

STATE OF OREGON
DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES
1069 State Office Building
Portland, Oregon 97201

OPEN FILE REPORT O-75-3

GEO THERMAL GRADIENT DATA

Richard G. Bowen
Project Supervisor

Preliminary data from a geothermal project funded by
U.S. Bureau of Mines Contract No. S0122129

1975

GEOHERMAL GRADIENT DATA

The geothermal gradient data given here show temperature depth relationships measured in 75 bore holes in Oregon. Most of the bore holes are east of the Cascade Mountains, and all were drilled for other purposes, mainly water wells, but they also include mineral exploration holes and foundation tests. All of the bore-hole data are presented in tabular form and, for most sites, are accompanied by a computer plot to show a graphical representation of the gradient.

Nearly all measurements were taken with a thermistor probe on the end of a shielded cable 300 to 1,000 M in length, all contained on a portable reel. (A thermistor is a temperature-dependent resistor that changes resistance over several ohms per degree of temperature. Temperature is thus measured indirectly using an electronic wheatstone bridge.) The thermistor-cable units were assembled and calibrated at the Dallas Seismological Observatory, Dallas, Texas using National Bureau of Standards reference thermometers. Calibration was made between 0°C and 60°C at intervals of 0.005°C. Accuracy in absolute temperatures is probably $\pm 0.1^\circ\text{C}$, and resolution between reading, 0.01°C. Multiple loggings of bores using different equipment showed only minor differences - probably most often due to convection within the well bore.

All of the data were gathered between 1970 and 1974 by R. G. Bowen and other staff members of the Oregon Department of Geology and Mineral Industries. The Department staff worked closely with Dr. David D. Blackwell, Southern Methodist University, Dallas, Texas, who directed the building and calibration of the equipment used on the project. Since 1972, the funding of the project has been provided by a U.S. Bureau of Mines contract with the Department (S0122129) to study the geothermal potential of Oregon.

Locations of the bore holes are given by township, range, and section, in that order, utilizing a method similar to that of U.S. Geological Survey Water Supply Papers. For example, 19-45-25 means township 19 S., Range 45 E., section 25. Unless otherwise noted, township is south and range is east as nearly all sites are south and east of the Willamette Meridian and base line.

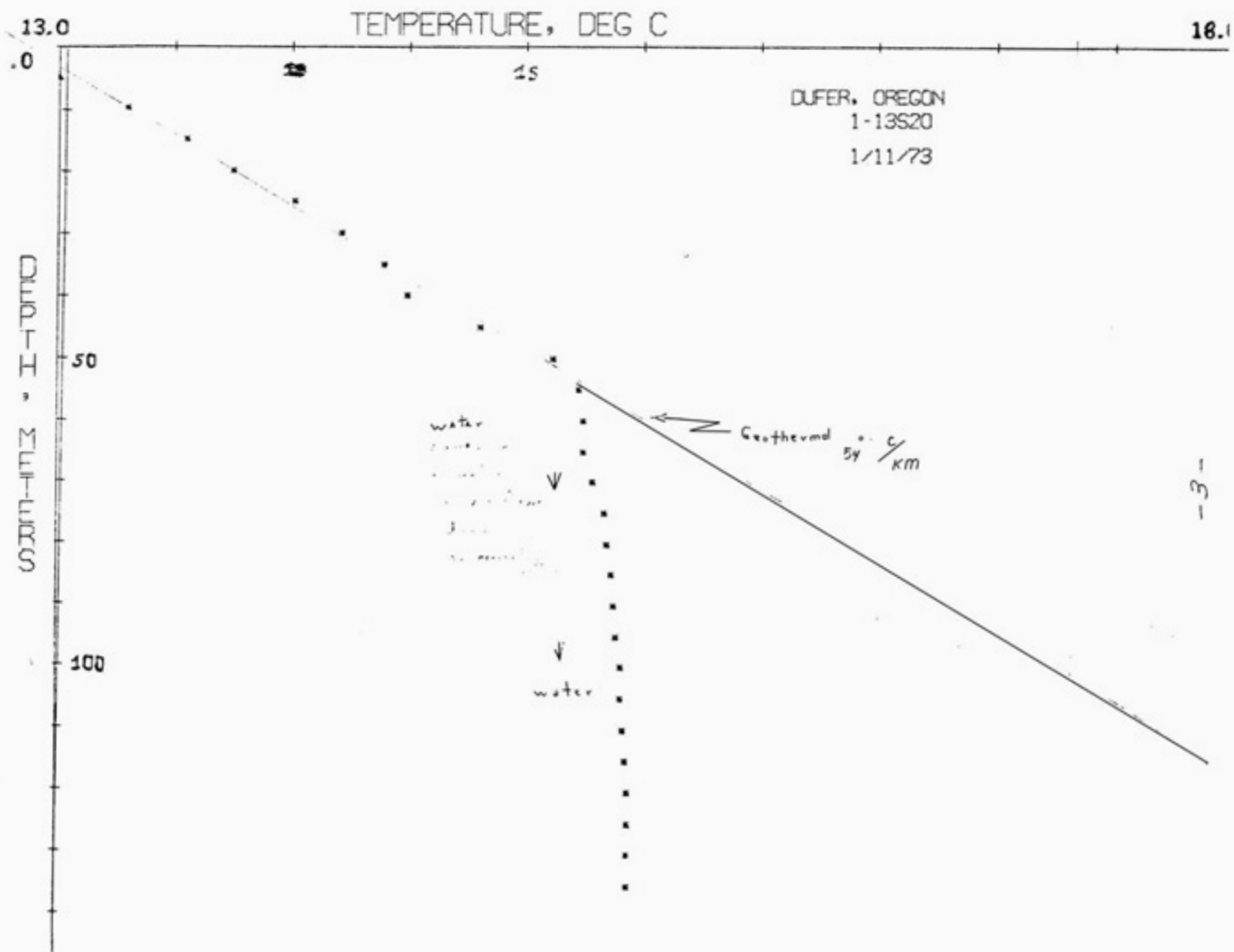
This information is released in preliminary form to assist those doing more detailed geothermal gradient and heat-flow studies for geothermal exploration. It is a part of a more detailed study by R. G. Bowen, D. D. Blackwell, and Department staff members that is now underway and will be released at a later date.

March 1975

LOCATION: DUFUR, OREGON
HOLE NUMBER: 1-13520
DATE MEASURED: 1/11/73

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
5.0	16.4	13.020	55.44	.0	.0
10.0	32.8	13.310	55.96	58.0	31.4
15.0	49.2	13.560	56.41	50.0	35.4
20.0	65.6	13.760	56.77	40.0	45.6
25.0	82.0	14.020	57.24	52.0	35.0
30.0	98.4	14.220	57.60	40.0	45.6
35.0	114.8	14.400	57.92	36.0	50.6
40.0	131.2	14.500	58.10	20.0	91.1
45.0	147.6	14.810	58.66	52.0	29.4
50.0	164.0	15.120	59.22	62.0	29.4
55.0	180.4	15.230	59.41	22.0	82.8
60.0	196.8	15.250	59.45	4.0	455.6
65.0	213.2	15.250	59.45	.0000000000000000	.0
70.0	229.6	15.290	59.52	8.0	227.8
75.0	246.0	15.340	59.61	10.0	182.2
80.0	262.4	15.350	59.63	2.0	911.1
85.0	278.8	15.370	59.67	4.0	455.6
90.0	295.2	15.380	59.68	2.0	911.1
95.0	311.6	15.390	59.70	2.0	911.1
100.0	328.0	15.410	59.74	4.0	455.6
105.0	344.4	15.410	59.74	.0000000000000000	.0
110.0	360.8	15.420	59.76	2.0	911.1
115.0	377.2	15.430	59.77	2.0	911.1
120.0	393.6	15.440	59.79	2.0	911.1
125.0	410.0	15.440	59.79	.0000000000000000	.0
130.0	426.4	15.440	59.79	.0000000000000000	.0
135.0	442.8	15.440	59.79	.0000000000000000	.0

Dufur, Ore
1-13-520
1/11/73



LOCATION: ARLINGTON, OREGON
HOLE NUMBER: B 15
DATE MEASURED: 6/1/73

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
10.0	32.8	15.500	59.90	.0	.0
15.0	49.2	15.480	59.86	-4.0	-455.6
20.0	65.6	15.610	60.10	26.0	70.1
25.0	82.0	15.850	60.53	48.0	38.0
30.0	98.4	16.000	60.80	30.0	60.7
35.0	114.8	16.140	61.05	28.0	65.1
40.0	131.2	16.270	61.29	26.0	70.1
45.0	147.6	16.370	61.47	20.0	91.1
50.0	164.0	16.490	61.68	24.0	75.9
55.0	180.4	16.720	62.10	46.0	39.6
60.0	196.8	16.940	62.49	44.0	41.4
65.0	213.2	17.150	62.87	42.0	43.4
70.0	229.6	17.380	63.28	46.0	39.6
75.0	246.0	17.630	63.73	50.0	36.4
80.0	262.4	17.880	64.18	50.0	36.4
85.0	278.8	18.150	64.67	54.0	33.7
90.0	295.2	18.415	65.15	53.0	34.4
95.0	311.6	18.690	65.64	55.0	33.1
100.0	328.0	18.960	66.13	54.0	33.7
105.0	344.4	19.230	66.61	54.0	33.7
110.0	360.8	19.570	67.23	68.0	26.8
115.0	377.2	19.920	67.86	70.0	26.0
120.0	393.6	20.300	68.54	76.0	24.0
125.0	410.0	20.545	68.98	49.0	37.2
130.0	426.4	20.795	69.43	50.0	36.4

ARLINGTON

B-15

6/1/73

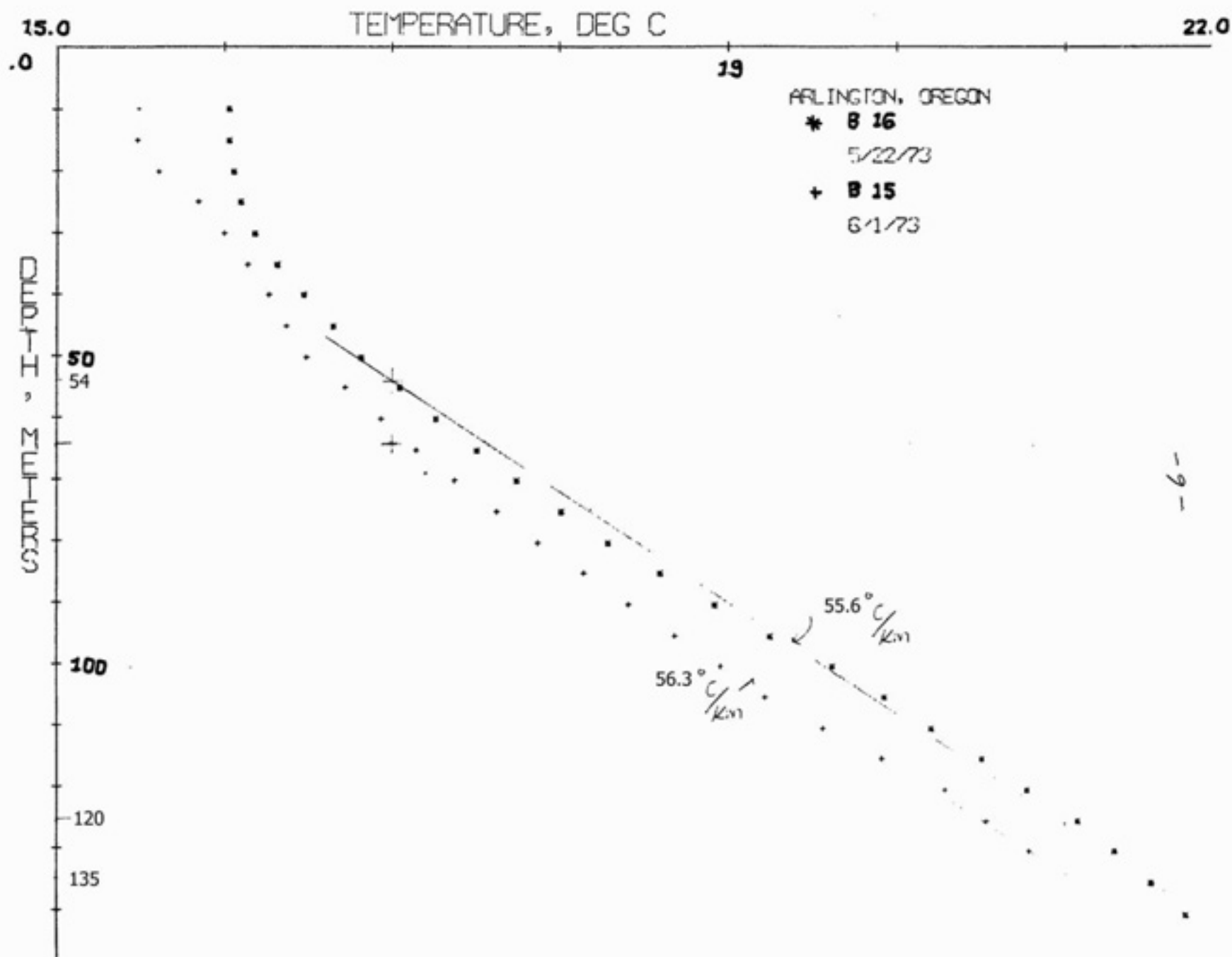
-4-

i-22-56

LOCATION: ARLINGTON, OREGON
HOLE NUMBER: B 16
DATE MEASURED: 5/22/73

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
10.0	32.8	16.030	60.85	.0	.0
15.0	49.2	16.030	60.85	.0000000000000000	.0
20.0	65.6	16.055	60.90	5.0	364.4
25.0	82.0	16.100	60.98	9.0	202.5
30.0	98.4	16.180	61.12	16.0	113.9
35.0	114.8	16.315	61.37	27.0	67.5
40.0	131.2	16.475	61.65	32.0	56.9
45.0	147.6	16.655	61.98	36.0	50.6
50.0	164.0	16.820	62.28	33.0	55.2
55.0	180.4	17.050	62.69	46.0	39.6
60.0	196.8	17.270	63.09	44.0	41.4
65.0	213.2	17.510	63.52	48.0	38.0
70.0	229.6	17.750	63.95	48.0	38.0
75.0	246.0	18.020	64.44	54.0	33.7
80.0	262.4	18.295	64.93	55.0	33.1
85.0	278.8	18.605	65.49	62.0	29.4
90.0	295.2	18.930	66.07	65.0	28.0
95.0	311.6	19.255	66.66	65.0	28.0
100.0	328.0	19.630	67.33	75.0	24.3
105.0	344.4	19.935	67.88	61.0	29.9
110.0	360.8	20.215	68.39	56.0	32.5
115.0	377.2	20.515	68.93	60.0	30.4
120.0	393.6	20.780	69.40	53.0	34.4
125.0	410.0	21.080	69.94	60.0	30.4
130.0	426.4	21.305	70.35	45.0	40.5
135.0	442.8	21.525	70.74	44.0	41.4
140.0	459.2	21.735	71.12	42.0	43.4
145.0	475.6	21.925	71.46	38.0	48.0

1-21-36
ARLINGTON
B-16
5/22/73



LOCATION: ARLINGTON, OREGON
HOLE NUMBER: 2-21S1
DATE MEASURED: 2/23/73

Pebble Springs

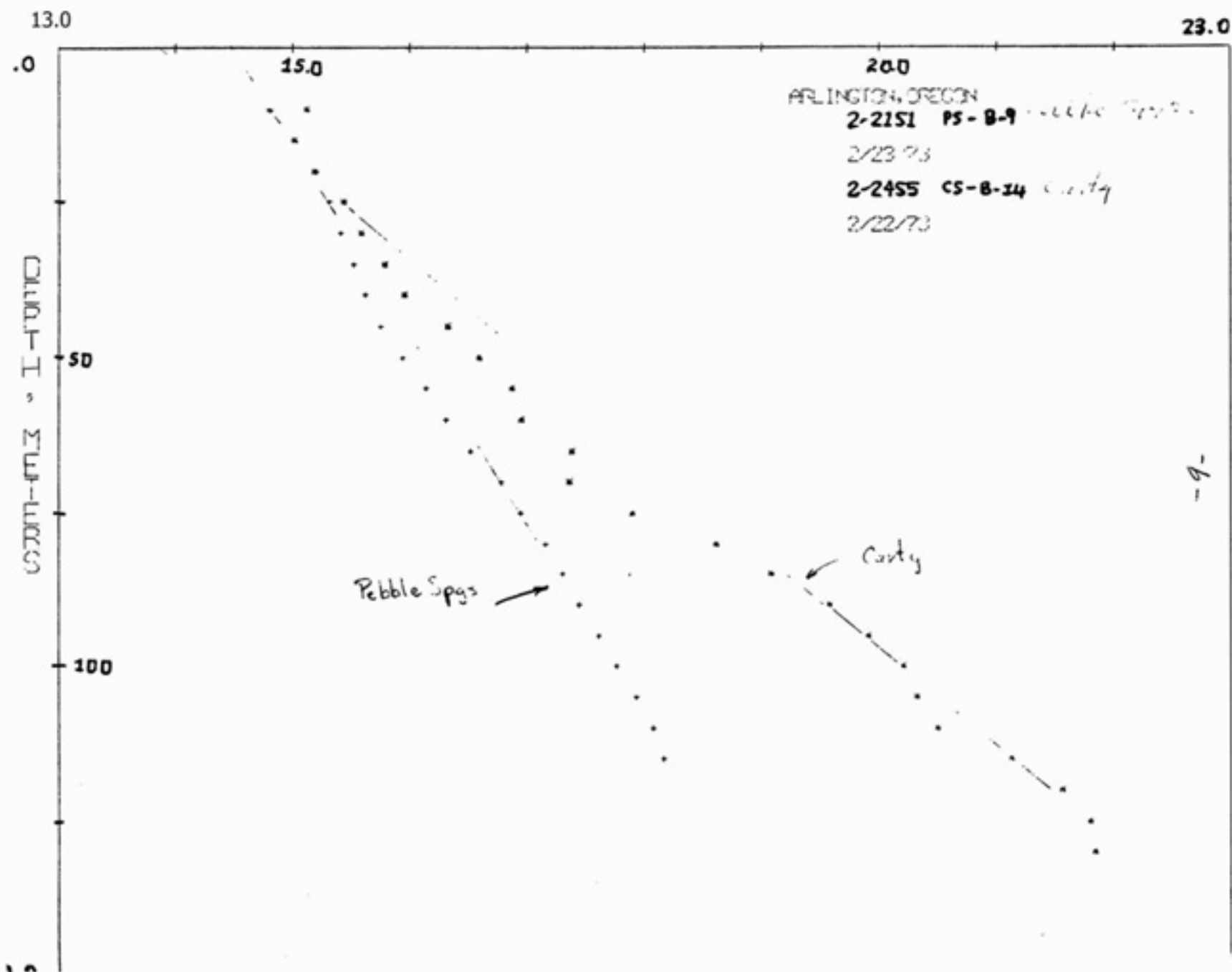
DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
10.0	32.8	15.120	59.22	.0	.0
15.0	49.2	15.015	59.03	-21.0	-86.8
20.0	65.6	15.190	59.34	35.0	52.1
25.0	82.0	15.440	59.79	50.0	36.4
30.0	98.4	15.590	60.06	30.0	60.7
35.0	114.8	15.790	60.42	40.0	45.6
40.0	131.2	15.960	60.73	34.0	53.6
45.0	147.6	16.330	61.39	74.0	24.6
50.0	164.0	16.605	61.89	55.0	33.1
55.0	180.4	16.875	62.37	54.0	33.7
60.0	196.8	16.965	62.54	18.0	101.2
65.0	213.2	17.390	63.30	85.0	21.4
70.0	229.6	17.370	63.27	-4.0	-455.6
75.0	246.0	17.905	64.23	107.0	17.0
80.0	262.4	18.615	65.51	142.0	12.8
85.0	278.8	19.090	66.36	95.0	19.2
90.0	295.2	19.595	67.27	101.0	18.0
95.0	311.6	19.920	67.86	65.0	28.0
100.0	328.0	20.220	68.40	60.0	30.4
105.0	344.4	20.335	68.60	23.0	79.2
110.0	360.8	20.505	68.91	34.0	53.6
115.0	377.2	21.140	70.05	127.0	14.3
120.0	393.6	21.570	70.83	86.0	21.2
125.0	410.0	21.815	71.27	49.0	37.2
130.0	426.4	21.850	71.33	7.0	260.3

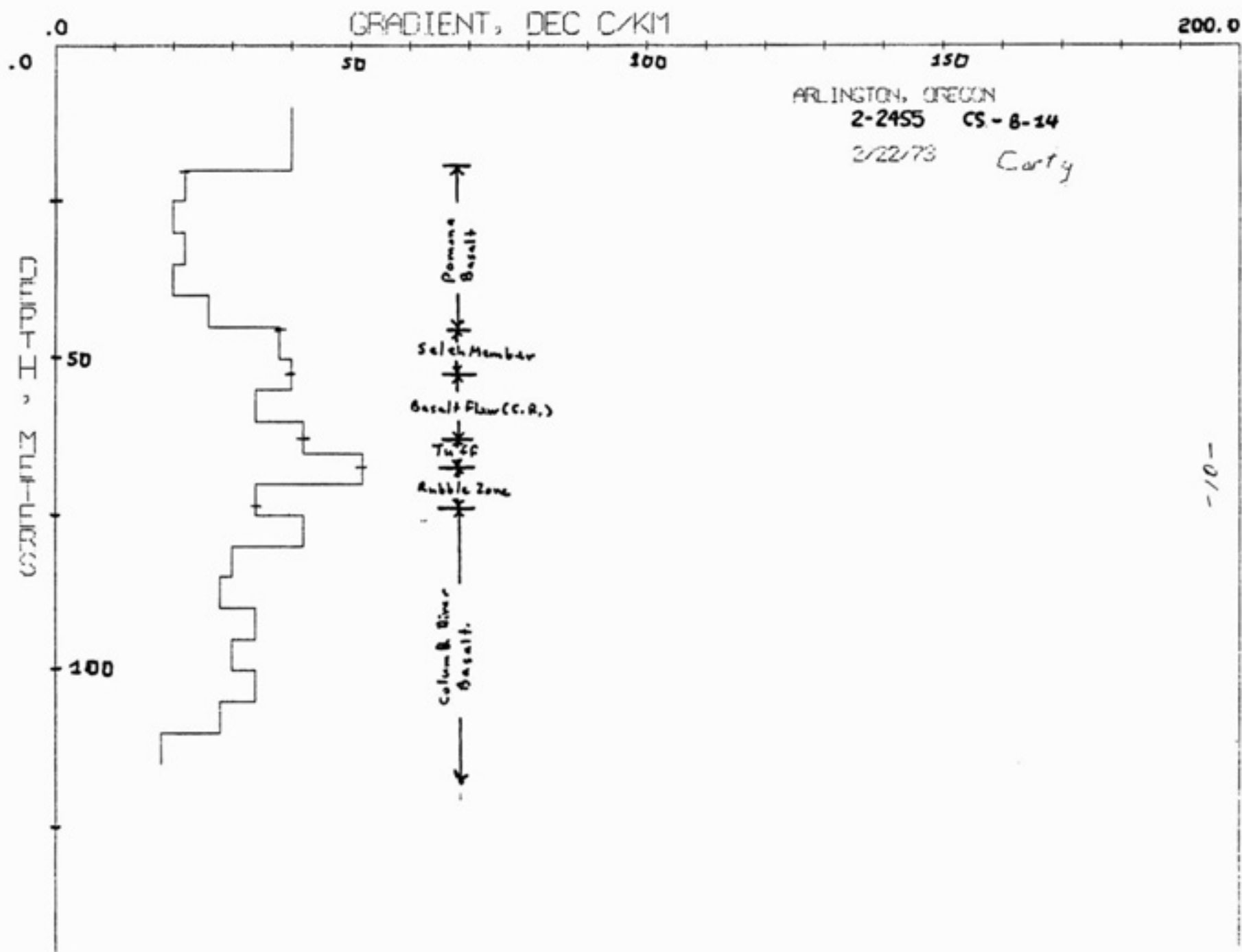
LOCATION: ARLINGTON, OREGON
HOLE NUMBER: 2-2455
DATE MEASURED: 2/22/73

Carly

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
1.0	3.3	5.070	41.13	.0	.0
10.0	32.8	14.810	58.66	1082.2	1.7
15.0	49.2	15.010	59.02	40.0	45.6
20.0	65.6	15.210	59.38	40.0	45.6
25.0	82.0	15.320	59.58	22.0	82.8
30.0	98.4	15.420	59.76	20.0	91.1
35.0	114.8	15.530	59.95	22.0	82.8
40.0	131.2	15.630	60.13	20.0	91.1
45.0	147.6	15.760	60.37	26.0	70.1
50.0	164.0	15.950	60.71	38.0	48.0
55.0	180.4	16.150	61.07	40.0	45.6
60.0	196.8	16.320	61.38	34.0	53.6
65.0	213.2	16.530	61.75	42.0	43.4
70.0	229.6	16.790	62.22	52.0	35.0
75.0	246.0	16.960	62.53	34.0	53.6
80.0	262.4	17.170	62.91	42.0	43.4
85.0	278.8	17.320	63.18	30.0	60.7
90.0	295.2	17.460	63.43	28.0	65.1
95.0	311.6	17.630	63.73	34.0	53.6
100.0	328.0	17.780	64.00	30.0	60.7
105.0	344.4	17.950	64.31	34.0	53.6
110.0	360.8	18.090	64.56	28.0	65.1
115.0	377.2	18.180	64.72	18.0	101.2

TEMPERATURE, DEG C





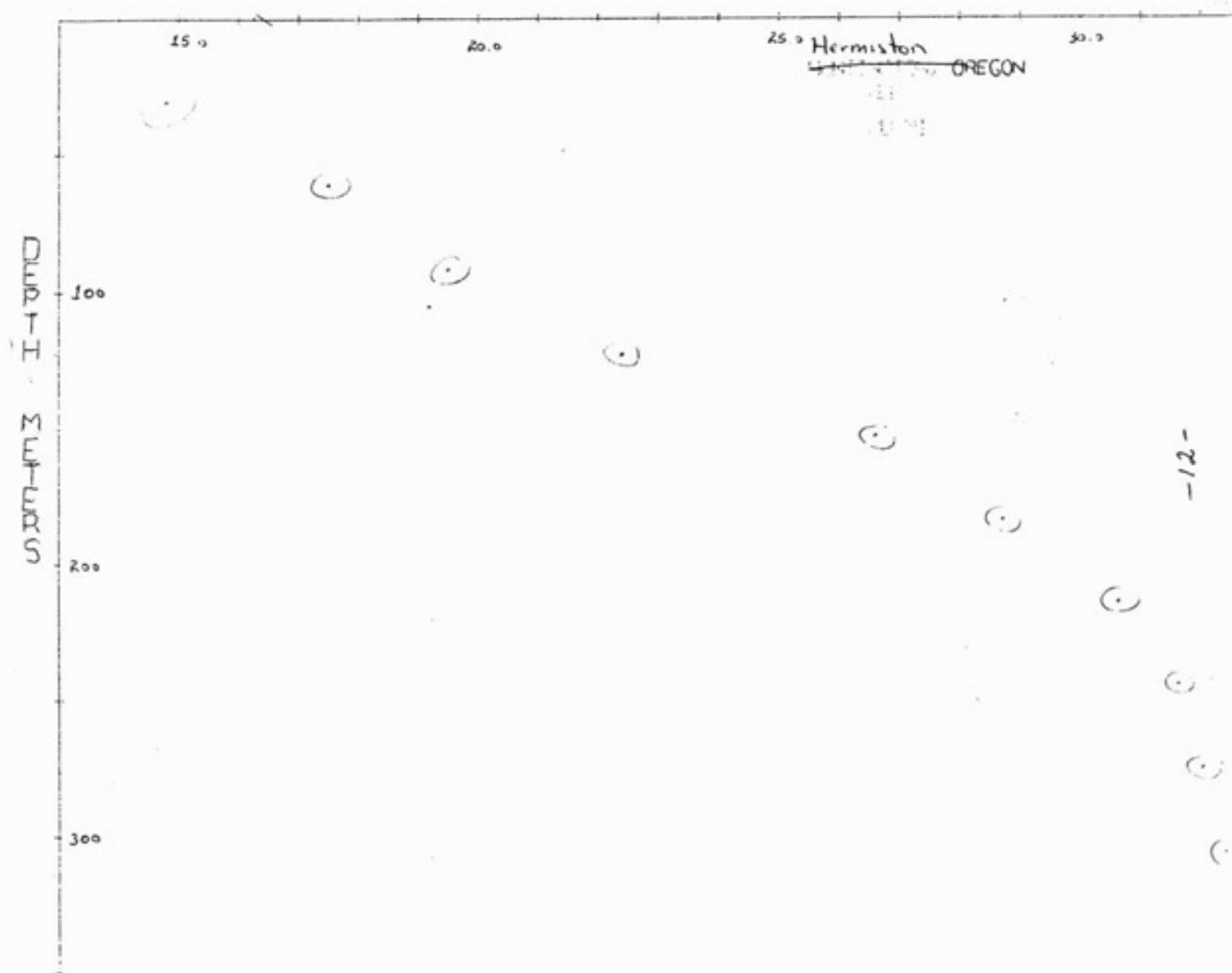
Hermiston
 LOCATION: HUNTINGTON, OREGON
 HOLE NUMBER: WH-
 DATE MEASURED: 8DGM1

Porter - Verringer W-11

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
30.5	100.0	14.800	58.64	•0	•0
61.0	199.9	17.500	63.50	38.6	20.6
91.4	299.9	19.500	67.10	55.6	27.8
121.9	399.9	22.400	72.32	75.1	19.2
152.4	499.9	26.600	79.88	137.8	13.2
182.9	599.8	28.700	83.66	58.9	26.4
213.4	699.8	30.600	87.08	52.3	29.2
243.8	799.8	31.600	88.88	32.8	55.6
274.3	899.8	32.000	89.60	13.1	135.9
304.8	999.7	32.400	90.32	13.1	138.9

2-27-87
 Hermiston
 WW -
 No date

TEMPERATURE, DEG C



LOCATION: SUMPTER, OREGON
HOLE NUMBER: 8-37S28
DATE MEASURED: 5/30/73

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
10.0	32.8	4.890	40.80	.0	.0
15.0	49.2	5.440	41.79	110.0	16.6
20.0	65.6	5.290	41.52	-30.0	-60.7
25.0	82.0	5.290	41.52	.0000000000	000.0
30.0	98.4	5.320	41.58	6.0	303.7
35.0	114.8	5.340	41.61	4.0	455.6
40.0	131.2	5.370	41.67	6.0	303.7
45.0	147.6	5.400	41.72	6.0	303.7
50.0	164.0	5.440	41.79	8.0	227.8
55.0	180.4	5.480	41.86	8.0	227.8
60.0	196.8	5.510	41.92	6.0	303.7
65.0	213.2	5.590	42.06	16.0	113.9
70.0	229.6	5.630	42.13	8.0	227.8
75.0	246.0	5.720	42.30	18.0	101.2
80.0	262.4	5.770	42.39	10.0	182.2
85.0	278.8	5.780	42.40	2.0	911.1
90.0	295.2	5.850	42.53	14.0	130.2
95.0	311.6	5.870	42.57	4.0	455.6
100.0	328.0	5.970	42.75	20.0	91.1

-13-

Sumpter, Ore
8-37-§28
5/30/73

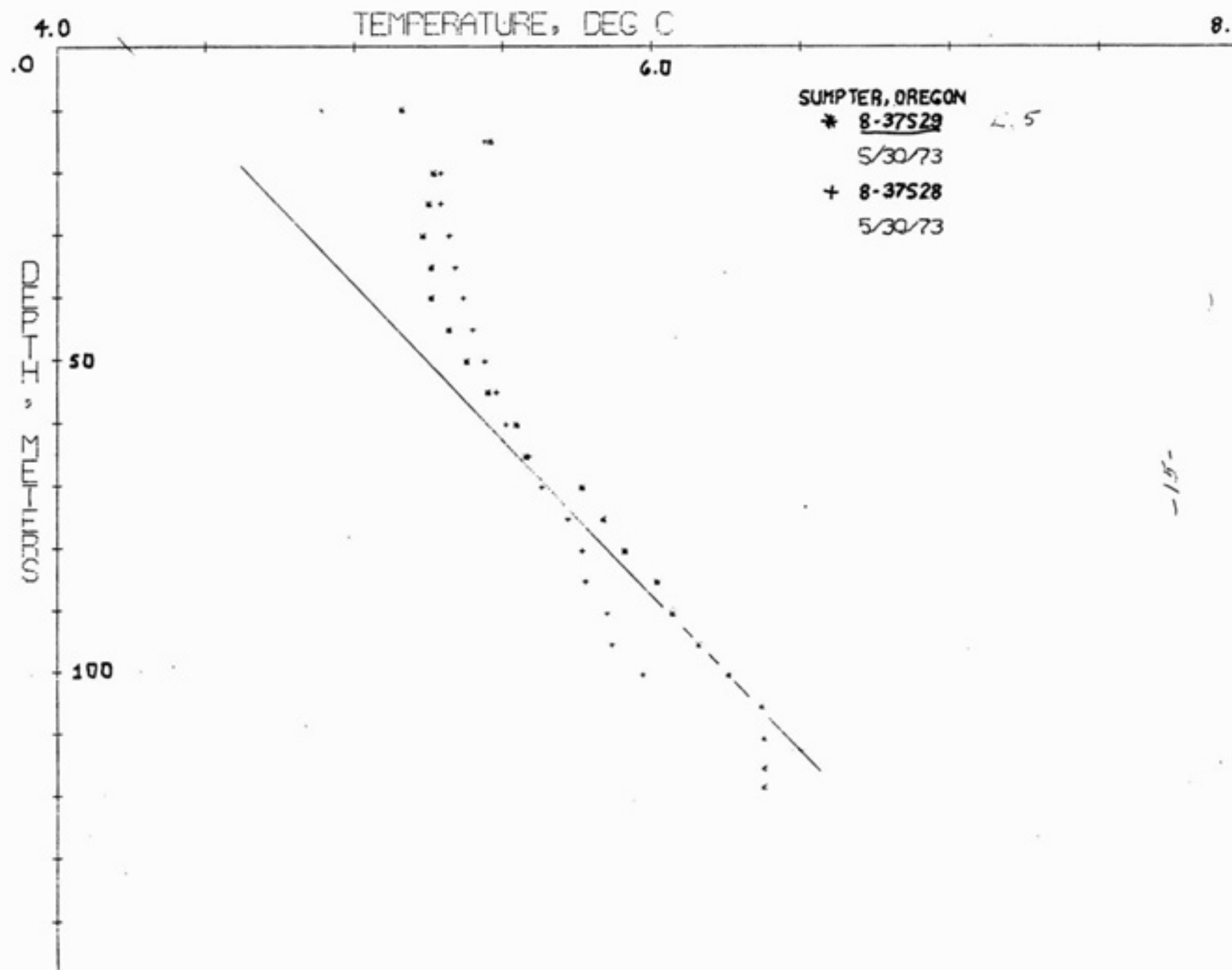
LOCATION: SUMPTER, OREGON
HOLE NUMBER: 8-37S29
DATE MEASURED: 5/30/73

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
10.0	32.8	5.160	41.29	.0	.0
15.0	49.2	5.460	41.83	60.0	30.4
20.0	65.6	5.270	41.49	-38.0	-48.0
25.0	82.0	5.250	41.45	-4.0	-455.6
30.0	98.4	5.230	41.41	-4.0	-455.6
35.0	114.8	5.260	41.47	6.0	303.7
40.0	131.2	5.260	41.47	.0000000000000.0	
45.0	147.6	5.320	41.58	12.0	151.9
50.0	164.0	5.380	41.68	12.0	151.9
55.0	180.4	5.450	41.81	14.0	130.2
60.0	196.8	5.550	41.99	20.0	91.1
65.0	213.2	5.580	42.04	6.0	303.7
70.0	229.6	5.770	42.39	38.0	48.0
75.0	246.0	5.840	42.51	14.0	130.2
80.0	262.4	5.910	42.64	14.0	130.2
85.0	278.8	6.020	42.84	22.0	82.8
90.0	295.2	6.070	42.93	10.0	182.2
95.0	311.6	6.160	43.09	18.0	101.2
100.0	328.0	6.260	43.27	20.0	91.1
105.0	344.4	6.370	43.47	22.0	82.8
110.0	360.8	6.380	43.48	2.0	911.1
115.0	377.2	6.380	43.48	.0000000000000.0	
118.0	387.0	6.380	43.48	.0000000000000.0	

Sumpter, Ore

8-37-S 29

5/30/73



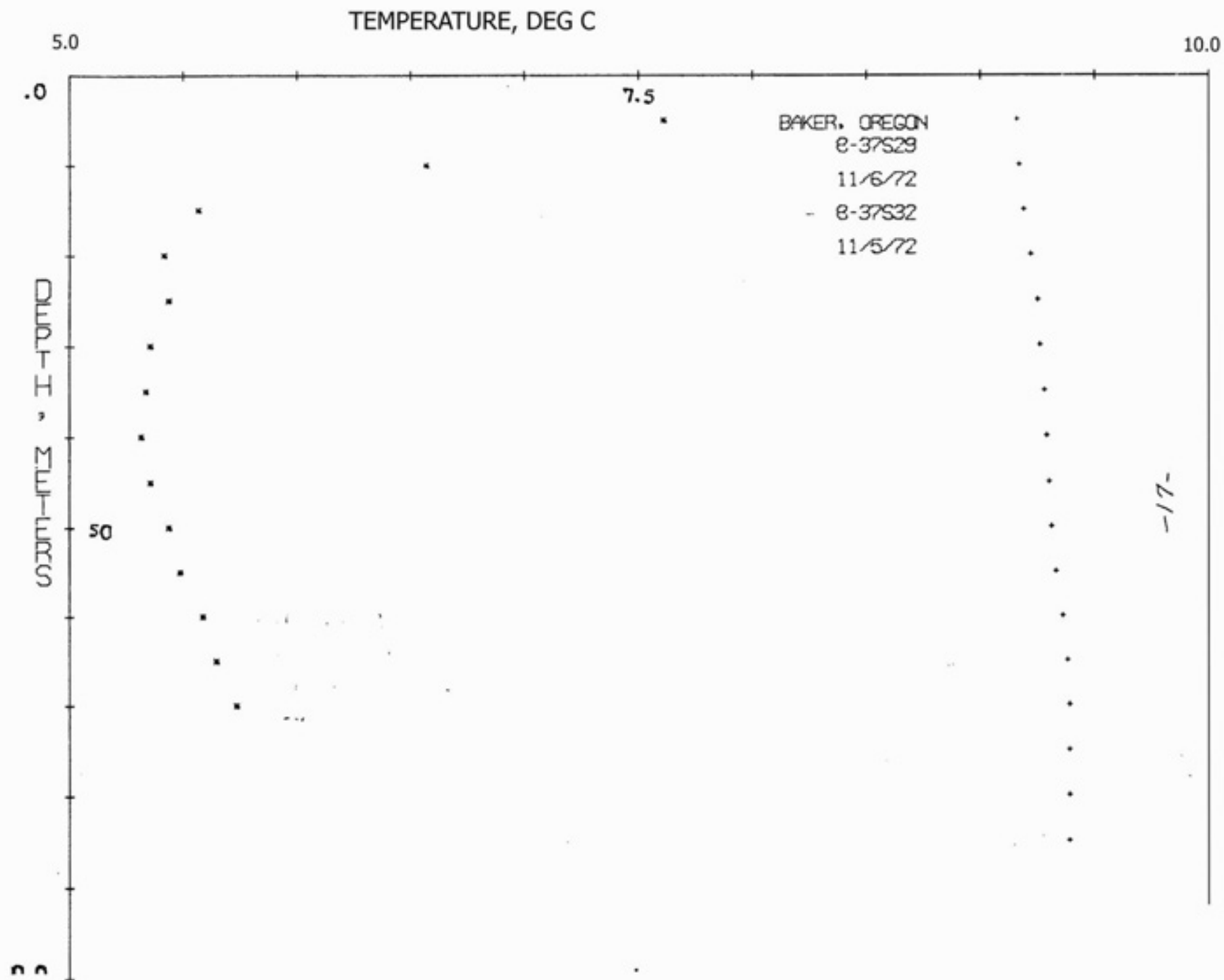
LOCATION: BAKER, OREGON
HOLE NUMBER: 8-37S32
DATE MEASURED: 11/5/72

DEPTH METERS	DEPTH FEET	TEMPERATURE DEG C	TEMPERATURE DEG F	GEO THERMAL GRADIENT DEG C/KM	GEO THERMAL GRADIENT FEET/DEG F
5.0	16.4	9.160	48.49	.0	.0
10.0	32.8	9.170	48.51	2.0	911.1
15.0	49.2	9.190	48.54	4.0	455.6
20.0	65.6	9.220	48.60	6.0	303.7
25.0	82.0	9.250	48.65	6.0	303.7
30.0	98.4	9.260	48.67	2.0	911.1
35.0	114.8	9.280	48.70	4.0	455.6
40.0	131.2	9.290	48.72	2.0	911.1
45.0	147.6	9.300	48.74	2.0	911.1
50.0	164.0	9.310	48.76	2.0	911.1
55.0	180.4	9.330	48.79	4.0	455.6
60.0	196.8	9.360	48.85	6.0	303.7
65.0	213.2	9.380	48.88	4.0	455.6
70.0	229.6	9.390	48.90	2.0	911.1
75.0	246.0	9.390	48.90	.000000000000000000	.0
80.0	262.4	9.390	48.90	.000000000000000000	.0
85.0	278.8	9.390	48.90	.000000000000000000	.0

Baker

8-37-32

11/5/72



LOCATION: BAKER, OREGON
HOLE NUMBER: 8-42S24
DATE MEASURED: 11/2/72

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
3.0	9.8	12.240	54.03	.0	.0
5.0	16.4	12.220	54.00	-10.0	-182.2
10.0	32.8	12.330	54.19	22.0	82.8
15.0	49.2	12.520	54.54	38.0	48.0
20.0	65.6	12.680	54.82	32.0	56.9
25.0	82.0	12.740	54.93	12.0	151.9
30.0	98.4	12.790	55.02	10.0	182.2
35.0	114.8	12.830	55.09	8.0	227.8
40.0	131.2	12.870	55.17	8.0	227.8
45.0	147.6	13.140	55.65	54.0	33.7
50.0	164.0	13.440	56.19	60.0	30.4
55.0	180.4	13.680	56.62	48.0	38.0
60.0	196.8	13.850	56.93	34.0	53.6
65.0	213.2	14.160	57.49	62.0	29.4
70.0	229.6	14.190	57.54	6.0	303.7

-18-

Baker, Ore
8-42-S~~24~~ 24
11/2/72.

LOCATION: BAKER, OREGON
HOLE NUMBER: 8-42-S29
DATE MEASURED: 11/2/72

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
3.0	9.8	13.550	56.39	.0	.0
5.0	16.4	13.220	55.80	-165.0	-11.0
10.0	32.8	13.000	55.40	-44.0	-41.4
15.0	49.2	13.070	55.53	14.0	130.2
20.0	65.6	13.120	55.62	10.0	182.2
25.0	82.0	13.200	55.76	16.0	113.9
30.0	98.4	13.260	55.87	12.0	151.9
35.0	114.8	13.300	55.94	8.0	227.8
40.0	131.2	13.370	56.07	14.0	130.2
45.0	147.6	13.440	56.19	14.0	130.2

probably S 29

Baker, Ore

8#-42-\$29

11/2/72

TEMPERATURE, DEG C

10.0

.0

12.5

BAKER, OREGON

* 8-42S24

11/2/72

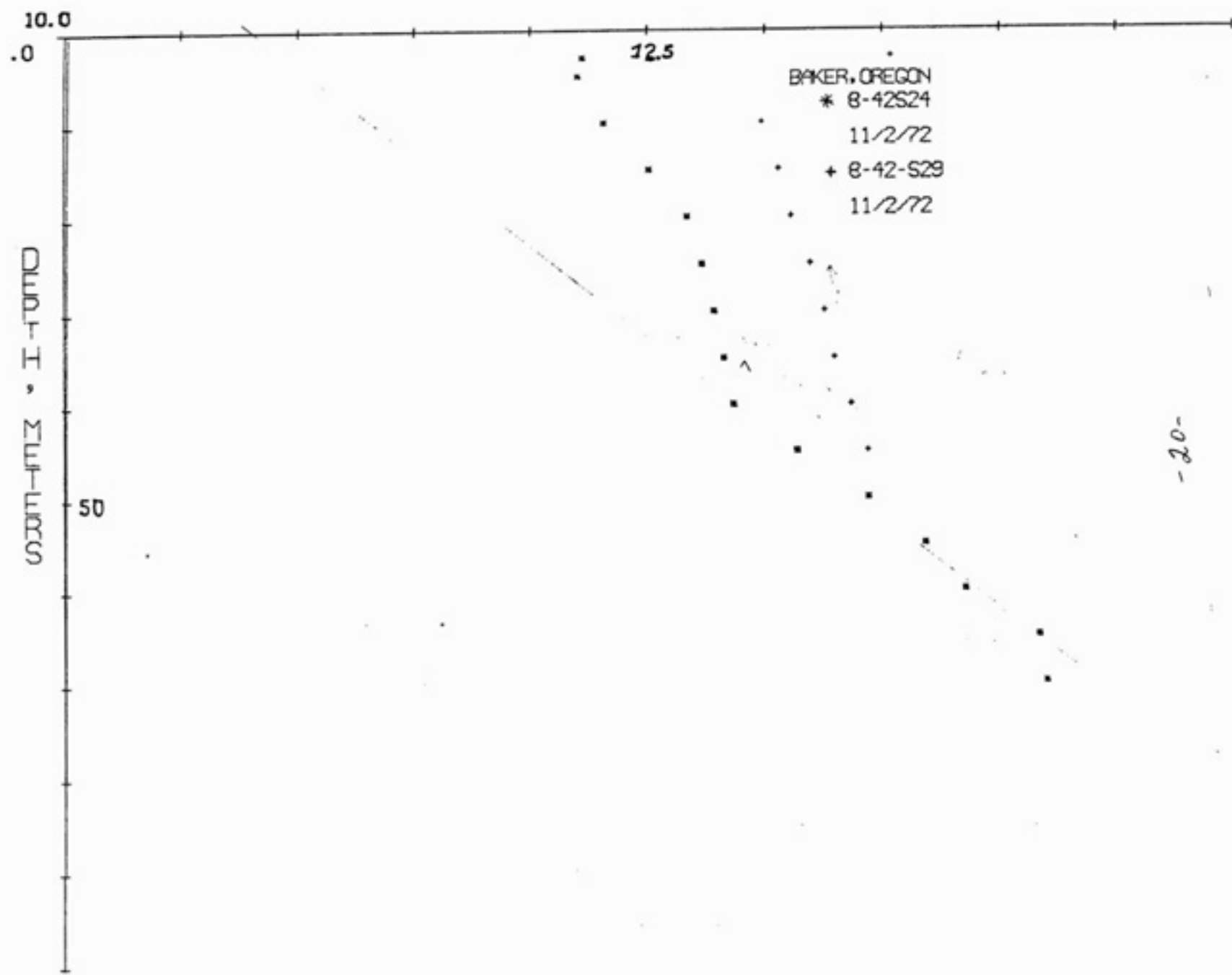
+ 8-42-S29

11/2/72

DEPTH, FEET

50

-20-



TEMPERATURE-DEPTH LOG

Location Cow Canyon Rest Area 1.8 miles South Shaniko Jct on US 97
 Company Ore State Highway Dept. Drill Hole No. _____
 Date 8/25/73 Depth Drilled 520 Zero Depth 2000' - 610 M
 Probe, Cable, Bridge _____ Operator Harris
 Comments NW, NE sec 9, T9S, R1E

Depth		Resistance	Temperature		$\Delta T/\Delta x$	Comments
M	Fe		Deg C	Deg F	$^{\circ}\text{C}/\text{km}$	
5M	16.4	5703	11.58	52.84	-110	
10M	32.8	5837	11.03	51.85	130	
15M	49.2	5678	11.68	53.02	22	
20M	65.6	5651	11.79	53.22	52	
30M	98.4	5529	12.31	54.16	33	
40M	131.2	5452	12.64	54.75	18	
50M	164.0	5413	12.82	55.07	28	
60M	196.6	5348	13.10	55.58	35	
70	229.6	5270	13.45	56.21	30	
80	262.4	5204	13.75	56.75	43	
90	295.2	5112	14.18	57.52	28	
100	328.0	5052	14.46	58.03	5	Water
110	360.8	5042.7	14.51	58.12	11	
120	393.6	5017.8	14.62	58.32	8	
130	426.4	5001.3	14.70	58.46	21	
140	459.2	4959.4	14.91	58.84	91	
150	492.0	4774.1	15.82	60.48	78	
155	508.4	4696.4	16.21	61.18		

LOCATION: JAKER, OREGON
 HOLE NUMBER: 9-41SS7
 DATE MEASURED: 11/4/72

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
5.0	16.4	12.640	54.75	.0	.0
10.0	32.8	12.030	53.65	-122.0	-14.9
15.0	49.2	12.240	54.03	42.0	43.4
20.0	65.6	12.520	54.54	56.0	32.5
25.0	82.0	12.720	54.90	40.0	45.6

Baker, Ore
 9-41-§ 7
 11/4/72

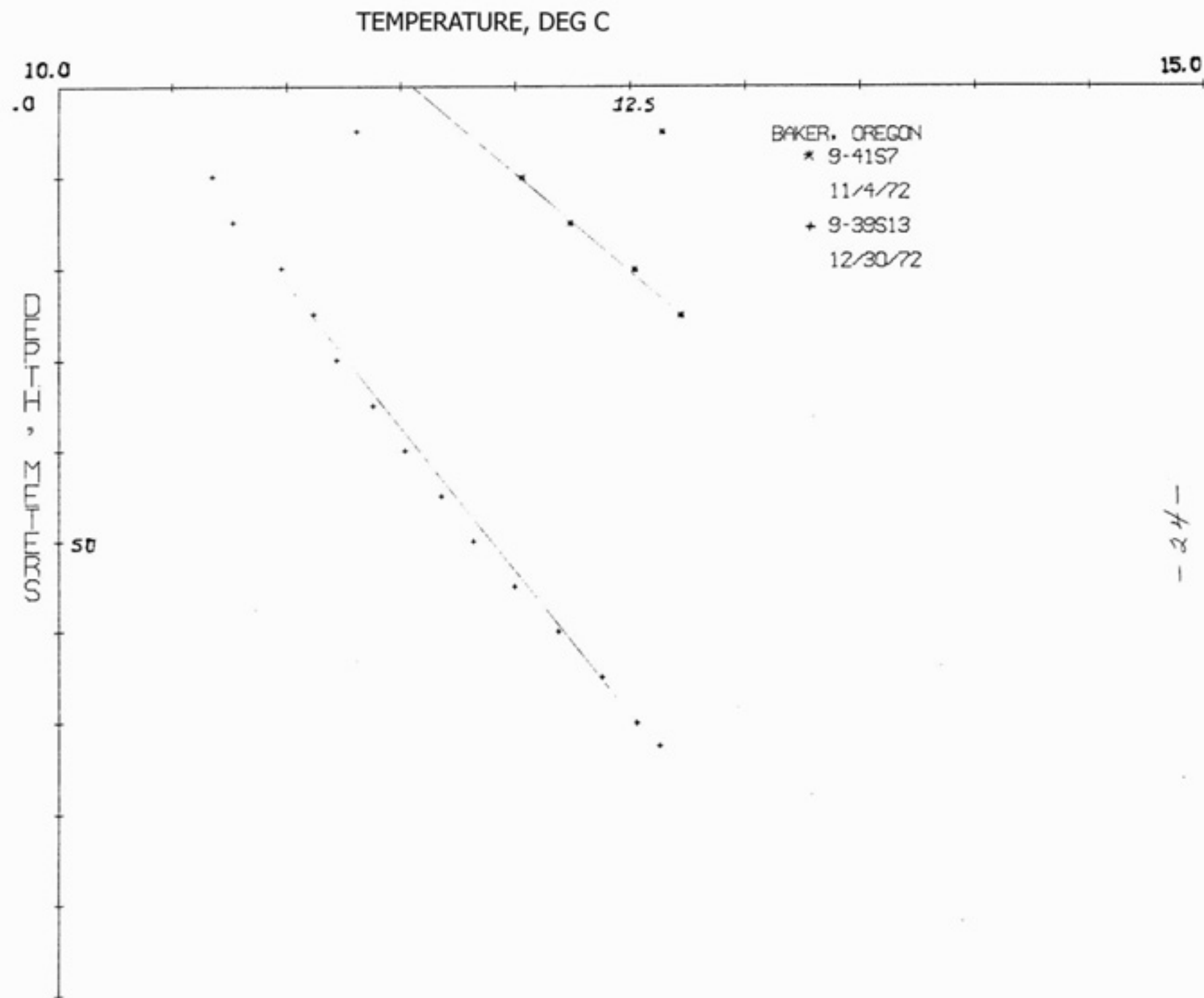
LOCATION: BAKER, OREGON
HOLE NUMBER: 9-39S13
DATE MEASURED: 12/30/72

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
5.0	16.4	11.310	52.36	.0	.0
10.0	32.8	10.680	51.22	-126.0	-14.5
15.0	49.2	10.770	51.39	18.0	101.2
20.0	65.6	10.980	51.76	42.0	43.4
25.0	82.0	11.120	52.02	28.0	65.1
30.0	98.4	11.220	52.20	20.0	91.1
35.0	114.8	11.380	52.48	32.0	56.9
40.0	131.2	11.520	52.74	28.0	65.1
45.0	147.6	11.680	53.02	32.0	56.9
50.0	164.0	11.820	53.28	28.0	65.1
55.0	180.4	12.000	53.60	36.0	50.6
60.0	196.8	12.190	53.94	38.0	48.0
65.0	213.2	12.380	54.28	38.0	48.0
70.0	229.6	12.530	54.55	30.0	60.7
72.5	237.8	12.630	54.73	40.0	45.6

Baker, Ore

9-39-S13

12/30/72



TEMPERATURE-DEPTH LOG

Location Lebanon, SW, SW sec 4, T12S, R1W elev 430'
 Company _____ Drill Hole No. _____
 Date 10/29/74 Depth Drilled _____ Zero Depth _____
 Probe, Cable, Bridge BR-1 operator Bowen, Hull
 Comments _____

[illegible]

LOCATION: JOHN DAY, OREGON
HOLE NUMBER: 13-29S9
DATE MEASURED: 9/14/73

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
10.0	32.8	12.350	54.23	.0	.0
15.0	49.2	12.660	54.79	62.0	29.4
20.0	65.6	12.820	55.08	32.0	56.9
25.0	82.0	12.870	55.17	10.0	182.2
30.0	98.4	12.930	55.27	12.0	151.9
35.0	114.8	12.980	55.36	10.0	182.2
40.0	131.2	13.070	55.53	18.0	101.2
45.0	147.6	13.130	55.63	12.0	151.9
50.0	164.0	13.190	55.74	12.0	151.9
55.0	180.4	13.280	55.90	18.0	101.2
60.0	196.8	13.390	56.10	22.0	82.8
65.0	213.2	13.440	56.19	10.0	182.2
70.0	229.6	13.540	56.37	20.0	91.1
75.0	246.0	13.690	56.64	30.0	60.7
80.0	262.4	13.920	57.06	46.0	39.6
85.0	278.8	14.000	57.20	16.0	113.9
90.0	295.2	14.100	57.38	20.0	91.1
95.0	311.6	14.220	57.60	24.0	75.9
100.0	328.0	14.360	57.85	28.0	65.1
105.0	344.4	14.530	58.15	34.0	53.6
110.0	360.8	14.770	58.59	48.0	38.0
115.0	377.2	15.050	59.09	56.0	32.5
120.0	393.6	15.350	59.63	60.0	30.4
125.0	410.0	15.700	60.26	70.0	26.0
130.0	426.4	16.040	60.87	68.0	26.8
135.0	442.8	16.390	61.50	70.0	26.0
140.0	459.2	16.720	62.10	66.0	27.6
145.0	475.6	16.970	62.55	50.0	36.4
150.0	492.0	17.260	63.07	58.0	31.4

John Day
McCaig
Well 13-29- \$9¹⁵
9/14/73

LOCATION: JOHN DAY, OREGON
 HOLE NUMBER: 13-31S26
 DATE MEASURED: 9/13/73

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
10.0	32.8	13.790	56.82	.0	.0
15.0	49.2	13.010	55.42	-156.0	-11.7
20.0	65.6	12.860	55.15	-30.0	-60.7
25.0	82.0	12.910	55.24	10.0	182.2
30.0	98.4	12.190	53.94	-144.0	-12.7
35.0	114.8	13.250	55.85	212.0	8.6
40.0	131.2	13.530	56.35	56.0	32.5
45.0	147.6	13.730	56.71	40.0	45.6
50.0	164.0	13.950	57.11	44.0	41.4
55.0	180.4	14.210	57.58	52.0	35.0
60.0	196.8	14.410	57.94	40.0	45.6
65.0	213.2	14.580	58.24	34.0	53.6
70.0	229.6	14.810	58.66	46.0	39.6

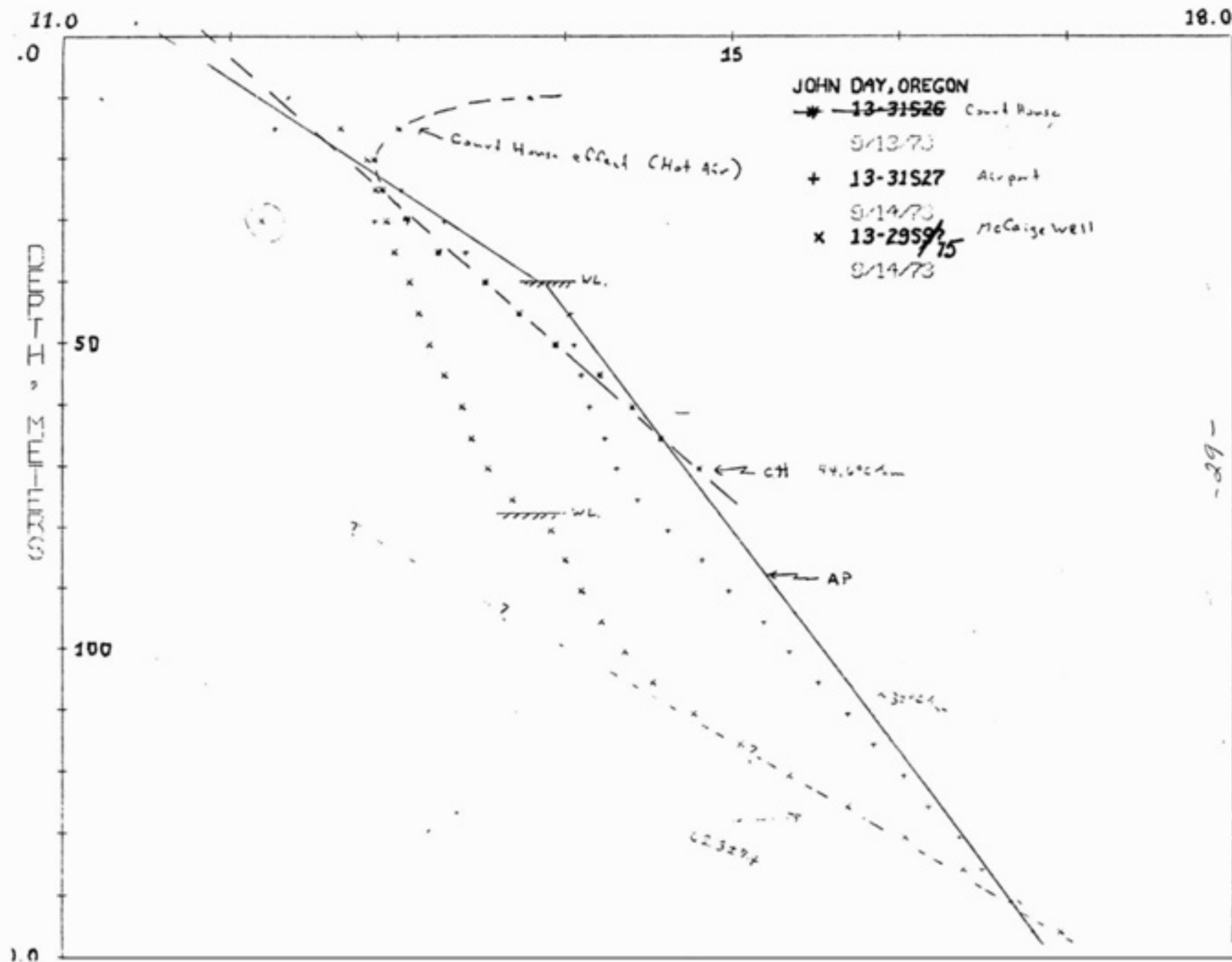
John Day
13-31-S26
9/13/73
Court House

LOCATION: JOHN DAY, OREGON
HOLE NUMBER: 13-31S27
DATE MEASURED: 9/14/73

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
10.0	32.8	11.240	52.23	.0	.0
15.0	49.2	12.270	54.09	206.0	8.8
30.0	98.4	12.860	55.15	39.3	46.3
25.0	82.0	13.020	55.44	32.0	56.9
30.0	98.4	13.280	55.90	52.0	35.0
35.0	114.8	13.410	56.14	26.0	70.1
40.0	131.2	13.870	56.97	92.0	19.8
45.0	147.6	14.040	57.27	34.0	53.6
50.0	164.0	14.060	57.31	4.0	455.6
55.0	180.4	14.100	57.38	8.0	227.8
60.0	196.8	14.150	57.47	10.0	182.2
65.0	213.2	14.240	57.63	18.0	101.2
70.0	229.6	14.310	57.76	14.0	130.2
75.0	246.0	14.440	57.99	26.0	70.1
80.0	262.4	14.620	58.32	36.0	50.6
85.0	278.8	14.820	58.68	40.0	45.6
90.0	295.2	14.980	58.96	32.0	56.9
95.0	311.6	15.190	59.34	42.0	43.4
100.0	328.0	15.350	59.63	32.0	56.9
105.0	344.4	15.520	59.94	34.0	53.6
110.0	360.8	15.700	60.26	36.0	50.6
115.0	377.2	15.850	60.53	30.0	60.7
120.0	393.6	16.030	60.85	36.0	50.6
125.0	410.0	16.180	61.12	30.0	60.7
130.0	426.4	16.370	61.47	38.0	48.0
135.0	442.8	16.500	61.70	26.0	70.1
140.0	459.2	16.670	62.01	34.0	53.6
145.0	475.6	16.810	62.26	28.0	65.1
150.0	492.0	16.970	62.55	32.0	56.9

John Day
13-31-S27
9/14/73
AIRPORT

TEMPERATURE, DEG C



-29-

LOCATION: VALLI REGION
HOLE NUMBER: 14-3513
DATE MEASURED: 8/16/72

MEASUREMENTS

DEPTH METERS	DEPTH FEET	TEMPERATURE DEG C	TEMPERATURE DEG F	GEOTHERMAL GRADIENT DEG C/KM	GEOTHERMAL GRADIENT FEET/DEG F
3.0	9.8	11.365	52.45	.0	.0
5.0	16.4	12.910	51.24	-227.5	-5.0
10.0	32.8	11.515	52.73	121.0	15.1
15.0	49.2	11.995	53.59	26.0	13.0
20.0	65.6	12.565	54.62	114.0	16.0
25.0	82.0	12.725	54.90	32.0	25.2
30.0	98.4	12.930	55.27	41.0	44.4
35.0	114.8	13.170	55.71	44.0	35.0
40.0	131.2	13.410	56.14	48.0	35.0
45.0	147.6	13.655	56.58	49.0	37.2
50.0	164.0	13.910	57.04	51.0	35.7
55.0	180.4	14.045	57.28	27.0	67.5
60.0	196.8	14.285	57.71	48.0	35.0
65.0	213.2	14.530	58.15	49.0	37.2
70.0	229.6	14.735	58.52	41.0	44.4
75.0	246.0	14.985	58.97	30.0	35.4
80.0	262.4	15.115	59.21	26.0	70.1
85.0	278.8	15.215	59.39	20.0	91.1
90.0	295.2	15.340	59.61	25.0	72.9
95.0	311.6	15.495	59.89	31.0	55.5
100.0	328.0	15.745	60.34	50.0	35.4
105.0	344.4	15.915	60.65	34.0	53.5
110.0	360.8	16.065	60.92	30.0	60.7
115.0	377.2	16.215	61.19	30.0	60.7
120.0	393.6	16.415	61.55	40.0	45.5
125.0	410.0	16.610	61.90	39.0	46.7
130.0	426.4	16.720	62.10	22.0	62.5
135.0	442.8	16.795	62.22	14.0	130.2
140.0	459.2	16.895	62.41	21.0	56.5
145.0	475.6	16.970	62.55	15.0	121.5
150.0	492.0	17.050	62.69	16.0	113.3
155.0	508.4	17.200	62.96	30.0	60.7
160.0	524.8	17.335	63.20	27.0	67.5
165.0	541.2	17.475	63.45	28.0	65.1
170.0	557.6	17.695	63.85	44.0	41.4
175.0	574.0	17.825	64.09	26.0	70.1
180.0	590.4	17.760	64.32	27.0	67.5
185.0	606.8	18.160	64.69	40.0	45.5
190.0	623.2	18.340	65.01	36.0	53.5
195.0	639.6	18.415	65.15	15.0	121.5
200.0	656.0	18.565	65.41	29.0	62.5
205.0	672.4	18.720	65.70	10.0	55.5
210.0	688.8	18.865	66.32	34.5	52.5
215.0	705.2	19.235	66.62	34.0	53.6
220.0	721.6	19.435	66.98	40.0	45.5
225.0	738.0	19.695	67.45	32.0	55.5
230.0	754.4	19.850	67.73	31.0	55.5
235.0	770.8	20.015	68.03	33.0	55.2

Huntington
14-43-\$13
01/1/72

HUNTINGTON
 LOCATION: WALE, OREGON
 HOLE NUMBER: 14-43513
 DATE MEASURED: 8/16/72

Adams Ranch
 FAC 2

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
245.0	803.6	20.225	68.40	31.0	44.4
250.0	820.0	20.425	68.76	30.0	45.6
255.0	836.4	20.605	69.09	37.0	49.2
260.0	852.8	20.875	69.57	33.0	34.4
265.0	869.2	21.075	69.93	30.0	45.6
270.0	885.6	21.235	70.21	32.0	55.9
275.0	902.0	21.435	70.58	31.0	44.4
280.0	918.4	21.675	71.01	47.0	38.8

Huntington
 P.2
 8/16/72

GRADIENT, DEC C/KM

.0

300.0

0

100

Huntington²⁰⁰
OREGON
14-18812
2/10/72

Abram., ranch

GRADIENT, DEC C/KM

300

-32-

15-42-14

LOCATION: BROGAN HILL
HOLE NUMBER:
DATE MEASURED: 6/22/73

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
10.0	32.8	13.270	55.89	.0	.0
15.0	49.2	13.670	56.61	30.0	22.8
20.0	65.6	14.000	57.20	66.0	27.6
25.0	82.0	14.340	57.81	68.0	26.8
30.0	98.4	14.720	58.50	76.0	24.0
35.0	114.8	14.920	58.86	40.0	45.6
40.0	131.2	15.000	59.00	16.0	113.9
45.0	147.6	15.037	59.07	7.4	246.2
50.0	164.0	15.037	59.07	.0000000000000000	.0
55.0	180.4	15.037	59.07	.0000000000000000	.0
75.0	246.0	15.320	59.58	14.1	128.8
90.0	295.2	16.330	61.39	67.3	27.1
95.0	311.6	16.440	61.59	22.0	82.8
100.0	328.0	16.510	61.72	14.0	130.2
105.0	344.4	16.560	61.81	10.0	182.2
110.0	360.8	16.620	61.92	12.0	151.9
115.0	377.2	17.050	62.69	86.0	21.2
120.0	393.6	17.750	63.95	140.0	13.0
125.0	410.0	17.870	64.17	24.0	75.9
130.0	426.4	17.940	64.29	14.0	130.2
135.0	442.8	18.190	64.74	50.0	36.4
140.0	459.2	18.390	65.10	40.0	45.6
150.0	492.0	19.160	66.49	77.0	23.7

Brogan Hill
15-42-14
6/22/73

TEMPERATURE, DEG C

20.

13.0

0

16

BROGAN HILL, OREGON

6/22/73

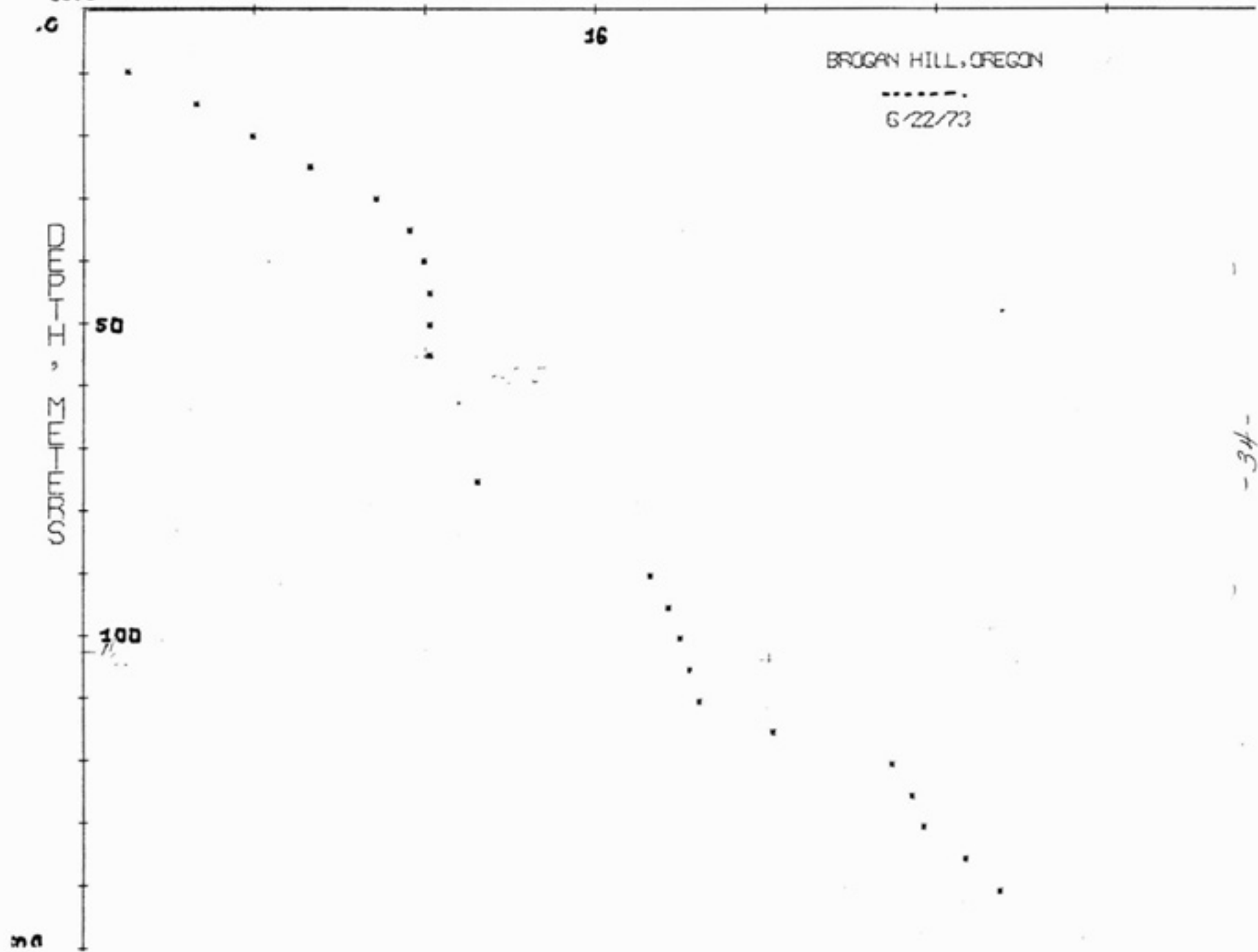
QUALITY - I-TIME

50

100

20

-34-



LOCATION: VALE, OR REGION
HULL NUMBER: 15 337
DATE MEASURED: 8/15/72

Farewell Bend well

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
3.0	9.8	13.095	55.57	.0	.0
5.0	16.4	12.605	54.69	-245.0	-7.4
10.0	32.8	13.540	56.37	137.0	9.7
15.0	49.2	14.045	57.28	101.0	18.0
20.0	65.6	14.360	57.85	53.0	28.9
25.0	82.0	14.555	58.20	39.0	46.7
30.0	98.4	14.785	58.61	46.0	39.6
35.0	114.8	15.035	59.06	50.0	36.4
40.0	131.2	15.315	59.57	56.0	32.5
45.0	147.6	15.560	60.04	53.0	34.4
50.0	164.0	15.850	60.53	54.0	33.7
55.0	180.4	16.125	61.02	55.0	33.1
60.0	196.8	16.425	61.56	50.0	30.4
70.0	229.6	17.110	62.80	58.5	26.6
80.0	262.4	17.745	63.94	53.5	28.7
90.0	295.2	18.660	65.59	51.5	19.9
100.0	328.0	20.325	68.58	156.5	10.9
110.0	360.8	20.220	68.40	-10.5	-173.5
120.0	393.6	20.475	68.85	25.5	71.5
130.0	426.4	21.630	70.93	115.5	15.8
140.0	459.2	21.780	71.20	15.0	121.5
150.0	492.0	22.145	71.86	36.5	49.9
160.0	524.8	22.395	72.31	25.0	72.9
170.0	557.6	22.655	72.78	26.0	70.1

Mallin Co.
Huntington

15-45-\$7

8/15/72

TEMPERATURE, DEG C

25.0

10.0

.0

Huntington
VALE, OREGON
15-1557
6/15/72
+ 14-13513
8/16/72

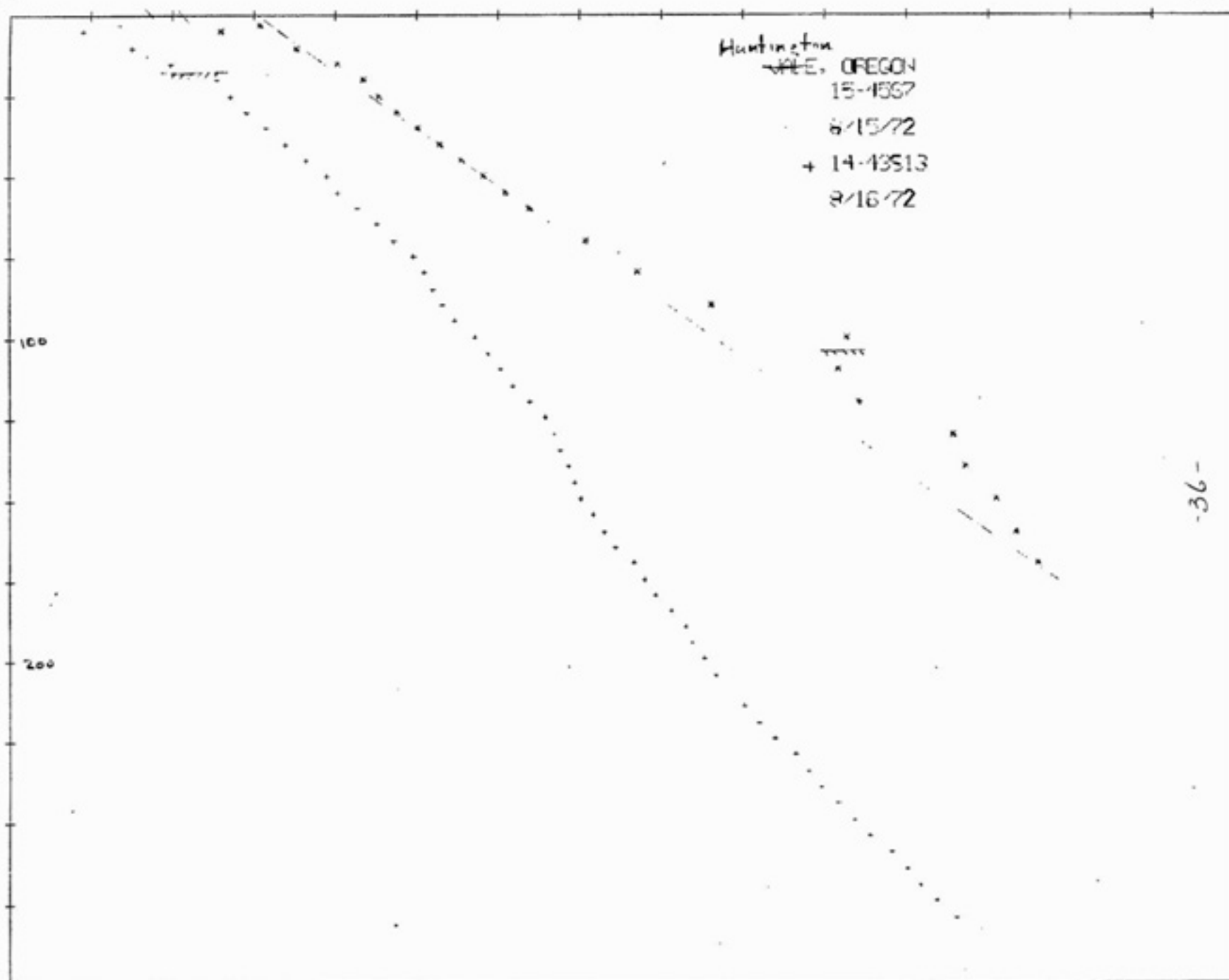
CHLORIDE, PERCENT

100

200

300.0

-36-

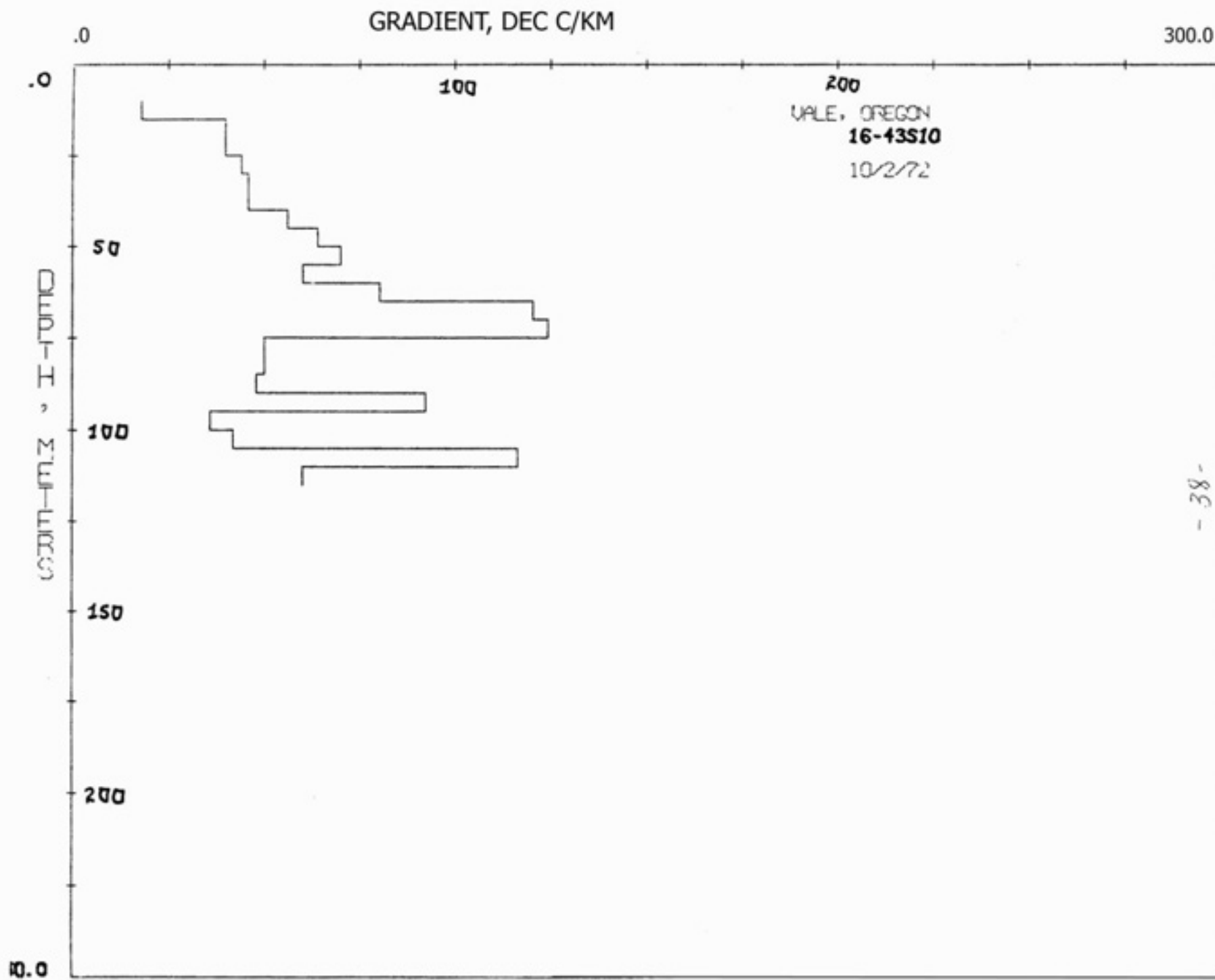


LOCATION: VALE, OREGON
HOLE NUMBER: 16-43S10
DATE MEASURED: 10/2/72

Water well

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
5.0	16.4	14.490	58.08	.0	.0
10.0	32.8	14.340	57.81	-30.0	-60.7
15.0	49.2	14.430	57.97	18.0	101.2
20.0	65.6	14.630	58.33	40.0	45.6
25.0	82.0	14.830	58.69	40.0	45.6
30.0	98.4	15.050	59.09	44.0	41.4
35.0	114.8	15.280	59.50	46.0	39.6
40.0	131.2	15.510	59.92	46.0	39.6
45.0	147.6	15.790	60.42	56.0	32.5
50.0	164.0	16.110	61.00	64.0	28.5
55.0	180.4	16.460	61.63	70.0	26.0
60.0	196.8	16.760	62.17	60.0	30.4
65.0	213.2	17.160	62.89	80.0	22.8
70.0	229.6	17.760	63.97	120.0	15.2
75.0	246.0	18.380	65.08	124.0	14.7
80.0	262.4	18.630	65.53	50.0	36.4
85.0	278.8	18.880	65.98	50.0	36.4
90.0	295.2	19.120	66.42	48.0	38.0
95.0	311.6	19.580	67.24	92.0	19.8
100.0	328.0	19.760	67.57	36.0	50.6
105.0	344.4	19.970	67.95	42.0	43.4
110.0	360.8	20.550	68.99	116.0	15.7
115.0	377.2	20.850	69.53	60.0	30.4

*Vale, Ore
16-43-S10
10/2/72*

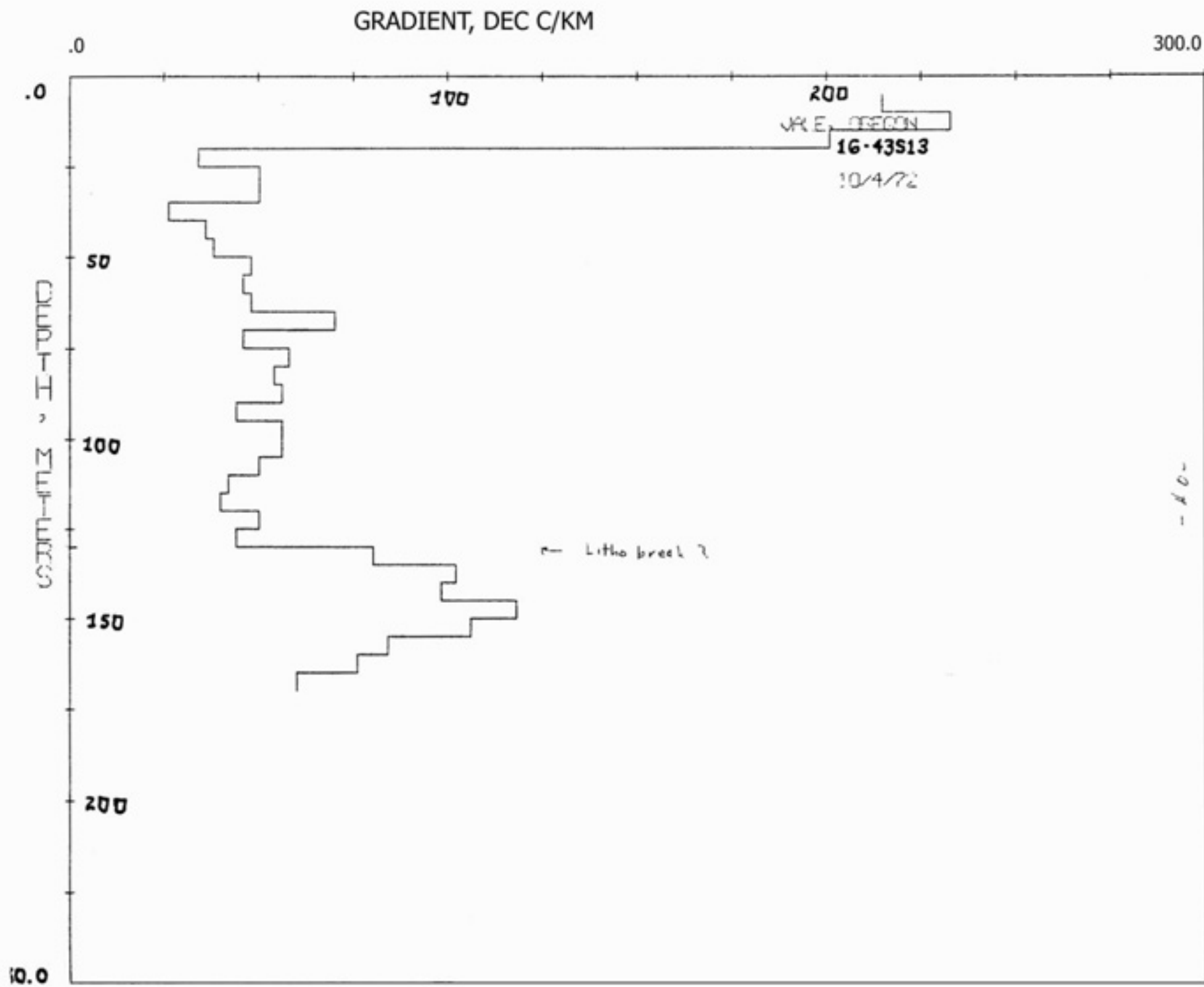


LOCATION: VALL, OREGON
HOLE NUMBER: 16-43S13
DATE MEASURED: 10/4/72

Water well

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
5.0	16.4	12.900	55.22	0	0
10.0	32.8	13.970	57.15	214.0	8.5
15.0	49.2	15.130	59.23	232.0	7.9
20.0	65.6	16.130	61.03	200.0	9.1
25.0	82.0	16.300	61.34	34.0	53.6
30.0	98.4	16.550	61.79	50.0	36.4
35.0	114.8	16.800	62.24	50.0	36.4
40.0	131.2	16.930	62.47	26.0	70.1
45.0	147.6	17.110	62.80	36.0	50.6
50.0	164.0	17.300	63.14	38.0	48.0
55.0	180.4	17.540	63.57	48.0	38.0
60.0	196.8	17.770	63.99	46.0	39.6
65.0	213.2	18.010	64.42	48.0	38.0
70.0	229.6	18.360	65.05	70.0	26.0
75.0	246.0	18.590	65.46	46.0	39.6
80.0	262.4	18.880	65.98	58.0	31.4
85.0	278.8	19.150	66.47	54.0	33.7
90.0	295.2	19.430	66.97	56.0	32.5
95.0	311.6	19.650	67.37	44.0	41.4
100.0	328.0	19.930	67.87	56.0	32.5
105.0	344.4	20.210	68.38	56.0	32.5
110.0	360.8	20.460	68.83	50.0	36.4
115.0	377.2	20.670	69.21	42.0	43.4
120.0	393.6	20.870	69.57	40.0	45.6
125.0	410.0	21.120	70.02	50.0	36.4
130.0	426.4	21.340	70.41	44.0	41.4
135.0	442.8	21.740	71.13	80.0	22.8
140.0	459.2	22.250	72.05	102.0	17.9
145.0	475.6	22.740	72.93	98.0	18.6
150.0	492.0	23.330	73.99	118.0	15.4
155.0	508.4	23.860	74.95	106.0	17.2
160.0	524.8	24.280	75.70	84.0	21.7
165.0	541.2	24.660	76.39	76.0	24.0
170.0	557.6	24.960	76.93	60.0	30.4

*Vale, Ore
16-43-\$13
10/4/72.*

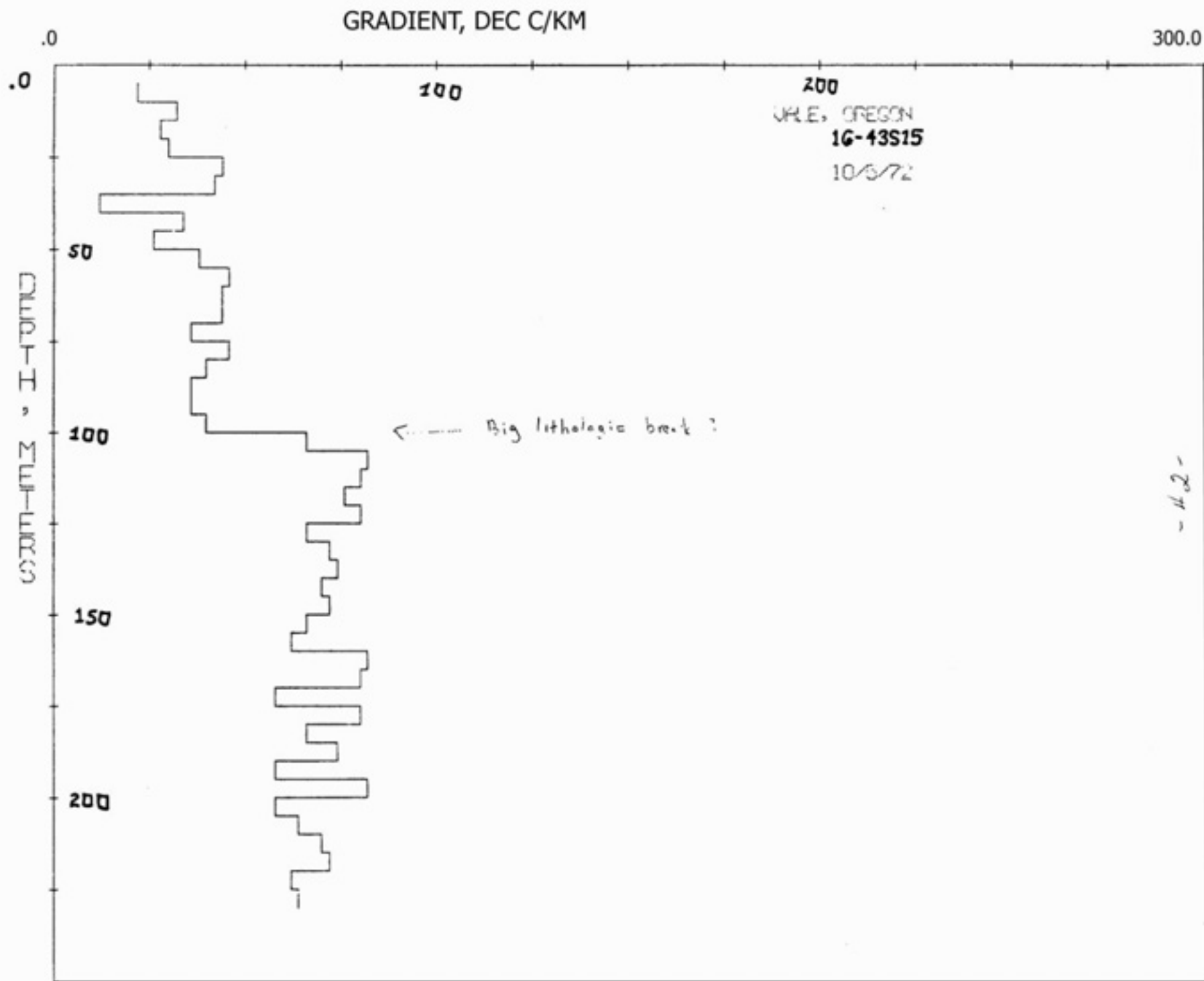


LOCATION: VALL. OREGON
HOLE NUMBER: 16-43S15
DATE MEASURED: 10/5/72

Water well

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
5.0	16.4	15.590	60.06	.0	.0
10.0	32.8	15.700	60.26	22.0	82.8
15.0	49.2	15.860	60.55	32.0	56.9
20.0	65.6	16.000	60.80	28.0	65.1
25.0	82.0	16.150	61.07	30.0	60.7
30.0	98.4	16.370	61.47	44.0	41.4
35.0	114.8	16.580	61.84	42.0	43.4
40.0	131.2	16.640	61.95	12.0	151.9
45.0	147.6	16.810	62.26	34.0	53.6
50.0	164.0	16.940	62.49	26.0	70.1
55.0	180.4	17.130	62.83	38.0	48.0
60.0	196.8	17.360	63.25	46.0	39.6
65.0	213.2	17.580	63.64	44.0	41.4
70.0	229.6	17.800	64.04	44.0	41.4
75.0	246.0	17.980	64.36	36.0	50.6
80.0	262.4	18.210	64.78	46.0	39.6
85.0	278.8	18.410	65.14	40.0	45.6
90.0	295.2	18.590	65.46	36.0	50.6
95.0	311.6	18.770	65.79	36.0	50.6
100.0	328.0	18.970	66.15	40.0	45.6
105.0	344.4	19.300	66.74	66.0	27.6
110.0	360.8	19.710	67.48	82.0	22.2
115.0	377.2	20.110	68.20	80.0	22.8
120.0	393.6	20.490	68.88	76.0	24.0
125.0	410.0	20.890	69.60	80.0	22.8
130.0	426.4	21.220	70.20	66.0	27.6
135.0	442.8	21.580	70.84	72.0	25.3
140.0	459.2	21.950	71.51	74.0	24.6
145.0	475.6	22.300	72.14	70.0	26.0
150.0	492.0	22.660	72.79	72.0	25.3
155.0	508.4	22.990	73.38	66.0	27.6
160.0	524.8	23.300	73.94	62.0	29.4
165.0	541.2	23.710	74.68	82.0	22.2
170.0	557.6	24.110	75.40	80.0	22.8
175.0	574.0	24.400	75.92	58.0	31.4
180.0	590.4	24.800	76.64	80.0	22.8
185.0	606.8	25.130	77.23	66.0	27.6
190.0	623.2	25.500	77.90	74.0	24.6
195.0	639.6	25.790	78.42	58.0	31.4
200.0	656.0	26.200	79.16	82.0	22.2
205.0	672.4	26.490	79.68	58.0	31.4
210.0	688.8	26.810	80.26	64.0	28.5
215.0	705.2	27.160	80.89	70.0	26.0
220.0	721.6	27.520	81.54	72.0	25.3
225.0	738.0	27.830	82.09	62.0	29.4
230.0	754.4	28.150	82.67	64.0	28.5

*Vall
16-43-#15
10/5/72*

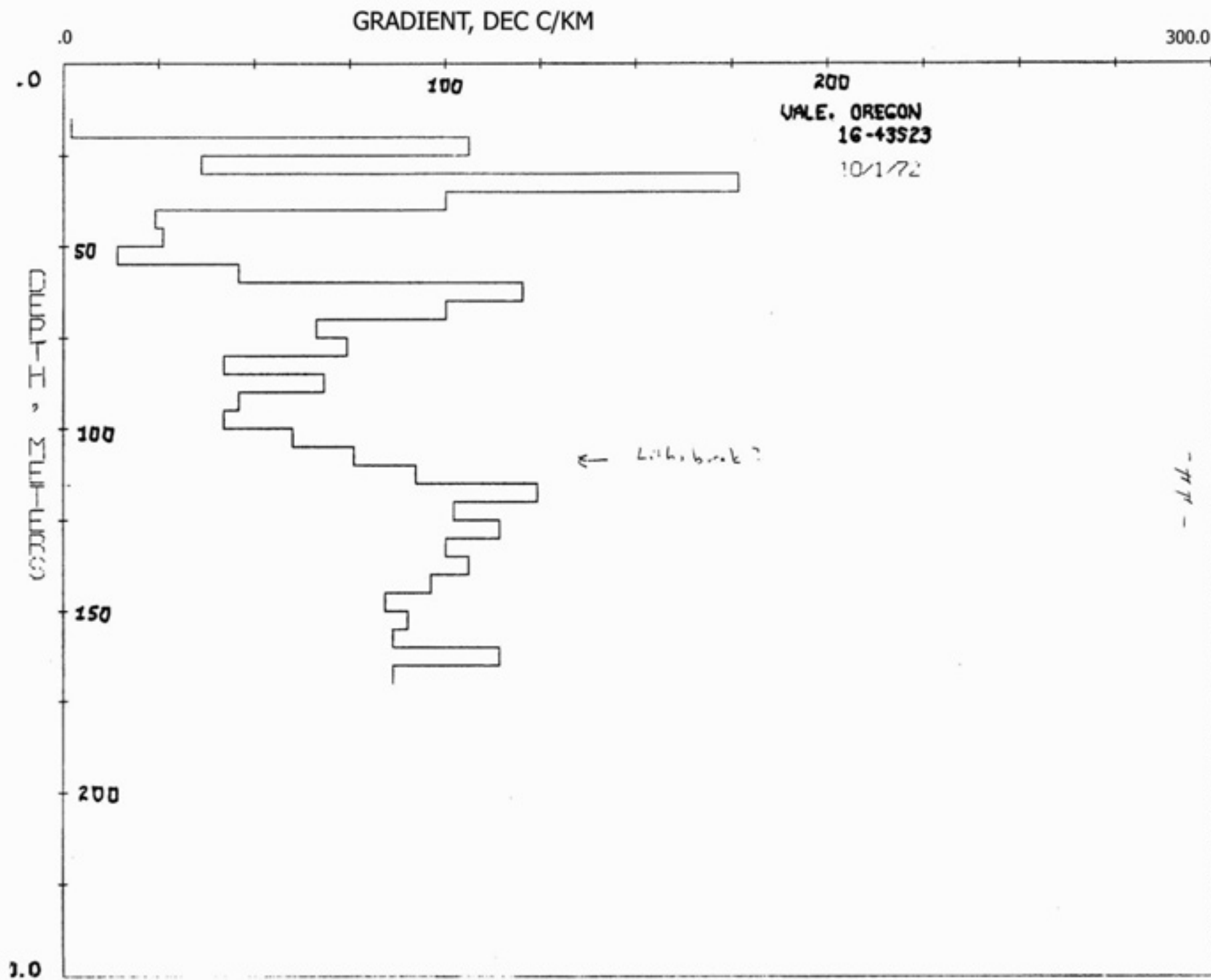


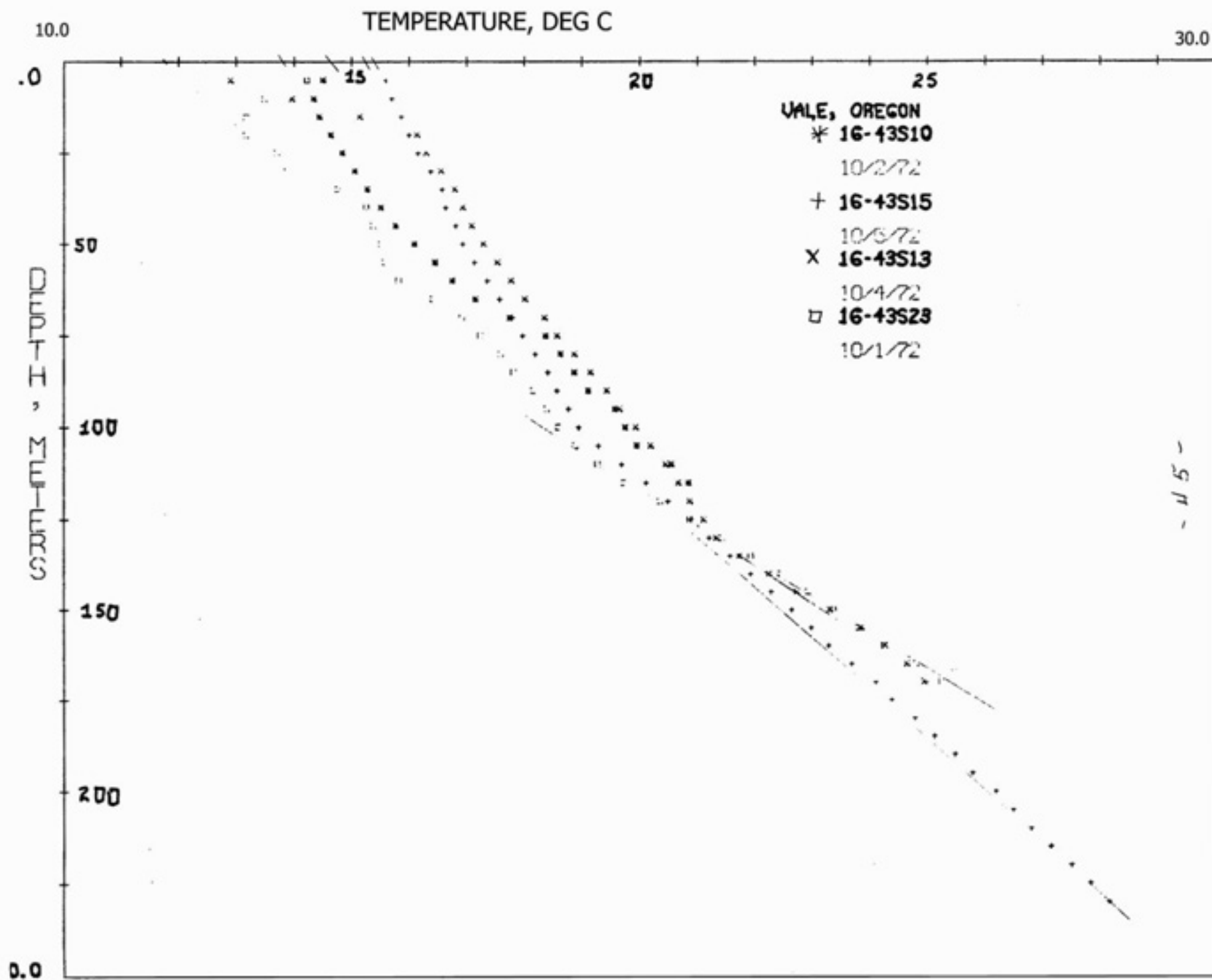
LOCATION: VALL. BREG9N
HOLE NUMBER: 16-43S23
DATE MEASURED: 10/1/72

Water well

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
5.0	16.4	14.230	57.61	.0	.0
10.0	32.8	13.490	56.28	-148.0	-12.3
15.0	49.2	13.160	55.69	-66.0	-27.6
20.0	65.6	13.170	55.71	2.0	911.1
25.0	82.0	13.700	56.66	106.0	17.2
30.0	98.4	13.880	56.98	36.0	50.6
35.0	114.8	14.760	58.57	176.0	10.4
40.0	131.2	15.260	59.47	100.0	18.2
45.0	147.6	15.380	59.68	24.0	75.9
50.0	164.0	15.510	59.92	26.0	70.1
55.0	180.4	15.580	60.04	14.0	130.2
60.0	196.8	15.810	60.46	46.0	39.6
65.0	213.2	16.410	61.54	120.0	15.2
70.0	229.6	16.910	62.44	100.0	18.2
75.0	246.0	17.240	63.03	66.0	27.6
80.0	262.4	17.610	63.70	74.0	24.6
85.0	278.8	17.820	64.08	42.0	43.4
90.0	295.2	18.160	64.69	68.0	26.8
95.0	311.6	18.390	65.10	46.0	39.6
100.0	328.0	18.600	65.48	42.0	43.4
105.0	344.4	18.900	66.02	60.0	30.4
110.0	360.8	19.280	66.70	76.0	24.0
115.0	377.2	19.740	67.53	92.0	19.8
120.0	393.6	20.360	68.65	124.0	14.7
125.0	410.0	20.870	69.57	102.0	17.9
130.0	426.4	21.440	70.59	114.0	16.0
135.0	442.8	21.940	71.49	100.0	18.2
140.0	459.2	22.470	72.45	106.0	17.2
145.0	475.6	22.950	73.31	96.0	19.0
150.0	492.0	23.370	74.07	84.0	21.7
155.0	508.4	23.820	74.88	90.0	20.2
160.0	524.8	24.250	75.65	86.0	21.2
165.0	541.2	24.820	76.68	114.0	16.0
170.0	557.6	25.250	77.45	86.0	21.2

Vall
16-43-S23
10/1/72





LOCATION: VALLE, OREGON
 HOLE NUMBER: 17-4359
 DATE MEASURED: 10/2/72

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
5.0	16.4	13.440	56.19	.0	.0
10.0	32.8	13.460	56.23	4.0	455.6
15.0	49.2	14.260	57.67	160.0	11.4
20.0	65.6	15.030	59.05	154.0	11.8
25.0	82.0	15.920	60.66	178.0	10.2
30.0	98.4	13.150	55.67	554.0	-3.3
35.0	114.8	16.760	62.17	722.0	2.5
40.0	131.2	17.010	62.62	50.0	36.4

average is

- 46 -

Valle, Ore
 17-43-59
 10/2/72

TEMPERATURE, DEG C

55.0

10.0

.0

UAE, OREGON

* 17-44S31

10/14/72

+ 17-44S17

10/6/72

x 17-43S9

10/2/72

□ 16-43S15

10/5/72

DEPTH, METERS

100

200

300

400

- 11 -

LOCATION: VALL. OREGON
HOLE NUMBER: 17-44-17
DATE MEASURED: 10/6/72

11

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
5.0	16.4	15.180	59.32	.0	.0
10.0	32.8	17.080	62.74	380.0	4.8
15.0	49.2	19.640	67.35	512.0	3.6
20.0	65.6	19.680	67.42	8.0	227.8
25.0	82.0	19.900	67.82	44.0	41.4
30.0	98.4	20.160	68.29	52.0	35.0
35.0	114.8	20.590	69.06	86.0	21.2
40.0	131.2	21.490	70.68	180.0	10.1
45.0	147.6	22.240	72.03	150.0	12.1
50.0	164.0	23.070	73.53	166.0	11.0
55.0	180.4	23.630	74.53	112.0	16.3
60.0	196.8	24.220	75.60	118.0	15.4
65.0	213.2	24.760	76.57	108.0	16.9
70.0	229.6	25.290	77.52	106.0	17.2
75.0	246.0	25.930	78.67	128.0	14.2
80.0	262.4	26.540	79.77	122.0	14.9
85.0	278.8	27.040	80.67	100.0	18.2
90.0	295.2	27.630	81.73	118.0	15.4
95.0	311.6	28.240	82.83	122.0	14.9
100.0	328.0	28.830	83.89	118.0	15.4
105.0	344.4	29.360	84.85	106.0	17.2
110.0	360.8	30.000	86.00	128.0	14.2
115.0	377.2	30.520	86.94	104.0	17.5
120.0	393.6	31.170	88.11	130.0	14.0
125.0	410.0	31.750	89.15	116.0	15.7
130.0	426.4	32.270	90.09	104.0	17.5
135.0	442.8	32.750	90.95	96.0	19.0
140.0	459.2	33.410	92.14	132.0	13.8
145.0	475.6	33.970	93.15	112.0	16.3
150.0	492.0	34.590	94.26	124.0	14.7
155.0	508.4	35.160	95.29	114.0	16.0
160.0	524.8	35.750	96.35	118.0	15.4
165.0	541.2	36.320	97.38	114.0	16.0
170.0	557.6	36.890	98.40	114.0	16.0
175.0	574.0	37.480	99.46	118.0	15.4
180.0	590.4	37.920	100.26	88.0	20.7
185.0	606.8	38.510	101.32	118.0	15.4
190.0	623.2	39.070	102.33	112.0	16.3
195.0	639.6	39.600	103.28	106.0	17.2
200.0	656.0	40.070	104.13	94.0	19.4
205.0	672.4	40.610	105.10	108.0	16.9
210.0	688.8	41.080	105.94	94.0	19.4
215.0	705.2	41.520	106.74	88.0	20.7
220.0	721.6	41.950	107.51	86.0	21.2
225.0	738.0	42.410	108.34	92.0	19.8
230.0	754.4	42.820	109.08	82.0	22.2
235.0	770.8	43.260	109.87	88.0	20.7
240.0	787.2	43.440	110.19	36.0	50.6

17-44-11

10/6/72

LOCATION: VALL BREGON
HOLE NUMBER: 17-44S-11
DATE MEASURED: 10/6/72

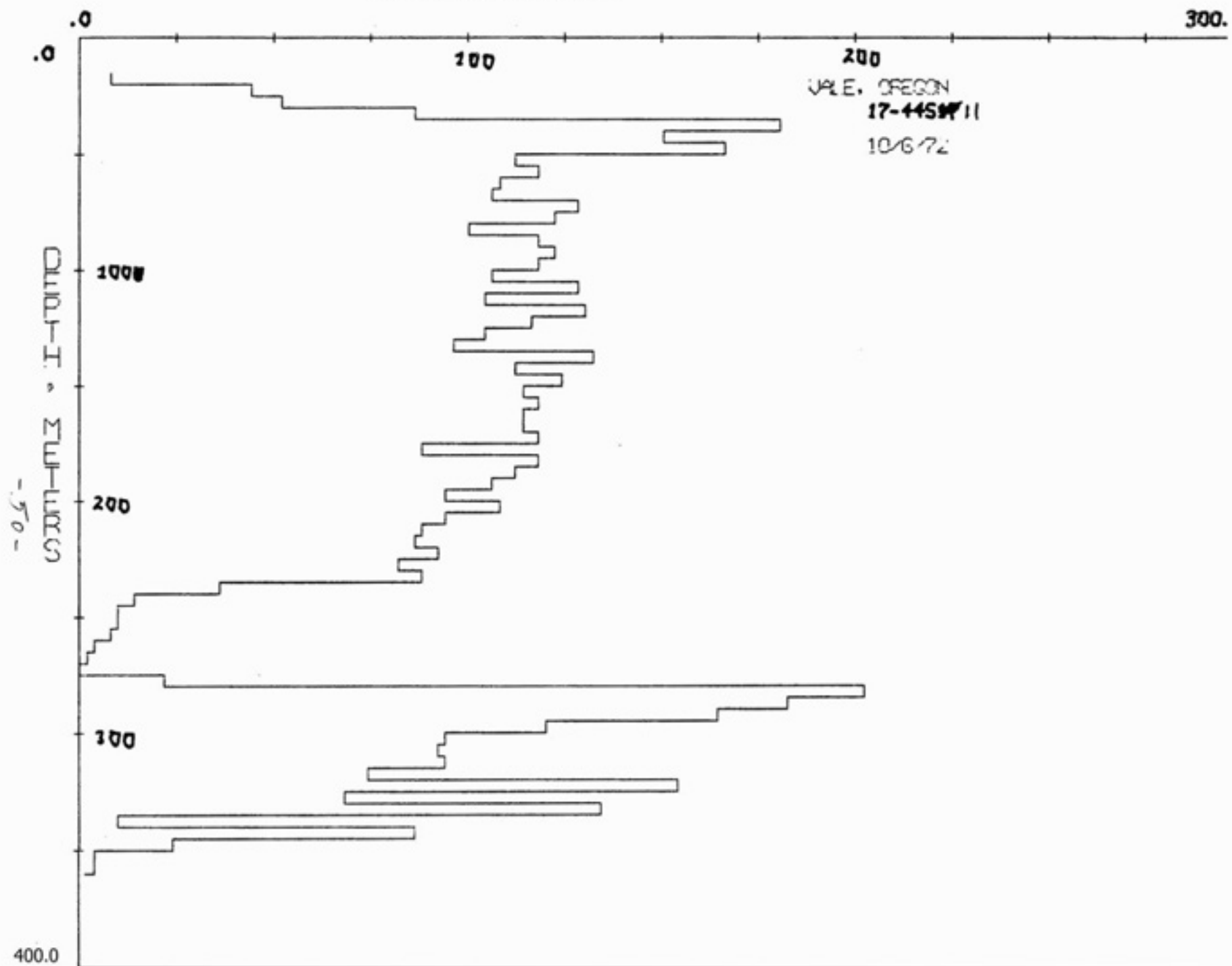
PAGE 2

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
245.0	803.6	43.510	110.32	14.0	130.2
250.0	820.0	43.560	110.41	10.0	182.2
255.0	836.4	43.610	110.50	10.0	182.2
260.0	852.8	43.650	110.57	8.0	227.8
265.0	869.2	43.670	110.61	4.0	455.6
270.0	885.6	43.680	110.62	2.0	911.1
275.0	902.0	43.680	110.62	0.00000000000000	0.0
280.0	918.4	43.790	110.82	22.0	82.8
285.0	934.8	44.800	112.64	202.0	9.0
290.0	951.2	45.710	114.28	182.0	10.0
295.0	967.6	46.530	115.75	164.0	11.1
300.0	984.0	47.130	116.83	120.0	15.2
305.0	1000.4	47.600	117.68	94.0	19.4
310.0	1016.8	48.060	118.51	92.0	19.8
315.0	1033.2	48.530	119.35	94.0	19.4
320.0	1049.6	48.900	120.02	74.0	24.6
325.0	1066.0	49.670	121.41	154.0	11.8
330.0	1082.4	50.010	122.02	68.0	26.8
335.0	1098.8	50.680	123.22	134.0	13.6
340.0	1115.2	50.730	123.31	10.0	182.2
345.0	1131.6	51.160	124.09	86.0	21.2
350.0	1148.0	51.280	124.30	24.0	75.9
355.0	1164.4	51.300	124.34	4.0	455.6
360.0	1180.8	51.320	124.38	4.0	455.6
365.0	1197.2	51.320	124.38	0.00000000000000	0.0
370.0	1213.6	51.320	124.38	0.00000000000000	0.0

17-44-S-11

~~17-44-S-11~~ P.2

GRADIENT, DEC C/KM



LOCATION: VALE, OREGON
HOLE NUMBER: 17-44S31
DATE MEASURED: 10/14/72

water well

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
5.0	16.4	13.430	56.17	.0	.0
10.0	32.8	13.850	56.93	84.0	21.7
15.0	49.2	14.510	58.12	132.0	13.8
20.0	65.6	14.990	58.98	96.0	19.0
25.0	82.0	15.630	60.13	128.0	14.2
30.0	98.4	15.920	60.66	58.0	31.4
35.0	114.8	16.390	61.50	94.0	19.4
40.0	131.2	16.930	62.47	108.0	16.9
45.0	147.6	17.390	63.30	92.0	19.8
50.0	164.0	17.700	63.86	62.0	29.4
55.0	180.4	18.060	64.51	72.0	25.3
60.0	196.8	18.430	65.17	74.0	24.6
65.0	213.2	19.020	66.24	118.0	15.4
70.0	229.6	19.460	67.03	88.0	20.7

average
86

Vale
17-44-S31
10/14/72

LOCATION: VALE, OREGON
HOLE NUMBER: 18-41S35
DATE MEASURED: 10/12/72

Water well

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
5.0	16.4	11.590	52.86	.0	.0
10.0	32.8	11.190	52.14	-80.0	-22.8
15.0	49.2	11.170	52.11	-4.0	-455.6
20.0	65.6	11.210	52.18	8.0	227.8
25.0	82.0	11.290	52.32	16.0	113.9
30.0	98.4	11.470	52.65	36.0	50.6
35.0	114.8	11.630	52.93	32.0	56.9
40.0	131.2	11.790	53.22	32.0	56.9
45.0	147.6	12.150	53.87	72.0	25.3

LOCATION: VALE, OREGON
HOLE NUMBER: 18-44S21
DATE MEASURED: 10/11/72

Water Well

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
5.0	16.4	13.600	56.48	.0	.0
10.0	32.8	13.770	56.79	34.0	53.6
15.0	49.2	14.220	57.60	90.0	20.2
20.0	65.6	14.910	58.84	138.0	13.2
25.0	82.0	15.060	59.11	30.0	60.7
30.0	98.4	15.340	59.61	56.0	32.5
35.0	114.8	15.650	60.17	62.0	29.4
40.0	131.2	15.970	60.75	64.0	28.5
45.0	147.6	16.350	61.43	76.0	24.0
50.0	164.0	16.700	62.06	70.0	26.0
55.0	180.4	17.010	62.62	62.0	29.4
60.0	196.8	17.340	63.21	66.0	27.6
65.0	213.2	17.690	63.84	70.0	26.0
70.0	229.6	18.010	64.42	64.0	28.5
75.0	246.0	18.310	64.96	60.0	30.4
80.0	262.4	18.830	65.89	104.0	17.5
85.0	278.8	18.880	65.98	10.0	182.2

average 12

*18-44-S21
10/11/72*

TEMPERATURE, DEG C

20.0

10.0

.0

15

UAE, OREGON

* 18-44S21

10/11/72

+ 18-41S35

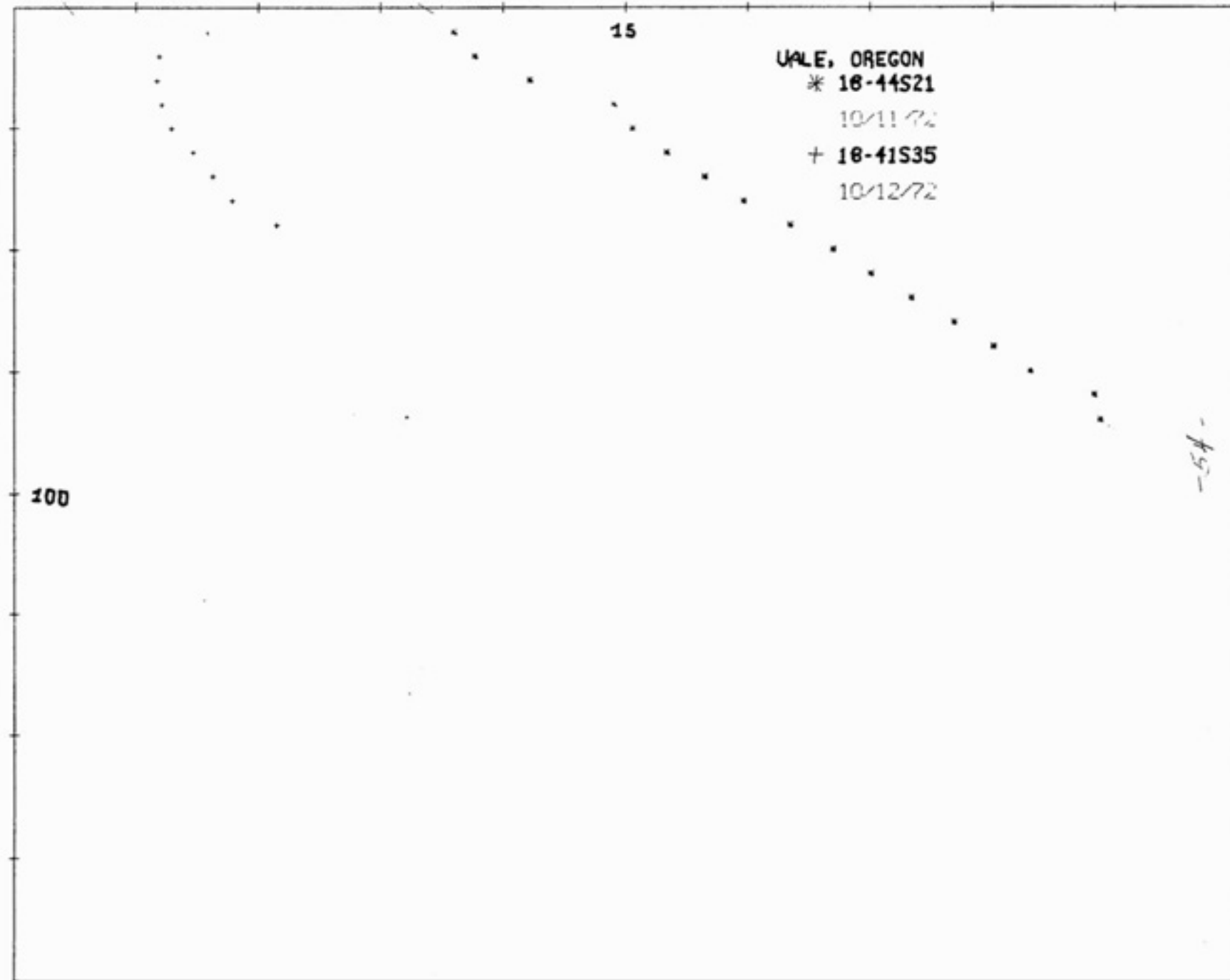
10/12/72

QUALITY, PERCENT

100

00.0

-54-



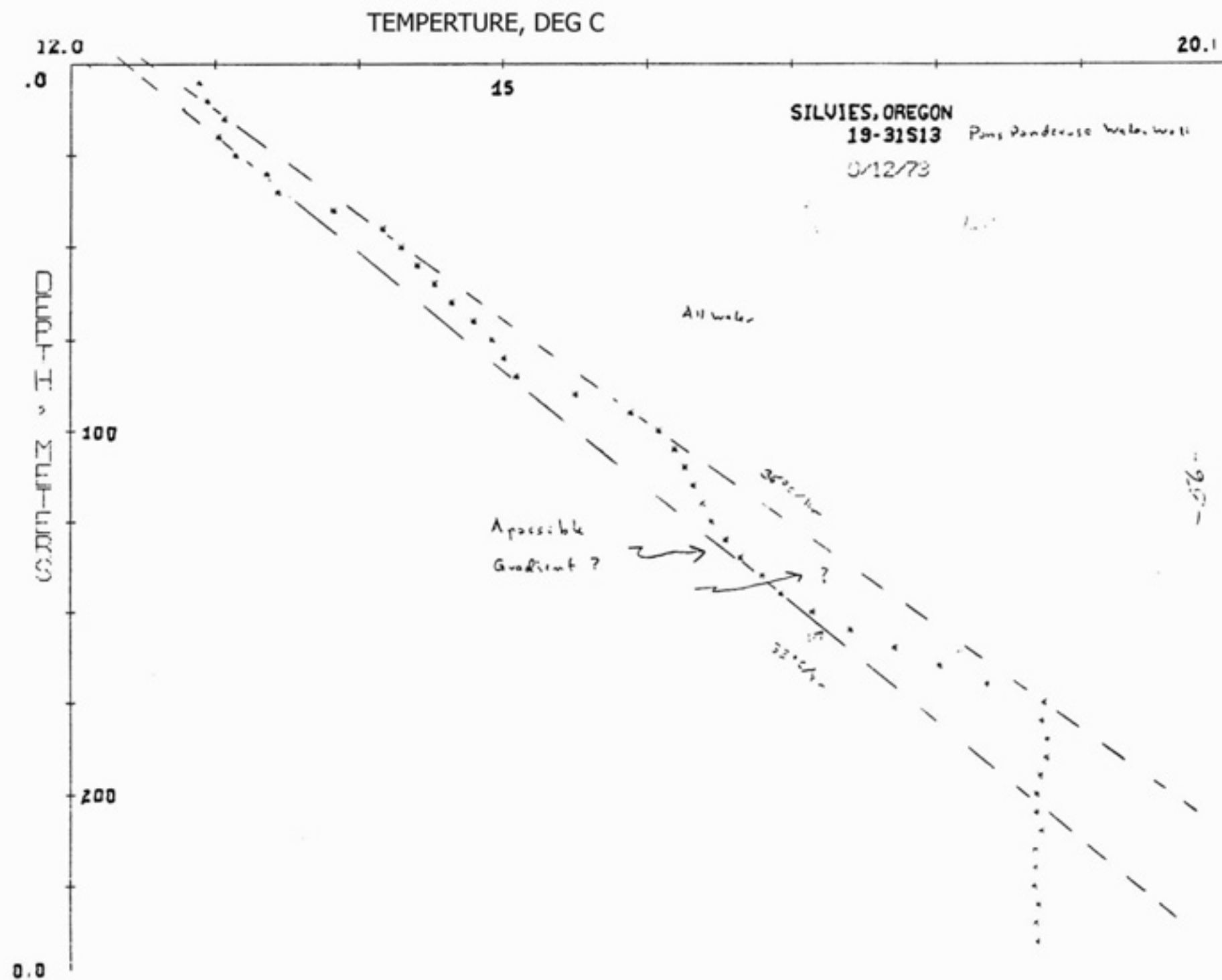
LOCATION: SILVIES, OREGON
HOLE NUMBER: 19-31513
DATE MEASURED: 9/12/73

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
5.0	16.4	12.890	55.20	.0	.0
10.0	32.8	12.940	55.29	10.0	182.2
15.0	49.2	13.060	55.51	24.0	75.9
20.0	65.6	13.020	55.44	-8.0	-227.8
25.0	82.0	13.140	55.65	24.0	75.9
30.0	98.4	13.360	56.05	44.0	41.4
35.0	114.8	13.440	56.19	16.0	113.9
40.0	131.2	13.820	56.88	76.0	24.0
45.0	147.6	14.170	57.51	70.0	26.0
50.0	164.0	14.300	57.74	26.0	70.1
55.0	180.4	14.410	57.94	22.0	82.8
60.0	196.8	14.530	58.15	24.0	75.9
65.0	213.2	14.650	58.37	24.0	75.9
70.0	229.6	14.800	58.64	30.0	60.7
75.0	246.0	14.930	58.87	26.0	70.1
80.0	262.4	15.010	59.02	16.0	113.9
85.0	278.8	15.100	59.18	18.0	101.2
90.0	295.2	15.500	59.90	80.0	22.8
95.0	311.6	15.890	60.60	78.0	23.4
100.0	328.0	16.080	60.94	38.0	48.0
105.0	344.4	16.190	61.14	22.0	82.8
110.0	360.8	16.260	61.27	14.0	130.2
115.0	377.2	16.320	61.38	12.0	151.9
120.0	393.6	16.380	61.48	12.0	151.9
125.0	410.0	16.450	61.61	14.0	130.2
130.0	426.4	16.540	61.77	18.0	101.2
135.0	442.8	16.650	61.97	22.0	82.8
140.0	459.2	16.800	62.24	30.0	60.7
145.0	475.6	16.930	62.47	26.0	70.1
150.0	492.0	17.140	62.85	42.0	43.4
155.0	508.4	17.410	63.34	54.0	33.7
160.0	524.8	17.710	63.88	60.0	30.4
165.0	541.2	18.020	64.44	62.0	29.4
170.0	557.6	18.350	65.03	66.0	27.6
175.0	574.0	18.740	65.73	78.0	23.4
180.0	590.4	18.730	65.71	-2.0	-911.1
185.0	606.8	18.770	65.79	8.0	227.8
190.0	623.2	18.760	65.77	-2.0	-911.1
195.0	639.6	18.720	65.70	-8.0	-227.8
200.0	656.0	18.700	65.66	-4.0	-455.6
205.0	672.4	18.700	65.66	000000000000.0	
210.0	688.8	18.730	65.71	6.0	303.7
215.0	705.2	18.690	65.64	-8.0	-227.8
220.0	721.6	18.690	65.64	000000000000.0	
225.0	738.0	18.680	65.62	-2.0	-911.1
230.0	754.4	18.710	65.68	6.0	303.7
235.0	770.8	18.700	65.66	-2.0	-911.1
240.0	787.2	18.710	65.68	2.0	911.1

Silvies, Ore

19-31-013

9/12/73



LOCATION: VALE, OREGON
HOLE NUMBER: 19-44S9
DATE MEASURED: 6/18/73

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
10.0	32.8	13.270	55.89	.0	.0
15.0	49.2	13.510	56.32	48.0	38.0
20.0	65.6	13.720	56.70	42.0	43.4
25.0	82.0	13.900	57.02	36.0	50.6
30.0	98.4	14.110	57.40	42.0	43.4
35.0	114.8	14.330	57.79	44.0	41.4
40.0	131.2	14.650	58.37	64.0	28.5
45.0	147.6	14.940	58.89	58.0	31.4
50.0	164.0	15.290	59.52	70.0	26.0
55.0	180.4	15.600	60.08	62.0	29.4
60.0	196.8	15.870	60.57	54.0	33.7
65.0	213.2	16.200	61.16	66.0	27.6
70.0	229.6	16.570	61.83	74.0	24.6
75.0	246.0	16.890	62.40	64.0	28.5
80.0	262.4	17.250	63.05	72.0	25.3
85.0	278.8	17.600	63.68	70.0	26.0
90.0	295.2	17.980	64.36	76.0	24.0
95.0	311.6	18.380	65.08	80.0	22.8
100.0	328.0	18.780	65.80	80.0	22.8
105.0	344.4	19.130	66.43	70.0	26.0
110.0	360.8	19.500	67.10	74.0	24.6
115.0	377.2	19.890	67.80	78.0	23.4
120.0	393.6	20.230	68.41	68.0	26.8
125.0	410.0	20.630	69.13	80.0	22.8
130.0	426.4	21.020	69.84	78.0	23.4
135.0	442.8	21.410	70.54	78.0	23.4
140.0	459.2	21.810	71.26	80.0	22.8
145.0	475.6	22.080	71.74	54.0	33.7
150.0	492.0	22.400	72.32	64.0	28.5
155.0	508.4	22.750	72.95	70.0	26.0
160.0	524.8	22.950	73.31	40.0	45.6

Vale, Ore
19-44-S9
6/18/73

LOCATION: VALE, OREGON
 HOLE NUMBER: 19-45S28
 DATE MEASURED: 6/14/73

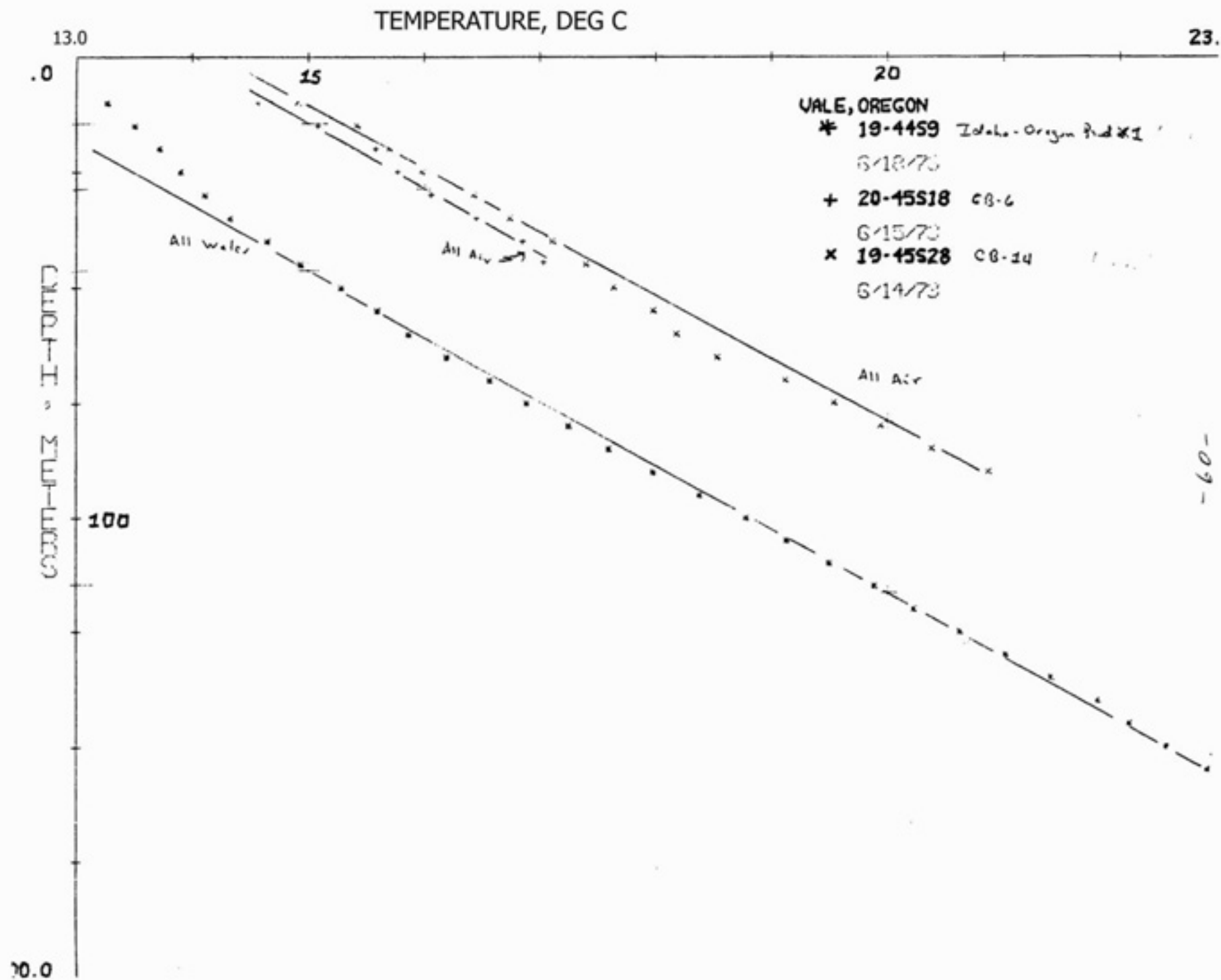
DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
10.0	32.8	14.910	58.84	.0	.0
15.0	49.2	15.420	59.76	102.0	17.9
20.0	65.6	15.700	60.26	56.0	32.5
25.0	82.0	15.980	60.76	56.0	32.5
30.0	98.4	16.430	61.57	90.0	20.2
35.0	114.8	16.740	62.13	62.0	29.4
40.0	131.2	17.110	62.80	74.0	24.6
45.0	147.6	17.400	63.32	58.0	31.4
50.0	164.0	17.640	63.75	48.0	38.0
55.0	180.4	17.980	64.36	68.0	26.8
60.0	196.8	18.180	64.72	40.0	45.6
65.0	213.2	18.530	65.35	70.0	26.0
70.0	229.6	19.120	66.42	118.0	15.4
75.0	246.0	19.540	67.17	84.0	21.7
80.0	262.4	19.940	67.89	80.0	22.8
85.0	278.8	20.380	68.68	88.0	20.7
90.0	295.2	20.870	69.57	98.0	18.6

Vale, Ore
 19-45-S28
 6/14/73

LOCATION: VALE, OREGON
 HOLE NUMBER: 20-45S18
 DATE MEASURED: 6/15/73

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
10.0	32.8	14.570	58.23	.0	.0
15.0	49.2	15.080	59.14	132.0	17.9
20.0	65.6	15.580	60.04	130.0	18.2
25.0	82.0	15.770	60.39	38.0	48.0
30.0	98.4	16.060	60.91	58.0	31.4
35.0	114.8	16.450	61.61	78.0	23.4
40.0	131.2	16.850	62.33	80.0	22.8
44.5	146.0	17.030	62.65	40.0	45.6

Vale, Ore
 20-45-S18
 6/15/73



LOCATION: VALE, OREGON
 HULL NUMBER: 19-45311
 DATE MEASURED: 8/23/72

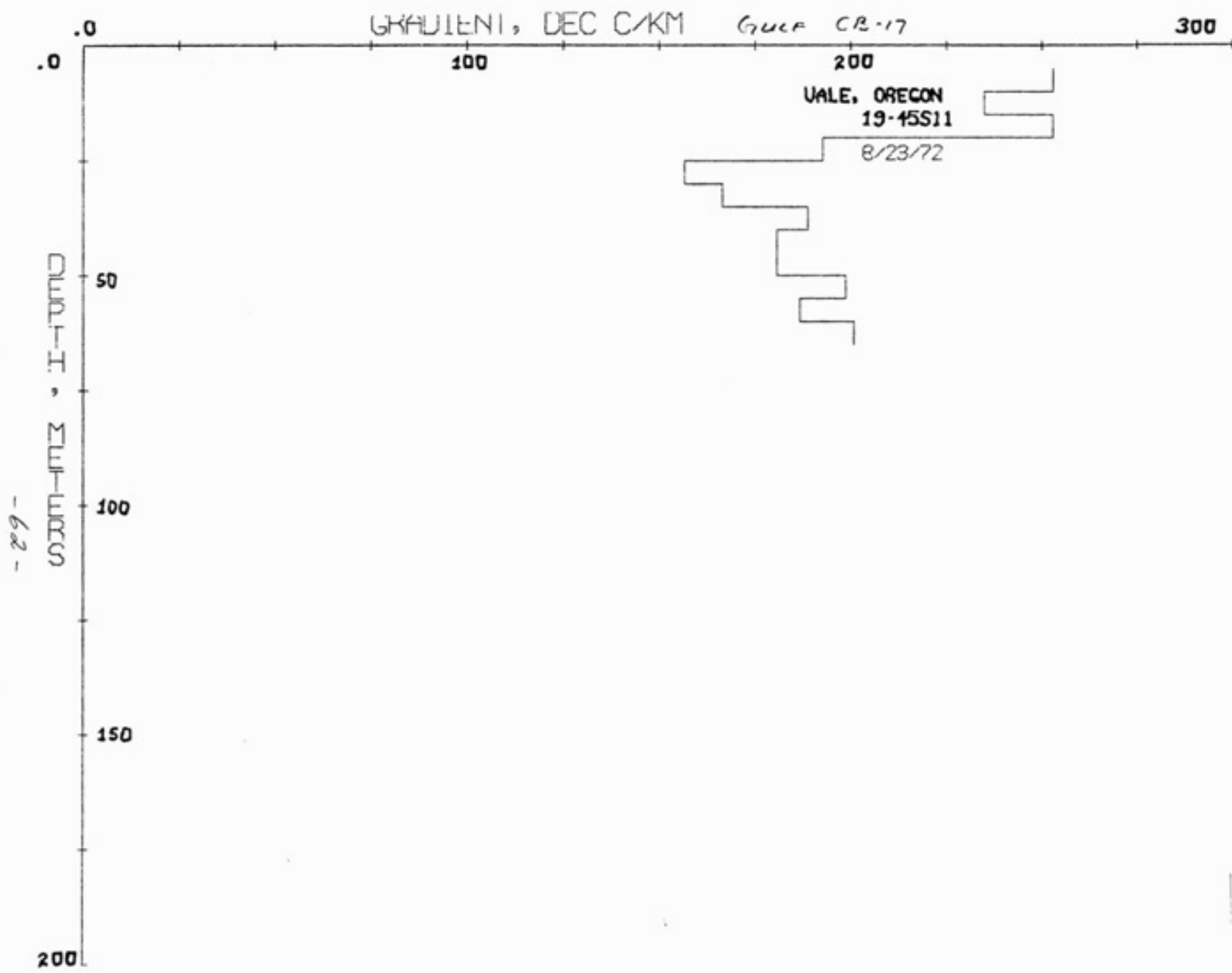
GULF CB-17

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
5.0	16.4	13.710	56.68	.0	.0
10.0	32.8	14.970	58.95	252.0	7.2
15.0	49.2	16.140	61.05	234.0	7.8
20.0	65.6	17.400	63.32	252.0	7.2
25.0	82.0	18.360	65.05	192.0	9.5
30.0	98.4	19.140	66.45	156.0	11.7
35.0	114.8	19.970	67.95	166.0	11.0
40.0	131.2	20.910	69.64	158.0	9.7
45.0	147.6	21.810	71.26	150.0	10.1
50.0	164.0	22.710	72.88	150.0	10.1
55.0	180.4	23.700	74.66	198.0	9.2
60.0	196.8	24.630	76.33	156.0	9.8
65.0	213.2	25.630	78.13	200.0	9.1

Gulf CB-17

19-45-311

8/23/72



TEMPERATURE, DEG C

35.

10.0

.0

20

25

30

VALE, OREGON

* 19-45S25 CB-21

7/24/72

+ 19-45S26 CB-11

7/25/72

x 19-45S22 CB-12

7/24/72

DEPTH, METERS

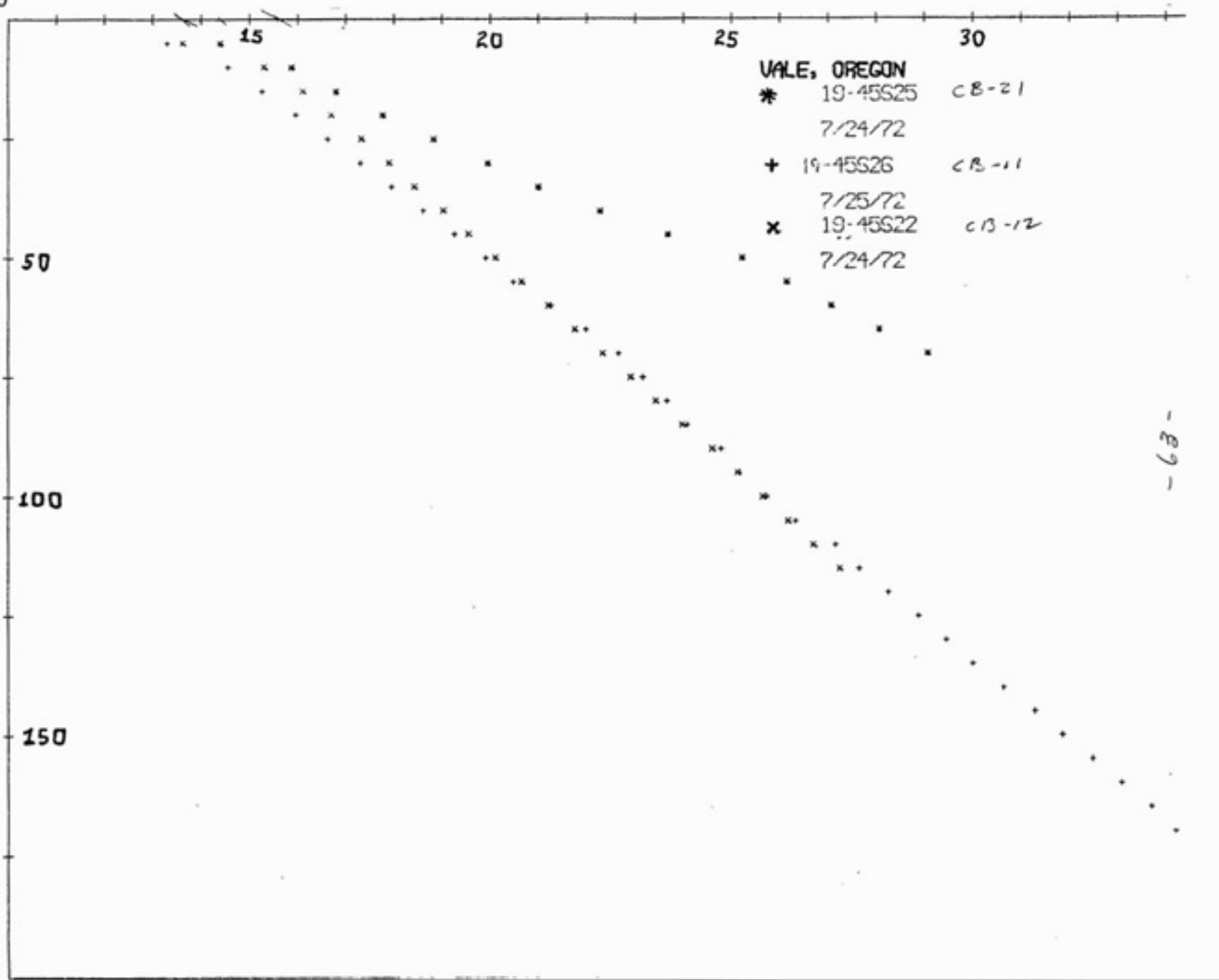
50

100

150

200.0

-69-



LOCATION: VALE, REGION
 HOLE NUMBER: 10-45314
 DATE MEASURED: 9/7/72

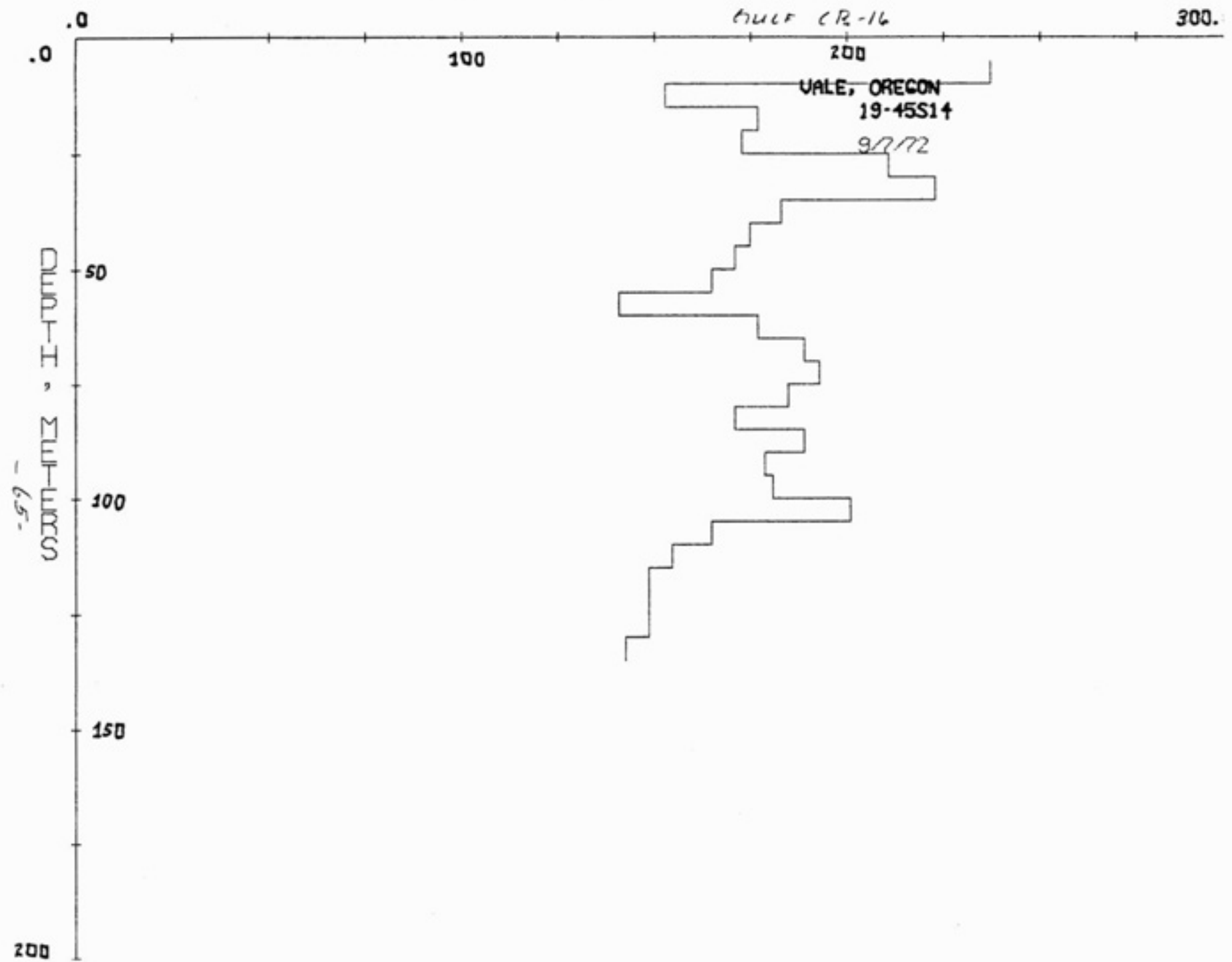
DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
3.0	9.8	15.800	60.44	.0	.0
5.0	16.4	14.460	58.03	-670.0	-2.7
10.0	32.8	15.640	60.15	236.0	7.7
15.0	49.2	16.400	61.52	152.0	12.0
20.0	65.6	17.280	63.10	176.0	10.4
25.0	82.0	18.140	64.65	172.0	10.6
30.0	98.4	19.190	66.54	210.0	3.7
35.0	114.8	20.300	68.54	222.0	8.2
40.0	131.2	21.210	70.18	152.0	10.0
45.0	147.6	22.080	71.74	174.0	10.6
50.0	164.0	22.930	73.27	170.0	10.7
55.0	180.4	23.750	74.75	164.0	11.1
60.0	196.8	24.450	76.01	140.0	13.0
65.0	213.2	25.330	77.59	176.0	10.4
70.0	229.6	26.270	79.29	138.0	9.7
75.0	246.0	27.230	81.01	192.0	9.6
80.0	262.4	28.150	82.67	154.0	9.0
85.0	278.8	29.000	84.20	170.0	10.7
90.0	295.2	29.940	85.89	138.0	9.7
95.0	311.6	30.830	87.49	178.0	10.2
100.0	328.0	31.730	89.11	130.0	10.1
105.0	344.4	32.730	90.91	200.0	9.1
110.0	360.8	33.550	92.39	154.0	11.1
115.0	377.2	34.320	93.78	154.0	11.6
120.0	393.6	35.060	95.11	148.0	12.3
125.0	410.0	35.800	96.44	148.0	12.3
130.0	426.4	36.540	97.77	148.0	12.3
135.0	442.8	37.290	99.05	142.0	12.3

Gulf CB-16

10-45314

9/7/72

GRADIENT, DEC C/KM



LOCATION: VALLEY, OREGON
 HOLE NUMBER: 19-45S22
 DATE MEASURED: 8DGM1

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
25.9	85.0	17.600	63.68	.0	.0
56.4	185.0	21.000	69.80	111.5	15.3
86.9	284.9	24.500	76.10	114.8	15.9
117.4	384.9	27.400	81.32	95.1	19.2

Gulf CB 12B

19-45-S22

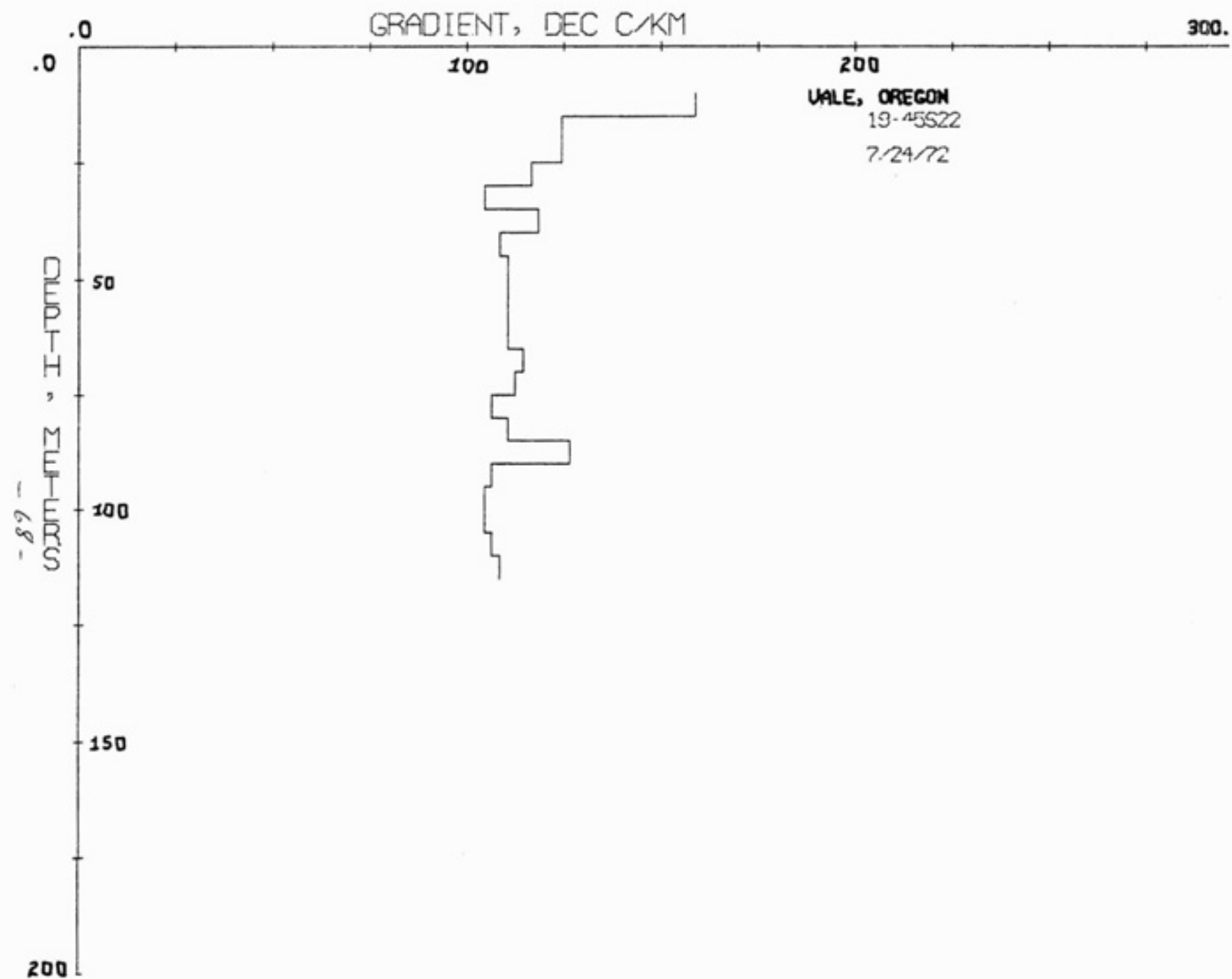
No data

LOCATION: VALLEY, OREGON
HOLE NUMBER: 19-45S22
DATE MEASURED: 7/24/72

same site as CB 12

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
3.0	9.8	13.580	56.44	.0	.0
5.0	16.4	13.620	56.52	20.0	91.1
10.0	32.8	15.300	59.54	336.0	5.4
15.0	49.2	16.090	60.96	108.0	11.5
20.0	65.6	16.710	62.08	124.0	14.7
25.0	82.0	17.330	63.19	124.0	14.7
30.0	98.4	17.910	64.24	116.0	15.7
35.0	114.8	18.430	65.17	104.0	17.5
40.0	131.2	19.020	66.24	118.0	15.4
45.0	147.6	19.560	67.21	108.0	16.9
50.0	164.0	20.110	68.20	110.0	16.6
55.0	180.4	20.660	69.19	110.0	16.6
60.0	196.8	21.210	70.18	110.0	16.6
65.0	213.2	21.760	71.17	110.0	16.6
70.0	229.6	22.330	72.19	114.0	16.0
75.0	246.0	22.890	73.20	112.0	16.3
80.0	262.4	23.420	74.16	106.0	17.2
85.0	278.8	23.970	75.15	110.0	16.6
90.0	295.2	24.600	76.28	126.0	14.5
95.0	311.6	25.130	77.23	106.0	17.2
100.0	328.0	25.650	78.17	104.0	17.5
105.0	344.4	26.170	79.11	104.0	17.5
110.0	360.8	26.700	80.06	106.0	17.2
115.0	377.2	27.240	81.03	108.0	16.9

Multiple
Gulf CB 12B
19-45-522
7/24/72

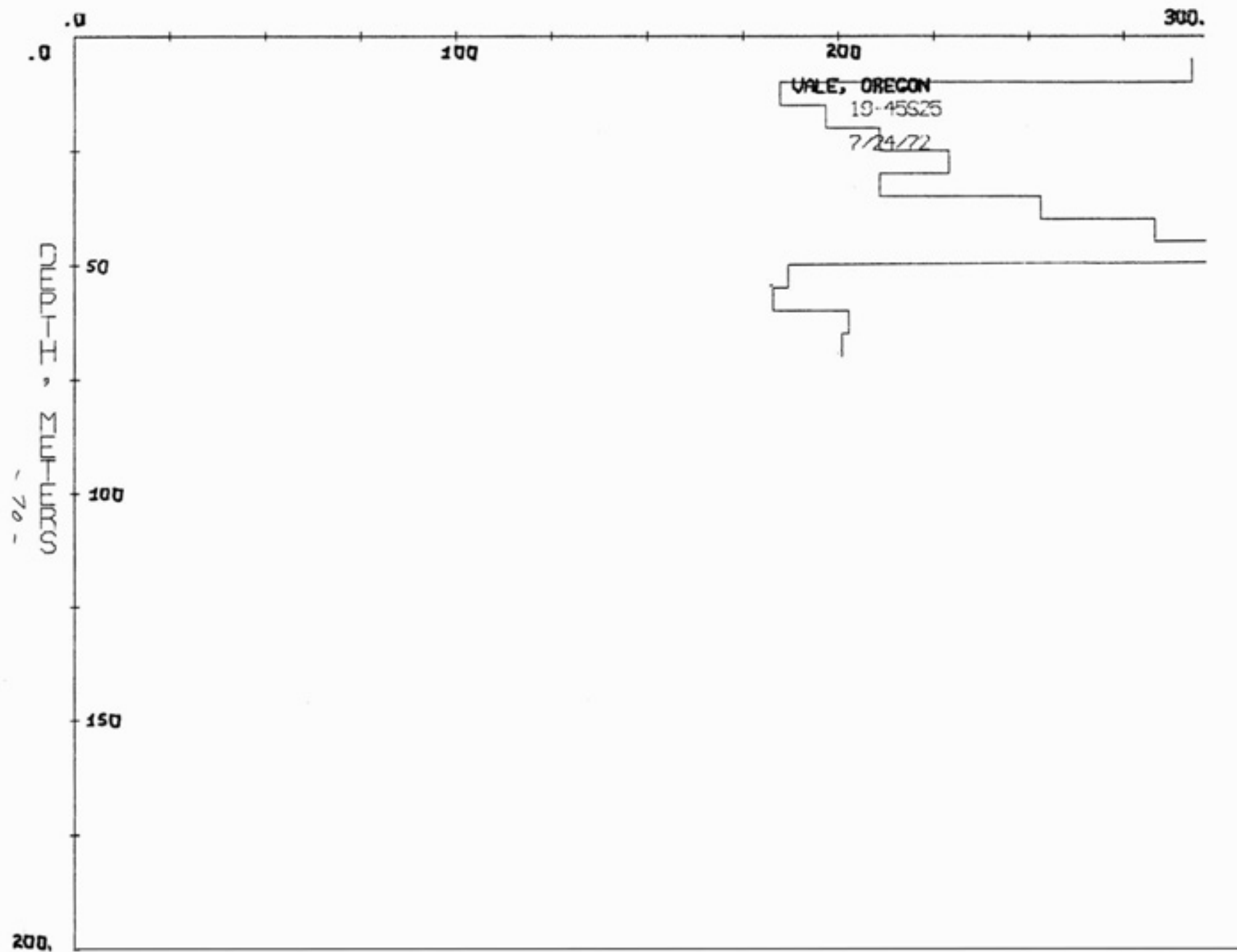


LOCATION: VALLEY GREGG
 HOLE NUMBER: 19-45525
 DATE MEASURED: 7/24/72

DEPTH METERS		DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
			DEG C	DEG F	DEG C/KM	FEET/DEG F
3.0	3.5	9.8	14.250	57.65	.0	.0
5.0	3.5	16.4	14.410	57.94	30.0	22.8
10.0	10.5	32.8	15.870	60.57	292.0	5.2
15.0	etc	49.2	16.790	62.22	194.0	9.0
20.0		65.6	17.770	63.99	196.0	9.3
25.0		82.0	18.820	65.88	210.0	8.7
30.0		98.4	19.960	67.93	228.0	8.0
35.0		114.8	21.010	69.82	210.0	8.7
40.0		131.2	22.270	72.09	252.0	7.2
45.0		147.6	23.680	74.62	232.0	6.9
50.0		164.0	25.230	77.41	310.0	5.9
55.0		180.4	26.150	79.09	136.0	9.6
60.0		196.8	27.070	80.73	152.0	10.0
65.0		213.2	28.080	82.54	202.0	9.0
70.0		229.6	29.050	84.34	200.0	9.1

19-45525
 7/24/72
 Converted to monitor well
 plastic pipe set to 24.5 M

GRADIENT, DEC C/KM



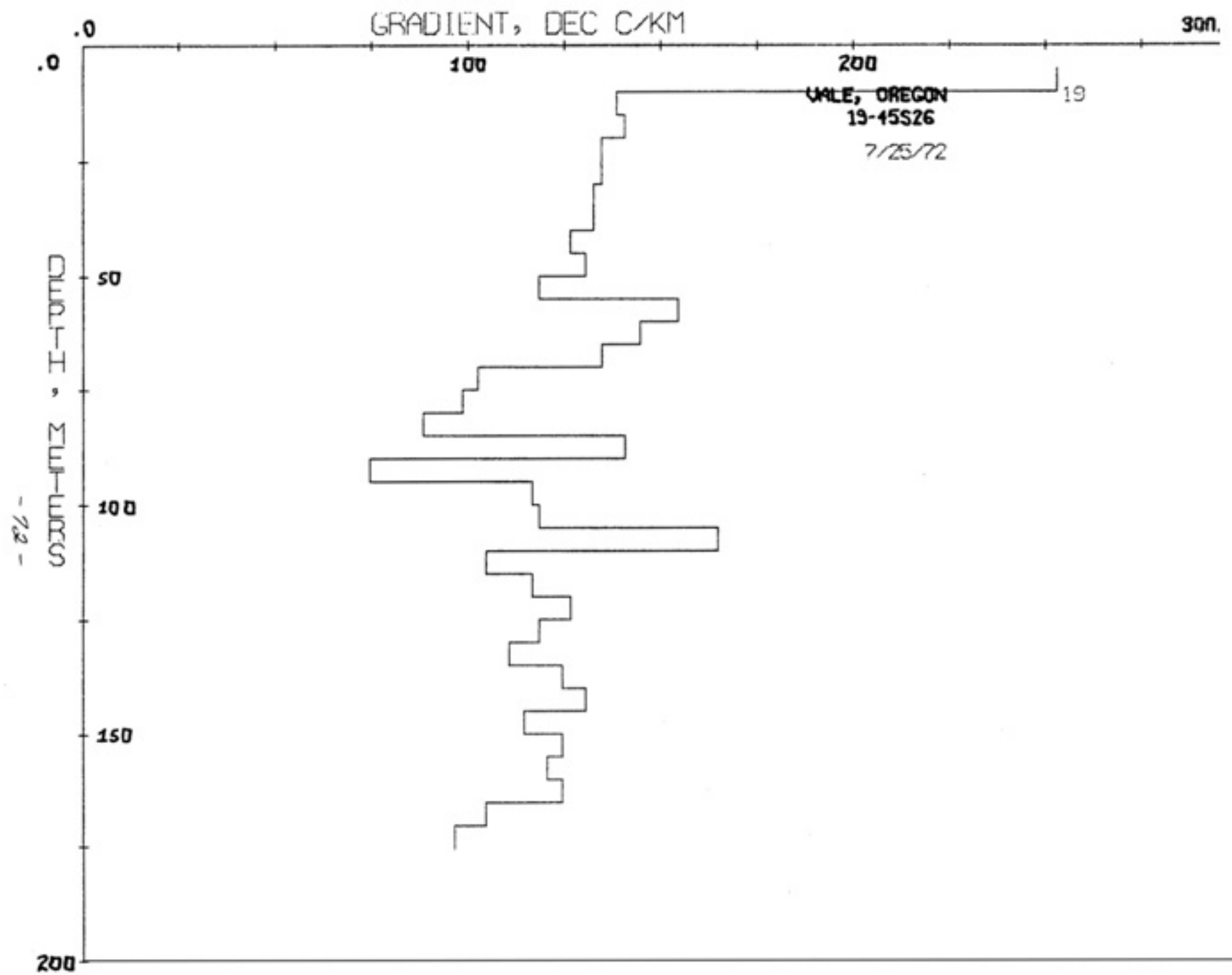
LOCATION: VALL, OREGON
 HOLE NUMBER: 19-45S26
 DATE MEASURED: 7/25/72

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
3.0	9.8	13.420	56.16	.0	.0
5.0	16.4	13.300	55.94	-60.0	-30.4
10.0	32.8	14.560	58.21	252.0	7.2
15.0	49.2	15.250	59.45	138.0	13.2
20.0	65.6	15.950	60.71	140.0	13.0
25.0	82.0	16.620	61.92	134.0	13.6
30.0	98.4	17.290	63.12	134.0	13.6
35.0	114.8	17.950	64.31	132.0	13.8
40.0	131.2	18.610	65.50	132.0	13.8
45.0	147.6	19.240	66.63	126.0	14.5
50.0	164.0	19.890	67.80	130.0	14.0
55.0	180.4	20.480	68.86	118.0	15.4
60.0	196.8	21.250	70.25	154.0	11.8
65.0	213.2	21.970	71.55	144.0	12.7
70.0	229.6	22.640	72.75	134.0	13.6
75.0	246.0	23.150	73.67	102.0	17.9
80.0	262.4	23.640	74.55	98.0	18.6
85.0	278.8	24.080	75.34	88.0	20.7
90.0	295.2	24.780	76.60	140.0	13.0
95.0	311.6	25.150	77.27	74.0	24.6
100.0	328.0	25.730	78.31	116.0	15.7
105.0	344.4	26.320	79.38	118.0	15.4
110.0	360.8	27.140	80.85	154.0	11.1
115.0	377.2	27.660	81.79	104.0	17.5
120.0	393.6	28.240	82.83	116.0	15.7
125.0	410.0	28.870	83.97	126.0	14.5
130.0	426.4	29.460	85.03	118.0	15.4
135.0	442.8	30.010	86.02	110.0	16.6
140.0	459.2	30.630	87.13	124.0	14.7
145.0	475.6	31.280	88.30	130.0	14.0
150.0	492.0	31.850	89.33	114.0	15.0
155.0	508.4	32.470	90.45	124.0	14.7
160.0	524.8	33.070	91.53	120.0	15.2
165.0	541.2	33.690	92.64	124.0	14.7
170.0	557.6	34.210	93.58	104.0	17.5
175.0	574.0	34.690	94.44	96.0	19.0

Gulf CB-11

19-45-#26

7/25/72



TEMPERATURE, DEG C

36.0

11.0

15

20

25

30

VALE, OREGON

* 19-45S26 CB-11

ODGM1

+ 19-45S22 CB-12

ODGM1

x 20-45S10 CB-1

ODGM1

□ 19-45S25 CB-21

ODGM1

* 23-44S5 OR BOW BASIN

ODGM1

DEPTH, FEET

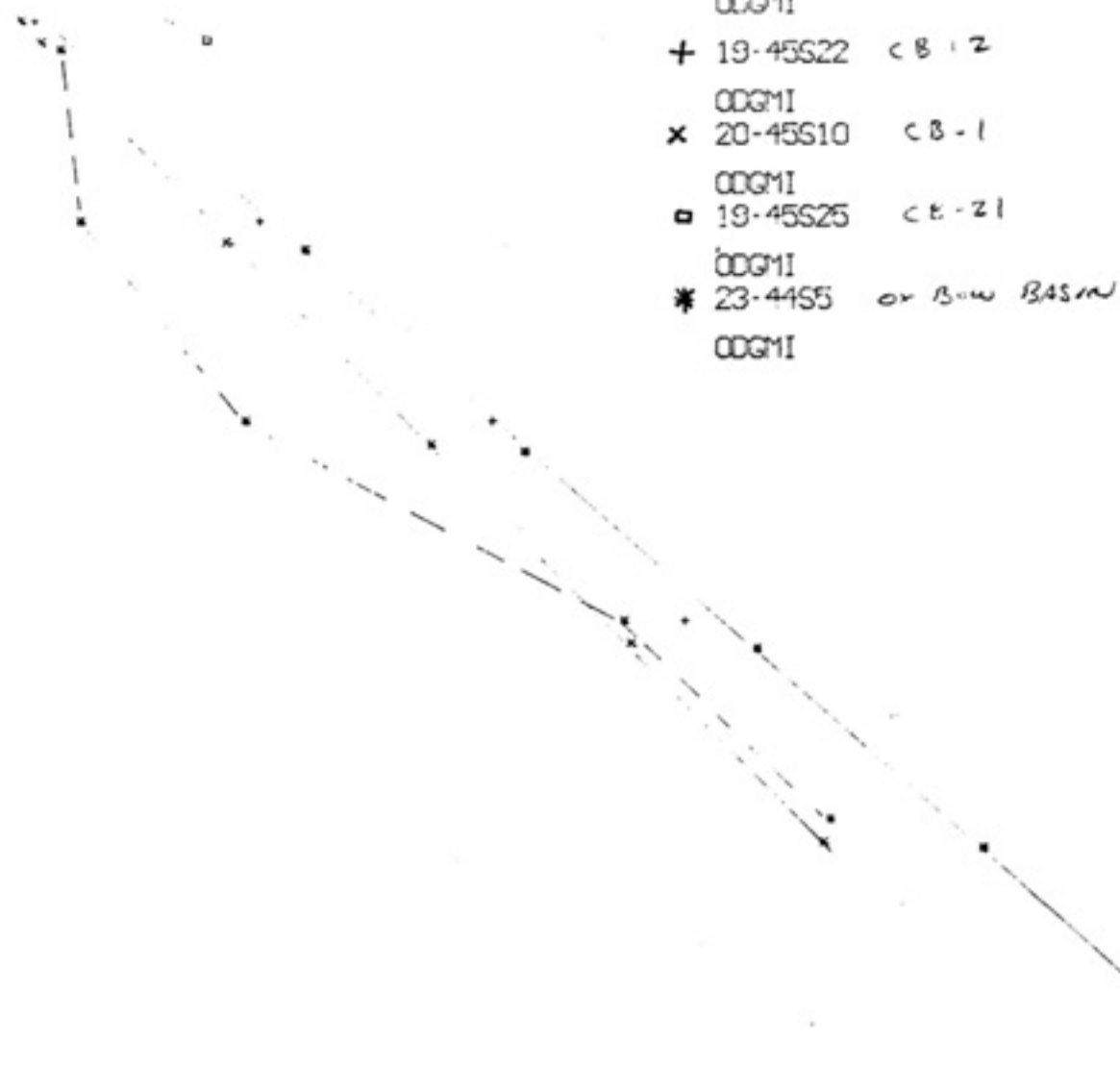
50

100

150

1.0

-73-



LOCATION: VALE, REGION

Gulf CB-4

HOLE NUMBER: 20-556 20-4556

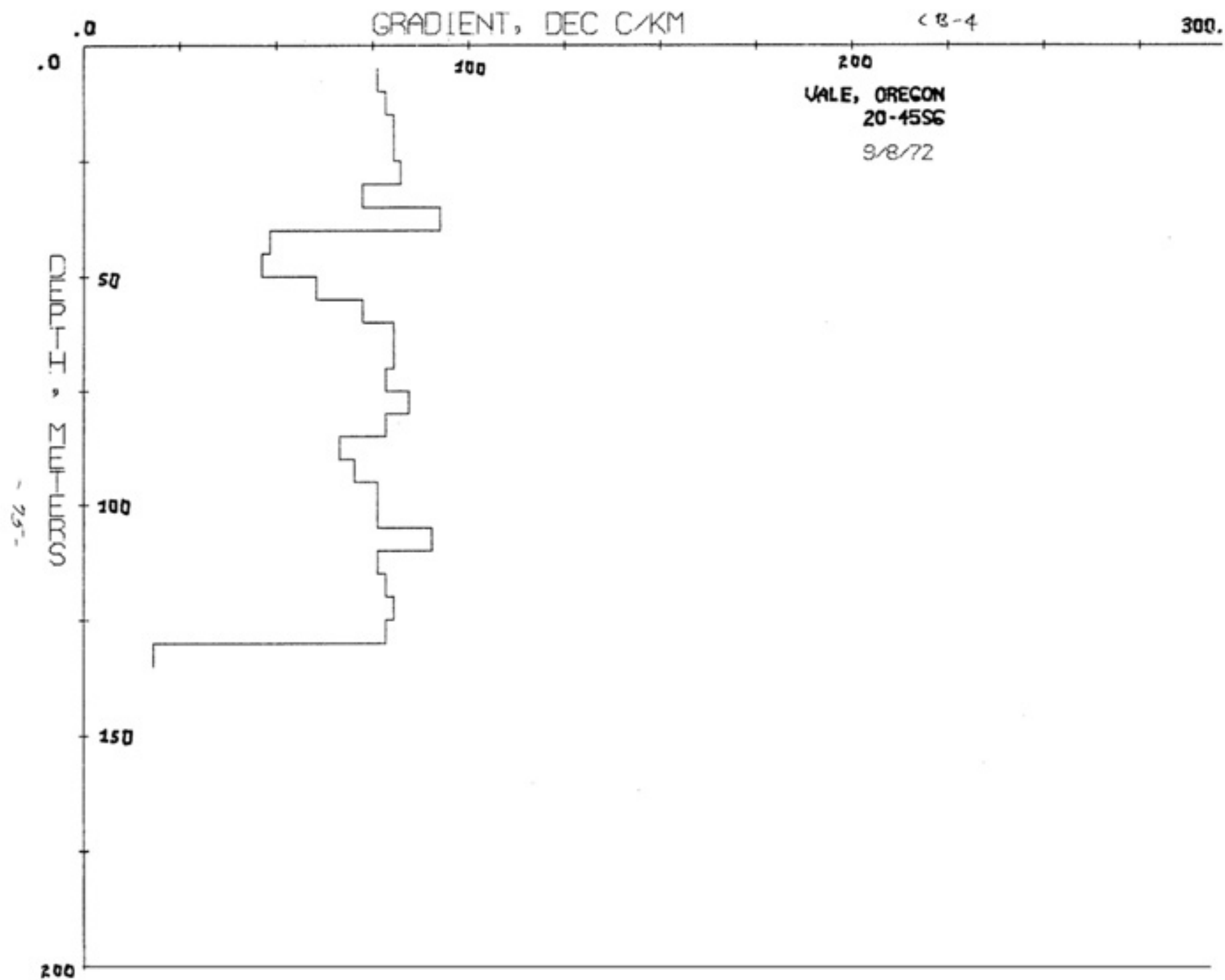
DATE MEASURED: 9/8/72

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
3.0	9.8	14.110	57.40	.0	.0
5.0	16.4	13.420	56.16	-345.0	-5.3
10.0	32.8	13.500	56.30	76.0	24.0
15.0	49.2	14.190	57.54	78.0	23.4
20.0	65.6	14.590	58.26	80.0	22.8
25.0	82.0	14.990	58.98	80.0	22.8
30.0	98.4	15.400	59.72	82.0	22.2
35.0	114.8	15.760	60.37	72.0	25.3
40.0	131.2	16.220	61.20	92.0	19.6
45.0	147.6	16.460	61.63	48.0	38.0
50.0	164.0	16.690	62.04	46.0	39.6
55.0	180.4	16.990	62.58	60.0	30.4
60.0	196.8	17.350	63.23	72.0	25.3
65.0	213.2	17.750	63.95	80.0	22.8
70.0	229.6	18.150	64.67	80.0	22.8
75.0	246.0	18.540	65.37	78.0	23.4
80.0	262.4	18.960	66.13	84.0	21.7
85.0	278.8	19.350	66.83	78.0	23.4
90.0	295.2	19.680	67.42	66.0	27.6
95.0	311.6	20.030	68.05	70.0	26.0
100.0	328.0	20.410	68.74	76.0	24.0
105.0	344.4	20.790	69.42	76.0	24.0
110.0	360.8	21.240	70.23	80.0	23.2
115.0	377.2	21.620	70.92	76.0	24.0
120.0	393.6	22.010	71.62	78.0	23.4
125.0	410.0	22.410	72.34	80.0	22.8
130.0	426.4	22.800	73.04	78.0	23.4
135.0	442.8	22.890	73.20	18.0	101.2

Gulf CB-4

20-45-\$6

9/8/72



LOCATION: VALE, REGION
HOLE NUMBER: 20-4510
DATE MEASURED: 9/8/72

Gulf CB-1

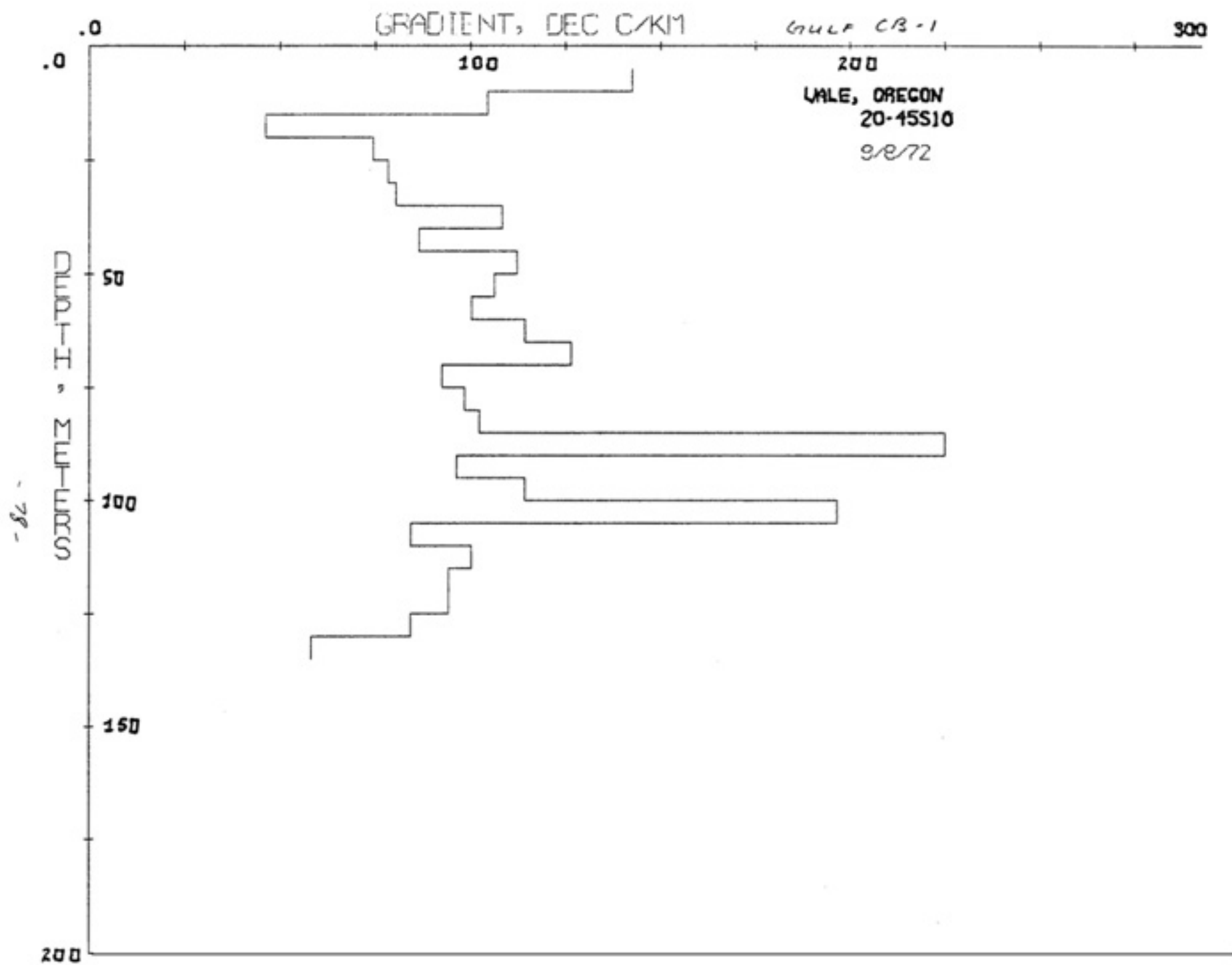
DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
3.0	9.8	16.110	61.00	•0	•0
5.0	16.4	15.040	59.07	-535.0	-3.4
10.0	32.8	15.750	60.35	142.0	12.5
15.0	49.2	16.270	61.29	104.0	17.5
20.0	65.6	16.500	61.70	46.0	39.6
25.0	82.0	16.870	62.37	74.0	24.6
30.0	98.4	17.260	63.07	78.0	23.4
35.0	114.8	17.660	63.79	50.0	22.5
40.0	131.2	18.200	64.76	108.0	16.9
45.0	147.6	18.630	65.53	86.0	21.2
50.0	164.0	19.190	66.54	112.0	16.3
55.0	180.4	19.720	67.50	106.0	17.2
60.0	196.8	20.220	68.40	100.0	18.2
65.0	213.2	20.790	69.42	114.0	16.0
70.0	229.6	21.420	70.56	126.0	14.5
75.0	246.0	21.880	71.38	92.0	19.3
80.0	262.4	22.370	72.27	98.0	18.6
85.0	278.8	22.880	73.18	102.0	17.9
90.0	295.2	24.000	75.20	224.0	8.1
95.0	311.6	24.480	76.06	96.0	19.0
100.0	328.0	25.050	77.09	114.0	16.0
105.0	344.4	26.030	78.85	196.0	9.3
110.0	360.8	26.450	79.61	34.0	21.7
115.0	377.2	26.950	80.51	100.0	18.2
120.0	393.6	27.420	81.36	94.0	19.4
125.0	410.0	27.890	82.20	94.0	19.4
130.0	426.4	28.310	82.96	54.0	21.7
135.0	442.8	28.600	83.48	58.0	31.4

Gulf CB-1
20-45-10
9/8/72

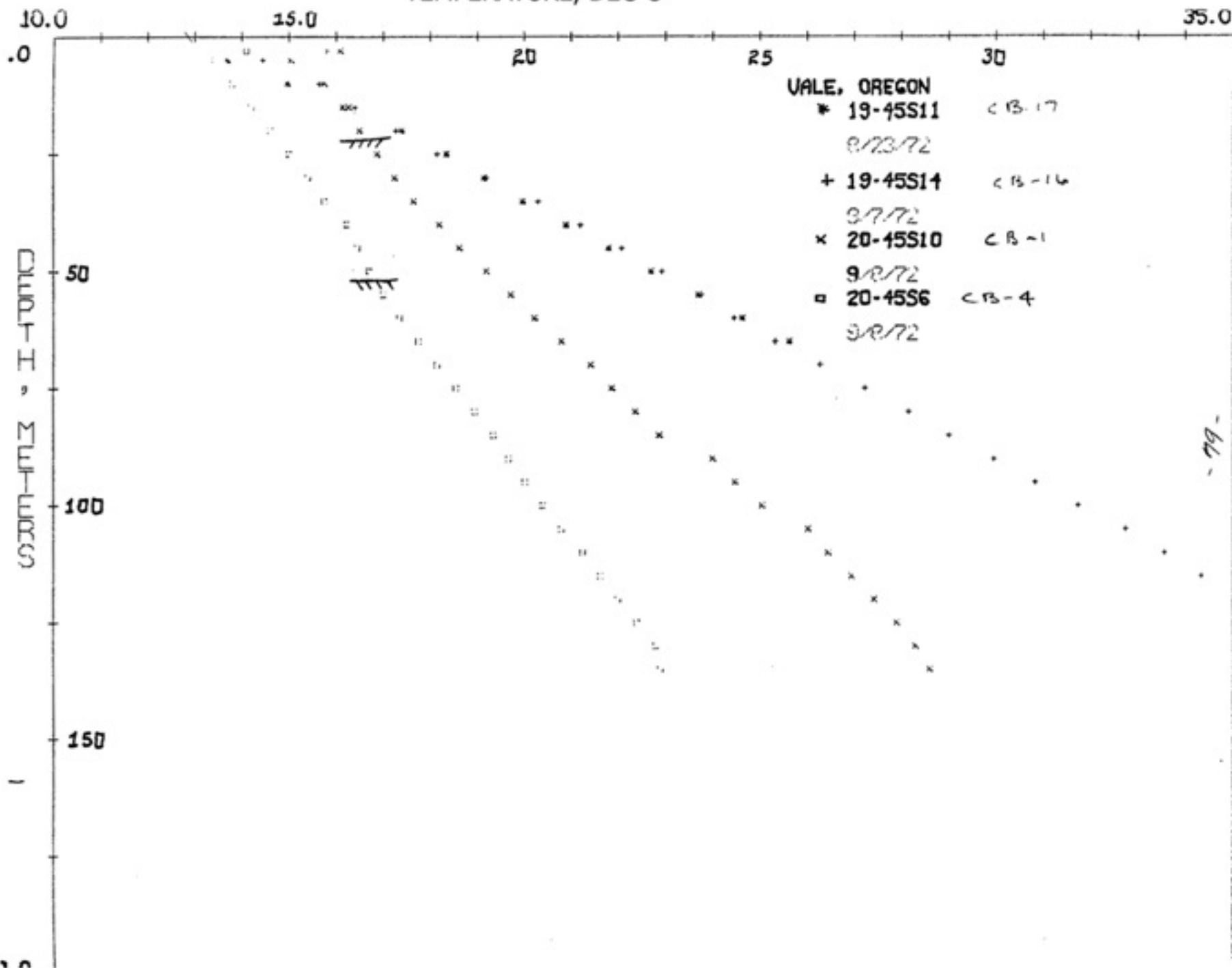
LOCATION: VALLEY, OREGON
 HOLE NUMBER: 20-45S10
 DATE MEASURED: 9DGM1

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEO THERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
29.3	96.0	17.700	63.86	.0	.0
59.7	195.9	20.500	68.90	31.9	19.8
90.2	295.9	23.600	74.48	101.7	17.9
120.7	395.9	26.600	79.88	98.4	18.5
151.2	495.9	29.500	85.10	95.1	19.2

Multiple.
 CB-1 (?)
 20-45-S10
 No date



TEMPERATURE, DEG C

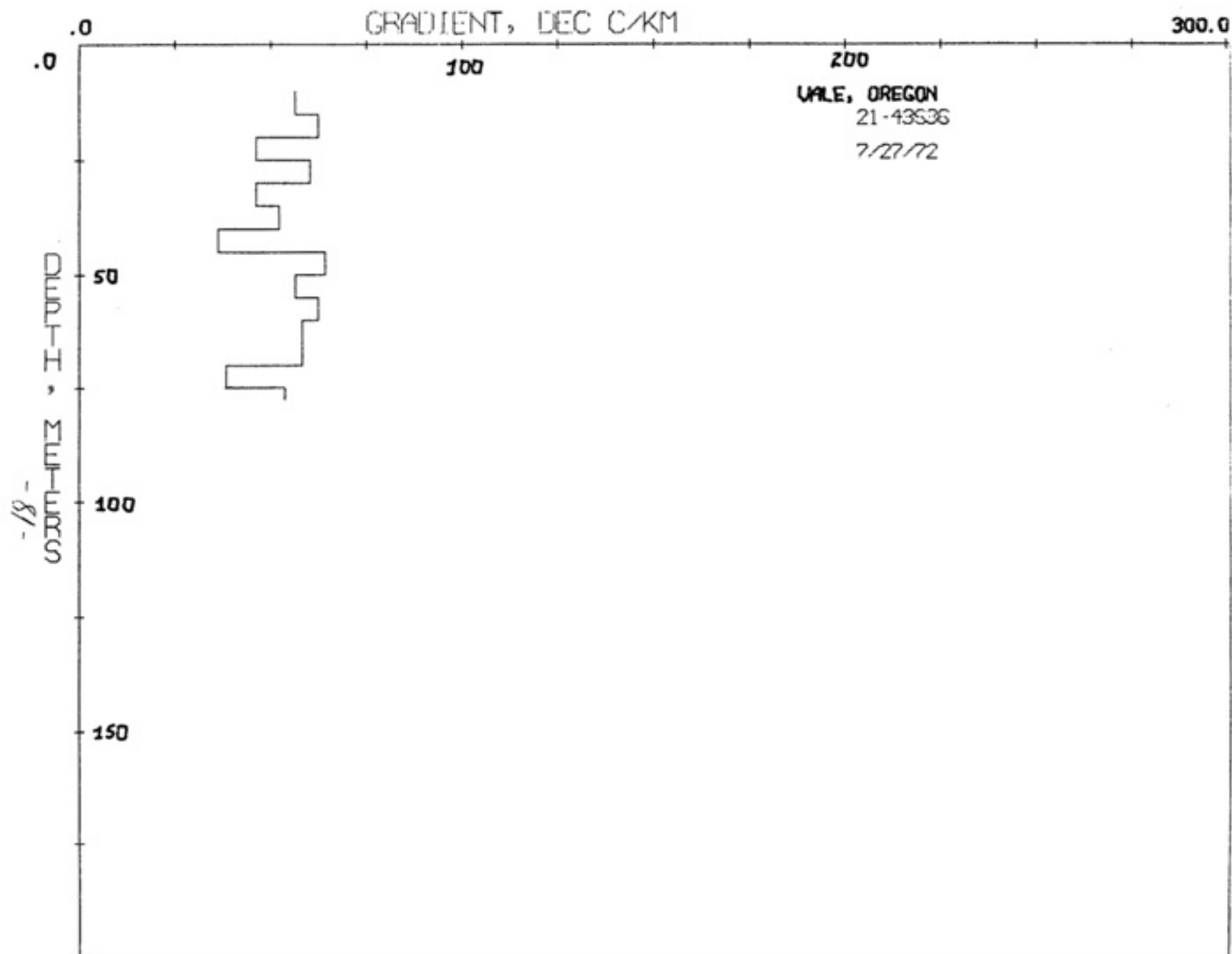


LOCATION: VAL OREGON
HOLE NUMBER: 21-43536
DATE MEASURED: 7/27/72

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
3.0	9.8	12.410	54.34	.0	.0
5.0	16.4	12.110	53.80	-150.0	-12.1
10.0	32.8	12.710	54.88	120.0	15.2
15.0	49.2	12.990	55.38	56.0	32.5
20.0	65.6	13.300	55.94	62.0	29.4
25.0	82.0	13.530	56.35	46.0	39.6
30.0	98.4	13.830	56.89	50.0	30.4
35.0	114.8	14.060	57.31	46.0	39.6
40.0	131.2	14.320	57.78	52.0	35.0
45.0	147.6	14.500	58.10	36.0	50.6
50.0	164.0	14.820	58.68	64.0	28.5
55.0	180.4	15.100	59.18	56.0	32.5
60.0	196.8	15.410	59.74	62.0	29.4
65.0	213.2	15.700	60.26	58.0	31.4
70.0	229.6	15.990	60.78	58.0	31.4
75.0	246.0	16.180	61.12	38.0	48.0
76.5	250.9	16.260	61.27	53.3	34.2

21-43 - \$36

7/27/72



LOCATION: VALLEY, OREGON
HOLE NUMBER: 23-44S5
DATE MEASURED: 8DGM1

*Qx Bow Basin
now has windmill on site*

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
25.9	85.0	17.400	63.32	.0	.0
56.4	185.0	18.300	64.94	29.5	61.7
86.9	284.9	20.800	69.44	82.0	22.2
117.4	384.9	26.500	79.70	187.0	9.7
147.8	484.9	29.600	85.28	101.7	17.9

*Qx Bow Basin
23-44-S5*

No date

See 19-45-S (various)

for temp-depth curve

87-

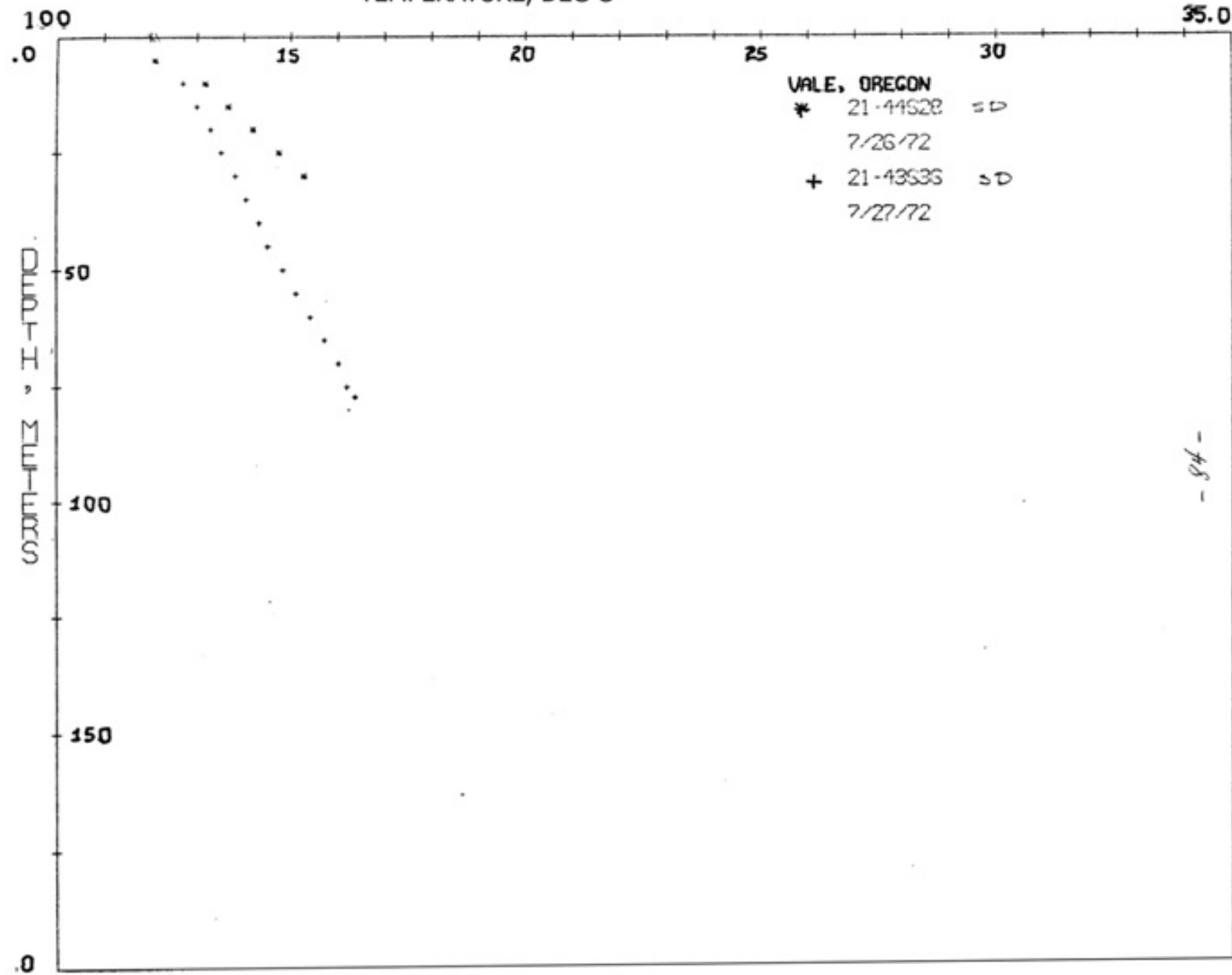
LOCATION: VALLEY, OREGON
HOLE NUMBER: 21-44S28
DATE MEASURED: 7/26/72

Gulf Sourdough

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEO THERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
3.0	9.8	12.180	53.92	0.0	0.0
5.0	16.4	12.090	53.76	45.0	40.5
10.0	32.8	13.170	55.71	216.0	8.4
15.0	49.2	13.680	56.62	102.0	17.0
20.0	65.6	14.210	57.58	106.0	17.2
25.0	82.0	14.740	58.53	106.0	17.2
30.0	98.4	15.270	59.49	106.0	17.2

Gulf Sourdough
21-44-S28
7/26/72

TEMPERATURE, DEG C



LOCATION: DREWSLEY, OREGON
HOLE NUMBER: 21-3511A
DATE MEASURED: 9/11/73

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
10.0	32.8	9.750	49.55	.0	.0
15.0	49.2	10.550	50.99	160.0	11.4
20.0	65.6	10.960	51.73	82.0	22.2
25.0	82.0	11.250	52.25	58.0	31.4
30.0	98.4	11.440	52.59	38.0	48.0
35.0	114.8	11.690	53.04	50.0	36.4
40.0	131.2	11.870	53.37	36.0	50.6
45.0	147.6	12.070	53.73	40.0	45.6
50.0	164.0	12.300	54.14	46.0	39.6
55.0	180.4	12.470	54.45	34.0	53.6
60.0	196.8	12.680	54.82	42.0	43.4
65.0	213.2	12.950	55.31	54.0	33.7
70.0	229.6	13.180	55.72	46.0	39.6
75.0	246.0	13.420	56.16	48.0	38.0
80.0	262.4	13.690	56.64	54.0	33.7
85.0	278.8	13.920	57.06	46.0	39.6
90.0	295.2	14.170	57.51	50.0	36.4
95.0	311.6	14.430	57.97	52.0	35.0
100.0	328.0	14.700	58.46	54.0	33.7

-85-

Drewsey
21-35-11A
9/11/73

LOCATION: DREWSEY, OREGON
 HOLE NUMBER: 21-3511B
 DATE MEASURED: 9/11/73

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
10.0	32.8	11.370	52.47	.0	.0
15.0	49.2	12.130	53.83	152.0	12.0
20.0	65.6	12.410	54.34	56.0	32.5
25.0	82.0	12.620	54.72	42.0	43.4
30.0	98.4	13.080	55.54	32.0	19.8
35.0	114.8	13.480	56.26	80.0	22.8
40.0	131.2	13.810	56.86	66.0	27.6
45.0	147.6	14.210	57.58	80.0	22.8
50.0	164.0	14.650	58.37	88.0	20.7

Drewsey, Ore
21-35-11B

TEMPERATURE, DEG C

15.0

12

DREWSEY, OREGON

* 21-3511A

9/11/73

~~21-3511B~~

9/11/73

DEPTH, FEET

50

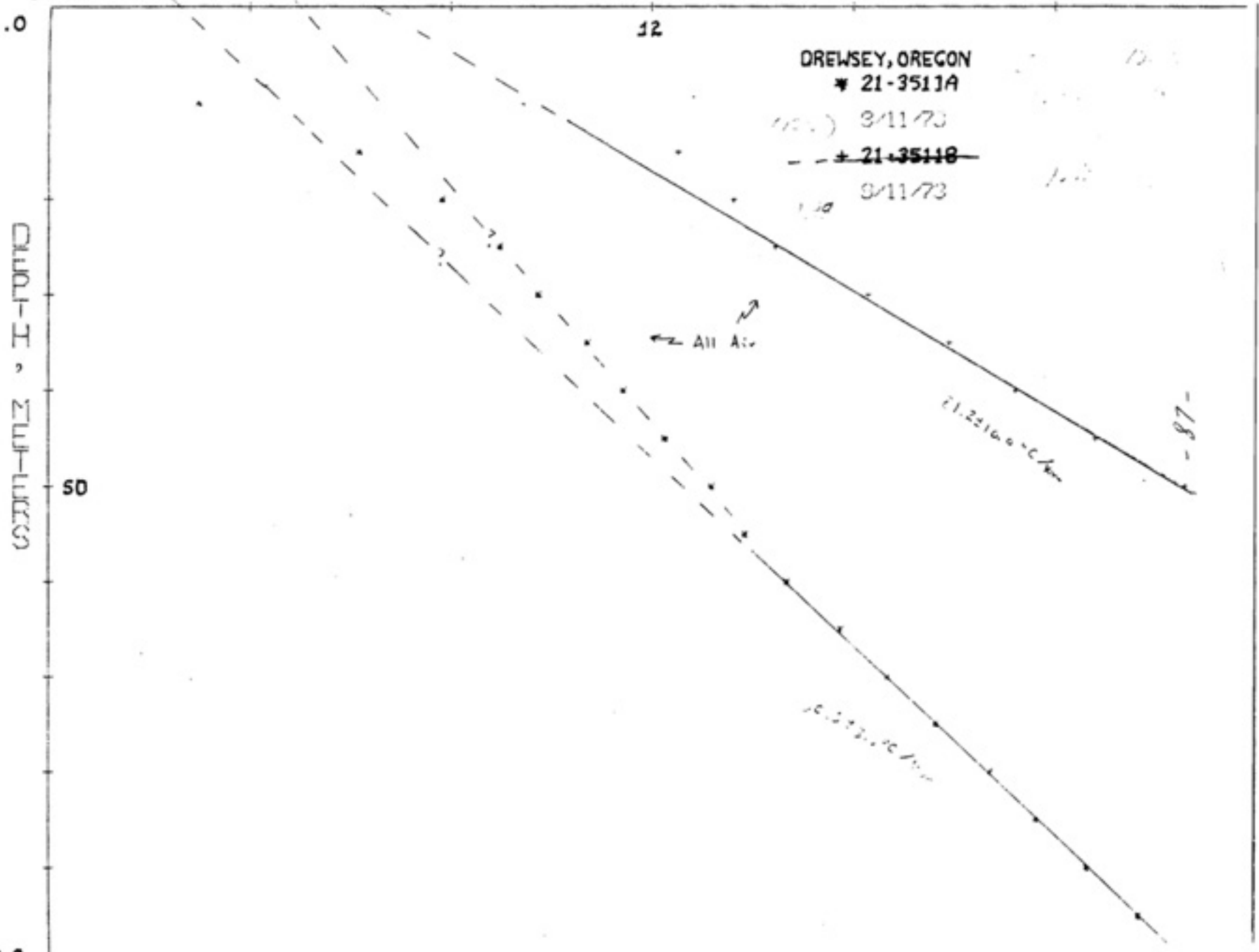
0.0

All Air

21.22160 °C / m

21.2173 °C / m

-87-



LOCATION: HARPER, OREGON
 HOLE NUMBER: 21-42S27
 DATE MEASURED: 6/21/73

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
10.0	32.8	14.090	57.36	.0	.0
15.0	49.2	14.290	57.72	40.0	45.6
20.0	65.6	14.460	58.03	34.0	53.6

Harper

21-42-S27

LOCATION: HARPER, OREGON
HOLE NUMBER: 21-42-
DATE MEASURED: 6/7/73

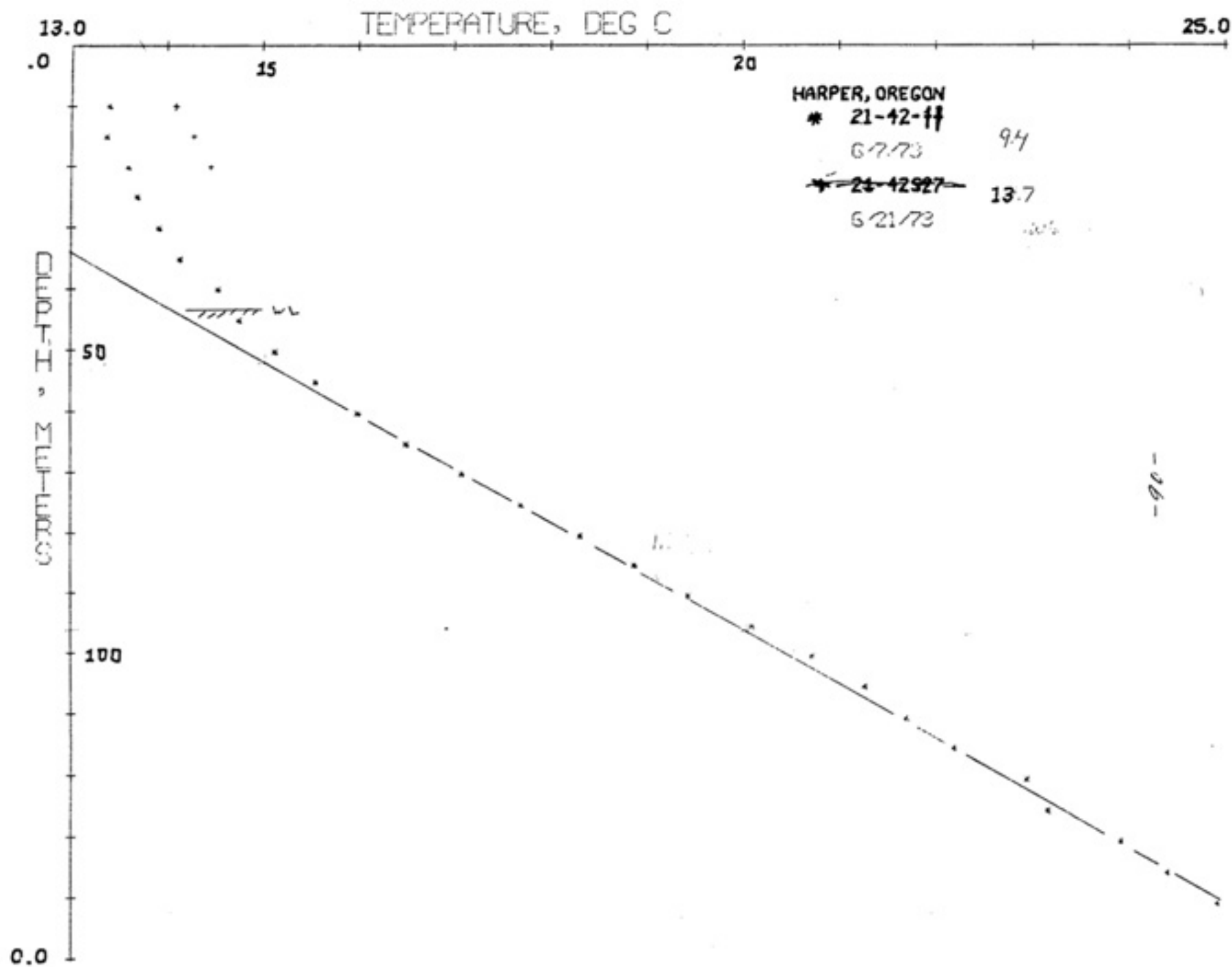
DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
10.0	32.8	13.390	56.10	.0	.0
15.0	49.2	13.370	56.07	-4.0	-455.6
20.0	65.6	13.600	56.48	46.0	39.6
25.0	82.0	13.690	56.64	18.0	101.2
30.0	98.4	13.920	57.06	46.0	39.6
35.0	114.8	14.140	57.45	44.0	41.4
40.0	131.2	14.530	58.15	78.0	23.4
45.0	147.6	14.750	58.55	44.0	41.4
50.0	164.0	15.120	59.22	74.0	24.6
55.0	180.4	15.540	59.97	84.0	21.7
60.0	196.8	15.980	60.76	88.0	20.7
65.0	213.2	16.480	61.66	100.0	18.2
70.0	229.6	17.060	62.71	116.0	15.7
75.0	246.0	17.670	63.81	122.0	14.9
80.0	262.4	18.280	64.90	122.0	14.9
85.0	278.8	18.850	65.93	114.0	16.0
90.0	295.2	19.390	66.90	108.0	16.9
95.0	311.6	20.050	68.09	132.0	13.8
100.0	328.0	20.680	69.22	126.0	14.5
105.0	344.4	21.220	70.20	108.0	16.9
110.0	360.8	21.650	70.97	86.0	21.2
115.0	377.2	22.140	71.85	98.0	18.6
120.0	393.6	22.900	73.22	152.0	12.0
125.0	410.0	23.120	73.62	44.0	41.4
130.0	426.4	23.870	74.97	150.0	12.1
135.0	442.8	24.350	75.83	36.0	19.0
140.0	459.2	24.870	76.77	104.0	17.5

Harper

21-42 - \$11

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6/7/73



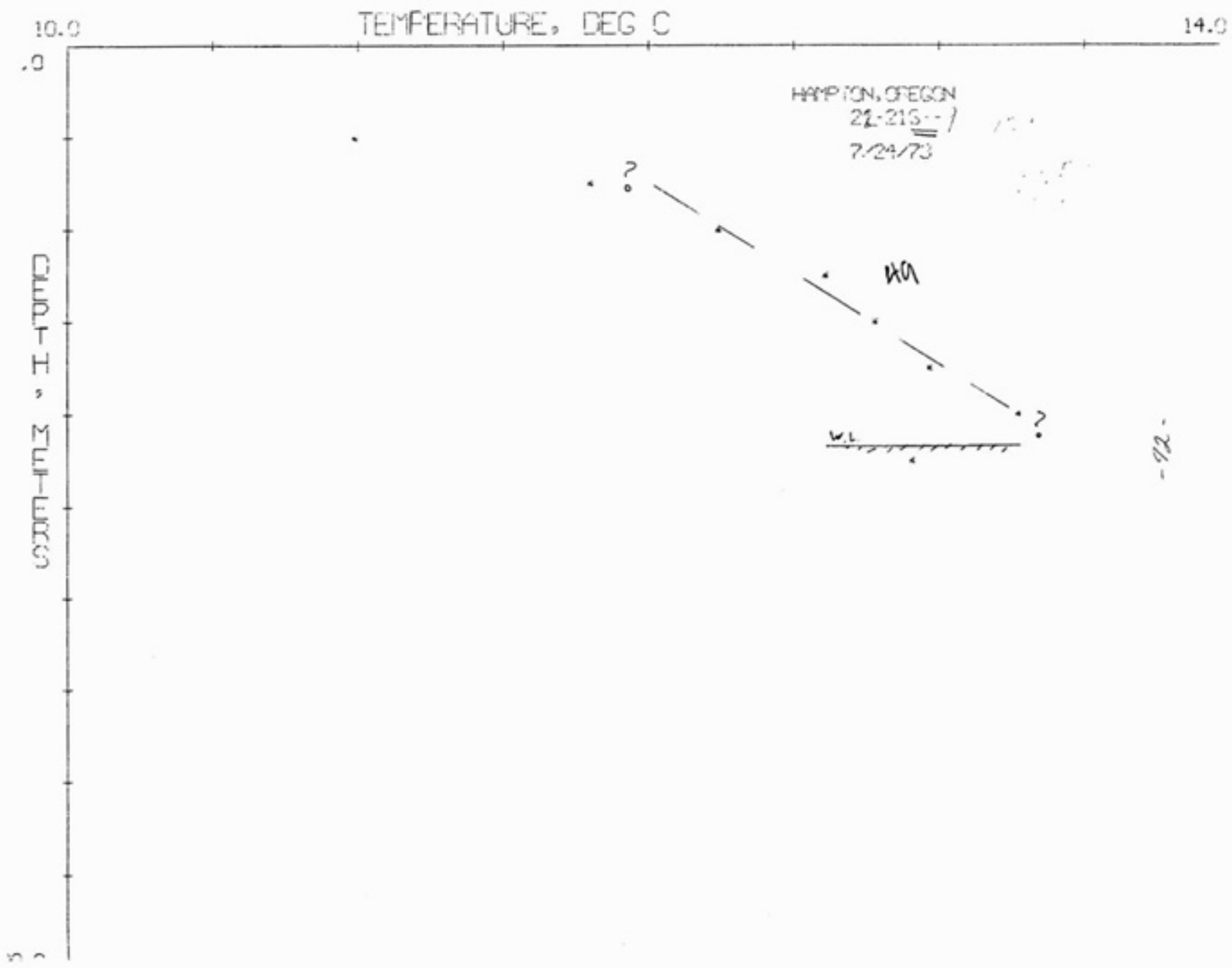
LOCATION: HAMPTON, OREGON
 HOLE NUMBER: 21-21S--
 DATE MEASURED: 7/24/73

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
10.0	32.8	10.990	51.78	.0	.0
15.0	49.2	11.800	53.24	162.0	11.2
20.0	65.6	12.240	54.03	88.0	20.7
25.0	82.0	12.610	54.70	74.0	24.6
30.0	98.4	12.780	55.00	34.0	53.6
35.0	114.8	12.970	55.35	38.0	48.0
40.0	131.2	13.270	55.89	60.0	30.4
45.0	147.6	12.910	55.24	-72.0	-25.3

Hampton, Ore

21-21-S ? probably ?

7/24/73

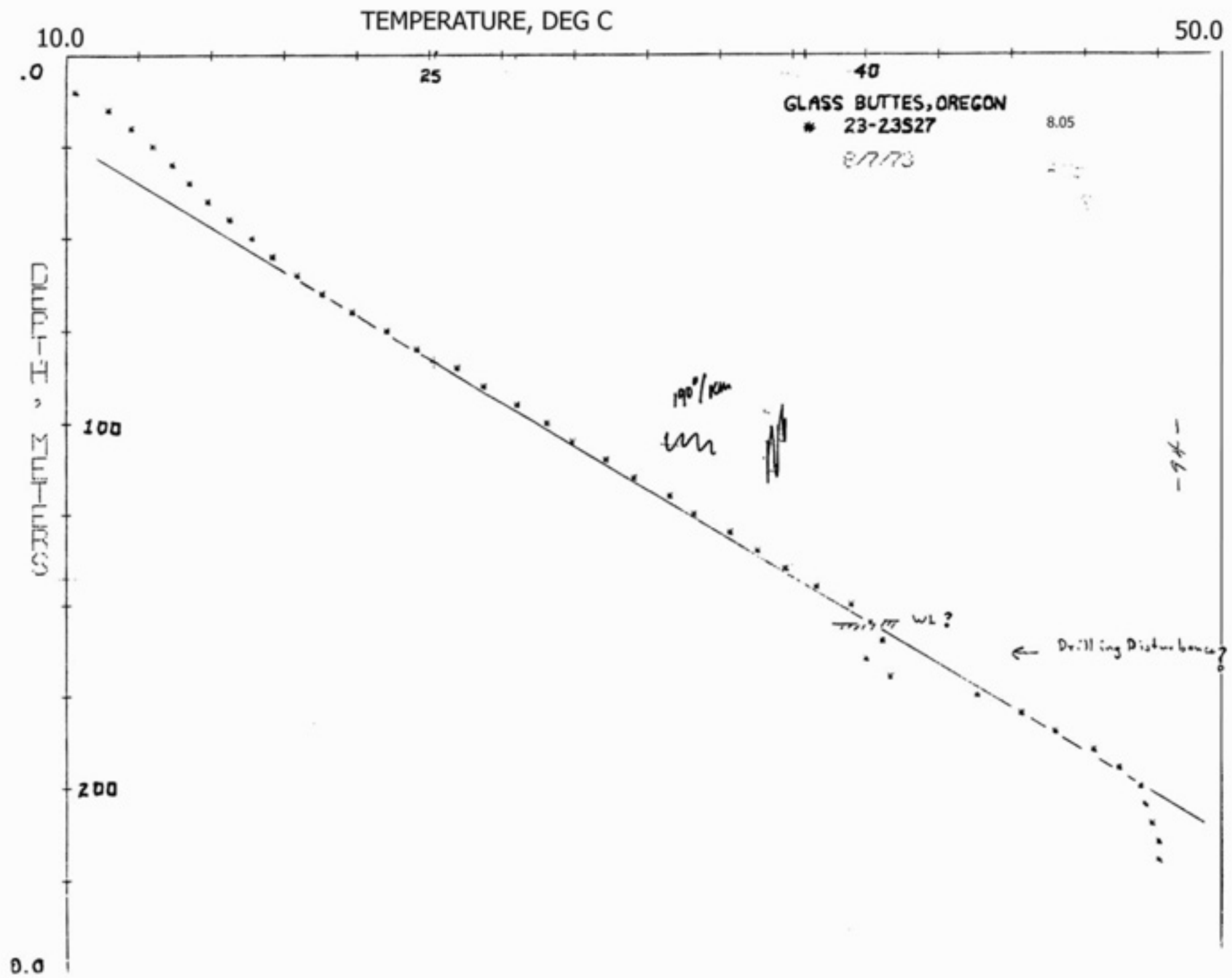


LOCATION: GLASS BUTTES, OREGON
HOLE NUMBER: 23-23527
DATE MEASURED: 8/7/73

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
10.0	32.8	10.310	50.56	.0	.0
15.0	49.2	11.470	52.65	232.0	7.9
20.0	65.6	12.260	54.07	158.0	11.5
25.0	82.0	13.050	55.49	158.0	11.5
30.0	98.4	13.680	56.62	126.0	14.5
35.0	114.8	14.290	57.72	122.0	14.9
40.0	131.2	14.920	58.86	126.0	14.5
45.0	147.6	15.690	60.24	154.0	11.8
50.0	164.0	16.460	61.63	154.0	11.8
55.0	180.4	17.150	62.87	138.0	13.2
60.0	196.8	18.000	64.40	170.0	10.7
65.0	213.2	18.890	66.00	178.0	10.2
70.0	229.6	19.920	67.86	206.0	8.8
75.0	246.0	21.110	70.00	238.0	7.7
80.0	262.4	22.150	71.87	208.0	8.8
85.0	278.8	23.580	74.44	286.0	6.4
90.0	295.2	24.480	76.06	180.0	10.1
95.0	311.6	25.640	78.15	232.0	7.9
100.0	328.0	26.670	80.01	206.0	8.8
105.0	344.4	27.560	81.61	178.0	10.2
110.0	360.8	28.710	83.68	230.0	7.9
115.0	377.2	29.670	85.41	192.0	9.5
120.0	393.6	30.900	87.62	246.0	7.4
125.0	410.0	31.770	89.19	174.0	10.5
130.0	426.4	32.990	91.38	244.0	7.5
135.0	442.8	33.950	93.11	192.0	9.5
140.0	459.2	34.940	94.89	198.0	9.2
145.0	475.6	35.980	96.76	208.0	8.8
150.0	492.0	37.200	98.96	244.0	7.5
155.0	508.4	37.880	100.18	136.0	13.4
160.0	524.8	38.260	100.87	76.0	24.0
165.0	541.2	37.730	99.91	-106.0	-17.2
170.0	557.6	38.550	101.39	164.0	11.1
175.0	574.0	41.540	106.77	598.0	3.0
180.0	590.4	43.070	109.53	306.0	6.0
185.0	606.8	44.220	111.60	230.0	7.9
190.0	623.2	45.560	114.01	268.0	6.8
195.0	639.6	46.420	115.56	172.0	10.6
200.0	656.0	47.180	116.92	152.0	12.0
205.0	672.4	47.370	117.27	38.0	48.0
210.0	688.8	47.610	117.70	48.0	38.0
215.0	705.2	47.820	118.08	42.0	43.4
220.0	721.6	47.830	118.09	2.0	911.1

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Glass Buttes
23-23-527
8/7/73



TEMPERATURE-DEPTH LOG

Location Sutherland CNW 21 T2S5, R6W elev 450'
 Company _____ Drill Hole No. _____
 Date 10/25/74 Depth Drilled _____ Zero Depth _____
 Probe, Cable, Bridge PR-1, WB-3 Operator Bowen
 Comments _____

Depth M Ft	Resistance	Temperature		$\Delta T/\Delta x$ °C/km	Comments
		Deg C	Deg F		
5	4703	16.18		-284	
10	4983	14.76		78	
15	4904	15.15		0	
20	4905	15.15		7	
25	4898.7	15.18		14	in water
30	4883.7	15.25		16	
35	4868.5	15.23		8	
40	4859.5	15.37		8	
45	4852.1	15.41		8	
50	4844.2	15.45		8	
55	4835.7	15.49		8	
60	4828.0	15.53		10	
65	4819.4	15.58		8	
70	4811.3	15.62		10	
75	4801.8	15.67		8	
80	4793.1	15.71		10	
85	4783.4	15.67		12	
90	4771.8	15.82	Sutherland		
91.5	bottom		25-6521		
		-95-			

27-30-13

LOCATION: HARNEY CO., OREGON
HOLE NUMBER: HP-10
DATE MEASURED: 6/8/73

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
1.0	3.3	16.870	62.37	.0	.0
2.0	6.6	11.420	52.56	-5450.0	-1.3
3.0	9.8	10.470	50.85	-950.0	-1.9
4.0	13.1	11.040	51.87	570.0	3.2
5.0	16.4	11.800	53.24	760.0	2.4
7.5	24.6	13.030	55.45	492.0	3.7
10.0	32.8	13.180	55.72	60.0	30.4
15.0	49.2	13.560	56.41	76.0	24.0
20.0	65.6	13.790	56.82	46.0	39.6
25.0	82.0	14.170	57.51	76.0	24.0
30.0	98.4	14.840	58.71	134.0	13.6
35.0	114.8	15.430	59.77	118.0	15.4
40.0	131.2	16.010	60.82	116.0	15.7
45.0	147.6	16.650	61.97	128.0	14.2
50.0	164.0	17.290	63.12	128.0	14.2
55.0	180.4	18.070	64.53	156.0	11.7
60.0	196.8	18.800	65.84	146.0	12.5
65.0	213.2	19.260	66.67	92.0	19.8
70.0	229.6	19.650	67.37	78.0	23.4
75.0	246.0	20.050	68.09	80.0	22.8
80.0	262.4	20.410	68.74	72.0	25.3
85.0	278.8	20.760	69.37	70.0	26.0
90.0	295.2	21.060	69.91	60.0	30.4
95.0	311.6	21.290	70.32	46.0	39.6
100.0	328.0	21.470	70.65	36.0	50.6
105.0	344.4	21.700	71.06	46.0	39.6
110.0	360.8	21.980	71.56	56.0	32.5
115.0	377.2	22.360	72.25	76.0	24.0
120.0	393.6	22.710	72.88	70.0	26.0
125.0	410.0	23.080	73.54	74.0	24.6
130.0	426.4	23.330	73.99	50.0	36.4

Harney Co.
HP-10 27-30-13
6/8/73

Harney Prospect 10

LOCATION: HARNEY, OREGON
HOLE NUMBER: 27-30S13
DATE MEASURED: 8DGM1

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
22.9	75.0	14.100	57.38	.0	.0
53.3	175.0	17.700	63.86	118.1	15.4
83.8	274.9	20.600	69.08	95.1	19.2
114.0	373.9	22.400	72.32	59.6	30.6
144.8	474.9	24.700	76.46	74.7	24.4

Multiple
Harney Prosp. 10
27-30-S13
(No data)

Harney Prospect 05

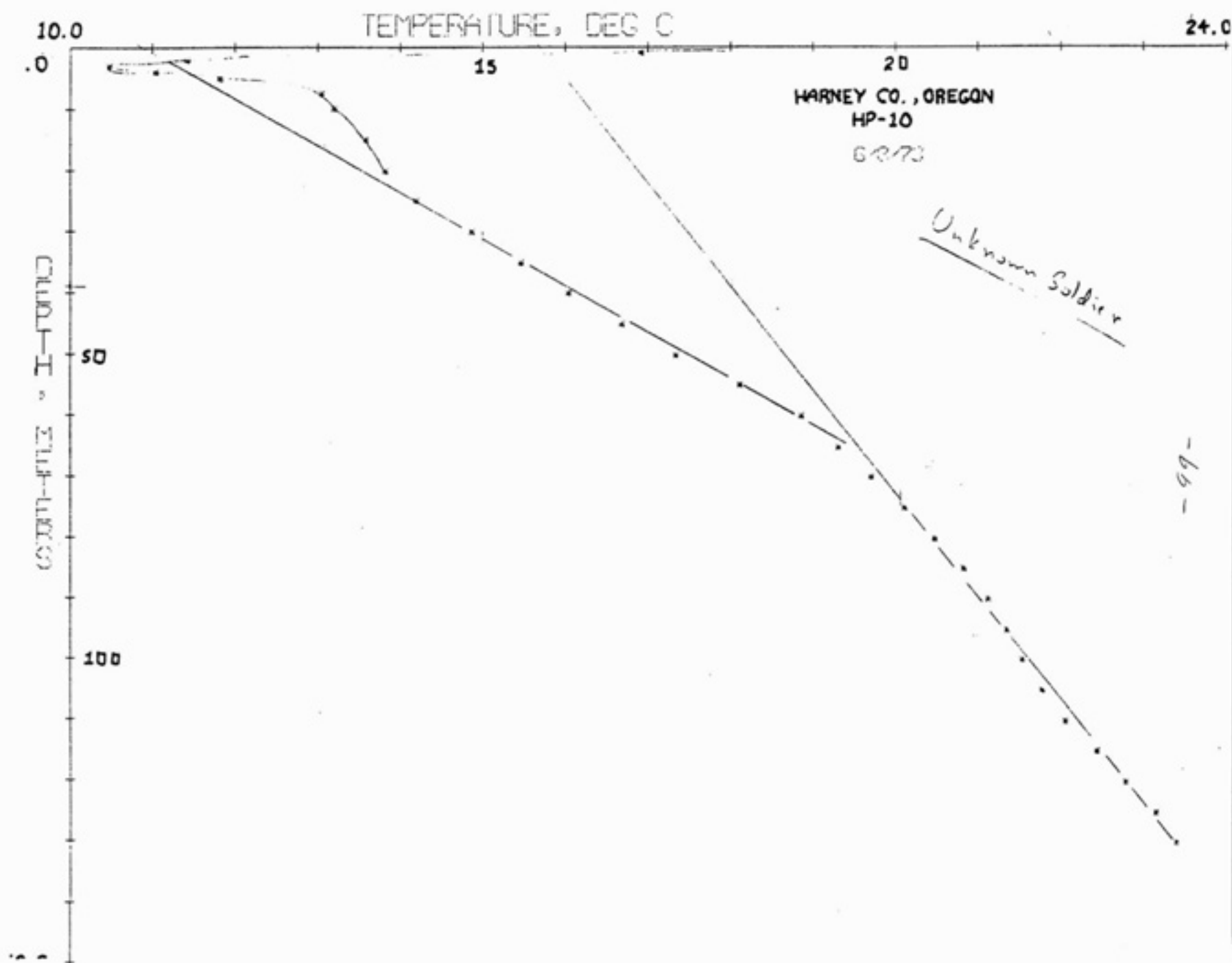
LOCATION: HARNEY, OREGON
HOLE NUMBER: 27-30S19
DATE MEASURED: 00GMI

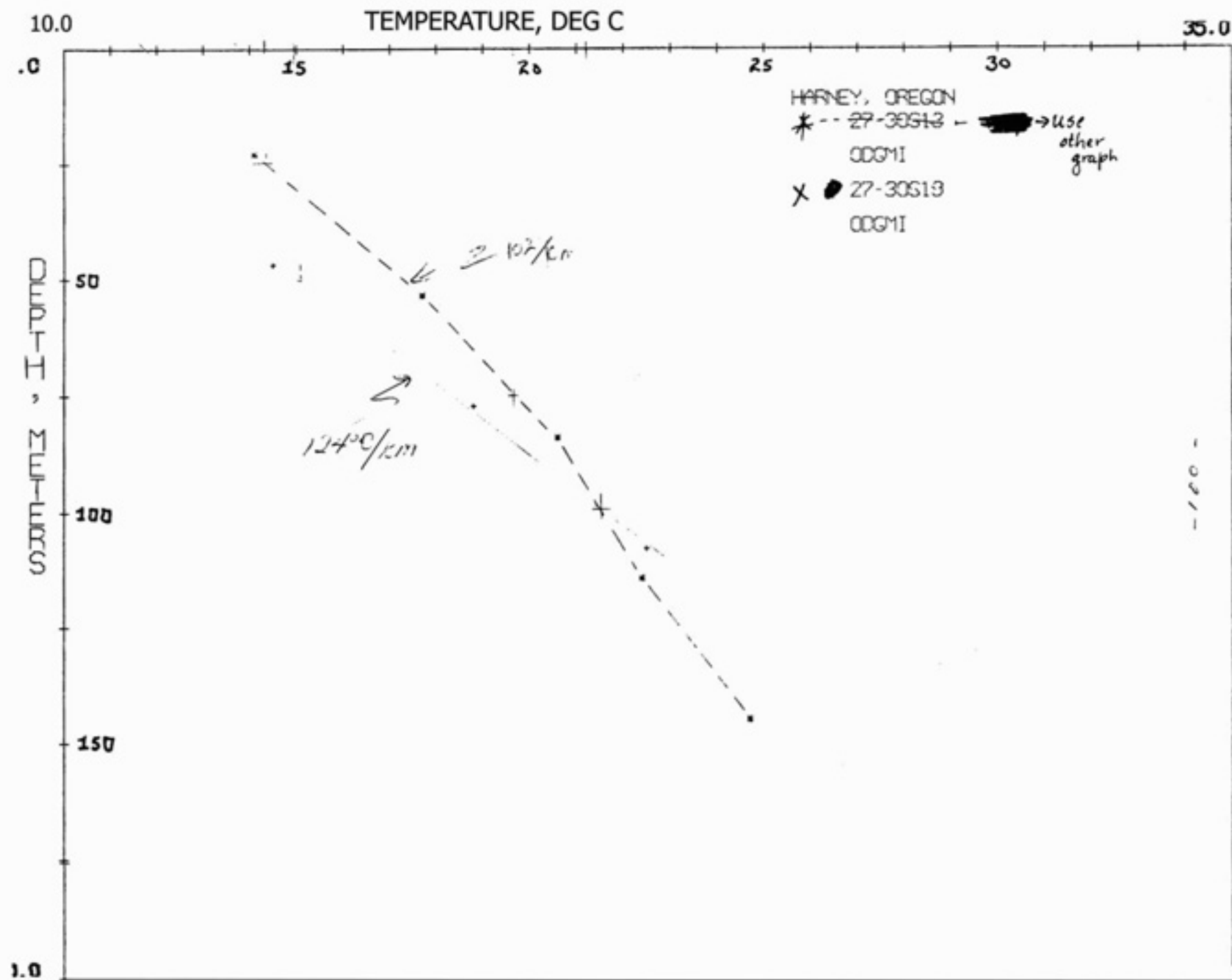
DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
46.6	152.9	14.500	58.10	.0	.0
77.1	252.9	18.800	65.84	141.1	12.9
107.6	352.9	22.500	72.50	121.4	15.0

Harney Prospect #88

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27-30-519
(No date)





LOCATION: COYOTE BUTTES, OREGON
 HOLE NUMBER: 27-3027B
 DATE MEASURED: 7/26/73

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
10.0	32.8	11.910	53.44	.0	.0
15.0	49.2	12.500	54.50	118.0	15.4
20.0	65.6	13.090	55.56	118.0	15.4
25.0	82.0	13.590	56.46	100.0	18.2
30.0	98.4	14.220	57.60	126.0	14.5
35.0	114.8	14.690	58.44	94.0	19.4
40.0	131.2	15.380	59.68	138.0	13.2
45.0	147.6	16.020	60.84	128.0	14.2
50.0	164.0	16.690	62.04	134.0	13.6
55.0	180.4	17.250	63.05	112.0	16.3
57.2	187.6	17.380	63.28	59.1	30.8

Coyote Buttes
27-30-²⁷278?
7/26/73

LOCATION: COYOTE BUTTES, OREGON
 HOLE NUMBER: 27-30S21
 DATE MEASURED: 7/25/73

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
10.0	32.8	14.310	57.76	.0	.0
15.0	49.2	15.430	59.77	224.0	8.1
20.0	65.6	16.700	62.06	254.0	7.2
25.0	82.0	17.990	64.38	258.0	7.1
30.0	98.4	18.920	66.06	186.0	9.8
35.0	114.8	19.770	67.59	170.0	10.7
40.0	131.2	20.570	69.03	160.0	11.4
45.0	147.6	21.240	70.23	134.0	13.6
50.0	164.0	21.920	71.46	136.0	13.4
55.0	180.4	22.640	72.75	144.0	12.7
60.0	196.8	23.380	74.08	148.0	12.3
65.0	213.2	24.030	75.25	130.0	14.0
70.0	229.6	24.640	76.35	122.0	14.9
75.0	246.0	25.250	77.45	122.0	14.9
80.0	262.4	25.860	78.55	122.0	14.9
85.0	278.8	26.460	79.63	120.0	15.2
90.0	295.2	27.120	80.82	132.0	13.8
95.0	311.6	27.790	82.02	134.0	13.6
100.0	328.0	28.540	83.37	150.0	12.1
105.0	344.4	29.310	84.76	154.0	11.8
110.0	360.8	29.890	85.80	116.0	15.7

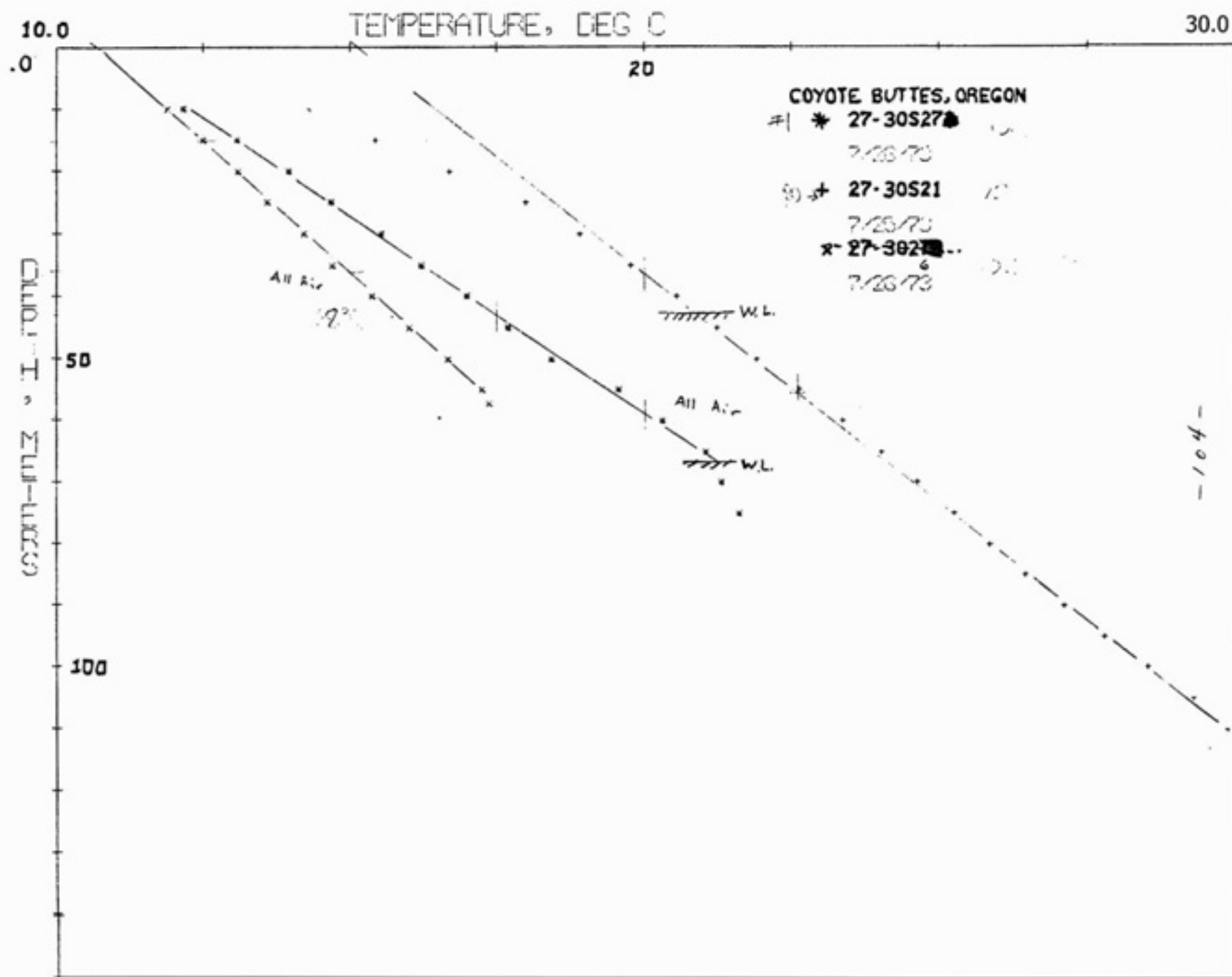
-102-

Coyote Buttes
 27-30-S21¹
 7/25/73

LOCATION: COYOTE BUTTES, OREGON
 HOLE NUMBER: 27-30S27
 DATE MEASURED: 7/26/73

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
10.0	32.8	12.160	53.89	.0	.0
15.0	49.2	13.070	55.53	182.0	10.0
20.0	65.6	13.970	57.15	180.0	10.1
25.0	82.0	14.680	58.42	142.0	12.8
30.0	98.4	15.540	59.97	172.0	10.6
35.0	114.8	16.220	61.20	136.0	13.4
40.0	131.2	16.990	62.58	154.0	11.8
45.0	147.6	17.710	63.88	144.0	12.7
50.0	164.0	18.450	65.21	148.0	12.3
55.0	180.4	19.590	67.26	228.0	8.0
60.0	196.8	20.320	68.58	146.0	12.5
65.0	213.2	21.070	69.93	150.0	12.1
70.0	229.6	21.320	70.38	50.0	36.4
75.0	246.0	21.620	70.92	60.0	30.4

Coyote Buttes
 27-30-S27
 7/26/73



TEMPERATURE-DEPTH LOG

Location Coyote Buttes NE, NW Sec 36, T27S, R20E
Company _____ Drill Hole No. _____
Date Aug 8, 1973 Depth Drilled _____ Zero Depth _____
Probe, Cable, Bridge VPR-1 Operator Harris
Comments elev 4135', 1260M

[illegible]

LOCATION: BEAVER MARSH REST STOP
 HOLE NUMBER:
 DATE MEASURED: 8/25/73

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
1.0	3.3	12.090	53.76	.0	.0
5.0	16.4	6.440	43.59	-1412.5	-1.3
10.0	32.8	6.220	43.20	-44.0	-41.4
15.0	49.2	6.440	43.59	44.0	41.4
20.0	65.6	6.460	43.63	4.0	455.6
25.0	82.0	6.460	43.63	.0000000000000.0	
30.0	98.4	6.460	43.63	.0000000000000.0	
35.0	114.8	6.470	43.65	2.0	911.1
40.0	131.2	6.470	43.65	.0000000000000.0	
50.0	164.0	6.370	43.47	-10.0	-182.2
55.0	180.4	6.340	43.41	-6.0	-303.7
65.0	213.2	6.130	43.03	-21.0	-86.8
70.0	229.6	6.120	43.02	-2.0	-911.1
75.0	246.0	6.120	43.02	.0000000000000.0	

Beaver Marsh
 28-8S5
 8/25/73

-106- NE, NE 00S, T28S, R0E

TEMPERATURE, DEG C

6.0

13.0

BEAVER MARSH REST STOP

8/25/73

20

-109-

June

CLIMATE STATION

0

LOCATION: TILLER, OREGON
HOLE NUMBER: DDH-7
DATE MEASURED: 10/25/72

T325, 7 W, sec 4

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
3.0	9.8	11.120	52.02	.0	.0
5.0	16.4	10.220	50.40	-450.0	-4.0
10.0	32.8	9.480	49.06	-148.0	-12.3
15.0	49.2	9.550	49.19	14.0	130.2
20.0	65.6	9.650	49.37	20.0	91.1
25.0	82.0	9.650	49.37	.0000000000	000.0
30.0	98.4	9.670	49.41	4.0	455.6
35.0	114.8	9.690	49.44	4.0	455.6
40.0	131.2	9.720	49.50	6.0	303.7
45.0	147.6	9.760	49.57	8.0	227.8
50.0	164.0	9.790	49.62	6.0	303.7
55.0	180.4	9.820	49.68	6.0	303.7
60.0	196.8	9.860	49.75	8.0	227.8
65.0	213.2	9.910	49.84	10.0	182.2
70.0	229.6	9.940	49.89	6.0	303.7
75.0	246.0	9.990	49.98	10.0	182.2
80.0	262.4	10.050	50.09	12.0	151.9
85.0	278.8	10.090	50.16	8.0	227.8
90.0	295.2	10.150	50.27	12.0	151.9
95.0	311.6	10.200	50.36	10.0	182.2
100.0	328.0	10.260	50.47	12.0	151.9
105.0	344.4	10.330	50.59	14.0	130.2
110.0	360.8	10.390	50.70	12.0	151.9
115.0	377.2	10.460	50.83	14.0	130.2
120.0	393.6	10.510	50.92	10.0	182.2
125.0	410.0	10.600	51.08	18.0	101.2
130.0	426.4	10.660	51.19	12.0	151.9
135.0	442.8	10.750	51.35	18.0	101.2
140.0	459.2	10.850	51.53	20.0	91.1
145.0	475.6	11.520	52.74	134.0	13.6
150.0	492.0	11.570	52.83	10.0	182.2
155.0	508.4	11.640	52.95	14.0	130.2
160.0	524.8	11.720	53.10	16.0	113.9
165.0	541.2	11.790	53.22	14.0	130.2
170.0	557.6	11.850	53.33	12.0	151.9
175.0	574.0	11.910	53.44	12.0	151.9
180.0	590.4	11.980	53.56	14.0	130.2
185.0	606.8	12.030	53.65	10.0	182.2
190.0	623.2	12.050	53.69	4.0	455.6
195.0	639.6	12.100	53.78	10.0	182.2
200.0	656.0	12.230	54.01	26.0	70.1
205.0	672.4	12.310	54.16	16.0	113.9
210.0	688.8	12.410	54.34	20.0	91.1
215.0	705.2	12.500	54.50	18.0	101.2

Tiller, Ore

DDH-7

10/25/72

-108-

T325 R2W 4

LOCATION: TILLER, OREGON
HOLE NUMBER: DDH-7
DATE MEASURED: 12/29/72

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
5.0	16.4	9.640	49.35	.0	.0
10.0	32.8	9.410	48.94	-46.0	-39.6
15.0	49.2	9.430	48.97	4.0	455.6
20.0	65.6	9.470	49.05	8.0	227.8
25.0	82.0	9.590	49.26	24.0	75.9
30.0	98.4	9.605	49.29	3.0	607.4
35.0	114.8	9.625	49.32	4.0	455.6
40.0	131.2	9.655	49.38	6.0	303.7
45.0	147.6	9.680	49.42	5.0	364.4
50.0	164.0	9.710	49.48	6.0	303.7
55.0	180.4	9.740	49.53	6.0	303.7
60.0	196.8	9.780	49.60	8.0	227.8
65.0	213.2	9.830	49.69	10.0	182.2
70.0	229.6	9.870	49.77	8.0	227.8
75.0	246.0	9.920	49.86	10.0	182.2
80.0	262.4	9.960	49.93	8.0	227.8
85.0	278.8	10.020	50.04	12.0	151.9
90.0	295.2	10.075	50.13	11.0	165.7
95.0	311.6	10.140	50.25	13.0	140.2
100.0	328.0	10.230	50.41	18.0	101.2
105.0	344.4	10.300	50.54	14.0	130.2
110.0	360.8	10.370	50.67	14.0	130.2
115.0	377.2	10.435	50.78	13.0	140.2
120.0	393.6	10.500	50.90	13.0	140.2
125.0	410.0	10.570	51.03	14.0	130.2
130.0	426.4	10.590	51.06	4.0	455.6
135.0	442.8	10.700	51.26	22.0	82.8
140.0	459.2	10.810	51.46	22.0	82.8
145.0	475.6	11.490	52.68	136.0	13.4
150.0	492.0	11.550	52.79	12.0	151.9
155.0	508.4	11.610	52.90	12.0	151.9
160.0	524.8	11.687	53.04	15.4	118.3
165.0	541.2	11.760	53.17	14.6	124.8
170.0	557.6	11.810	53.26	10.0	182.2
175.0	574.0	11.865	53.36	11.0	165.7
180.0	590.4	11.935	53.48	14.0	130.2
185.0	606.8	11.980	53.56	9.0	202.5
190.0	623.2	12.015	53.63	7.0	260.3
195.0	639.6	12.075	53.73	12.0	151.9
200.0	656.0	12.197	53.95	24.4	74.7
205.0	672.4	12.290	54.12	18.6	98.0
210.0	688.8	12.390	54.30	20.0	91.1
215.0	705.2	12.490	54.48	20.0	91.1

K = 6.7 upper
K = 8 Lower

-109- Multiple

32-2 - \$4
Tiller, Ore
DDH-7
12/29/72

TEMPERATURE, DEG C

13.0

9.0

.0

10

TILLER, OREGON

DDH-7

10/25/72

DDH-7

12/29/72

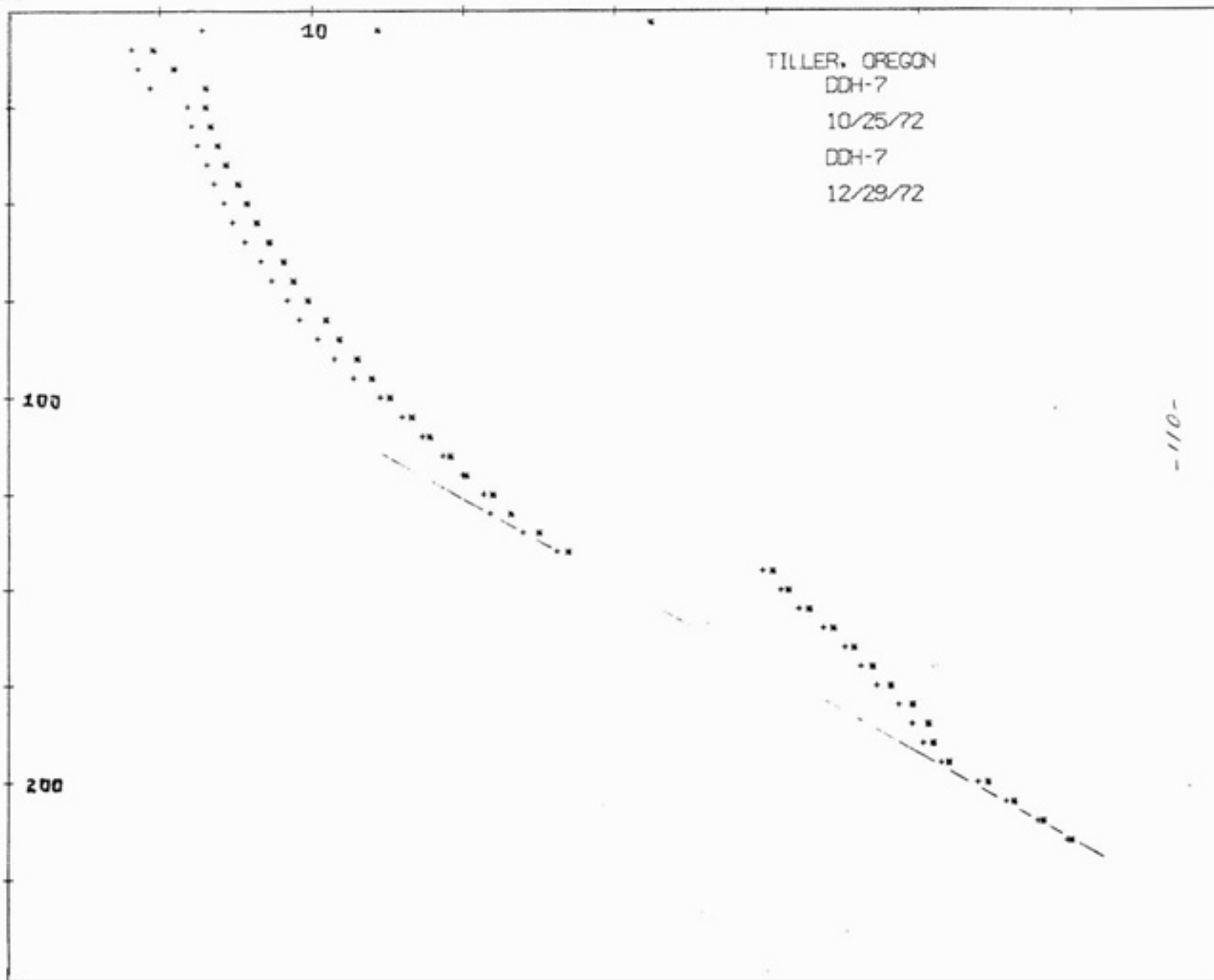
DEPTH, FEET

100

200

50.0

-110-



7395, R18 - 14

LOCATION: LAKEVIEW, OREGON
HOLE NUMBER: DDHMKP1
DATE MEASURED: 8/9/72

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL DEG C/KM	GRADIENT FEET/DEG F
		DEG C	DEG F		
3.0	9.8	6.933	44.47	.0	.0
5.0	16.4	6.825	44.28	-52.5	-34.7
10.0	32.8	7.163	44.89	67.0	27.2
15.0	49.2	7.775	45.99	123.0	14.8
20.0	65.6	8.290	46.92	103.0	17.7
25.0	82.0	8.923	48.06	126.0	14.5
30.0	98.4	9.535	49.16	123.0	14.8
35.0	114.8	10.145	50.26	122.0	14.9
40.0	131.2	10.885	51.59	148.0	12.3
45.0	147.6	11.635	52.94	150.0	12.1
50.0	164.0	12.375	54.27	148.0	12.3
55.0	180.4	13.280	55.90	181.0	10.1
60.0	196.8	14.135	57.39	165.0	11.0
65.0	213.2	14.675	58.41	114.0	16.0
70.0	229.6	15.270	59.49	119.0	15.3
75.0	246.0	15.795	60.43	105.0	17.4

Thomas Creek
37-18514
8/9/72

LOCATION: LAKEVIEW, OREGON
HOLE NUMBER: WW-TCC1
DATE MEASURED: 8/9/72

THCR 18S 27

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
3.0	9.8	9.955	49.92	.0	.0
5.0	16.4	9.360	48.85	-297.5	-6.1
10.0	32.8	10.855	51.54	299.0	6.1
15.0	49.2	11.365	52.46	102.0	17.9
20.0	65.6	11.930	53.47	113.0	16.1

Thomas Creek
37-18S 27

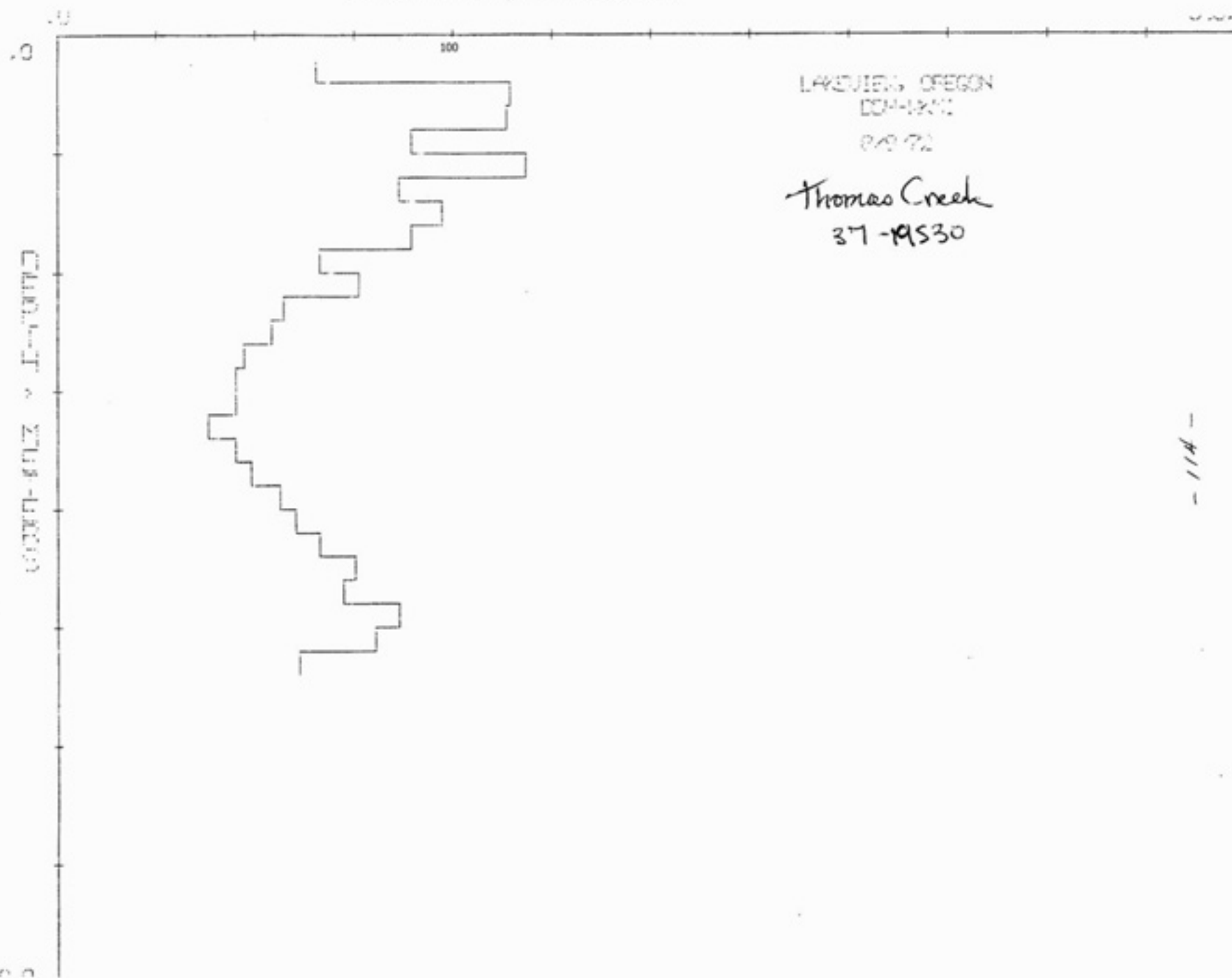
LOCATION: LAKEVIEW, OREGON
HOLE NUMBER: DDH-WKM1
DATE MEASURED: 8/9/72

TEMPERATURE LOG

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
3.0	9.8	7.910	46.24	.0	.0
5.0	16.4	7.285	45.11	-312.5	-5.8
10.0	32.8	7.610	45.70	65.0	28.0
15.0	49.2	8.180	46.72	114.0	16.0
20.0	65.6	8.745	47.74	113.0	16.1
25.0	82.0	9.190	48.54	39.0	20.5
30.0	98.4	9.780	49.60	118.0	15.4
35.0	114.8	10.210	50.38	36.0	21.2
40.0	131.2	10.695	51.25	77.0	18.8
45.0	147.6	11.140	52.05	39.0	20.5
50.0	164.0	11.470	52.65	66.0	27.6
55.0	180.4	11.850	53.33	76.0	24.0
60.0	196.8	12.135	53.84	37.0	32.0
65.0	213.2	12.405	54.33	34.0	33.7
70.0	229.6	12.640	54.75	47.0	38.8
75.0	246.0	12.865	55.16	45.0	40.5
80.0	262.4	13.090	55.56	45.0	40.5
85.0	278.8	13.280	55.90	38.0	48.0
90.0	295.2	13.505	56.31	45.0	40.5
95.0	311.6	13.750	56.75	49.0	37.2
100.0	328.0	14.030	57.25	36.0	32.5
105.0	344.4	14.330	57.79	60.0	30.4
110.0	360.8	14.660	58.39	66.0	27.6
115.0	377.2	15.035	59.06	75.0	24.3
120.0	393.6	15.395	59.71	72.0	25.3
125.0	410.0	15.825	60.48	66.0	21.2
130.0	426.4	16.225	61.20	80.0	22.8
135.0	442.8	16.530	61.75	61.0	29.9

Thomas Creek
37-19530

GRADIENT, DEC C/KM



LOCATION: LAKEVIEW, OREGON
 HOLE NUMBER: DDH-WKM3
 DATE MEASURED: 8/9/72

T 375, R 1E Sec 11

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
3.0	9.8	10.020	50.04	.0	.0
5.0	16.4	9.855	49.74	-82.5	-22.1
10.0	32.8	10.475	50.85	124.0	14.7
15.0	49.2	11.180	52.12	141.0	12.9
20.0	65.6	11.720	53.10	108.0	16.9

Thomas Creek

37-19S30

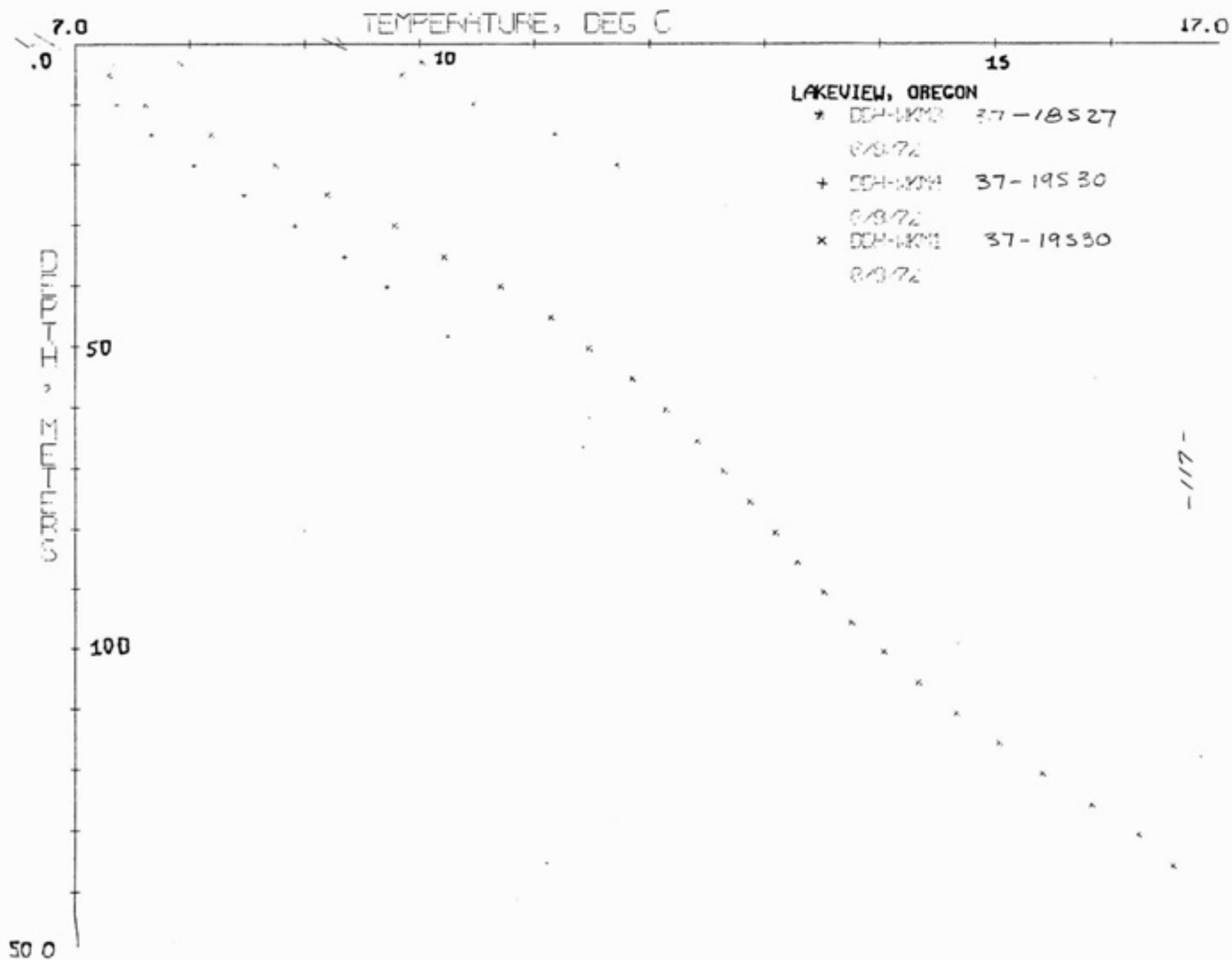
-115- 8/9/72

LOCATION: LAKEVIEW, OREGON
HOLE NUMBER: DDH-WKM4
DATE MEASURED: 8/9/72

T-15, R 19, S 30

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
3.0	9.8	7.335	45.20	.0	.0
5.0	16.4	6.525	43.74	-405.0	-4.5
10.0	32.8	7.360	45.25	167.0	10.9
15.0	49.2	7.655	45.78	59.0	30.9
20.0	65.6	8.035	46.46	76.0	24.0
25.0	82.0	8.470	47.25	87.0	20.9
30.0	98.4	8.915	48.05	89.0	20.5
35.0	114.8	9.335	48.80	84.0	21.7
40.0	131.2	9.705	49.47	74.0	24.6

Thomas Creek
37-19S30
8/9/72



TEMPERATURE, DEG C

6.0

17.0

.0

10

15

LAKEVIEW, OREGON

* DDH-KP1 37-18514

8/9/72

+ W1-T001 37-18527

8/9/72

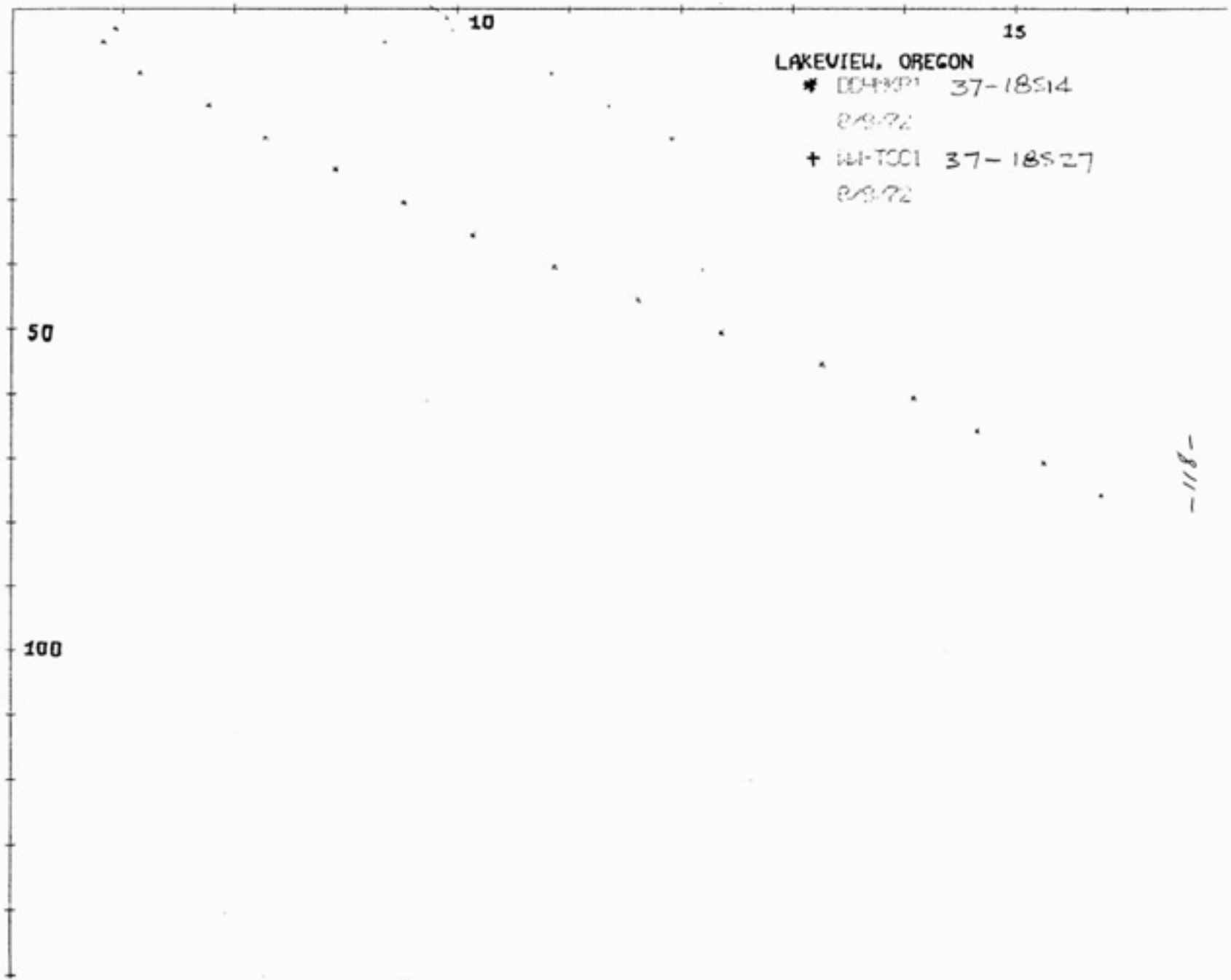
DEPTH - FEET

50

100

50.0

-118-



LOCATION: WH LEHORSE, GREEN
 HOLE NUMBER: 38-37325
 DATE MEASURED: 00GM1

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
30.5	100.0	20.500	69.44	.0	.0
59.4	195.0	24.100	75.38	114.0	15.0
89.9	294.9	25.200	77.36	36.1	50.5
120.4	394.9	27.600	81.68	78.7	23.1
150.9	494.9	29.300	84.74	55.8	32.7

Steens Prosp. 12

38-37-325

(No date)

LOCATION: FIELDS, OREGON
HOLE NUMBER: RDH-1
DATE MEASURED: 11/16/72

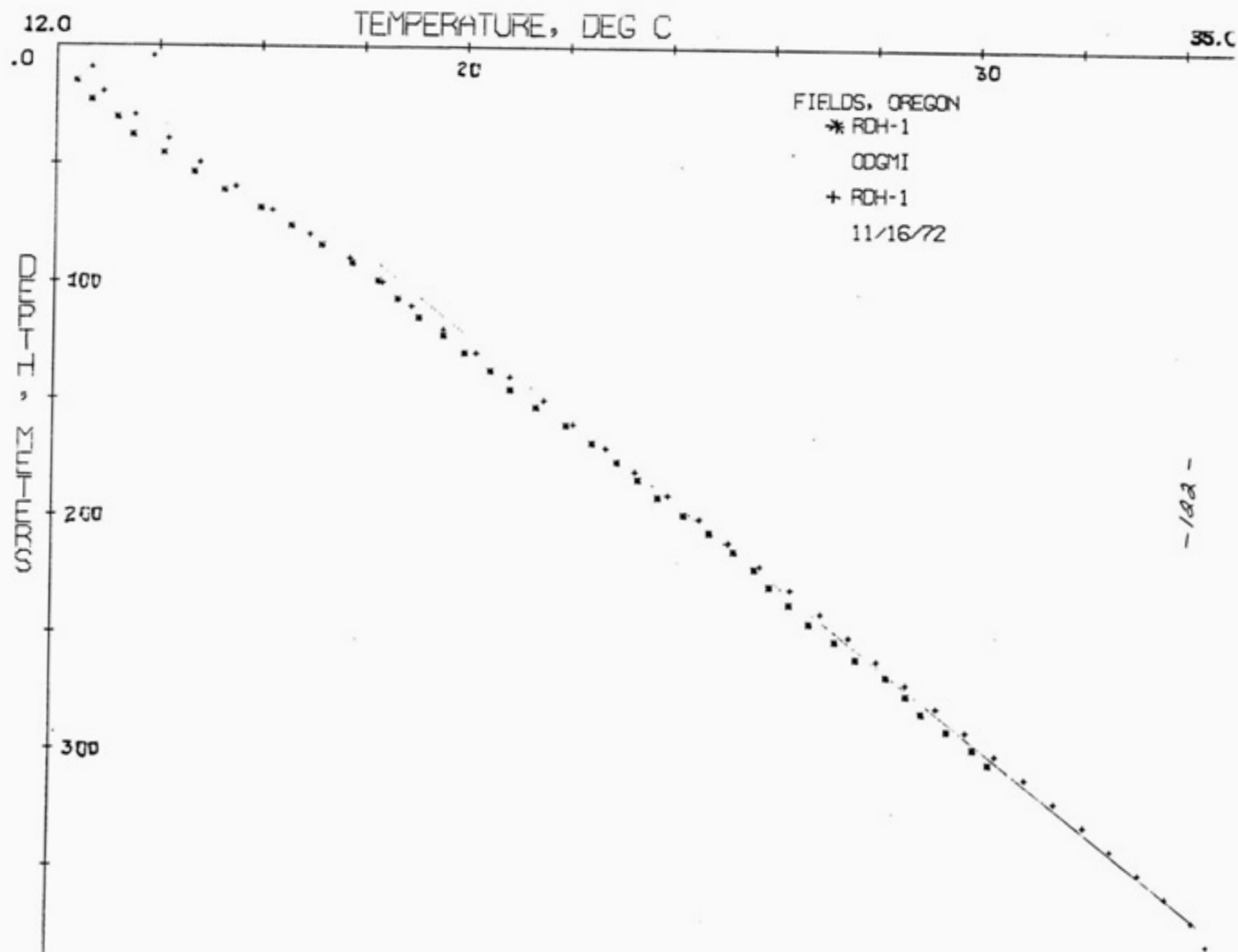
DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
5.0	16.4	13.880	56.98	.0	.0
10.0	32.8	12.680	54.82	-240.0	-7.6
20.0	65.6	12.930	55.27	25.0	72.9
30.0	98.4	13.530	56.35	60.0	30.4
40.0	131.2	14.180	57.52	65.0	28.0
50.0	164.0	14.810	58.66	63.0	28.9
60.0	196.8	15.520	59.94	71.0	25.7
70.0	229.6	16.240	61.23	72.0	25.3
80.0	262.4	16.970	62.55	73.0	25.0
90.0	295.2	17.740	63.93	77.0	23.7
100.0	328.0	18.390	65.10	65.0	28.0
110.0	360.8	18.960	66.13	57.0	32.0
120.0	393.6	19.580	67.24	62.0	29.4
130.0	426.4	20.230	68.41	55.0	28.0
140.0	459.2	20.890	69.60	66.0	27.6
150.0	492.0	21.560	70.81	67.0	27.2
160.0	524.8	22.150	71.87	59.0	30.9
170.0	557.6	22.780	73.00	63.0	28.9
180.0	590.4	23.370	74.07	59.0	30.9
190.0	623.2	24.000	75.20	63.0	28.9
200.0	656.0	24.620	76.32	62.0	29.4
210.0	688.8	25.210	77.38	59.0	30.9
220.0	721.6	25.820	78.48	61.0	29.9
230.0	754.4	26.410	79.54	59.0	30.9
240.0	787.2	27.010	80.62	60.0	30.4
250.0	820.0	27.570	81.63	56.0	32.5
260.0	852.8	28.120	82.62	55.0	33.1
270.0	885.6	28.700	83.66	58.0	31.4
280.0	918.4	29.300	84.74	60.0	30.4
290.0	951.2	29.880	85.78	58.0	31.4
300.0	984.0	30.440	86.79	56.0	32.5
310.0	1016.8	31.010	87.82	57.0	32.0
320.0	1049.6	31.600	88.88	59.0	30.9
330.0	1082.4	32.170	89.91	57.0	32.0
340.0	1115.2	32.690	90.84	52.0	35.0
350.0	1148.0	33.250	91.85	56.0	32.5
360.0	1180.8	33.780	92.80	53.0	34.4
370.0	1213.6	34.320	93.78	54.0	33.7
380.0	1246.4	34.620	94.32	30.0	60.7

39-34-#2
Fields, Ore
RDH-1
11/16/72

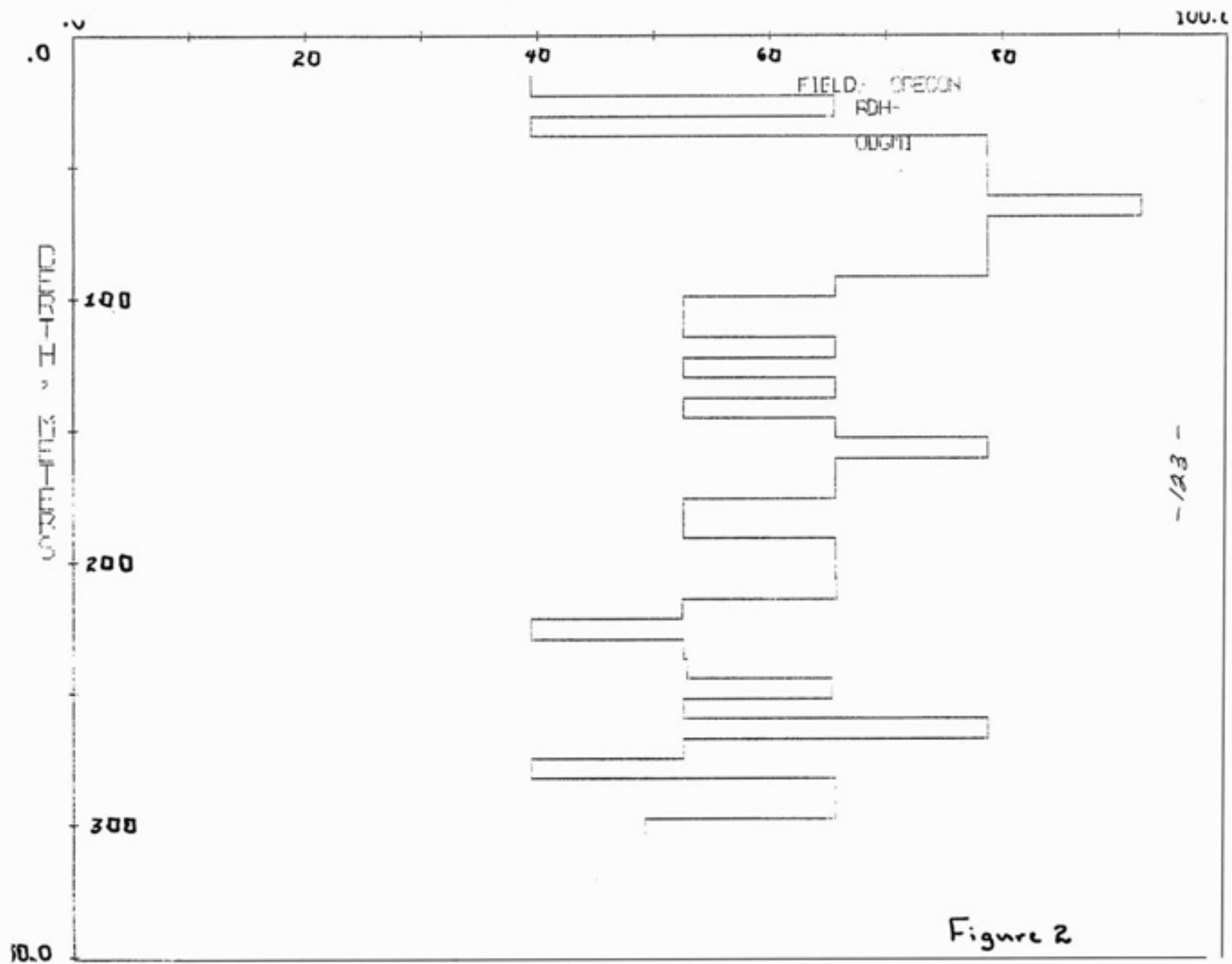
LOCATION: FIELDS, OREGON
 HOLE NUMBER: RDH-1
 DATE MEASURED: 8/8/61

DEPTH METERS	DEPTH FEET	TEMPERATURE DEG C	TEMPERATURE DEG F	GEO THERMAL GRADIENT DEG C/KM	GEO THERMAL GRADIENT FEET/DEG F
15.2	50.0	12.400	54.32	•0	•0
22.8	74.9	12.700	54.86	39.4	46.2
30.5	100.0	13.200	55.76	55.5	27.8
38.1	125.0	13.500	56.30	39.4	46.3
45.7	150.0	14.100	57.38	78.7	23.1
53.3	175.0	14.700	58.46	78.7	23.1
61.0	199.9	15.300	59.54	78.7	23.1
68.6	224.9	16.000	60.80	31.9	19.2
76.2	249.9	16.600	61.88	78.7	23.1
83.8	274.9	17.200	62.96	78.7	23.1
91.4	299.9	17.800	64.04	78.7	23.1
99.1	324.9	18.300	64.94	55.6	27.5
106.7	349.9	18.700	65.66	52.5	34.7
114.3	374.9	19.100	66.38	52.5	34.7
121.9	399.9	19.600	67.28	55.6	27.8
129.5	424.9	20.000	68.00	52.5	34.7
137.2	449.9	20.500	68.90	55.6	27.8
144.8	474.9	20.900	69.62	52.5	34.7
152.4	499.9	21.400	70.52	55.6	27.8
160.0	524.9	22.000	71.60	78.7	23.1
167.6	549.9	22.500	72.50	55.6	27.8
175.3	574.9	23.000	73.40	55.6	27.8
182.9	599.8	23.400	74.12	52.5	34.7
190.5	624.8	23.800	74.84	52.5	34.7
198.1	649.8	24.300	75.74	55.6	27.8
205.7	674.8	24.800	76.64	55.6	27.8
213.3	699.8	25.300	77.54	55.7	27.7
221.0	724.8	25.700	78.26	52.4	34.6
228.6	749.8	26.000	78.80	39.4	46.3
236.2	774.8	26.400	79.52	52.5	34.7
243.8	799.7	26.800	80.24	52.8	34.5
251.5	824.8	27.300	81.14	55.3	27.3
259.1	849.8	27.700	81.86	52.5	34.7
266.7	874.8	28.300	82.94	78.7	23.1
274.3	899.8	28.700	83.66	52.5	34.7
281.9	924.8	29.000	84.20	39.4	46.3
289.6	949.8	29.500	85.10	55.6	27.8
297.2	974.8	30.000	86.00	55.6	27.8
303.3	994.8	30.300	86.54	49.2	37.1

Multiple
 39-34-\$2
 Fields Ore
 RDH-1
 No date



GRADIENT, DEG C/KM



LOCATION: TROUT CREEK, OREGON
 HOLE NUMBER: 38-37S24
 DATE MEASURED: 7/28/73

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
10.0	32.8	13.040	55.47	.0	.0
15.0	49.2	13.530	56.35	38.0	18.6
20.0	65.6	13.890	57.00	72.0	25.3
25.0	82.0	14.170	57.51	56.0	32.5
30.0	98.4	14.490	58.08	64.0	28.5
35.0	114.8	14.840	58.71	70.0	26.0
40.0	131.2	15.230	59.41	78.0	23.4
45.0	147.6	15.640	60.15	82.0	22.2
50.0	164.0	16.080	60.94	38.0	20.7
55.0	180.4	16.500	61.70	84.0	21.7
60.0	196.8	16.940	62.49	88.0	20.7
65.0	213.2	17.390	63.30	90.0	20.2
70.0	229.6	17.830	64.09	88.0	20.7
75.0	246.0	18.320	64.98	38.0	18.6
80.0	262.4	18.780	65.80	92.0	19.8
85.0	278.8	19.260	66.67	96.0	19.0
90.0	295.2	19.760	67.57	100.0	18.2
95.0	311.6	20.180	68.32	84.0	21.7
100.0	328.0	20.450	68.81	54.0	33.7

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Trout Cr
 38-37-#24
 7/28/73

STEENS PROSPECT 10

LOCATION: WH. EMORSE, OREGON
HOLE NUMBER: 38-37S24
DATE MEASURED: 8DGM1

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
30.5	100.0	14.300	57.74	.0	.0
39.1	128.4	14.800	58.64	57.7	31.6
69.5	227.9	17.700	63.86	95.6	19.1
100.0	327.9	20.500	68.90	91.9	19.8

*preliminary
measurement 1971*

Multiple.

*Trout Creek
Steens Prosp 10*

38-37-#24

(No date)

LOCATION: TROUT CREEK, OREGON
 HOLE NUMBER: 38-37526
 DATE MEASURED: 7/28/73

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
10.0	32.8	13.220	55.80	.0	.0
15.0	49.2	13.770	56.79	110.0	16.6
20.0	65.6	14.290	57.72	104.0	17.5
25.0	82.0	14.870	58.77	116.0	15.7
30.0	98.4	15.300	59.54	86.0	21.2
35.0	114.8	15.810	60.46	102.0	17.9
40.0	131.2	16.000	60.80	38.0	48.0
45.0	147.6	16.490	61.68	98.0	18.6
50.0	164.0	16.730	62.11	48.0	38.0

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Trout Cr.
 38-37- \$24
 7/28/73

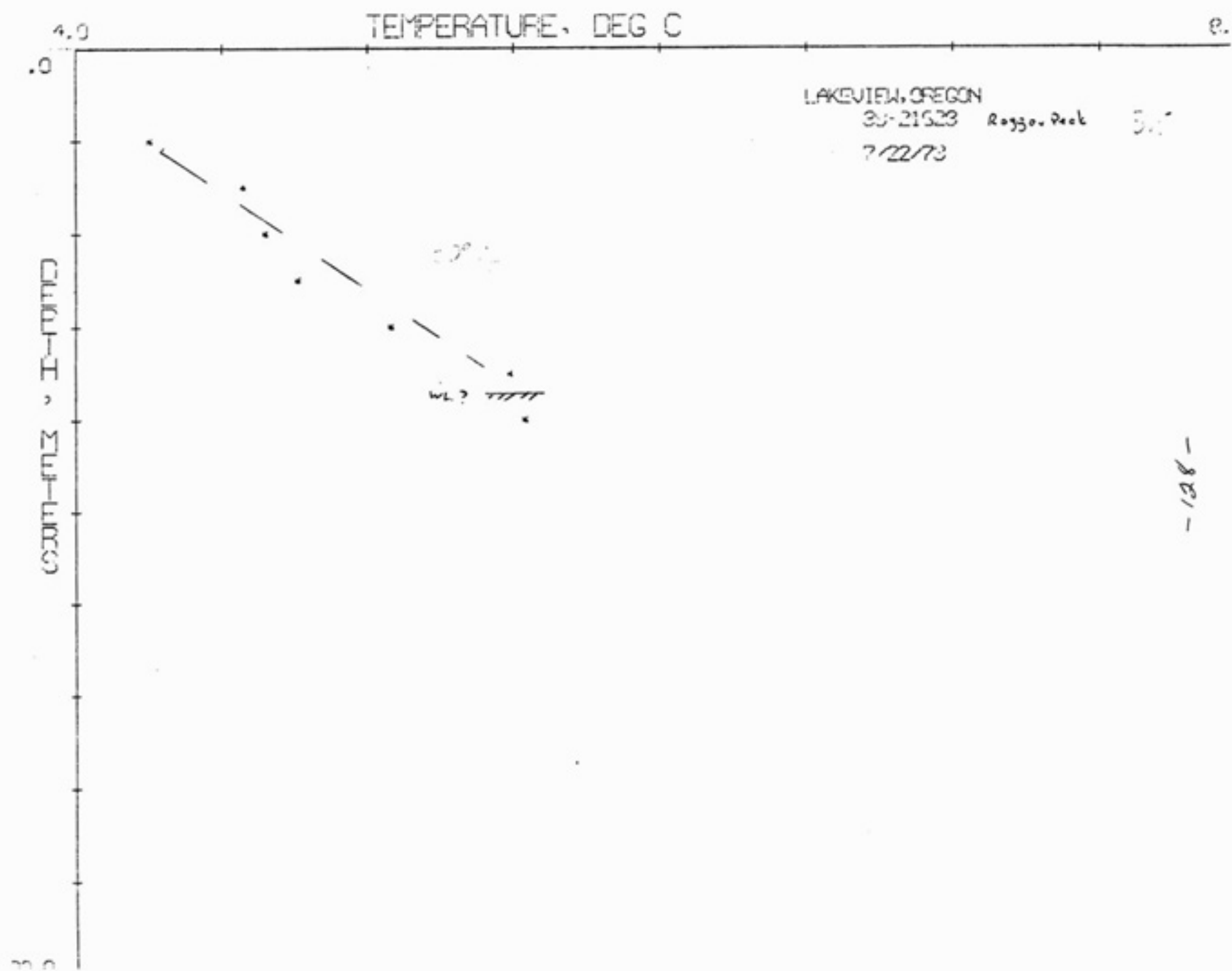
LOCATION: LAKEVIEW, OREGON
HOLE NUMBER: 39-21S29
DATE MEASURED: 7/22/73

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
10.0	32.8	4.250	39.65	.0	.0
15.0	49.2	4.570	40.23	64.0	28.5
20.0	65.6	4.650	40.37	16.0	113.9
25.0	82.0	4.760	40.57	22.0	82.8
30.0	98.4	5.080	41.14	64.0	28.5
35.0	114.8	5.490	41.88	82.0	22.2
40.0	131.2	5.540	41.97	10.0	182.2

Lakeview, Ore

39-21-S29

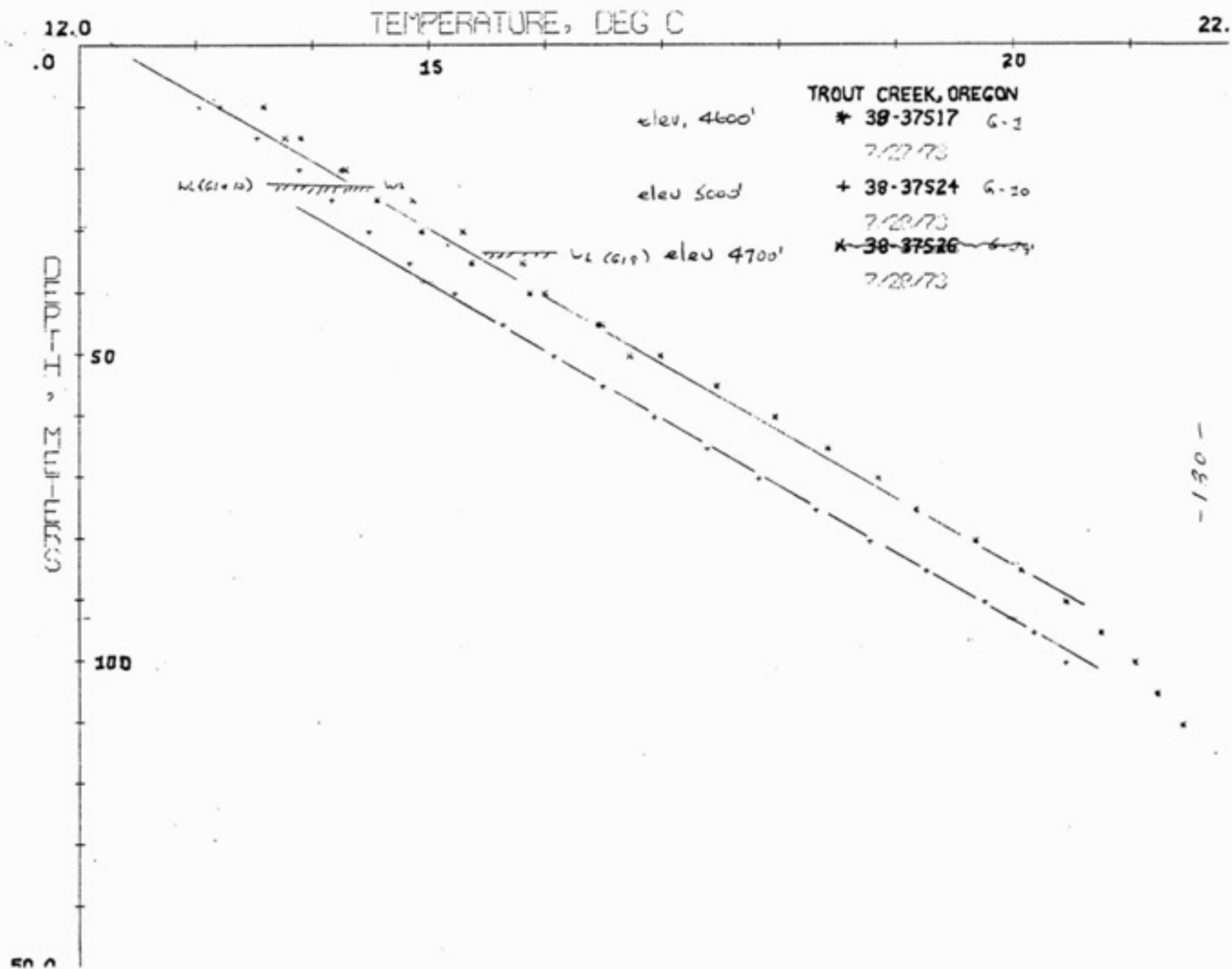
7/22/73



LOCATION: TROUT CREEK, OREGON
 HOLE NUMBER: 39-37S17
 DATE MEASURED: 7/27/73

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
10.0	32.8	13.580	56.44	.0	.0
15.0	49.2	13.900	57.02	64.0	28.5
20.0	65.6	14.250	57.65	70.0	26.0
25.0	82.0	14.560	58.21	62.0	29.4
30.0	98.4	14.940	58.89	76.0	24.0
35.0	114.8	15.370	59.67	86.0	21.2
40.0	131.2	15.870	60.57	100.0	18.2
45.0	147.6	16.460	61.63	118.0	15.4
50.0	164.0	16.990	62.58	106.0	17.2
55.0	180.4	17.470	63.45	96.0	19.0
60.0	196.8	17.970	64.35	100.0	18.2
65.0	213.2	18.420	65.16	90.0	20.2
70.0	229.6	18.850	65.93	86.0	21.2
75.0	246.0	19.170	66.51	64.0	28.5
80.0	262.4	19.680	67.42	102.0	17.9
85.0	278.8	20.070	68.13	78.0	23.4
90.0	295.2	20.450	68.81	76.0	24.0
95.0	311.6	20.750	69.35	60.0	30.4
100.0	328.0	21.040	69.87	58.0	31.4
105.0	344.4	21.230	70.21	38.0	48.0
110.0	360.8	21.450	70.61	44.0	41.4

Trout Cr.
 39-37-517
 7/27/73



STEENS PROSPECT 2

LOCATION: W. L. EMBRSE, OREGON
 HOLE NUMBER: 39-37S2
 DATE MEASURED: 8DGM1

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
30.5	100.0	17.100	62.78	.0	.0
44.8	147.0	19.300	66.74	153.5	11.9
75.3	247.0	23.500	74.30	137.8	13.2
105.8	346.9	27.600	81.68	134.5	13.5

Flagstaff Butte
 Steens Prosp. 2
 39-37-S2
 (No date)

Steaks Prospect

LOCATION: W. E. HORSE, OREGON
HOLE NUMBER: 39-37517
DATE MEASURED: 80GHI

DEPTH METERS	DEPTH FEET	TEMPERATURE		GEOTHERMAL GRADIENT	
		DEG C	DEG F	DEG C/KM	FEET/DEG F
36.6	120.0	15.400	59.72	.0	.0
67.1	220.0	18.500	65.30	101.7	17.3
97.5	319.9	20.500	68.90	55.6	27.8
128.0	419.9	22.800	73.04	75.5	24.1

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Flagstaff Butte
Steaks Prosp 1
39-37-517
No date

