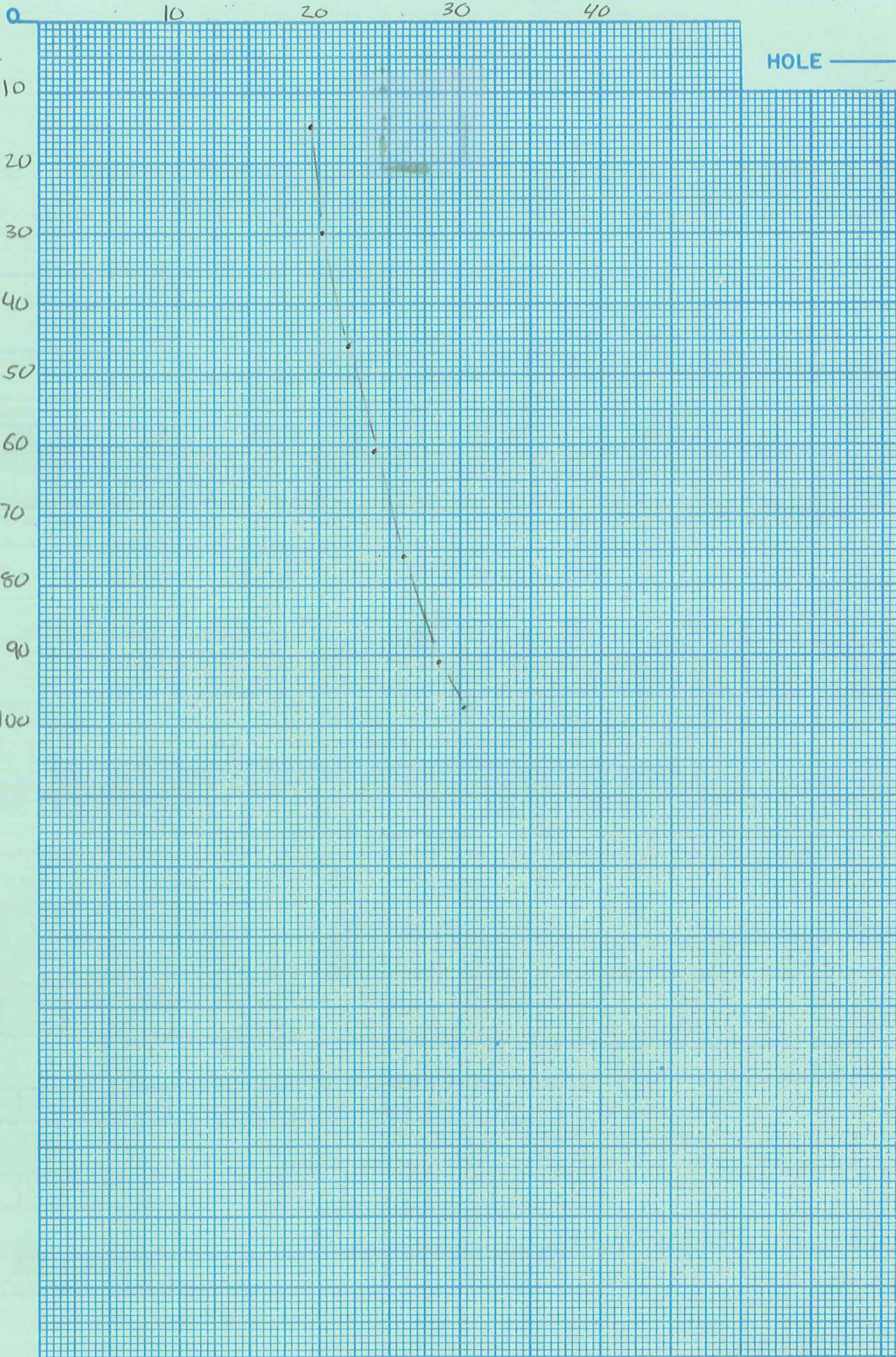


A00019

TEC-20

Emigrant Property
Nevada
Temperature / Depth Log

H00-1



DEPTH
METERS



TEMPERATURE °C →

ΔT Well No. _____

Property-Project Fishlake 1191 now 33027 Depth Logged 168m

Map Rhyolite Ridge Scale 15" Date: Drilled ? Logged 4/25/83

State NEVADA County ESMERALDA, _____ of _____ of NE of NE of Sec 17 T 1s R 37E

Instrument _____ Operator Geothermax Elevation 5600 (ft/m)

Comments _____

JUSTIFY

Date Logged

Proj No	Well No	DA	MO	YR	*																	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	*		
											25		4		8		3				C	M

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

Card A

Site Description																																																		Operator					Editor					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																					
MAGMA GRADIENT WELL																																																		GEO					TH													

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

Card B

Map Location **

Scale Unit	Map Size	N Lat	W Long																										
IN	(7.5, 15., 60.)	Degree	Degree																										
CM		Min	Min **																										
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
	15.	37.	45.	118.	00.																								

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	
		19.		1																										

Use decimals

Write M if meters

Segment 1 = Depths

Start	End	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

Best cond. (-K)
Downward extrapolations (-ΔK)

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

Segment 3

Segment 4

Segment 5

Segment 6

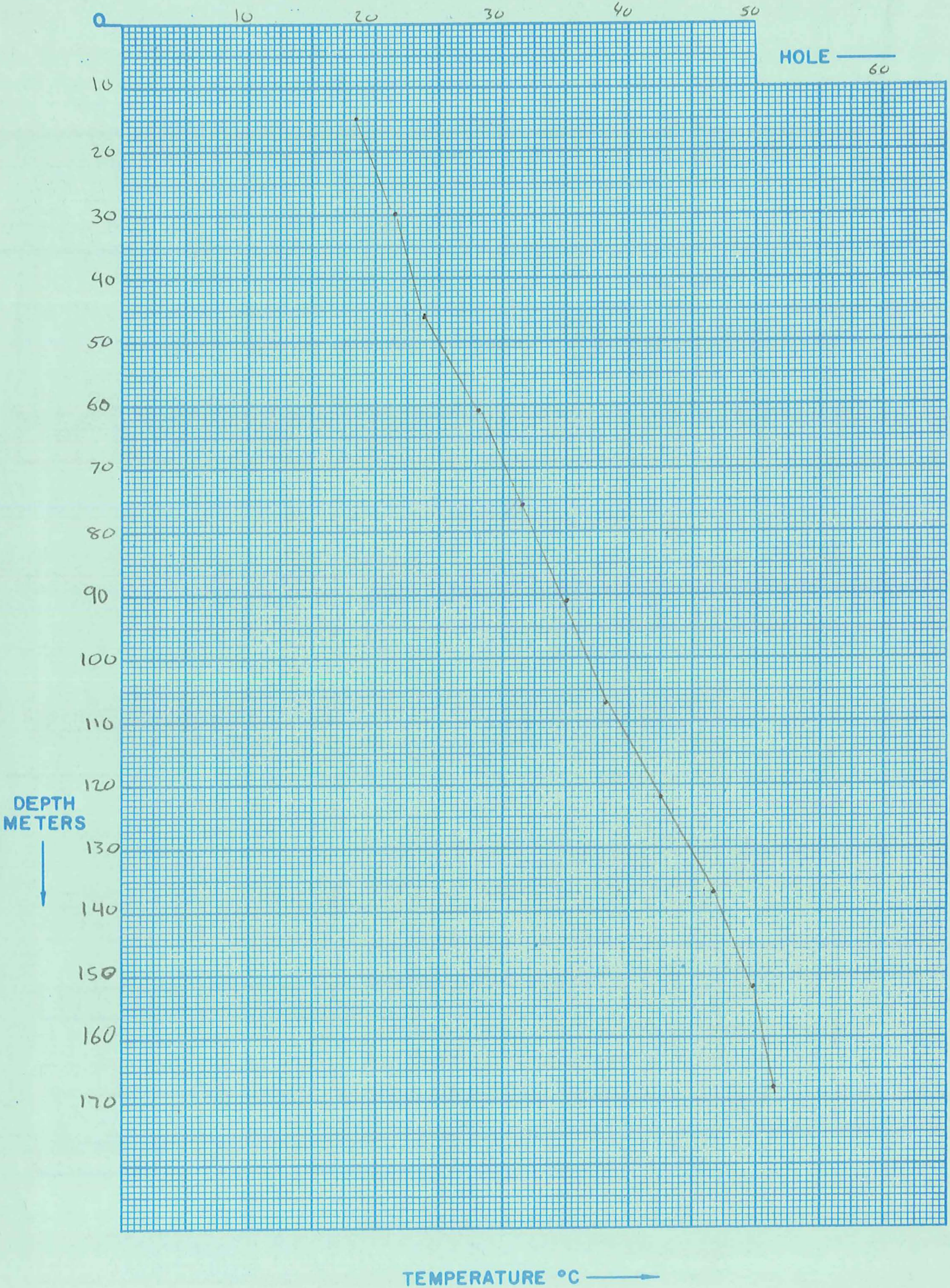
Segment 7

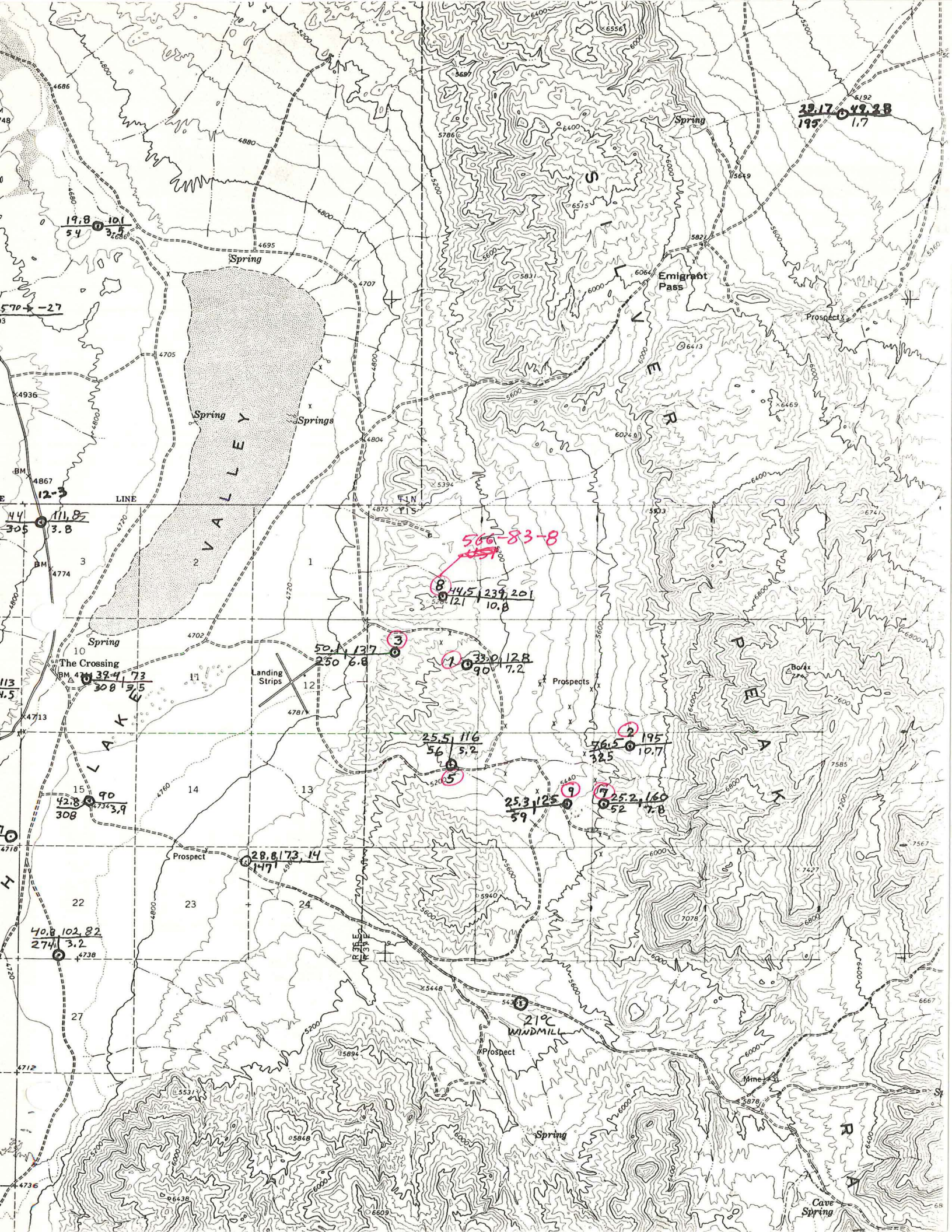
Segment 8

Segment 9

Segment 10

After final segment Start = .999





39.17
195

49.28
1.7

19.8
54

10.1
3.5

570
-27

12-3

44
305

111.8
3.8

113
4.5

39.4
308

73
5.5

42.8
308

90
7.9

40.8
274

102.82
3.2

28.8
147

73
14

566-83-8

44.5
12.1

239
10.8

201

50.1
250

137
6.8

33.0
90

128
7.2

25.5
56

116
5.2

76.5
325

195
10.7

25.3
59

125

25.2
52

160
7.8

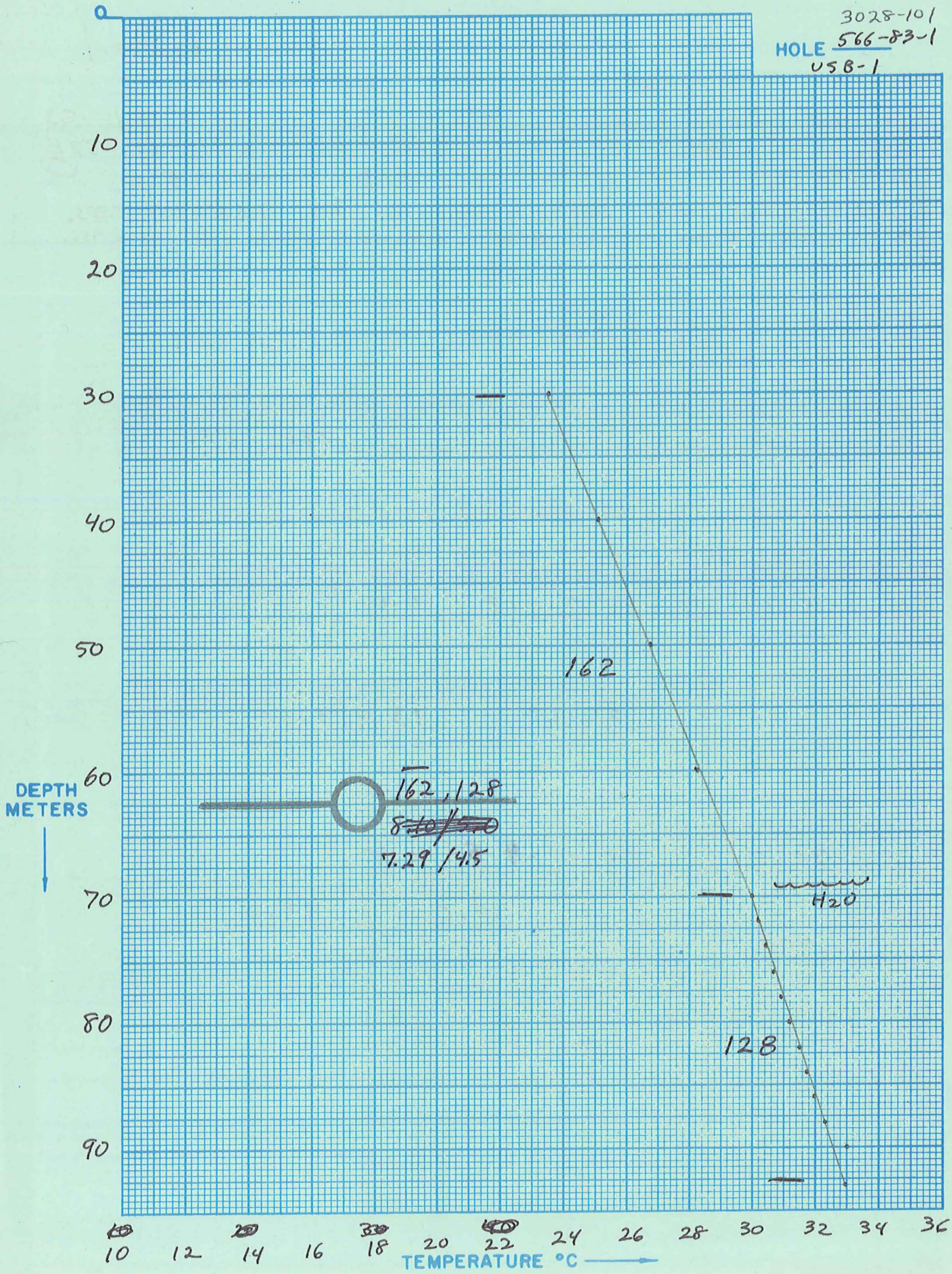
21°
WINDMILL

Cave
Spring

Blank

Page

3028-101
HOLE 566-83-1
USB-1



DEPTH METERS

TEMPERATURE °C

162, 128
~~8.10/5.0~~
7.29/4.5

H₂O

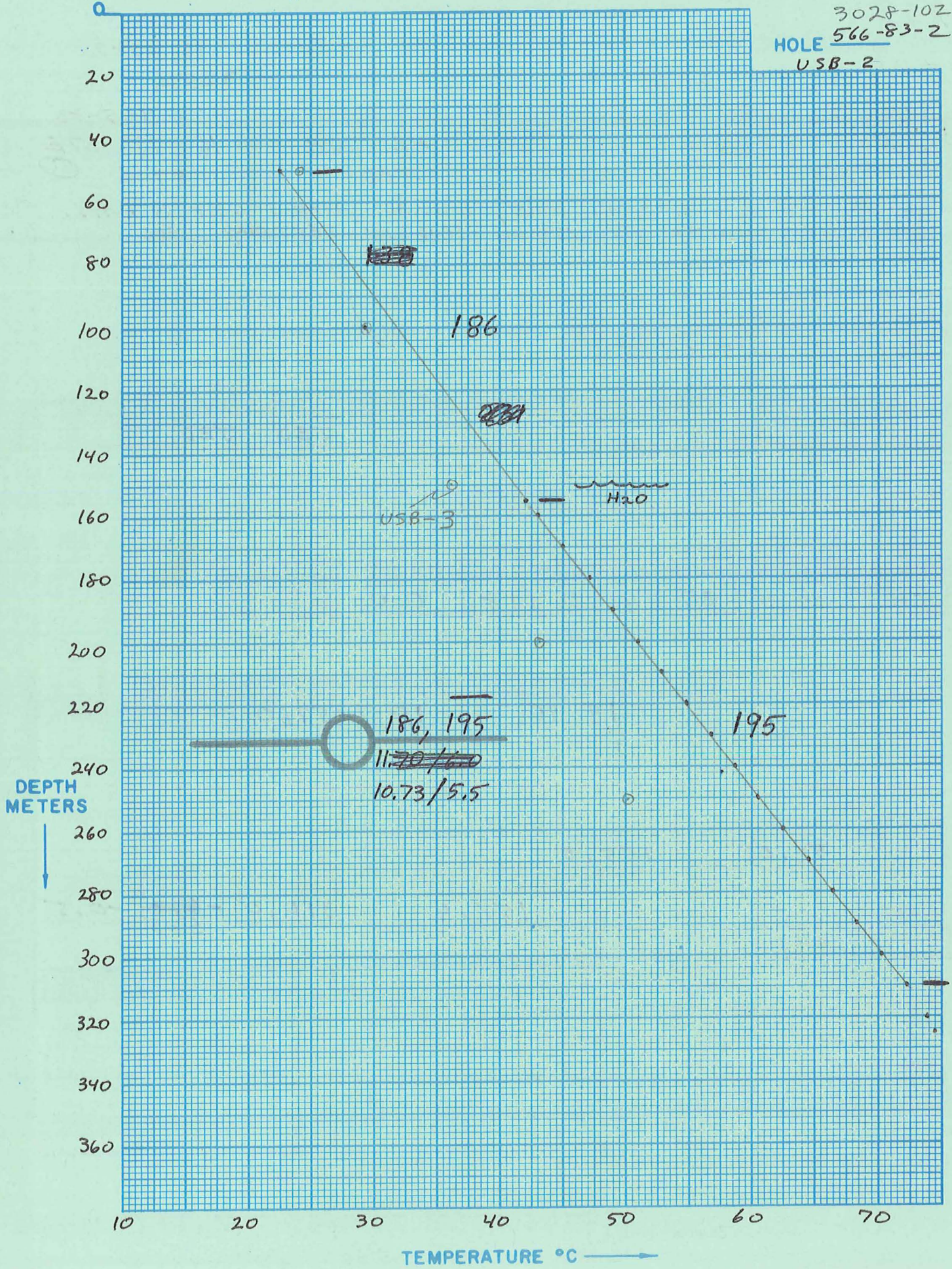
162

128

6.45

195

3028-102
HOLE 566-83-2
USB-2



AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

3028703

ΔT Well No. 566-83-3

Property-Project FISH LAKE Depth Logged 250m
 Map RHYOLITE RIDGE Scale _____ Date: Drilled _____ Logged 4-16-83
 State NV County ESM , _____ of _____ of SW of NW of Sec 7 T 15 R 37E
 Instrument SPA-103 Operator JED Elevation 4960 (ft/m)
 Comments US BORAX MINERAL HOLE, 6" THICK MUD BELOW 120 m

JUSTIFY

Date Logged

Proj No	Well No	DA	MO	YR	*
1 2 3 4 5 6 7 8 9 10	11 12 13 14 15 16 17 18 19 20				
566	83-316	04	83	CM	

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

Card A

Site Description																																																												Operator						Editor						DA			MO			YR																																																																																							
21-60	61-66	67-72	73-78	79-84	85-90	91-96	97-102	103-108	109-114	115-120	121-126	127-132	133-138	139-144	145-150	151-156	157-162	163-168	169-174	175-180	181-186	187-192	193-198	199-204	205-210	211-216	217-222	223-228	229-234	235-240	241-246	247-252	253-258	259-264	265-270	271-276	277-282	283-288	289-294	295-300	301-306	307-312	313-318	319-324	325-330	331-336	337-342	343-348	349-354	355-360	361-366	367-372	373-378	379-384	385-390	391-396	397-402	403-408	409-414	415-420	421-426	427-432	433-438	439-444	445-450	451-456	457-462	463-468	469-474	475-480	481-486	487-492	493-498	499-504	505-510	511-516	517-522	523-528	529-534	535-540	541-546	547-552	553-558	559-564	565-570	571-576	577-582	583-588	589-594	595-600	601-606	607-612	613-618	619-624	625-630	631-636	637-642	643-648	649-654	655-660	661-666	667-672	673-678	679-684	685-690	691-696	697-702	703-708	709-714	715-720	721-726	727-732	733-738	739-744	745-750	751-756	757-762	763-768	769-774	775-780	781-786	787-792	793-798	799-804	805-810	811-816	817-822	823-828	829-834	835-840	841-846	847-852	853-858	859-864	865-870	871-876	877-882	883-888	889-894	895-900	901-906	907-912	913-918	919-924	925-930	931-936	937-942	943-948	949-954	955-960	961-966	967-972	973-978	979-984	985-990	991-996	997-1002	1003-1008	1009-1014	1015-1020	1021-1026	1027-1032	1033-1038	1039-1044	1045-1050

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

Map Location **

Scale Unit	Map Size	N Lat	W Long
21-23	24-30	31-35	36-40
CM	15.0	37.45.0	118.0.0

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

Card B

Northing	Easting	Elev
51-60	61-70	71-80
21.60	11.75	4960

Write M if meters

Segment 1 = Depths

Start	End	Conductivity K	ΔK
21-25	26-30	31-35	36-40
50.0	100.0		

Best cond. (-K)
Downward extrapolations (-ΔK)

Segment 2

Start	End	K	ΔK
51-55	56-60	61-65	66-70
		100.0	250.0

Segment 3

21-25	26-30	31-35	36-40	41-45	46-50
					.999

Segment 4

51-55	56-60	61-65	66-70	71-75	76-80

Segment 5

21-25	26-30	31-35	36-40	41-45	46-50

Segment 6

51-55	56-60	61-65	66-70	71-75	76-80

Segment 7

21-25	26-30	31-35	36-40	41-45	46-50

Segment 8

51-55	56-60	61-65	66-70	71-75	76-80

Segment 9

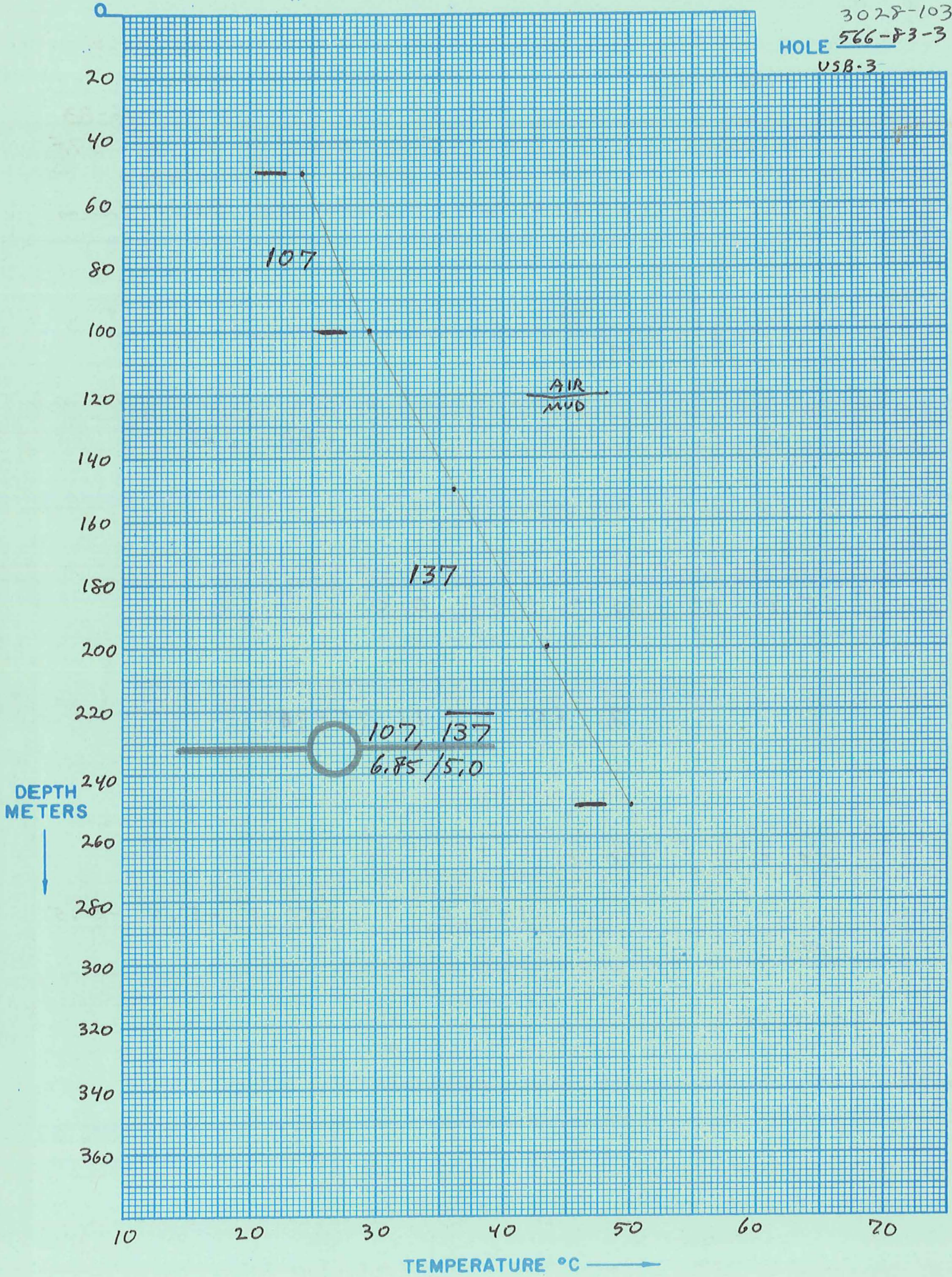
21-25	26-30	31-35	36-40	41-45	46-50

Segment 10

51-55	56-60	61-65	66-70	71-75	76-80

After final segment Start = .999

3028-103
HOLE 566-83-3
USB-3



ΔT Well No 3028-104

Property-Project 566 → EMIGRANT

Depth Logged ~~69~~ ~~67~~ ~~68~~ 52m

Map RHYOLITE RIDGE Scale 15"

Date: Drilled _____ Logged 6-9-83

State NV County ESM of _____ of NE of NW of Sec 32 T 15 R 38 E

Instrument SPA-103 Operator JED Elevation 7150 (ft/m)

Comments 6" MINERAL HOLE IN SMALL MINING AREA 0.3 MI SE OF NORTH SPG.

Date Logged

JUSTIFY

Card A

Proj No										Well No										DA	MO	YR	*				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20								
566																				09	06	83	CM				

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

Site Description																																																		Operator					Editor					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															
0.35 MI SE OF NORTH SPG																																																		JED					JED							

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

Drilled DA MO YR

Map Location **

Scale Unit		Map Size		N Lat		W Long																							
IN	CM	(7.5, 15, 60)	Degree	Min	Degree	Min	**																						
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
CM		15.0	118	37	45	118.	0.0																						

Use decimals

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

Card B

Northing										Easting										Elev									
51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
11.5										30.1										7150.									

Use decimals

Write M if meters

Segment 1 = Depths Start

Conductivity

Best cond. (-K)

Start										End										K	ΔK								
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
42.0										52.0																			

Downward extrapolations (-ΔK)

Segment 2

Start →

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
																				1.999									

Segment 3

Segment 5

Segment 4

Start →

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

Segment 7

Segment 6

Start →

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

Segment 9

Segment 8

Start →

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

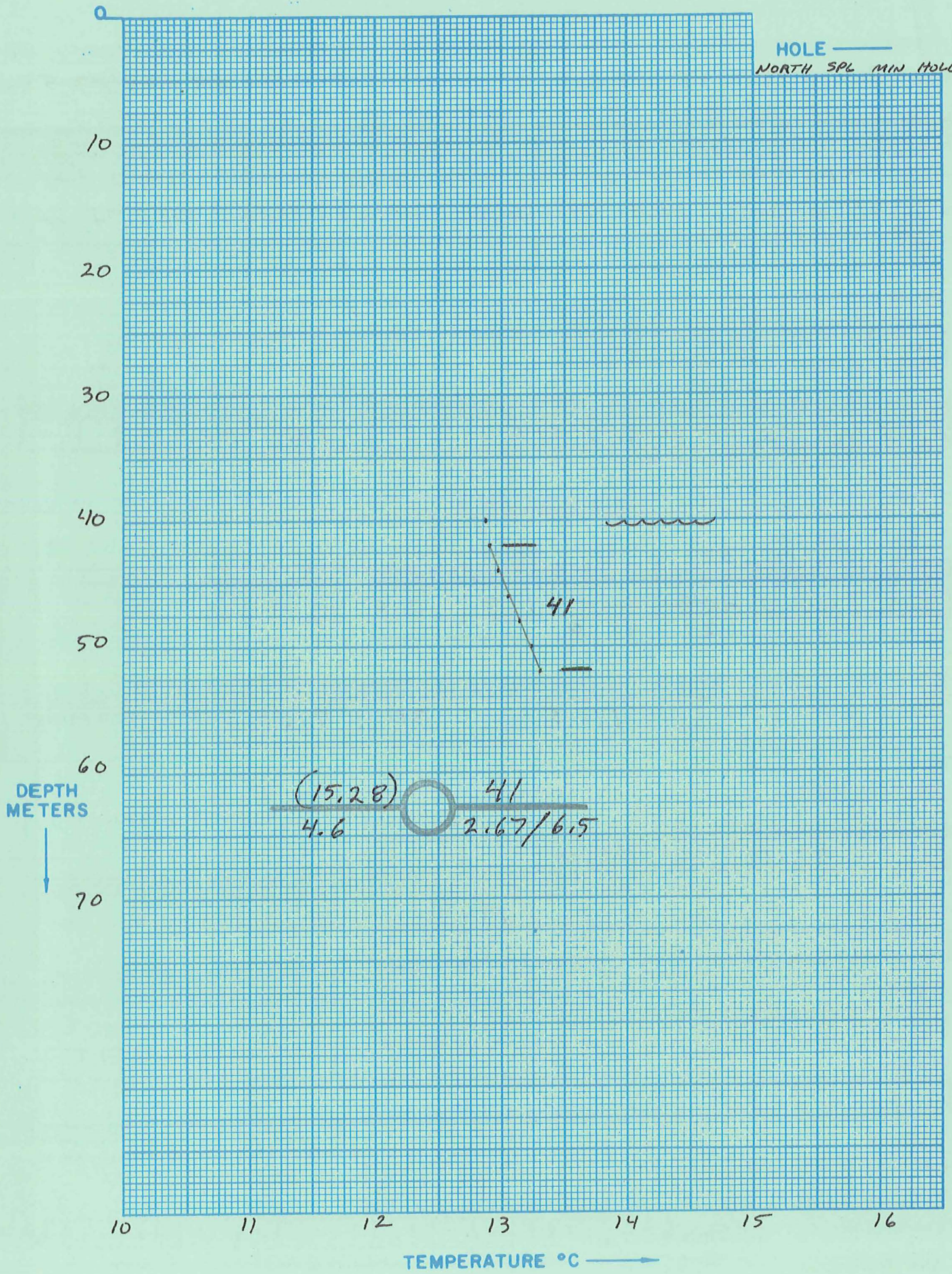
Segment 10

Start →

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

After final segment Start = .999

HOLE _____
NORTH SPL MIN HOLE



AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

3028-105

ΔT Well No. 566-83-5

Property-Project FISH LAKE - RECCE Depth Logged 56m
 Map RHYOLITE RIDGE Scale 15 Date: Drilled _____ Logged 4-16-83
 State NV County ESM, _____ of _____ of SE of NE of Sec 18 T 15 R 37E
 Instrument SPA-103 Operator JED Elevation 5200 (ft/m)
 Comments US BORAX MINERAL HOLE, 6" WATER IN BOTTOM OF HOLE.

JUSTIFY

Date Logged

Proj No	Well No	DA	MO	YR	*
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	566	83-5	16	04	83 CM

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

Card A

Site Description																														Operator					Editor			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	JED					56 57 58 59 60	JED			61 62 63				64 65 66 67 68			

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

Map Location **

Scale Unit	Map Size	N Lat	W Long	
21 22 23 24 25 26 27 28 29 30	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
IN CM	(7.5, 15, 60)	Degree	Min	Degree
CM	15.0	37.45.0	118.0	0.0

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

Card B

Northing										Easting										Elev												
51 52 53 54 55 56 57 58 59 60	18.95										61 62 63 64 65 66 67 68 69 70	13.155200										71 72 73 74 75 76 77 78 79 80	F									

Use decimals

Write M if meters

Segment 1 = Depths	Conductivity	Best cond. (-K)
Start	End	K
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
45.0	56.0	-4.5
		-0.5

Downward extrapolations (-ΔK)

Segment 2

51 52 53 54 55 56 57 58 59 60	61 62 63 64 65 66 67 68 69 70	71 72 73 74 75 76 77 78 79 80
.999		

Segment 3

Segment 4

Segment 5

Segment 6

Segment 7

Segment 8

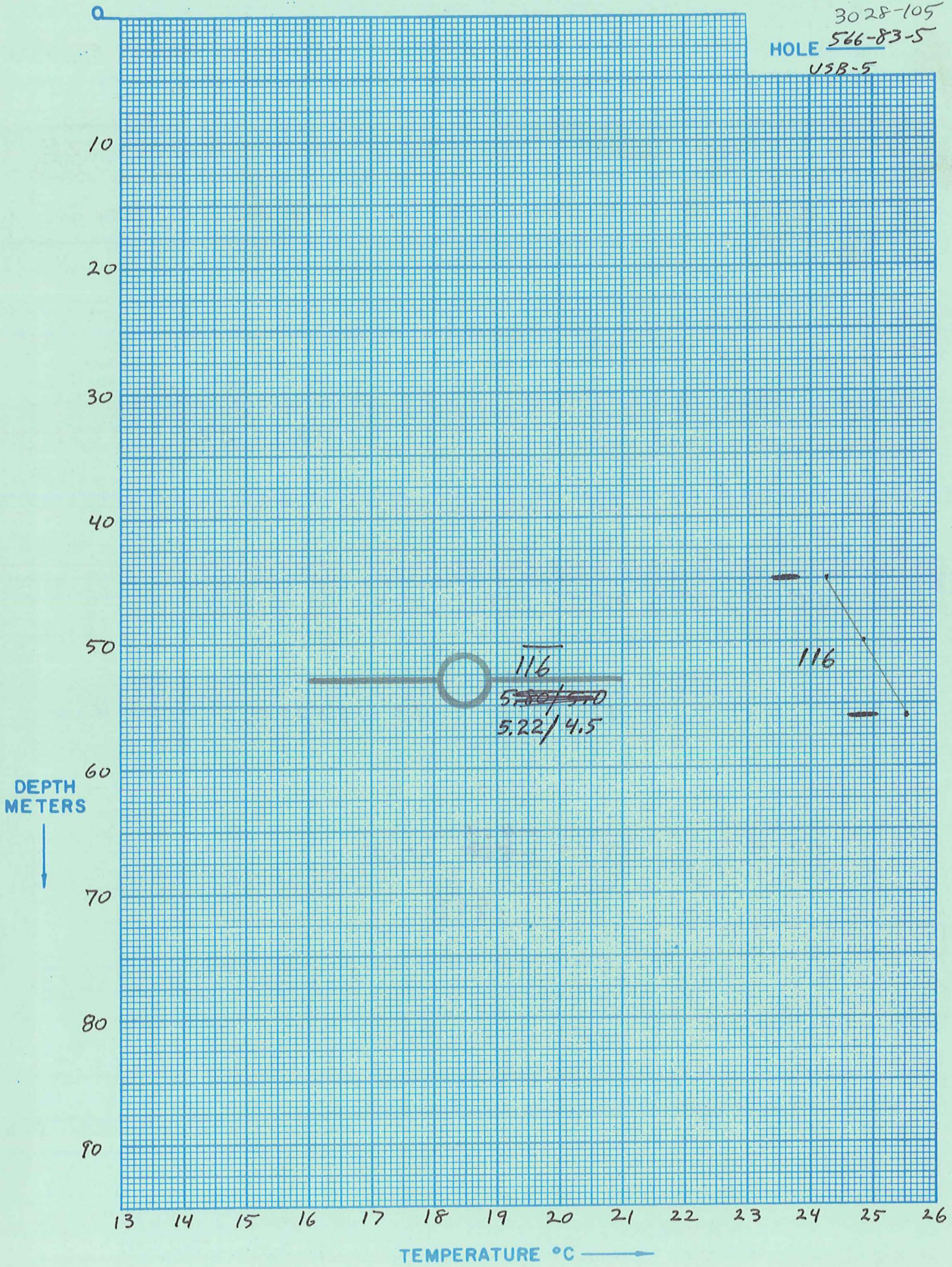
Segment 9

Segment 10

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

3028-105
HOLE 566-83-5
USB-5



Property-Project EMIGRANT Depth Logged 279m
 Map RHYOLITE RIDGE Scale _____ Date: Drilled _____ Logged 9/15/83
 State NU County ESM, _____ of _____ of _____ of Sec _____ T _____ R _____
 Instrument SPA 109 Operator DEYMONAZ Elevation 5840 (F/m)
 Comments 6" MINERAL HOLE

JUSTIFY

Card A

Date Logged

Proj No	Well No	DA	MO	YR
1 2 3 4 5 6 7 8 9 10	11 12 13 14 15 16 17 18 19 20			
3028	106	15	09	83

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

Site Description

Operator	Editor	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
JED / JED				

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

Card B

Scale Unit

Scale Unit	Map Size	N Lat	W Long
21 22 23 24 25	26 27 28 29 30	31 32 33 34 35	36 37 38 39 40
cm	7.5	45.0	118.0

Map Location **

Map Size (7.5, 15, 60)

N Lat Degree Min Degree Min **

W Long Degree Min **

Use decimals

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

Northing

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
		5840

Use decimals

Write M if meters

Segment 1 = Depths

Start	End	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	
50.0	175.0		

Best cond. (-K)
Downward extrapolations (-ΔK)

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	
	175.0	275.0	

Segment 3

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
.999		

Segment 4

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

Segment 5

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 6

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

Segment 7

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 8

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

Segment 9

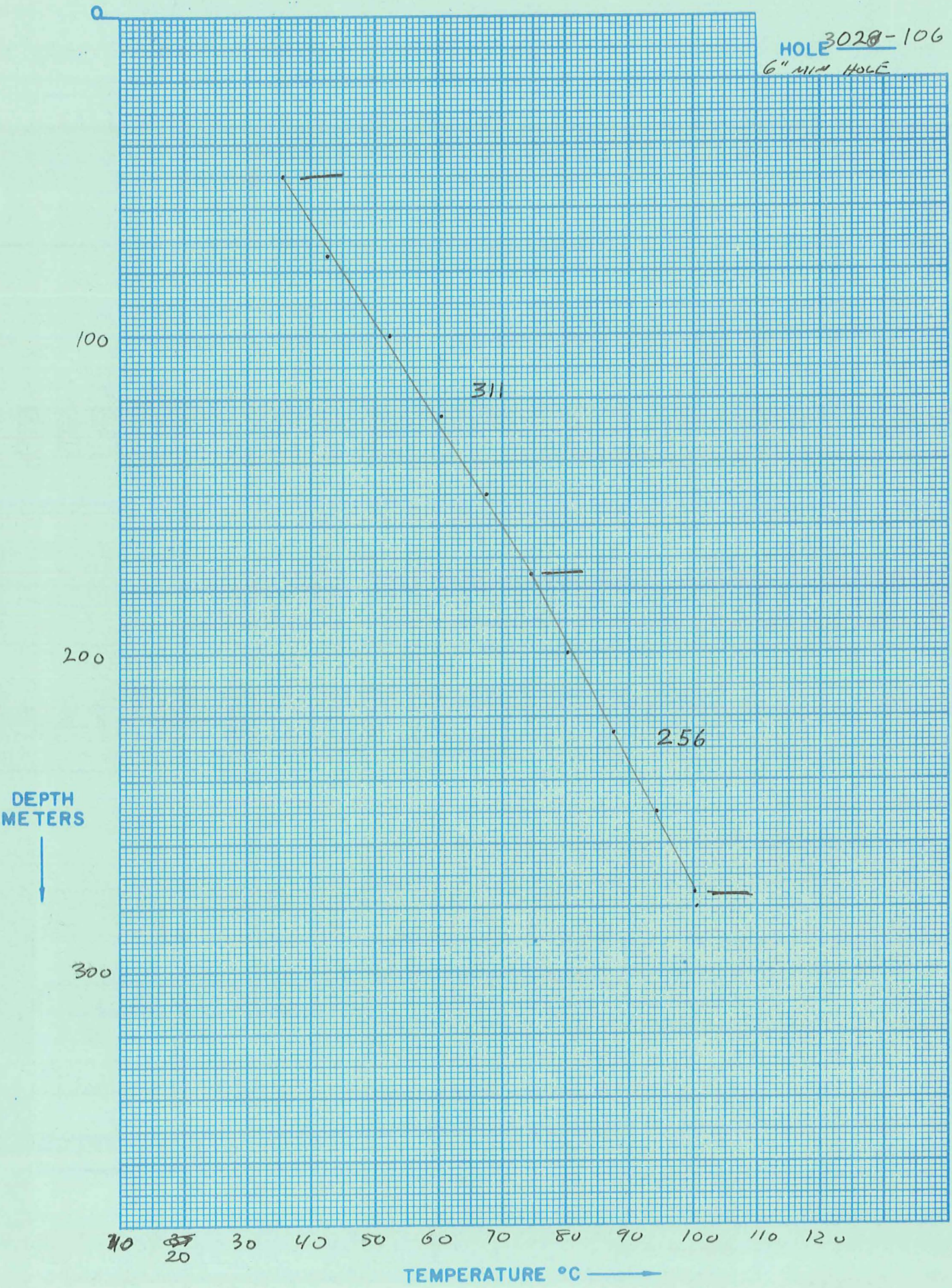
21 22 23 24 25 26 27 28 29 30	31 32 33 34 35 36 37 38 39 40	41 42 43 44 45 46 47 48 49 50

Segment 10

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 3028-106
6" MIN HOLE



DEPTH METERS



TEMPERATURE °C



AMAX EXPLORATION, INC.
TEMPERATURE/DEPTH LOG

3028-107
ΔT Well No. 566-83-7

Property-Project FISH LAKE - RECCE Depth Logged 52 m
Map RHYOLITE RIDGE Scale 15" Date: Drilled Logged 4-16-83
State NV County ESM of of NW of SW of Sec 16 T 15 R 37E
Instrument SPA-103 Operator JED Elevation 5640 (ft/m)
Comments US BORAX MINERAL HOLE 6" HOLE, AT SOUTH BASE OF RHYOLITE ASH FLOW HILL-DRILLED WITHIN LAST 20 DAYS USB-7

JUSTIFY

Card A

Date Logged

Proj No	Well No	DA	MO	YR
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
566	83-7			C M

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

Site Description

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

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

Card B

Map Location * *

Scale Unit CM Map Size 15.0 N Lat 37.45.0 W Long 118.0.0

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

Use decimals

Northing 18.05 Easting 16.60 Elev 5640

Write M if meters

Use decimals

Segment 1 = Depths

Start	End	K	ΔK
21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50	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	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	21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
30.0	40.0	57.0	0.5

Best cond. (-K)
Downward extrapolations (-ΔK)

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	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	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	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
		40.0	52.0 - 4.89 - 0.5

Segment 3

Segment 4

Segment 5

Segment 6

Segment 7

Segment 8

Segment 9

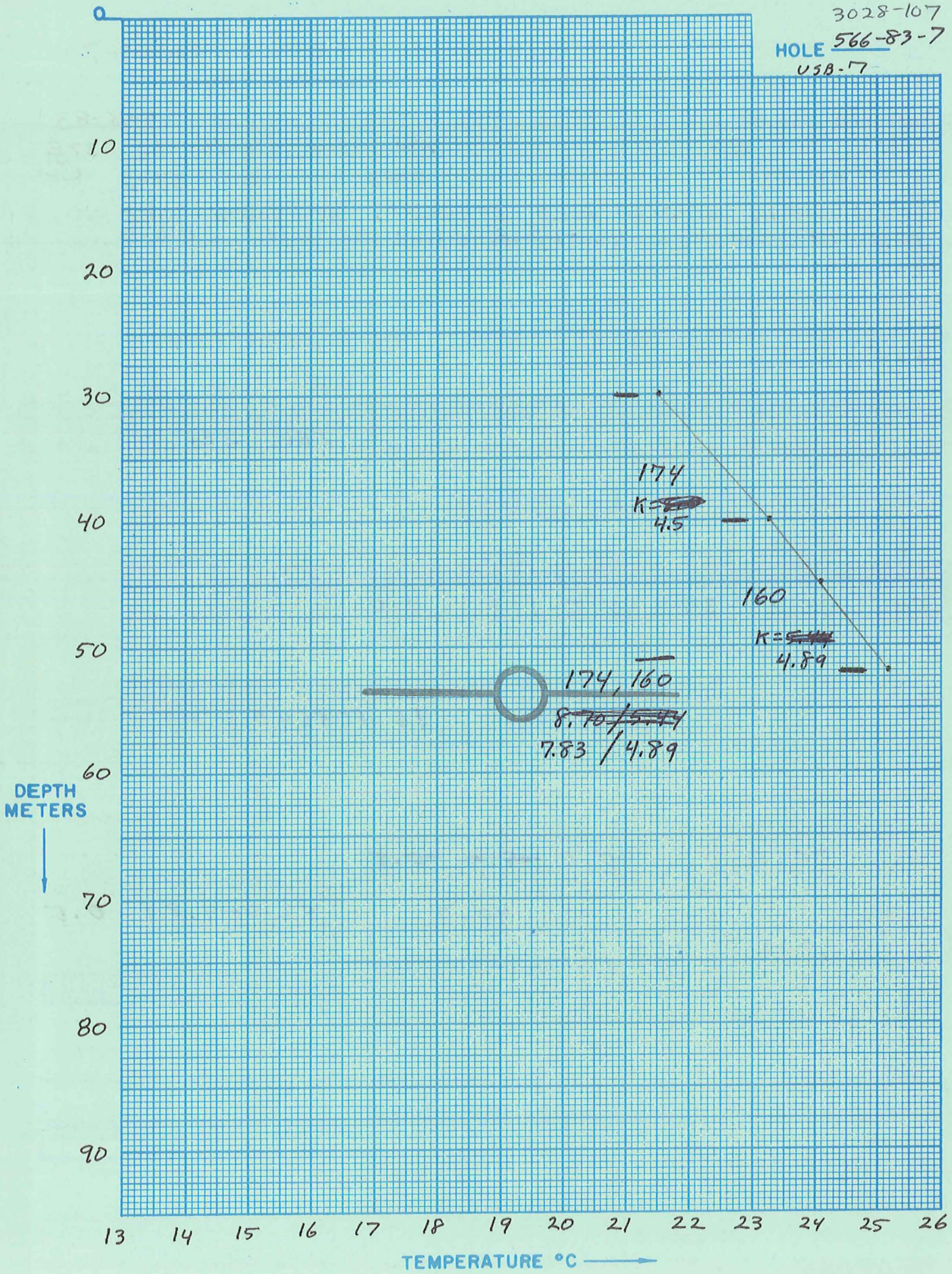
Segment 10

After final segment Start = .999

3028-107

HOLE 566-83-7

USB-7



10

20

30

40

50

60

70

80

90

DEPTH METERS



TEMPERATURE °C

174

~~K=~~
4.5

160

~~K=~~
4.89

174, 160

~~8.70 / 5.44~~
7.83 / 4.89

3028-108

ΔT Well No. 566-83-8 USB-8

Property-Project RECCE Depth Logged 121 m

Map RHYOLITE RIDGE Scale 15 Date: Drilled _____ Logged 5-4-83

State NV County ESM of _____ of SW of SE of Sec 6 T 15 R 37E

Instrument SPA-103 Operator JED Elevation 5130 (m)

Comments 6" ~~ABANDONED~~ ABANDONED MINERAL HOLE. PROBABLY DRILLED BY US BORAX IN 1981-82. DRILLED IN TUFFACEOUS SEDS.

JUSTIFY

Date Logged

Proj No	Well No	DA	MO	YR	*
1 2 3 4 5 6 7 8 9 10	11 12 13 14 15 16 17 18 19 20				
566	83-804	05	05	83	CM

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

Card A

Site Description																																								Operator					Editor			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	69 70 71 72 73 74 75 76 77 78 79 80	81 82 83 84 85 86 87 88 89 90	91 92 93 94 95 96 97 98 99 100	101 102 103 104 105 106 107 108 109 110	111 112 113 114 115 116 117 118 119 120	121 122 123 124 125 126 127 128 129 130	131 132 133 134 135 136 137 138 139 140	141 142 143 144 145 146 147 148 149 150	151 152 153 154 155 156 157 158 159 160	161 162 163 164 165 166 167 168	169 170 171 172 173 174 175 176 177 178 179 180	181 182 183 184 185 186 187 188 189 190	191 192 193 194 195 196 197 198 199 200																																							
5, 8 KM SW OF EMIGRANT PASS										JED					JED																																									

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

Map Location **

Scale Unit IN CM

Map Size (7.5, 15, 60) 15.0

N Lat Degree 37.45 W Long Degree 118.00

Min 45 Min 00

Use decimals

Card B

Northing 22.78 Easting 12.905130 Elev 5130

Use decimals

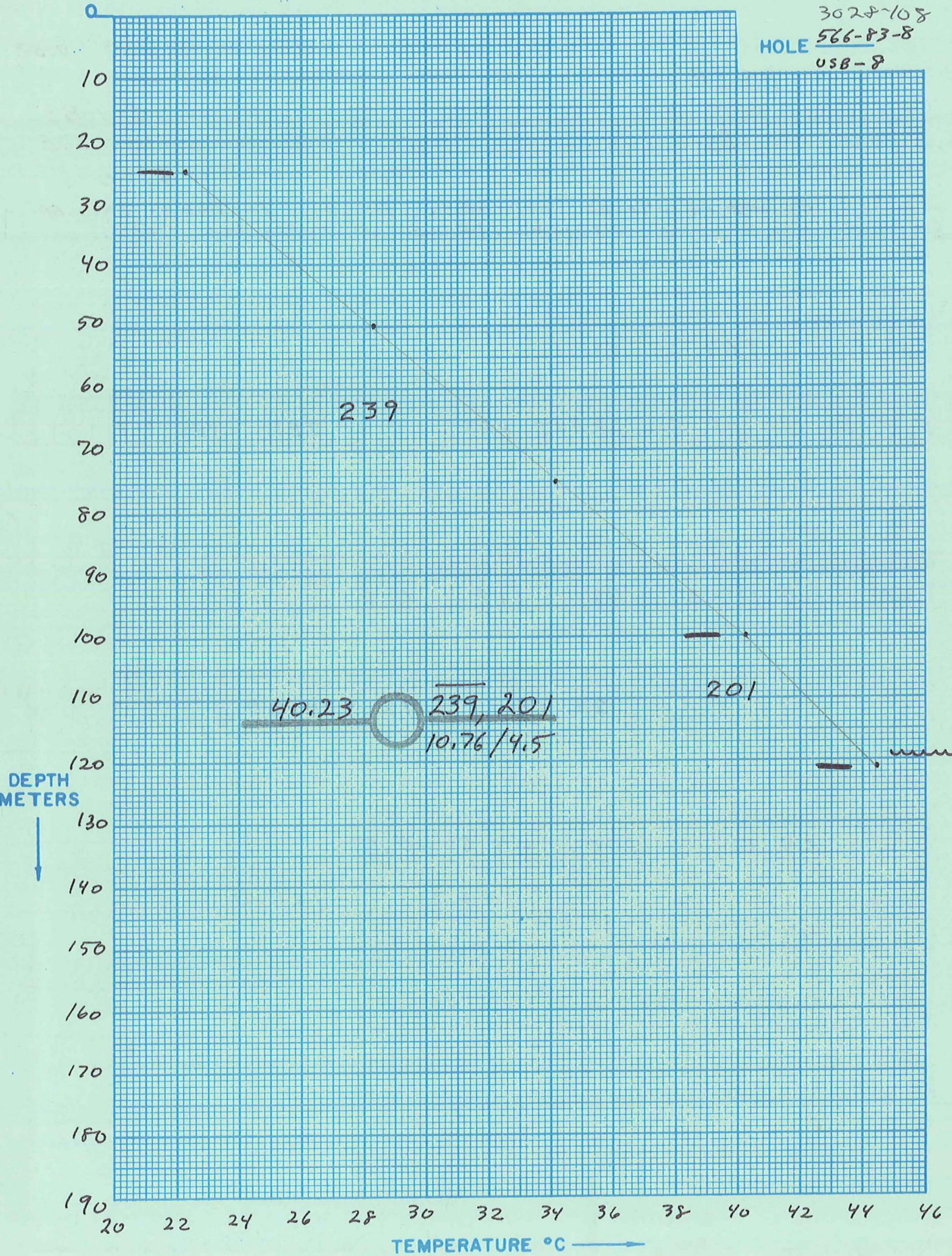
Write M if meters

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

Segment	Start	End	Conductivity K	ΔK	Best cond. (-K)	Downward extrapolations (-ΔK)
Segment 1	25.0	100.0	-4.5	-0.5		
Segment 2			100.0		121.0	
Segment 3	.999					
Segment 4						
Segment 5						
Segment 6						
Segment 7						
Segment 8						
Segment 9						
Segment 10						

After final segment Start = .999

3024-108
HOLE 566-83-8
USB-8



33028-109

ΔT Well No. 566-83-9

Property-Project _____ Depth Logged 59m

Map RHYOLITE RIDGE Scale 15" Date: Drilled _____ Logged 6-3-83

State NV County ESM, _____ of _____ of _____ of Sec _____ T _____ R _____

Instrument SPA-29 Operator JED Elevation 5520 (ft/m)

Comments USB-9 ABDN MINERAL HOLE w/ RUSTY 7" CASING DRY TO TD.

JUSTIFY

Date Logged

Proj No	Well No	DA	MO	YR	*
1 2 3 4 5 6 7 8 9 10	11 12 13 14 15 16 17 18 19 20				
566	83-903	06	83	CM	

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

Card A

Site Description																																																		Operator					Editor					DA			MO			YR		
																																																		JED					JED													

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

Map Location **

Scale Unit

IN	CM
	CM

Map Size (7.5, 15, 60)

15.0

N Lat

Degree	Min

W Long

Degree	Min

Use decimals

Northring

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Easting

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Elev

																									5520									
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	------	--	--	--	--	--	--	--	--	--

Write M if meters

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

Segment 1 = Depths

Start	End	Conductivity	Best cond. (-K)
		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	

Segment 2

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
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Segment 3

Segment 4

Segment 5

Segment 6

Segment 7

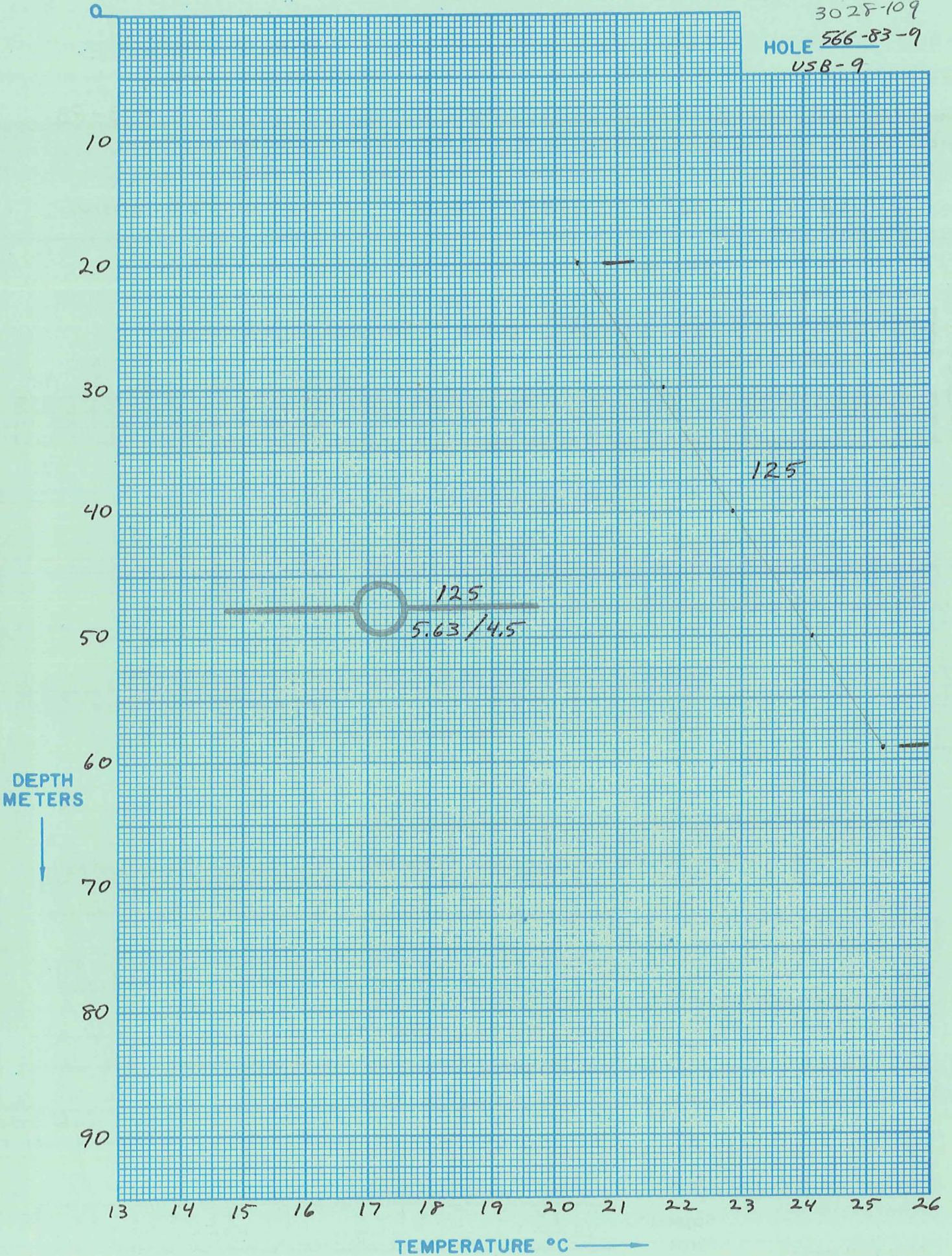
Segment 8

Segment 9

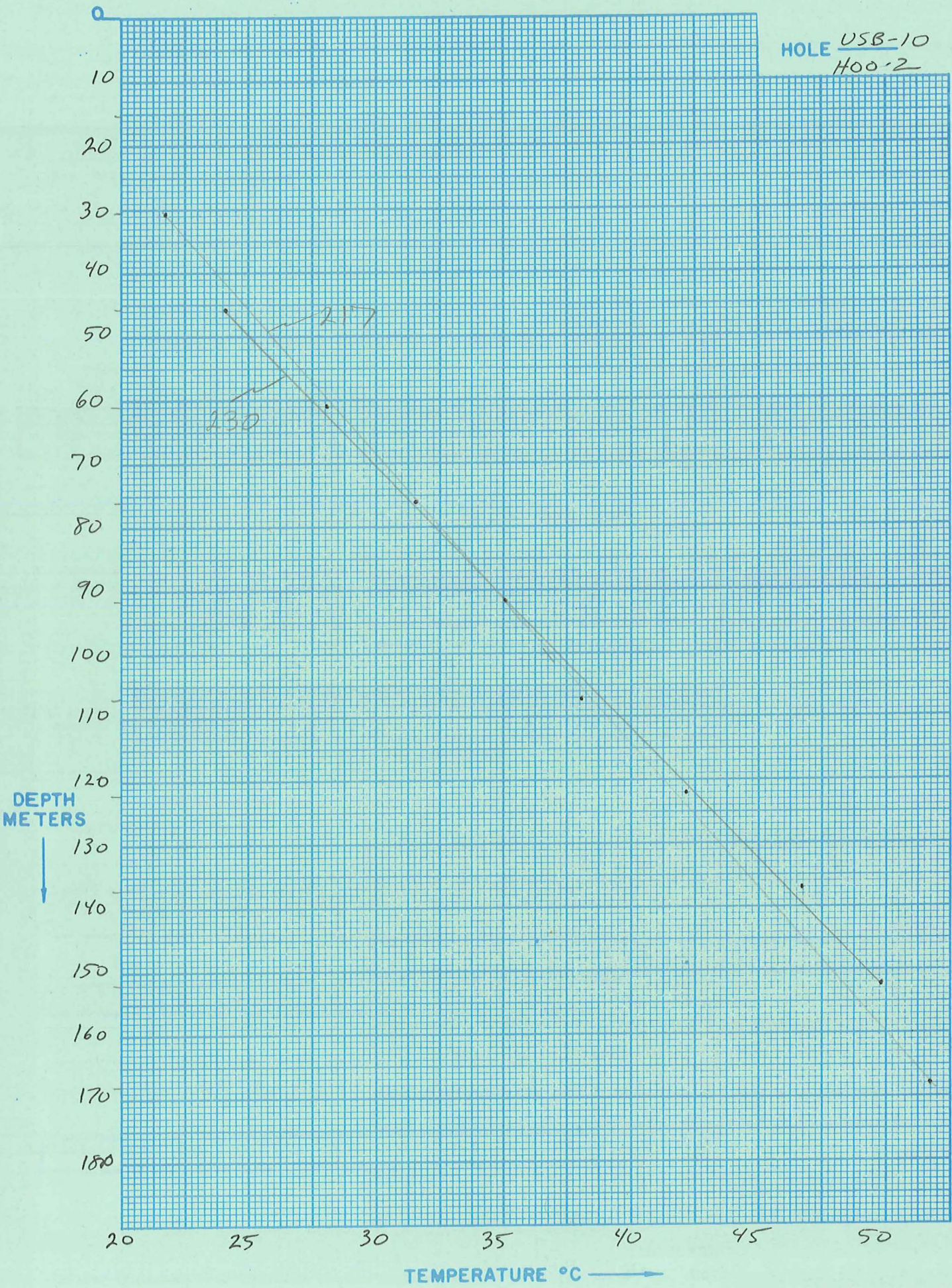
Segment 10

After final segment Start = .999

3028-109
HOLE 586-83-9
USB-9



HOLE USB-10
H00-2



ΔT Well No. 3028-111

Property-Project Emigrant Depth Logged 95m
 Map Rhyolite Ridge Scale 1S Date: Drilled SUMMER 84 Logged 6-1-84
 State NV County Esmeralda of of SE of SE of Sec 6 T 1S R 37E
 Instrument Enviro lab 168 Operator DP Elevation 5120 (ft/m)
 Comments U.S. BORAX MINERAL HOLE.

JUSTIFY

Date Logged

Proj No	Well No	DA	MO	YR	*
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20					
33028	1 1 1 0 1	0 6	8 4	C M	
3028					

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

Card A

Site Description																																								Operator					Editor			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						HDP					JED																																							

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

Map Location **

Scale Unit	Map Size	N Lat	W Long
IN CM	(7.5, 15, 60.)	Degree	Min
21 22 23 24 25	26 27 28 29 30	31 32 33 34 35	36 37 38 39 40
CM	7.5	37.45.0	118.0.0

Use decimals

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

Northing										Easting										Elev									
51 52 53 54 55	56 57 58 59 60	61 62 63 64 65	66 67 68 69 70	71 72 73 74 75	76 77 78 79 80																								
					22.35										13.305120.					F									

Use decimals

Write M if meters

Segment 1 = Depths	Conductivity	Best cond. (-K)
Start	End	Downward extrapolations (-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.	90.	

Segment 2

51 52 53 54 55	56 57 58 59 60	61 62 63 64 65	66 67 68 69 70	71 72 73 74 75	76 77 78 79 80				
					999				

Segment 3

Segment 4

Segment 5

Segment 6

Segment 7

Segment 8

Segment 9

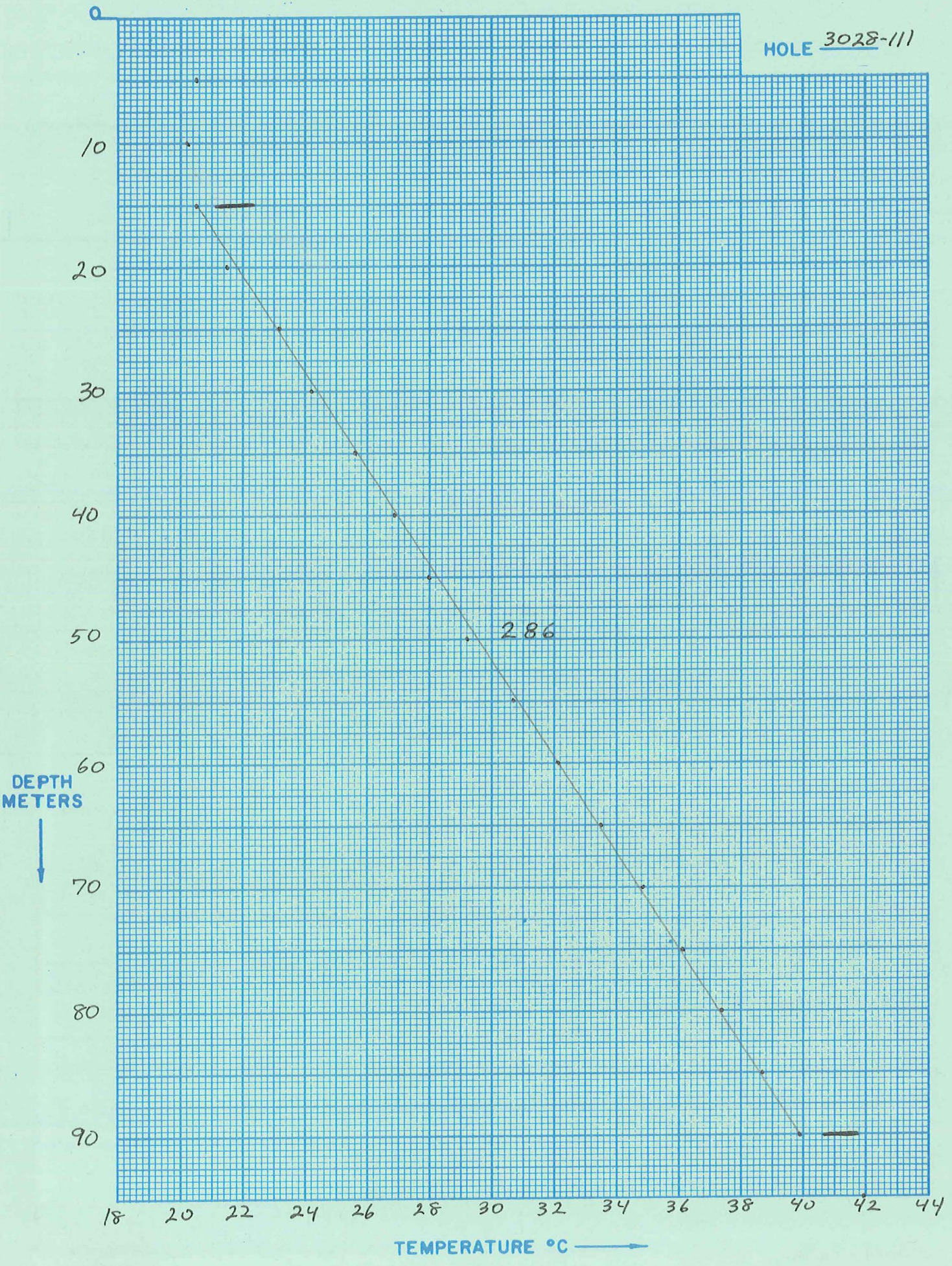
21 22 23 24 25 26 27 28 29 30	31 32 33 34 35 36 37	38 39 40	41 42 43 44 45	46 47 48 49 50
-------------------------------	----------------------	----------	----------------	----------------

Segment 10

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
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After final segment Start = .999

HOLE 3028-111



ΔT Well No. 3028-112

Property-Project EMIGRANT

Depth Logged 163 m

Map BHYOLITE RIDGE Scale 7 1/2

Date: Drilled _____

Logged 1832m 6-20-84

State NV County ESM, _____ of NE of NW of NW of Sec 17 T 15 R 37E

Instrument SPA-29

Operator DEYMONAZ

Elevation 5360 ft
m

Comments U.S. BORAX MIN. HOLE

Date Logged

JUSTIFY Proj No Well No DA MO YR *
 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 *
 3028 112 20 06 84 CM *19-Write F if Fahrenheit, 20-Write F if Feet

Card A Site Description Operator Editor 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
 JED JED

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

Map Location * *

Scale Unit Map Size N Lat W Long
 IN (7.5, 15, 60) Degree Min Degree Min **
 CM 7.5 37. 45.0 118. 0.0
 Measure from SW corner of map; except AMS sheets measure from bottom center degree mark (W,-)(E,+)

Card B Northing Easting Elev
 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80
 19.32 14.60 5360. F ← Write M if meters

Use decimals

Segment 1 = Depths Start End Conductivity K ΔK Best cond. (-K) Downward extrapolations (-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
 25. 160. End K ΔK

Segment 2 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
 .999

Segment 3 Start →

Segment 4 Start →

Segment 5 Start →

Segment 6 Start →

Segment 7 Start →

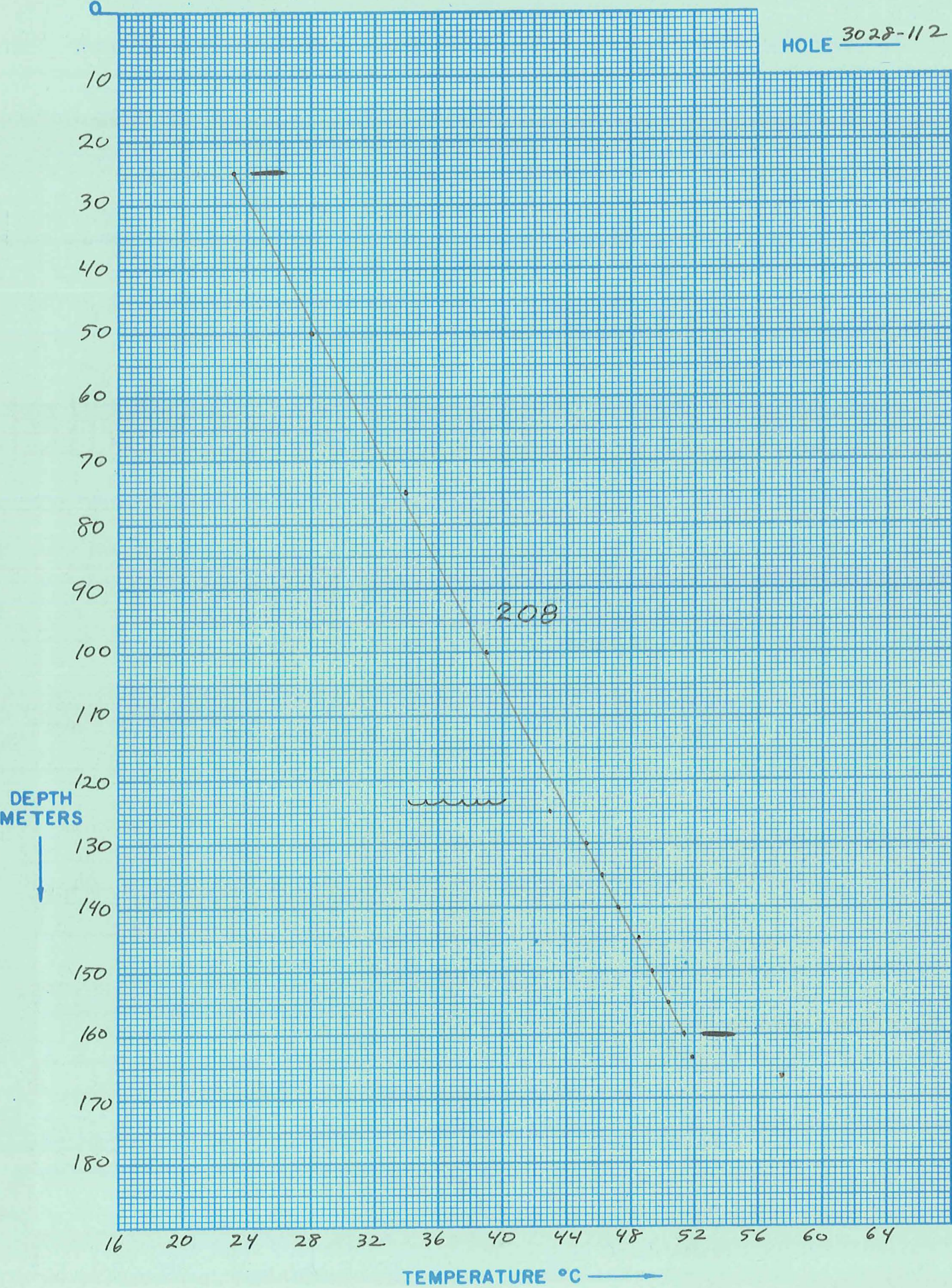
Segment 8 Start →

Segment 9 Start →

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 3028-112



ΔT Well No. 3028-113

Property-Project EMIGRANT Depth Logged 170m
 Map RHYOLITE RIDGE Scale 7 1/2 Date: Drilled _____ Logged 6-20-84
 State NV County ESM of _____ of SW of SW of Sec 9 T 15 R 37E
 Instrument SPA-~~403~~ 29 Operator DEYMONAZ Elevation 5630 (ft/m)
 Comments U.S. BORAX MIN HOLE,

Date Logged

JUSTIFY Proj No Well No DA MO YR *
 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
 3028 113 20 06 84 CM *19-Write F if Fahrenheit, 20-Write F if Feet

Card A Site Description Operator Editor 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
 JED JED

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

Map Location * *

Scale Unit IN CM Map Size (7.5, 15, 60) N Lat Degree Min Degree Min **
 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
 CM 7.5 37. 45. 0 118. 0
 Use decimals

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

Card B Northing Easting Elev
 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80
 19.80 16.575630. F ← Write M if meters
 Use decimals

Segment 1 = Depths Start End Conductivity K ΔK Best cond. (-K) Downward extrapolations (-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
 25. 50.

Segment 2 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
 50. 170.

Segment 3 Start → 1.999

Segment 4 Start →

Segment 5 Start →

Segment 6 Start →

Segment 7 Start →

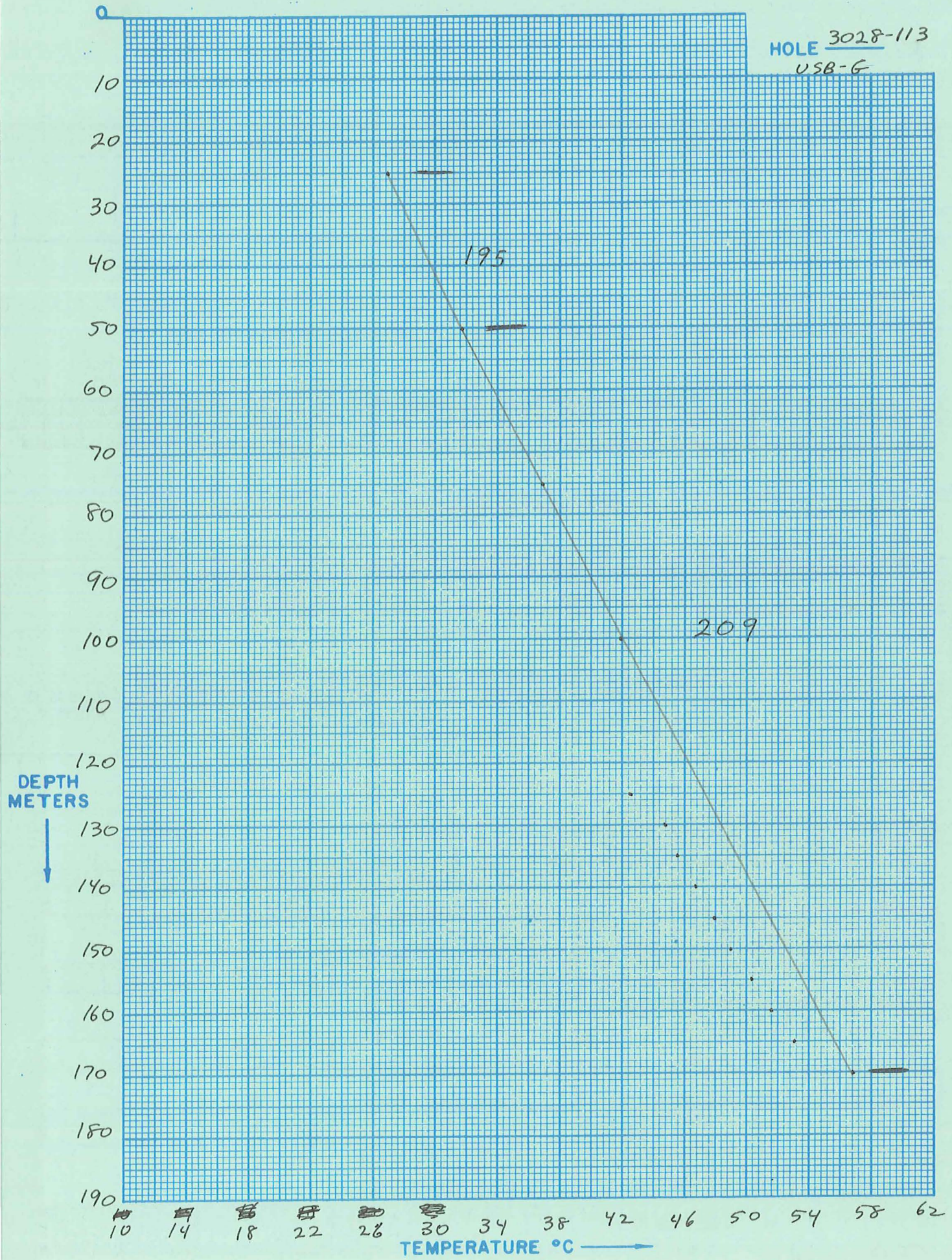
Segment 8 Start →

Segment 9 Start →

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 3028-113
USB-G



ΔT Well No. 3028-114

Property-Project EMIGRANT Depth Logged 60m
 Map RHYOLITE RIDGE Scale 7 1/2 Date: Drilled _____ Logged 5-27-84
 State NV County ESM of _____ of SE of NE of Sec 7 T 15 R 37E
 Instrument SPA-29 Operator DEYMONAZ Elevation 5360 (ft/m)
 Comments U.S. BORAX MIN HOLE

JUSTIFY

Date Logged

Proj No	Well No	DA	MO	YR	*
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20					
3028	114	27	05	84	CM

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

Card A

Site Description																																																		Operator					Editor					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	69 70	71 72 73 74 75	76 77 78 79 80																																																														
																																																		JED					JED													

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

Map Location **

Scale Unit IN CM

Map Size (7.5, 15., 60.) 7.5

N Lat Degree 37. Min 45.0

W Long Degree 118. Min 0.0

Use decimals

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

Card B

Northing															Easting															Elev									
51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70	71 72 73 74 75 76 77 78 79 80																																						
20.8															13.60															5360									

Use decimals

Write M if meters

Segment 1 = Depths

Start	End	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			
	25	60	

Best cond. (-K)
Downward extrapolations (-ΔK)

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			
		.999	

Segment 3

Segment 4

Segment 5

Segment 6

Segment 7

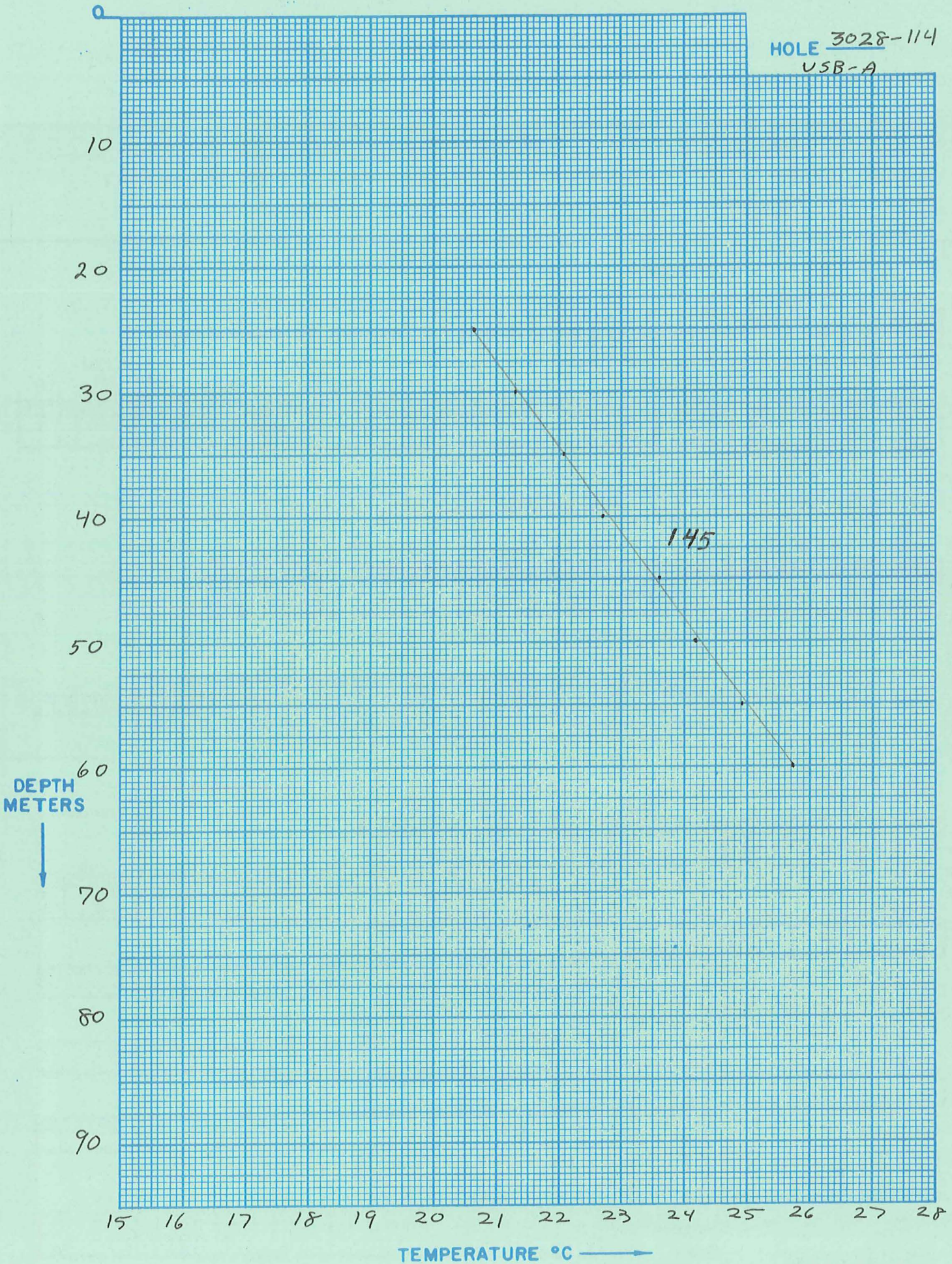
Segment 8

Segment 9

Segment 10

After final segment Start = .999

HOLE 3028-114
USB-A



AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 3028-115

Property-Project EMIGRANT Depth Logged 170 m
 Map RHYOLITE RIDGE Scale 7 1/2 Date: Drilled _____ Logged 5-26-84
 State NV County ESM of _____ of SW of NW of Sec 8 T 15 R 37E
 Instrument SPA-29 Operator DEYMONAZ Elevation 5230 (m)
 Comments US. BORAX MIN. HOLE

JUSTIFY

Date Logged

Proj No	Well No	DA	MO	YR	*
1 2 3 4 5 6 7 8 9 10	11 12 13 14 15 16 17 18 19 20				
3026	115	26	05	84	F

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

Card A

Site Description																																								Operator					Editor					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	69 70	71 72 73 74 75	76 77 78 79 80	81 82 83 84 85	86 87 88 89 90	91 92 93 94 95	96 97 98 99 100																																																
																																								JED					JED													

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

Map Location * *

Scale Unit IN CM

Map Size (7.5, 15, 60) 7.5

N Lat Degree 37 Min 45.0

W Long Degree 118 Min 0.0

Use decimals

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

Card B

Northing										Easting										Elev									
51 52 53 54 55 56 57 58 59 60	61 62 63 64 65 66 67 68 69 70	71 72 73 74 75 76 77 78 79 80																											
21.07										14.305230										F									

Use decimals

Write M if meters

Segment 1 = Depths

Start	End	Conductivity K	ΔK	Best cond. (-K)	Downward extrapolations (-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			
100.0	155.0				

Segment 2

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																	
155.0										170.0									

Segment 3

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																	
1999																			

Segment 4

Segment 5

Segment 6

Segment 7

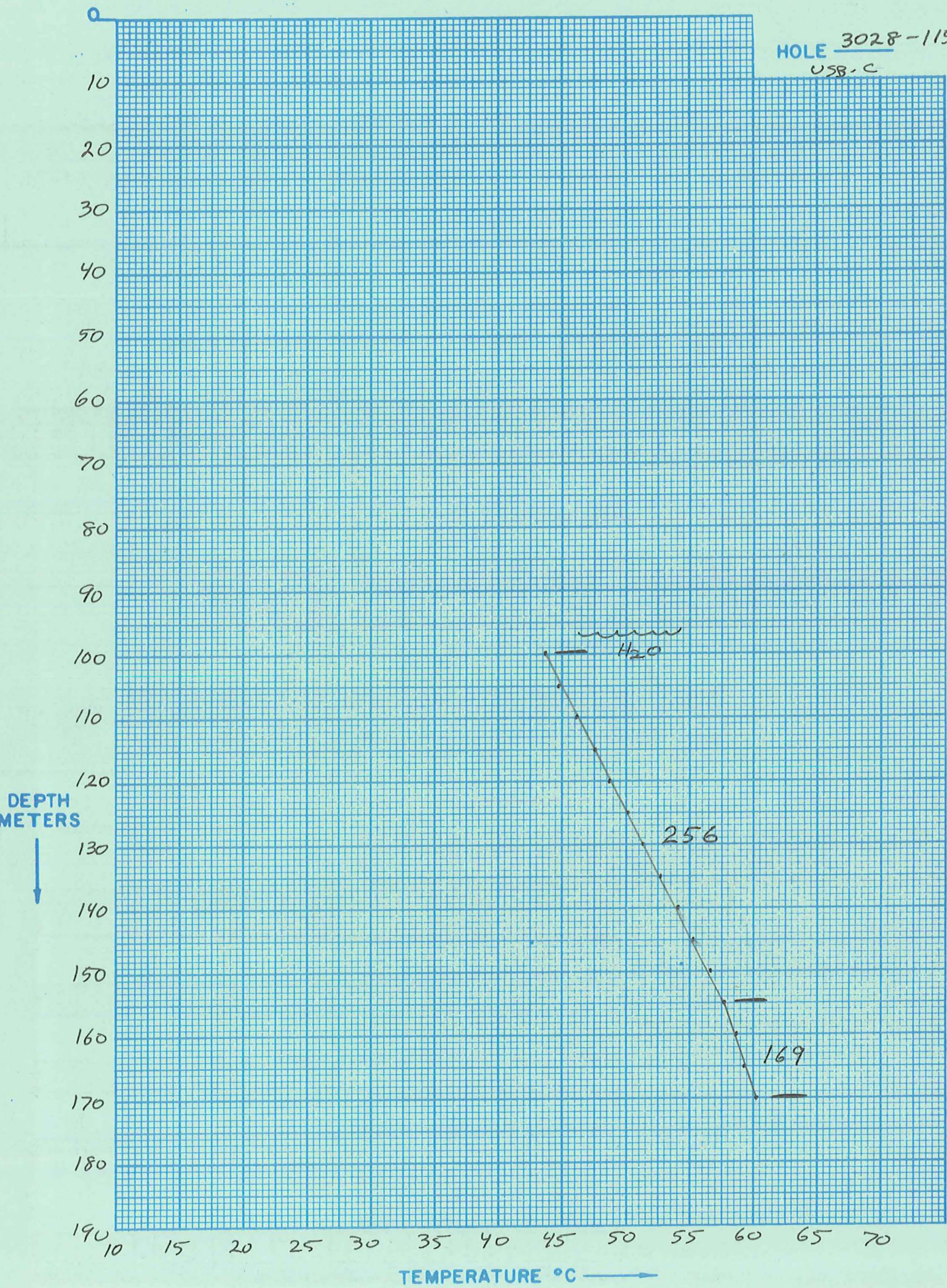
Segment 8

Segment 9

Segment 10

After final segment Start = .999

HOLE 3028-115
USB-C



ΔT Well No. 3028-116

Property-Project EMIGRANT

Depth Logged 74m

Map RHYOLITE RIDGE Scale 7 1/2

Date: Drilled 5-26-84 Logged 5-26-84

State NV County ESM, of of CEN of SE of Sec 7 T 15 R 37E

Instrument SPA-29 Operator DEYMONAZ Elevation 5280 (ft/m)

Comments U.S. BORAX MIN. HOLE

JUSTIFY

Date Logged

Proj No	Well No	DA	MO	YR	*
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20					
3302	116	26	05	84	CM

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

Card A

Site Description																																								Operator					Editor			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	JED					JED			/		/		/		/																																						

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

Map Location **

Scale Unit	Map Size	N Lat	W Long
IN CM	(7.5, 15, 60)	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		Degree	Min **
CM	7.5	37.45	118.0

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	20.25										13.305280										F									

Use decimals

Write M if meters

Segment 1 = Depths	Conductivity	Best cond. (-K)
Start	End	Downward extrapolations (-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	K	ΔK
20.0	74.0	

Segment 2

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	K	ΔK
	.999	

Segment 3

Segment 4

Segment 5

Segment 6

Segment 7

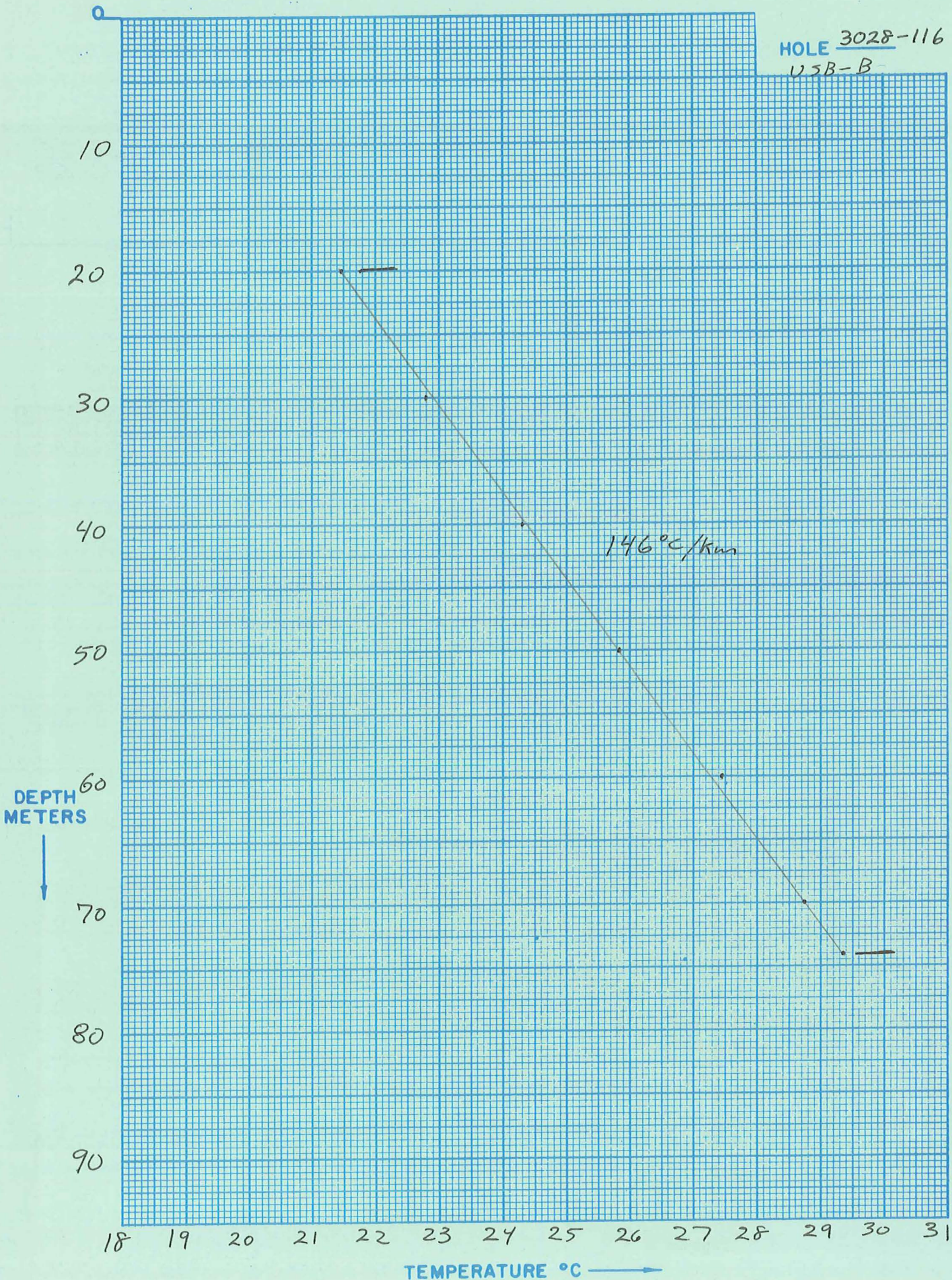
Segment 8

Segment 9

Segment 10

After final segment Start = .999

HOLE 3028-116
USB-B



ΔT Well No. 3028-117

Property-Project EMIGRANT Depth Logged 100 m
 Map RHYOLITE RIDGE Scale 7 1/2" Date: Drilled Logged 6-20-84
 State NV County ESM, of NW of NE of NE of Sec 20 T 15 R 37E
 Instrument SPA-29 Operator DEYMONAZ Elevation 5560 (ft/m)
 Comments US. BORAX MIN. HOLE. REPORTEDLY DRILLED TO 1800-2000'

JUSTIFY

Date Logged

Proj No	Well No	DA	MO	YR	*
1 2 3 4 5 6 7 8 9 10	11 12 13 14 15 16 17 18 19 20				
3028	11720	06	84	CM	

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

Card A

Site Description																																								Operator					Editor					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 69 70	71 72 73 74 75	76 77 78 79 80	81 82 83 84 85	86 87 88 89 90	91 92 93 94 95	96 97 98 99 100	101 102 103 104 105	106 107 108 109 110	111 112 113 114 115	116 117 118 119 120	121 122 123 124 125	126 127 128 129 130	131 132 133 134 135	136 137 138 139 140	141 142 143 144 145	146 147 148 149 150	151 152 153 154 155	156 157 158 159 160	161 162 163 164 165	166 167 168 169 170	171 172 173 174 175	176 177 178 179 180	181 182 183 184 185	186 187 188 189 190	191 192 193 194 195	196 197 198 199 200																													
																																								JED					JED													

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

Card B

Scale Unit CM Map Size 7.5 (7.5, 15, 60.) N Lat 37.45.0 W Long 118.0.0

Map Location * * Degree Min Degree Min **

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

Northing 19.35 Easting 14.60 Elev 5560

Use decimals

Write M if meters

Segment 1 = Depths

Start	End	Conductivity K	ΔK	Best cond. (-K)	Downward extrapolations (-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			
45.0	80.0				

Segment 2

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			
	80.0	90.0			

Segment 3

90.0	100.0				
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Segment 4

.999					
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Segment 5

Segment 6

Segment 7

Segment 8

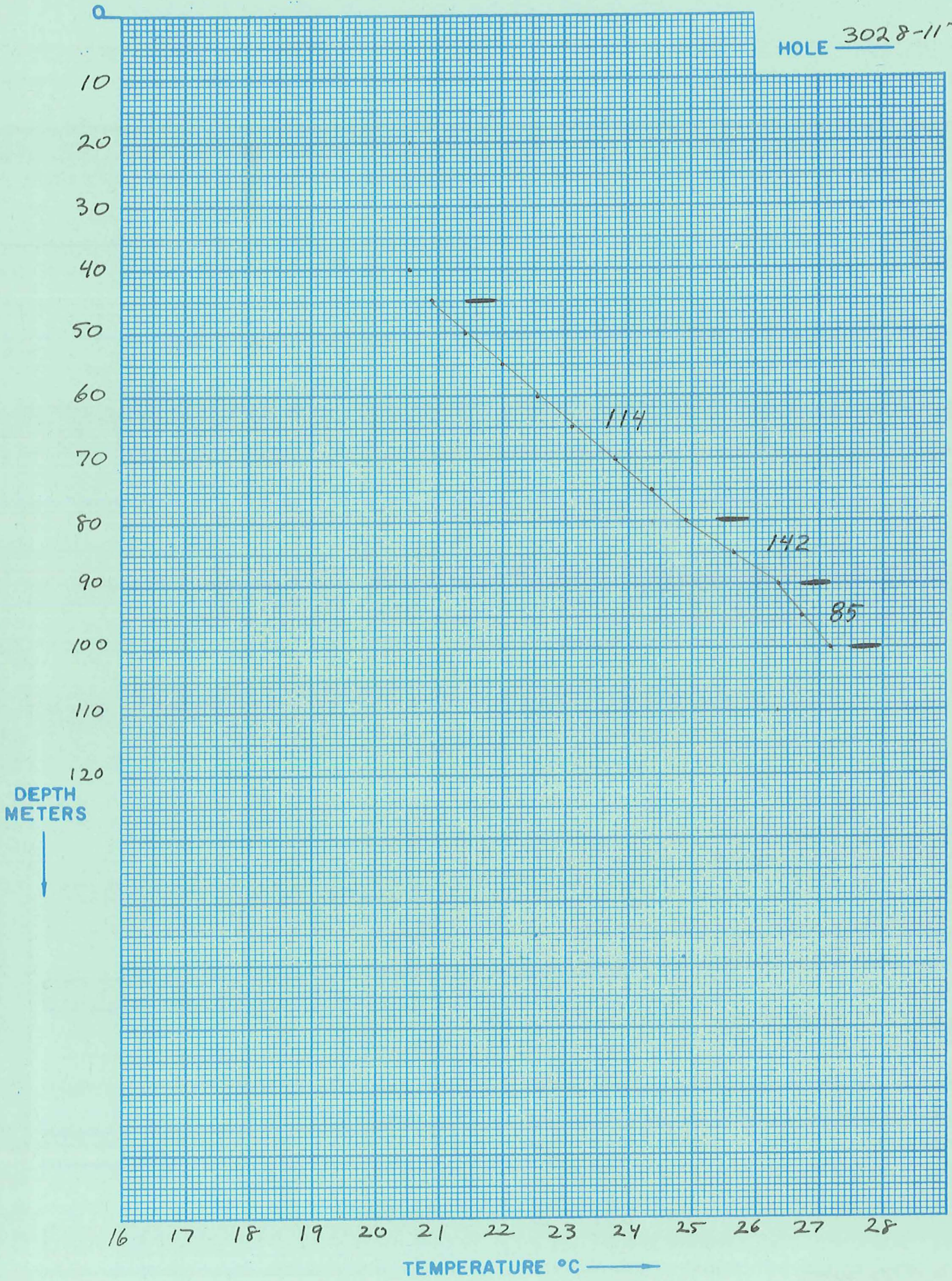
Segment 9

Segment 10

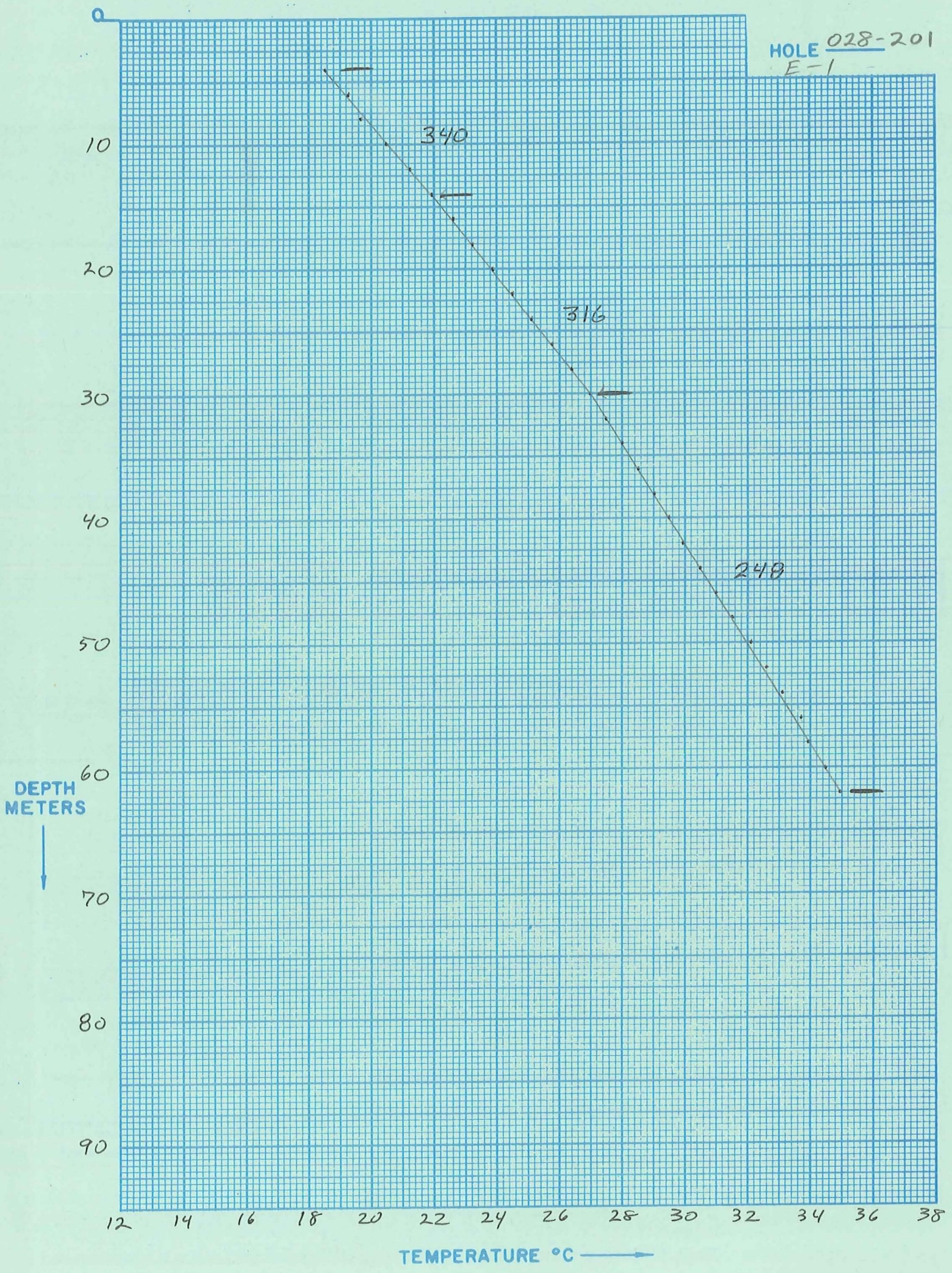
51 52 53 54 55 56 57 58 59 60	61 62 63 64 65 66 67 68 69 70	71 72 73 74 75 76 77 78 79 80

After final segment Start = .999

HOLE 3028-117



HOLE 028-201
E-1



Date Logged: 12/6/83 ΔT Well No. 028-201

1

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H ₂ O Air	Lithology, etc.
< 4	109.80	18.56					C .0884 L
6	106.97	19.30					
8	105.60	19.67	0.37	185			
10	102.53	20.50	0.83	415			
12	99.82	21.25	0.75	375			
< 14	97.30	21.96	0.71	355			
16	95.03	22.62	0.66	330			
18	92.90	23.25	0.63	315			
20	90.71	23.91	0.66	330			
22	88.66	24.54	0.63	315			
24	86.74	25.14	0.60	300			
26	84.67	25.80	0.66	330			
28	82.86	26.39	0.59	295			
< 30	81.01	27.01	0.62	310			
32	79.48	27.53	0.52	260			
34	78.02	28.03	0.50	250			
36	76.62	28.53	0.50	250			
38	75.24	29.02	0.49	245			
40	73.94	29.49	0.47	235			
42	72.63	29.97	0.48	240			
44	71.28	30.48	0.51	255			
46	69.91	31.00	0.52	260			
48	68.56	31.53	0.53	265			
50	67.17	32.08	0.55	275			
52	65.90	32.60	0.52	260			
54	64.63	33.12	0.52	260			
56	63.16	33.74	0.62	310			

K=Conductivity

ΔT Well No. 028-202

Property-Project EMIGRANT Depth Logged 62 m

Map RHYOLITE RIDGE Scale _____ Date: Drilled _____ Logged 12-6-83

State NV County ESM, _____ of _____ of CEN of SE of Sec 31 T 1N R 37E

Instrument SPA-29 Operator JED Elevation 5260 (ft/m)

Comments _____

JUSTIFY

Date Logged

Proj No	Well No.	DA	MO	YR	*
1 2 3 4 5 6 7 8 9 10	11 12 13 14 15 16 17 18 19 20				
3028	20206	12	83		C M

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

Card A

Site Description																																																		Operator					Editor					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	69 70 71 72 73 74 75 76 77 78 79 80	81 82 83 84 85	86 87 88	89 90 91 92 93																																																													
																																																		JED					JED													

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

Card B

Map Location **

Scale Unit	Map Size	N Lat	W Long
IN CM	(7.5, 15, 60)	Degree	Degree
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		Min	Min **
CM	15.0	37.45.0	118.0.0

Use decimals

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

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

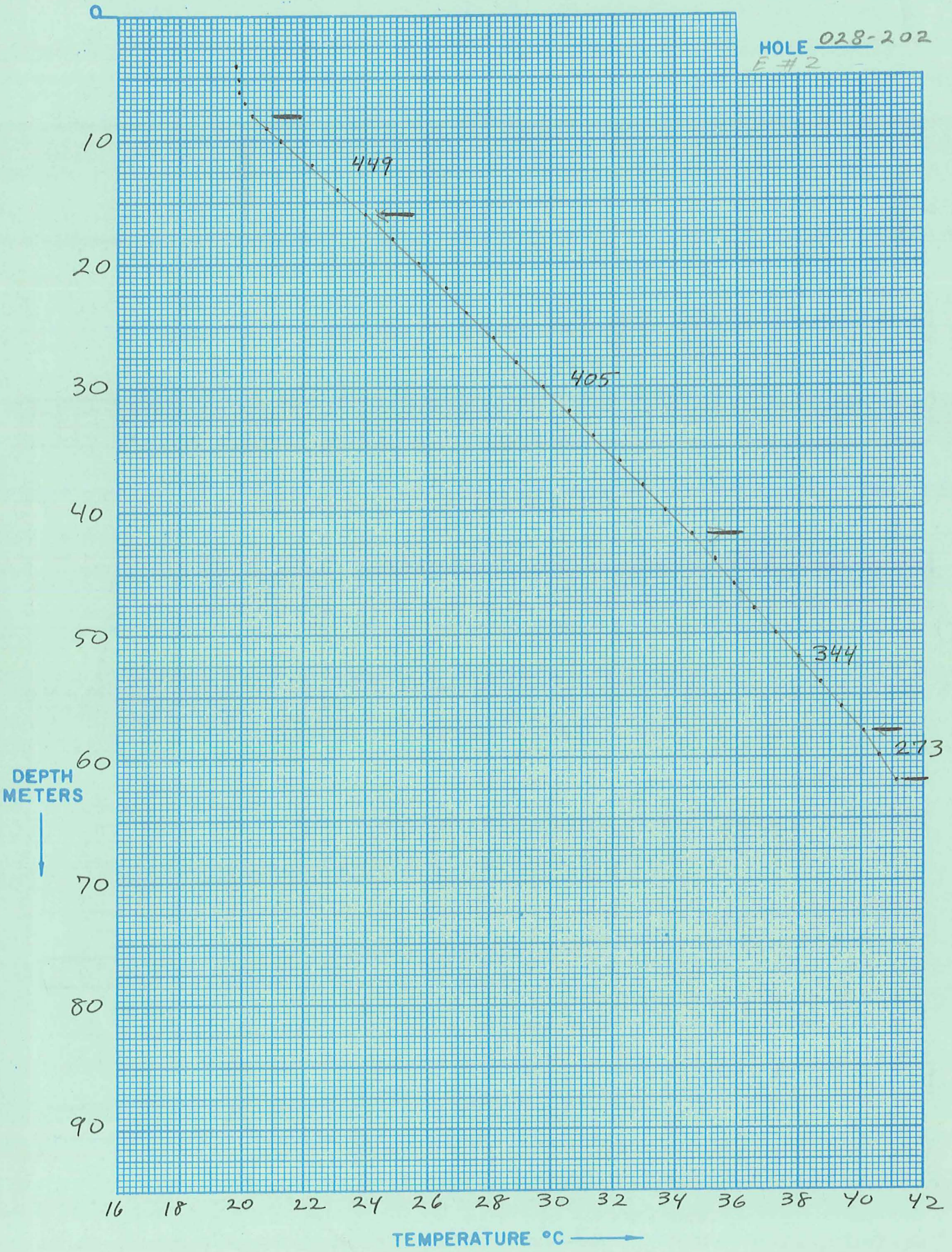
Use decimals

Write M if meters

Segment	Start	End	Conductivity K	ΔK	Best cond. (-K)
Segment 1	8.0	16.0			
Segment 2			16.0	42.0	
Segment 3	42.0	58.0			
Segment 4			58.0	62.0	
Segment 5	.999				
Segment 6					
Segment 7					
Segment 8					
Segment 9					
Segment 10					

After final segment Start = .999

HOLE 028-202
E #2



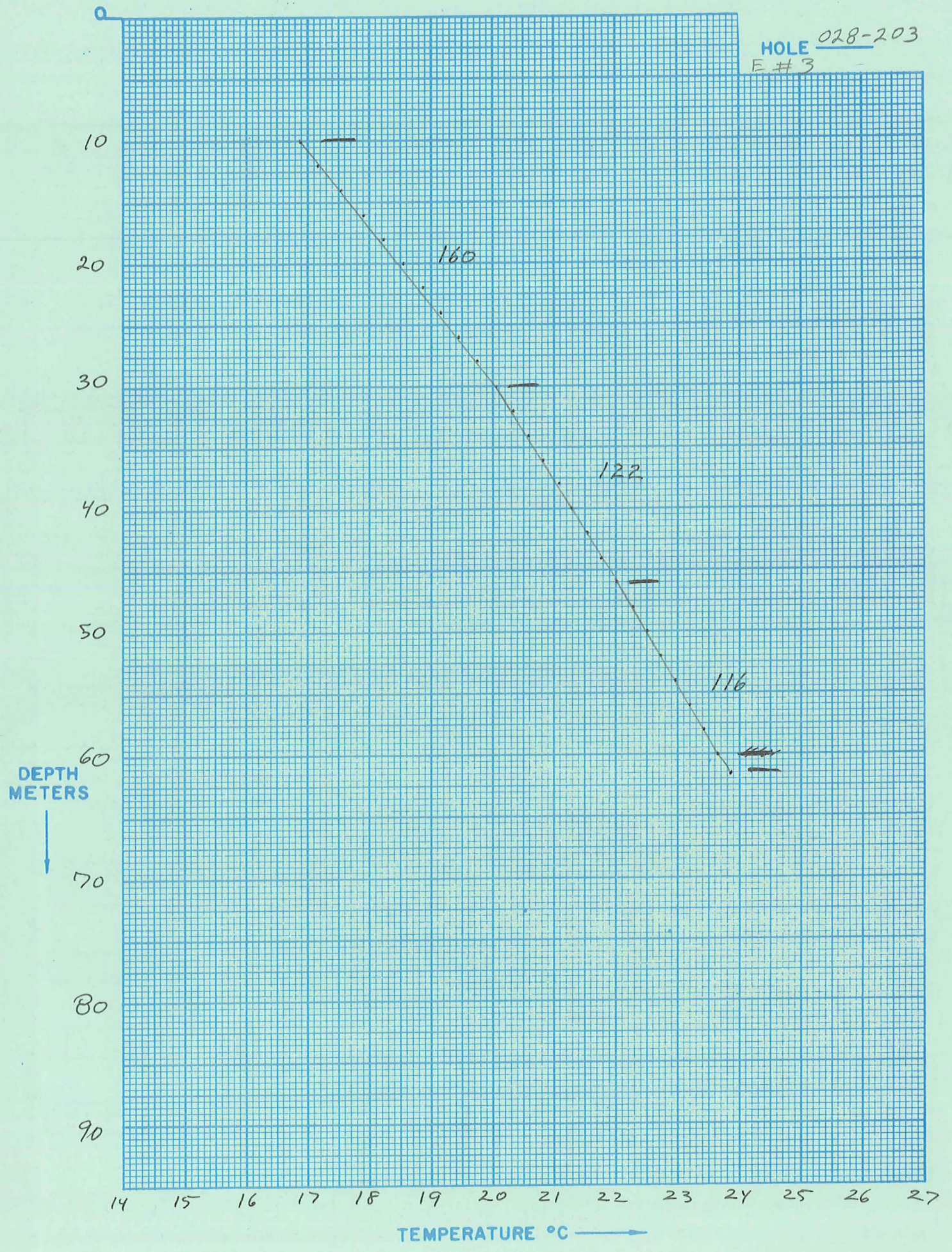
Date Logged: 12-2-83ΔT Well No. 028-202

2

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H ₂ O Air	Lithology, etc.
4	105.04	19.82					C .0884 C —
5	104.59	19.94	0.12	120			
6	104.47	19.97	0.03	30			
7	103.90	20.12	0.15	150			
8	102.90	20.40	0.28	280			
9	101.32	20.83	0.43	430			
10	99.66	21.29	0.46	460			
12	96.35	22.24	0.95	475			
14	93.36	23.11	0.87	435			
16	90.43	23.99	0.88	440			
18	87.65	24.85	0.86	430			
20	84.91	25.73	0.88	440			
22	82.21	26.61	0.88	440			
24	80.33	27.24	0.63	315			
26	77.68	28.15	0.91	455			
28	75.75	28.84	0.69	345			
30	73.18	29.77	0.93	465			
32	71.03	30.58	0.81	405			
34	69.01	31.35	0.77	385			
36	66.90	32.19	0.84	420			
38	65.00	32.96	0.77	385			
40	63.30	33.68	0.72	360			
42	61.31	34.53	0.85	425			
44	59.62	35.28	0.85	425			
46	58.31	35.88	0.60	300			
48	56.88	36.54	0.66	330			
50	55.39	37.26	0.72	360			

K=Conductivity

HOLE 028-203
E # 3



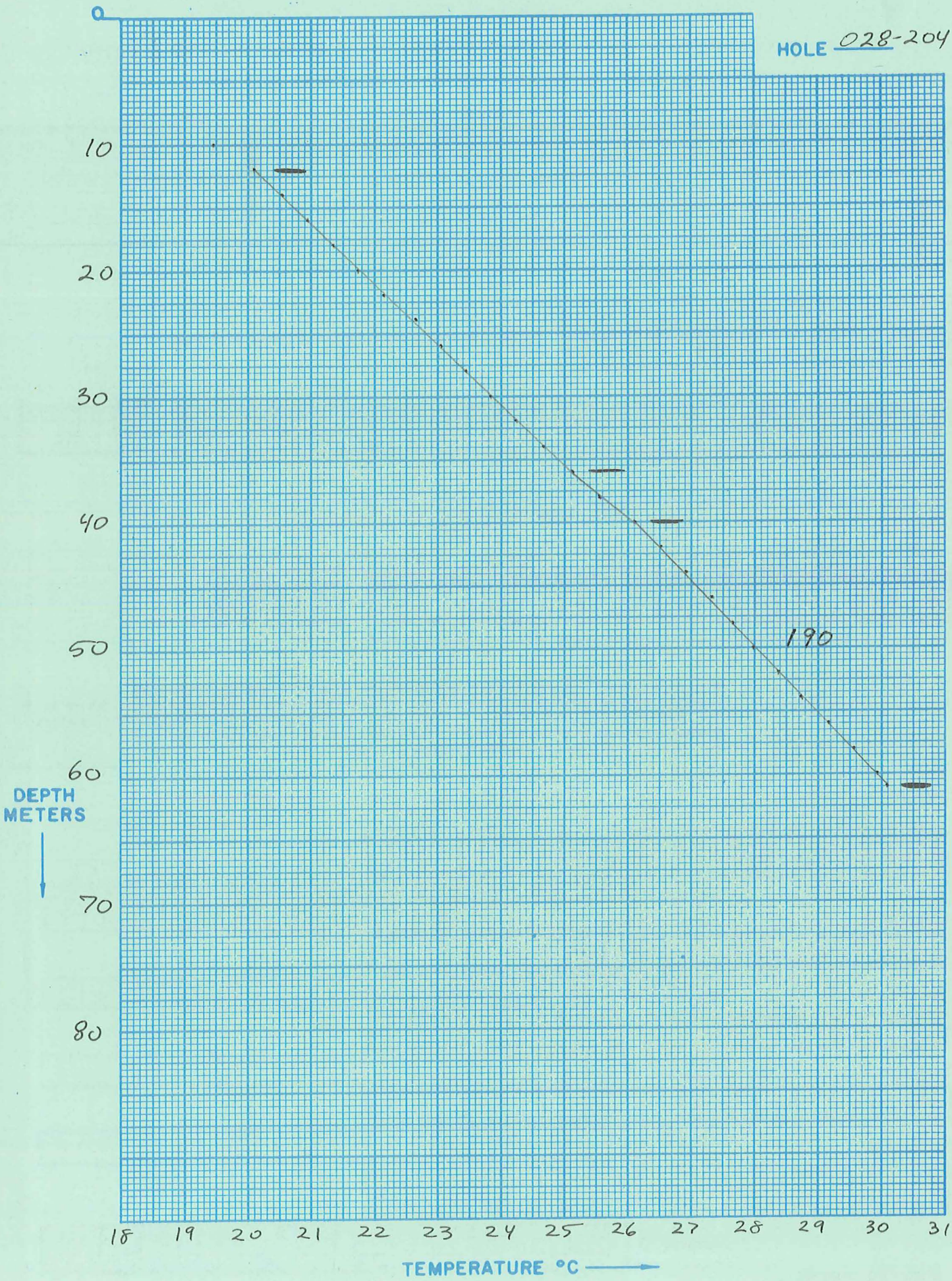
Date Logged: 12-6-83ΔT Well No. 028-203

#3

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H ₂ O Air	Lithology, etc.
< 10	116.47	16.87					C - 0886 L
12	115.28	17.16	0.29	145			
14	113.73	17.55	0.39	195			
16	112.32	17.91	0.36	180			
18	111.00	18.25	0.34	170			
20	109.83	18.55	0.30	150			
22	108.60	18.87	0.32	160			
24	107.51	19.16	0.29	145			
26	106.44	19.44	0.28	140			
28	105.24	19.76	0.32	160			
< 30	104.11	20.07	0.31	155			
32	103.13	20.33	0.26	130			
34	102.21	20.59	0.26	130			
36	101.33	20.83	0.24	120			
38	100.44	21.08	0.25	125			
40	99.65	21.30	0.22	110			
42	98.78	21.54	0.24	120			
44	97.94	21.78	0.24	120			
< 46	97.09	22.02	0.24	120			
48	96.25	22.27	0.25	125			
50	95.42	22.51	0.24	120			
52	94.65	22.73	0.22	110			
54	93.83	22.97	0.24	120			
56	93.07	23.20	0.23	115			
58	92.33	23.42	0.22	110			
60	91.56	23.65	0.23	115			
< 62	90.80 90.80	23.88 23.88	0.23	115			

K=Conductivity

HOLE 028-204



Date Logged: 12-6-83ΔT Well No. 028-204
E-4

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H ₂ O Air	Lithology, etc.
10	106.38	19.46				H ₂ O	Σ .0946 L
12	104.04	20.09	0.63	315		↓	
14	102.41	20.53	0.44	220			
16	100.84	20.96	0.43	215			
18	99.41	21.36	0.40	200			
20	98.11	21.73	0.37	185			
22	96.64	22.15	0.42	210			
24	94.92	22.65	0.50	250			
26	93.54	23.06	0.41	205			
28	92.25	23.44	0.38	190			
30	91.00	23.82	0.38	190			
32	89.67	24.23	0.41	205			
34	88.18	24.69	0.46	230			
36	86.78	25.13	0.44	220			
38	85.43	25.56	0.43	215			
40	83.80	26.09	0.53	265			
42	82.50	26.51	0.42	210			
44	81.33	26.90	0.39	195			
46	80.09	27.32	0.42	210			
48	79.11	27.66	0.34	170			
50	78.17	27.98	0.32	160			
52	77.01	28.39	0.41	205			
54	76.03	28.74	0.35	175			
56	74.81	29.17	0.43	215			
58	73.79	29.55	0.38	190			
60	72.77	29.92	0.37	185			
61	72.33	30.09	0.17	170			

K=Conductivity

ΔT Well No. 028-205

Property-Project EMIGRANT Depth Logged 62 m
 Map RHYOLITE RIDGE Scale 15'' Date: Drilled _____ Logged 12-6-83
 State NV County ESM of _____ of NW of SE of Sec 5 T 15 R 37E
 Instrument SPA-29 Operator JED Elevation 5300 (m)

Comments _____

JUSTIFY

Card A

Date Logged																			
Proj No					Well No					DA		MO		YR		*19-Write F if Fahrenheit, 20-Write F if Feet			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
3	0	2	8		2	0	5	0	6	12	8	3							

Site Description

Site Description																																								Operator					Editor					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								
																																								JED					JED										

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

Card B

Map Location **

Scale Unit		Map Size		N Lat		W Long																							
IN	CM	(7.5, 15, 60)		Degree	Min	Degree	Min																						
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
CM		15.0		37.45.0		118.00.0																							

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
																				5300.									

Write M if meters

Use decimals

Segment 1 = Depths

Start										End										Conductivity										Best cond. (-K)									
																				K										ΔK									
8.0										44.0																													

Segment 2

Start										End										Conductivity										Best cond. (-K)									
																				K										ΔK									
																				44.0										61.9									

Segment 3

Start										End										Conductivity										Best cond. (-K)									
.999																																							

Segment 4

Start										End										Conductivity										Best cond. (-K)									

Segment 5

Start										End										Conductivity										Best cond. (-K)									

Segment 6

Start										End										Conductivity										Best cond. (-K)									

Segment 7

Start										End										Conductivity										Best cond. (-K)									

Segment 8

Start										End										Conductivity										Best cond. (-K)									

Segment 9

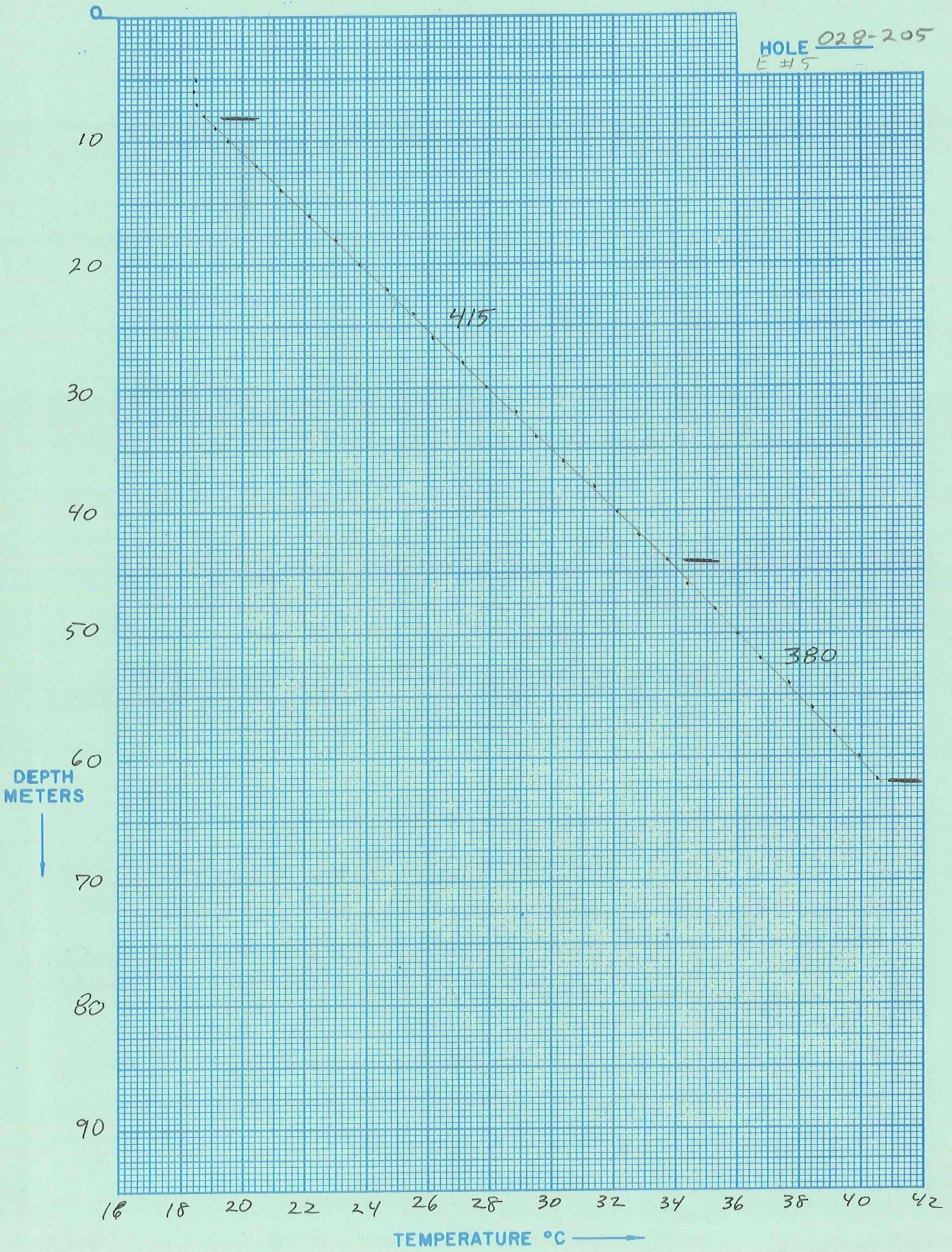
Start										End										Conductivity										Best cond. (-K)									

Segment 10

Start										End										Conductivity										Best cond. (-K)									

After final segment Start = .999

HOLE 028-205
E #5



Date Logged: 12-6-83 ΔT Well No. 028-205# 5

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H ₂ O Air	Lithology, etc.
4							C <u>.0882</u> L
5	110.25	18.44					
6	110.40	18.40					
7	109.91	18.53	0.13	130			
< 8	108.92	18.79	0.26	260			
9	107.50	19.16	0.37	370			
10	105.92	19.58	0.42	420			
12	102.79	20.43	0.85	425			
14	99.86	21.24	0.81	405			
16	96.66	22.15	0.91	455			
18	93.82	22.98	0.83	415			
20	91.10	23.79	0.81	405			
22	88.31	24.65	0.86	430			
24	85.41	25.56	0.91	455			
26	83.54	26.17	0.61	305			
28	80.56	27.16	0.99	495			
30	78.45	27.88	0.72	360			
32	75.73	28.84	0.96	480			
34	73.97	29.48	0.64	320			
36	71.55	30.38	0.90	450			
38	69.07	31.34	0.96	480			
40	66.98	32.16	0.82	410			
42	65.45	32.78	0.62	310			
< 44	63.20	33.72	0.94	470			
46	61.66	34.38	0.66	330			
48	59.71	35.24	0.86	430			
50	58.02	36.01	0.77	385			

K=Conductivity

ΔT Well No. 028-206

Property-Project EMIGRANT Depth Logged 62m
 Map RHYOLITE RIDGE Scale 15'' Date: Drilled _____ Logged 12-6-83
 State NV County ESM, _____ of _____ of NW of SE of Sec 8 T 15 R 37E
 Instrument SPA-29 Operator JED Elevation 5360 (F/M)
 Comments _____

JUSTIFY

Date Logged

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

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

Card A

Site Description																																								Operator					Editor					DA			MO			YR		
																																								JED					JED					1 2 3			4 5 6			7 8 9		

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

Map Location **

Scale Unit	Map Size	N Lat	W Long
21 22 23 24 25 C M	26 27 28 29 30 1 5 .	31 32 33 34 35 3 7 .	36 37 38 39 40 4 5 .
41 42 43 44 45 1 1 8 .	46 47 48 49 50 0 . 0		

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

Card B

Northing										Easting										Elev									
																				5 3 6 0 .									

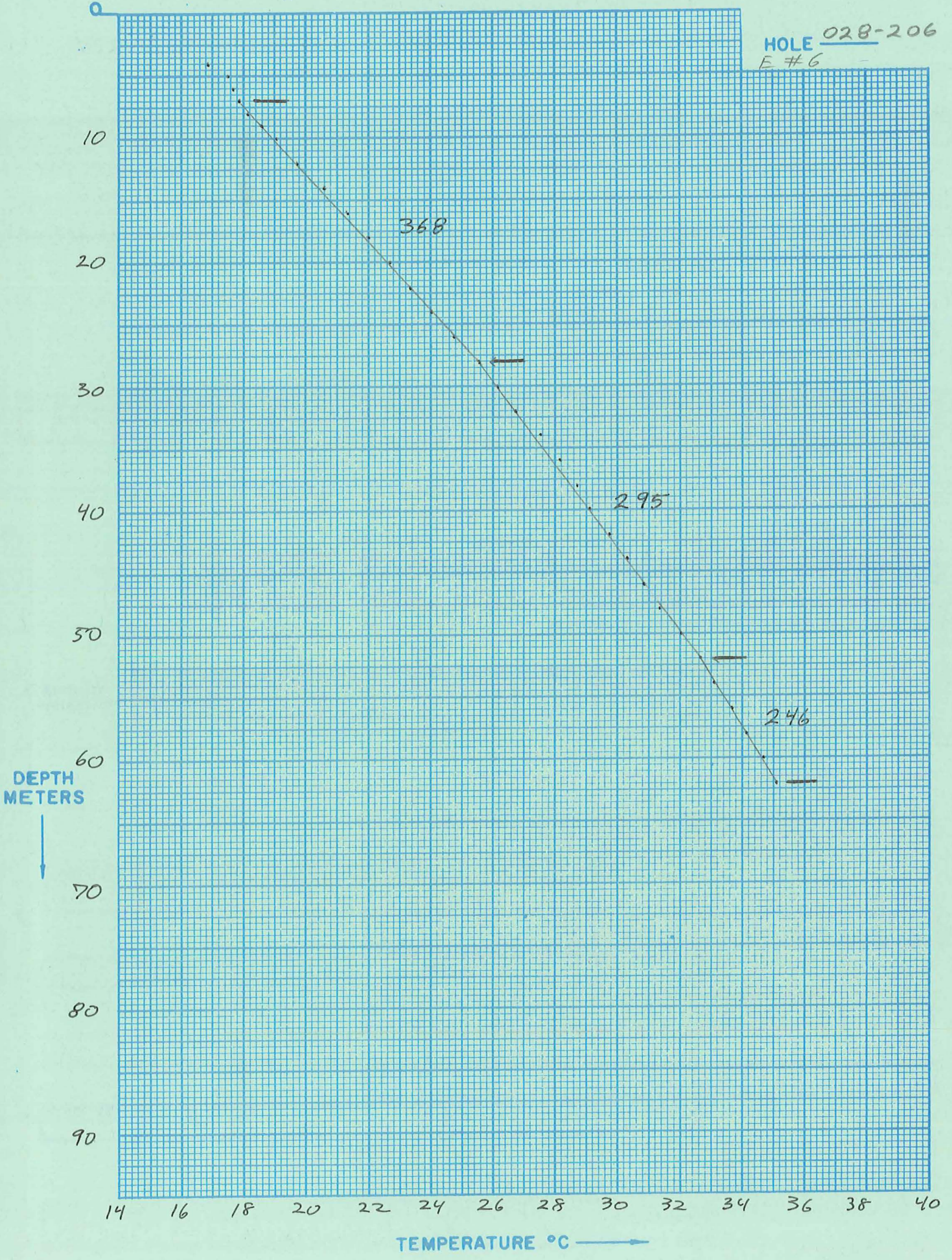
Use decimals

Write M if meters

Segment	Start	End	Conductivity K	ΔK	Best cond. (-K)
Segment 1	7.0	28.0			
Segment 2			28.0		
Segment 3	52.0	62.0			
Segment 4			.999		
Segment 5					
Segment 6					
Segment 7					
Segment 8					
Segment 9					
Segment 10					

After final segment Start = .999

HOLE 028-206
E #6



DEPTH
METERS

TEMPERATURE °C

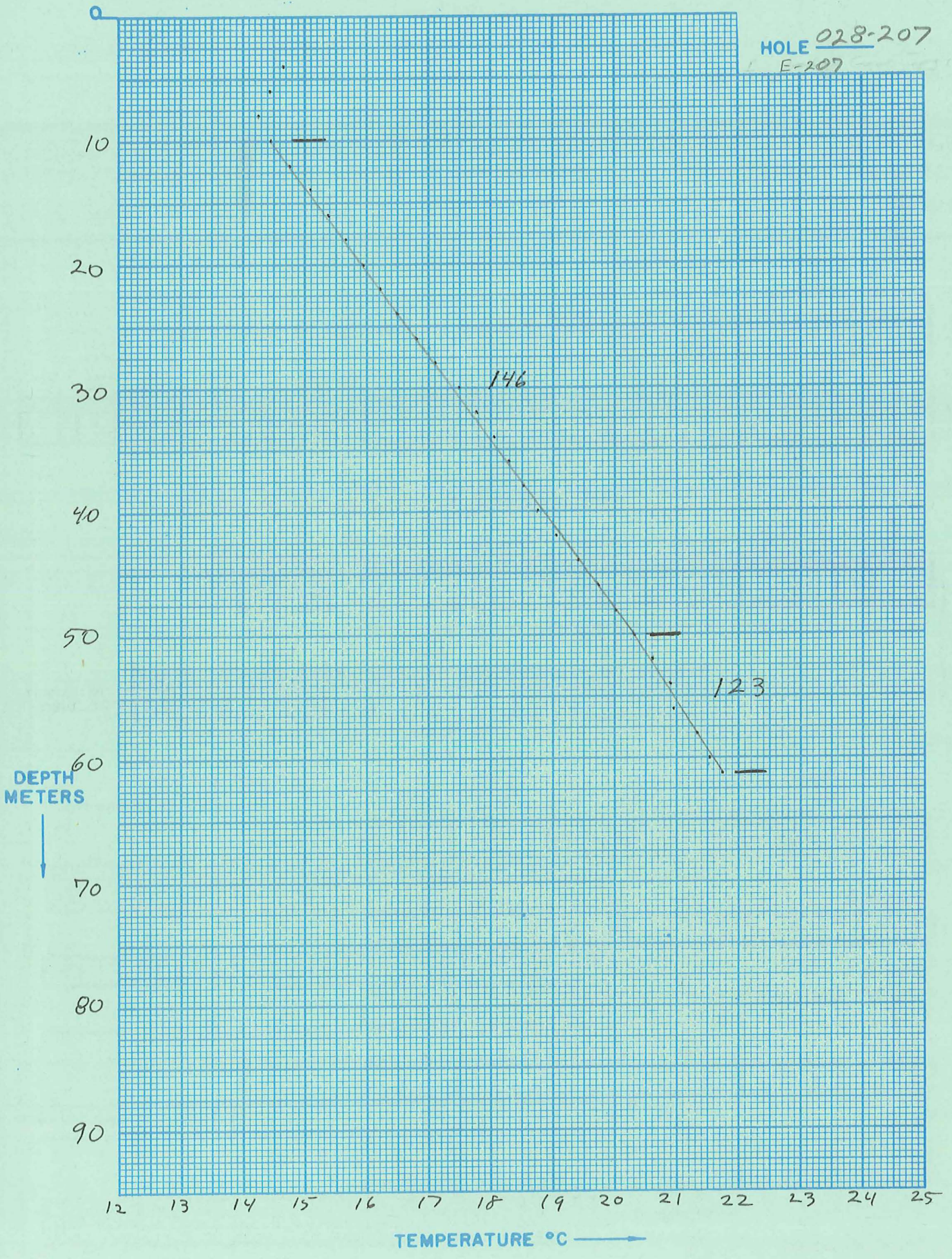
Date Logged: 12-6-83ΔT Well No. 028-206

Penciled in #6

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H ₂ O Air	Lithology, etc.
4	116.60	16.84				H ₂ O	C 60880 L
5	113.94	17.50					
6	113.32	17.66	0.16	160			
7	112.63	17.83	0.17	170			
8	111.34	18.16	0.33	330			
9	109.80	18.56	0.40	400			
10	108.06	19.01	0.45	450			
12	104.91	19.85	0.84	420			
14	102.18	20.59	0.74	370			
16	99.66	21.29	0.70	350			
18	97.26	21.98	0.69	345			
20	94.88	22.67	0.69	345			
22	92.55	23.35	0.68	340			
24	90.33	24.02	0.67	335			
26	87.91	24.77	0.75	375			
28	85.44	25.55	0.78	390			
30	83.60	26.15	0.60	300			
32	81.73	26.77	0.62	310			
34	79.43	27.55	0.78	390			
36	77.56	28.19	0.64	320			
38	76.12	28.70	0.51	255			
40	74.82	29.17	0.47	235			
42	73.17	29.77	0.60	300			
44	71.71	30.32	0.55	275			
46	70.37	30.83	0.51	255			
48	68.96	31.37	0.54	270			
50	67.30	32.03	0.66	330			

K=Conductivity

HOLE 028-207
E-207



Date Logged: 12-6-83ΔT Well No. 028-207

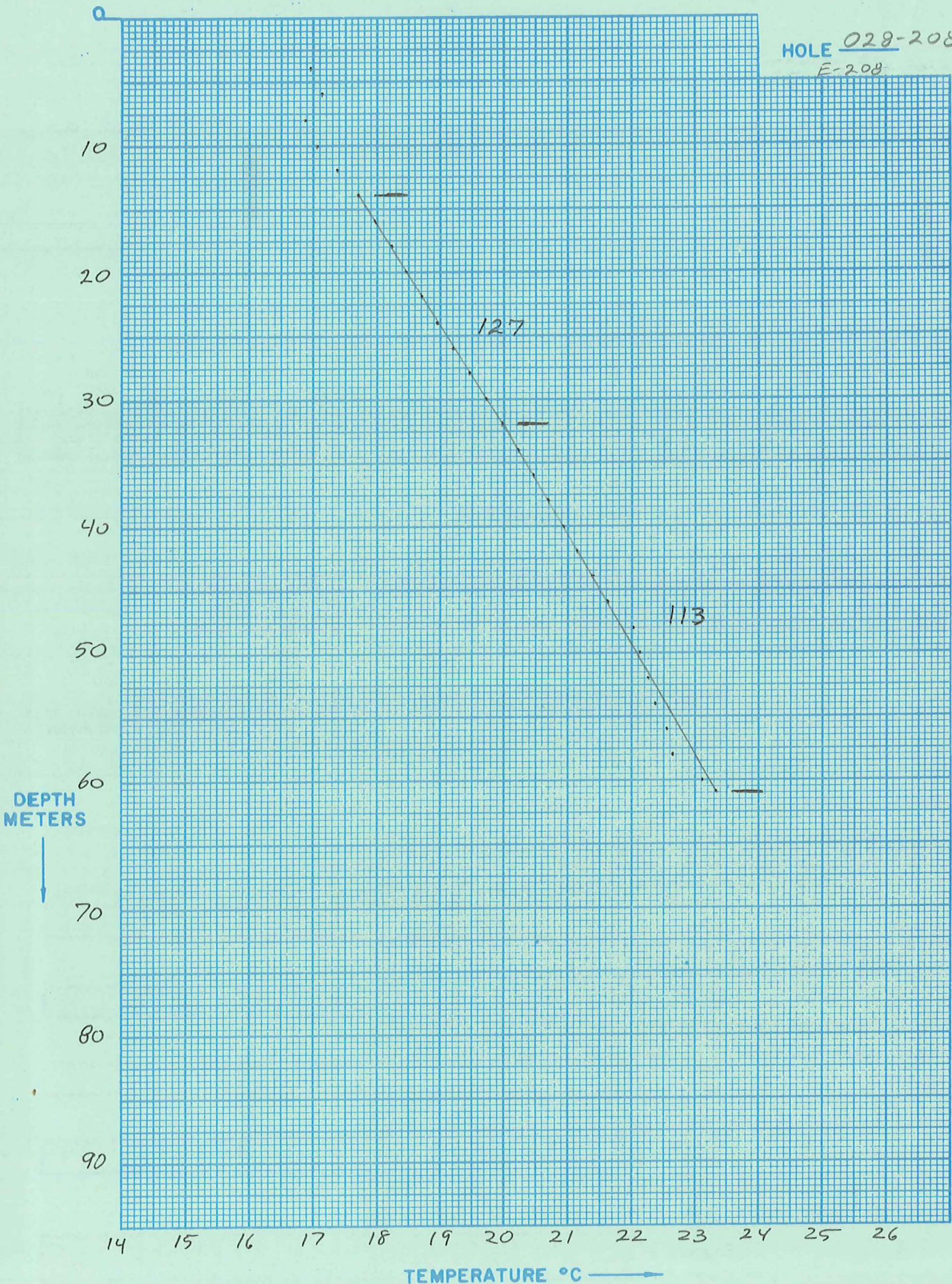
Near Cave Spg.

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H ₂ O Air	Lithology, etc.
4	125.73	14.64				H ₂ O	Σ <u>0858</u> L
6	126.65	14.42				↓	
8	127.38	14.25				↓	
10	126.53	14.45	0.20	100			
12	125.22	14.76	0.31	155			
14	123.82	15.09	0.33	165			
16	122.60	15.38	0.29	145			
18	121.41	15.66	0.28	140			
20	120.35	15.92	0.26	130			
22	119.17	16.21	0.29	145			
24	118.04	16.48	0.27	135			
26	116.75	16.80	0.32	160			
28	115.52	17.10	0.30	150			
30	114.04	17.48	0.38	190			
32	112.90	17.76	0.28	140			
34	111.81	18.04	0.28	140			
36	110.90	18.28	0.24	120			
38	109.96	18.52	0.24	120			
40	109.02	18.76	0.24	120			
42	108.00	19.03	0.27	135			
44	106.61	19.40	0.37	185			
46	105.37	19.73	0.33	165			
48	104.31	20.01	0.28	140			
50	103.25	20.30	0.29	145			
52	102.16	20.60	0.30	150			
54	101.07	20.90	0.30	150			
56	100.83	20.97	0.07	35			

K=Conductivity

page _____ of _____

HOLE 029-208
E-208



Date Logged: 12-6-83ΔT Well No. 028-208

CEN Sec 20

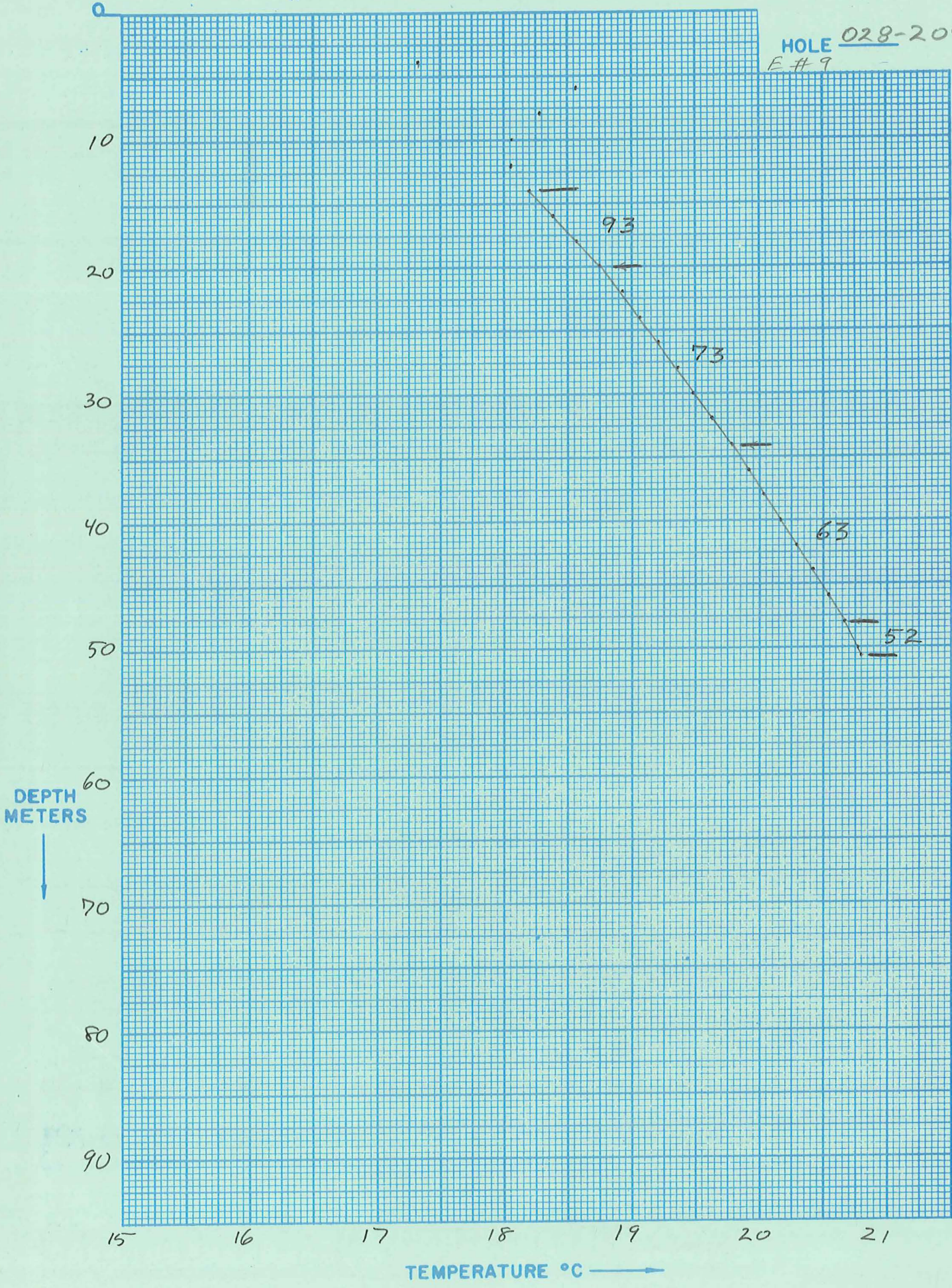
1 mi. N. of W.M.

1

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H ₂ O Air	Lithology, etc.
4	116.05	16.97				H ₂ O	C 0.0868 L
6	115.51	17.11					
8	116.45	16.87				↓	
10	115.75	17.05	0.18	90			
12	114.48	17.37	0.32	160			
14	113.18	17.69	0.32	160			
16	112.14	17.96	0.27	135			
18	111.11	18.22	0.26	130			
20	110.14	18.47	0.25	125			
22	109.22	18.71	0.24	120			
24	108.29	18.96	0.25	125			
26	107.34	19.20	0.24	120			
28	106.42	19.45	0.25	125			
30	105.40	19.72	0.27	135			
32	104.48	19.97	0.25	125			
34	103.55	20.22	0.25	125			
36	102.63	20.47	0.25	125			
38	101.78	20.70	0.23	115			
40	100.94	20.94	0.24	120			
42	100.16	21.15	0.21	105			
44	99.33	21.39	0.24	120			
46	98.49	21.62	0.23	115			
48	97.11	22.02	0.40	200			
50	96.78	22.11	0.09	45			
52	96.25	22.27	0.16	80			
54	95.86	22.38	0.11	55			
56	95.28	22.55	0.17	85			

K=Conductivity

HOLE 028-209
E # 9



Date Logged: 12-6-83 ΔT Well No. 028-209

#9

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H ₂ O Air	Lithology, etc.
4	114.60	17.33				H ₂ O	C 10883 L
6	109.76	18.57					
8	110.84	18.29					
10	111.68	18.07					
12	111.69	18.07					
< 14	111.20	18.20	0.13	65			
16	110.48	18.38	0.18	90			
18	109.74	18.57	0.19	95			
18	109.74	18.57	0.19	95			
< 20	109.02	18.76	0.19	95			
22	108.38	18.93	0.17	85			
24	108.38	18.93	0.17	85			
24	107.86	19.07	0.14	70			
26	107.32	19.21	0.14	70			
28	106.74	19.36	0.15	75			
30	106.26	19.49	0.13	65			
32	105.69	19.64	0.15	75			
34	105.17	19.78	0.14	70			
< 34	105.17	19.78	0.14	70			
36	104.68	19.91	0.13	65			
38	104.24	20.03	0.12	60			
40	103.77	20.16	0.13	65			
42	103.30	20.29	0.13	65			
44	102.83	20.42	0.13	65			
46	102.37	20.54	0.12	60			
46	102.37	20.54	0.12	60			
< 48	101.95	20.66	0.12	60			
50	101.53	20.77	0.11	55			
50	101.53	20.77	0.11	55			
< 50.7	101.42	20.80	0.03				
50.7	101.42	20.80	0.03				

K=Conductivity

page _____ of _____

ΔT Well No. 028-210

Property-Project EMIGRANT Depth Logged 62 m

Map RHYOLITE RIDGE Scale 15" Date: Drilled _____ Logged 12-6-83

State NV County ESM, _____ of _____ of NE of SW of Sec 19 T 15 R 37E

Instrument SPA-29 Operator JED Elevation 5240 (m)

Comments _____

JUSTIFY

Date Logged

Proj No	Well No	DA	MO	YR	*
1 2 3 4 5 6 7 8 9 10	11 12 13 14 15 16 17 18 19 20				
3028	21006	12	83	CM	

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

Card A

Site Description																																								Operator					Editor					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	JED / JED					12			83																																													

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

Card B

Map Location **

Scale Unit	Map Size	N Lat	W Long
IN	(7.5, 15, 60)	Degree	Min
CM	15.0	37.45.0	118.0.0

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																											
		5240.0																											

Write M if meters

Segment 1 = Depths

Start	End	Conductivity K	ΔK	Best cond. (-K)
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		
22.0	50.0			

Segment 2

Start	End	Conductivity 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	
		50.0	61.8

Segment 3

Segment 4

Segment 5

Segment 6

Segment 7

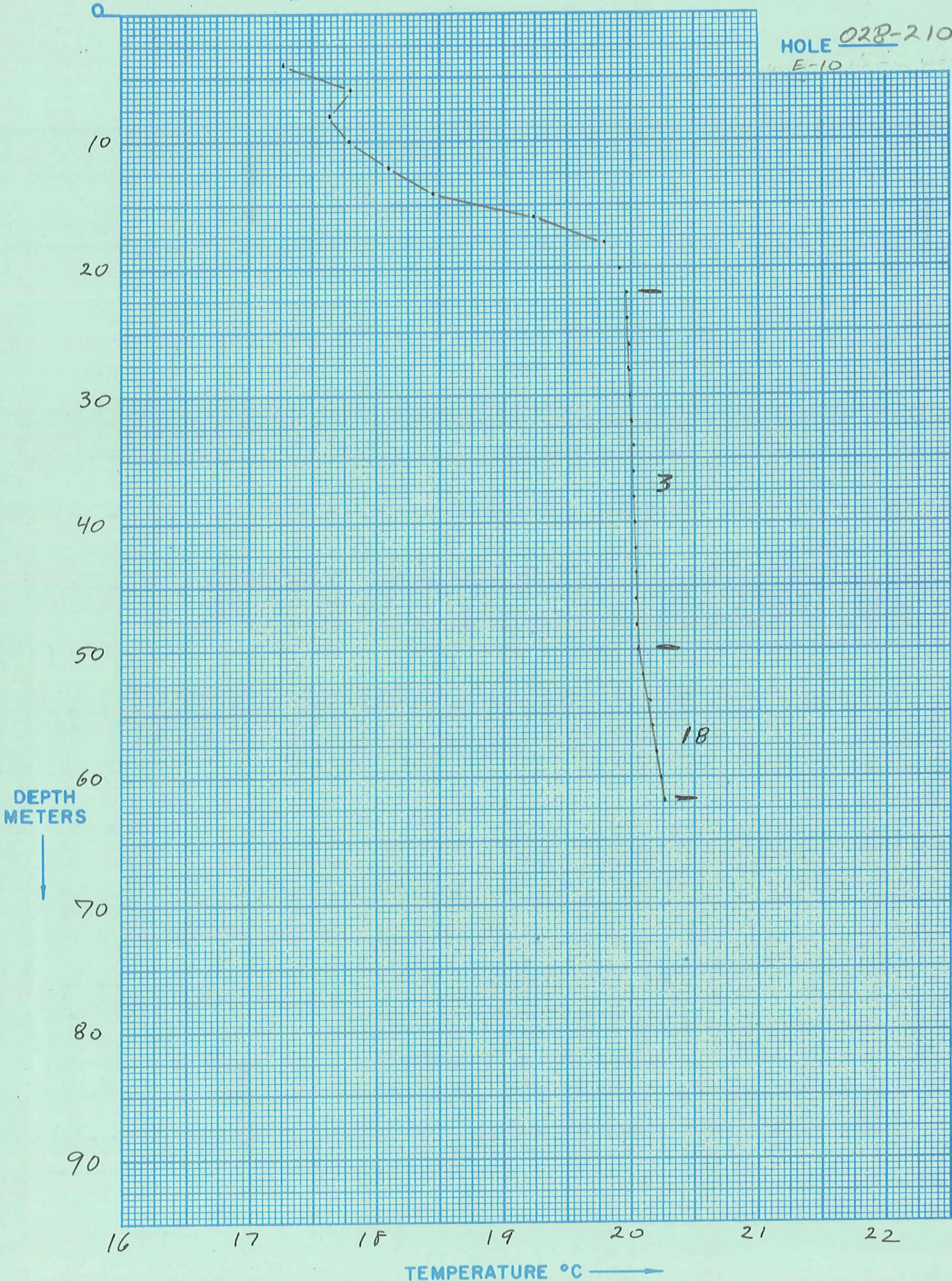
Segment 8

Segment 9

Segment 10

After final segment Start = .999

HOLE 028-210
E-10

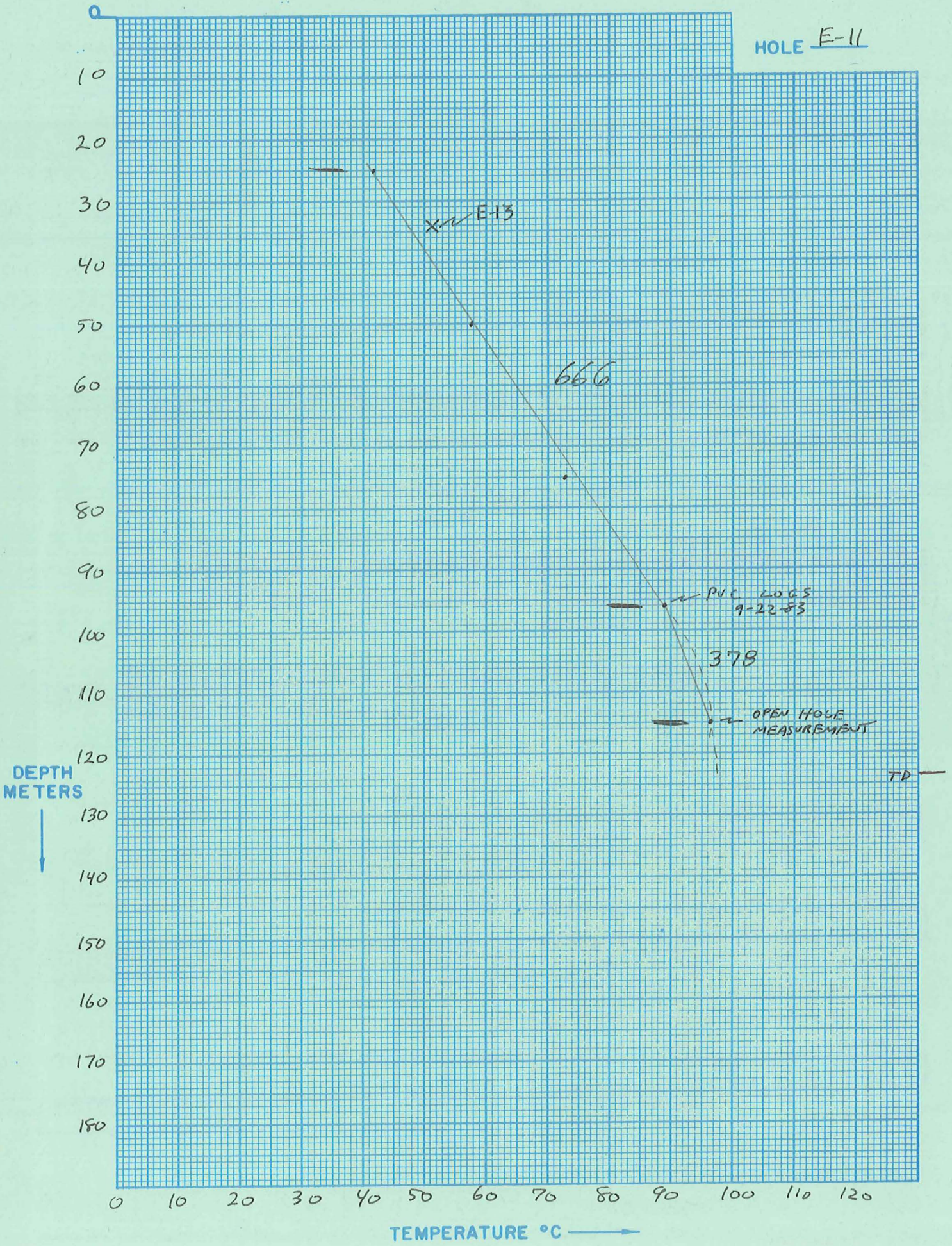


Date Logged: 12-6-83 ΔT Well No. 028-210*in gravels in wash*

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H ₂ O Air	Lithology, etc.
4	114.85	17.27					C .0866 L <u> </u>
6	112.77	17.80					
8	113.44	17.63					
10	112.85	17.78	0.15	75			
12	111.59	18.10	0.32	160			
14	110.22	18.45	0.35	175			
16	107.20	19.24	0.79	395			
18	105.15	19.79	0.55	275			
20	104.64	19.92	0.13	65			
22	104.50	19.96	0.04	20			
24	104.46	19.97	0.01	5			
26	104.43	19.98	0.01	5			
28	104.43	19.98	0	0			
30	104.37	19.99	0.01	5			
32	104.34	20.00	0.01	5			
34	104.30	20.01	0.01	5			
36	104.32	20.01	0	0			
38	104.27	20.02	0.01	5			
40	104.25	20.03	0.01	5			
42	104.23	20.03	0	0			
44	104.22	20.04	0.01	5			
46	104.22	20.04	0	0			
48	104.21	20.04	0	0			
50	104.18	20.05	0.01	5			
52	104.04	20.09	0.04	20			
54	103.80	20.15	0.06	30			
56	103.75	20.17	0.02	10			

K=Conductivity

HOLE E-11



ΔT Well No. 028-212

Property-Project ~~ESMERALDA~~ EMIGRANT Depth Logged 61 m

Map RHYOLITE RIDGE Scale 15'' Date: Drilled _____ Logged 12-6-83

State NV County ESM of _____ of NW of SE of Sec 16 T 15 R 37E

Instrument SPA-29 Operator JED Elevation 5840 (ft/m)

Comments _____

JUSTIFY

Date Logged

Proj No	Well No	DA	MO	YR	*
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20					
3028	21206	12	83	CM	

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

Card A

Site Description																																																		Operator					Editor					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																					
																																																		JED					JED													

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

Card B

Scale Unit

Map Size (75, 15, 60)

Map Location **

N Lat

W Long

21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
CM	15.0					37.45.0					118.0.0																		

Use decimals

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

Northing										Easting										Elev									
51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
																				5840									

Use decimals

Write M if meters

Segment 1 = Depths

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
8.0										39.0																			

Conductivity

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2

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
										38.0										61.0									

Segment 3

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
.999																													

Segment 4

Segment 5

Segment 6

Segment 7

Segment 8

Segment 9

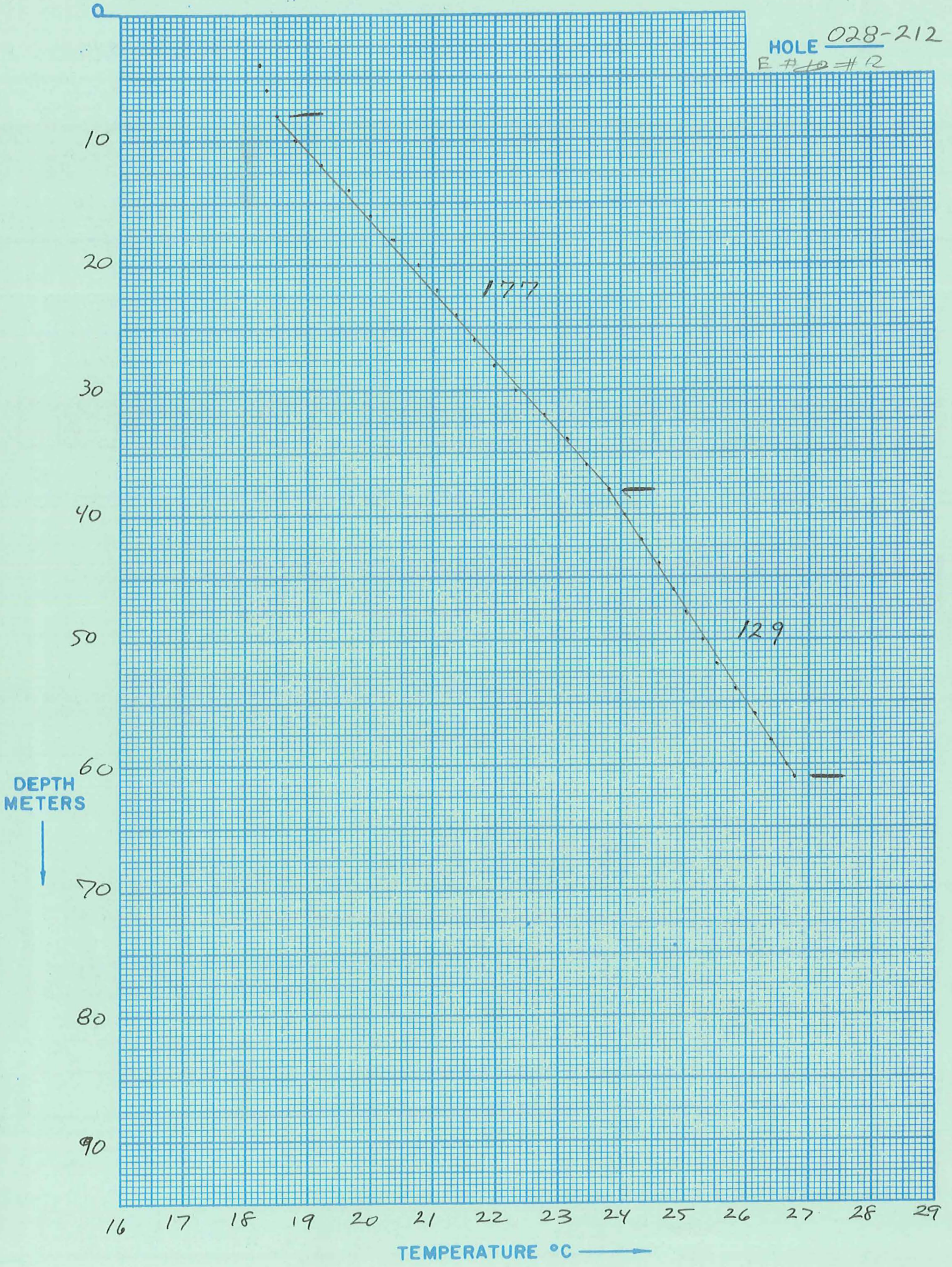
Segment 10

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 028-212
E # 10 # 12



Date Logged: 12-6-83ΔT Well No. 028-212

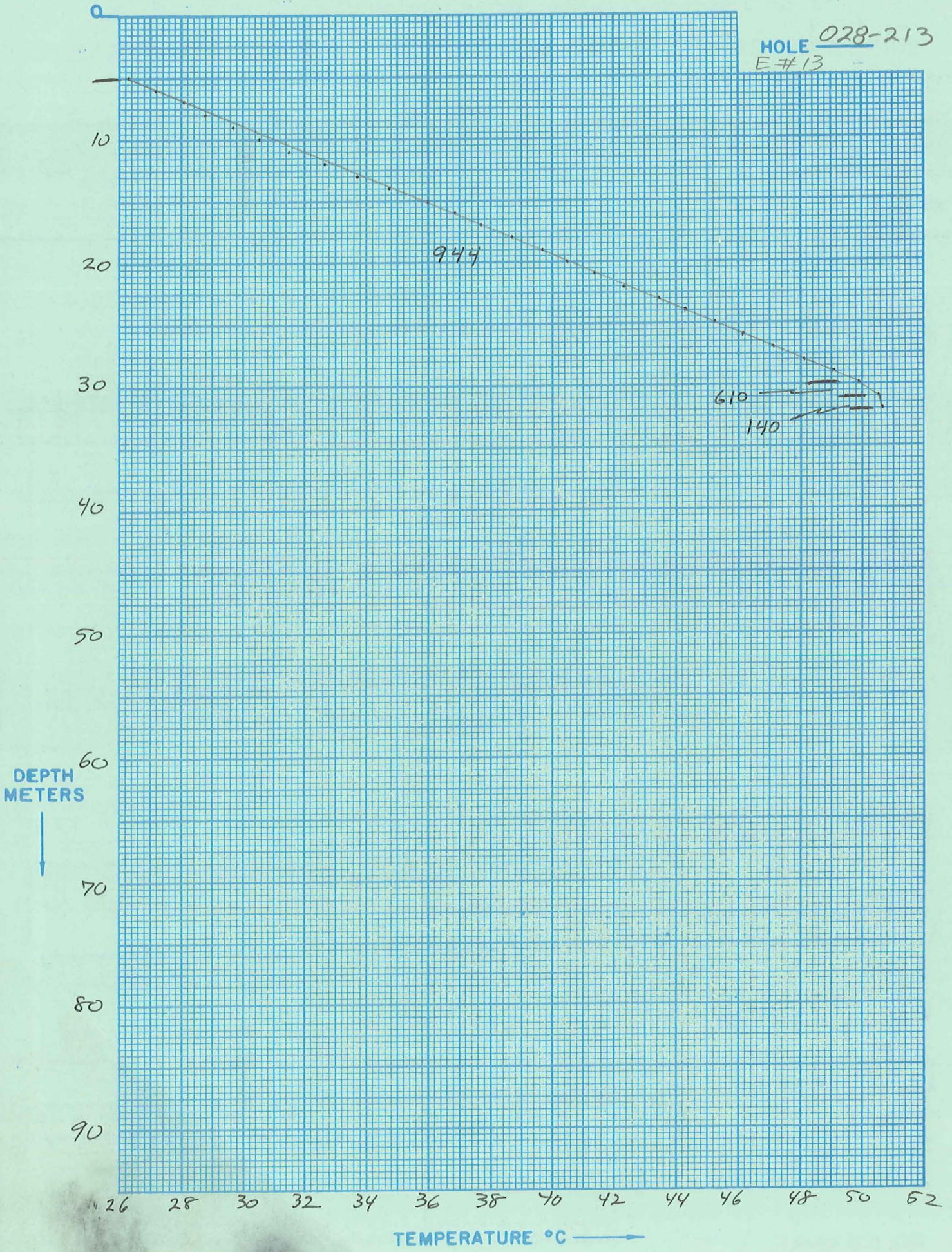
ID on map #12

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H ₂ O Air	Lithology, etc.
4	111.14	18.21				H ₂ O	C L <u>.0874</u>
6	110.67	18.33	0.12	60		↓	
8	110.02	18.50	0.17	65			
10	108.82	18.81	0.31	155			
12	107.30	19.21	0.40	200			
14	105.67	19.65	0.44	220			
16	104.34	20.00	0.35	175			
18	102.98	20.37	0.37	185			
20	101.50	20.78	0.41	205			
22	100.45	21.07	0.29	145			
24	99.34	21.38	0.31	155			
26	98.32	21.67	0.29	145			
28	97.25	21.98	0.31	155			
30	96.06	22.32	0.34	170			
32	94.45	22.79	0.47	235			
34	93.27	23.14	0.35	175			
36	92.20	23.46	0.32	160			
38	91.04	23.81	0.35	175			
40	90.19	24.07	0.26	130			
42	89.36	24.32	0.25	125			
44	88.45	24.60	0.28	140			
46	87.72	24.83	0.23	115			
48	87.01	25.05	0.22	110			
50	86.23	25.30	0.25	125			
52	85.41	25.56	0.26	130			
54	84.52	25.85	0.29	145			
56	83.61	26.15	0.30	150			

K=Conductivity

page _____ of _____

HOLE 028-213
E#13



Date Logged: 12-6-83ΔT Well No. 028-213

#13

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H ₂ O Air	Lithology, etc.
4	88.50	24.59				H ₂ O	C .0881 L
← 5	83.17	26.29					
6	80.45	27.20					
7	77.88	28.08	0.88	880			
8	75.87	28.79	0.71	710			
9	73.37	29.70	0.91	910			
10	71.09	30.55	0.85	850			
11	68.58	31.52	0.97	970			
12	65.82	32.63	1.11	1110			
13	63.20	33.72	1.09	1090			
14	60.82	34.75	1.03	1030			
15	58.08	35.98	1.23	1230			
16	56.22	36.86	0.88	880			
17	54.50	37.69	0.83	830			
18	52.50	38.69	1.00	1000			
19	50.60	39.68	0.99	990			
20	49.08	40.49	0.81	810			
21	47.47	41.38	0.89	890			
22	45.77	42.36	0.98	980			
23	43.98	43.43	1.07	1070			
24	42.57	44.30	0.87	870			
25	41.19	45.19	0.89	890			
26	39.73	46.16	0.97	970			
27	38.38	47.09	0.93	930			
28	36.93	48.13	1.04	1040			
29	35.73	49.02	0.89	890			
← 30	34.60	49.89	0.87	870			

K=Conductivity

LITHOLOGIC LOG

Project: Emigrant

Hole: E-1 (3028-201)

Elevation: 4880

Date Drilled: 9-14-83

Location: Cen, NE¼ Sec. 36, T1N, R36E

Method: Rotary air/foam

Geologist: Deymonaz

Gamma: N/R

(ft) Depth (m)	Description
-------------------	-------------

Site in wash near lt. green silstones.

0-95
(0-29)

Siltstone - (Tertiary) - Lt. green, soft, trace of gypsum, minor sandy beds.

95-200
(29-61)

Siltstone and conglomerate (Tertiary) - Siltstone as above with lt. brown siltstone and small gravels (1-5 mm) of angular aphanitic flow rocks and Paleozoic siltstones, limestones and chert.

Drilled dry 0 - 50
Foam injection 50 - 200

LITHOLOGIC LOG

Project: Emigrant

Hole: E-2 (3028-202)

Elevation: 5280

Date Drilled: 9-14-83

Location: NE $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 31, T1N, R37E

Method: Rotary air

Geologist: Deymonaz

Gamma: N/A

(ft) Depth (m)	Description
-------------------	-------------

0-30
(0-9)

Sandstone - siltstone - Spudded in next to surface o/c in same material. Thinly bedded tuffaceous sandstones and sandy siltstones. Lt. tan, beds 1 in. to 1 ft. thick. 10-15% small xls of altered feldspars with minor quartz and chloritized biotite. 20% small dk. gray lith frags of limestone and siltstone.

30-145
(9-44)

Sandy siltstone - Lt. tan, similar to above except finer grained, cuttings come out as fine sandy powder. Xls as above decrease to 5% and lith frags as above.

145-180
(44-55)

Sandy siltstone - As above except pale red.

180-200

Sandy siltstone (Tertiary) - As 30-145'.

Drilled dry to TD.

LITHOLOGIC LOG

Project: Emigrant

Hole: E-3 (3028-203)

Elevation: 5680

Date Drilled: 9-14-83

Location: NW $\frac{1}{4}$, SE $\frac{1}{4}$, Sec. 32, T1N, R37E

Method: Rotary air

Geologist: Deymonaz

Gamma: N/A

Depth (m) Description

0-200
(0-1)

Sandy Conglomerate - Hole drilled next to outcrop and drilled entirely in same material with no observed variations. Massive, sandy conglomerate with angular to subrounded rock from 2 mm to 0.5 m, consisting of Paleozoic siltstones, shales, limestone, and Tertiary volcanic rock in sandy matrix with with some silt and clay. Moderately indurated.

Drilled dry to TD.

LITHOLOGIC LOG

Project: Emigrant

Hole: E-4 (3028-204)

Elevation: 4880

Date Drilled: 9-15-83

Location: NW $\frac{1}{4}$, NW $\frac{1}{4}$ Sec. 4, T1S, R37E

Method: Rotary air

Geologist: Deymonaz

Gamma: _____

(ft)
Depth (m)

Description

0-95
(0-29)

Sandy conglomerate, Sandstone - Pale to medium reddish brown, may be reworked air fall tuff. 10-50% small angular (1-10mm) lith frags of siltstone and minor limestone and silicic volcanic rx. Sand composed of quartz grains, lith frags and small biotite, pumice and ash matrix. Appears to be alternating beds of sandstone and conglomerate. Same material at surface striking N80E and dipping 11° south.

95-190
(29-58)

Sandy siltstone - Lt. greenish-gray, 5-10% lith frags as above. Sand in silt/clay matrix.

190-200
(58-61)

Sandy siltstone - As above, except lt. med. gray and becoming damp.

Drilled dry to TD.

LITHOLOGIC LOG

Project: Emigrant

Hole: E-5 (3028-205)

Elevation: 5320

Date Drilled: 9-20-83

Location: NW $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 5, T1S, R37E

Method: Rotary air/foam

Geologist: Deymonaz

Gamma: N/A

Depth (ft) (m)	Description
-------------------	-------------

0-8
(0-2.5)

Sand and gravel - Tertiary and Paleozoic subrounded to subangular gravels in sandy silt matrix.

8-20
(2.5-6)

Claystone - siltstone - Tand to lt. green, thinly bedded with common clear gypsum.

20-200
(6-61)

Claystone (Tertiary) - Lt. to med. green, firm. Minor iron and manganese staining along tight fractures. Very consistant through interval except for slight color variations. No gypsum or calcite noted.

Drilled dry 0-80
Foam injection 80-200

LITHOLOGIC LOG

Project: Emigrant

Hole: E-6 (3028-206)

Elevation: 5360

Date Drilled: 9-21-83

Location: Cen. Sec. 8, T1S, R37E

Method: Rotary air/foam

Geologist: Deymonaz

Gamma: N/A

(ft) Depth (m)	Description
-------------------	-------------

Surface outcrop next to drill hole of thin bedded (2-3cm) lt. tan siltstone. Pervasive tight fractures with common manganese coating.

0-85
(0-26)

Siltstone - Lt. tan to lt. tan as in outcrop with minor reddish brown iron stains. Mostly altered to montmorillonitic clays, rare clear gypsum.

85-200
(26-61)

Siltstone (Tertiary) - Similar to above except med. gray. Common small (1mm) angular white feldspar completely altered to clay. Very mild sulfur odor in cuttings, drillers also noted slight odor while drilling.

LITHOLOGIC LOG

Project: Emigrant

Hole: E-7 (3028-207)

Elevation: 6000

Date Drilled: 9-22-83

Location: SW¼ SE¼ Sec. 27, T1S, R37E

Method: Rotary air/foam

Geologist: Deymonaz

Gamma: N/A

(ft) Depth (m)	Description
-------------------	-------------

Site next to surface outcrop of sandy shales. White, lt. brown and reddish brown. Sharp lateral color changes.

0-30
(0-9)

Shale (Tertiary) - Thin bedded, sandy, lt. reddish brown, firm, common clear to white gypsum, trace of biotite. Minor thin white siltstone interbeds.

30-50
(9-15)

Shale - As above but lighter colored with tan and red layers. Common limonite stains along fracture surfaces.

50-60
(15-18)

Shale - As above except lt. gray.

60-68
(18-21)

Shale - As above except lt. to med. gray. Some fine laminations and small (<1 mm) altered biotite.

68-78
(21-24)

Siltstone - Med. gray, as 0 - 30 but massive.

78-115
(24-36)

Siltstone - Lt. brown with thin lighter colored beds, and sandy.

115-200
(36-61)

Siltstone - Med. gray, as above with trace of very fine disseminated pyrite.

Drilled dry 0 - 120'
Foam injection 120' - 200'

LITHOLOGIC LOG

Project: Emigrant

Hole: E-8 (3028-208)

Elevation: 5550

Date Drilled: 9-21-83

Location: Cen. Sec. 20, T1S, R37E

Method: Rotary air/foam

Geologist: Deymonaz

Gamma: N/A

Depth (m)	Description
0-2 (0-0.6)	<u>Sand & Gravel</u> - Unconsolidated material.
2-120 (0.6-37)	Siltstone - Lt. tan, firm with 1-5% small angular to subangular red, dark gray and green silicic aphanitic and porphyritic lithic fragments. 1-5mm. Also some finer sand sized material. Trace of small altered biotite and quartz grains.
120-130 (37-40)	<u>Sandstone</u> - Lt. gray, coarse, well cemented.
130-160 (40-49)	<u>Siltstone</u> - As in 2-120'.
160-200 (49-61)	<u>Sandstone (Tertiary)</u> - Similar to 120-130 interval but slightly coarser, grains 1-1.5mm.
	Drilled dry 0-100 Foam injection 100-200

LITHOLOGIC LOG

Project: Emigrant

Hole: E-9 (3028-209)

Elevation: 5600

Date Drilled: 9-22-83

Location: SE $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 29, T1N, R37E

Method: Rotary air/foam

Geologist: Deymonaz

Gamma: N/A

(ft) Depth (m)	Description
-------------------	-------------

Spudded in canyon at base of Emigrant Fm. outcrop on north side of canyon. Nearby surface outcrop thin bedded, coarsely crystalline limestone. Med. greenish gray to greenish brown. Rust red, soft amorphous grains common in limestone. Thin shaley interbeds. Beds dipping generally 10-26° to east.

0-100
(0-30)

Limestone and shale - (Upper and Middle Cambrian Emigrant Fm) Med. gray, lt. gray and lt. red to brick red. Not crystalline as in surface outcrops. 60-80% limestone 20-40% shales. Much of shales rust red. Entire section pervasively fractured. Occasional thin chert beds or lenses.

100-160
(30-49)

Shales & limestone - (Upper and Middle Cambrian Emigrant Fm) Hard siliceous shales, med. gray and red as above with thin interbeds of med. to dk. gray limestone.

Drilled dry 0-50'
Foam injection 50'-160'

LITHOLOGIC LOG

Project: Emigrant

Hole: E-10 (3028-210)

Elevation: 5240

Date Drilled: 9-22-83

Location: NE $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 19, T1S, R37E

Method: Rotary air/foam

Geologist: Deymonaz

Gamma: N/A

(ft) Depth (m)	Description
-------------------	-------------

0-200
(0-61)

Gravels (Qog) - Poorly consolidated, angular to subrounded gravels as in surrounding outcrops. Poorly bedded, gently dipping with material ranging from sand sized to 1 meter in diameter but generally less than 10cm. Gravels primarily silicic xl tuffs and flow rocks with minor siltstones, cherts and limestones. First water at 40 feet, volume increased with depth to 890 GPM at TD.

Drilled dry 0-10
Foam injection 10-200

LITHOLOGIC LOG

Project: EmigrantHole: E-11 (3028-11)Elevation: 5040Date Drilled: 9-15-83Location: NW¼ NE¼ Sec. 6, T1S, R37EMethod: Rotary air/foam injectionGeologist: DeymonazGamma: N/A

Depth (m)	Description
0-43 (0-13)	<p>Drilled 100-200 ft. west of small area of bleached and silicified rock and sulfur, manganese and ulexite deposition.</p> <p><u>Siltstone</u> - Lt. gray, tan and pale green, soft to firm. Minor sand sized material either as thin interbeds or dissiminated throughout the siltstone. Thin red interval of lithic xl tuff 12-13', may be small dike.</p>
43-45 (13-14)	<p><u>Lithic xl tuff</u> - Brick red, firm, altered to clay. 15% altered xls of feldspars and biotite, trace of quartz and 20% small lithic frags.</p>
45-80 (14-24)	<p><u>Lithic xl tuff, siltstone and sandstone</u> - Tuff as above except lt. green and soft, altered to soft sandy clay. May be air fall deposit. Interbeds of siltstone and sandstone. Returns as fine sandy powder. 60-80 cuttings coated with red powder.</p>
80-392 (24-120)	<p><u>Tuff</u> - Lt. to med. greenish gray, altered to clay. Common fresh appearing small biotite 0.1-0.3mm. Some fine quartz grains and common altered white feldspars in clay matrix. Has green and white mottled appearance. Occasional large (2mm) biotite. Common small rounded, hard reddish aphanite lith frags <1-2mm. Some altered white material may be pumice. V. lt.-gray, soft sandy ash 250-280'.</p>
392-400 (120-122)	<p><u>Chalcedoney</u> - Med. to lt. gray amorphous silica. Very hard, water entry at 398' "silica cap".</p>
400-405 (122-123.5)	<p><u>Xl lithic tuff</u> - Lt. gray, salt & pepper appearance, brittle. Second water entry at 403.</p>
405-406 (123.5-124)	<p><u>Chalcedoney</u> - As 392-400, additional water, 55-60 GPM lifted to surface.</p>
	<p>Drilled dry 0-280 Foam injection 280-406</p>

LITHOLOGIC LOG

Project: EmigrantHole: E-12 (3028-212)Elevation: 5840Date Drilled: 9-21-83Location: NW $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 16, T1S, R37EMethod: Rotary air/foamGeologist: DeymonazGamma: N/A

Depth (ft) (m)	Description
0-3 (0-1)	<u>Gravel</u> - Angular gravels of shales, siltstone and silicic volcanic rock in lt. tan silty, sandy matrix.
3-30 (1-9)	<u>Conglomerate</u> - Angular silicic shales or siltstones in a lt. brown sandy matrix. May be fault breccia as in o/c 100' east of drill hole.
30-100 (9-30)	<u>Siltstone</u> - Medium to lt. gray to lt. greenish gray thin bedded Paleozoic siltstone. Hard enough to scratch steel. Very fractured and drills much easier than hardness suggests. Thin quartz and some calcite veins, common yellow iron staining and/or clay along fractures. Trace of disseminated pyrite. 70-100', thin interbeds of lt. and dark gray siltstone.
100-125 (30-38)	<u>Siltstone and limestone</u> - Siltstone as above with minor thin beds of dark gray limestone. Common calcite filled fractures.
125-150 (38-46)	<u>Limestone</u> - (Lower Cambrian Harkless Fm) - Med.-dark gray, numerous small, white and clear calcite filled fractures. <1% small disseminated pyrite, also along small tight fractures. Minor thin beds of dark gray siltstones. Minor yellow clay along fractures.
150-180 (46-55)	<u>Andesite dike</u> - Pale green, fine grained, mostly altered to clay. <1% fine disseminated pyrite. Unable to identify individual mineral grains.
180-200 (55-61)	<u>Limestone</u> - As 125-150.

LITHOLOGIC LOG

Project: Emigrant

Hole: E-13 (3028-213)

Elevation: 4880

Date Drilled: 9-22-83

Location: SE $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 25, T1N, R36E

Method: Rotary air/foam

Geologist: Deymonaz

Gamma: N/A

Depth (m) Description

0-90
(0-27) (Ordovician Palmetto Fm.)
Limestone - Med. to lt. gray and red. Finely to coarsely crystalline with numerous calcite veins. Red iron staining throughout the unit. Minor amount of hard silicic shales and chert.

90-120
(27-37) Cavern - Open cavity along range front fault. Drill pipe dropped free 9-120. Unable to amke connection at 120' without plugging bit with fine sand and clay. Ran probe in open hole to 115', temp. of 49.68°C.

Drilled dry 0-60
Foam injection 60-120