A00025

TEC-18

Bully Creek
Thermal Data - Field Sheets

Malheur County, Oregon

Well Names
BC-4(504) to BC-29(529)
BC-101(601) to BC-142(642)

BULLY CREEK

THERMAL DATA - FIELD SHEETS

NOTE: Well numbers has been changed

DATE	ISSUED TO
GAYLORD 40	

Bally Creek Geothermal Data Summary

9.	(19.2)	32.0 – 57.7*	1.4 @ 2.5	28.	19.0	72 – 78 (73)	2.2 @ 3.0	(18)	(21.2)	78.8	2.4 @ 3.0
	3.47				2.71				2.54		
2.	(19.3)	44 – 57.5*	1.7 @ 3.0	13	(15.1)	46.1 – ~~62.6~~*	1.9 @ 3.0	114	(20.7)	66.0	2.0 @ 3.0
	3.48				3.77				3.03		
10.	(17.5)	35.5	1.4 @ 4.0	17*	(30.9)	183.1	5.5 @ 3.0	107	(20.8)	76.0, 75.* 88.0	2.3 @ 3.0
	5.63				1.09				2.33		
1.	(20.6)	~~56.0~~ ~~68.5~~ 63.5*	2.2 @ 3.5	22.	(21.3)	90.8, 120.5*, 50.5	4.2 @ 3.5	113	(13.7)	33.3	1.0 @ 3.0
	3.57				2.11				6.01		
4.	(10.5)	16.0	1.0 @ 6.0	29.	(24.2)	115, 125*	3.7 @ 3.0				
	12.5				1.60						
16.	(21.8)	90.4* – 106.8	3.2 @ 3.5	21.	(16.8)	26, 38*	1.2 @ 3.0	106	16.4	40	1.2 @ 3.0
	2.13				5.26				~~5.0~~		
~~8.~~	(13.3)	35.7	2.1 @ 6.0	25.	(15.7)	59.0; 44.0*	1.3 @ 3.0	115	18.8	66.4, 73.4	2.4 @ 3.2
	5.6				4.55			~~117~~	2.86		
9.	(16.2)	30*, –71.0	1.8 @ 6.0	101	~~12.6~~ (26.0)	138*, 93, 76	4.1 @ 3.0	108	28.8	113.9	3.4 @ 3.0
	3.45				2.63				1.76		
14.	(17.5)	55.5* – 93.3	3.3 @ 6.0	102	(27.2)	111, 148*	4.4 @ 3.0	109	19.76	66.0, 53, 122.	2.0 @ 3.0
	2.74				1.35				2.81		
15.	(19.3)	86* – 100	5.1 @ 6.0	103	(19.2)	61.0	1.8 @ 3.0	110	19.9	50.5, 106, 55.	1.5 @ 3.0
	2.34				3.28				3.96		
~~16~~ 23.	(19.2)	79.6 – 94.8*	2.9 @ 3.0	104	(17.1)	45	1.4 @ 3.0	111	19.0	40.6, 72.5	2.3 @ 3.2
	2.30				4.4				2.76		
17.	(23.1)	108.9 – 126.8*	4.4 @ 3.5	105	(17.3)	55.0	1.7 @ 3.0	112	18.6	62.9, 110.2	3.5 @ 3.2
	1.71				3.64				3.18		

Bully Creek Cont'd.

116 $\frac{31.0}{1.1}$ • $\frac{\overline{180.}, 275.0}{5.4 @ 3.0}$

117. $\frac{28.9}{3.64}$ • $\frac{337.3, \overline{60.0}, 244.0, 50.0}{1.8 @ 3.0}$

118 $\frac{20.26}{2.43}$ • $\frac{82.4}{2.5 @ 3.0}$

119 $\frac{23.56}{1.72}$ • $\frac{\overline{104.0}, 138., [redacted], 120.7}{3.1 @ 3.0}$

120 $\frac{20.1}{2.78}$ • $\frac{\overline{72.0}, 77.6}{2.2 @ 3.0}$.

HOLE DEPTHS

BULLY CREEK.

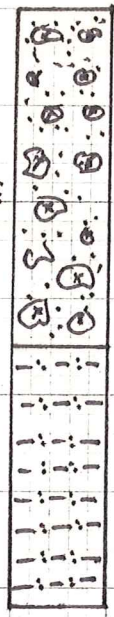
HOLE NO	DEPTH in ms.
NV-2	48.0
BC-4	61.0
" 8	60.7
" 9	67.1
NV-9	44.
NV-10	39
NV-11	42
BC-13	61.0
" 14	91.0
" 15	57.3
" 16	64.0
" 17	91.
NV 17	51.
" 18	49.
BC 21	60
" 22	104.
" 23	66.
" 25	66.75
" 28	66.4
" 29	62.8

HOLE NO	DEPTH
Δ BC-101	56.5
" 102	55.0
" 103	35.
" 104	55.
" 105	55.
" 106	30.
" 107	70.
" 113	45
" 114	85.
" 115	110
" 116	300
~~Δ NON AMAX DRILL HOLES~~	
"	
" 117	60
" 118	125
" 119	150
" 120	150

Δ - NON AMAX DRILL HOLES.

#4.

#8



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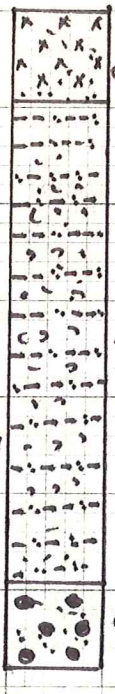

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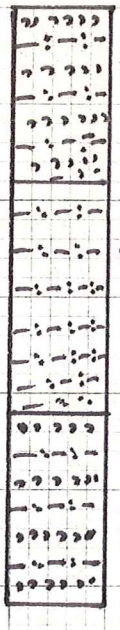

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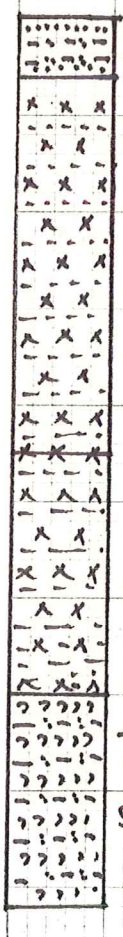

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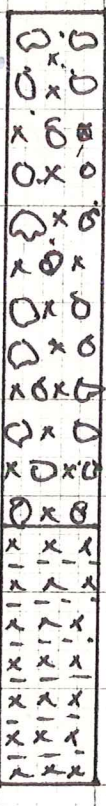

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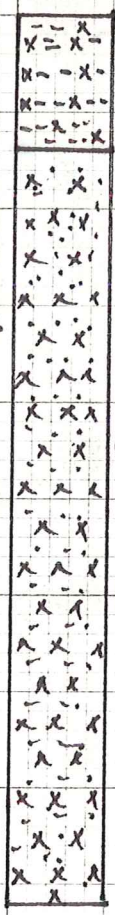

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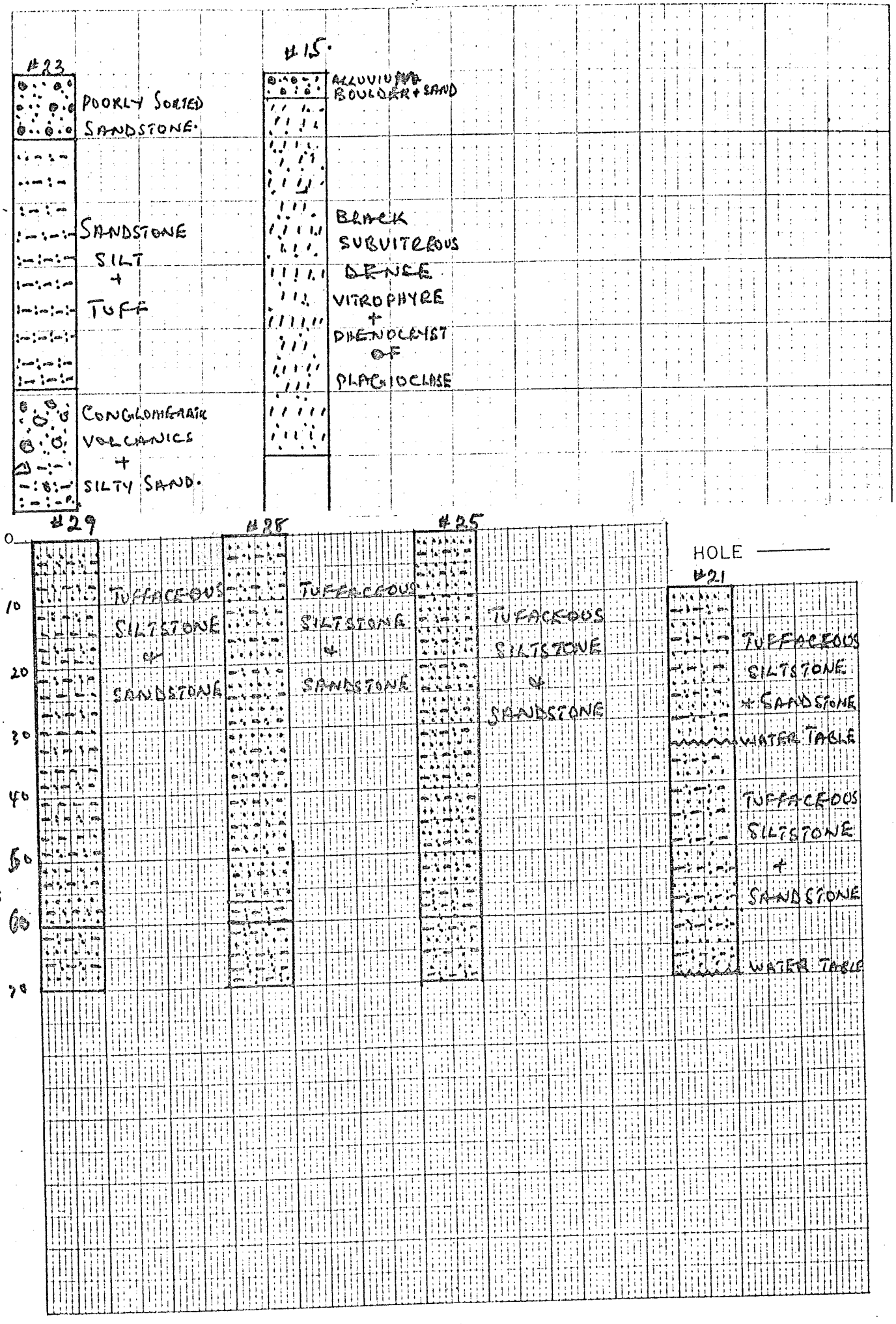


46 0780

TEMPERATURE 80

504

TEMPERATURE - DEPTH LOG

Location 2 Miles North Burnt Stump Butte Date Dec 20 1976

Map Brogan, Oregon 15' Quad

Property Bully Creek T 17S R 42E sec NE¼SE¼ 9

Drill Hole BC-4 504 Date Drilled Dec 12, 1976 Elevation 5030 ft.

Instrument Geotherm Operator CWK

Comments

Depth ~~(meters)~~	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
10		5.70			
20		9.78			
30		9.29			
40		9.12			
50		9.17	.05		
60		9.23	.06		
70		9.29	.06		
80		9.33	.04		
90		9.38	.05		
100		9.42	.04		
110		9.45	.03		
120		9.48	.03		
130		9.55	.07		
140		9.58	.03		
150		9.64	.06		
160		9.67	.03		
170		9.75	.08		
180		9.78	.03		
190		9.87	.09		
200		9.95	.08		

AKIN

LITHOLOGIC LOG BC-4

BULLY CREEK PROPERTY

NE¼ SE¼ Sec 9 T17S R42E

Elevation: 5,030'

Depth (meters)	Description
0-62	Dark black, sub vitreous, dense vitrophyre with phenocrysts of feldspar. Hole was dry to total depth.

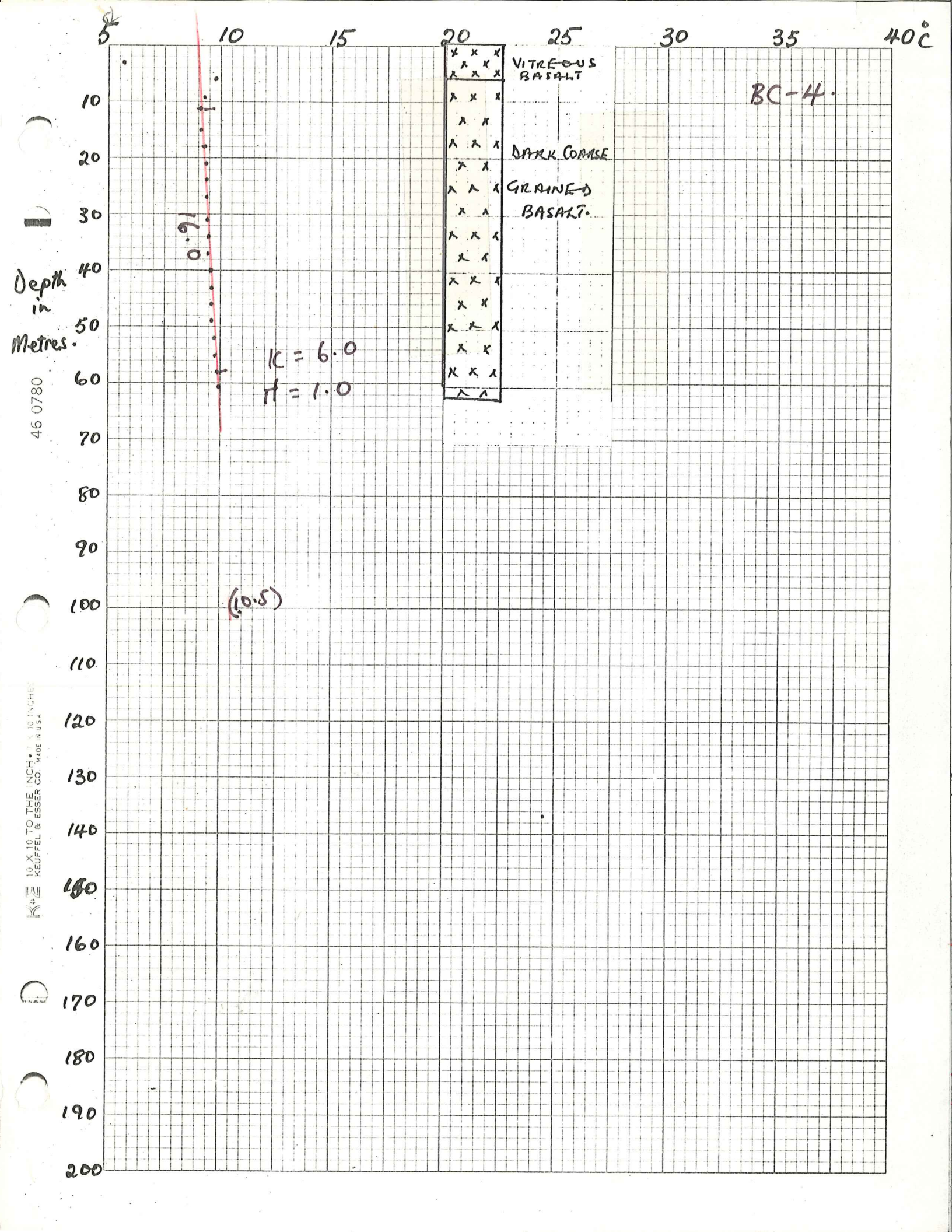
H. D. Pilkington
March 14, 1977

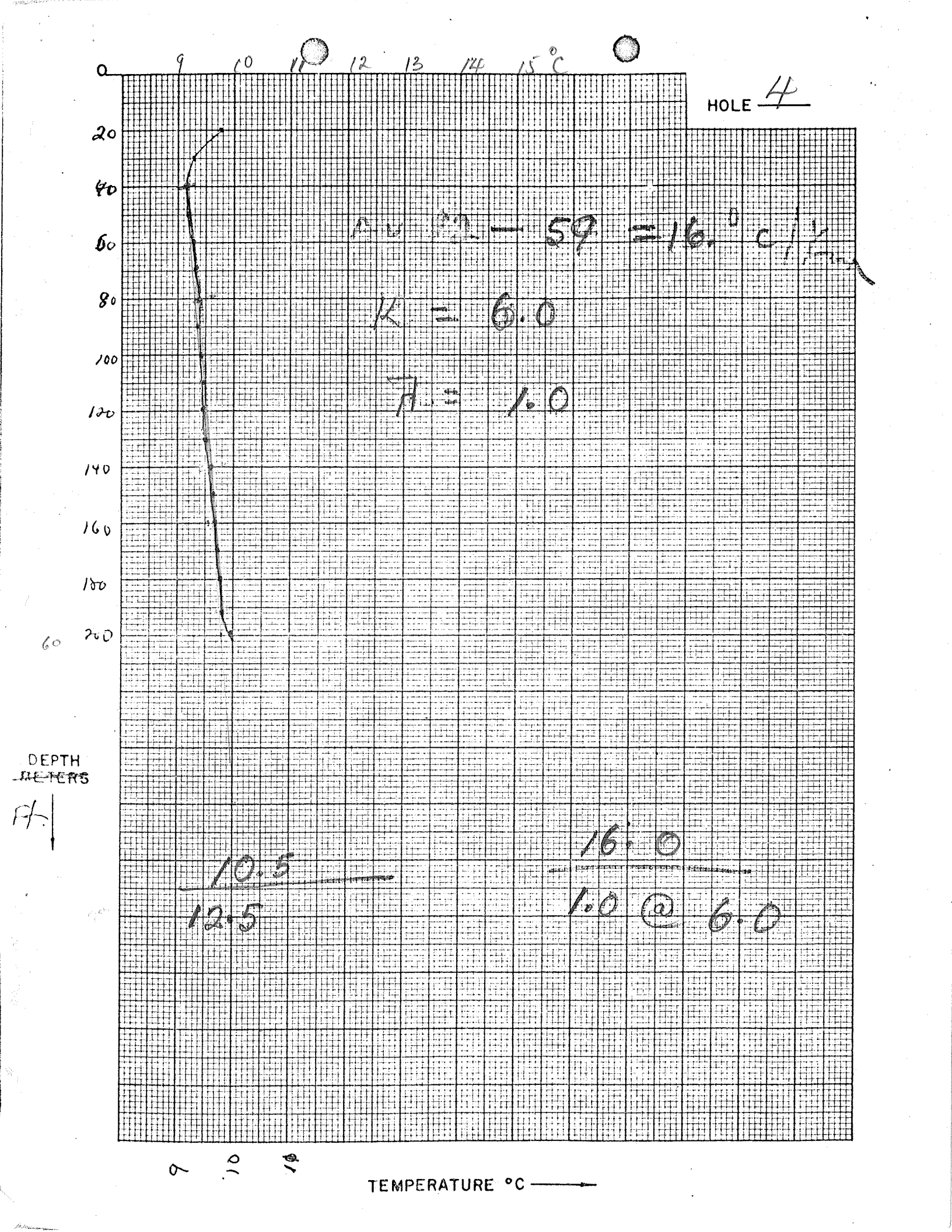
HDP:mmo

GeoThermEx, Inc.
Site Scientist [signature]
Date 12 DEC 76

#4 LITHOLOGIC LOG

INTERVAL	SCHEMATIC OF STRATIGRAPHY	LITHOLOGIC DESCRIPTION	COMMENTS, INTERPRETATION
0 - 10	|||	Vitreous bslt.	Top unit of Delechaie; "Columbia basalt" of George Walker.
20	|||	Dark, fn grain (black) basalt	SAMPLE
30	|||	do	
40	|||	do	
50	|||	do	
60	|||	do	
70	|||	do	SAMPLE
80	|||	do	SAMPLE
90	|||	do	


5
10
15
20
25
30
35
40°C
BC-4.
VITREOUS BASALT
DARK COARSE GRAINED BASALT.
0.91
K = 6.0
H = 1.0
(10.5)
Depth in Metres.
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
180
190
200
46 0780
10 X 10 TO THE INCH
KEUFFEL & ESSER CO MADE IN U.S.A.


HOLE 4
9 10 11 12 13 14 15 °C
0
20
40
60
80
100
120
140
160
180
200
DEPTH METERS
10.5
12.5
16.0
1.0 @ 6.0
TEMPERATURE °C

LITHOLOGIC LOG

Site Scientist _____

Date _____

#14

INTERVAL	SCHEMATIC OF STRATIGRAPHY	LITHOLOGIC DESCRIPTION	COMMENTS, INTERPRETATION
100 110		black, aph basalt	
110 120		do	
120 130		do	
130 140		do	
140 150		do	SAMPLE
150 160		do	
160 170		do	
170 180		do	
180 190		do	SAMPLE
190 200		do - some chips to 25 mm	
200 205	TD		

PROJ.	WELL	DA-MO-YR-M/F			DESCRIPTION	EDITORS	TERRAIN CORR.
TES	208	7	SF	76 M	E-208: 2.5 [illegible]	[illegible]	
737	50420	DC	76	F	T17S, R42E, S9, BROGAN, OR	CWK/AKIN	

duplicate

IN/CM	MAP: 7.5, 15. or 60.	DEG'S LAT	MINS DLAT	DEG'S LONG.	MINS DLONG	N.	E.	ELEV.	M/F
IN	15.	38.	20.	112.	45.	8.62	9.42	4825.	F
CM	15.5	44.	00.	117.	45.	18.65	23.0	5030.	F

SW CORNER

duplicate

SEGMENT DEPTH START	END	K	±	SEGMENT START	END	K	±
16.	26.	7.	.5	26.	40.	1.7	.5
80.	200.	-6.0	-.5	.999			

START = [illegible]
Sr last = .999
Start =
Price

duplicate

DEPTH	°C	DEPTH	°C	DEPTH	°C
1.	16.[illegible]	1.5	16.916	2.	16.82

99999. LAST ENTRY

508

TEMPERATURE - DEPTH LOG

Location Burnt Stump Butte Date Dec 17 1976

Map Brogan, Oregon 15' Quad

Property Bully Creek T 17 S R 42E sec SE¼ NE¼ 21

Drill Hole BC-8 508 Date Drilled Dec 14, 1976 Elevation 4540 ft.

Instrument Geothermex Operator CWK

Comments

Depth ~~(meters)~~	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
10		9.82			
20		11.22	1.30		
30		10.44	-.78		
40		10.18	-.36		
50		10.27	.09		
60		10.43	.16		
70		10.55	.12		
80		10.68	.13		
90		10.77	.09		
100		10.86	.09		
110		10.91	.05		
120		10.99	.08		
130		11.08	.09		
140		11.19	.11		
150		11.34	.15		
160		11.47	.13		
170		11.55	.08		
180		11.67	.12		
190		11.77	.10		
199		11.87	.10		

LITHOLOGIC LOG BC-8

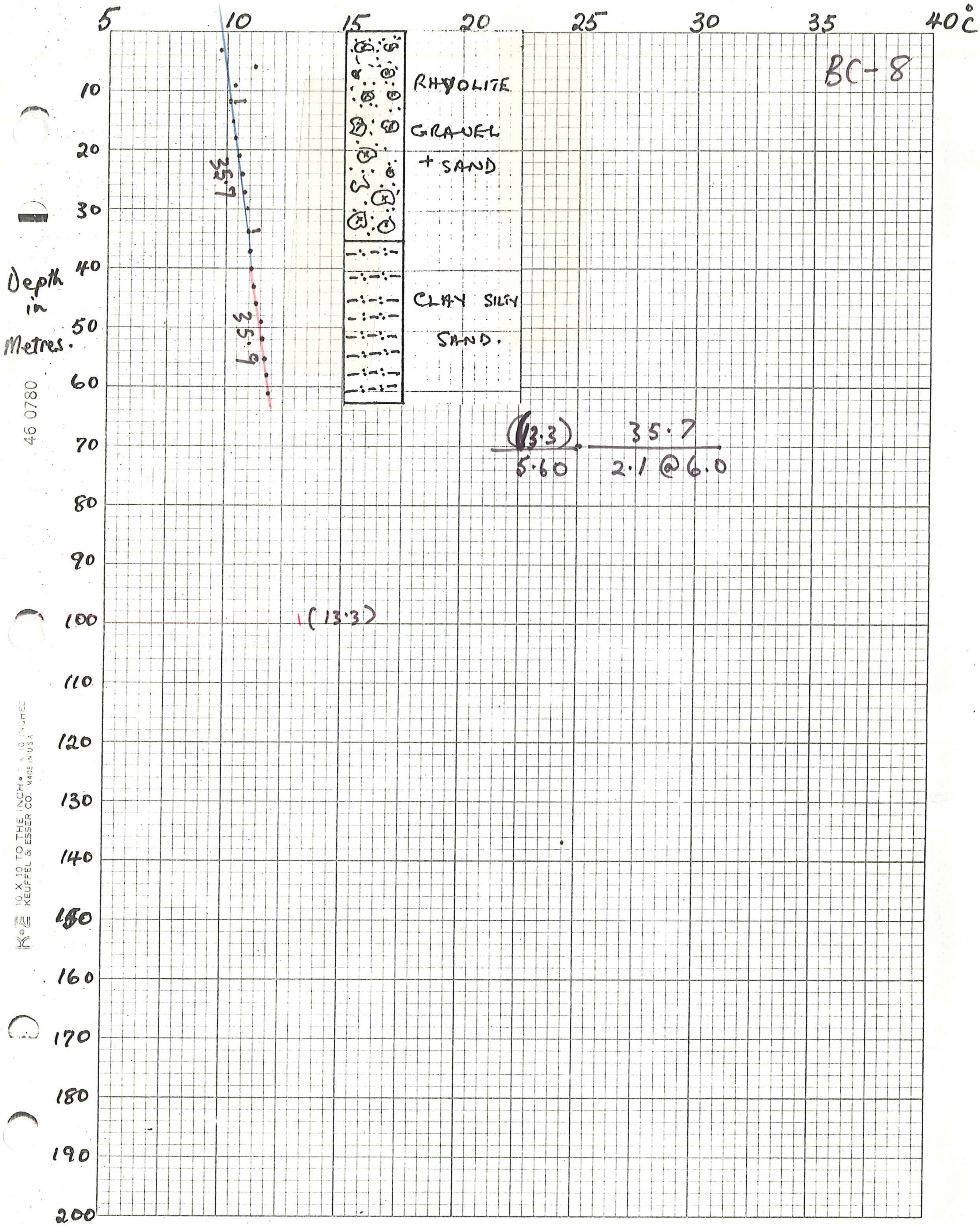
BULLY CREEK PROPERTY

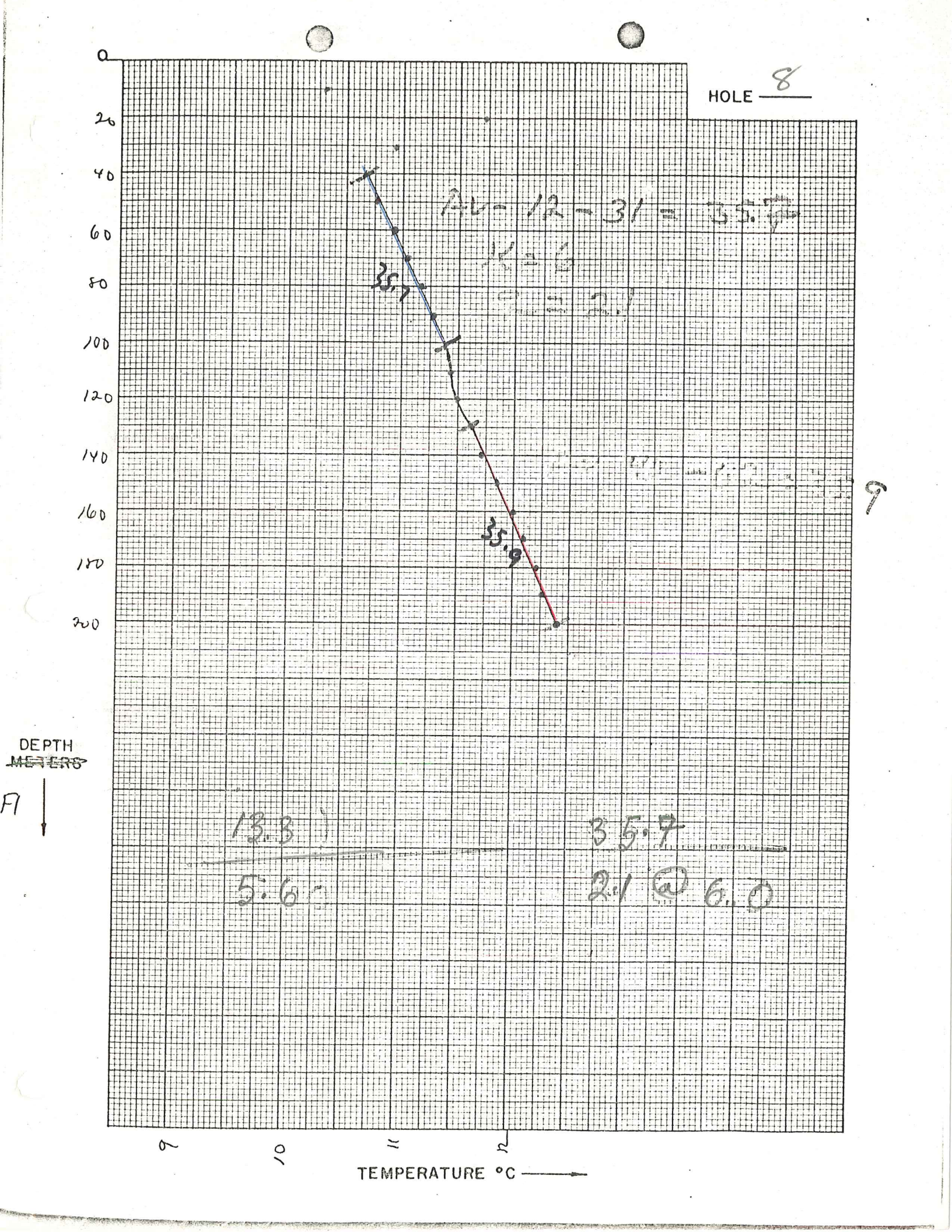
SE¼ NE¼ Sec 21 T17S R42E Elevation: 4,540'

Depth (meters)	Description
0 - 37	Medium gray to pinkish brown fine-grained, dense, porphyritic rhyolite. Between 30 and 37 meters small flow of water, less than 2 gpm, from fractures.
37 - 61	Dark black, subvitreous, dense, porphyritic vitrophyre.

H. D. Pilkington
March 14, 1977

HDP:mmo




HOLE 8
0
20
40
60
80
100
120
140
160
180
200
35.7
35.9
13.3
5.6
35.7
2.1 @ 6.0
0
10
20
TEMPERATURE °C
DEPTH
METERS

Site Scientist CWK
Date 12/14

LITHOLOGIC LOG

#8

INTERVAL	SCHEMATIC OF STRATIGRAPHY	LITHOLOGIC DESCRIPTION	COMMENTS, INTERPRETATION
0-10'		Rhyolite: med. gray; chips are sl. translucent, w/acc. opaque dust evenly distrib throughout; sev. % phen. to 2mm of qtz, fsp, Fe-oxide,	Flow? Unit Tri of Dellechaie Note platy fracture of surface float, at c. 5 cm intervals.
10-20'		some of which is weathered. Some is finely mottled gray and purple due to weathering of fine dusty opaque in patches* Recovered	*overall color purplish
20-30'		cuttings are angular, 1-10mm, occas 1gr. 10-20': do.	SAMPLE 0-30'
30-40'		20-30': do.; purple mottling (weathering) scarce. 30-50': do; purple mottling abund. in some fragments, absent elsewhere, may associate	
40-50'		w/ occas. veinlets of 'geothite-limonite', which are bordered by a thin (≤1mm)	Weathering or weak hydrothermal, perhaps deuteric altn? - suspect latter.
50-60'		zone of yellow-green altn. 50-60: do., note rust-stained joint surfaces, adj yellow-green altn, as above.	
60-70'		do; plus occas. balls of yellow-orange clay-silt-sand	SAMPLE 40-50'.
70-80'		do.	
80-90'		do.	
90-100'		do	SAMPLE 90-100'
100-110'		do.	
110-120		do.	c. 125 - enter black vitrophyre SAMPLE 110-120'
120-130		Black vitrophyre; aphanitic matrix w/ pitchy, vitreous luster, phenocrysts	SAMPLE 120-130'
130-140		to 1mm of fsp, augite. Cuttings recovered to 3cm long, flat, chips and plates.	
140-150		do, also recover sm. percent balls of lt. orange-brown clayey material	Fe-colloidal precipitate from cavities in rock? Have seen iden. material in basalt vesicles in drill core.
150-160		do., brown clayey mat. c. 5% of recovery, coats shear or joint surfaces. Pitchstone is loc.	c 160-170 fractured rock, caving
160-170	do.	riddled w/ fine fractures (random?) sealed w/ orange mat'l. also see traces of Calcite	SAMPLE 150-160.
170-180	do	and zeolite(?), on occas surfaces of platy	
180-190	do	chips. In 170-180 ... fine fract. absent.	
190-200	do.	In 180-190 and 190-200 ... cuttings are ≤1cm.	c 195 - caving

PROJ.	WELL	DA-	MO-	YR-	M/F	DESCRIPTION	EDITORS	TERRAIN CORR.	L/P	IST	DIST
7[illegible]5	208	7	SF	76	M	E-208: 2.5 [illegible] N. [illegible] COVE FORT, UT	J[illegible]				
737	50817		DC	76	F	1.5KM SE BURNT STUMP BUTTE, OR	CWK/AKIN				

duplicate

IN/CM	MAP: 7.5, 15. or 60.	DEG'S LAT	MINS DLAT	DEG'S LONG.	MINS DLONG	N.	E.	ELEV.	M/F
IN	15.	38.	20.	112.	45.	8.62	9.42	4825.	F
CM	15.	44.	00.	117.	45.	~~13.35~~ 13.75	~~23.3~~ 23.15	4540.	F

SW CORNER

duplicate

SEGMENT DEPTH / SEGMENT

START	END	K	±	START	END	K	±
16.	26.	7.	.5	26.	[illegible]	[illegible]	.5
40.	100.	6.	.5	130.	199.	5.97	.5
.999							

START = [illegible] for last .999

Format =

Print...

duplicate

DEPTH	°C	DEPTH	°C	DEPTH	°C
1.	16.[illegible]	1.5	16.91[illegible]	2.	16.82

99999. LAST DEPTH

509

TEMPERATURE - DEPTH LOG

Location 1 Mile ENE of Burnt Stump Butte Date Dec 15, 1976

Map Brogan, Oregon 15' Quad

Property Bully Creek T 17S R 42E sec NE¼NE¼ 22

Drill Hole BC-9509 Date Drilled Dec 11, 1976 Elevation 4390 ft.

Instrument Geotherm Operator CWK

Comments Air temp 5.5°C

Depth (~~meters~~)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
10		10.57			
			.43		
20		11.00			
			-.18		
30		10.82			
			.24		
40		11.06			
			.14		
50		11.20			
			.15		
60		11.35			
			.18		
70		11.53			
			.16		
80		11.69			
			.19		
90		11.88			
			.17		
100		12.05			
			.13		
110		12.18			
			.25		
120		12.43			
			.19		
130		12.62			
			.20		
140		12.82			
			.19		
150		13.01			
			.16		
160		13.17			
			.17		
170		13.34			
			.16		
180		13.50			
			.19		
190		13.69			
			.14		
200		13.83			
			.09		
210		13.92			
			.20		
220		14.12			

LITHOLOGIC LOG BC-9

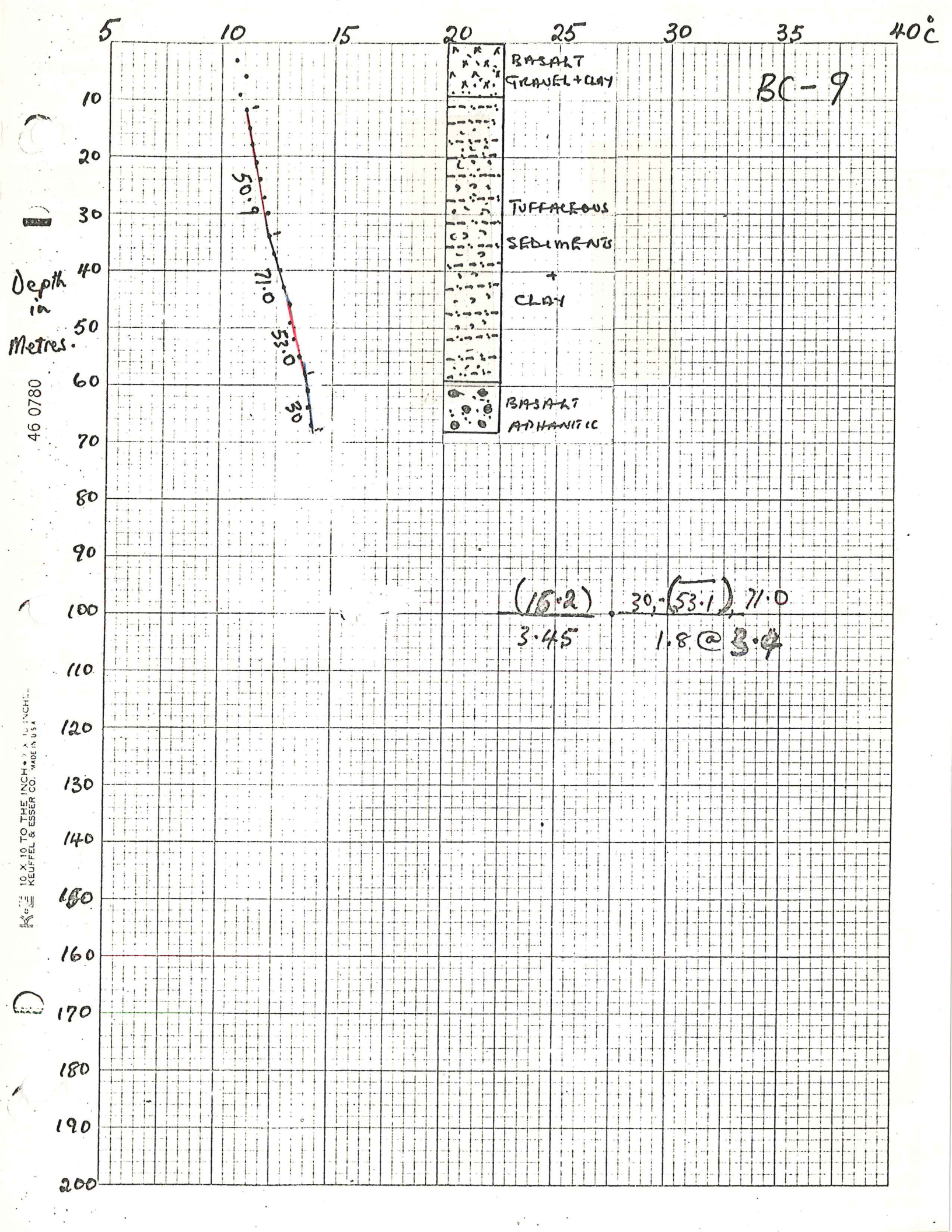
BULLY CREEK PROPERTY

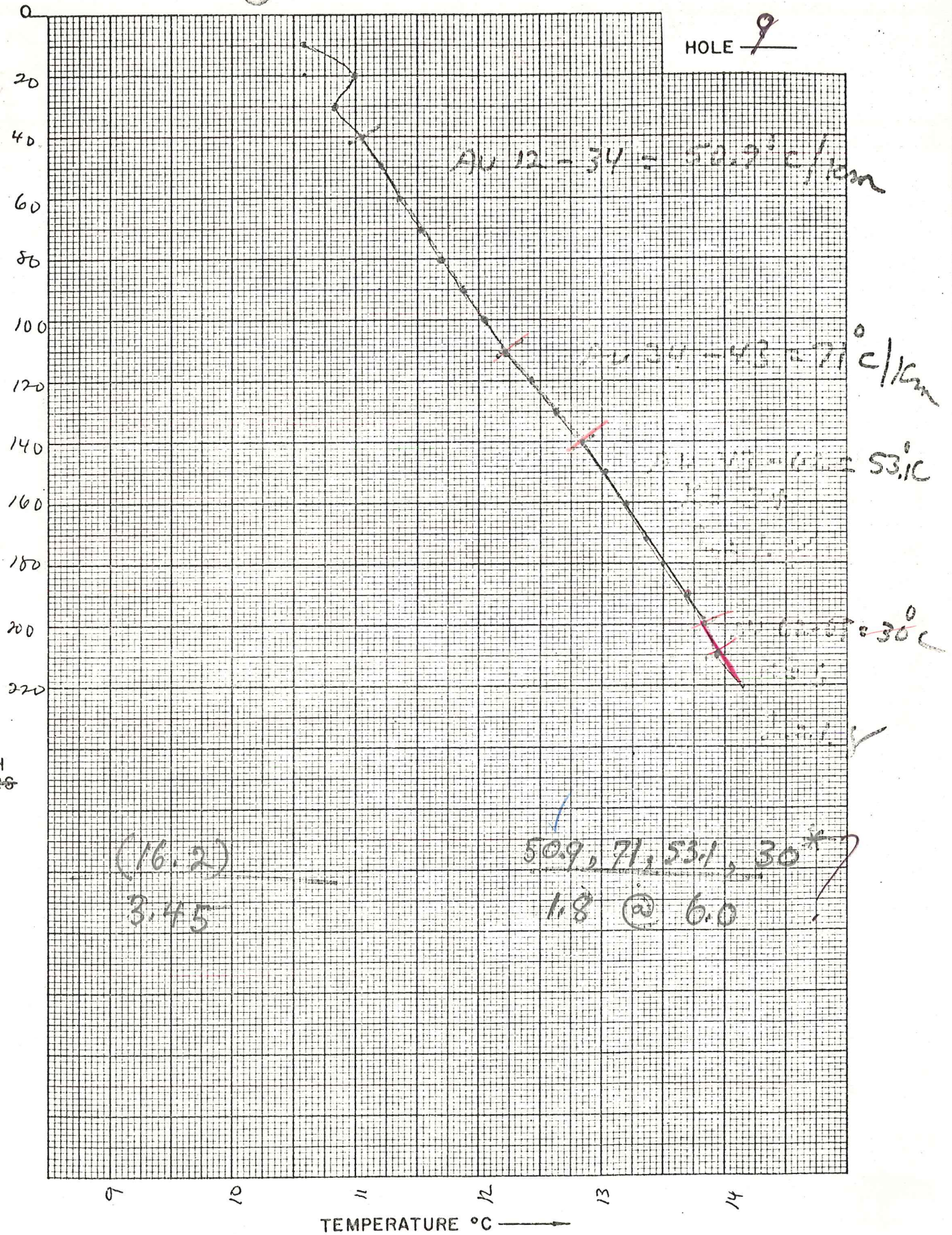
NE¼ NE¼ Sec 22 T17S R42E Elevation: 4,390'

Depth (meters)	Description
0 - 9	Dark black, subvitreous, dense, porphyritic, vitrophyre.
9 - 62	Gray to brownish gray, fine-grained tuffaceous, sandstone, siltstone, and tuff breccia of the Chalk Butte formation. From 61-62 meters had 1-2 gpm water.
62 - 67	Dark black, subvitreous, dense vitrophyre with phenocrysts of feldspar.

H. D. Pilkington
March 14, 1977

HDP:mmo


5
10
15
20
25
30
35
40°C
BC-9
BASALT GRAVEL + CLAY
TUFFACEOUS SEDIMENTS + CLAY
BASALT APHANITIC
50.9
71.0
53.0
30
Depth in Metres
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
180
190
200
(16.2) 30, (53.1) 71.0
3.45
1.8 @ 3.4
46 0780
10 X 10 TO THE INCH
KEUFFEL & ESSER CO. MADE IN U.S.A.


HOLE 9
0
20
40
60
80
100
120
140
160
180
200
220
DEPTH
METERS
9
10
11
12
13
14
TEMPERATURE °C
Au 12 - 34 = 52.2 °C/km
= 53.1°C
= 30°C
(16.2)
3.45
50.9, 71, 53.1, 30°
1.8 @ 6.0

LITHOLOGIC LOG

Site Scientist [illegible]
Date 11 DEC [illegible]

#9

INTERVAL	SCHEMATIC OF STRATIGRAPHY	LITHOLOGIC DESCRIPTION	COMMENTS, INTERPRETATION
0 - 10		chips of BSLT - vitreous black ... 4mm diam	SAMPLES EACH 10', FEW SKIPPED
10 - 20		do	
20 - 30		Tuffaceous sd; sdy tuff; lt. buff w/ clay binder; chips to 15 mm diam	Chalk Butte Fm top 'A natural mud.
30 - 40		do	
40 50		do; stringer of gray sdy clay.	
50 60		do	
60 70		do; + gray sd, orange sd, blk bslt (vitreous) grass seeds up hole	
70 80		do	
80 90		do	
90 100		[illegible]	

Geothermex, Inc.
Site Scientist MCG
Date 11 Dec. 76

LITHOLOGIC LOG

#9

INTERVAL	SCHEMATIC OF STRATIGRAPHY	LITHOLOGIC DESCRIPTION	COMMENTS, INTERPRETATION
100 110		grey T. sd., frags about 3 mm diam	
110 120		do	
120 130		do	
130 140		do	
140 150		do	
150 160		do. many variegated [illegible]	
160 170		do – dominant grey clay-tuff frags to 12 mm	
170 180		mostly grey; 15% tan/buff frags similar to tuffac. sand in 20-30' zone	
180 190		grey + tan/buff tuffac. sd., large frags similar to 20-30' zone	
		Basalt – vitreous black aphanitic chips	WATER TABLE – OR PERCHED ZONE – DRILLER BLOWING ≈ 15 GPM @ 205'
190 200		[illegible] tuff, grey, pink silt, sd., tuff frags to [illegible] to [illegible]mm; [illegible] 3 mm	
200 210		basalt – to 10 mm; 10% buff sdy tuff (salmon colored)	

PROJ.	WELL	DA - MO - YR - M/F	DESCRIPTION	EDITORS	TERRAIN CORR	L/P	ISF/DIST
[illegible]5	208	7 SF 76 M	E-208: 2.5 KM N. OF COVE FORT, UT	J[illegible]			
737	509	15 DC 76 F	1.5KM N. OF. BLUE RESERVOIR, OR	CWK/AKIN			

duplicate

IN/CM	MAP: 7.5, 15. or 60.	DEG'S LAT	MINS DLAT	DEG'S LONG.	MINS DLONG	N.	E.	ELEV.	M/F
IN	15.	38.	20.	112.	45.	8.62	9.42	4825.	F
CM	15.5	44.	00	117.	45.	14.80	25 5	4390.	F

(SW CORNER)

duplicate

SEGMENT DEPTH START	END	K	±	SEGMENT START	END	K	±
16.	24.	7.	.5	24.	10.	4.7	.5
40.	110.	3.55	.5	110.	140.	2.55	.5
140.	200.	-3.4	-.5	.999			

START = [illegible] for last -.999

[illegible] =

[illegible]

duplicate

DEPTH	°C	DEPTH	°C	DEPTH	°C
1.	16.[illegible]	1.5	16.91[illegible]	2.	16.82

99999. LAST DEPTH

513

TEMPERATURE - DEPTH LOG

Jan 6, 1977

Location 1 Mile SE Grouse Springs Date Dec 18, 1976

Map Brogan, Oregon 15' Quad

Property Bully Creek T 17S R 42E sec NE¼ NW¼ 34

Drill Hole BC-13 513 Date Drilled Dec 15, 1976 Elevation 4050 ft.

Instrument Geothermex Operator CWK - MG & RP

Comments

Depth ft (~~meters~~)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
		10.15			
10		8.51			
		11.05	2.16		
20		10.67			
		11.04	.16		
30		10.83			
		10.77	-.03		
40		10.80			
		10.85	.05		
50		10.85			
		10.92	.15		
60		11.00			
		10.94	.27		
70		11.27			
		11.35	.12		
80		11.39			
		11.41	.11		
90		11.50			
		11.20	.14		
100		11.64			
		11.52	.11		
110		11.75			
		11.42	.15		
120		11.90			
		11.56	.11		
130		12.01			
		11.73	.19		
140		12.20			
		11.80	.19		
150		12.39			
		12.57	.18		
160		12.57			
		12.47	.14		
170		12.71			
		12.56	.23		
180		12.94			
		12.78	.15		
190		13.09			
		13.06	.11		
200		13.20			

LITHOLOGIC LOG BC-13

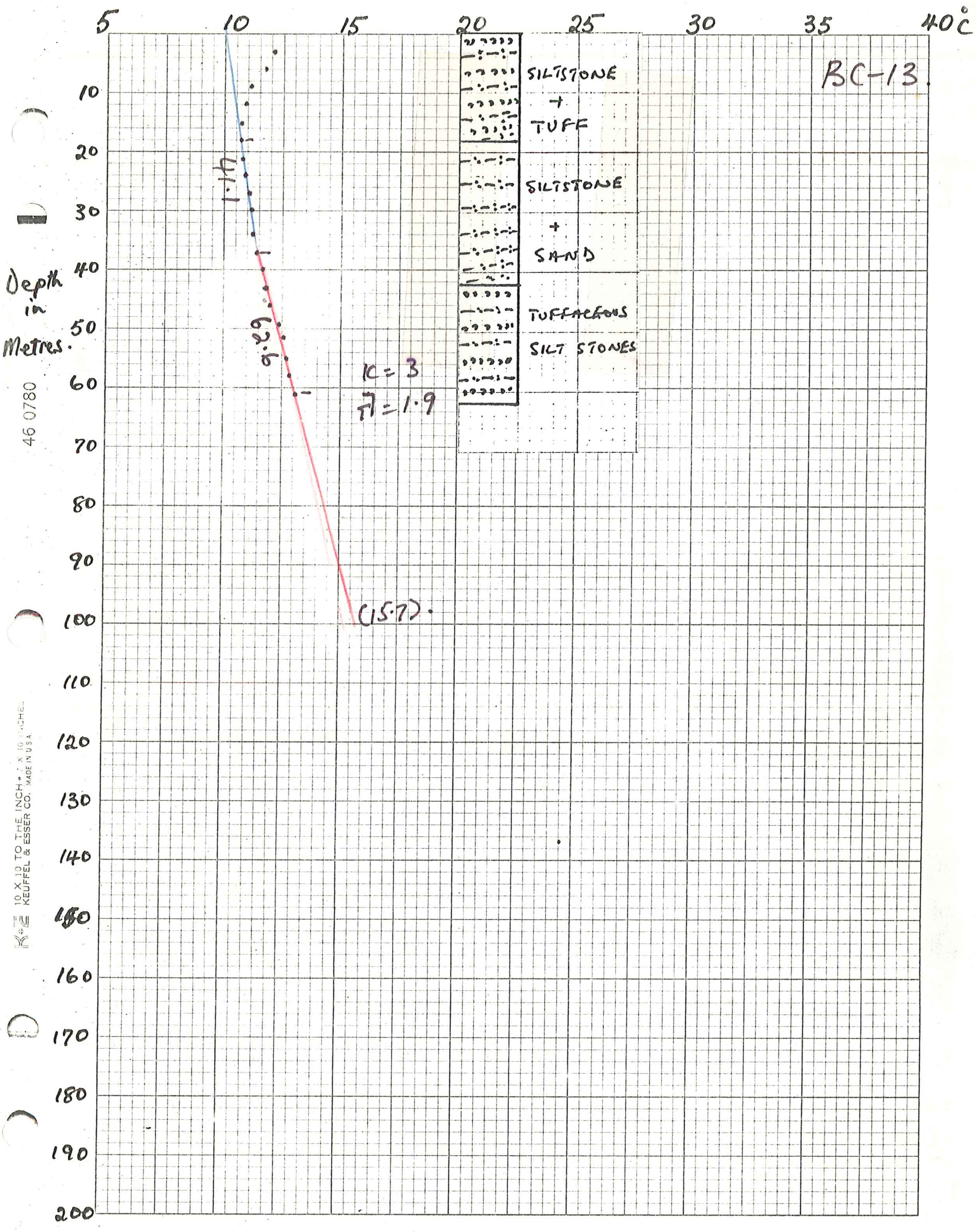
BULLY CREEK PROPERTY

NE¼ NW¼ Sec 34 T17S R42E Elevation: 4,050'

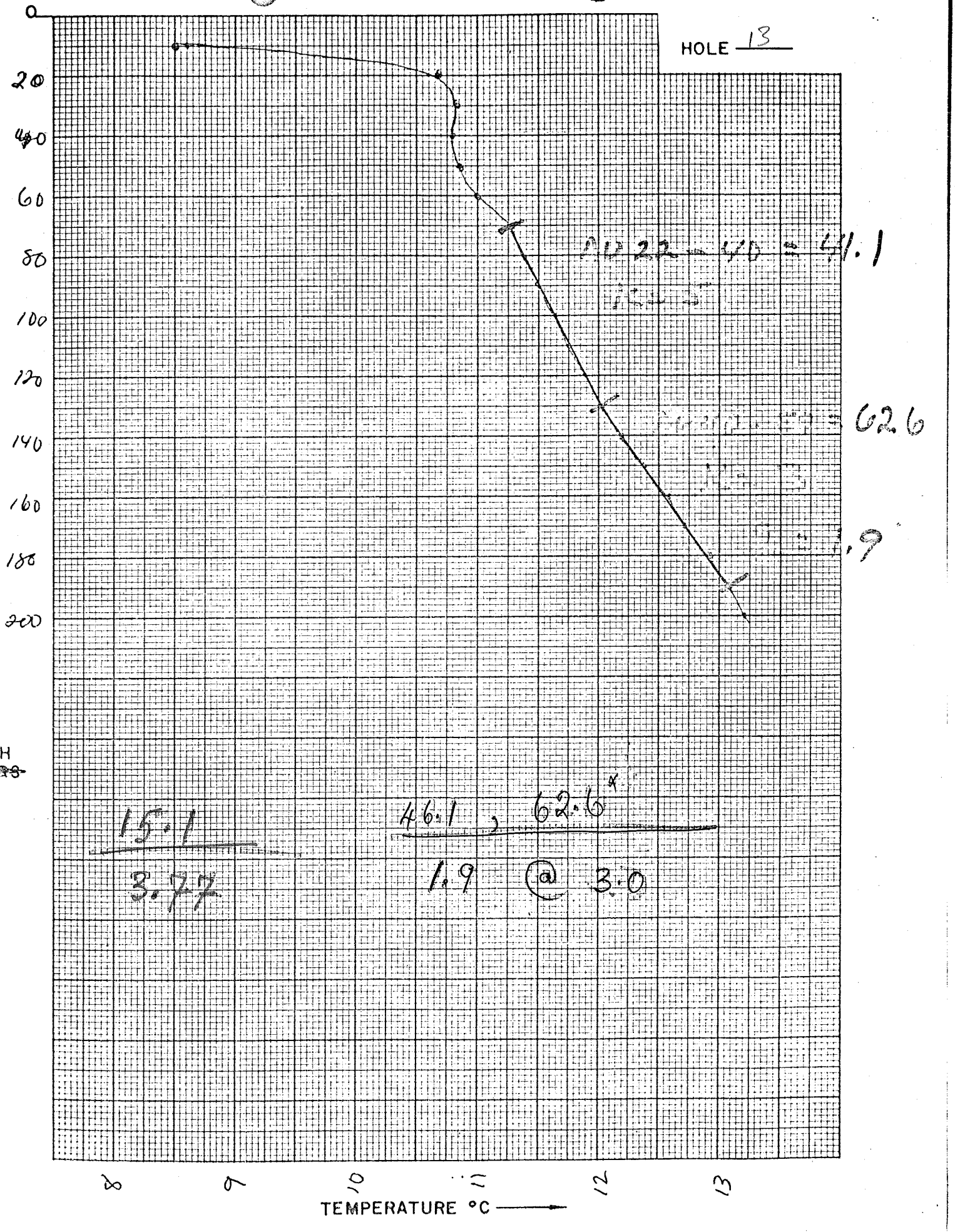
Depth (meters)	Description
0 - 3	Pale pink to pinkish tan fine-grained, dense, porphyritic rhyolite.
3 - 18	Black sandstone composed of fragments of the black vitrophyre. Water saturated, in what is a probable recharge situation.
18 - 43	Tan fine-grained tuffaceous siltstone of the Chalk Butte formation.
43 - 61	Gray to tan tuffaceous siltstones, sandstones of the Chalk Butte formation.

H. D. Pilkington
March 14, 1977

HDP:mmo



BC-13
5
10
15
20
25
30
35
40°C
Depth in Metres.
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
180
190
200
SILTSTONE + TUFF
SILTSTONE + SAND
TUFFACEOUS SILT STONES
1.17
9.29
K = 3
Π = 1.9
(15.7)
46 0780
10 X 10 TO THE INCH • 7 X 10 INCHES
KEUFFEL & ESSER CO. MADE IN USA


HOLE 13
0
20
40
60
80
100
120
140
160
180
200
DEPTH
FT.
8
9
10
11
12
13
TEMPERATURE °C
41.1
62.6
15.1
3.7%
46.1 , 62.6
1.9 @ 3.0

GeothermEx, Inc.
Site Scientist CWK
Date 12/15/76

LITHOLOGIC LOG

#13

INTERVAL ft.	SCHEMATIC OF STRATIGRAPHY	LITHOLOGIC DESCRIPTION	COMMENTS, INTERPRETATION
			See back for desc. of surface geo.
0–10	0	Tan siltst* and tuff(?): cryptoxalline orangy tan siltstone and aphanitic but coarser textured pale tan (creme) sed, prob. rhyolite tuff, interbanded, apparently, in layers ≥ 1 cm thick (poss to sev. decimeters)	SAMPLE 0–10' siltstone is mod. hard but softer than knife; SAMPLE 10–20'
	8	contact c. 8 ft.	
10–20		Black sandstone or tuff: .5–2mm grains qtz and black glass (or other aphanite) in scant matrix gray silt, moderately consolidated	Rapid drilling. Glass clasts resemble black vitrophyre in bottom half hole #8.
20–30		do.	
30–40		do. Many cuttings, to 1cm, are porphyritic, fractured black glass, f.p. pheno.	SAMPLE 30–40'.
40–50		do.	
50–60	58	contact 60–70: Tan siltstone and creme silt-sand or tuff, as above but somewhat softer.	SAMPLE 60–70'
60–70			
70–80		Tan siltstone, fairly weak	Can gouge siltst. w/ fingernail, break frags in hand
			Drilling 15 ft/5 min.
80–90		do.	
90–100		do.	
100–110		do. Note signs of wispy, tuffaceous texture in some fragments	
110–120		do	
120–130		do	SAMPLE ~~120–130~~ 130–140
130–140	140	do. contact.	
140–150		Pink and green* siltst, tuffaceous siltstone. Soft (breaks w/ fingers), occas balls pink clay-silt.	* most gray-green, occas. yellow grn. SAMPLE 140–150
			SAMPLE 150–160.
150–160		do., plus gray siltst.	
160–170		do., dominantly (90% gray)	165 ft: cont. – 2-3 gpm water

LITHOLOGIC LOG

Site Scientist Cuk
Date 12/16/76

#13

INTERVAL	SCHEMATIC OF STRATIGRAPHY	LITHOLOGIC DESCRIPTION	COMMENTS, INTERPRETATION
170-180		do, c.50% tan, 50% gray.	
180-190		mix all colors, balls pink silt-clay abund.	
190-200		do.	
	200 TD		

PROJ.	WELL	DA-MO-YR-M/F	DESCRIPTION	EDITORS	TERRAIN CORR	L/P	ISE	±/WDIST
755	208	7 SP 76 M	B-208: 2.5KM N. OF COVE FORT, UT	[illegible]				
737	513	18 DC 78 F	4.2KM SE. BURNT STUMP BUTTE, OR	DP/AKIN				

duplicate

IN/CM	MAP: 7.5, 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.	345.	9.3	24.8	4050.	F

SW CORNER

duplicate

SEGMENT DEPTH

START	END	K	±	START	END	K	±
16.	26.	7.	.5	26.	29.	3.3	.5
70.	130.	4.57	.5	130.	190.	3.	.5
.999							

STAT = .999 for last .999

last =

Princ:

duplicate

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

99999. LAST DEPTH

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

CODING FORM FOR [illegible]

S14

TEMPERATURE - DEPTH LOG

Location ½ Mile South Bannock Corral Spring Date Dec 23, 1976

Map Bryan, Oregon 15' Quad

Property Bully Creek T 17S R 42E sec NW¼ SE¼ 23

Drill Hole BC-14 S14 Date Drilled Dec 17, 1976 Elevation 3730 ft.

Instrument Geotherm Operator M G & CWK

Comments Air Temp 3.4°C

Depth (~~meters~~)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
10		10.92			
			-.08		
20		10.84			
			.25		
30		11.09			
			.30		
40		11.39			
			.30		
50		11.69			
			.29		
60		11.98			
			.13		
70		12.11			
			.30		
80		12.41			
			.13		
90		12.54			
			.30		
100		12.84			
			.12		
110		12.96			
			.20		
120		13.16			
			.18		
130		13.34			
			.18		
140		13.52			
			.15		
150		13.67			
			.17		
160		13.84			
			.09		
170		13.93			
			.19		
180		14.12			
			.18		
190		14.30			
			.20		
200		14.50			
			.05		
210		14.55			
			.34		
220		14.89			

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
230		15.12			
			.27		
240		15.39			
			.15		
250		15.54			
			.34		
260		15.88			
			.30		
270		16.18			
			.24		
280		16.42			
			.30		
290		16.72			
			.23		
300		16.95			

LITHOLOGIC LOG BC-14

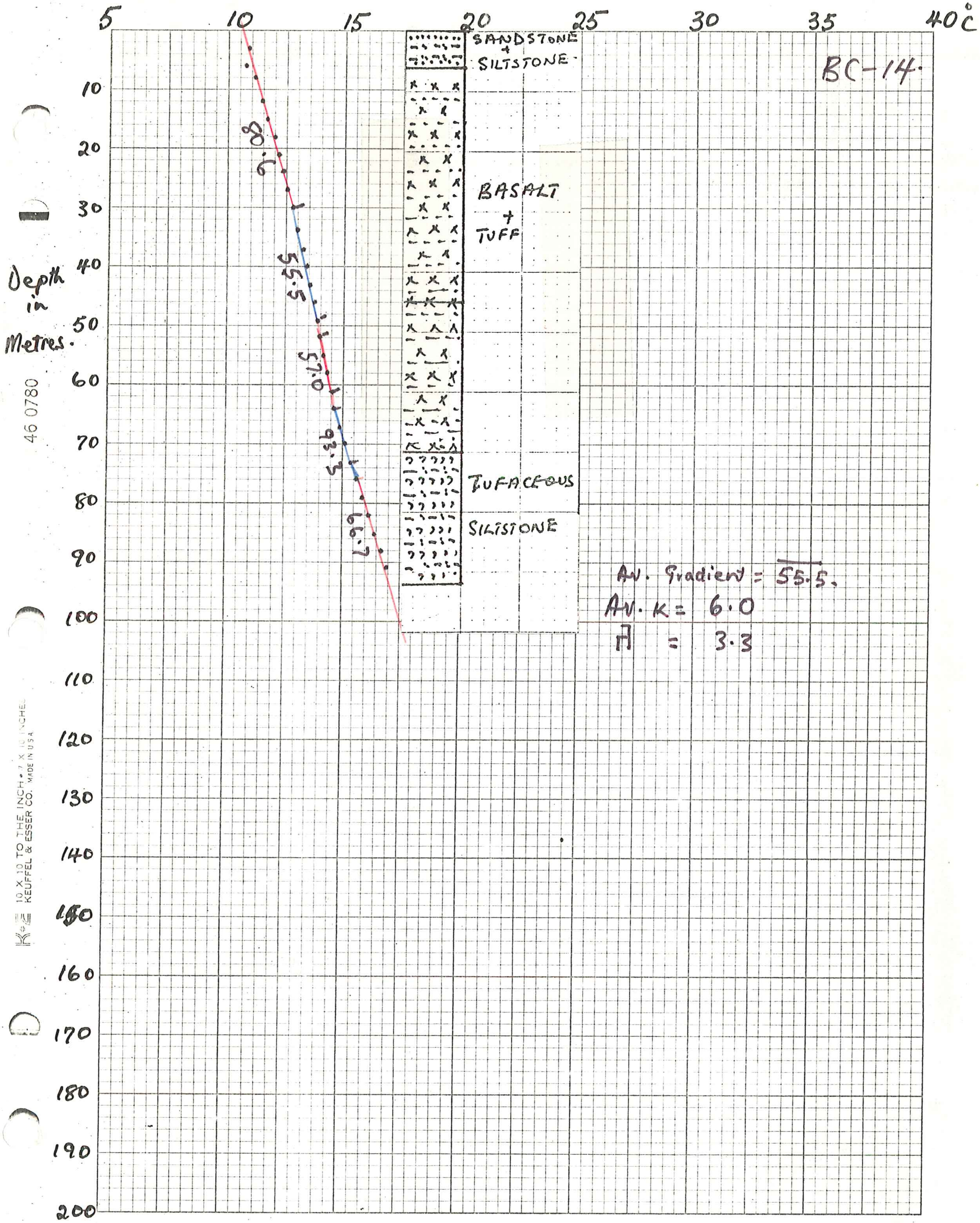
BULLY CREEK PROPERTY

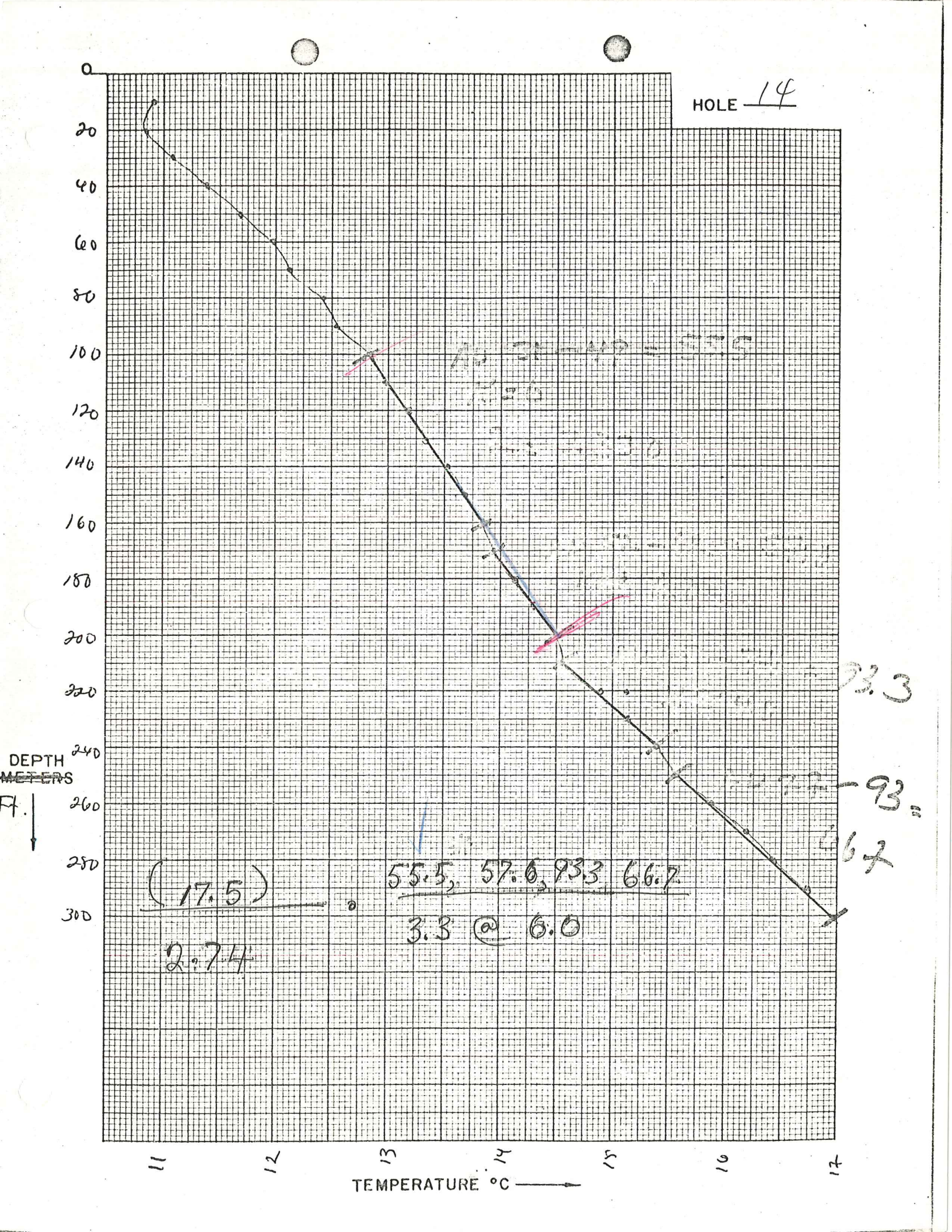
NW¼ SE¼ Sec 23 T17S R42E Elevation: 3,730'

Depth (meters)	Description
0 - 6	Fine-grained, olive to brown tuffaceous sandstone and siltstone.
6 - 70	Dark black, subvitreous, dense vitrophyre with phenocrysts of feldspar. Between 61 and 64 meters, hole made water, between 1-3 gpm.
70 - 91	Gray to brownish gray fine-grained, tuffaceous silstones, sandstones and tuff breccia. Small quantity of water encountered at 73 meters, less than 1 gpm.

H. D. Pilkington
March 14, 1977

HDP:mmo

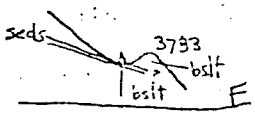

BC-14.
5
10
15
20
25
30
35
40°C
Depth in Metres.
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
180
190
200
SANDSTONE + SILTSTONE
BASALT + TUFF
TUFACEOUS SILTSTONE
9.8
55.5
57.0
93.3
66.7
Av. Gradient = 55.5.
Av. K = 6.0
H = 3.3
46 0780
10 X 10 TO THE INCH • 7 X 10 INCHES
KEUFFEL & ESSER CO. MADE IN U.S.A.


HOLE 14
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
DEPTH
METERS
FT.
11
12
13
14
15
16
17
TEMPERATURE °C
93.3
66.7
(17.5)
2.74
55.5, 57.6, 93.3 66.7
3.3 @ 6.0

LITHOLOGIC LOG

Site Scientist CWK
Date 12/16/76

#14

INTERVAL	SCHEMATIC OF STRATIGRAPHY	LITHOLOGIC DESCRIPTION	COMMENTS, INTERPRETATION
0-20	20	Fine olive sandstone, brown, siliceous siltstone Sandst 70% siltst. 30%. Ss is dom qtz-suspect tuffaceous, some siltst has wispy banding. Hsiltst < Hknife	SAMPLE 0-20' Rapid drilling
20-30		Black aphanite. H ~ Hknife; dull luster; fract surfaces weathered rust color. to c. 5mm depth. Occas. vesicles to 2mm.	Basalt* SAMPLE 20-30
30-40		do.	Same rock forms knob to E of site + appears to extend down to canyon bottom seen from short dist. to N+NE.
40-50		do.	Float on slope W of site appears to be blk vitrophyre, plus some 'rhy' as on top of #8.
50-60		do. Note ep. green altn of some joint surfaces.	
60-70		do. Rapid drilling cont. 15'/8 min. Some joint surfaces weathered to 2 mm depth, most <	
70-80		do.	* 12/17 basalt passes into a porph. blk vitrophyre downwards in canyon, also see traces of sed. float
80-90		do	
90-100		do.	
100-110		do	
110-120		do.	
120-130		do.	
130-140	c 143	do.	
140-150	c 155?	Basalt as above: plus c10% tuff: siliceous, brown, ep. grn, vitric-crystal.	During drilling of 150-160 foam, lt. brown, % returns tuff prob. > than in samples taken.
150-160		do.	SAMPLE 140-160.
160-170		Basalt sim. as above, Note brown clay-silt along joint surfaces of some fragments (bit ↓ coarser, occas. porph, cuttings less angular, chip-shaped, more rounded.	SAMPLE 160-170

LITHOLOGIC LOG . . .

Site Scientist Cusk
Date 12/17/76

#14

INTERVAL	SCHEMATIC OF STRATIGRAPHY	LITHOLOGIC DESCRIPTION	COMMENTS, INTERPRETATION
170-180		do. Sev. lg balls brown clft w/ basalt sand (paleosoil?)	SAMPLE 180-190
180-190		Basalt, some glassy, some poss tuff.	
190-200		do.	
200-210		do.	
210-220		Basalt as above; blk, aphanitic, some bears fine phens fsp, ol(?) appears unaltered, but occas. contains dissem. sulfide and sulfide + silica(?) in fractures. Some is glassy.	SAMPLE 210-220.
			SAMPLE 220-230
220-230		do., fewer signs sulfide	
	c. 230		
230-240		Gray-brown tuffaceous siltst. 70%, basalt 30% H siltst < H knife	SAMPLE 230-240
240-250		do.	Small amount water gained during drilling below c. 248 ft.
250-260		do.	
260-270		Gray-brown, dk. gray, med. gray tuffaceous siltst and tuff, v. fine gr., some blk glass	SAMPLE 260-270
270-280		do.	
280-290		do., also some olive, v dark greenish brown.	SAMPLE 280-290
290-300		do.	
	TD 300		

NO.	WELL	DA-MO-YR-F		DESCRIPTION	EDITORS	TERRAIN CORR	L/P	ISE	LAST
755	208	7 SP 76	M	B-208: 2.5 KM N. OF COVE FORT, UT	JED/EDF				
737	S1422	DC 76	F	SOUTH OF BANNOCK CORRAL SPG, OR	CWK/ARIN				

duplicate

IN/CM	MAP: 7.5, 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	4829.	F
CM	15.	44.	00.	117.	45.	13.2	27.80	3730.	F

SW CORNER

duplicate

SEGMENT DEPTH

START	END	K	±	START	END	K	±
16.	[illegible]	7.	.5	[illegible]	72.	4.8	.5
100.	160.	-6.	.5	170.	200.	5.78	.5
210.	240.	3.57	.5	250.	300.	4.99	-.5
.999							

STA T = .999 for last .999

Last =

Princ:

duplicate

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

99999. LAST DEPTH

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

CODING FORM FOR OLD DATA

Urt Lange 1 of 1

515

TEMPERATURE - DEPTH LOG

Location Kern Creek Date Jan 16, 1977

Map Brogan Oregon 15' Quad

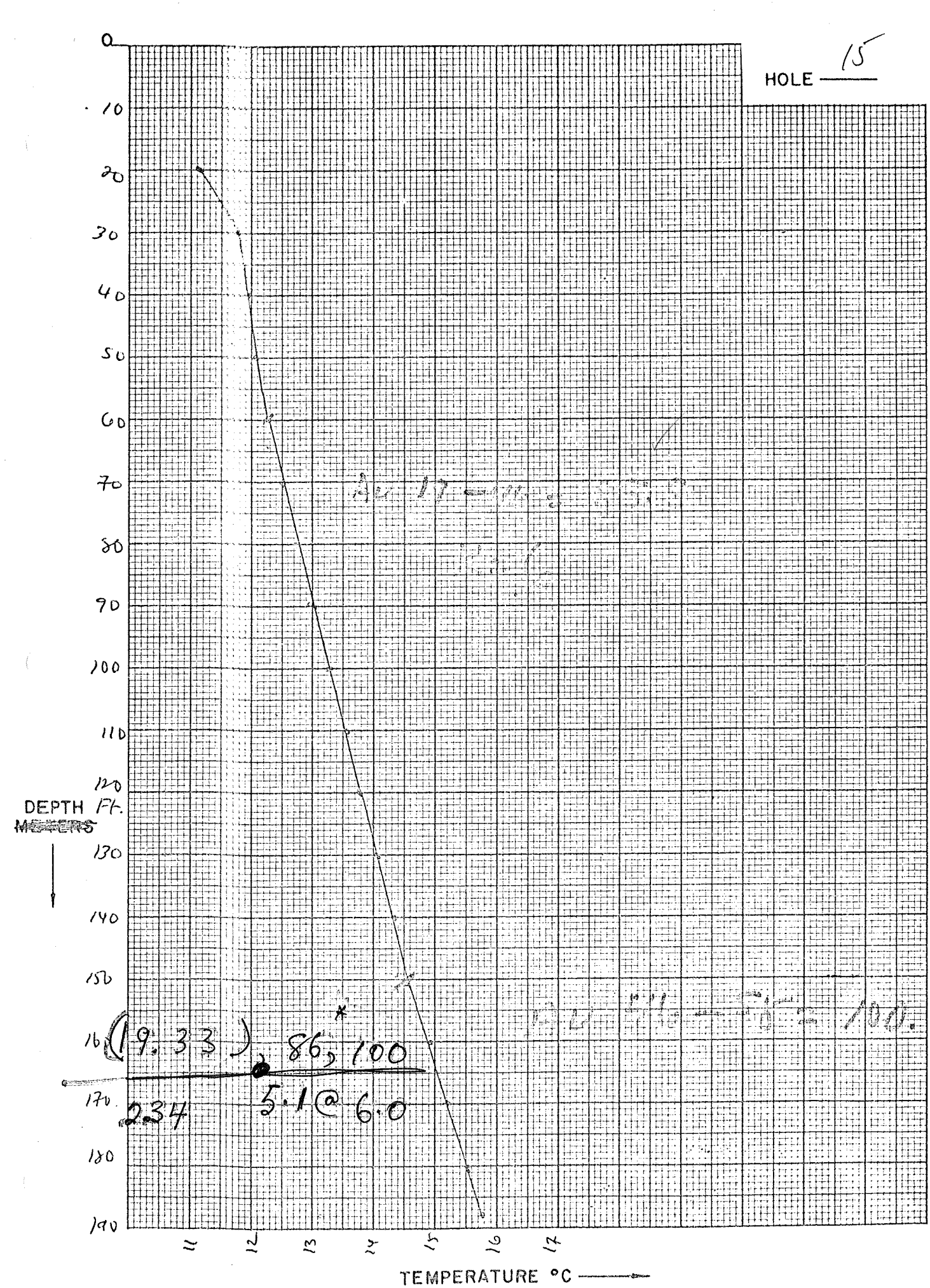
Property Bully Creek T 17S R 42E sec NW¼ NE¼ 24

Drill Hole BC-15 515 Date Drilled Jan 8, 1977 Elevation 3500 ft.

Instrument Geotherm-ex Operator M.G.

Comments

Depth (~~meters~~)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
10		7.75			
			3.37		
20		11.12			
			.67		
30		11.79			
			.19		
40		11.98			
			.10		
50		~~12.08~~			
			.16		
60		12.24			
			.26		
70		12.50			
			.25		
80		12.75			
			.26		
90		13.01			
			.25		
100		13.26			
			.30		
110		13.56			
			.17		
120		13.73			
			.32		
130		14.05			
			.27		
140		14.32			
			.23		
150		14.55			
			.40		
160		14.95			
			.25		
170		15.20			
			.34		
180		15.54			
			.22		
188		15.76			


HOLE 15
0
10
20
30
40
50
60
70
80
90
100
110
120
DEPTH Ft.
130
140
150
160
170
180
190
11
12
13
14
15
16
17
TEMPERATURE °C
(19.33), 86, 100
2.34
5.1 @ 6.0

LITHOLOGIC LOG BC-15

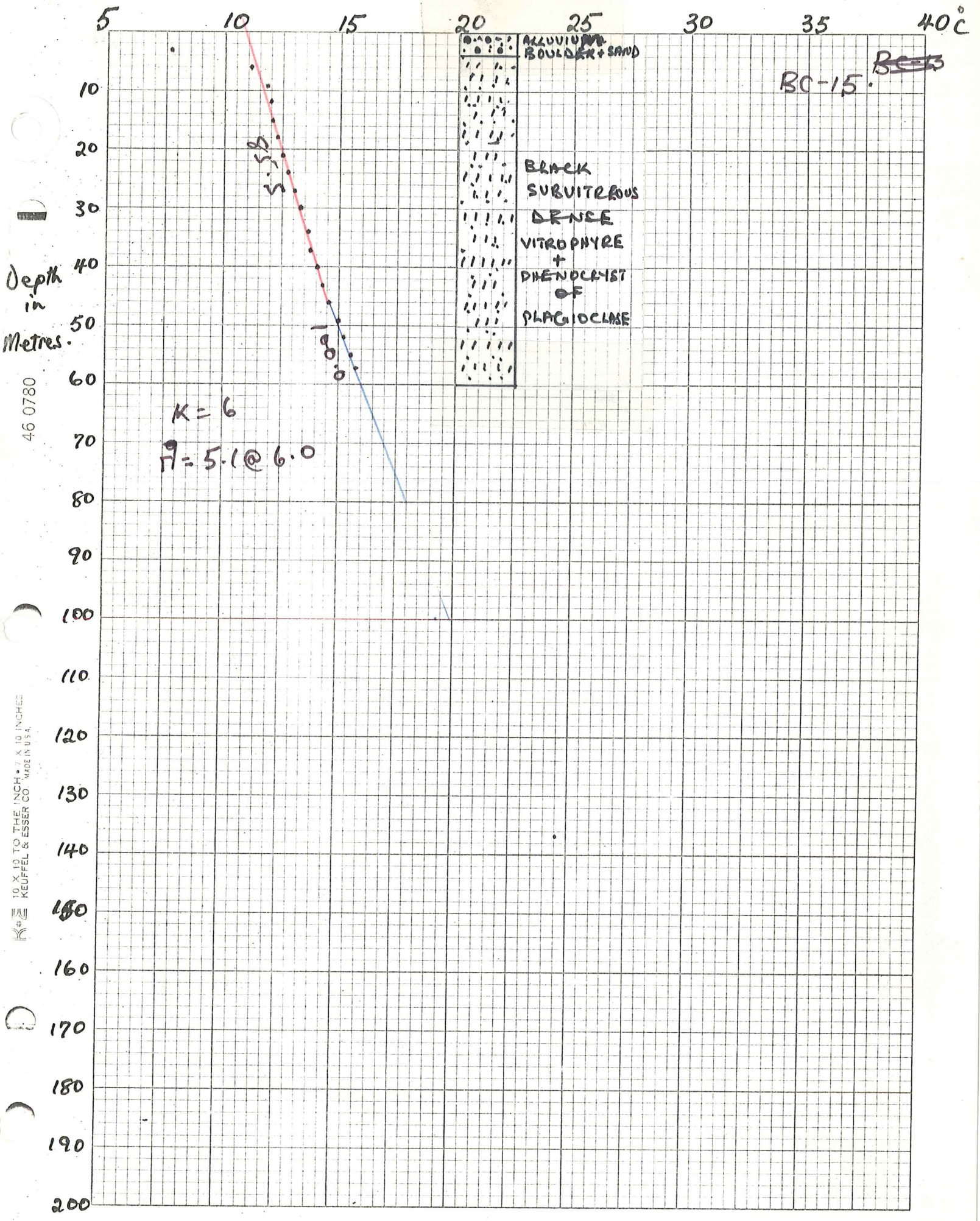
BULLY CREEK PROPERTY

NW¼ NE¼ Sec 24 T17S R42E Elevation: 3,500'

Depth (meters)	Description
0 - 3	Alluvium, boulders of black vitrophyre in a matrix of sand and gravel.
3 - 60	Black, subvitreous, dense vitrophyre with phenocrysts of plagioclase Hole was dry to total depth.

H. D. Pilkington
March 14, 1977

HDP:mmo


5
10
15
20
25
30
35
40°C
Depth in Metres.
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
180
190
200
ALLUVIUM BOULDER + SAND
BLACK SUBVITREOUS DENSE VITROPHYRE + PHENOCRYST OF PLAGIOCLASE
BC-15.
K = 6
T = 5.1 @ 6.0
46 0780
10 X 10 TO THE INCH • 7 X 10 INCHES
KEUFFEL & ESSER CO. MADE IN U.S.A.

FLOU.	WELL	DA-MO-YR-F	DESCRIPTION	EDITORS	TERRAIN CODE	LAT/LONG
755		208 7 SP 76 M	B-208: 2.5 KM N. OF GOVE FORT, UT	JG		
737		51516 JA 27 F	T12S, R42E, S24, BROGAN, OREGON	AG/AAIN		

duplicate

	IN/CM	MAP: 7.5, 15. or 60.	DEG's LAT	MINS DLAT	DEG's LONG.	MINS DLONG	N.	E.	ELEV.	M/F
	IN	15.	28.	00.	112.	45.	8.62	9.42	4825.	F
	CM	15.	44.	00.	117.	45.	14.6	30.25	3500.	F

SW CORNER

14.5 30.35

duplicate

SEGMENT DEPTH START	SEGMENT DEPTH END	K	±	SEGMENT START	SEGMENT END	K	±
16.	150	-6.0	-5	16.	188.	5.16	-.5
60-							
.999							

STAT = -.999 for last .999

Last =

Princ =

duplicate

DEPTH	°C	DEPTH	°C	DEPTH	°C
1.	16.925	1.5	16.510	3.	16.82-

99999. LAST DEPTH

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

516

TEMPERATURE - DEPTH LOG

Location ½ Mile SW Morrison Reservoir Date Dec 23, 1976

Map Brogan, Oregon 15' Quad

Property Bully Creek T 17 R 43E sec SW¼ SW¼ 7

Drill Hole BC-516 Date Drilled Dec 22, 1976 Elevation 3,365 ft.

Instrument Geothermex Operator MG

Comments Air temp 6°C

Depth (~~meters~~)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
10		11.90			
			.57		
20		12.47			
			.50		
30		12.97			
40					Missed mark on line
50		13.70			
			.20		
60		13.90			
			.22		
70		14.12			
			.50		
80		14.62			
			.38		
90		15.00			
			.12		
100		15.12			
			.45		
110		15.57			
			.28		
120		15.85			
			.25		
130		16.10			
			.25		
140		16.25			
			.37		
150		16.62			
			.29		
160		16.91			
			.30		
170		17.21			
			.26		
180		17.47			
			.32		
190		17.79			
			.30		
200		18.09			
			.33		
210		18.42			
			.23		

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
220		18.65				
			.25			
230		18.90				
			.32			
240		19.22				
			.29			
250		19.51				
			.22			
260		19.73				

LITHOLOGIC LOG BC-16

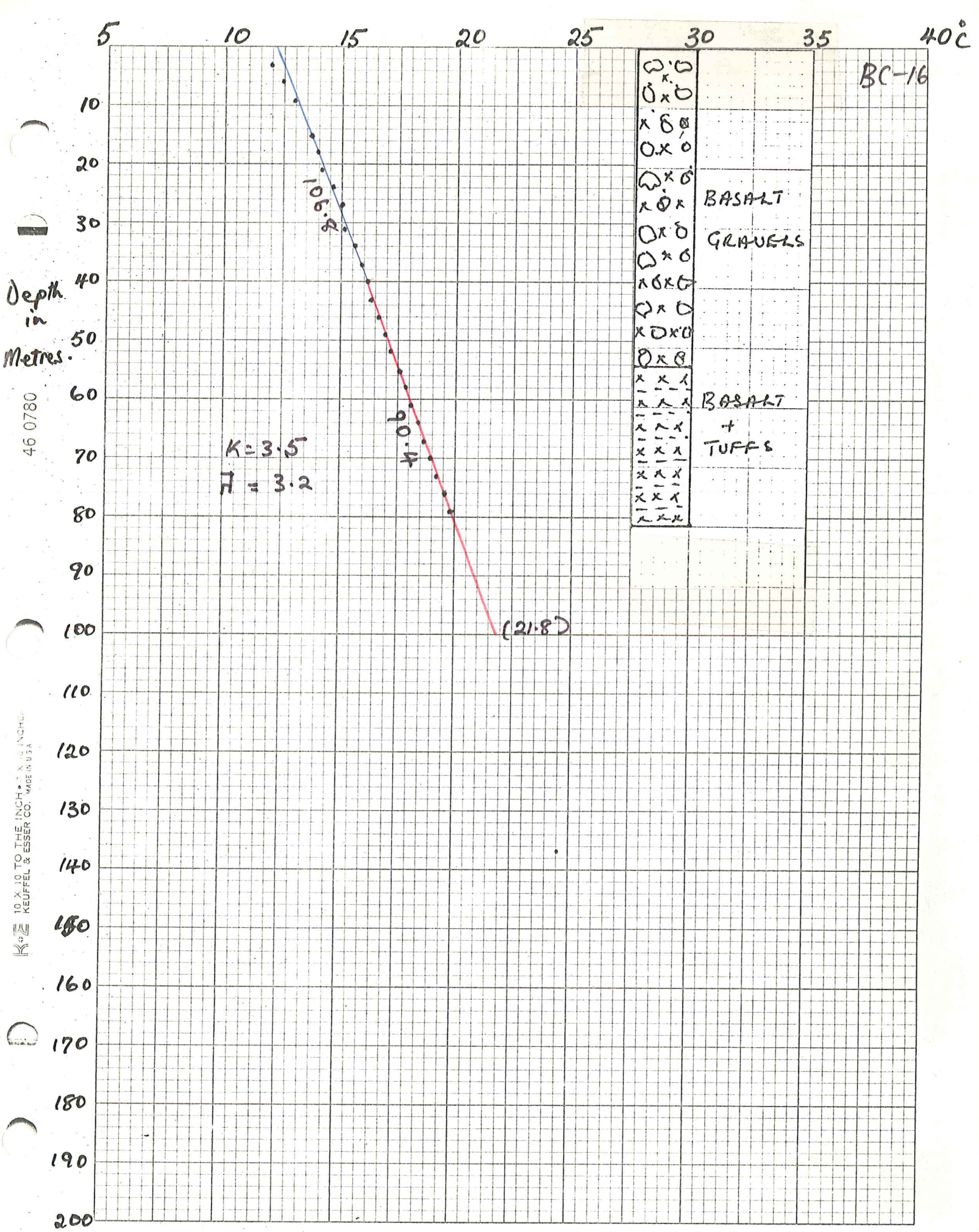
BULLY CREEK PROPERTY

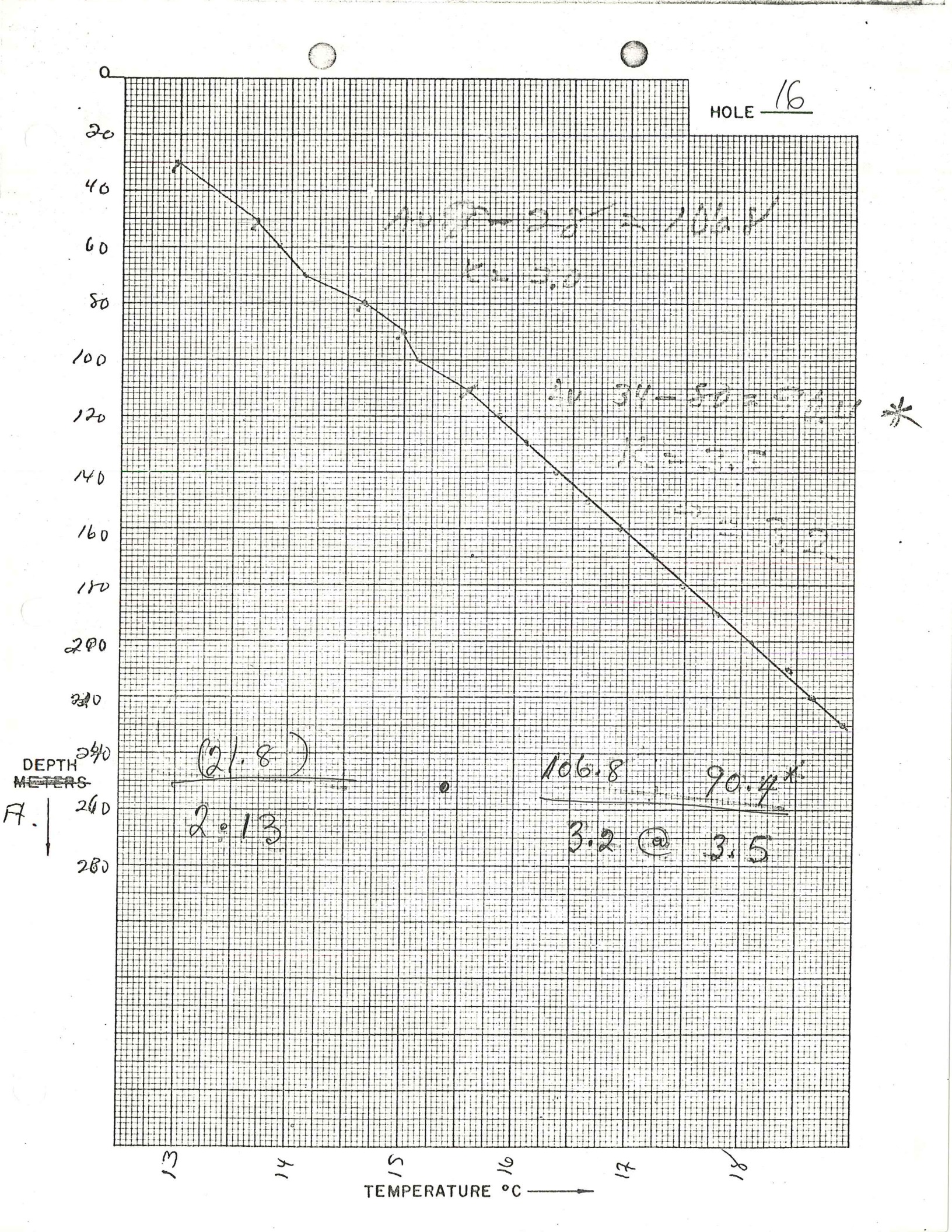
SW¼ SW¼ Sec 7 T17S R43E Elevation: 3,365'

Depth (meters)	Description
0 - 80	Gray to brownish-gray alternating tuffaceous silstones, sandstones, and tuff breccias. Hole was dry to total depth.

H. D. Pilkington
March 14, 1977

HDP:mmo


5
10
15
20
25
30
35
40°C
BC-16
Depth in Metres.
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
180
190
200
BASALT GRAVELS
BASALT + TUFFS
K=3.5
H = 3.2
(21.8)
46 0780
10 X 10 TO THE INCH • 7 X 10 INCHES
KEUFFEL & ESSER CO. MADE IN U.S.A.


HOLE 16
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
DEPTH
METERS
M.
(21.8)
2.13
106.8
90.4*
3.2 @ 3.5
13
14
15
16
17
18
TEMPERATURE °C

#16

LITHOLOGIC LOG

Site Scientist [illegible]
Date ______

INTERVAL	SCHEMATIC OF STRATIGRAPHY	LITHOLOGIC DESCRIPTION	COMMENTS, INTERPRETATION
		(Page 1 missing when xeroxed)	
0-120		Tf. sd.	
120-130		Black basalt frags @ 125 rdd, oxidized scoriaceous, in Tf. sand	
130-140		do pebbles, frags oxidized bslt, chert nodules, tuff sd	
150		Rd'd pebbles of basalt, chert, dk gray tf. sand	
160		do; some clayey sd	
170		do. more, larger tf sd frags to 20mm; [black basalt in] 175 - appearance of tf. sd frags	
180		BSLT & TUFF. SD FRAGS TO [illegible]mm 35% 65%	
190		BSLT	
200		BSLT	
210	—[illegible]	DO - Stringer of gray SS @ 260 TD	

PROJ.	WELL	DA-MO-YR-F	DESCRIPTION	EDITORS	TERRAIN CORR	L P	ISE	F-IST
755	208	7 SP 76 M	B-208: 2.5KM N. OF COVE FORT, UT	[illegible]				
737	51623	DC 76 F	T17S, R43E, SW CORNER, S7, OR	MG/AKIN				

duplicate

SW CORNER

IN/CM	MAP: 7.5, 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.	45.	~~18.15~~ 18.05	~~31.4~~ 31.55	3365.	F

duplicate

SEGMENT DEPTH

START	END	K	±	SEGMENT START	END	K	±
16.	26.	7.	.5	26.	73.	6.73	.5
110.	210.	-3.5	-.5	.999			

STA T = .999 for last .999

Last =

Prici: se

duplicate

DEPTH	°C	DEPTH	°C	DEPTH	°C
1.	16.325	1.5	16.516	3.	16.82

99999. LAST DEPTH

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

CODING FORM FOR [illegible]

517

TEMPERATURE - DEPTH LOG

Location 3/4 mile South Rock Cabin Spring Date Dec 22 1976

Map Brogan, Oregon 15' Quad.

Property Bully Creek T 17S R 42E sec SW¼ SE¼ 26

Drill Hole BC-17 Date Drilled Dec 18, 1976 Elevation 3390 ft.

Instrument Geothermex Operator MG

Comments

Depth (~~meters~~)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
10		12.86			
20		11.75			
30		12.45	.70		
40		12.91	.46		
50		13.22	.31		
60		13.60	.34		
70		13.90	.30		
80		14.25	.35		
90		14.59	.34		
100		14.96	.37		
110		15.25	.29		
120		15.64	.39		
130		15.97	.33		
140		16.32	.35		
150		16.66	.34		
160		17.04	.38		
170		17.36	.32		
180		17.73	.37		
190		18.03	.30		
200		18.37	.34		
210		18.80	.43		
220		19.15	.35		

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
230		19.60			
			.40		
240		20.00			
			.40		
250		20.40			
			.40		
260		20.80			
			.38		
270		21.18			
			.36		
280		21.54			
			.42		
290		21.96			
			.38		
300		22.34			

LITHOLOGIC LOG BC-17

BULLY CREEK PROPERTY

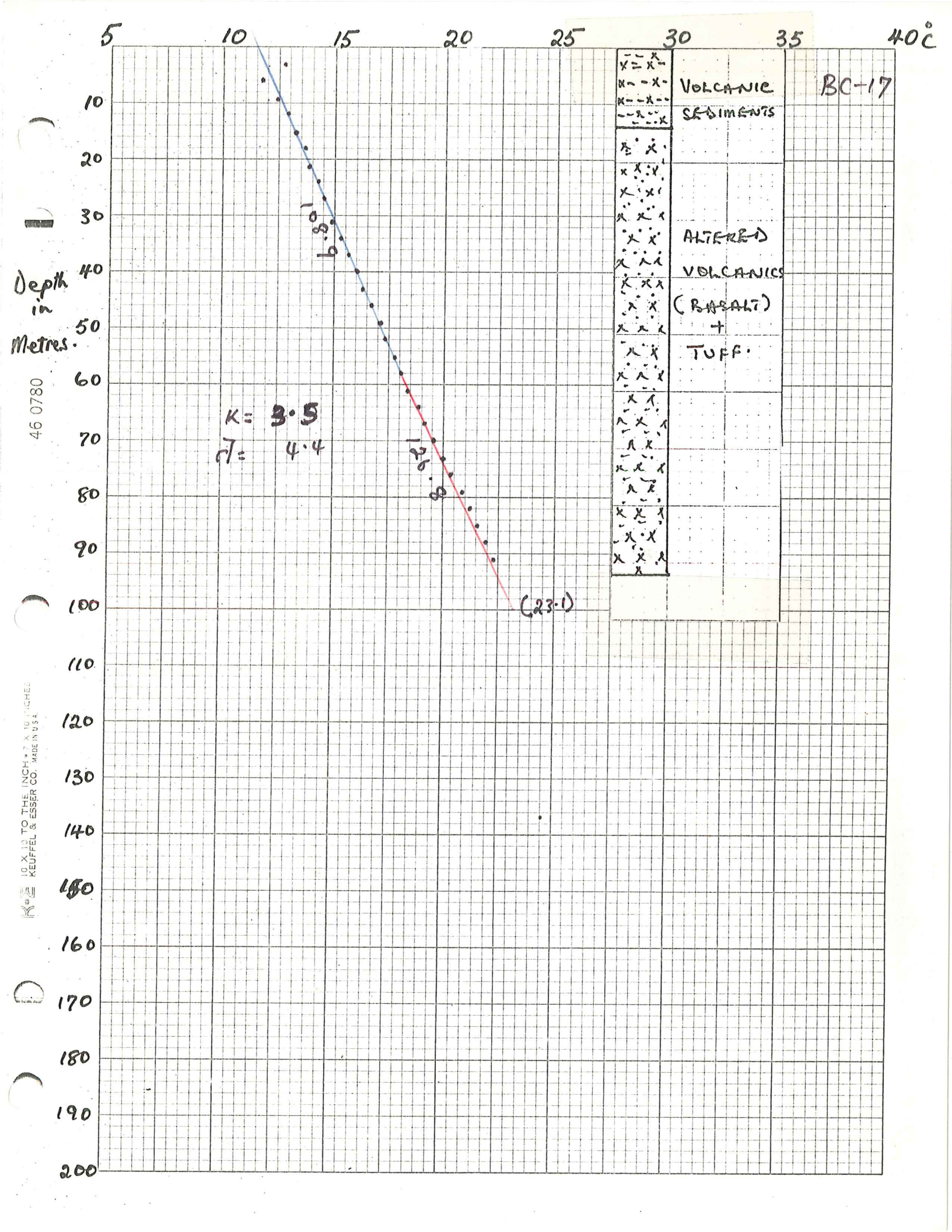
SW¼ SE¼ Sec 26 T17S R42E

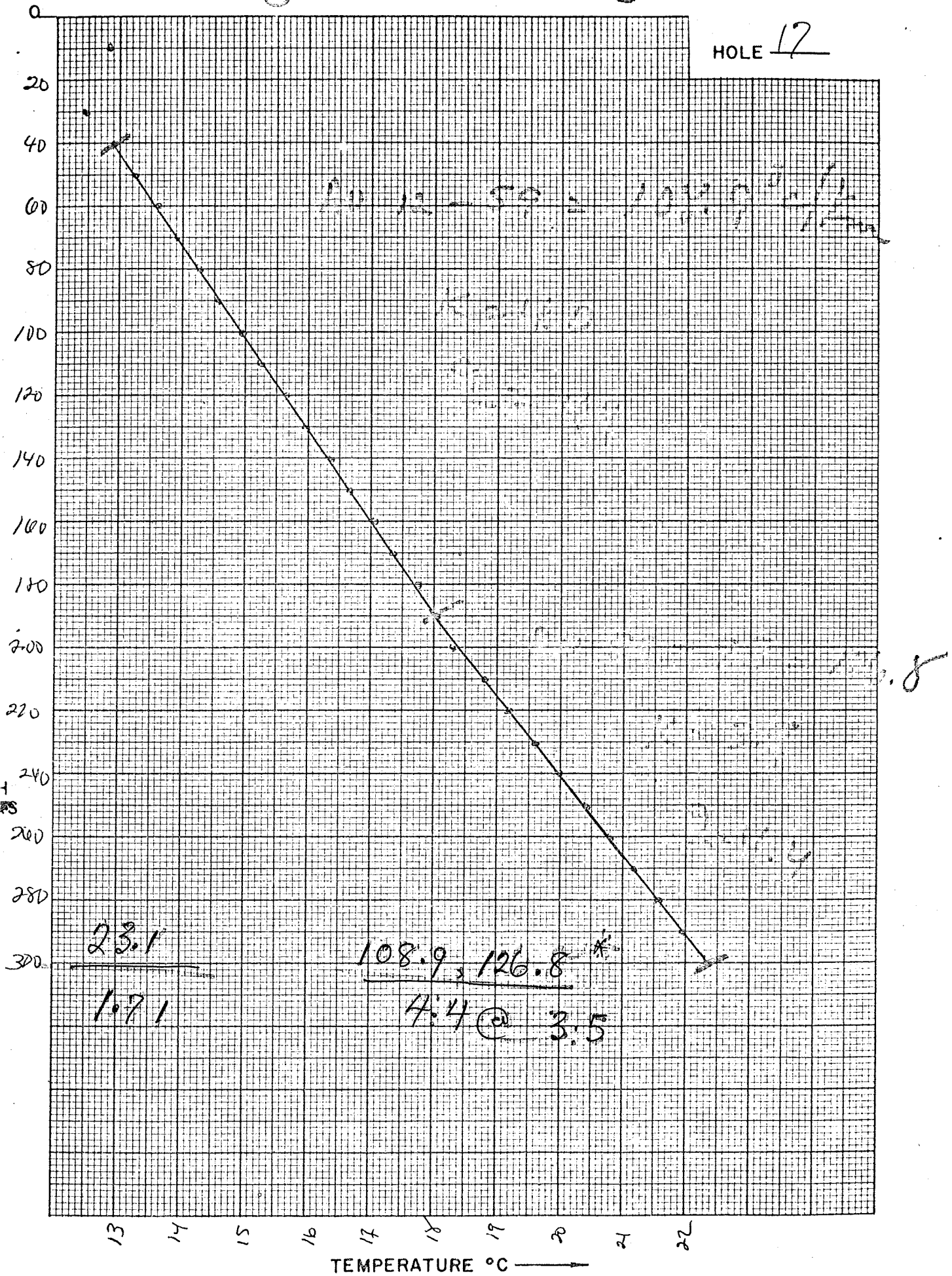
Elevation: 3,390'

Depth (meters)	Description
0 - 91	Dark gray to greenish-brown, tuff breccia composed of lithic fragments of rhyolite and vitrophyre set in a matrix of fine-to-medium-grained tuff. Water flow encountered between 76 and 79 meters - estimated rate of 1-3 gpm.

H. D. Pilkington
March 14, 1977

HDP:mmo


5
10
15
20
25
30
35
40°C
BC-17
VOLCANIC SEDIMENTS
ALTERED VOLCANICS (BASALT) + TUFF.
Depth in Metres.
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
180
190
200
K = 3.5
σT = 4.4
(23.1)
46 0780
KEUFFEL & ESSER CO. MADE IN U.S.A.


HOLE 12
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
DEPTH
TEMPERATURE °C
13
14
15
16
17
18
19
20
21
22
23.1
1.71
108.9, 126.8
4.4 @ 3.5

Geothermex, Inc.

LITHOLOGIC LOG

Site Scientist Unk

Date 12/13

#17

INTERVAL	SCHEMATIC OF STRATIGRAPHY	LITHOLOGIC DESCRIPTION	COMMENTS, INTERPRETATION
0-10		Weathered porphyry (?) - ident. not certain, could be volcaniclastic sed. Yellow-orange.	SAMPLE D-10, + hand Spec. from surface float.
10-20		crude laths to sev. mm of altd fsp(?) in wispy, cloudy, dark matrix w/ signs of Volc (or tuff?) texture. May contain fine qtz.	
20-30		10-20: do. 20-30: do.	Rapid drilling
30-40		do.	
	c.45		
40-50		c. 50% above; c. 50% greenish blk aphanite, an altered volcanic, prob basalt.	SAMPLE 40-50'.
50-60		Volcanic as above, black, locally gray, same altd greenish black. Appears glassy; cloudy, aph. text. w/ fine structures scarcely discernable. Basalt, or silicic vitrophyre? See poss. qtz.	SAMPLE 50-60'
60-70			15'/10 min
70-80		60-70: do 70-80: do. note cloudy gray uncommon, altd green V. rare; all fresh, unaltd.	Doubt presence of qtz. less 'glassy' when dry, see fine fgneous text dk laths in lt. matrix - prob Basalt. → or rhyolite, see below 80-90'
80-90			SAMPLE 70-80'
90-100		80-90: do, much is glassy, bears gray fragments of banded glass (hand lens), faint signs tuff texture in black matrix	SAMPLE 80-90'
100-110		70-120: do. (tuff) 100-110: do.	
110-120		do: high % is glass (black)	Rapid drilling
120-130		do:	
130-140		do.	15'/9 min.
140-150		do.	
150-160		do.	
160-170		Black pyroclastic (tuff), cont.	

LITHOLOGIC LOG

Site Scientist RWF
Date 12/10

#17

INTERVAL	SCHEMATIC OF STRATIGRAPHY	LITHOLOGIC DESCRIPTION	COMMENTS, INTERPRETATION
170-180		do.	
180-190		do.	
190-200		do.	
200-210		do.	
210-220		do.	SAMPLE 210-220
220-230		do. c. 10% gray	
230-240		do	
240-250		c. 20% gray, pyroch. text. clearly vis	
250-260		do.	Water in hole at c. 250 probable (judging from
260-270		do.	SAMPLE 260-270 air line pressure increase)
270-280		do.	
280-290		do.	
290-300		do.	SAMPLE 290-300 ft.
	TD 300		

PROV.	WELL	DA-MO-YR-F	DESCRIPTION	EDITORS	TERRAIN CORR
755	208	7 SP 76	MB-208: 2.5KM N. OF COVE FORT, UT	VED/ADD	
737	51722	DC 76 F	T17S, R42E, S26, BROGAN, OR (SW CORNER)	MG/AAIN	

duplicate

IN/CM	MAP: 7.5, 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.	345.	~~10.25~~ 10.2	~~27.7~~ 27.55	3390.	F

duplicate

SEGMENT DEPTH START	END	K	±	SEGMENT START	END	K	±
16.	26.	7.	.5	26.	73.	4.3	.5
40.	190.	4.08	.5	190.	300.	3.5	.5
.999							

STA T = .999 for last .999

Last =

Princ:

duplicate

DEPTH	°C	DEPTH	°C	DEPTH	°C
1.	16.325	1.5	16.516	3.	16.82

99999. LAST DEPTH

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

521

TEMPERATURE - DEPTH LOG

Location Cottonwood Creek Date Jan 10, 1977

Map Bryan, Oregon 15' Quad

Property Bully Creek T 18S R42E sec NW¼SE¼ 2

Drill Hole BC-21 521 Date Drilled Jan 12, 1977 Elevation 2980 ft.

Instrument Geothermex Operator MG

Comments

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
10		11.62			
20		13.32	1.03		
30		13.35	.25		
40		13.60	.25		
50		13.85	.04		
60		13.89	.11		
70		14.00	.30		
80		14.30	.06		
90		14.36	.07		
100		14.43	.09		
110		14.52	.06		
120		14.58	.12		
130		14.70	.06		
140		14.76	-.01		
150		14.75	.08		
160		14.83	.19		
170		15.02	.11		
180		15.13	.12		
190		15.25	—		
196		15.25			

LITHOLOGIC LOG BC-21

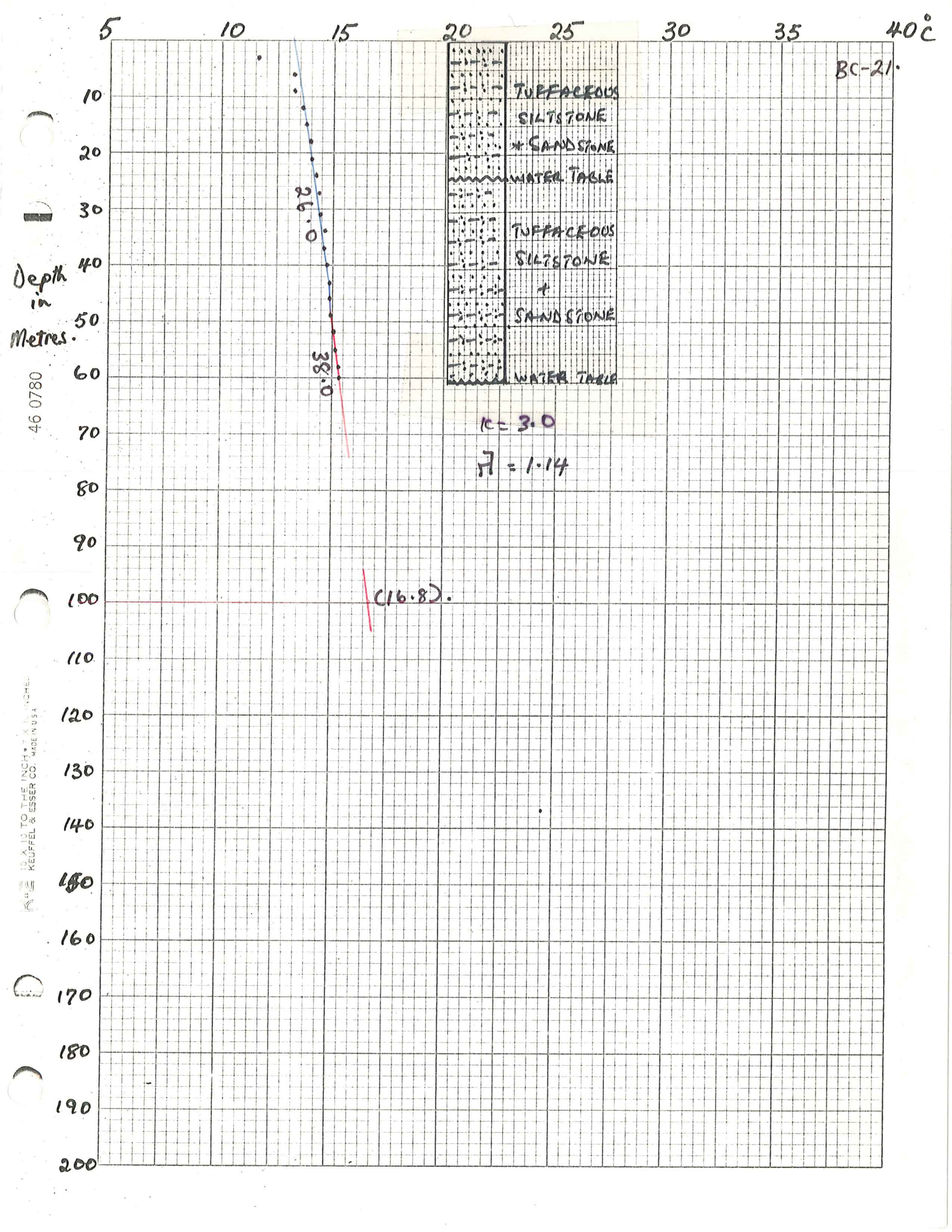
BULLY CREEK PROPERTY

NW¼ SE¼ Sec 2 T18S R42E Elevation: 2,980'

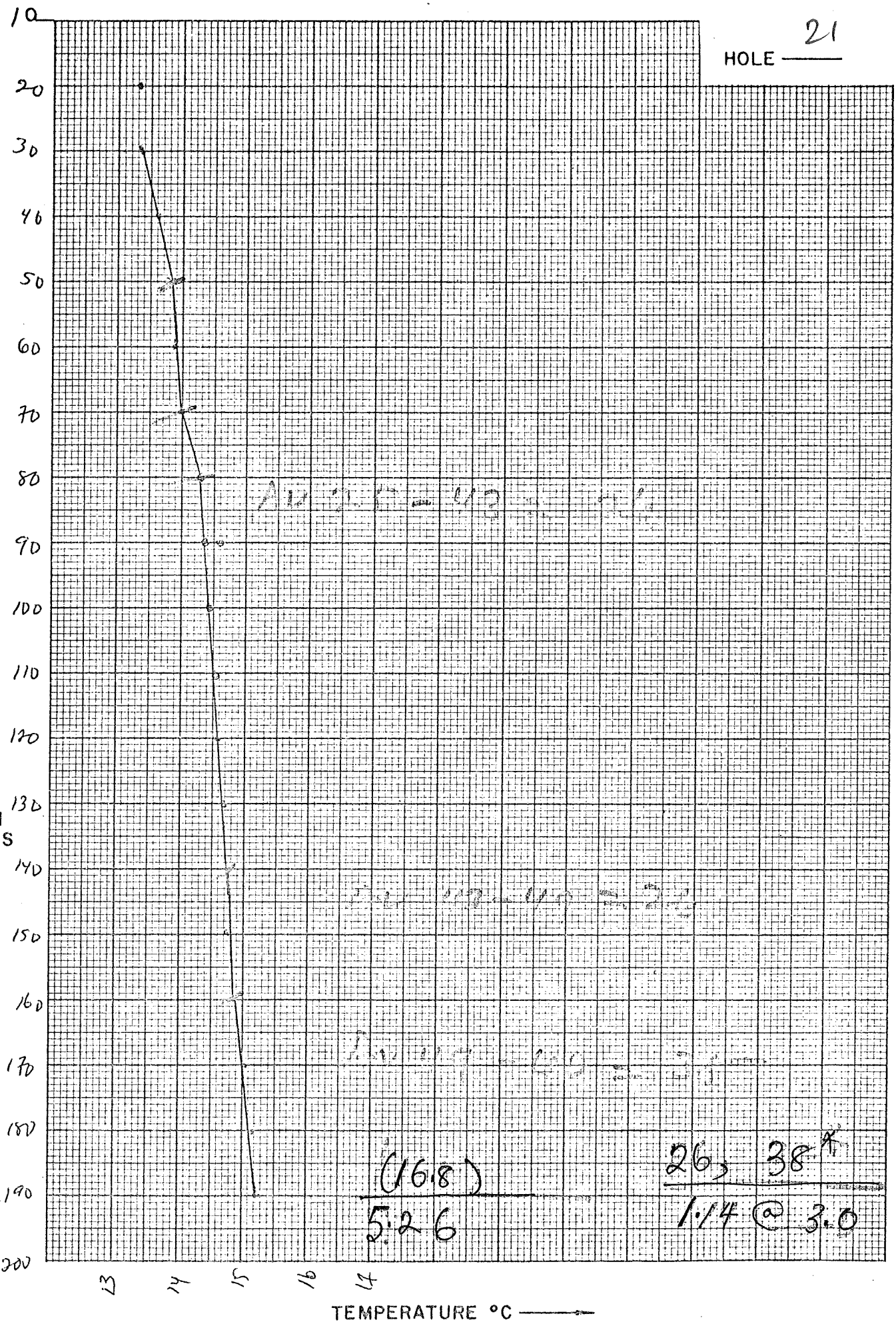
Depth (meters)	Description
0 - 60	Gray to brownish-gray, alternating tuffaceous silstone, sandstones and tuff breccias. Heavy flow of water encountered at a depth of 24 meters, probably 30 gpm, and also had good flow of water at 60 meters.

H. D. Pilkington
March 14, 1977

HDP:mmo


5
10
15
20
25
30
35
40°C
BC-21.
Depth in Metres.
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
180
190
200
TUFFACEOUS SILTSTONE + SANDSTONE
WATER TABLE
TUFFACEOUS SILTSTONE + SANDSTONE
WATER TABLE
26.0
38.0
(16.8).
K = 3.0
T = 1.14
46 0780
KEUFFEL & ESSER CO. MADE IN U.S.A.

HOLE 21



(16.8)
5.26

26, 38 ?
1.14 @ 3.0

PROJ.	WELLID	DA-MO-YR-F/M	DESCRIPTION	EDITORS	TERRAIN CORR	L/P	H/TISE	DIST
755	208	7 SP 76 M	B-208: 2.5KM N. OF COVE FORT, UT	JED/DDB				
737	S2116	JA 76 F	ON CREEK SPG T18S, R42E, S2 ORE	MG/AMIN				

duplicate

SW CORNER

IN/CM	MAP: 7.5, 15. or 60.	DEG'S LAT	MIN'S DLAT	DEG'S LONG.	MIN'S DLONG	N.	E.	ELEV.	M/F
IN	15.	38.	30.	112.	45.	8.62	9.42	4825.	F
CM	15	44.	00.	117.	45.	6.85	27.7	2980.	F
						5.6	27.35		

duplicate

SEGMENT DEPTH

START	END	K	±	SEGMENT START	END	K	±
16.	22.	7.	.5	22.	70.	3.3	.5
80.	160.	4.38	.5	160.	196.	-3.	-.5
.999							

STA T = .999 for last .999

last =

Price:

duplicate

DEPTH	°C	DEPTH	°C	DEPTH	°C
1.	16.325	1.5	16.516	3.	16.82

99999. LAST DEPTH

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

522

TEMPERATURE - DEPTH LOG

Location 2 miles SE of Rock Cabin Spring Date Jan 5, 1977

Map Brogan, Oregon 15' Quad

Property Bully Creek T 17S R 42E sec NE¼ SW¼ 36

Drill Hole BC-22 Date Drilled Dec 19, 1976 Elevation 3040 ft.

Instrument Geothermex Operator MG

Comments Air Temp 7°C

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
10		9.60			
20		11.85			
30		12.60			
~~40~~					Missed 40' marker
50		13.35	.33		
60		13.68	.25		
70		13.93	.23		
80		14.16	.29		
90		14.45	.25		
100		14.70	.30		
110		15.00	.25		
120		15.25	.30		
130		15.55	.28		
140		15.83	.29		
150		16.12	.30		
160		16.42	.29		
170		16.71	.22		
180		16.93	.26		
190		17.19	.36		
200		17.55	.50		
210		18.05	.27		
220		18.32			

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
230		18.66			
			.44		
240		19.10			
			.40		
250		19.50			
			.70		
260		20.20			
			.15		
270		20.35			
			.14		
280		20.49			
			.11		
290		20.60			
			.15		
300		20.75			
			.10		
310		20.85			
			.20		
320		21.05			
			.17		
330		21.22			
340		21.45			

LITHOLOGIC LOG B-22

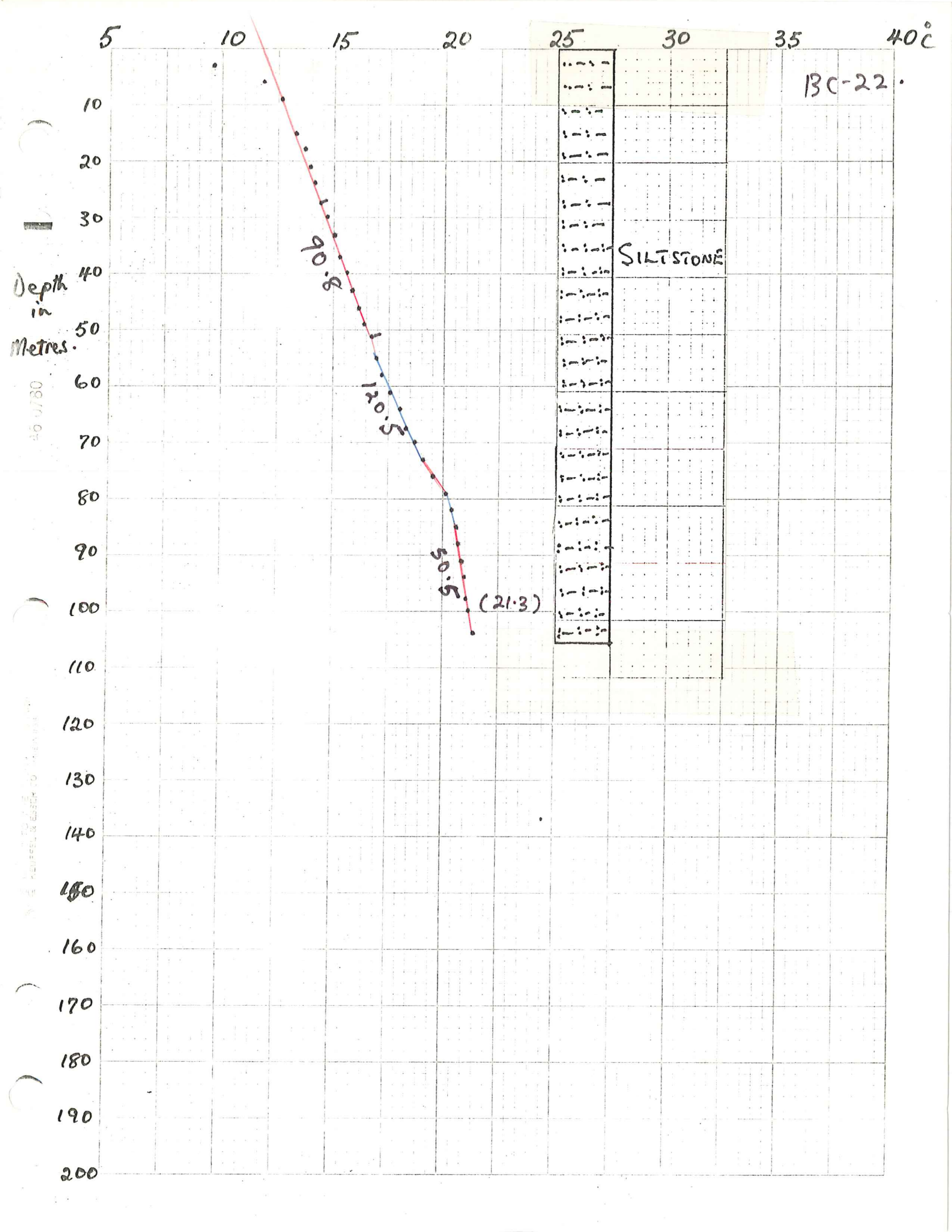
BULLY CREEK PROPERTY

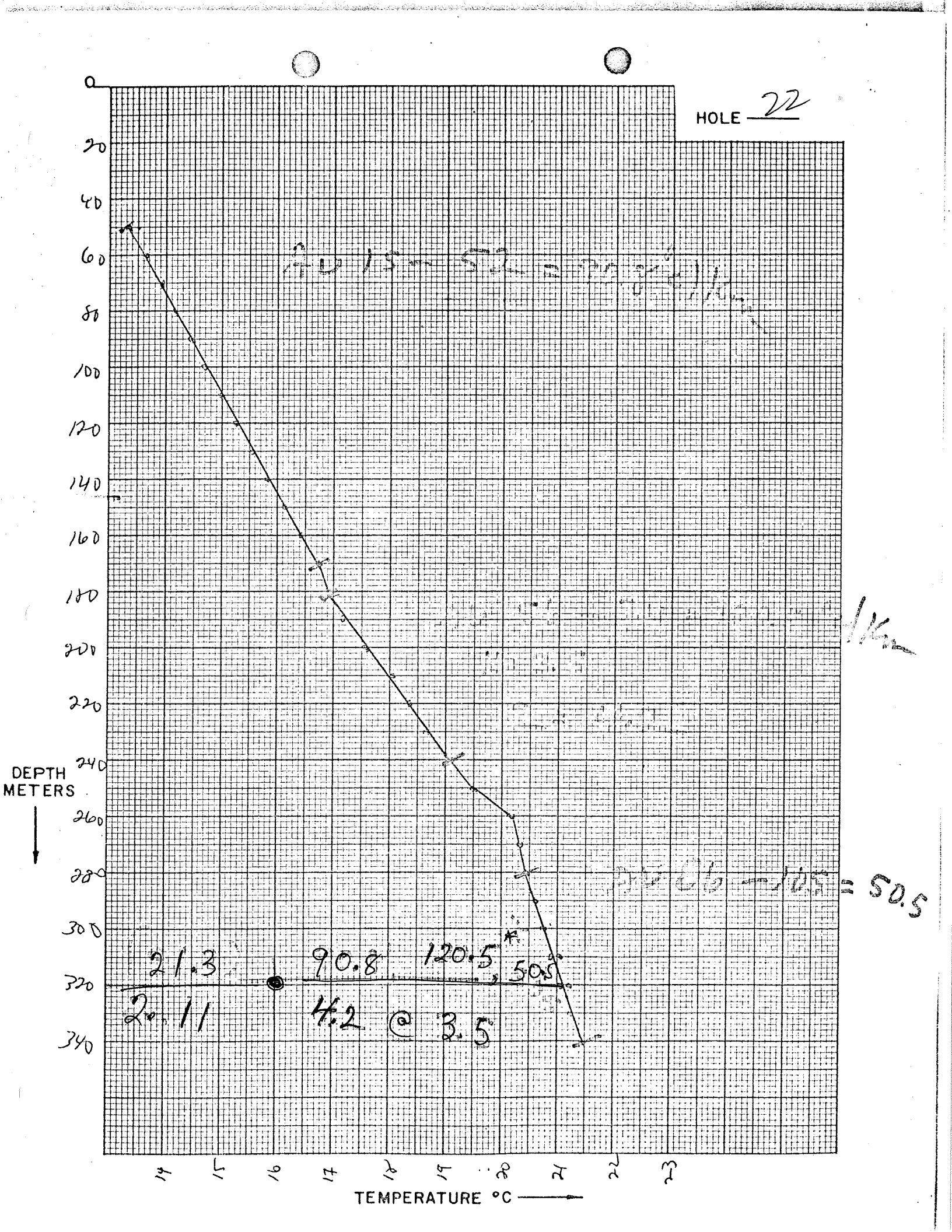
NE¼ SW¼ Sec 36 T17S R42E Elevation: 3,040'

Depth (meters)	Description
0 - 104	Alternating gray to greenish-gray siltstones, tuffaceous siltstones and sandstones and lithic tuffs. A small flow of water 1-3 gpm was encountered between 52 and 55 meters. A good flow of water, 5-10 gpm, was found between 91 and 94 meters, at the bottom of the hole was making about 30 gpm.

H. D. Pilkington
March 14, 1977

HDP:mmo


5
10
15
20
25
30
35
40°C
BC-22.
Depth in Metres.
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
180
190
200
90.8
120.5
150.5
(21.3)
SILTSTONE


HOLE 22
DEPTH METERS
TEMPERATURE °C
14
15
16
17
18
19
20
21
22
23
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
320
340
21.3
90.8
120.5
50.5
2.11
4.2 @ 3.5

LITHOLOGIC LOG

Geothermex, Inc.
Site Scientist Cook
Date 12/19/76

#22

INTERVAL	SCHEMATIC OF STRATIGRAPHY	LITHOLOGIC DESCRIPTION	COMMENTS, INTERPRETATION
0-10		Gray-buff fine tuffaceous sandstone	Rapid drilling, mud cuttings fine silt sized, carried away w/ foam
10-20		do.	SAMPLE 0-20'
20-30		Gray, greenish gray silt, siltstone	
30-40		Fine tuffaceous SS, sltst, cont. c.30-35 olive color, c.35-40 much is weathered to bright orange	SAMPLE 30-40 - note bias tuds coar grain sizes, much silt + (?) clay lost in foam
40-50		do. - brownish gray dom. silt, occas grains qtz, uncommon V mafics	c 53 ft. foam turns chocolate brown
50-60		70% brown silt, 30% gray sandy siltst, fine SS.	SAMPLE 50-70
60-70		do- brown silt consolidated into siltst.	
70-80		do- brown siltst more grayish, less chocolate	c. 82 ft. foam turns buff for 1-2 ft.
80-90		do - plus sm. % buff siltst	
90-100		Gray brown, some buff sandst, siltst; gray clay	
100-110		Greenish gray to brown fine sandstone, pinkish buff siltstone	SAMPLE 100-110
110-120		Siltst - buff, gray-brown	
120-130		dom. buff	
130-140		80% pale grayish pink, rest gray, buff siltst	
140-150		80% brownish gray siltstone	SAMPLE 140-150
150-160		do.	
160-170		70% greenish gray, 30% bluish gray	15'/7mm.

LITHOLOGIC LOG . . .

Site Scientist Luk
Date 12/19

#2-2

INTERVAL	SCHEMATIC OF STRATIGRAPHY	LITHOLOGIC DESCRIPTION	COMMENTS, INTERPRETATION
170-180		c.100% olive siltst.	
180-190		do, some sandst, variable grays, browns.	
190-200		90% greenish gray (olive)	
200-210		do.	
210-220		do.	% returns recoverable v. small most is silt in foam.
220-230		Greenish gray clay-silt, and siltstone as above, single fragment fine grained sulfide (?)	SAMPLE 220-230
230-240		do - plus sev. lg pieces (2cm) fine grained pyrite (?)	SAMPLE 230-240
240-250		do. — no sulfide	
250-260		60% greenish gray, 40% pure gray ('blue' gray) greenish gray sl. softer, finer grained than gray —	SAMPLE 250-260
260-270		100% olive	
270-280		do	
280-290		do.	
290-300		100% gray brown (or brownish gray)	
300-310		do.	c. 305 ft - water
310-370		do.	
320-330		60% gray brown siltst, 40% gray, fine ss.	SAMPLE 320-330.
330-340		do	increasing water (c. 30 gpm) entering hole.
	TD 340		

PROJ.	WELL	DA-MO-YR-F	DESCRIPTION	EDITORS	TERRAIN CORR	L P	ISE	DIST
755	208	7 SP 76	MB-208: 2.5KM N. OF COVE FORT, UT					
737	522	5 JA 76 F	T17S, R42E, SW CORNER OF S36, OR	MG/AHN				

Coding Form

duplicate

IN / CM	MAP: 7.5, 15. or 60.	DEG'S LAT	SW CORNER 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.	345.	~~7.50~~ 8.3	~~28.80~~ 29.25	3040.	F

duplicate

SEGMENT DEPTH

START	END	K	±	SEGMENT START	END	K	±
16.	26.	3.	.5	26.	76.	4.2	.5
50.	170.	4.64	.5	180.	240.	3.55	.5
260.	340.	8.35	.5	.999			

STA T = .999 for 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

Coding Form for Old Data

TEMPERATURE - DEPTH LOG

Location 3/4 mile North Sugar Loaf Butte Date Jan 6, 1977

Map Jamieson, Oregon 15' Quad

Property Bully Creek T 17S R 43E sec SW¼ SE¼ 19

Drill Hole BC523 Date Drilled Dec 21, 1976 Elevation 3358 ft.

Instrument Geothermex Operator MG & DP

Comments -20°C air temp

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
10		10.55			
20		11.75	1.20		
30		11.60	- .15		
40		11.94	.34		
50		12.14	.20		
60		12.50	.36		
70		12.80	.30		
80		13.10	.30		
90		13.40	.30		
100		13.78	.38		
110		14.05	.27		
120		14.30	.25		
130		14.51	.21		
140		14.80	.29		
150		15.04	.24		
160		15.23	.19		
170		15.50	.27		
180		15.70	.20		
190		15.90	.20		
200		16.20	.30		
210		16.49	.29		
217	TD	16.55	.06		

LITHOLOGIC LOG BC-23

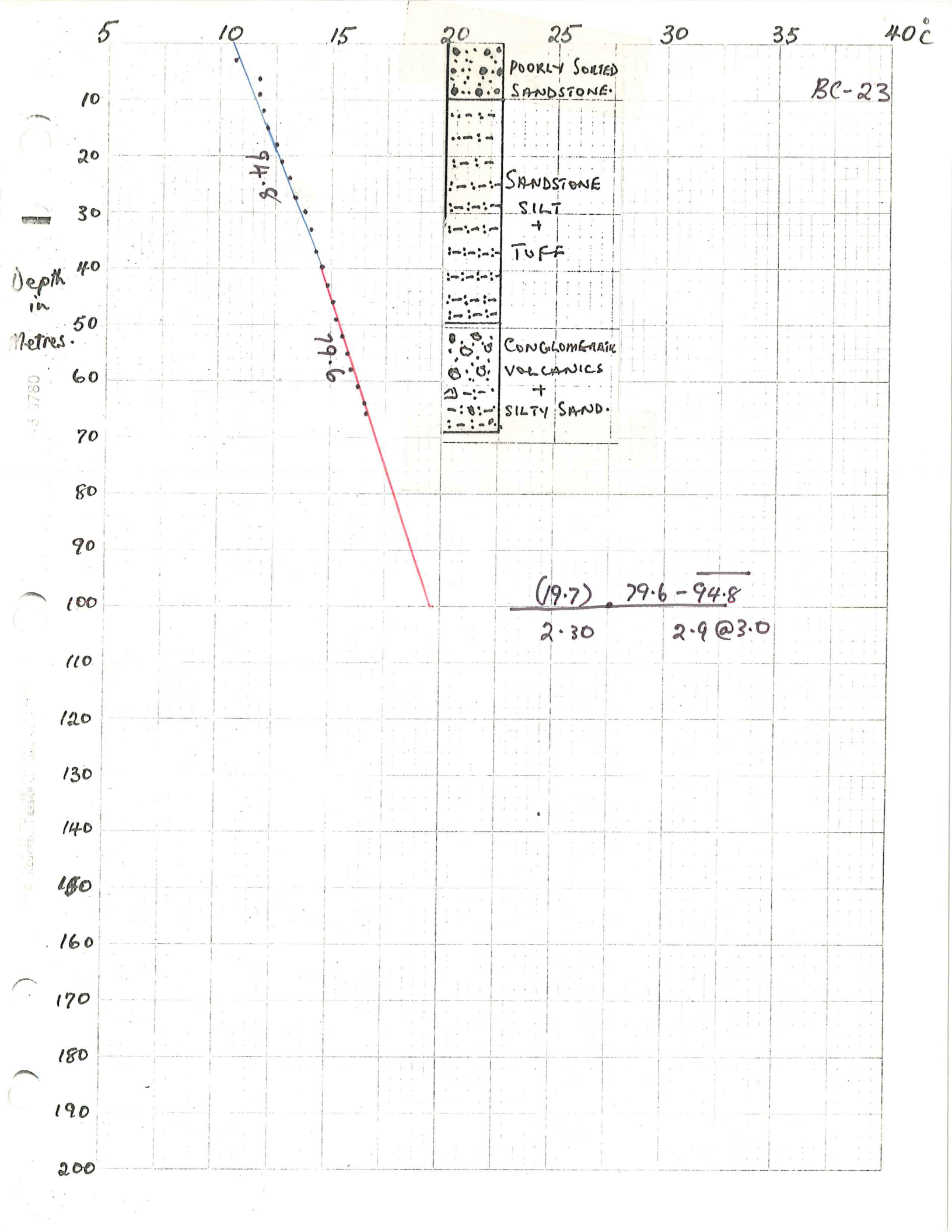
BULLY CREEK PROPERTY

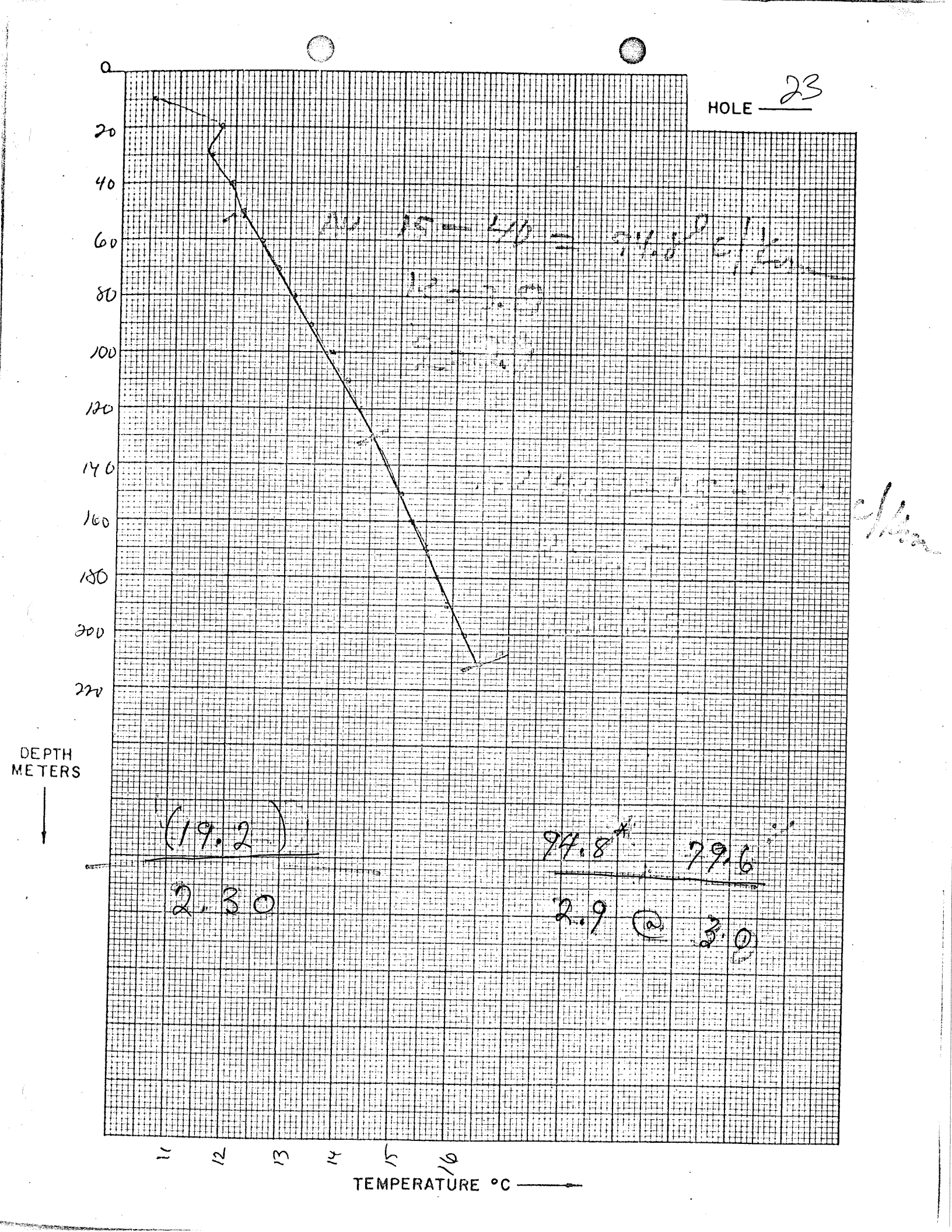
SW¼ SE¼ Sec 19 T17S R43E Elevation: 3,358'

Depth (meters)	Description
0 - 49	Gray to pinkish-gray alternating tuffaceous silstones and sandstones.
49 - 66	Gray to brown lithic tuff on tuff breccia with fragments of rhyolite and vitrophyre in a tuffaceous matrix. Minor water at 49 meters.

H. D. Pilkington
March 14, 1977

HDP:mmo


5
10
15
20
25
30
35
40°C
Depth in Metres.
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
180
190
200
3.46
9.66
POORLY SORTED SANDSTONE.
SANDSTONE SILT + TUFF
CONGLOMERATE VOLCANICS + SILTY SAND.
BC-23
(19.7) 29.6 - 94.8
2.30
2.9 @ 3.0


HOLE 23
0
20
40
60
80
100
120
140
160
180
200
220
DEPTH METERS
(19.2)
2.30
94.8 ft
79.6
2.9 @ 3.0
11
12
13
14
15
16
TEMPERATURE °C

LITHOLOGIC LOG

#23

Site Scientist [illegible]
Date 12/21/78

INTERVAL	SCHEMATIC OF STRATIGRAPHY	LITHOLOGIC DESCRIPTION	COMMENTS, INTERPRETATION
0-10		Brown-weathered poorly sorted sandstone, clots of brown silt (soil?), lesser basalt, blk vitreophyre, gray rhyolite (flow)	Alluvium or gravelly sediment.
10-20		do.	
20-30		do.	SAMPLE ~~20~~ 10-30
30-40		Buff colored poorly consolidated silt-fine sandstone, buff clay.	SAMPLE 30-40
40-50		Buff-colored fine grained tuffaceous sandstone, mod. consol.	SAMPLE 40-50
50-60		Mix of types in 30-50	
60-70		do., plus some blk, aph. basalt (cave?)	
70-80		do, plus brown fine sandstone, brown silt. less basalt.	SAMPLE 70-80
80-90		brown & buff sandstones, tuffaceous	
90-100		do.	
100-110		gray silt, minor sand of above materials	SAMPLE 100-110
110-120		Buff, fine sandstone, plus sand grains of black basalt(?) & red cinder.	
120-130		do.	
130-140		do., plus lg. clots sandy brown silt	SAMPLE 110-140
140-150		do.	
150-160		do.	160-180 Occas. bouncing of bit ⇒ cobbles? or thin layers hard tuff
160-170		Conglomerate of variable dark brown, red-brown; blk aph. volcanics, w/ brown silt, sand matrix. Sand & pebble sizes	Driller reports possible water not certain
170-180		do. Coarsest returns 1 cm dia, all angular	SAMPLE 170-180

LITHOLOGIC LOG

#23

Site Scientist CUK
Date 12/21/76

INTERVAL	SCHEMATIC OF STRATIGRAPHY	LITHOLOGIC DESCRIPTION	COMMENTS, INTERPRETATION
180-190		do.	
190-200		do. also angular sand + pebbles light siliceous volcanics, aphanitic (cherty) + w/ faint tufftext, gray + buff.	SAMPLE 190-200
200-210		do.	
210-215		do.	
	TD 215		

PROJ.	WELL	DA-MO-YR-F/M	DESCRIPTION	EDITORS	TERRAIN CORR	L/P	H	ISE	... ST
755	208	7 SP 76 M	B-208: 2.5 KM N. OF COVE FORT, UT	[illegible]					
737	S23	6 JA 77 F	1. KM N. OF SUGARLOAF BUTTE, OR	DP/AKIN					

Coding Form Con

duplicate

IN/CM	MAP: 7.5, 15, or 60.	DEG'S LAT	MIN'S DLAT	DEG'S LONG.	MIN'S DLONG	N.	E.	ELEV.	M/F
		SW CORNER							
IN	15.	38.	30.	112.	45.	8.62	9.42	4825.	F
CM	15	44.	00	117.	30.	~~13.85~~ 12.9	~~1.0~~ .75	3358.	F

duplicate

SEGMENT DEPTH

START	END	K	±	START	END	K	±
16.	26.	2.	.5	26.	70.	4.?	.5
60.	130.	3.	.5	130.	217.	3.57	.5
.999							

START = .999 for last
.999

Last =

Print: ...

duplicate

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

99999. LAST DEPTH

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

TEMPERATURE - DEPTH LOG

525

Location 2½ miles West Jordan Hot Springs Date Jan 15, 1977

Map Bogan, Oregon 15' Quad

Property Bully Creek T 18S R 42E sec NW¼ SW¼ 12

Drill Hole BC-25 Date Drilled Jan 13, 1977 Elevation 3,100 ft.

Instrument Geotherm Operator MG

Comments

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
20		11.20			
			0.05		
30		11.25			
			.23		
40		11.48			
			.14		
50		11.62			
			.18		
60		11.80			
			.17		
70		11.97			
			.21		
80		12.18			
			.15		
90		12.33			
			.21		
100		12.54			
			.18		
110		12.72			
			.13		
120		12.85			
			.13		
130		12.98			
			.12		
140		13.10			
			.13		
150		13.23			
			.09		
160		13.32			
			.18		
170		13.50			
			.14		
180		13.64			
			.12		
190		13.76			
			.21		
200		13.97			
			.14		
210		14.11			
			.10		
219		14.21			

LITHOLOGIC LOG BC-25

BULLY CREEK PROPERTY

NW¼ SW¼ Sec 12 T18S R42E

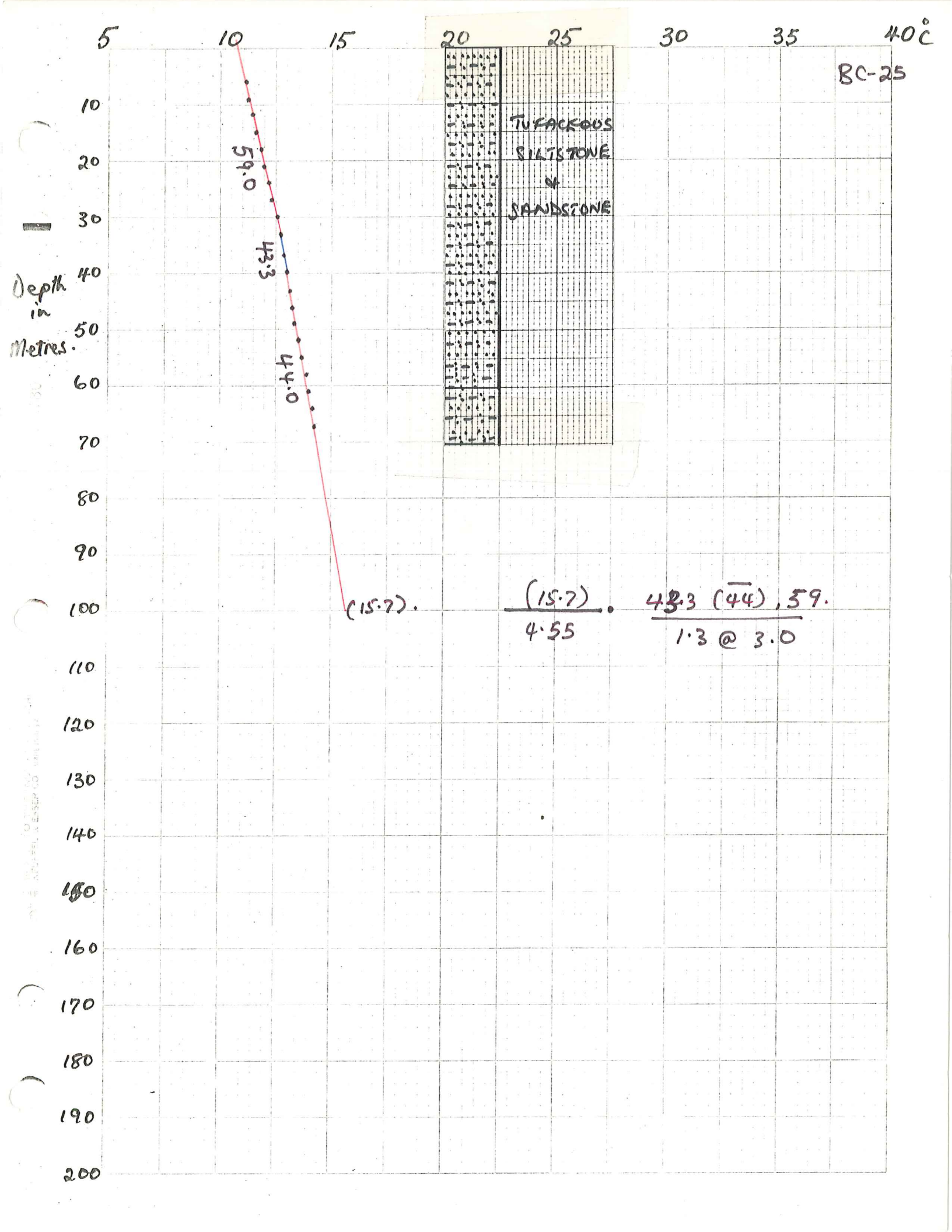
Elevation: 3,100'

Depth (meters)	Description
0 - 67	Gray to greenish-gray alternating tuffaceous silstone and sandstone of the Chalk Butte formation. Hole was dry to the total depth.

H. D. Pilkington
March 14, 1977

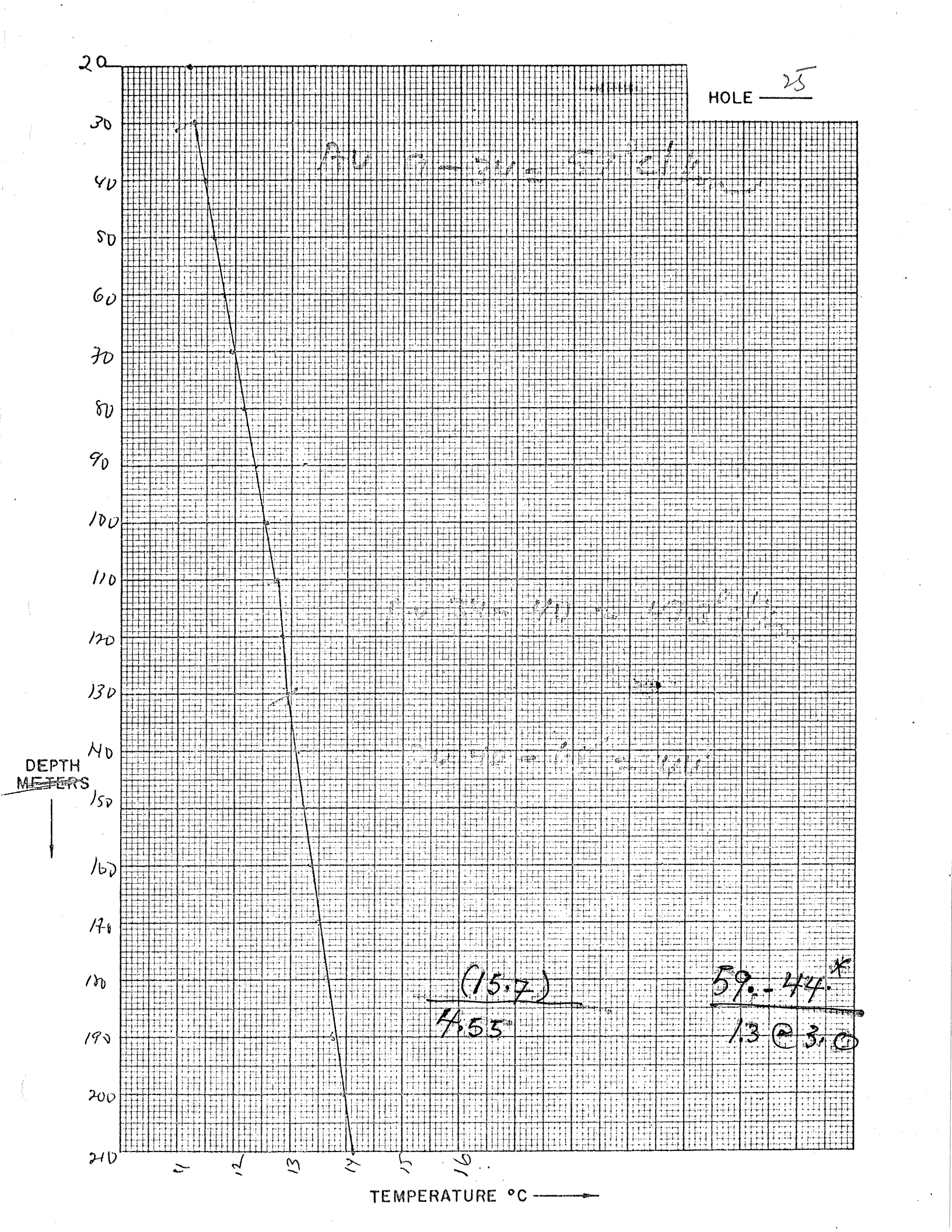
HDP:mmo

BC-25



(15.7).

$\frac{(15.7)}{4.55}$. $\frac{43.3\ (\overline{44}),59.}{1.3\ @\ 3.0}$


HOLE 25
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
180
190
200
210
DEPTH
METERS
11
12
13
14
15
16
TEMPERATURE °C
(15.7)
4.55
59.-44.*
1.3 @ 3.0

PROJ.	WELL	DA-MO-YR-F	DESCRIPTION	EDITORS	TERRAIN CORR	L P	H I	ISE	EST
755	208	7 SP 76 M	B-208: 2.5KM N. OF COVE FORT, UT	JED/RDF					
737	52515	JA 77 F	T18S, R42E, SEC12, BROGAN, ORE	MG/DAIN					

duplicate

SW CORNER

IN/CM	MAP: 7.5, 15. or 60.	DEG'S LAT	MIN'S DLAT	DEG'S LONG.	MIN'S DLONG	N.	E.	ELEV.	M/F
IN	15.	38.	30.	112.	45.	8.62	9.42	4829.	F
CM	15.	44.	00	117.	345.	~~3.3~~ 3.4	~~29.2~~ 28.8	3100.	F

duplicate

SEGMENT DEPTH

START	END	K	±	START	END	K	±
16.	22.	7.	.5	22.	73.	4.3	.5
40.	110.	2.24	.5	130.	219.	3.	.5
.999							

STA T = .999 for last .999

last =

Price:

K

±

duplicate

DEPTH	°C	DEPTH	°C	DEPTH	°C
1.	16.325	1.5	16.516	3.	16.82

99999. LAST DEPTH

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

CODING FORM FOR DATA ...

CODING FORM

528

TEMPERATURE - DEPTH LOG

Location 1 Mile East Sugarloaf Butte Date Jan 16, 1977

Map Jamieson, Oregon 15' Quad

Property Bully Creek T 17S R 43E sec SE¼NW¼ 29

Drill Hole BC-~~5~~28 Date Drilled Jan 9, 1977 Elevation 3420 ft.

Instrument Geothermex Operator MB

Comments

Depth (~~meters~~)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
10		8.30			
~~20~~		11.95			
30		12.11	.16		
~~40~~		12.40	.29		
50		12.80	.40		
60		13.02	.22		
70		13.26	.24		
80		13.44	.18		
90		13.64	.20		
100		13.86	.22		
110		14.12	.26		
120		14.30	.18		
130.		14.52	.22		
140		14.70	.18		
150		15.01	.31		
160		15.22	.21		
170		15.42	.20		
180		15.64	.22		
190		15.94	.30		
200		16.12	.18		
210		16.31	.19		
218		16.50	.19		

LITHOLOGIC LOG BC-28

BULLY CREEK PROPERTY

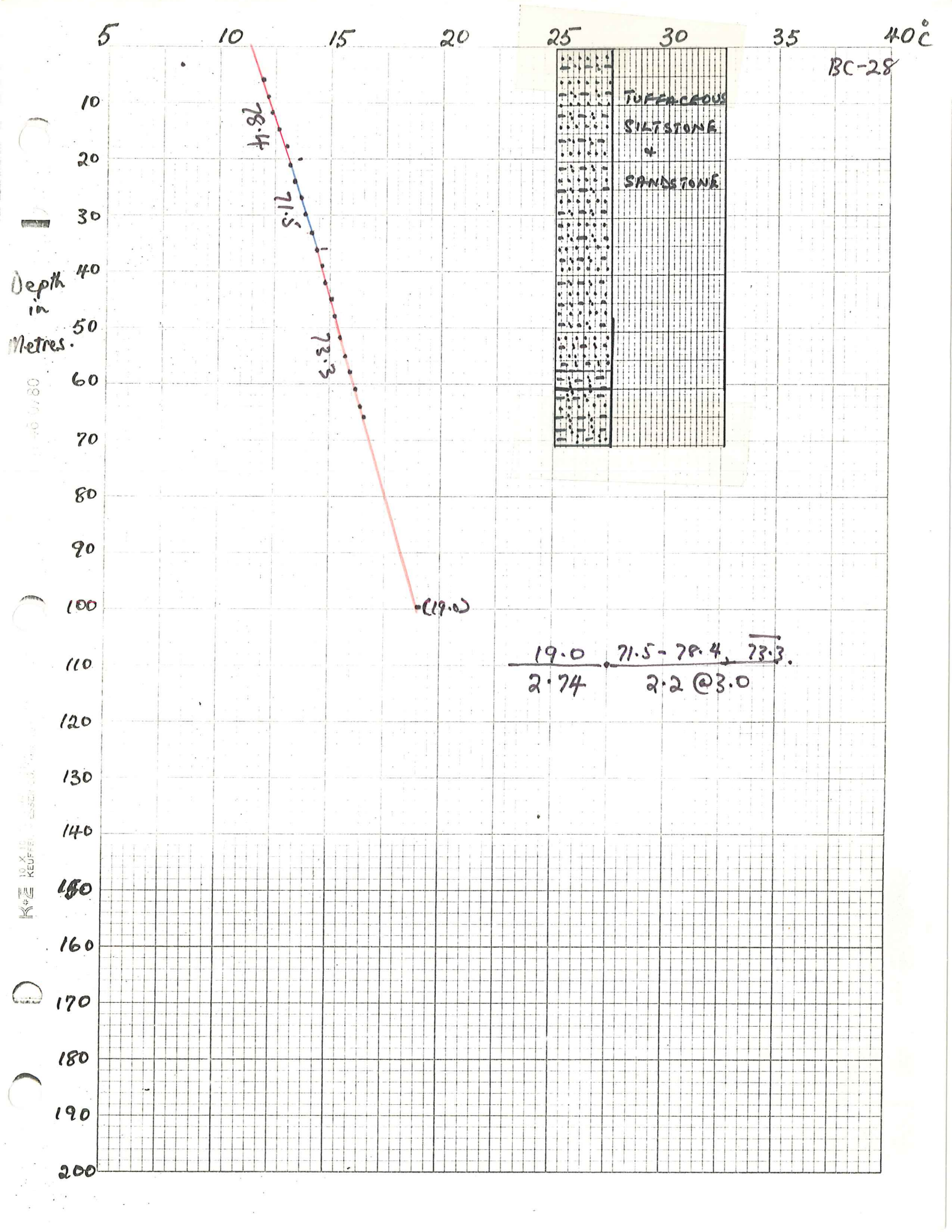
SE¼ NW¼ Sec 29 T17S R43E Elevation: 3,420'

Depth (meters)	Description
0 - 67	Gray to pinkish gray alternating tuffaceous silstones and sandstones of the Chalk Butte formation. The hole was dry to the total depth.

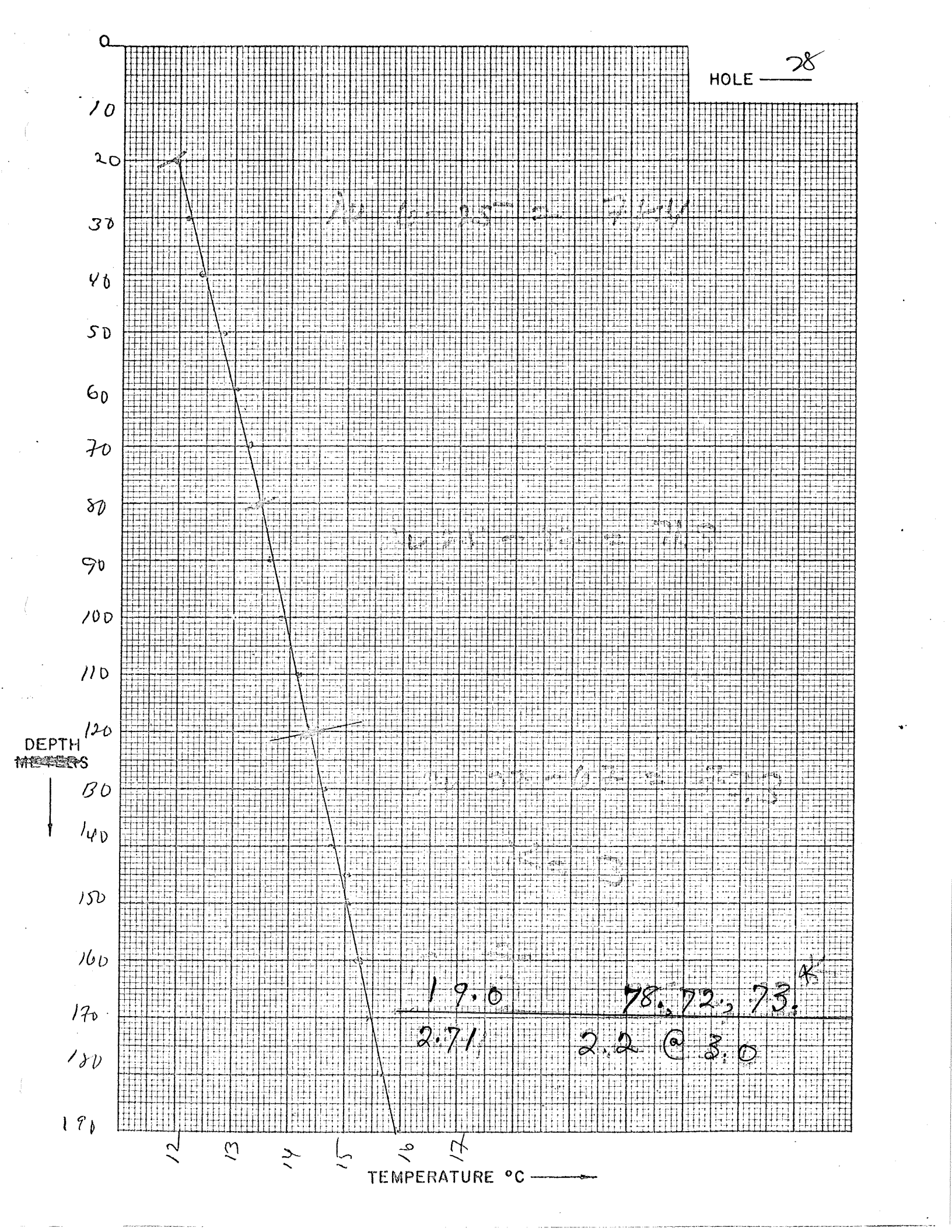
H. D. Pilkington
March 14, 1977

HDP:mmo

BC-28



$\frac{19.0}{2.74}$ $\frac{71.5 - 78.4,\ \overline{73.3}.}{2.2\ @3.0}$


HOLE 28
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
180
190
DEPTH METERS
12
13
14
15
16
17
TEMPERATURE °C
19.0
78., 72., 73.
2.71
2.2 @ 3.0

PROJ. | WELL | DA-MO-YR-F | DESCRIPTION | EDITORS | TERRAIN CORR | L/P | ISE | LIST

PROJ.	WELL	DA-MO-YR-F	DESCRIPTION	EDITORS
55	208	7 SP 76 M	B-208: 2.5 KM N. OF COVE FORT, UT	
737	S2816	JA 77 F	1.3 KM E OF SUGARLOAF BUTTE, OR	MG/AHN

duplicate

IN/CM	MAP: 7.5, 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.	~~11.15~~ 11.25	~~2.75~~ 2.7	3420	F

SW CORNER

duplicate

SEGMENT DEPTH

START	END	K	±	SEGMENT START	END	K	±
16.	26.	7.	.5	26.	70.	4.3	.15
20.	80.	2.8	.5	80.	120.	3.08	.5
120.	218.	3.	.15	.999			

STA T = .999 for 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

CODING FORM FOR ...

529

TEMPERATURE - DEPTH LOG

Location 3/4 mile north Coyote Spring Date Jan 13, 1977

Map Jamieson, Oregon 15' Quad

Property Bully Creek T 17S R 43E sec SW1/4 SE1/4 32

Drill Hole BC-29 Date Drilled Jan 10, 1977 Elevation 3,100 ft.

Instrument Geokon Operator MB

Comments

Depth ~~ft (meters)~~	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
10		12.62			
20		13.33	.23		
30		13.56	.45		
40		14.01	.46		
50		14.47	.37		
60		14.84	.30		
70		15.14	.46		
80		15.60	.27		
90		15.87	.41		
100		16.28	.34		
110		16.62	.48		
120		17.10	.37		
130		17.47	.45		
140		17.92	.37		
150		18.29	.42		
160		18.71	.41		
170		19.12	.37		
180		19.49	.34		
190		19.83	.36		
200		~~20.19~~	.22		
206		20.41			

LITHOLOGIC LOG BC-29

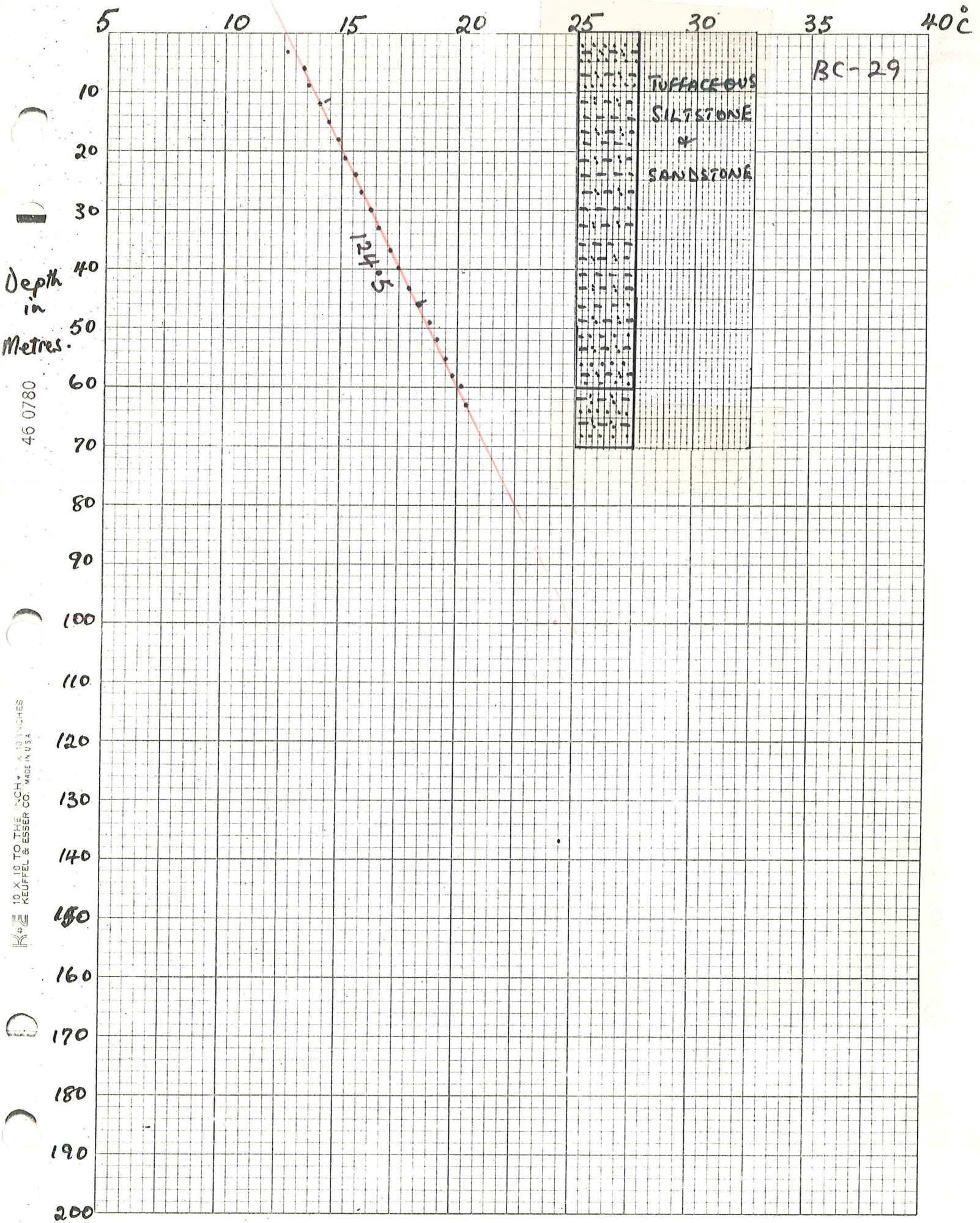
BULLY CREEK PROPERTY

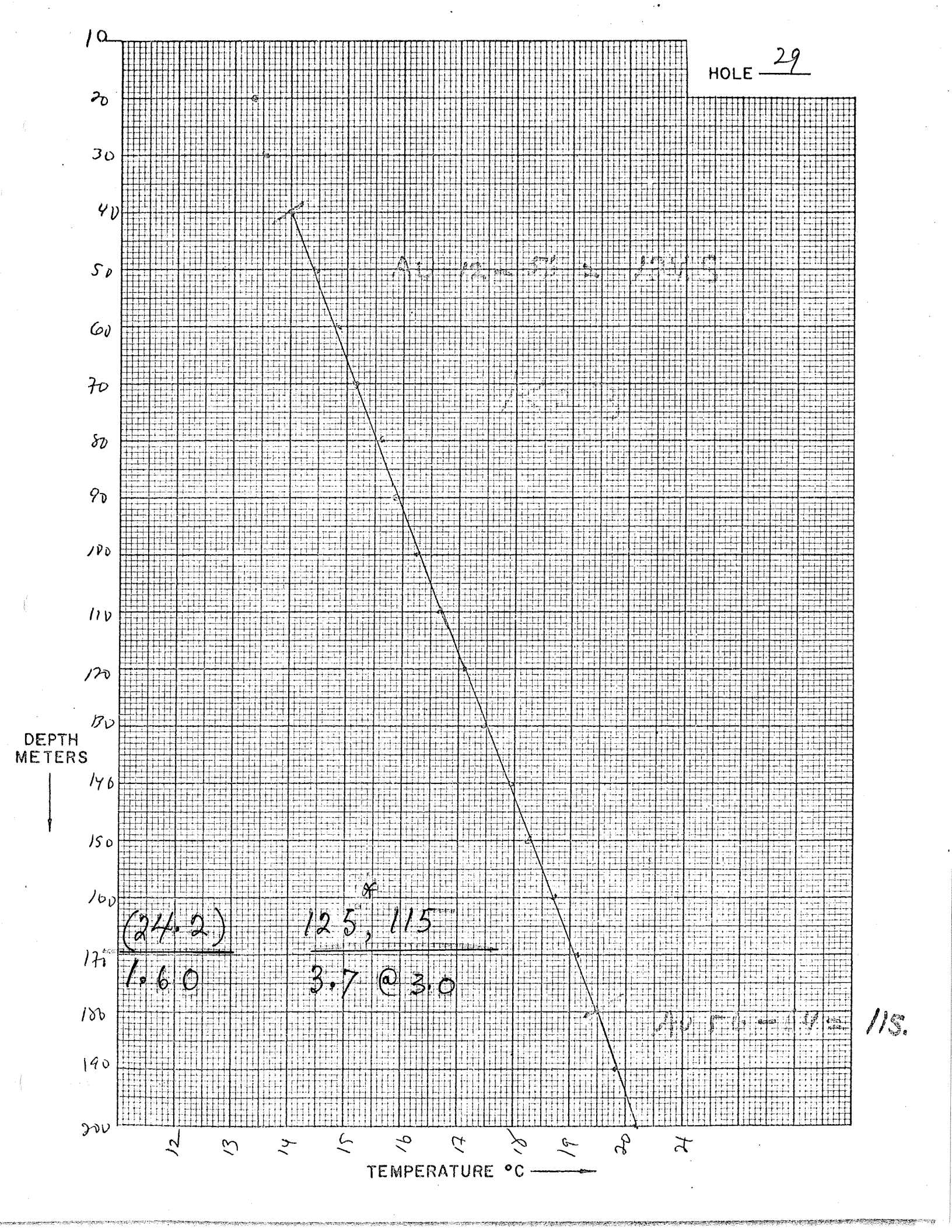
SW¼ SE¼ Sec 32 T17S R43E Elevation: 3,100'

Depth (meters)	Description
0 - 63	Gray to pinkish-gray alternating tuffaceous siltstone and sandstone of the Chalk Butte formation. No water was encountered in the hole.

H. D. Pilkington
March 14, 1977

HDP:mmo




HOLE 29
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
180
190
200
DEPTH METERS
12
13
14
15
16
17
18
19
20
21
TEMPERATURE °C
(24.2)
1.60
125, 115
3.7 @ 3.0
115.

PROV.	WELL	DA-MO-YR-F	DESCRIPTION	EDITORS	TERRAIN CORR	L/P	ISE	EST
755	208	7 SP 76 M	B-208: 2.5KM N. OF COVE FORT, UT	JED/ZEDR				
737	S2913	JA 77 F	2.9KM SE OF SUGARLOAF BUTTE, OR	MG/ARIN				

duplicate

IN/CM	MAP: 7.5, 15, or 60.	SW CORNER DEG's LAT	MIN's DLAT	DEG's LONG	MIN's DLONG	N.	E.	ELEV.	M/F
IN	15.	38.	30.	112.	45.	8.62	9.42	4829.	F
CM	15	44.	00	117.	30.	~~7.85~~ 8.0	~~3.0~~ 4.2	3160	F

duplicate

SEGMENT DEPTH START	END	K	±	SEGMENT START	END	K	±
16.	26.	7.	.5	26.	73.	6.3	.15
40.	206.	-3.	-.5	.999			

STAT = .999 for last .999

Last =

Print: =

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

CODING FORM FOR ...

601

TEMPERATURE - DEPTH LOG

Location NW end Bully Creek Reservoir Date Nov 29, 1976

Map Jamieson, Ore 15' Quad

Property Bully Creek T 18 S R 43E sec SW¼ NE¼ 4

Drill Hole BC-101 601 Date Drilled 1976 Elevation _____ ft.

Instrument Direct Reading Probe Operator JP

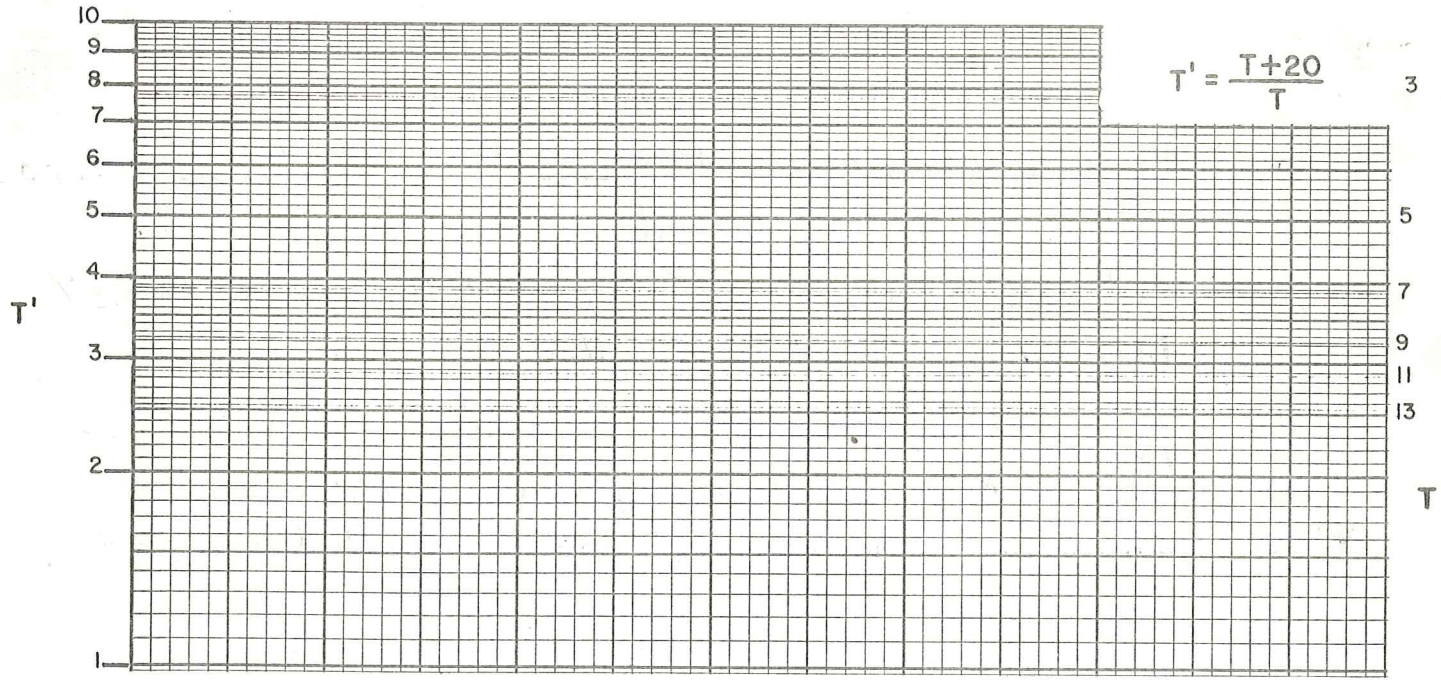
Comments 1" iron Pipe ✓ chevron gradient Hole

Hole collared in Chalk Butte Fm - altered and silicified at bottom

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
0					
5					
10					
15		18.14			
20		18.82	.68	136	
25		19.70	.88	176	
30		20.48	.78	156	
35		21.08	.60	120	
40		21.50	.42	84	
45		22.01	.51	102	
50		22.41	.40	80	
55		22.77	.36	72	
56.5		22.91	.14	93	

unaltered chalk Butte K ≅ 3.0

Altered - SiO_2 K ≅ 5.9



RESISTANCE

HOLE

DEPTH METERS

0
10
20
30
40
50
60

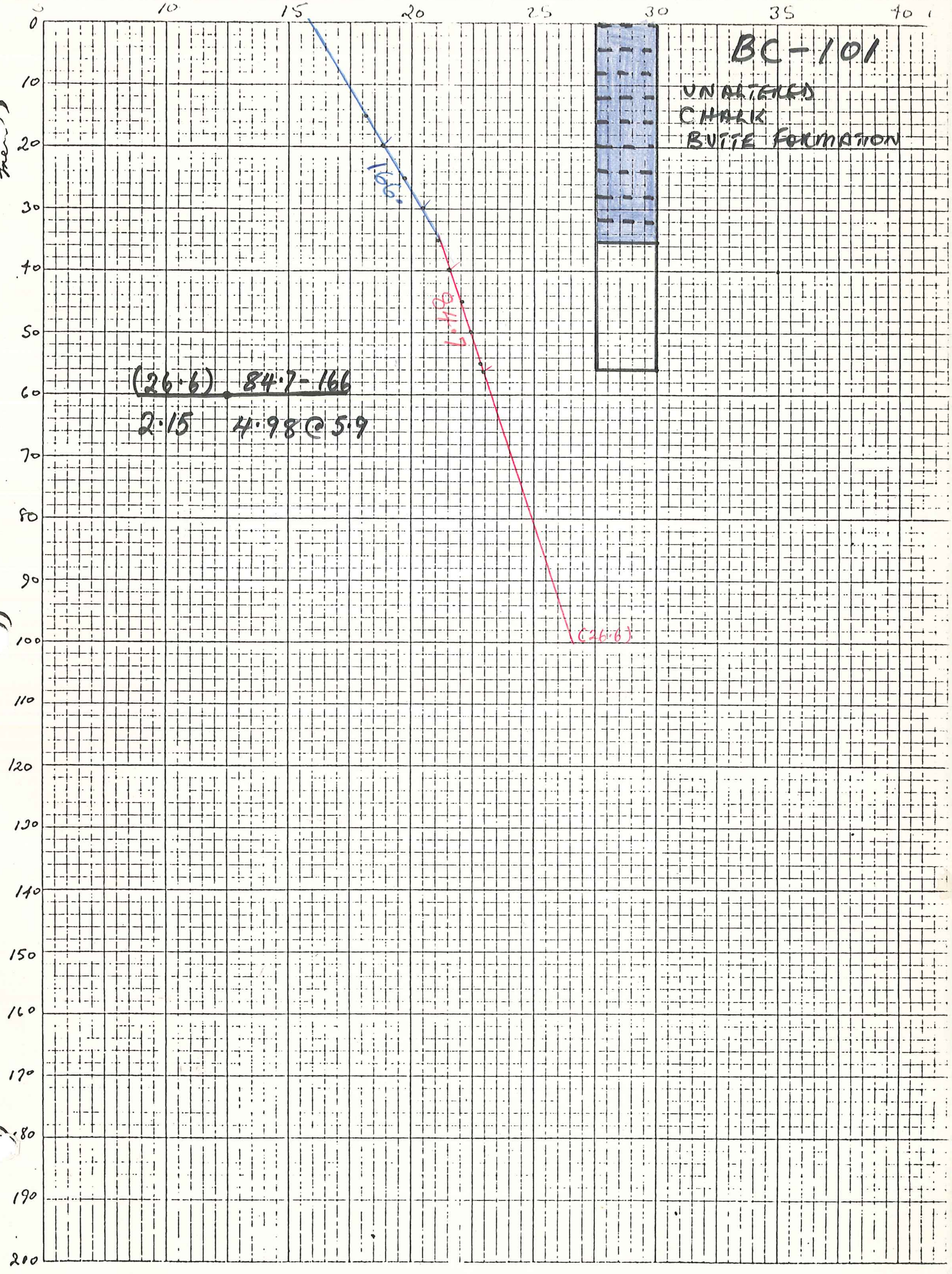
Av 25-35 m = 138°c/km
k ≅ 3.0
q = 4.14

Av 35-45 m = 93°c/km
k ≅ 4.45

Av 45-55 m = 96°c/km
k ≅ 5.0

18 19 20 21 22 23

TEMPERATURE °C



#101

Hole #1 = 190=T.D.

10'	=17.88°C	- 64.18°F
20	-20.16.08	- 60.94 11:23 -
30	=17.14	- 62.85 11:26
40	=17.70	- 63.86
50	=18.04	- 64.47
60	=18.69	- 65.64
70	=19.23	- 66.61
80	=19.73	- 67.51
90	=20.20	- 68.36
100	=20.63	- 69.13
120	=21.26	- 70.27
140	=21.76	- 71.17
160	=22.24	- 72.03
180	=22.67	- 72.81
190	=22.78	- 73.00

99999.

PROJ.	WELL	DA-MO-YR-M/F	DESCRIPTION	EDITORS	TERRAIN CORR	L/P	ISE	DIST
TES	208	7 SP 76	ME-208: 2.5 MI N. OF COVE FORT, UT	J…				
737	101 (601)		FF NW END OF BULLY CREEK RES, ORE	JFD/AKIN				

duplicate

IN/CM	MAP: 7.5, 15. or 60.	DEG'S LAT (SW CORNER)	MIN'S DLAT	DEG'S LONG.	MIN'S DLONG	N.	E.	ELEV.	M/F
IN	15.	38.	30.	112.	45.	8.62	9.42	4825.	F
CM	15.	44.	00.	117.	30.	6.0	~~6.3~~ 6.7	2600	F

duplicate

SEGMENT DEPTH START	END	K	±	SEGMENT START	END	K	±
16.	34.	7.	.5	34.	80.	4.7	.5
50.	100.	-3.	.5	100.	190.	5.39	-.5
.999							

START = .999 for last .999

Last =

Print

11123

duplicate

DEPTH	°C	DEPTH	°C	DEPTH	°C
1.	16.775	1.5	16.916	2.	16.82

99999. LAST DEPTH

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

602

TEMPERATURE - DEPTH LOG

Location SW Coyote Springs ¼ mile Date Nov 29, 1976

Map Jamieson Ore 15' Quad

Property Bully Creek T 18S R43E sec SW¼ NW¼ 5

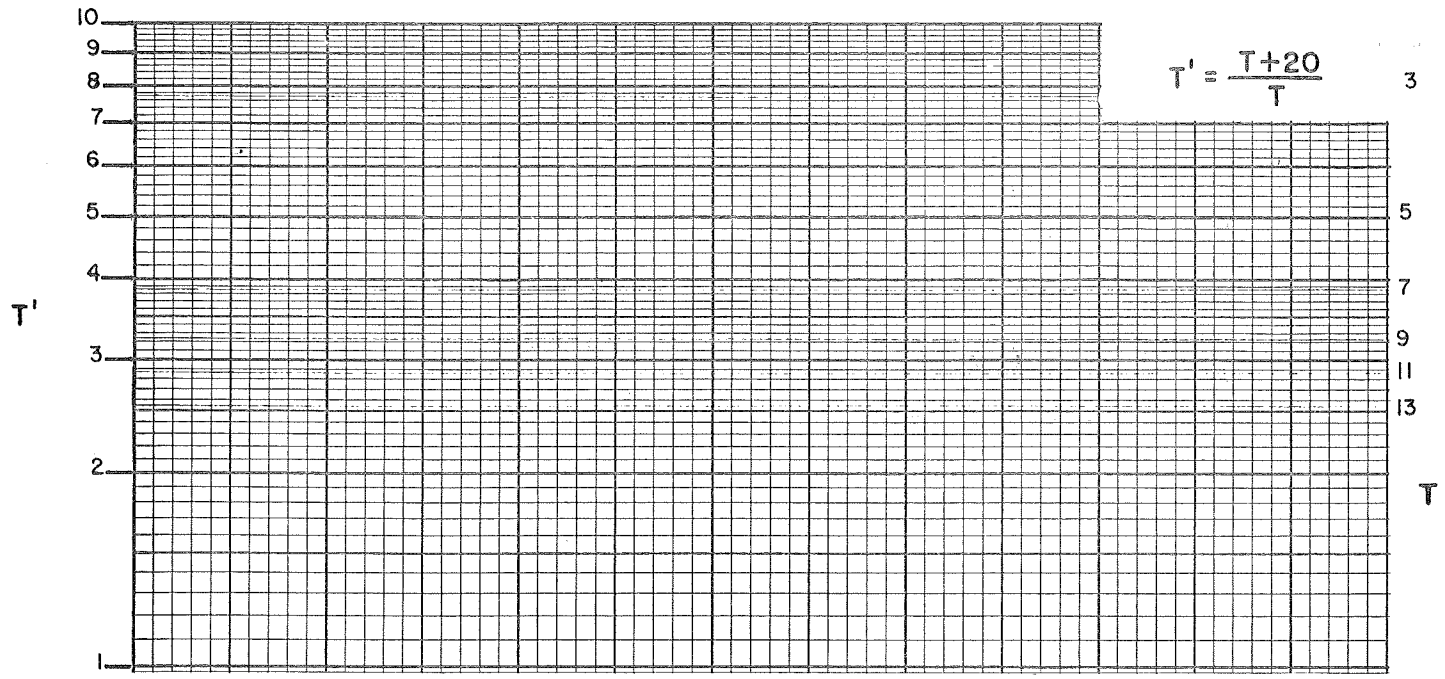
Drill Hole BC-602 Date Drilled 1976 Elevation 2840 ft.

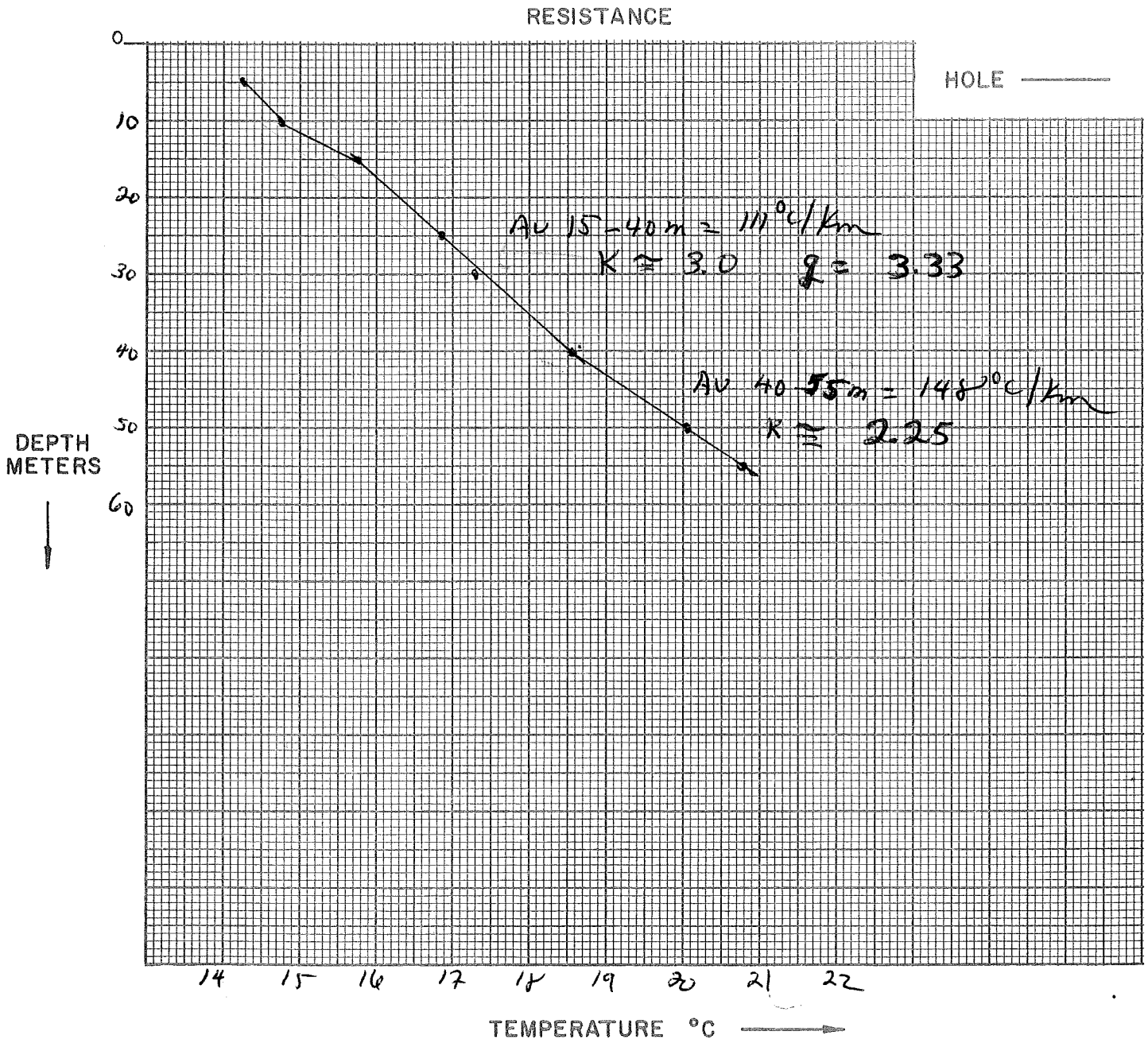
Instrument Direct Reading Probe Operator RO

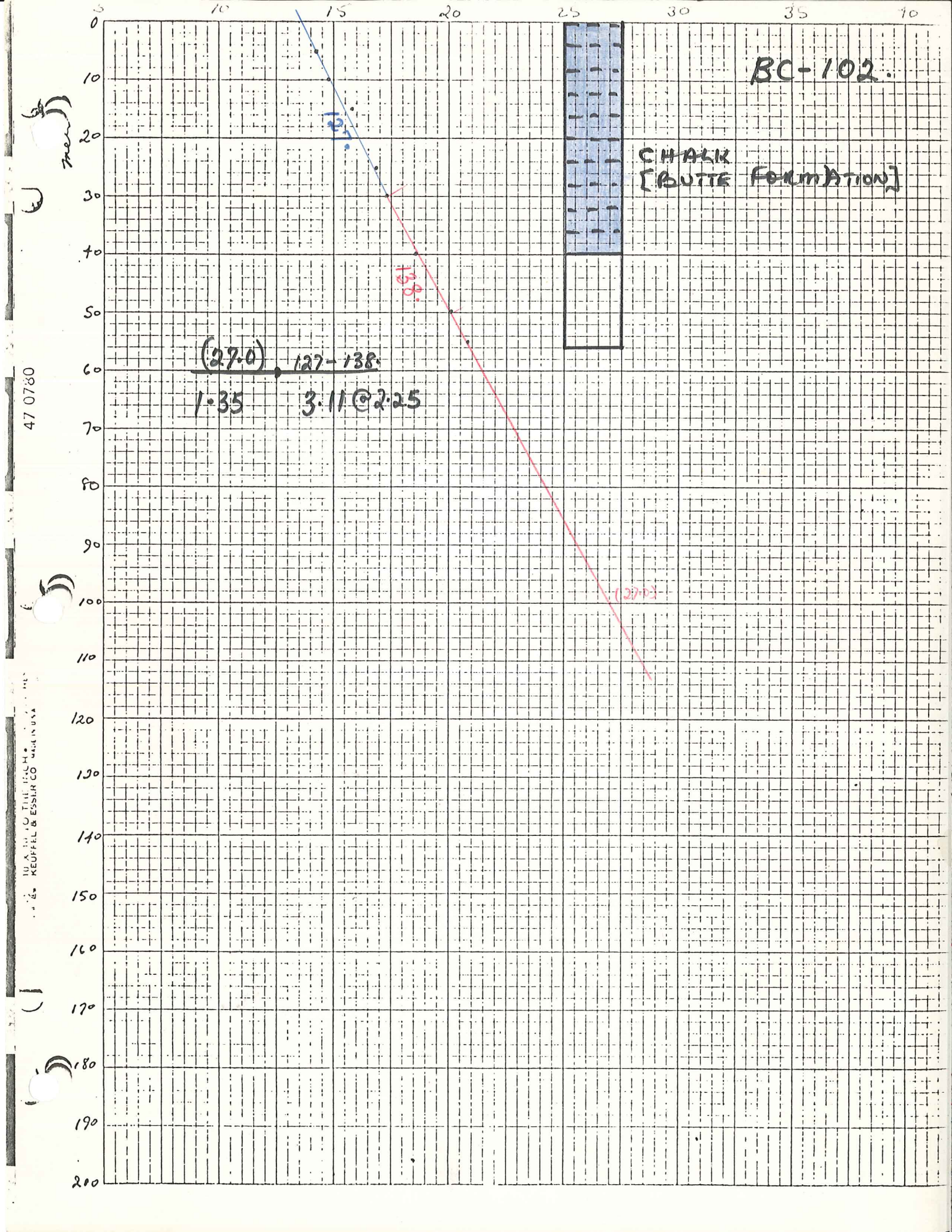
Comments 1" Iron pipe Chevron Gradient hole

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
0					
5		14.27			
10		14.74	470	94	
15		15.76	1020	204	
20					
25		16.86	906	90	
30		17.28	420	84	
35					
40		18.54	1360	136	
45					
50		20.04			
55		20.76	720	144	

Chalk Butte Fm -


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


RESISTANCE
HOLE
Av 15-40 m = 111°C/Km
K ≅ 3.0 g = 3.33
Av 40-55 m = 148°C/Km
K ≅ 2.25
DEPTH METERS
0
10
20
30
40
50
60
14
15
16
17
18
19
20
21
22
TEMPERATURE °C


BC-102.
CHALK
[BUTTE FORMATION]
(27.0)
127-138.
1.35
3.11@2.25

603

TEMPERATURE - DEPTH LOG

Location 2 Miles South Bully Creek Reservoir Date December 1, 1976

Map ~~Jamieson Oregon~~ Vines Hill Oregon 7.5' Quad

Property Bully Creek T 18S R 43E sec NE¼ NW¼ 22

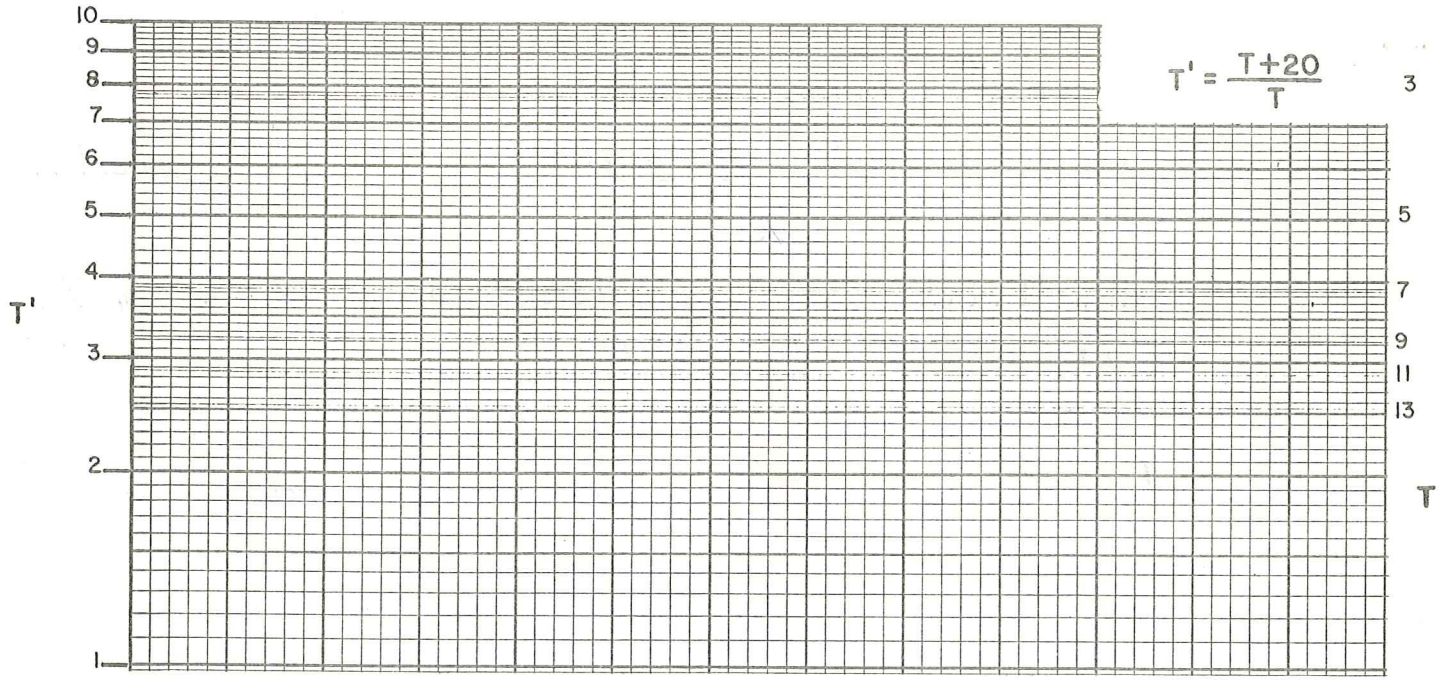
Drill Hole BC-103 603 Date Drilled 1976 Elevation _____ ft.

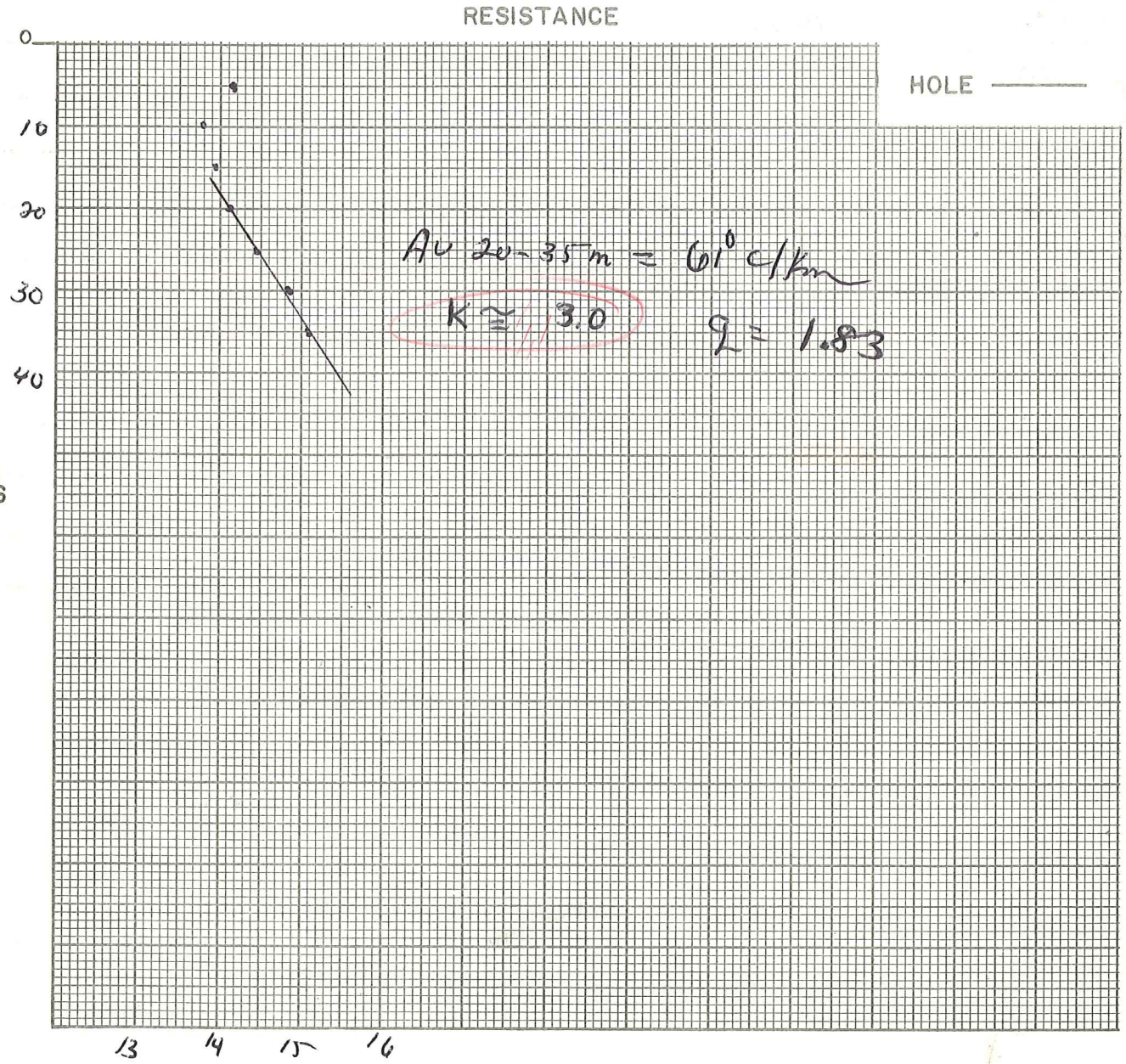
Instrument Direct Reading Probe Operator DP

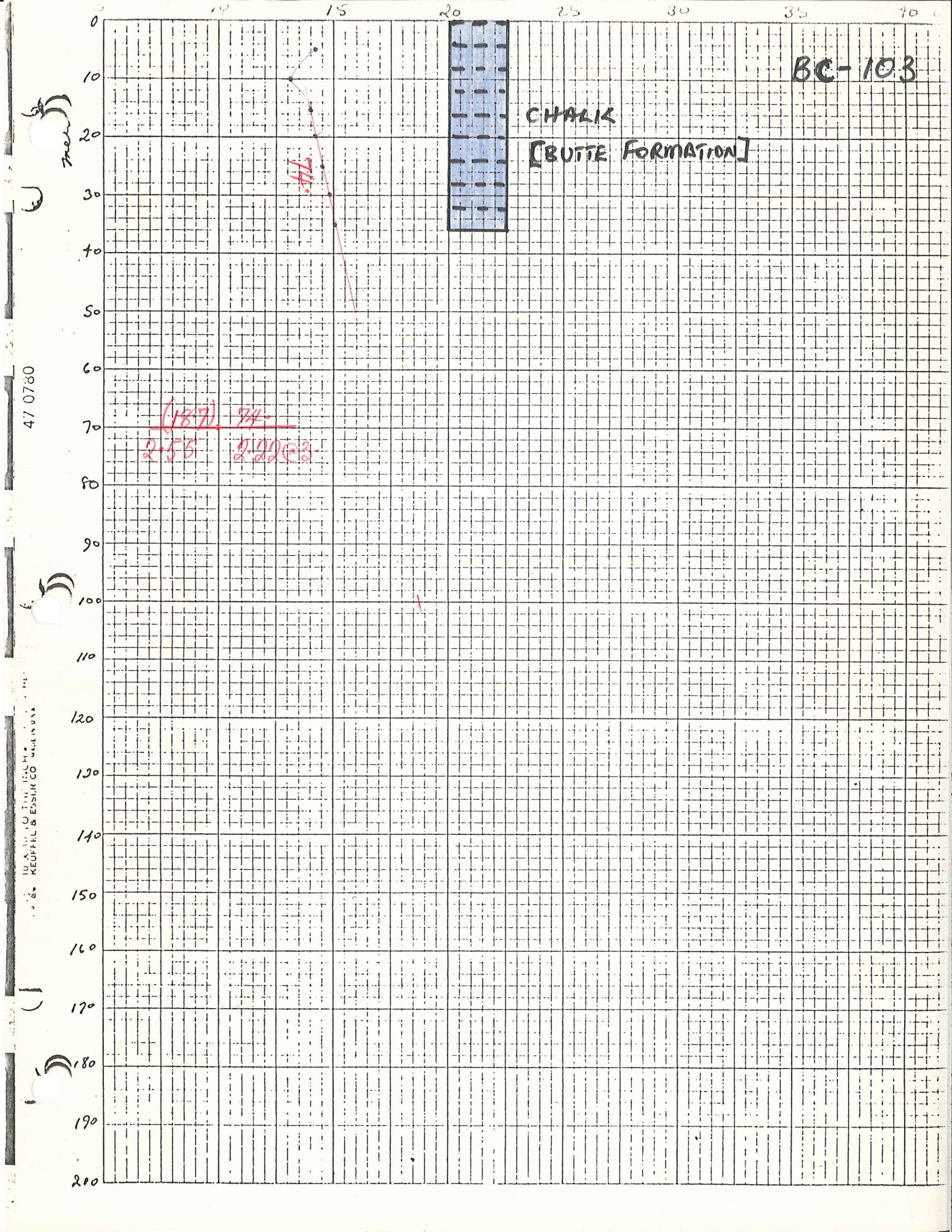
Comments 1" iron pipe Chevron Gradient Hole

Chalk Butte Fm

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
0					
5		14.17			
10		13.80	.03		
15		13.94	.140	25	
20		14.10	.160	32	
25		14.49	.390	78	
30		14.84	.350	70	
35		15.02	.180	36	


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


RESISTANCE
0
10
20
30
40
HOLE
Av 20-35 m ≅ 61° c/km
K ≅ 3.0
q ≅ 1.83
DEPTH METERS
13
14
15
16
TEMPERATURE °C


BC-103
CHALK
[BUTTE FORMATION]
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
180
190
200
47 0760

Hole #24=119 = T.D.

10=15.29°c	-	59.52°F
20-13.33	-	59.99
30=13.35	-	56.03
40=13.84	-	56.91
50=14.03	-	57.25
60=14.12	-	57.42
70=14.22	-	57.60
80=14.32	-	57.78
90=14.59	-	58.26
100=14.82	-	58.68
119=15.00	-	59.00

99999.

PROJ.	WELL	DA-MO-YR-M/F	DESCRIPTION	EDITORS	TERRAIN CORR.	L/P	LIST/dist
55	208	7 SP 76 M	E-208: 2.5 KM N. OF COVE FORT, UT	[illegible]			
137	603		FF4 KM NE OF DIVERSION DAM, ORE	JD/AKIN			

duplicate

IN/CM	MAP: 7.5, 15. or 60.	DEG'S LAT (SW CORNER)	MIN'S DLAT	DEG'S LONG.	MIN'S DLONG	N.	E.	ELEV.	M/F
IN	15.	38.	20.	112.	45.	8.62	9.42	4625.	F
CM	7.5	43.	52.5	117.	30.	~~54.7~~ 54.1	~~20.2~~ 19.9	~~2840.~~ 2800.	F

duplicate

SEGMENT DEPTH START	END	K	±	SEGMENT START	END	K	±
16.	34.	7.	.5	34.	40.	5.8	.5
50.	119.	-3.	-.5	.999			

START = .999 for last .999

Last =

Price

duplicate

DEPTH	°C	DEPTH	°C	DEPTH	°C
1.	16.775	1.5	16.916	2.	16.82

99999. LAST DEPTH

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

TEMPERATURE - DEPTH LOG

Location 2.5 Miles South of Jordan Hot Springs Date Dec 1, 1976

Map ~~Jamieson Oregon~~ Vines Hill Oregon 7.5 Quad

Property Bully Creek T 18S R 43E sec NW¼ SW¼ 21

Drill Hole BC-10 4 Date Drilled 1976 Elevation _____ ft.

Instrument Direct Reading Probe Operator DP

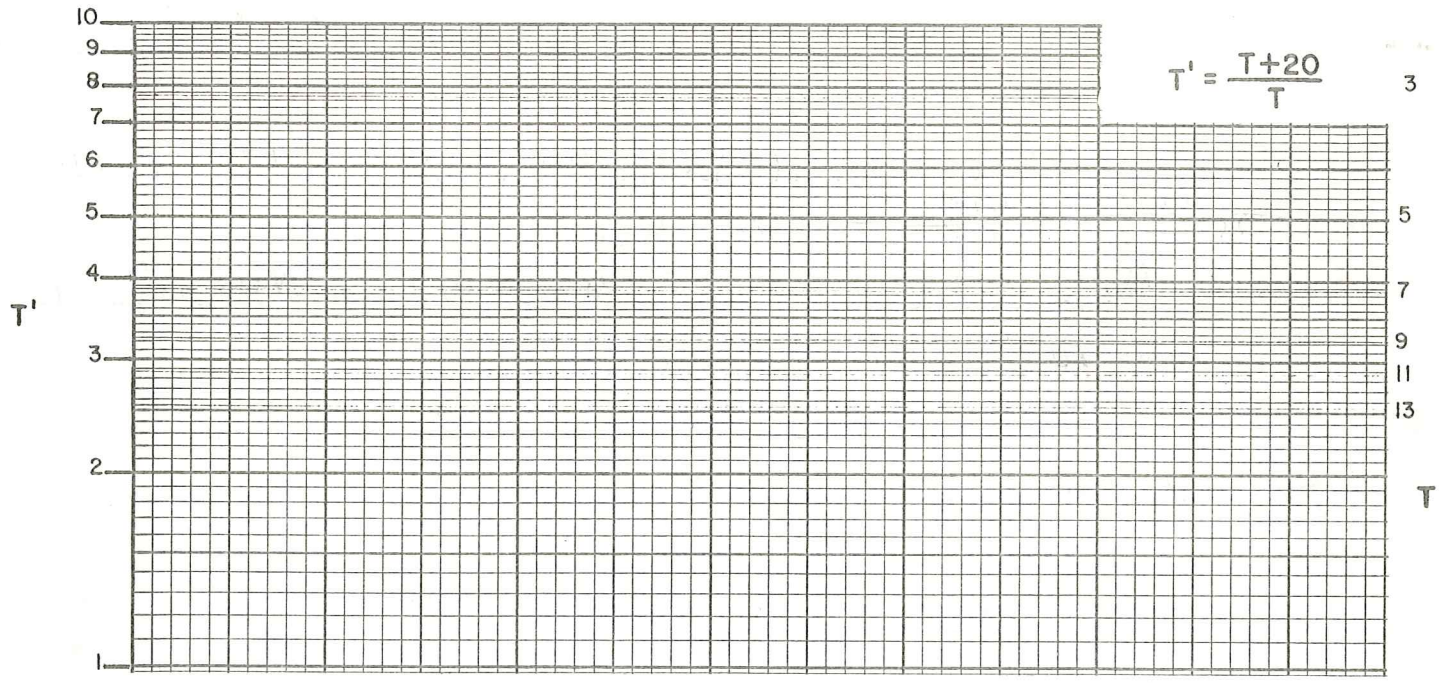
Comments 1" Iron pipe

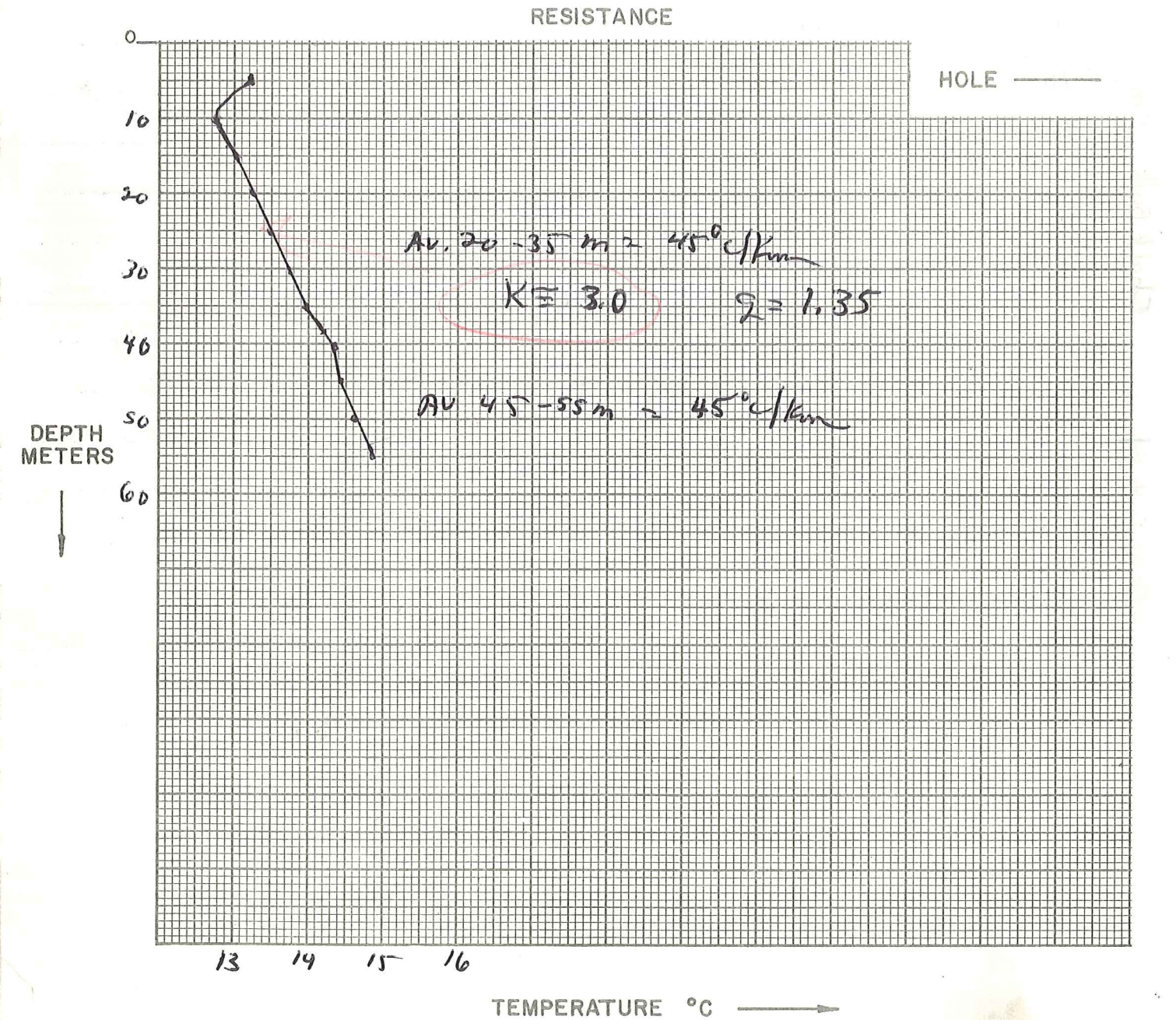
Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
0					
5		13.21			
10		12.77	.260	52	
15		13.03	.220	44	
20		13.25	.240	48	
25		13.49	.220	44	
30		13.71	.270	54	
35		13.98	.340	68	
40		14.32	.180	36	
45		14.40	.200	40	
50		14.60	.250	50	
55		14.85			

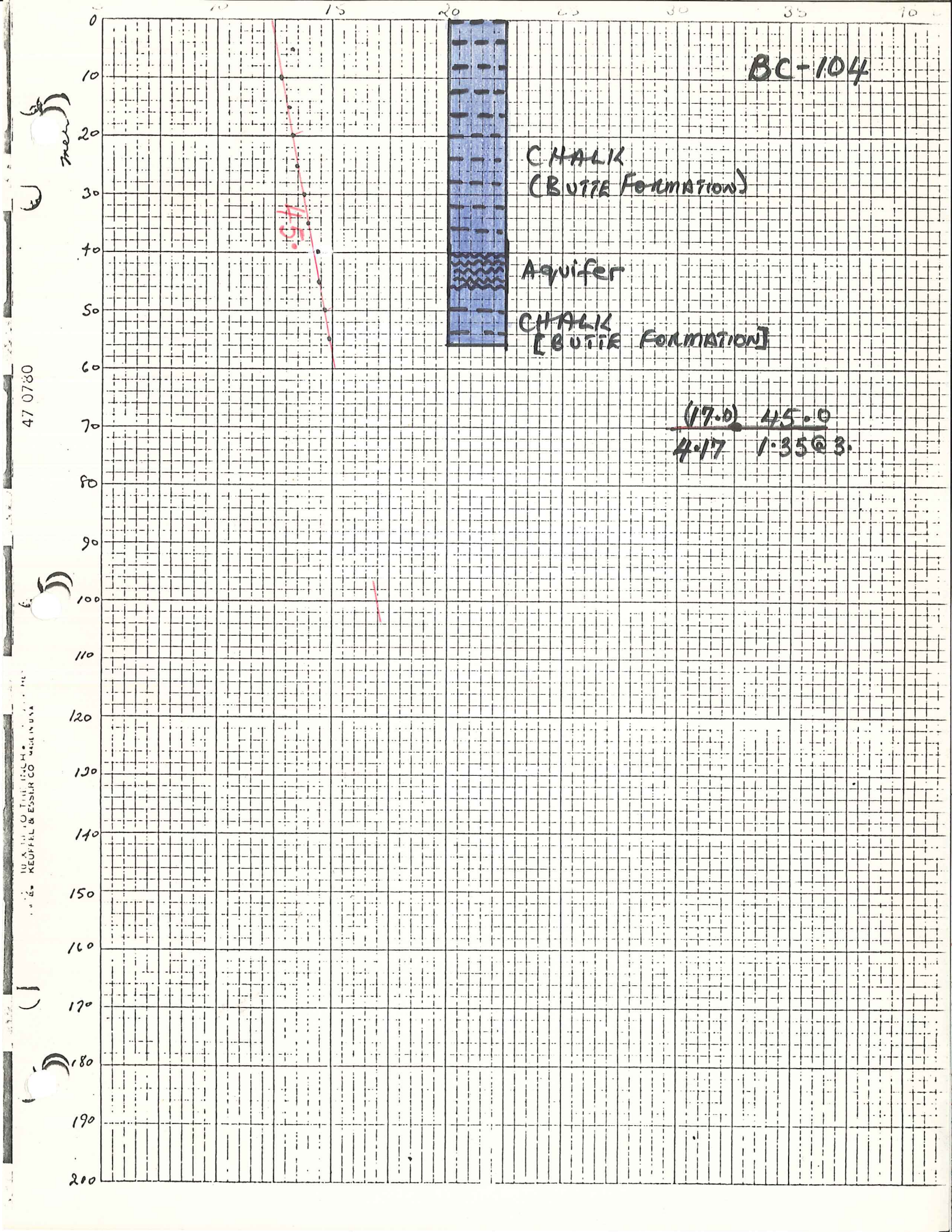
Chalk Butte Fm.

Aquifer

Chalk Butte Fm.


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


RESISTANCE
HOLE
DEPTH METERS
0
10
20
30
40
50
60
Av. 20-35 m = 45° c/Km
K = 3.0
Q = 1.35
Av 45-55 m = 45° c/Km
13
14
15
16
TEMPERATURE °C


BC-104
CHALK
(BUTTE FORMATION)
Aquifer
CHALK
[BUTTE FORMATION]
(17.0) 45.0
4.17 1.35@3.
47 0780
KEUFFEL & ESSER CO

#104

11:36

11:38

Hole #23=185=T.D.

10=14.86°c	-	58.75°F
20=12.57	-	54.63
30=12.60	-	54.68
40=12.99	-	55.38
50=13.10	-	55.58
60=13.36	-	56.05
70=13.46	-	56.23
80=13.64	-	56.55
90=13.73	-	56.71
100=13.85	-	56.93
120=14.06	-	57.31
140=14.38	-	57.88
160=14.61	-	58.30
180=14.79	-	58.62
185-14.86	-	58.75

99999.

PROJ.	WELL	DA-MO-YR-M/F	DESCRIPTION	EDITORS	TERRAIN CORR.	L/P	LIST/PLOT
[illegible]	208	7 SF 76 M	E-208: 2.5 MI. N. OF COVE FORT, UT	J[illegible]			
737	604	FF	2.7 N OF DAM, VINES HILL, ORE	JFD/AKIN			

duplicate

SW CORNER

IN/CM	MAP: 7.5, 15. or 60.	DEG'S LAT	MINS DLAT	DEG'S LONG.	MINS DLONG	N.	E.	ELEV.	M/F
IN	15.	38.	20.	112.	45.	8.62	9.42	4825.	F
cm	7.5	43.	52.5	117.	30.	~~50.40~~ 52.8	~~13.0~~ 12.55	2900. 2960.	F

duplicate

SEGMENT DEPTH START	END	K	±	SEGMENT START	END	K	±
16.	24.	7.	.5	24.	30.	[illegible]	.5
50.	185.	-3.	-.5	.999			

START =
[illegible]
.999

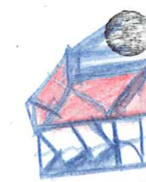
[illegible] =

[illegible]

duplicate

DEPTH	°C	DEPTH	°C	DEPTH	°C
1.	16.[illegible]	1.5	16.91[illegible]	2.	16.82

99999.
LAST ENTRY



605

TEMPERATURE - DEPTH LOG

Location 2.5 miles SSW Jordon Hot Springs Date Dec 1, 1976

Map Vines Hill Oregon 7½' Quad

Property Bully Creek T 18S R 43E sec SE¼ NW¼ 20

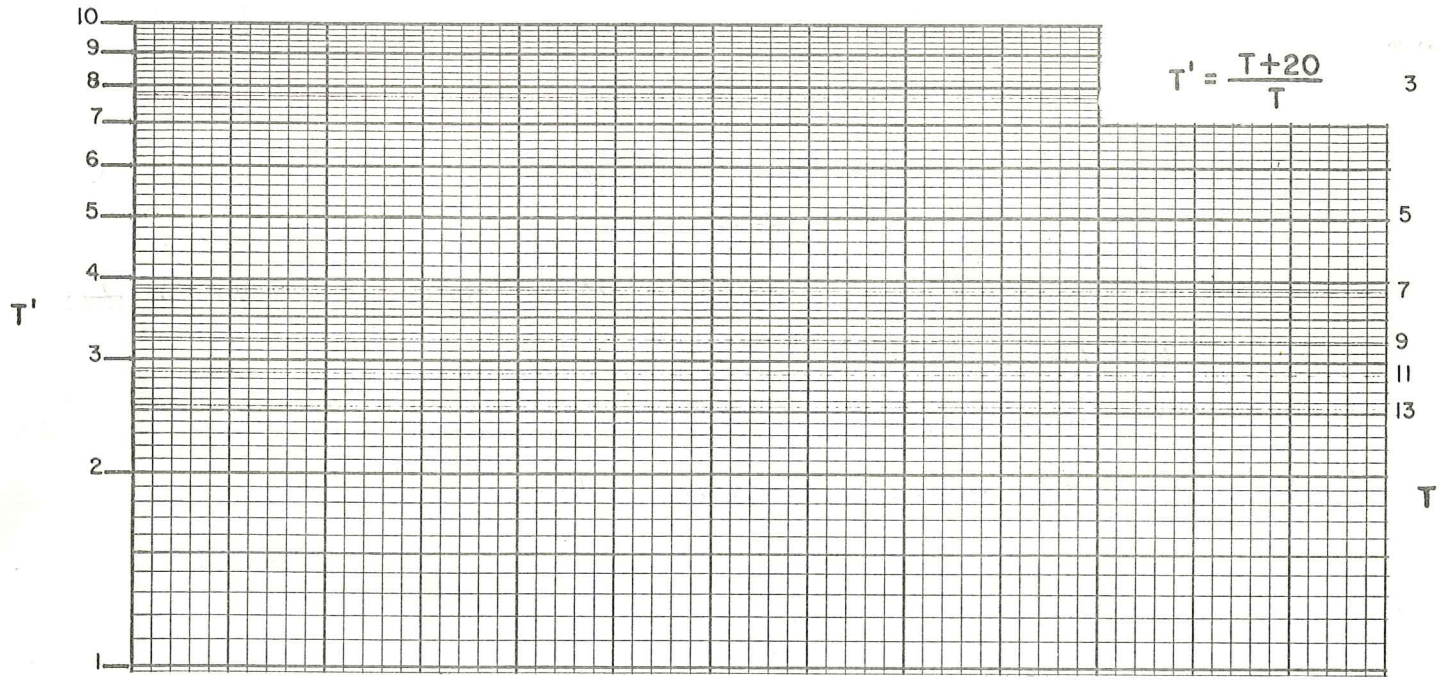
Drill Hole BC-105 Date Drilled 1976 Elevation ft.

Instrument New direct Reading Probe Operator DS

Comments 1" iron pipe Chevron Gradient Hole

Chalk Butte Fm

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
0					
5		13.04			
10		12.50	.020	4	
15		12.52	.310	62	
20		12.83	.170	34	
25		13.00	.180	36	
30		13.18	.320	64	
35		13.50	.200	40	
40		13.70	.300	60	
45		14.00	.240	48	
50		14.24	.360	62	
55		14.56			



RESISTANCE

HOLE 105

DEPTH METERS

0
10
20
30
40
50
60

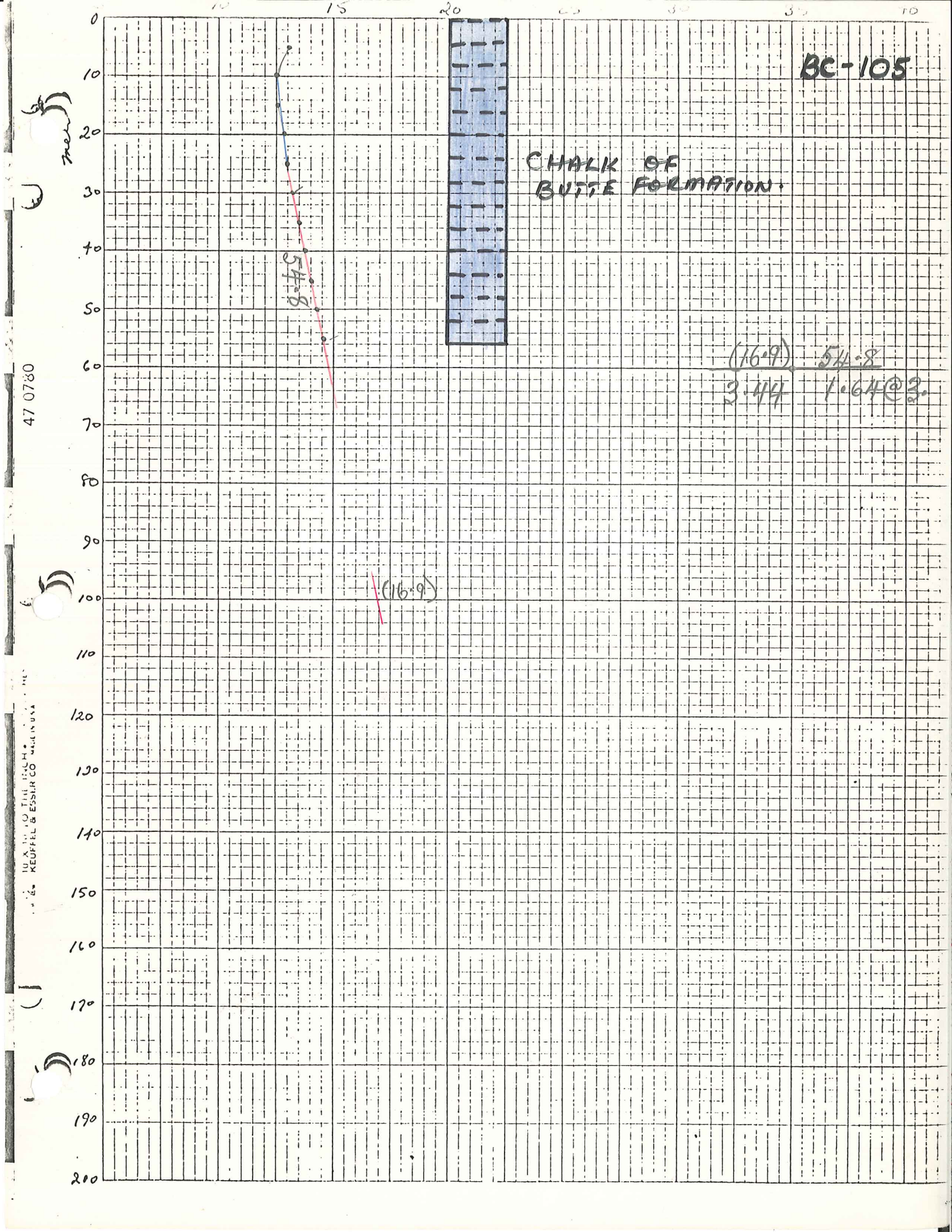
44° C/km

Av 30-55m = 55° C/Km

K = 3.0 Q = 1.65

13 14 15 16

TEMPERATURE °C


BC-105
CHALK OF BUTTE FORMATION.
54.8
(16.9)
(16.9)
54.8
3.44
1.64@3.
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
180
190
200

105

Hole #22=190' = T.D.

10=14.49°C	-	58.08°F
20=12.50	-	54.50
30=12.33	-	54.19
40=12.56	-	54.61
50=12.69	-	54.84
60=12.83	-	55.09
70=12.94	-	55.29
80=13.04	-	55.47
90=13.11	-	55.60
100=13.21	-	55.78
120=14.21	-	57.58
140=14.04	-	57.27
160=14.27	-	57.69
180=14.41	-	57.94
190=14.61	-	58.30

99999.

11:38
11:40

PROJ.	WELL	DA-MO-YR-M/F	DESCRIPTION	EDITORS	TERRAIN CORR.	L/P	ISF	DIST
55	208	7 SF 76 M	E-2?8: 2.5 MI. N. OF COVE FORT, UT	J[illegible]				
737	105	FF	4 KM NW OF DAM, VINES HILL, OK	JFD/AKIM				

605

duplicate

IN/CM	MAP: 7.5, 15. or 60.	DEG'S LAT	MINS DLAT	DEG'S LONG.	MINS DLONG	N.	E.	ELEV.	M/F
IN	15.	38.	20.	112.	45.	8.62	9.42	4825.	F
CM	7.5	43.	52.5	117.	30.	53.85	8.10	2890.	F

(SW CORNER)

53.0 8.3 2940.

duplicate

SEGMENT DEPTH / SEGMENT

START	END	K	±	START	END	K	±
16.	24.	7.	.5	24.	50.	4.7	.5
50.	100.	3.75	.5	100.	190.	-3.0	-.5
.999							

START = ... for last .999

Start = ...

Price ...

duplicate

DEPTH	°C	DEPTH	°C	DEPTH	°C
1.	16.???	1.5	16.91?	2.	16.82

99999. LAST DEPTH

606

TEMPERATURE - DEPTH LOG

Location 3/4 mile South of Bully Creek Date Dec 1, 1976

Map Vines Hill Oregon 7½' Quad

Property Bully Creek T 18S R 43E sec NE¼ NE¼ 19

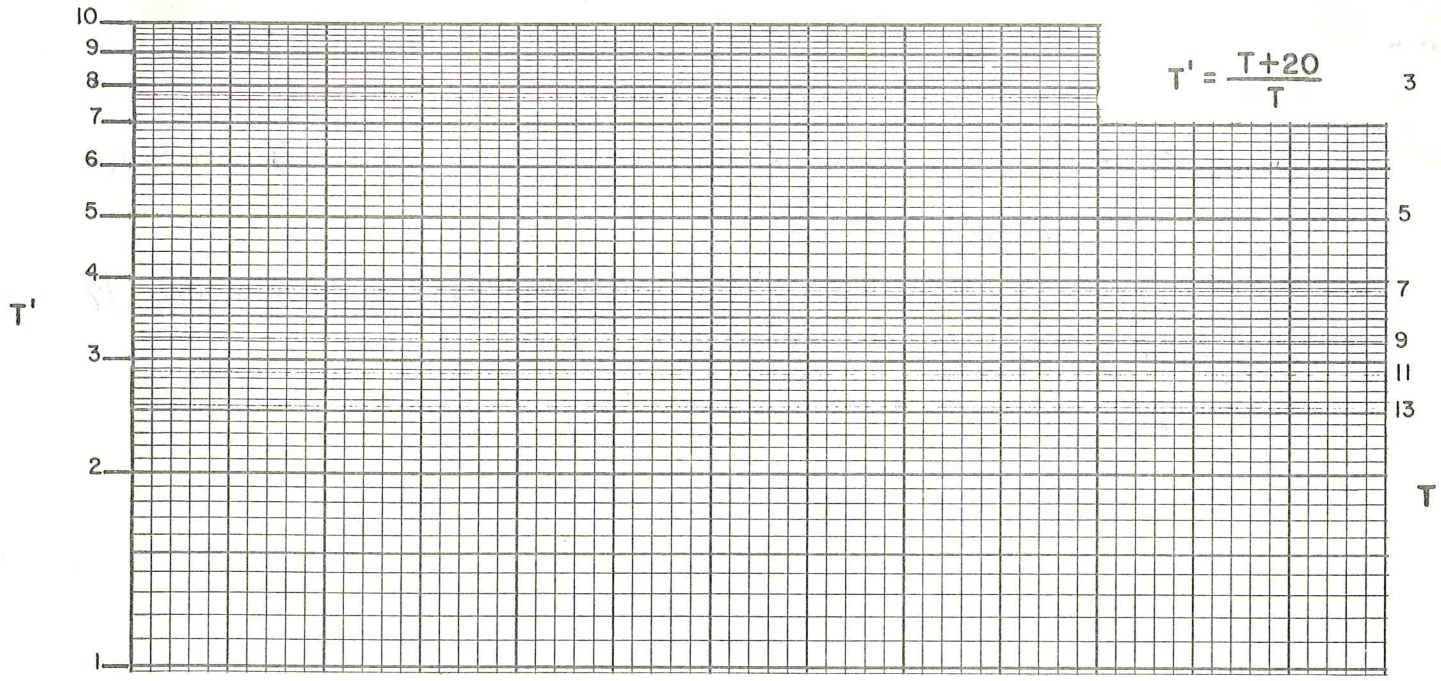
Drill Hole BC-106 Date Drilled 1976 Elevation ____ ft.

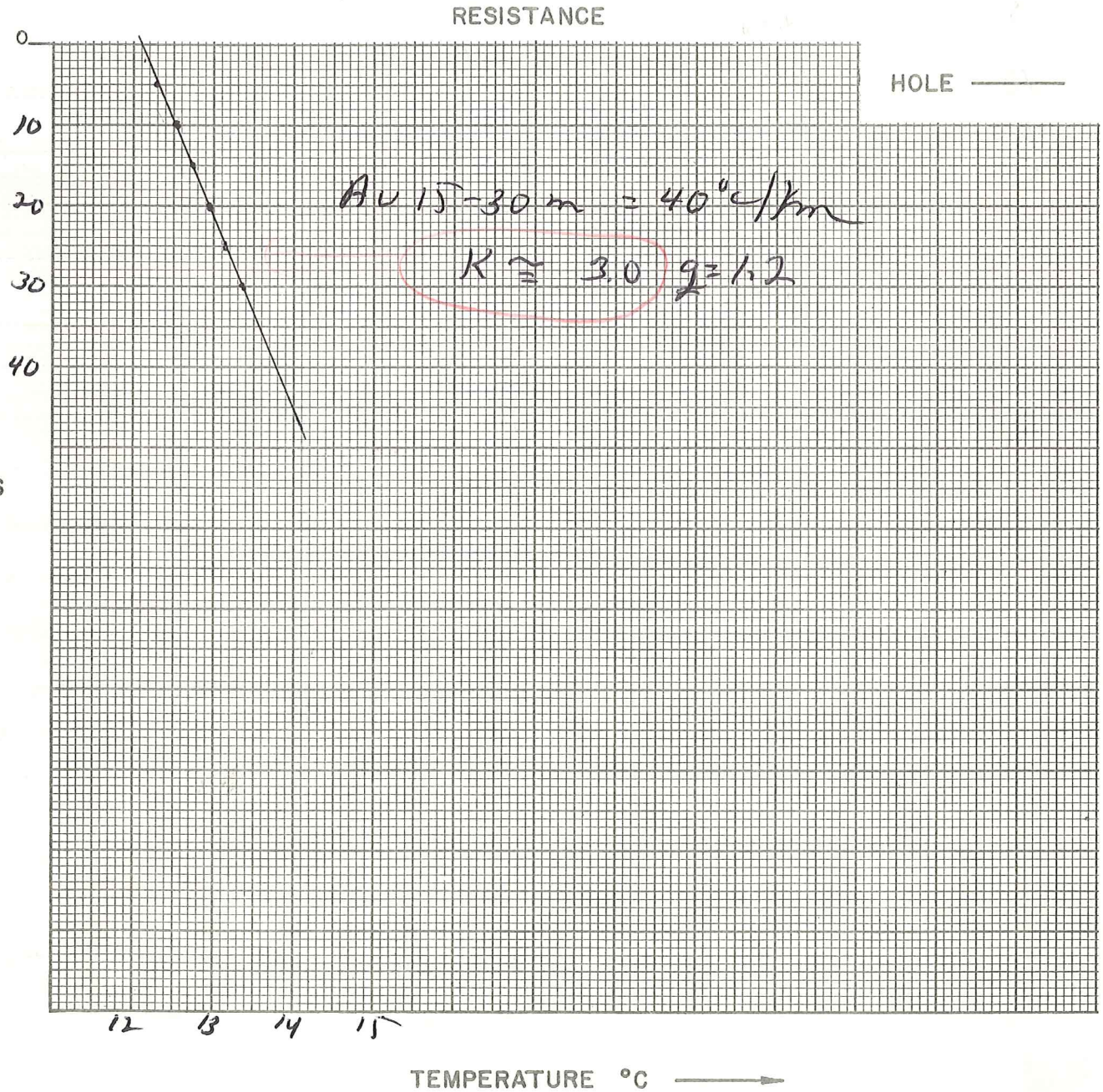
Instrument Direct Reading Probe Operator DP

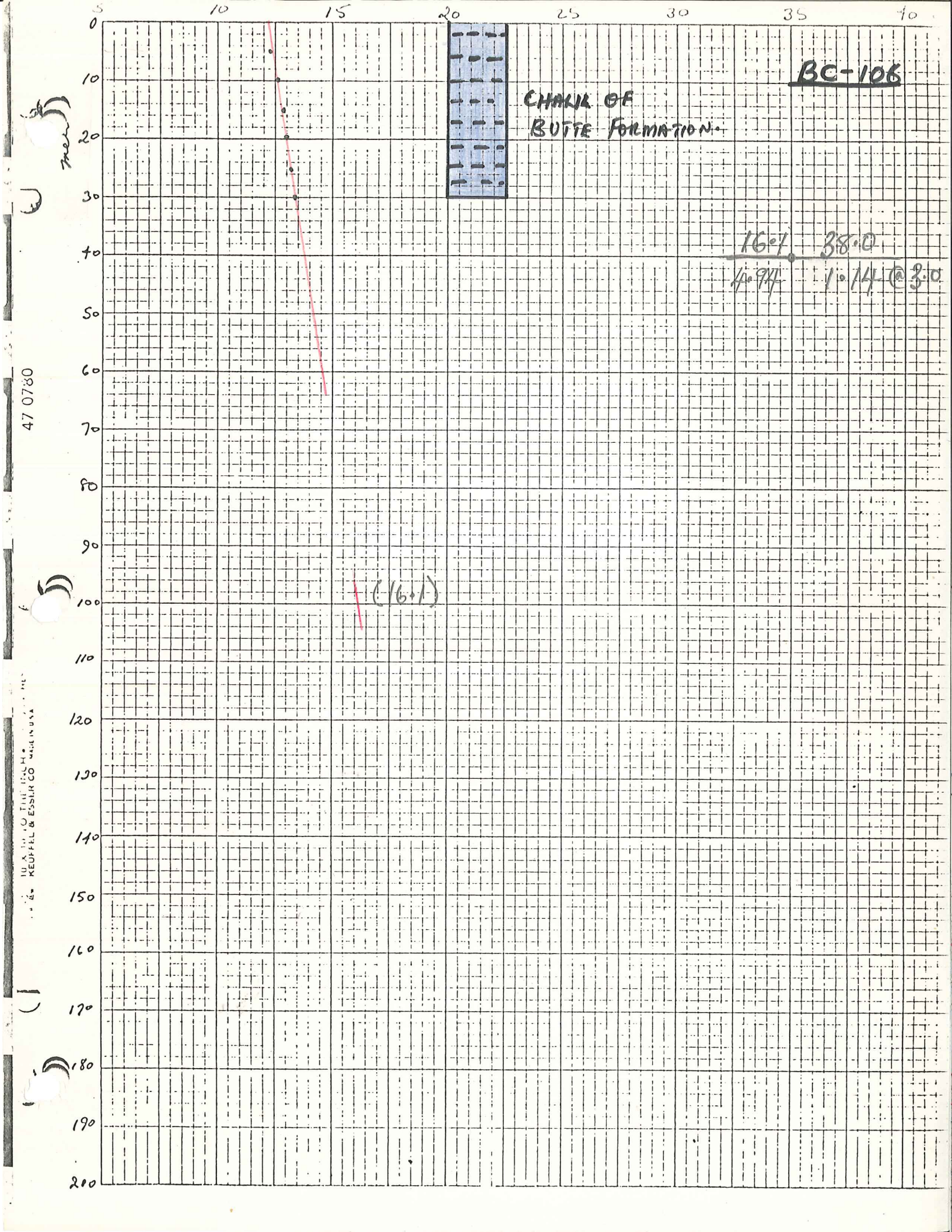
Comments 1" iron pipe Chevron Gradient Hole

Chalk Butte

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
0					
5		12.30			
10		12.57	.270	54	
15		12.72	.150	30	
20		12.95	.230	46	
25		13.11	.160	32	
30		13.33	.226		


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


RESISTANCE
0
10
20
30
40
HOLE
DEPTH METERS
Au 15-30 m = 40°C/km
K ≅ 3.0 q = 1.2
12
13
14
15
TEMPERATURE °C


BC-106
CHALK OF BUTTE FORMATION.
16.1 38.0
4.94 1.14 @ 3.0
(16.1)
47 0780

BC-102

Hole #33=190 = T.D.

10=15.08°c	-	59.14°F
20=15.94	-	57.09
30=14.31	-	57.56
40=14.90	-	58.82
50=15.68	-	60.22
60=15.97	-	60.75
70=16.37	-	61.47
80=16.66	-	61.99
90=16.95	-	62.51
100=17.08	-	62.74
120=17.66	-	63.79
140=18.76	-	65.77
160=19.51	-	67.12
180=20.55	-	89.99
190-20.85	-	69.53

99999.

PROJ.	WELL	DA-MO-YR-M/F	DESCRIPTION	EDITORS	TERRAIN CORR	L/P	ISF	[illegible] EST
55	208	7 SP 76 M	E-208: 2.5 [illegible] M. OF COVE F[illegible]T, UT	J[illegible]				
137	602	F	F 1.5 KM NW OF HOTWELL, BC, ORE	DP/AKIN				

duplicate

IN/CM	MAP: 7.5, 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	7.5	43.	52.5	117.	30.	~~6.0~~ 6.15	~~2.5~~ 2.3	2800.	F

SW CORNER

duplicate

SEGMENT DEPTH / SEGMENT

START	END	K	±	START	END	K	±
16.	24.	7.	.3	24.	30.	4.7	.5
70.	120.	4.0	.5	120.	200.	-3.	-.5
.999							

START = [illegible] for last .999

Last = .

Price.

duplicate

DEPTH	°C	DEPTH	°C	DEPTH	°C
1.	16.3[illegible]	1.5	16.516	2.	16.82

99999. LAST DEPTH

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

106

10=14.24°c	- 57.63°F
20=12.56	- 54.61
30=12.56	- 54.61
40=12.66	- 54.79
50=12.84	- 55.11
60=12.96	- 55.33
70=13.04	- 55.47
80=13.12	- 55.62
90=13.25	- 55.85
100=13.54	- 56.37
120=13.66	- 56.59
140=13.77	- 56.79
160=14.13	- 57.43
180=14.41	- 57.94
200=14.76	- 58.57
220=15.68	- 60.22
240=15.80	- 60.44
260=16.06	- 60.91
271-16.29	- 61.32

99999.

11:40 -
11:43

PROJ.	WELL	DA-MO-YR-M/F	DESCRIPTION	EDITORS	TERRAIN CORR	L/P	IS#	HEAT FLOW / GRADIENT / LIST
155	208	7 SF 76 M	E-208: 2.5 MI. N. OF COVE FORT, UT	[illegible]				
737	606	FF	4.5KM NW OF DAM, VINES HILL, OR	JFD/AKIN				

duplicate

	IN/CM	MAP: 7.5, 15. or 60.	DEG'S LAT	MINS DLAT	DEG'S LONG.	MINS DLONG	N.	E.	ELEV.	M/F
	IN	15.	38.	20.	112.	45.	8.62	9.42	4825.	F
	cm	7.5	43.	52.5	117.	30.	~~55.20~~	~~3.35~~	2890.	F

(SW CORNER)

~~55.3~~ 55.3 — 3.3

duplicate

SEGMENT DEPTH START	END	K	±	SEGMENT START	END	K	±
16.	26.	7.	.5	26.	40.	4.7	.5
50.	100.	-3.	.5	100.	200	3.08	.5
220.	271.	3.15	-.5	.999			

START = ... for last .999

first = ...

Frice ...

duplicate

DEPTH	°C	DEPTH	°C	DEPTH	°C
1.	16.[illegible]	1.5	16.91[illegible]	3.	16.82

99999. LAST DEPTH

607

TEMPERATURE - DEPTH LOG

Location 3 Miles SW of Dennis Date

Map Jamieson Oregon 15'. Quad

Property North Vale - Bully Creek T 17S R 44E sec SW¼ NE¼ 31

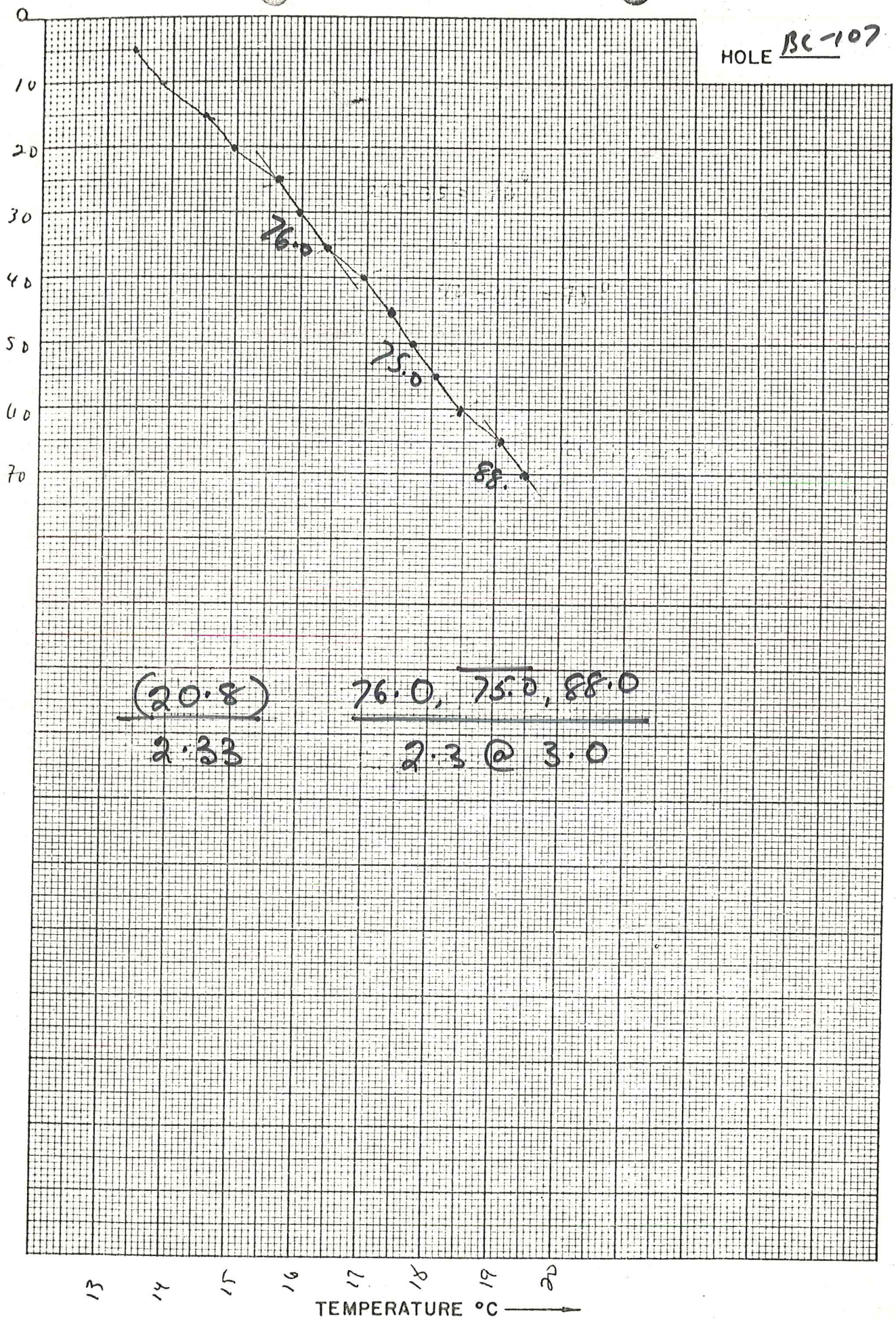
BC-107 607

Drill Hole 17-44 S31 Date Drilled Elevation ft.

Instrument Operator DOGAMI

Comments Water Well

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
5.		13.430			
10		13.850	.420	84	
15		14.510	.560	112	
20		14.990	.480	96	
25		15.630	.640	128	
30		15.920	.290	58	
35		16.390	.470	94	
40		16.930	.540	108	
45		17.390	.460	92	
50		17.700	.310	62	
55		18.060	.360	72	
60		18.430	.370	74	
65		19.020	.590	118	
70		19.460	.440	88	


HOLE BC-107
0
10
20
30
40
50
60
70
76.0
75.0
88.
(20.8)
2.33
76.0, 75.0, 88.0
2.3 @ 3.0
DEPTH METERS
13
14
15
16
17
18
19
20
TEMPERATURE °C

TEMPERATURE - DEPTH LOG

607

Location 3 Miles SW of Dennis Date

Map Jamieson Oregon 15'. Quad

Property North Vale - Bully Creek BC-107 T 17S R 44E sec SW¼ NE¼ 31

Drill Hole 17-44S31 Date Drilled Elevation ft.

Instrument 607 Operator DOGAMI

Comments Water Well

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
5.		13.430			
10		13.850	.420	84	11:43 -
15		14.510	.560	112	11:45
20		14.990	.480	96	
25		15.630	.640	128	
30		15.920	.290	58	
35		16.390	.470	94	
40		16.930	.540	108	
45		17.390	.460	92	
50		17.700	.310	62	
55		18.060	.360	72	
60		18.430	.370	74	
65		19.020	.590	118	
70		19.460	.440	88	
99999					

PROV.	WELL	DA-MO-YR-F	M	DESCRIPTION	EDITORS	TERRAIN CORR	L/P	ISE	LAST
755	208	7 SP 76	M	B-208: 2.5 KM N. OF COVE FORT, UT					
737	107		M	6. KM NE. OF BULLY CREEK SCH, OR. DOG/AKIN					

duplicate

IN/CM	MAP: 7.5, 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.	8.40	16.35	2220.	F

SW CORNER

duplicate

SEGMENT DEPTH

START	END	K	±	START	END	K	±
16.	26.	7.	.5	26.	73.	6.3	.5
40.	60.	-3.0	-.5	.999			

STAT = .999 for last .999

Last =

Princ: ...

duplicate

DEPTH	°C	DEPTH	°C	DEPTH	°C
1.	16.725	1.5	16.510	3.	16.82

99999. LAST DEPTH

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

CODING FORM FOR OLD ...

CODING FORM FOR

613

TEMPERATURE - DEPTH LOG

Location 4 miles SE of Westfall Date

Map Westfall, Oregon 15' Quad

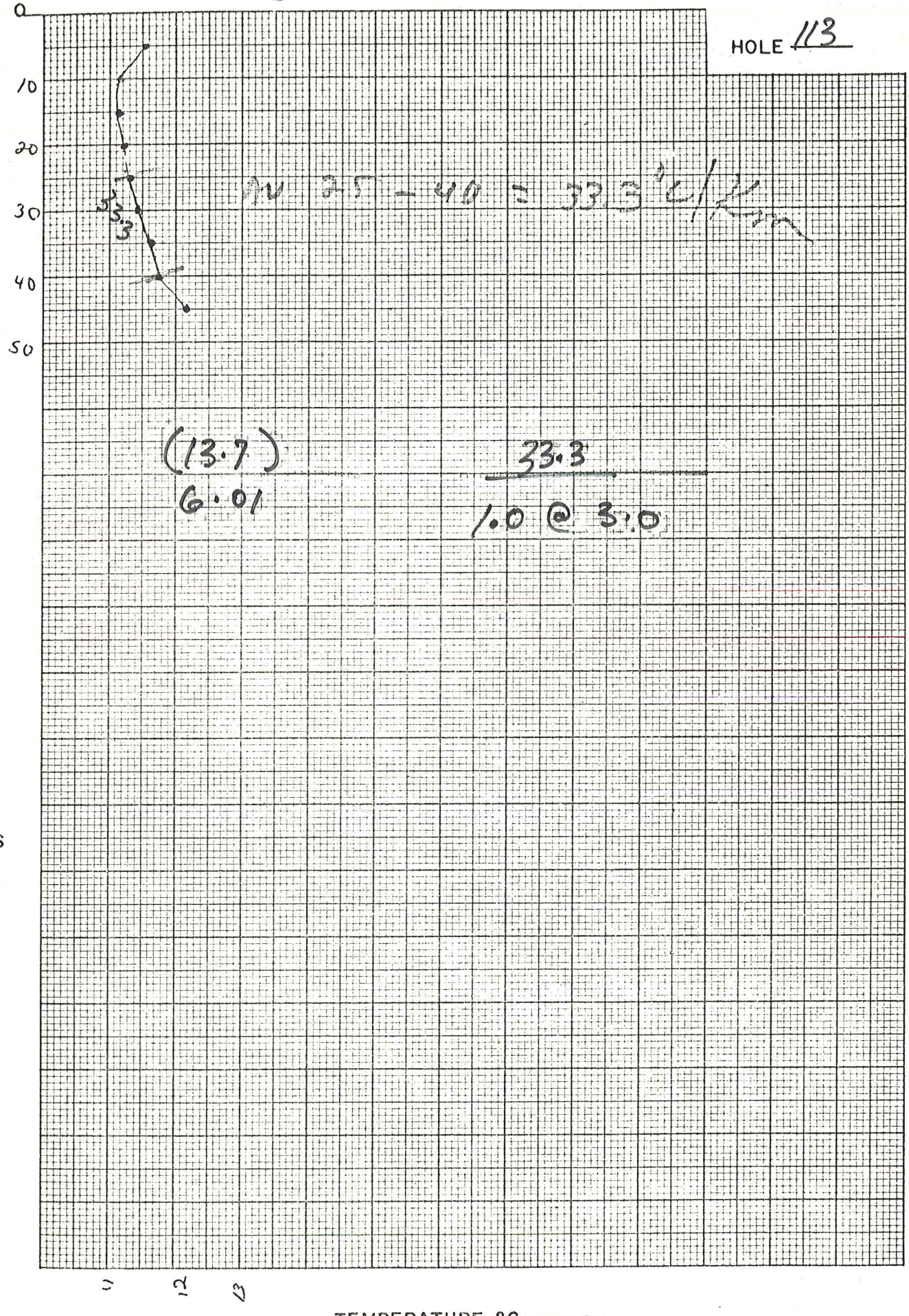
Property Bully Creek T 18S R 41E sec NE¼ NE¼ 35

Drill Hole # BC-613 - 41 535 Date Drilled Elevation ft.

Instrument Operator DOGAMI

Comments

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
5		11.590			
10		11.190	-.400		
15		11.170	-.020		
20		11.210	.040	8	
25		11.290	.080	16	
30		11.470	.180	36	
35		11.630	.160	32	
40		11.790	.160	32	
45		12.150	.360	72	


HOLE 113
0
10
20
30
40
50
DEPTH METERS
TEMPERATURE °C
(13.7)
6.01
33.3
1.0 @ 3.0

613

TEMPERATURE - DEPTH LOG

Location 4 miles SE of Westfall Date

Map Westfall, Oregon 15' Quad

Property Bully Creek T 18S R 41E sec NE¼ NE¼ 35

Drill Hole BC-613 #-41 535 Date Drilled Elevation ft.

Instrument Operator DOGAMI

Comments

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Gradient °C/Km Avg.	Comments
5		11.590			
10		11.190	-.400		11:45 - 11:47
15		11.170	-.020		
20		11.210	.040	8	
25		11.290	.080	16	
30		11.470	.180	36	
35		11.630	.160	32	
40		11.790	.160	32	
45		12.150	.360	72	
99999					

CODING Form

PROV. | WELL | DA-MO-YR-F | DESCRIPTION | EDITORS | TERRAIN COOR | UP | RISE | WEST

755 208 7 SP 76 M B-208: 2.5 KM N. OF COVE POST, UT
737 113 M 6.2KM SE OF WESTFALL, OREGON DOG/AKIN

duplicate

	IN CM	MAP: 7.5, 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.	43.	45.	117.	45	38.5	13.3	2900.	F

duplicate

SEGMENT DEPTH

START	END	K	±	SEGMENT START	SEGMENT END	K	±
16.	26.	7.	.5	16.	26.	4.3	.5
25.	40.	-3.0	-.5	.999			

START = -.999 or last .999

Last =

Princi... K ±

duplicate

DEPTH	°C	DEPTH	°C	DEPTH	°C
1.	16.325	1.5	16.316	2.	16.82

99999. LAST DEPTH

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

CODING Form for OLDS Data

PROJ.	WELL	DA-MO-YR-M/F	DESCRIPTION	EDITORS	TERRAIN CORR	L/P	4/L	ISE	DIST
755	208	7 SP 76	MB-208: 2.5KM N. OF COVE FORT, UT	JED/DDF					
737	630		FFBC130: 0.8KM NW OF HOTSPRGS, ORCHEV/OA.						

duplicate

SW CORNER

IN/CM	MAP: 7.5, 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.		117.	30.	4.30 / 4.45	3.70 / 3.8	2600	F

JUST red

duplicate

SEGMENT DEPTH

START	END	K	±	START	END	K	±
16.	26.	7.	.5	26.	40.	35.8	.5
40.	110.	-3.4	-.5	.999			

START = .999 for last .999

Last = .

Princ: seg K ±

duplicate

DEPTH	°C	DEPTH	°C	DEPTH	°C
1.	16.325	1.5	16.510	2.	16.82
10.	63.86	20.	61.39	30.	61.29

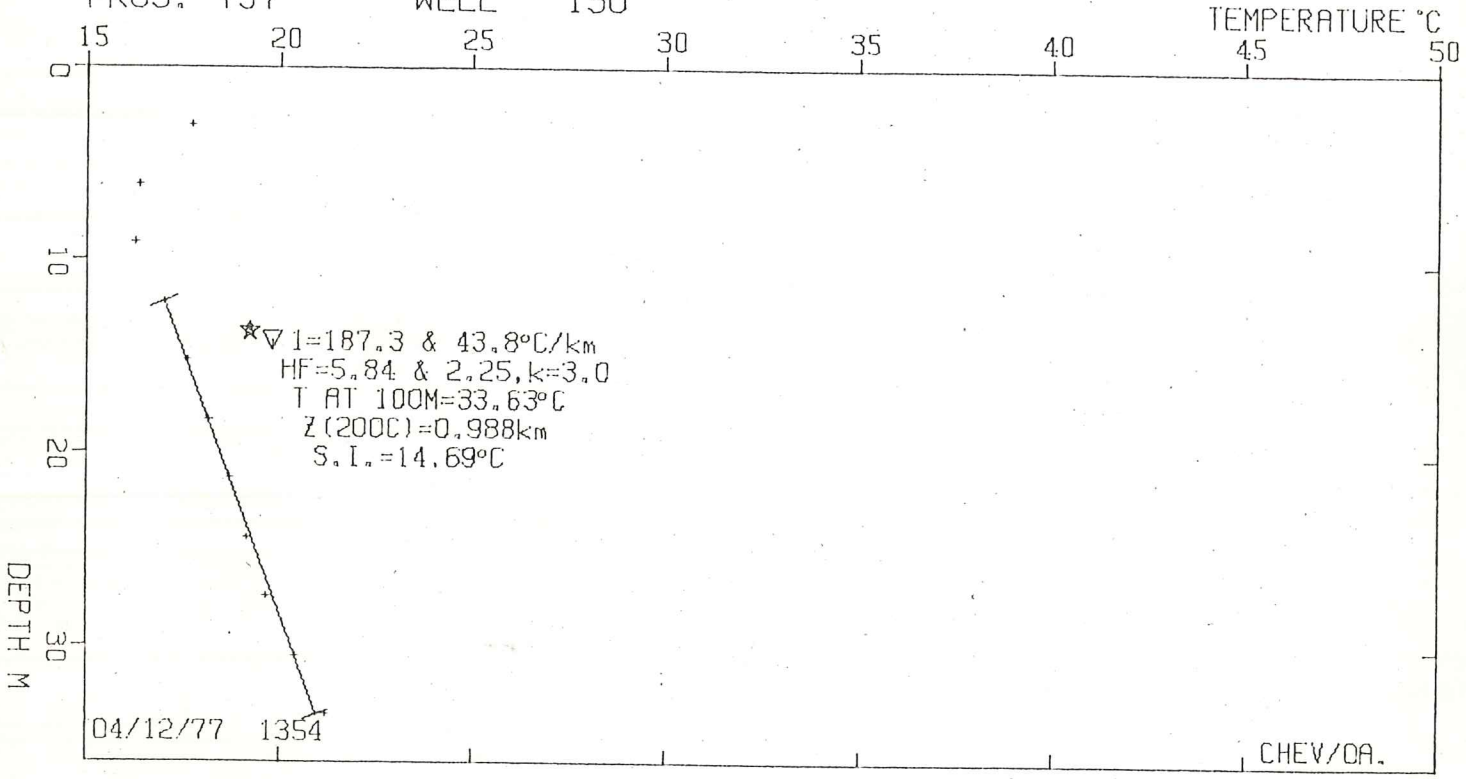
99999. LAST DEPTH

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

dup

BC130: 0.8KM NW OF HOTSPRG, OR N.LAT 44.024, W.LONG 117.471

PROJ. 737 WELL 130



GEOTHERMAL LOG, AMAX EXPLORATION, INC., A.L.LANGE

PROJ	WELL DA	MO	YR	WELL TITLE	EDITOR	TERRAIN	LP	EI	ISZ	IST
737	130			BC130: 0.8KM NW OF HOTSPRG, OR	CHEV/OA.	0.0	0	0	1	1

YCM	XCM	N.LAT	W.LONG	ELEV
~~4.3000~~ 4.45	~~3.7~~000 3.8	44.0243	117.4711	792.5

J	SEG START	SEG END	CONDTVTY & STD DEV.	
1	12.192	33.528	3.000	0.500

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

PROJ	WELL DA	MO	YR	DEPTH (M)	DEG C	DEG C/KM	SAMPLE NO.
737	130			3.048	17.700	99999.000	1
				6.096	16.328	-450.204	2
				9.144	16.272	-18.227	3
				12.192	17.011	242.418	4
				15.240	17.600	193.203	5
				18.288	18.150	180.447	6
				21.336	18.689	176.803	7
				24.384	19.161	154.926	8
				27.432	19.628	153.108	9
				30.480	20.378	246.063	10
737	130			33.528	21.178	262.469	11

SEG	ZSTART	TSTART	ZEND	TEND	INTERCPT	COND & DCON	GRADIENT & S.D.	HFU & DHF	T AT 100M	KM
	187.323	0.358	20.538							
1	12.192	17.011	33.528	21.178	14.692	3.000 0.500	187.323 43.799	5.839 2.251	33.630	0.988

PRECEEDING SEGMENT USED FOR EXTRAPOLATION

SEGMENT	GRADIENT	COND. DEDUCED FR.SEGMT 1. HF =	
1	187.323	3.000	5.84

PROJ.	WELL	DA-MO-YR-M/F	DESCRIPTION	EDITORS	TERRAIN CORR	L/P	H/I	ISZ	ST
755	208	7 SP 76 M	B-208: 2.5KM N. OF COVE FORT, UT	JEU/BDT					
737	131		FFBC131: 1.3KM SW OF HOTSPGS ORCHEV/CA						

duplicate

IN/CM	MAP: 7.5, 15. or 60.	DEG'S LAT	MIN'S DLAT	DEG'S LONG.	MIN'S DLONG	N.	E.	ELEV.	M/F
IN	15.	38.	30.	112.	45.	8.62	9.42	4825.	F
CM	15.	44		117.	30.	3.0	1.85	2940	F
						3.3	1.9		

SW CORNER

duplicate

SEGMENT DEPTH START	END	K	±	SEGMENT START	END	K	±
16.	26.	7.	.5	26.	70.	5.8	.5
100.	160.	-5.5	-.5	.999			

START = .999 for last .999

Last = .

Print: seg K ±

duplicate

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

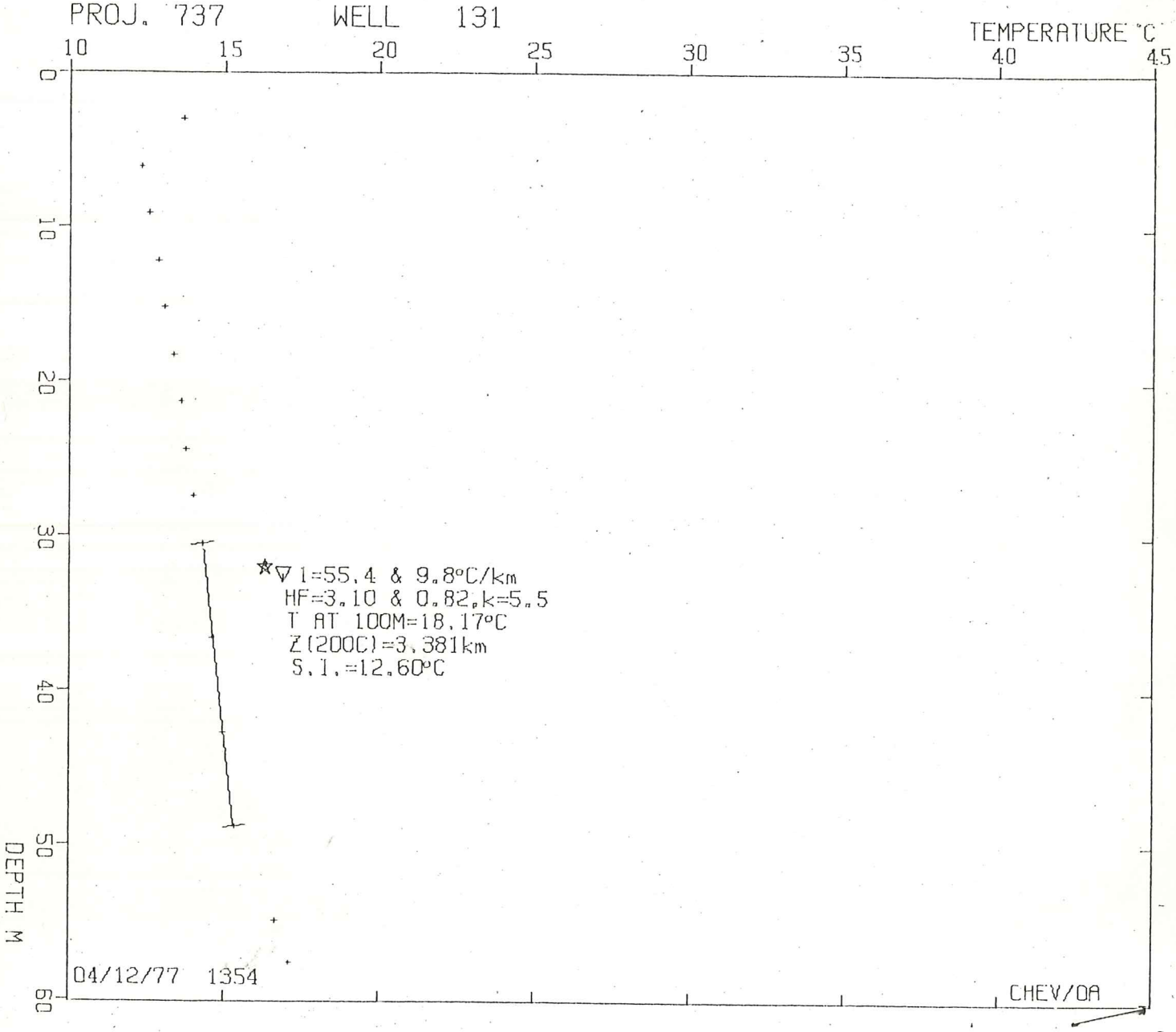
99999. LAST DEPTH

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

dup 631

BC131: 1.3KM SW OF HOTSPG, OR N.LAT 44.017, W.LONG 117.486

PROJ. 737 WELL 131



GEOTHERMAL LOG, AMAX EXPLORATION, INC., A.L.LANGE

PROJ	WELL	DA	MO	YR	WELL TITLE	EDITOR	TERRAIN	LP	LI	ISZ	IST
737	131				BC131: 1.3KM SW OF HOTSPG, OR	CHEV/OA	0.0	0	0	1	1

631

YCM	XCM	N.LAT	W.LONG	ELEV
~~3.0000~~ 3.3	~~1.8500~~ 1.9	44.0170	117.4856	835.2

J	SEG START	SEG END	CONDTVTY & STD DEV.	
1	30.480	48.768	5.500	0.500

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

PROJ	WELL	DA	MO	YR	DEPTH (M)	DEG C	DEG C/KM	SAMPLE NO.
737	131				3.048	13.650	99999.000	1
					6.096	12.311	-439.269	2
					9.144	12.539	74.731	3
					12.192	12.861	105.716	4
					15.240	13.039	58.325	5
					18.288	13.361	105.716	6
					21.336	13.578	71.085	7
					24.384	13.772	63.795	8
					27.432	14.011	78.374	9
					30.480	14.322	102.073	10
737	131				36.576	14.589	43.744	11
					42.672	14.950	59.237	12
					48.768	15.328	61.972	13
					54.864	16.661	218.722	14
					57.607	17.100	159.996	15

SEG	ZSTART	TSTART	ZEND	TEND	INTERCPT	COND & DCON	GRADIENT & S.D.	HFU & DHF	T AT 100M	KM
	55.413	0.110	6.324							
1	30.480	14.322	48.768	15.328	12.602	5.500 0.500	55.413 9.844	3.097 0.818	18.167	3.381

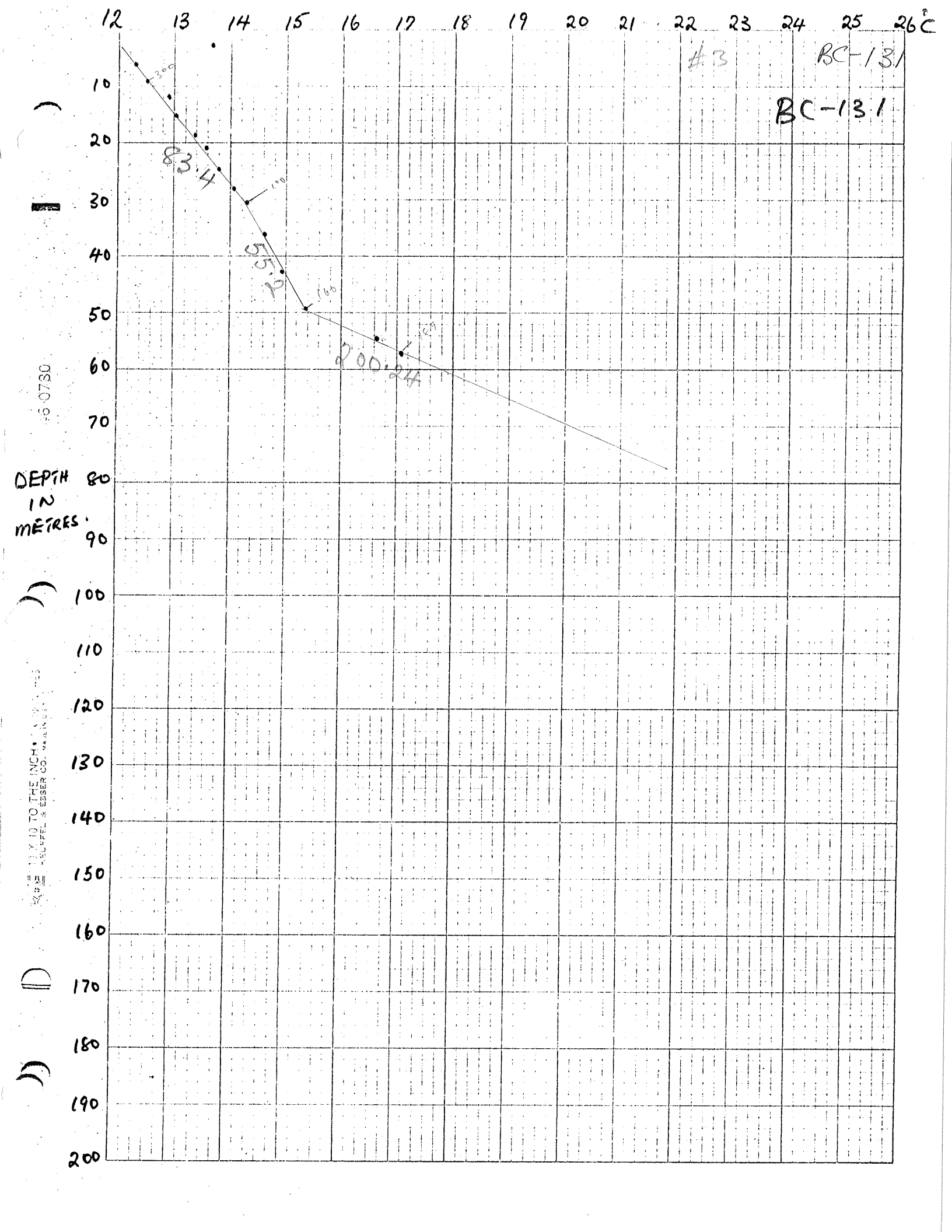
PRECEEDING SEGMENT USED FOR EXTRAPOLATION

SEGMENT	GRADIENT	COND. DEDUCED FR.SEGMT 1, HF = 3.10
1	55.413	5.500

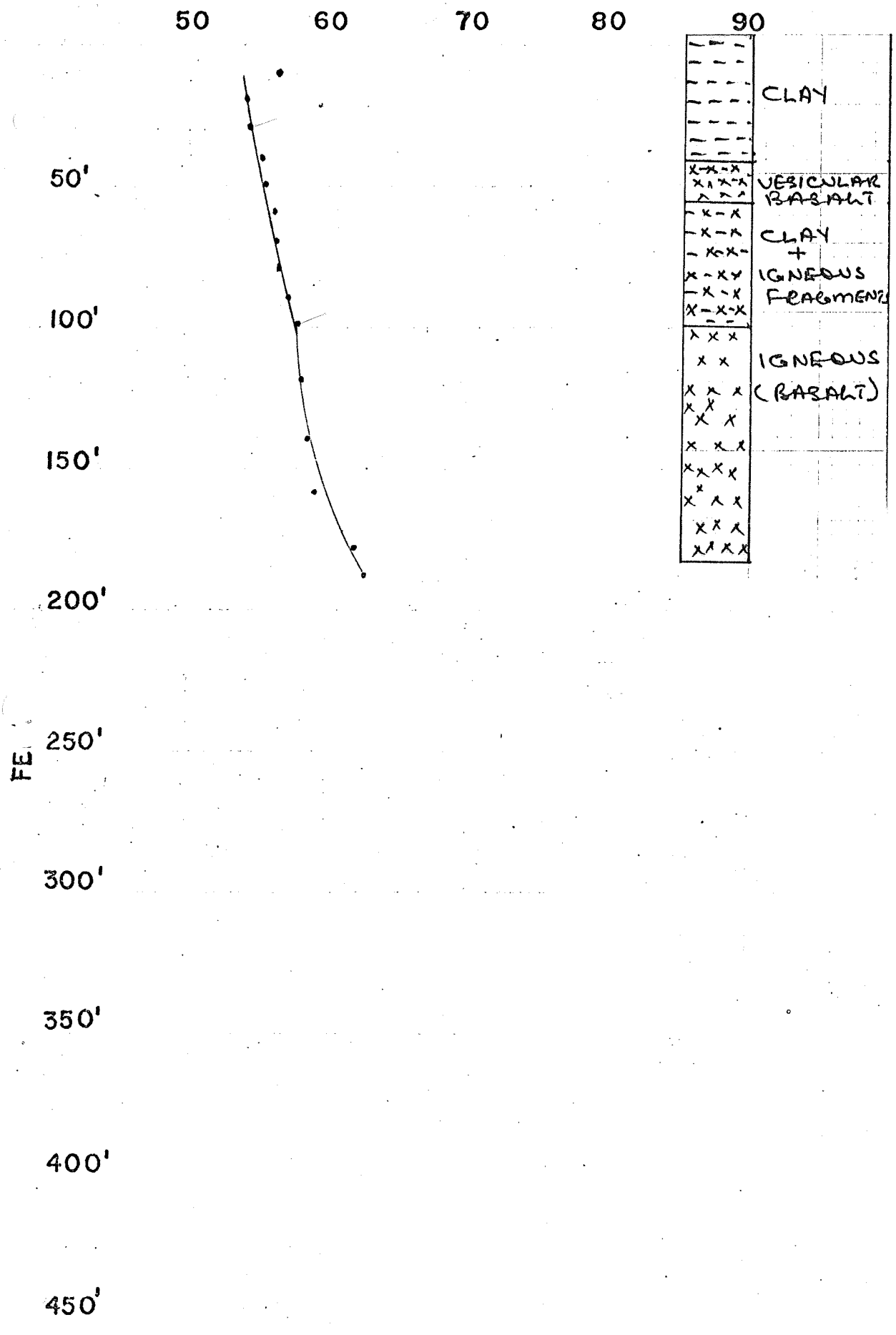
NBC #3 — BC-131

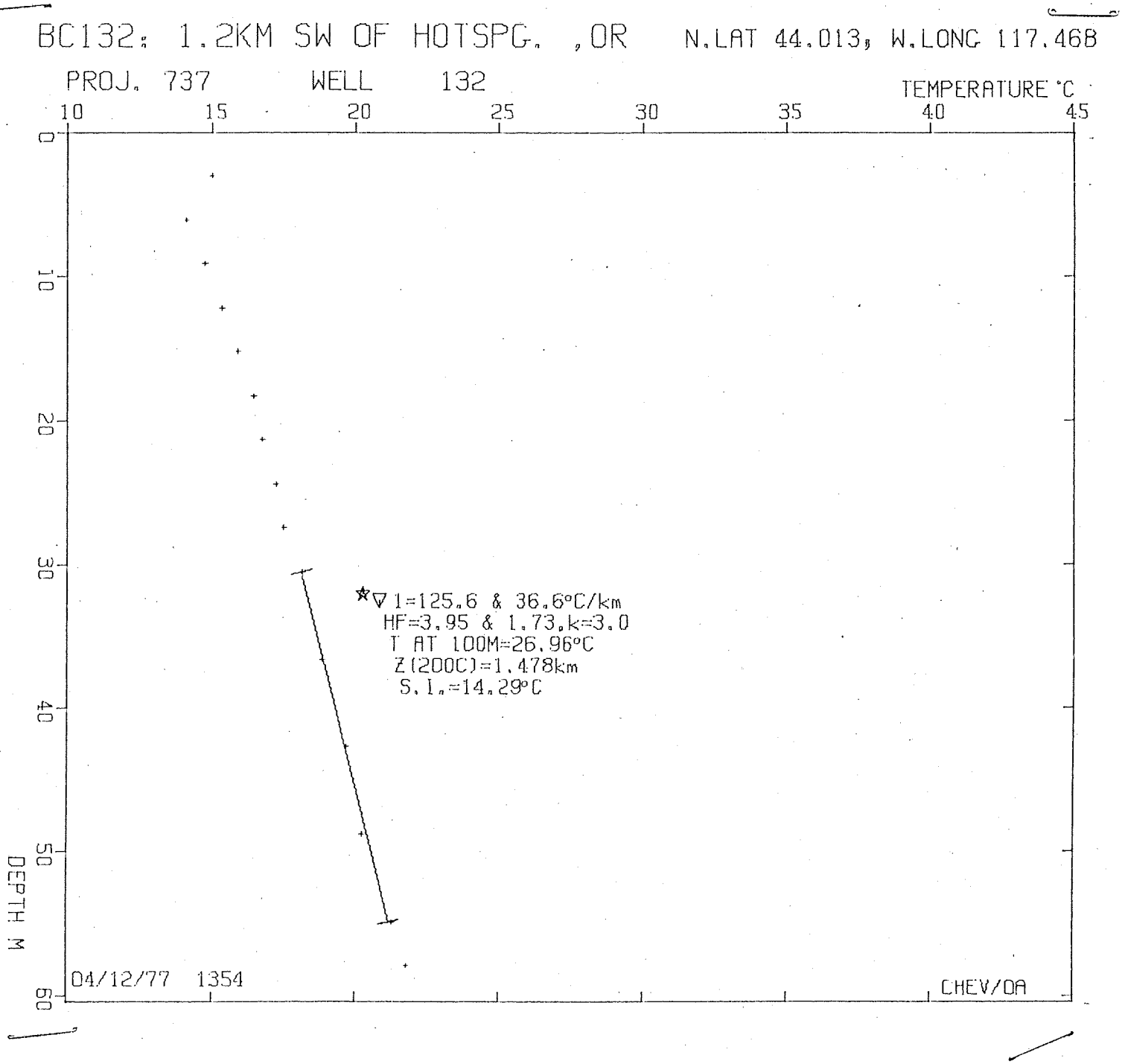
Lithology

0-15'	Clay - light tan and dark igneous material (basalt?) with frags of quartz
15-30'	As above w/chalcedony
30-45'	Clay - light tan - 100%
45-60'	Vesicular basalt (blk) - w/clay
60-75'	Clay - light tan - w/igneous frags
75-90'	Clay " " " " (basalt)
90-105'	Silicified clay stone (baked?) - hard 5 - or very fine grained tuff
105-120'	As above
120-135'	Igneous - dark (basalt?) w/qtz veining
135-150'	As above
150-165'	As above w/ minor white alt. prod.
165-180'	As above
180-190'	As above


12 13 14 15 16 17 18 19 20 21 22 23 24 25 26°C
#3
BC-131
BC-131
300
83.4
100
51.20
100
200.24
100
DEPTH IN METRES.
10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200
#60730
KEUFFEL & ESSER CO.

#3 °F RC-131


50
60
70
80
90
50'
100'
150'
200'
250'
300'
350'
400'
450'
FE
CLAY
VESICULAR BASALT
CLAY + IGNEOUS FRAGMENTS
IGNEOUS (BASALT)


BC132: 1.2KM SW OF HOTSPG. ,OR N.LAT 44.013, W.LONG 117.468
PROJ. 737 WELL 132
TEMPERATURE °C
10
15
20
25
30
35
40
45
0
10
20
30
40
50
60
DEPTH M
▽1=125.6 & 36.6°C/km
HF=3.95 & 1.73,k=3.0
T AT 100M=26.96°C
Z(200C)=1.478km
S.I.=14.29°C
04/12/77 1354
CHEV/DA

GEOTHERMAL LOG, AMAX EXPLORATION, INC., A.L.LANGE

PROJ	WELL	DA	MO	YR	WELL TITLE	EDITOR	TERRAIN	LP	LI	ISZ	IST
737	132				BC132: 1.2KM SW OF HOTSPG. ,OR	CHEV/OA	0.0	0	0	1	1

YCM	XCM	N.LAT	W.LONG	ELEV
2.3000	4.1500	44.0130	117.4677	816.9

J	SEG START	SEG END	CONDTVTY & STD DEV.	
1	30.480	54.864	3.000	0.500

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

PROJ	WELL	DA	MO	YR	DEPTH (M)	DEG C	DEG C/KM	SAMPLE NO.
737	132				3.048	15.000	99999.000	1
					6.096	14.078	-302.567	2
					9.144	14.761	224.190	3
					12.192	15.361	196.851	4
					15.240	15.900	176.801	5
					18.288	16.472	187.734	6
					21.336	16.761	94.782	7
					24.384	17.239	156.753	8
					27.432	17.522	92.954	9
					30.480	18.161	209.608	10
737	132				36.576	18.839	111.185	11
					42.672	19.700	141.259	12
					48.768	20.239	88.401	13
					54.864	21.289	172.242	14
					57.912	21.822	174.980	15

SEG	ZSTART	TSTART	ZEND	TEND	INTERCPT	COND & DCON	GRADIENT & S.D.	HFU & DHF	T AT 100M	KM
	125.582	0.246	14.099							
1	30.480	18.161	54.864	21.289	14.287	3.000 0.500	125.582 36.572	3.950 1.725	26.957	1.478

PRECEEDING SEGMENT USED FOR EXTRAPOLATION

SEGMENT	GRADIENT	COND. DEDUCED FR.SEGMT 1. HF = 3.95
1	125.582	3.000

PROJ.	WELL	DA-MO-YR	M/F	DESCRIPTION	EDITORS	TERRAIN CORR	L/P	ISE / … EST
755	208	7 SP 76	M	B-208: 2.5 KM N. OF COVE FORT, UT	JED/HDF			
737	6132		F	FF6C132: 1.2 KM SW OF H075PG, OR	CHEV/CA			

duplicate

IN/CM	MAP: 7.5, 15. or 60.	SW CORNER DEG'S LAT	MIN'S DLAT	DEG'S LONG.	MIN'S DLONG	N.	E.	ELEV.	M/F
IN	15.	38.	30.	112.	45.	8.62	9.42	4825.	F
cm	15.	44		117	30.	2.30	4.15	2680	F

duplicate

SEGMENT DEPTH START	END	K	±	SEGMENT START	END	K	±
16.	26.	7.	.5	26.	40.	5.8	.5
100.	180.	3.0	.5	.999			

START = .999 for last .999

Last =

Princ: se

duplicate

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

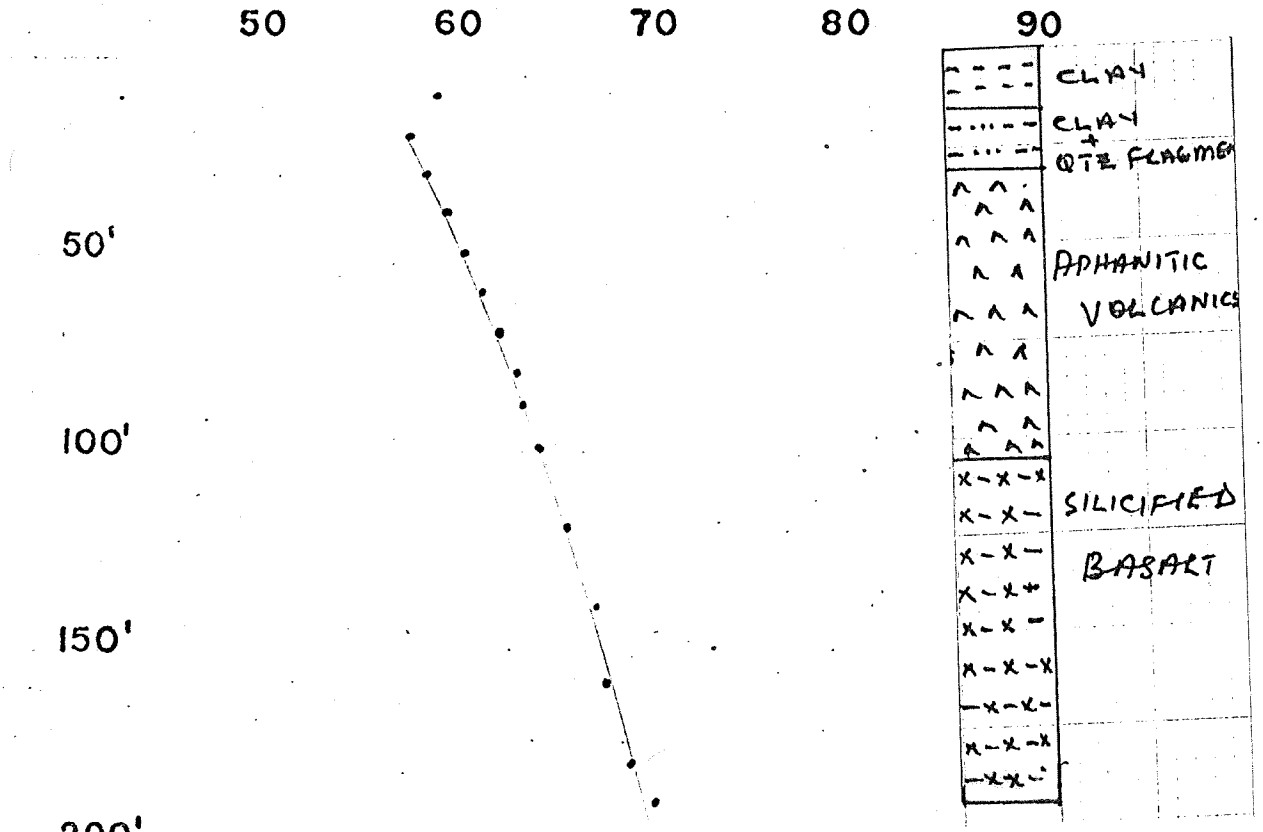
99999. LAST DEPTH

NBC #20 BC-132

Lithology

0-15'	Buff colored clay - consolidated - 100%
15-30'	Clay reddish brn w qtz frags w/minor caliche
30-45'	Dark aphanitic volcanic - w pyrite incrustacions
45-60'	" " " w/clay - minor amount
60-75'	As above
75-90'	" " w/no clay
90-105'	As above w silicified tuff - white
105-120'	Silicified basalt, minor clay & tuff - trace caliche w/qtz frags
120-135'	Silicified basalt w qtz frags
135-150'	As above
150-165'	As above w trace caliche
165-180'	As above w clay traces and inclusions of red volcanic (rhyolite ?)
180-195'	As above

#20 °F


50
60
70
80
90
50'
100'
150'
200'
250'
300'
350'
400'
450'
FEET
CLAY
CLAY + QTZ FRAGMEN
APHANITIC VOLCANICS
SILICIFIED BASALT

TEMPERATURE DEPTH LOG

ΔT Well No.____________

Property-Project____________ Depth Logged____________

Map____________ Scale______ Date: Drilled__________ Logged__________

State__________ County__________ Section________ T_____ R_____

Instrument__________ Operator__________ Elevation__________ ft.

Comments____________________

COMPUTER PROCESSING

Card A

RT JUSTIFY:

Proj No → (1–4)	Well No → (5–10)	Date Logged: DA (11–12)	(13)	MO → (14–15)	(16)	YR (17–18)	* (19)	* (20)
	533						C	M

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

Site Description (21–50)	Operator (51–55)	Editor (56–60)
8.6KM N OF VINES HILL, OR		

Card B

Map Location △

Scale Unit in cm (21–23)	(24–25)	Map Size (7.5, 15., 60) (26–30)	N Lat Degree (31–35)	N Lat Min (36–40)	W Long Degree (41–45)	W Long Min (46–50)

Use decimals

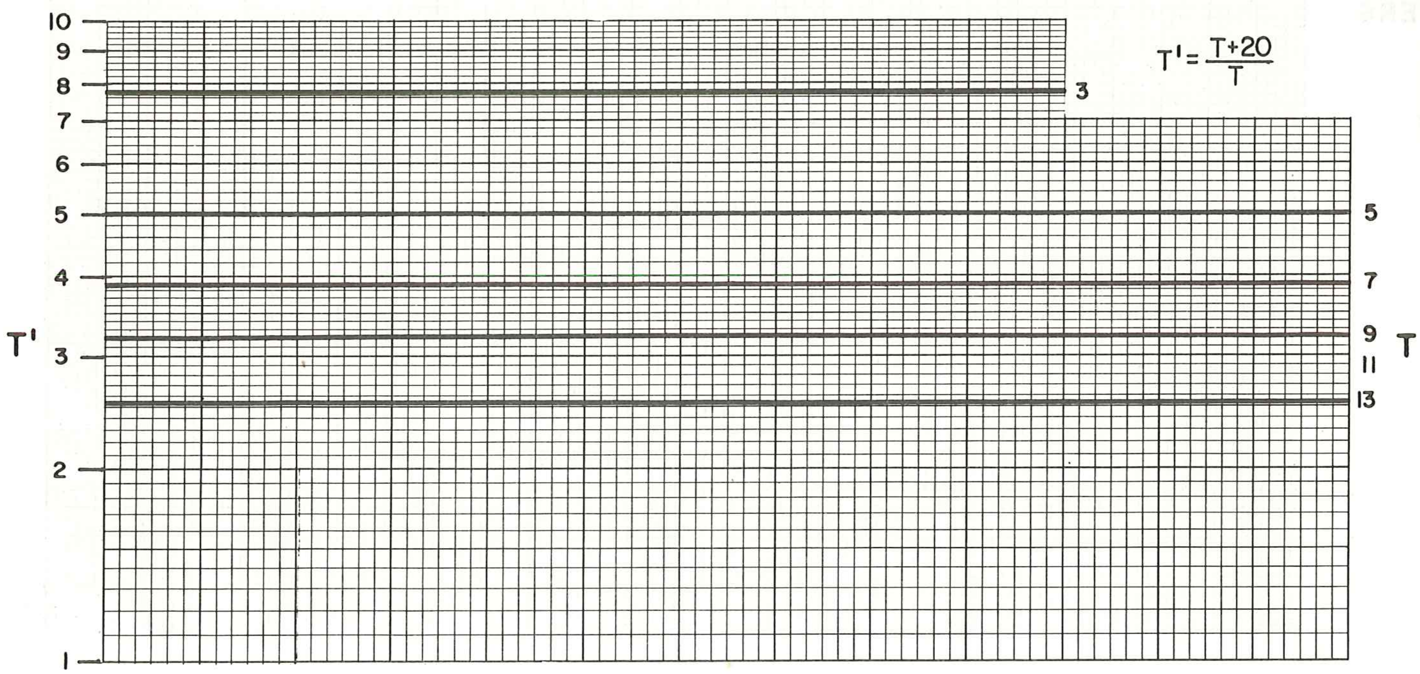
△ Measure from SW corner of map; except AMS sheets measure from bottom center degree mark (W,−) (E,+)

Northing (51–60)	Easting (61–70)	Elev (71–75)	(76–79)	(80)
				F

Write M if meters ←

Use decimals

AIR TEMPERATURE MEASUREMENTS



RESISTANCE / TEMPERATURE

PROJ.	WELL	DA-MO-YR-M/F	DESCRIPTION	EDITORS	TERRAIN CORR	L/P	ISE
755	208	7 SP 76 M	B-208: 2.5 KM N. OF COVE FORT, UT	JED/ADF			
737	633	F	FBC133: 6.87KM N. OF VINESHILLDOR	CHEW/CA			

duplicate

IN/CM	MAP: 7.5, 15. or 60.	DEG'S LAT (SW CORNER)	MIN'S DLAT	DEG'S LONG.	MIN'S DLONG	N.	E.	ELEV.	M/F
IN	15.	38.	30.	112.	45.	8.62	9.42	4825.	F
CM	7.5	43.	52.5	117.	30	47.0	18.0	2700.	F

duplicate

SEGMENT DEPTH / SEGMENT

START	END	K	±	START	END	K	±
16.	26.	7.	.5	26.	40.	5.8	.5
200.	440.	-5.0	-.5	.999			

START = -.999 for last .999

last = ..

Princ. segm K ±

duplicate

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

99999. LAST DEPTH

GEOTHERMAL LOG, AMAX EXPLORATION, INC., A.L.LANGE

PROJ	WELL	DA	MO	YR	WELL TITLE	EDITOR	TERRAIN	LP	LI	ISZ	IST
737	133				BC133: 6.87KM N.OF VINESHIL,OR	CHEV/OA	0.0	0	0	1	1

633

YCM	XCM	N.LAT	W.LONG	ELEV
47.0000	18.0000	43.9770	117.4462	823.0

J	SEG START	SEG END	CONDTVTY & STD DEV.
1	60.960	134.112	5.000 0.500

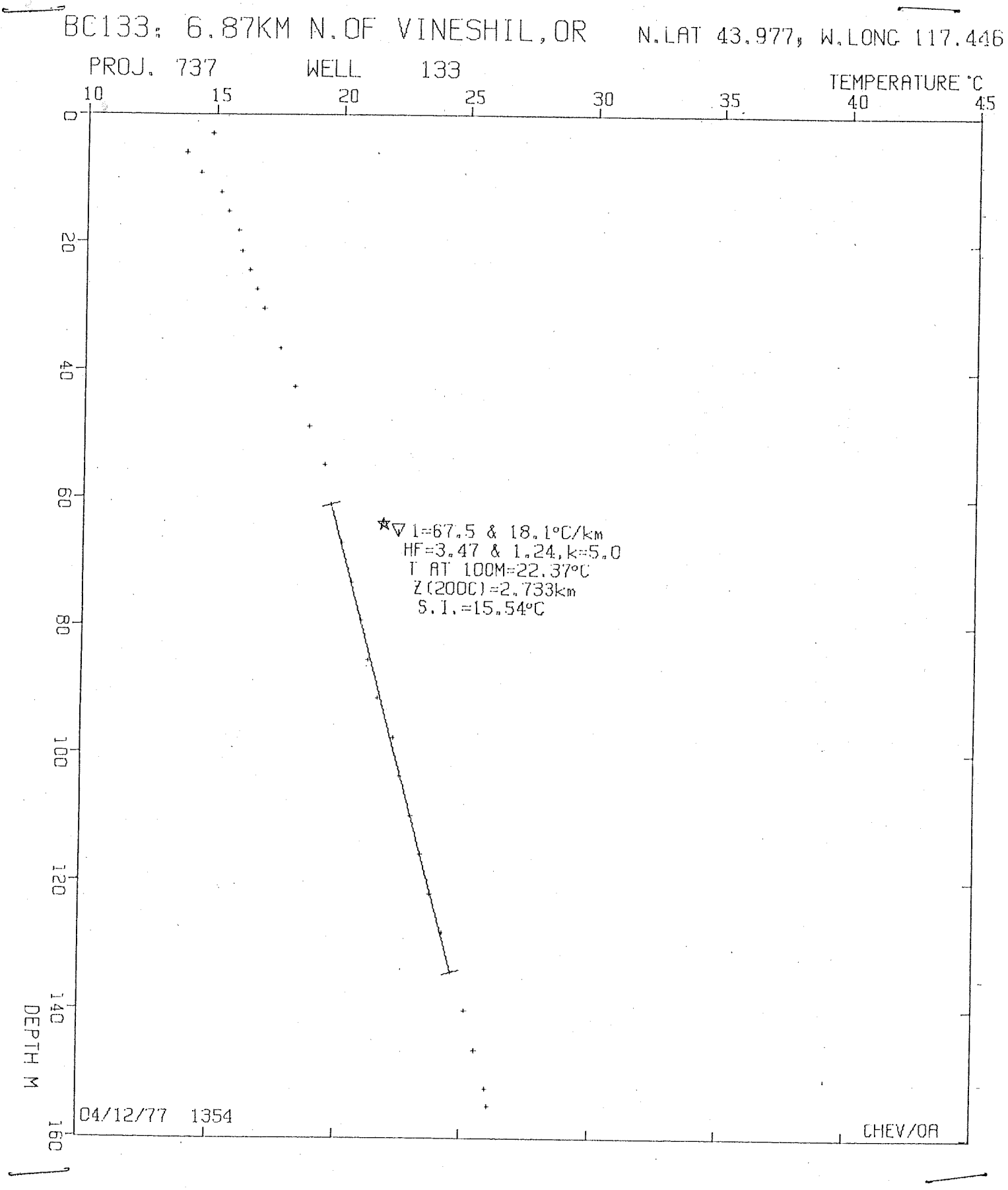
*** PREVIOUS SEGMENT USED TO EXTRAPOLATE TO DEPTH ***

PROJ	WELL	DA	MO	YR	DEPTH (M)	DEG C	DEG C/KM	SAMPLE NO.
737	133				3.048	14.850	99999.000	1
					6.096	13.839	-331.731	2
					9.144	14.389	180.447	3
					12.192	15.211	269.757	4
					15.240	15.478	87.488	5
					18.288	15.900	138.526	6
					21.336	16.061	52.859	7
					24.384	16.339	91.132	8
					27.432	16.639	98.426	9
					30.480	16.939	98.426	10
737	133				36.576	17.611	110.273	11
					42.672	18.222	100.246	12
					48.768	18.739	84.757	13
					54.864	19.400	108.449	14
					60.960	19.672	44.655	15
					67.056	20.089	68.352	16
					73.152	20.489	65.616	17
					79.248	20.922	71.085	18
					85.344	21.189	43.746	19
					91.440	21.578	63.794	20
737	133				97.536	22.261	112.095	21
					103.632	22.522	42.833	22
					109.728	22.961	71.996	23
					115.824	23.328	60.149	24
					121.920	23.739	67.441	25
					128.016	24.239	82.018	26
					134.112	24.578	55.594	27
					140.208	25.128	90.223	28
					146.304	25.550	69.260	29
					152.400	26.000	73.821	30
737	133				155.143	26.089	32.401	31

SEG	ZSTART	TSTART	ZEND	TEND	INTERCPT	COND & DCON	GRADIENT & S.D.	HFU & DHF	T AT 100M	KM
	67.500	0.264	15.110							
1	60.960	19.672	134.112	24.578	15.537	5.000 0.500	67.500 18.139	3.466 1.244	22.367	2.733

PRECEEDING SEGMENT USED FOR EXTRAPOLATION

SEGMENT	GRADIENT	COND. DEDUCED FR.SEGMT 1, HF = 3.47
1	67.500	5.000


BC133: 6.87KM N.OF VINESHIL,OR
N.LAT 43.977, W.LONG 117.446
PROJ. 737
WELL 133
TEMPERATURE °C
10
15
20
25
30
35
40
45
0
20
40
60
80
100
120
140
160
DEPTH M
☆▽ 1=67.5 & 18.1°C/km
HF=3.47 & 1.24, k=5.0
T AT 100M=22.37°C
Z(200C)=2.733km
S.I.=15.54°C
04/12/77 1354
CHEV/OR

NBC #35 BC-133

Lithology

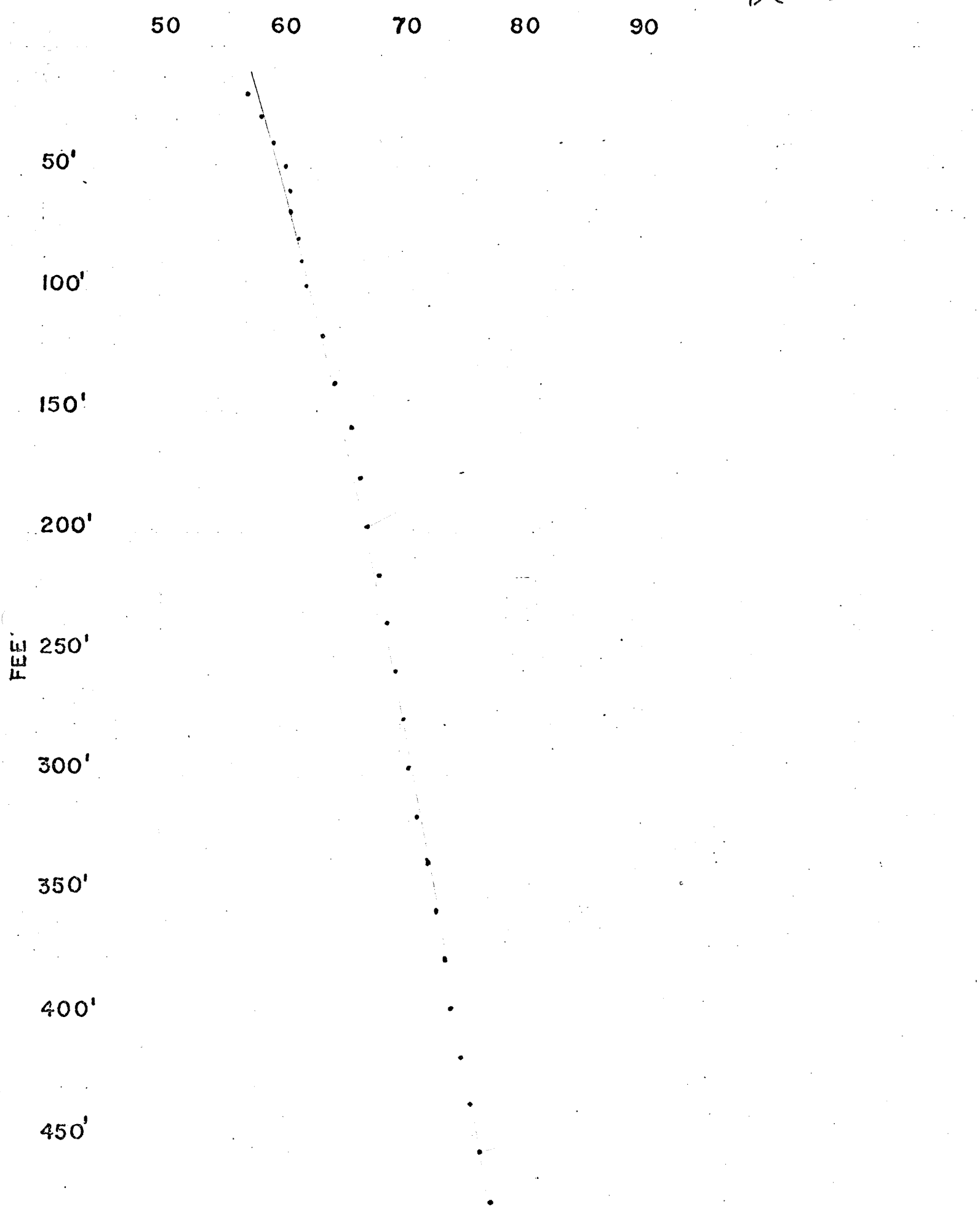
0-15'	Clay - light tan - possibly 5% v. fine grain sand.
15-30'	V. fine light tan sand composed dominantly of SiO_2 volcanic chards? Chard size is fairly uniform, all angular - w/small amount of clay present.
30-45'	As above - with more clay.
45-60'	As above - 50% clay and v. fine sand.
60-75'	As above - w/rare basalt? (dark igneous frags).
75-90'	Grey-grn-clay - ~ 10% igneous chips - less amount of fine light sand ~ 20%.
90-105'	Grey-grn clay - 70% - SiO_2 chips (chards?)
105-120'	Light tan-grn-volcanic decop - clay - soft - white streak - 75% w/some basalt? 15% trace of pyrite - some in small qtz vein.
120-135'	Tan-grn-clay 70% w/volcanic decop sand ash flow 20%.
135-150'	Clay - as above 80% w/smaller % of chards.
150-165'	Dark 90% aphanitic volcanic (basalt?) 10% - clay - trace chalcedony
165-180'	As above (basalt?) pyrite frags xls w/ash
180-195'	As above - w/qtz filling some depressions (rare)
195-210'	Basalt (?) 95% covered with ash and clay
210-225'	Basalt ? Gabbro? 99% - small amount chalcedony & pyrite
225-240'	Dark igneous - ? - with small amount of trace mineral - malochite? dark green w/pyrite
240-255'	As above
255-270'	As above
270-285'	As above ~ 5% pyrite
285-300'	As above
300-315'	As above with clay (grey-grn)
315-330'	As above
330-345'	Dark basalt 80% - with small amount chards

NBC #35 (continued)

345-360'	Basalt? 80% clay & chards
360-375'	Clay now missing sieved - 50% w/basalt? 40% with traces of pyrite & weathered andesite?
375-390'	As above
390-405'	Clay - 60% - chards & basalt? 10% clay - 80% - w/glass chards
405-420'	Trace of basalt?
420-435'	As above
435-450'	90% clay & chards
450-465'	" "
465-480'	" "
480-495	Clay - as above
495-500	" "

#35 °F

BC-133



TEMPERATURE DEPTH LOG

ΔT Well No. _____

Property-Project _____ Depth Logged _____

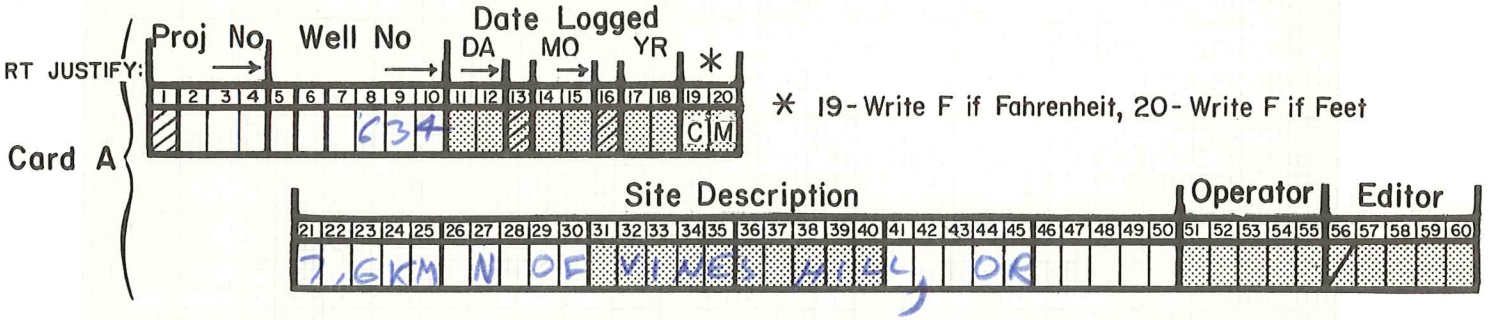
Map _____ Scale _____ Date: Drilled _____ Logged _____

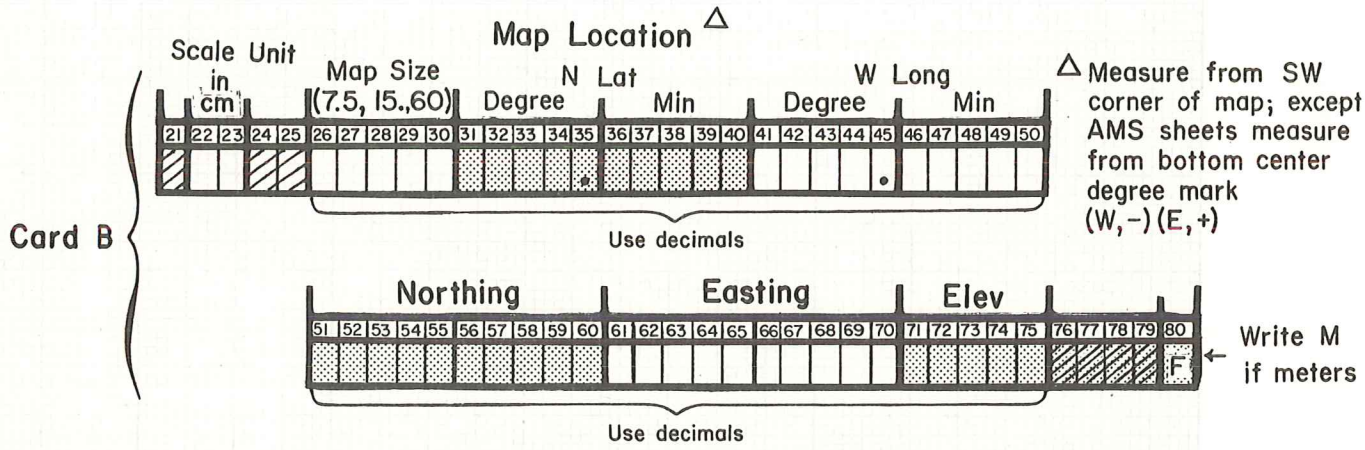
State _____ County _____ Section _____ T _____ R _____

Instrument _____ Operator _____ Elevation _____ ft.

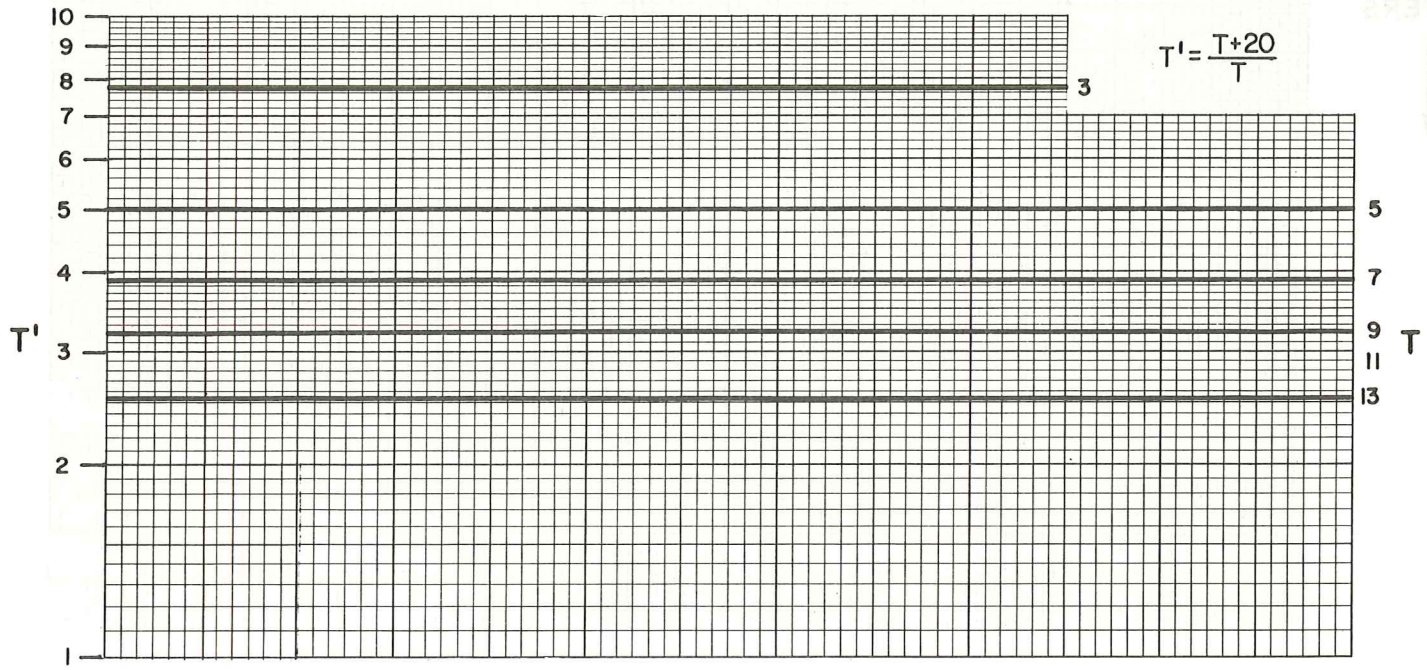
Comments _____

COMPUTER PROCESSING





AIR TEMPERATURE MEASUREMENTS



RESISTANCE / TEMPERATURE

PROJ.	WELL	DA-MO-YR-M/F	DESCRIPTION	EDITORS	TERRAIN CORR	L/P	H	ISE	HIST
755	208	7 SP 76	MB-208: 2.5 KM N. OF COVE FORT, UT	JED/RDF					
737	634		FFBC134: 0.7 Km SE OF FBC133, OR	CH EV/DA					

duplicate

IN/CM	MAP: 7.5, 15. or 60.	DEG'S LAT	SW CORNER MIN'S DLAT	DEG'S LONG.	MIN'S DLONG	N.	E.	ELEV.	M/F
IN	15.	38.	30.	112.	45.	8.62	9.42	4825.	F
CM	7.5	43.	52.5	117.	30	43.35	19.0	2600.	F
						43.55	19.25		

duplicate

SEGMENT DEPTH START	END	K	±	SEGMENT START	END	K	±
16.	26.	7.	.5	26.	40.	5.8	.5
120.	160.	-3.0	-.5	.999			

START = .999 for last .999

Last = ..

Princ. seg
K
±

duplicate

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

99999. LAST DEPTH

GEOTHERMAL LOG, AMAX EXPLORATION, INC., A.L.LANGE

PROJ	WELL	DA	MO	YR	WELL TITLE	EDITOR	TERRAIN	LP	LI	ISZ	IST
737	134				BC134: 0.71KM SE.OF BC133 ,OR	CHEV/OA	0.0	0	0	1	1

634

YCM	XCM	N.LAT	W.LONG	ELEV
~~43.3500~~ 43.55	19.0000 19.25	43.9691	117.4432	7925

J	SEG START	SEG END	CONDTVTY & STD DEV.	
1	36.576	48.768	3.000	0.500

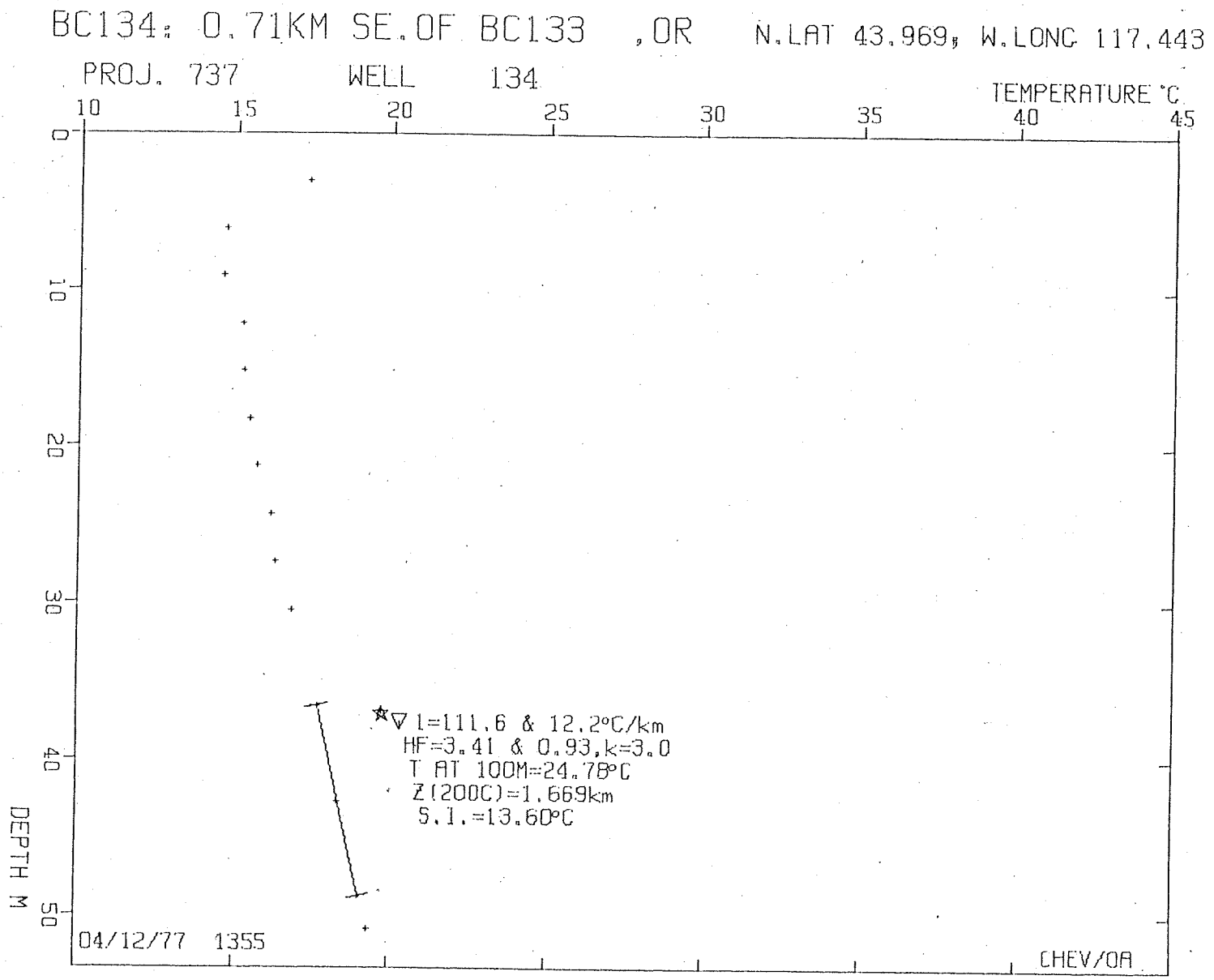
*** PREVIOUS SEGMENT USED TO EXTRAPOLATE TO DEPTH ***

PROJ	WELL	DA	MO	YR	DEPTH (M)	DEG C	DEG C/KM	SAMPLE NO.
737	134				3.048	17.322	99999.000	1
					6.096	14.650	-876.713	2
					9.144	14.539	-36.453	3
					12.192	15.178	209.608	4
					15.240	15.228	16.404	5
					18.288	15.439	69.263	6
					21.336	15.711	89.313	7
					24.384	16.161	147.635	8
					27.432	16.300	45.571	9
					30.480	16.872	187.736	10
737	134				36.576	17.700	135.790	11
					42.672	18.328	102.982	12
					48.768	19.061	120.298	13
					50.902	19.339	130.189	14

SEG	ZSTART	TSTART	ZEND	TEND	INTERCPT	COND & DCON	GRADIENT & S.D.	HFU & DHF	T AT 100M	KM
	111.646	0.220	12.587							
1	36.576	17.700	48.768	19.061	13.599	3.000 0.500	111.646 12.244	3.411 0.926	24.781	1.669

PRECEEDING SEGMENT USED FOR EXTRAPOLATION

SEGMENT	GRADIENT	COND. DEDUCED FR.SEGMT 1, HF = 3.41
1	111.646	3.000

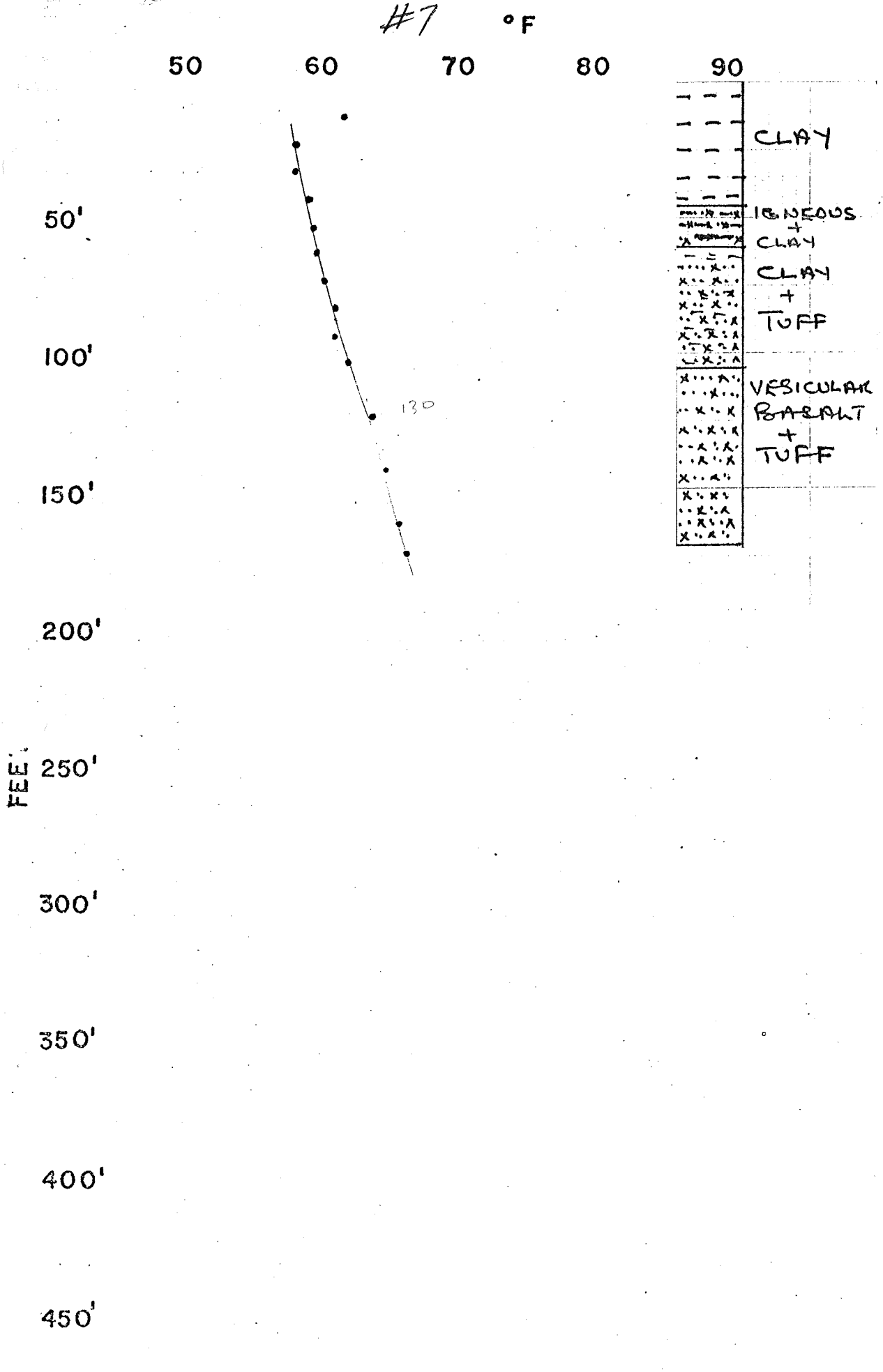

BC134: 0.71KM SE.OF BC133 ,OR N.LAT 43.969, W.LONG 117.443
PROJ. 737 WELL 134
TEMPERATURE °C
10
15
20
25
30
35
40
45
0
10
20
30
40
50
DEPTH M
☆▽ I=111.6 & 12.2°C/km
HF=3.41 & 0.93,k=3.0
T AT 100M=24.78°C
Z(200C)=1.669km
S.I.=13.60°C
04/12/77 1355
CHEV/OR

NBC #7 — BC-134

Lithology

0-15'	Clay light tan w/vol frags
15-30'	As above
30-45'	As above
45-60'	Dark - fine grained igneous w qtz frags and clay/minor
60-75'	Tuff - white w/vol frags
75-90'	Buff colored clay or weathered tuff, w/vol frags
90-105'	As above
105-120'	Clay - buff or weathered tuff, vol (basalt) and traces of pyrite or chalcopyrite
120-135'	Weathered vesicular basalt w/chalcedony and pyrite traces
135-150'	Tuff - white, w/vol frags (basalt) & traces of quartz & occasional chards
150-168'	Tuff weathered or claystone w/vesicular basaltic frags

#7


°F
50
60
70
80
90
50'
100'
150'
200'
250'
300'
350'
400'
450'
FEET
130
CLAY
IGNEOUS
+
CLAY
CLAY
+
TUFF
VESICULAR
BASALT
+
TUFF

TEMPERATURE DEPTH LOG

ΔT Well No._____

Property-Project_____ Depth Logged_____

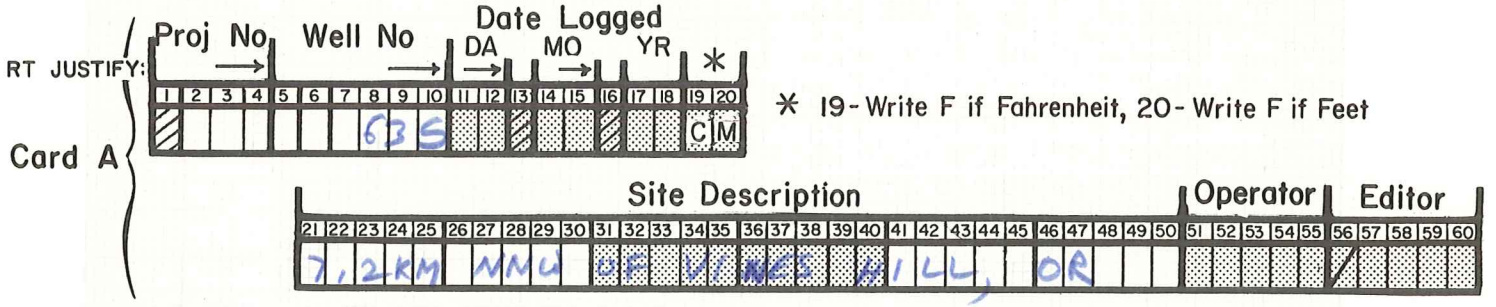
Map_____ Scale_____ Date: Drilled_____ Logged_____

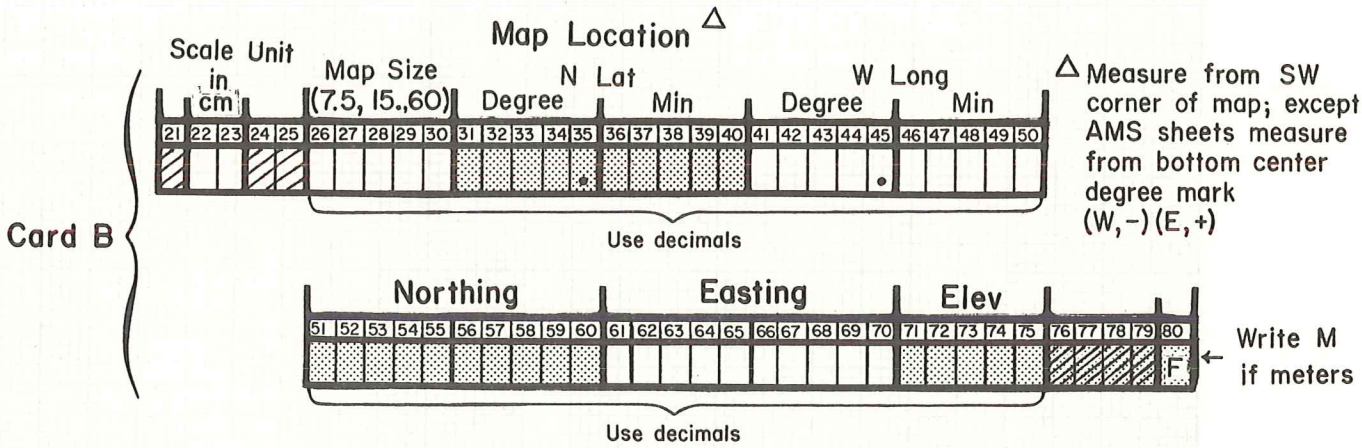
State_____ County_____ Section_____ T_____ R_____

Instrument_____ Operator_____ Elevation_____ ft.

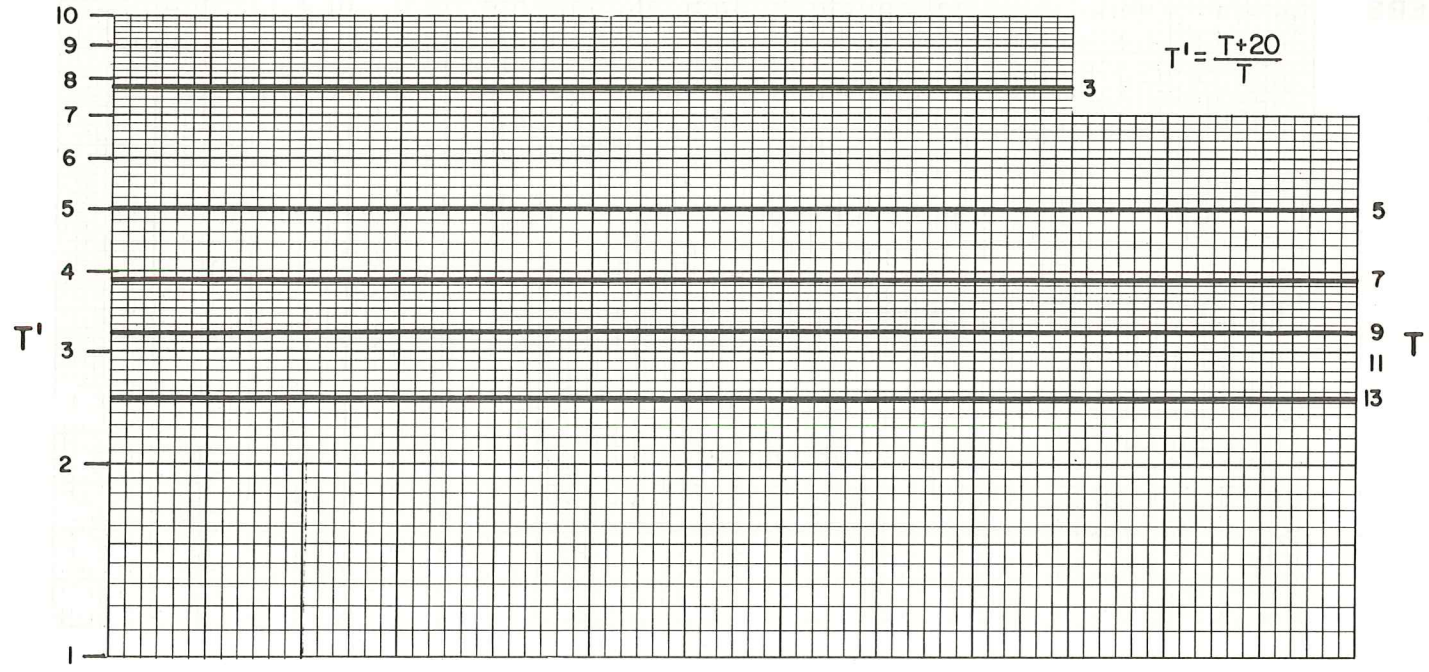
Comments_____

COMPUTER PROCESSING





AIR TEMPERATURE MEASUREMENTS



RESISTANCE / TEMPERATURE

PROJ.	WELL	DA-MO-YR-M/F			DESCRIPTION	EDITORS	TERRAIN CORR	L/P	ISE	WORST
755	208	7	SP	76 M	B-208: 2.5KM N. OF COVE FORT, UT	JED/RDF				
737	135				FF BC135: 1.0KM SW. OF BC134 , OK	CHEN/OA				

duplicate

IN/CM	MAP: 7.5, 15. or 60.	DEG'S LAT (SW CORNER)	MIN'S DLAT	DEG'S LONG.	MIN'S DLONG	N.	E.	ELEV.	M/F
IN	15.	38.	30.	112.	45.	8.62	9.42	4825.	F
CM	7.5	43.	52.5	117.	30.	41.0	16.0	2500.	F

duplicate

SEGMENT DEPTH START	SEGMENT DEPTH END	K	±	SEGMENT START	SEGMENT END	K	±
16.	26.	7.	.5	26.	40.	5.8	.5
50.	100.	-5.0	-.5	.999			

START = .999 for last .999

Last = ..

Print: segm K ±

duplicate

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

99999. LAST DEPTH

GEOTHERMAL LOG, AMAX EXPLORATION, INC., A.L.LANGE

PROJ	WELL	DA	MO	YR	WELL TITLE	EDITOR	TERRAIN	LP	CI	ISZ	IST
737	135				BC135: 1.0KM SW.OF BC134 ,OR	CHEV/OA	0.0	0	0	1	1

YCM	XCM	N.LAT	W.LONG	ELEV
41.0000	16.0000	43.9640	117.4521	762.0

J	SEG START	SEG END	CONDTVTY & STD DEV.	
1	15.240	30.480	5.000	0.500

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

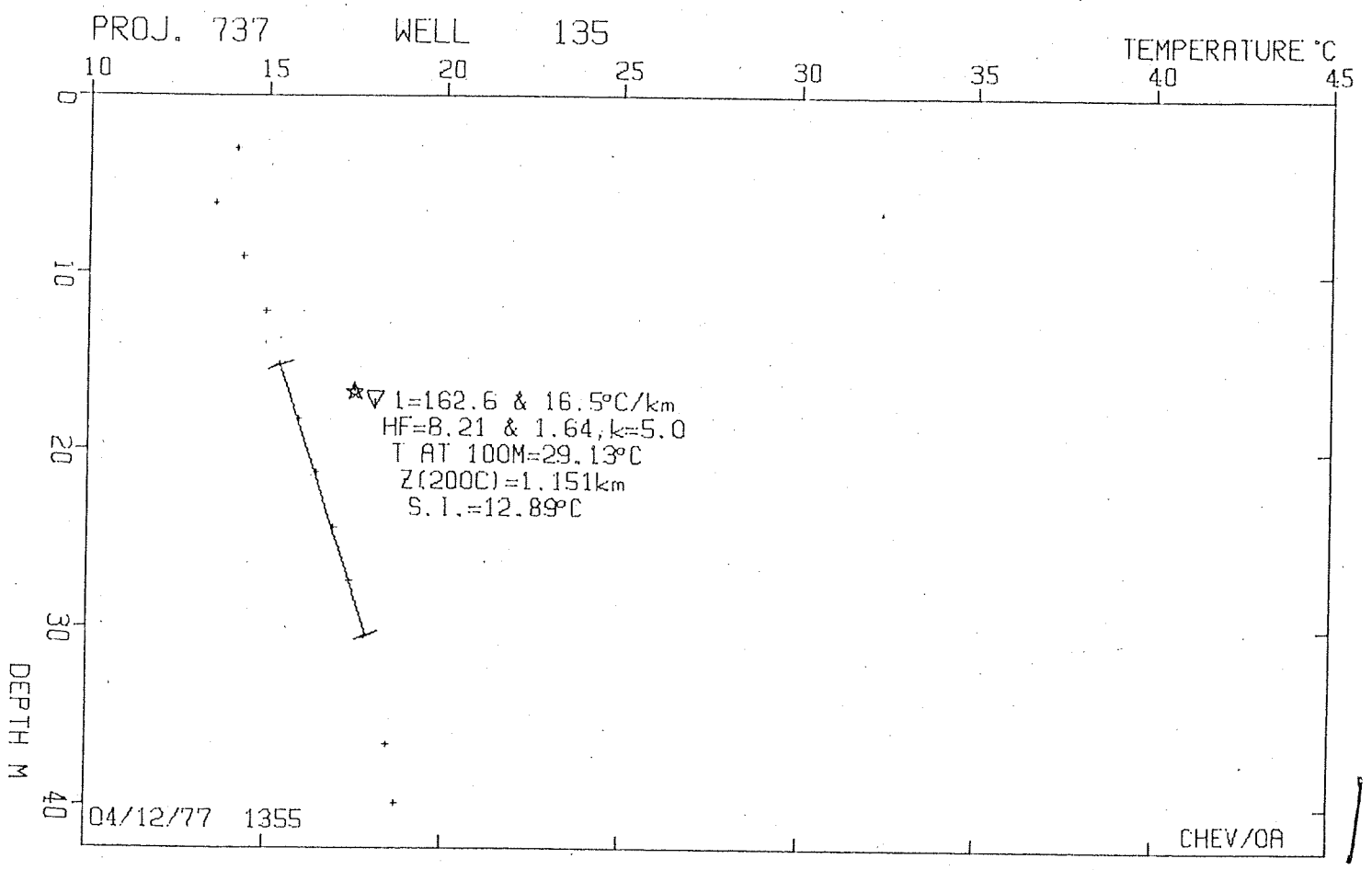
PROJ	WELL	DA	MO	YR	DEPTH (M)	DEG C	DEG C/KM	SAMPLE NO.
737	135				3.048	14.078	99999.000	1
					6.096	13.478	-196.851	2
					9.144	14.300	269.757	3
					12.192	14.928	205.965	4
					15.240	15.328	131.234	5
					18.288	15.878	180.444	6
					21.336	16.389	167.689	7
					24.384	16.911	171.331	8
					27.432	17.328	136.703	9
					30.480	17.822	162.220	10
737	135				36.576	18.439	101.160	11
					39.929	18.689	74.565	12

SEG	ZSTART	TSTART	ZEND	TEND	INTERCPT	COND & DCON	GRADIENT & S.D.	HFU & DHF	T AT 100M	KM
	162.584	0.314	18.013							
1	15.240	15.328	30.480	17.822	12.893	5.000	0.500	162.584 16.519	8.212 1.639	29.125 1.151

PRECEEDING SEGMENT USED FOR EXTRAPOLATION

SEGMENT	GRADIENT	COND. DEDUCED FR.SEGMT 1, HF = 8.21
1	162.584	5.000

BC135: 1.0KM SW.OF BC134 , OR N.LAT 43.964, W.LONG 117.452



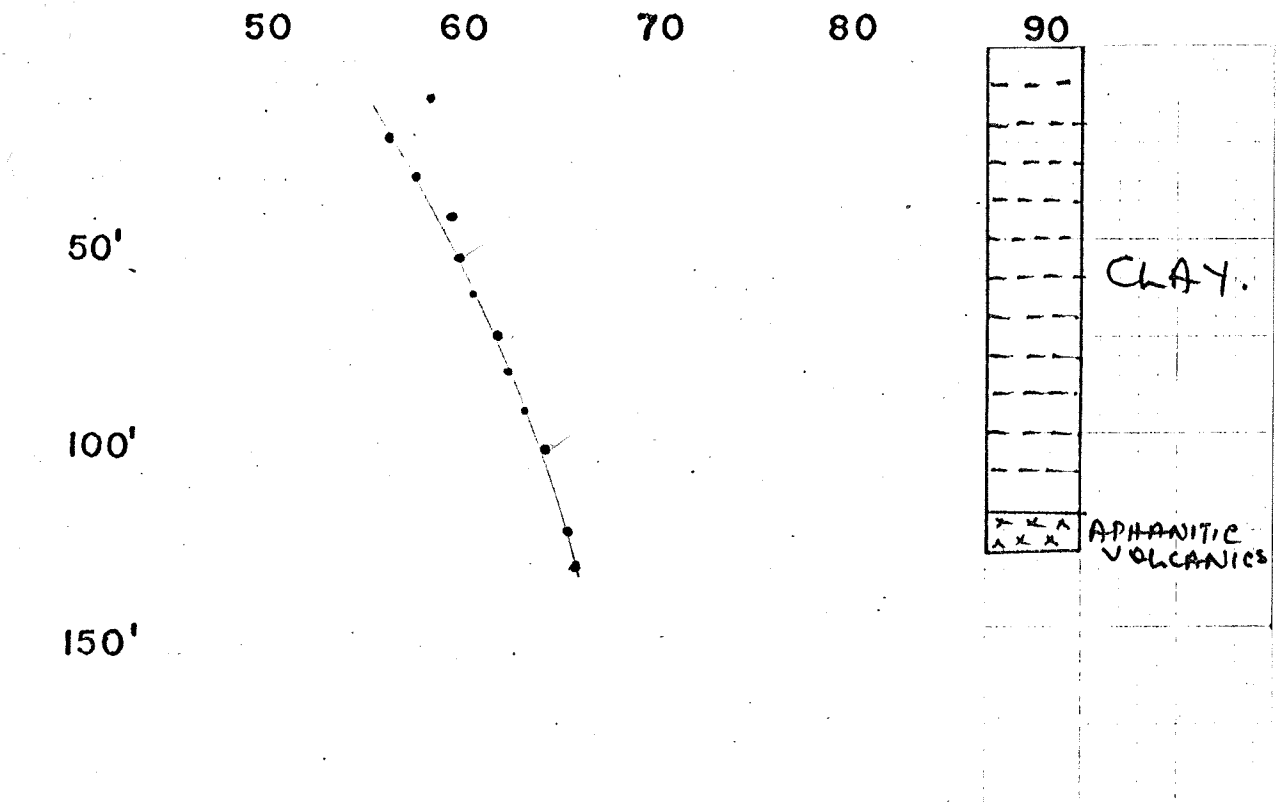
BC-135

NBC #8

Lithology

0-15'	Clay - buff w/rounded vol frags
15-30'	As above
30-45'	Clay, buff w silicified vol frags (light colored)
45-60'	As above w/pyrite traces on volcanics
60-75'	Clay - buff w/pyrite traces and trace tuff
75-90'	As above
90-105'	As above
105-120'	Aphanitic volcanics (basalt) w/qtz veining & incrustacions
120-130'	As above

#8 °F BC-135


50
60
70
80
90
50'
100'
150'
200'
250'
300'
350'
400'
450'
FEET
CLAY.
APHANITIC VOLCANICS

TEMPERATURE DEPTH LOG

ΔT Well No._____

Property-Project_____ Depth Logged_____

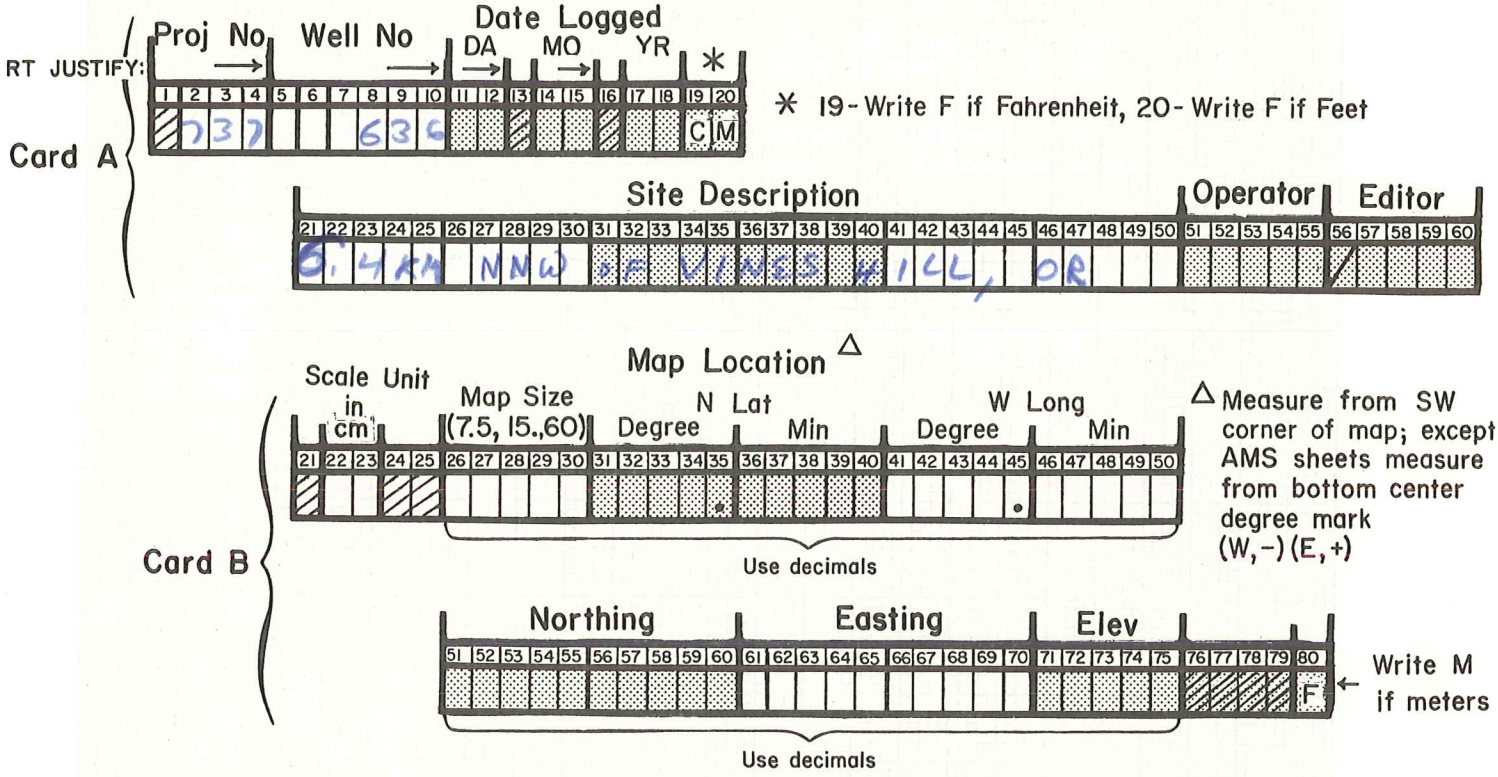
Map_____ Scale_____ Date: Drilled_____ Logged_____

State_____ County_____ Section_____ T_____ R_____

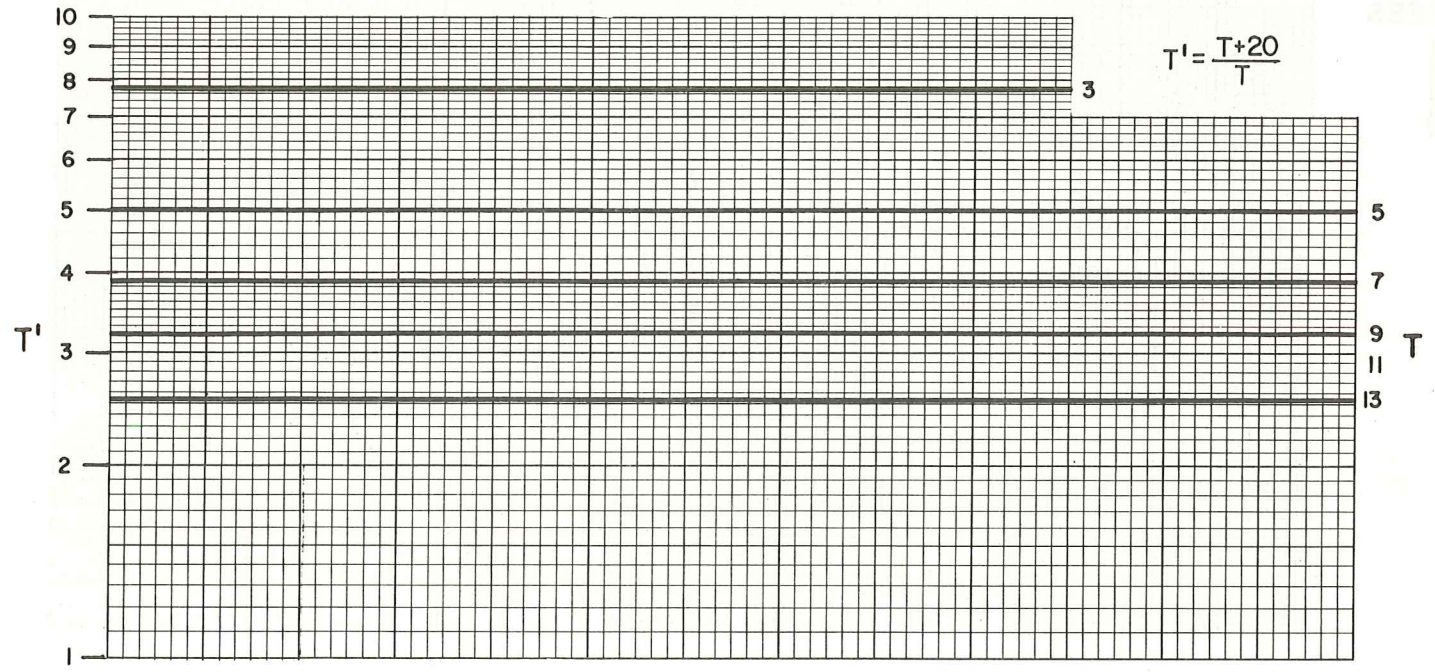
Instrument_____ Operator_____ Elevation_____ ft.

Comments_____

COMPUTER PROCESSING



AIR TEMPERATURE MEASUREMENTS



RESISTANCE / TEMPERATURE

Page ___ of ___

PROJ.	WELL	DA-MO-YR-M/F	DESCRIPTION	EDITORS	TERRAIN CORR	L/P	ISZ	MODIST
755	208	7 SP 76 M	B-208: 2.5 KM N. OF COVE FORT, UT	JED/AD				
737	636		FF BC136: 0.65KM SE. OF BC135, OR	CHEV/CA				

duplicate

IN/CM	MAP: 7.5, 15. or 60.	LAT (DEG's)	DLAT (MIN's) SW CORNER	LONG (DEG's)	DLONG (MIN's)	N.	E.	ELEV.	M/F
IN	15.	38.	30.	112.	45.	8.62	9.42	4825.	F
CM	7.5	43.	52.5	117.30		~~37.75~~ 384	~~17.0~~ 17.4	2360.	F

duplicate

SEGMENT DEPTH / SEGMENT

START	END	K	±	START	END	K	±
16.	36.	7.	.5	26.	40.	5.8	.5
280.	460.	-3.0	-.5	.999			

START = .900 for last .999

Last = .

Print: segm K ±

duplicate

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

99999. LAST DEPTH

BC-136

NBC #10

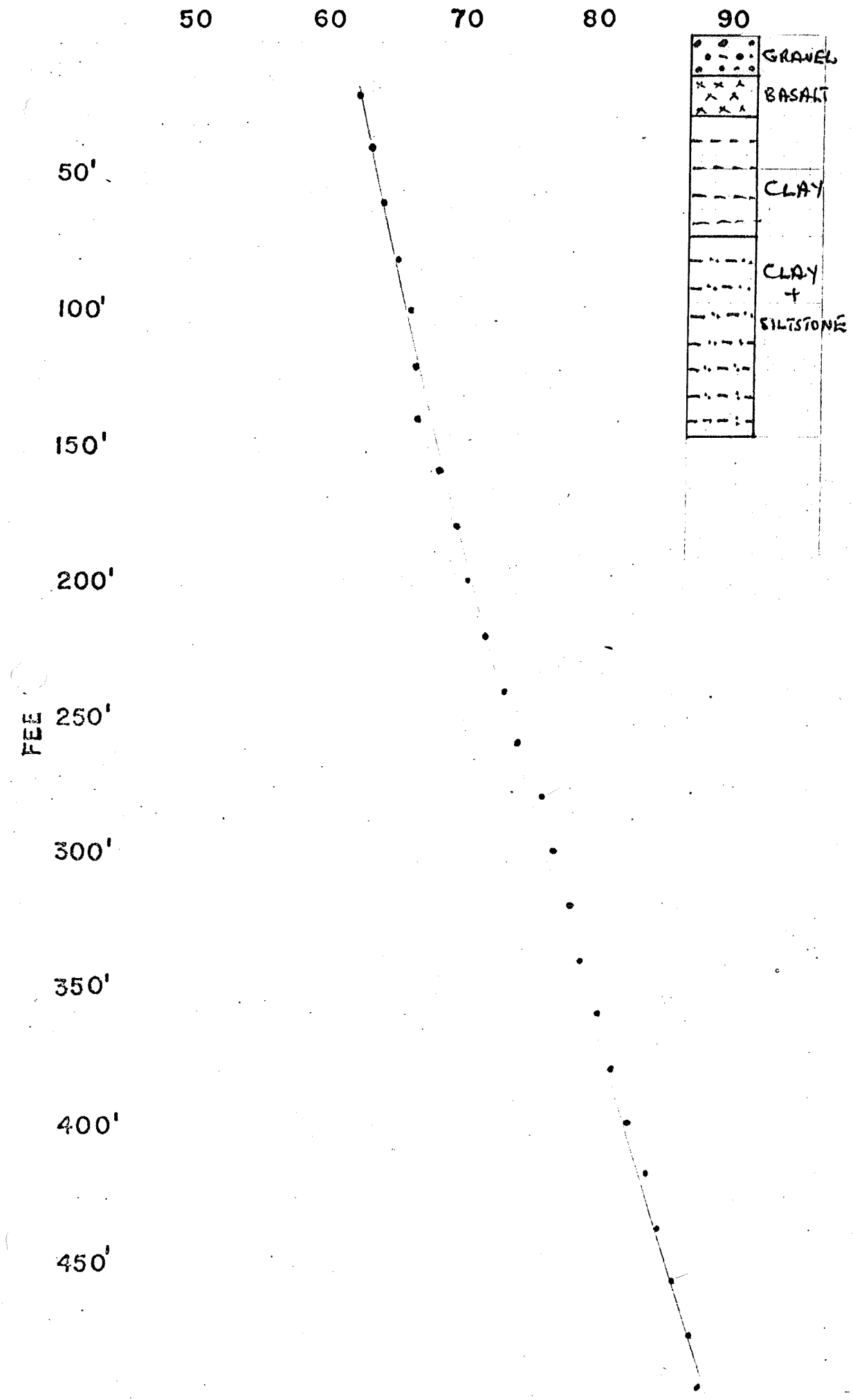
Lithology

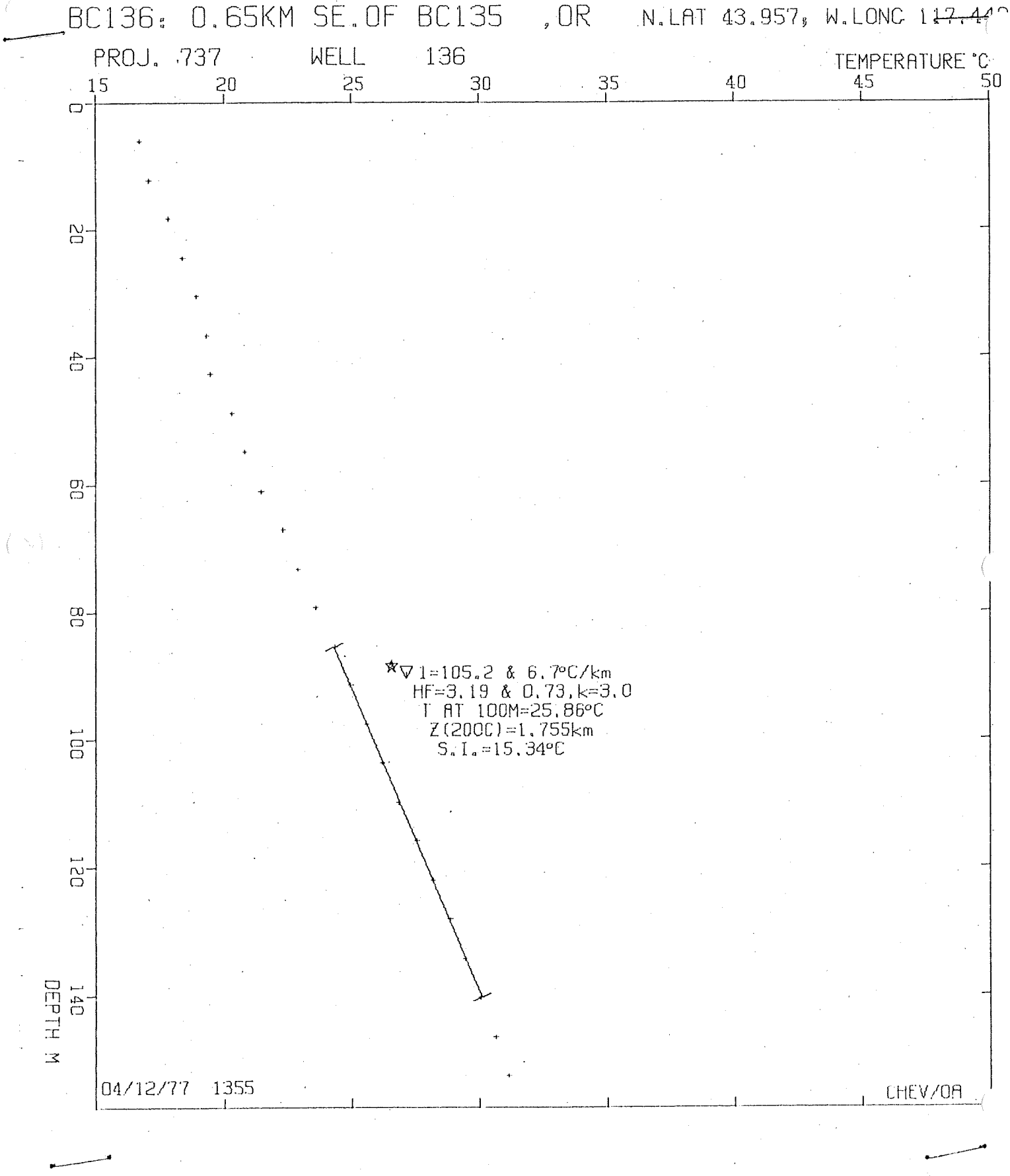
0-15'	Pea gravel - w/basalt? well rounded
15-30'	Basalt?
30-45'	Light tan clay - w rare chards
45-60'	Clay - as above
60-75'	Clay - with 10% chards
75-90'	Ashy vol siltstone or claystone - w/rare basalt frags
90-105'	As above
105-120'	As above no basalt
120-135'	As above no basalt
135-150'	As above no basalt

NEALS-BULLY CREEK NO. 10

#10 °F

BC-136




BC136: 0.65KM SE.OF BC135 ,OR N.LAT 43.957, W.LONG 117.44
PROJ. 737 WELL 136
TEMPERATURE °C
15
20
25
30
35
40
45
50
0
20
40
60
80
100
120
140
DEPTH M
☆▽1=105.2 & 6.7°C/km
HF=3.19 & 0.73,k=3.0
T AT 100M=25.86°C
Z(200C)=1.755km
S.I.=15.34°C
04/12/77 1355
CHEV/OR

GEOTHERMAL LOG, AMAX EXPLORATION, INC., A.L.LANGE

PROJ	WELL DA	MO	YR	WELL TITLE	EDITOR	TERRAIN	LP	LI	ISZ	IST
737	136			BC136: 0.65KM SE.OF BC135 ,OR	CHEV/OA	0.0	0	0	1	1

YCM	XCM	N.LAT	W.LONG	ELEV
37.7500	17.0000	43.9569	117.4492	719.3

J	SEG START	SEG END	CONDTVTY & STD DEV.	
1	85.344	140.208	3.000	0.500

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

PROJ	WELL DA	MO	YR	DEPTH (M)	DEG C	DEG C/KM	SAMPLE NO.
737	136			6.096	16.722	99999.000	1
				12.192	17.056	54.682	2
				18.288	17.778	118.473	3
				24.384	18.333	91.135	4
				30.480	18.889	91.135	5
				36.576	19.278	63.794	6
				42.672	19.444	27.341	7
				48.768	20.278	136.701	8
				54.864	20.778	82.021	9
				60.960	21.444	109.362	10
737	136			67.056	22.278	136.701	11
				73.152	22.889	100.248	12
				79.248	23.611	118.476	13
				85.344	24.333	118.473	14
				91.440	24.944	100.249	15
				97.536	25.611	109.360	16
				103.632	26.222	100.249	17
				109.728	26.833	100.249	18
				115.824	27.556	118.476	19
				121.920	28.222	109.360	20
737	136			128.016	28.833	100.248	21
				134.112	29.444	100.249	22
				140.208	30.056	100.248	23
				146.304	30.667	100.249	24
				152.400	31.167	82.021	25

SEG	ZSTART	TSTART	ZEND	TEND	INTERCPT	COND & DCON	GRADIENT & S.D.	HFU & DHF	T AT 100M	KM
	105.227	0.398	22.827							
1	85.344	24.333	140.208	30.056	15.338	3.000 0.500	105.227 6.693	3.190 0.727	25.858	1.755

PRECEEDING SEGMENT USED FOR EXTRAPOLATION

SEGMENT	GRADIENT	COND. DEDUCED FR.SEGMT 1, HF = 3.19
1	105.227	3.000

revised titles

TEMPERATURE DEPTH LOG

please enter in orig book

ΔT Well No. _____

Property-Project _____ Depth Logged _____

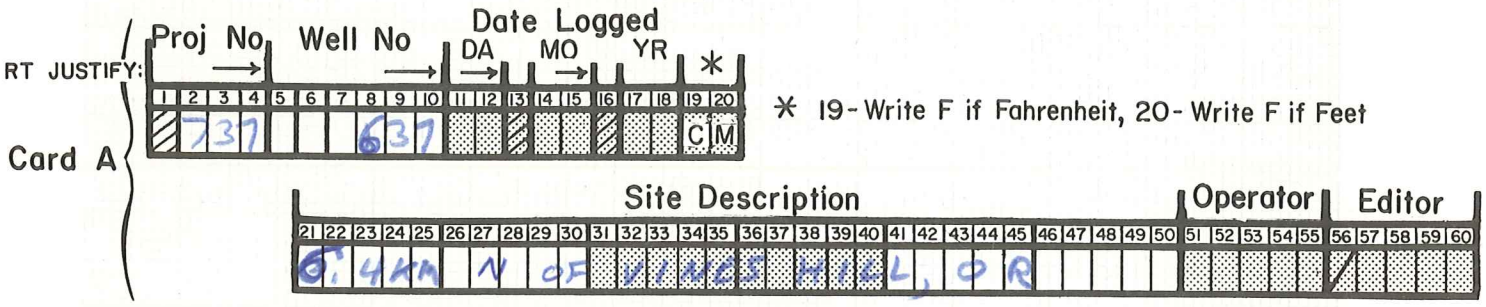
Map _____ Scale _____ Date: Drilled _____ Logged _____

State _____ County _____ Section _____ T _____ R _____

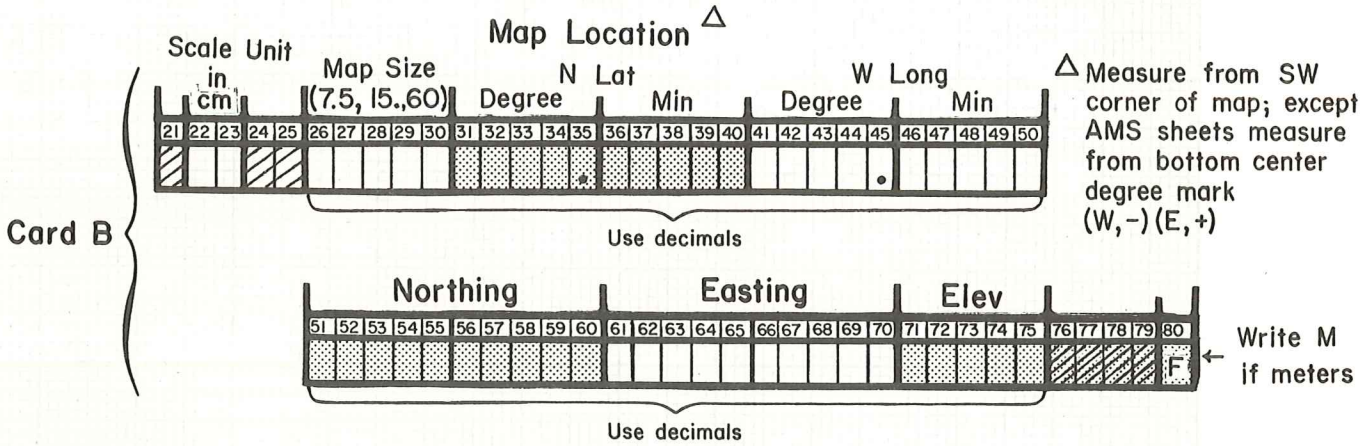
Instrument _____ Operator _____ Elevation _____ ft.

Comments _____

COMPUTER PROCESSING



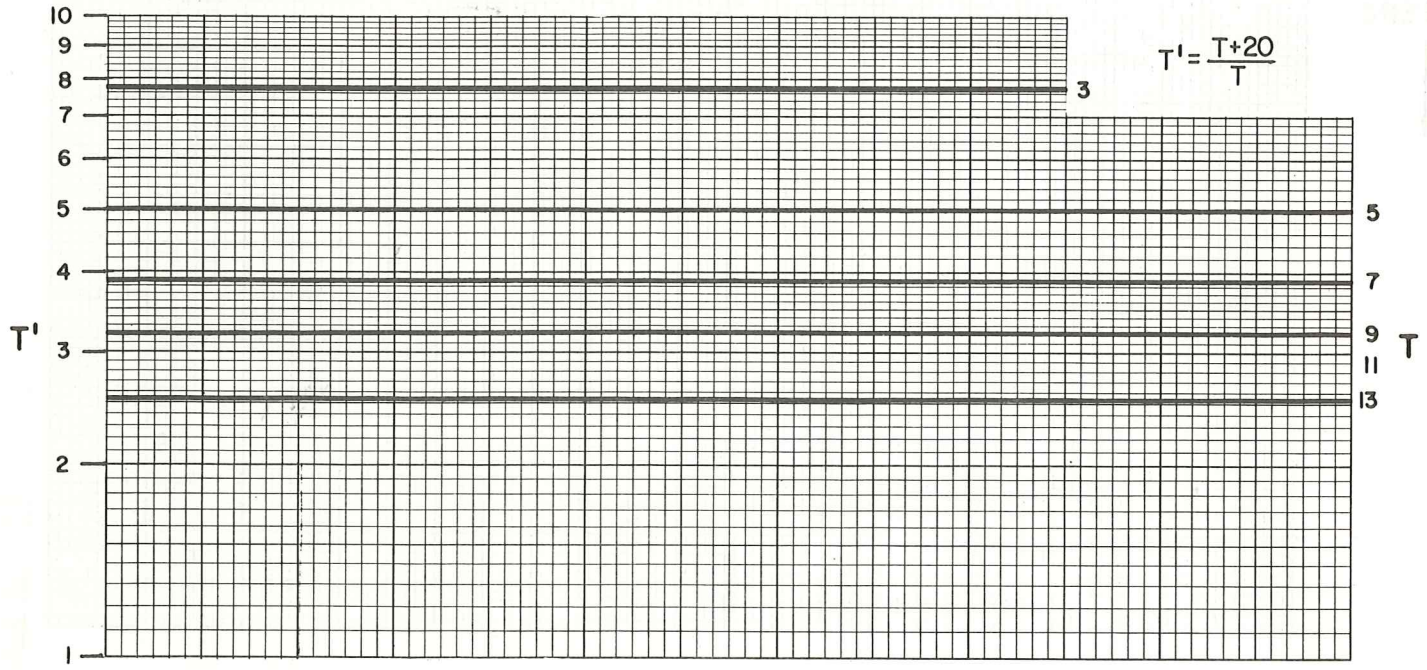
* 19 - Write F if Fahrenheit, 20 - Write F if Feet



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

← Write M if meters

AIR TEMPERATURE MEASUREMENTS



RESISTANCE / TEMPERATURE

PROJ.	WELL	DA-MO-YR-M/F	DESCRIPTION	EDITORS	TERRAIN CORR	L/P	ISE	EST
755	208	7 SP 76	MB-208; 2.5KM N. OF COVE FORT, UT	JED/HDH				
737	137 (6)		FFRC137; 1.83KM. E. OF BC136 , OR	CHEV/OR				

duplicate

IN/CM	MAP: 7.5, 15, or 60.	DEG'S LAT	MIN'S DLAT	DEG'S LONG.	MIN'S DLONG	N.	E.	ELEV.	M/F
IN	15.	38.	30.	112.	45.	8.62	9.42	4825.	F
CM	7.5	43.	52.5	117.30	0	~~37.25~~ 37.3	~~26.45~~ 26.6	2330.	F

SW CORNER

duplicate

SEGMENT DEPTH START	END	K	±	SEGMENT START	END	K	±
16.	26.	7.	.5	26.	40.	5.8	.5
50.	120.	-3.0	-.5	.999			

START = .999 for last

.999

Last = .

Princ. seg. K ±

duplicate

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

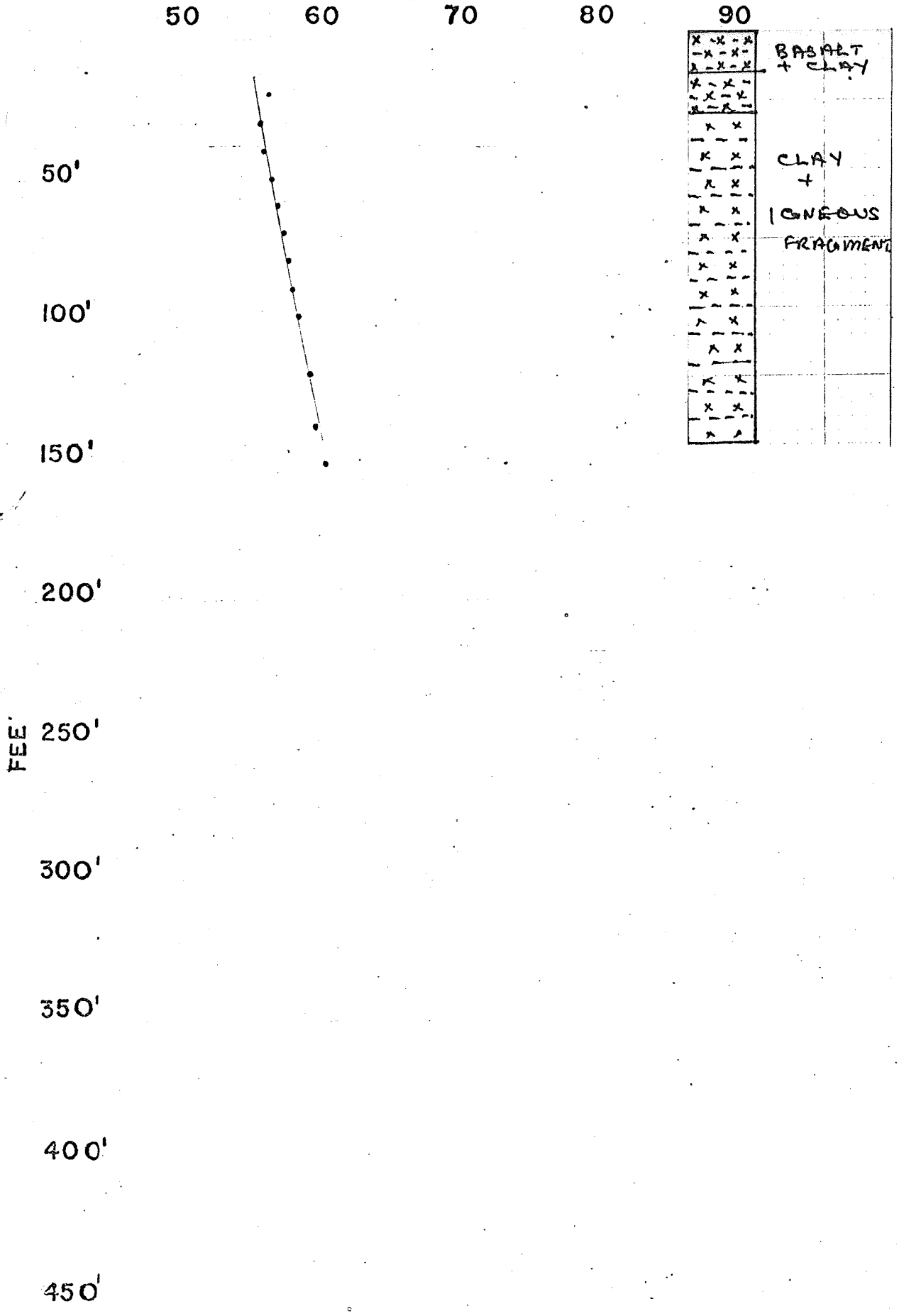
99999. LAST DEPTH

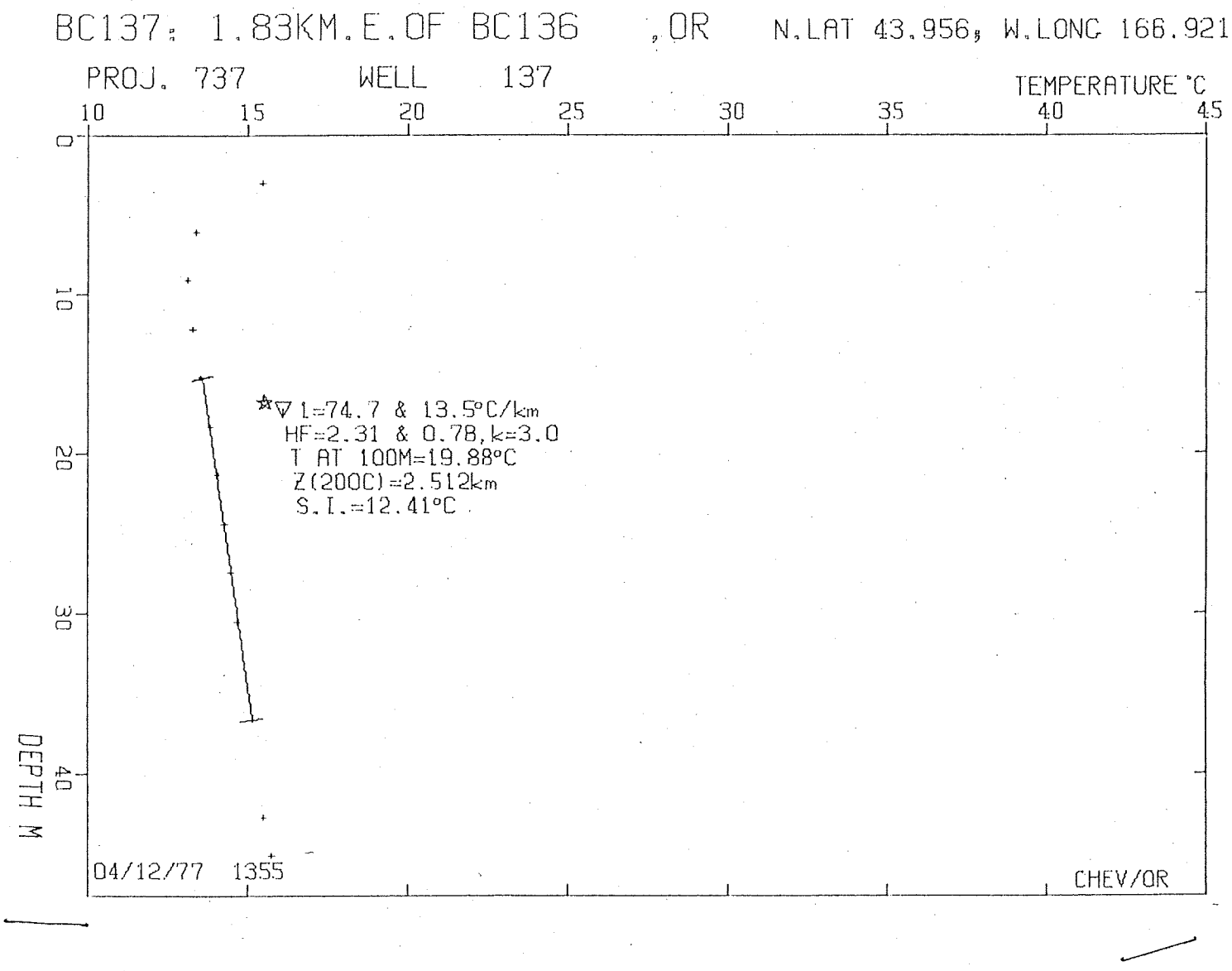
BC-137

NBC #11
Lithology

0-15	Basalt, well rounded w/clay
15-30	As above
30-45	Clay - Buff w/igneous frags
45-60	" " "
60-75	" " "
75-90	" " "
90-105	" " "
105-120	" " "
120-135	" " "
135-150	" " "

#11 °F BC-137


50
60
70
80
90
50'
100'
150'
200'
250'
300'
350'
400'
450'
FEET
BASALT + CLAY
CLAY + IGNEOUS FRAGMENT


BC137: 1.83KM.E.OF BC136 ,OR N.LAT 43.956, W.LONG 166.921
PROJ. 737 WELL 137
TEMPERATURE °C
10
15
20
25
30
35
40
45
0
10
20
30
40
DEPTH M
☆▽ 1=74.7 & 13.5°C/km
HF=2.31 & 0.78,k=3.0
T AT 100M=19.88°C
Z(200C)=2.512km
S.I.=12.41°C
04/12/77 1355
CHEV/OR

GEOTHERMAL LOG, AMAX EXPLORATION, INC., A.L.LANGE

PROJ	WELL	DA	MO	YR	WELL TITLE	EDITOR	TERRAIN	LP	LI	ISZ	IST
737	137				BC137: 1.83KM.E.OF BC136 ,OR	CHEV/OR	0.0	0	0	1	1

YCM	XCM	N.LAT	W.LONG	ELEV
37.2500	26.4500	43.9558	166.9209	710.2

J	SEG START	SEG END	CONDTVTY & STD DEV.	
1	15.240	36.576	3.000	0.500

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

PROJ	WELL	DA	MO	YR	DEPTH (M)	DEG C	DEG C/KM	SAMPLE NO.
737	137				3.048	15.428	99999.000	1
					6.096	13.361	-678.041	2
					9.144	13.122	-78.374	3
					12.192	13.261	45.567	4
					15.240	13.500	78.374	5
					18.288	13.789	94.780	6
					21.336	14.061	89.313	7
					24.384	14.250	61.971	8
					27.432	14.461	69.263	9
					30.480	14.661	65.617	10
737	137				36.576	15.139	78.376	11
					42.672	15.511	61.060	12
					45.110	15.728	88.856	13

SEG	ZSTART	TSTART	ZEND	TEND	INTERCPT	COND & DCON	GRADIENT & S.D.	HFU & DHF	T AT 100M	KM
	74.686	0.148	8.496							
1	15.240	13.500	36.576	15.139	12.412	3.000 0.500	74.686 13.451	2.308 0.777	19.876	2.512

PRECEEDING SEGMENT USED FOR EXTRAPOLATION

SEGMENT	GRADIENT	COND. DEDUCED FR. SEGMT 1, HF = 2.31
1	74.686	3.000

ET=004.22
04/12/77 1355 BK=004.23,FG=000.03,ID=000.00

!FIN

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

638

ΔT Well No. 737 - 138

Property-Project Bully Creek Depth Logged 127.74 m

Map Jamieson Scale 15' Date: Drilled 23/8/78 Logged 31/8/78

State OR County Malheur , ___ of ___ of NE of NE of Sec 3 T 18S R 43E

Instrument Chevron Operator Fleiner Elevation 2580 (ft / m)

Comments

Card A

RT JUSTIFY

Proj No	Well No	DA	MO	YR	*	
737	638	31	8	78	C	M

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

Site Description	Operator	Editor	Drilled DA	Drilled MO	Drilled YR
3.2 km NE Jordan HS	F	DP	23	8	78

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

Card B

Map Location * *

Scale Unit IN CM	Map Size (7.5, 15., 60.)	N Lat Degree	N Lat Min	W Long Degree	W Long Min **
cm	15.	44.	0.	117.	30.0

Use decimals

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

Northing	Easting	Elev	
6.9	9.3	2580.	F

Use decimals

← Write M if if meters

Segment 1 = Depths

Start	End	Conductivity K	ΔK
6.1	67.1	[illegible]	[illegible]

67.07

Best cond. (-K)

Downward extrapolations (-ΔK)

103.66

Segment 2

Start	End	K	ΔK
67.1	103.7		

Segment 3 103.66

Start	End	K	ΔK
103.7	127.7	-3.0	-.5

Segment 4

Start
-999

Segment 5

Segment 6

Start

Segment 7

Segment 8

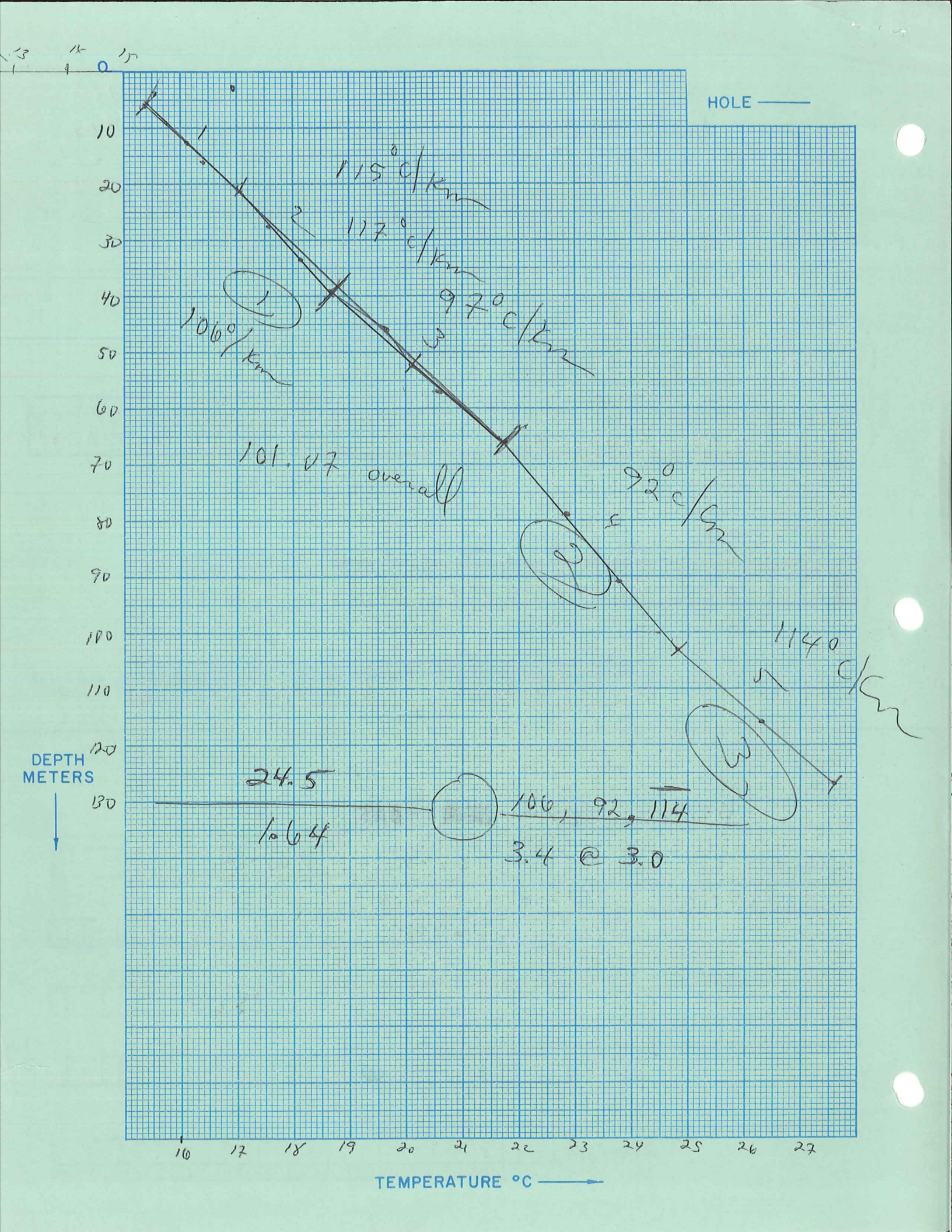
Start

Segment 9

Segment 10

Start

After final segment Start = .999


HOLE
DEPTH METERS
TEMPERATURE °C
1
2
3
4
5
115° C/Km
117° C/Km
97° C/Km
1060° C/Km
101.07 overall
92° C/Km
1140 C/Km
24.5
1.64
106, 92, 114
3.4 @ 3.0

Date Logged: _____

ΔT Well No. 737 - 138

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
3.01	3305	16.94					
6.10	3535	15.33					
9.15	3485	15.72					
12.20	3425	16.11					
15.24	3385	16.39					
18.29	3335	16.83					
21.34	3285	17.06					
24.39	3265	17.22					
27.44	3215	17.56					
30.49	3185	17.78					
33.54	3135	18.11					
36.59	3085	18.44					
39.63	2983	19.17					
42.68	2945	19.44					
45.73	2916	19.61					
48.78	2890	19.83					
51.83	2856	20.06					
54.88	2823	20.33					
57.93	2792	20.61					
60.98	2743	21.06					
67.07	2664	21.78					
73.17	2592	22.39					
79.27	2535	22.89					
85.37	2483	23.39					
91.46	2445	23.72					
97.56	2382	24.28					
103.66	2317	24.83					

NOTE — These are not measurements. Please ignore!

K=Conductivity

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

639

ΔT Well No. 737 - 139

Property-Project Bully Creek Depth Logged 128 m

Map Jamieson Scale 15 Date: Drilled 24/8/78 Logged 31/8/78

State OR County Malheur , ___ of ___ of SW of SW of Sec 1 T 18S R 43E

Instrument Chevron Operator Fleiner Elevation 2580 (ft m)

Comments ___

Card A

RT JUSTIFY | Proj No | Well No | Date Logged: DA | MO | YR | *

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

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

Site Description	Operator	Editor	Drilled DA	MO	YR
21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50	51 52 53 54 55	56 57 58 59 60	61 62	63 64	65 66 67 68
4 Km E Jordan HS	F	/ DP	24	8	78

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

Card B

Scale Unit IN CM	Map Size (7.5, 15., 60.)	Map Location ** N Lat Degree	Min	W Long Degree	Min **
21 22 23 24 25	26 27 28 29 30	31 32 33 34 35	36 37 38 39 40	41 42 43 44 45	46 47 48 49 50
CM	15.	44.	0.0	117.	30.0

Use decimals

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

Northing	Easting	Elev	
51 52 53 54 55 56 57 58 59 60	61 62 63 64 65 66 67 68 69 70	71 72 73 74 75	76 77 78 79 80
5.1	12.2	2580.	F

Use decimals

← Write M if if meters

Segment 1 = Depths Start 15.24 End 45.73 Conductivity 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
	15.2		45.7		

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 End 103.66 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
	45.7		103.7	-3.0	--5

Segment 3 103.66 Start → 128.05

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
	103.7		128.1		

Segment 4 Start → .999

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

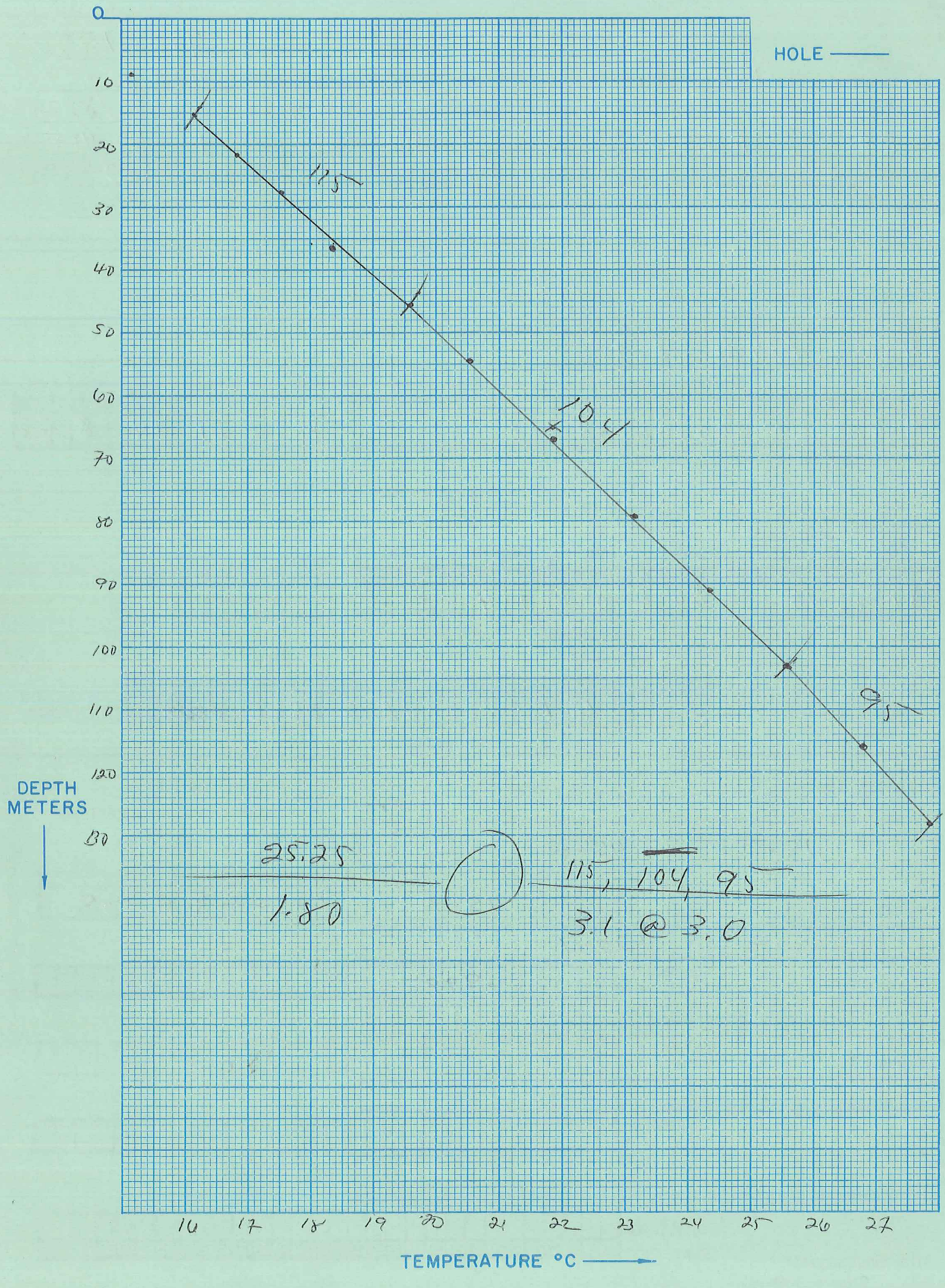
Segment 9

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

Segment 10 Start →

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

After final segment Start = .999


HOLE
0
10
20
30
40
50
60
70
80
90
100
110
120
130
115
104
95
DEPTH METERS
25.25
1.80
115, 104, 95
3.1 @ 3.0
16
17
18
19
20
21
22
23
24
25
26
27
TEMPERATURE °C

Date Logged: 31/8/78

ΔT Well No. 737-139

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
3.01	2595	22.39					
6.10	3665	14.61					
9.15	3565	15.17					
12.20	3485	15.72					
15.24	3415	16.17					
18.29	3365	16.56					
21.34	3315	16.89					
24.39	3245	17.33					
27.44	3215	17.56					
30.49	3175	17.83					
33.54	3135	18.11					
36.59	3085	18.39					
39.63	2978	19.22					
42.68	2936	19.50					
45.73	2918	19.61					
48.78	2887	19.83					
51.83	2836	20.22					
54.88	2800	20.56					
57.93	2763	20.89					
60.98	2726	21.22					
67.07	2651	21.89					
73.17	2581	22.50					
79.27	2510	23.11					
85.37	2438	23.78					
91.46	2375	24.33					
97.56	2312	24.89					
103.66	2254	25.56					

K=Conductivity

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
109.76	21.97	26.17					
115.85	2143	26.78					
121.95	2100	27.28					
128.05	2055	27.83					
99999,							

K=Conductivity

page ____ of ____

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

640

ΔT Well No. 737 -140

Property-Project Bully Creek Depth Logged 133.5 m

Map Jamieson Scale 15' Date: Drilled 26/8/78 Logged 3/9/78

State OR County Malheur, ___ of ___ of SW of NE of Sec 27 T 17S R 43E

Instrument Chevron Operator Fleiner Elevation 2800 (ft / m)

Comments

Card A

RT JUSTIFY | Proj No | Well No | Date Logged: DA | MO | YR | * | 1 2 3 4 | 5 6 7 8 9 10 | 11 12 | 13 14 | 15 16 | 17 18 | 19 | 20 | 737 | 640 | 3 | 9 | 78 | C | M

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

Site Description | Operator | Editor | Drilled: DA | MO | YR | 21 22 23 24 25 | 26 27 28 29 30 | 31 32 33 34 35 | 36 37 38 39 40 | 41 42 43 44 45 | 46 47 48 49 50 | 51 52 53 54 55 | 56 57 58 59 60 | 61 62 | 63 64 65 | 66 67 68 | 2 Km SE HOPE BUTTE | F | DP | 26 | 8 | 78

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

Card B

Scale Unit IN CM | Map Size (7.5, 15., 60.) | Map Location ** N Lat: Degree, Min | W Long: Degree, Min | ** | 21 22 23 24 25 | 26 27 28 29 30 | 31 32 33 34 35 | 36 37 38 39 40 | 41 42 43 44 45 | 46 47 48 49 50 | CM | 15. | 44. | 0.0 | 117. | 30.0

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

Use decimals

Northing | Easting | Elev | 51 52 53 54 55 | 56 57 58 59 60 | 61 62 63 64 65 | 66 67 68 69 70 | 71 72 73 74 75 | 76 77 78 79 80 | 11.4 | 8.5 | 2800. | F

Write M if if meters

Use decimals

Segment 1 = Depths: Start | End (45.73) | Conductivity: 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 | 12.2 | 45.7

Best cond. (-K)

Downward extrapolations (-ΔK)

(133.57)

Segment 2 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 | 45.7 | 133.5 | -3.0 | -.5

Segment 3 | .999

Segment 4 Start →

Segment 5

Segment 6 Start →

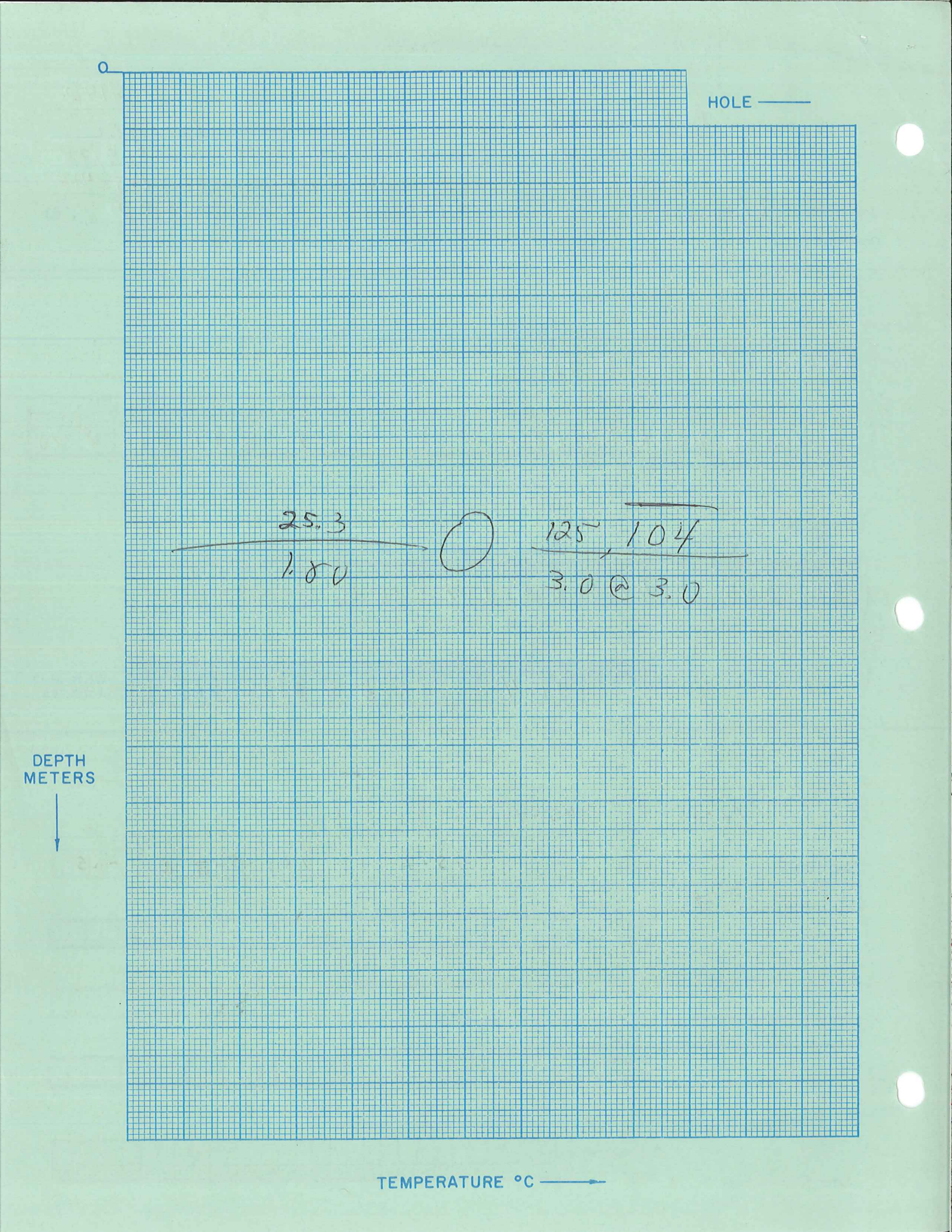
Segment 7

Segment 8 Start →

Segment 9 | 21 22 23 24 25 | 26 27 28 29 30 | 31 32 33 34 35 | 36 37 38 39 40 | 41 42 43 44 45 | 46 47 48 49 50

Segment 10 Start → | 51 52 53 54 55 | 56 57 58 59 60 | 61 62 63 64 65 | 66 67 68 69 70 | 71 72 73 74 75 | 76 77 78 79 80

After final segment Start = .999


0
HOLE
25.3
1.80
125
104
3.0 @ 3.0
DEPTH
METERS
TEMPERATURE °C

Date Logged: 3/9/78

ΔT Well No. 737-140

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
3.01	3425	16.11					
6.10	3685	14.50					
9.15	3585	15.00					
12.20	3525	15.44					
15.24	3465	15.83					
18.29	3405	16.28					
21.34	3355	16.61					
24.39	3305	16.94					
27.44	3245	17.33					
30.49	3215	17.56					
33.54	3165	17.89					
36.59	3125	18.17					
39.63	3085	18.44					
42.68	2961	19.33					
45.73	2923	19.56					
48.78	2884	19.83					
51.83	2844	20.17					
54.88	2804	20.50					
57.93	2764	20.89					
60.98	2725	21.22					
67.07	2649	21.89					
73.17	2572	22.61					
79.27	2503	23.22					
85.37	2434	23.83					
91.46	2364	24.44					
97.56	2303	25.00					
103.66	2242	25.67					

K=Conductivity

Date Logged: _____ ΔT Well No. _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
109.76	2185	26.33					
115.85	2133	26.94					
121.95	2082	27.50					
128.05	2025	28.17					
133.54	1982	28.67					
99999.							

K=Conductivity

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

641

ΔT Well No. 737 - 141

Property-Project Bully Creek Depth Logged 150 m

Map Jamieson Scale 15 Date: Drilled 28/8/78 Logged 3/9/78

State OR County Malheur , of of NW of SE of Sec 35 T 17S R 45E

Instrument Chevron Operator Fleiner Elevation 2600 (ft / m)

Comments

Card A

RT JUSTIFY | Proj No | Well No | DA | MO | YR | * | Date Logged

1 2 3 4	5 6 7 8 9 10	11 12	13 14 15	16 17 18	19 20
737	641	3	9	78	C M

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

Site Description (21–50)	Operator (51–55)	Editor (56–60)	Drilled DA (61–62)	Drilled MO (63–65)	Drilled YR (66–68)
3-5 KM SE HOPE BUTTE	F	/ DP	28	8	78

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

Card B

Scale Unit IN CM (21–25)	Map Size (7.5, 15., 60.) (26–30)	N Lat Degree (31–35)	N Lat Min (36–40)	W Long Degree (41–45)	W Long Min ** (46–50)
CM	15.0	44.	0.0	117.	30.0

Map Location * *

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

Use decimals

Northing (51–60)	Easting (61–70)	Elev (71–75)	(76–79)	(80)
8.3	11.0	2600.		F

Write M if if meters

Use decimals

Segment 1 = Depths

Start (21–30)	End (31–40)	Conductivity K (41–45)	ΔK (46–50)
9.2	24.4		

Best cond. (-K)

Downward extrapolations (- Δ K)

Segment 2

Start (51–60)	End (61–70)	K (71–75)	ΔK (76–80)
24.4	39.6		

Segment 3

Start (21–30)	End (31–40)	K (41–45)	ΔK (46–50)
39.6	97.6	-3.0	-.5

Segment 4

Start (51–60)	End (61–70)	K (71–75)	ΔK (76–80)
97.6	150.0		

Segment 5

Start (21–30)	End (31–40)	K (41–45)	ΔK (46–50)
.999			

Segment 6

Start (51–60)	End (61–70)	K (71–75)	ΔK (76–80)

Segment 7

Start (21–30)	End (31–40)	K (41–45)	ΔK (46–50)

Segment 8

Start (51–60)	End (61–70)	K (71–75)	ΔK (76–80)

Segment 9

Start (21–30)	End (31–40)	K (41–45)	ΔK (46–50)

Segment 10

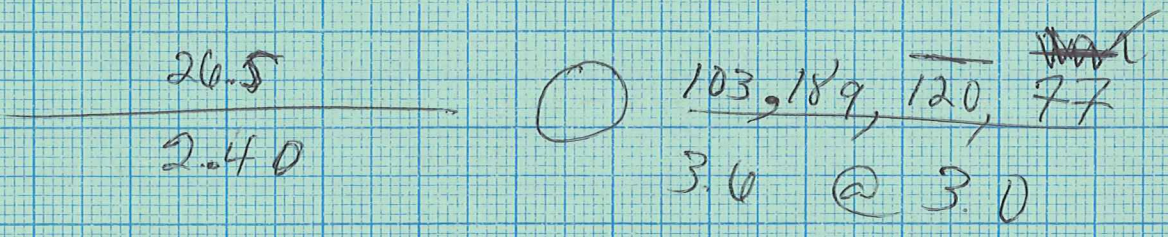
Start (51–60)	End (61–70)	K (71–75)	ΔK (76–80)

After final segment Start = .999

0

HOLE

DEPTH METERS



TEMPERATURE °C

Date Logged: 3/9/78

ΔT Well No. 737-141

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
3.01	3405	16.28					
6.10	3745	14.17					
9.15	3605	14.89					
12.20	3565	15.17					
15.24	3515	15.50					
18.29	3465	15.83					
21.34	3405	16.28					
24.39	3375	16.44					
27.44	3265	17.22					
30.49	3215	17.56					
33.54	3155	18.00					
36.59	3105	18.33					
39.63	2966	19.28					
42.68	2913	19.67					
45.73	2865	20.00					
48.78	2819	20.39					
51.83	2771	20.83					
54.88	2725	21.22					
57.93	2681	21.61					
60.98	2639	22.00					
67.07	2555	22.72					
73.17	2477	23.44					
79.27	2400	24.11					
85.37	2331	24.72					
91.46	2266	25.44					
97.56	2195	26.22					
103.66	2138	26.83					

K=Conductivity

Date Logged: _____ ΔT Well No. _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
109.76	2095	27.33					
115.85	2059	27.78					
121.95	2013	28.28					
128.05	1972	28.78					
133.54	1928	29.28					
140 24	1890	29.67					
146.34	1857	30.11					
150	1843	30.28					
99999.							

K=Conductivity

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

642

ΔT Well No. 737 - 142

Property-Project: Bully Creek — Depth Logged: 143.9 m

Map: Jamieson — Scale: 15 — Date: Drilled 29/8/78 — Logged 3/9/78

State: OR — County: Malheur, ___ of ___ of SW of NE of Sec 25 T ___ R ___

Instrument: Chevron — Operator: Fleiner — Elevation: 2850 (ft/m)

Comments:

Card A

RT JUSTIFY

Proj No (1–4)	Well No (5–10)	Date Logged DA (11–12)	MO (13–15)	YR (16–18)	19*	20*
737	642	3	9	78	C	M

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

Site Description (21–50)	Operator (51–55)	Editor (56–60)	Drilled DA (61–62)	MO (64–65)	YR (67–68)
5.0 KM ESE HOPE BUTTE	F	/ DP	29	8	78

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

Card B

Map Location **

Scale Unit IN CM (21–25)	Map Size (7.5, 15., 60.) (26–30)	N Lat Degree (31–35)	N Lat Min (36–40)	W Long Degree (41–45)	W Long Min (46–50)
Cm	15.0	44.	0.0	117.	30.0

Use decimals

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

Northing (51–60)	Easting (61–70)	Elev (71–75)	76–79	80
11.4	14.2	2850.		F

Use decimals

Write M if if meters

Segment 1 = Depths

Best cond. (−K)

Downward extrapolations (−ΔK)

Segment	Start	End	Conductivity K	ΔK
Segment 1	12.2	54.9 (54.86)		
Segment 2	54.9	57.9 (57.93)		
Segment 3 (57.93)	57.9	143.9	−4.0	−.5
Segment 4	.999			
Segment 5				
Segment 6				
Segment 7				
Segment 8				
Segment 9				
Segment 10				

After final segment Start = .999

0

HOLE

22.7

2.47

78, 260, 75

3.0 @ 4.0

DEPTH METERS

TEMPERATURE °C

Date Logged: 3/9/78

ΔT Well No. 737 - 142

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
3.01	3425	16.11					
6.10	3695	14.44					
9.15	3615	14.83					
12.20	3565	15.17					
15.24	3525	15.44					
18.29	3485	15.72					
21.34	3445	16.00					
24.39	3415	16.17					
27.44	3375	16.44					
30.49	3335	16.72					
33.54	3295	17.00					
36.59	3265	17.22					
39.63	3245	17.33					
42.68	3215	17.56					
45.73	3185	17.78					
48.78	3155	18.00					
51.83	3125	18.17					
54.88	3085	18.44					
57.93	2971	19.22					
60.98	2941	19.44					
67.07	2881	19.89					
73.17	2816	20.39					
79.27	2749	21.00					
85.37	2682	21.61					
91.46	2629	22.06					
97.56	2577	22.56					
103.66	2529	22.94					

K=Conductivity

Date Logged: ____________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
109.76	2478	23.44					
115.85	2433	23.83					
121.95	2391	24.22					
128.05	2350	24.56					
133.54	2308	24.94					
140.24	2266	25.39					
→143.90	2242	25.67					
99999.							

K=Conductivity

page ____ of ____

THERMAL GRADIENT GRAPHS (PLOTS)

Missing / The Crossed wells a

(~~1~~, ~~3~~, ~~4~~, ~~5~~, ~~6~~, ~~7~~, ~~8~~, ~~12~~, ~~13~~, ~~15~~, ~~16~~, ~~77-2~~, ~~77-1~~, NORTH VALE)

(111 - South Vale)

New Wells

(130, 131, 132, 133, 134, 135, 136, 137, Bully Creek)