$
Δ V-115	$\frac{18.8}{2.86} \cdot \frac{66.4 - 73.4^*}{2.4 @ 3.2}$	V-6	$\frac{(20.9)}{2.98} \cdot \frac{67.1}{2.0 @ 3.0}$
Δ V-111	$\frac{(\quad)}{2.29} \cdot \frac{87.3}{2.6 @ 3.0}$	V-12	$\frac{(20.4)}{2.84} \cdot \frac{70.5}{2.1 @ 3.0}$
Δ V-103	$\frac{(31.8)}{1.11} \cdot \frac{180.8}{5.4 @ 3.0}$	V-13	$\frac{(21.0)}{2.69} \cdot \frac{74.4}{2.3 @ 3.0}$
V-5	$\frac{(22.4)}{2.40} \cdot \frac{73.6 - 107^*}{3.2 @ 3.0}$	V-14	$\frac{(22.9)}{2.35} \cdot \frac{85.0}{2.6 @ 3.0}$
V-104		V-15	$\frac{(19.7)}{3.64} \cdot \frac{55}{1.7 @ 3.0}$
Δ V-104	$\frac{(31.2)}{1.27} \cdot \frac{146.5 - 176.6^*}{5.3 @ 3.0}$	V-16	$\frac{(22.4)}{2.39} \cdot \frac{83.8}{2.5 @ 3.0}$
V-3	$\frac{(22.3)}{2.20} \cdot \frac{93.0 - 96.5^*}{2.9 @ 3.0}$	V-17	$\frac{(24.5)}{1.90} \cdot \frac{105}{3.2 @ 3.0}$
Δ V-108	$\frac{(21.1)}{2.94} \cdot \frac{68^* - 91.9}{2.0 @ 3.0}$		

100-series holes are not Amax holes



NORTH
FACE

TEMPERATURE DEPTH LOG

ΔT Well No. 201

Property-Project VALE Depth Logged _____

Map _____ Scale _____ Date: Drilled _____ Logged _____

State _____ County _____ Section _____ T _____ R _____

Instrument _____ Operator _____ Elevation _____ ft.

Comments _____

COMPUTER PROCESSING

RT JUSTIFY: Proj No Well No Date Logged

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

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

Card A

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	5				K	M	N	W		2	F		F	I	N	D	L	E	Y	R	E	S	E	R	V	O	I	R		D	P									M	L	H													

Scale Unit		Map Size		Map Location ^Δ				N Lat				W Long			
in	cm	(7.5, 15., 60)		Degree	Min	Degree	Min	Degree	Min	Degree	Min	Degree	Min	Degree	Min
CM		7	5	43	52	117	15								

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

Card B

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							2	3	0		2	3	8	0												F

Use decimals

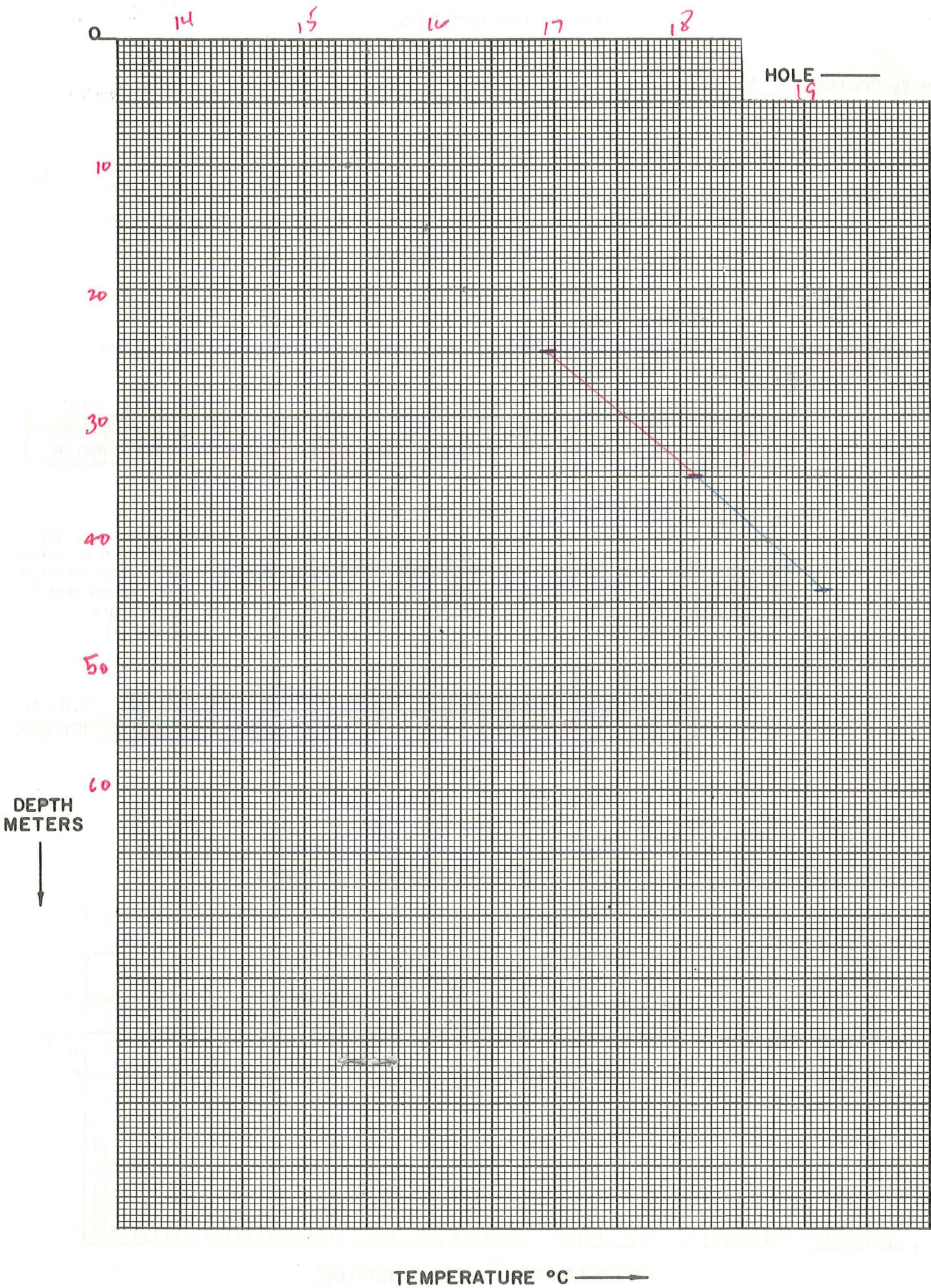
Write M if meters

	SEGMENT DEPTH															
	Start				End				K				ΔK			
C	2	5	0		4	4	0		-	3	0		-	1	5	
D																
E																
F																
G																

Continue each card below.

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

Final Segment: Start = .999



1 of 3
201

TEMPERATURE - DEPTH LOG

Location Vale, Oregon Date May 31, 1975
 Map Vale East Quadrangle
 Property T 18S R 45E sec ^{SW 1/4} NW 1/4 26
 Drill Hole V-1 Date Drilled May 15, 1975 Elevation 2380 ft.
 Instrument _____ Operator Pilkington
 Comments Logged at 1015 hrs Filled with H₂O to top drilled

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient		Comments
				°C/Km	Avg.	
0	3.5940	25.155	-9.700			
1	5.225	15.455	-2.910			
2	5.875	12.545	-0.860			
3	6.083	11.685	0.510			
4	5.958	12.195	0.980			
5	5.725	13.175	0.475			
6	5.616	13.650	0.520			
7	5.499	14.170	0.625			
8	5.363	14.795	0.375			
9	5.283	15.170	0.165			
10	5.248	15.335	0.110			
11	5.223	15.445	0.110			
12	5.202	15.535	0.130			
13	5.175	15.685	0.160			
14	5.143	15.845	0.135			
15	5.115	15.980	0.210			
16	5.072	16.190	0.165			
17	5.035	16.375	-0.055			
18	5.046	16.320	-0.090			
19	5.064	16.230	0.040			
20	5.056	16.270	0.115			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

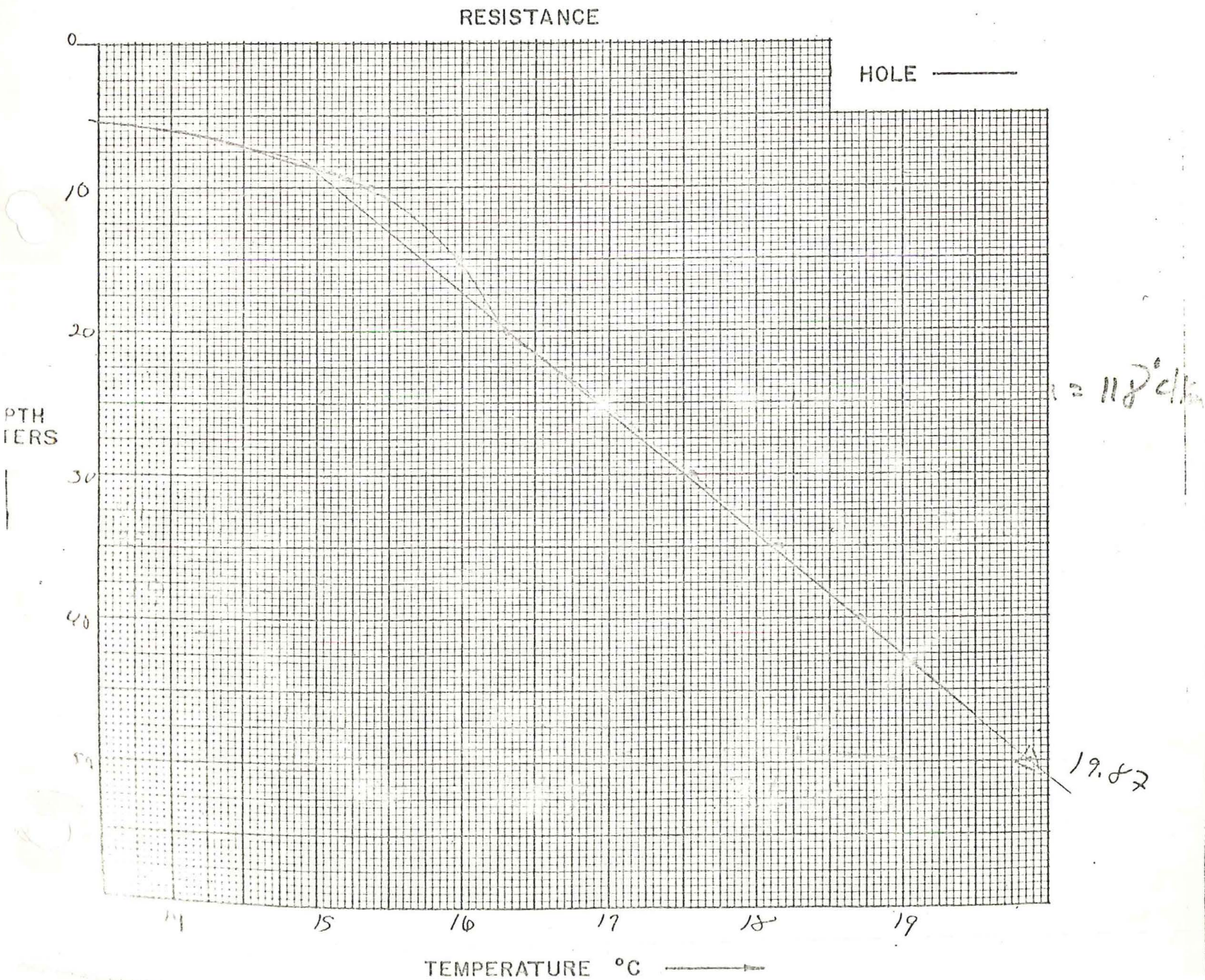
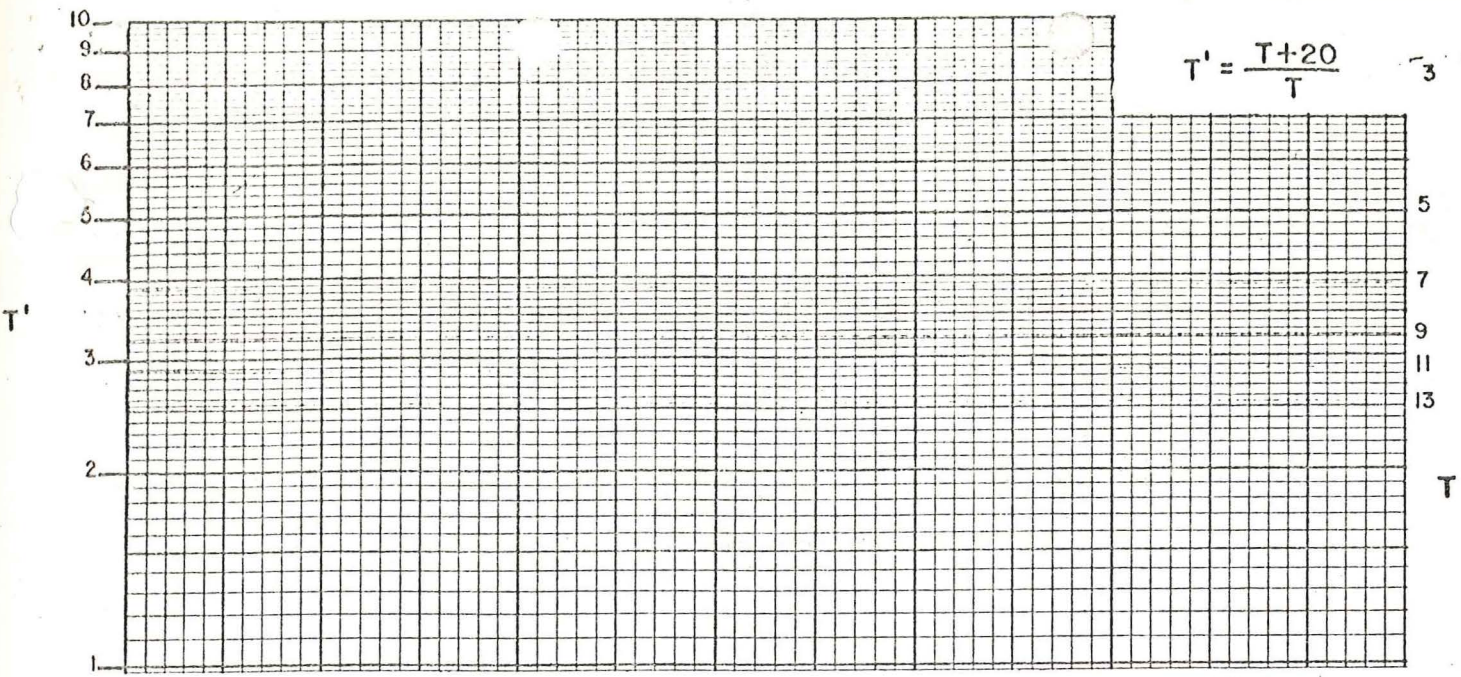
Property _____ T _____ R _____ sec _____

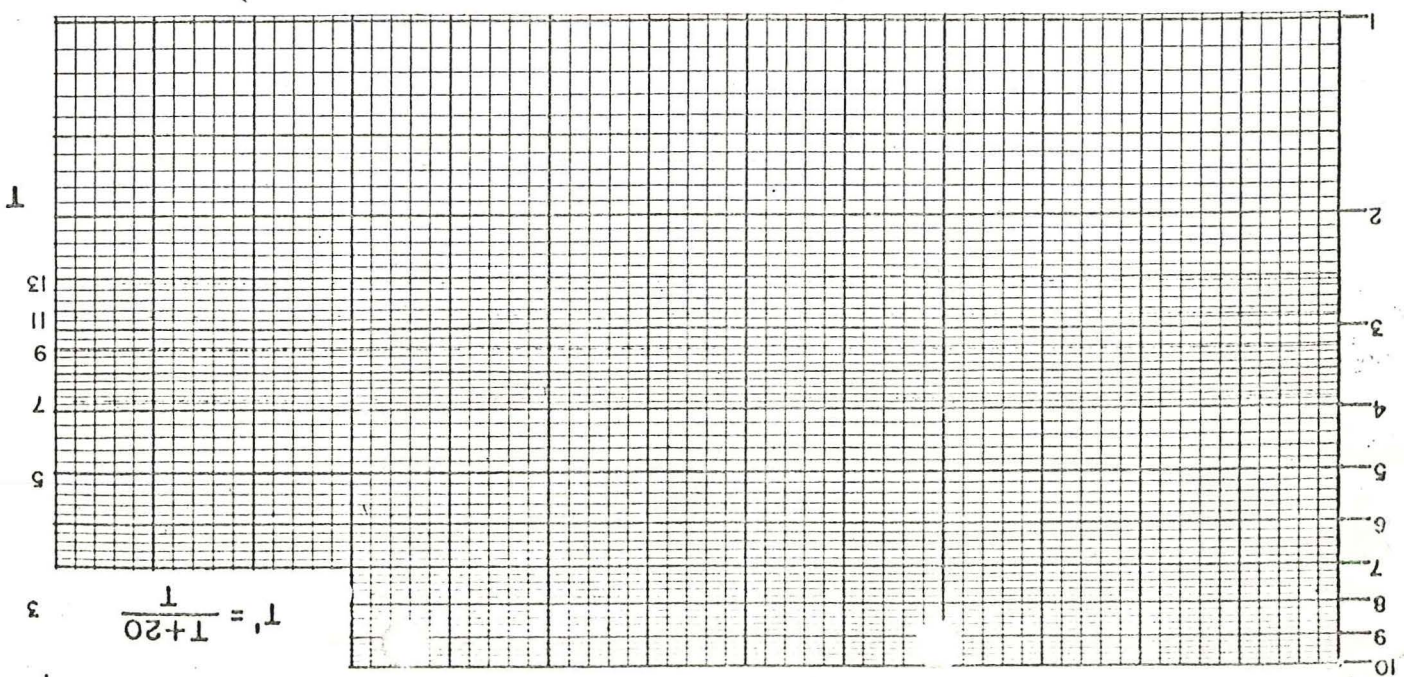
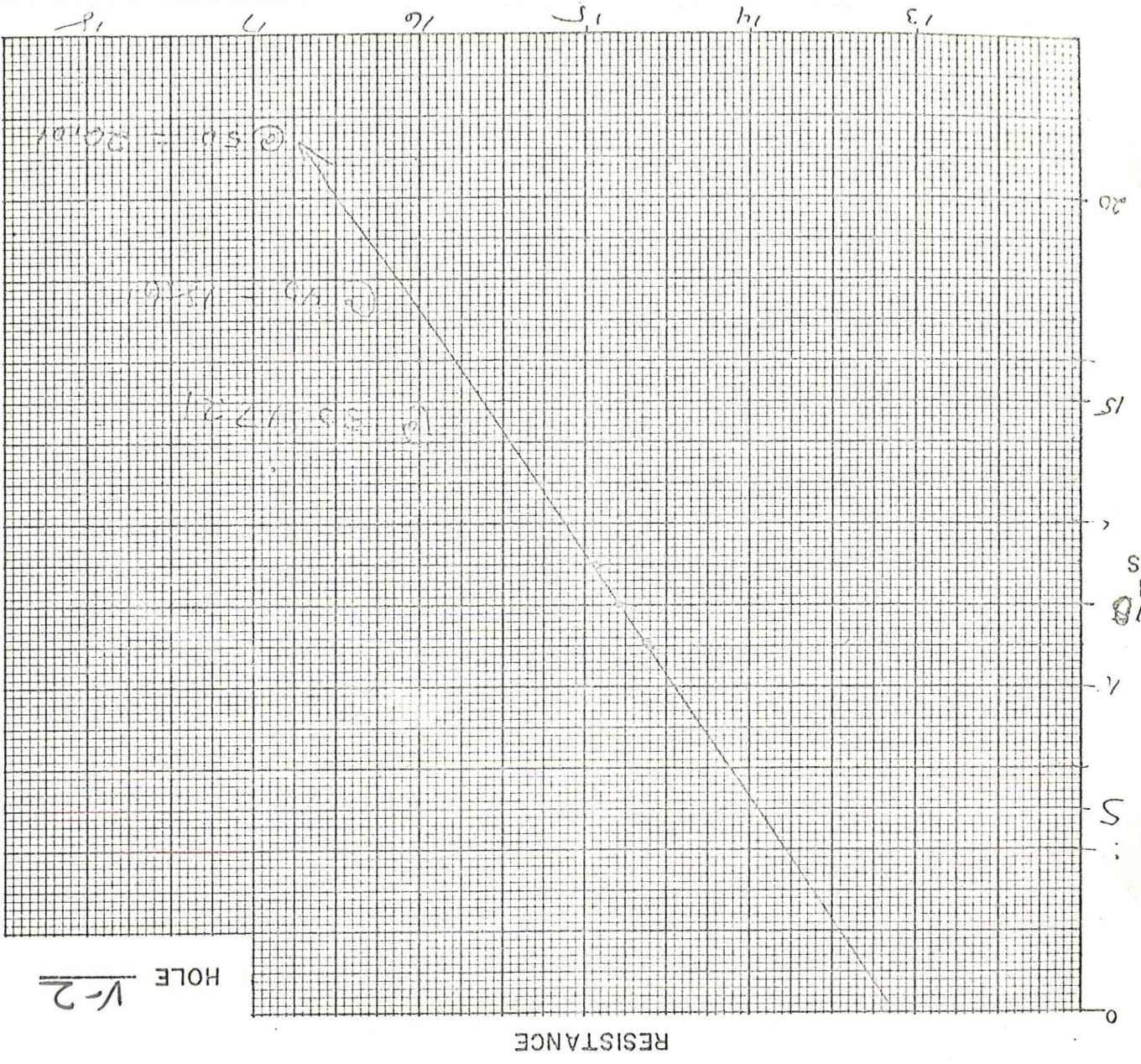
Drill Hole 1 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
21	5033	16385			
			0.130		
22	5007	16515			
			0.125		
23	4982	16640			
			0.125		
24	4958	16765			
			0.140		
25	4931	16905			
			0.120		
26	4907	17025			
			0.125		
27	4881	17160			
			0.120		
28	4858	17280			
			0.135		
29	4832	17415			
			0.145		
30	4805	17560			
			0.130		
31	4780	17690			
			0.140		
32	4754	17830			
			0.100		
33	4735	17938			
			0.085		
34	4720	18015			
			0.100		
35	4701	18115			
			0.105		
36	4682	18220			
			0.115		
37	4661	18335			
			0.115		
38	4640	18450			
			0.120		
39	4618	18570			
			0.130		
40	4595	18700			
			0.165		
41	4565	18865			
			0.115		





TEMPERATURE DEPTH LOG

ΔT Well No. 203

Property-Project VALE Depth Logged _____
 Map _____ Scale _____ Date: Drilled _____ Logged _____
 State _____ County _____ Section _____ T _____ R _____
 Instrument _____ Operator _____ Elevation _____ ft.
 Comments _____

COMPUTER PROCESSING

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						
665					203					31					NY					75	CM				

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

Card A

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																				
0.5 KM SOUTH OF GAMES RES																																																		DF					MLH				

Card B

Scale Unit		Map Size		Map Location Δ				N Lat				W Long				Δ Measure from SW corner of map; except AMS sheets measure from bottom center degree mark (W,-) (E,+) Use decimals													
in	cm	(7.5, 15, 60)		Degree		Min		Degree		Min		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
CM		7.5		43				52.5		117				15															

Northing										Easting <u>2.25</u>										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	F
8.0										2.1										20										

Write M if meters

	SEGMENT DEPTH																															
	Start														End														K	Δ K		
C	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		
D	10.0														25.0																	
E	40.0														50.0															-1.5		
F																																
G																																

Continue each card below.

	SEGMENT DEPTH																															
	Start														End														K	Δ K		
C	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		
D	25.0														40.0															-3.0		
E	.999																													.5		
F																																
G																																

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location Vale, Oregon Date May 31, 1975

Map Vale East Quadrangle

Property T 14S R 45E sec NW 1/4 NW 1/4 29

Drill Hole V-3 Date Drilled May 21, 1975 Elevation 2020 ft.

Instrument _____ Operator Pilkinson

Comments logged at 1330 hrs. Filled with H₂O date drilled

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
0					Air
1	5.425	14.515	-2.755		
2	6.065	11.760	-0.685		
3	6.238	11.075	0.695		
4	6.062	11.720	0.795		
5	5.868	12.565	0.910		
6	5.656	13.475	0.680		
7	5.503	14.155	0.465		
8	5.414	14.560	0.165		
9	5.391	14.665	0.030		
10	5.384	14.695	0.020		
11	5.380	14.715	0.015		
12	5.370	14.760	0.060		
13	5.358	14.820	0.050		
14	5.347	14.870	0.015		
15	5.344	14.885	0.050		
16	5.333	14.935	0.075		
17	5.317	15.010	0.070		
18	5.302	15.080	0.056		
19	5.291	15.136	0.050		
20	5.281	15.180	0.070		

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

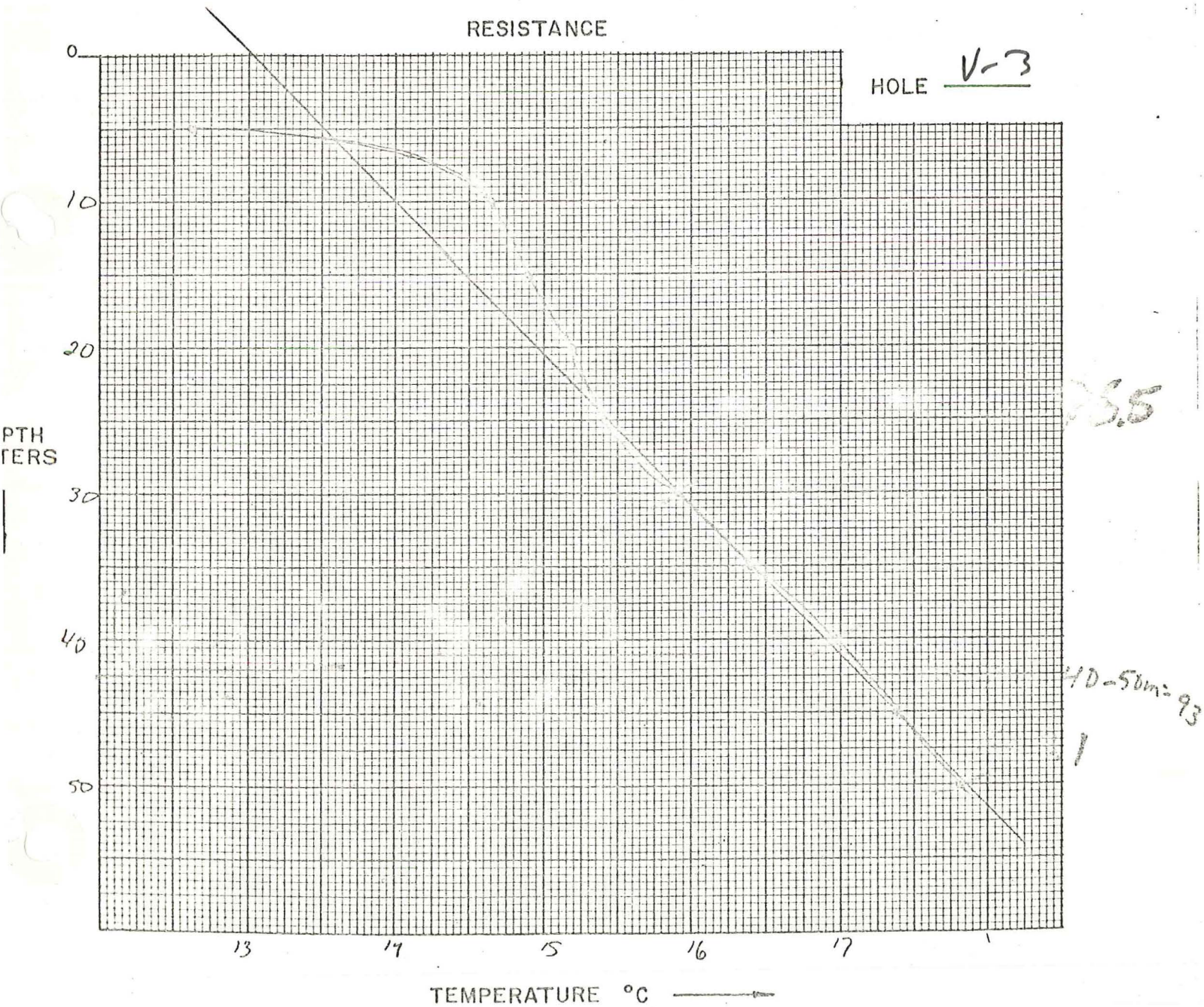
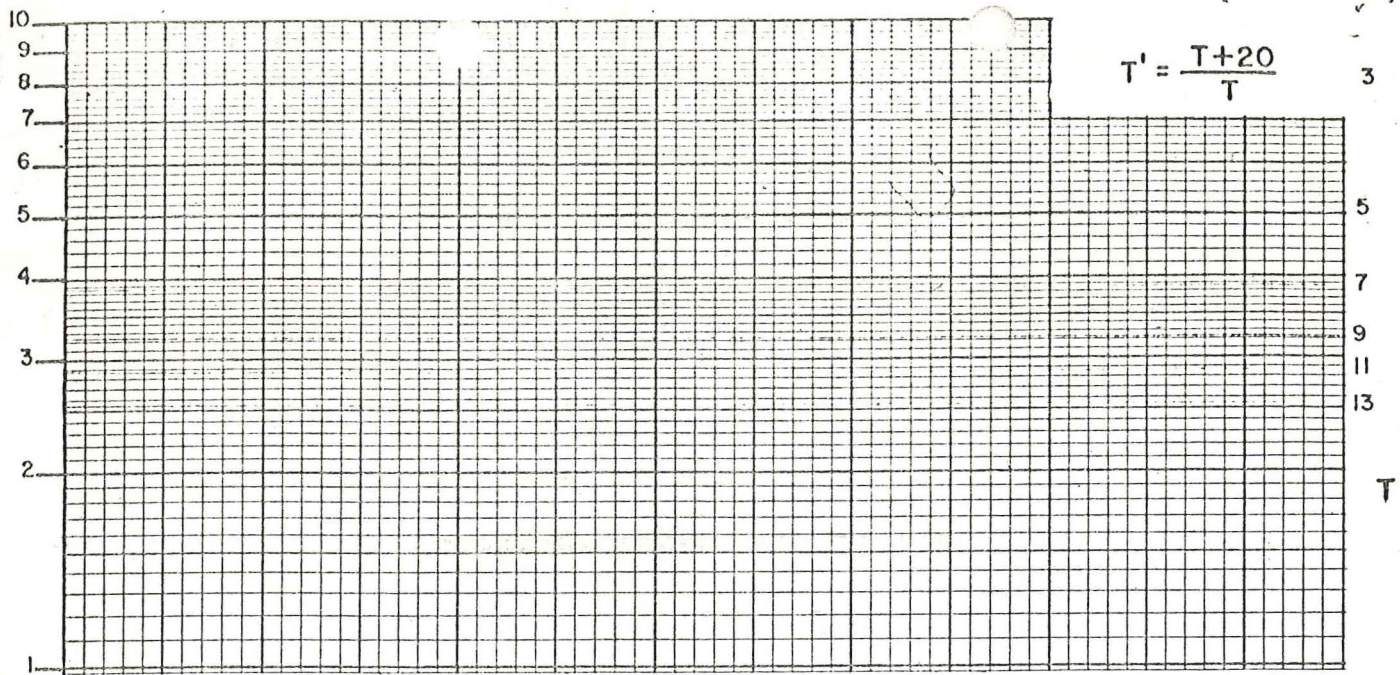
Property _____ T _____ R _____ sec _____

Drill Hole 3 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient		Comments
				°C/Km	Avg.	
21	5.266	15.250	0.070			
22	5.251	15.220	0.070			
23	5.237	15.390	0.075			
24	5.221	15.465	0.075			
25	5.205	15.540	0.085			
26	5.188	15.625	0.080			
27	5.171	15.705	0.070			
28	5.157	15.775	0.075			
29	5.141	15.850	0.070			
30	5.127	15.920	0.080			
31	5.111	16.000	0.085			
32	5.094	16.085	0.095			
33	5.074	16.180	0.100			
34	5.054	16.280	0.105			
35	5.033	16.385	0.120			
36	5.009	16.505	0.130			
37	4.989	16.635	0.060			
38	4.972	16.695	0.090			
39	4.954	16.785	0.100			
40	4.935	16.885	0.095			
41	4.916	16.980	0.110			



TEMPERATURE - DEPTH LOG

Location Vale, Oregon Date May 31 1975

Map Mitchell Butte Quadrangle

Property _____ T 19S R 45E sec NW 1/4 SE 1/4 35

Drill Hole V-4 Date Drilled May 21, 1975 Elevation 2840 ft.

Instrument _____ Operator Pilkington

Comments logged at 1430 hrs Filled with H₂O date drilled

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient		Comments
				°C/Km	Avg.	
0						air
1	5.175	15.685				
2	5.885	12.495	-3.190			
3	5.912	12.385	0.110			
4	5.721	13.190	0.805			
5	5.435	13.565	0.375			
6	5.543	13.975	0.390			
7	5.361	14.505	0.830			
8	5.263	15.265	0.460			
9	5.235	15.400	0.135			
10	5.230	15.420	0.020			
11	5.231	15.415	-0.005			
12	5.230	15.420	0.005			
13	5.224	15.450	0.030			
14	5.211	15.515	0.065			
15	5.195	15.575	0.060			
16	5.182	15.655	0.080			
17	5.167	15.725	0.070			
18	5.151	15.805	0.080			
19	5.133	15.890	0.085			
20	5.116	15.975	0.085			
			0.085			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

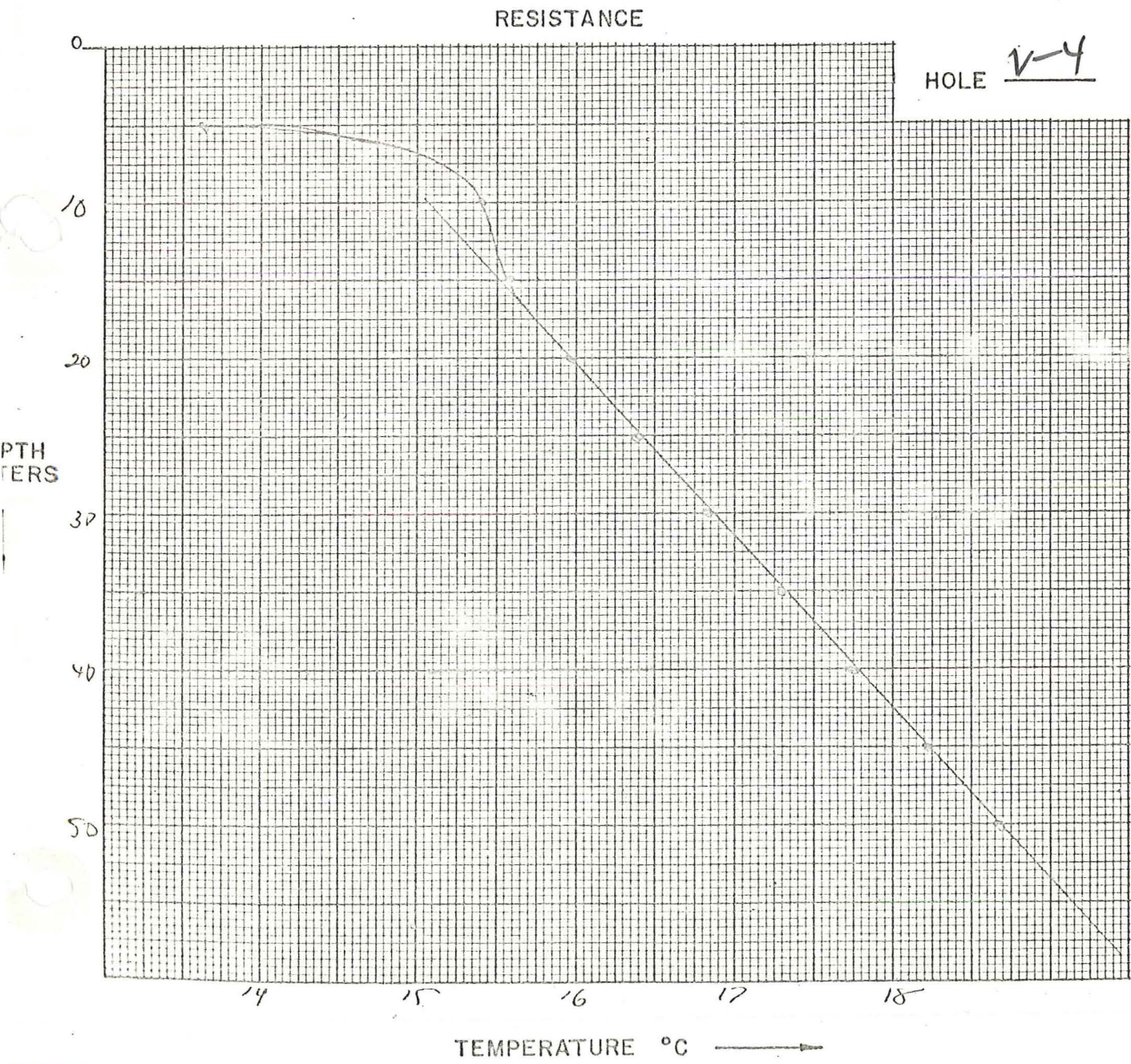
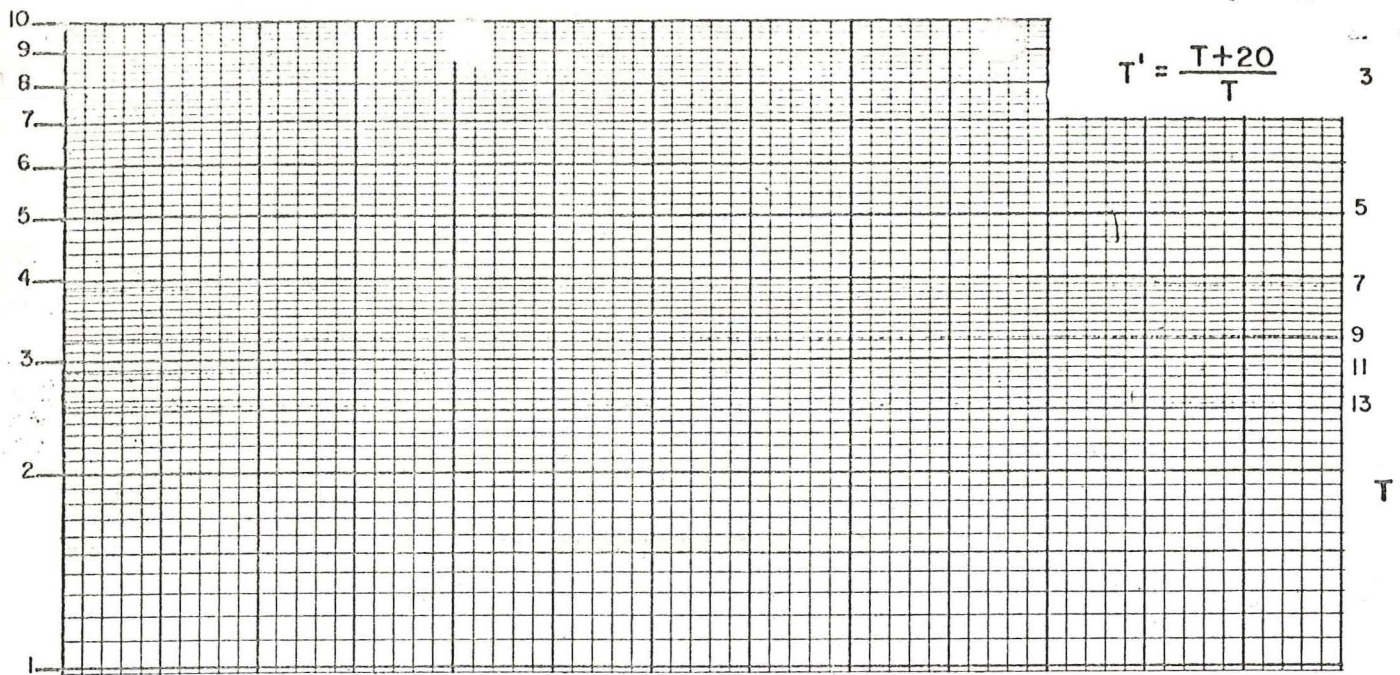
Property _____ T _____ R _____ sec _____

Drill Hole 4 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
21	5099	16.060			
22	5083	16.140	0.080		
23	5.065	16.225	0.085		
24	5.049	16.305	0.080		
25	5.030	16.480	0.085		
26	5.015	16.475	0.075		
27	4.996	16.575	0.100		
28	4.978	16.665	0.090		
29	4.962	16.745	0.080		
30	4.945	16.830	0.085		
31	4.928	16.920	0.090		
32	4.910	17.010	0.090		
33	4.893	17.100	0.090		
34	4.876	17.185	0.085		
35	4.859	17.275	0.090		
36	4.839	17.380	0.105		
37	4.822	17.465	0.085		
38	4.805	17.560	0.095		
39	4.788	17.650	0.090		
40	4.770	17.745	0.095		
41	4.751	17.845	0.100		
			0.090		



TEMPERATURE - DEPTH LOG

205

Location Vada, Oregon Date May 31, 1975

Map Cairo Quadrangle

Property T 19S R 46E sec NE 1/4 NE 1/4 9

Drill Hole V-5 Date Drilled May 22, 1975 Elevation 2000 ft.

Instrument _____ Operator P. King

Comments logged at 1600 hrs. Filled with H₂O date drilled

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient		Comments
				°C/Km	Avg.	
0						
1	5.525	14.055	-2.135			
2	6.025	11.920	-0.095			
3	6.048	11.825	0.685			
4	5.882	12.510	0.650			
5	5.728	13.160	0.495			
6	5.615	13.655	0.405			
7	5.526	14.050	0.250			
8	5.471	14.300	0.055			
9	5.458	14.355	0.000			
10	5.458	14.355	0.005			
11	5.457	14.360	0.105			
12	5.456	14.365	0.015			
13	5.453	14.380	0.030			
14	5.446	14.410	0.035			
15	5.439	14.445	0.050			
16	5.429	14.495	0.045			
17	5.418	14.540	0.045			
18	5.408	14.585	0.085			
19	5.390	14.670	0.035			
20	5.382	14.705	0.110			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T _____ R _____ sec _____

Drill Hole S _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
21	S.359	14815	0.160		
22	S.324	14975	0.125		
23	S.298	15100	0.070		
24	S.283	15170	0.265		
25	S.227	15435	0.190		
26	S.188	15625	0.230		
27	S.236	15395	0.155		
28	S.205	15540	0.015		
29	S.202	15555	-0.030		
30	S.209	15525	0.170		
31	S.182	15655	0.080		
32	S.165	15735	0.190		
33	S.126	15925	0.070		
34	S.112	15995	-0.125		
35	S.137	15870	-0.060		
36	S.150	15810	0.035		
37	S.142	15845	0.085		
38	S.125	15930	0.085		
39	S.108	16015	0.115		
40	S.085	16130	0.195		
41	S.045	16325	0.245		

$$T' = \frac{T+20}{T}$$

T'

T

RESISTANCE

HOLE V-5

DEPTH METERS



77.6

4.1

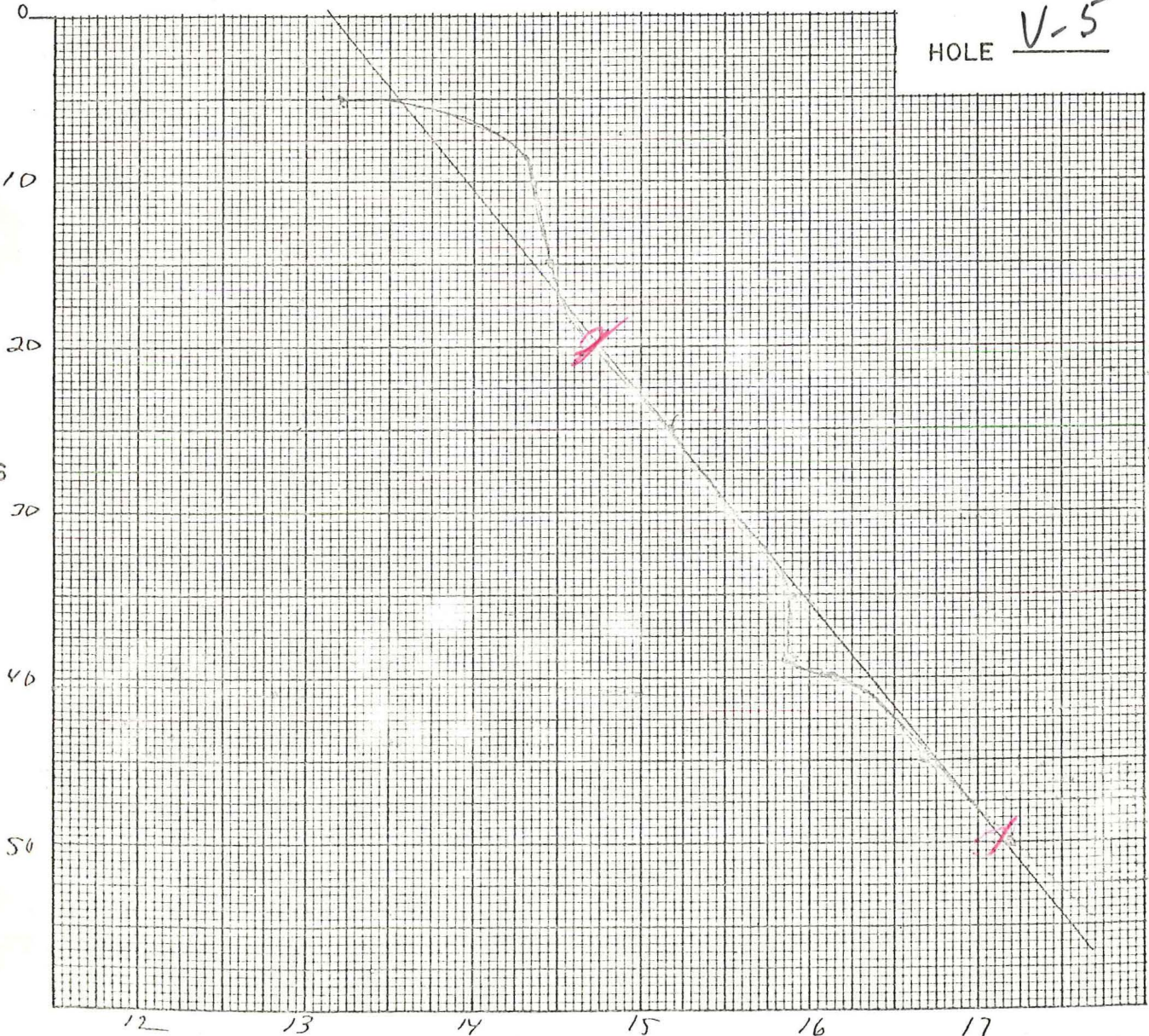
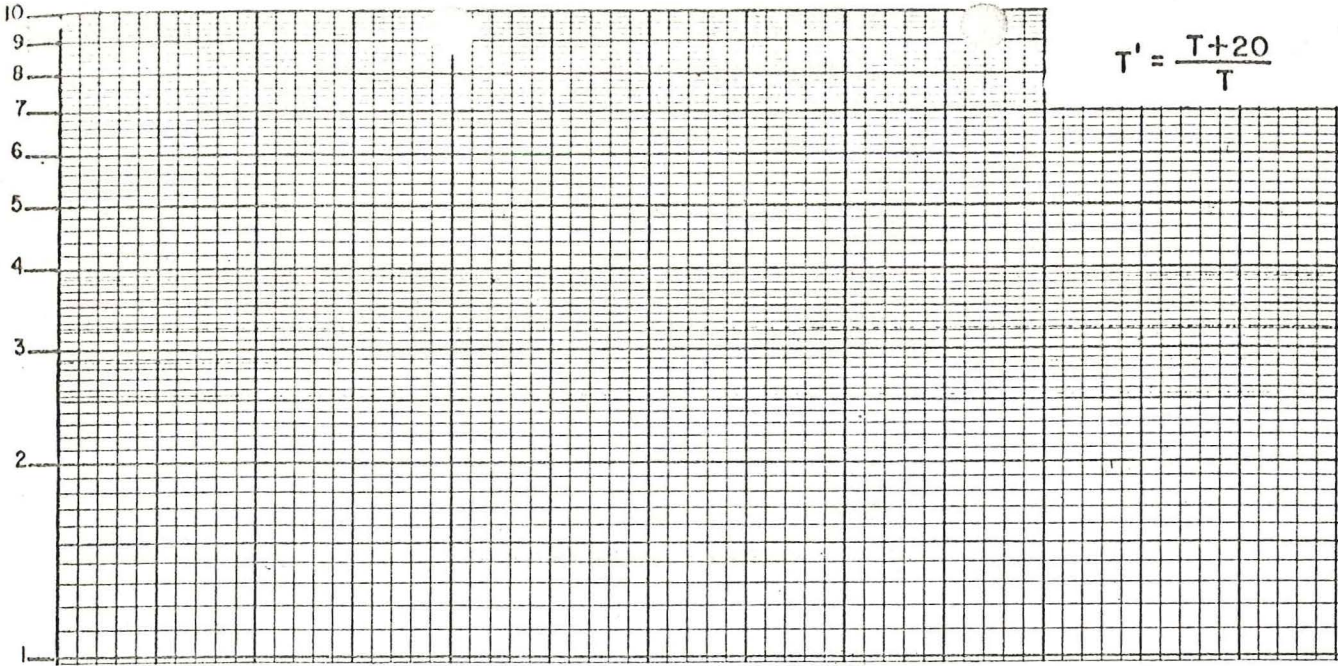
107

0.50 = 107

107

3.2

TEMPERATURE °C →



TEMPERATURE DEPTH LOG

ΔT Well No. 206

Property-Project VALE 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			*
1	2	3	4	5	6	7	8	9	10	DA	MO	YR	*
6	6	5			2	0	6	3		11	11	75	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	DP	MLH																							

Card B

Scale Unit					Map Size					Map Location ^Δ					W Long																			
in cm					(7.5, 15., 60)					N Lat		Degree			Min		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	Use decimals				
CM					7	5				43		52			117					7	5				Write M if meters									

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

	SEGMENT DEPTH		K	ΔK
	Start	End		
C	20.0	28.0		
D	33.0	50.0	-3.0	-.5
E				
F				
G				

Continue each card below.

	SEGMENT DEPTH		K	ΔK
	Start	End		
C	28.0	33.0		
D	.999			
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location Vale, Oregon Date May 31, 1975

Map Carro Quadrangle

Property T 19S R 46E sec NE 1/4 NE 1/4 32

Drill Hole V-6 Date Drilled May 22, 1975 Elevation 2640 ft.

Instrument _____ Operator R. Kington

Comments Logged at 1700 hrs Filled with H₂O date drilled

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
0					
1	5.140	15.855			
2	5.875	12.540	-3.315		
3	6.031	11.895	0.645		
4	5.880	12.515	0.620		
5	5.685	13.350	0.835		
6	5.495	14.190	0.840		
7	5.328	14.955	0.765		
8	5.232	15.410	0.455		
9	5.214	15.500	0.090		
10	5.222	15.460	-0.040		
11	5.195	15.590	0.130		
12	5.112	15.995	0.405		
13	5.104	16.035	0.040		
14	5.154	15.790	-0.245		
15	5.190	15.615	-0.175		
16	5.195	15.590	-0.025		
17	5.176	15.650	0.090		
18	5.164	15.740	0.060		
19	5.157	15.775	0.035		
20	5.148	15.820	0.045		
			0.040		

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T _____ R _____ sec _____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

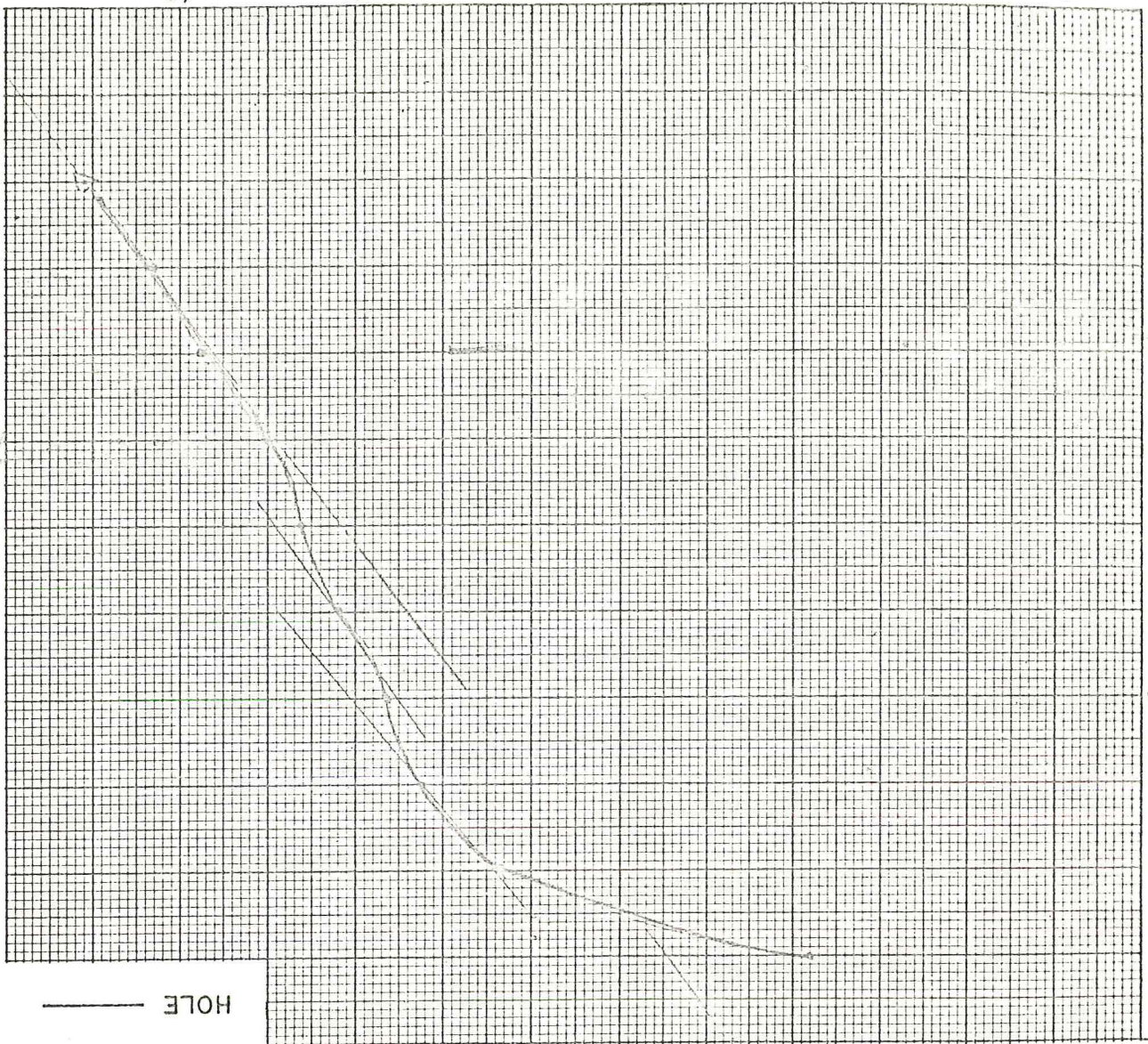
Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient		Comments
				°C/Km	Avg.	
21	5139	15860				
22	5128	15915	0.055			
23	5118	15965	0.050			
24	5107	16020	0.055			
25	5098	16065	0.045			
26	5085	16130	0.065			
27	5072	16190	0.060			
28	5065	16225	0.035			
29	5065	16225	0.055			
30	5054	16200	0.055			
31	5043	16335	0.050			
32	5033	16385	-0.020			
33	5037	16365	0.050			
34	5027	16415	0.050			
35	5017	16465	0.060			
36	5005	16525	0.060			
37	4994	16585	0.070			
38	4980	16655	0.060			
39	4968	16715	0.090			
40	4946	16825	0.060			
41	4935	16885	0.020			
	4931	16905	0.055			

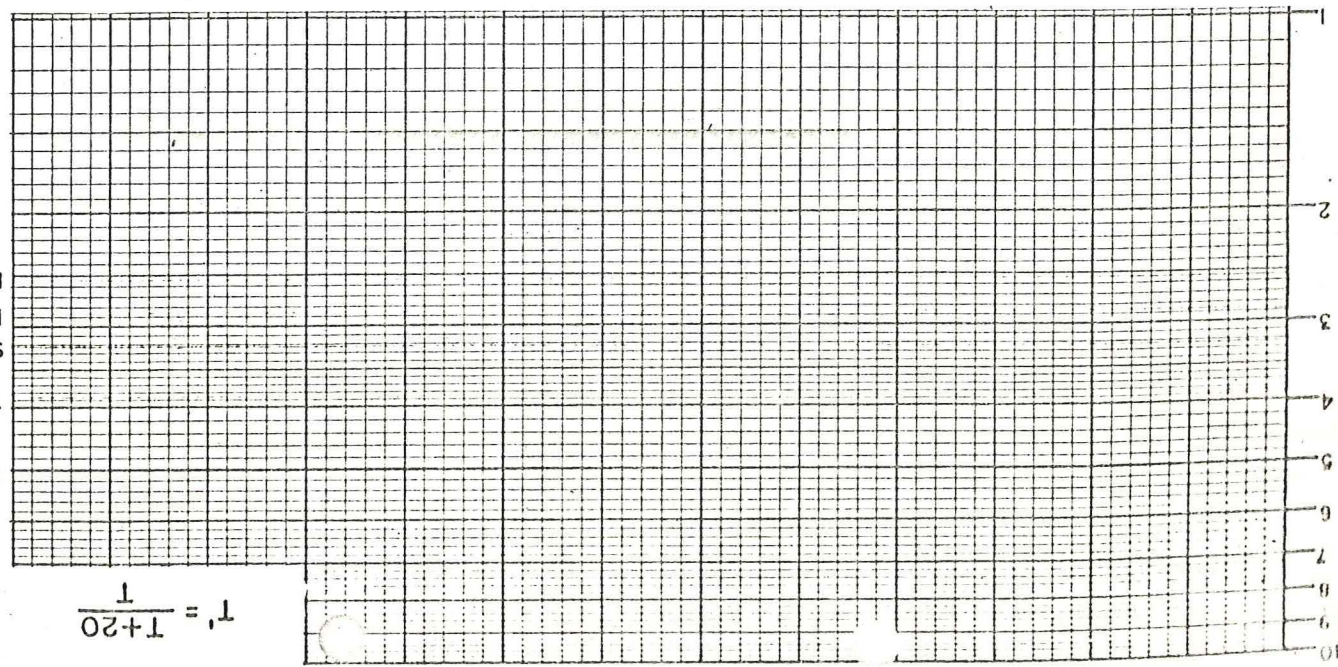
TEMPERATURE °C

12 13 14 15 16 17

1755
2.01
= 67.1



PTI
TERS



NOT USED

207

TEMPERATURE - DEPTH LOG

Location Vale Oregon Date June 1, 1975

Map Mitchell Butte Quadrangle

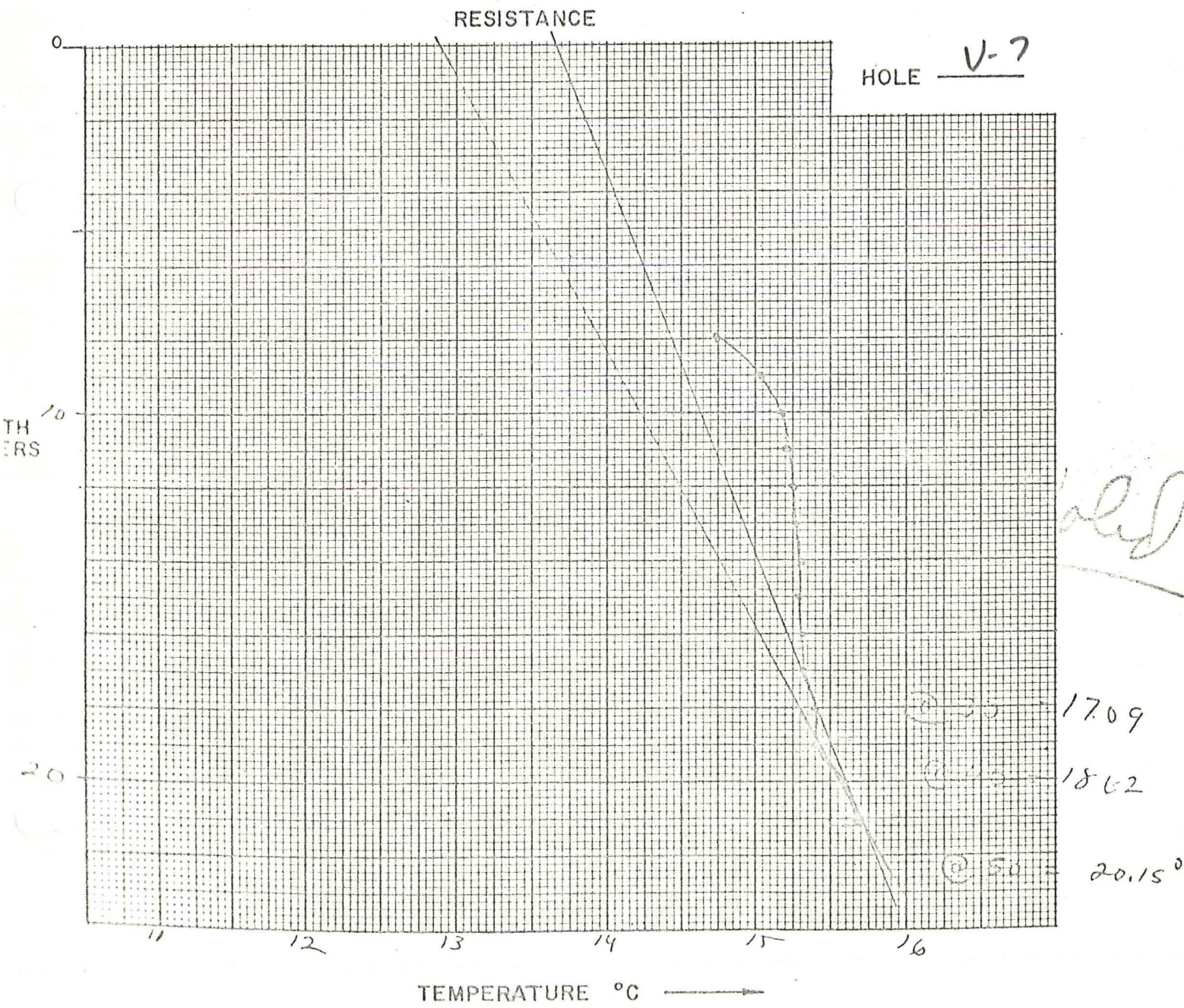
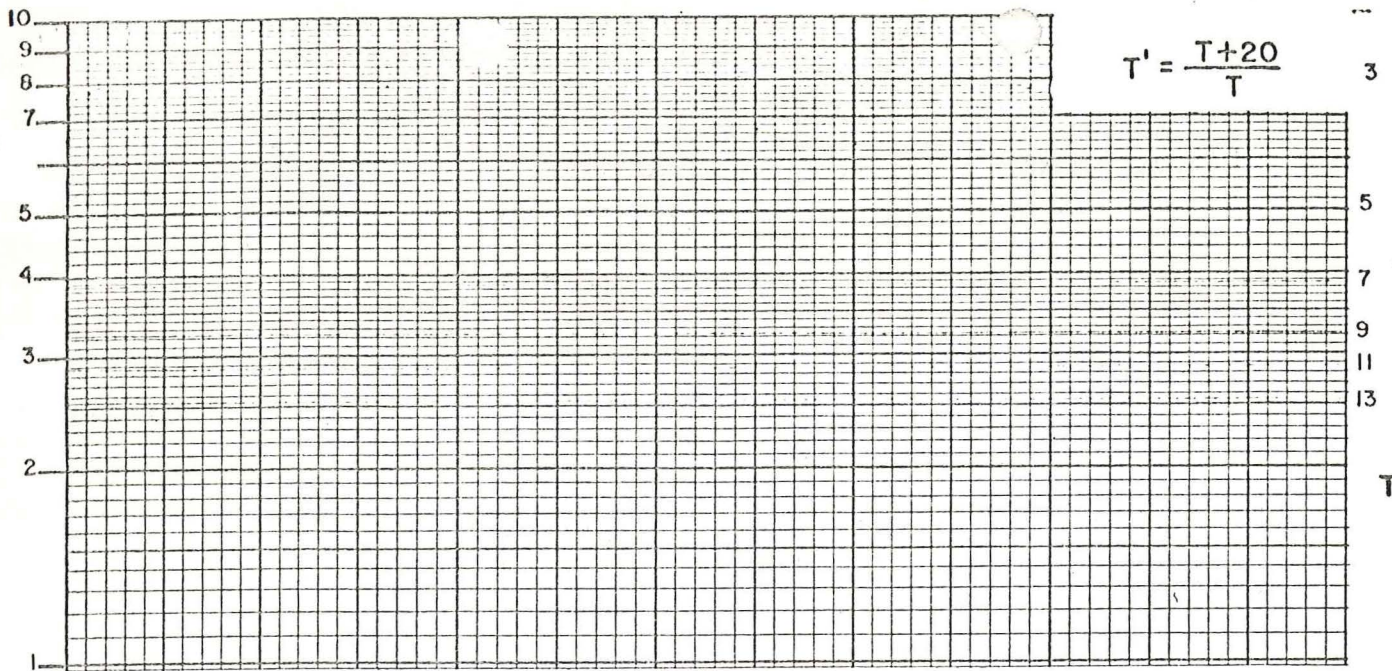
Property T 20S R 46E sec 17 1/4 SW 1/4 17

Drill Hole V-7 Date Drilled May 23, 1975 Elevation 2360 ft.

Instrument _____ Operator Pilkington

Comments Logged at 0830 hrs Filled with H₂O date drilled

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient		Comments
				°C/Km	Avg.	
0						
1	4.292	20.455	-5.975			
2	5.431	14.480	-2.580			
3	6.030	11.900	-0.220			
4	6.085	11.680	0.985			
5	5.845	12.665	0.835			
6	5.650	13.500	0.770			
7	5.477	14.270	0.450			
8	5.379	14.720	0.300			
9	5.315	15.020	0.145			
10	5.284	15.165	0.025			
11	5.279	15.190	0.050			
12	5.268	15.240	0.015			
13	5.265	15.255	0.050			
14	5.254	15.305	0.015			
15	5.251	15.320	0.005			
16	5.250	15.325	0.010			
17	5.248	15.335	0.020			
18	5.244	15.355	0.000			
19	5.244	15.355	0.250			
20	5.192	15.605	0.110			



TEMPERATURE DEPTH LOG

Property-Project VALE ΔT Well No. 208
 Map _____ Scale _____ Date: Drilled _____ Logged _____
 State _____ County _____ Section _____ T _____ R _____
 Instrument _____ Operator _____ Elevation _____ ft.
 Comments _____

COMPUTER PROCESSING

RT JUSTIFY: Proj No Well No Date Logged
 (1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20) * 19- Write F if Fahrenheit, 20- Write F if Feet

Card A

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 KM NW OF CHALE RESERVOIR										DP		MLH																											

Map Location Δ

Scale Unit Map Size N Lat W Long Δ Measure from SW corner of map; except AMS sheets measure from bottom center degree mark (W,-)(E,+)

in cm (7.5, 15., 60) Degree Min Degree Min

Card B

Northing										Easting										Elev																																							
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
41.6										32.6										2760.																																							

Use decimals Write M if meters

SEGMENT DEPTH

	Start	End	K	ΔK
C	15.0	25.0		
D	35.0	45.0		
E	.999			
F				
G				

Continue each card below.

SEGMENT DEPTH

	Start	End	K	ΔK
C	25.0	35.0	-3.0	.5
D	45.0	50.0		-.5
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location Vale, Oregon Date June 1, 1975

Map Double Mtn Quadrangle

Property T 20 S R 44 E sec SE 1/4 SW 1/4 12

Drill Hole V-8 Date Drilled May 23, 1975 Elevation 2760 ft.

Instrument _____ Operator Pilkinson

Comments logged at 0930 hrs - Filled with H₂O date drilled

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
0	4.932	16.900			
1	5.385	14.690	-2.310		
2	6.038	11.865	-2.825		
3	6.064	11.760	-0.105		
4	5.885	12.495	0.735		
5	5.679	13.375	0.880		
6	5.545	13.965	0.590		
7	5.405	14.600	0.635		
8	5.377	14.730	0.130		
9	5.397	14.635	0.105		
10	5.409	14.580	-0.055		
11	5.421	14.525	-0.065		
12	5.397	14.635	0.110		
13	5.368	14.770	0.145		
14	5.385	14.690	-0.080		
15	5.363	14.795	0.105		
16	5.363	14.795	0.001		
17	5.350	14.855	0.060		
18	5.338	14.910	0.055		
19	5.319	15.000	0.090		
20	5.301	15.015	0.085		
			0.135		

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

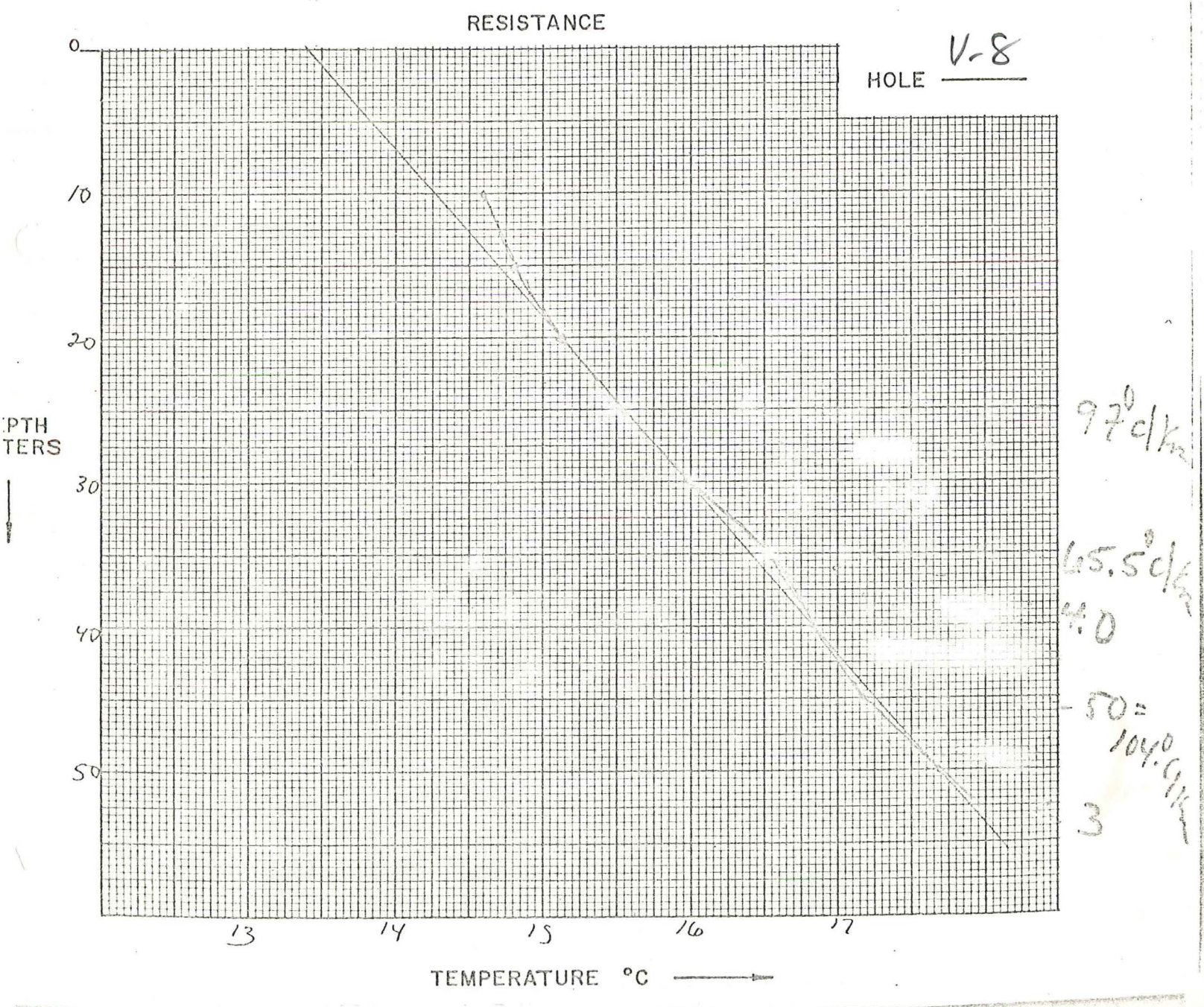
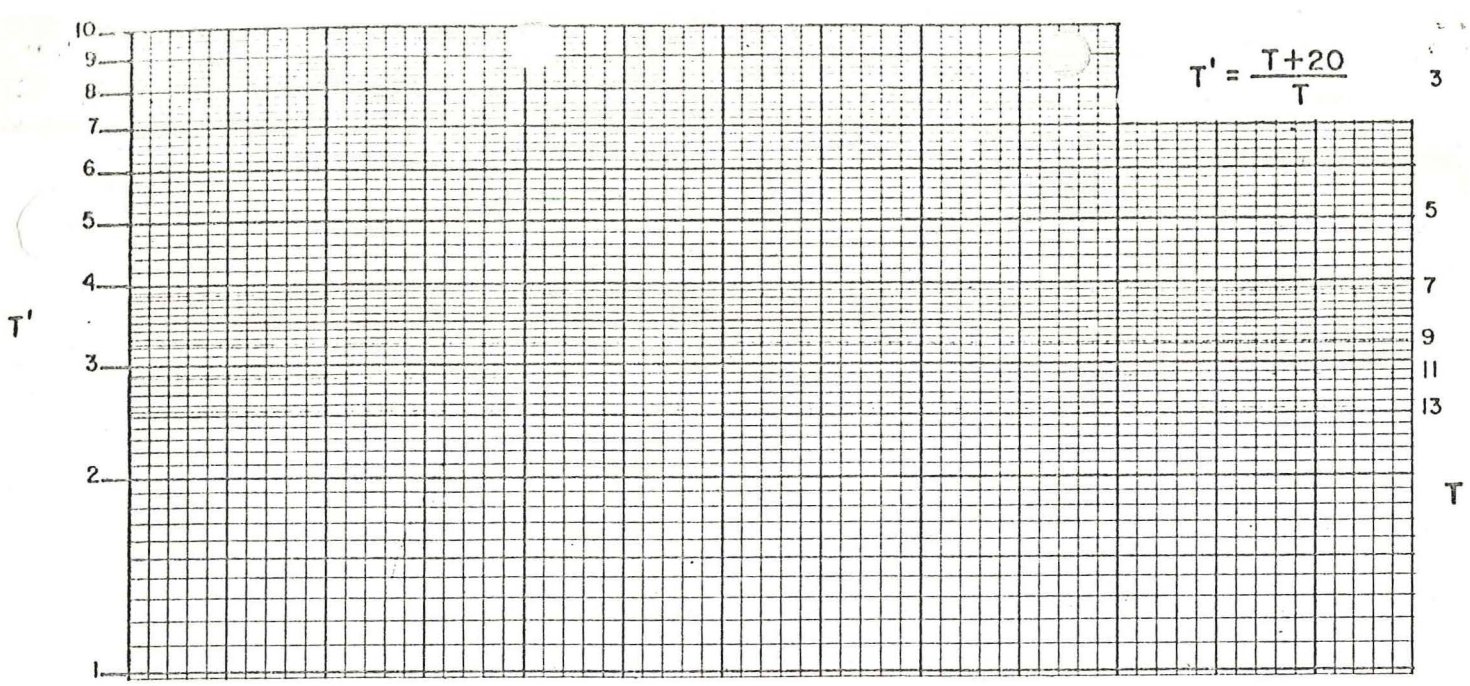
Property _____ T _____ R _____ sec _____

Drill Hole 8 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient		Comments
				°C/Km	Avg.	
21	5,274	15,210				
22	5,253	15,310	0.100			
23	5,230	15,420	0.110			
24	5,219	15,475	0.055			
25	5,205	15,540	0.065			
26	5,183	15,656	0.110			
27	5,166	15,730	0.080			
28	5,149	15,815	0.085			
29	5,131	15,900	0.085			
30	5,116	15,975	0.075			
31	5,100	16,055	0.080			
32	5,081	16,145	0.090			
33	5,065	16,225	0.080			
34	5,046	16,320	0.095			
35	5,008	16,510	0.190			
36	5,003	16,535	0.025			
37	4,999	16,555	0.020			
38	4,996	16,575	0.020			
39	4,986	16,625	0.050			
40	4,947	16,820	0.195			
41	4,924	16,940	0.120			
			0.080			



TEMPERATURE DEPTH LOG

ΔT Well No. 209

Property-Project VALE Depth Logged _____

Map _____ Scale _____ Date: Drilled _____ Logged _____

State _____ County _____ Section _____ T _____ R _____

Instrument _____ Operator _____ Elevation _____ ft.

Comments _____

COMPUTER PROCESSING

RT JUSTIFY: Proj No Well No Date Logged

→					→					→					*				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
665					20901					JE 75					CM				

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

Card A

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 NW OF MITCHELL BUTTE																																																		DP					MLH									

Map Location ^Δ

Scale Unit					Map Size					N Lat					W Long														
in					(7.5, 15., 60)					Degree					Degree														
cm										Min					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					7.5					43.					45.					117.					15.				

Use decimals

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

Card B

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
21.9										2.03080.										F									

Write M if meters

	SEGMENT DEPTH		K	ΔK
	Start	End		
C	15.0	40.0	-5.0	.5
D	.999			
E				
F				
G				

Continue each card below.

	SEGMENT DEPTH		K	ΔK
	Start	End		
C	40.0	47.0		.5
D				
E				
F				
G				

Final Segment: Start = .999

TEMPERATURE - DEPTH LOG

Location Vale Oregon Date June 1 1975

Map Mitchell Butte Quadrangle

Property T 20 S R 45 E sec SW 1/4 SE 1/4 29

Drill Hole V-9 Date Drilled May 23, 1975 Elevation 3080 ft.

Instrument _____ Operator Pilkingham

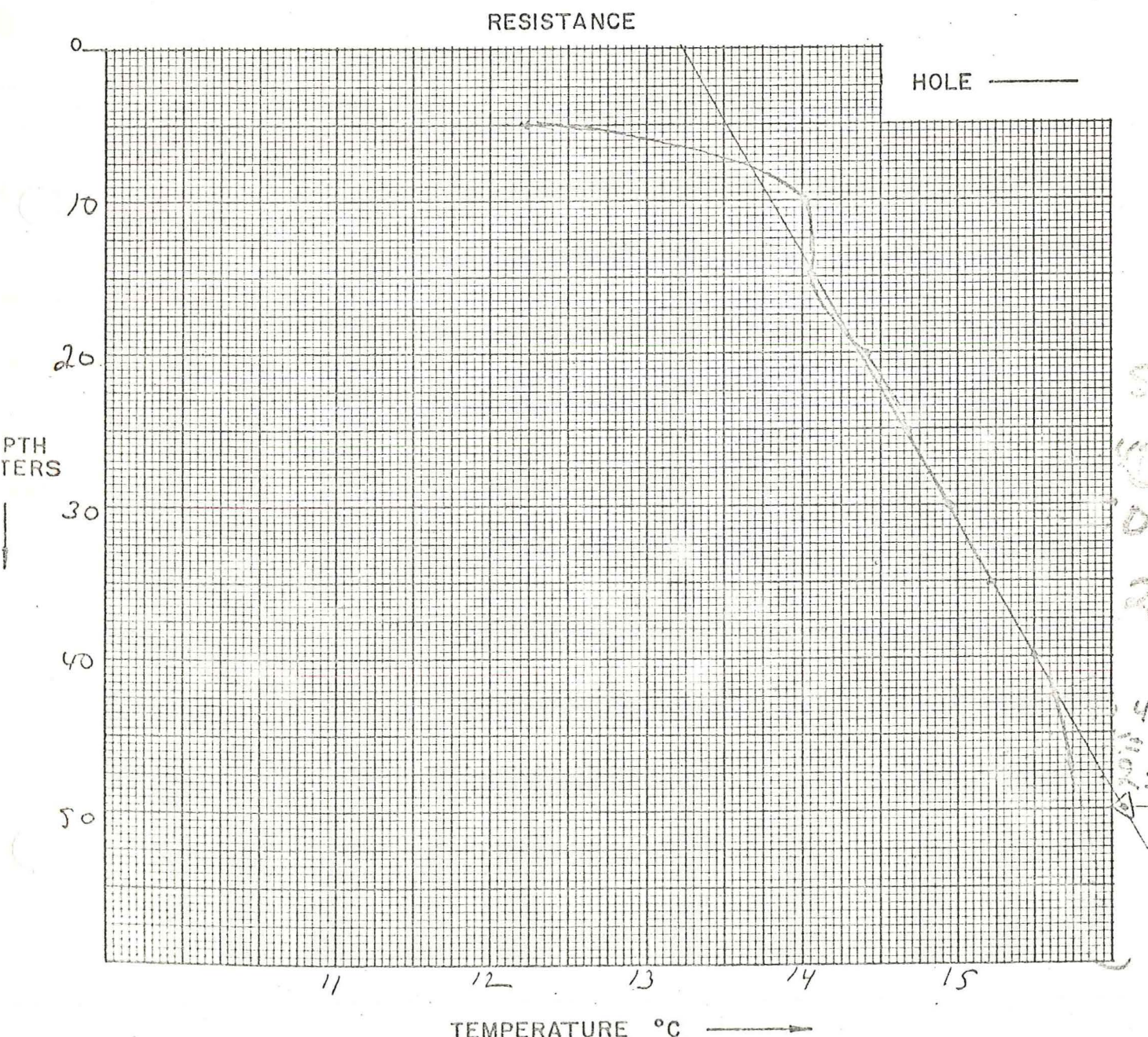
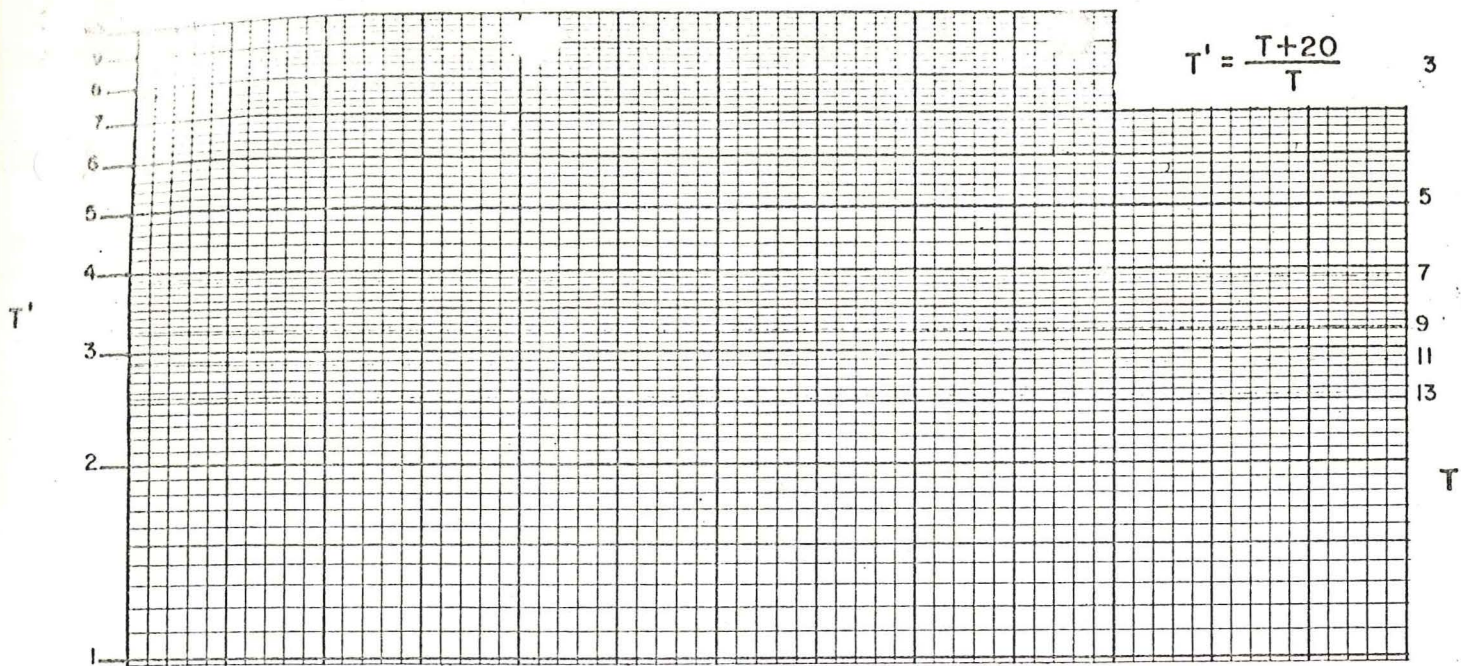
Comments Logged at 1030 hrs. Filled with H₂O date drilled

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
0	3231	20.00			
1	5180	15.665	-12.335		
2	6325	10.770	-4.935		
3	6.228	11.110	0.380		
4	6.077	11.710	0.600		
5	5958	12.195	0.485		
6	5806	12.830	0.645		
7	5662	13.450	0.620		
8	5595	13.740	0.290		
9	5545	13.965	0.225		
10	5531	14.025	0.060		
11	5520	14.075	0.050		
12	5541	13.985	-0.090		
13	5547	13.955	-0.030		
14	5537	14.000	0.045		
15	5525	14.055	0.055		
16	5517	14.090	0.045		
17	5502	14.160	0.070		
18	5486	14.230	0.070		
19	5470	14.305	0.075		
20	5447	14.405	0.100		
			0.070		

TEMPERATURE - DEPTH LOG

Location _____ Date _____
 Map _____
 Property _____ T _____ R _____ sec _____
 Drill Hole 9 Date Drilled _____ Elevation _____ ft.
 Instrument _____ Operator _____
 Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient		Comments
				°C/Km	Avg.	
21	5432	14475				
			0.040			
22	5424	14515				
			0.035			
23	5416	14550				
			0.075			
24	5400	14625				
			0.060			
25	5387	14685				
			0.035			
26	5379	14720				
			0.030			
27	5371	14756				
			0.075			
28	5356	14825				
			0.065			
29	5345	14880				
			0.070			
30	5330	14950				
			0.060			
31	5317	15010				
			0.050			
32	5306	15060				
			0.070			
33	5291	15130				
			0.065			
34	5278	15195				
			0.050			
35	5267	15245				
			0.070			
36	5252	15315				
			0.060			
37	5240	15375				
			0.060			
38	5227	15435				
			0.040			
39	5219	15475				
			0.030			
40	5213	15505				
			0.020			
41	5208	15525				
			0.035			



TEMPERATURE DEPTH LOG

ΔT Well No. 210

Property-Project VALE Depth Logged _____
 Map _____ Scale _____ Date: Drilled _____ Logged _____
 State _____ County _____ Section _____ T _____ R _____
 Instrument _____ Operator _____ Elevation _____ ft.
 Comments _____

COMPUTER PROCESSING

RT JUSTIFY: Proj No Well No Date Logged

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	11	01	75	C							

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

Card A

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	DP	MLH																												

Card B

Scale Unit										Map Size										Map Location ^Δ													
in										(7.5, 15., 60)										N Lat					W Long								
cm																				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	43	37	11	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	53	9	9	5	33	00	F

Use decimals

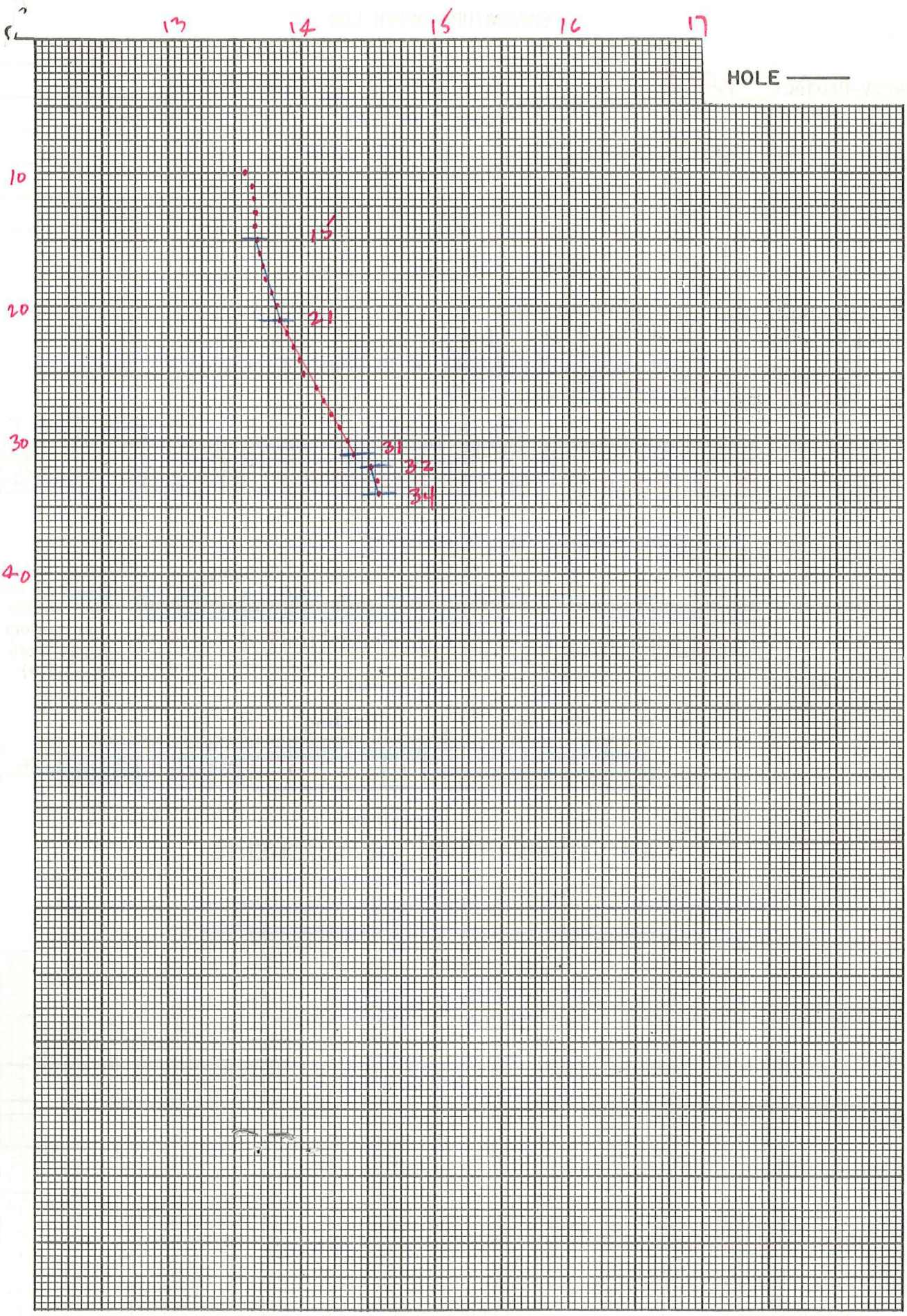
Write M if meters

	SEGMENT DEPTH		K	ΔK
	Start	End		
C	15.0	21.0		
D	32.0	34.0		-.5
E				
F				
G				

Continue each card below.

	SEGMENT DEPTH		K	ΔK
	Start	End		
C	21.0	31.0		
D	.999			-.5
E				
F				
G				

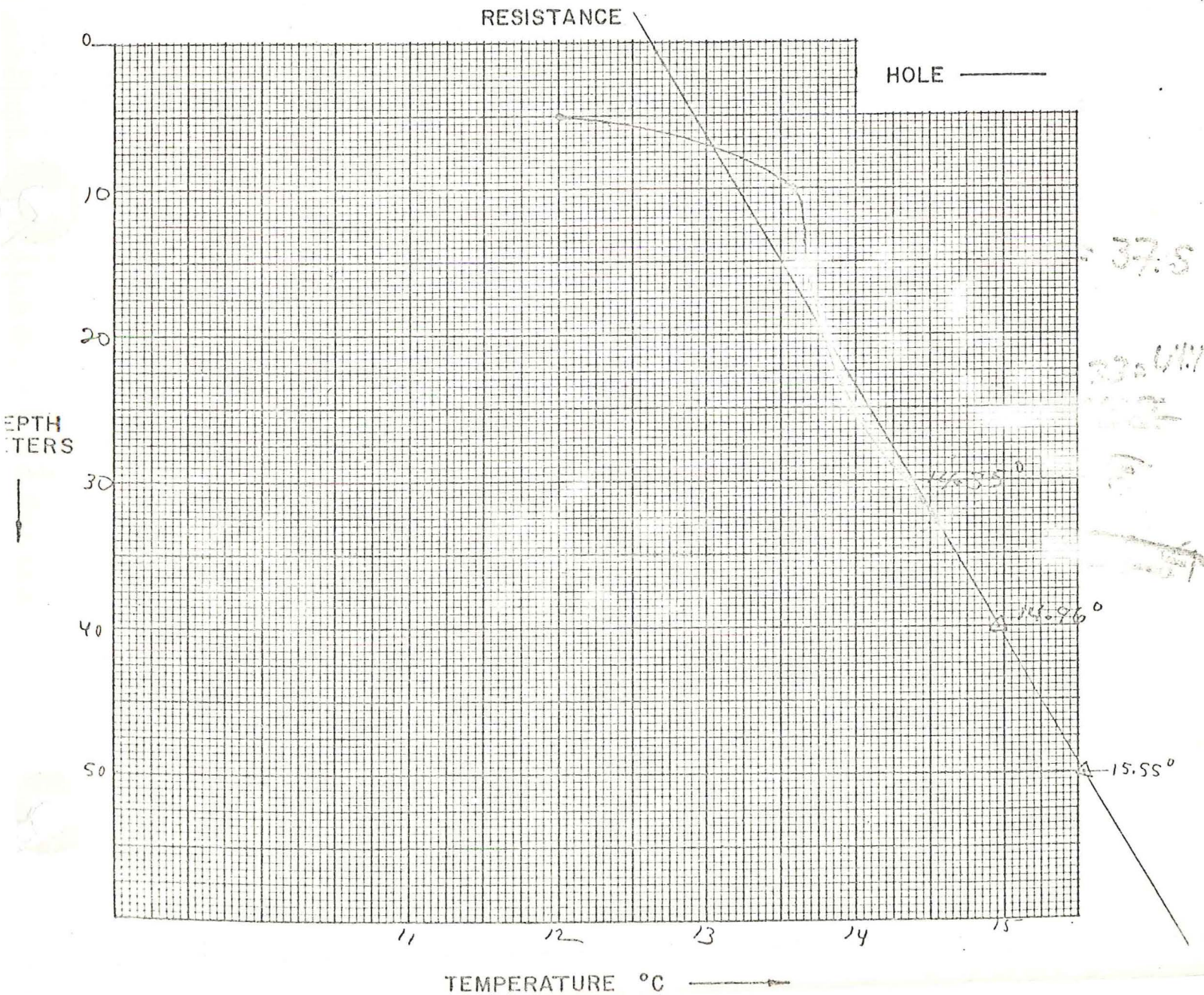
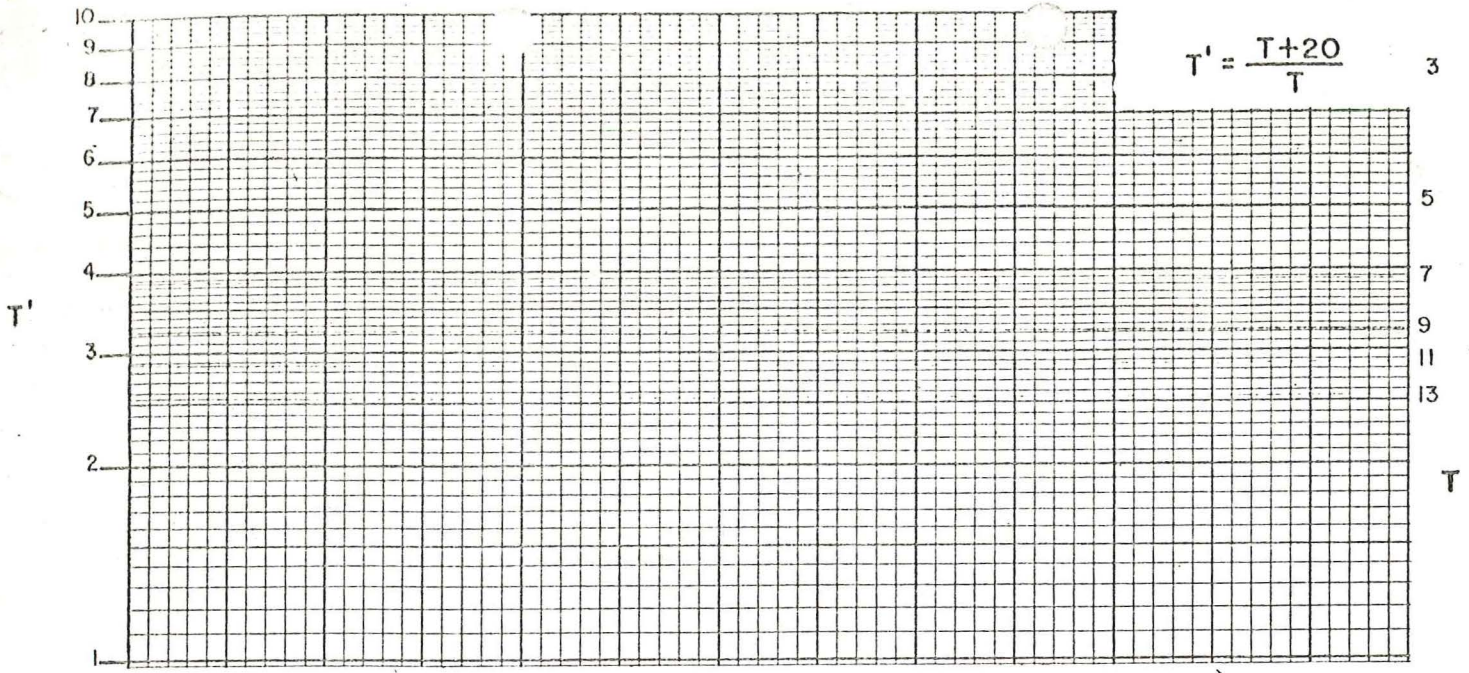
Final Segment: Start = .999



TEMPERATURE - DEPTH LOG

Location Mitchell Butte, Oregon Date June 1, 1975
 Map Owyhee Dam Quadrangle
 Property T 21S R 45E sec SW 1/4 NW 1/4 16
 Drill Hole V-10 Date Drilled May 24, 1975 Elevation 3300 ft.
 Instrument _____ Operator P. King
 Comments logged at 1200 hrs. Filled with H₂O date drilled

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
0	3000	29.495			
1	5.310	15.040	-14.455		
2	6.228	11.110	-3.930		
3	6.382	10.520	-0.590		
4	6.198	11.230	0.710		
5	6.004	12.005	0.775		
6	5.857	12.615	0.610		
7	5.752	13.060	0.445		
8	5.695	13.305	0.245		
9	5.653	13.485	0.180		
10	5.633	13.575	0.090		
11	5.623	13.620	0.045		
12	5.620	13.630	0.010		
13	5.616	13.650	0.020		
14	5.616	13.650	0.000		
15	5.612	13.665	0.015		
16	5.606	13.695	0.030		
17	5.603	13.705	0.010		
18	5.597	13.735	0.030		
19	5.589	13.770	0.045		
20	5.581	13.805	0.035		
			0.040		



TEMPERATURE - DEPTH LOG

Location Mitchell Butte, Oregon Date June 1, 1975

Map Owyhee Dam Quad

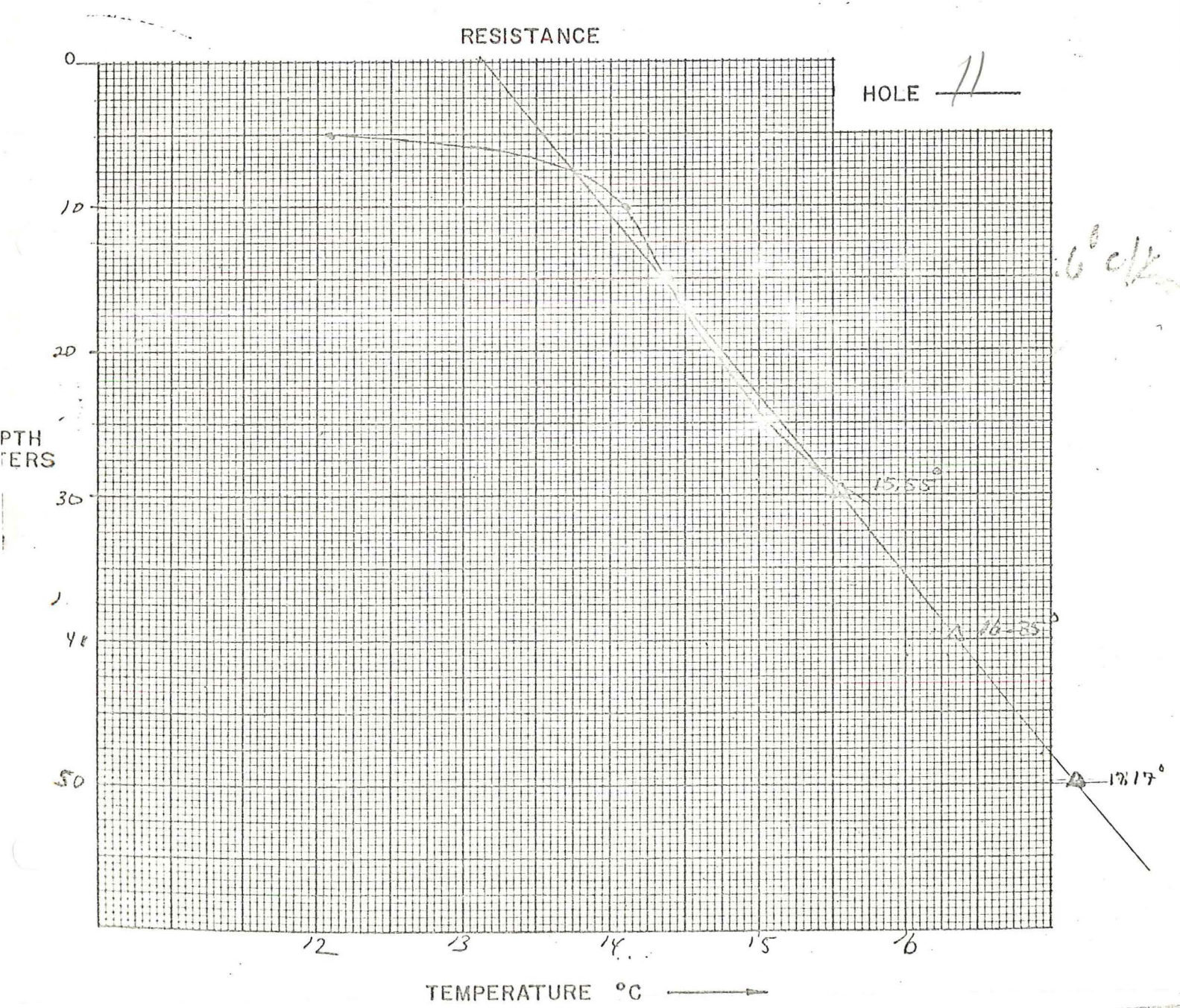
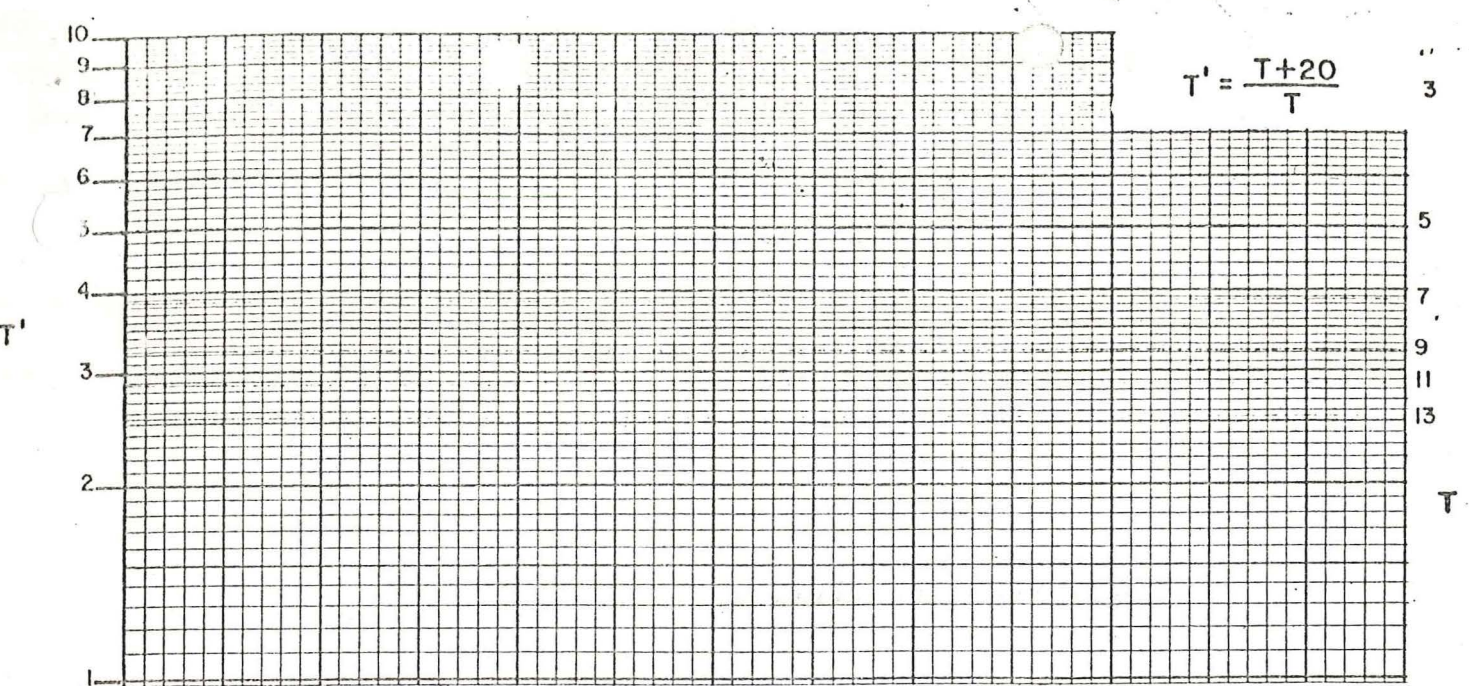
Property _____ T 21S R 45E sec S1/4 NW1/4 36

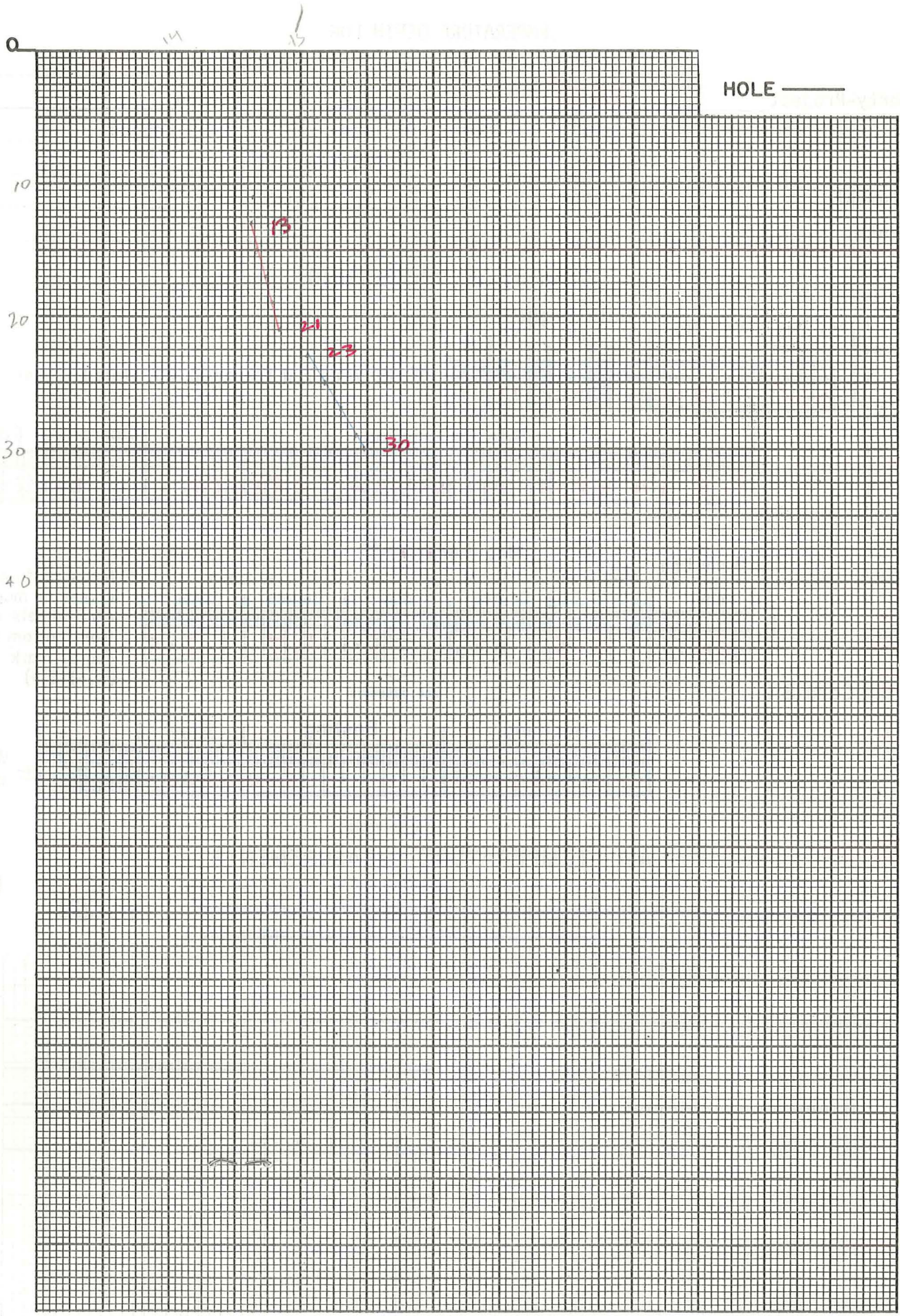
Drill Hole V-11 Date Drilled May 26, 1975 Elevation 2740 ft.

Instrument _____ Operator Pilkington

Comments logged at 1330 hrs. Filled with H₂O 0900 hrs May 29, 1975.

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
0					
1	4.930	16.810			
2	5.755	13.045	-3.865		
3	6.038	11.865	-1.180		
4	6.063	11.765	-0.105		
5	5.989	12.065	0.305		
6	5.832	12.720	0.655		
7	5.698	13.290	0.570		
8	5.629	13.590	0.305		
9	5.563	13.875	0.295		
10	5.514	14.105	0.220		
11	5.484	14.240	0.135		
12	5.473	14.290	0.050		
13	5.461	14.345	0.055		
14	5.465	14.325	-0.020		
15	5.460	14.350	0.025		
16	5.446	14.410	0.060		
17	5.420	14.530	0.080		
18	5.401	14.620	0.090		
19	5.388	14.680	0.060		
20	5.378	14.725	0.045		
			0.285		





DEPTH METERS



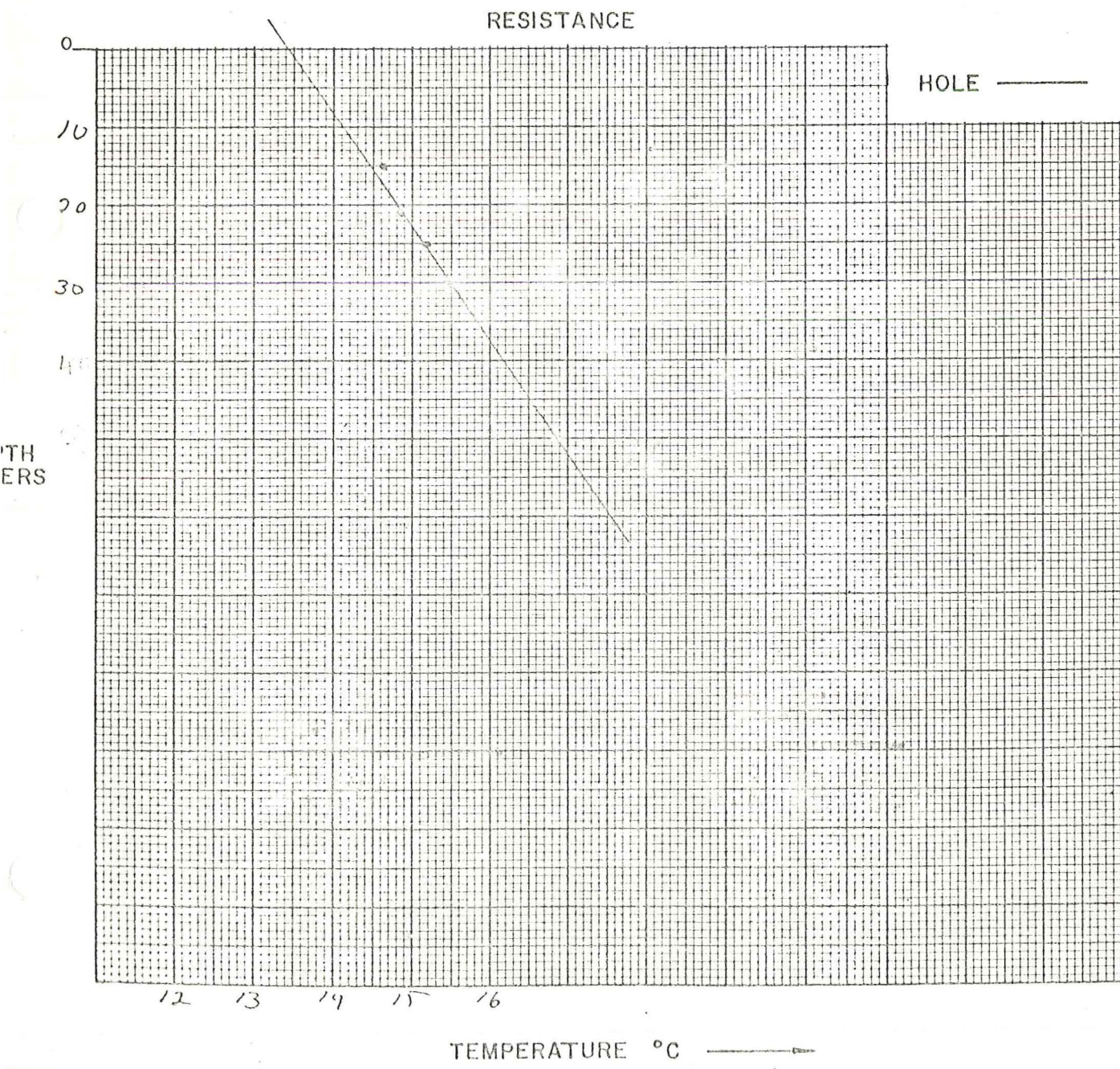
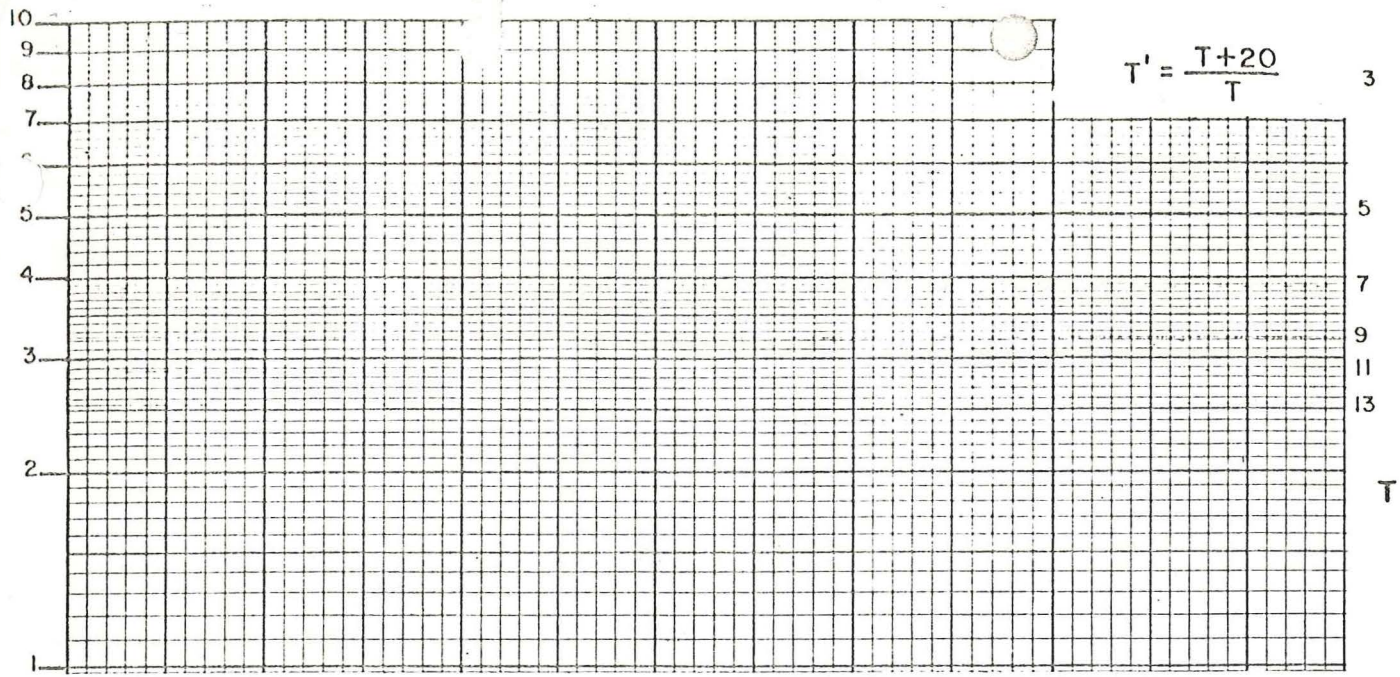
TEMPERATURE °C

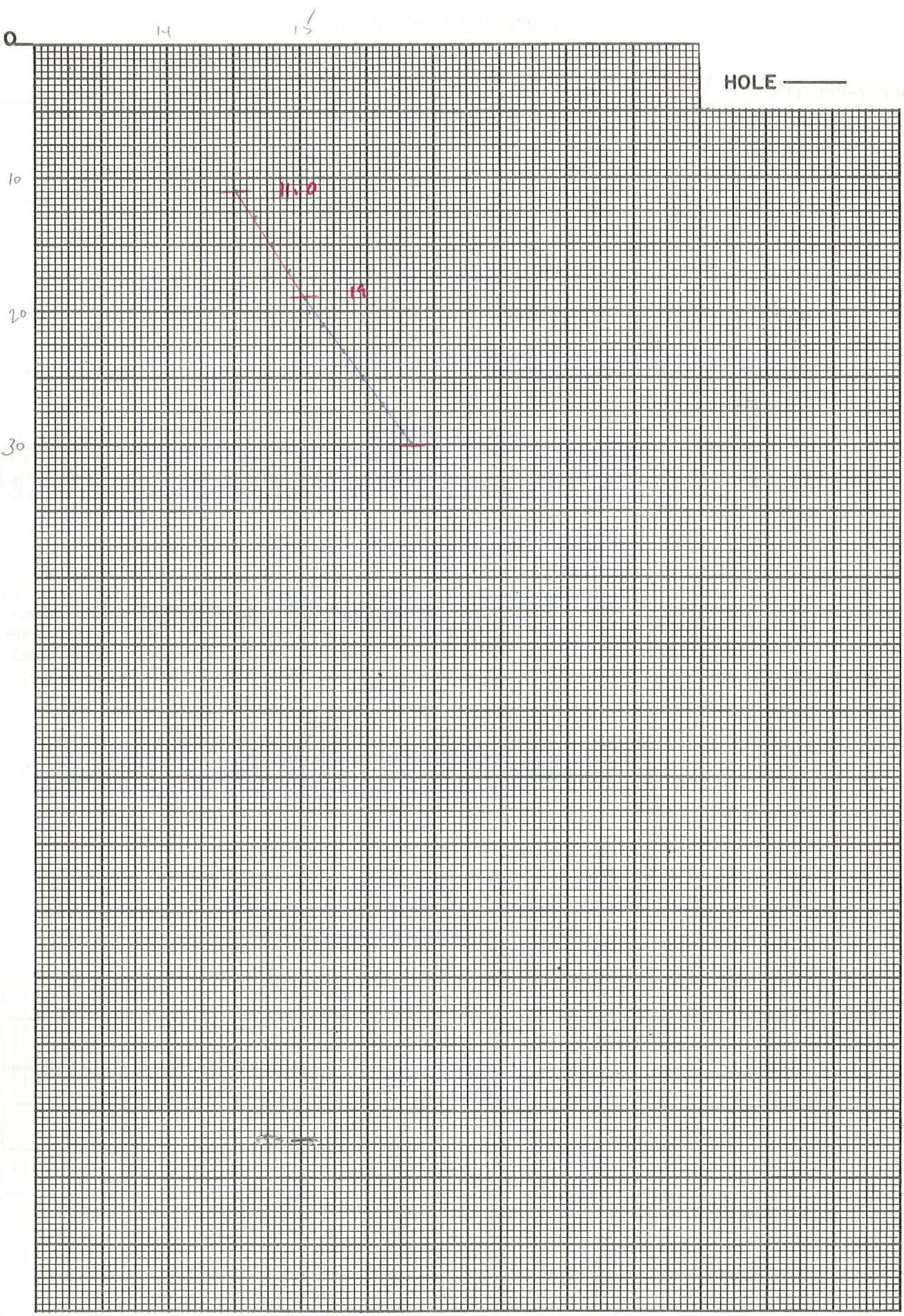
HOLE

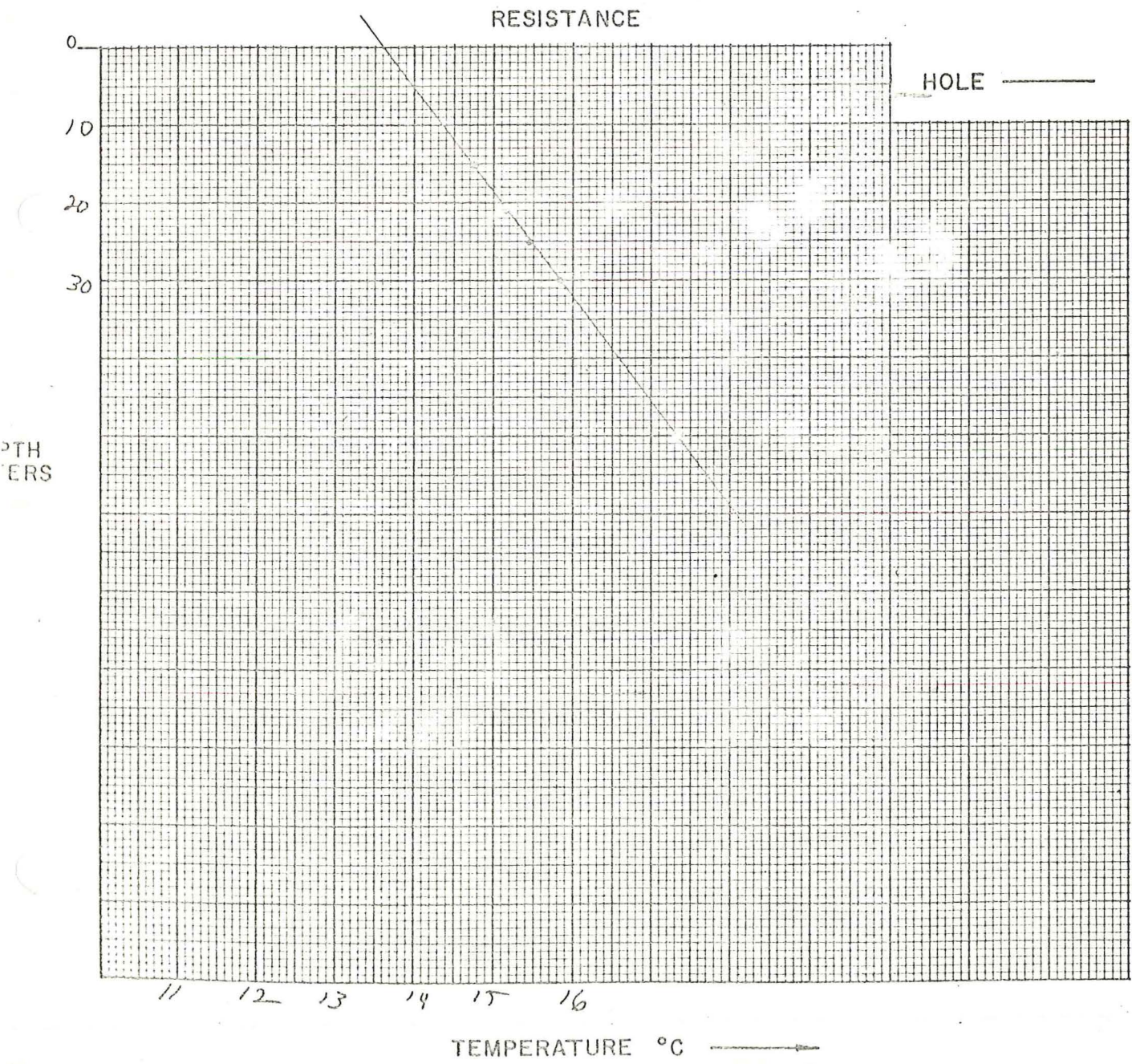
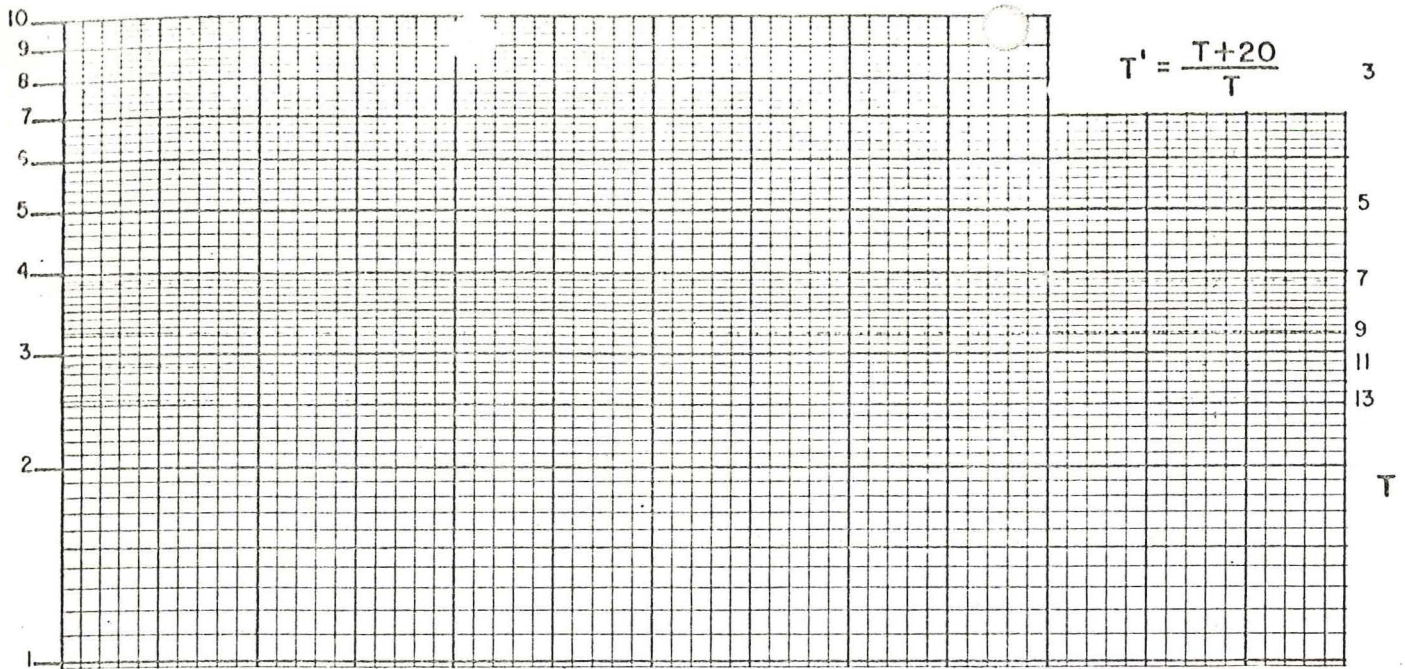
0
10
20
30
40

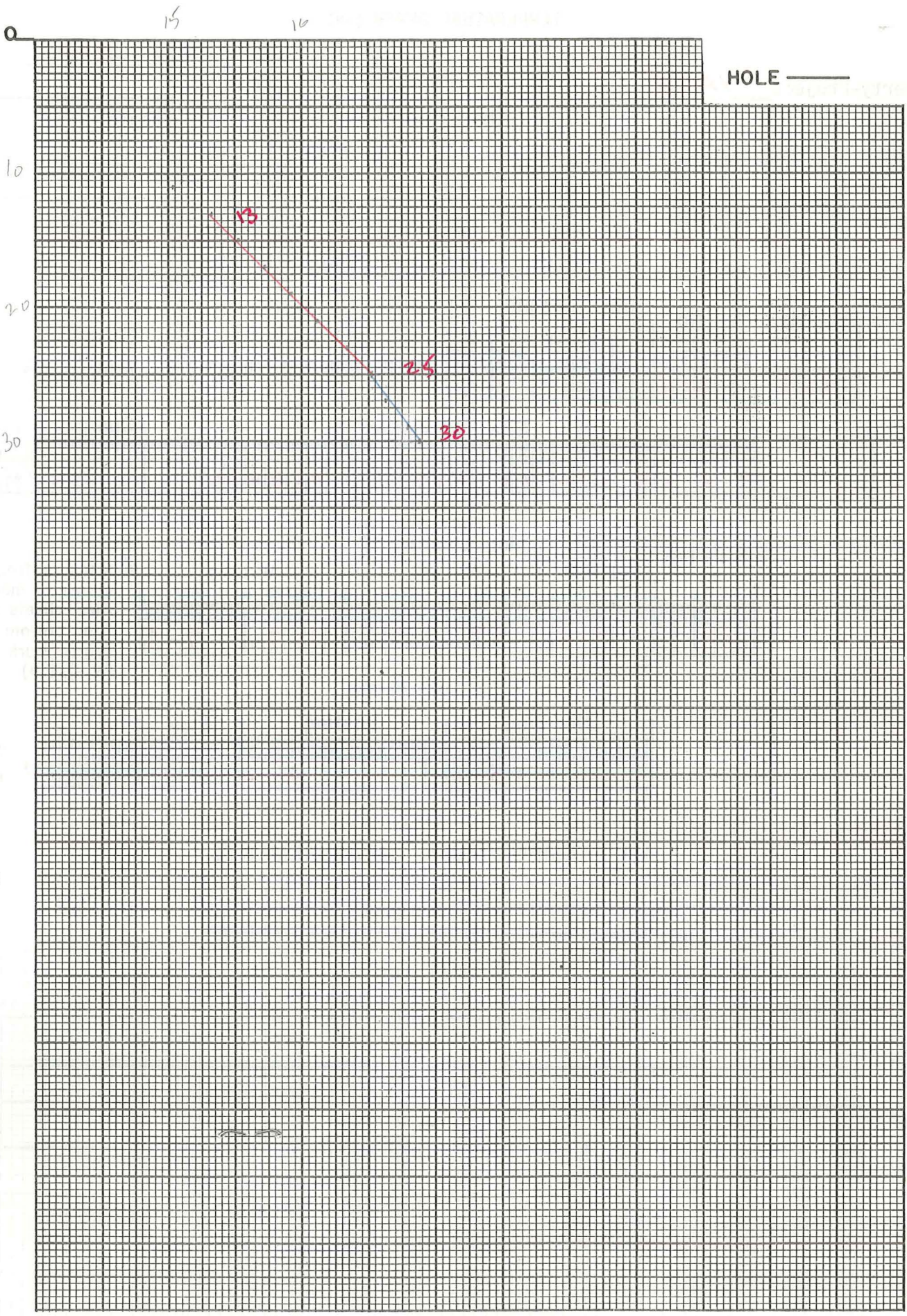
14 15

13
21
23
30









DEPTH METERS



TEMPERATURE °C

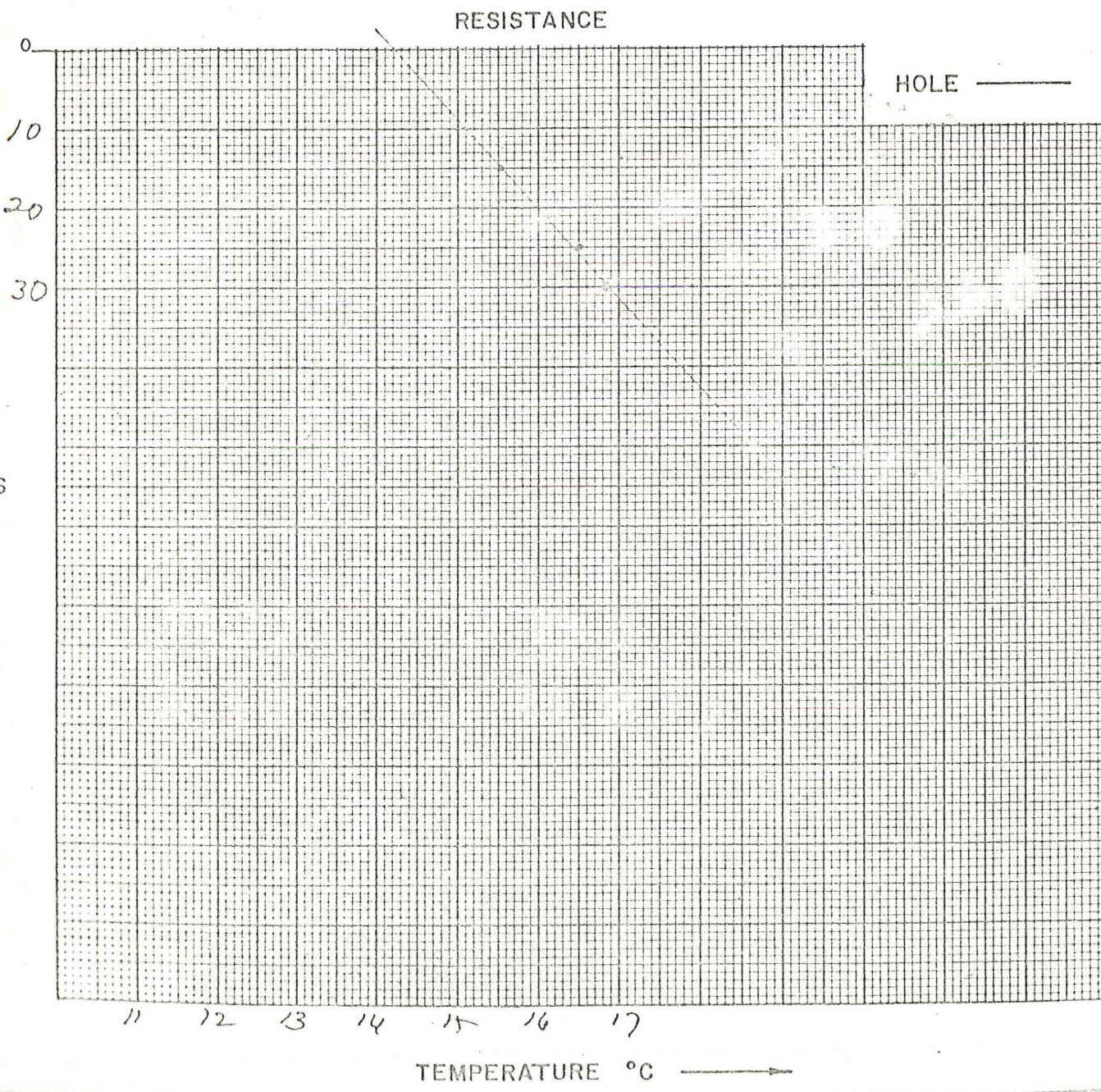
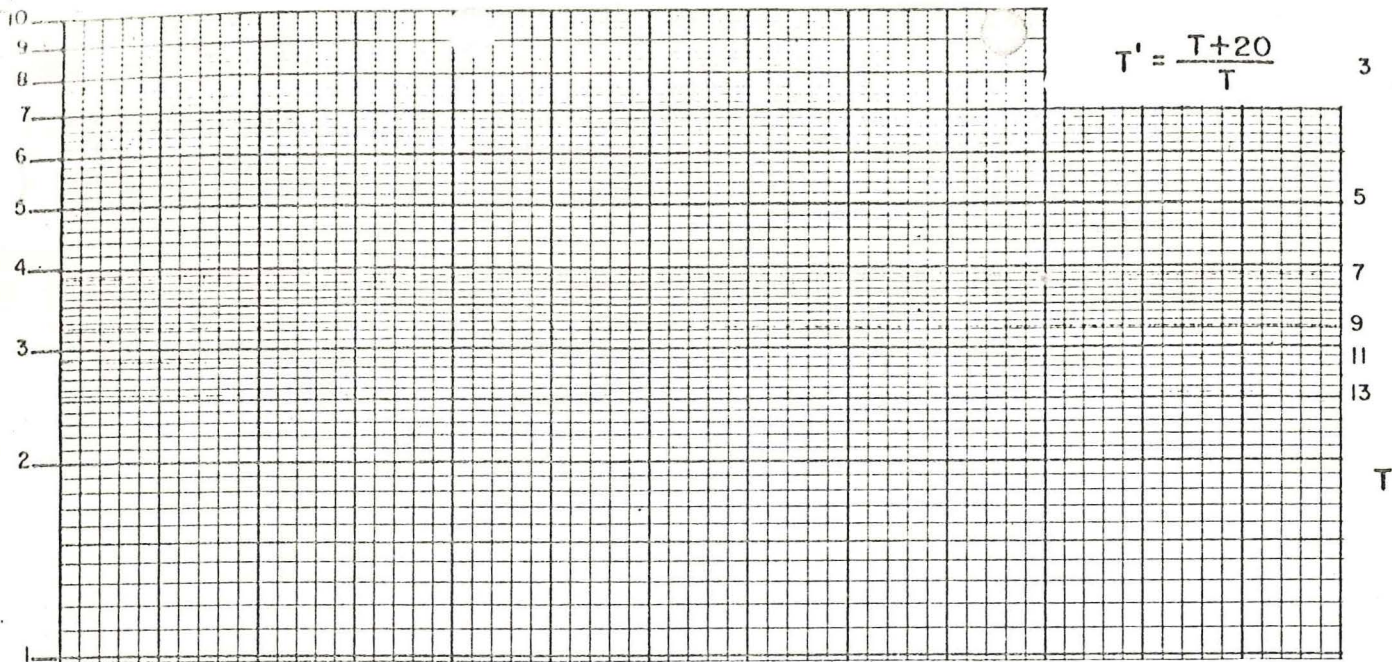


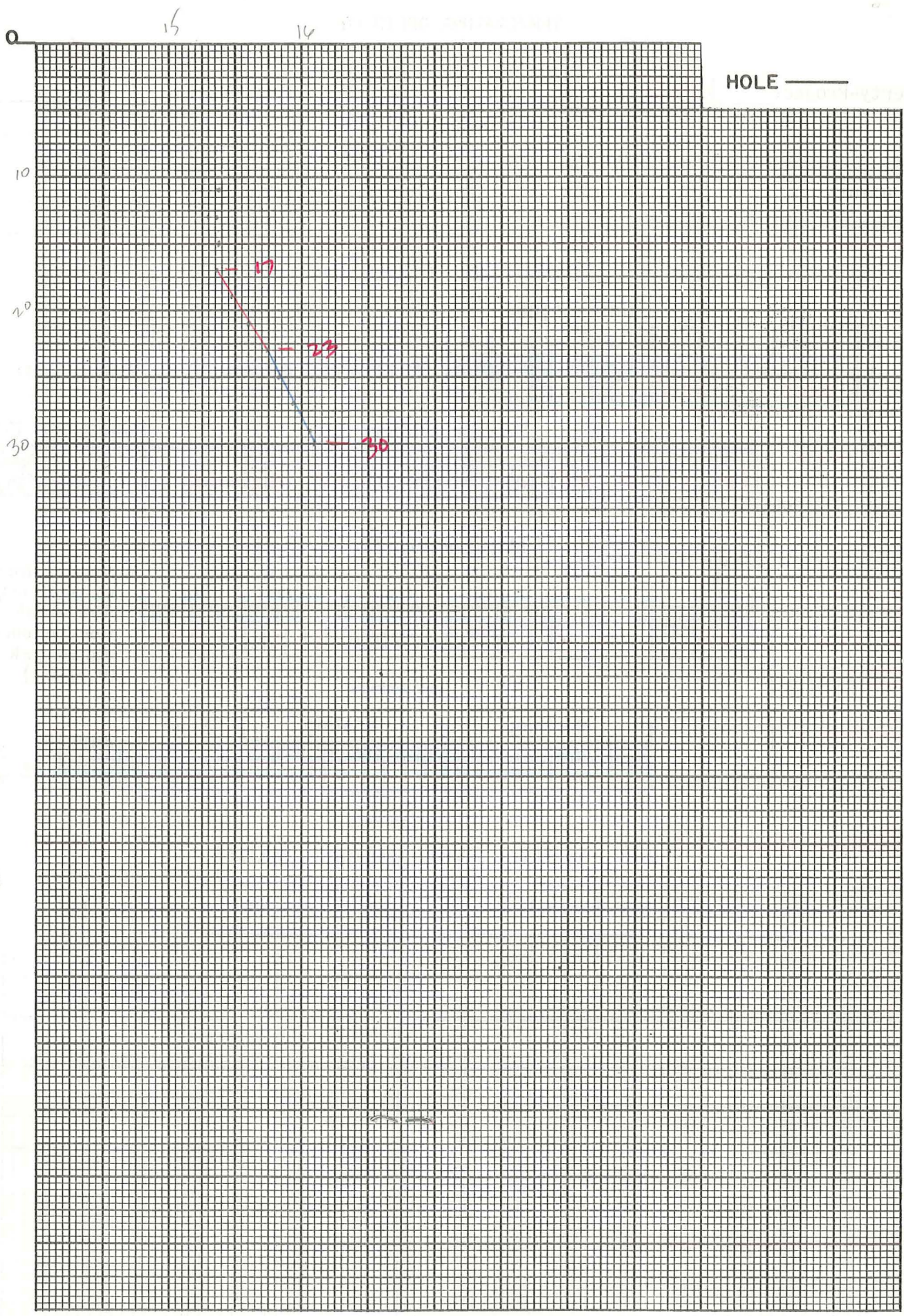
TEMPERATURE - DEPTH LOG

Location Vale Oregon Date October 17, 1975
 Map Dwyker Quadrangle
 Property T20S R 46E sec NE 1/4 NW 1/4 S
 Drill Hole V-14 Date Drilled October 9, 1975 Elevation 2480 ft.
 Instrument _____ Operator DP
 Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
1					no reading
3	4800	12.585			
5	5.045	16.325	-1.260		
7	5.310	15.040	-1.285		
9	5.329	14.955	-0.085	42.5	
11	5.310	15.040	0.085	145.0	
13	5.249	15.330	0.290	95.0	
15	5.210	15.520	0.190	100.0	
17	5.168	15.720	0.200	97.5	
19	5.128	15.915	0.195	100.0	
21	5.088	16.115	0.200	115.0	
23	5.041	16.345	0.230	82.5	
25	5.008	16.510	0.165	62.5	
27	4.984	16.635	0.125	82.5	
29	4.951	16.800	0.165	80.0	
30	4.936	16.820	0.020		

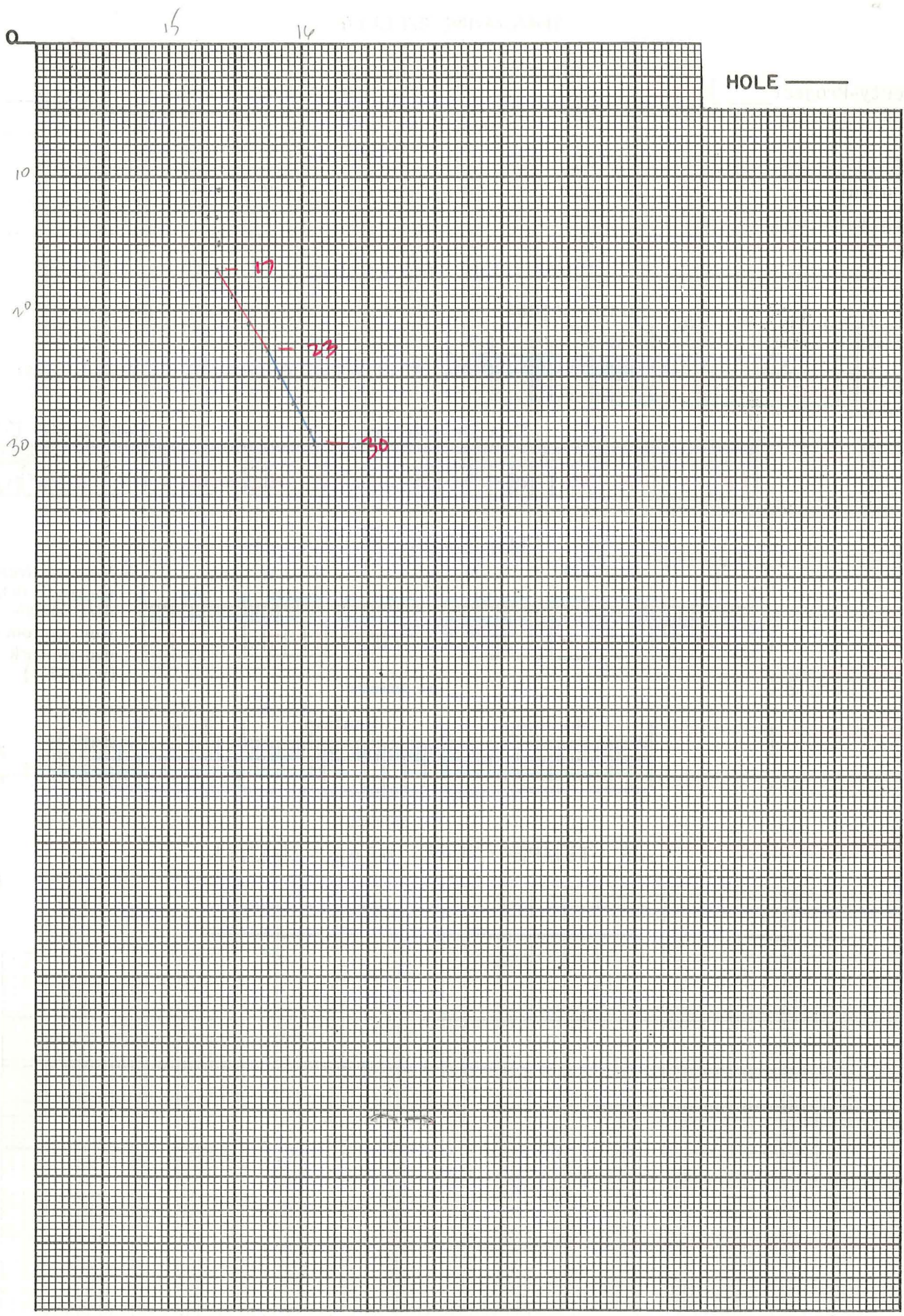
Average gradient 15-30 90.0 °C / km

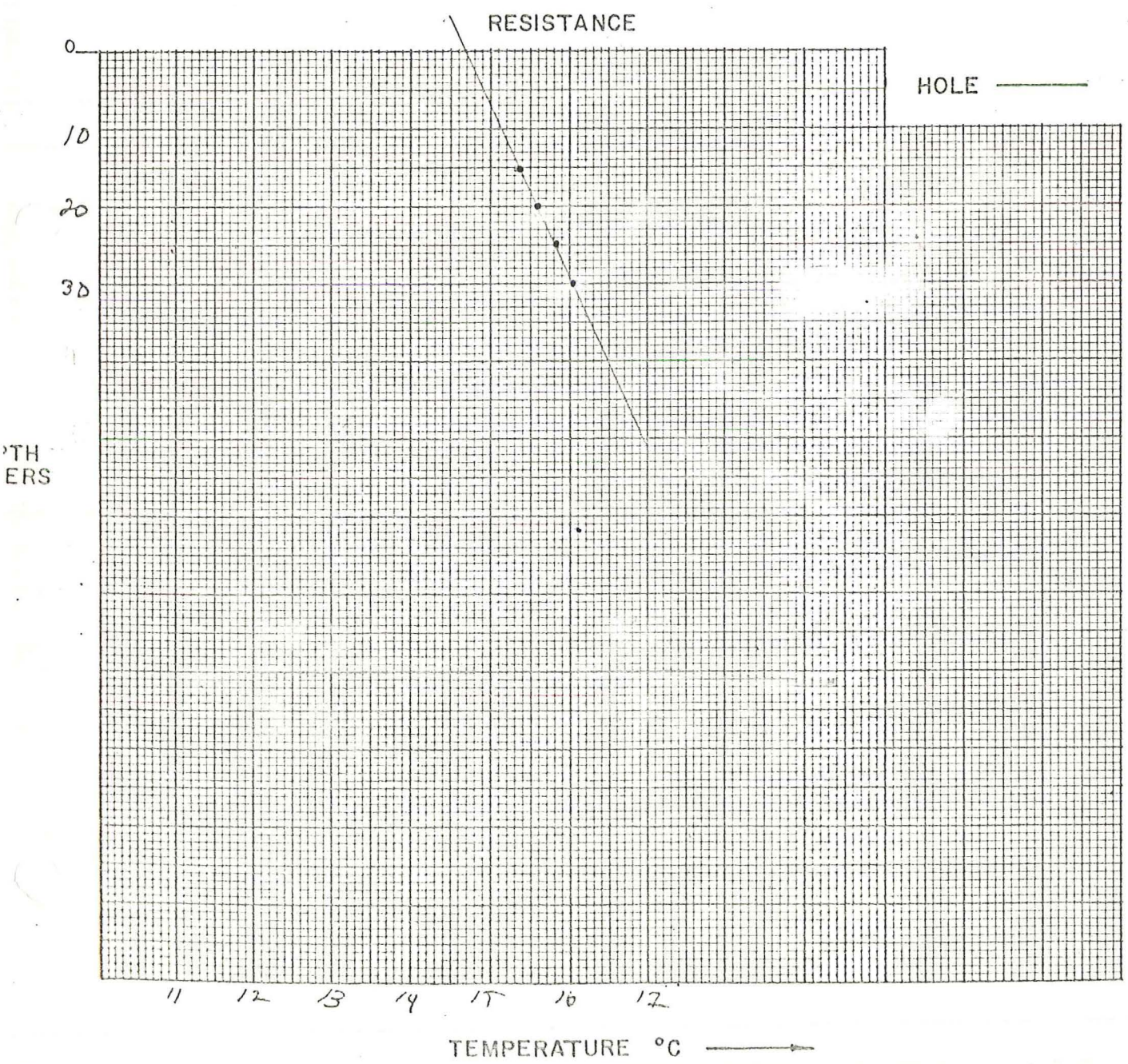
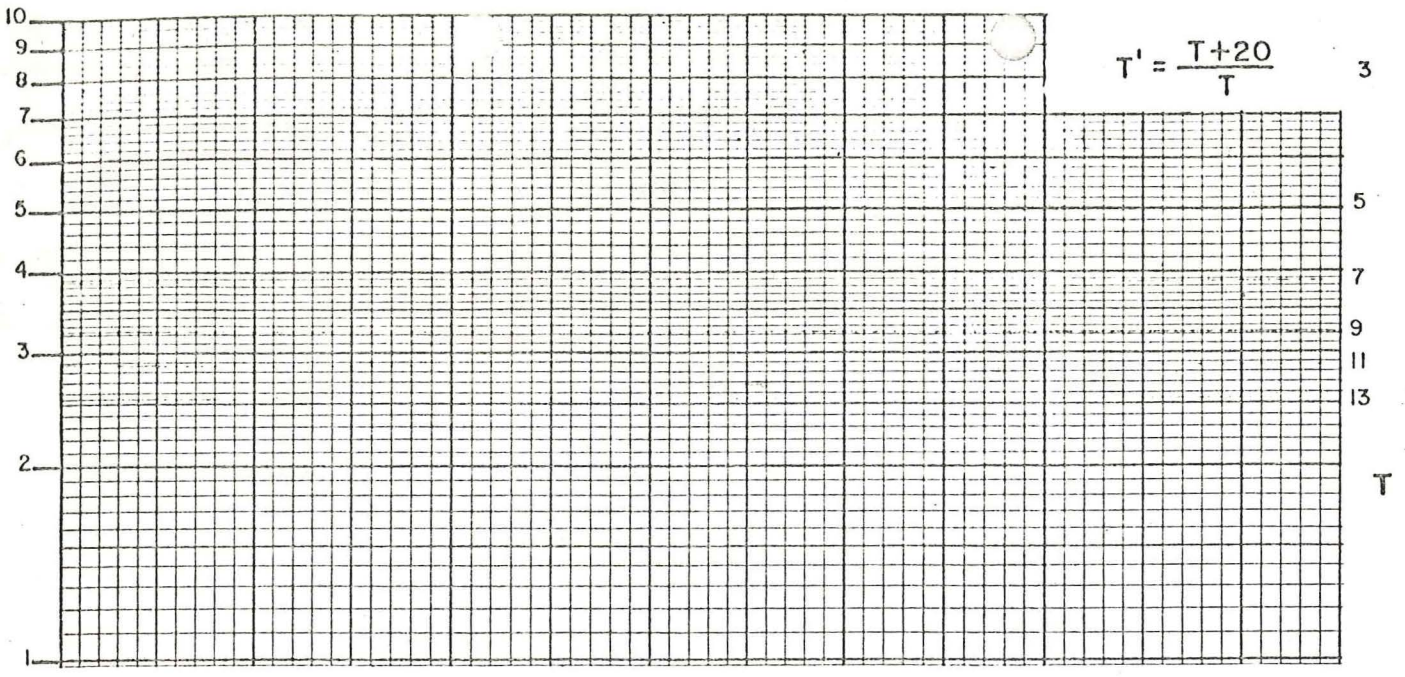


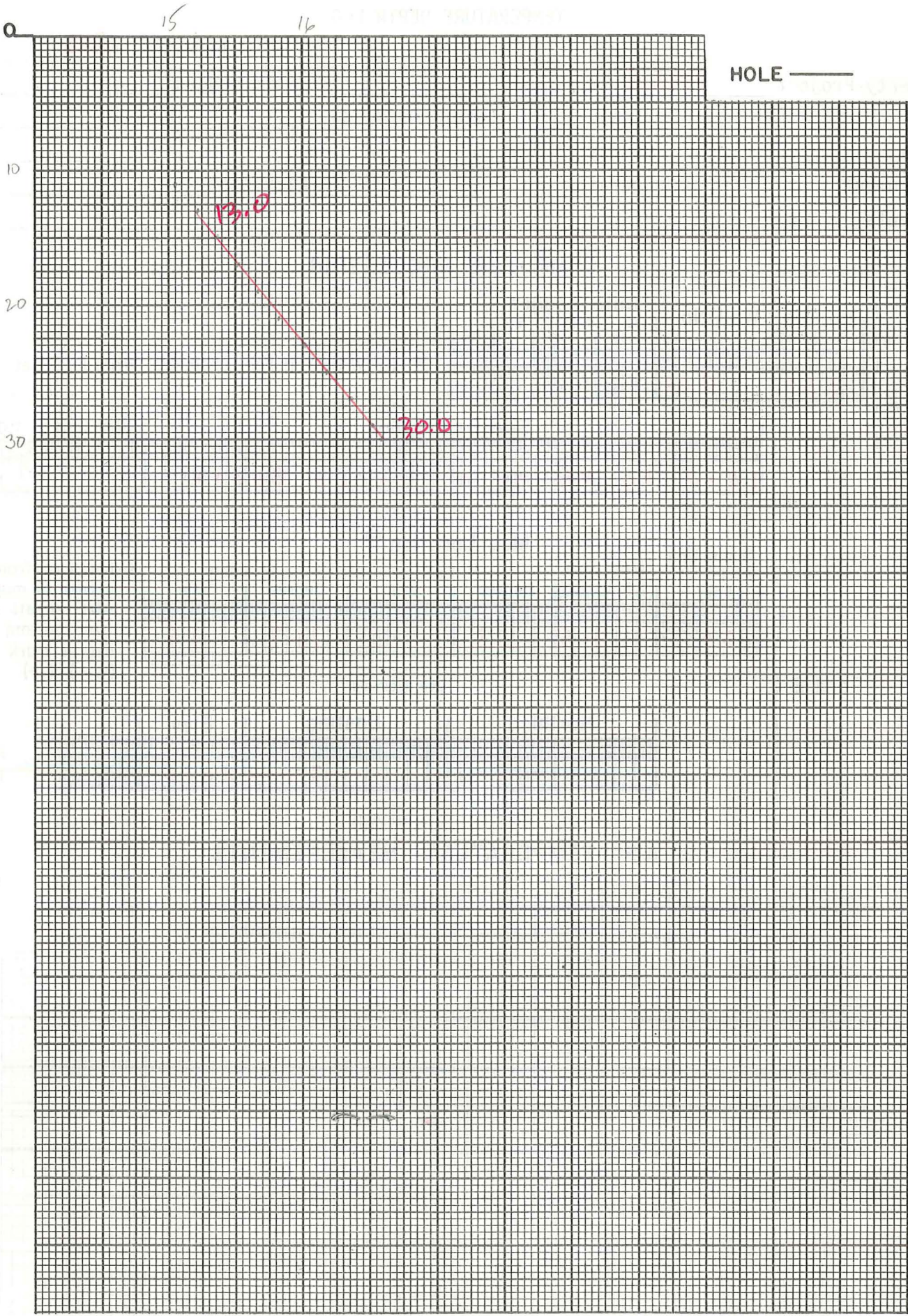


DEPTH METERS
↓

TEMPERATURE °C →



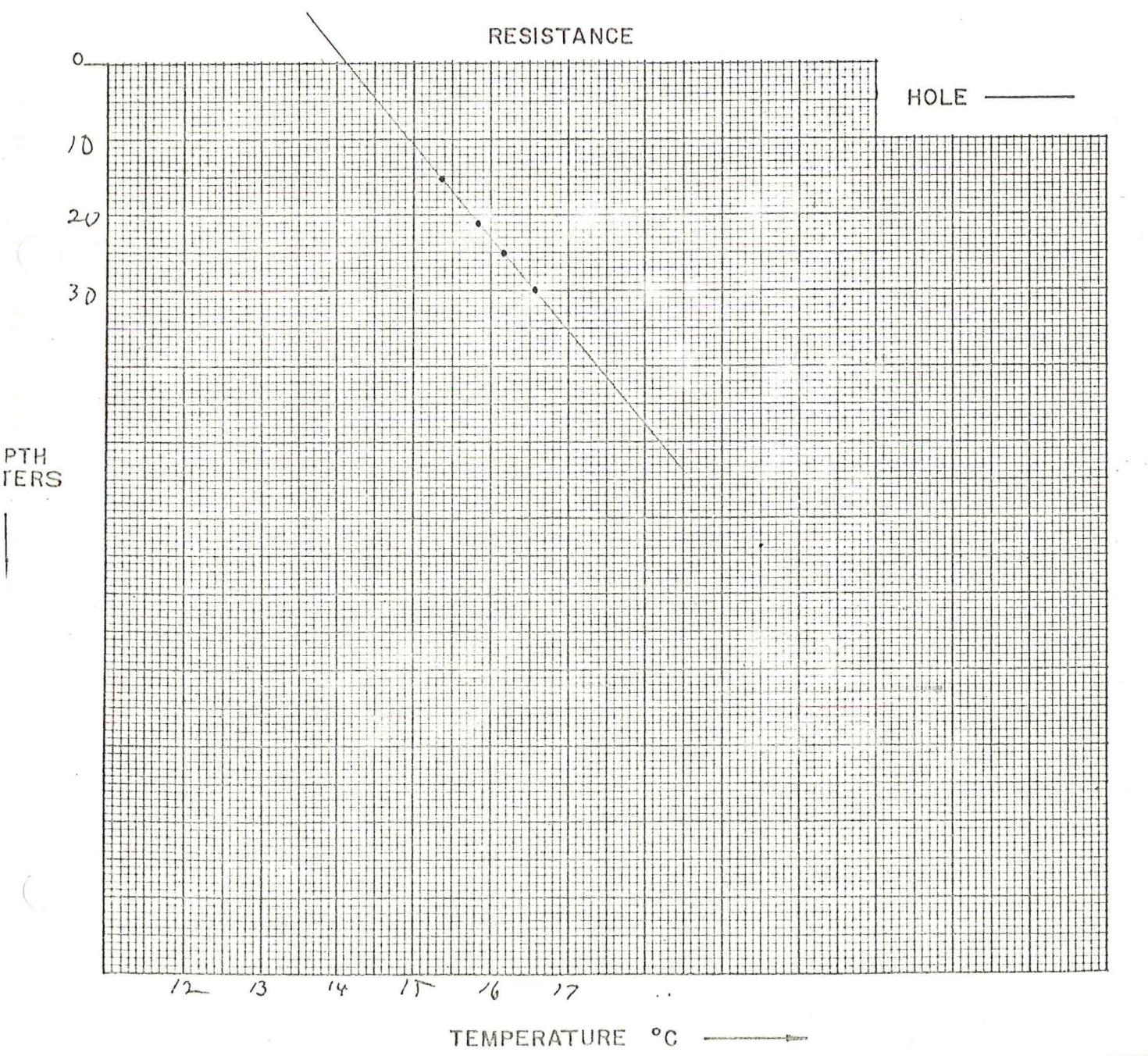
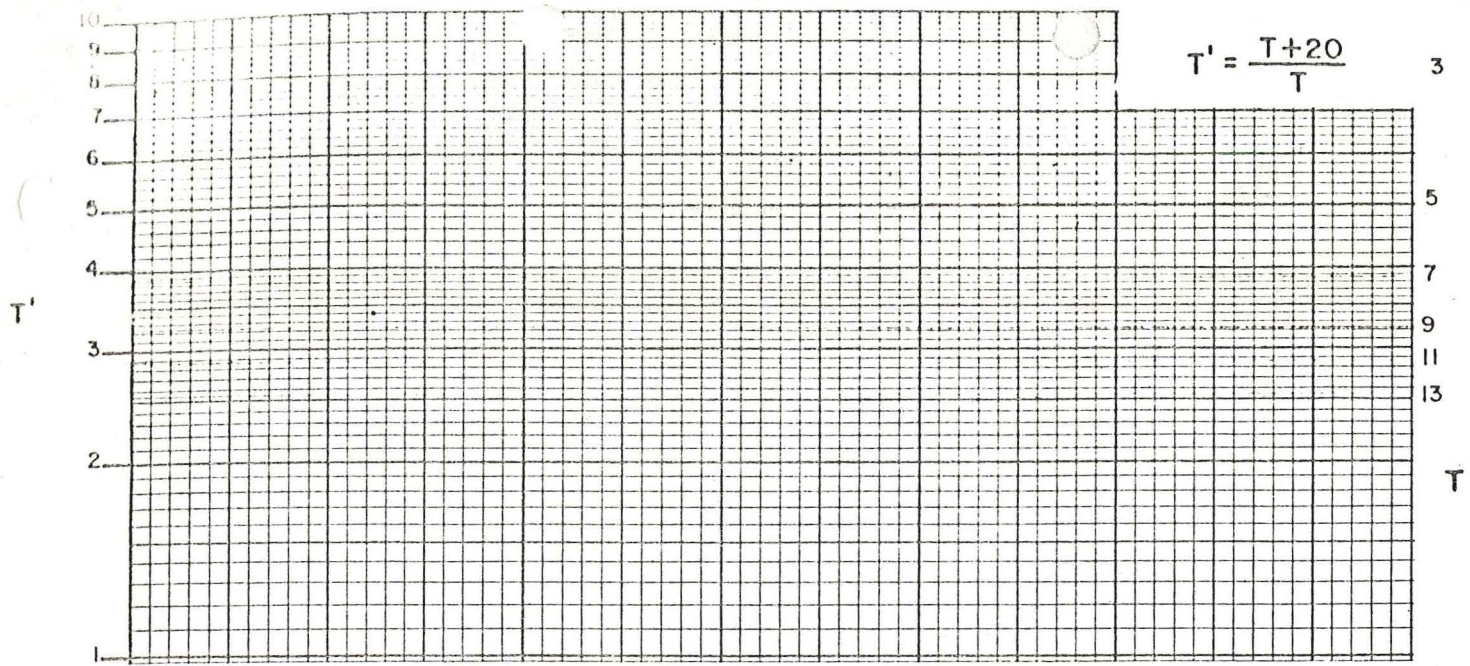




DEPTH
METERS



TEMPERATURE °C



TEMPERATURE DEPTH LOG

ΔT Well No. 217

Property-Project VALE 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	11	07	17	00	75	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	DP	HLH																												

Card B

Scale Unit										Map Size										Map Location Δ													
in										(7.5, 15., 60)										N Lat					W Long								
cm																				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	43	45	117	15

Use decimals

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	46.4	31.7	2730	F

Use decimals

Write M if meters

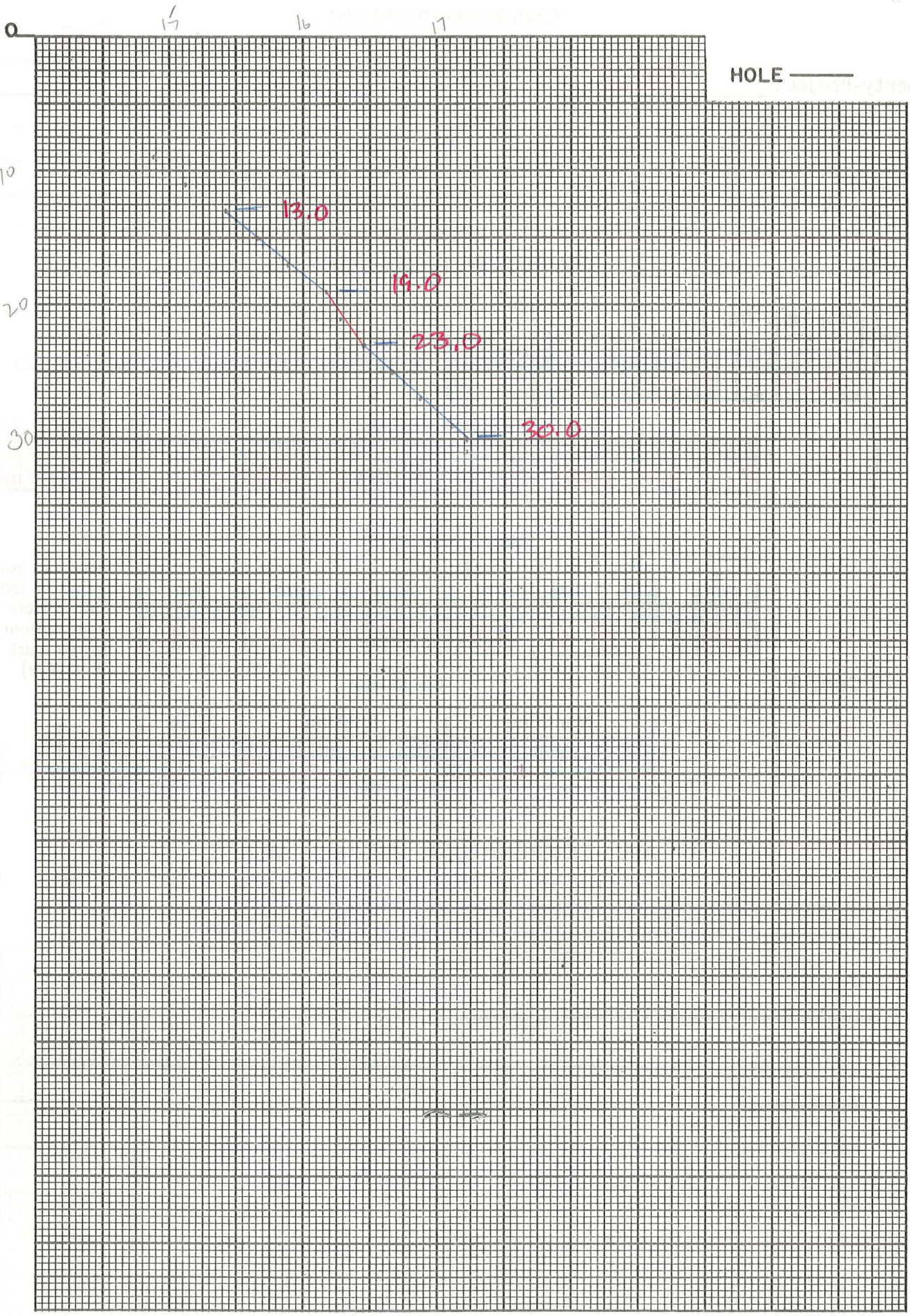
Δ Measure from SW corner of map; except AMS sheets measure from bottom center degree mark (W, -) (E, +)

	SEGMENT DEPTH		K	ΔK
	Start	End		
C	13.0	19.0		
D	23.0	30.0	-3.0	-.5
E				
F				
G				

Continue each card below.

	SEGMENT DEPTH		K	ΔK
	Start	End		
C	19.0	23.0		
D	.999			
E				
F				
G				

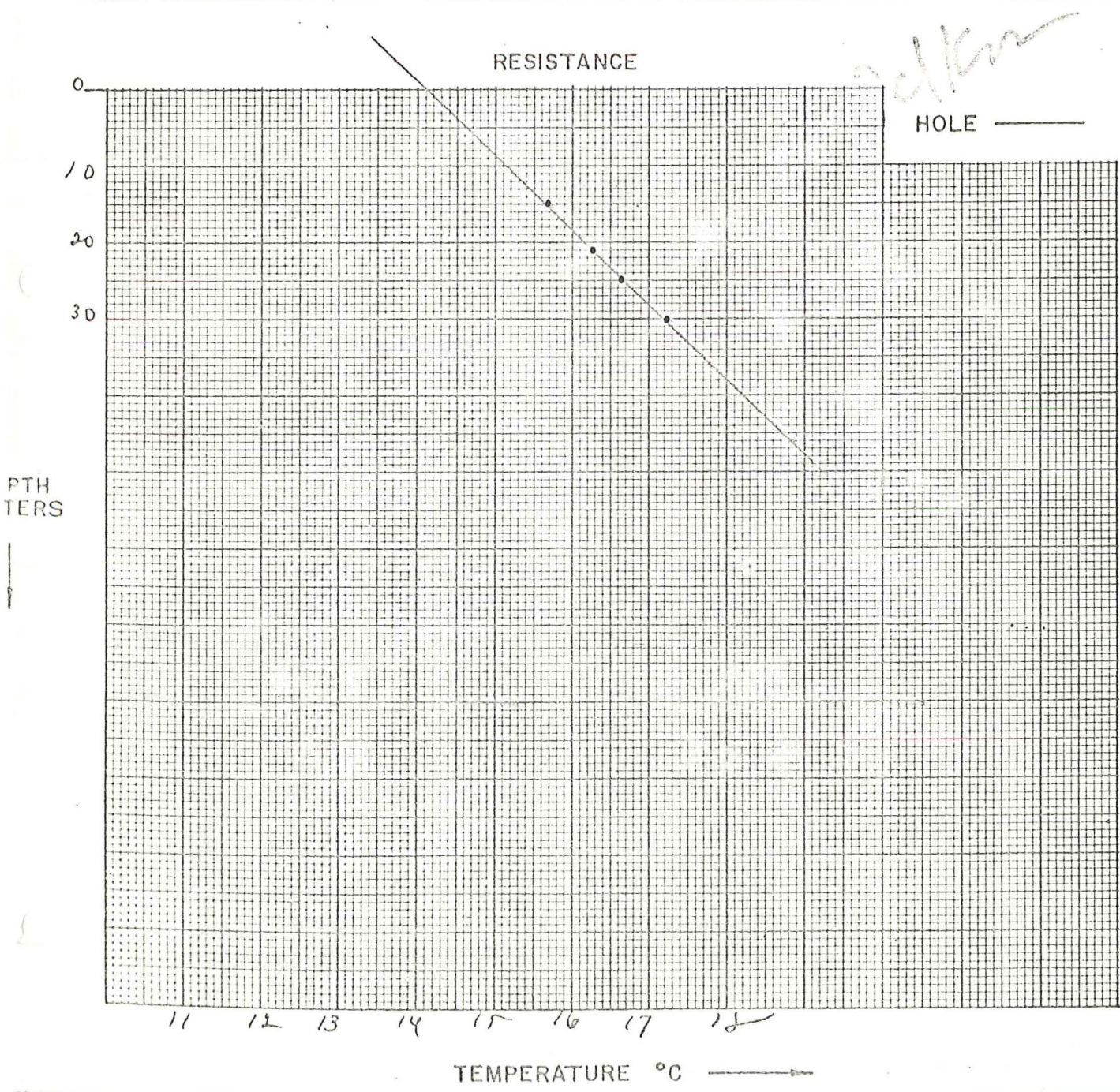
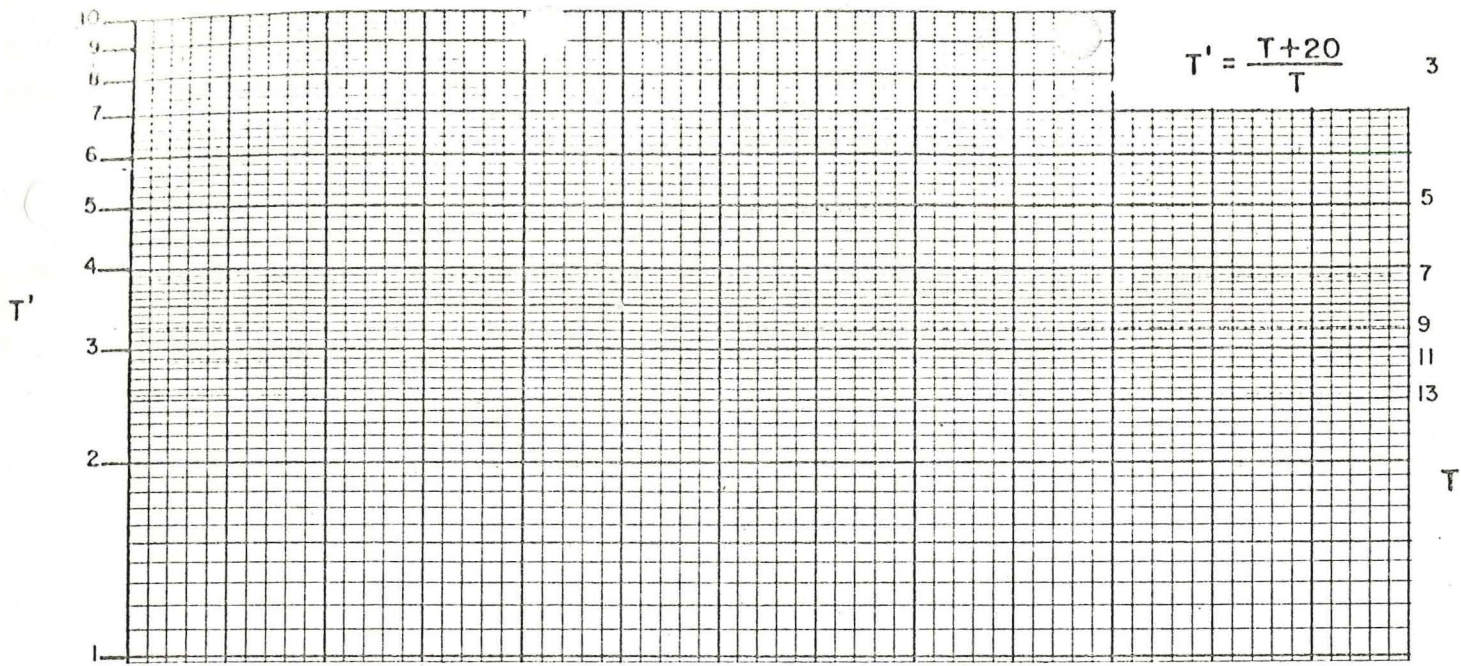
Final Segment: Start = .999

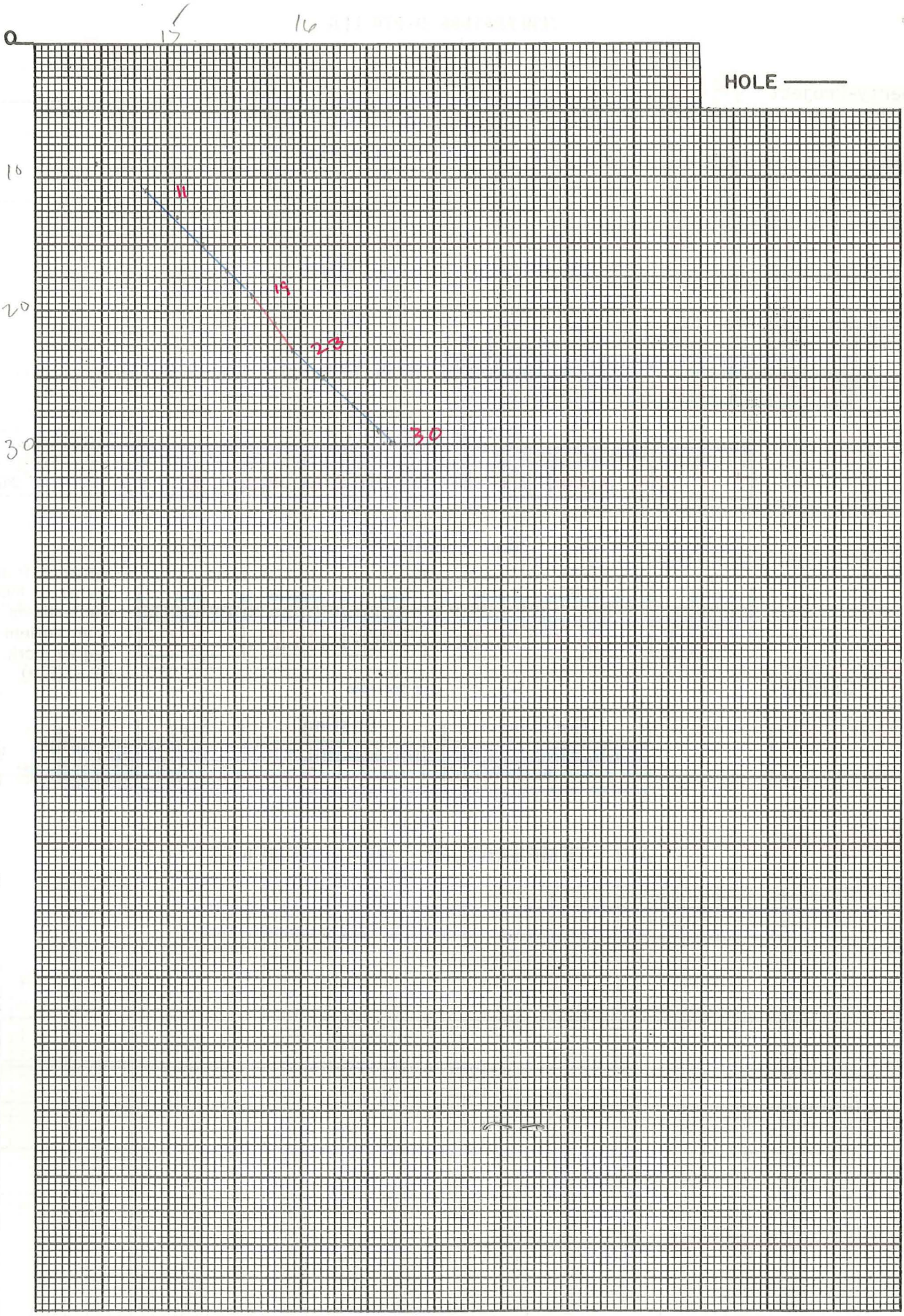


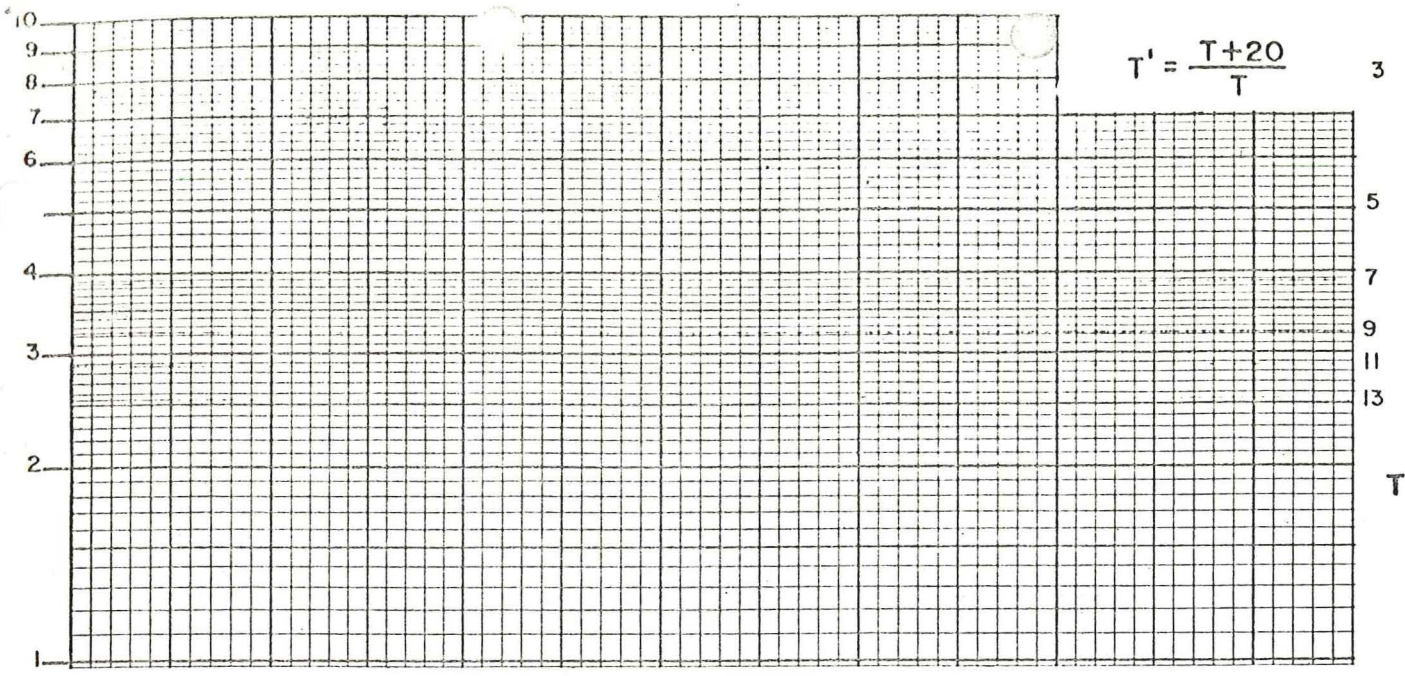
DEPTH METERS



TEMPERATURE °C







RESISTANCE



12 13 14 15 16 17 ..
TEMPERATURE °C ———→

TH
ERS

TEMPERATURE DEPTH LOG

ΔT Well No. 219

Property-Project VALE Depth Logged _____

Map _____ Scale _____ Date: Drilled _____ Logged _____

State _____ County _____ Section _____ T _____ R _____

Instrument _____ Operator _____ Elevation _____ ft.

Comments _____

COMPUTER PROCESSING

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	
665					219					17		06		75		CM				

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

Card A

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 SOUTH OF VALE, OREGON																																																		DF					MLM				

Scale Unit		Map Size		Map Location ^Δ				W Long																					
in		(7.5, 15., 60)		N Lat		Degree		Min		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		7.5		43.		52.5		117.		15.																			

Use decimals

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

Card B

Northing										Easting										Elev									
51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
32.0										2.42300.										F									

Use decimals

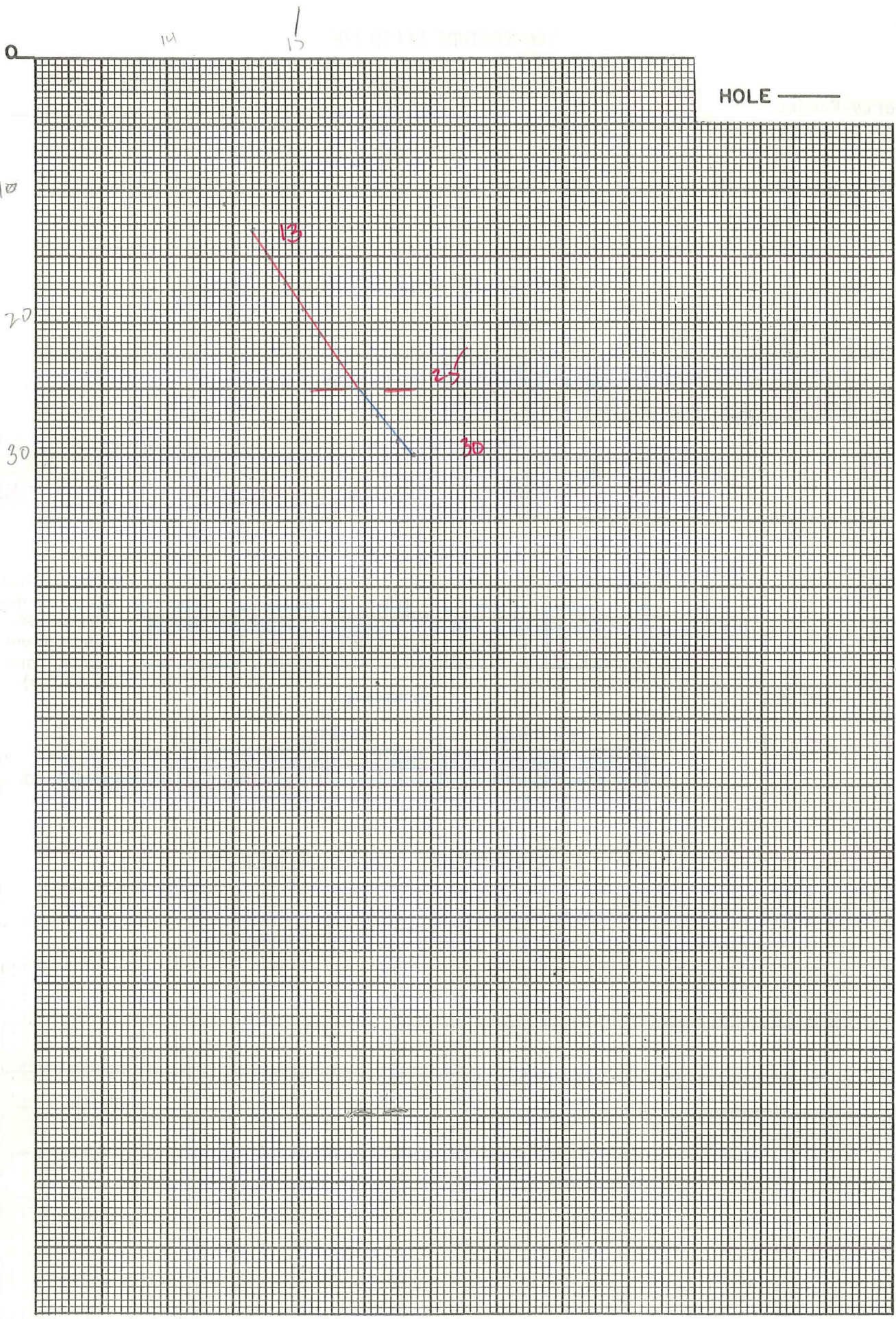
Write M if meters

	SEGMENT DEPTH		K	ΔK
	Start	End		
C	13.0	25.0		
D	.999			
E				
F				
G				

Continue each card below.

	SEGMENT DEPTH		K	ΔK
	Start	End		
C	25.0	30.0	-3.0	-.5
D				
E				
F				
G				

Final Segment: Start = .999



HOLE ———

10

20

30

14

15

13

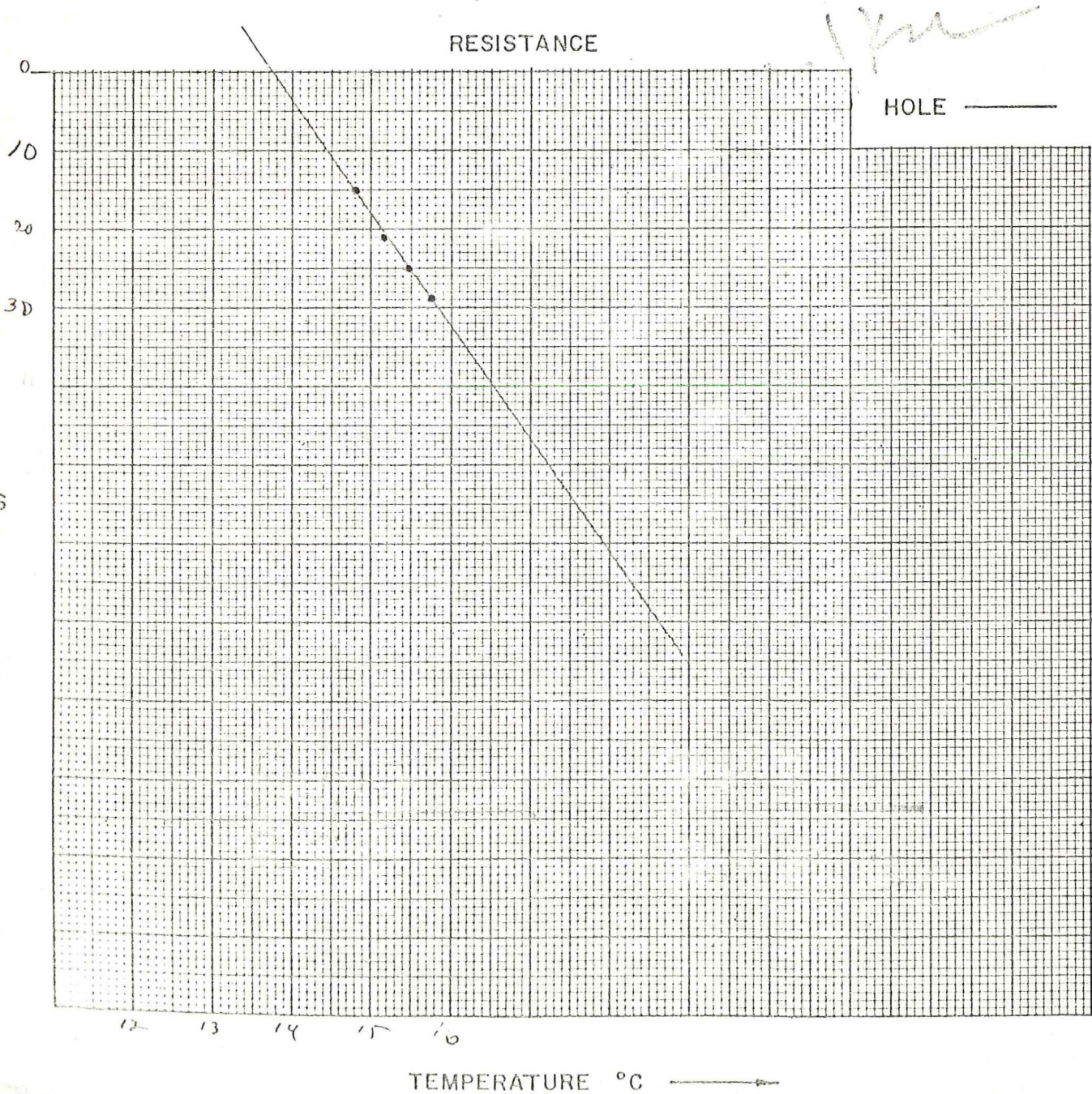
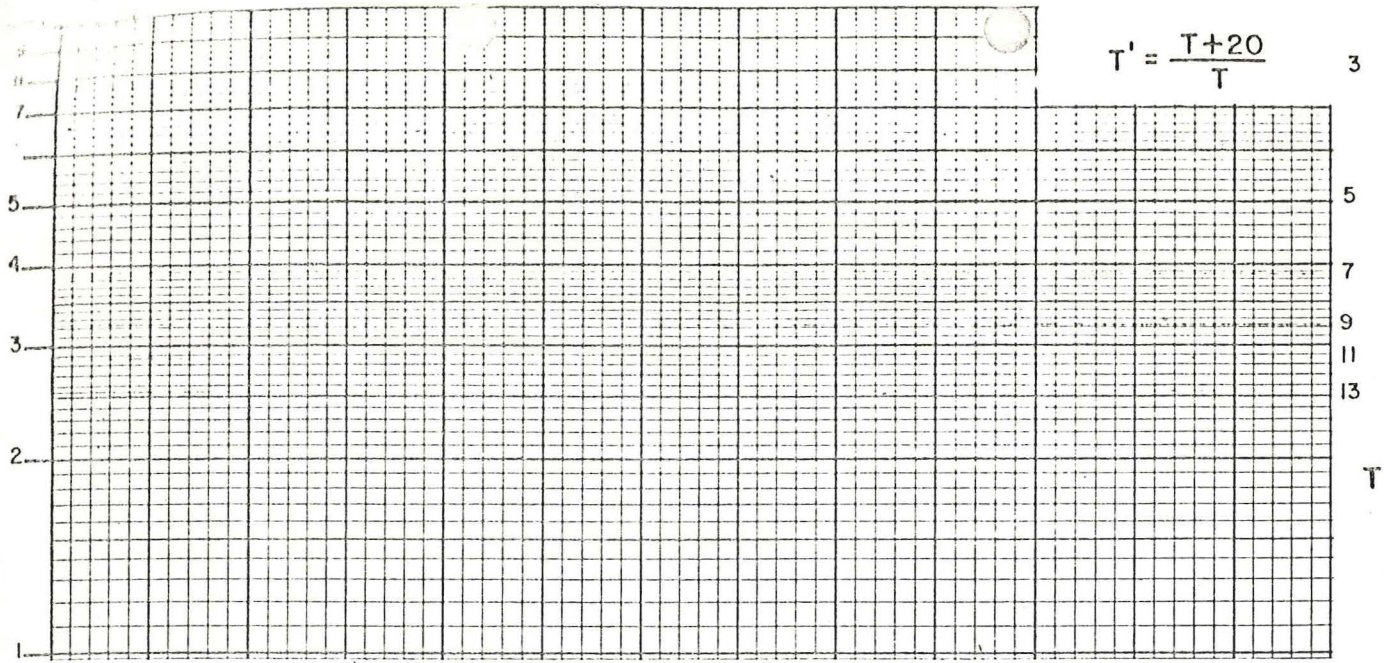
25

30

DEPTH METERS



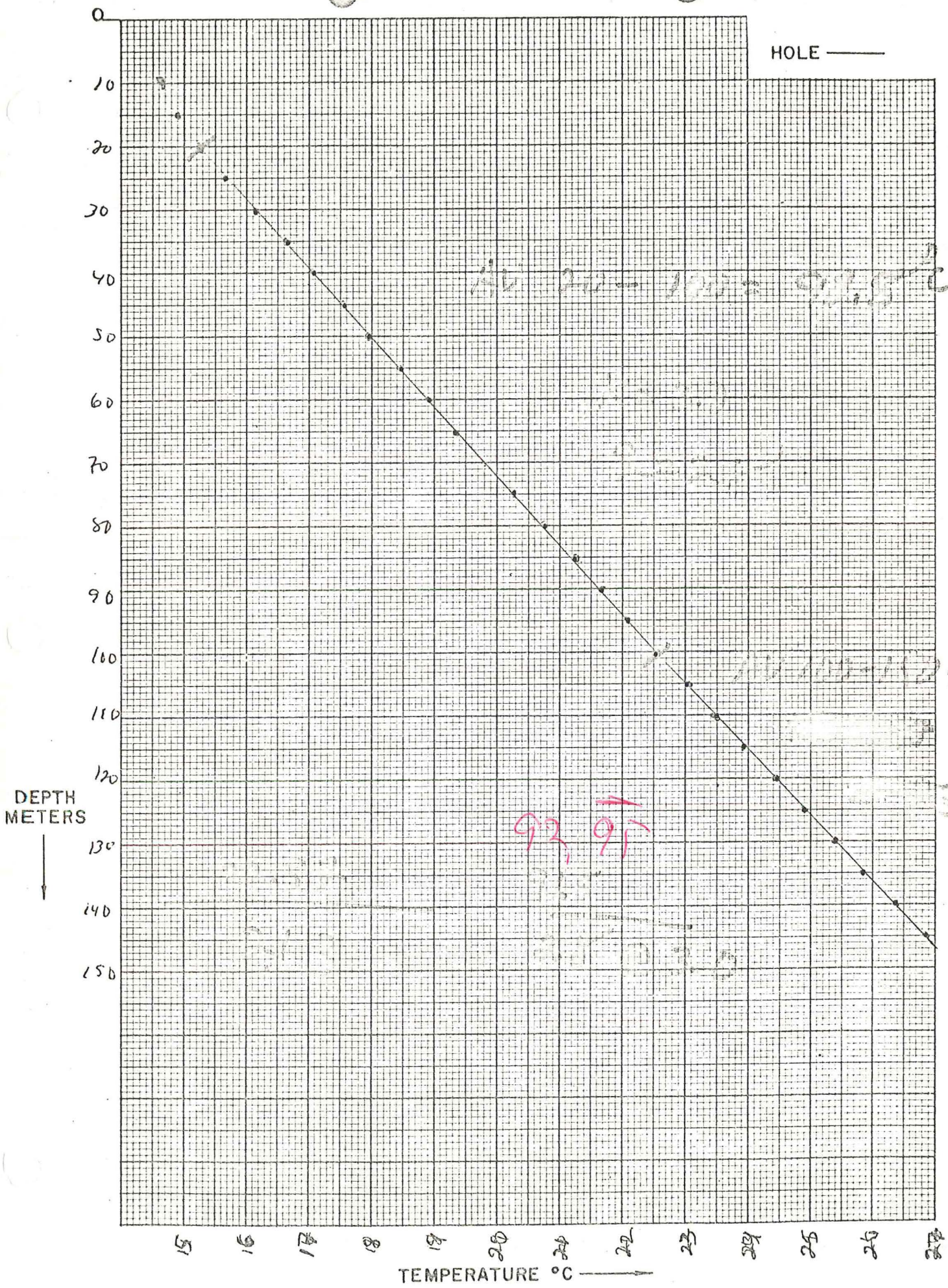
TEMPERATURE °C ———>



TEMPERATURE - DEPTH LOG

Location Lincoln Bench Date _____
 Map Vale East, Oregon 7 1/2' Quad
 Property Vale T 19S R 46E sec Nw 1/4 Nw 1/4 30
 Drill Hole V-101 VN-75-1 Date Drilled _____ Elevation 2885 ft.
 Instrument _____ Operator DO G A M T
 Comments Gradient Note

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
10		14.67	.24	48	
15		14.91	.34	68	
20		15.25	.42	84	
25		15.67	.47	94	
30		16.14	.48	96	
35		16.62	.44	88	
40		17.06	.47	94	
45		17.53	.46	92	
50		17.99	.45	90	
55		18.44	.47	94	
60		18.91	.45	90	
65		19.36	.42	84	
70		19.78	.50	100	
75		20.28	.47	94	
80		20.75	.51	102	
85		21.26	.43	86	
90		21.69	.38	76	
95		22.07	.50	100	
100		22.57	.45	90	
105		23.02	.45	90	
110		23.47	.46	92	



TEMPERATURE DEPTH LOG

ΔT Well No. 302

Property-Project VALE Depth Logged _____
 Map _____ Scale _____ Date: Drilled _____ Logged _____
 State _____ County _____ Section _____ T _____ R _____
 Instrument _____ Operator _____ Elevation _____ ft.
 Comments _____

COMPUTER PROCESSING

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
665					302					08		08		77			C M		

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

Card A

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 NORTH OF CHALK RES																																																		DOB					HLH				

Card B

Scale Unit		Map Size		Map Location ^Δ				N Lat				W Long																	
in	cm	(7.5, 15., 60)	cm	Degree	Min	Degree	Min	Degree	Min	Degree	Min	Degree	Min	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		7.5		43.45				117.22				5																	

Use decimals

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	
37.2										37.6										2900.					F					

Write M if meters

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

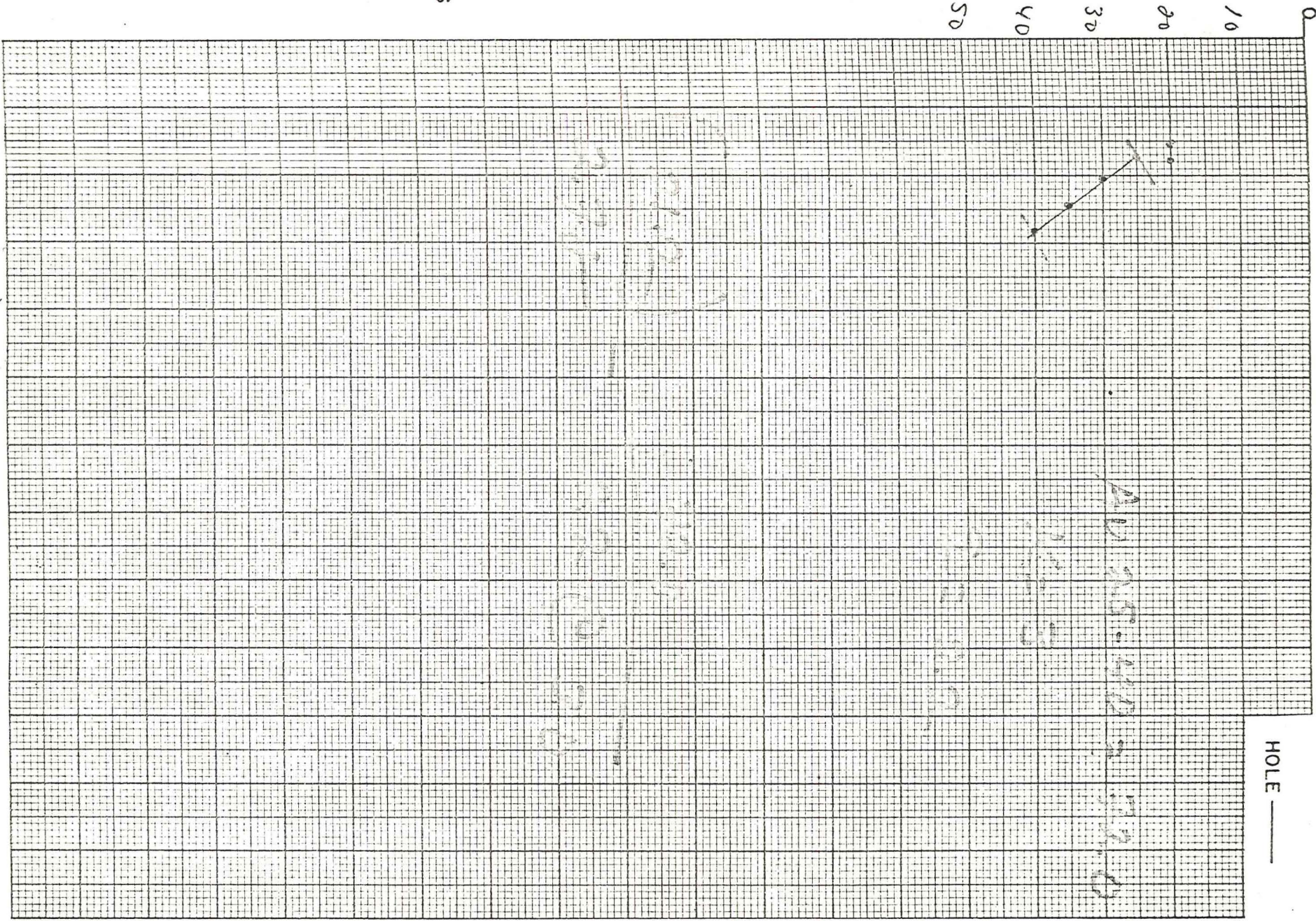
	SEGMENT DEPTH																													
	Start				End				K				ΔK																	
	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
C	25.0				40.0				-3.0				-1.5																	
D																														
E																														
F																														
G																														

Continue each card below.

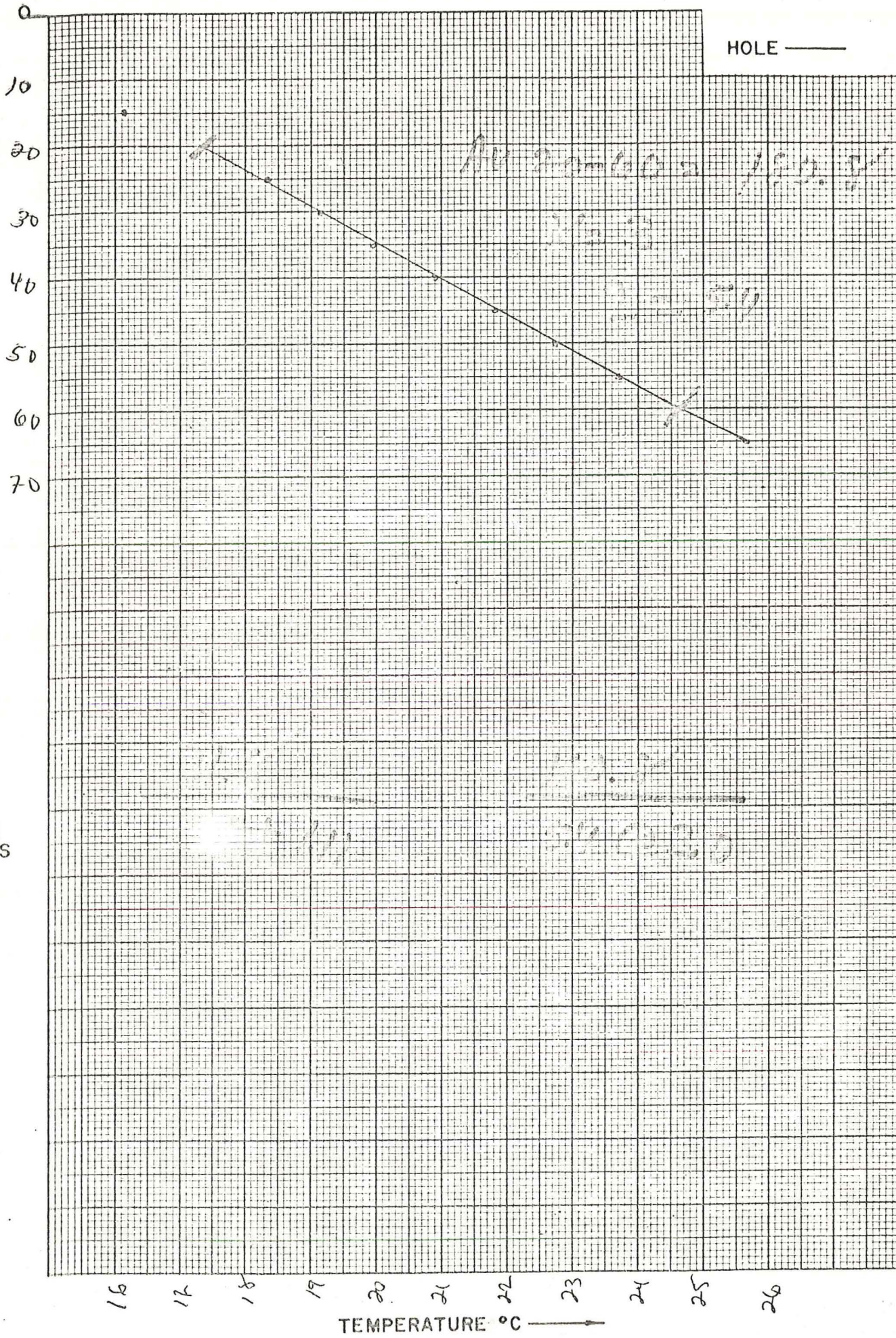
	SEGMENT DEPTH																													
	Start				End				K				ΔK																	
	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
C	.999																													
D																														
E																														
F																														
G																														

Final Segment: Start = .999

HOLE ———



HOLE _____



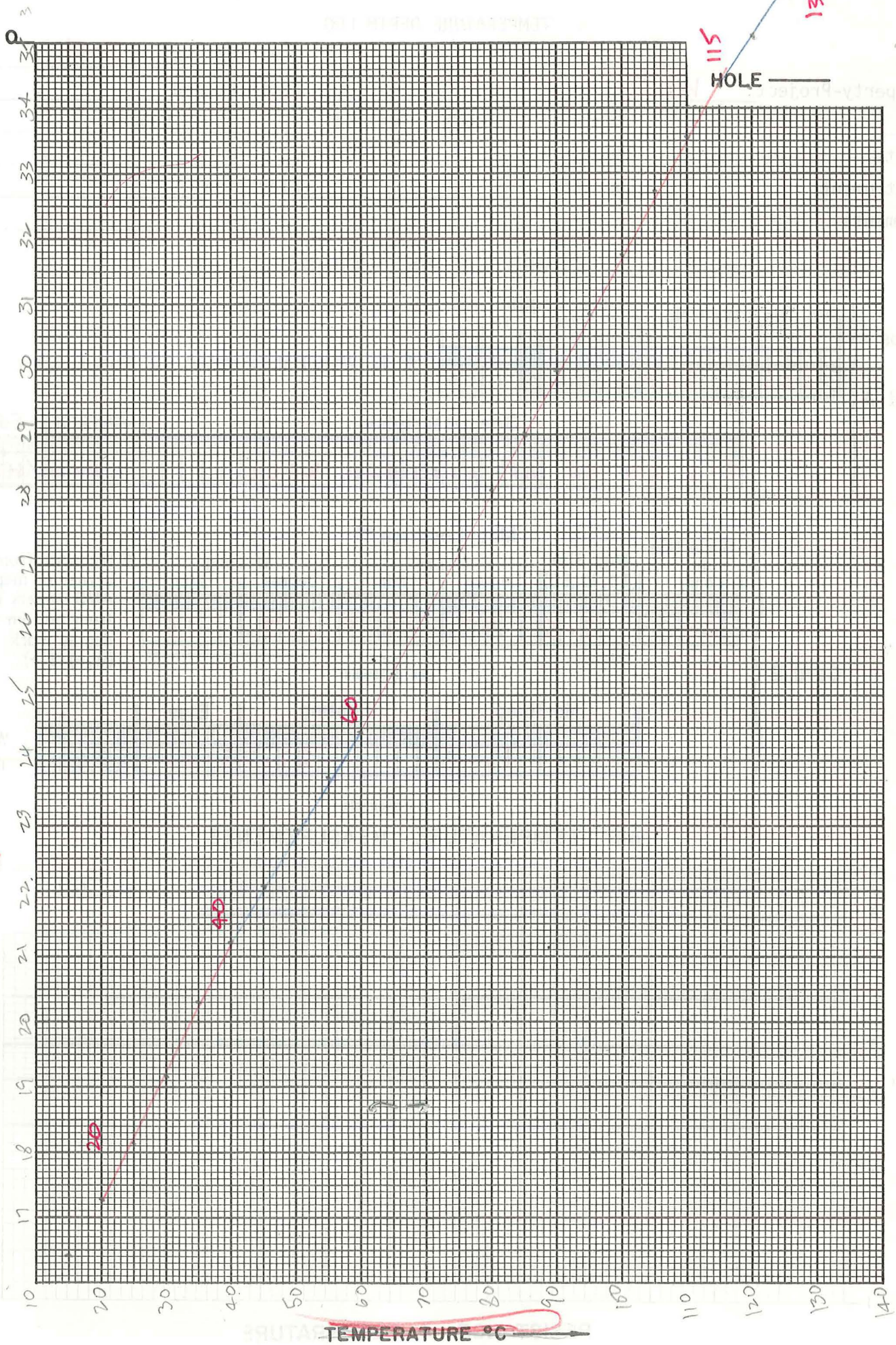
DEPTH METERS



TEMPERATURE °C



DEPTH
METERS



115
HOLE

135

TEMPERATURE °C

TEMPERATURE - DEPTH LOG

Location 12 miles SE Vale Date _____

Map Vale East, Oregon 7 1/2' Quad

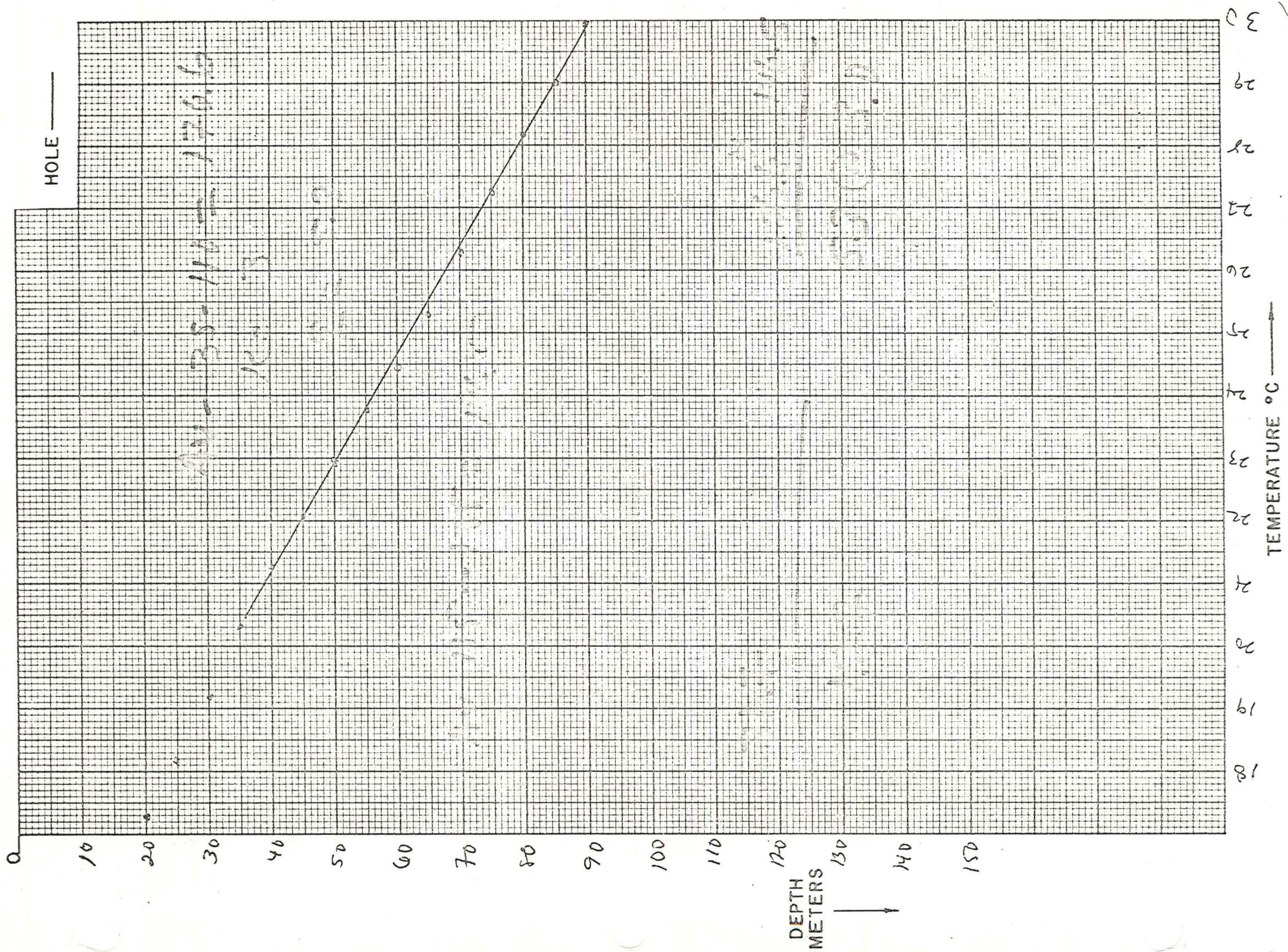
Property Vale T 19S R 45E sec SE 1/4 SE 1/4 14

Drill Hole 19-45 514 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator DOGAMI

Comments Gulf CB-16

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
10		15.640	760	<u>152</u>	
15		16.400	<u>.880</u>	<u>176</u>	
20		17.280	<u>.860</u>	<u>172</u>	
25		18.140	<u>1.050</u>	<u>210</u>	
30		19.190	<u>1.110</u>	<u>222</u>	
35		20.300	<u>.910</u>	<u>182</u>	
40		21.210	<u>.870</u>	<u>174</u>	
45		22.080	<u>.850</u>	<u>170</u>	
50		22.930	<u>.820</u>	<u>164</u>	
55		23.750	<u>.700</u>	<u>140</u>	
60		24.450	<u>.880</u>	<u>176</u>	
65		25.330	<u>.940</u>	<u>188</u>	
70		26.270	<u>.960</u>	<u>192</u>	
75		27.230	<u>.920</u>	<u>184</u>	
80		28.150	<u>.850</u>	<u>170</u>	
85		29.000	<u>.940</u>	<u>188</u>	
90		29.940	<u>.890</u>	<u>178</u>	
95		30.830	<u>.900</u>	<u>180</u>	
100		31.730	<u>1.000</u>	<u>200</u>	
105		32.730	<u>.820</u>	<u>164</u>	
110		33.550	<u>.770</u>	<u>154</u>	

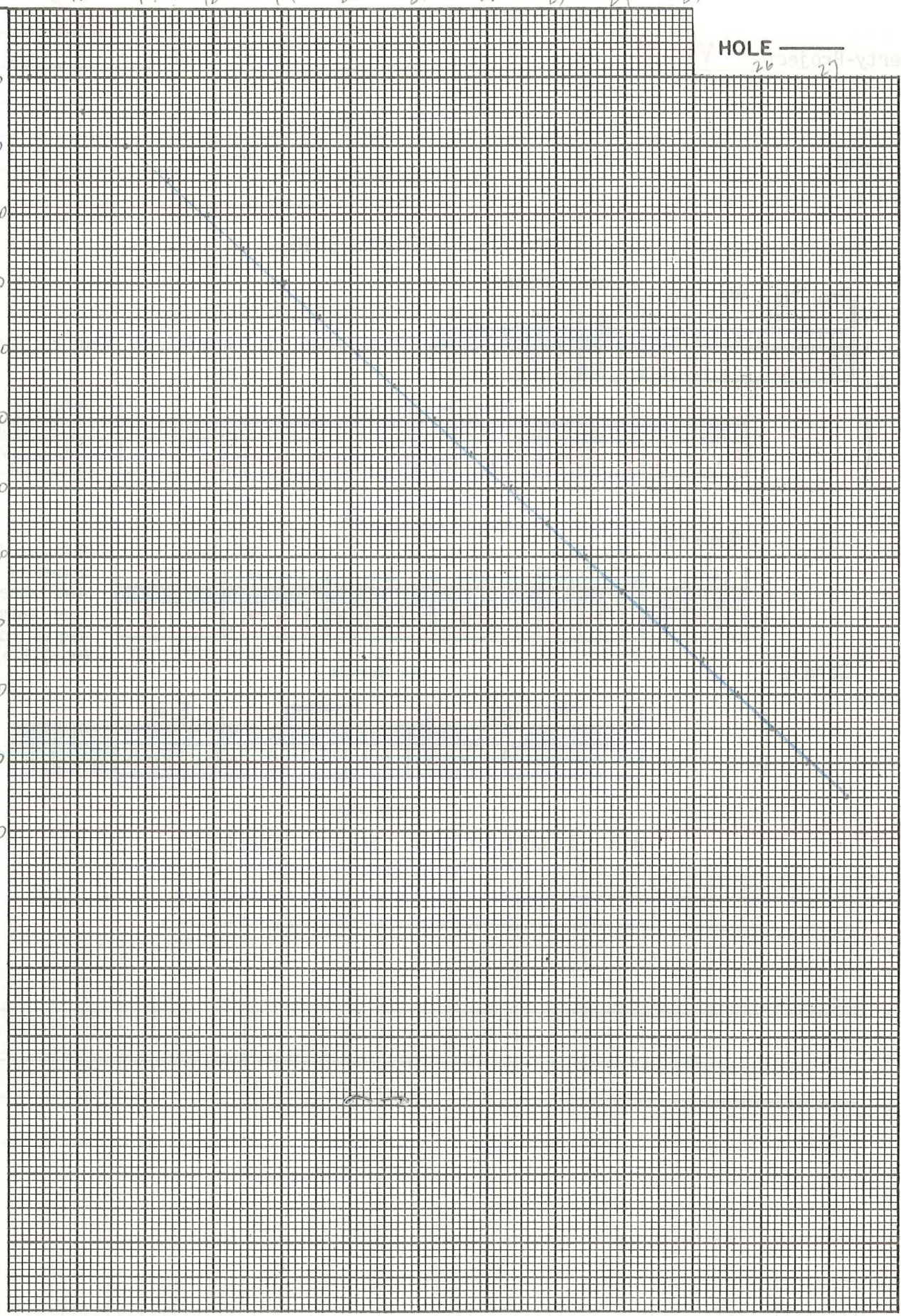


16 17 18 19 20 21 22 23 24 27

HOLE 26 27

0
10
20
30
40
50
60
70
80
90
100
110
120

DEPTH METERS
↓



TEMPERATURE °C →

TEMPERATURE - DEPTH LOG

305

Location 5 miles SSE of Vale Date _____

Map Vale East, Oregon 7 1/2 Quad

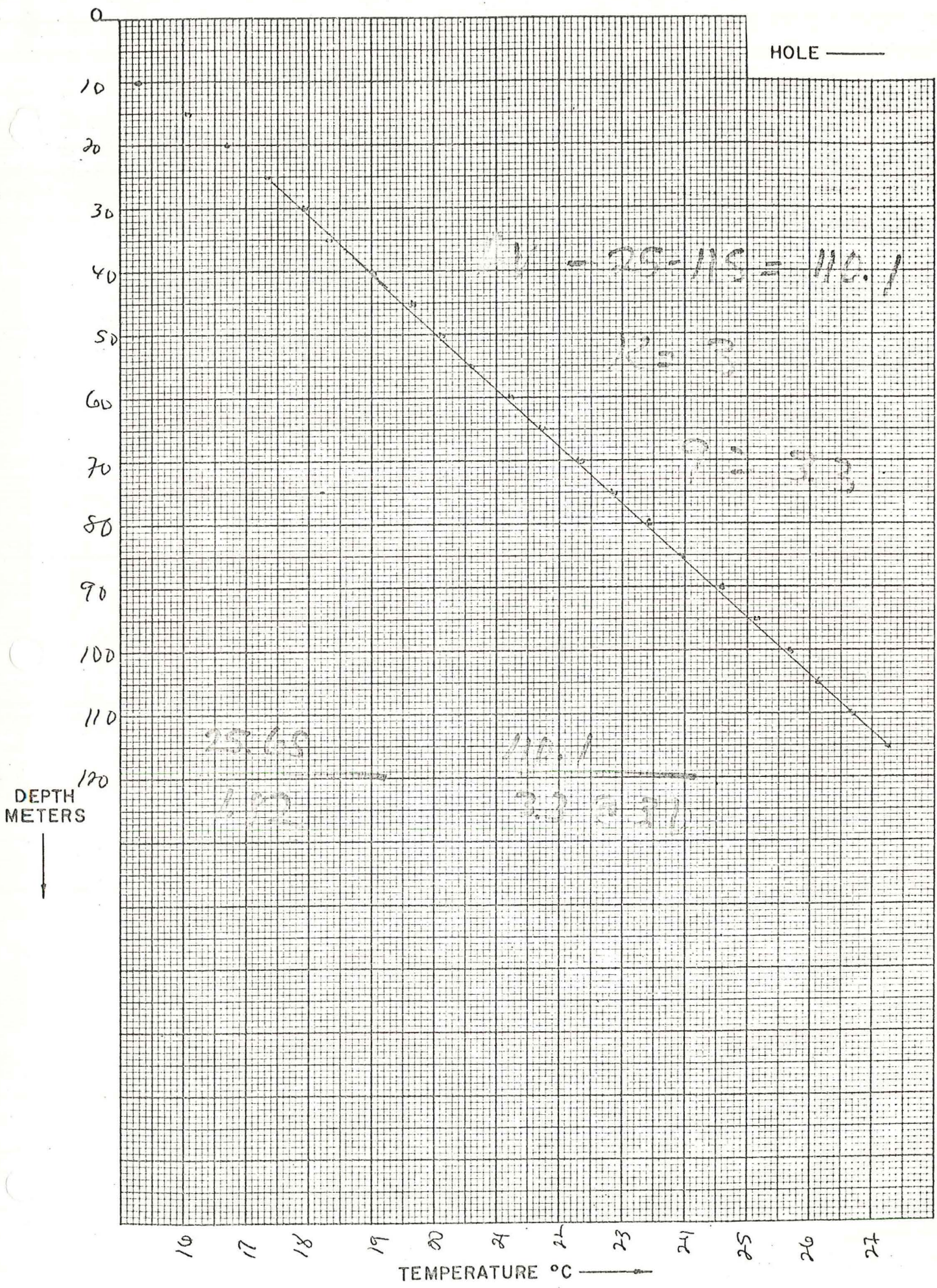
Property Vale T 19S R 4SE sec NW 1/4 SE 1/4 22

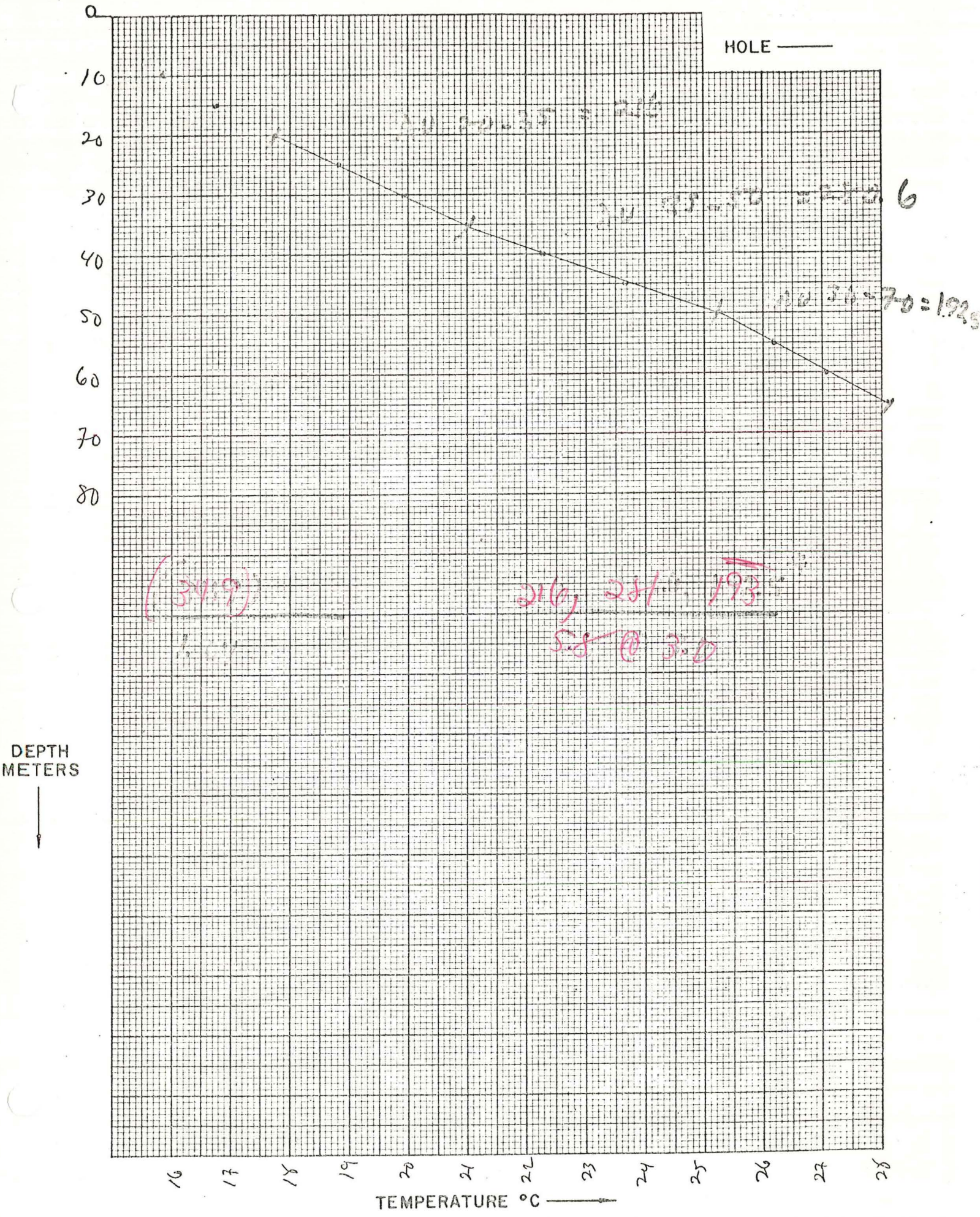
Drill Hole V-105 19-45522 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator DOGAME

Comments Gulf. CB-12B

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient		Comments
				°C/Km	Avg.	
10		15.300				
15		16.090	.790			
20		16.710	.620	124		
25		17.330	.620	124		
30		17.910	.580	116		
35		18.430	.520	104		
40		19.020	.590	118		
45		19.560	.540	108		
50		20.110	.550	110		
55		20.660	.550	110		
60		21.210	.550	110		
65		21.760	.550	110		
70		22.330	.570	114		
75		22.890	.560	112		
80		23.420	.530	106		
85		23.970	.550	110		
90		24.600	.630	126		
95		25.130	.530	106		
100		25.650	.520	104		
105		26.170	.520	104		
110		26.700	.530	106		
115		27.240	.540	108		

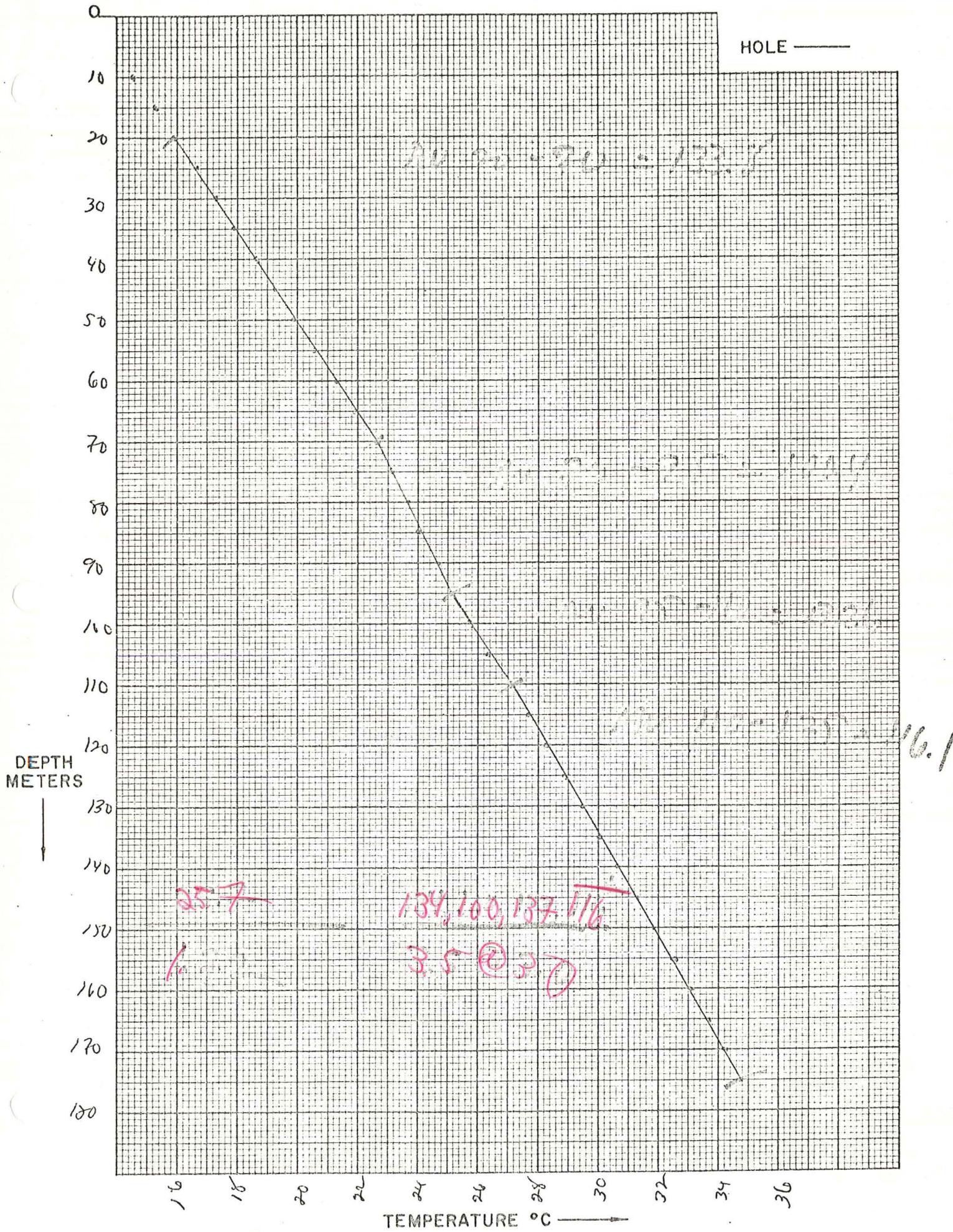




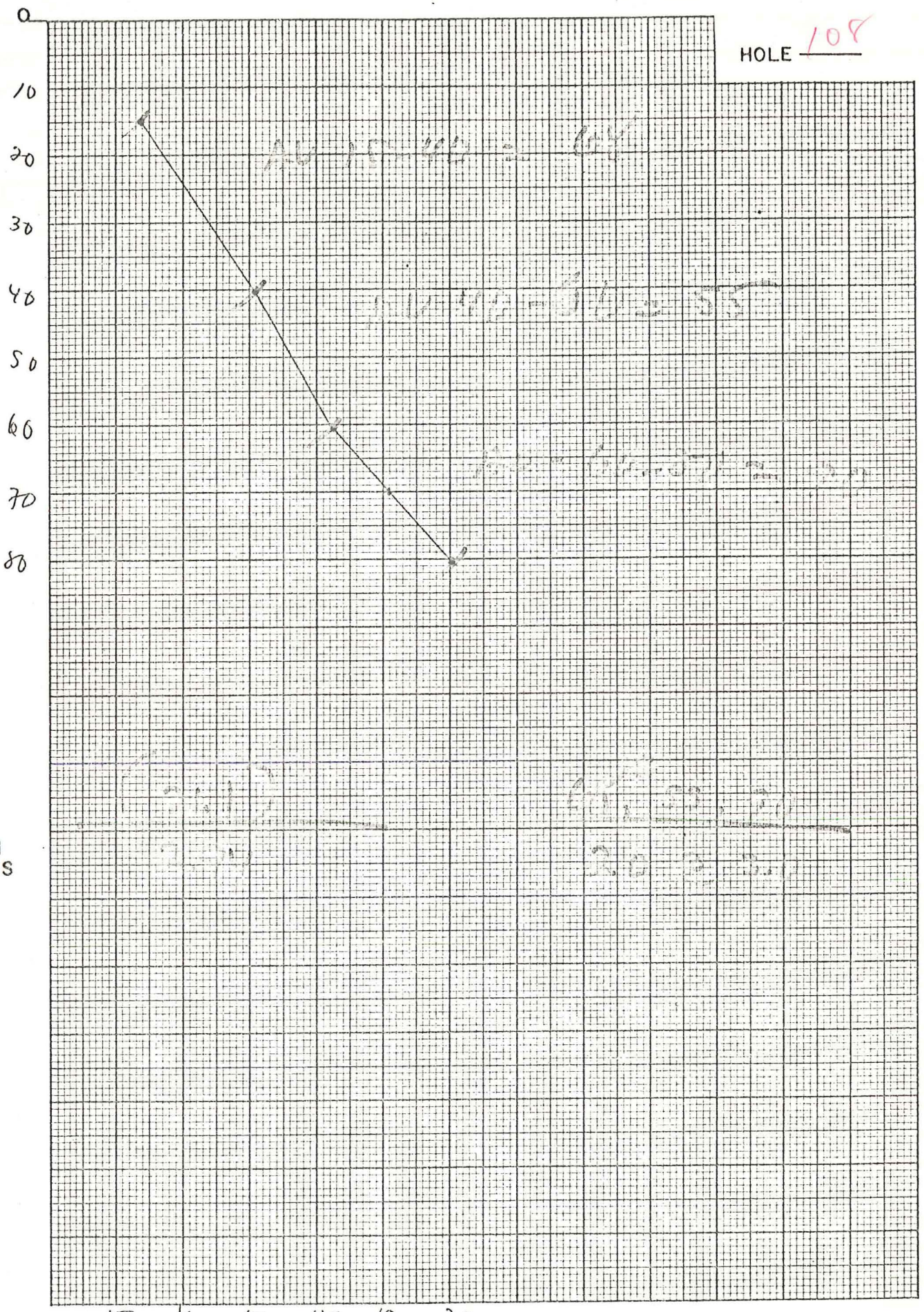
TEMPERATURE - DEPTH LOG

Location Cow Hollow Date _____
 Map Vale East, Oregon 7 1/2' Quad
 Property Vale T 19S R 45E sec SE 1/4 Nully 26
 Drill Hole V-107 Date Drilled _____ Elevation _____ ft.
 Instrument _____ Operator DOGAMI
 Comments Gulf CB-11

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
15		15.250			
20		15.950	.700	140	
25		16.670	.670	134	
30		17.290	.670	134	
35		17.950	.660	132	
40		18.610	.660	132	
45		19.240	.630	126	
50		19.890	.650	136	
55		20.480	.590	118	
60		21.250	.770	154	
65		21.970	.720	144	
70		22.640	.670	134	
75		23.150	.510	102	
80		23.640	.490	98	
85		24.080	.440	88	
90		24.780	.700	140	
95		25.150	.370	74	
100		25.730	.580	116	
105		26.320	.590	118	
110		27.140	.820	164	
115		27.660	.520	104	
			.580	116	



HOLE 108



DEPTH METERS



TEMPERATURE °C —————>

TEMPERATURE - DEPTH LOG

Location Cow Hollow Date _____

Map Double Mtn, Oregon 7 1/2 Quad

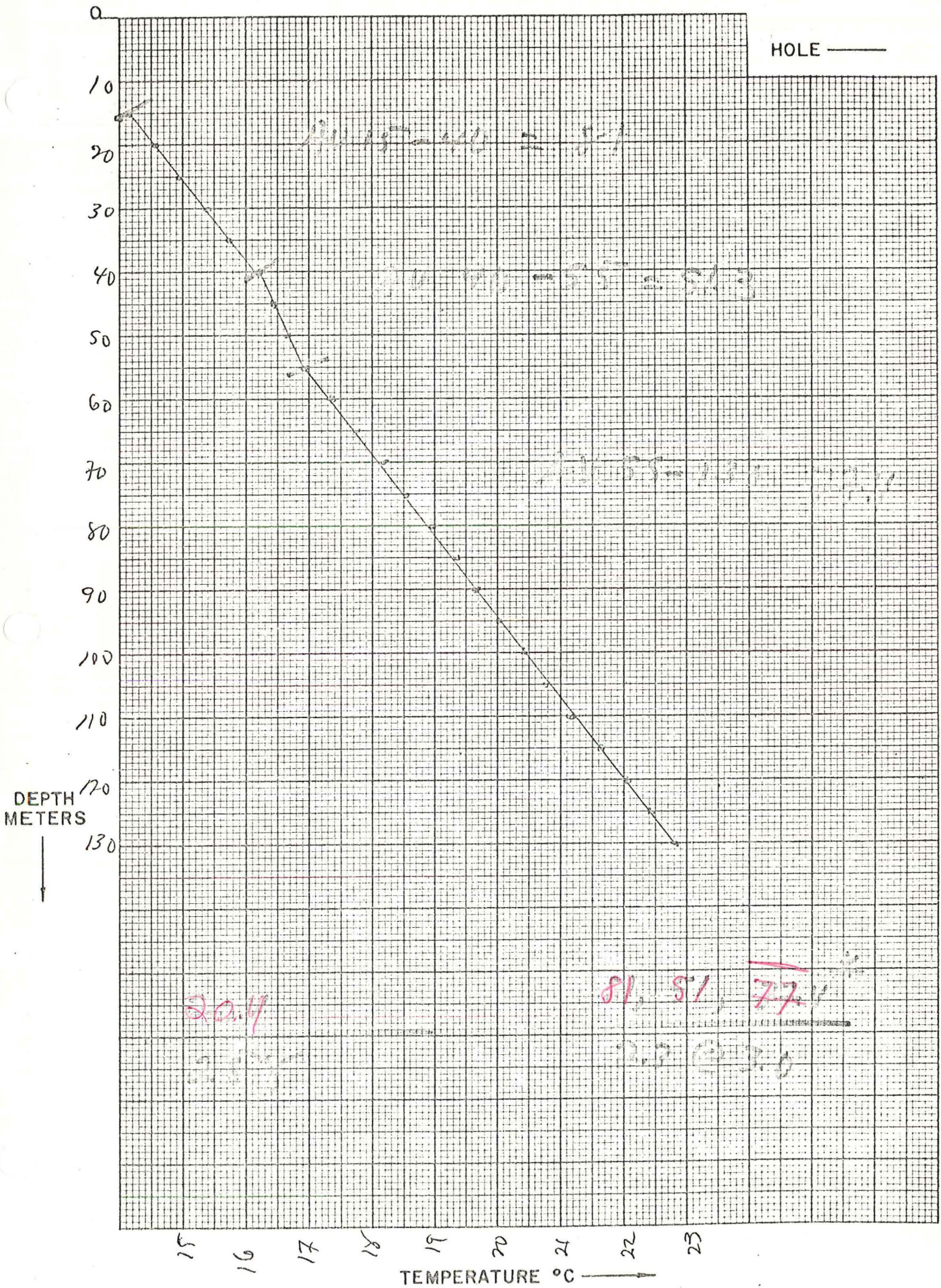
Property Vale T 20S R 45E sec SE 1/4 6

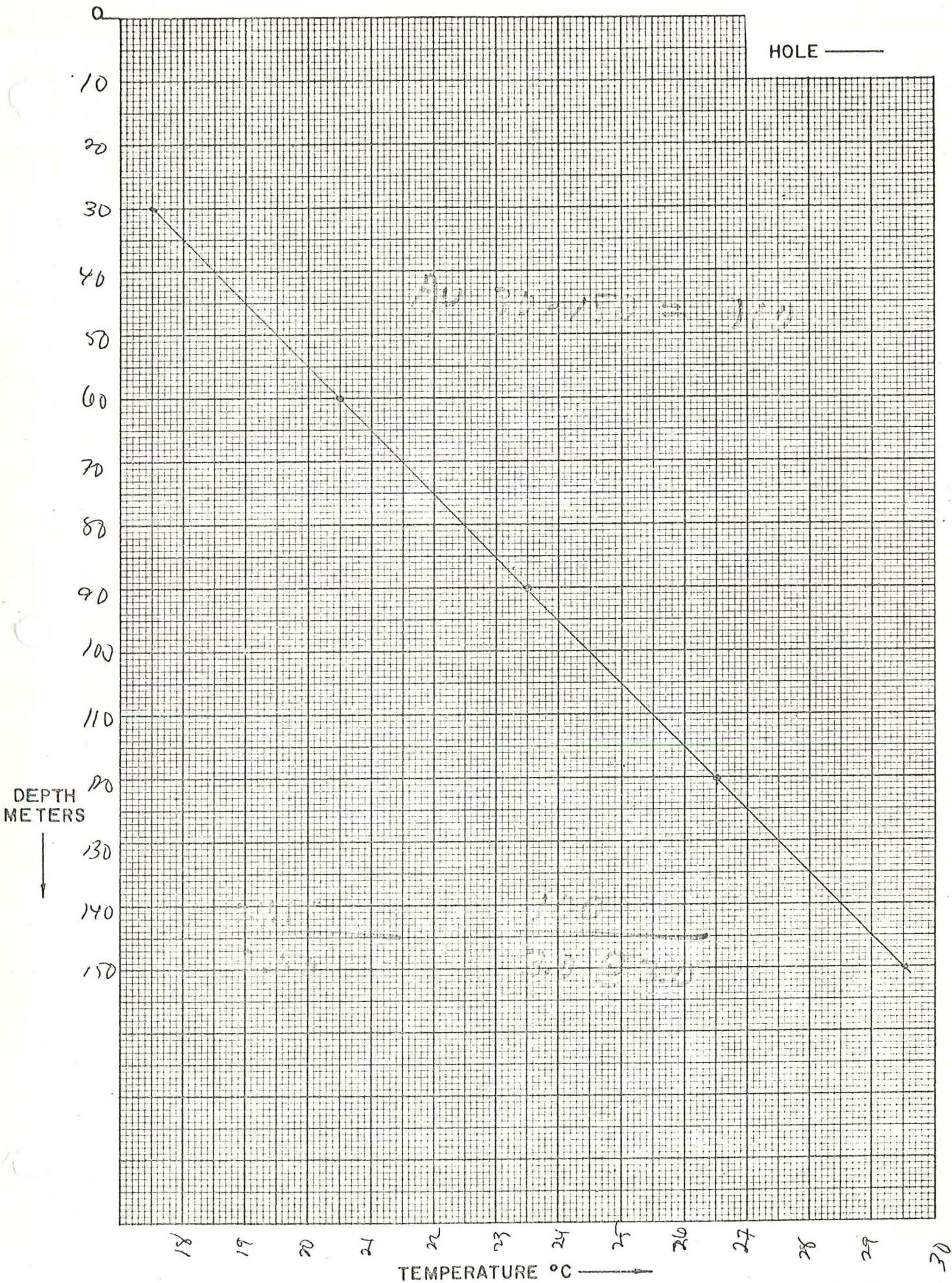
Drill Hole V-109 20-45 S 6 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator DOGAMT

Comments Gulf CB-4

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
15		14.190			
			400	80	
20		14.590			
			400	80	
25		14.990			
			410	82	
30		15.400			
			360	72	
35		15.760			
			460	92	
40		16.220			
			240	48	
45		16.460			
			230	46	
50		16.690			
			300	60	
55		16.990			
			360	72	
60		17.350			
			400	80	
65		17.750			
			400	80	
70		18.150			
			390	78	
75		18.540			
			420	84	
80		18.960			
			390	78	
85		19.350			
			330	66	
90		19.680			
			350	70	
95		20.030			
			380	76	
100		20.410			
			380	76	
105		20.790			
			450	90	
110		21.240			
			380	76	
115		21.620			
			390	78	
120		22.010			





North Vale

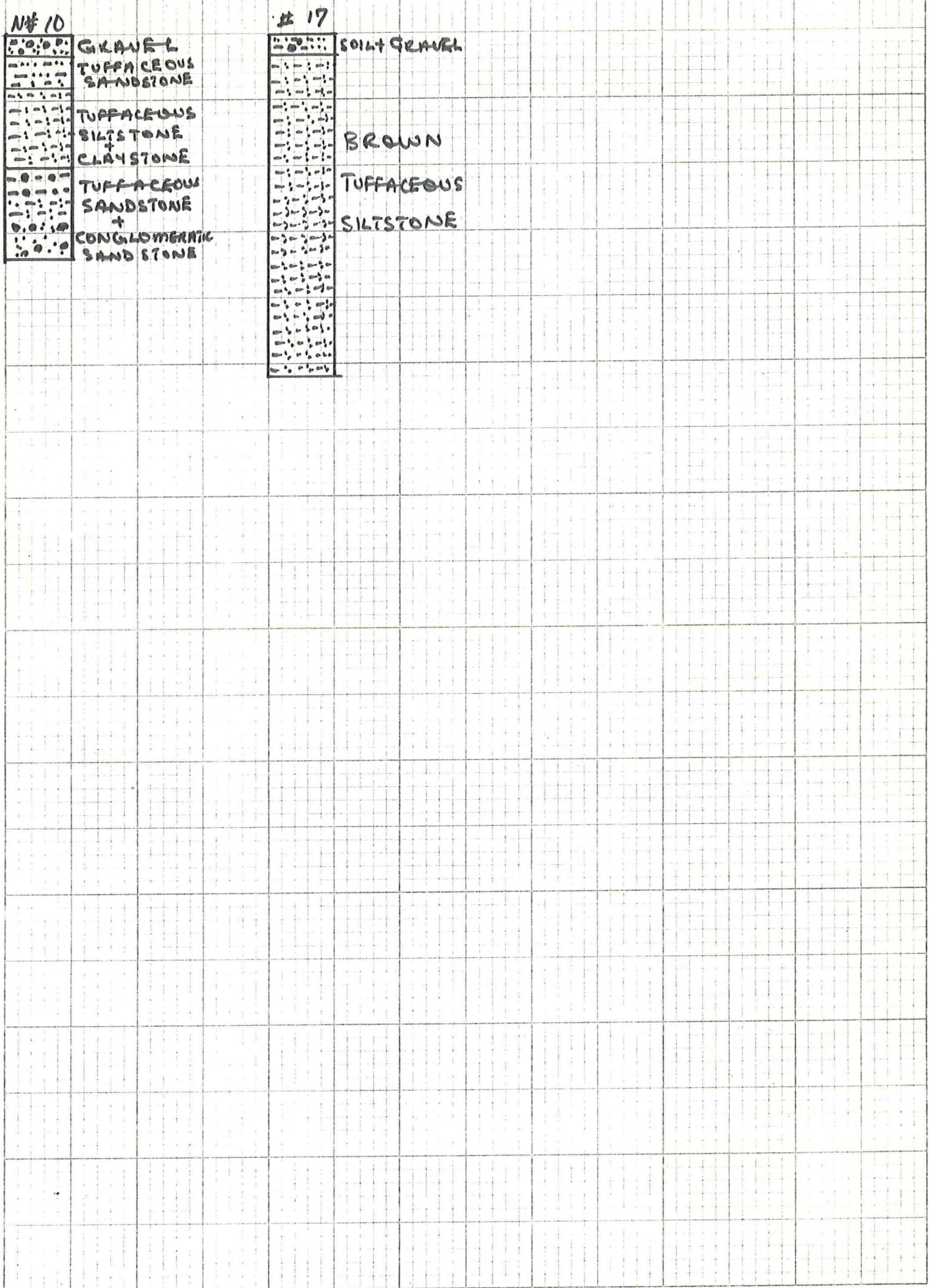
NORTH VARE THERMAL DATA.

HOLE NO	GEOTHERMAL DATA	HOLE NO	GEOTHERMAL DATA
NV-5	19.6 34.4-61. 5.8 1.7@2.8	NV-77-2	(33.2) . 210-220.* .91 6.6 @ 3.0
NV-4	19.9 . 52.5-73.0 2.74 1.6 @ 3.0	NV-77-1	(24.8) . 123* - 182 1.63 4.3 @ 3.5
Δ NV-109	19.8 . 66.6, 122.0 2.81 2.0 @ 3.0	NV-1	(19.8) . 73.5 2.72 2.2 @ 3.0
Δ NV-110	19.9 . 50.5* - 106.0 3.96 1.5 @ 3.0	Δ NV-108	(28.8) . 113.9 1.76 3.4 @ 3.0
Δ NV-111	19.0 . 40.6-72.5* 2.76 2.3 @ 3.2	Δ NV-117	(28.9) . 60, 50, 244, 337* 3.64 1.8 @ 3.0
Δ NV-112	18.6 . 62.9-110.2* 3.12 3.5 @ 3.2	Δ NV-118	(20.3) . 82.4 2.43 2.5 @ 3.0
NV-6	(18.8) . 53.* - 77.0 3.77 1.7 @ 3.2	Δ NV-119	(23.6) . 104.* - 138. 1.72 3.1 @ 3.0
NV-7	(18.4) . 61.7-80.0* 3.24 2.4 @ 3.0	Δ NV-120	(20.1) . 72.0 - 77.6 2.78 2.2 @ 3.0
NV-8	(20.0) . 69.4 2.88 1.9 @ 2.8	NV-13	(19.7) . 47.7 - 66.5* 3.01 2.0 @ 3.0
NV-3	(24.5) . 110. 1.82 3.3 @ 3.0	NV-14	(21.1) . 86.3*, 66.0, 109.0 2.32 2.6 @ 3.0
NV-12	(20.1) . 58.6-77.5* 3.41 2.2 @ 2.8	NV-15	21.0 . 70.5, 72.84.5 2.69 2.2 @ 3.0
		NV-16	(25.6) . 109, 132* 1.83 4.0 @ 3.0

NORTH VALE (NV-) HOLE DEPTHS.

<u>HOLE NO</u>	<u>HOLE DEPTH.</u> in metres.
NV-1	32 metres
NV-2	48
NV-3	33
NV-4	50
NV-5	45
NV-6	50
NV-7	50
NV-8	44
NV-9	44
NV-10	39
NV-11	42
NV-12	50
NV-13	50
NV-14	39
NV-15	50
NV-16	50
NV-17	51
NV-18	49.
NV-77-1	62
NV-77-2	61
ANV - 108	
109	
110	
111	
112	
117.	
118.	
119.	
120.	

LITHOLOGY MAPS FOR NORTH-VARE.



46 0780

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

1 01

TEMPERATURE - DEPTH LOG

Location North Vale Date May 29, 1975

Map Jamieson Quadr. 16

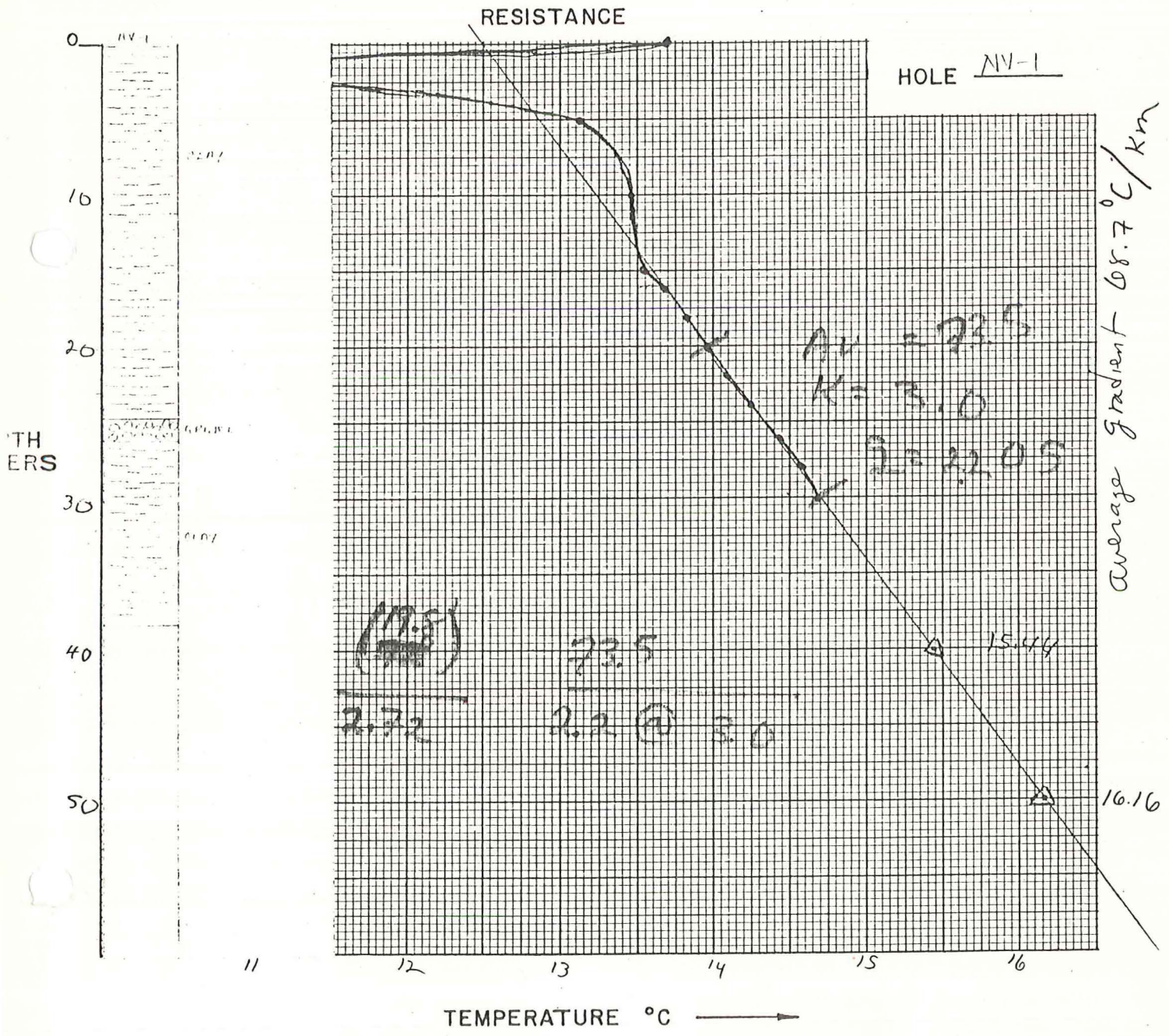
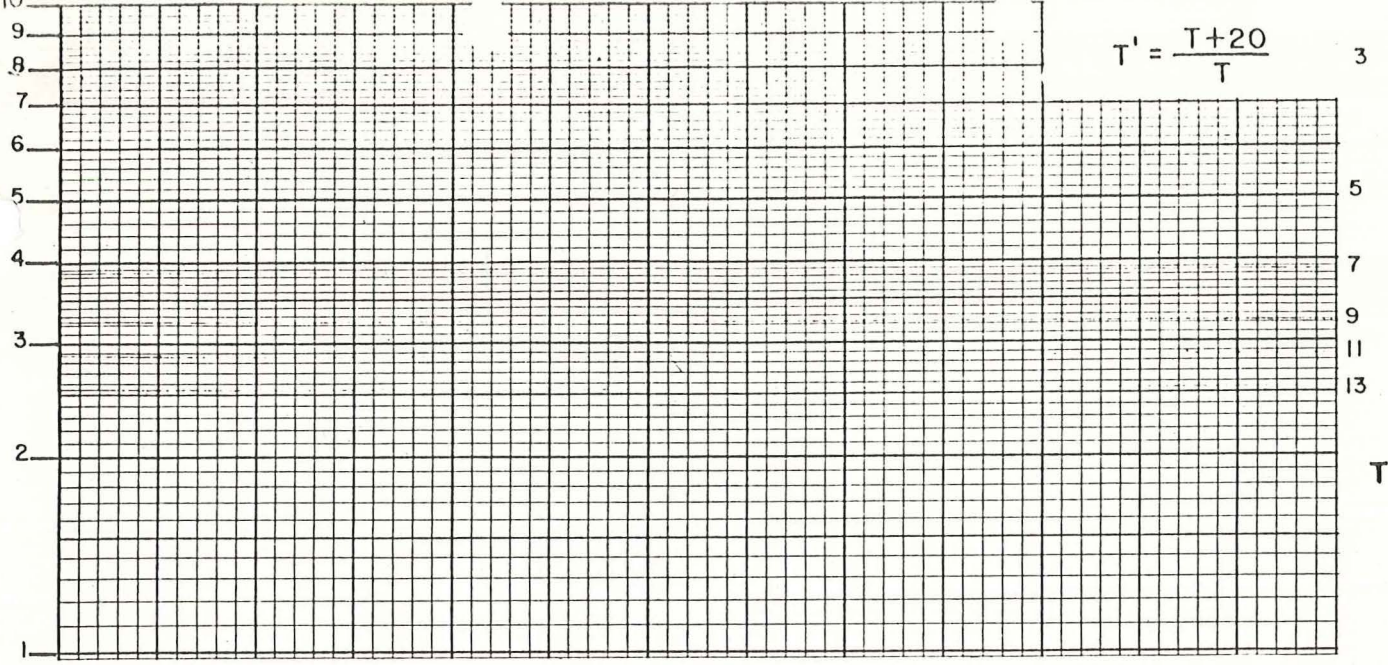
Property T 17 S R 44 E sec SW 1/4 - 11

Drill Hole NV-1 Date Drilled May 1, 1975 Elevation 2345 ft.

Instrument _____ Operator D Pilkington

Comments logged at 1100 hrs filled with H₂O valve drilled.

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
0	5.595	13.740			
1	6.316	10.760	-2.980		
2	6.271	10.945	0.185		
3	6.047	11.830	0.885		
4	5.878	12.525	0.695		
5	5.737	13.125	0.600		
6	5.673	13.400	0.275		
7	5.659	13.460	0.060		
8	5.654	13.485	0.025		
9	5.652	13.490	0.015		
10	5.652	13.490	0.000		
11	5.651	13.495	0.005		
12	5.646	13.520	0.025		
13	5.642	13.535	0.015		
14	5.639	13.550	0.015		
15	5.639	13.550	0.000		
16	5.603	13.705	0.155		
17	5.589	13.770	0.065		
18	5.575	13.830	0.060		
19	5.561	13.895	0.065		
20	5.547	13.955	0.060		
			0.070		



TEMPERATURE - DEPTH LOG

Location North Vale Date May 29, 1975

Map Jamieson Quadrangle

Property T 17S R 44E sec NE 1/4 - 18

Drill Hole Nv-2 Date Drilled May 2, 1975 Elevation 2520 ft.

Instrument _____ Operator D Pilkington

Comments Logged at 1200 hrs. filled with H₂O date drilled

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km. Avg.	Comments
0	5.549	13.945	-2.355		
1	6.107	11.590	-0.870		
2	6.329	10.720	1.085		
3	6.053	11.805	0.805		
4	5.858	12.610	0.615		
5	5.713	13.225	0.560		
6	5.587	13.785	0.170		
7	5.547	13.955	0.065		
8	5.533	14.020	0.000		
9	5.533	14.020	0.005		
10	5.531	14.025	0.025		
11	5.526	14.050	0.035		
12	5.518	14.085	0.060		
13	5.505	14.105	0.055		
14	5.493	14.200	0.060		
15	5.480	14.260	0.055		
16	5.467	14.315	0.045		
17	5.457	14.360	0.045		
18	5.448	14.405	0.040		
19	5.439	14.445	0.060		
20	5.426	14.505	0.010		

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Property _____ T _____ R _____ sec _____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient		Comments
				°C/Km	Avg.	
21	5.424	14.515				
22	5.421	14.525	0.010			
23	5.420	14.530	0.005			
24	5.419	14.535	0.005			
25	5.414	14.560	0.025			
26	5.414	14.560	0.000			
27	5.414	14.560	0.000			
28	5.416	14.550	0.010			
29	5.416	14.550	0.000			
30	5.413	14.560	0.010			
31	5.407	14.590	0.030			
32	5.398	14.635	0.045			
33	5.386	14.690	0.055			
34	5.379	14.720	0.030			
35	5.364	14.790	0.070			
36	5.358	14.820	0.030			
37	5.344	14.885	0.065			
38	5.314	15.025	0.140			
39	5.241	15.370	0.245			
40	5.223	15.455	0.085			
41	5.211	15.515	0.060			
			0.055			

PROJ.	WELL	DA-MO-YR-F	DESCRIPTION	EDITORS	TERRAIN CORR	L	P	ISE	LIST
755	208	7	SP 75 ME-208: 2.5 KM N. OF COVE FORT, UT						
665	229	MY 75	MT KM NE OF HOPE BUTTE, OREGON	DP/ARIN					

duplicate

IN	MAP: 75, 15. or 50.	DEG'S SW CORNER	DEG'S MIN'S	DEG'S	MIN'S	N.	E.	ELEV.	M
CM	15.	38.	30.	112.	45.	8.62	9.42	4825.	F
CM	15.	44.	00.	117.	30.	17.0	16.35	2520.	F

duplicate

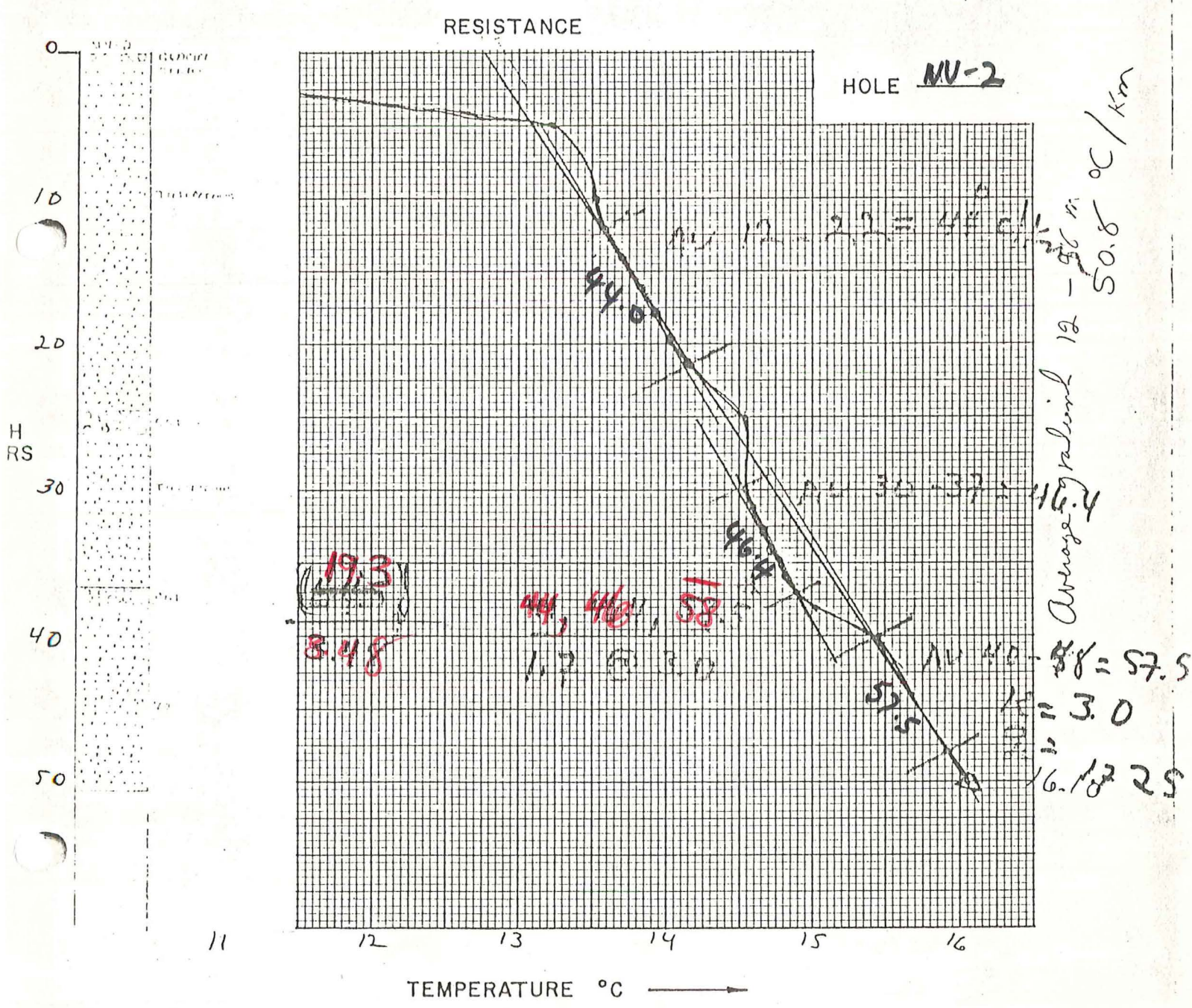
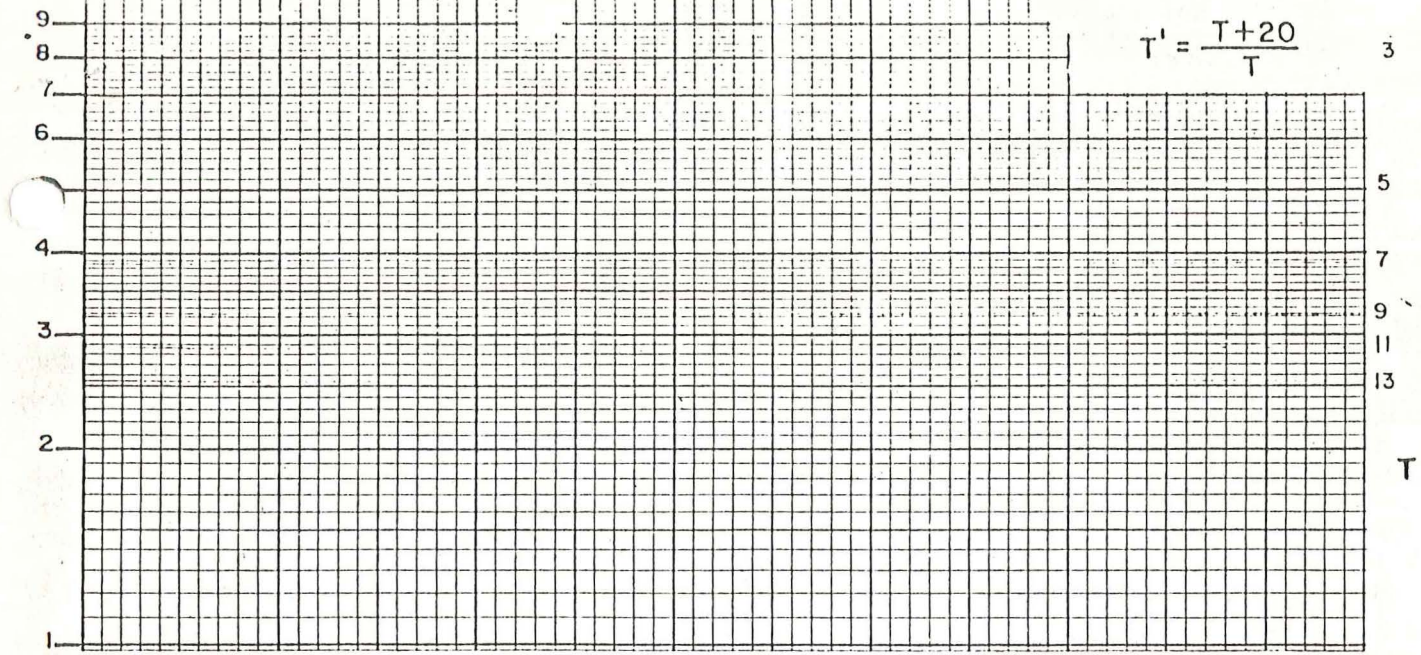
SEGMENT DEPTH										SEGMENT										START =
START	END	K	±	START	END	K	±	START	END	K	±	START	END	K	±	START =				
16.																999				
10.	20.			30.	38.			30.	38.			30.	38.			999				
40.	48.			-3.	-5.			1.999								999				

duplicate

DEPTH	°C	DEPTH	°C	DEPTH	°C
1.	16.200	1.5		16.810	

99999
LAST DEPTH

JA, FB, MR, AP, MY, JE, JL, AG, SP, OC, NV, DC



40°C

35

30

25

20

15

10

5

NV-2

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

Depth
in
Metres.

46 0780

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



(19.3)

$\frac{19.3}{3.48}$ $\frac{44; 46.4, 57.5}{1.7 @ 3.0}$

TEMPERATURE - DEPTH LOG

Location North Vale Date May 27, 1975

Map Jamieson Quadrangle

Property T 16S R 44E sec SW 29

Drill Hole NV-3 Date Drilled May 2, 1975 Elevation 2440 ft.

Instrument _____ Operator D. Pilkington

Comments Logged at 1350 hrs. Filled with H₂O date drilled

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient		Comments
				°C/Km	Avg.	
0	5.287	15.150	-3.530			
1	6.100	11.620	- .060			
2	6.115	11.560	1.190			
3	5.825	12.750	0.740			
4	5.652	13.490	0.470			
5	5.540	13.960	0.275			
6	5.478	14.265	0.140			
7	5.447	14.405	0.055			
8	5.436	14.460	0.070			
9	5.420	14.530	0.070			
10	5.405	14.600	0.065			
11	5.391	14.665	0.090			
12	5.372	14.755	0.110			
13	5.348	14.865	0.080			
14	5.331	14.945	0.015			
15	5.328	14.960	0.080			
16	5.311	15.040	0.090			
17	5.291	15.130	0.095			
18	5.271	15.225	0.095			
19	5.251	15.320	0.105			
20	5.229	15.425	0.110			

PROJ.	WELL	DA-MO-YR-F	DESCRIPTION	EDITORS	TERRAIN	COORD	L	P	ISE	WEST
755	208	7 SP 76	MB-208: 2.5 KM N. OF COVE FOST, UT	VED/DP						
7665	329	MY 75	3.3 KM NORTH OF LANCASTER, OR	DP/AMIN						

COPIED FROM Log

duplicate

IN	CM	MAP: 7.5, 15, or 50	DEG'S SW CORNER	DEG'S LAT	MIN'S DLAT	DEG'S LONG.	MIN'S DLONG	N.	E.	ELEV.	(M/F)
IN	15			28	20	112	45	8.62	9.42	4825	F
CM	15			49	00	117	30	25.15	17.45	2440	F

duplicate

SEGMENT DEPTH										SEGMENT									
START	END	K	±	START	END	K	±	START	END	K	±	START	END	K	±	START	END	K	±
16	20	20	.5	20	25	20	.5	20	25	20	.5	20	25	20	.5	20	25	20	.5
16	33	-3	-.5	33	36	-3	-.5	33	36	-3	-.5	33	36	-3	-.5	33	36	-3	-.5

STA T =
-999
or last
-999
Last =
Price: \$
K
=

duplicate

DEPTH	°C	DEPTH	°C	DEPTH	°C
1	16.325	1.5	16.510	3	16.82

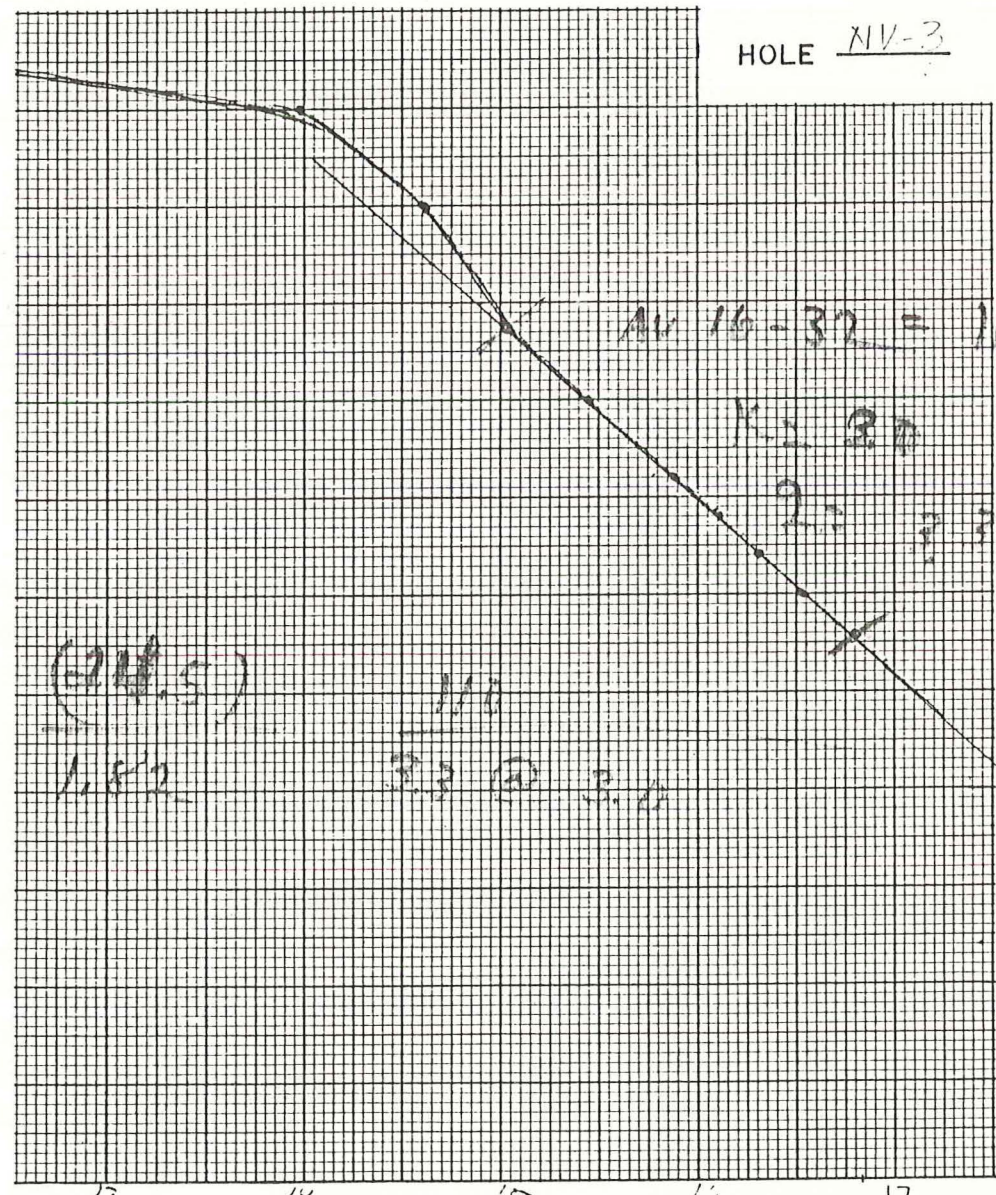
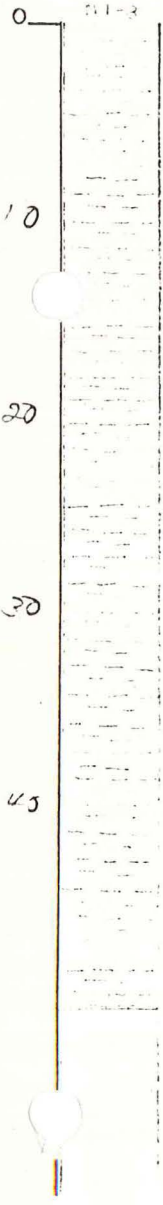
99999
LAST
DEPT

$$\Gamma' = \frac{T+20}{T}$$



RESISTANCE

HOLE NV-3



AV 16-32 = 110° C/Km

K = 30

L = 300

(211.5)

1.82

1/0

33 @ 3.1

17.65

50m = Δ
18.85°

12

13

14

15

16

17

TEMPERATURE °C →

01

TEMPERATURE - DEPTH LOG

Location North Vale, Oregon Date May 29, 1975

Map Jamieson Quadrangle

Property T 16S R 43E sec NE 1/4 10

Drill Hole NV-4 Date Drilled May 8, 1975 Elevation 2566 ft.

Instrument _____ Operator Pilkington

Comments logged at 1430 hrs Filled with H₂O date drilled

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient		Comments
				°C/Km	Avg.	
0	4.805	17.560				
1	5.650	13.500	-4.060			
2	6.370	10.565	-2.935			
3	6.436	10.315	0.250			
4	6.205	11.200	0.885			
5	5.990	12.065	0.865			
6	5.850	12.645	0.580			
7	5.712	13.230	0.595			
8	5.664	13.440	0.210			
9	5.646	13.520	0.080			
10	5.636	13.560	0.040			
11	5.625	13.610	0.050			
12	5.611	13.670	0.060			
13	5.595	13.740	0.070			
14	5.577	13.820	0.080			
15	5.559	13.900	0.080			
16	5.542	13.980	0.070			
17	5.526	14.050	0.090			
18	5.506	14.140	0.065			
19	5.492	14.205	0.245			
20	5.440	14.440	0.255			

2 of 3

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		Comments
				°C/Km	Avg.	
21	5,428	14.495	0.020			
22	5,423	14.515	0.050			
23	5,413	14.565	0.035			
24	5,405	14.600	0.055			
25	5,393	14.655	0.045			
26	5,383	14.700	0.060			
27	5,370	14.760	0.060			
28	5,358	14.820	0.060			
29	5,345	14.880	0.055			
30	5,333	14.935	0.065			
31	5,321	14.990	0.060			
32	5,308	15.050	0.060			
33	5,296	15.110	0.060			
34	5,283	15.170	0.060			
35	5,270	15.230	0.055			
36	5,259	15.285	0.060			
37	5,246	15.345	0.055			
38	5,235	15.400	0.045			
39	5,225	15.445	0.050			
40	5,215	15.495	0.035			
41	5,207	15.530	0.015			

PROJ.	WELL	DA-MO-YR-F	DESCRIPTION	EDITORS	TERRAIN CORR.
755	208	7 SP	76 MB-208: 2.5 KM N. OF COVE FOST, UT	VED	
665	429	MY 75-M	2.6 KM NE OF JAMIESON, OR	DAAN	

COASTAL
FOOT
COR

duplicate

IN	MAP: 7.5, 15, or 50.	DEG'S SW CORNER	DEG'S LAT	MIN'S DLAT	DEG'S LONG.	MIN'S DLONG	N.	E.	ELEV.	M	F
IN	15.	38.	20.	112.	45.	8.62		9.42	4825.		F
CM	15.	44.	00.	119.	30.	85.35		8.8	2566.		F

duplicate

SEGMENT DEPTH												SEGMENT																																			
START						END						START						END																													
						K						±												K						±																	
16.						20.						7.						20.						30.						15.																	
20.						40.						-3.0						.5						40.2						50.						2.2						-.5					
.999																																															

STA T =
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or last
999
Last =
Princ =

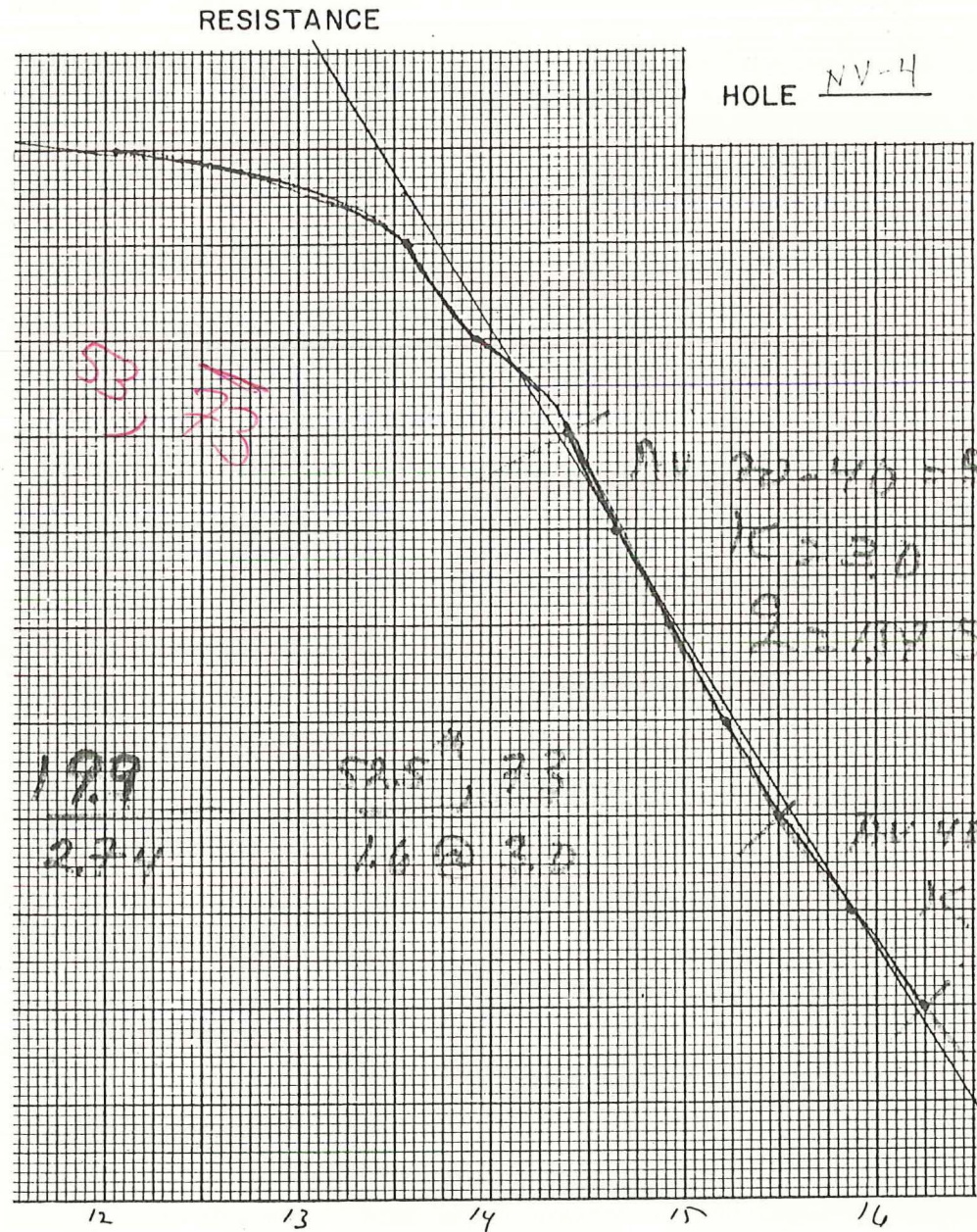
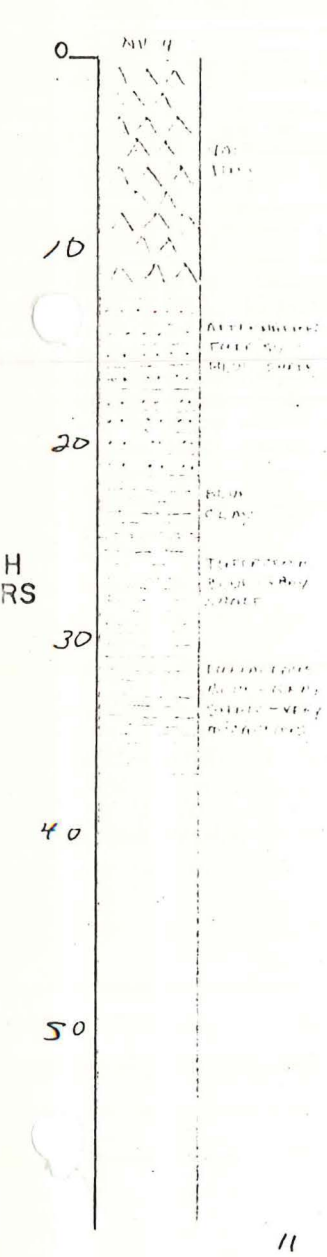
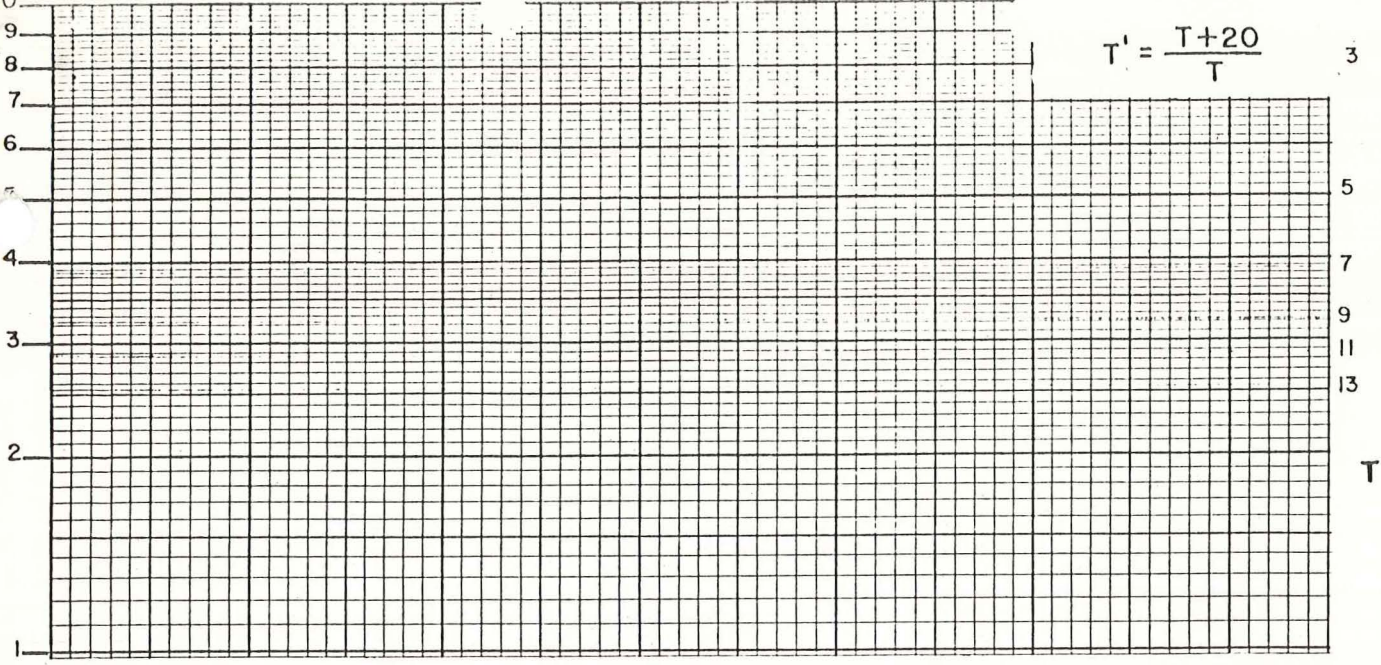
duplicate

DEPTH												°C												DEPTH												°C												DEPTH												°C											
1.												16.325												1.5												16.510												2.												16.82											

99999.
AT
DEPTH

JA, FB, MR, AP, MY, JE, JL, AG, SP, OC, NV, DC

COASTAL FOOT COR



19.9
2.74

52.5
1.6 @ 2.0

NV 20-40 - SD = 52.5
K = 2.30
2.0 / 1.75

NV 40 - SD = 73
K = 2.15

TEMPERATURE - DEPTH LOG

Location North Vale, Oregon Date May 29, 1975

Map Jamieson Quadrangle

Property T 15 S R 43 E sec SW 1/4 27

Drill Hole NV-5 Date Drilled May 8, 1975 Elevation 2960 ft.

Instrument _____ Operator Pilkington

Comments logged at 1600 hrs Filled with H₂O and drilled

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient		Comments
				°C/Km	Avg.	
0	3.480	25.990				
1	5.605	13.700				
2	6.275	10.930				
3	6.455	10.245				
4	6.205	11.200	0.955			
5	6.045	11.840	0.640			
6	5.824	12.755	0.915			
7	5.645	13.520	0.775			
8	5.548	13.950	0.430			
9	5.520	14.075	0.125			
10	5.513	14.110	0.045			
11	5.513	14.110	0.000			
12	5.522	14.070	-0.640			
13	5.522	14.070	0.000			
14	5.519	14.080	0.010			
15	5.512	14.115	0.035			
16	5.503	14.155	0.040			
17	5.496	14.185	0.030			
18	5.487	14.225	0.040			
19	5.479	14.260	0.035			
20	5.470	14.305	0.045			
			0.040			

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
21	5.461	14.345			
22	5.452	14.345	0.040		
23	5.444	14.420	0.035		
24	5.471	14.480	0.060		
25	5.423	14.515	0.035		
26	5.413	14.565	0.050		
27	5.403	14.610	0.045		
28	5.392	14.660	0.050		
29	5.379	14.720	0.060		
30	5.368	14.770	0.050		
31	5.356	14.825	0.055		
32	5.346	14.875	0.050		
33	5.327	14.960	0.085		
34	5.306	15.060	0.100		
35	5.292	15.125	0.055		
36	5.283	15.170	0.045		
37	5.280	15.185	0.015		
38	5.279	15.190	0.005		
39	5.280	15.185	0.005		
40	5.271	15.225	0.040		
41	5.262	15.270	0.045		
			0.110		

PROJ.	WELL	DA-MO-YR-F	DESCRIPTION	EDITORS	TERRAIN COOR	L	H	ISE	WEST
755	208	7 SP	76 MB-208: 2.5 KM N. OF CUBE FOOT, UT	VED					
665	529	MY 75-M	6. KM NORTH OF JAMIESON, OR	DP/AMIN					

COPIED FROM Log

duplicate

IN CM	MAP: 7.5, 15, or 30	DEG'S LAT	MIN'S DLAT	DEG'S LONG.	MIN'S DLONG	N.	E.	ELEV.	M/F
IN	15.	38.	20.	112.	45.	8.62	9.42	4825.	F
CM	15.	44.	00	117.	30	42.1	7.5	2960	F

duplicate

SEGMENT DEPTH										SEGMENT									
START	END	K	±	START	END	K	±	START	END	K	±	START	END	K	±				
16.	21.	7.	1.5	20.	25.	35.	-2.8	35.	45.	5.0	-1.5	50.	55.	65.	2.0				
25.	35.	-2.8	5	35.	45.	5.0	-1.5	50.	55.	65.	2.0	65.	70.	80.	1.0				
999																			

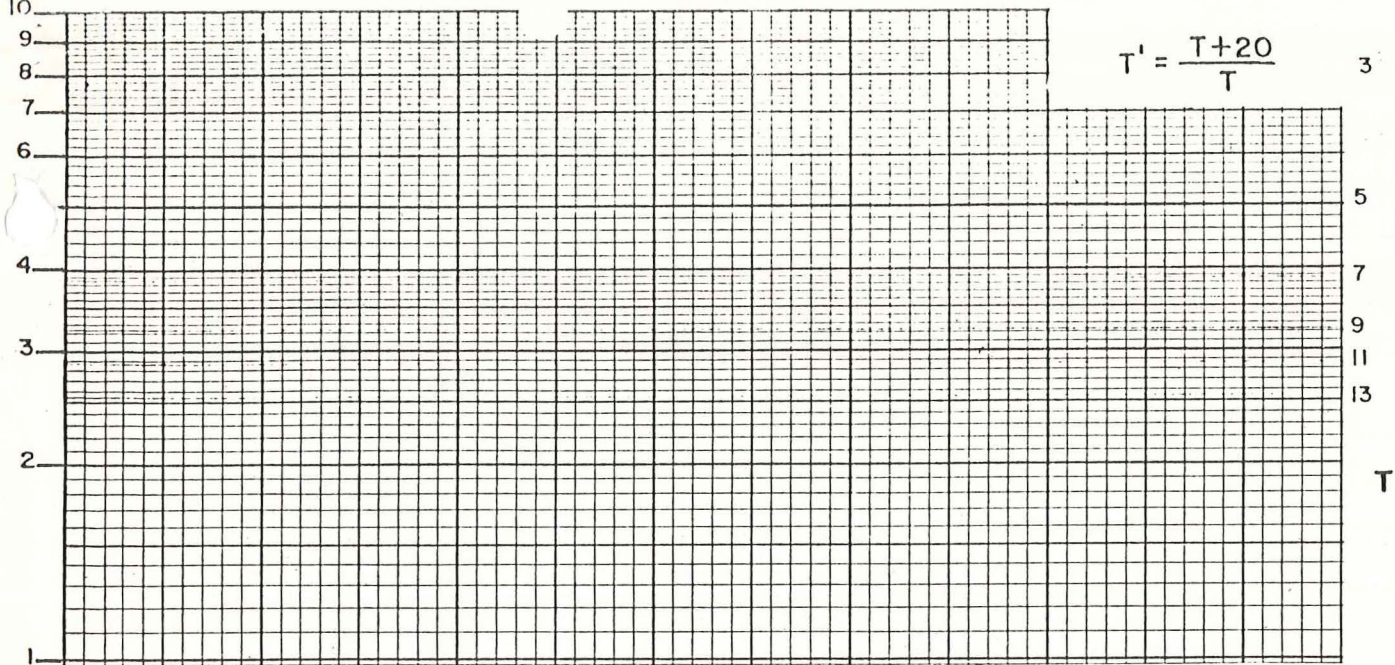
STA T =
-999
or last
-999
Last =
Princ: =

duplicate

DEPTH	OC	DEPTH	OC	DEPTH	OC
1.	16.325	1.5	10.810	2.	16.82

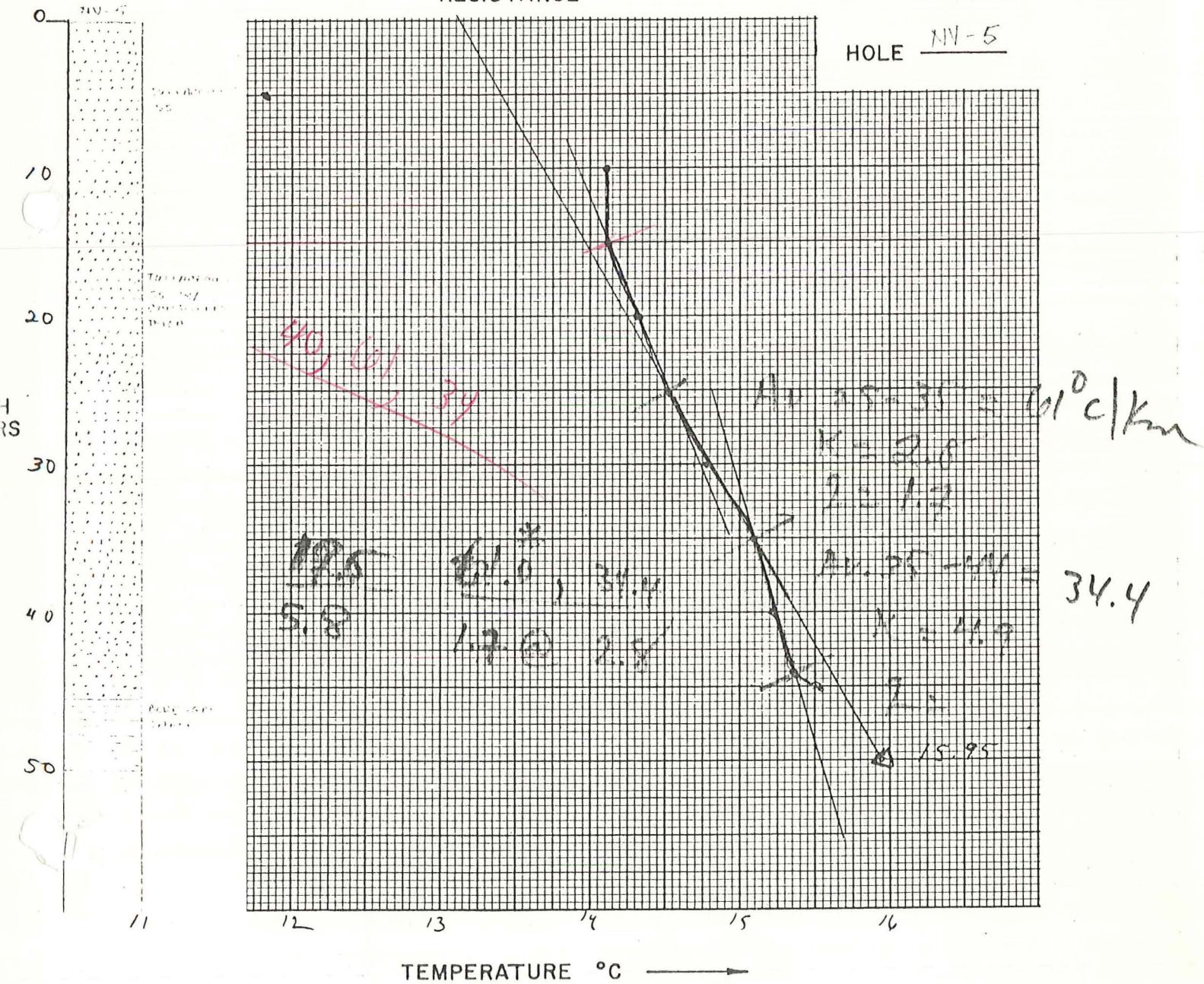
99999.
LAST
DEPTH

JA, FB, MR, AP, MY, JE, JL, AG, SP, OC, NV, DC



RESISTANCE

HOLE NV-5



1 of 5

TEMPERATURE - DEPTH LOG

Location North Vale, Oregon Date May 30, 1975

Map Jamison Quadrangle

Property T 16 S R 44 E sec SE 1/4 4.

Drill Hole NV-6 Date Drilled May 9, 1975 Elevation 2640 ft.

Instrument _____ Operator Pilkington

Comments logged at 1230 hrs Filled in Ph. H₂O and sealed

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
0	3.073	21.375	-4.165		
1	5.275	15.210	-3.570		
2	6.095	11.640	0.260		
3	6.160	11.280	0.895		
4	5.938	12.275	0.715		
5	5.768	12.990	0.680		
6	5.611	13.670	0.405		
7	5.520	14.075	0.180		
8	5.481	14.255	0.080		
9	5.463	14.335	0.026		
10	5.459	14.355	0.010		
11	5.456	14.365	0.000		
12	5.456	14.365	-0.010		
13	5.459	14.355	0.005		
14	5.458	14.360	0.020		
15	5.453	14.320	0.035		
16	5.445	14.415	0.040		
17	5.437	14.455	0.040		
18	5.428	14.495	0.045		
19	5.418	14.540	0.130		
20	5.392	14.670	0.010		

01

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

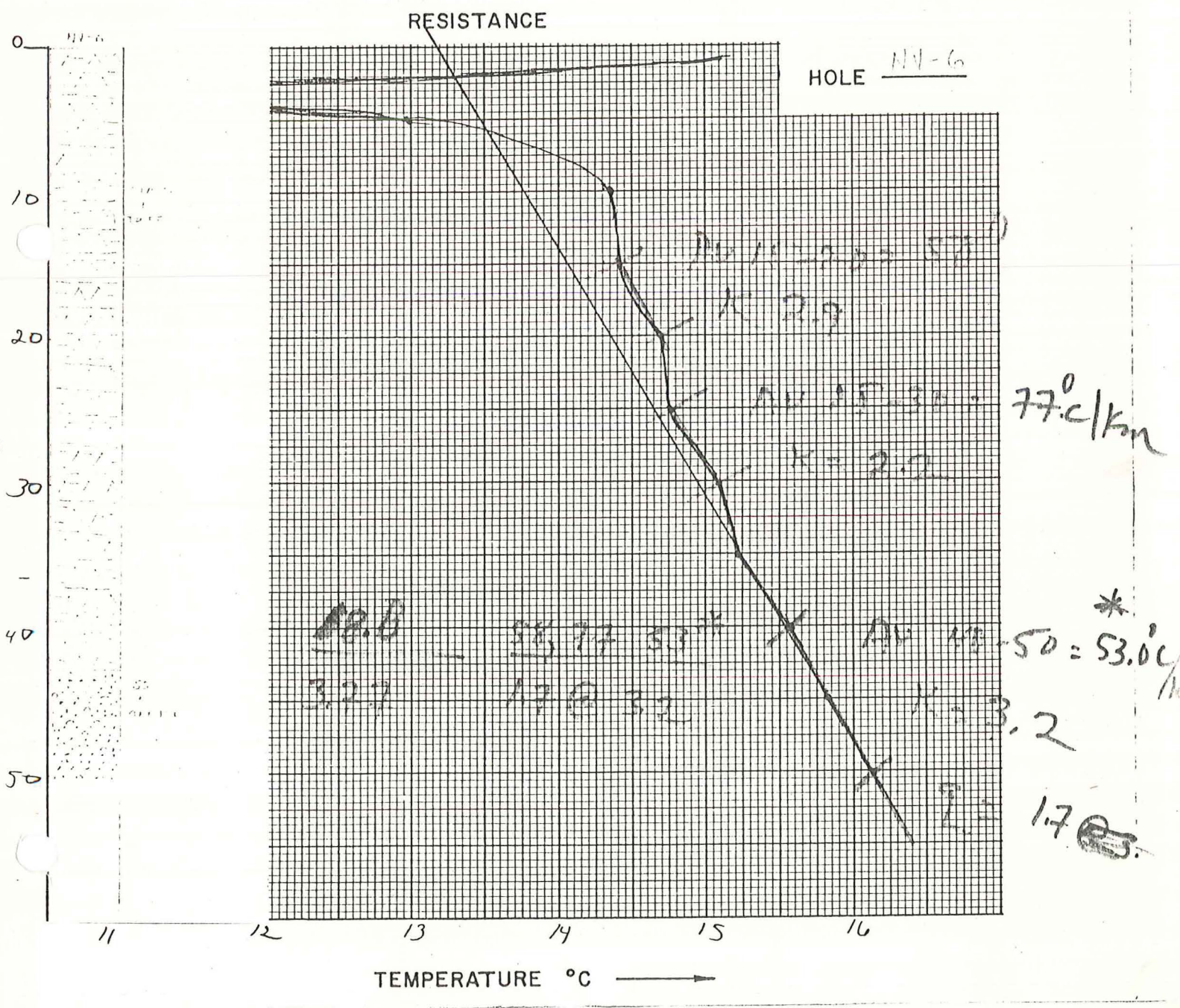
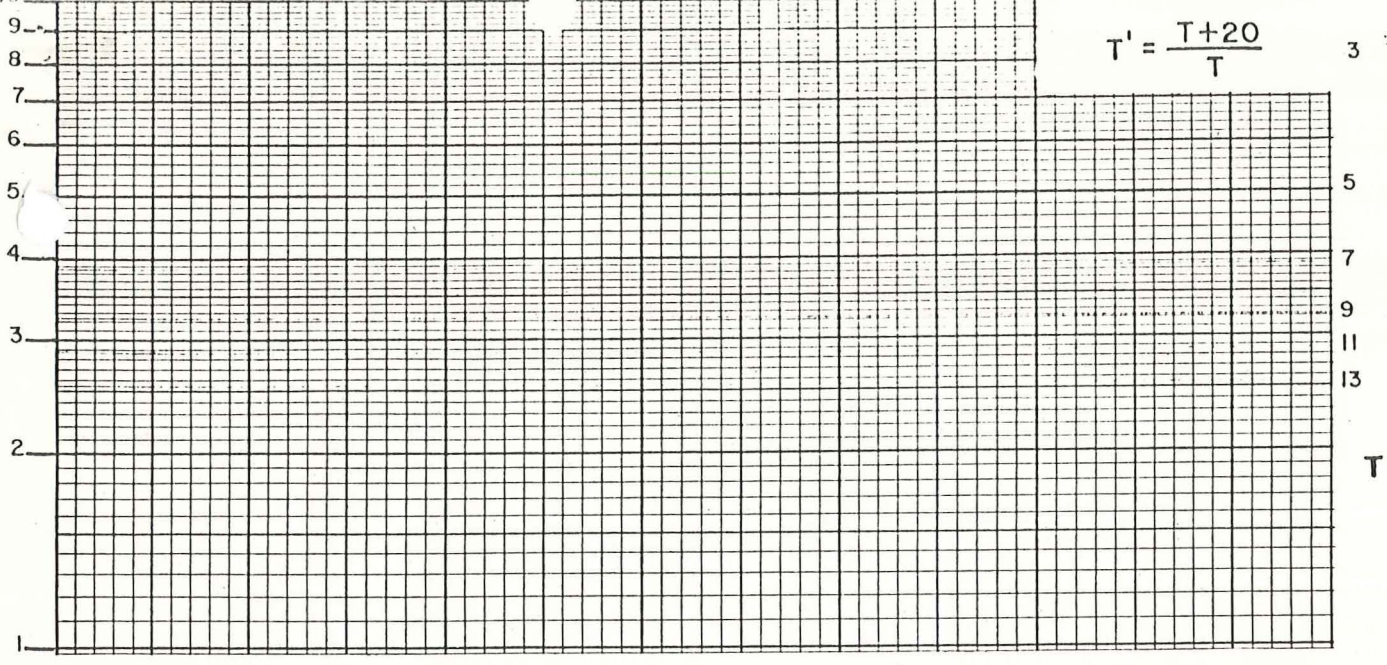
Property _____ T _____ R _____ sec _____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient		Comments
				°C/Km	Avg.	
21	5.388	14.680				
			0.015			
22	5.384	14.695				
			0.025			
23	5.379	14.720				
			0.020			
24	5.375	14.740				
			0.015			
25	5.371	14.755				
			0.095			
26	5.351	14.850				
			0.095			
27	5.331	14.945				
			0.085			
28	5.315	15.020				
			0.060			
29	5.302	15.080				
			0.060			
30	5.289	15.140				
			0.020			
31	5.285	15.160				
			0.010			
32	5.283	15.170				
			0.010			
33	5.281	15.180				
			0.025			
34	5.276	15.205				
			0.030			
35	5.269	15.235				
			0.045			
36	5.260	15.280				
			0.060			
37	5.247	15.340				
			0.060			
38	5.218	15.480				
			0.050			
39	5.207	15.530				
			0.045			
40	5.198	15.575				
			0.045			
41	5.189	15.620				
			0.050			



101

TEMPERATURE - DEPTH LOG

Location North Vale, Oregon Date May 30, 1975
 Map Jamieson Quadrangle
 Property T 15S R 45E sec SW 1/4 31
 Drill Hole NV-7 Date Drilled May 9, 1975 Elevation 2520 ft.
 Instrument _____ Operator Pilkington
 Comments logged at 1500 hrs Filled with H₂O after drilled

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient		Comments
				°C/Km	Avg.	
0	4.630	18.505	-5.440			
1	5.750	13.065	-2.540			
2	6.380	10.525	-0.220			
3	6.439	10.305	0.860			
4	6.230	11.105	0.295			
5	6.006	12.000	0.640			
6	5.850	12.640	0.345			
7	5.769	12.985	0.100			
8	5.746	13.085	0.020			
9	5.741	13.105	-0.020			
10	5.746	13.085	0.075			
11	5.728	13.160	0.000			
12	5.728	13.160	0.020			
13	5.724	13.180	0.040			
14	5.715	13.220	0.050			
15	5.703	13.270	0.045			
16	5.692	13.315	0.065			
17	5.678	13.350	0.080			
18	5.659	13.460	0.060			
19	5.646	13.520	0.040			
20	5.636	13.560	0.055			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

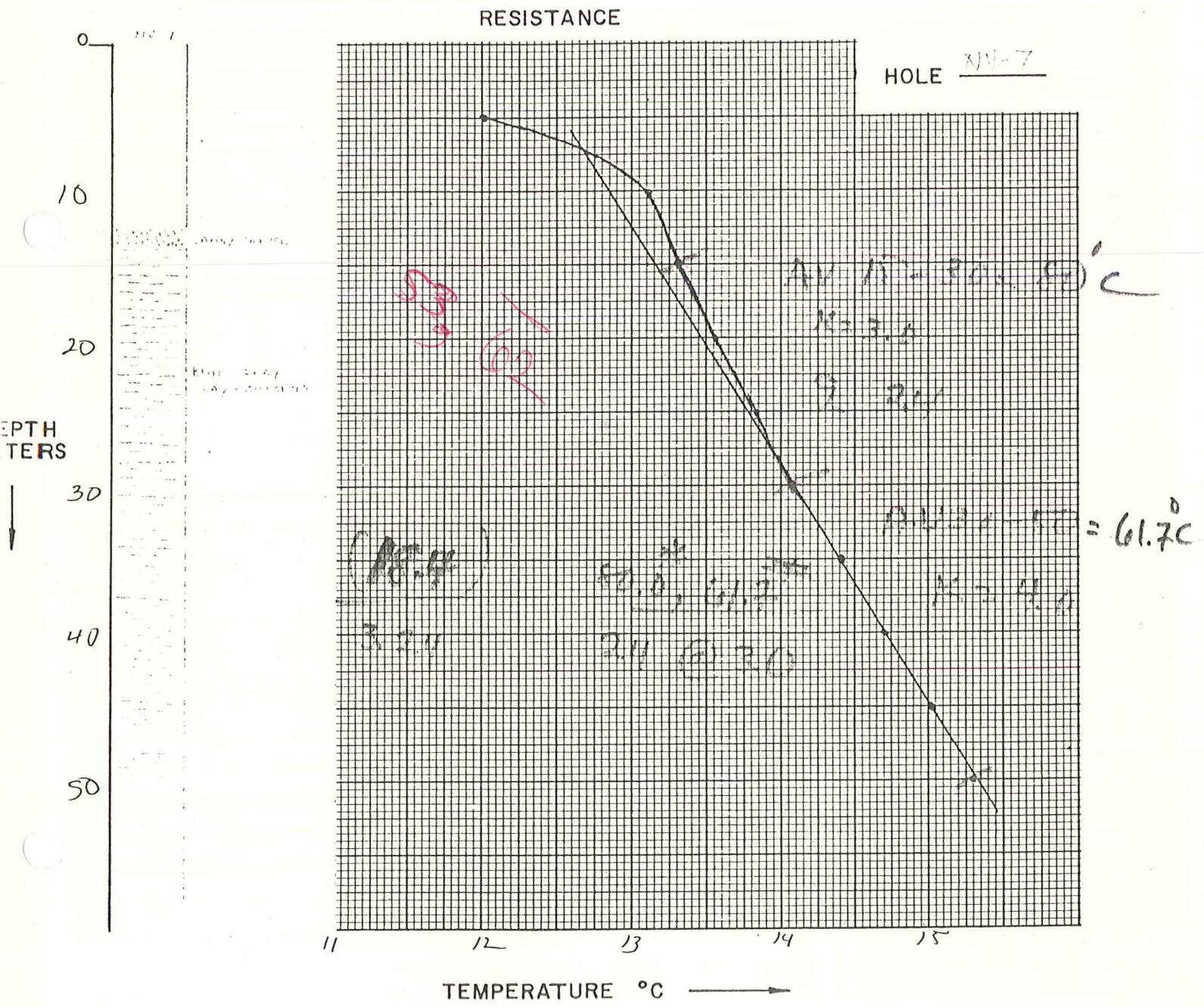
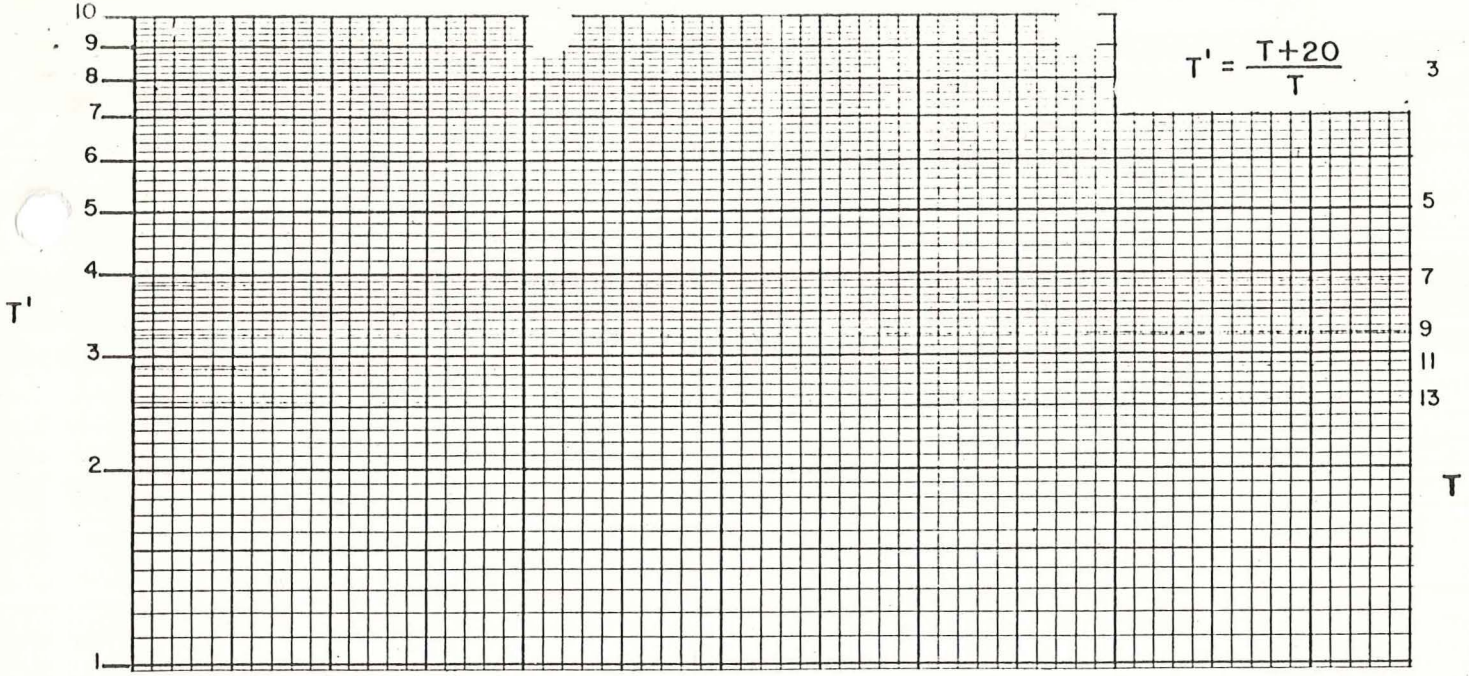
Property _____ T _____ R _____ sec _____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient		Comments
				°C/Km	Avg.	
21	5624	13.615	0.050			
22	5613	13.665	0.075			
23	5595	13.740	0.065			
24	5581	13.805	0.050			
25	5570	13.855	0.085			
26	5562	13.890	0.040			
27	5553	13.930	0.050			
28	5542	13.980	0.065			
29	5527	14.045	0.025			
30	5521	14.070	0.030			
31	5515	14.100	0.150			
32	5482	14.250	0.150			
33	5449	14.400	0.020			
34	5444	14.420	0.025			
35	5439	14.445	0.010			
36	5437	14.455	0.010			
37	5434	14.465	0.040			
38	5426	14.505	0.090			
39	5406	14.595	0.125			
40	5379	14.720	0.070			
41	5364	14.790	0.000			



101

TEMPERATURE - DEPTH LOG

Location North Vale Oregon Date May 30, 1975
 Map Huntington Quadrangle
 Property _____ T 15 S R 44 E sec NE 1/4 20
 Drill Hole NV-8 Date Drilled May 9, 1975 Elevation 3240 ft.
 Instrument _____ Operator Pilkington
 Comments logged at 1330 hrs Filed with H2O disk drilled

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient		Comments
				°C/Km	Avg.	
0	3.155	28.655	-5.845			
1	5.810	12.810	-1.600			
2	6.203	11.210	-0.510			
3	6.335	10.700	0.015			
4	6.331	10.715	0.380			
5	6.233	11.095	0.565			
6	6.090	11.660	0.575			
7	5.948	12.235	0.490			
8	5.831	12.725	0.580			
9	5.695	13.305	0.510			
10	5.579	13.815	0.200			
11	5.534	14.015	0.055			
12	5.521	14.070	0.005			
13	5.522	14.075	0.010			
14	5.518	14.085	0.025			
15	5.513	14.116	0.040			
16	5.504	14.150	0.050			
17	5.493	14.200	0.055			
18	5.481	14.255	0.050			
19	5.469	14.305	0.050			
20	5.458	14.355	0.055			

_____ of _____

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
21	5.446	14.410			
22	5.434	14.465	0.055		
23	5.423	14.515	0.050		
24	5.409	14.580	0.065		
25	5.397	14.635	0.055		
26	5.384	14.695	0.060		
27	5.372	14.755	0.060		
28	5.357	14.820	0.065		
29	5.343	14.885	0.065		
30	5.329	14.955	0.070		
31	5.316	15.015	0.060		
32	5.302	15.080	0.065		
33	5.288	15.145	0.065		
34	5.274	15.210	0.065		
35	5.258	15.290	0.080		
36	5.243	15.360	0.070		
37	5.227	15.435	0.075		
38	5.207	15.530	0.095		
39	5.187	15.630	0.100		
40	5.172	15.700	0.070		
41	5.159	15.770	0.070		
			0.065		

PROJ.	WELL	DA-MO-YR-F	DESCRIPTION	EDITORS	TERRAIN CORR	ISE	WEST
755		208 7 SP 76 MB-208	2.5 KM N. OF COVE FORT, VT				
665		C830 MY 75-M	11 KM. NE OF JAMELSON, OR	DA/ARIN			

COASTAL
CON

duplicate

IN/CM		MAP: 75, 15. or 60.	DEG'S SW CORNER	DEG'S LAT	MIN'S DLAT	DEG'S LONG.	MIN'S DLONG	N.	E.	ELEV.	M/F	
	IN	15.		38.	20.	112.	45.	8.62		9.42	4825.	F
	CM	15.		44.	15.	117.	30.	1.0		19.45.	3240	F

0.8

duplicate

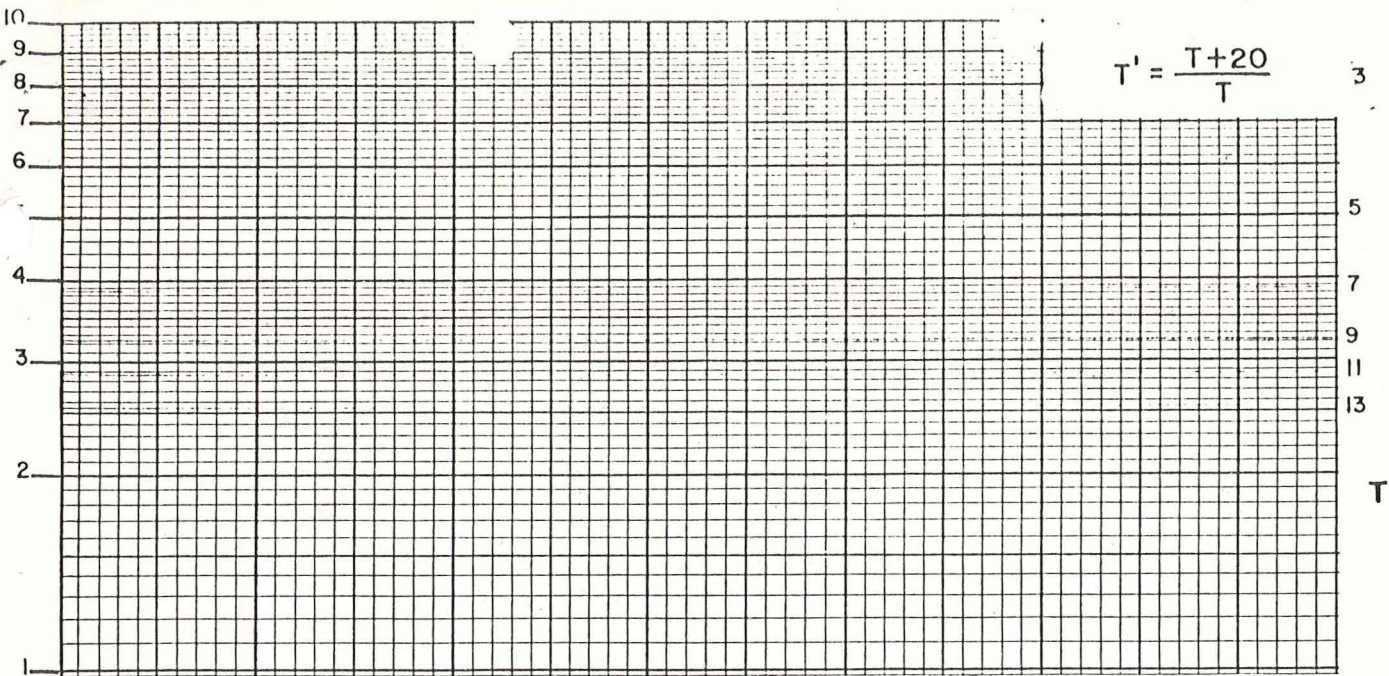
SEGMENT DEPTH										SEGMENT									
START					END					K					±				
16.																			
15.					25.					3.61					- .5				
.999										25.2					44.				
															-2.8				
															- .5				

STA T =
-999
or last
.999
Last =
Price: \$
K
=

duplicate

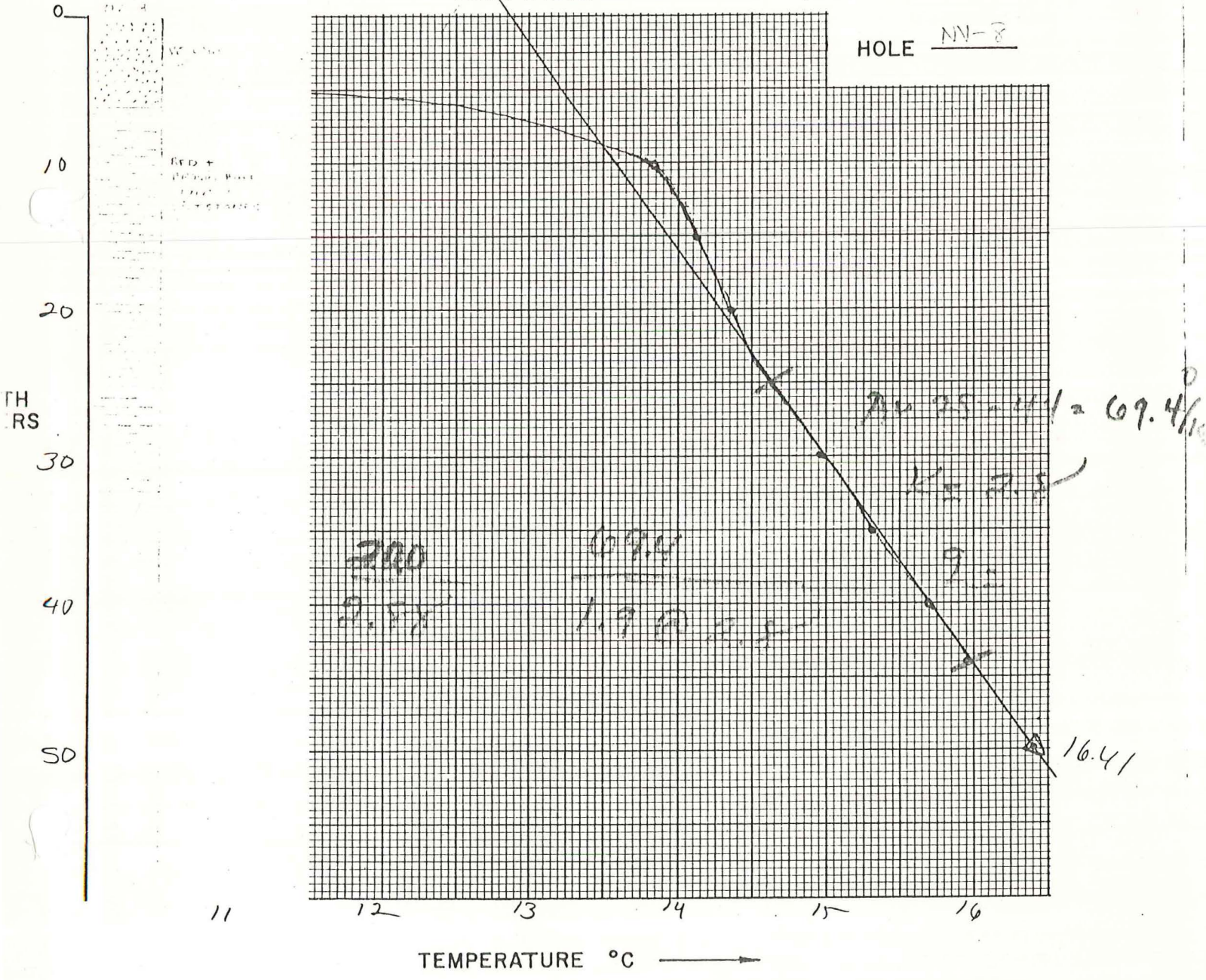
DEPTH	°C	DEPTH	°C	DEPTH	°C
1.	16.325	1.5	16.516	2.	16.82

99999.
LAST
DEPTH



RESISTANCE

HOLE AN-8



TEMPERATURE - DEPTH LOG

Location North Vale, Oregon Date May 29, 1975

Map Tamiasin Quadrangle

Property T 16 S R 43 E sec NE 1/4 32

Drill Hole NV-9 Date Drilled May 10, 1975 Elevation 2800 ft.

Instrument _____ Operator Pilking, Inc

Comments logged at 1700 hrs Filled with H₂O date drilled

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient		Comments
				°C/Km	Avg.	
0	4.291	20.460				
1	5.615	13.655				
2	6.250	11.025				
3	6.197	11.235	0.210			
4	6.065	11.760	0.525			
5	5.875	12.540	0.780			
6	5.720	13.195	0.655			
7	5.541	13.985	0.790			
8	5.496	14.185	0.200			
9	5.493	14.200	0.015			
10	5.492	14.205	0.005			
11	5.498	14.175	0.030			
12	5.487	14.225	0.050			
13	5.493	14.200	0.025			
14	5.490	14.210	0.010			
15	5.483	14.245	0.035			
16	5.455	14.370	0.125			
17	5.455	14.370	0.000			
18	5.452	14.385	0.015			
19	5.446	14.410	0.025			
20	5.441	14.435	0.025			
			0.020			

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

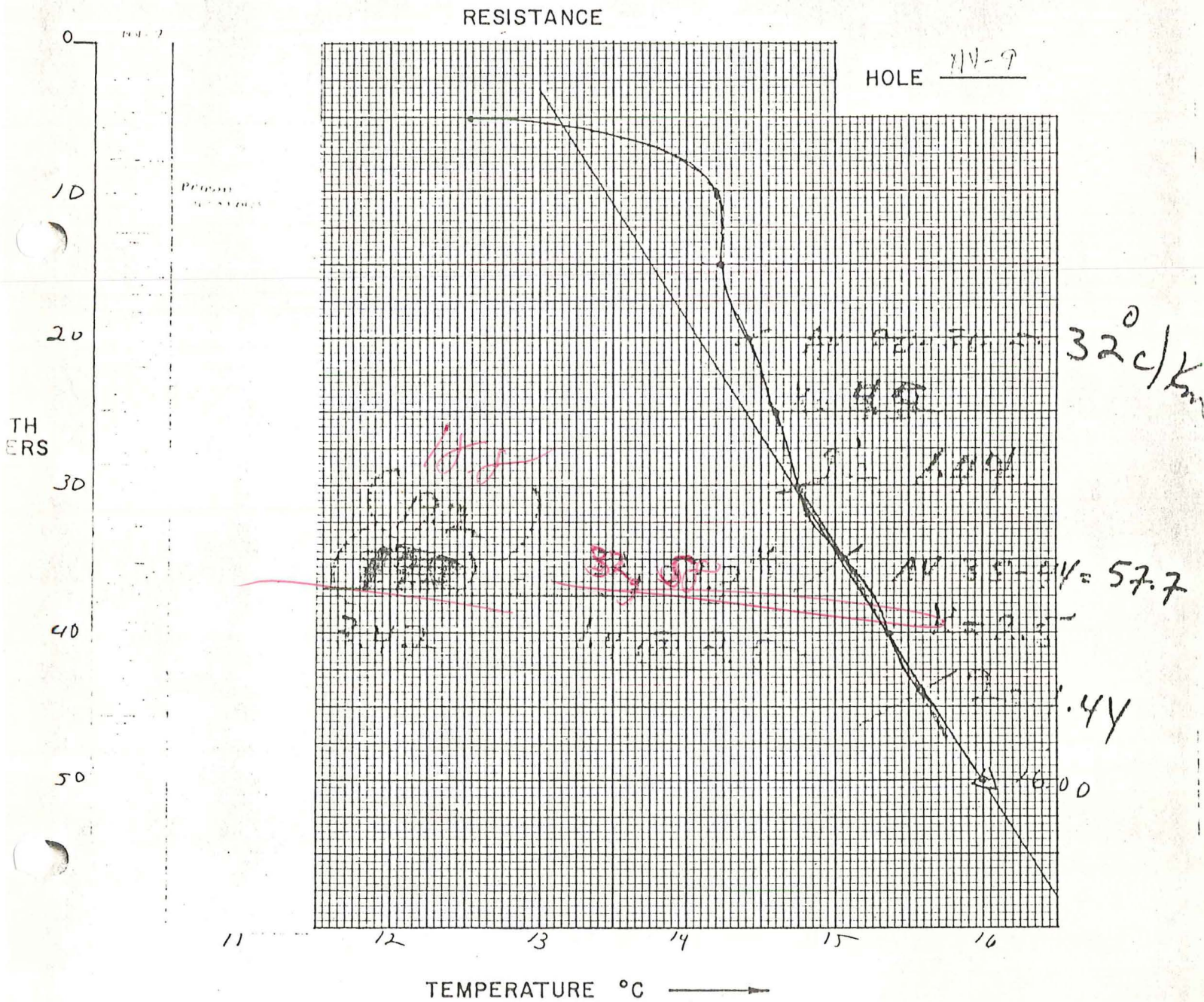
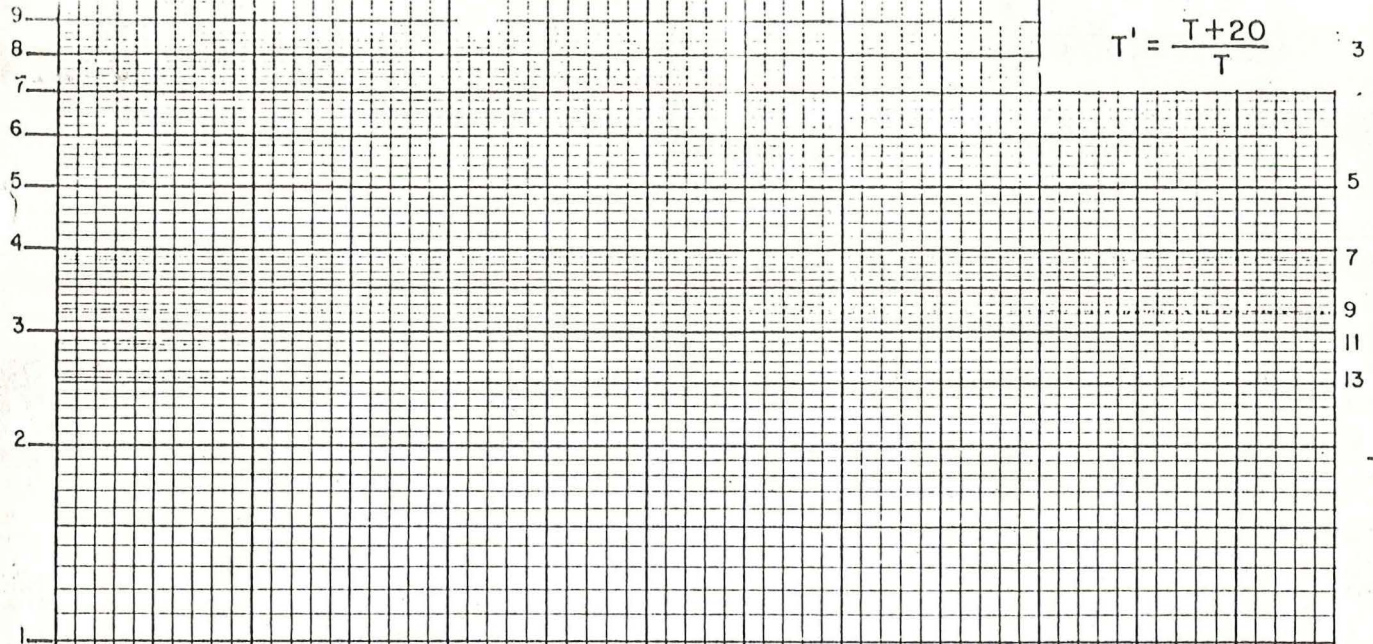
Property _____ T _____ R _____ sec _____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient		Comments
				°C/Km	Avg.	
21	5.437	14.455				
22	5.429	14.490	0.035			
23	5.420	14.530	0.040			
24	5.414	14.560	0.030			
25	5.408	14.585	0.025			
26	5.402	14.615	0.030			
27	5.393	14.655	0.040			
28	5.385	14.690	0.035			
29	5.377	14.725	0.035			
30	5.372	14.755	0.030			
31	5.367	14.775	0.020			
32	5.360	14.810	0.035			
33	5.362	14.800	-0.010			
34	5.332	14.940	0.140			
35	5.304	15.070	0.130			
36	5.289	15.145	0.075			
37	5.278	15.195	0.050			
38	5.265	15.255	0.060			
39	5.254	15.305	0.050			
40	5.242	15.365	0.060			
41	5.231	15.415	0.050			
			0.060			



40°C

5 10 15 20 25 30 35

NV-9

Depth
in
Metres.

46 0780

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

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

32.0

57.7

(19.2)

<u>19.2</u>	<u>32, 57.7</u>
3.47	1.4 @ 2.5

TEMPERATURE - DEPTH LOG

Location North Vale, Oregon Date May 30, 1975

Map Jamieson Quadrangle

Property T 17S R 43E sec NW 1/4 22

Drill Hole NV-10 Date Drilled May 10, 1975 Elevation 3000 ft.

Instrument _____ Operator P. King

Comments Logged at 1030 hrs Filled with H₂O after drilled

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
0	4685	18.205	-2.585		
1	5189	15.620	-3.415		
2	5955	12.205	-1.020		
3	6210	11.185	0.380		
4	6113	11.565	0.890		
5	5895	12.455	0.635		
6	5745	13.090	0.695		
7	5585	13.785	0.455		
8	5484	14.240	0.210		
9	5438	14.450	0.095		
10	5417	14.545	0.030		
11	5410	14.575	-0.020		
12	5415	14.555	-0.030		
13	5421	14.525	-0.005		
14	5422	14.520	0.005		
15	5421	14.525	0.020		
16	5417	14.545	0.055		
17	5405	14.600	0.025		
18	5400	14.625	0.025		
19	5394	14.650	0.015		
20	5391	14.665	0.070		

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
21	5.376	14.735	0.055		
22	5.364	14.790	0.000		
23	5.364	14.790	0.000		
24	5.365	14.790	0.020		
25	5.360	14.810	0.035		
26	5.352	14.845	0.045		
27	5.342	14.890	0.035		
28	5.335	14.925	0.045		
29	5.325	14.970	0.060		
30	5.313	15.030	0.050		
31	5.302	15.080	0.040		
32	5.293	15.120	0.065		
33	5.280	15.185	0.025		
34	5.275	15.210	0.020		
35	5.270	15.230	0.025		
36	5.265	15.255	0.030		
37	5.259	15.285	0.030		
38	5.252	15.315	0.025		
39	5.247	15.340			
99999.					

Average gradient 20-39 m 35.5 °C / km

PROJ.	WELL	DA-MO-YR-F	DESCRIPTION	EDITORS	TERMIN COOR	L	B	ISE	WEST
755		208 7 SP 76 ME-208	2.5 KM N. OF COVE FORT, UT						
665		1030 MY 75 M 11.5	KM SOUTH OF JAMIESON, ORE	DP/HEGE					

duplicate

IN	CM	MAP: 7.5, 15, or 50	DEG'S SW CORNER	DEG'S LAT	MIN'S DLAT	DEG'S LONG.	MIN'S DLONG	N.	E.	ELEV.	(M/F)
IN		15.	38.	20.		112.	45.	8.62	9.42	4825.	F
CM		15	44.	00		117'	30°	13.75	7.65	3000.	F

duplicate

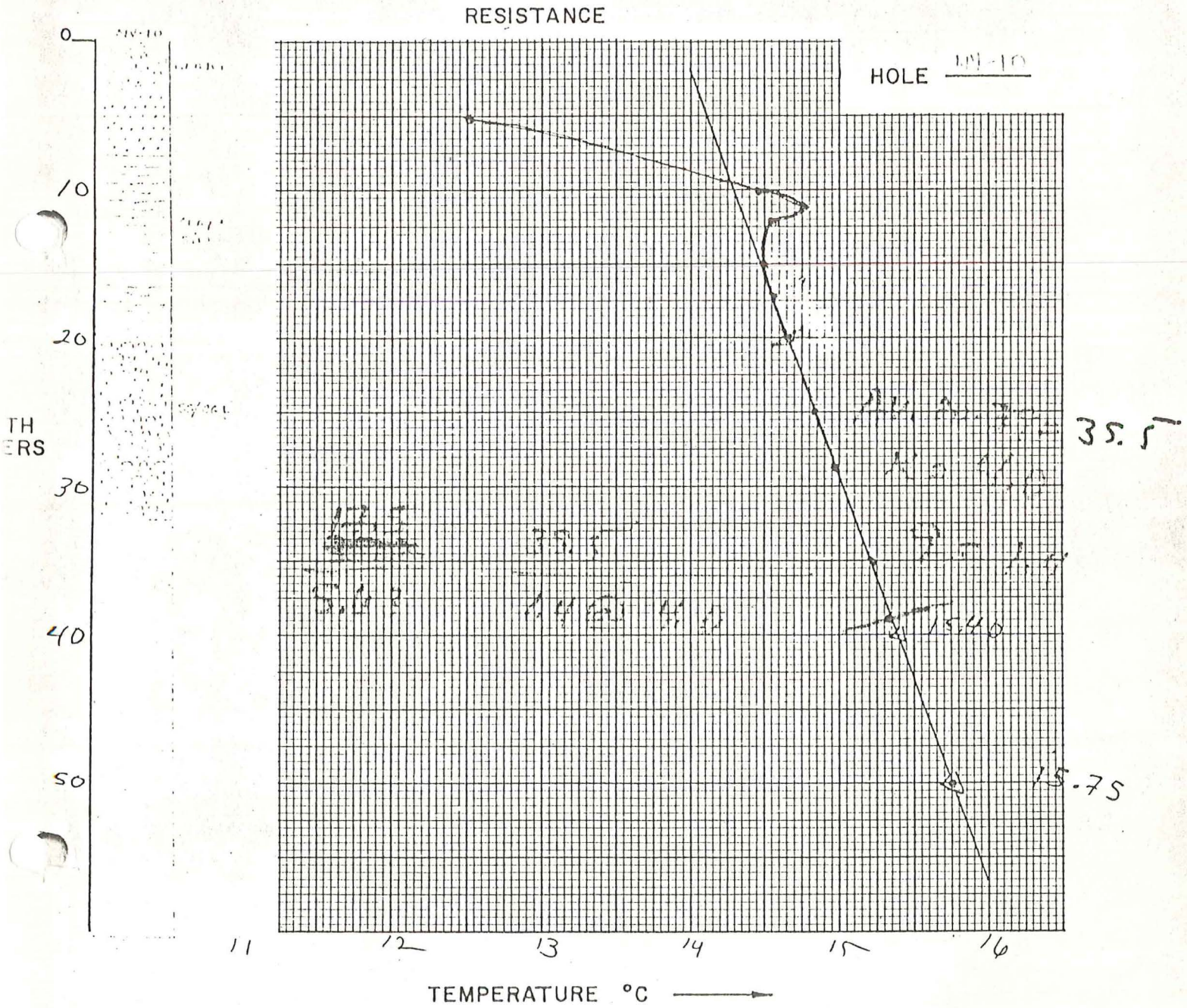
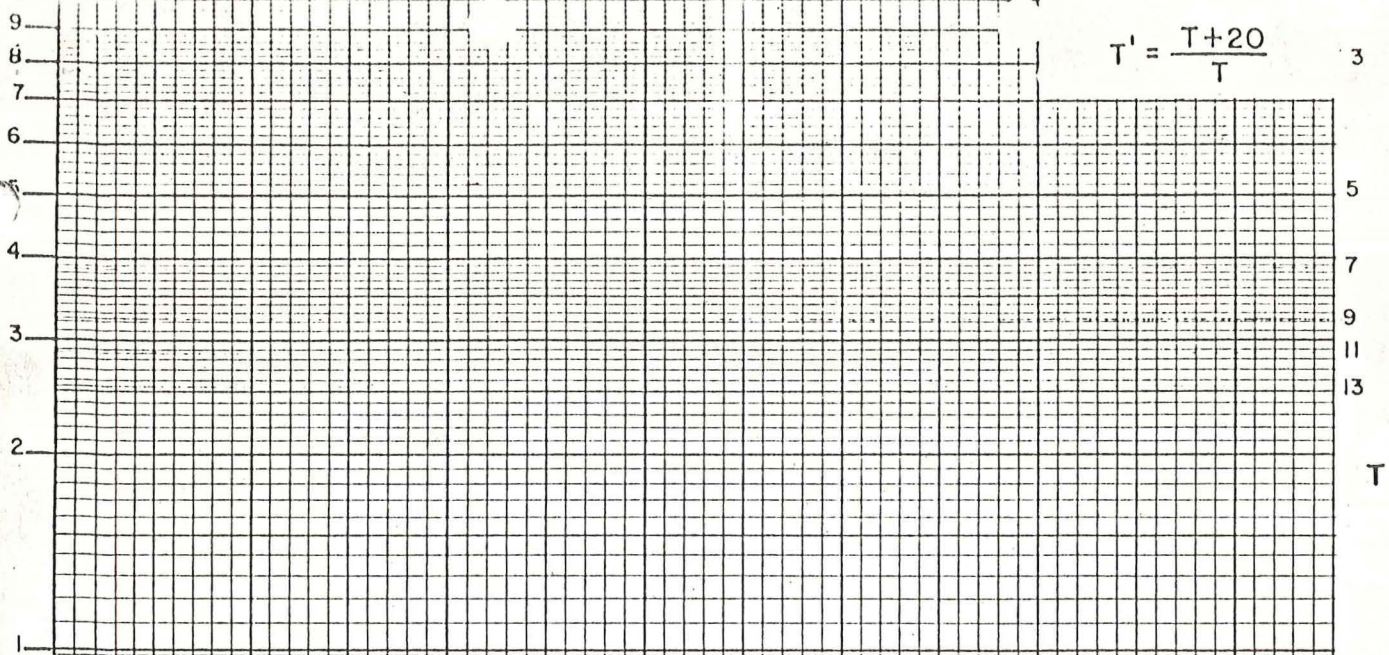
SEGMENT DEPTH					SEGMENT					START =
START	END	K	±		START	END	K	±		Start =
16.										999.
16.		38.								999.
										Price =

duplicate

DEPTH	°C	DEPTH	°C	DEPTH	°C
1.		1.5		16.82	

99999.
LAT
DEPT

JA, FB, MR, AP, MY, JS, JL, AG, SP, OC, NV, DC



AKIN

LITHOLOGIC LOG NV-10

BULLY CREEK PROPERTY

SW $\frac{1}{4}$ NW $\frac{1}{4}$ SEC 22 T17S R43E

Elevation: 3,000'

<u>Depth (meters)</u>	<u>Description</u>
0 - 3	Terrace gravel.
3 - 8	Buff to gray fine-grained tuffaceous sandstone of the Chalk Butte formation.
8 - 20	Alternating buff to gray tuffaceous siltstone and claystone of the Chalk Butte formation.
20 - 32	Buff to yellow brown tuffaceous sandstone and conglomerate sandstone of the Chalk Butte formation. The hole was dry to the total depth.


H. D. Pilkington

HDP:mmo

5 10 15 20 25 30 35 40°C

NV-10

GRAVEL
TUFFACEOUS SANDSTONE
TUFFACEOUS SILTSTONE + CLAYSTONE
TUFFACEOUS SANDSTONE + CONGLOMERATE SANDSTONE

35.5

(17.5)

$\frac{17.5}{5.63}$

$\frac{35.5}{1.4 @ 4.0}$

Depth in Metres.

46 0780

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

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

TEMPERATURE - DEPTH LOG

Location North Vale, Oregon Date May 30, 1975

Map Jamison Quadrangle

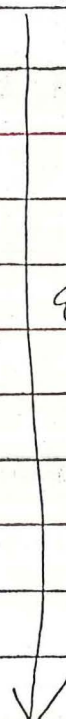
Property T 17 S R 44 E sec 5 1/4 33

Drill Hole NV-11 Date Drilled May 12, 1975 Elevation 2700 ft.

Instrument _____ Operator Pilkington

Comments logged at 0845 Filled with 120 ml. fluid

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient		Comments
				°C/Km	Avg.	
0						
1						
2						
3						
4						
5						
6						
7						
8						
9						
10	5.465	14.600				
11						
12	5.475	14.280				
13	5.468	14.330	0.050			
14	5.459	14.355	0.025			
15	5.449	14.400	0.045			
16	5.437	14.455	0.055			
17	5.426	14.505	0.050			
18	5.414	14.560	0.055			
19	5.400	14.625	0.065			
20	5.386	14.690	0.065			



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		Comments
				°C/Km	Avg.	
21	5.371	14.755	0.070			
22	5.356	14.825	0.060			
23	5.344	14.885	0.045			
24	5.331	14.930	0.065			
25	5.320	14.995	0.070			
26	5.305	15.065	0.070			
27	5.290	15.135	0.050			
28	5.280	15.185	0.065			
29	5.260	15.250	0.055			
30	5.254	15.305	0.065			
31	5.241	15.370	0.060			
32	5.228	15.430	0.085			
33	5.211	15.515	0.065			
34	5.197	15.580	0.050			
35	5.187	15.630	0.090			
36	5.168	15.720	0.100			
37	5.147	15.820	0.075			
38	5.132	15.895	0.050			
39	5.122	15.945	0.060			
40	5.110	16.005	0.055			
41	5.083	16.140	0.050			

PROJ.	WELL	DA-MO-YR-F	DESCRIPTION																												EDITORS		TERRAIN COOR		L P		ISF		RIST	
755		208 7 SP 76 ME-208	2.5 KM N. OF COVE FORT, VT																												JEN									
665		1130 MY 75	M 7 KM NE OF BULLY CREEK, OREGON																												DP/HEGE									

duplicate		IN	MAP: 7.5, 15. or 50.	DEG'S LAT	MIN'S DLAT	DEG'S LONG.	MIN'S DLONG	N.	E.	ELEV.	M/F
	IM	15.	38.	30.	112.	45.	8.62		9.42	4825.	F
	CM	15	44.	00.	117.	30.	8.1		20.65	2700.	F

duplicate		SEGMENT DEPTH				SEGMENT			
START	END	K	±	START	END	K	±		
16.	34.	7.	.5	34.	42.	3.97	-.5		
16.	34.	-3.5	.5	34.	42.	3.97	-.5		
.999									

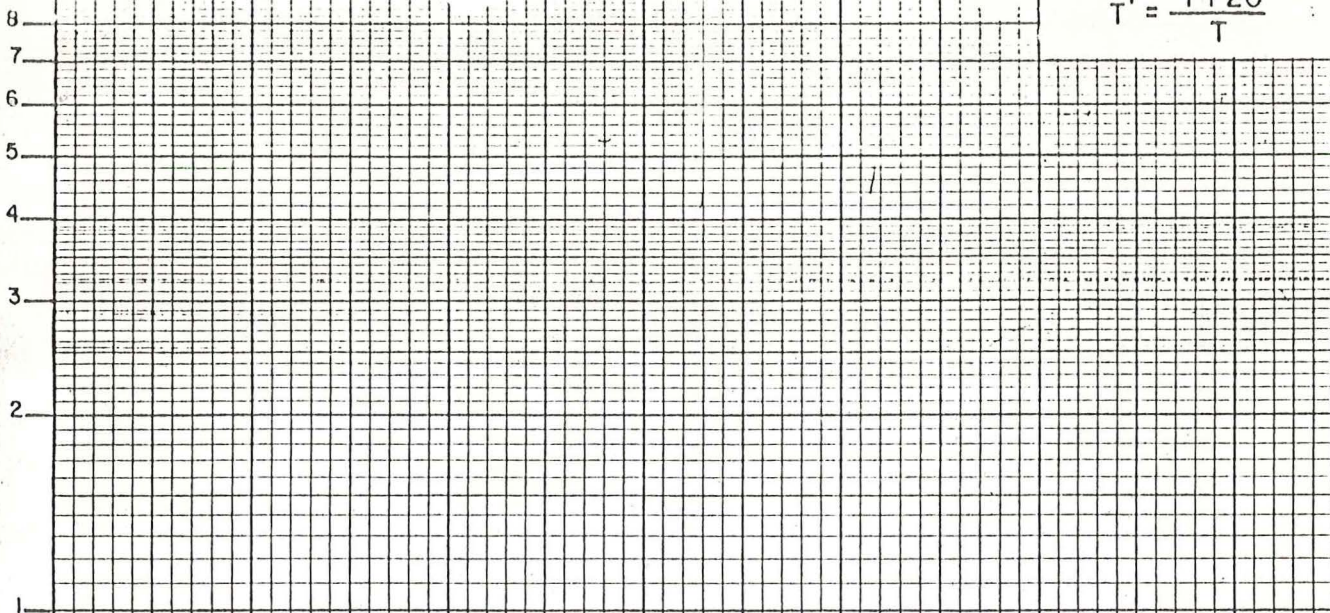
duplicate		DEPTH	°C	DEPTH	°C	DEPTH	°C
	1.	16.205		1.5	16.510		16.82

JA, FB, MR, AP, MY, JE, JL, AG, SP, OC, NV, DC

START =
 -50
 or last
 .999
 Last =
 Price =
 99999.
 LAST
 DEPTH

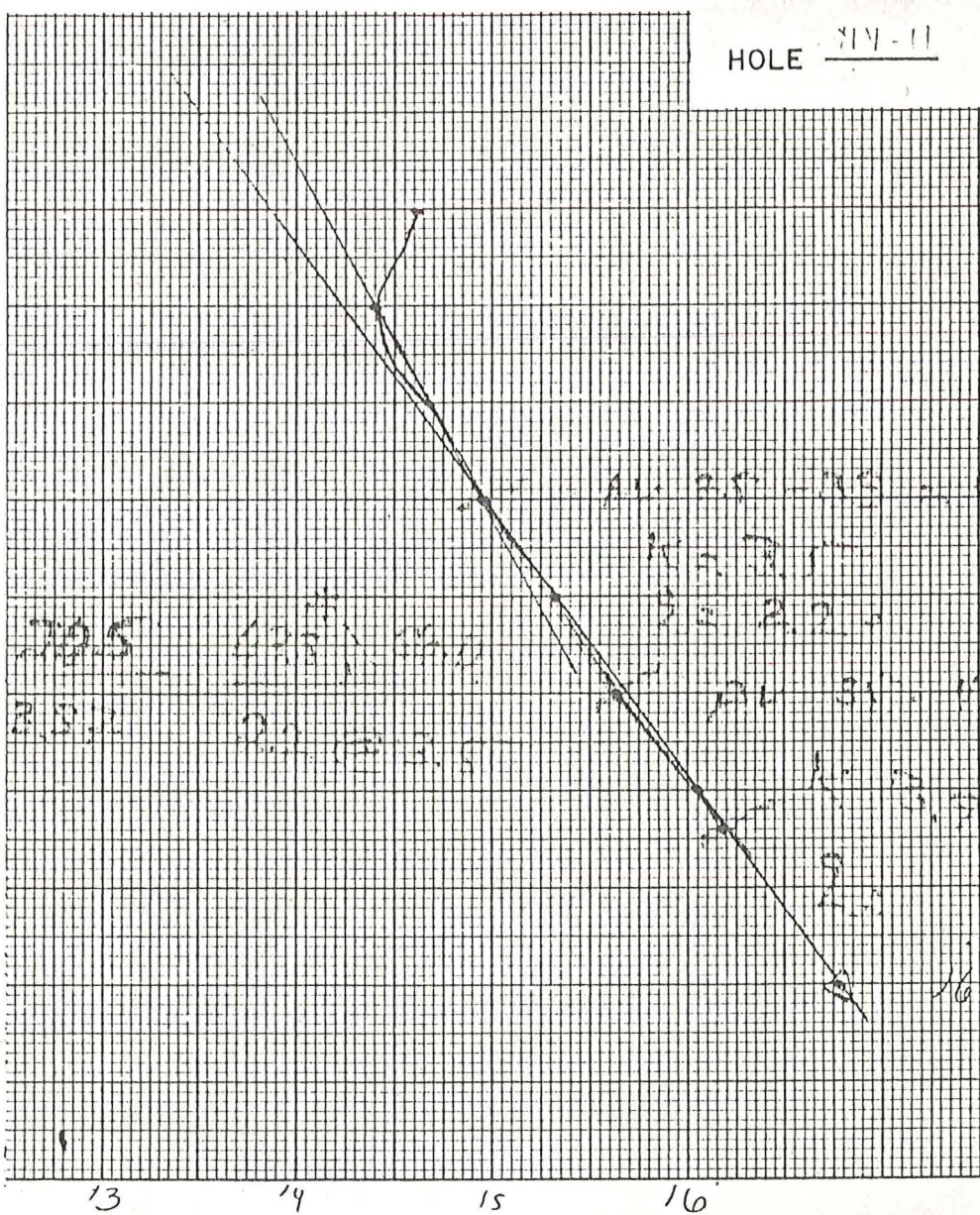
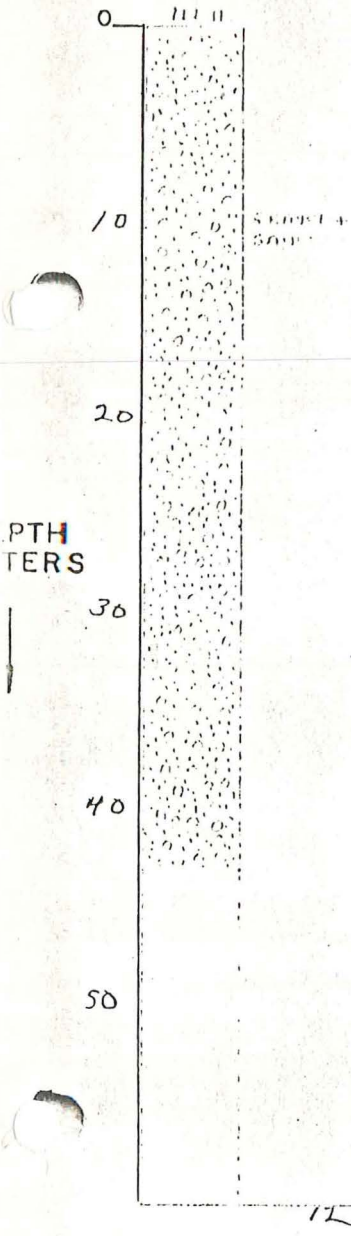
$$T' = \frac{T+20}{T}$$

3
5
7
9
11
13
T



RESISTANCE

HOLE 219-11



70.5
12.5
13.5
14.5
15.5
16.5
17.5
18.5
19.5
20.5
21.5
22.5
23.5
24.5
25.5
26.5
27.5
28.5
29.5
30.5
31.5
32.5
33.5
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36.5
37.5
38.5
39.5
40.5
41.5
42.5
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TEMPERATURE °C →

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NV-11

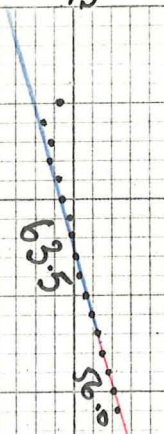
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KEUFFEL & ESSER CO. MADE IN U.S.A.



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TEMPERATURE - DEPTH LOG

Location North Vale Oregon Date May 30, 1925

Map Jamieson Quadrangle

Property _____ T 10S R 44E sec SE 1/4 25

Drill Hole NU -12 Date Drilled May 13 Elevation 2580 ft.

Instrument _____ Operator Pilkington

Comments Logged at 1000 hrs Filed with H2O log drilled

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
0	3317	27.285	-13.165		
1	5.510	14.120	-2.375		
2	6.045	11.845	0.125		
3	6.015	11.960	0.560		
4	5.880	12.520	0.610		
5	5.735	13.130	0.635		
6	5.590	13.765	0.650		
7	5.445	14.415	0.130		
8	5.417	14.545	0.025		
9	5.411	14.570	0.025		
10	5.406	14.595	0.055		
11	5.394	14.650	0.090		
12	5.375	14.740	0.060		
13	5.362	14.800	0.110		
14	5.337	14.960	0.060		
15	5.325	14.970	0.035		
16	5.318	15.005	0.030		
17	5.312	15.035	0.070		
18	5.297	15.105	0.075		
19	5.281	15.180	0.040		
20	5.272	15.220	0.100		

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

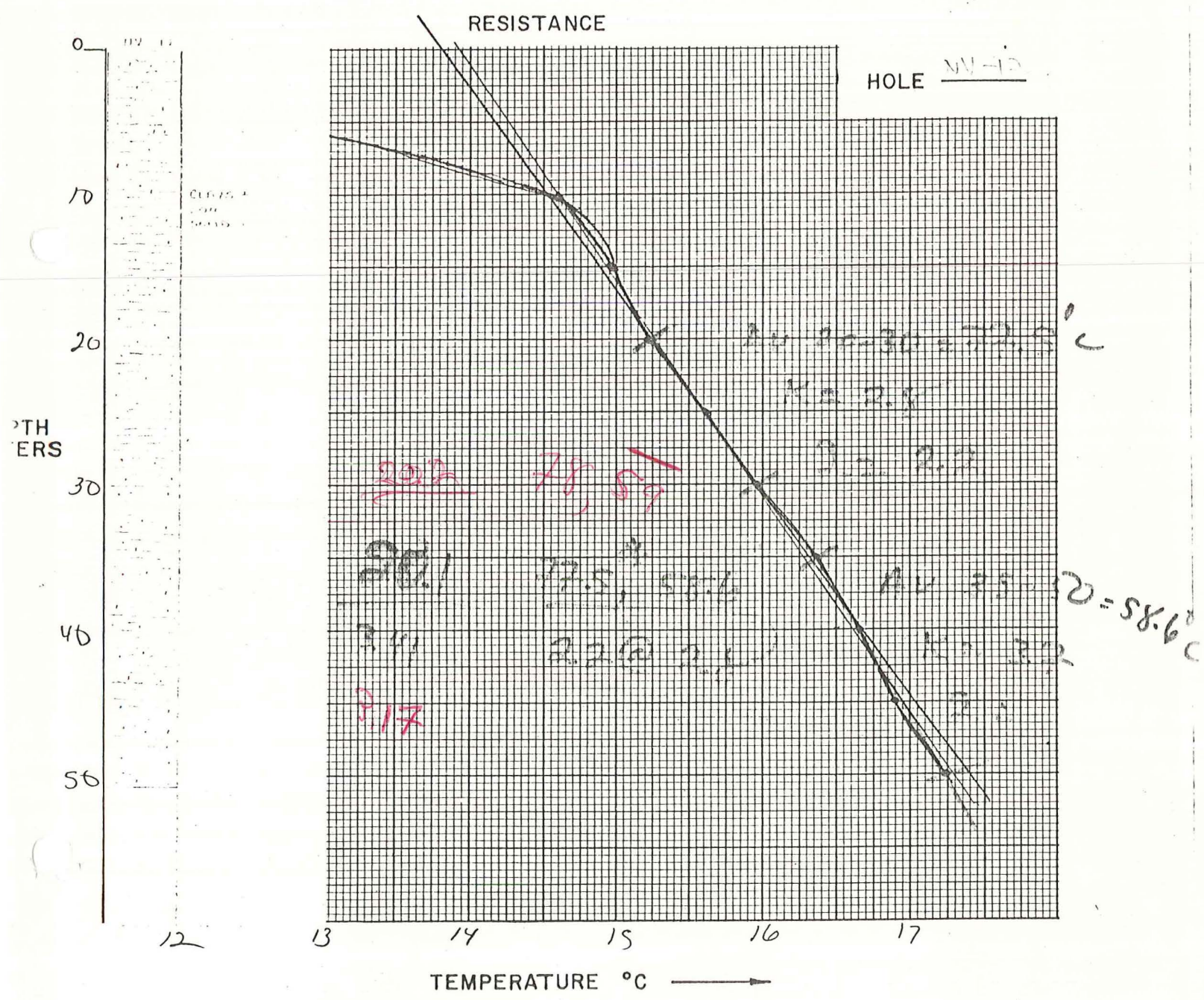
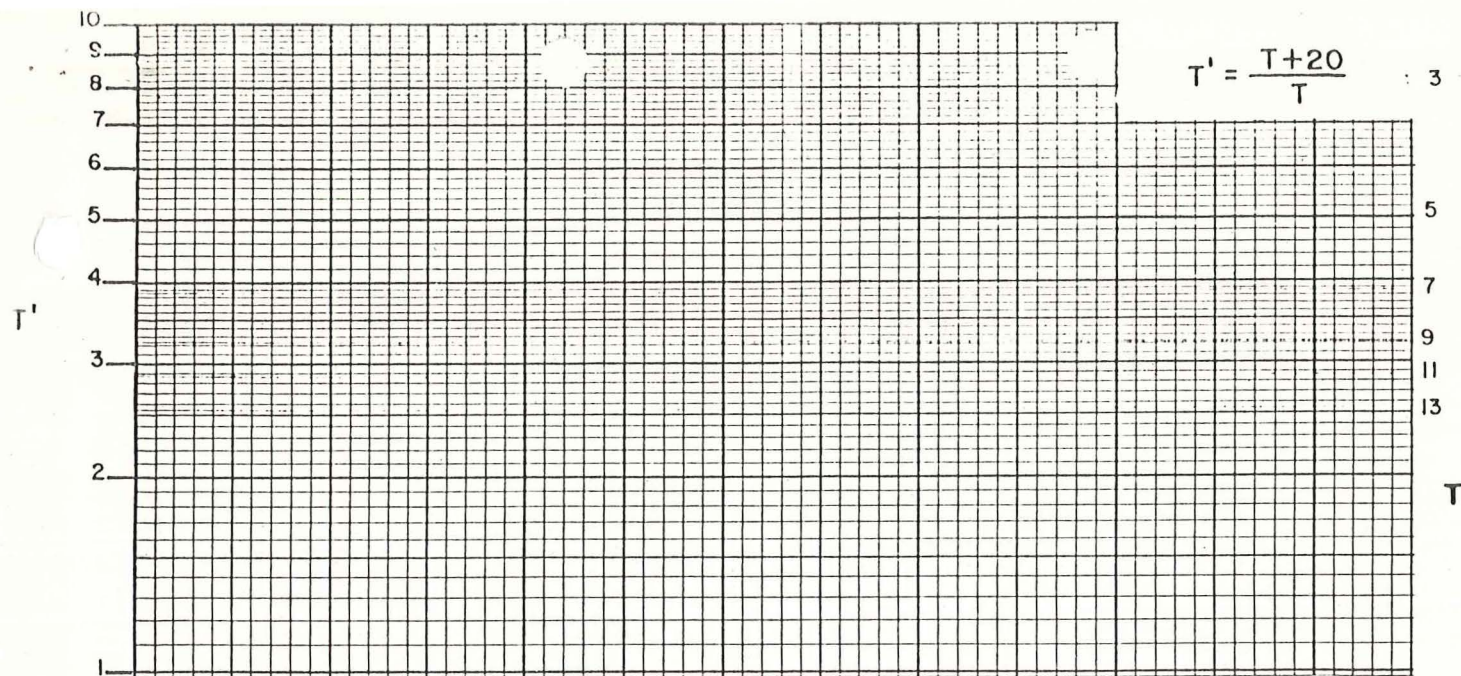
Property _____ T _____ R _____ sec _____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
21	5.251	15.320	0.065		
22	5.238	15.385	0.070		
23	5.223	15.455	0.065		
24	5.208	15.520	0.095		
25	5.190	15.615	0.080		
26	5.180	15.665	0.075		
27	5.164	15.740	0.105		
28	5.143	15.845	0.060		
29	5.130	15.905	0.090		
30	5.112	15.995	0.090		
31	5.094	16.085	0.070		
32	5.079	16.155	0.045		
33	5.070	16.200	0.075		
34	5.055	16.275	0.095		
35	5.035	16.320	0.095		
36	5.017	16.405	0.025		
37	5.012	16.490	0.015		
38	5.009	16.505	0.110		
39	4.989	16.615	0.055		
40	4.978	16.670	0.035		
41	4.970	16.705	0.045		



TEMPERATURE - DEPTH LOG

1 of 1
N 13

Location North Vale Oregon Date May 30, 1971

Map Moore's Hollow Quadrangle

Property T 17S R 45E sec SE 1/4 2

Drill Hole NV-13 Date Drilled May 13 1975 Elevation 2710 ft.

Instrument _____ Operator P. Kington

Comments logged at 1700 hrs. Filled with H₂O date drilled.

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient		Comments
				°C/Km	Avg.	
0	2.954	30.470	17.100			
1	5.680	13.370	-2.065			
2	6.180	11.305	0.215			
3	6.125	11.520	0.210			
4	5.925	12.330	0.390			
5	5.832	12.720	0.605			
6	5.690	13.305	0.650			
7	5.543	13.975	0.215			
8	5.495	14.190	0.005			
9	5.494	14.195	-0.025			
10	5.499	14.170	0.010			
11	5.497	14.180	0.015			
12	5.494	14.195	0.020			
13	5.489	14.215	0.035			
14	5.482	14.250	0.045			
15	5.472	14.295	0.065			
16	5.453	14.380	0.070			
17	5.457	14.360	0.035			
18	5.450	14.395	0.070			
19	5.435	14.465	0.110			
20	5.410	14.575	0.035			

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
21	5.403	14.610	0.015		
22	5.406	14.595	0.035		
23	5.399	14.630	0.060		
24	5.385	14.690	0.100		
25	5.364	14.790	0.030		
26	5.357	14.820	0.045		
27	5.348	14.865	0.030		
28	5.341	14.895	0.055		
29	5.330	14.950	0.055		
30	5.318	15.005	0.070		
31	5.303	15.075	0.075		
32	5.287	15.150	0.045		
33	5.278	15.195	0.065		
34	5.264	15.260	0.050		
35	5.253	15.310	0.065		
36	5.240	15.375	0.055		
37	5.228	15.430	0.070		
38	5.214	15.500	0.065		
39	5.200	15.565	0.115		
40	5.178	15.670	0.055		
41	5.167	15.725	0.025		

TEMPERATURE - DEPTH LOG

Location NorR Vale Date May 30, 1975
 Map Moore's Hollow Quadrangle
 Property _____ T 17S R 45E sec SW₄ 23
 Drill Hole NV-14 Date Drilled May 13, 1975 Elevation 3060 ft.
 Instrument _____ Operator P. King
 Comments logged at 1800 hrs. Filled with H₂O date drilled!

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
0	3.302	27.410			
1	5.240	15.375	12.035		
2	6.180	11.310	-4.075		
3	6.347	10.650	-0.650		
4	6.170	11.340	0.690		
5	6.020	11.940	0.600		
6	5.795	12.875	0.935		
7	5.655	13.480	0.605		
8	5.588	13.725	0.295		
9	5.581	13.805	0.032		
10	5.585	13.785	-0.020		
11	5.581	13.805	0.020		
12	5.570	13.855	0.050		
13	5.558	13.905	0.050		
14	5.545	13.965	0.060		
15	5.528	14.040	0.075		
16	5.520	14.075	0.035		
17	5.509	14.125	0.050		
18	5.487	14.225	0.100		
19	5.468	14.310	0.085		
20	5.436	14.460	0.150		
			0.100		

2 of 3

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
21	5.414	14.560	0.120		
22	5.388	14.680	0.120		
23	5.362	14.800	0.085		
24	5.344	14.885	0.110		
25	5.320	14.995	0.065		
26	5.306	15.060	0.075		
27	5.290	15.135	0.075		
28	5.275	15.210	0.085		
29	5.263	15.265	0.070		
30	5.248	15.335	0.080		
31	5.231	15.415	0.055		
32	5.220	15.470	0.075		
33	5.204	15.545	0.040		
34	5.196	15.585	0.080		
35	5.180	15.665	0.125		
36	5.154	15.790	0.195		
37	5.122	15.945	0.120		
38	5.098	16.065	0.035		
39	5.091	16.100			
99999.					

Average gradient 20-39 m = 86.3 °C/km

PROJ.	WELL	DA-MO-YR-F	DESCRIPTION	EDITORS	TERRAIN	COORD	USE	STATUS
755	208	7 SP	76 MB-208: 2.5 km N. OF COVE FOST, UT	VE				
665	1430	MY 75	7.0 km SE OF ALKALI SPRING, OR	DP/ARIN				

duplicate		IN	MAP: 75, 15. or 80.	DEG'S SW CORNER	DEG'S	MIN'S	MIN'S	N.	E.	ELEV.	M
		CM		LAT	DLAT	DLONG.	DLONG.				F
		IN	15.	38.	20.	112.	45.	8.62	9.42	4825.	F
		CM	15.	44.	00.	117.	15.	12.50	9.30	3060.	F

duplicate		SEGMENT DEPTH				SEGMENT			
		START	END	K	±	START	END	K	±
		16.		7.	5	10.		3.7	5
		16.	28.	-3.0	+5	28.	34.	3.92	5
		34.	38.	2.38	-5	19.99			

duplicate		DEPTH	°C	DEPTH	°C	DEPTH	°C
		1.		1.5		10.	8.10
			16.325				16.82

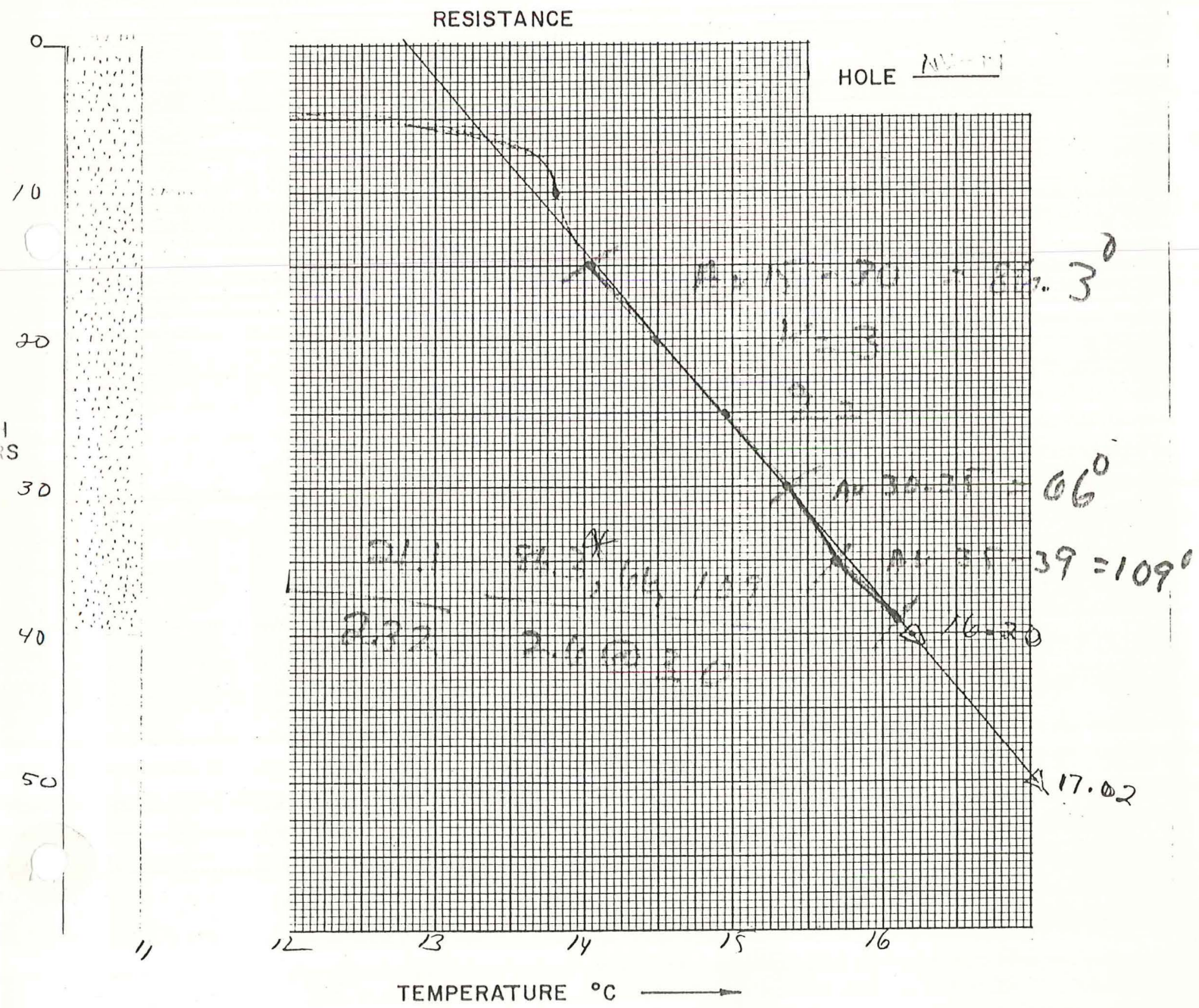
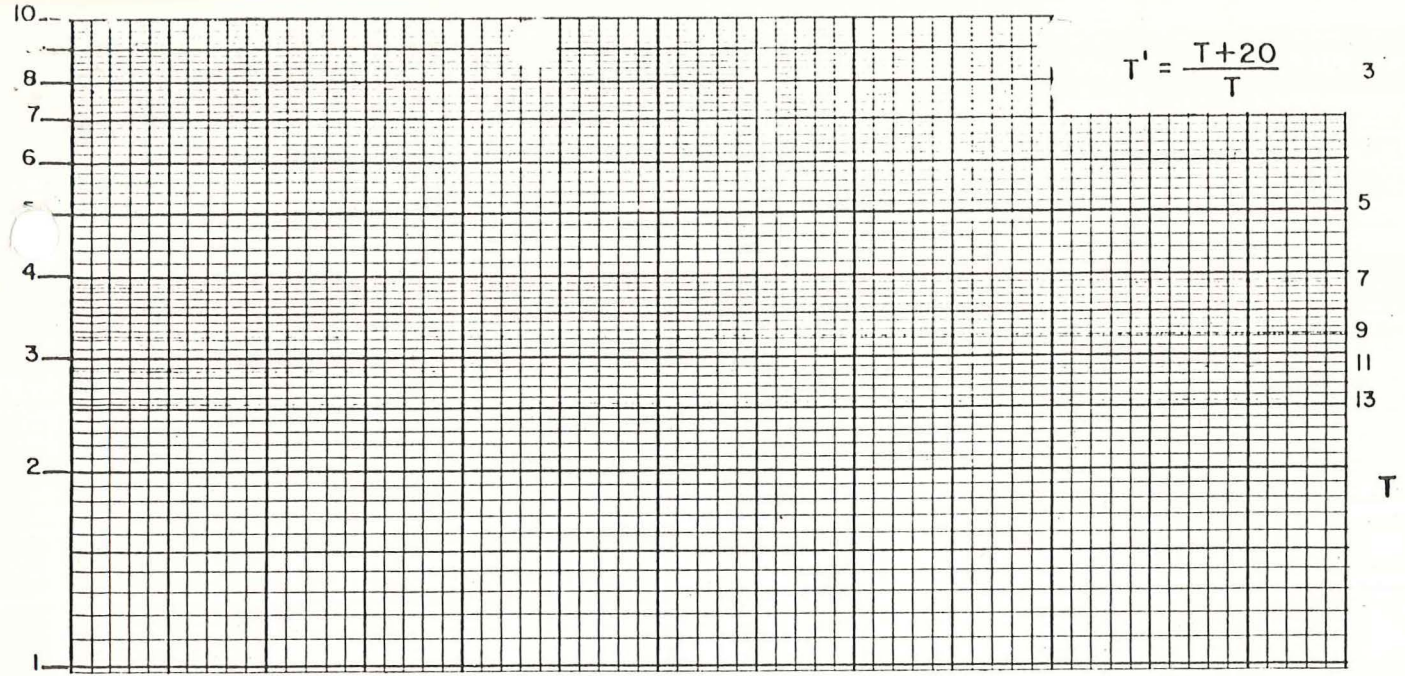
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1 of 3

TEMPERATURE - DEPTH LOG

Location North Vale, Oregon Date May 31, 1975

Map Moore's Hollow Quadrangle

Property T 18S R 45E sec SE 1/4 4

Drill Hole MV-15 Date Drilled May 14, 1975 Elevation 2520 ft.

Instrument _____ Operator Pilkington

Comments logged at 1130 hrs Filed with H2O date drilled

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient		Comments
				°C/Km	Avg.	
0						air
1						air
2	5.775	12.962	0.930			
3	5.995	12.030	0.530			
4	5.870	12.560	0.655			
5	5.216	13.215	0.690			
6	5.558	13.905	0.085			
7	5.442	13.980	0.650			
8	5.398	14.630	0.060			
9	5.385	14.690	0.035			
10	5.378	14.725	0.615			
11	5.375	14.740	0.025			
12	5.369	14.765	0.045			
13	5.360	14.810	0.060			
14	5.347	14.870	0.060			
15	5.334	14.930	0.080			
16	5.317	15.010	0.075			
17	5.301	15.085	0.105			
18	5.279	15.190	0.070			
19	5.264	15.280	0.070			
20	5.249	15.330	0.070			
			0.070			

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
21	5.235	15.400			
22	5.221	15.465	0.065		
23	5.207	15.530	0.065		
24	5.192	15.605	0.075		
25	5.176	15.680	0.075		
26	5.162	15.750	0.070		
27	5.150	15.810	0.060		
28	5.136	15.875	0.065		
29	5.122	15.945	0.070		
30	5.109	16.010	0.065		
31	5.095	16.080	0.070		
32	5.079	16.155	0.075		
33	5.061	16.245	0.090		
34	5.043	16.335	0.090		
35	5.021	16.445	0.110		
36	5.002	16.540	0.095		
37	4.986	16.625	0.085		
38	4.969	16.710	0.085		
39	4.955	16.780	0.070		
40	4.940	16.855	0.075		
41	4.926	16.930	0.075		
			0.065		

PROJ.	WELL	DA-MO-YR-F	DESCRIPTION	EDITORS	TERRAIN CORR	USE
755	208	7 SF 76 ME-208	2.5 KM N. OF COVE FORT, UT			
665	1531	MY 75 M	10 KM SOUTH OF ALKALIE SPRGS, OR	DP/AKIN		

duplicate

IN	MAP: 75, 15. or 50.	DEG'S LAT	MIN'S DLAT	DEG'S LONG.	MIN'S DLONG	N.	E.	ELEV.	(M/F)
CM		38.	20.	112.	47.	8.62	9.42	4825.	F
		44.	00.	119.	15.	5.30	5.25	2520.	F

duplicate

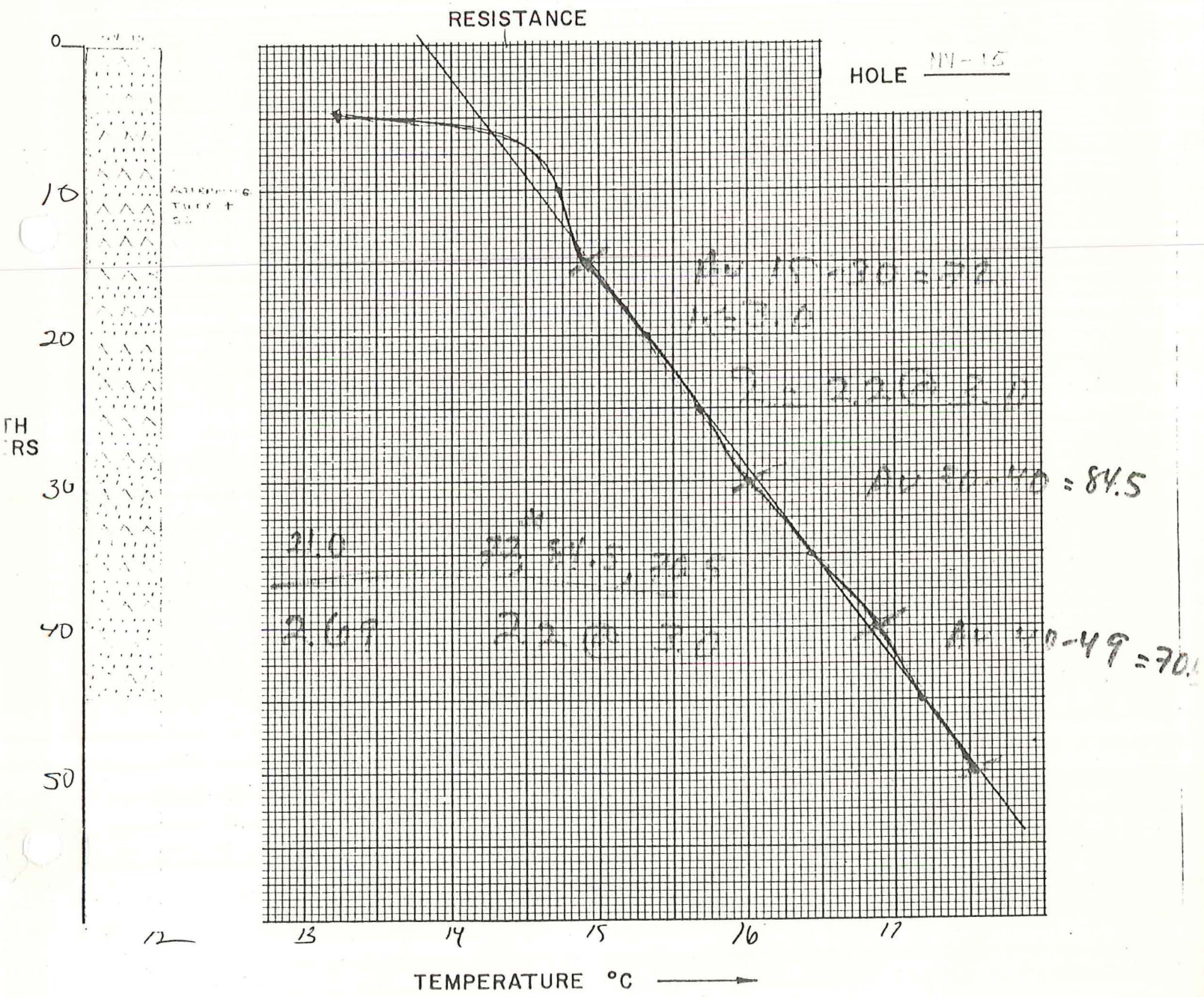
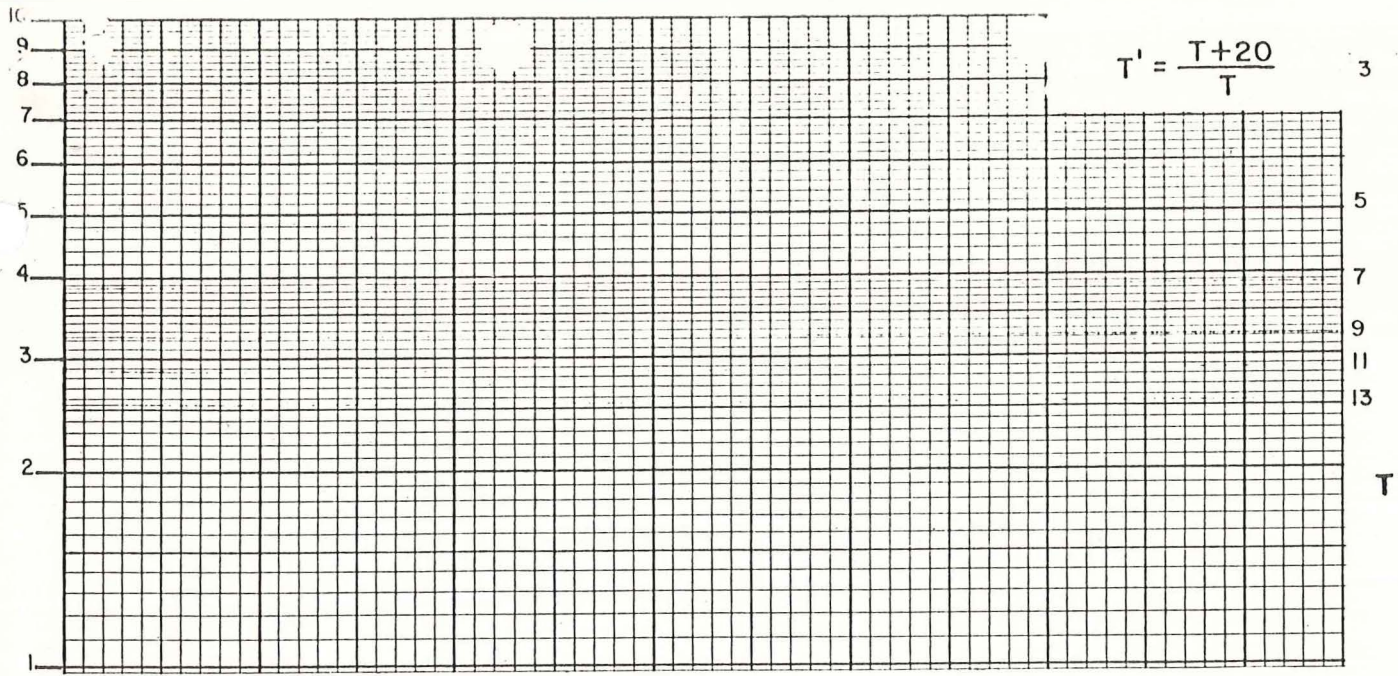
SEGMENT DEPTH				SEGMENT			
START	END	K	±	START	END	K	±
16.	14.	7.	±	0.	5.	5.	±
15.	30.	-3.0	.5	30.	40.	2.57	.5
40.	50.	3.06	-.5	.999			

duplicate

DEPTH	°C	DEPTH	°C	DEPTH	°C
1.	16.225	1.5	16.915	1.	16.82

START =
 999
 Point =
 Price =

99999
 LAT
 DEPT



1 of 1

TEMPERATURE - DEPTH LOG

Location North Vale Oregon Date May 31, 1975
 Map Morris Hollow Quadrangle
 Property _____ T 18S R 40E sec NE 1/4 - 5
 Drill Hole MV-16 Date Drilled May 15, 1975 Elevation 2560 ft.
 Instrument _____ Operator P. King
 Comments Logged at 0830 hrs. Filled with H₂O with drill

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
0	4.503	19.215	-2.535		
1	4.975	16.680	-3.630		
2	5.754	13.050	0.355		
3	5.838	12.695	0.395		
4	5.745	13.090	0.910		
5	5.537	14.000	0.630		
6	5.398	14.630	0.530		
7	5.285	15.160	0.515		
8	5.177	15.675	0.225		
9	5.131	15.900	0.080		
10	5.115	15.980	0.080		
11	5.099	16.060	0.080		
12	5.083	16.140	0.090		
13	5.064	16.230	0.060		
14	5.052	16.290	0.085		
15	5.035	16.375	0.095		
16	5.016	16.470	0.085		
17	4.999	16.555	0.100		
18	4.980	16.655	0.105		
19	4.958	16.760	0.125		
20	4.935	16.885	0.115		

2 of 3

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		Comments
				°C/Km	Avg.	
21	4.914	16.990				
22	4.891	17.110	0.120			
23	4.871	17.215	0.105			
24	4.846	17.345	0.130			
25	4.824	17.460	0.115			
26	4.796	17.600	0.140			
27	4.772	17.735	0.135			
28	4.749	17.860	0.125			
29	4.723	17.990	0.130			
30	4.697	18.140	0.140			
31	4.677	18.245	0.105			
32	4.654	18.370	0.125			
33	4.629	18.510	0.140			
34	4.600	18.670	0.160			
35	4.580	18.780	0.110			
36	4.557	18.910	0.130			
37	4.534	19.040	0.130			
38	4.514	19.155	0.115			
39	4.494	19.270	0.125			
40	4.475	19.380	0.110			
41	4.456	19.490	0.110			
			0.120			

PROJ. | WELL | DA-MO-YR-F | DESCRIPTION | EDITORS | TERRAIN CORR. | USE | DIST.

665 | 1631 | MY | 75 | 13 KM. NW. OF MALHEUR BUTTE, OR | DP/ARIN

duplicate

IN	CM	MAP: 75, 15. or 10.	DEG. LAT	MIN. DLAT	DEG. LONG.	MIN. DLONG	N.	E.	ELEV.	(M)
IN	CM	15.	38.	20.	112.	45.	8.62	9.42	4825.	F
CM	15.	49.	00	117.	15	5.60	18.20	2560.	F	

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duplicate

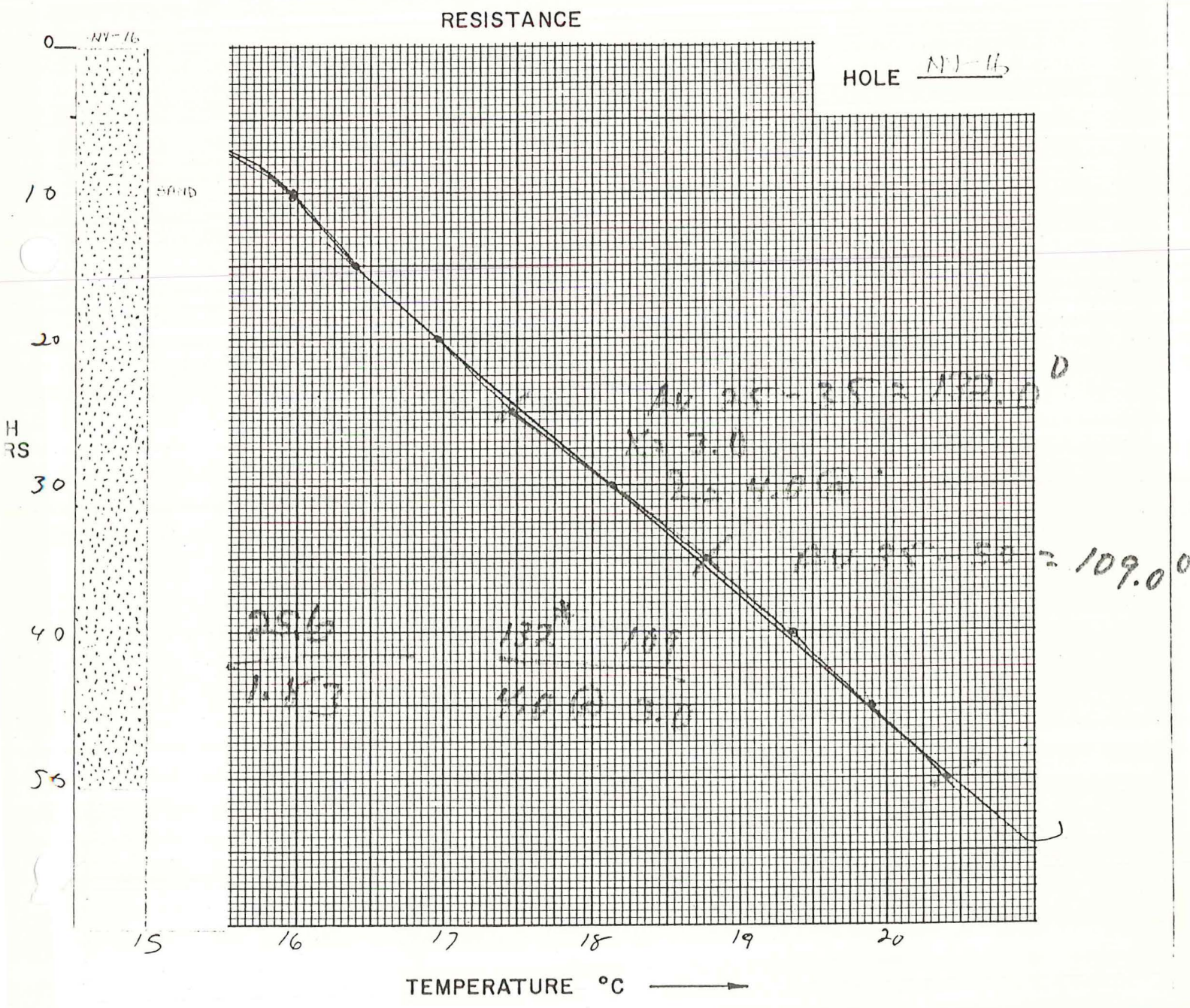
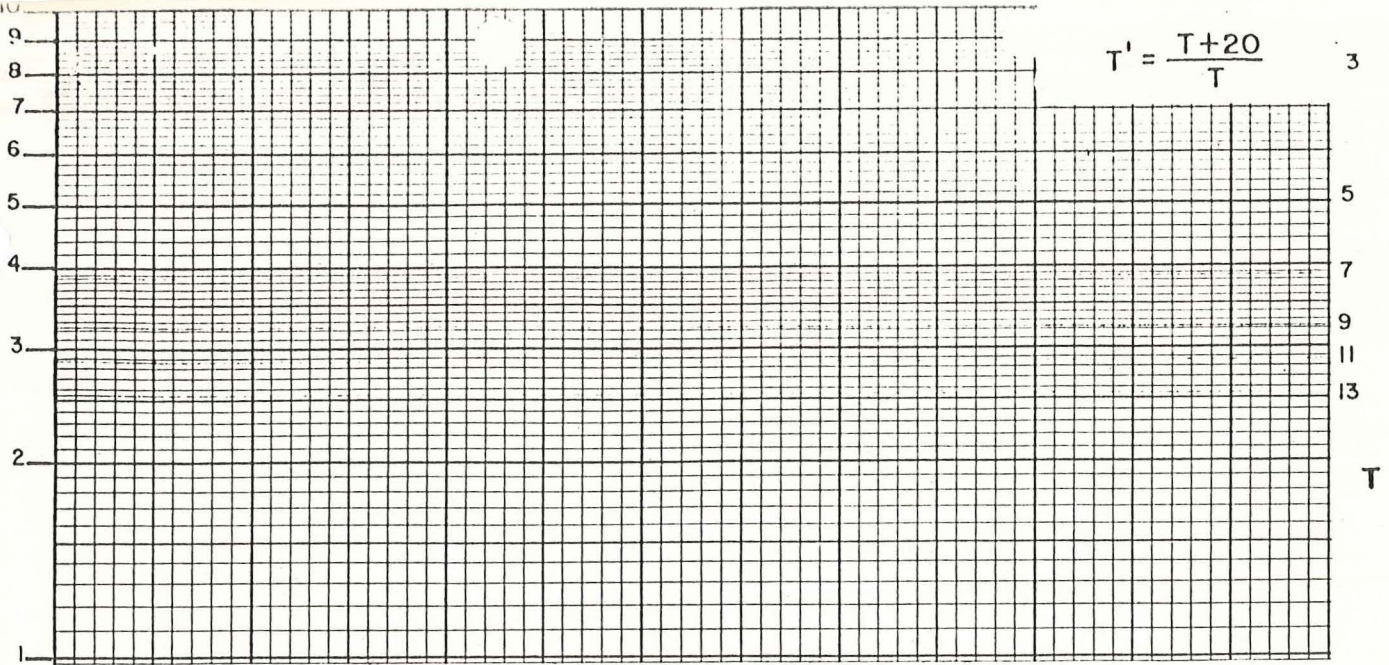
SEGMENT DEPTH		SEGMENT		START	END	K	±	START	END	K	±
16.	20.	36.	50.	3.	3.	3.	5.	3.	3.	3.	5.
.999											

START =
 999
 Point =
 Price =

duplicate

DEPTH	°C	DEPTH	°C	DEPTH	°C
1.	16.22	1.5	16.91	1.	16.82

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 LAT
 DEPTH



Relog

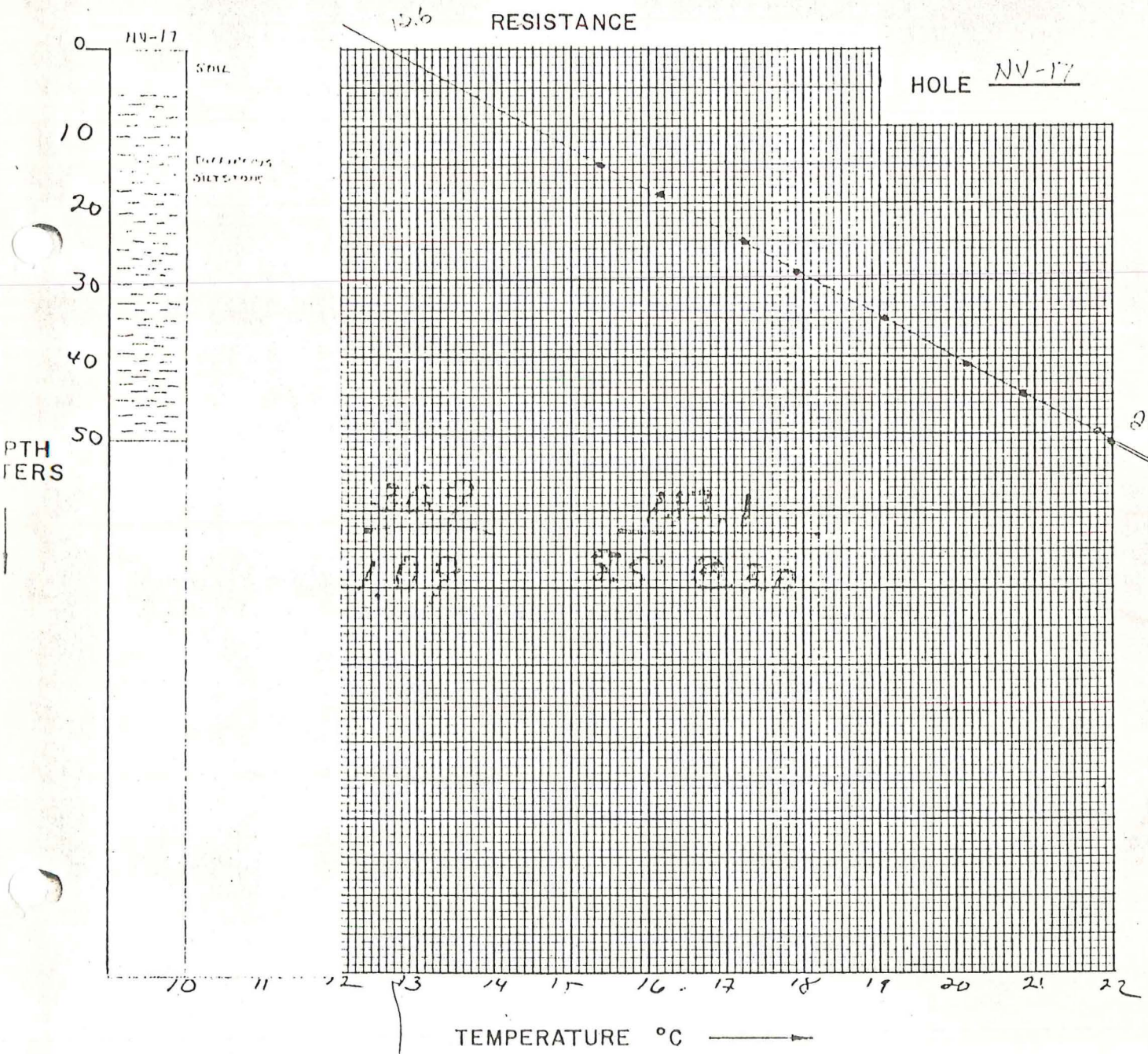
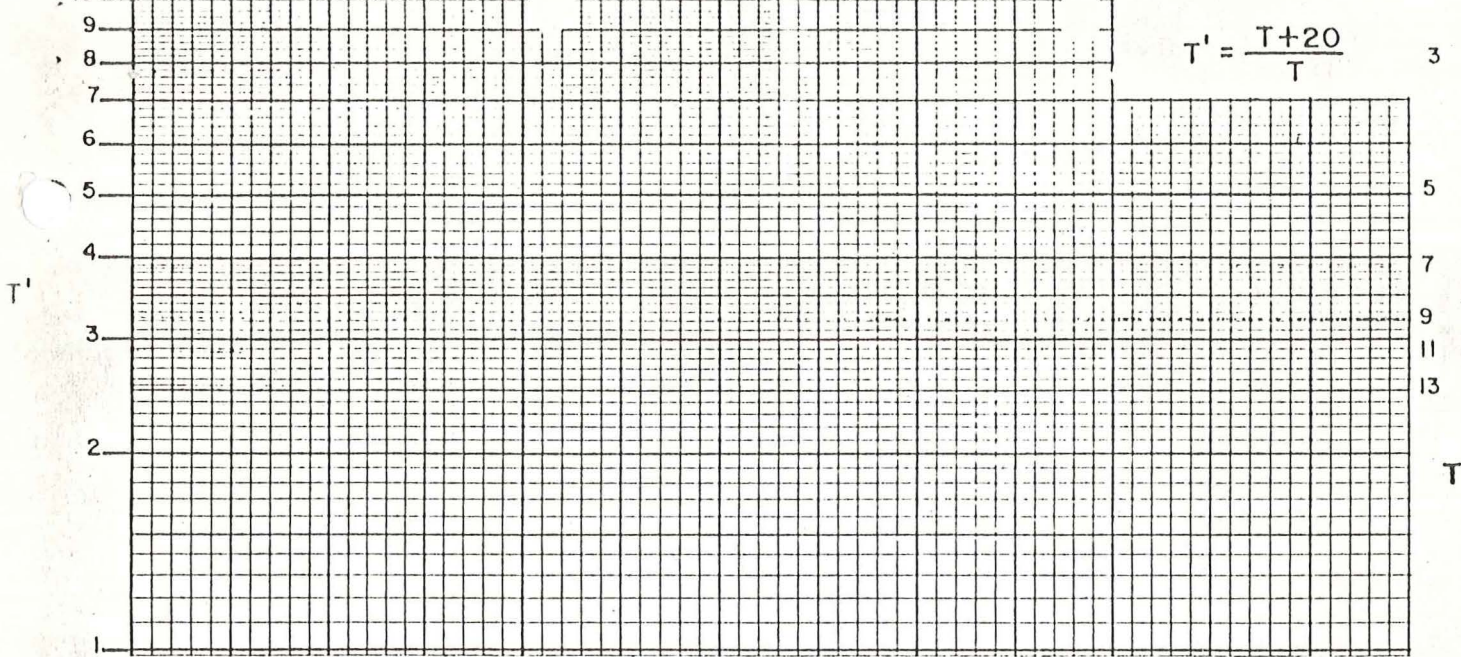
TEMPERATURE - DEPTH LOG

Location 3 1/2 miles NW of Jordan Hot Spring Date Jan 5, 1977
 Map Brogan Oregon 15' Quad
 Property Bully Creek T 17S R 42E sec NW 1/4 NE 1/4 Sec 25
 Drill Hole MV-17 Date Drilled Oct 9, 1975 Elevation 3240 ft.
 Instrument Geothermex Operator MG & DP
 Comments Air temp -5°C

322
1.1 m
10

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
3.0	16	11.87			
6.1	20	12.76	.89		
9.1	30	13.02	.26		
12.2	40	13.64	.62		
15.2	50	14.22	.58		
18.3	60	14.72	.50		
21.3	70	15.35	.63		
24.4	80	16.00	.65		
27.4	90	16.56	.56		
30.5	100	17.10	.54		
33.5	110	17.64	.54		
36.6	120	18.24	.60		
39.6	130	18.86	.62		
42.7	140	19.45	.59		
45.7	150	20.05	.60		
48.8	160	20.68	.63		
60.3	165	20.99	.31		
99.99					

$$T' = \frac{T+20}{T}$$



LITHOLOGIC LOG NV-17

BULLY CREEK PROPERTY

NW $\frac{1}{4}$ NE $\frac{1}{4}$ Sec 25 T17S R42E

Elevation: 3,240'

Depth (meters)

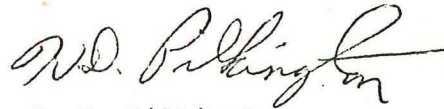
Description

0 - 3

Brown to grayish yellow soil and lag gravel.

3 - 51

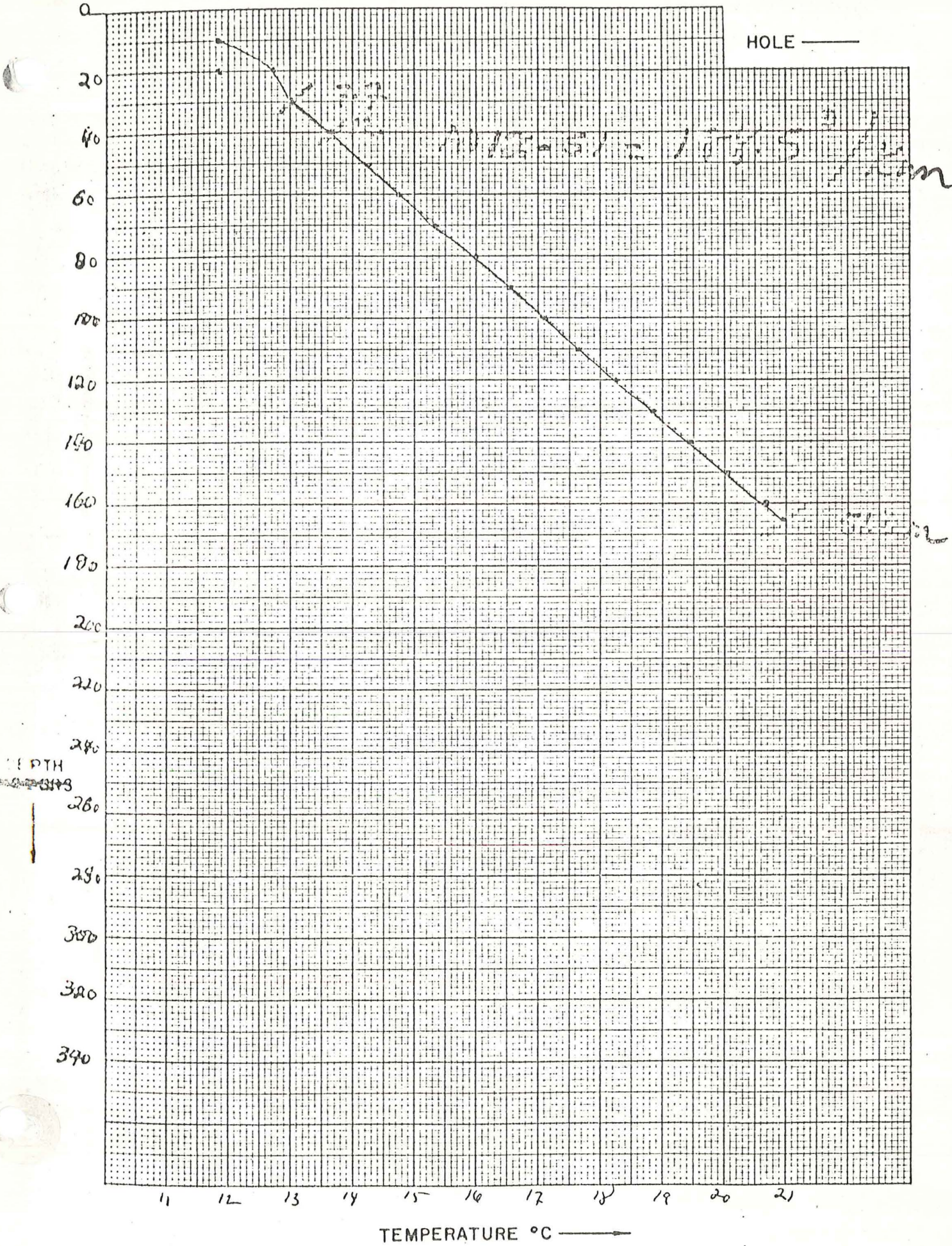
Light gray to yellow brown tuffaceous silstones. Hole was dry to bottom.



H. D. Pilkington

HDP:mmo

HOLE ———



DEPTH



TEMPERATURE °C ———>

TEMPERATURE - DEPTH LOG

Location North Va'a, Oregon Date October 17, 1975
 Map Jamieson Quadrangle
 Property T 18S R 43E sec NE 1/4 SW 1/4 13
 Drill Hole NV-18 Date Drilled October 9, 1975 Elevation 2690 ft.
 Instrument _____ Operator DP
 Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient		Comments
				°C/Km	Avg.	
1	5.294	15.115	0.895			
3	5.109	16.010	-3.090	-154.5		
5	5.555	13.920	-0.300	-15.0		
7	5.621	13.620	0.235	117.5		
9	5.570	13.855	0.170	85.0		
11	5.532	14.025	0.105	52.5		
13	5.508	14.130	0.110	55.0		
15	5.484	14.240	0.135	67.5		
17	5.454	14.375	0.165	72.5		
19	5.422	14.520	0.170	85.0		
21	5.385	14.690	0.140	70.0		
23	5.355	14.830	0.150	75.0		
25	5.323	14.980	0.165	82.5		
27	5.288	15.145	0.245	122.5		
29	5.237	15.390	0.045	22.5		
31	5.227	15.435	0.185	92.5		
33	5.189	15.620	0.160	80.0		
35	5.156	15.780	0.150	75.0		
37	5.125	15.930	0.160	80.0		
39	5.093	16.090	0.165	82.5		
41	5.059	16.255	0.170	85.0		

49
17/2

PROJ.	WELL	DA-MO-YR-F	DESCRIPTION	EDITORS	TERRAIN CORR	L	ISE	WEST
755	208	7	SP 75 ME-208: 2.5 KM N. OF COVE FOOT, UT					
665	1817	OC	75 M4 KM SE OF BULLY CREEK SCH, OR	DP/HEGE				

duplicate

IN	MAP: 75, 15. or 50.	DEG'S SW CORNER	DEG'S	MIN'S	DEG'S	MIN'S	N.	E.	ELEV.	M
CM	15.	38.	20.	112.	45.	8.62	9.42	4825.	F	
CM	15.	44.	00.	117.	30.	1.0	12.7	2690.	F	

duplicate

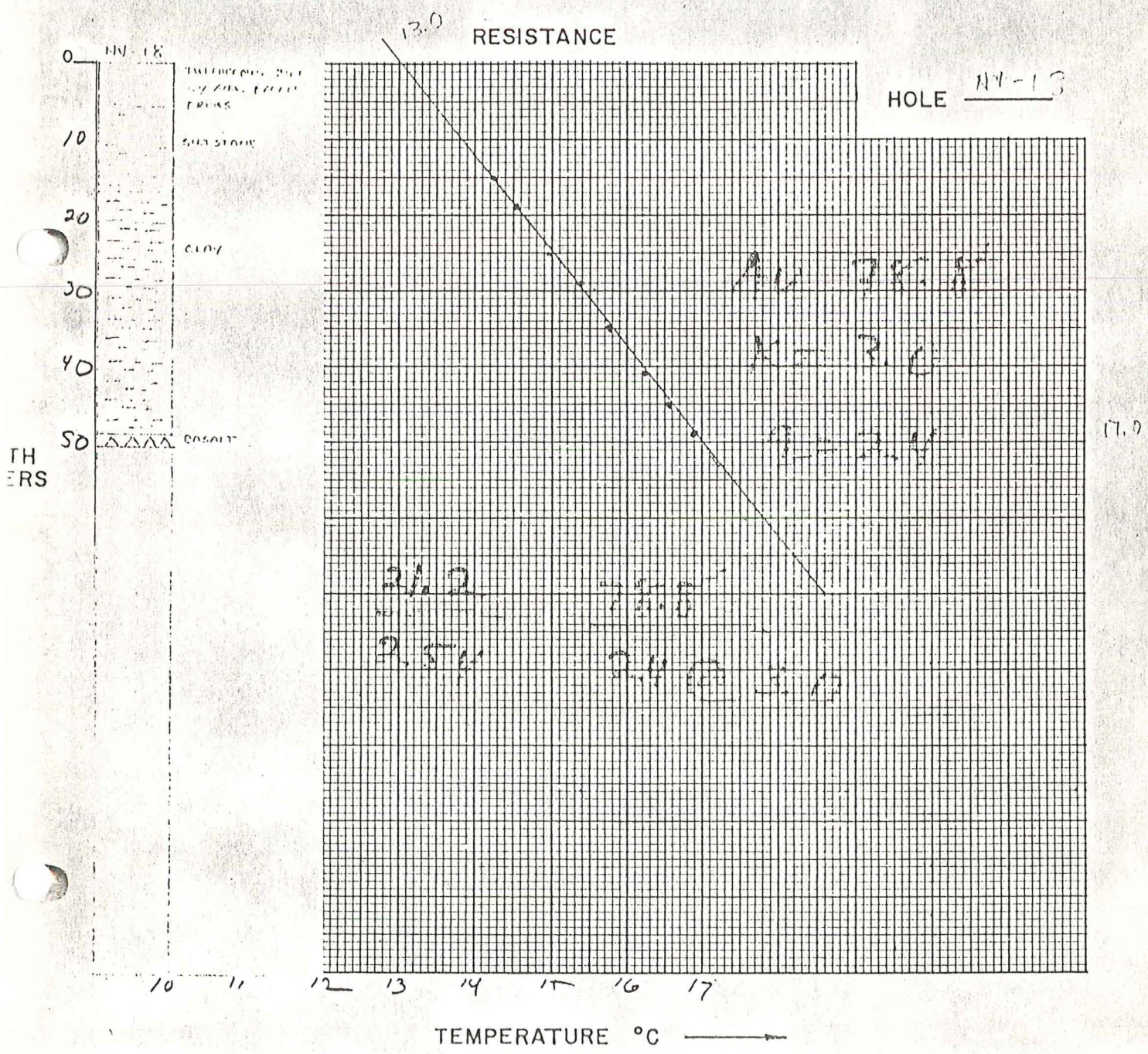
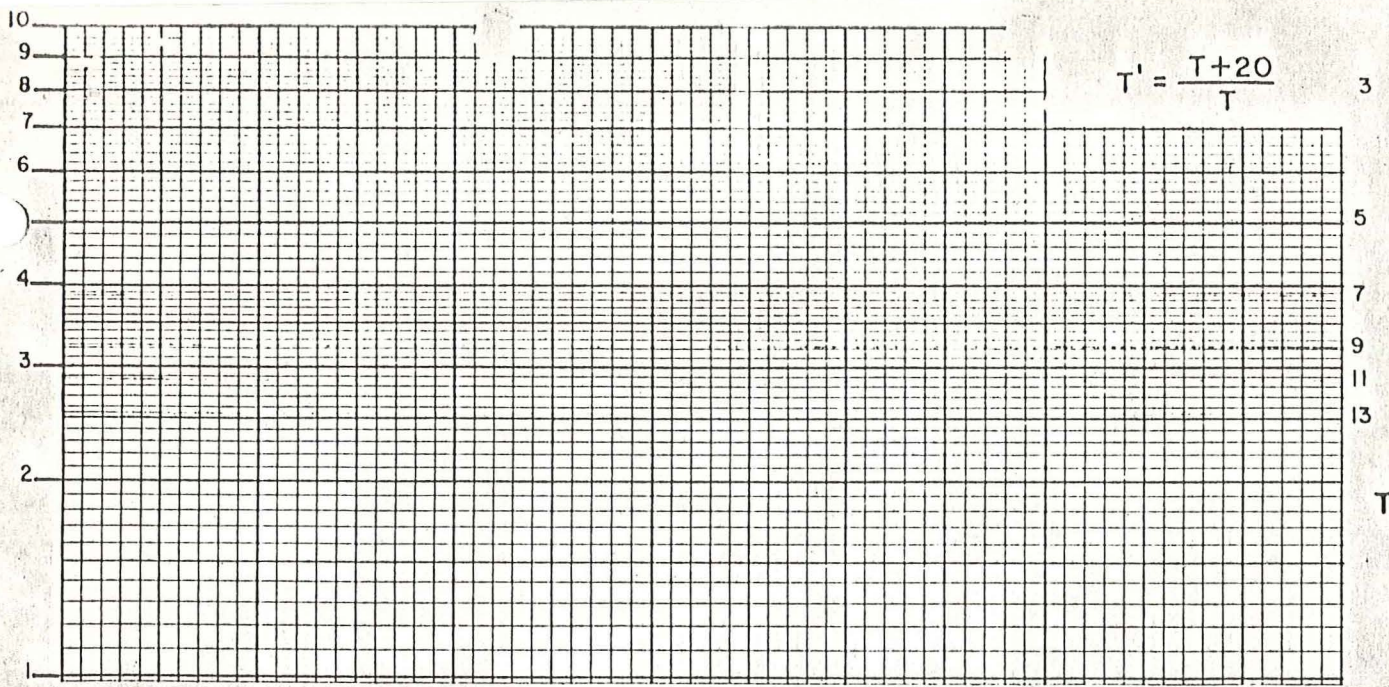
SEGMENT DEPTH										SEGMENT									
START	END	K	±	START	END	K	±	START	END	K	±	START	END	K	±				
16.																			
17.		49.				-3.0	-0.5												

duplicate

DEPTH	°C	DEPTH	°C	DEPTH	°C
1.	16.28	1.5		16.81	

JA, FB, MR, AP, MY, JE, JL, AG, SP, OC, NV, DC

START =
 Br last
 .999
 Point =
 Price =
 99999.
 LAST
 DEPTH



TEMPERATURE - DEPTH LOG

1 of 1
71

Location S side of trail, in saddle Date 17 JAN 77

Map Jackson, OR, 15 MIN

Property NORTH VALLE - JACKSON STEINBERG T 175 R 44E sec NE 4, 3

Drill Hole 77-71 Date Drilled 15 JAN 77 Elevation 2400 ft.

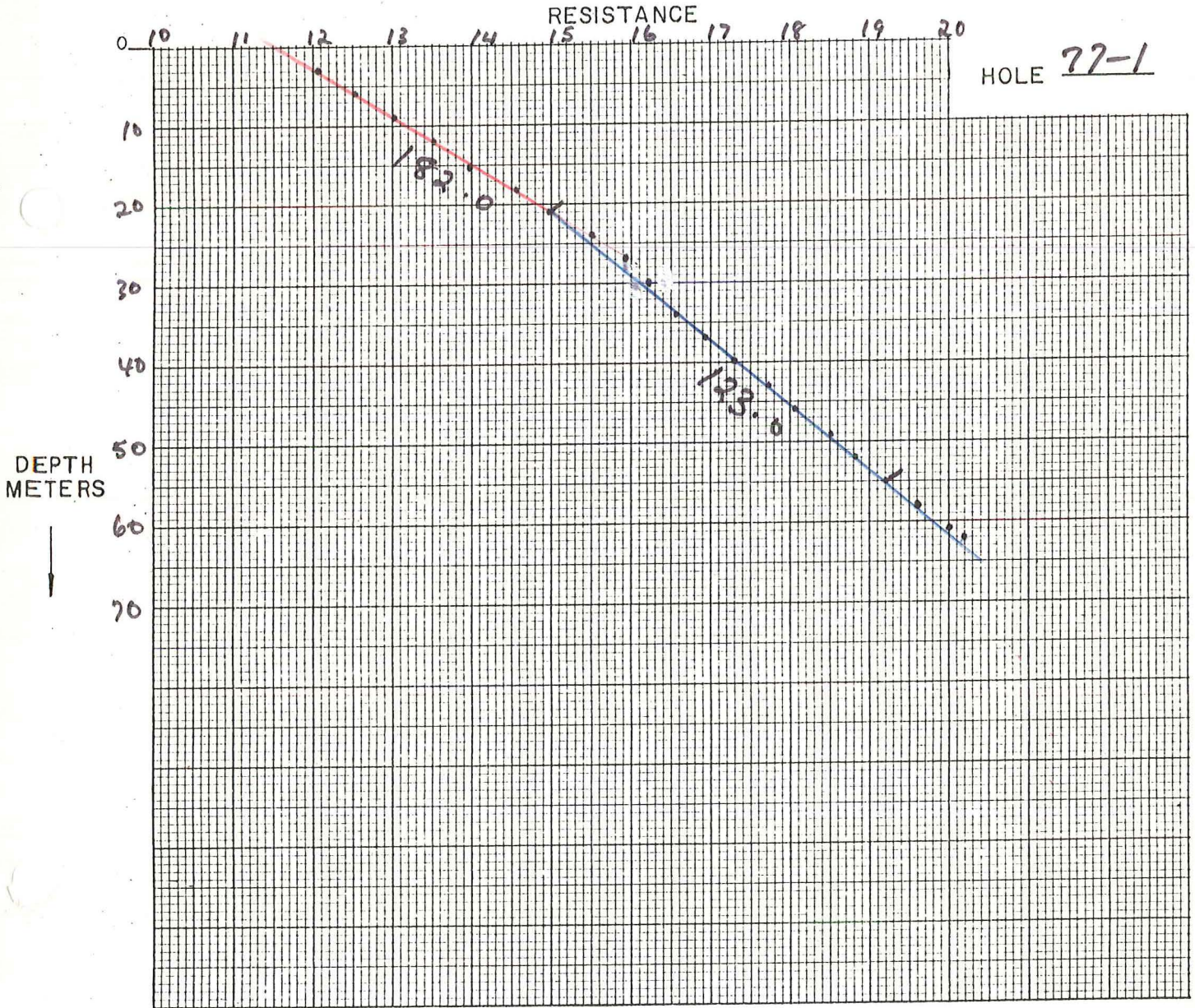
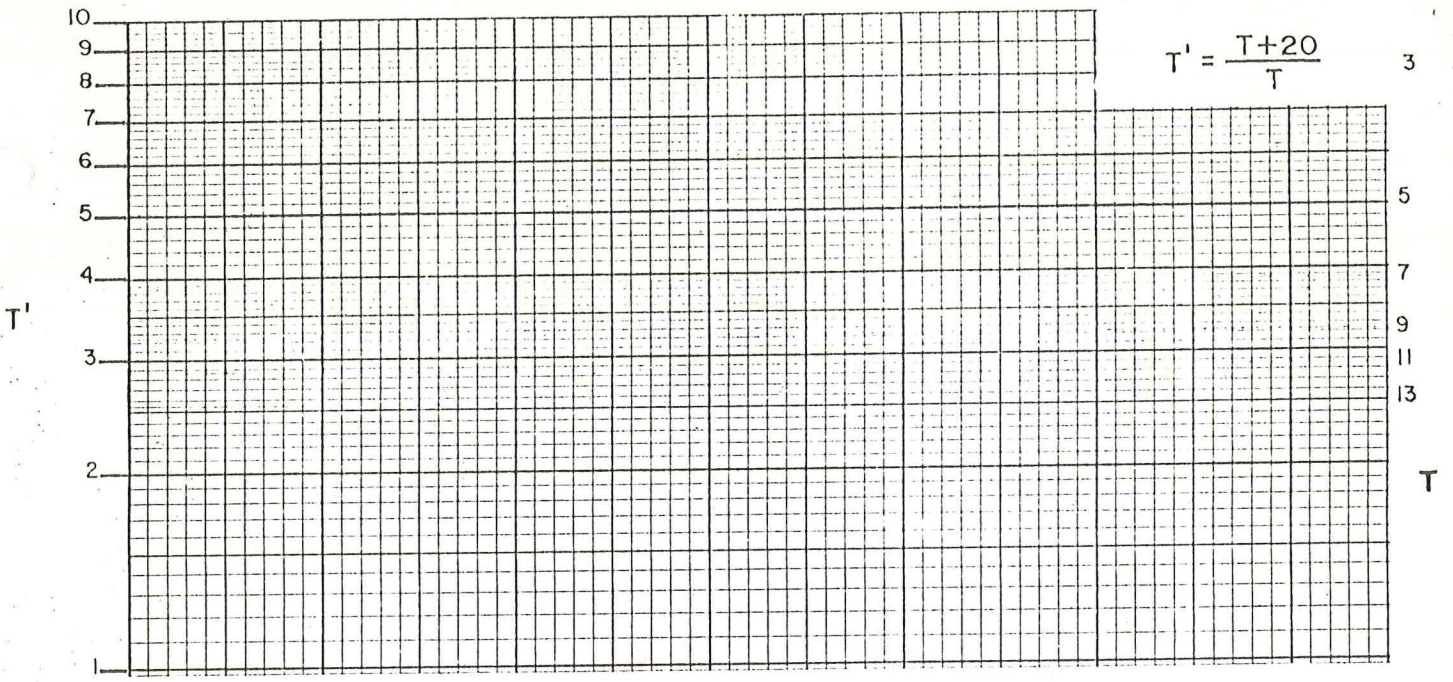
Instrument ENVIRO LABS Operator GARDNER

Comments Change well #

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
10		12.05			NOLE DRY to T.D.
20		12.32	0.41		Buff to pinkish tan med. gr.
30		13.00	.48		grainy tuffaceous sandstone
40		13.53	.43		↓
50		13.94	.41		
60		14.55	.61		
70		14.98	.43		
80		15.51	.53		Change at 86' to med. gray
90		15.87	.36		sticky tuffaceous silt.
100		16.20	.33		claystone - swells + sticky
110		16.55	.35		
120		16.91	.36		
130		17.30	.39		
140		17.70	.40		
150		18.06	.36		
160		18.51	.42		
170		18.81	.30		
180		19.20	.39		
190		19.58	.38	126°C/Km,	
200		20.02	.44	105'-200'; 130°C/Km	
204		20.19	.36/10	0'-200'	

Feet
3.0
6.1
9.1
12.1
15.2
18.2
21.3
24.4
27.4
30.5
33.5
36.6
39.6
42.7
45.7
48.8
51.8
54.9
57.9
61.0
64.0

99999.



TEMPERATURE °C

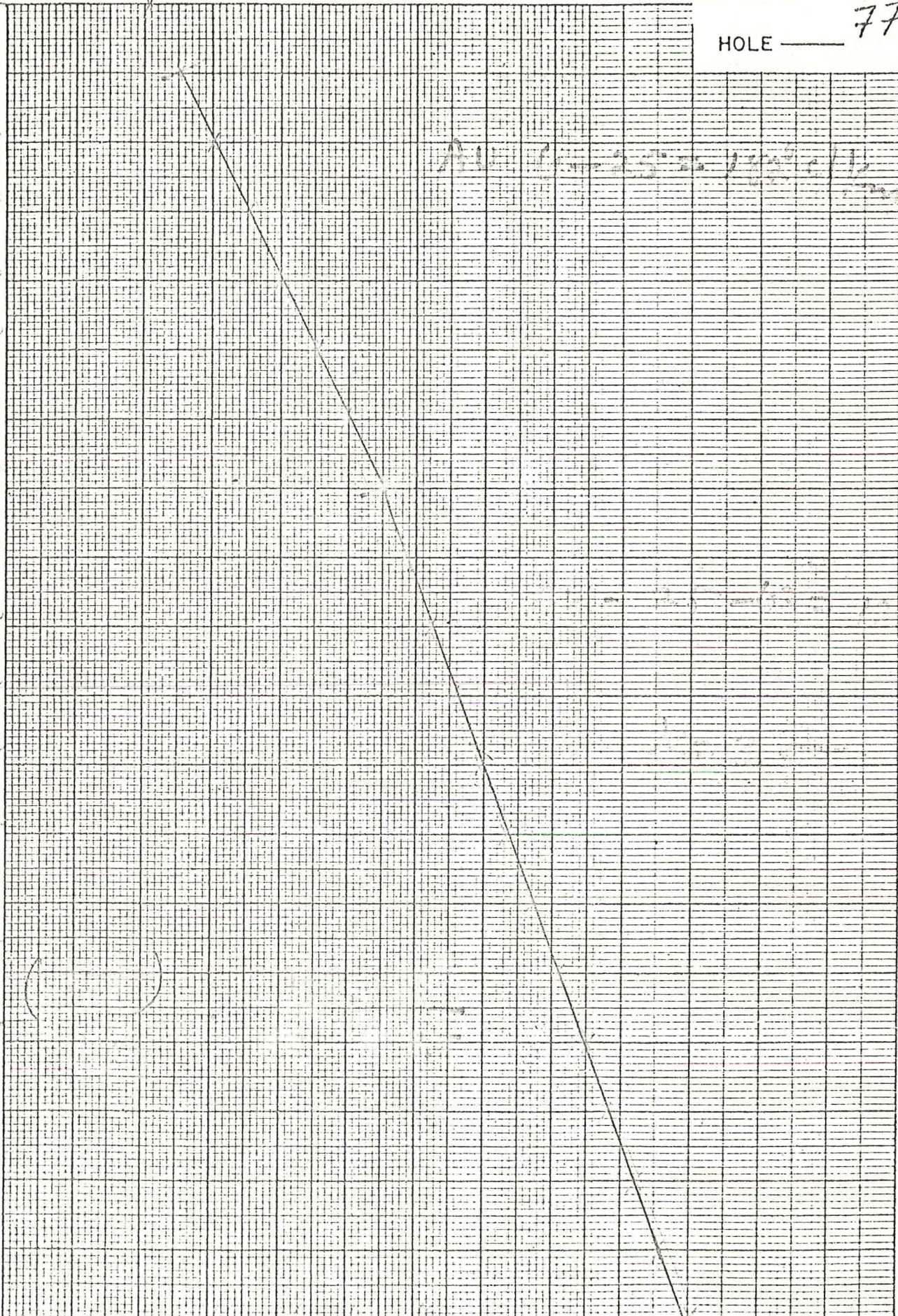
N.V.
77-1

HOLE _____

10 11 12 13 14 15 16 17 18 19 20

DEPTH
METERS
↓
feet

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



TEMPERATURE °C →

10 11 12 13 14 15 16 17 18 19 20 21

TEMPERATURE - DEPTH LOG

1 of 1
72

Location ✓ OF FENCE LINE Date 17 JAN 77

Map JAMISON, OR., 15 MIN

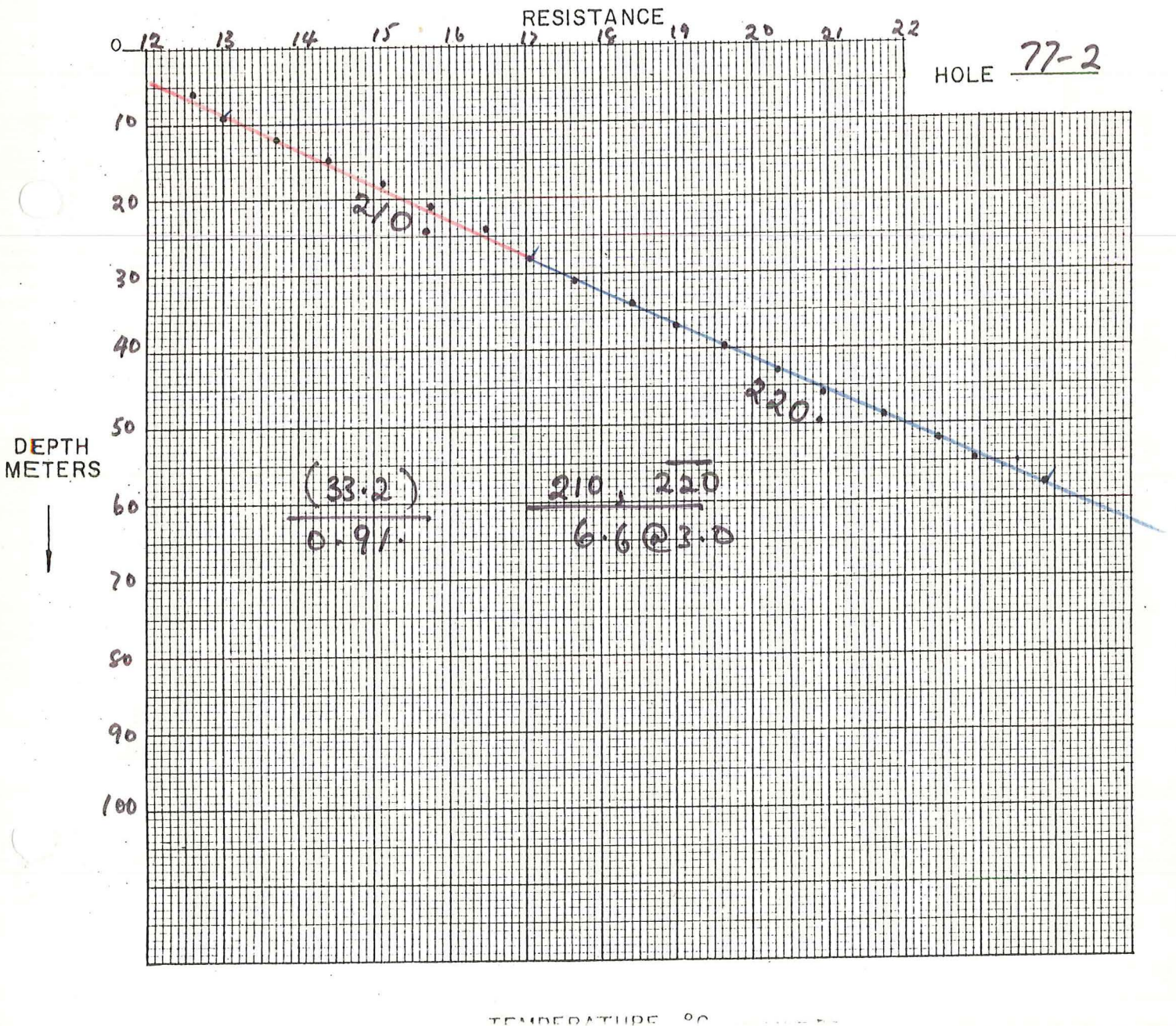
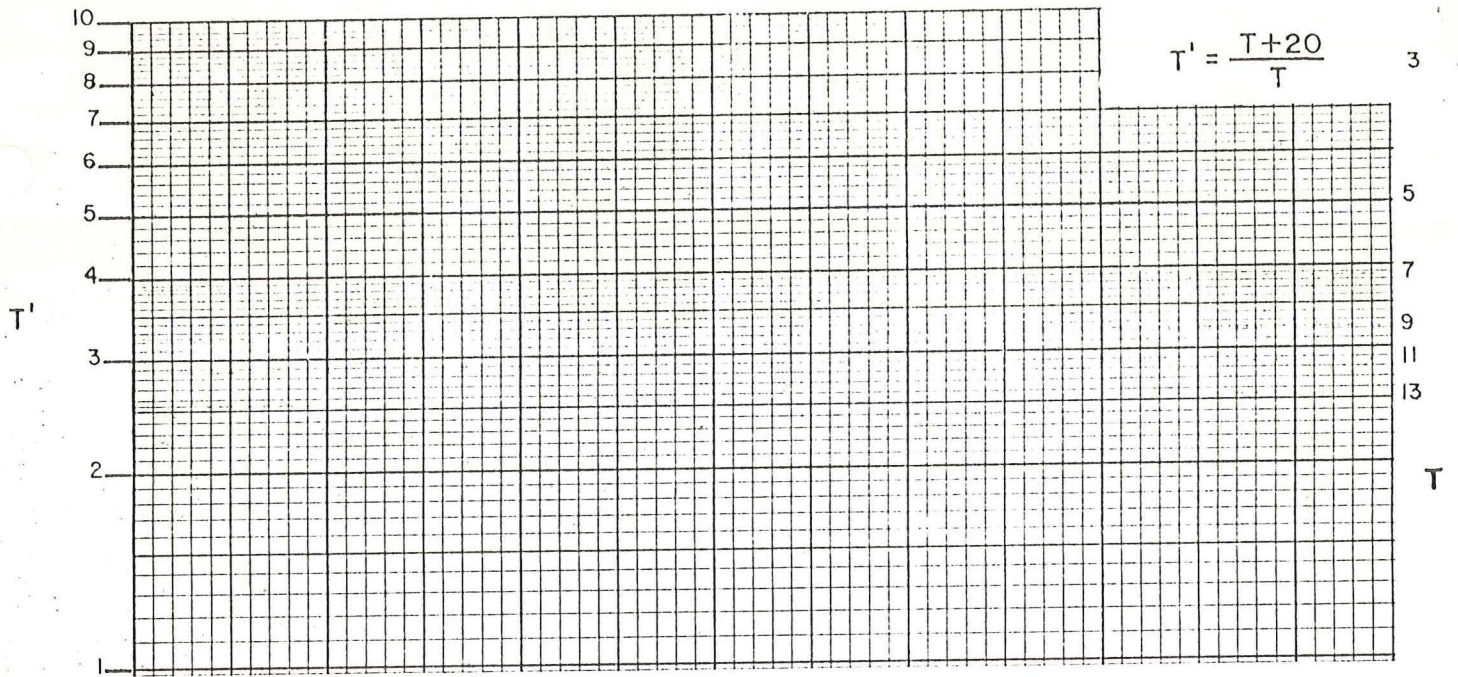
Property NORTHVALE ^{JAMISON} STRINGER T 16 S R 44 E sec SE 4 33

Drill Hole 77-2 Date Drilled 15 JAN 77 Elevation 2400 ft.

Instrument ENVIRO LAB ⁷² Operator BAEDNER

Comments change well NO.

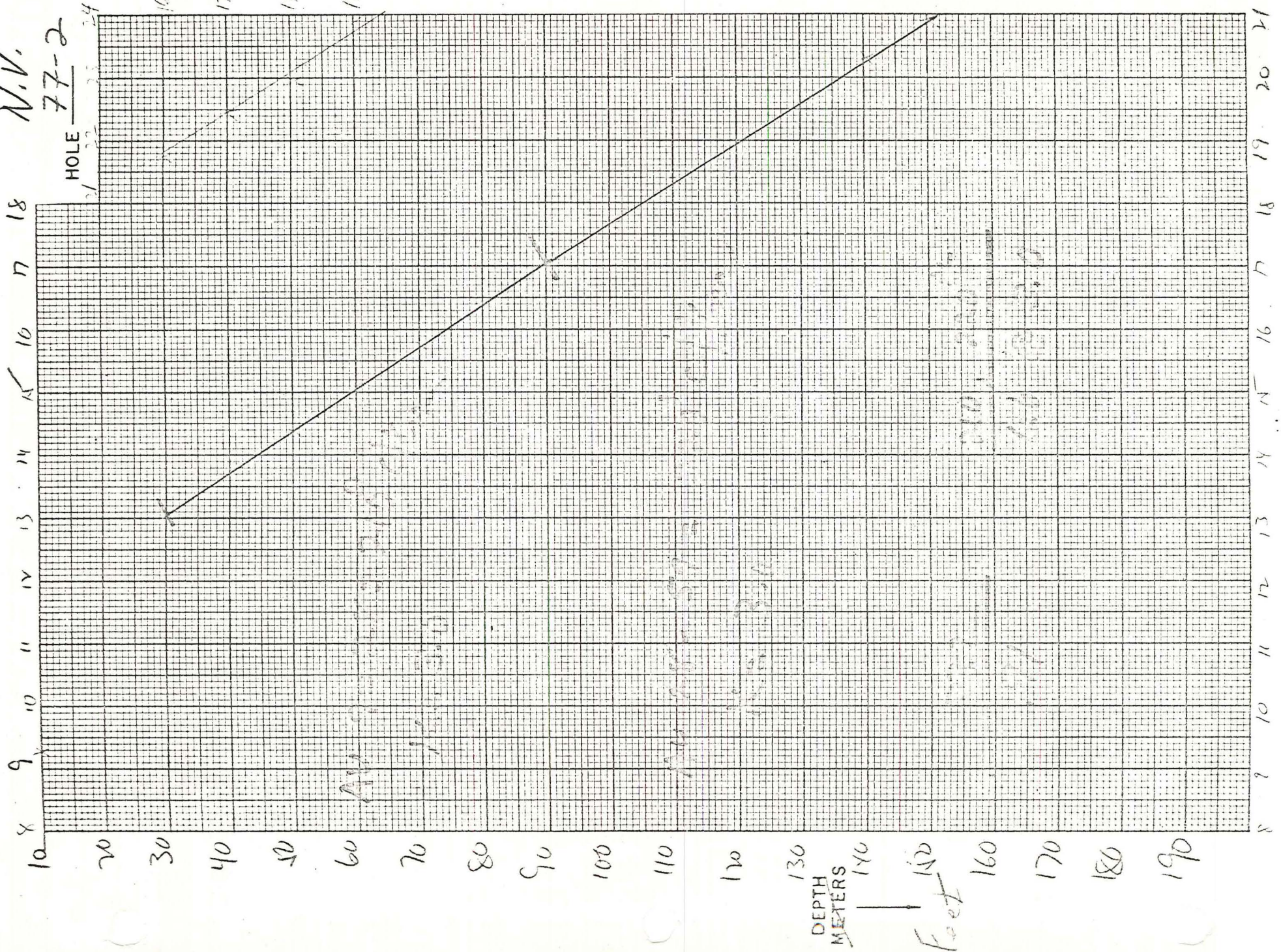
Feet	Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
	10		9.25			
	20		12.65	3.40		
	30		13.07	.42		
	40		13.74	.67		medium gray tuffaceous salt-claystone ↓
	50		14.39	.65		
	60		15.11	.72		
	70		15.77	.66		>2 gpm water entering hole
	80		16.49	.65		
	90		17.06	.64		
	100		17.66	.60		
	110		18.40	.74		increasing water
	120		18.99	.59		
	130		19.69	.65		
	140		20.34	.70		
	150		20.92	.58		
	160		21.71	.79		
	170		22.85	.74		
	180		22.91	.46		
	190		23.89	.98	224°C/km, 90'-190' depth	
	200				221°C/km, 30'-190' depth	
	99999					



N.V.

77-2

HOLE



TEMPERATURE °C

TEMPERATURE - DEPTH LOG

Location 2 Mibs NE of Dennis Date _____

Map Jameison Oregon 15' Quad

Property North Vale BC-108 T 17S R 44E sec SE 1/4 NE 1/4 11

Drill Hole 17-44 S11 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator DOGAMT

Comments Water well

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
5		15.180			
10		17.080	1.900		
15		19.640	2.560		
20		19.680	.040		
25		19.900	.220	44	
30		20.160	.260	52	
35		20.590	.430	86	
40		21.490	.900	180	
45		22.240	.750	150	
50		23.070	.830	166	
55		23.630	.560	118	
60		24.220	.590	118	
65		24.760	.540	108	
70		25.290	.530	106	
75		25.930	.640	128	
80		26.540	.610	122	
85		27.040	.500	100	
90		27.630	.590	118	
95		28.240	.610	122	
100		28.830	.590	118	
105		29.360	.530	106	
110		30.000	.640	128	

TEMPERATURE - DEPTH LOG

Location _____ Date _____

Map _____

Property _____ T _____ R _____ sec _____

Drill Hole _____ Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator _____

Comments Hole 370 meters deep

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
115		30.520	.520	104	
120		31.170	.650	130	
125		31.750	.580	116	
130		32.270	.520	104	
135		32.750	.480	96	
140		33.410	.660	132	
145		33.970	.560	112	
150		34.590	.620	124	
155		35.160	.570	114	
160		35.750	.590	118	
165		36.320	.570	114	
170		36.890	.570	114	
175		37.480	.590	118	
180		37.920	.440	88	
185		37.920	.590	118	
190		38.510	.560	112	
195		39.070	.530	106	
200		39.600	.470	94	
205		40.070	.540	108	
210		40.610	.470	94	
215		41.080	.440	88	
220		41.520	.440	88	
99990		41.950	.430	86	

PROJ.	WELL	DA-MO-YR-F	DESCRIPTION	EDITORS	TERRAIN	COORD	USE
755	208	7 SP 76 MB-208	2.5 KM N. OF COVE Fc T, VT				
7665	108	M 7.0 KM SE OF LANCASTER, OR					

COPIED FOR CON

duplicate

IN CM	MAP: 75, 15, or 60.	DEG'S LAT	MIN'S DLAT	DEG'S LONG.	MIN'S DLONG	N.	E.	ELEV.	M/F
IN	15.	38.	20.	112.	45.	8.62	9.42	4825.	F
CM	15.	44.	00	117.30	19.0		27.4	2350	F

18.9 27.

duplicate

SEGMENT DEPTH										SEGMENT									
START	END	K	±	START	END	K	±	START	END	K	±	START	END	K	±				
16.	20.	7.	.5	20.	20.	20.	.5	20.	20.	20.	.5	20.	20.	20.	.5				
50.	220.	-3.	-.5	.999															

STA T =
-999
or last
999
Fast =
Princ. =

duplicate

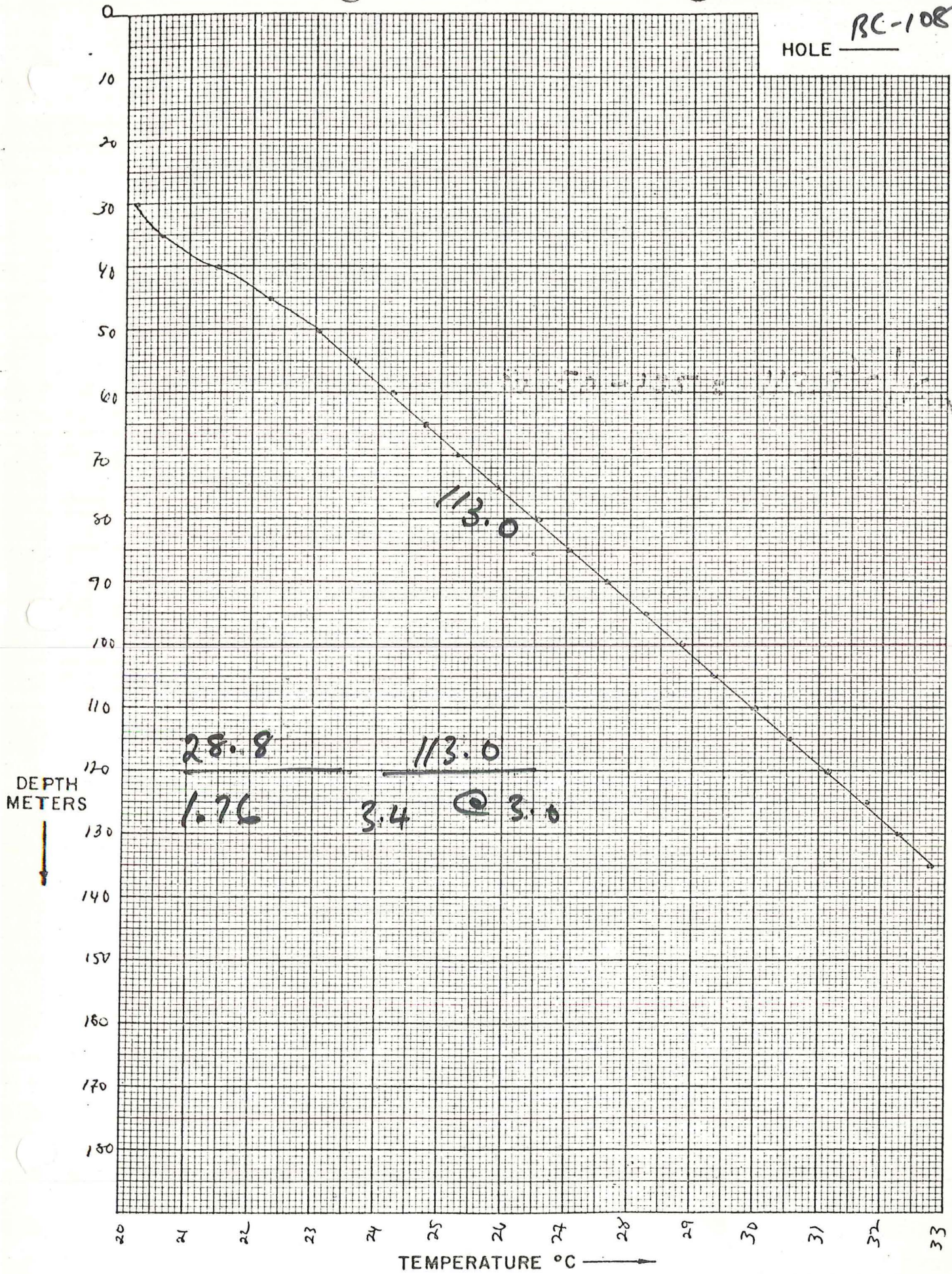
DEPTH	°C	DEPTH	°C	DEPTH	°C
1.	16.225	1.5	16.510	2.	16.82

99999.
LAST
DEPT

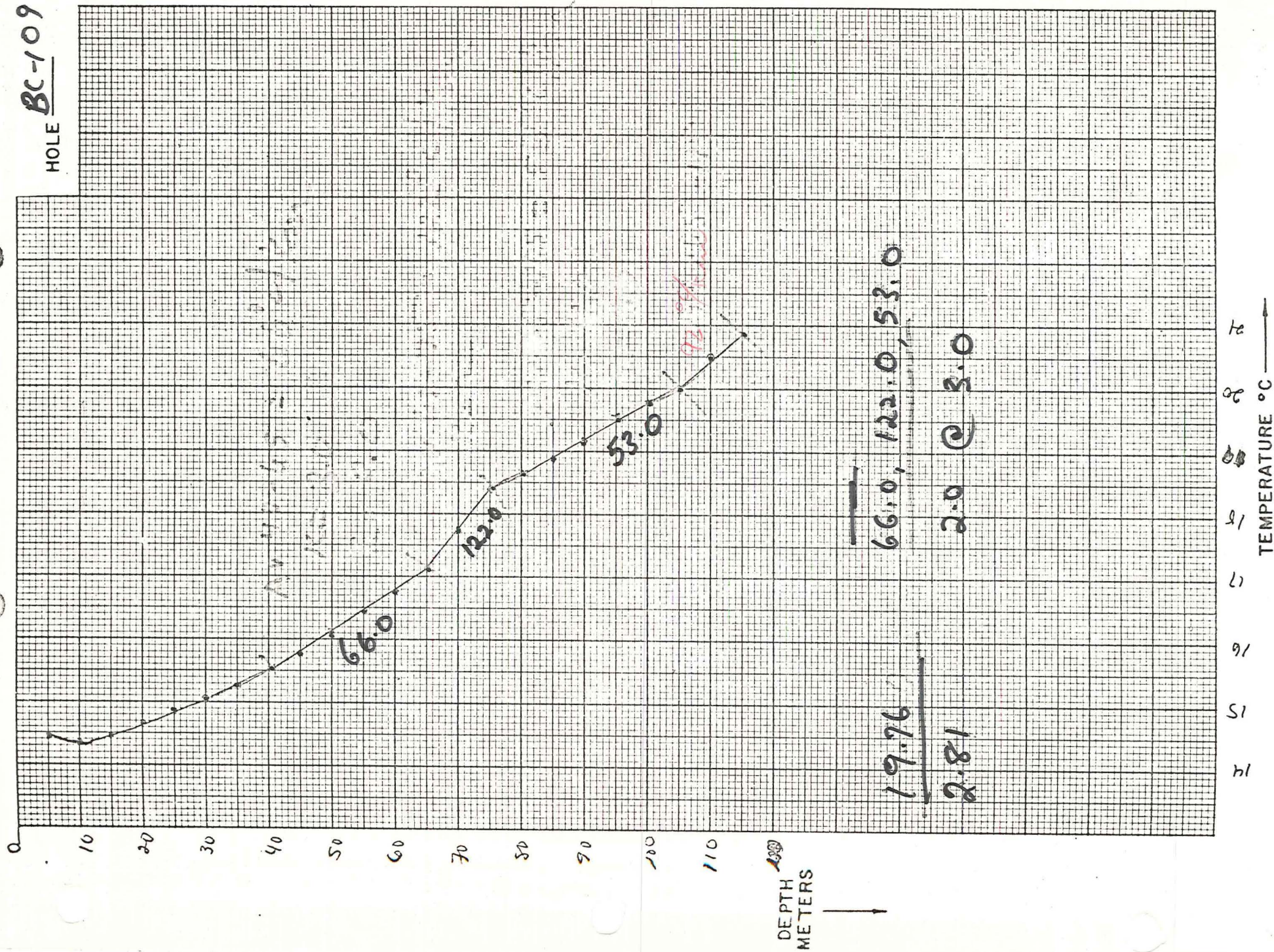
JA, FB, MR, AP, MY, JE, JL, AG, SP, OC, NV, DC

COPIED FOR CON

HOLE RC-108



HOLE BC-109



TEMPERATURE - DEPTH LOG

Location 2 miles East of Jamieson Date _____

Map Jamieson Oregon 15' Quad

Property North Vale T 16 S R 43 E sec NE 1/4 SE 1/4 13

Drill Hole BC-110 16-43 S13 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator DOGAMI

Comments Water Well

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
5		12.900			
10		13.970	1.070		
15		15.130	1.160		
20		16.130	1.000		
25		16.300	.170	34	
30		16.550	.250	50	
35		16.800	.250	50	
40		16.930	.130	26	
45		17.110	.180	36	
50		17.300	.190	38	
55		17.540	.240	48	
60		17.770	.230	46	
65		18.010	.240	48	
70		18.360	.350	70	
75		18.590	.230	46	
80		18.880	.290	58	
85		19.150	.270	54	
90		19.430	.280	56	
95		19.650	.220	44	
100		19.920	.280	56	
105		20.210	.280	56	
9999					

PROJ. WELL DA-MO-YR-F DESCRIPTION EDITORS TERRAIN CORR. USE LIST

755 208 7 SF 76 ME-208 2.5 KM N. OF COVE FOOT, UT DOG/AKIN

665 110 M 4. KM EAST OF JAMEISON, OR

duplicate

IN	MAP: 7.5, 15. or 50.	DEG'S SW CORNER LAT	MIN'S DLAT	DEG'S LONG.	MIN'S DLONG	N.	E.	ELEV.	(M/F)
IN	15.	38.	20.	112.	45.	8.62	9.42	4825.	F
CM	15.	44.	00	117.	30	31.55	14.0	2600.	F

duplicate

SEGMENT DEPTH					SEGMENT				
START	END	K	±	START	END	K	±	START	END
16.									
50.	130			135.	155.	1.43	.5		
155.	170.	2.75	-.5	.999					

START =
 999
 Point =
 Price =

duplicate

DEPTH	°C	DEPTH	°C	DEPTH	°C
1.	16.30	1.5		16.81	16.82

99999
 LAT
 DEPTH

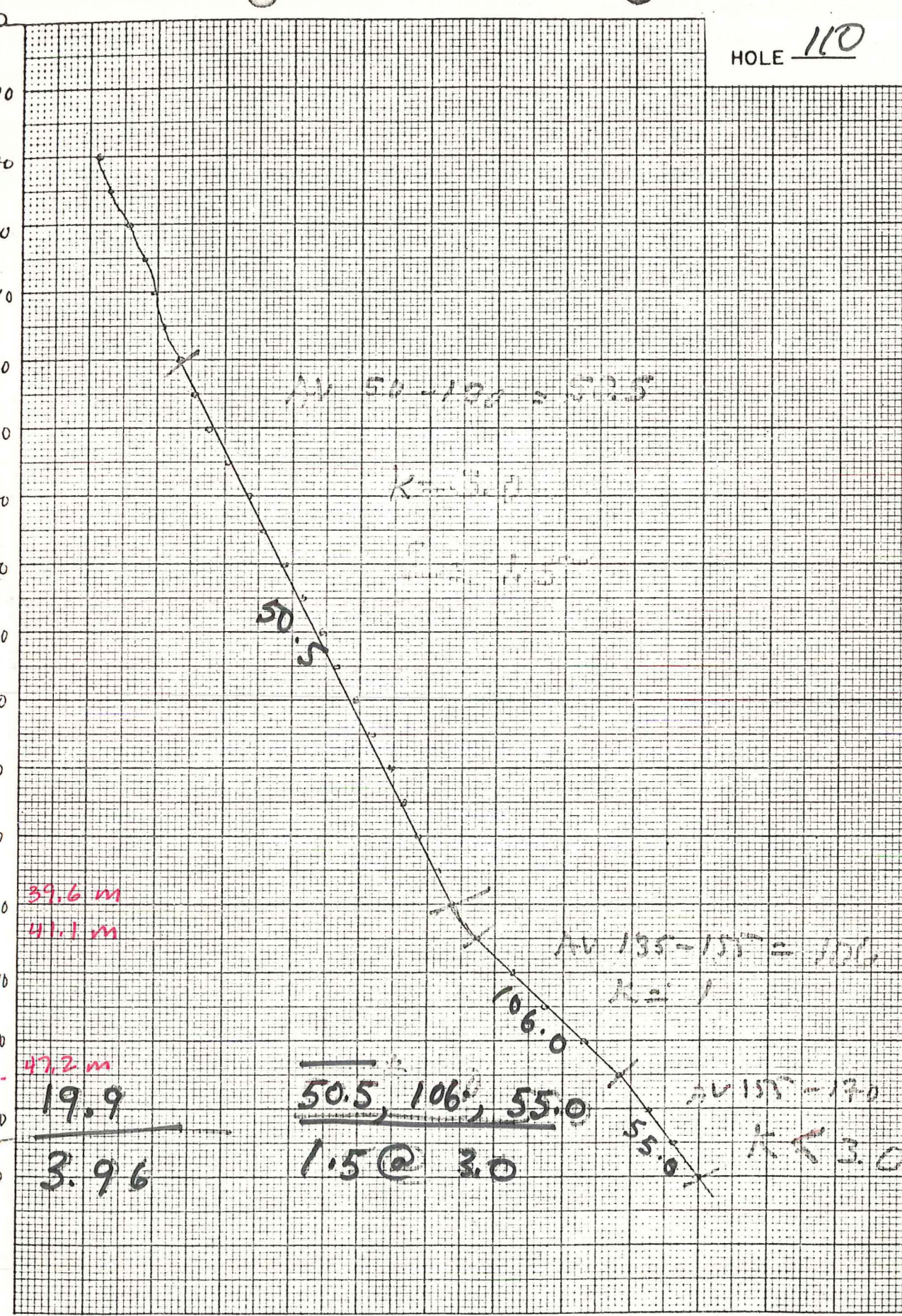
HOLE 110

15.2 m

DEPTH METERS

51.8 m

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



AV 50-100 = 50.5

106.0

55.0

50.5

AV 135-155 = 106.0

AV 155-170 = 55.0

39.6 m

41.1 m

47.2 m

19.9

3.96

50.5, 106.0, 55.0

1.5 @ 3.0

50.5

55.0

55

3.0

16 17 18 19 20 21 22 23 24 25

TEMPERATURE °C

TEMPERATURE - DEPTH LOG

Location Jamieson Date _____

Map Jamieson, Oregon 15' Quad

Property North Vale T 16 S R 43 E sec 15

Drill Hole BC-111611
16-43-515 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator DOGAMI

Comments Water Well TD 230 m

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
5		15.590			
10		15.700	.110	22	
15		15.860	.160	32	
20		16.000	.140	28	
25		16.150	.150	30	
30		16.370	.220	44	
35		16.580	.210	42	
40		16.640	.060	12	
45		16.810	.170	34	
50		16.940	.130	26	
55		17.130	.190	38	
60		17.360	.230	46	
65		17.580	.220	44	
70		17.800	.220	44	
75		17.980	.180	36	
80		18.210	.230	46	
85		18.410	.200	40	
90		18.590	.180	36	
95		18.770	.180	36	
100		18.970	.200	40	
105		19.300	.330	66	
110		19.710	.410	82	

PROJ.	WELL	DA-MO-YR-F	DESCRIPTION	EDITORS	TERRAIN	COORD	ISE	LIST
755	208	7 SP 76	MB-208: 2.5 KM N. OF COVE FOST, UT	VED				
7665	611	M	1 KM SOUTH OF JAMELSON, OR	DOG/AAM				

GOING
FORN
CON

duplicate

IN	CM	MAP: 7.5, 15, or 30.	DEG'S LAT	MIN'S DLAT	DEG'S LONG.	MIN'S DLONG	N.	E.	ELEV.	M	F
	IN	15.	38.	00.	112.	45.	8.62	9.42	4825.		F
	CM	15.	44.	00.	117.	30.	31.65	8.70	2480		F

31.6 8.6

duplicate

SEGMENT DEPTH										SEGMENT														
START					END					START					END									
				16.																				
				50.				100.						5.7					100.					170.
				-999										-5										-3.2
				15.				50.						50.					100.					+3.2
				100.				125.						125.					190.					-0.5
				-999																				

STA T =
-999
or last
-999
Last =
Princ: ...

duplicate

DEPTH	°C	DEPTH	°C	DEPTH	°C
1.	16.325	1.5	16.510	2.	16.82-

99999.
LAST
DEPTH

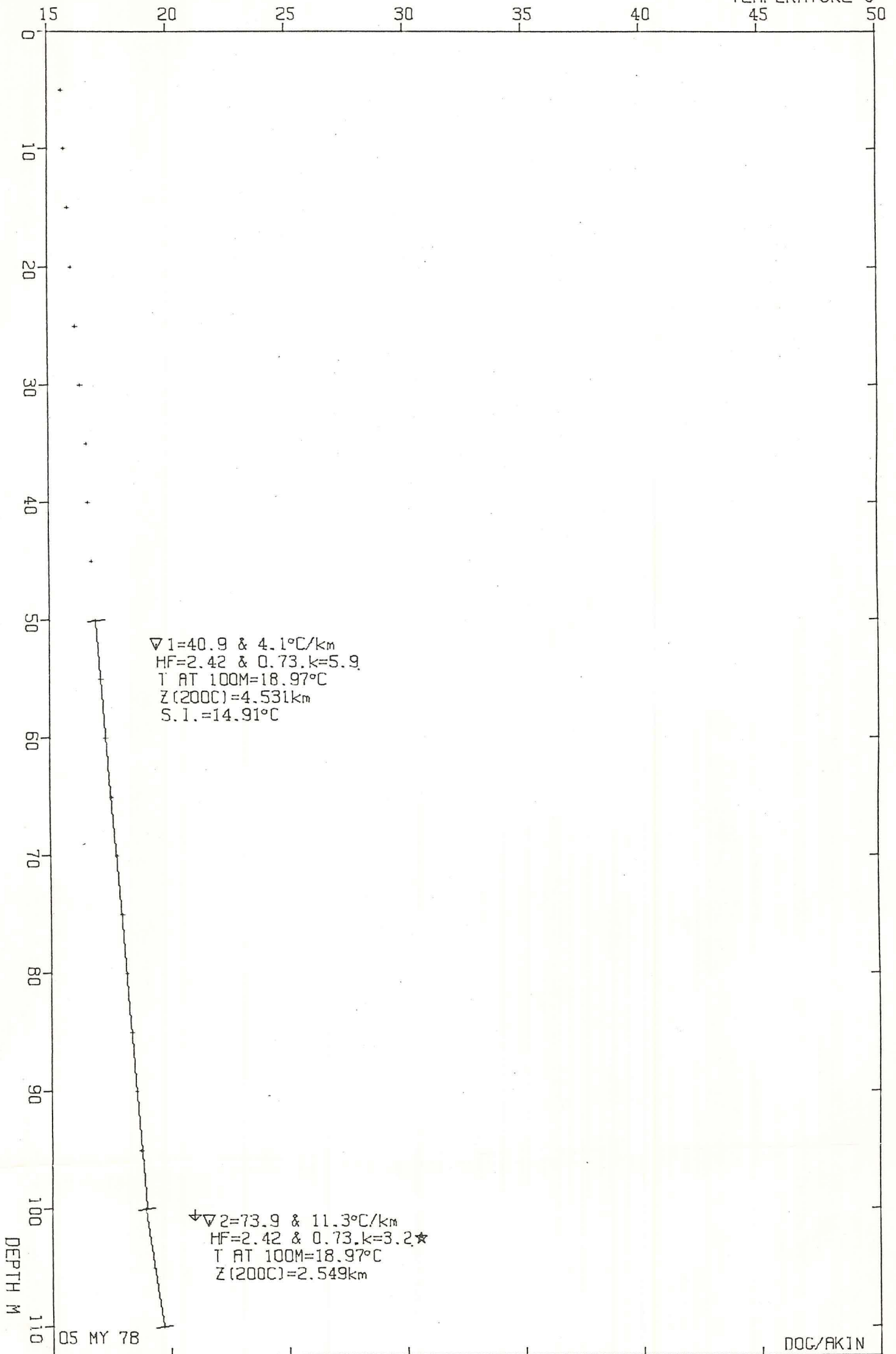
JA, FB, MR, AP, MY, JE, JL, AG, SP, OC, NV, DC

GOING FORN CON

VALE, OR
1 KM SOUTH OF JAMEISON, OR
PROJ. 665 WELL 611

N.LAT 44.179; W.LONG 117.433

TEMPERATURE °C



PROJECT: VALE, BR

PROJ WELL DA MO YR WELL TITLE EDITOR TERRAIN LP LI ISZ TST
665 611 1KM SOUTH OF JAMEISON, BR DOG/AKIN 0.0 0 0 1 1

YCM XCM N.LAT W.LONG ELEV
31.6000 8.6000 44.1786 117.4328 755.9

J SEG START SEG END CONDTVITY & STD DEV.
1 50.000 100.000 5.700 50.000
2 100.000 110.000 3.200 0.500

PRECEDING CONDUCTIVITY USED TO COMPUTE OTHERS
*** PREVIOUS SEGMENT USED TO EXTRAPOLATE TO DEPTH ***

PROJ	WELL	DA	MO	YR	DEPTH (M)	DEG C	DEG C/KM	SAMPLE NO.
665	611				5.000	15.590	99999.000	1
					10.000	15.700	22.000	2
					15.000	15.860	32.000	3
					20.000	16.000	28.000	4
					25.000	16.150	29.999	5
					30.000	16.370	44.000	6
					35.000	16.580	41.998	7
					40.000	16.640	12.003	8
					45.000	16.810	34.000	9
					50.000	16.940	25.998	10
665	611				55.000	17.130	38.000	11
					60.000	17.360	45.999	12
					65.000	17.580	44.000	13
					70.000	17.800	44.000	14
					75.000	17.980	36.002	15
					80.000	18.210	45.999	16
					85.000	18.410	39.999	17
					90.000	18.590	36.002	18
					95.000	18.770	35.999	19
					100.000	18.970	39.999	20
665	611				105.000	19.300	66.000	21
					110.000	19.710	82.001	22

SURFACE INTERCEPT FOR SEGMENT 1 = 14.912

SEG	ZSTART	TSTART	ZEND	TEND	COND & DCON	GRADIENT & S.D.	HFL &	DHF	T AT 100M	KM
1	50.000	16.940	100.000	18.970	5.928 50.000	40.852 4.123	2.482	0.732	18.970	4.531

SEG	ZSTART	TSTART	ZEND	TEND	COND & DCON	GRADIENT & S.D.	HFL &	DHF	T AT 100M	KM
2	100.000	18.970	110.000	19.710	3.200 0.500	73.910 11.315	2.482	0.732	18.970	2.549

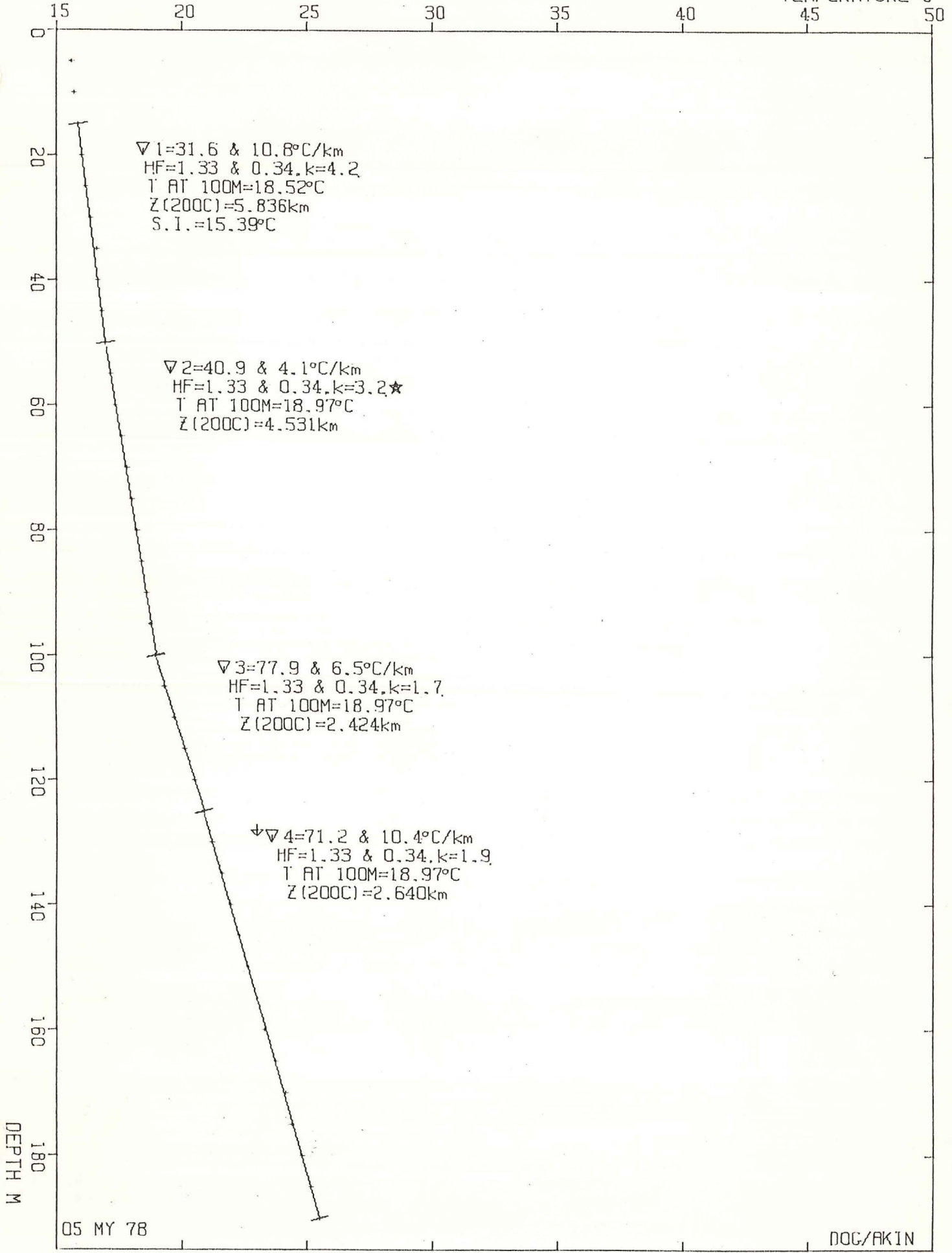
PRECEDING SEGMENT USED FOR EXTRAPOLATION



VALLE, OR
1KM SOUTH OF JAMEISON, OR
PROJ. 665 WELL 111

N.LAT 44.179, W.LONG 117.432

TEMPERATURE °C



05 MY 78

PROJECT: VALE, OR

PROJ WELL DA MO YR WELL TITLE EDITOR TERRAIN LP LI ISZ YST
 665 111 1KM SOUTH OF JAMEISON, OR DGG/AKIN 0.0 0 0 1 1

YCM XCM N.LAT W.LONG ELEV
 31.6500 8.7000 44.1789 117.4320 755.9

J SEG START SEG END CONDUCTIVITY & STD DEV.

1 15.000 50.000 0.000 0.000
 2 50.000 100.000 3.200 0.500

PRECEDING CONDUCTIVITY USED TO COMPUTE OTHERS

3 100.000 125.000 0.000 0.000
 4 125.000 190.000 0.000 0.500

*** PREVIOUS SEGMENT USED TO EXTRAPOLATE TO DEPTH ***

PROJ	WELL	DA	MO	YR	DEPTH (M)	DEG C	DEG C/KH	SAMPLE NO.
665	111				5.000	15.590	99999.000	1
					10.000	15.700	22.000	2
					15.000	15.860	32.000	3
					20.000	16.000	28.000	4
					25.000	16.150	23.999	5
					30.000	16.370	44.000	6
					35.000	16.580	41.998	7
					40.000	16.640	12.003	8
					45.000	16.810	34.000	9
					50.000	16.940	25.998	10
665	111				55.000	17.130	33.000	11
					60.000	17.360	45.999	12
					65.000	17.580	44.000	13
					70.000	17.800	44.000	14
					75.000	17.980	36.002	15
					80.000	18.210	45.999	16
					85.000	18.410	37.999	17
					90.000	18.590	36.002	18
					95.000	18.770	35.999	19
					100.000	18.970	39.999	20
665	111				105.000	19.300	66.000	21
					110.000	19.710	82.001	22
					115.000	20.100	78.000	23
					120.000	20.500	80.002	24
					125.000	20.900	79.999	25
					130.000	21.200	60.001	26
					135.000	21.600	79.999	27
					140.000	21.950	70.001	28
					145.000	22.300	69.998	29
					150.000	22.650	70.001	30
665	111				155.000	23.000	70.001	31
					160.000	23.300	59.998	32
					165.000	23.750	90.002	33
					170.000	24.150	79.999	34
					175.000	24.400	50.000	35
					180.000	24.800	79.999	36
					185.000	25.150	70.001	37
					190.000	25.500	70.001	38



SURFACE INTERCEPT FOR SEGMENT 1 = 15.390

SEG	ZSTART	TSTART	ZEND	TEND	COND & DCEN	GRADIENT & S.D.	HFL &	DHF	T AT 100M	KM
1	15.000	15.860	50.000	16.940	4.197 0.000	31.641 10.794	1.328	0.336	18.522	5.836
2	50.000	16.940	100.000	18.970	3.200 0.500	40.852 4.123	1.328	0.336	18.970	4.531
3	100.000	18.970	125.000	20.900	1.704 0.000	77.912 6.468	1.328	0.336	18.970	2.424
4	125.000	20.900	190.000	25.500	1.864 0.500	71.238 10.389	1.328	0.336	18.970	2.640

PRECEDING SEGMENT USED FOR EXTRAPOLATION

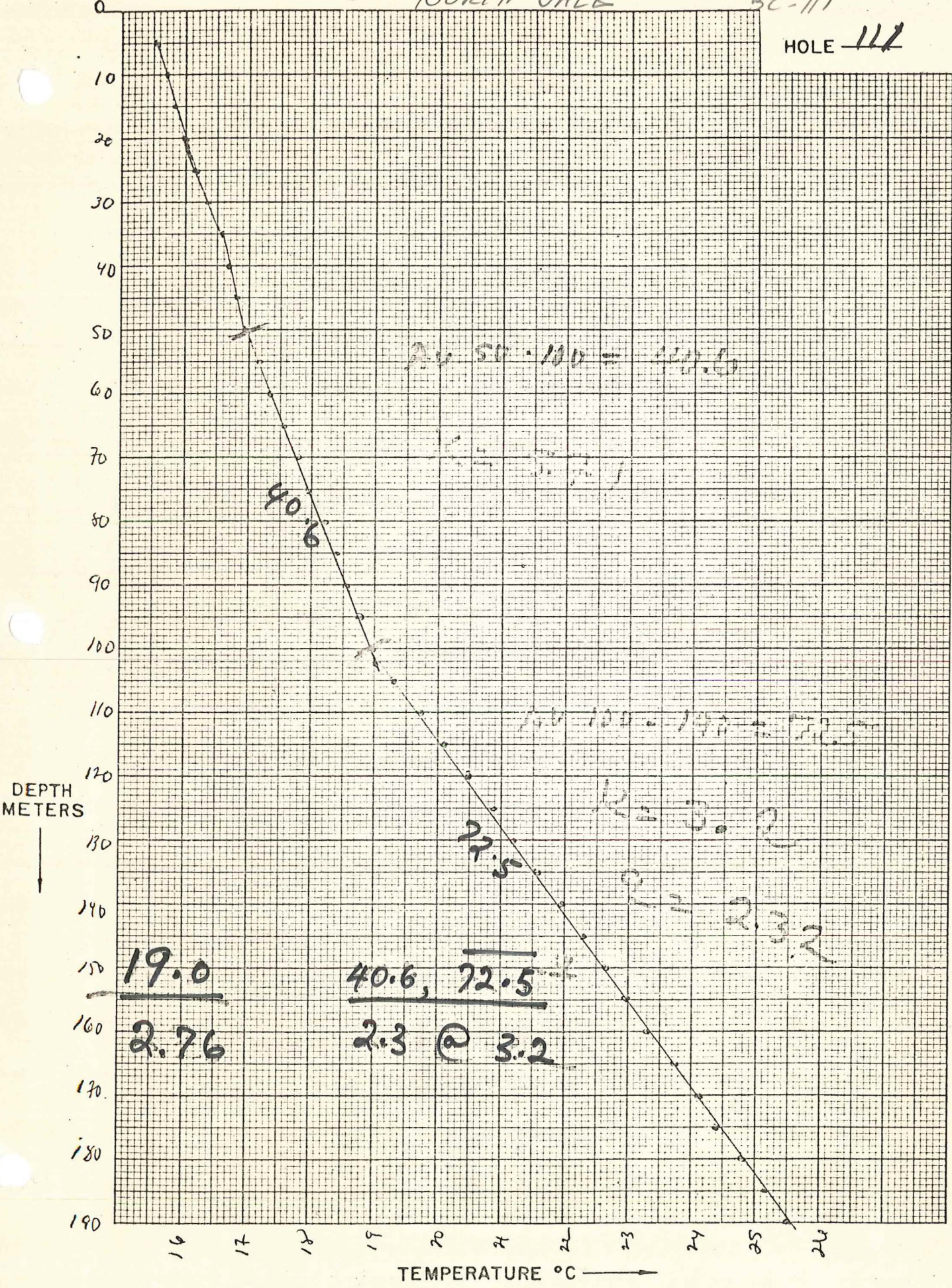
DATA FOR THIS WELL AND PROJECT # ALREADY ON DISK!!



NORTH VALE

BC-111

HOLE 111



TEMPERATURE - DEPTH LOG

Location 2 miles SE of Jamieson Date _____
 Map Jamieson, Oregon 15' Quad
 Property North Vale T 16S R 43E sec SE 1/4 SE 1/4 23
 Drill Hole BC-112 16-43523 Date Drilled _____ Elevation _____ ft.
 Instrument _____ Operator DOGAMT
 Comments Water well

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
5		14.230			
10		13.490	<u>-.740</u>		
15		13.160	<u>-.330</u>		
20		13.170	<u>.010</u>		
25		13.700	<u>.530</u>	<u>106</u>	
30		13.880	<u>.180</u>	<u>36</u>	
35		14.760	<u>.880</u>	<u>176</u>	
40		15.260	<u>.500</u>	<u>100</u>	
45		15.380	<u>.120</u>	<u>24</u>	
50		15.510	<u>.130</u>	<u>26</u>	
55		15.580	<u>.070</u>	<u>14</u>	
60		15.810	<u>.230</u>	<u>46</u>	
65		16.410	<u>.600</u>	<u>120</u>	
70		16.910	<u>.500</u>	<u>100</u>	
75		17.240	<u>.330</u>	<u>66</u>	
80		17.610	<u>.370</u>	<u>74</u>	
85		17.820	<u>.210</u>	<u>42</u>	
90		18.160	<u>.340</u>	<u>78</u>	
95		18.380	<u>.230</u>	<u>46</u>	
100		18.600	<u>.210</u>	<u>42</u>	
105		18.900	<u>.300</u>	<u>60</u>	

5
2
10
1
83

99999

PROJ. WELL DA-MO-YR-F																				DESCRIPTION																				EDITORS										TERRAIN COOR									
1-20	208	7	SP	76	MB-208	2.5 KM N. OF	CUVE	FOOT, UT	JENKINS																																																		
1-20	112				3 KM SE. OF	JAMMISON, OK	DOG AKIN																																																				

Get me
for
log

duplicate

IN CM	MAP: 7.5, 15, or 30.	DEG'S LAT	MIN'S DLAT	DEG'S LONG.	MIN'S DLONG	N.	E.	ELEV.	M/F
IN	15.	38.	20.	112.	45.	8.62	9.42	4825.	F
cm	15.	44.	00.	117.	30.	22.0	11.8	2480.	F

28.4 11.55

duplicate

SEGMENT DEPTH																				SEGMENT																			
START										END										START										END									
16.																				7.										.5									
120.										190.										-3.2										-0.5									
80.										105.										-3.2										.25									
140.										170.																				-1.5									

STA T =
-999
or last
999

Last =
Price: \$

duplicate

DEPTH										°C										DEPTH										°C									
1.										16.225										1.5										16.510									
																														16.82									

99999.
LAST
DEC 74

JA, FB, MR, AP, MY, JE, JL, AG, SP, OC, NV, DC

coding Edm Edm 0105 0105

NEW!

TEMPERATURE DEPTH LOG

Property-Project Vale ΔT Well No. 114
 Map Vale West Scale 7 1/2 Date: Drilled _____ Logged _____
 State OR County 7 Section _____ T _____ R _____
 Instrument _____ Operator DOGAMI Elevation _____ ft.
 Comments water well

COMPUTER PROCESSING

RT JUSTIFY: **Card A**

Proj No					Well No					Date Logged			*							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	*
665					114															

* 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 KM WNW OF VALE, OR, WATERWELL																																													DOGAMI					ALL				

Card B

Scale Unit		Map Size		N Lat		W Long																							
in	cm	(7.5, 15.60)	Degree	Min	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		7.5		43.52		117.22		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
55.										12,22570.					F														

Use decimals

Write M if meters

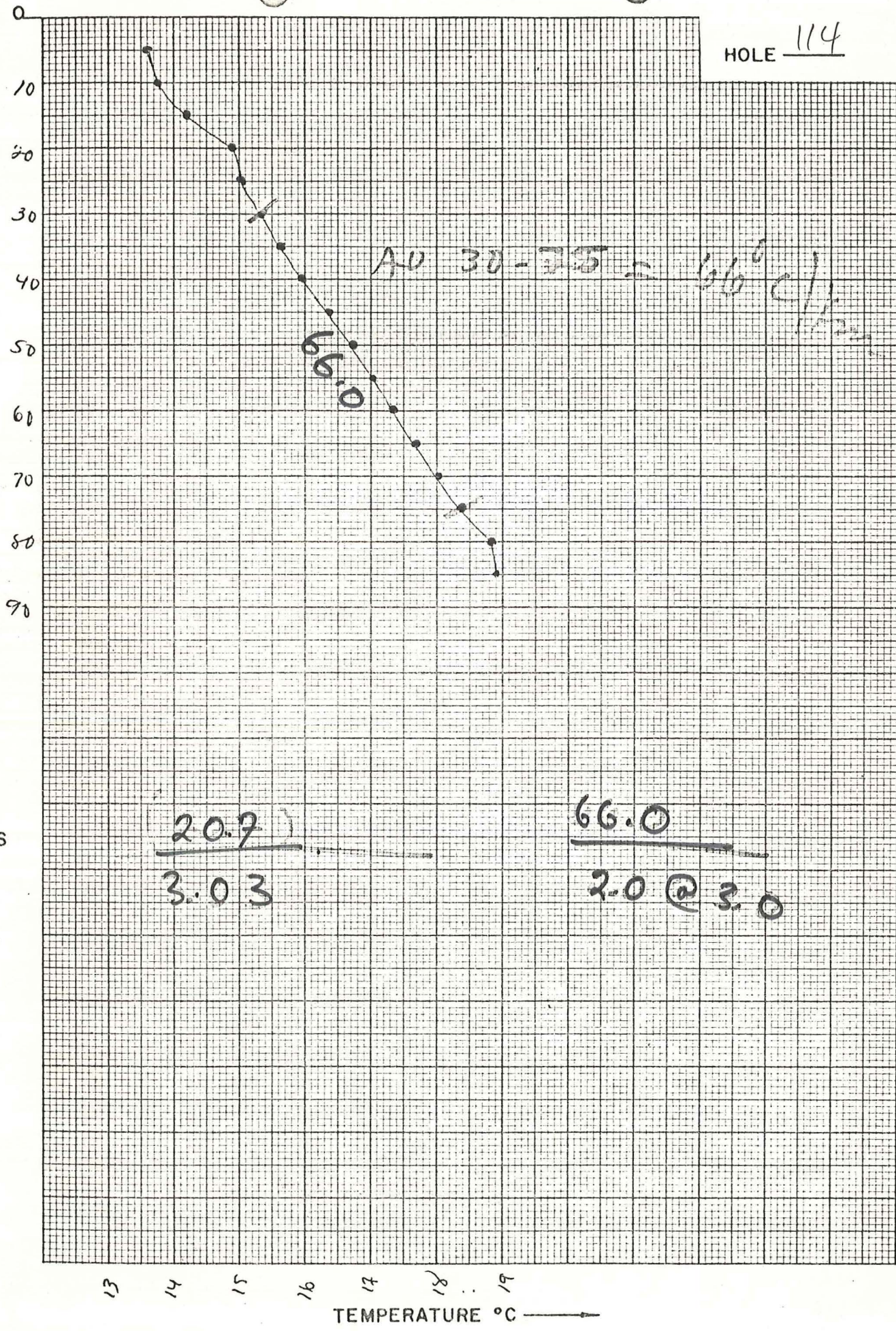
	SEGMENT DEPTH																													
	Start	End	K	ΔK																										
C																														
D																														
E																														
F																														
G																														
	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
	30.										75.										-3.					-.5				

Continue each card below.

	SEGMENT DEPTH																													
	Start	End	K	ΔK																										
C																														
D																														
E																														
F																														
G																														
	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
	.999																													

Final Segment: Start = .999

HOLE 114



DEPTH METERS

TEMPERATURE °C

MT entered

TEMPERATURE - DEPTH LOG

Location 5 mi. S SW of Vale Date _____

Map Vale west Oregon 7 1/2' Quad

Property Vale & Bully Creek T 19S R 44E sec SE 1/4 9

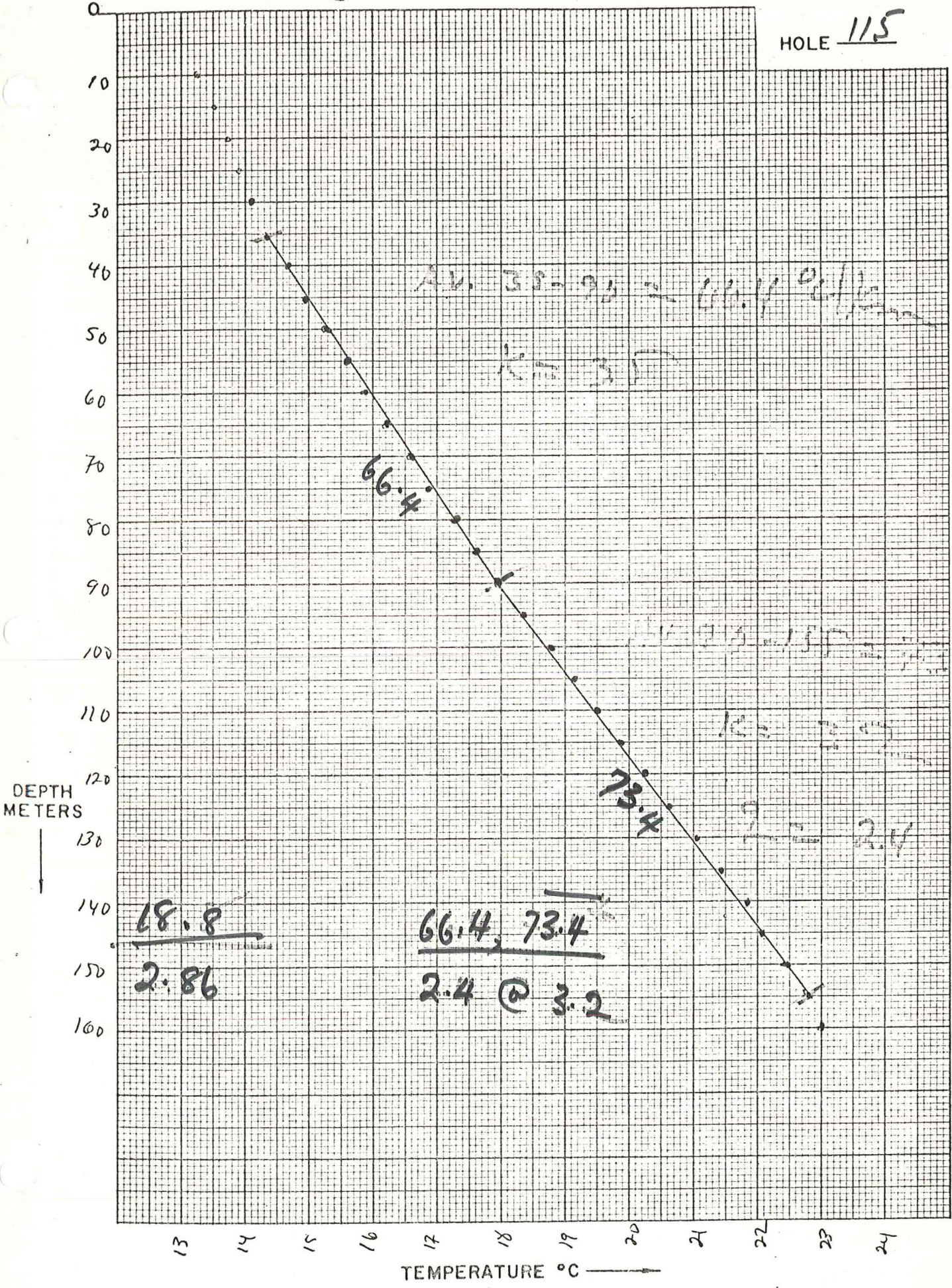
Drill Hole BC-115 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator DOGAMT

Comments Oil well drilled 1950 probed June 18, 1973
TD 4611 feet.

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
10		13.270			
15		13.510	.240	48	
20		13.720	.210	42	
25		13.900	.180	36	
30		14.110	.210	42	
35		14.330	.220	44	
40		14.650	.320	64	
45		14.940	.290	58	
50		15.290	.350	70	
55		15.600	.310	62	
60		15.870	.270	54	
65		16.200	.330	66	
70		16.570	.370	74	
75		16.890	.320	64	
80	17.250	17.250	.360	72	
85		17.400	.350	70	
90		17.980	.380	76	
95		18.380	.400	80	
100		18.780	.400	80	
105		19.120	.350	70	
110		19.500	.370	74	

HOLE 115



TEMPERATURE DEPTH LOG

NEW!

ΔT Well No. 116

Property-Project Vale Depth Logged _____
 Map Vale S. Scale 7.5 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																
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
				DA	MO	YR													*	
665		116																		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 NE VALE, OR										OIL TEST										DES		ALL																	

Card B

Scale Unit		Map Size		Map Location Δ																									
in		(7.5, 15., 60)		N Lat		W Long																							
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
CM		7.5		43		52.5		117		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
53.5					10.1					233.5					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	60.					80.					-3.					-1.5														
D	180.					350.																								
E																														
F																														
G																														

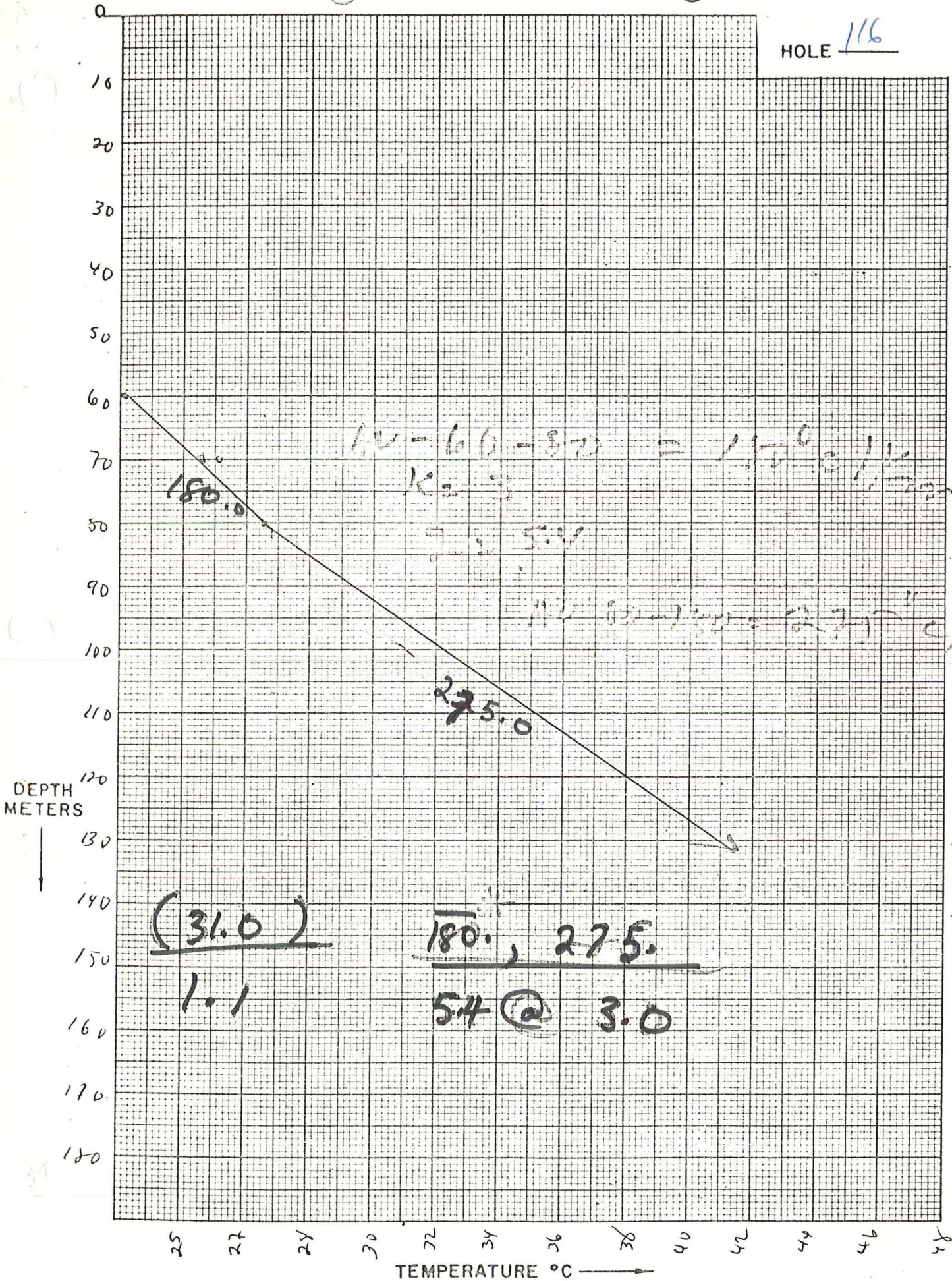
Continue each card below.

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.					180.																								
D	377																													
E																														
F																														
G																														

Final Segment: Start = .999

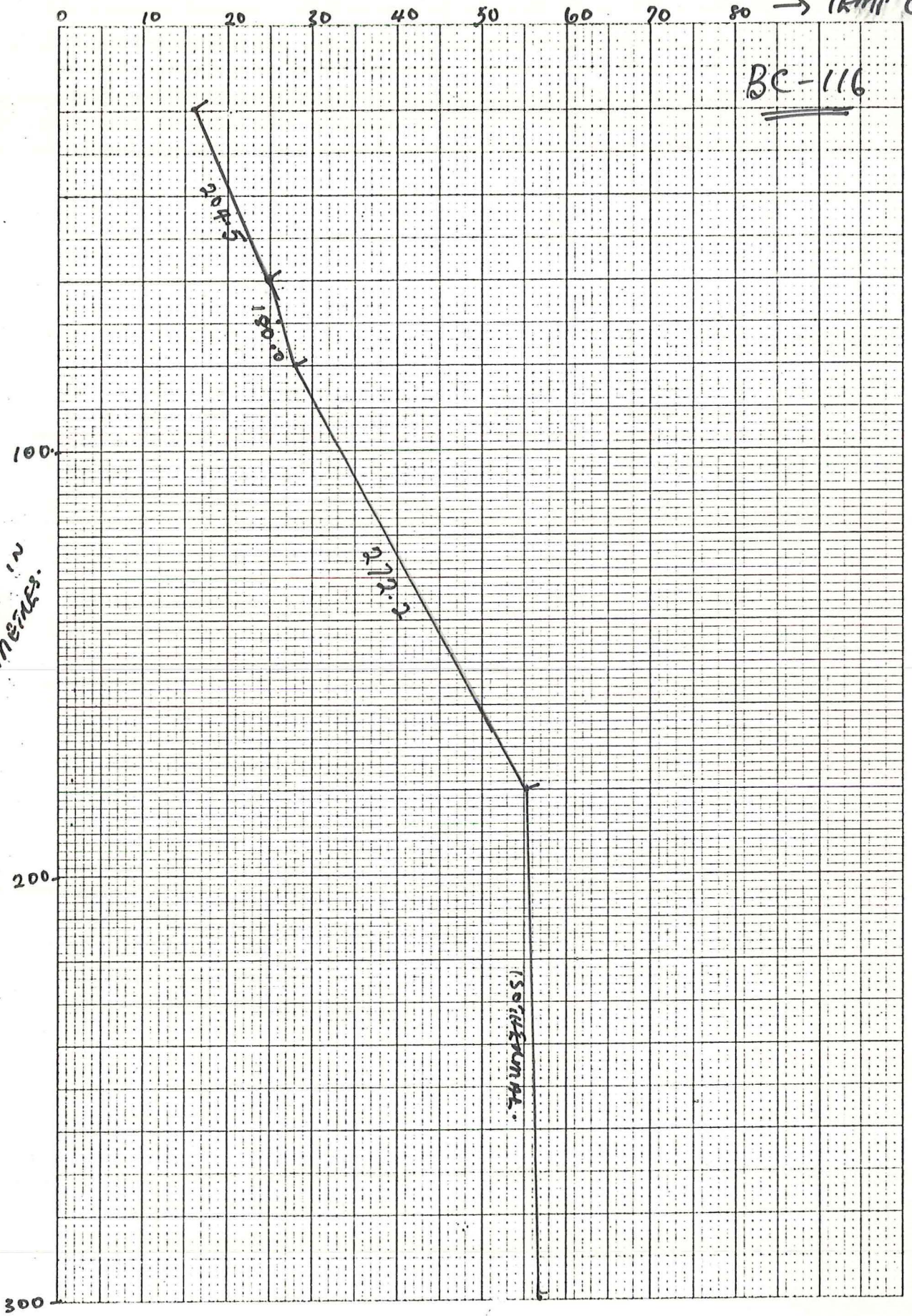
HOLE 116



→ TEMP °C

BC-116

DEPTH IN METERS.



15.0

18.0

25.0

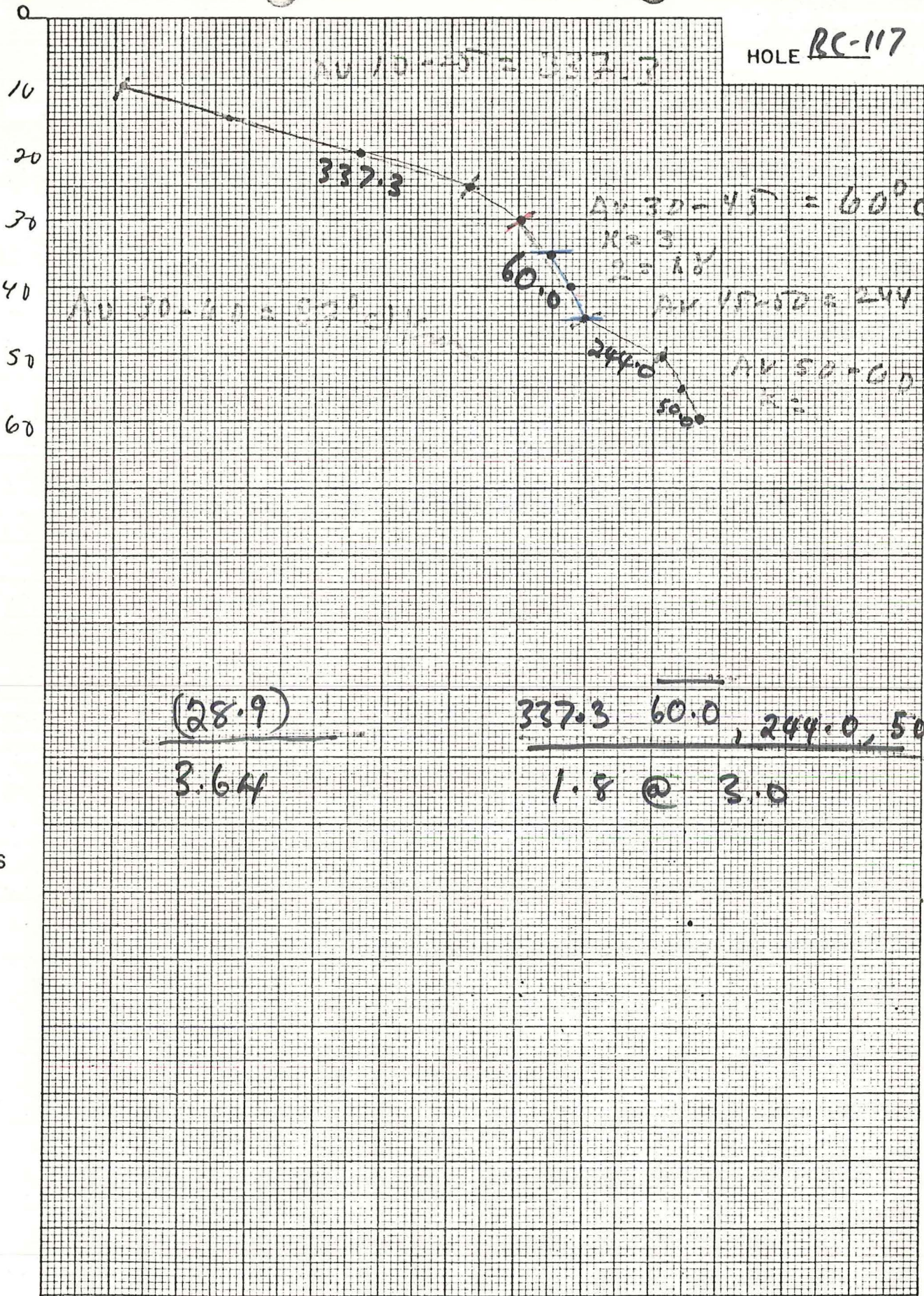
ISOTHERMAL

100

200

300

HOLE RC-117



AV 10-45 = 337.7

337.3

$\Delta T_{30-45} = 60.0^\circ\text{C}/\text{km}$

$K = 3$
 $Z = 18$

AV 30-45 = 337.7

AV 15-50 = 244

AV 50-60 = 50.0

60.0

244.0

50.0

(28.9)

3.64

337.3, 60.0, 244.0, 50.0

1.8 @ 3.0

DEPTH METERS



18 19 20 21 22 23 24 25 26 27

TEMPERATURE °C

TEMPERATURE - DEPTH LOG

Location 3 Miles ENE of Alkali Flats Date _____

Map Jamieson Oregon 15' Quad

Property North Vale T 17 S R 45 E sec NE 1/4 SE 1/4 2

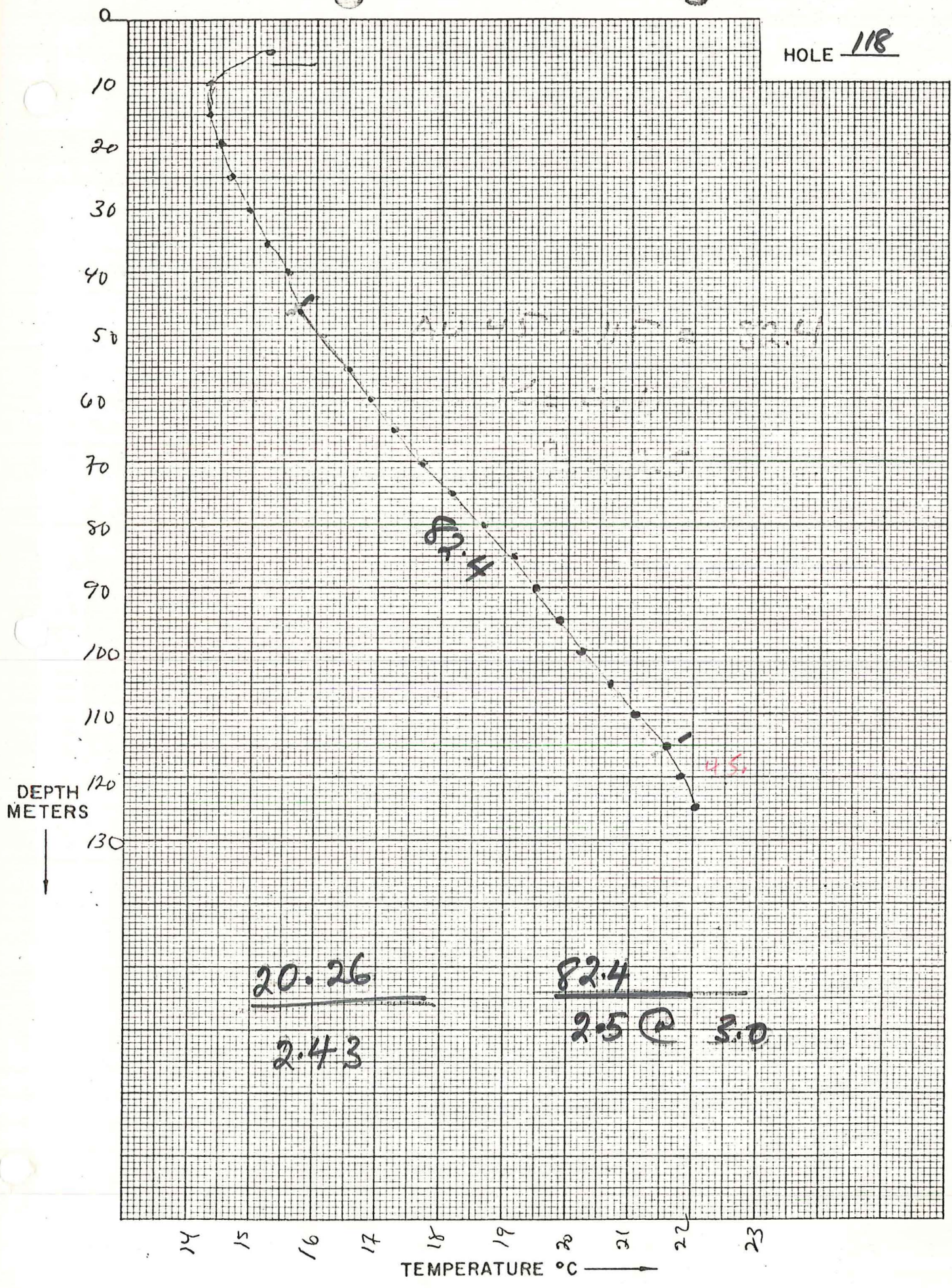
Drill Hole BC-118 VN-75-3 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator DOGAMT

Comments Gradient hole

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
5		16.25			
10		14.30			
15		14.30	.00	0	
20		14.46	.16	32	
25		14.67	.21	42	
30		14.91	.24	48	
35		15.21	.30	60	
40		15.54	.33	66	
45		15.79	.25	50	
50		16.11	.32	64	
55		16.50	.39	78	
60		16.86	.36	72	
65		17.28	.42	84	
70		17.69	.41	82	
75		18.16	.47	94	
80		18.70	.54	108	
85		19.14	.44	88	
90		19.49	.35	70	
95		19.84	.35	70	
100		20.26	.42	84	
105		20.67	.41	82	
			.42	84	

HOLE 118

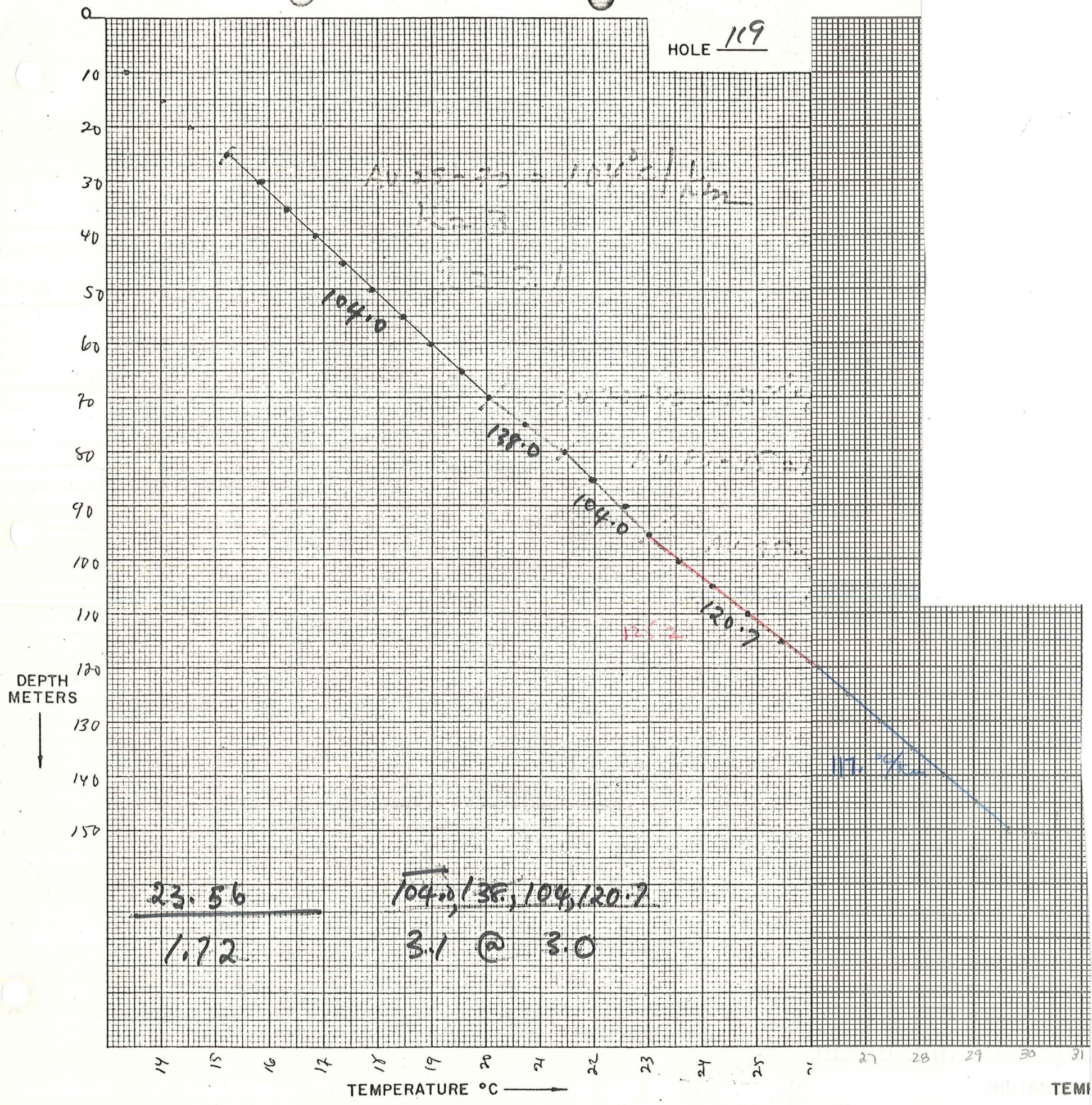


TEMPERATURE - DEPTH LOG

Location 5 1/2 miles North Malheur Butte Date _____
 Map Moore's Hollow, Oregon 15' Quad
 Property North Vale T 17S R 46E sec NE 1/4 SW 1/4 16
 Drill Hole BC-119 VN-75-4 Date Drilled _____ Elevation _____ ft.
 Instrument _____ Operator DOGAMI
 Comments Gradient Note

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
5		12.32			
10		13.35	1.03	206	
15		14.06	.71	142	
20		14.53	.47	94	
25		15.27	.74	148	
30		15.82	.55	110	
35		16.34	.52	104	
40		16.82	.48	96	
45		17.34	.52	104	
50		17.86	.52	104	
55		18.41	.55	110	
60		18.96	.55	110	
65		19.51	.55	110	
70		20.05	.54	108	
75		20.72	.67	134	
80		21.43	.71	142	
85		21.99	.56	112	
90		22.56	.57	114	
95		22.99	.43	86	
100		23.56	.57	114	
105		24.12	.56	112	

HOLE 119



TEMPERATURE - DEPTH LOG

Location Jacobsen Gulch Date _____

Map Moores Hollow Oregon 15' Quad

Property North Vale T 17S R 46E sec NW 1/4 NE 1/4 13

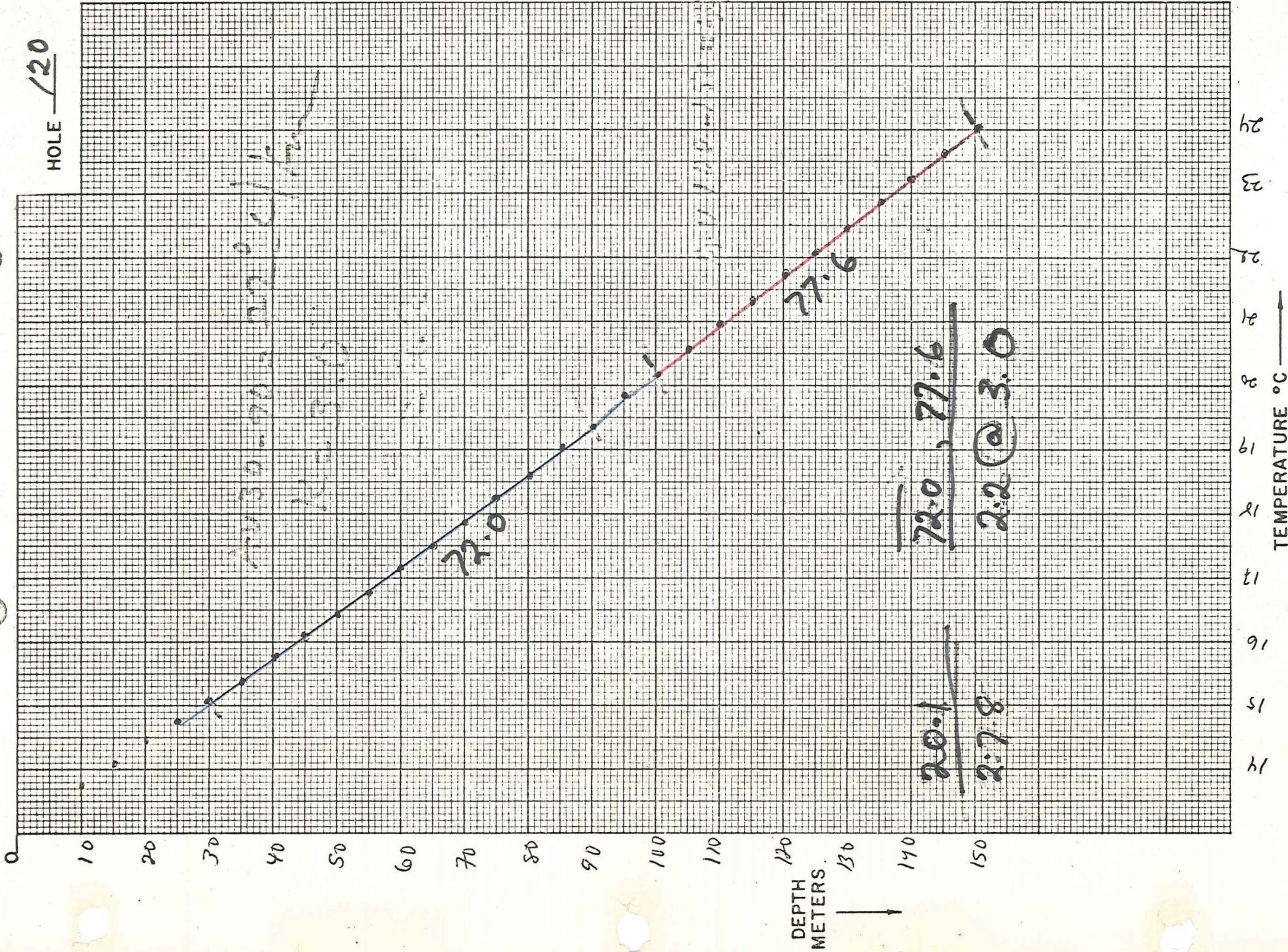
Drill Hole BC-120 VN-75-5 Date Drilled _____ Elevation _____ ft.

Instrument _____ Operator DOGAMT

Comments _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
10		13.76			
15		14.09	.33	66	
20		14.44	.35	70	
25		14.73	.29	58	
30		15.06	.33	66	
35		15.39	.33	66	
40		15.73	.34	68	
45		16.07	.34	68	
50		16.41	.34	68	
55		16.77	.36	72	
60		17.13	.36	72	
65		17.50	.37	74	
70		17.86	.36	72	
75		18.23	.37	74	
80		18.60	.37	74	
85		19.01	.41	82	
90		19.38	.37	74	
95		19.84	.46	92	
100		20.12	.28	56	
105		20.55	.43	86	
110		20.95	.40	80	
			.38	76	

HOLE 120



20.1
2:7.8
22.0
27.6

20.1
2:7.8
22.0
27.6
2:2 @ 3.0

27.6°C

DEPTH METERS

TEMPERATURE °C

14 15 16 17 18 19 20 21 22 23 24

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150