A00017

TEC-19

ΔT

Thermal Data Field Sheets
New Mexico

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Lost ΔT

ΔT Well No. 80-1

erty-Project 1114 Depth Logged 36 m

ap Kettner Canyon Scale 7½' Date: Drilled ______ Logged 6-11-80

State NM County Valencia, SE of NW of NE of ______ of Sec 21 T 11N R 14W

Instrument DT101 Operator KG Elevation 8420 [✓ ft] m

Comments Abandoned windmill w/ storage tank (Gallup AMS)

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
1	1	1	4							1	1	▨	0	6	▨	8	0	C	M

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

Site Description (columns 21–50) | Operator (51–55) | Editor (56–60) | Drilled: DA (61–62) ▨ 63, MO (64–65) ▨ 66, YR (67–68)

Operator: KG/

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

Map Location **

Scale Unit IN CM					Map Size (7.5, 15., 60.)					N Lat Degree					N Lat Min					W Long Degree					W Long 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
▨	C	M	▨	▨			7	.	5			3	5	.			7	.	5		1	0	8	.		2	2	.	5

Use decimals

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

Car

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
					2	3	.	0	0						2	1	.	6	0	8	4	2	0	.	▨	▨	▨	▨	F

Use decimals

Write M if ← if meters

Segment 1 = Depths: Start (21–30), End (31–40); Conductivity: K (41–45), ΔK (46–50)

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → (51–60), End (61–70), K (71–75), ΔK (76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

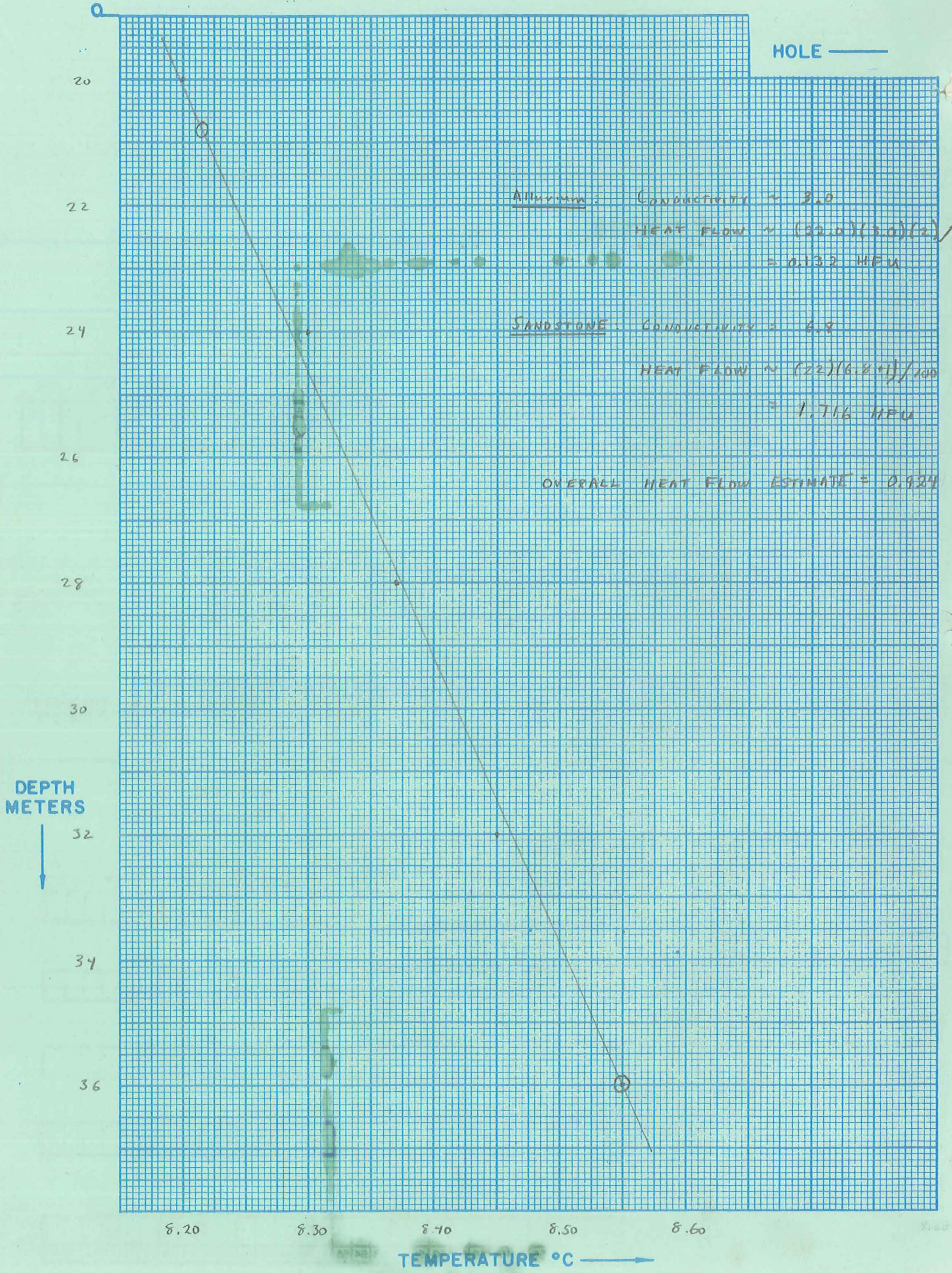
Segment 8 Start →

Segment 9 (21–50)

Segment 10 Start → (51–80)

After final segment Start = .999

GRADIENT = $\frac{8.55 - 8.215}{36 - 20.8} \times 1000 = 22.0$ °C/km



ALLUVIUM: CONDUCTIVITY ~ 3.0

HEAT FLOW ~ (22.0)(3.0)(2)/100

= 0.132 HFU

SANDSTONE: CONDUCTIVITY = 6.8

HEAT FLOW ~ (22)(6.8+1)/100

= 1.716 HFU

OVERALL HEAT FLOW ESTIMATE = 0.924 HFU

Lost ΔT

Date Logged: 6-11-80

ΔT Well No. 80-1

Depth (meters)	Instr. Reading	Temp. °C	ΔT (°c)	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		8.20				↑	↑
			0.10	25.0			
24		8.30					
			0.07	17.5			
28		8.37					
			0.08	20.0			
32		8.45					
			0.10	25.0			
36		8.55				H_2O	sandstone-alluvium

K=Conductivity

page ____ of ____

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

CHRYSACOLLA WELL ΔT

ΔT Well No. 80-2

Property-Project 1114 Depth Logged 41.6

Map MT SEDGEWICK Scale 1:24000 Date: Drilled ______ Logged 6/12/80

State NM County VALENCIA, SW 1/4 of SE 1/4 of NW 1/4 of SE 1/4 of Sec 31 T 11 N R 11 W

Instrument KG PROBE (DT 101) Operator KG + JL Elevation 7744 (ft m)

Comments 8-10' blades on windmill; near Cu-stained phyllite; 0.3 km E of Cu prospect on qtz stringer (Gallup AMS)

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
1114		12	▨	06	▨	80	C M

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

Site Description	Operator	Editor	Drilled DA		Drilled MO		Drilled YR
21–50	51 52 53 54 55	56 57 58 59 60	61 62	63	64 65	66	67 68
	KG-JL	/		▨		▨	

(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 **
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	35.	07.5	108.	07.5

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
5.25	34.4	7744.	▨	F

Use decimals

← Write M if if meters

Segment ! = Depths | Conductivity | Best cond. (-K)

Downward extrapolations (-ΔK)

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

	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

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

Segment 9

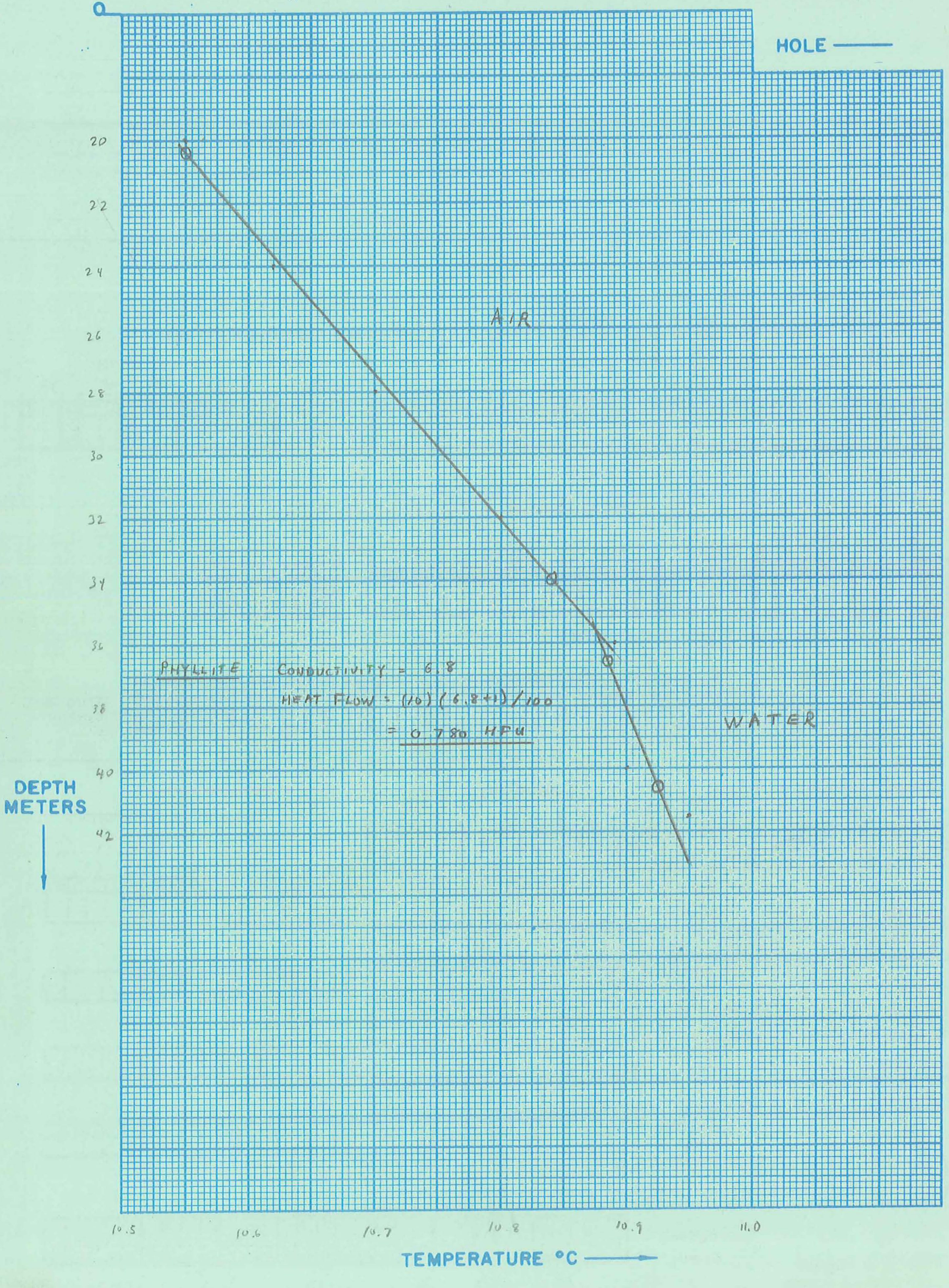
21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

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

AIR GRADIENT : [(10.84 - 10.55)/(34 - 20.4)] × 1000 = 21.3 °C /km

H_2O GRADIENT : [(10.925 - 10.885)/(40.6 - 36.6)] × 1000 = 10 °C / Km



PHYLLITE : CONDUCTIVITY = 6.8

HEAT FLOW = (10)(6.8+1)/100

= 0.780 HFU

Chrysacolla ΔT

Date Logged: 6-12-80

ΔT Well No. 80-2

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air
20	10.55	10.55				Air
			0.07	17.5		↓
24	10.62	10.62				
			0.08	20.0		
28	[illegible]	10.70				
			0.10	25.0		
32	[illegible]	10.80				
			0.09	22.5		
36	[illegible]	10.89				
			0.01	2.5		
40	[illegible]	10.90				H_2O
			0.05	31.5		↓
41.6	[illegible]	10.95				

Lithology, etc.

Qal underlain by Fe stnd muscovite phyllite w/ Cu mineral (chrysacolla?) in phyllite & qtz. stringers H_2O @ ~36m

K=Conductivity

page ______ of ______

Date Logged: ____________________ ΔT Well No. _____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page _____ of _____

AMAX EXPLORATION, INC. EMPTY WELL ΔT

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-3

Property-Project 1114 Depth Logged 35.5 m

Map PAXTON SPRINGS Scale 1:24000 Date: Drilled ______ Logged 6/12/80

State NM County VALENCIA, NW¼ of NE¼ of NE¼ of NW¼ of Sec 19 T 10N R 11W

Instrument DT 101 (K8) Operator KB + JL Elevation 7595 [✓ ft] (m)

Comments abandonned well - no windmill - 8" casing w/ submersible pump; no water encountered but damp (Gallup AMS)

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
1	1	1	4							1	2	▨	0	6	▨	8	0	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
																														K	G	/	J	L	/							▨			▨		

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

Map Location **

Card B

Scale Unit IN CM					Map Size (7.5, 15., 60.)					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
▨	C	M	▨	▨			7	.	5			3	5	.			0	.	0	1	0	8	.				7	.	5

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
					4	0	.	8	2						3	2	.	4	6	7	5	9	5	.	▨	▨	▨	▨	F

Use decimals

← Write M if if meters

Segment 1 = Depths Start / End; Conductivity K / ΔK

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

Best cond. (-K)

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

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

Segment 9

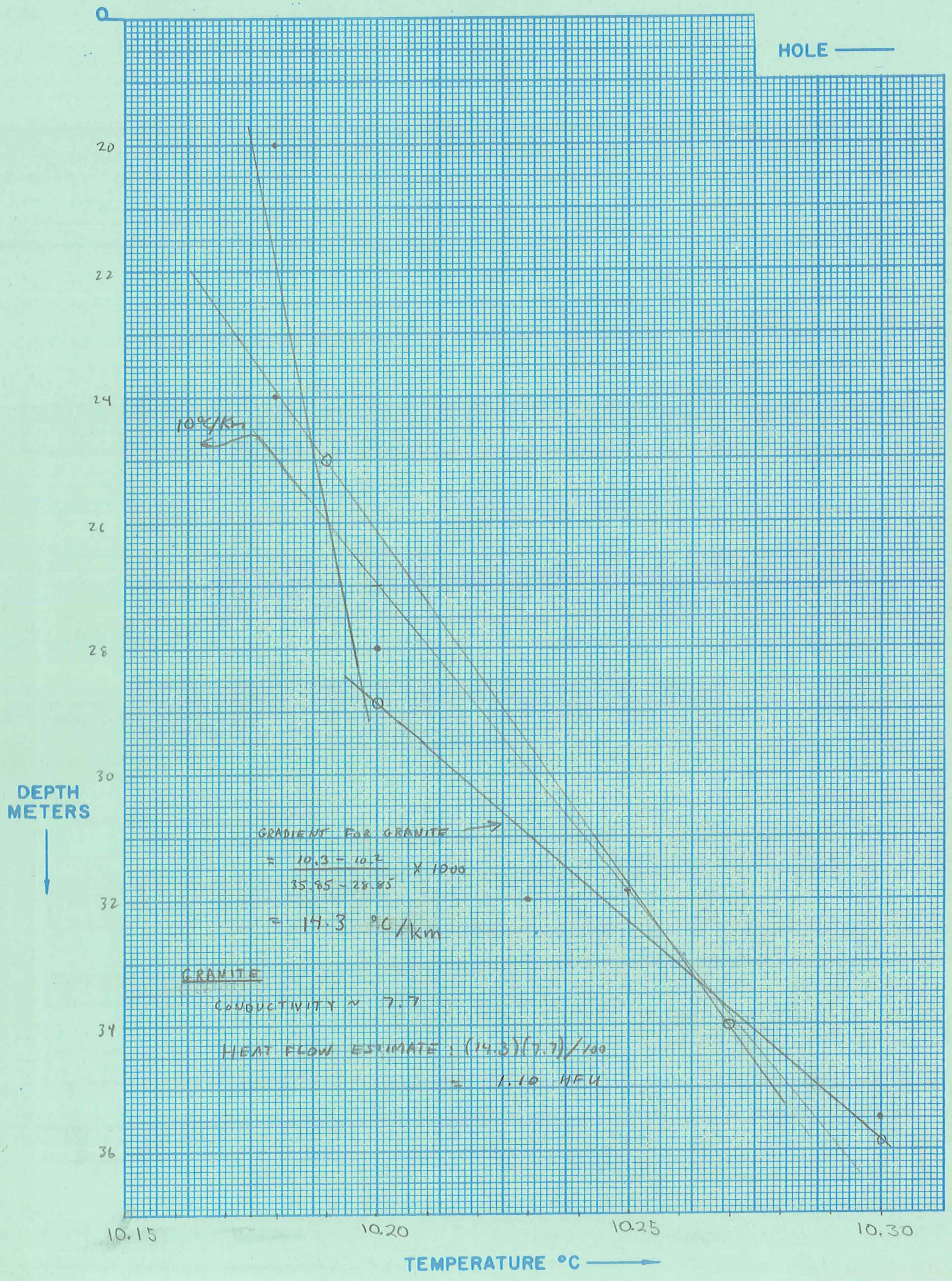
21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

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

GRADIENT = $\frac{10.27 - 10.19}{34 - 25} \times 1000 = 8.9$ °C/km



GRADIENT FOR GRANITE

$= \frac{10.3 - 10.2}{35.85 - 28.85} \times 1000$

$= 14.3$ °C/km

GRANITE

CONDUCTIVITY ~ 7.7

HEAT FLOW ESTIMATE : (14.3)(7.7)/100

= 1.10 HFU

Empty Well ΔT

Date Logged: 6/12/80

ΔT Well No. 80-3

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O [✓ Air]	Lithology, etc.
20		10.18	0	0			Qal underlain by fine grained granite
24		10.18	0.02	5.0			
28		10.20	0.03	7.5			
32		10.23	0.07	20.0			
35.5		10.30					

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

K-spar ΔT

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-4

Property-Project 1114 Depth Logged 68.85 m

Map PAXTON SPRGS Scale 1:24,000 Date: Drilled ____ Logged 6/12/80

State NM County VALENCIA, NW¼ of SE¼ of NE¼ of NW¼ of Sec 31 T 10N R 11 W

Instrument DT 101 (KG) Operator KG + JL Elevation 7808 ([✓ ft] m)

Comments 8' blades on windmill w/ submersible pump (GALLUP AMS)

Date Logged

JUSTIFY

Card A

Proj No (1–4)	Well No (5–10)	DA (11–12)	13	MO (14–15)	16	YR (17–18)	19*	20*
1 1 1 4		1 2	▨	0 6	▨	8 0	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)	63	Drilled MO (64–65)	66	Drilled YR (67–68)
	K G / J L	/		▨		▨	

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

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)
▨ C M	▨ ▨	7.5	35.	0.0	108.	7.5

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
26.50	32.66	7808.	▨	F

Use decimals

← Write M if if meters

Segment 1 = Depths

Start (21–30) End (31–40)

Conductivity K (41–45) ΔK (46–50)

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → (51–60) End (61–70) K (71–75) ΔK (76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

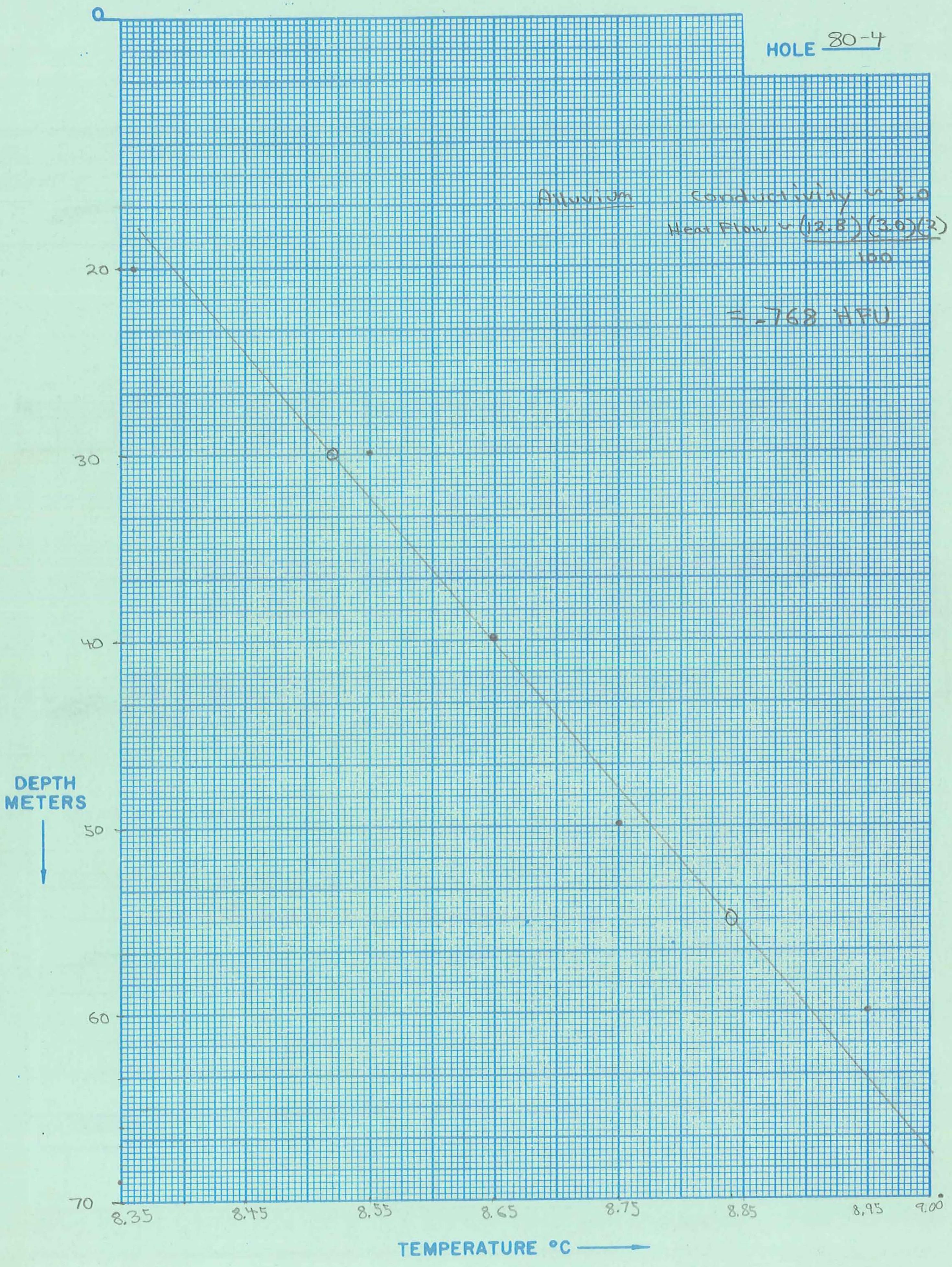
Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start = .999

GRADIENT = $\frac{8.84 - 8.52}{55 - 30} \times 1000 = 12.8$ °C/km



Alluvium conductivity ~ 3.0

Heat Flow ~ $\frac{(12.8)(3.0)(2)}{100}$

= .768 HFU

K-spar ΔT [illegible]

Date Logged: 6/12/80

ΔT Well No. 80-4

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		8.37					Qal @ surface
			.18	18.0			
30		8.55					K-spar rich, Qtz poor
			.10	10.0			
40		8.65					Fe stnd plutonic rk.
			.10	10.0			
50		8.75					(ie, syenite)
			.20	20.00			
60		8.95					
			.07	7.00			
68.85		9.02				H_2O	H_2O @ 18.6 m

K=Conductivity

page ____ of ____

Date Logged: ____________________

ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ____ of ____

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-5

Property-Project 1114 Depth Logged 15.3

Map Guadalupe, N.M Scale 15′ Date: Drilled ______ Logged 6/10/80

State NM County Sand. , ____ of ____ of ____ of ____ of Sec 35 T 16N R 3W

Instrument DT 101 Operator Bill Huntsman Elevation 6091 [✓ ft] m

Comments windmill, 3″ casing TD 15.3 m, WT 11.5 m

JUSTIFY

Card A

Date Logged

Proj No (1–4)	Well No (5–10)	DA (11–12)	13	MO (14–15)	16	YR (17–18)	19*	20*
1114		10	▨	06	▨	80	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)	63	Drilled MO (64–65)	66	Drilled YR (67–68)
	HUNTS	/		▨		▨	

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

Card B

Map Location **

21	Scale Unit IN CM (22–23)	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)
▨	cm	▨	7.5	107.15	.	35.30	.

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
35.	446.1	6091.	▨	F

Use decimals

← Write M if if meters

Segment 1 = Depths

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

Best cond. (-K)

Downward extrapolations (- ΔK)

Segment 2 Start →

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

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start = .999

0

HOLE ——

Bottom Hole Temp

DEPTH
METERS
↓

TEMPERATURE °C →

Date Logged: 6/10/80

ΔT Well No. 80-5
SEC 35 T16N R3W

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
						↑ Air	
013.3		13.27					SANDSTONE
			.02	10			
015.3		13.25			6.8	H_2O	

K=Conductivity

page ____ of ____

Date Logged: ____________________

ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

BONITA ΔT

ΔT Well No. 80-6

Property-Project 1114 Depth Logged 48m

Map ARROSA RANCH Scale 7.5 Date: Drilled ______ Logged 6/12/80

State N MEX County VALENCIA, ____ of SW of NE of NE of Sec 36 T 9N R 11W

Instrument DT 101 Operator SHENKER Elevation 7004 (ft/m)

Comments Broken Down Windmill - Possible Fault - BASE OF CLIFF - 6" casing

JUSTIFY

Card A

Date Logged

Proj No (1–5)	Well No (6–10)	DA (11–12)	MO (14–15)	YR (17–18)	19*	20*
1114		12	06	80	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)
	SHENK				

(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) / Min (36–40)	W Long Degree (41–45) / Min (46–50)
cm	7.5	34.52 .	108.00 .

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
44.	21.2	7004.		F

Use decimals

Write M if if meters

Segment 1 = Depths

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

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start →

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

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

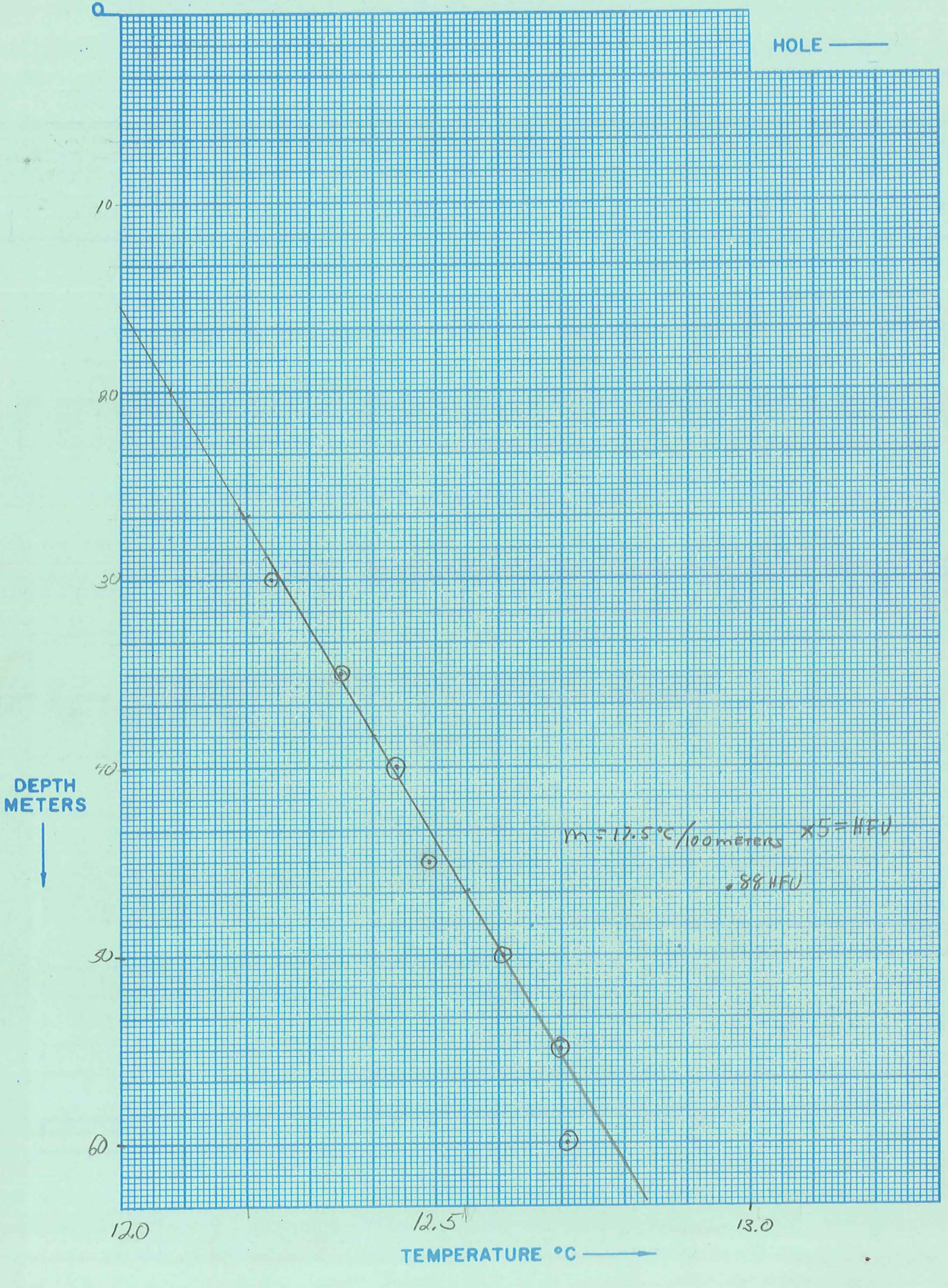
Segment 7

Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start = .999



HOLE
0
10
20
30
40
50
60
DEPTH METERS
m = 17.5°C/100 meters ×5 = HFU
.88 HFU
12.0
12.5
13.0
TEMPERATURE °C

BONITA ΔT

Date Logged: 6/12/80

ΔT Well No. 80 - 6

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
							Alluvium of ferg. sandstone - well at base of ss - escarp.
30		12.24	.11	22			
35		12.35	.09	18		↑	
40		12.44	.10	20	↑		
45		12.54	.07	14		Air	
50		12.61	.09	18	5	Air.	
55		12.70	.01	2	5	Air	
60		12.71			5	Air	

K=Conductivity

page ____ of ____

Date Logged: ____________________

ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

San Rafael ΔT

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80 - 7

Property-Project 1114 Depth Logged

Map San Rafael Scale 7.5 Date: Drilled Logged 6-12-80

State N. Mex. County Valencia, NE of NW of SE of of Sec 33 T 10N R 11W

Instrument DT-101 #3 Operator BH & AS Elevation 7666 [✓ ft] m

Comments 6" cased windmill, in valley between ~~seds & metas~~. ss & gte cong.

Card A

JUSTIFY

Proj No (1-4)	Well No (5-10)	Date Logged DA (11-12)	MO (14-15)	YR (17-18)	19*	20*
1114		12	06	80	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)

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

Card B

Map Location **

Scale Unit IN CM (21-22)	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	7.5	35.00	.	108.00	.

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
37.2	0.8	7666.		F

Use decimals

Write M if if meters

Segment 1 = Depths

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

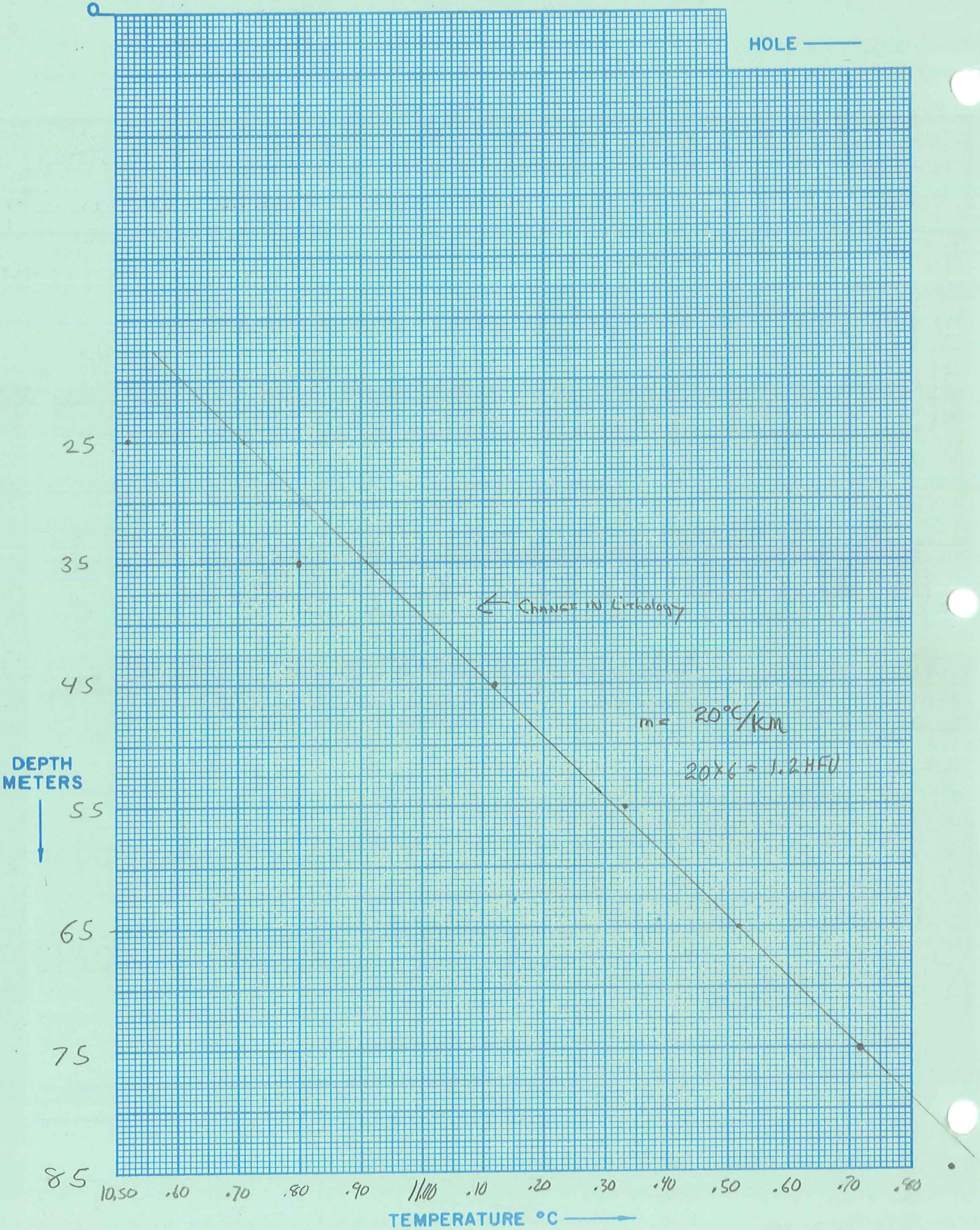
Best cond. (-K)

Downward extrapolations (-ΔK)

	Start (51-60)	End (61-70)	K (71-75)	ΔK (76-80)
Segment 2				
Segment 4				
Segment 6				
Segment 8				
Segment 10				

	Start (21-30)	End (31-40)	K (41-45)	ΔK (46-50)
Segment 3				
Segment 5				
Segment 7				
Segment 9				

After final segment Start = .999



← CHANGE IN Lithology

m = 20°C/KM

20×6 = 1.2 HFU

San Rafael ΔT

Date Logged: 6-12-80

ΔT Well No 80-7

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
							Alluvium mainly ferugenous s.s. and large sand size qtz. from qtz conglomerate-breccia.
25		10.52					
			.28	28			
35		10.80			4		
			.32	32			
45		11.12			4		
			.21	21			
55		11.33			6	Air?	
			.19	19			
65		11.52			6	H_2O	
			.20	20			
75		11.72			6	H_2O?	
			.14	14			
85		11.86				H_2O	

K=Conductivity

page ____ of ____

Date Logged: ____________________

ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page _____ of _____

AMAX EXPLORATION, INC. DISAPPOINTMENT ΔT

TEMPERATURE/DEPTH LOG

ΔT Well No. 80 - 8

roperty-Project 1114 Depth Logged 39 m

ap Madrid N.M Scale 15' 1/62500 Date: Drilled ______ Logged 6/15/80

State NM County Santa Fe , SW1/4 of NW1/4 of NE1/4 of NE 1/4 of Sec 13 T 12N R 7E

Instrument JL Operator JL Elevation 6887 [✓ ft] (m)

Comments Windmill, 8" casing, pipe pulled out (pump) (ALBUQUERQUE AMS)

Card A

JUSTIFY

Proj No (1–4) · Well No (5–10) · Date Logged: DA (11–12), MO (14–15), YR (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	1	1	4							1	5	▨	0	6	▨	8	0	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)

21–50	51	52	53	54	55	56	57–60	61	62	63	64	65	66	67	68
				J	L	/				▨			▨		

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

Card B

Map Location **

Scale Unit IN CM (21–23) · Map Size (7.5, 15., 60.) (26–30) · N Lat: Degree (31–35), Min (36–40) · W Long: Degree (41–45), Min (46–50) **

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
▨	C	M	▨	▨		1	5	.	0			3	5	.		1	5	.	0		1	0	6	.		1	5	.	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)

51–56	57	58	59	60	61–65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
	3	.	5	8		1	5	.	6	8	6	8	8	7	.	▨	▨	▨	▨	F

Use decimals

← Write M if if meters

Segment 1 = Depths: Start (21–30), End (31–40) · Conductivity: K (41–45), ΔK (46–50)

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → (51–60) · End (61–70) · K (71–75) · ΔK (76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

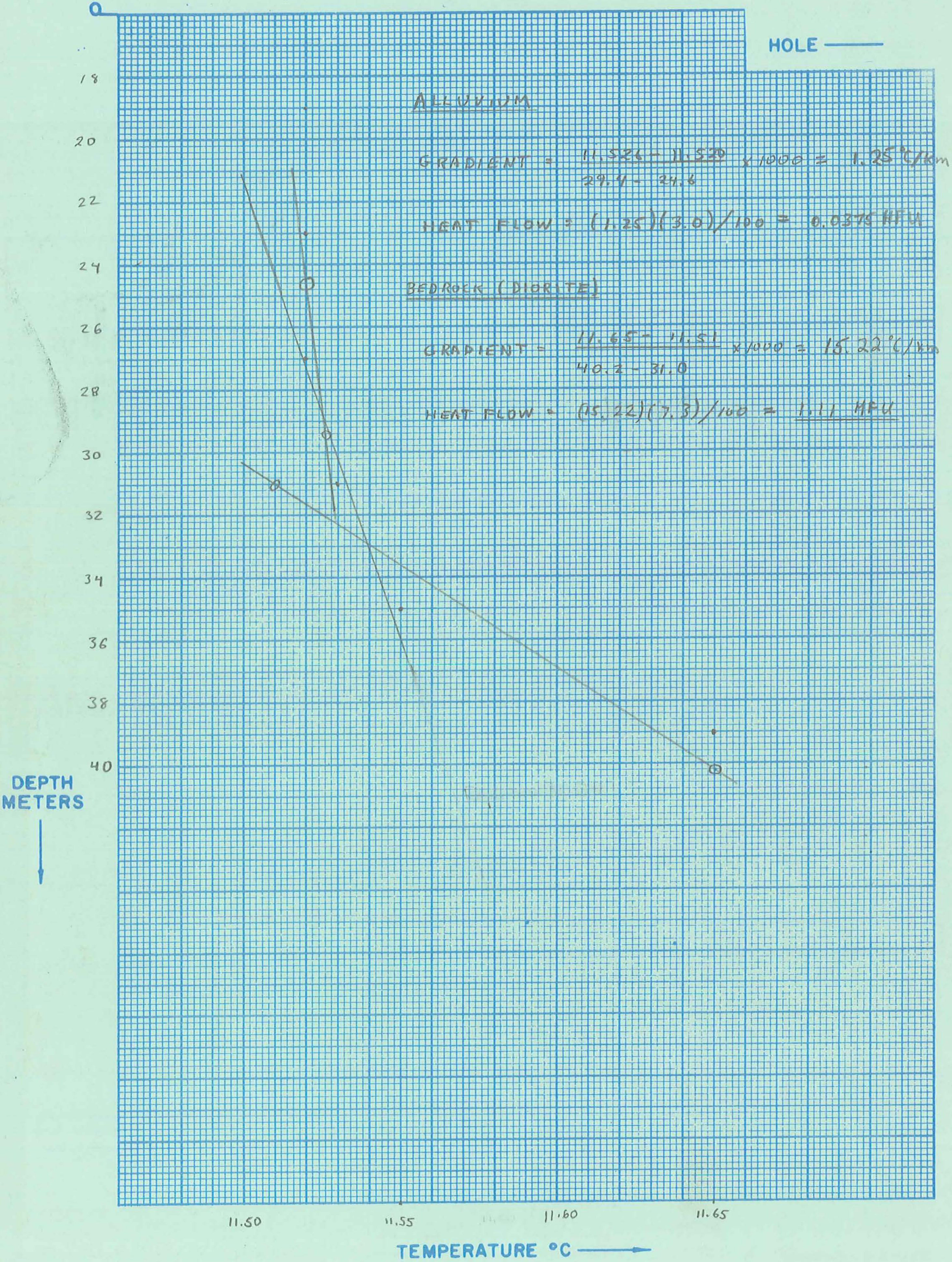
Segment 7

Segment 8 Start →

Segment 9 (21–50)

Segment 10 Start → (51–80)

After final segment Start =.999



ALLUVIUM

$$\text{GRADIENT} = \frac{11.526 - 11.520}{29.4 - 24.6} \times 1000 = 1.25\ °C/km$$

$$\text{HEAT FLOW} = (1.25)(3.0)/100 = 0.0375\ \text{HFU}$$

BEDROCK (DIORITE)

$$\text{GRADIENT} = \frac{11.65 - 11.51}{40.2 - 31.0} \times 1000 = 15.22\ °C/km$$

$$\text{HEAT FLOW} = (15.22)(7.3)/100 = \underline{1.11\ \text{HFU}}$$

DISAPPOINTMENT ΔT

Date Logged: 6/15/80

ΔT Well No. 80-8

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O [✓ Air]	Lithology, etc.
19		11.52	0	0	3.0		Qal containing
23		11.52	0	0	3.0		blocks and boulders
27		11.52	0.01	2.5	3.0		of diorite, quartzite,
31		11.53	0.02	5.0	7.3		minor basalt. Hills,
35		11.55	0.10	25	7.3		3 km south, look
39		11.65			7.3	↓	plutonic in origin.

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page _____ of _____

AMAX EXPLORATION, INC. GLENN ΔT

TEMPERATURE/DEPTH LOG

ΔT Well No. 80 - 9

Property-Project 1114 Depth Logged 73.05

Map MADRID Scale 1:62 500 Date: Drilled ______ Logged 6/15/80

State NM County SANTA FE , NE¼ of SE¼ of NE¼ of NE¼ of Sec 7 T 12N R 8E

Instrument DT 101 (JL) Operator JL Elevation 6617 [✓ ft] (m)

Comments 10' blade ; turned intermittently during probing ; 6" casing ; 500+ feet deep (as per rancher) (ALBUQUERQUE AMS)

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	1	1	4							1	5	▨	0	6	▨	8	0	C	M

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

Site Description (columns 21–50) | Operator (51–55) | Editor (56–60) | Drilled: DA (61–62) MO (64–65) YR (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
																																	J	L	/							▨			▨		

(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 **				
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
▨	C	M	▨	▨		1	5	.	0			3	5	.		1	5	.	0		1	0	6	.		1	5	.	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
						6	.	0	9						1	8	.	7	3	6	6	1	7	.	▨	▨	▨	▨	F

Use decimals

← Write M if if meters

Segment 1 = Depths

Conductivity

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

Best cond. (-K)

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

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

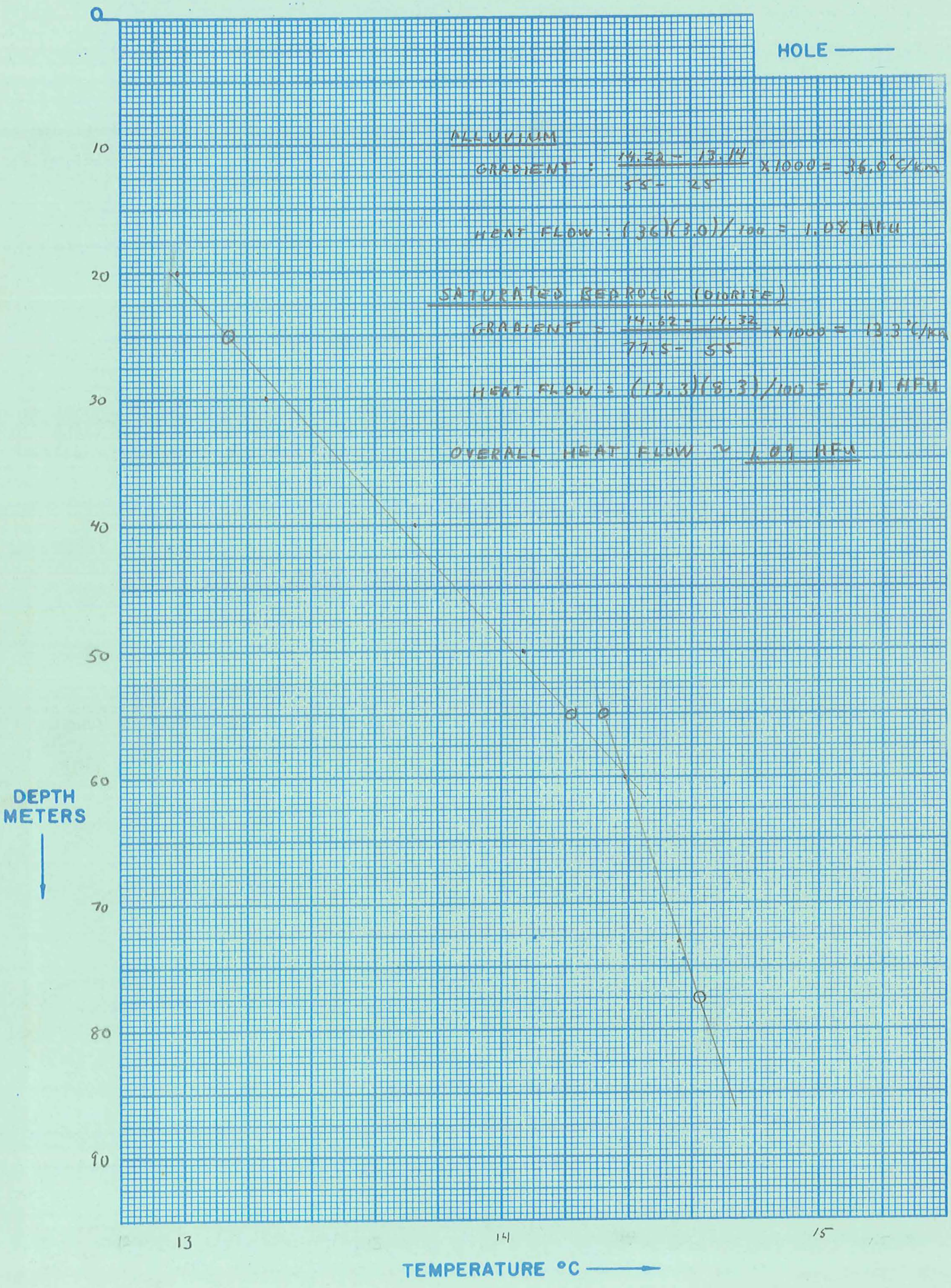
Segment 9

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



ALLUVIUM

GRADIENT : $\frac{14.22 - 13.14}{55 - 25} \times 1000 = 36.0\ ^\circ C/km$

HEAT FLOW : (36)(3.0)/100 = 1.08 HFU

SATURATED BEDROCK (DIORITE)

GRADIENT = $\frac{14.62 - 14.32}{77.5 - 55} \times 1000 = 13.3\ ^\circ C/km$

HEAT FLOW = (13.3)(8.3)/100 = 1.11 HFU

OVERALL HEAT FLOW ~ 1.09 HFU

GLENN ΔT

Date Logged: 6/15/80

ΔT Well No. 80-9

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		12.98	0.28	28	3.0	AIR	Qal w/ cobbles of
30		13.26	0.47	47	3.0		quartzite & diorite
40		13.73	0.34	34	3.0		
50		14.07	0.32	32	3.0		
60		14.39	0.17	17	7.3		H_2O @ 65.9 m
73.05		14.56			8.3	H_2O	

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

PICTURE ROCK ΔT

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-10

Property-Project 1114 Depth Logged 50.0 m

Map MADRID QUAD Scale 1:62,500 Date: Drilled ______ Logged 6/16/80

State NM County SANTA FE, ______ of NW¼ of SE¼ of NW¼ of Sec 34 T 15N R 8E

Instrument DT 101 (JL) Operator JL Elevation 6160 [✓ ft] (m)

Comments 8' blades, 6" casing; casing open w/ no pumping rod (ALBUQUERQUE AMS)

JUSTIFY

Card A

Date Logged

Proj No (1–5)	Well No (6–10)	DA (11–12)	13	MO (14–15)	16	YR (17–18)	19*	20*
1114		16	▨	06	▨	80	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)	63	MO (64–65)	66	YR (67–68)
	JL	/		▨		▨	

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

Card B

Map Location **

Scale Unit IN CM (22–23)	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	35.	15.0	106.	15.0

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)	80
42.60	23.96	6160.	F

Use decimals

← Write M if if meters

Segment 1 = Depths

Start (21–30) End (31–40)

Conductivity K (41–45) ΔK (46–50)

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → (51–60) End (61–70) K (71–75) ΔK (76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

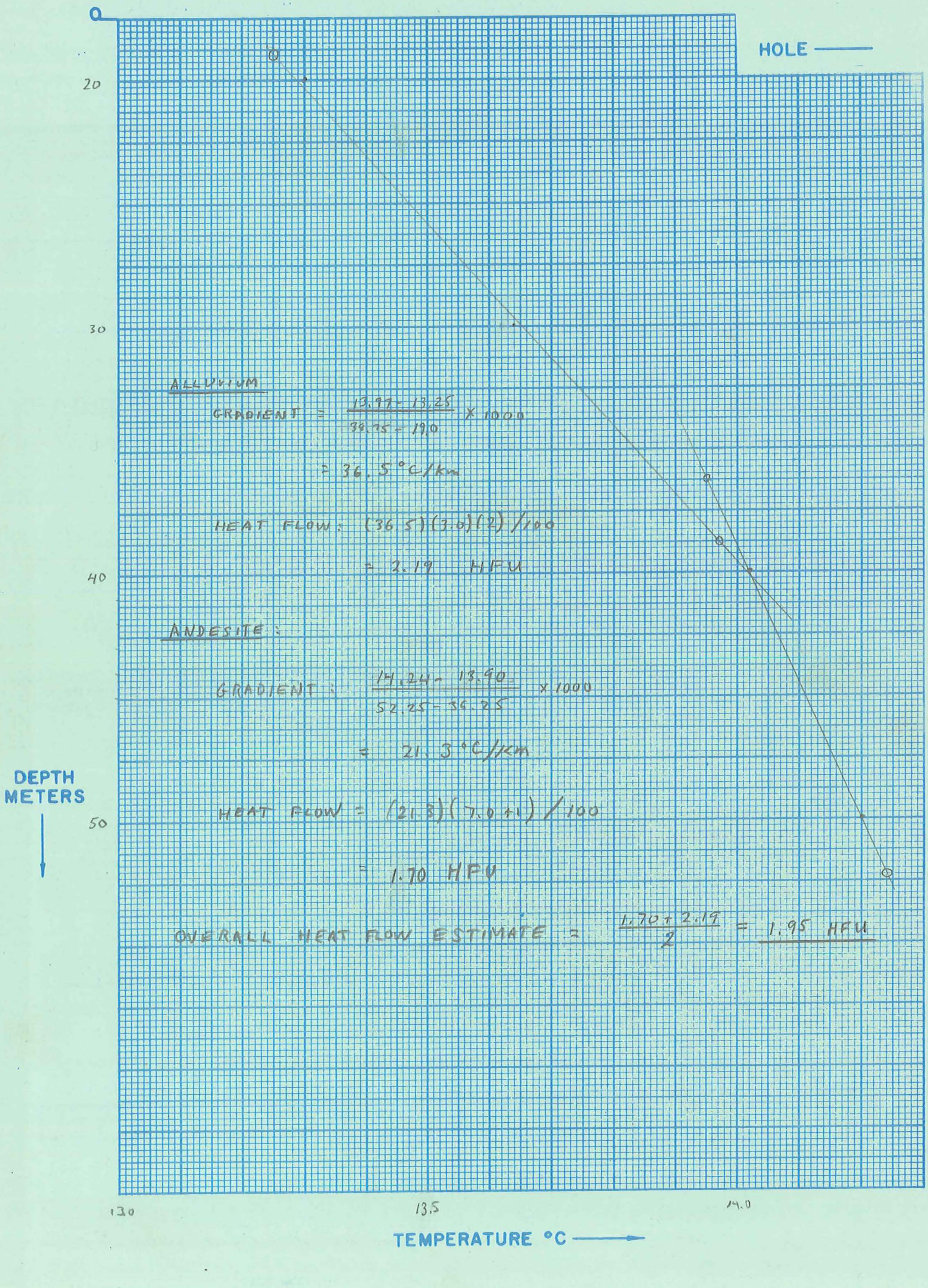
Segment 7

Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start = .999



ALLUVIUM

GRADIENT = $\frac{13.97 - 13.25}{38.75 - 19.0}$ × 1000

= 36.5 °C/km

HEAT FLOW : (36.5)(3.0)(2) /100

= 2.19 HFU

ANDESITE :

GRADIENT : $\frac{14.24 - 13.90}{52.25 - 36.25}$ x 1000

= 21.3 °C/km

HEAT FLOW = (21.3)(7.0+1) / 100

= 1.70 HFU

OVERALL HEAT FLOW ESTIMATE = $\frac{1.70 + 2.19}{2}$ = 1.95 HFU

PICTURE ROCK ΔT

Date Logged: 6/16/80

ΔT Well No. 80-10

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O ~~Air~~	Lithology, etc.
20		13.30	0.34	34	3.0	H_2O	Qal underlain by
30		13.64	0.38	38	3.0		andesite; Qal is
40		14.02	0.18	18	7.0		light reddish brown.
50		14.20			7.0	↓	H_2O @ 15 m

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page _____ of _____

Dry Gulch ΔT

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-11

Property-Project 1114 Depth Logged 85.8 m

Map San Felipe Pueblo N.M Scale 15' 1/62500 Date: Drilled ______ Logged 6/16/80

State N.M County Sandoval , SW¼ of NW¼ of NW¼ of SW¼ of Sec 24 T 14N R 6E

Instrument ΔT 101 (JL) Operator JL Elevation 5795 [✓ ft] m

Comments Windmill gone, 6" casing (ALBUQUERQUE AMS)

Card A

Date Logged

JUSTIFY

Proj No 1 2 3 4	Well No 5 6 7 8 9 10	DA 11 12	13	MO 14 15	16	YR 17 18	19*	20*
1 1 1 4		1 6	▨	0 6	▨	8 0	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	63	MO 64 65	66	YR 67 68
				▨		▨	

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

Card B

Map Location **

21	Scale Unit IN CM 22 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
▨	C M	▨	15.0	35.	15.0	106.	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
31.27	33.90	5795.	▨	F

Use decimals

Write M if if meters

Segment 1 = Depths

Conductivity

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

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start →

51–60	End 61–70	K 71–75	ΔK 76–80

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

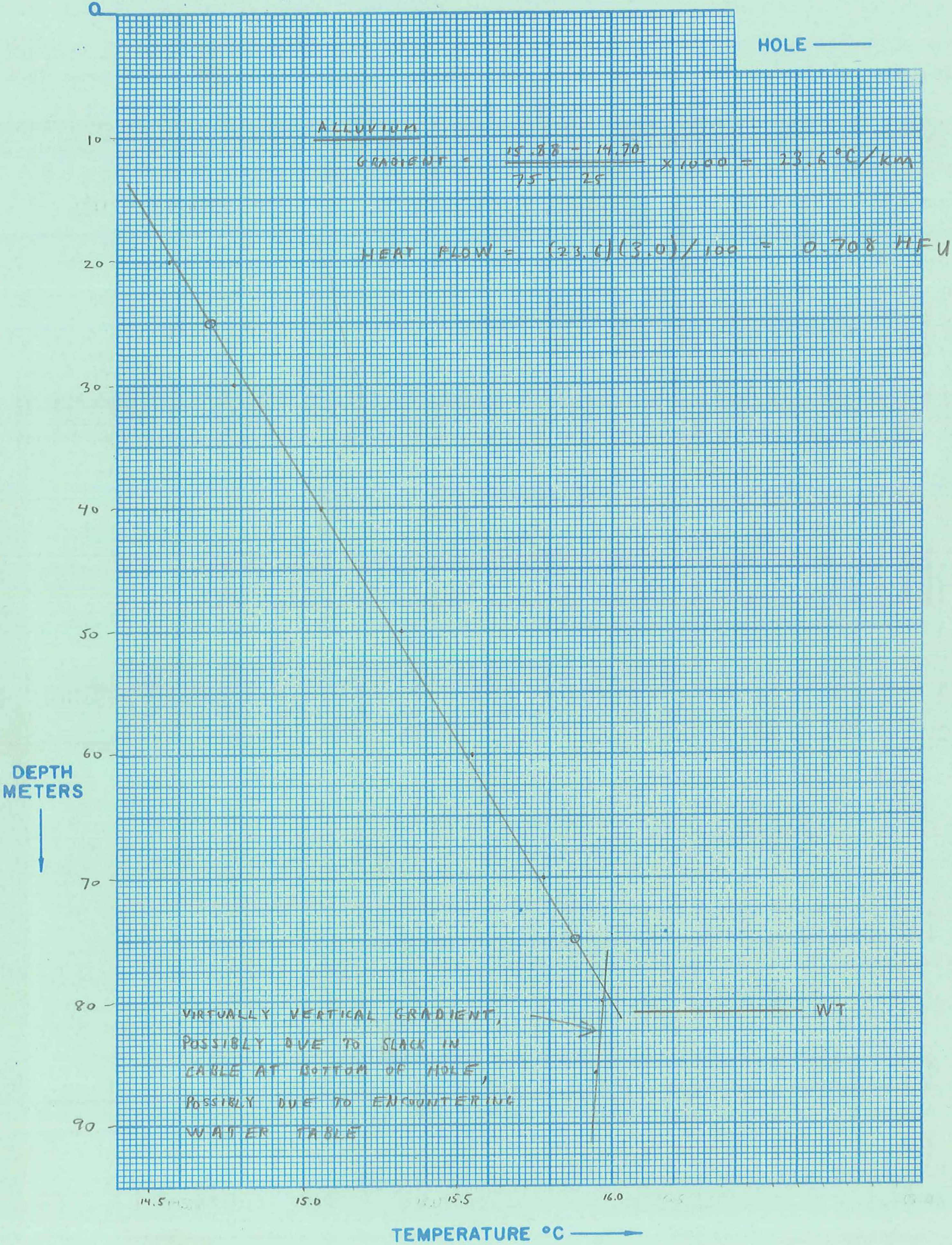
Segment 9

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



ALLUVIUM

$$\text{GRADIENT} = \frac{15.88 - 14.70}{75 - 25} \times 1000 = 23.6\ °C/km$$

$$\text{HEAT FLOW} = (23.6)(3.0)/100 = 0.708\ \text{HFU}$$

VIRTUALLY VERTICAL GRADIENT, POSSIBLY DUE TO SLACK IN CABLE AT BOTTOM OF HOLE, POSSIBLY DUE TO ENCOUNTERING WATER TABLE

Dry Gulch ΔT

Date Logged: 6/16/80

ΔT Well No. 80-11

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	~~H₂O~~ Air	Lithology, etc.
20		14.57	0.21	21.0	3.0		Qal all around
30		14.78	0.28	28.0	"		w/ cobbles of diorite
40		15.06	0.26	26.0	"		
50		15.32	0.23	23.0	"		
60		15.55	0.23	23.0	"		
70		15.78	0.19	19.0	"		
80		15.97	-0.02	-3.4	"		H₂O @ 81.0 m
85.8	?→	15.95			"	H₂O	

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

AMAX EXPLORATION, INC. Cattle ΔT

TEMPERATURE/DEPTH LOG

ΔT Well No. 80 - 12

Property-Project 1114 **Depth Logged**

Map San Felipe Pueblo N.M Scale 15' 1/62500 **Date: Drilled** **Logged** 6/16/80

State N.M County Sandoval , NW¼ of NE¼ of NE¼ of SW¼ of Sec 32 T 15N R 6E

Instrument DT 101 (JL) Operator JL **Elevation** 5500 [✓ ft] (m)

Comments 6" casing, windmill has 10' blade (diam), well had been pumping when we arrived, no water coming out.

(ALBUQUERQUE AMS)

Card A

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
1	1	1	4							1	6		0	6		8	0	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)
	JL	/			

(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				
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
	C	M				1	5	.	0			3	5	.		1	5	.	0		1	0	6	.		3	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
					4	1	.	9	0						2	4	.	5	9	5	5	0	0	.					F

Use decimals

Write M if if meters

Segment 1 = Depths

Conductivity

Best cond. (-K)

Downward extrapolations (-ΔK)

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

Segment 2 Start →

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

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

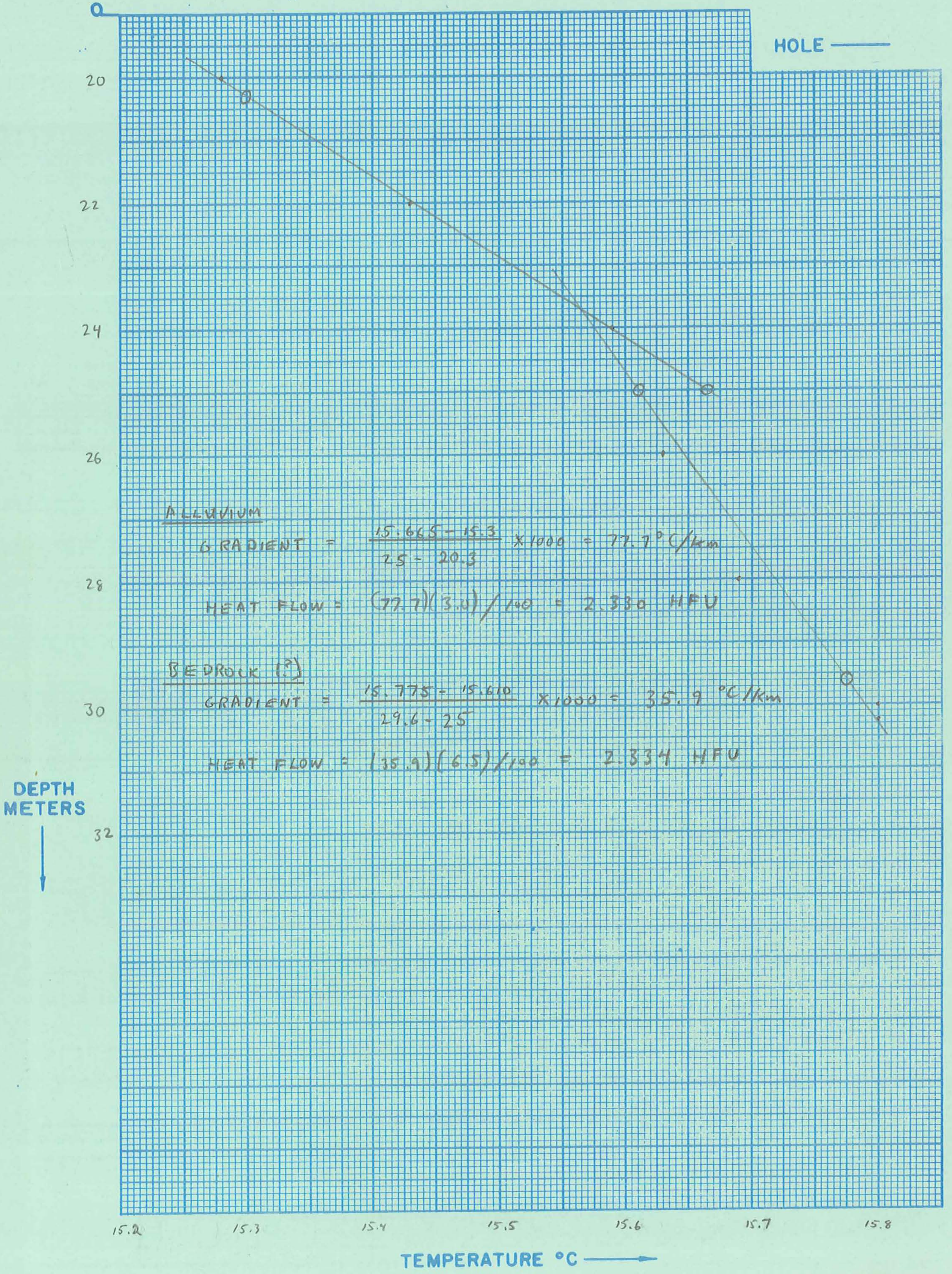
Segment 9

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



ALLUVIUM

GRADIENT = $\frac{15.665 - 15.3}{25 - 20.3} \times 1000 = 77.7 °C/km$

HEAT FLOW = $(77.7)(3.0)/100 = 2.330$ HFU

BEDROCK (?)

GRADIENT = $\frac{15.775 - 15.610}{29.6 - 25} \times 1000 = 35.9 °C/km$

HEAT FLOW = $(35.9)(6.5)/100 = 2.334$ HFU

Cattle ΔT

Date Logged: 6/16/80

ΔT Well No. 80-12

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	~~H_2O~~ [✓ Air]	Lithology, etc.
20		15.28	0.15	75	3.0		Lt. brown Qal
22		15.43	0.16	80	3,0		visible all around.
24		15.59	0.04	20	3.0		
26		15.63	0.06	30	6.5		
28		15.69	0.11	55	6.5		
30		15.80	0.00	0	6.5		
31.2		15.80			6.5		

K=Conductivity

page ____ of ____

Date Logged: ____________________

ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Arroyo Tonque ΔT

ΔT Well No. 80 - 13

Property-Project 1114 Depth Logged 34 m

Map San Felipe Pueblo N.M Scale 15' 1/62500 Date: Drilled — Logged 6/16/80

State N.M County Sandoval , SW¼ of SE¼ of NE¼ of NE¼ of Sec 28 T 14N R 5E

Instrument DT 101 (J.L.) Operator J.L. Elevation 5265 [✓ ft] m

Comments windmill, 8' blade, 6" casing. Was pumping when arrived.

(ALBUQUERQUE AMS)

Card A

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
1	1	1	4							1	6	▨	0	6	▨	8	0	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
																																	J	L	/							▨			▨		

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

Card B

Map Location * *

Scale Unit IN CM					Map Size (7.5,15.,60.)					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
▨	C	M	▨	▨		1	5	.	0			3	5	.		1	5	.	0		1	0	6	.		3	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
					2	9	.	8	1						1	3	.	2	0	5	2	6	5	.	▨	▨	▨	▨	F

← Write M if if meters

Use decimals

Segment 1 = Depths

Best cond. (-K)

Downward extrapolations (-ΔK)

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

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 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

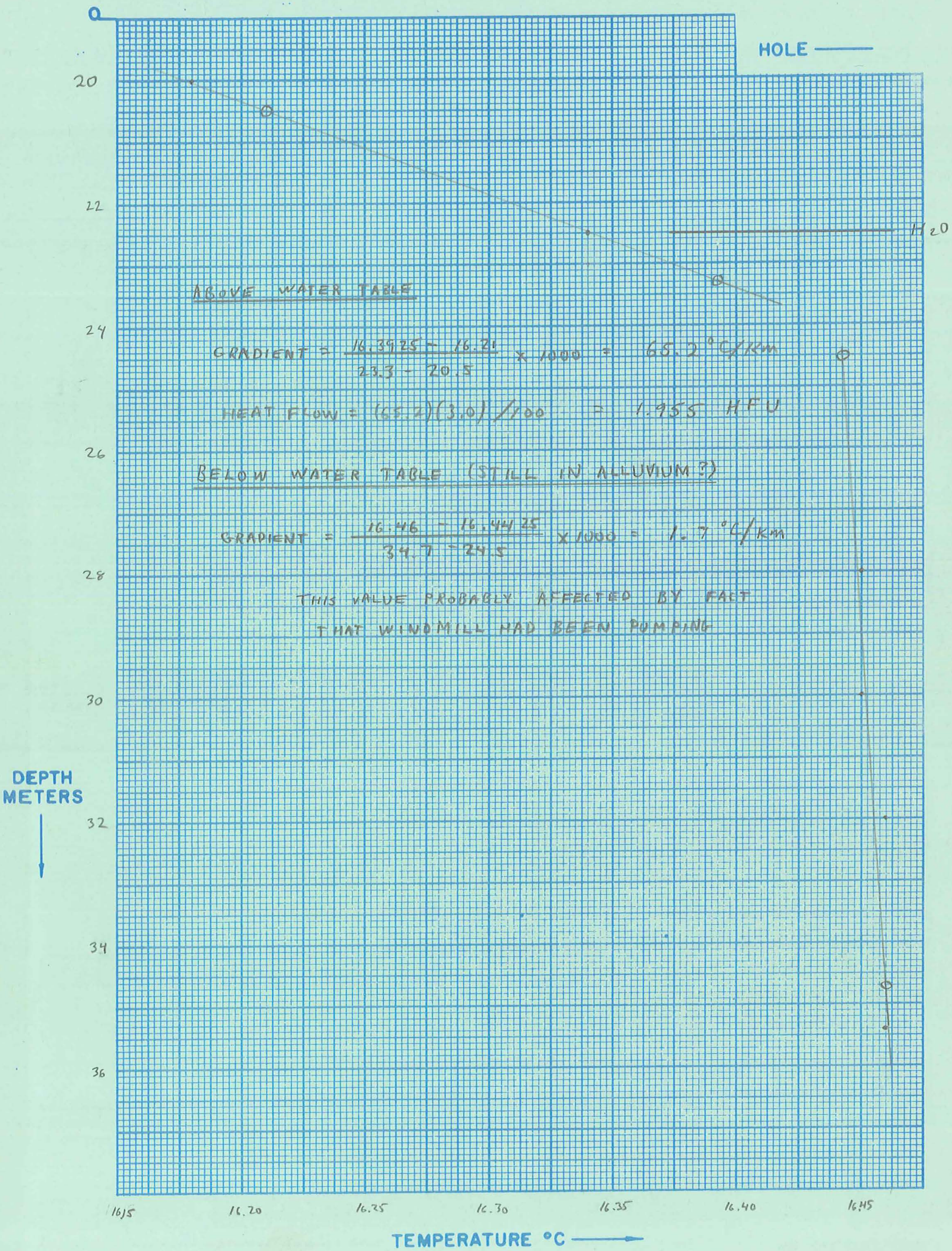
Segment 9

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



ABOVE WATER TABLE

$$\text{GRADIENT} = \frac{16.3925 - 16.21}{23.3 - 20.5} \times 1000 = 65.2 \text{ °C/km}$$

$$\text{HEAT FLOW} = (65.2)(3.0)/100 = 1.955 \text{ HFU}$$

BELOW WATER TABLE (STILL IN ALLUVIUM ?)

$$\text{GRADIENT} = \frac{16.46 - 16.4425}{34.7 - 24.5} \times 1000 = 1.7 \text{ °C/km}$$

THIS VALUE PROBABLY AFFECTED BY FACT THAT WINDMILL HAD BEEN PUMPING

Arroyo Tonque ΔT

Date Logged: 6/16/80

ΔT Well No. 80-13

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20.0		16.18	0.16	64.0	3.0	Air	Qal all around
22.5		16.34	0.11	20.0	3.0	—	containing, limestone,
28.0		16.45	0.00	0	6.0	H_2O	quartzite, and cobbles
30.0		16.45	0.01	5.0	6.0		of diorite.
32.0		16.46	0.00	0	6.0		
34.7		16.46			6.0		H_2O @ 22.5 m

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page _____ of _____

PLACITAS ΔT

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80 - 14

Property-Project 1114

Depth Logged 50.0 m

Map SAN FELIPE PUEBLO

Scale 1:62,500

Date: Drilled

Logged 6/17/80

State NM County SANDOVAL, SE¼ of SE¼ of SW¼ of SE¼ of Sec 31 T 13N R 5E

Instrument DT 101 (JL)

Operator JL

Elevation 5920 [✓ ft] (m)

Comments NEW WELL (WITHOUT BLADES); CEMENT DATED 1976; 5" plastic casing (Albuquerque AMS)

JUSTIFY

Card A

Date Logged

Proj No (1-4)	Well No (5-10)	DA (11-12)	13	MO (14-15)	16	YR (17-18)	* 19	20
1114		17	▨	06	▨	80	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)	63	MO (64-65)	66	YR (67-68)
	JL/			▨		▨	

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

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)
CM	▨	15.0	35.	15.0	106.	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
9.72	7.48	5920.	▨	F

Use decimals

← Write M if if meters

Segment 1 = Depths

Start (21-30)

End (31-40)

Conductivity

K (41-45)

ΔK (46-50)

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → (51-60)

End (61-70)

K (71-75)

ΔK (76-80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

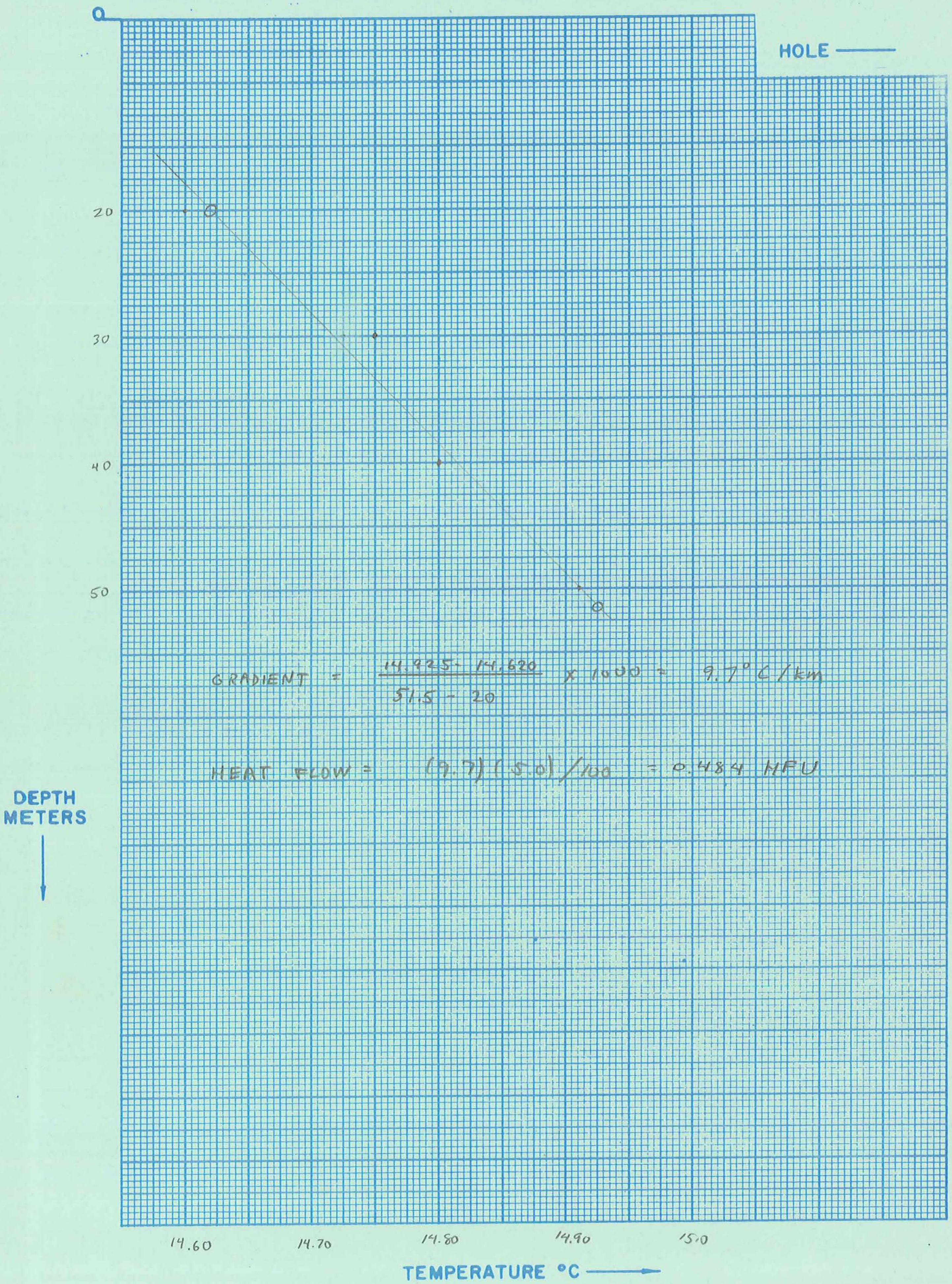
Segment 7

Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start = .999



$$\text{GRADIENT} = \frac{14.925 - 14.620}{51.5 - 20} \times 1000 = 9.7° \text{C/km}$$

$$\text{HEAT FLOW} = (9.7)(5.0)/100 = 0.484 \text{ HFU}$$

PLACITAS ΔT

Date Logged: 6/17/80

ΔT Well No. 80 - 14

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	[✓ H_2O] ~~Air~~	Lithology, etc.
20		14.60			5.0	↓	MASSIVE MEDIUM GRAY
			0.15	15.0			
30		14.75			5.0		LIMESTONE
			0.05	5.0			
40		14.80			5.0		
			0.11	11.0			
50		14.91			5.0		
							H_2O @ 18.2 m

K=Conductivity

page ___ of ___

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ____ of ____

AMAX EXPLORATION, INC.　　　　RADIO TOWER ΔT

TEMPERATURE/DEPTH LOG

ΔT Well No. 80 - 15

Property-Project 1114　　Depth Logged 206.4 m

Map LA MESITA NEGRA SE Scale 1:24000　Date: Drilled ______ Logged 6/18/80

State NM County BERNALILLO, SW¼ of SE¼ of NW¼ of NW¼ of Sec 6 T 9N R 2E

Instrument DT 101 (JL)　Operator JL　Elevation 5497 [✓ ft] (m)

Comments OPEN PIPE, 6½" casing; BOTTOM NOT REACHED　(ALBUQUERQUE AMS)

Card A

JUSTIFY

	Proj No	Well No	Date Logged DA	MO	YR	*
Columns	1 2 3 4 5	6 7 8 9 10	11 12 13	14 15 16	17 18	19 20
	1 1 1 4		18	06	80	C M

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

	Site Description	Operator	Editor	Drilled DA	MO	YR
Columns	21–50	51–55	56–60	61 62 63	64 65 66	67 68
		J L	/			

(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 **
Columns	21 22 23 24 25	26 27 28 29 30	31 32 33 34 35	36 37 38 39 40	41 42 43 44 45	46 47 48 49 50
	C M	7.5	35.	0.0	106.	52.5

Use decimals

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

	Northing	Easting	Elev		
Columns	51–60	61–70	71–75	76 77 78 79	80
	11.98	37.01	5497.		F

Use decimals

← Write M if if meters

Segment 1 = Depths　Start (21–30)　End (31–40)

Conductivity　K (41–45)　ΔK (46–50)

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → (51–60)　End (61–70)　K (71–75)　ΔK (76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

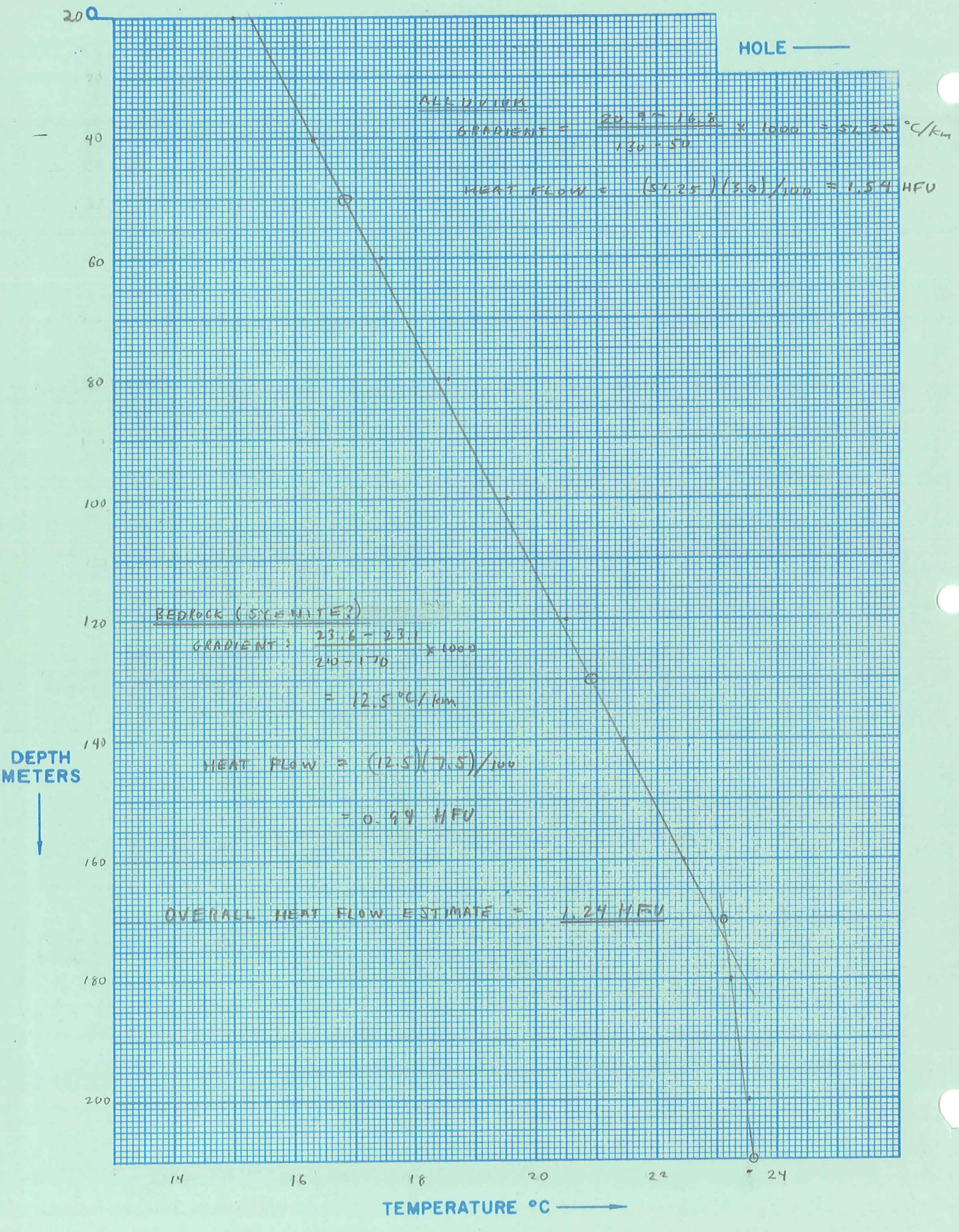
Segment 7

Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start = .999



ALLUVIUM

$$\text{GRADIENT} = \frac{20.9 - 16.8}{130 - 50} * 1000 = 51.25 \text{ °C/km}$$

HEAT FLOW = (51.25)(3.0)/100 = 1.54 HFU

BEDROCK (SYENITE?)

$$\text{GRADIENT}: \frac{23.6 - 23.1}{210 - 170} * 1000$$

= 12.5 °C/km

HEAT FLOW = (12.5)(7.5)/100

= 0.94 HFU

OVERALL HEAT FLOW ESTIMATE = 1.24 HFU

RADIO TOWER ΔT

Date Logged: 6/18/80

ΔT Well No. 80-15

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	~~H_2O~~ [✓ Air]	Lithology, etc.
20		14.98			3.0		Qal - LIGHT BROWN, FINE, WITH PEBBLES UP TO 4 cm, EXCEPT FOR PIECES OF SYENITE WITH K-SPAR PHENOCRYSTS UP TO 3.0 cm AND ALTERED HORNBLENDE
			1.32	66.0			
40		16.30			3.0		
			1.12	56.0			
60		17.42			3.0		
			1.11	55.5			
80		18.53			3.0		
			1.00	50.0			
100		19.53			3.0		
			0.97	48.5			
120		20.50			3.0		
			0.96	48.0			
140		21.46			3.0		
			0.98	49.0			
160		22.44			3.0		
			0.78	39.0			
180		23.22			7.5		
			0.31	15.5			
200		23.53			7.5		
			0.01	1.6			
206.4		23.54			7.5		

K=Conductivity

page ____ of ____

Date Logged: ____________________   ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

RUNWAY ΔT

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-16

Property-Project 1114 Depth Logged 76.3 m

Map LOS LUNAS Scale 1:24000 Date: Drilled ______ Logged 6/19/80

State NM County VALENCIA, SE 1/4 of SE 1/4 of SE 1/4 of NE 1/4 of Sec 4 T 6N R 3E

Instrument DT101 (JL) Operator JL Elevation 5109 ([✓ ft] m)

Comments WINDMILL GONE; 5" PIPE WITH 1.75 m OF 2" PIPE STICKING OUT (SOCORRO AMS)

Card A

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
1	1	1	4							1	9		0	6		8	0	C	M

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

Site Description (columns 21–50), Operator (51–55), Editor (56–60), Drilled DA (61–62), MO (64–65), YR (67–68)

21–50	51	52	53	54	55	56–60	61–68
			J	L	/		

(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 **				
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
	C	M					7	.	5			3	4	.		4	5	.	0		1	0	6	.		4	5	.	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
					1	2	.	1	9						4	7	.	4	8	5	1	0	9	.					F

Use decimals

← Write M if if meters

Segment 1 = Depths Start (21–30), End (31–40); Conductivity K (41–45), ΔK (46–50)

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → (51–60), End (61–70), K (71–75), ΔK (76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

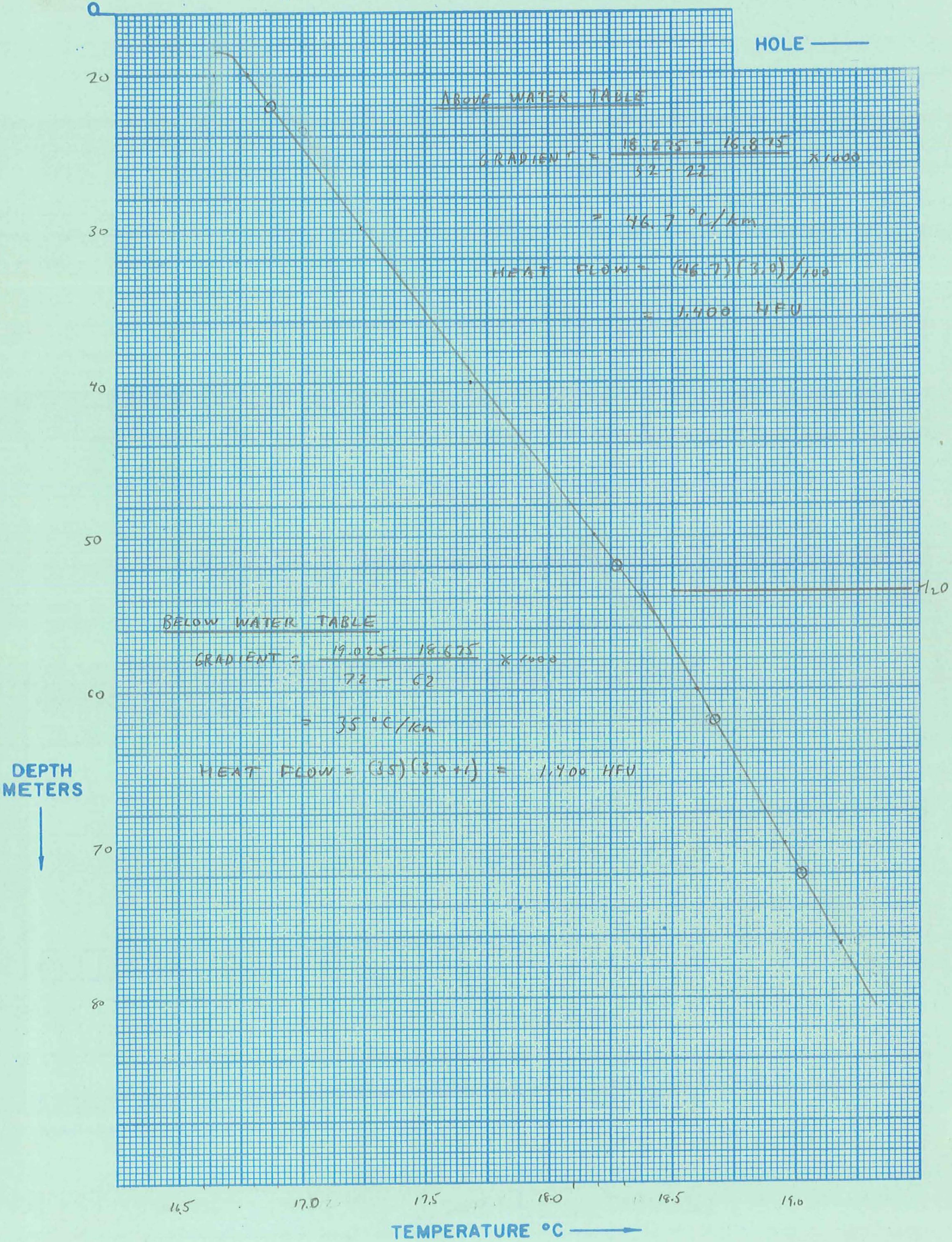
Segment 7

Segment 8 Start →

Segment 9 (21–50)

Segment 10 Start → (51–80)

After final segment Start = .999



ABOVE WATER TABLE

$$\text{GRADIENT} = \frac{18.275 - 16.875}{52 - 22} \times 1000$$

$$= 46.7 \text{ °C/km}$$

$$\text{HEAT FLOW} = (46.7)(3.0)/100$$

$$= 1.400 \text{ HFU}$$

BELOW WATER TABLE

$$\text{GRADIENT} = \frac{19.025 - 18.675}{72 - 62} \times 1000$$

$$= 35 \text{ °C/km}$$

$$\text{HEAT FLOW} = (35)(3.0+1) = 1.400 \text{ HFU}$$

Date Logged: 6/19/80

ΔT Well No. 80-16

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		16.78	0.46	46			FINE-GRAINED, SILTY, LIGHT
30		17.24	0.44	44			BROWN Qal WITH
40		17.68	0.50	50			FEW PEBBLES (5 cm MAX)
50		18.18	0.48	48			
60		18.60	0.36	36			
70		18.96	0.22				
76.3		19.18					H_2O @ 53.8 m

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

Rattlesnake ΔT

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-17

Property-Project 1114 Depth Logged 65.9m

Map Edgewood Scale 15′ Date: Drilled ______ Logged 6-16-80

State NM County Santa Fe , SW of SW of SW of NE of Sec 20 T 10N R 8E

Instrument OT-101 Operator KG Elevation 6343 ([✓ ft] m)

Comments middle of Estancia basin seds. (Albuquerque AMS)

JUSTIFY

Card A

Date Logged

Proj No 1 2 3 4	5	Well No 6 7 8 9 10	DA 11 12	13	MO 14 15	16	YR 17 18	19 *	20 *
1114			16		06		80	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	63	MO 64 65	66	YR 67 68
	KG	/					

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

Card B

Map Location **

Scale Unit IN CM 21 22 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
CM	15.	35.	00.	106.	15.

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
13.80	20.10	6343.		F

Use decimals

Write M if if meters

Segment 1 = Depths

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

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → | Start 51–60 | End 61–70 | K 71–75 | ΔK 76–80 |

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

Segment 9

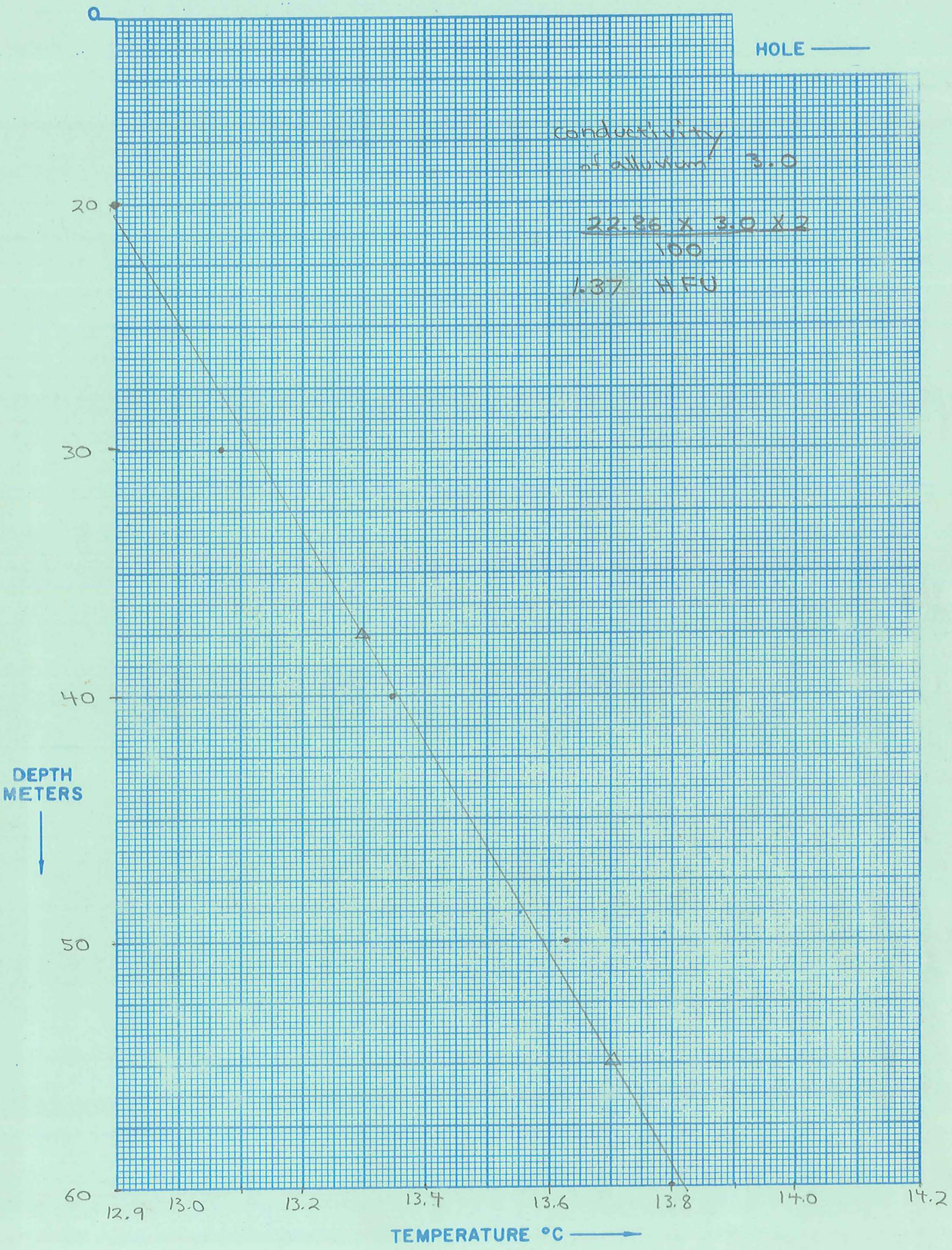
21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

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

Δ slope $\frac{13.7-13.3}{55.0-37.5}$ $\frac{.4}{17.5}$ 22.86 °C/Km



conductivity of alluvium 3.0

$\frac{22.86 \times 3.0 \times 2}{100}$

1.37 HFU

Rattlesnake ΔT

Date Logged: 6-16-80

ΔT Well No. 80-17

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		12.9				H_2O	Qal basin alluvium,
			.17	17		↑	
30		13.07					light brown, fine
			.28	28			
40		13.35					sediment
			.28	28			
50		13.63					
			.17	17			
60		13.80					
			.28	28			
65.9		14.08				H_2O	

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

Antelope ΔT

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-18

Property-Project 1114 Depth Logged 30.1 m

Map Edgewood Scale 15′ Date: Drilled ______ Logged 6-16-80

State NM County Santa Fe , NE of NW of NE of SW of Sec 23 T 11 N R 8E

Instrument DT-101 Operator KG Elevation 6355 (ft/m)

Comments insulated - went down inner pipe (Albuquerque AMS)

JUSTIFY

Card A

Date Logged

Proj No (1–4)	Well No (5–10)	DA (11–12)	13	MO (14–15)	16	YR (17–18)	19*	20*
1114		16	▨	06	▨	80	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)	63	Drilled MO (64–65)	66	Drilled YR (67–68)
	KG/			▨		▨	

(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.	35.	00.	106.	15.

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 (71–79)	80
28.8	27.4	6355.	F

Use decimals

Write M if if meters

Segment 1 = Depths

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

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → (51–80: Start, End, K, ΔK)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

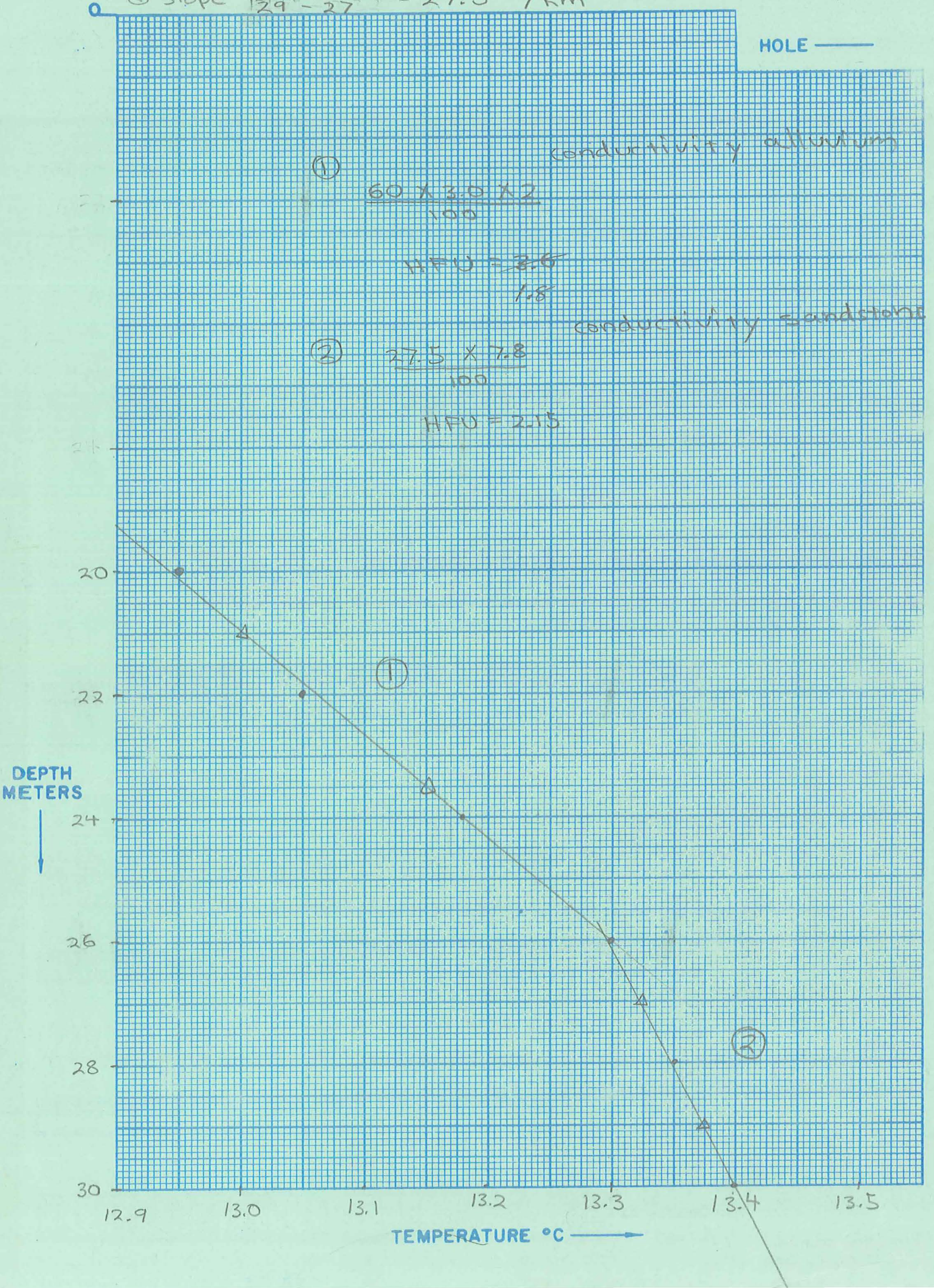
Segment 9

Segment 10 Start →

After final segment Start = .999

① slope $\frac{13.15 - 13}{23.5 - 21.0} = 60\ °C/km$

② slope $\frac{13.375 - 13.32}{129 - 27} = 27.5\ °C/km$



① $\frac{60 \times 3.0 \times 2}{100}$

conductivity alluvium

HFU = ~~3.6~~ 1.8

conductivity sandstone

② $\frac{27.5 \times 7.8}{100}$

HFU = 2.15

Antelope ΔT

Date Logged: 6-16-80

ΔT Well No. 80-18

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		12.95				H_2O	Qal basin seds
			.10	50		↑	
22		13.05					w/ some quartz
			.13	65			
24		13.18					conglomerate pebbles
			.12	60			
26		13.30					fine → medium
			.05	25			
28		13.35					sed. grains
			.05?	25			
30		13.40				H_2O	sandstone at
							depth. ?

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Dead Bird ΔT

ΔT Well No. 80-19

Property-Project 1114 Depth Logged 60.9m

Map Edgewood Scale 15' Date: Drilled ____ Logged 6-16-80

State NM County Santa Fe, NE of NW of NE of SE of Sec 26 T 11N R 7E

Instrument DT-101 Operator KD Elevation 6,580 [✓ ft] (m)

Comments no fences! (Albuquerque AMS)

JUSTIFY

Card A

Date Logged

Proj No (1–4)	Well No (5–10)	DA (11–12)	MO (14–15)	YR (17–18)	* 19	* 20
1114		16	06	80	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 (64–65)	Drilled YR (67–68)
	KD/				

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

Card B

Map Location **

Scale Unit IN CM (22–23)	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	.	35.	00.	106.	15.

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)	80
26.3	13.3	6580.	F

Use decimals

Write M if if meters

Segment 1 = Depths

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

Best cond. (−K)

Downward extrapolations (−ΔK)

Segment 2 Start → (51–60)	End (61–70)	K (71–75)	ΔK (76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

Segment 9

Segment 10 Start →

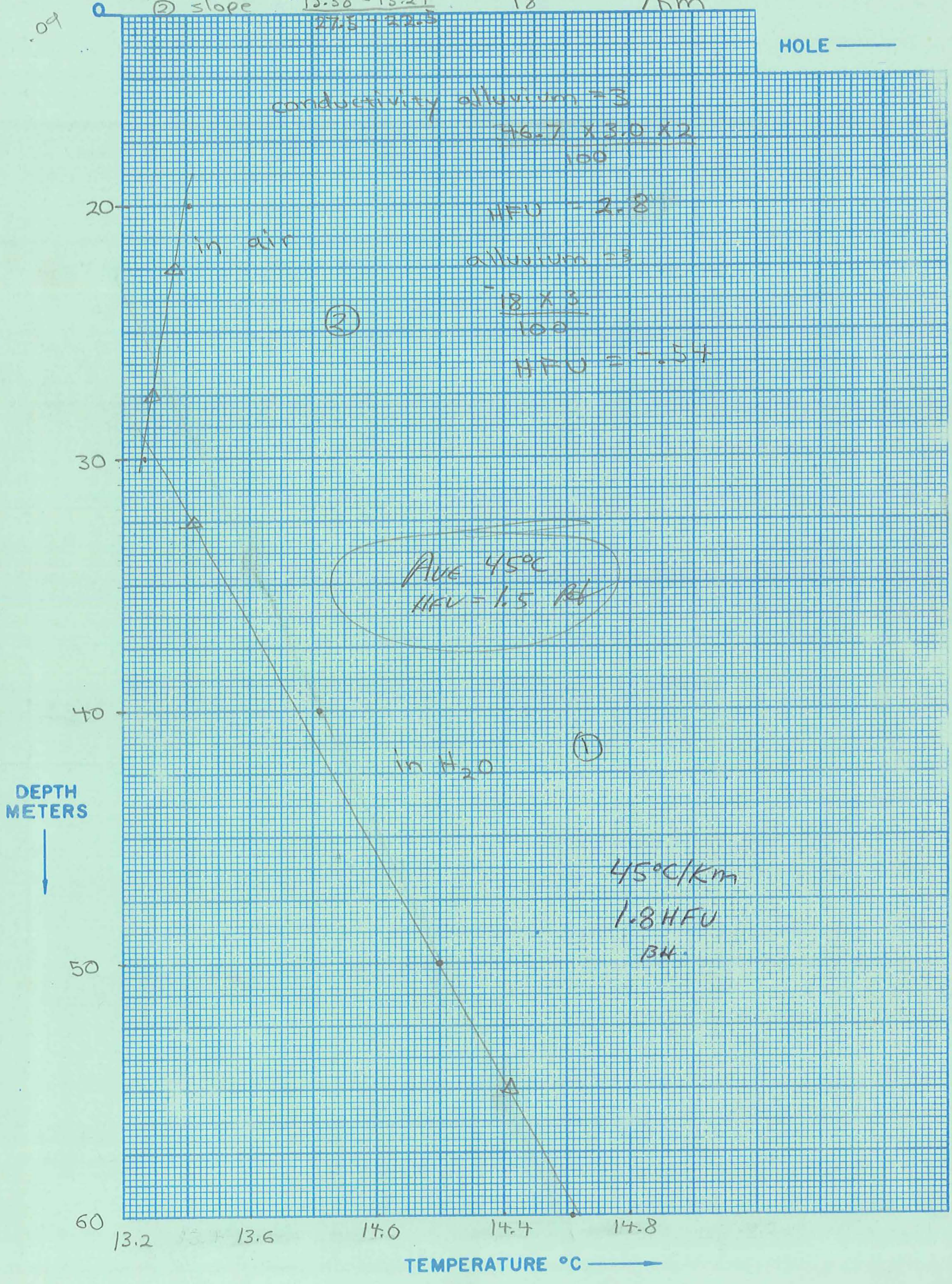
After final segment Start =.999

① Slope $\frac{14.42-13.42}{55-33.6}$ 46.7 °C/Km

② slope $\frac{13.38-13.29}{27.5-22.5}$ - 18 °C/Km

.09

HOLE ———



conductivity alluvium = 3

$\frac{46.7 \times 3.0 \times 2}{100}$

HFU = 2.8

alluvium = 3

$-\frac{18 \times 3}{100}$

HFU = -.54

Ave 45°C
HFU = 1.5 Rb

45°C/Km
1.8 HFU
BH

Dead Bird ΔT

Date Logged: 6-16-80

ΔT Well No. 80-19

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		13.41				Air	fine, brown
			-.14	-14			
30		13.27				H_2O	Qal
			.55	55			
40		13.82				↑	
			.38	38			
50		14.20					
			.42	42			
60		14.62					
			0				
60.9		14.62				H_2O	

K=Conductivity

page ____ of ____

Date Logged: ____________________

ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page _____ of _____

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Red Ant ΔT

ΔT Well No. 80-20

Property-Project 1114 Depth Logged 48.9

Map Sedillo Scale 7.5' Date: Drilled ______ Logged 6-18-80

State NM County Bernalillo, middle O of NE of SE of NW of Sec 4 T 10N R 6E

Instrument DT-101 Operator KG Elevation 6898 ([✓ ft] m)

Comments abandoned (Albuquerque AMS)

JUSTIFY

Card A

Date Logged

Proj No (1–5)	Well No (6–10)	DA (11–12)	MO (14–15)	YR (17–18)	19*	20*
1114		18	06	80	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 (64–65)	Drilled YR (67–68)
	KG	/			

(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	7.5	35.	00.	106.	22.5

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
55.7	26.65	6898.		F

Use decimals

Write M if if meters

Segment 1 = Depths: Start (21–30), End (31–40); Conductivity: K (41–45), ΔK (46–50)

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → (51–60), End (61–70), K (71–75), ΔK (76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start = .999

① Slope $\frac{12.63 - 12.31}{142.5 - 27.5}$ 21.33 °C/Km

? ② slope $\frac{12.13 - 11.8}{23.7 - 21.2}$ 132 °C/Km

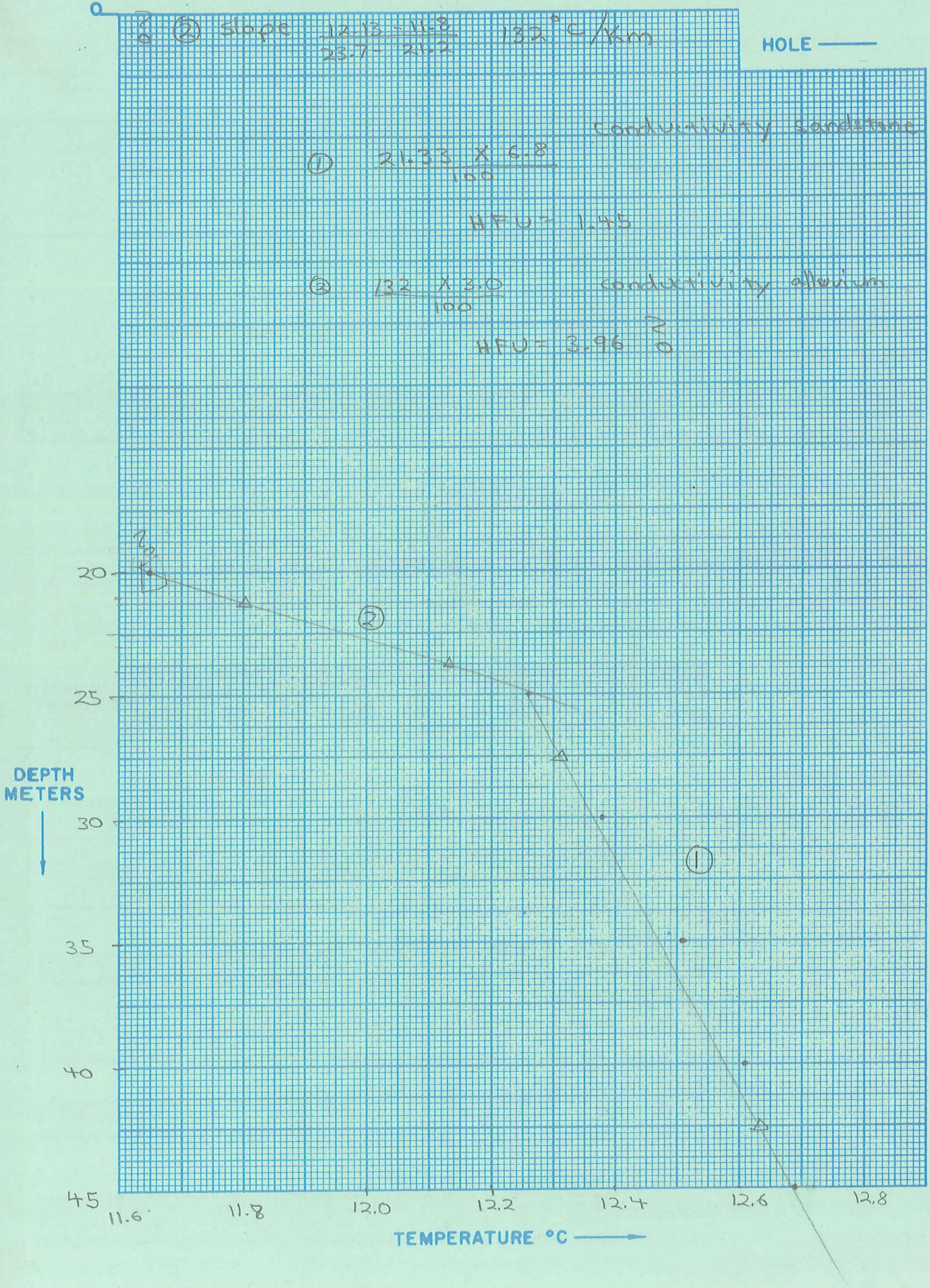
conductivity sandstone

① $\frac{21.33 \times 6.8}{100}$

HFU = 1.45

② $\frac{132 \times 3.0}{100}$ conductivity alluvium

HFU = 3.96 ?



Red Ant ΔT

Date Logged: 6-18-80

ΔT Well No. 80-20

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		11.65				Air ↑	reddish brown
			.61	122?			
25		12.26					Qal on surface
			.12	24			
30		12.38					underneath a
			.13	26			
35		12.51					medium → fine
			.10	20			
40		12.61				Air	grained, thinly
			.08	16			
45		12.69				H_2O @	laminated, well
48.9		12.72				44m	silicic cemented
							sandstone (almost
							quartzite). Deep
							red iron staining
							on surface.

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Indian Land #1 ΔT

ΔT Well No. 80-21

Property-Project 1114 Depth Logged 66m

Map Bosque Peak Scale 7½' 1/24000 Date: Drilled ____ Logged 6/19/80

State NM County Valencia, SE¼ of SW¼ of SW¼ of NW¼ of Sec 11 T 7N R 4E

Instrument WA #4 Operator WA Elevation 5715 ([✓ ft] m)

Comments Windmill, 10' blades, 6" casing. Was pumping when I arrived

---

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	1	1	4							1	9	▨	0	6	▨	8	0	C	M

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

Site Description

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

Operator					Editor					Drilled DA			MO			YR	
51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
			W	A	/							▨			▨		

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

Card B

Map Location **

Scale Unit IN CM					Map Size (7.5, 15., 60.)					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
▨	C	M	▨	▨			7	.	5			3	4	.		5	1	.	0		1	0	6	.		2	9	.	4

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
					4	5	.	5	0							3	.	2	5	5	7	1	5	.	▨	▨	▨	▨	F

Use decimals

← Write M if if meters

Segment 1 = Depths

Conductivity

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

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

Start →

Segment 5

Segment 6

Start →

Segment 7

Segment 8

Start →

Segment 9

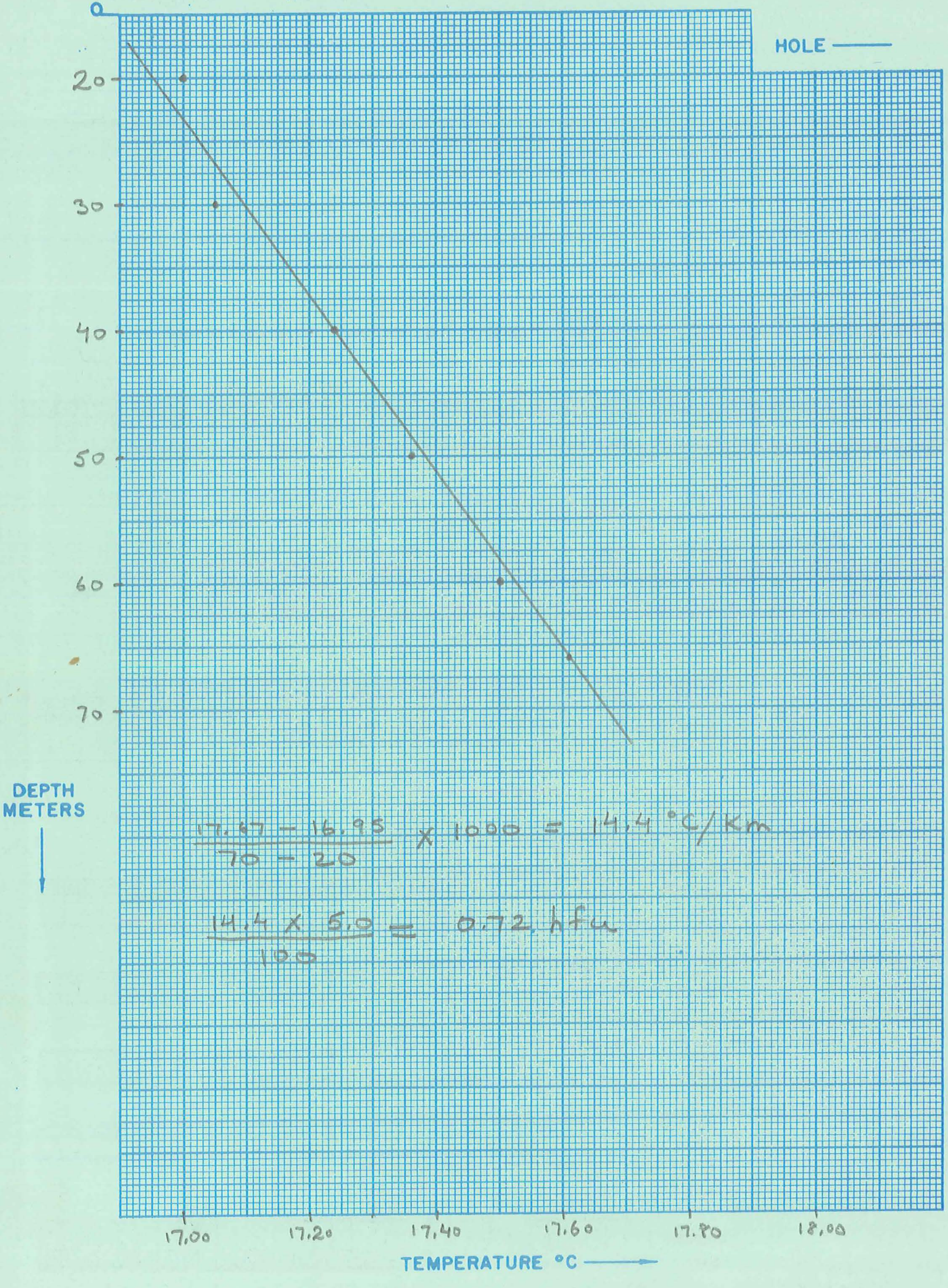
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

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



$$\frac{17.67 - 16.95}{70 - 20} \times 1000 = 14.4 \text{ °C/Km}$$

$$\frac{14.4 \times 5.0}{100} = 0.72 \text{ hfu}$$

Indian Land # 1 ΔT

Date Logged: 06/19/80

ΔT Well No. 80-21

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		17.00	0.05	5			Alluvium in
30		17.05	0.19	19			Fan deposits
40		17.24	0.12	12		H_2O	on flanks of
50		17.36	0.14	14			the Manzano
60		17.50	0.11	18			mountains.
66		17.61					Granite below?
							Or perhaps downfaulted
			avg	14			limestone? Entire
							well most probably
							in alluvium.

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Indian Land #2 ΔT

ΔT Well No. 80-22

Property-Project 1114 Depth Logged 96 m

Map Bosque Peak Scale 7½' 1/24000 Date: Drilled ______ Logged 6/19/80

State N.M. County Valencia, NW¼ of NE¼ of NE¼ of NW¼ of Sec 23 T 7N R 4E

Instrument WA #4 Operator W.A. Elevation 5745 [✓ ft] (m)

Comments Windmill, 10' blades 6" casing, was pumping for short intervals before arrival.

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	1	1	4							1	9	▨	0	6	▨	8	0	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)	(63)	Drilled MO (64–65)	(66)	Drilled YR (67–68)
	WA	/		▨		▨	

(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 **				
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
▨	C	M	▨	▨			7	.	5			3	4	.		4	9	.	5		1	0	6	.		2	9	.	5

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
					3	4	.	3	0							2	.	6	0	5	7	4	5	.	▨	▨	▨	▨	F

Use decimals

Write M if if meters

Segment 1 = Depths

Conductivity

Best cond. (-K)

Downward extrapolations (-ΔK)

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

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 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

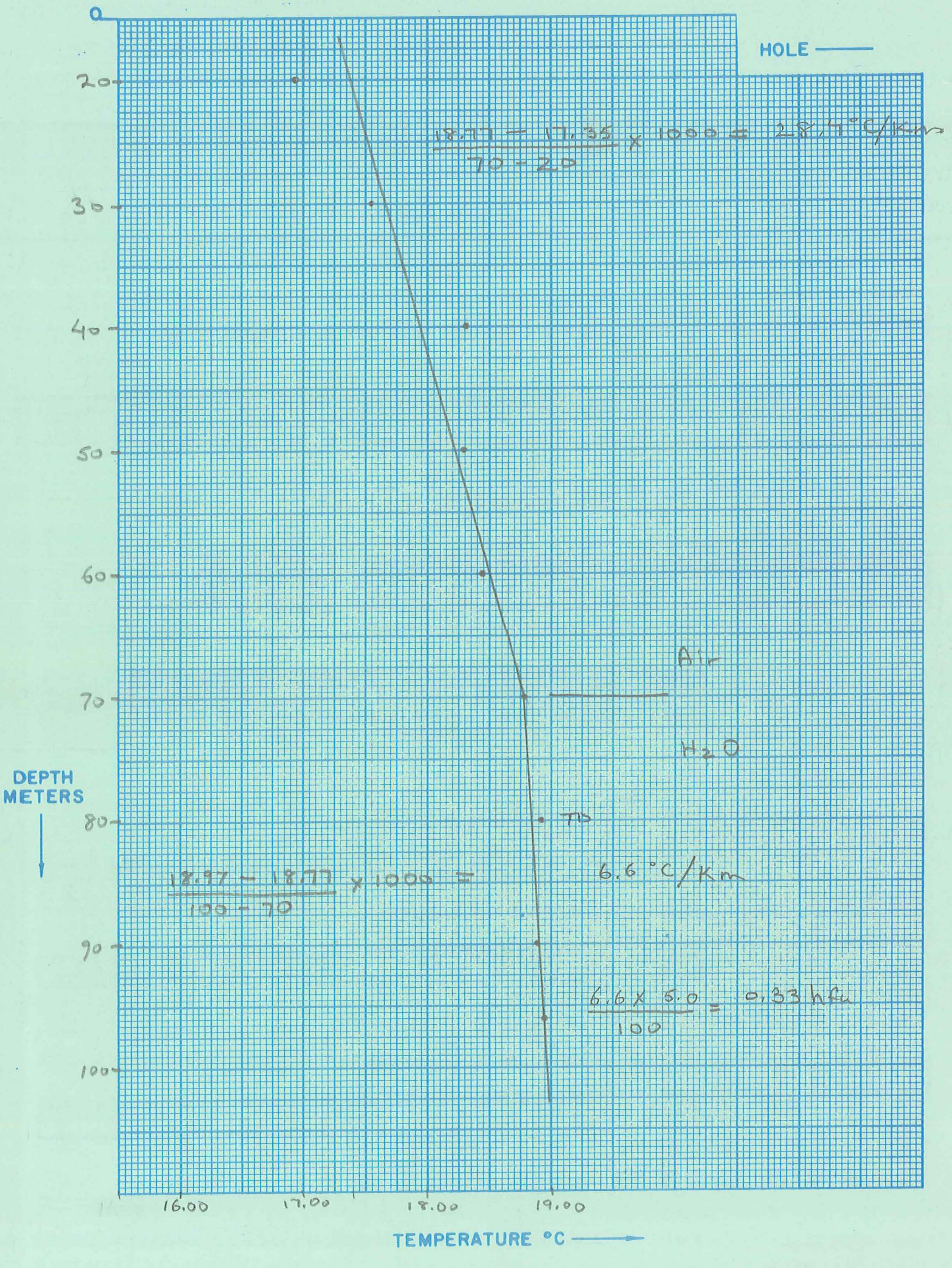
Segment 9

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


HOLE ——
0
20
30
40
50
60
70
80
90
100
DEPTH METERS
16.00
17.00
18.00
19.00
TEMPERATURE °C
$\frac{18.77 - 17.35}{70 - 20} \times 1000 = 28.4$ °C/Km
Air
H_2O
TD
$\frac{18.97 - 18.77}{100 - 70} \times 1000 =$
6.6 °C/Km
$\frac{6.6 \times 5.0}{100} = 0.33$ hfu

Indian Land #2 ΔT

Date Logged: 06/19/80

ΔT Well No. 80-22

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		16.94					Alluvium shed
30		18.05					off Manzano
40		18.31	0.26	26			mountains. See
50		18.29	0.02	-2			Indian Land #1 ΔT
60		18.43	0.14	14	air		
70		18.77	0.34	34			74m
80	TD?	18.92	0.15	15			
90		18.88	0.04	-4			
96		18.95	0.07	12		H_2O	

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page _____ of _____

AMAX EXPLORATION, INC. Flowers Ranch ΔT

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-23

Property-Project 1114 **Depth Logged** 50m 6/17/80

Map Estancia, N.M Scale 15' 1/62500 **Date:** **Drilled** ______ **Logged** 6/17/80

State N.M County Torrance, SW¼ of NW¼ of NW¼ of NE¼ of Sec 11 T 8N R 8E

Instrument WA Operator WA **Elevation** 6225 ([✓ ft] m)

Comments Windmill, 6' blades, 6" casing; was not pumping SOCORRO AMS

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 1 1 4		1 7	0 6	8 0	C M

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

Site Description	Operator	Editor	Drilled DA	MO	YR
21–50	51–55	56–60	61 62 63	64 65 66	67 68
waterwell	WA	/			

(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 **
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	34.	56.5	106.	4.0

Use decimals

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

Northing	Easting	Elev		
51–60	61–70	71–75	76–79	80
33.80	26.35	6225.		F

Use decimals

Write M if if meters

Segment 1 = Depths Start, End; Conductivity K, ΔK (21–50)

Best cond. (-K) Downward extrapolations (- Δ K): End, K, ΔK

Segment 2 Start → (51–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

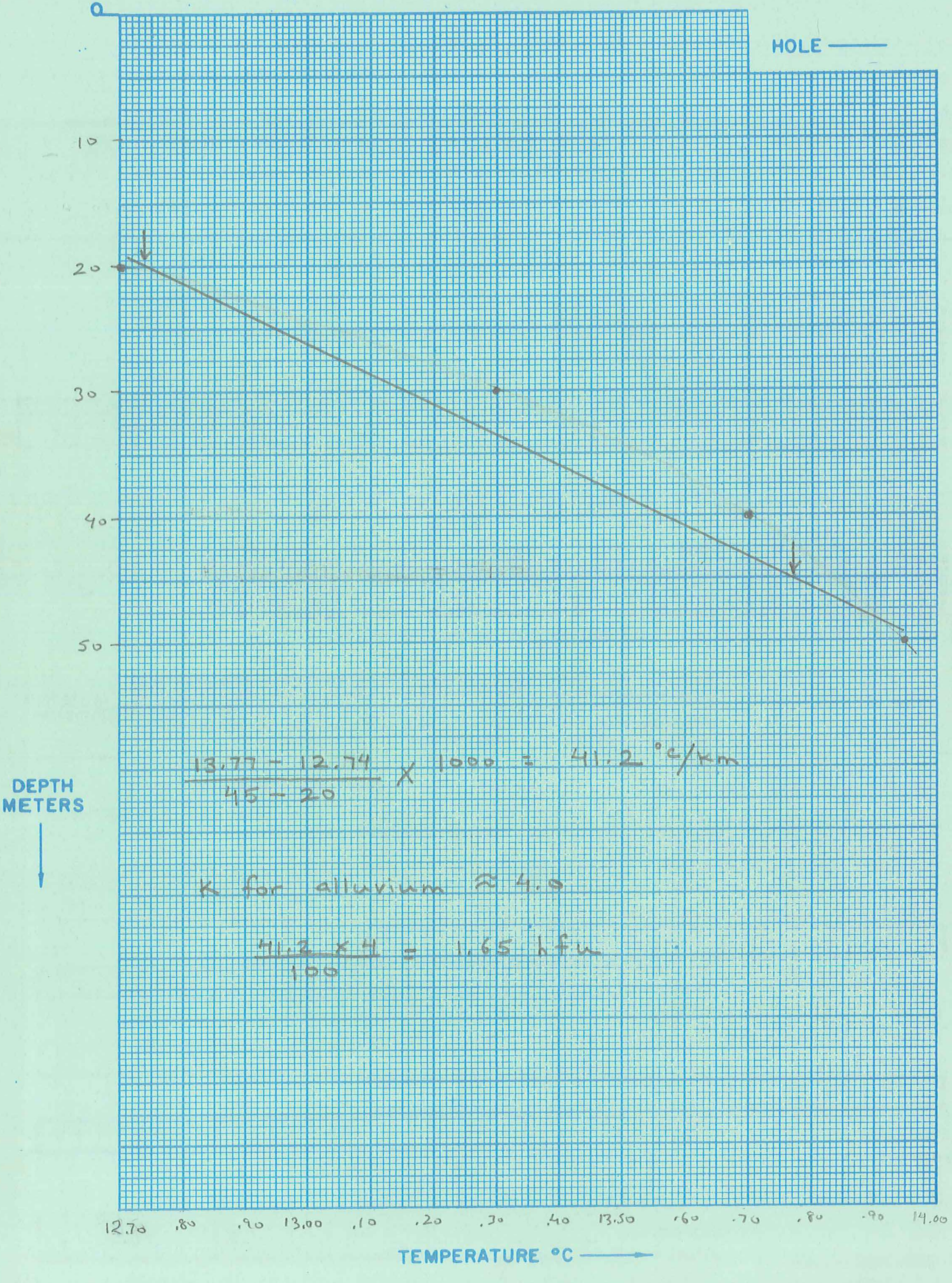
Segment 7

Segment 8 Start →

Segment 9 (21–50)

Segment 10 Start → (51–80)

After final segment Start =.999



$$\frac{13.77 - 12.74}{45 - 20} \times 1000 = 41.2 \text{ °c/km}$$

K for alluvium ≈ 4.0

$$\frac{41.2 \times 4}{100} = 1.65 \text{ hfu}$$

Flowers Ranch ΔT

Date Logged: 6/17/80

ΔT Well No. 80-23

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		12.70	0.60	60			red-brown alluvium
30		13.30	0.40	40			for miles around.
40		13.70	0.25	25			
50		13.95					
			avg.	42			

K=Conductivity

page ______ of ______

Date Logged: ____________________

ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ____ of ____

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Cross-road ΔT

ΔT Well No. 80-24

Property-Project 1114 Depth Logged 28 m

Map Estancia, N.M. Scale 15' 1/62500 Date: Drilled ______ Logged 6/17/80

State N.M. County Torrance, NW1/4 of SW1/4 of SW1/4 of Sw1/4 of Sec 7 T 7N R 7E

Instrument WA Operator WA Elevation 6335 ([✓ ft] m)

Comments Windmill, 6' blades, 6" casing, actively pumping, no turn off mechanism

---

Card A

JUSTIFY	Proj No (1–4)	Well No (5–10)	Date Logged DA (11–12)	MO (14–15)	YR (17–18)	19*	20*
	1114		17	06	80	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)
	WA	/			

(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	34.	50.5	106.	8.7

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
16.35	15.10	6335.		F

Use decimals

80 ← Write M if if meters

Segment 1 = Depths Start (21–30) End (31–40) Conductivity K (41–45) ΔK (46–50)

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → (51–60) End (61–70) K (71–75) ΔK (76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

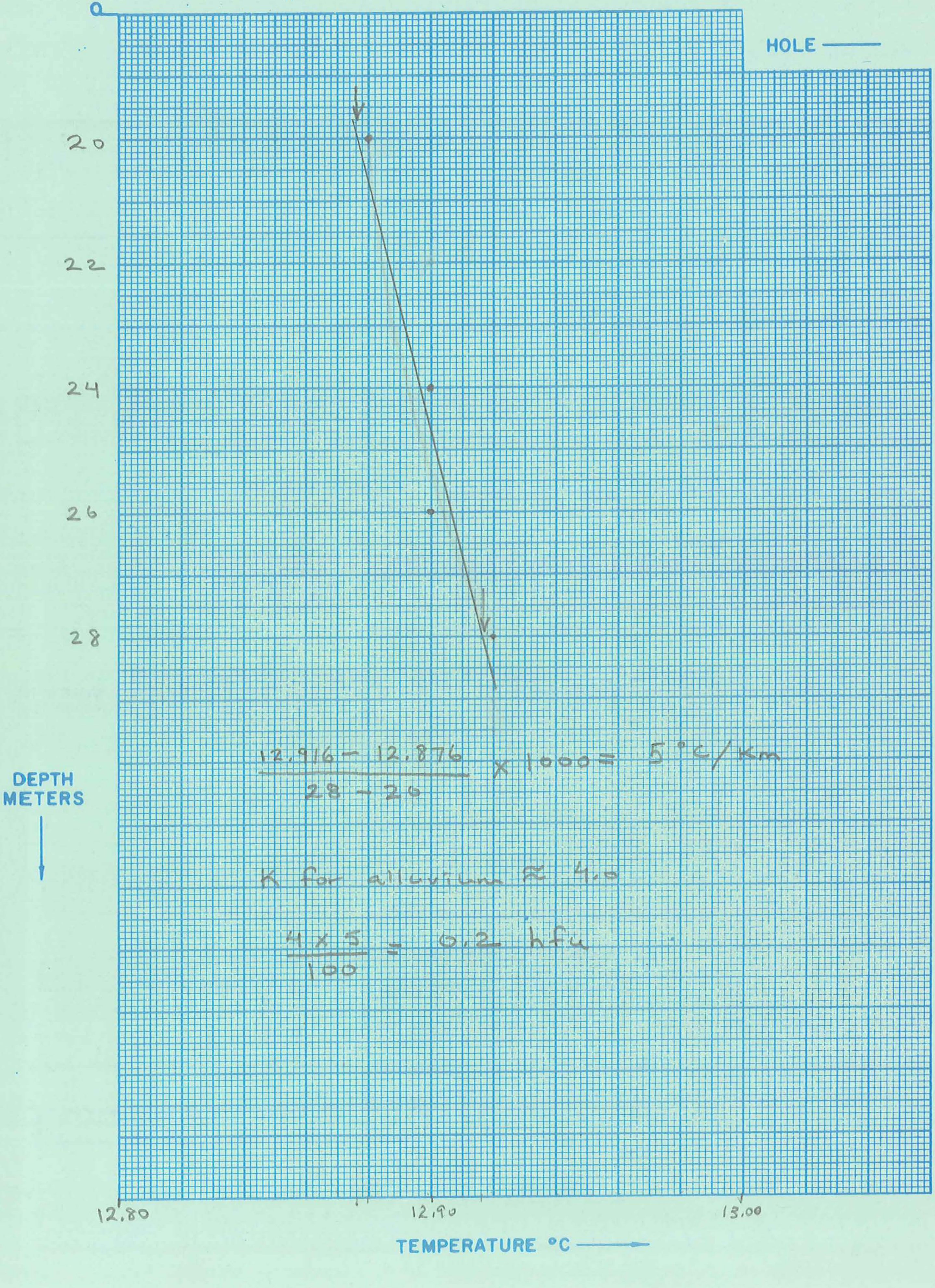
Segment 7

Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start = .999



$$\frac{12.916 - 12.876}{28 - 20} \times 1000 = 5 \text{ °C/Km}$$

K for alluvium ≈ 4.0

$$\frac{4 \times 5}{100} = 0.2 \text{ hfu}$$

Cross-road ΔT

Date Logged: ____________________

ΔT Well No. 80-24

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		12.88				11 m air	In alluvium,
			0.02	5			
24		12.90					red-brown earth.
			0.00	0.00			
26		12.90					
			0.02	10			
28		12.92					
						17m H_2O	
			avg	5			

K=Conductivity

page ______ of ______

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

2 tanks ΔT

ΔT Well No. 80-25

Property-Project 1114 Depth Logged 36m

Map Estancia, N.M Scale 15' 1/62500 Date: Drilled ______ Logged 6/17/80

State N.M. County Torrance, NE¼ of NE¼ of SE¼ of SE¼ of Sec 33 T 7N R 8E

Instrument WA Operator WA Elevation 6195 ([✓ ft] m)

Comments Windmill, 6' blades, 6" casing, pumping continuously, no turn-off mechanism

---

Card A

JUSTIFY

Proj No (1–4): 1114
Well No (5–10):
Date Logged: DA (11–12): 17 MO (14–15): 06 YR (17–18): 80
19: C 20: M

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

Site Description (21–50):
(Approx. location, water well?, oil test?, etc.)

Operator (51–55): WA
Editor (56–60): /
Drilled: DA (61–62) MO (64–65) YR (67–68)

Card B

Scale Unit IN CM (22–23): CM

Map Size (7.5, 15., 60.) (26–30): 15.

Map Location **

N Lat: Degree (31–35): 34. Min (36–40): 47.

W Long: Degree (41–45): 106. Min (46–50): 6.

Use decimals

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

Northing (51–60): 6.40
Easting (61–70): 22.35
Elev (71–75): 6195.
80: F ← Write M if if meters

Use decimals

Segment 1 = Depths

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

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → (51–60) End (61–70) K (71–75) ΔK (76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

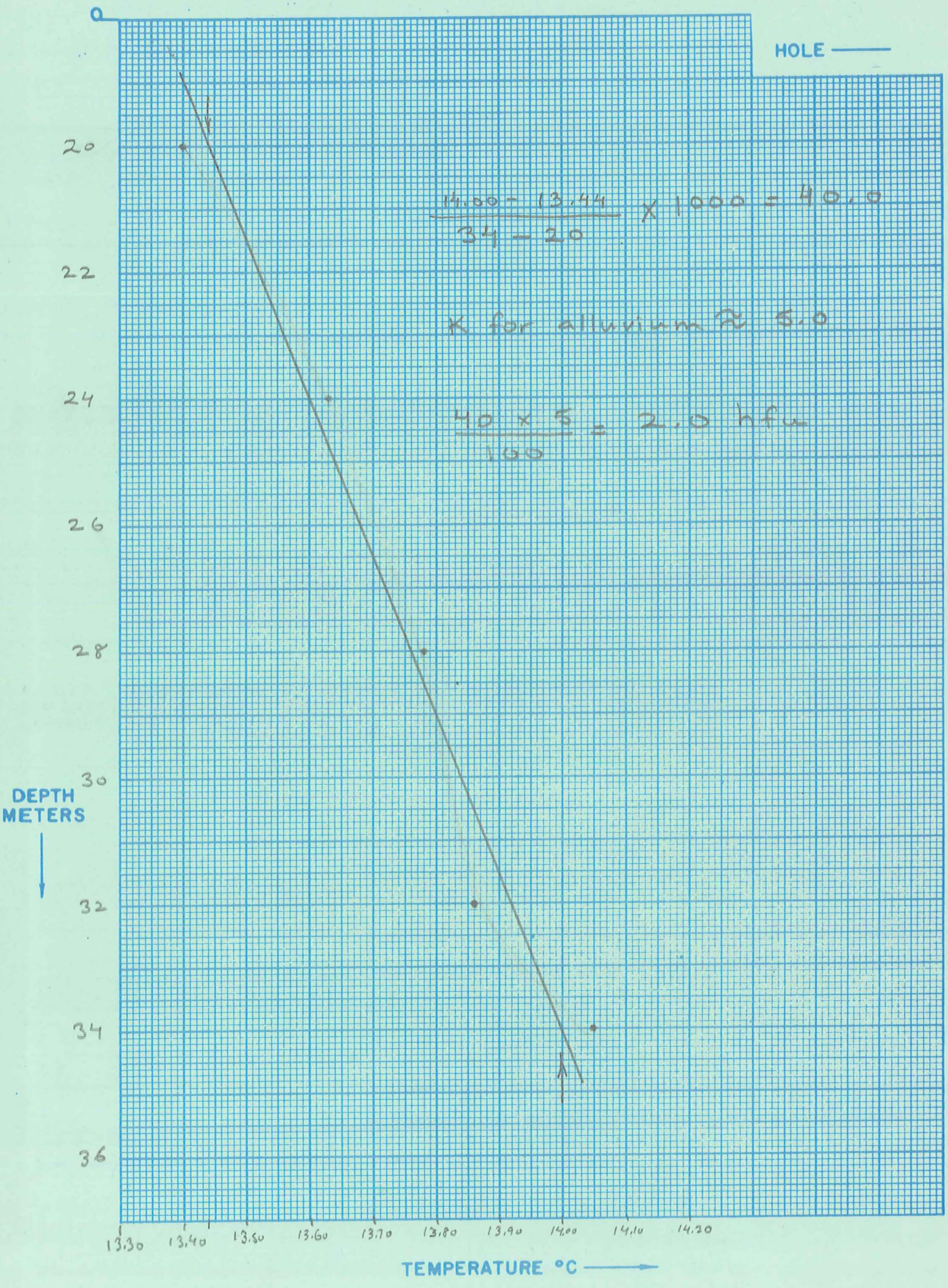
Segment 7

Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start = .999



$$\frac{14.00 - 13.44}{34 - 20} \times 1000 = 40.0$$

K for alluvium ≈ 5.0

$$\frac{40 \times 5}{100} = 2.0 \text{ hfu}$$

2Tanks ΔT

Date Logged: ____________

ΔT Well No. 80-25

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		13.40	0.23	58		air	↕1m below surface
24		13.63	0.15	38		H_2O	
28		13.78	0.08	20		↓	Qal
32		13.86	0.19	48			red-brown earth
36		14.05					visible for miles
							around.
			avg	41			

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page _____ of _____

Wooden Pumper ΔT

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-26

Property-Project 1114 Depth Logged 60 m

Map Estancia N.M. (SOCORRO AMS) Scale 15' 1/62500 Date: Drilled ______ Logged 6/18/80

State N.M. County Torrance , SE¼ of SW¼ of SW¼ of SE¼ of Sec 17 T 8N R 8E

Instrument WA #4 Operator WA Elevation 6345 [✓ ft] (m)

Comments Windmill, 6' blades, 6" casing. Not in use, pump disconnected.

JUSTIFY

Card A

	Proj No	Well No	Date Logged DA	MO	YR	*
Columns	1 2 3 4	5 6 7 8 9 10	11 12 13	14 15 16	17 18	19 20
Entry	1 1 1 4		18	06	80	C M

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

	Site Description	Operator	Editor	Drilled DA	MO	YR
Columns	21–50	51 52 53 54 55	56 57 58 59 60	61 62 63	64 65 66	67 68
Entry		WA	/			

(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 **
Columns	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
Entry		15.	34.	54.6	106.	7.2

Use decimals

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

	Northing	Easting	Elev		
Columns	51–60	61–70	71 72 73 74 75	76 77 78 79	80
Entry	28.89	18.82	6345.		F

Use decimals

Write M if if meters

Segment 1 = Depths

Start / End / Conductivity K / ΔK

21–30 / 31–40 / 41–45 / 46–50

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → End K ΔK

51–60 / 61–70 / 71–75 / 76–80

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

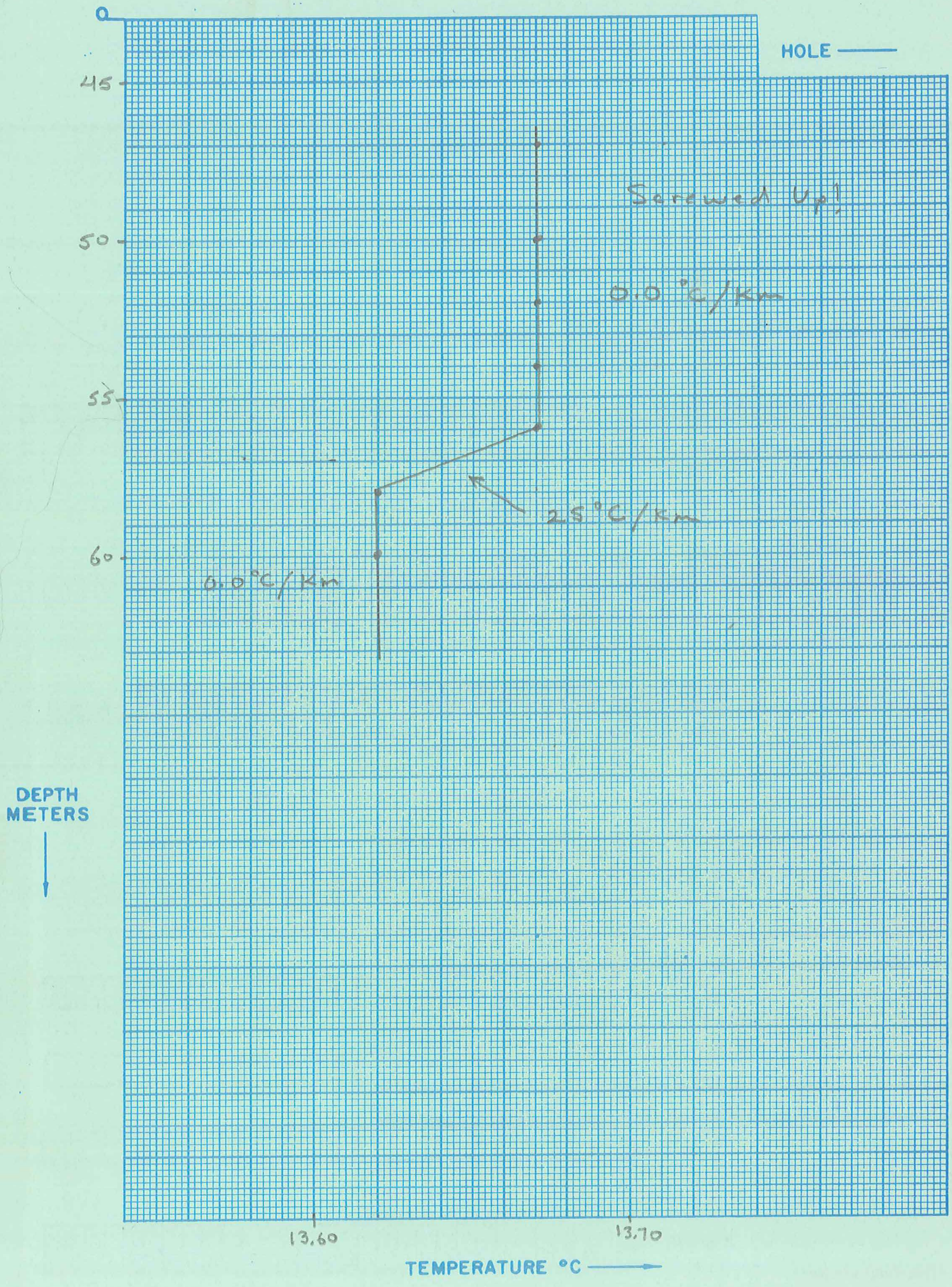
Segment 9

21–50

Segment 10 Start →

51–80

After final segment Start =.999


0
45
50
55
60
HOLE
Screwed Up!
0.0 °C/Km
25 °C/Km
0.0°C/Km
DEPTH METERS
13.60
13.70
TEMPERATURE °C

Wooden Pumper ΔT

Date Logged: 06/18/80

ΔT Well No. 80-26

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
45						air	Alluvium.
47		13.67					Red-brown earth
			0.00	0			
50		13.67					for miles around,
			0.00	0			
52		13.67				H_2O	Limestone(?) ridge
			0.00	0			
54		13.67					to W, ~1mile
			0.00	0			
56		13.67					
			0.05	25			
58		13.62					
			0.00	0			
60		13.62					
			avg =	4			

K=Conductivity

page ______ of ______

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ____ of ____

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Canada de la Perra ΔT

ΔT Well No. 80-27

Property-Project 1114 Depth Logged 88 m

Map Socorro Ams, Tajique N.M. Scale 7½' 1/24000 Date: Drilled ______ Logged 06/18/80

State N.M County Torrance Co, SW¼ of NW¼ of SW¼ of NE¼ of Sec 26 T 7N R 6E

Instrument WA #4 Operator WA Elevation 6920 ([✓ ft] m)

Comments Windmill, 5' blades, 6" casing, found in pasture; well was pumping when I arrived.

Date Logged

JUSTIFY

Card A

Proj No (1–4)	Well No (5–10)	DA (11–12)	MO (13–15)	YR (16–18)	19*	20*
1114					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 (63–65)	YR (66–68)
	WA	/			

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

Map Location **

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	7.5	34.	48.5	106.	16.8

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)	80
27.10	35.80	6920.	F

Use decimals

Write M if if meters

Segment 1 = Depths

Best cond. (-K)

Downward extrapolations (-ΔK)

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

Segment 2 Start →

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

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

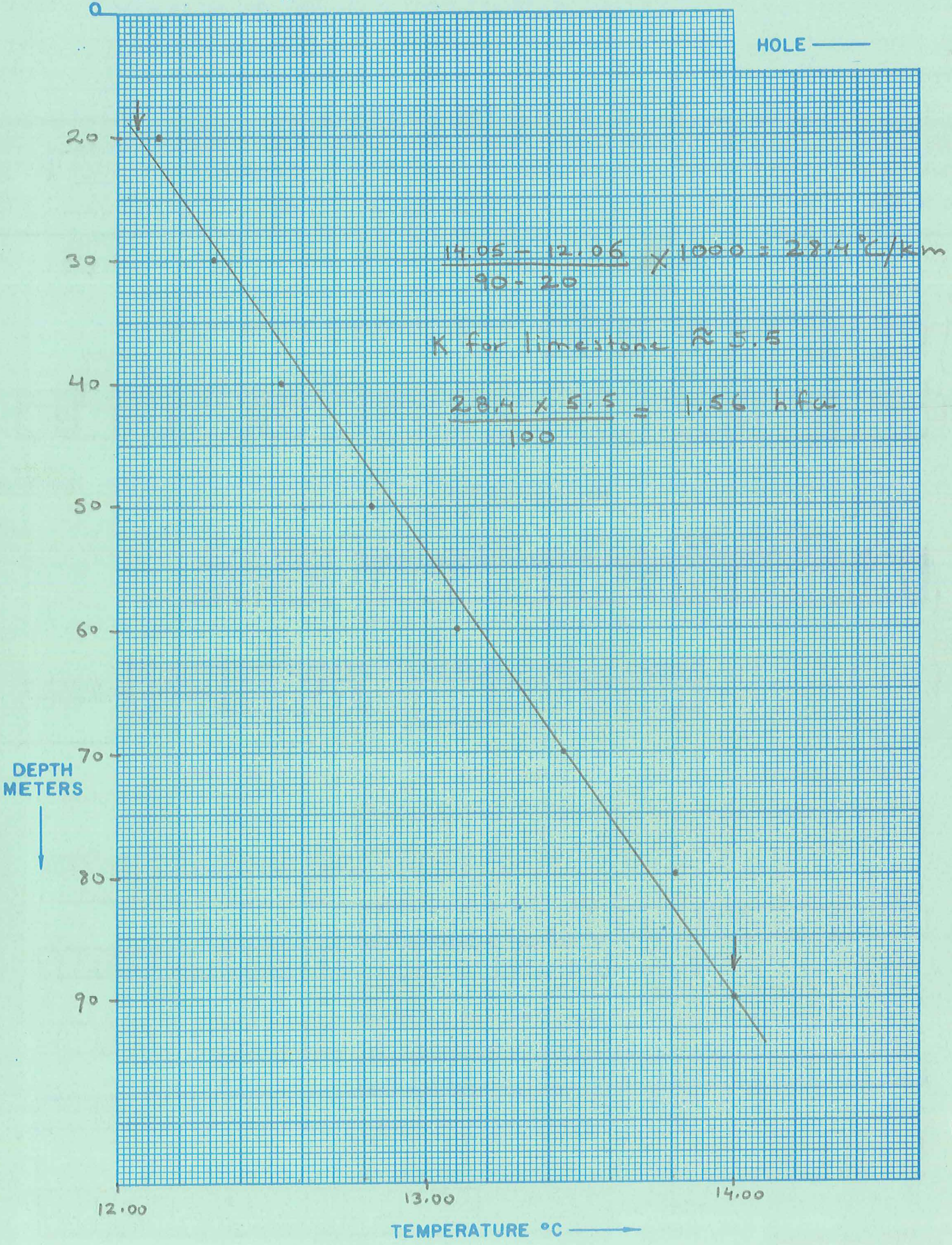
Segment 7

Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start = .999



$$\frac{14.05 - 12.06}{90 - 20} \times 1000 = 28.4\ °C/km$$

K for limestone ≈ 5.5

$$\frac{28.4 \times 5.5}{100} = 1.56\ \text{hfu}$$

Canada de la Perra ΔT

Date Logged: 06/18/80

ΔT Well No. 80-27

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		12.13	0.18	18			Alluvium underlain
30		12.31	0.22	22			(~ 5-7m below) by
40		12.53	0.29	29			a lt. grey fossil
50		12.82	0.32	32			bearing limestone.
60		13.10	0.35	35			H_2O, 19m below
70		13.45	0.36	36			surface
80		13.81	0.24	24			Limestone cuttings
88		14.05				↓	located next to well.
						H_2O	
			avg =	28			

K=Conductivity

page ____ of ____

Date Logged: ____________________

ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page _____ of _____

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Abandoned Farm ΔT

ΔT Well No. 80-28

Property-Project 1114 Depth Logged 28 m

Map Tajique, N.M (Socorro AMS) Scale 7.5' 1/24000 Date: Drilled ______ Logged 6/18/80

State N.M County Bernalillo, ______ of UNSURVEYED of ______ of ______ of Sec 34 T 8N R 6E

Instrument WA #4 Operator WA ______ Elevation 6990 (ft m)

Comments Windmill removed, 2" pipe, home abandoned

Card A

Date Logged

JUSTIFY Proj No (1-4)	Well No (5-10)	DA (11-12)	13	MO (14-15)	16	YR (17-18)	19*	20*
1114			▨		▨		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)	63	Drilled MO (64-65)	66	Drilled YR (67-68)
	WA	/	18	▨	06	▨	80

(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	7.5	34.	52.3	106.	15.2

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
55.50	47.00	6990.	▨	F

Use decimals

80: Write M if if meters

Segment 1 = Depths

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

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start →

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

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

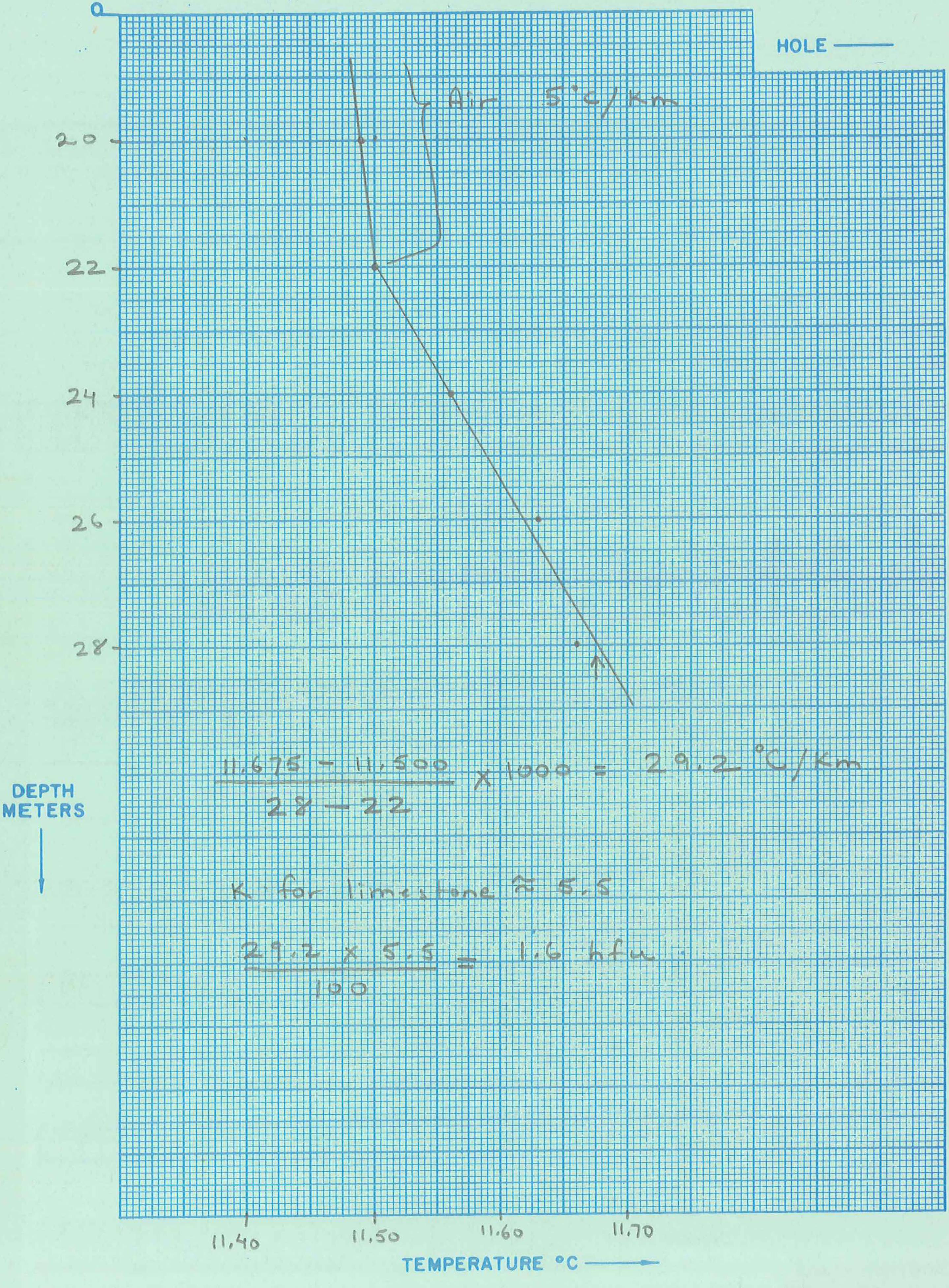
Segment 9

(21-50)

Segment 10 Start →

(51-80)

After final segment Start = .999



$$\frac{11.675 - 11.500}{28 - 22} \times 1000 = 29.2\ °C/Km$$

K for limestone ≈ 5.5

$$\frac{29.2 \times 5.5}{100} = 1.6 \text{ hfu}$$

Abandoned Farm ΔT

Date Logged: 06/18/80

ΔT Well No. 80-28

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		11.49	0.01	5			Alluvium.
22		11.50	0.06	30			No o/c visible,
24		11.56	0.07	35			limestone visible
26		11.63	0.03	15			in o/c's along road.
28		11.66					Limestone blocks
			avg=	21			in nearby creek.

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

COW ΔT

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-29

Property-Project 1114 Depth Logged 36 m

Map Escabosa, N.M. Scale 7½' 1/24000 Date: Drilled ______ Logged 06/19/80

State N.M. County Bernalillo, SW¼ of NW¼ of NW¼ of SE¼ of Sec 35 T 9N R 6E

Instrument WA #4 Operator WA Elevation 7160 (ft/m)

Comments Windmill, 6' blades, 6" casing. Was actively pumping when arrived.

Date Logged

JUSTIFY

Card A

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

	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	1	1	4							1	9	▨	0	6	▨	8	0	C	M

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
																																	W	A	/							▨			▨		

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

Map Location **

Card B

Scale Unit IN CM					Map Size (7.5, 15., 60.)					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
▨	C	M	▨	▨			7	.	5			3	4	.		5	7	.	5		1	0	6	.		1	6	.	3

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
					3	8	.	9	0						4	0	.	3	5	7	1	6	0	.	▨	▨	▨	▨	F

Use decimals

← Write M if 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 (- Δ K)

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 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

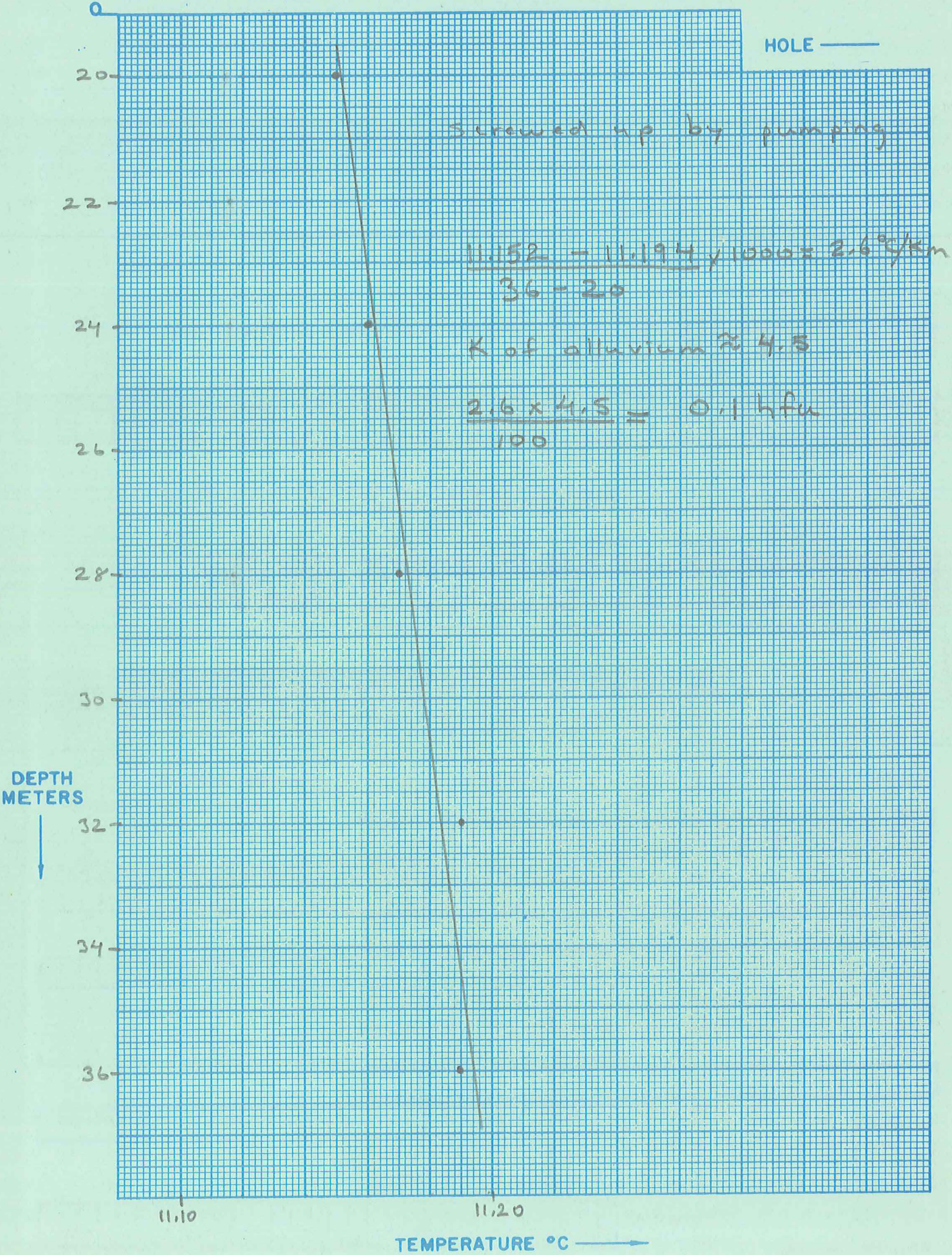
Segment 9

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



Screwed up by pumping

$$\frac{11.152 - 11.194}{36 - 20} \times 1000 = 2.6\,^{\circ}\mathrm{c/Km}$$

K of alluvium ≈ 4.5

$$\frac{2.6 \times 4.5}{100} = 0.1\ \mathrm{hfu}$$

Cow ΔT

Date Logged: 06/19/80

ΔT Well No. 80-29

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		11.15	0.02	5			Alluvium on surface.
24		11.16	0.01	2.5			Abundent limestone
28		11.17	0.02	5	H_2O		in o/c's along road
32		11.19	0.00	0			near Ponderosa Pine,
36		11.19					Water was near
							surface when I
			avg=	3			arrived.

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

SANTA ANA WINDMILL ΔT

ΔT Well No. 80-30

Property-Project ______ Depth Logged 53.7m

Map SANTA ANA PUEBLO Scale 7.5 Date: Drilled ______ Logged 6/15/80

State N MEX County SANDOVAL , ______ of SE of NE of NW of Sec 22 T 14N R3E

Instrument DT 10T Operator HUNTSMAN ______ Elevation 5350 ft (ft/m)

Comments NORTH OF THE PUEBLO

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
	/ / / 4		15	06	50	C M

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

			Drilled		
Site Description	Operator	Editor	DA	MO	YR
21–50	51 52 53 54 55	56 57 58 59 60	61 62	63 64 65	66 67 68
	HUNTS	/			

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

Map Location **

		N Lat		W Long		
Scale Unit IN CM	Map Size (7.5, 15., 60.)	Degree	Min	Degree	Min	**
21 22 23 24 25	26 27 28 29 30	31 32 33 34 35	36 37 38 39 40	41 42 43 44 45	46 47 48 49 50	
Cm	7.5	35.	22 .3	106.	37 .	

Use decimals

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

Northing	Easting	Elev		
51–60	61–70	71 72 73 74 75	76 77 78 79	80
26.8	5.6	5350.		F

Use decimals

← Write M if if meters

Card

Segment 1 = Depths

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

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start →

End	K	ΔK
51–60 61–70	71–75	76–80

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

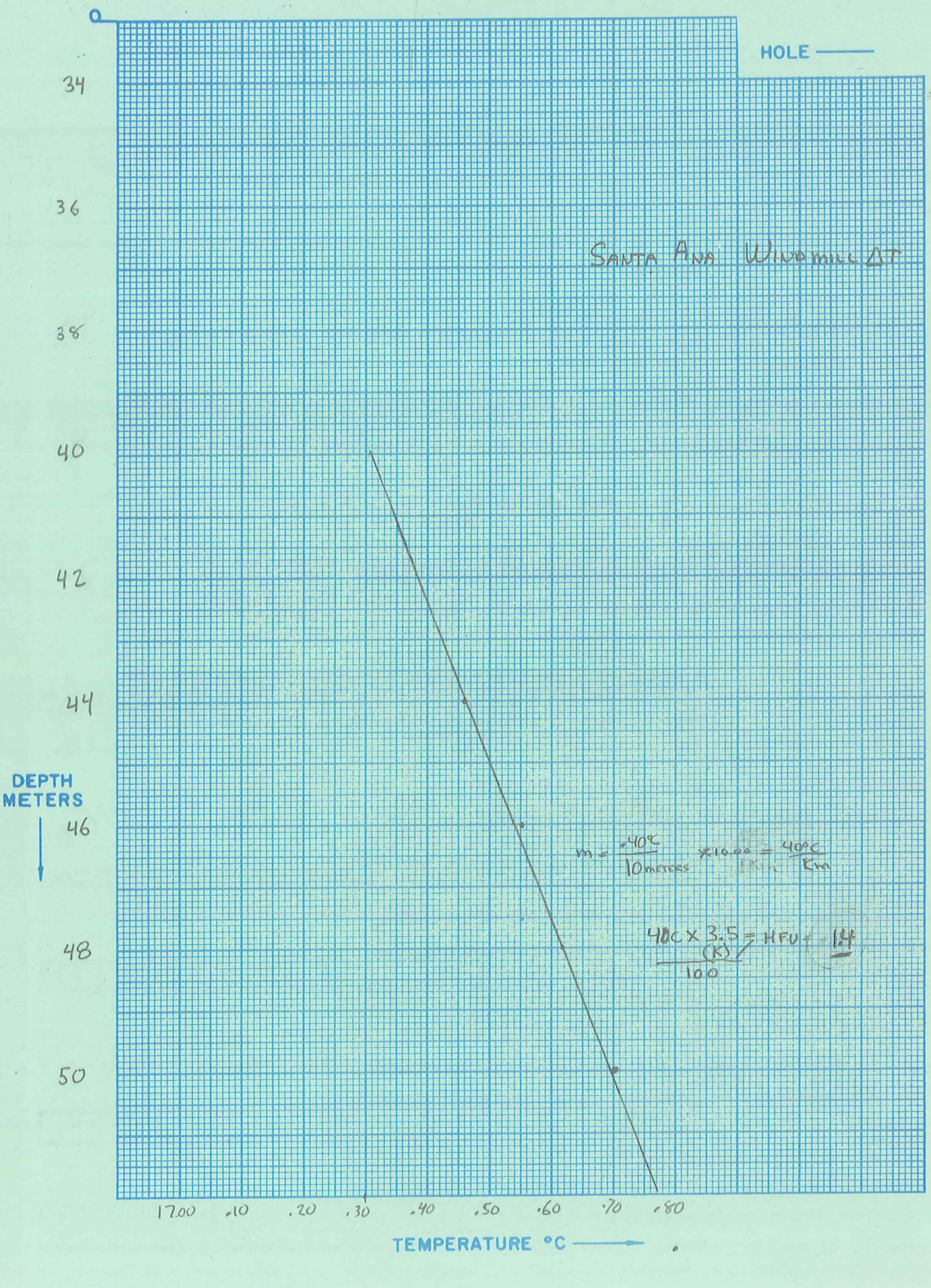
Segment 9

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



Santa Ana Windmill ΔT

$m = \frac{.40°C}{10\ \text{meters}} \times \frac{1000}{1\,\text{Km}} = \frac{40°C}{\text{Km}}$

$\frac{40C \times 3.5\,(K)}{100} = \text{HFU} = \underline{1.4}$

SANTA ANA

Date Logged: 6/15/80

ΔT Well No. 80 - 30

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
							0 - TD 53.7m - S.S. surface of Alv - Caliche on surface
30	AIR	17.35					
40.0	AIR	17.44			2.5	↑	S.S. m to VC - SR - Gravel fill alv -
42.0	AIR WATER TABLE	17.44	.00		2.5	AIR	
44.0		17.46	.02		3.5	WATER	
46.0		17.55	.09	4.5	3.5	↓	
48.0		17.62	.07	3.5	3.5		
50.0		17.70°C	.08	4°	3.5		
53.7		17.80°C	.10		3.5		S.S. Alv -

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

NOWHERE ΔT

ΔT Well No. 80-31

Property-Project ______ Depth Logged ______

SKY VILLAGE NE

Map SKY VILLAGE NE Scale 1: 7.5 Date: Drilled ______ Logged 6/15/80

State N MEX County SANDOVEL , ______ of ______ of ______ of ______ of Sec 28 T 15N R 1E

Instrument ΔT 101 Operator Huntsman ______ Elevation 5870 (ft/m)

Comments 7mi S.W. of San Ysidro

JUSTIFY

Card A

Date Logged

Proj No (1–4)	Well No (5–10)	DA (11–12)	13	MO (14–15)	16	YR (17–18)	19*	20*
1114		15		06		80	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)	63	Drilled MO (64–65)	66	Drilled YR (67–68)
	HUNTS	/					

(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	7.5	35.	22.	106.	52 .

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
35.4	12.5	5870.		F

Use decimals

80 ← Write M if if meters

Segment 1 = Depths

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

Best cond. (-K)

Downward extrapolations (- ΔK)

Segment 2 Start →

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

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

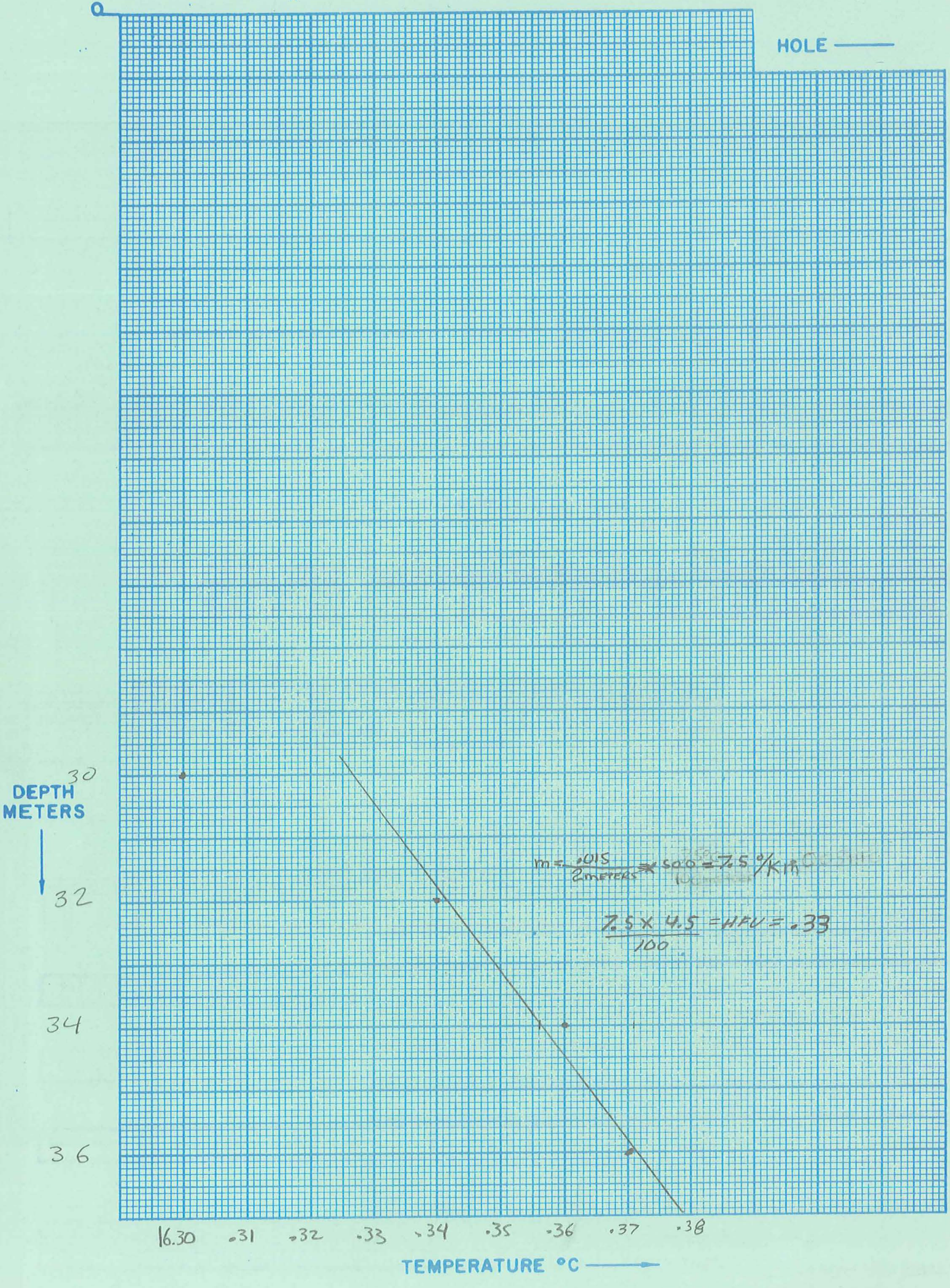
Segment 9

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



$$m = \frac{.015}{2\text{ meters}} \times 500 = 7.5\ °/\text{Km}$$

$$\frac{7.5 \times 4.5}{100} = \text{HFU} = .33$$

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
						H_2O ↓	
30		16.30			4.5		
32		16.34	.04		4.5		
34		16.36	.02		4.5		AlV - Sandy Clay mudstone
36		16.37	.01		4.5		

K=Conductivity

page ____ of ____

Date Logged: ______________

ΔT Well No. 80-31

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ____ of ____

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Tenorio Ranch ΔT

ΔT Well No. BHT

Property-Project ______ Depth Logged 36.6 m

Map SKY VILLAGE NE Scale 7.5 Date: Drilled ______ Logged 6/15/80

State N MEX County SANDOVEL, ______ of NW of SE of NW of Sec 4 T 14N R 1E

Instrument ΔT 101 Operator Huntsman Elevation 5830 (ft m)

Comments WELL WAS PUMPING - WHEN ARIVED AT SITE - WELL WAS THAN SHUT DOWN

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
1	1	1	4							1	5	▨	0	6	▨	8	0	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
																														H	U	N	T	S	/							▨			▨		

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

Map Location **

Card B

Scale Unit IN CM					Map Size (7.5, 15., 60.)					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
▨	C	m	▨	▨		1	5	.				3	5	.	2	2		.			1	0	6	.	5	2		.	

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
					4	6	.									1	1	.		5	8	3	0	.	▨	▨	▨	▨	F

Use decimals

Write M if if meters

Segment 1 = Depths

Conductivity

Best cond. (-K)

Downward extrapolations (-ΔK)

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

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 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 ——

DEPTH
METERS
↓

TEMPERATURE °C ——→

ΔT TENORIO RANCH

Date Logged: 6/15/80

ΔT Well No. BHT

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
30.0		↑					SS- Caliche
32.0							'Thim Limstone Coal Beds Alu
34.0		AIR 15.32	.01		5		
36.0		15.33	.00		5		
36.6		15.33	.00		5		

NO GRAD - WEll WAS PUMPING AND H_2O's MIXED.

K=Conductivity

page _____ of _____

Date Logged: ____________________ ΔT Well No. _____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ____ of ____

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Copper Pit ΔT

ΔT Well No. 80 32

Property-Project EARTH RESOURCES Copper Pit Depth Logged 80 meters

Map SAN PABLO Scale 7.5 Date: Drilled ______ Logged 6/16/80

State N MEX County SANDOVEL , ______ of SE of SW of NW of Sec 1 T 20N R 1W

Instrument ΔT 101 Operator SHENKER ______ Elevation 7500 [✓ ft] m

Comments Cu & Ag MINE ON THE NACIMIENTO FAULT

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
1	1	1	4							1	6	▨	0	6	▨	8	0	C	M

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

Site Description (columns 21–50): blank

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

Operator					Editor					Drilled DA			MO			YR	
51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
S	H	E	N	K	/							▨			▨		

Card B

Map Location * *

Scale Unit IN CM					Map Size (7.5, 15., 60.)					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
▨	C	m	▨	▨			7	.	5			3	5	.	5	2		.			1	0	7	.	2	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	4	.	5							3	9	.			7	5	0	0	.	▨	▨	▨	▨	F

Use decimals

Write M if if meters

Segment 1 = Depths

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

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → (51–60) End (61–70) K (71–75) ΔK (76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

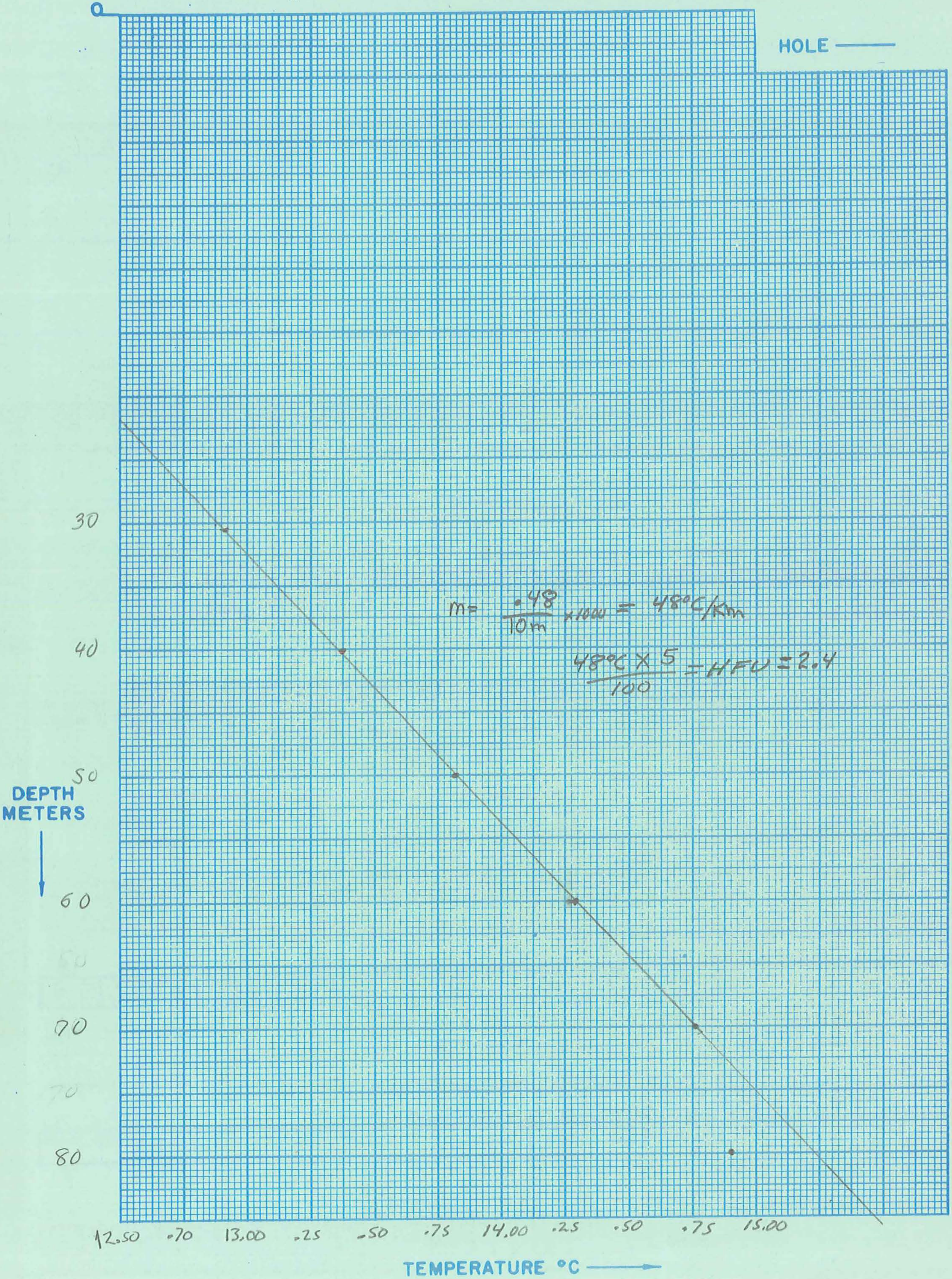
Segment 7

Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start = .999



$$m = \frac{.48}{10m} \times 1000 = 48°C/Km$$

$$\frac{48°C \times 5}{100} = HFU = 2.4$$

COPPER PIT ΔT

Date Logged: 6/16/80

ΔT Well No. 80-32

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20						Air	
30		12.91				H_2O	
40		13.38	.47				
50		13.80	.42				
60		14.26	.46				Fault Gouge - Hard Rock SS.
70		14.76	.50		5?		
5 80	— TD —	14.83	.07		5?		

K=Conductivity

page ______ of ______

Date Logged: ____________________ ΔT Well No. _____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page _____ of _____

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Silva #5 WINDMILL ΔT

ΔT Well No. 80 33

Property-Project ____ Depth Logged ____

Map SOUTH GARCIA Scale 7.5 Date: Drilled NOV 19 1979 Logged 35 METERS

State N MEX County VAL , ____ of ____ of ____ of ____ of Sec 33 T 7N R 2W

Instrument ΔT 101 Operator HUNTSMAN Elevation 5270 (ft / m)

Comments ____

Card A

JUSTIFY

Date Logged

Proj No (1–4)	Well No (5–10)	DA (11–12)	13	MO (14–15)	16	YR (17–18)	19*	20*
N/14		19		06		80	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)	63	Drilled MO (64–65)	66	Drilled YR (67–68)
	HUNTS	/					

(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	.	35.	34	107.	15 .

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
16.	32.5	5270.		F

Use decimals

Write M if if meters

Segment 1 = Depths

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

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start →

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

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

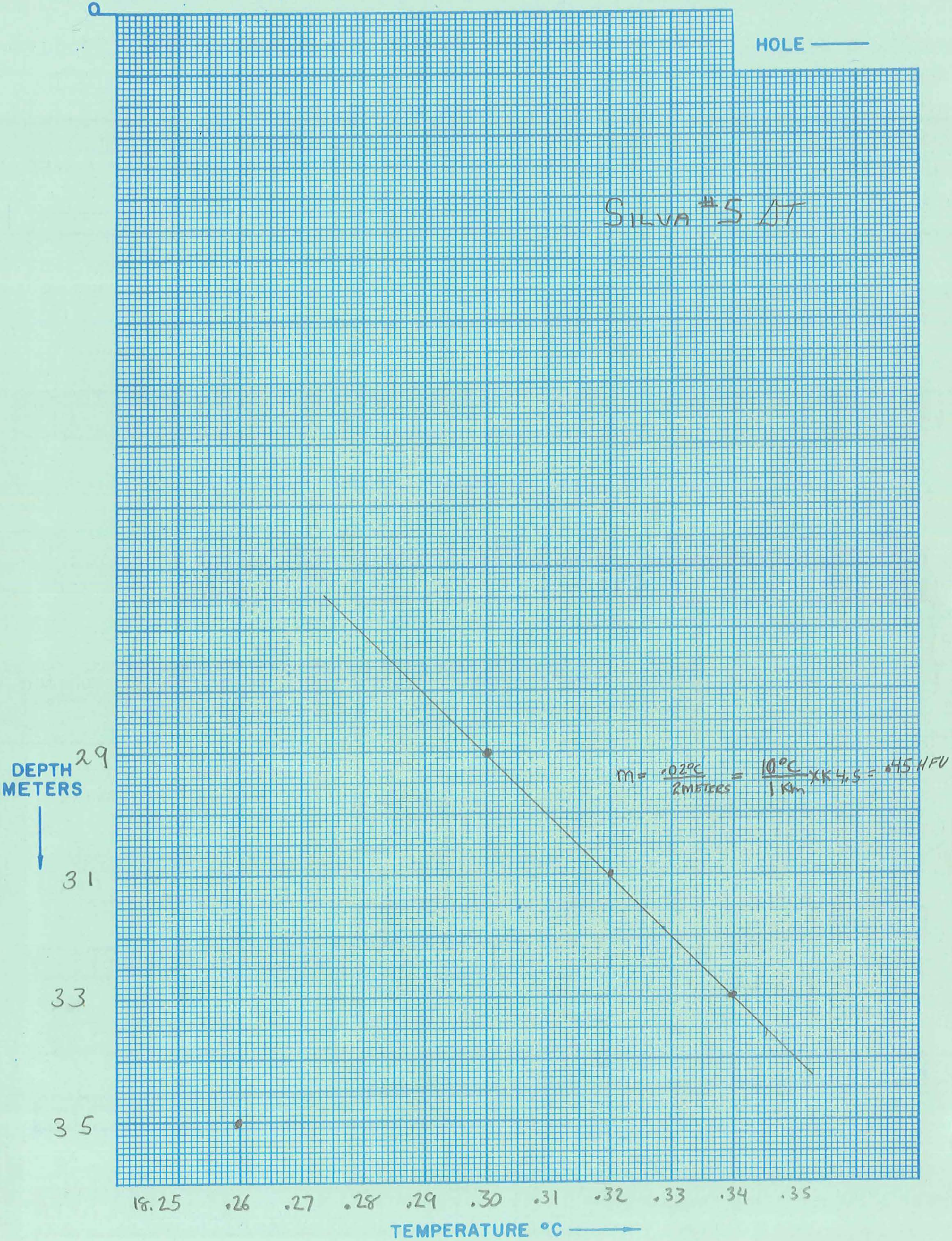
Segment 7

Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start = .999



Silva #5 ΔT

$m = \frac{.02°C}{2 \text{ METERS}} = \frac{10°C}{1 \text{ Km}} \times K\ 4.5 = .45 \text{ HFU}$

Silva #5 ΔT

Date Logged: 6/18/80
SILVA #5

ΔT Well No. 80 33

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
29		18.30			4.5		S.S. Course - SA - Tan LT RED
31		18.32	.02		4.5		
33		18.34	.02		4.5	AIR	OFF BOTTOM -
35	AIR	18.26 ~ METAL PLATE?	.08				ON BOTTOM

COULDN'T GET TO H_2O TABLE

DRY HOLE

K=Conductivity

page 2 of 2

Date Logged: ____________________ ΔT Well No. ______________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ____ of ____

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT FENCELINE WINDMILL ΔT

ΔT Well No. BHT

Property-Project ____ Depth Logged 152m

Map South Garcia Scale 15 min Date: Drilled ____ Logged 6/19/80

State N MEX County VAl , ____ of SW of SE of SE of Sec 35 T 7N R 4W

Instrument ΔT 101 Operator Huntsman ____ Elevation 6273 (ft/m)

Comments ____

Card A

JUSTIFY

	Proj No	Well No	Date Logged DA	MO	YR	19	20
Columns	1–4	5–10	11–12	14–15	17–18	19	20
	1114		19	06	80	C	M

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

	Site Description	Operator	Editor	Drilled DA	MO	YR
Columns	21–50	51–55	56–60	61–62	64–65	67–68
		HUNTS/				

(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
Columns	21–25	26–30	31–35	36–40	41–45	46–50
	CC	15.	34.	45 .	107.	15 .

Use decimals

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

	Northing	Easting	Elev	80
Columns	51–60	61–70	71–75	80
	5.8	3.8	6273.	F

Use decimals

← Write M if if meters

Segment 1 = Depths Start (21–30) End (31–40) Conductivity K (41–45) ΔK (46–50)

Best cond. (-K)

Downward extrapolations (- Δ K)

Segment 2 Start → (51–60) End (61–70) K (71–75) ΔK (76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start = .999

0

HOLE ______

DEPTH
METERS
↓

TEMPERATURE °C →

AT FENCELINE WINDMILL ΔT

Date Logged: 6/19/80

ΔT Well No. BHT

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
100		15.38					
120		15.38	0.0				
1124			0.0				
128							
132							
136		15.38	0.0				
140			0.0				S.S. MED TO SI COURSE SM RED - MOD HEM
144		15.38	0.0				
146			0.0				10" Casing
148		15.38	0.0				For same Reason No grad could
150		15.38	0.0				be measured - Dry hole
152		15.39	0.0				

K=Conductivity

page ___ of ___

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page _____ of _____

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT LOMITA

ΔT Well No. 80 - 34

Property-Project ______ Depth Logged 54m

Map Tome NE Scale 7.5 Date: Drilled ______ Logged 6/21/80

State N MEX County ~~Grant~~ Valencia, ______ of ______ of ______ of ______ of Sec 33 T 6N R 4E

Instrument ΔT 101 Operator Huntsman Elevation 5552 (ft/m)

Comments ON ROAD to JFK Park — UNSURVEYED

JUSTIFY

Card A

Proj No (1–4): 1114

Well No (5–10):

Date Logged DA (11–12) MO (14–15) YR (17–18)

19–20*: C M

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

Site Description (21–50):

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

Operator (51–55): HUNTS

Editor (56–60):

Drilled DA (61–62) MO (64–65) YR (67–68)

Card B

Scale Unit IN CM (22–23): cm

Map Size (7.5, 15., 60.) (26–30): 7.5

Map Location ** N Lat Degree Min (31–40): 34.37 .

W Long Degree Min (41–50): 106.37 .

Use decimals

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

Northing (51–60): 26.5

Easting (61–70): 39.

Elev (71–79): 5552.

80: F ← Write M if if meters

Use decimals

Segment 1 = Depths Start (21–30) End (31–40) Conductivity K (41–45) ΔK (46–50)

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

Segment 2 Start → (51–60) End (61–70) K (71–75) ΔK (76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

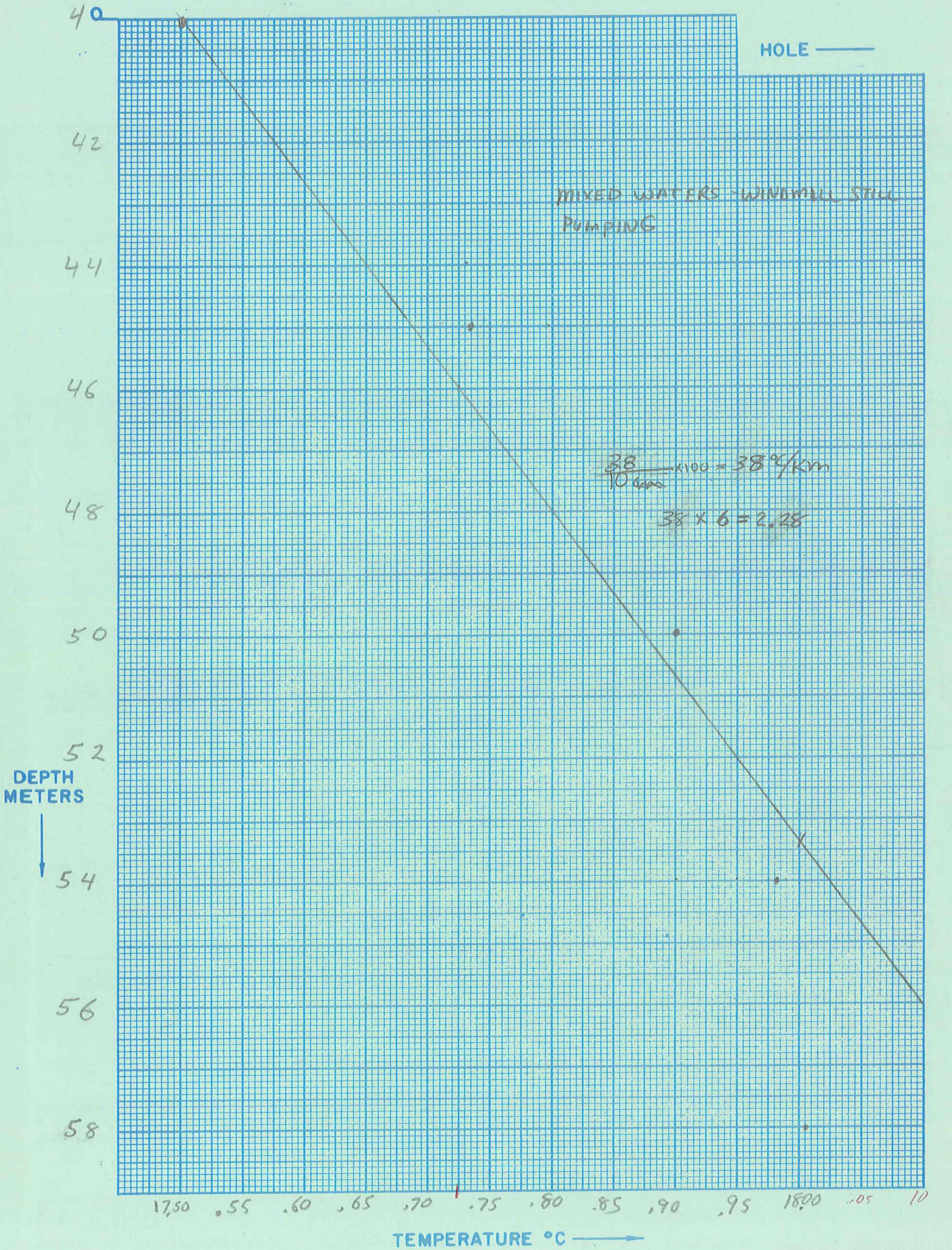
Segment 7

Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start = .999



MIXED WATERS - WINDMILL STILL PUMPING

$\frac{.38}{10\ cm}$ x100 = 38 °/Km

38 x 6 = 2.28

ΔT LOMITA

Date Logged: ____________

ΔT Well No. 80-34

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
35	AIR	17.55				AIR	
40		17.55			6	H_2O	
45		17.73	.18	36	6		
50		17.90	.17	34	6		
52			.08	16			
54		17.98					SS - F to M - Tan
56	TD	/	.03				WIND MILL WILL NOT SHUT DOWN DUE TO WINDS
58		18.01					
60		1801					

K=Conductivity

page ____ of ____

Date Logged: ____________________

ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

BHT

ΔT Well No. ______

roperty-Project ______ Depth Logged 110

Map RILEY Scale 15.0 Date: Drilled ______ Logged 6/22/80

State N MEX County SOCORRO , ______ of ______ of ______ of ______ of Sec 22 T 1N R 3W

Instrument DT 101 Operator HUNTSMAN SHENUEK Elevation 5930 (ft/m)

Comments WINDMILL - 8" CASING - TANK - Ca Crust

Card A

JUSTIFY

Date Logged

Proj No (1-4)	Well No (5-10)	DA (11-12)	MO (13-15)	YR (16-18)	* (19-20)
1114		22	06	80	C M

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

Site Description (21-50)	Operator (51-55)	Editor (56-60)	Drilled DA (61-63)	MO (64-66)	YR (67-68)
	HUNTS/				

(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	35.	15 .	107.	15 .

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 (71-79)	80
7.3	6.5	5930.	F

Use decimals

Write M if if meters

Segment 1 = Depths

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

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start →

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

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start = .999

0

HOLE ——

DEPTH
METERS
↓

TEMPERATURE °C →

BHT

Date Logged: ____________

ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
50							
60							
70		19.00					
80							
90		19.07					
100		19.07					
110		19.07					

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page _____ of _____

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

GREEN ΔT

ΔT Well No. 80-36

Property-Project ____ Depth Logged 40 meters

Map Riley N mex Scale 15.0 Date: Drilled ____ Logged 6/22/80

State N mex County Socorro, ____ of ____ of NW of SW of Sec 35 T 1N R 4W

Instrument DT 101 Operator Shenker Huntsman Elevation 6151 (ft/m)

Comments Windmill w/ 6 inch casing & water tank

Card A

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
	1	1	1	4							2	2	▨	0	6	▨	8	0	C	M

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

Site Description	Operator	Editor	Drilled DA	Drilled MO	Drilled YR
21–50	51–55	56–60	61–62	63–65	66–68
	HUNTS	/		▨	▨

(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 **
21–25	26–30	31–35	36–40	41–45	46–50
▨ Cm ▨▨	15.0	34.	15 .	107.	15 .

Use decimals

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

Northing	Easting	Elev		
51–60	61–70	71–75	76–79	80
2.6	2.1	6151.	▨	F

Use decimals

← Write M if if meters

Segment 1 = Depths

Conductivity

Best cond. (-K)

Downward extrapolations (-ΔK)

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

Segment 2 Start → (End 51–60, K 61–70 … columns 51–80)

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

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

Segment 9

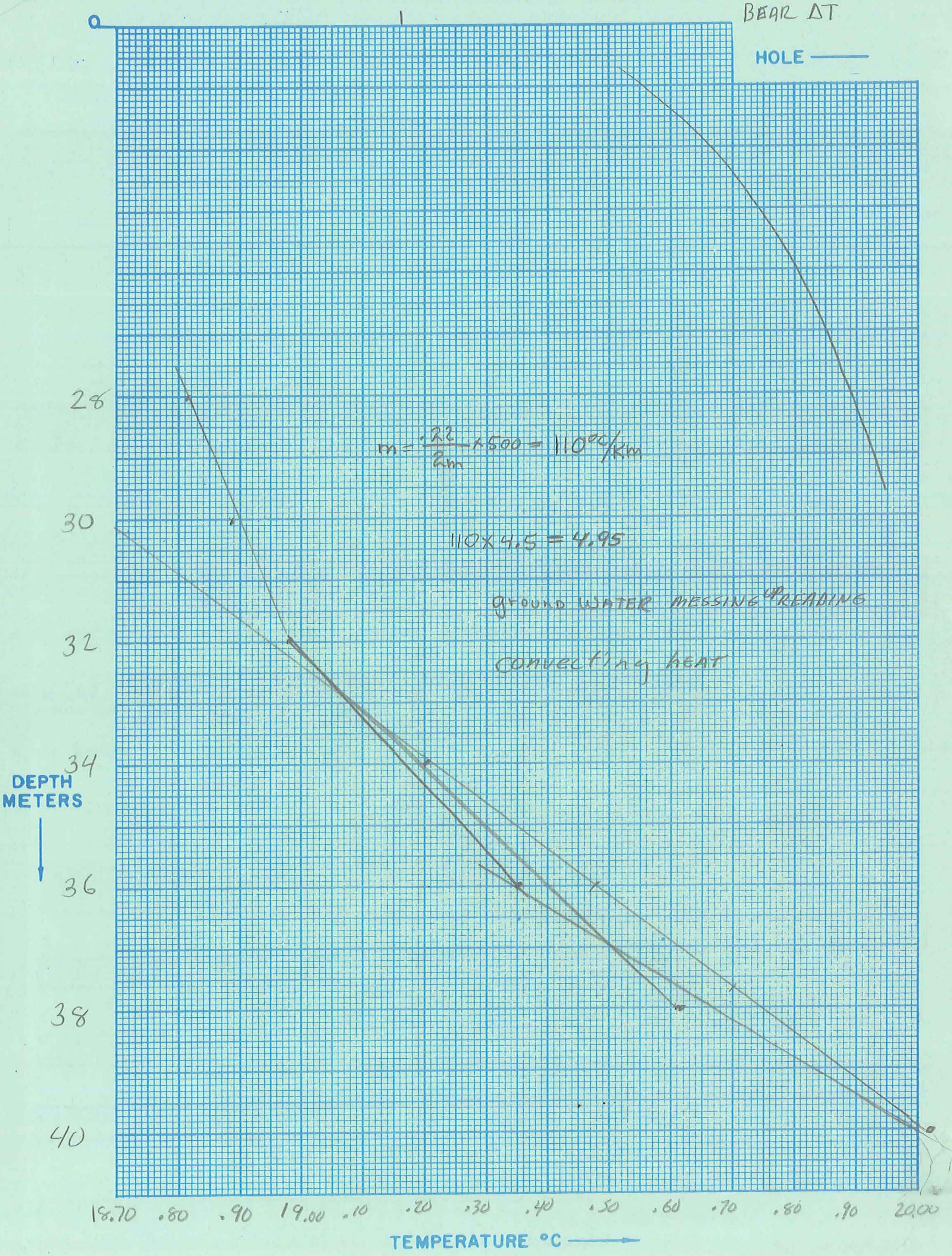
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

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

BEAR ΔT



$m = \frac{.22}{2m} \times 500 = 110°C/Km$

$110 \times 4.5 = 4.95$

ground WATER MESSING up READING

convecting heat

GREENT

Date Logged: 6/22/80

ΔT Well No. 80-36

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
							AIV- ANDSITE
28		18.825	.065	33°/Km			S.S. pyr GRAVELS
30		18.89	.09	45°C/Km			
32		18.98	.22	110°C/K			
34		19.20	.15	75°C/Km			
36		19.35	.27	135°C/Km	4.5?		
38		19.62	.41	205°C/Km		AIR ? H_2O	
40		20.03					

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page _____ of _____

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

BAR ΔT

ΔT Well No. 80-37

Property-Project ____________ Depth Logged ____________

Map MAGDALENA Scale 15.0 Date: Drilled ____________ Logged 6/24

State N MEX County SOC , ______ of SW of NE of SE of Sec 17 T3S R2W

Instrument DT 101 Operator SHENKER Elevation 6100 (ft / m)

Comments Windmill - 6 inch casing

Card A

JUSTIFY

Proj No (1–4)	Well No (5–10)	Date Logged DA (11–12)	MO (14–15)	YR (17–18)	19*	20*
1114		24	06	80	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)
	HUNTS	/			

(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	34.	.	107.15	.

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
8.5	27.5	6100.		F

Use decimals

Write M if if meters

Segment 1 = Depths

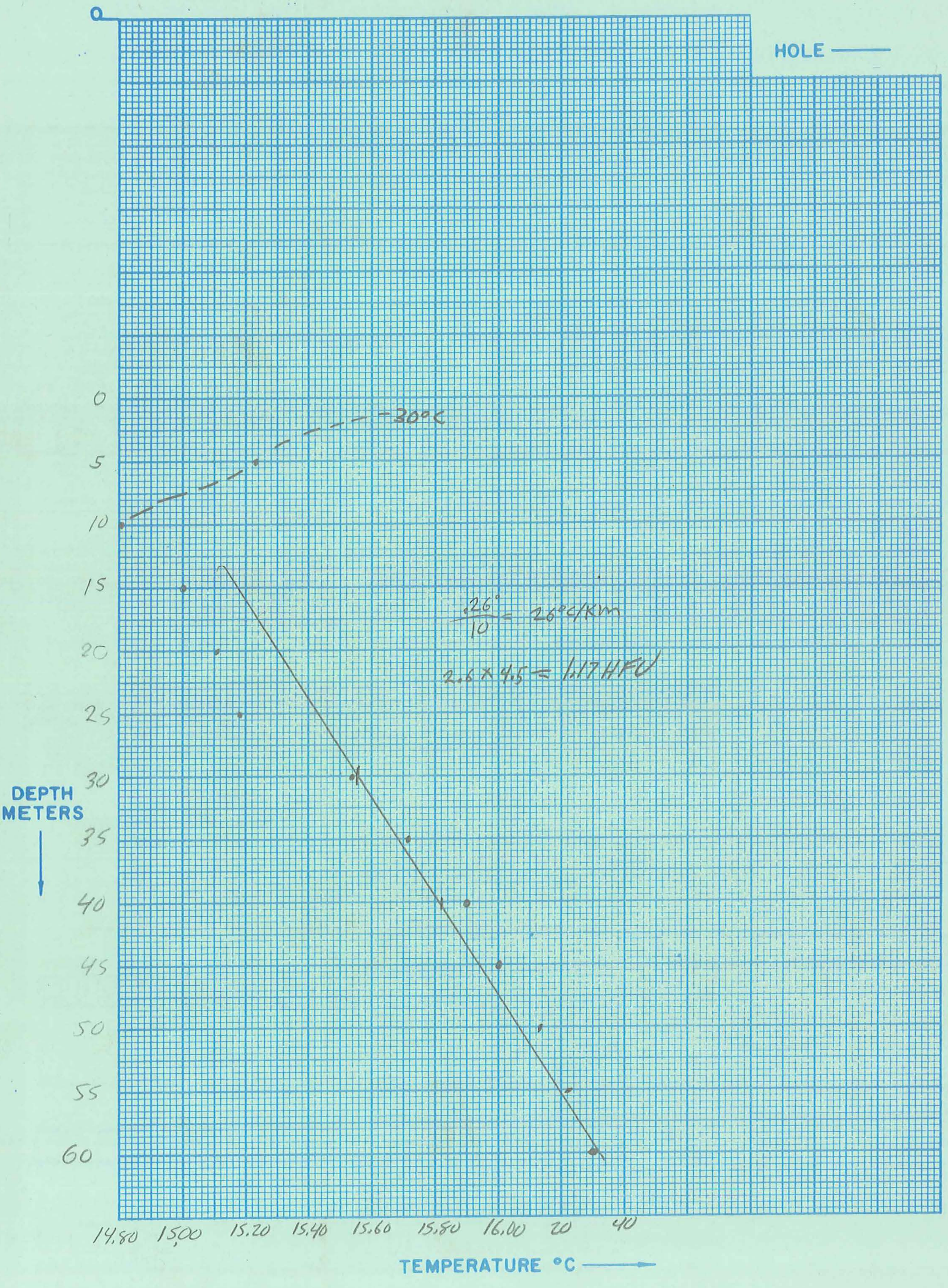
Start (21–30)	End (31–40)	Conductivity K (41–45)	ΔK (46–50)

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment	Start (21–30 / 51–60)	End (31–40 / 61–70)	K (41–45 / 71–75)	ΔK (46–50 / 76–80)
Segment 2				
Segment 3				
Segment 4				
Segment 5				
Segment 6	/			
Segment 7				
Segment 8				
Segment 9				
Segment 10				

After final segment Start = .999



$\frac{.26°}{10}$ = 26°C/Km

2.6 × 4.5 = 1.17 HFU

BAR ΔT

Date Logged: 6/24/80

ΔT Well No. 80-37

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
0		30.00					
5		15.22					
10		14.80	42	-84°C			
15		15.01	21	42°C			
20		15.11	11	20°C			
25		15.19	8	16°C			
30		15.54	.35	70°C			
35		15.72	.18	36°C	4		
40		15.90	.18	36°C			
45		16.00	.10	20°C			S.S. - Arkose - Gravels Ig. RXS
50		16.14	.14	28°C	4.5		
55		16.22	.08	16°C	4.5		
60		16.30	.08	16°C	4.5		

K=Conductivity

page ______ of ______

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

COYOTE ΔT

ΔT Well No. 80-38

Property-Project ______ Depth Logged 45m

Map RILEY Scale 15 Date: Drilled ______ Logged 6/22/80

State N MEX County Socorro , SE of SE of SE of SE of Sec 24 T 3N R 4W

Instrument ΔT 101 Operator HUNTSMAN SHENKER Elevation 5906 (ft/m)

Comments WINDMILL, 4 small Tanks

JUSTIFY

Card A

Proj No (1–4)	Well No (5–10)	Date Logged DA (11–12)	MO (14–15)	YR (17–18)	* 19	* 20
1114		22	06	80	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)
	HUNTS	/			

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

Map Location * *

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	34.	15 .	107.	15 .

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
38.	10.	5906.		F

Use decimals

← Write M if if meters

Segment 1 = Depths Start (21–30) End (31–40) Conductivity K (41–45) ΔK (46–50)

Best cond. (-K)

Downward extrapolations (- Δ K)

Segment 2 Start → (51–60) End (61–70) K (71–75) ΔK (76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

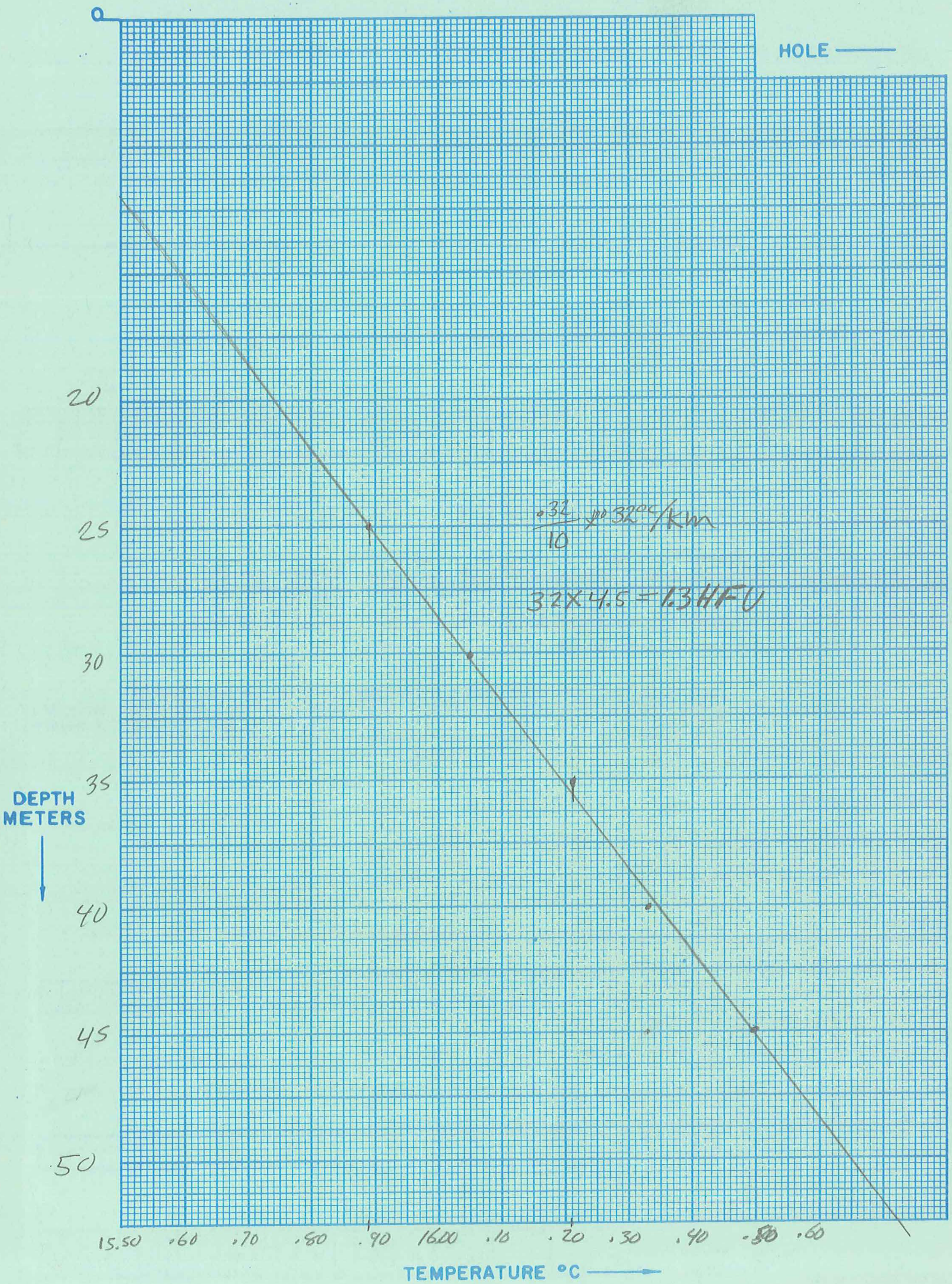
Segment 7

Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start = .999



$\frac{.32}{10}$ = 32°C/km

32 × 4.5 = 1.3 HFU

COYOTE ΔT

Date Logged: 6/22/80

ΔT Well No. 80-38

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
							A/U-SS Course-REDISHTAN
25		15.89					
			.16	32°C/km			
30		16.05			4.5		
			.16	32°C/km			
35		16.21					
			.12	24°C/km			
40		16.33					
			.17	34°C/km			
45		16.50					

K=Conductivity

page ____ of ____

Date Logged: ____________________

ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

Lost Pencil ΔT

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-39

Property-Project 1114 Depth Logged ____

Map Riley Scale 15' Date: Drilled ____ Logged 6/22/80

State NM County Socorro , ____ of SW of NW of NW of Sec 23 T 2N R 3W

Instrument DT-101 #3 Operator Huntsman/Shenker Elevation 5975 ([✓ ft] m)

Comments 8' windmill, 8" casing, shut off, disconnected.

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	1	1	4							2	2	▨	0	6	▨	8	0	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	63	Drilled MO 64–65	66	Drilled YR 67–68
	BHEAS	/		▨		▨	

(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.	34.	15.0	107.	15.

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
.	.	5975.	▨	F

Use decimals

← Write M if if meters

Segment 1 = Depths

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

Best cond. (-K)

Downward extrapolations (- Δ K)

Segment 2 Start → 51–60	End 61–70	K 71–75	ΔK 76–80

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

Segment 9

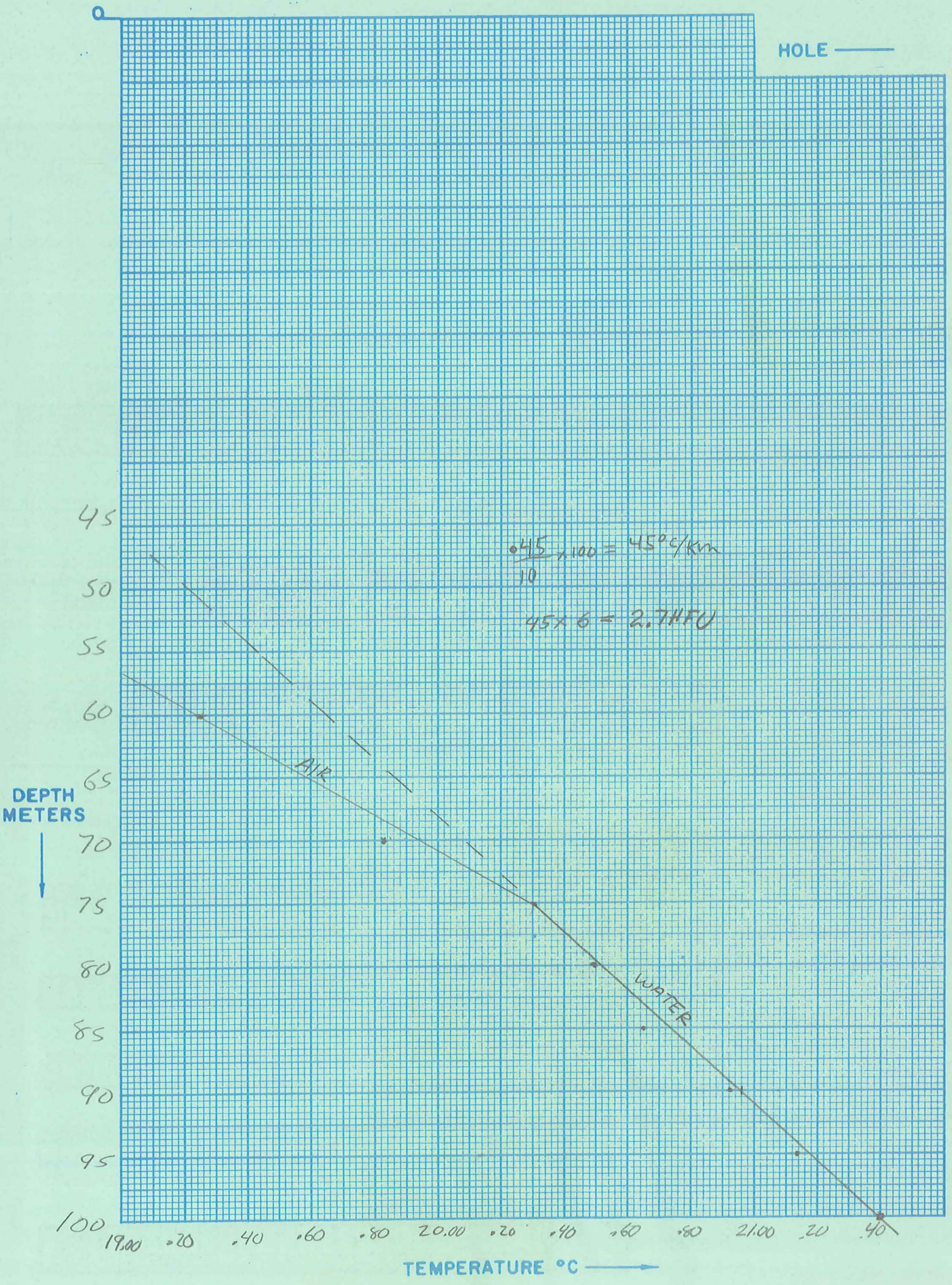
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

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

LOST PENCIL ΔT



$\frac{.45}{10} \times 100 = 45$°c/Km

45 × 6 = 2.7HFU

Lost Pencil ΔT

Date Logged: 6/22/80

ΔT Well No. 80-39

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
45							Limestone
50							
55							
60		19.25				↑	
			.58	58			
65					5	Air	
70		19.83				↑	
			.37	74			
75		20.20			5	Air	
			.30	60			
80		20.50			5	Air	
			.15	30			
85		20.65			5	Air?	
			.26	52			
90		20.91			6	H_2O?	
			.22	44			
95		21.13			6	H_2O	
			.27	54			
100		21.40			6	H_2O	

K=Conductivity

page ______ of ______

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ____ of ____

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

MISSLE ΔT

ΔT Well No. 80 40

Property-Project ______ Depth Logged 80 m

Map TULAROSA Ams Scale Ams Date: Drilled ______ Logged 6/23/80

State N MEX County Socorro , ______ of SE of SE of SE of Sec 17 T 5 S R 31E

Instrument ΔT 101 Operator Huntsman Elevation 4945 (ft/m)

Comments East of Entrance to missle Range - Ranch - windmill

Card A

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
1	1	1	4							2	3		0	6		8	0	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

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

Card B

Map Location * *

Scale Unit IN CM					Map Size (7.5, 15., 60.)					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
	C	M						.					.					.					.					.	

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 if meters

Segment 1 = Depths

Conductivity

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

Best cond. (-K)

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

Segment 3

Segment 4

Start →

Segment 5

Segment 6

Start →

Segment 7

Segment 8

Start →

Segment 9

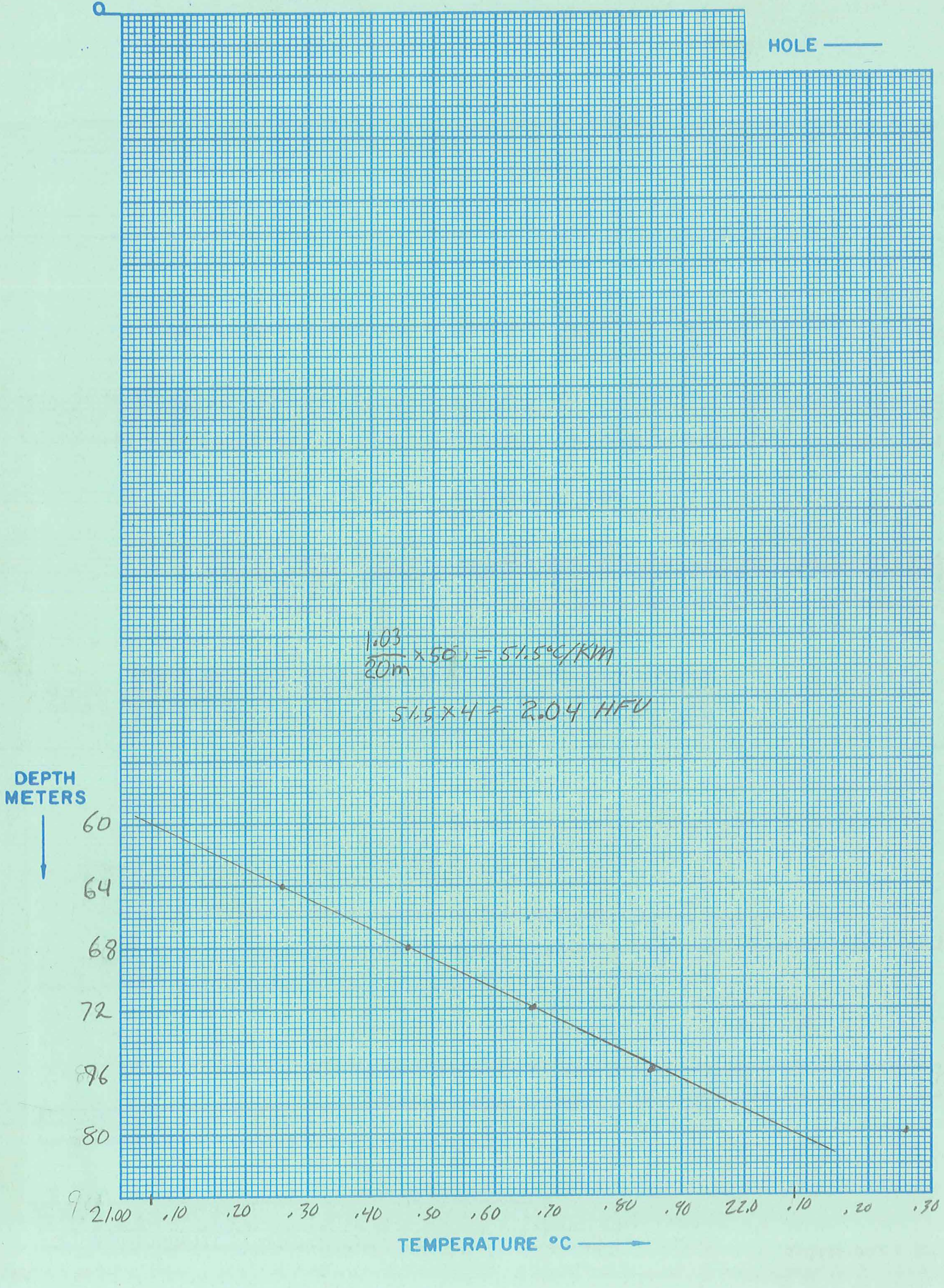
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

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



$\frac{1.03}{20m} \times 50 = 51.5$°C/KM

$51.5 \times 4 = 2.04$ HFU

MISSLE ΔT

Date Logged: ____________

ΔT Well No. 80-40

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
60							SS · Tan · F to m w/ COAL SEAM
64		21.26	.20	50°C/K		4	
68		21.46	.20	50°C/K		4	
72		21.66	.19	48°C/K		4	
76		21.85	.41	102°C/K		4	
80		22.26				4	

K=Conductivity

page ______ of ______

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

FUNNEL ΔT

ΔT Well No. 80-41

Property-Project 1114 Depth Logged

Map Magdelena Scale 15' Date: Drilled Logged 6/24/80

State NM County Socorro , of center of NE of NW of Sec 17 T 1S R 3W

Instrument DT-101 #3 Operator Bill Huntsman Elevation 5861 ([✓ ft] m)

Comments 6" cased windmill, functional w/ old gas pump.

JUSTIFY

Card A

Date Logged

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

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	1	1	4							2	4		0	6		8	0	C	M

Site Description	Operator	Editor	Drilled DA	MO	YR
21–50	51–55	56–60	61–62	63–65	66–68

(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
21–25	26–30	31–35	36–40	41–45	46–50
CM	15.	34.	00.	107.	15.

Use decimals

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

Northing	Easting	Elev		
51–60	61–70	71–75	76–79	80
40.5	11.	5861.		F

Use decimals

Write M if if meters

Segment 1 = Depths

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

Best cond. (−K)

Downward extrapolations (−ΔK)

Segment 2 Start →	End	K	ΔK
51–60	61–70	71–75	76–80

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

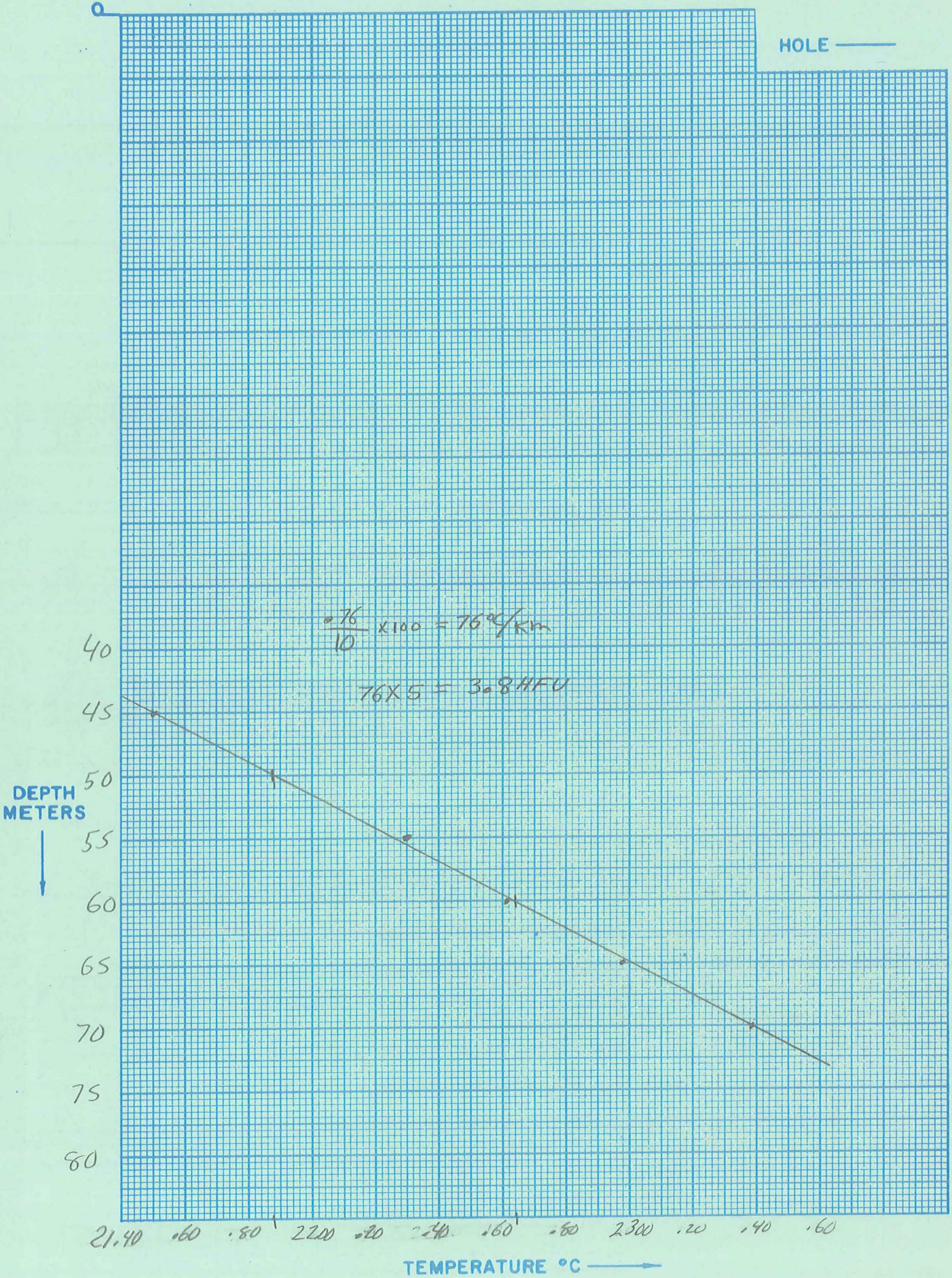
Segment 8 Start →

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



$\frac{.76}{10} \times 100 = 76°/km$

$76 \times 5 = 3.8$ HFU

Funnel ΔT

Date Logged: 6/24/80

ΔT Well No. 80-41

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
							Qal - ls & rhy. @ surface
							probably ls. @ depth.
40							
45		21.50					
			.80	80			
50							
55		22.30					
			.31	62			
60		22.61			5	Air	
			.37	74			
65		22.98			5	H2O?	
			.41	82			
70		23.39			5	H2O	

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ____ of ____

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

SHOTGUN AT

ΔT Well No. 80-42

Property-Project 1114 Depth Logged

Map Magdalena Scale 15' Date: Drilled Logged 6/24/80

State NM County Socorro , of NW of NW of NW of Sec 22 T 2S R 3W

Instrument DT-101 #3 Operator Huntsman Elevation 6025 [✓ ft] (m)

Comments 8" casing, abandoned well.

Card A

JUSTIFY

Date Logged

Proj No 1-4	Well No 5-10	DA 11-12	13	MO 14-15	16	YR 17-18	* 19	* 20
		24	▨	06	▨	80	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	63	MO 64-65	66	YR 67-68
	HUNTS	/		▨		▨	

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

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
22.5	15.	6025.	▨	F

Use decimals

Write M if if meters

Segment 1 = Depths

Start 21-30	End 31-40	Conductivity K 41-45	ΔK 46-50

Best cond. (-K)

Downward extrapolations (-Δ K)

Segment 2 Start 51-60	End 61-70	K 71-75	ΔK 76-80

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

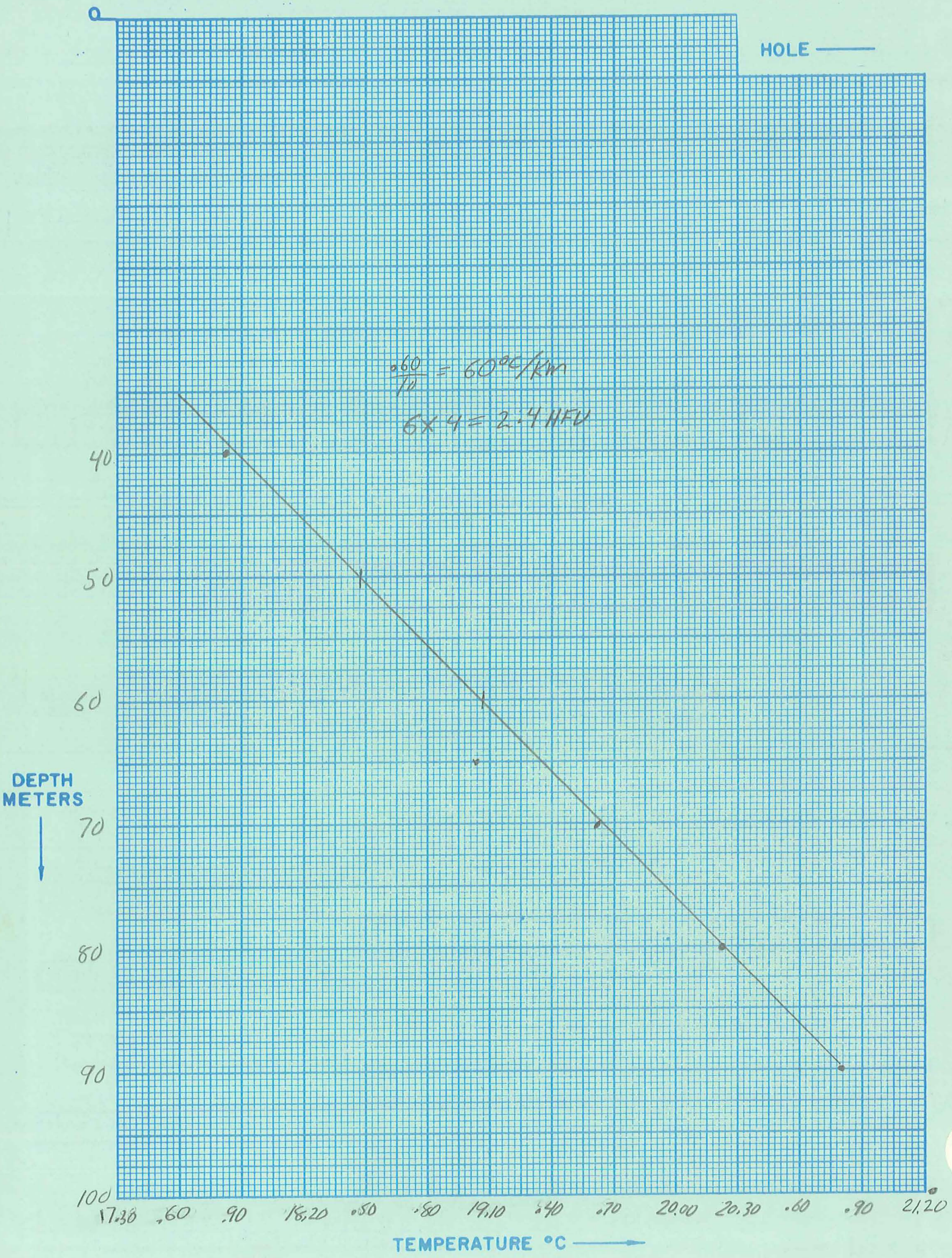
Segment 7

Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start = .999



$\frac{.60}{10} = 60\,^{\circ}\mathrm{C/km}$

$6 \times 4 = 2.4$ HFU

SHOT GUN ΔT

Date Logged: 6/24/80

ΔT Well No. 80-42

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
							Qal - volcanics - xline → intr. & extrusive Magdalena rangefront fault - ~ 1 mile W.
40		17.80					
			1.25	62.5			
50							
60		19.05					
			.57	57			
70		19.62			4		
			.60	60			
80		20.22			4	↑	
			.58	58			
90		20.80			4	Air	
			.41	41			
100		21.21					

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. _____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page _____ of _____

Δ

ΔT BLACK WELL

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-43

Property-Project ______ Depth Logged 110 m

Map Socorro AMS Scale 250,000 Date: Drilled ______ Logged 6/21/80

State N MEX County Socorro, ______ of SE of SE of SE of Sec 17 T 2N R 3E

Instrument ΔT 101 Operator HUNTSMAN Elevation 5150 (ft/m)

Comments Aband old Elec WELL -

Card A

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
																		C	M

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

Site Description (21–55) Operator (51–55) Editor (56–60) Drilled DA (61–62) MO (63–65) YR (66–68)

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

Card B

Map Location * *

Scale Unit IN CM					Map Size (7.5, 15., 60.)					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
	C	M				1	7	.	5			3	3	.	4	5		.			1	0	6	.	4	5		.	

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
					2	1	.								1	5	.			5	1	5	0	.					F

Use decimals

← Write M if if meters

Segment 1 = Depths Start (21–30) End (31–40) Conductivity K (41–45) ΔK (46–50)

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

Segment 2 Start → (51–60) End (61–70) K (71–75) ΔK (76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

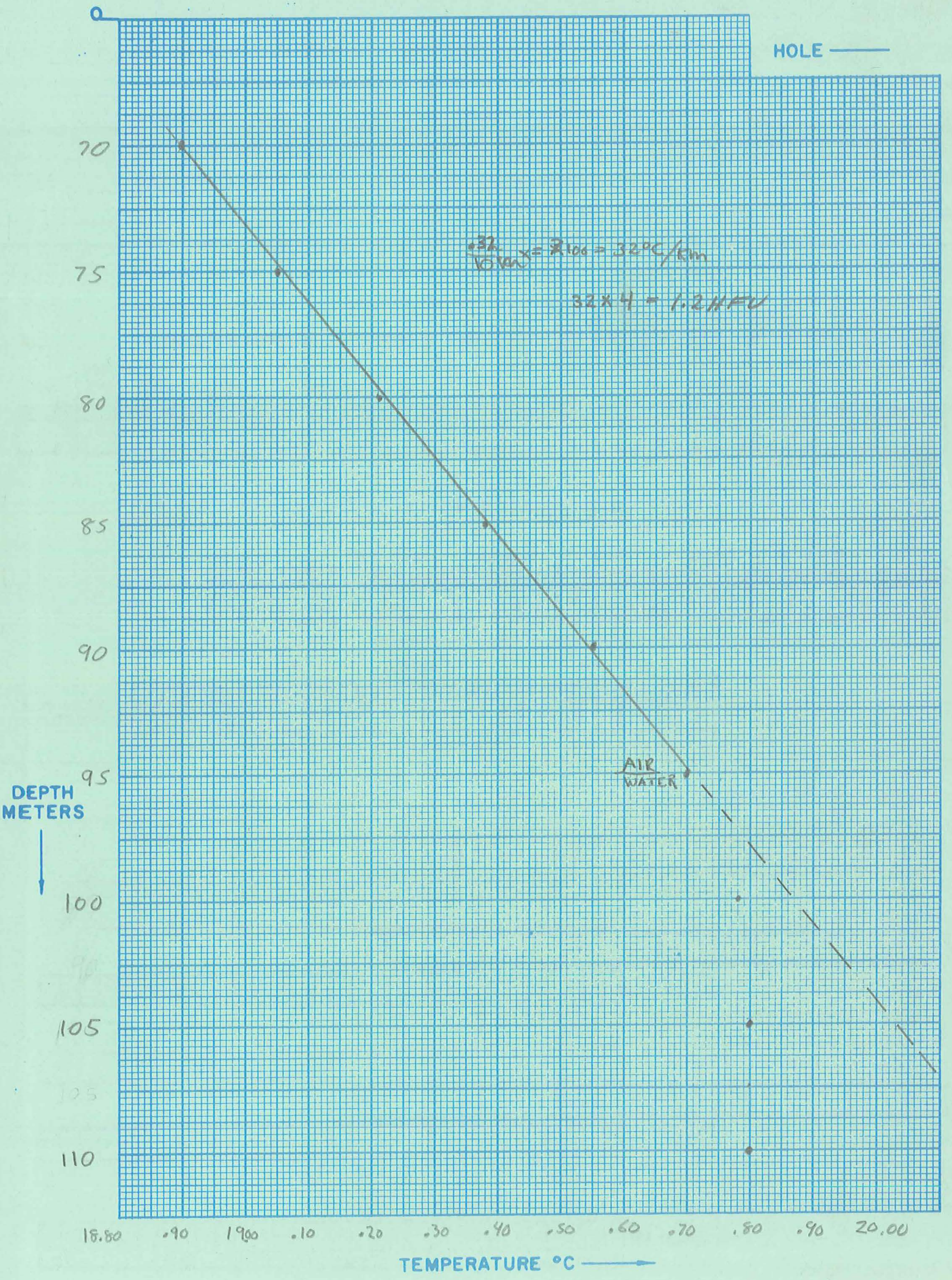
Segment 8 Start →

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


HOLE ——
0
70
75
80
85
90
95
100
105
110
DEPTH METERS
18.80
.90
19.00
.10
.20
.30
.40
.50
.60
.70
.80
.90
20.00
TEMPERATURE °C
.32/10m x= ~~2~~100 = 32°C/Km
32 x 4 = 1.2 HFU
AIR/WATER

ΔT BLACK WELL

Date Logged: 6/21/80

ΔT Well No. 80-43

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
70		18.90					
75		19.05	.15	30	4		
80		19.21	.16	32	4		
85		19.38	.17	34	4		
90		19.55	.17	34	4	AIR	S.S. A/U – MED to C Sm gravels SK
95		19.70	.15 WATER	30	4.5	WATER	
100		19.78	.08	16	4.5		
105	— TD —	19.80	.02	4	4.5		
110		19.80	.00		4.5		

K=Conductivity

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Buck ΔT

ΔT Well No. 80-44

Property-Project ______ Depth Logged 34m TD

Map Crosby Springs Scale 7.5 Date: Drilled ______ Logged 6-28-80

State N MEX County CATRON , ______ of ______ of SE of NW of Sec 16 T 1S R 10W

Instrument DT 101 Operator Huntsman Elevation 7820 (ft/m)

Comments Windmill - 6 inch casing

Card A

JUSTIFY

Date Logged

Proj No (1–4)	Well No (5–10)	DA (11–12)	13	MO (14–15)	16	YR (17–18)	* 19	20
1114		28	▨	06	▨	80	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)	63	Drilled MO (64–65)	66	Drilled YR (67–68)
	HUNTS	/		▨		▨	

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

Card B

Map Location **

21	Scale Unit IN CM (22–23)	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) **
▨	cm	▨	7.5	34.	07 .	108.0	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
44.	43.5	7820.	▨	F

Use decimals

← Write M if if meters

Segment 1 = Depths

Conductivity

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

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → (51–60)	End (61–70)	K (71–75)	ΔK (76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

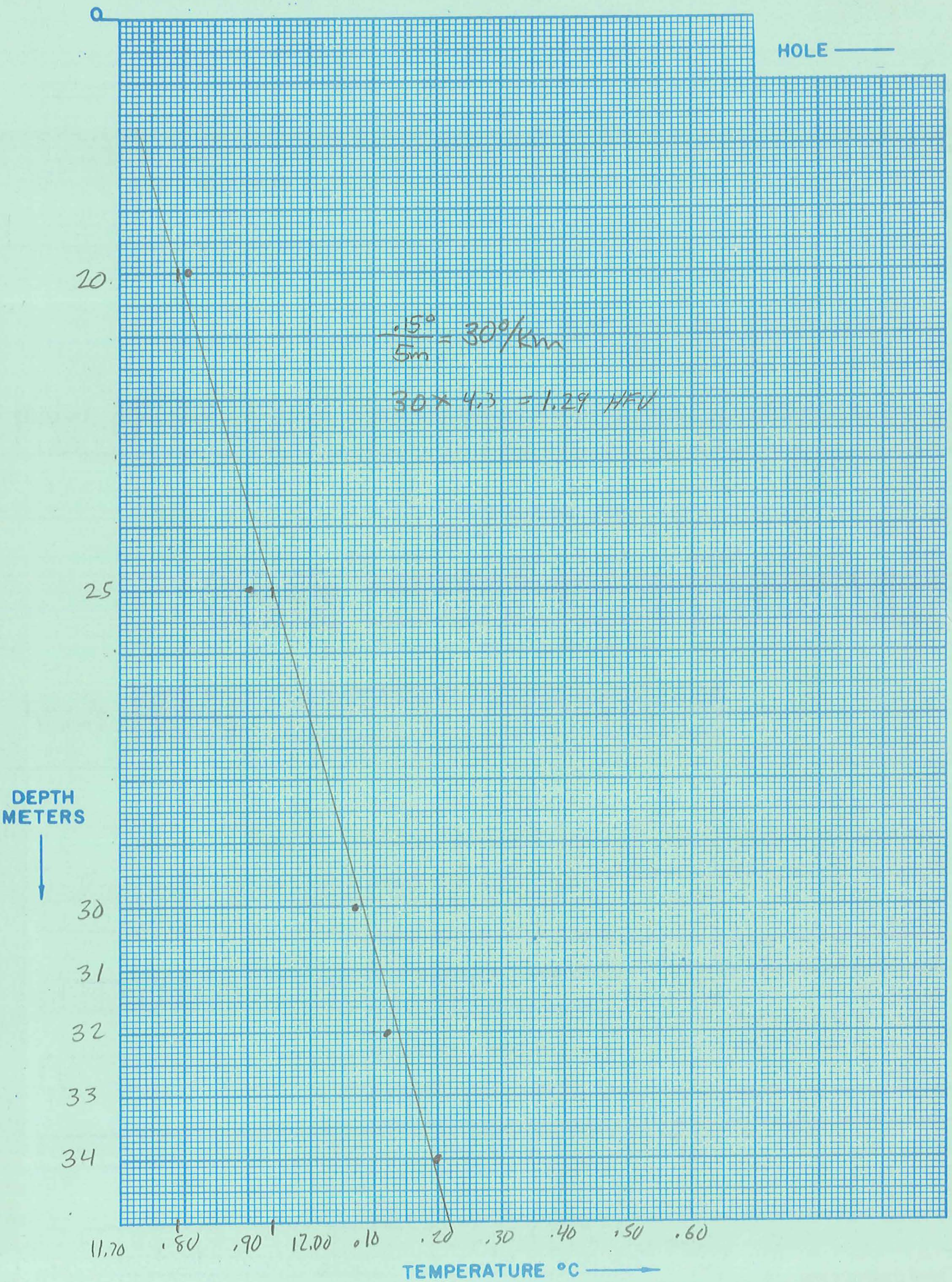
Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start = .999

HOLE ———



$\frac{.15^\circ}{5m} = 30^\circ/km$

$30 \times 4.3 = 1.29$ HFU

BUCK ΔT

Date Logged: ______________

ΔT Well No. 80-44

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		11.81	.09	18°C	H_2O		
25		11.90	.17	34°C	↓	4.3	
30		12.07	.05	25°C		4.3	
32		12.12	.08	40°C		4.3	
34		12.20				4.3	
36			TD				Alw- Rholylitic tuffs Andesite
38		12.24					
40		12.24					
42		12.24					

K=Conductivity

page ______ of ______

Date Logged: ____________________ ΔT Well No. _____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page _____ of _____

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG Broken ΔT

ΔT Well No. 80 - 45

Property-Project ____ Depth Logged 35 - 33.5 TD

Map Sugarloaf Mtn Scale 7.5 Date: Drilled ____ Logged 6-28-80

State N MEX County CATRON , ____ of SE of NE of SE of Sec 16 T 3S R 11W

Instrument ΔT 101 Operator Huntsman Elevation 7100 (ft/m)

Comments WINDMILL - BROKEN DOWN - WOOD -

Card A

JUSTIFY

Proj No (1-4)	Well No (5-10)	Date Logged DA (11-12)	MO (13-15)	YR (16-18)	19*	20*
1 1 1 4		28	06	80	C	M

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

Site Description (21-50)	Operator (51-55)	Editor (56-60)	Drilled DA (61-63)	MO (64-66)	YR (67-68)
	HUNTS	/			

(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	7.5	34.	00 .	108.	00 .

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)	80
20.5	8.	7100.	F

Use decimals

Write M if if meters

Segment 1 = Depths

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

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → (51-60) | End (61-70) | K (71-75) | ΔK (76-80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

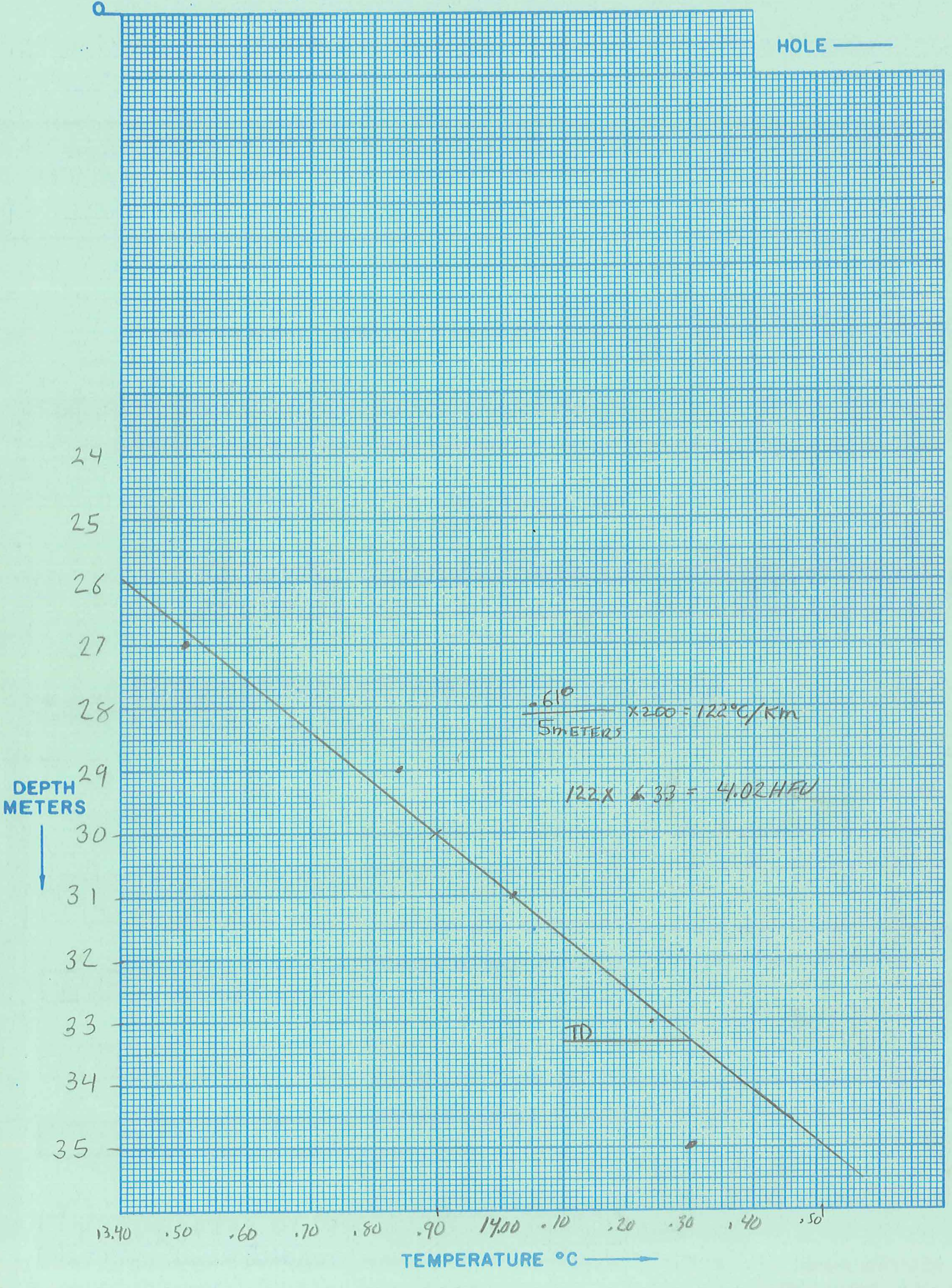
Segment 7

Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start =.999



$$\frac{.61^{\circ}}{5\text{METERS}} \times 200 = 122^{\circ}\text{C/Km}$$

$122 \times 3.3 = 4.02$ HFU

Broken ΔT

Date Logged: ____________________ ΔT Well No. 80-45

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
25						↑	
27		13.50			3.3	AIR	
29		13.84	.34	170°c/km	3.3	H_2O	S.S. AN large Andesite rxs Basalt RXS
31		14.02	.18	90°c/km	3.3	↓	
33		14.24	.22	110°c/km	3.3		
35		14.3	.06	30	3.45		

K= 3.3 AS MEASURED BY USGS

K=Conductivity

page ______ of ______

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ____ of ____

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

MALPAIS ΔT

ΔT Well No. 80-46

Property-Project ______ Depth Logged 50

Map ROSWELL Scale AMS Date: Drilled ______ Logged 2/27/80

State N MEX County LIN , ___ of ___ of ___ of ___ of Sec 2 T 6S R 9E

Instrument DT 101 Operator Huntsman Elevation 5500 (ft/m)

Comments Windmill 8" Casing - Northwest of malpais

Card A

JUSTIFY

Date Logged

Proj No (1–4)	Well No (5–10)	DA (11–12)	MO (14–15)	YR (17–18)	* 19	20
1114		27	06	80	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 (64–65)	Drilled YR (67–68)
	HUNTS	/			

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

Card B

Map Location * *

Scale Unit IN CM (22–23)	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	125.	33.	.	106.	.

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)	80
36.	.5	5500.	F

Use decimals

Write M if if meters

Segment 1 = Depths Start (21–30) End (31–40) Conductivity K (41–45) ΔK (46–50)

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → (51–60) End (61–70) K (71–75) ΔK (76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

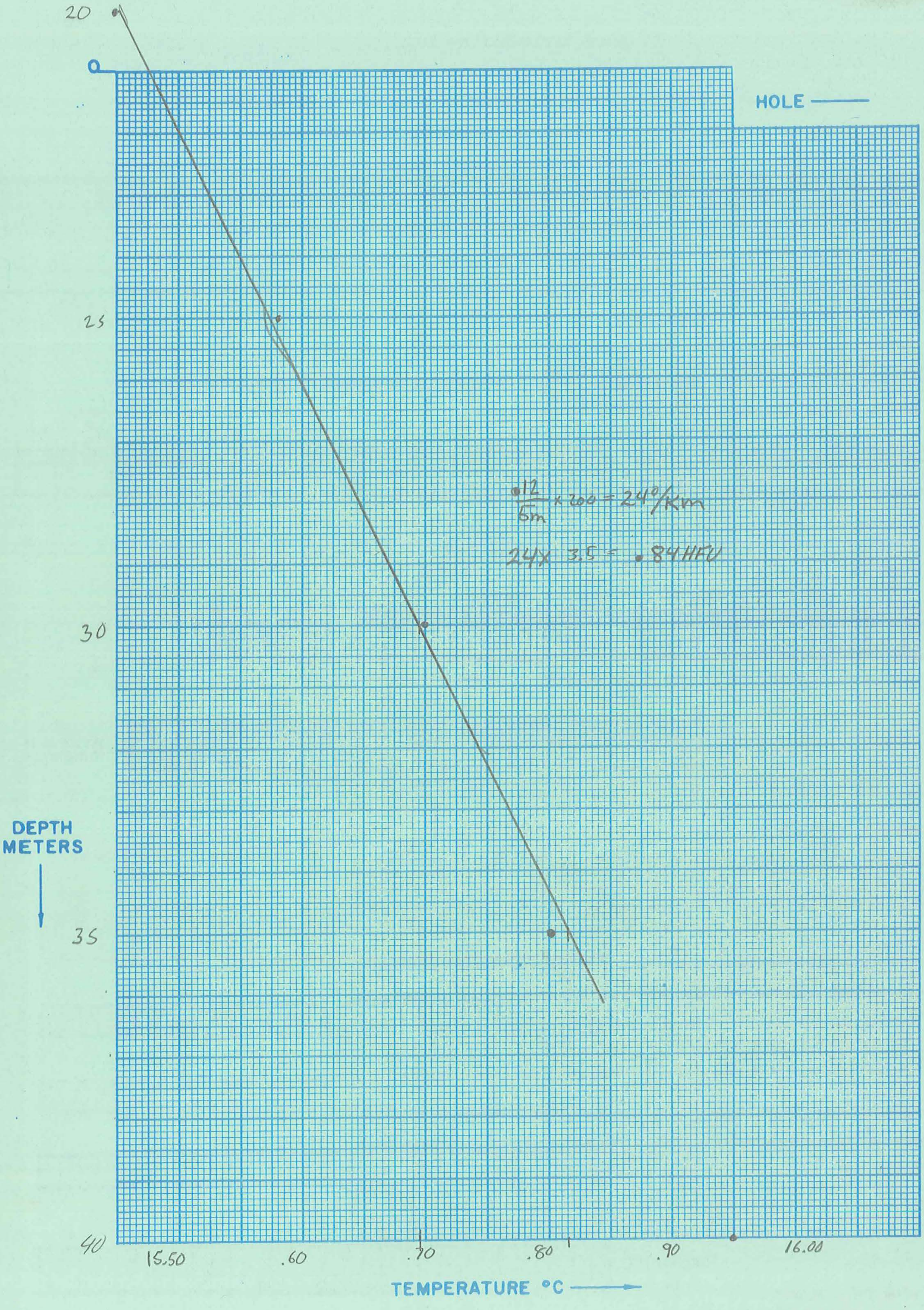
Segment 7

Segment 8 Start →

Segment 9 (21–50)

Segment 10 Start → (51–80)

After final segment Start = .999



$\frac{.12}{5m} \times 200 = 24°/Km$

$24 \times 3.5 = .84$ HFU

MALPAIS ΔT

Date Logged: 2-27/80

ΔT Well No. 80-46

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		15.45					
25		15.58	.13	26°/Km	3.5		
30		15.70	.12	24°/Km	3.5		
35		15.80	.10	20°/Km	3.5	↑	55 Gravels Close to malpais
40		15.95	.15	30°/Km		Air	
42						H_2O	
44						↓	
46		16.00					
48		16,00					
50		16.05					

K=Conductivity

page ______ of ______

Date Logged: ____________________

ΔT Well No. ______________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page _____ of _____

AMAX EXPLORATION, INC. CAPITAN ΔT

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-47

Property-Project ______ Depth Logged 30m

Map CAPITAN Scale 15.0 Date: Drilled ______ Logged 6/26/80

State N MEX County LINCOLN , ______ of NW of NW of NW of Sec 31 T 8S R 15E

Instrument DT 101 Operator SHENKER Elevation 6651 (ft/m)

Comments WINDMILL 5 inch casing

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
										2	6	▨	0	6	▨	8	0	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
																																			/							▨			▨		

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

Card B

Map Location **

Scale Unit IN CM					Map Size (7.5, 15., 60.)					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
▨	C	m	▨	▨		1	5	.						.				.			1	0	5	.	3	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
							.										.			6	6	5	1	.	▨	▨	▨	▨	F

Use decimals

Write M if if meters

Segment 1 = Depths

Conductivity

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

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 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

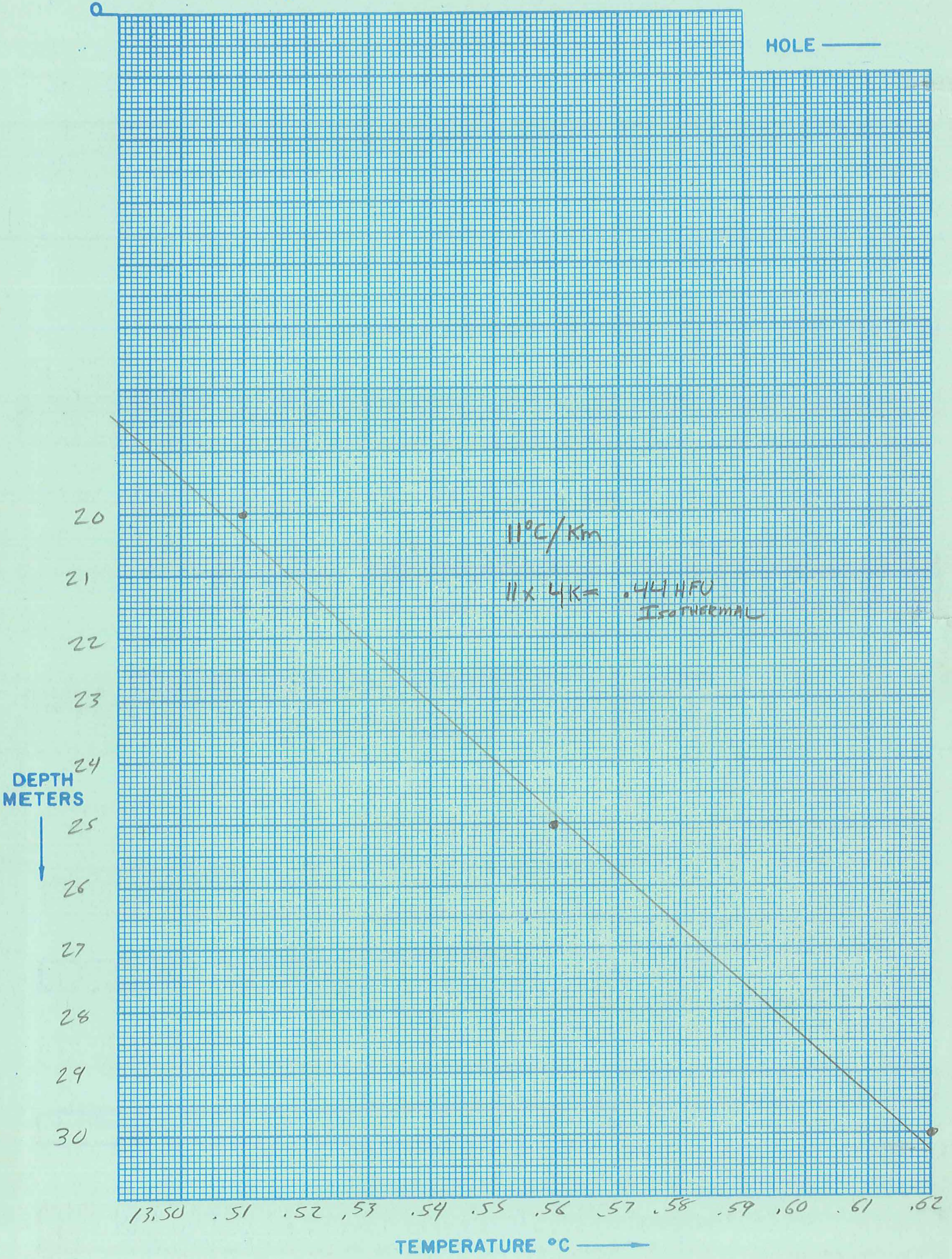
Segment 9

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



11°C/Km

11 x 4K = .44 HFU
Isothermal

Date Logged: 6/26/80

ΔT Well No. 80-47

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
15					4		S.S. VF - Gravels - mixed
20		13.51			4		
			.05	10°/Km			
25		13.56			4		
			.06	12°/Km			
30		13.62			4		

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

HIDDEN ΔT

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80 - 48

roperty-Project 1114 Depth Logged 40 m

Map BELEN NW Scale 1:24000 Date: Drilled ______ Logged 6/21/80

State NM County VALENCIA , SW ¼ of SE ¼ of SW ¼ of NE ¼ of Sec 13 T 6N R 2W

Instrument DT 101 (JL) Operator J. L. Elevation 5118 ([✓ ft] m)

Comments ABANDONNED WOODEN WINDMILL; OPEN 5½" PIPE (SOCORRO AMS)

JUSTIFY

Card A

Date Logged

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

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

	Site Description (columns 21–50)	Operator					Editor					Drilled DA			MO			YR	
Column	21–50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
Entry					J	L	/							▨			▨		

(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 **				
Column	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
Entry	▨	C	M	▨	▨			7	.	5			3	4	.		3	7	.	5		1	0	7	.			0	.	0

Use decimals

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

	Northing										Easting										Elev									
Column	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
Entry						5	6	.	1	9							1	.	1	4	5	1	1	8	.	▨	▨	▨	▨	F

Use decimals

Write M if if meters

Segment 1 = Depths

Start (columns 21–30) End (columns 31–40)

Conductivity K (columns 41–45) ΔK (columns 46–50)

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → (columns 51–60) End (columns 61–70) K (columns 71–75) ΔK (columns 76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

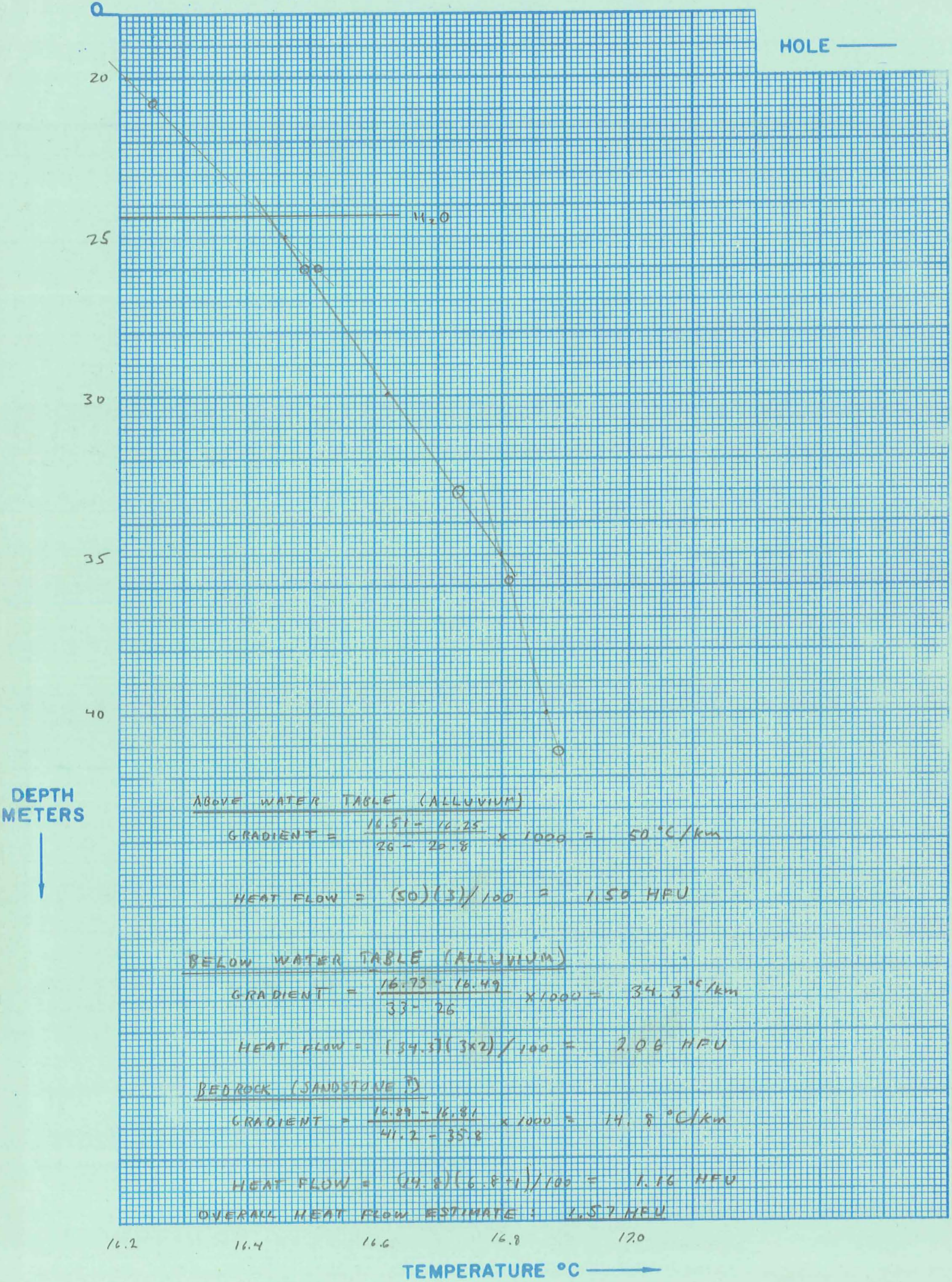
Segment 7

Segment 8 Start →

Segment 9 (columns 21–50)

Segment 10 Start → (columns 51–80)

After final segment Start = .999



ABOVE WATER TABLE (ALLUVIUM)

$$\text{GRADIENT} = \frac{16.51 - 16.25}{26 - 20.8} \times 1000 = 50\ °C/km$$

HEAT FLOW = (50)(3)/100 = 1.50 HFU

BELOW WATER TABLE (ALLUVIUM)

$$\text{GRADIENT} = \frac{16.73 - 16.49}{33 - 26} \times 1000 = 34.3\ °C/km$$

HEAT FLOW = (34.3)(3×2)/100 = 2.06 HFU

BEDROCK (SANDSTONE ?)

$$\text{GRADIENT} = \frac{16.89 - 16.81}{41.2 - 35.8} \times 1000 = 14.8\ °C/km$$

HEAT FLOW = (14.8)(6.8+1)/100 = 1.16 HFU

OVERALL HEAT FLOW ESTIMATE : 1.57 HFU

3 MIN. EQUIL. TIME

4.0
20.3
24.3

HIDDEN ΔT

Date Logged: 6/21/80

ΔT Well No. 80-48

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O-[✓ Air]	Lithology, etc.
20		16.21	0.25	50.0	3.0	↓	LIGHT BROWN SANDY Qal
25		16.46	0.18	36.0	6.0		WITH ROUNDED PEBBLES UP
30		16.62	0.18	36.0	6.0	H_2O ↓	TO 4cm AND LARGER (UP
35		16.80	0.07	14.0	6.0		TO .75 m), ANGULAR CHUNKS
40		16.87			7.8		OF RED SANDSTONE, QUARTZITE,
							AND BASALT. HILLS ~2km
							TO NORTH ARE BASALT
							FLOW CAPPING SANDSTONE
							H_2O @ 24.3 m

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ______________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

FLACK ΔT

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-49

Property-Project 1114 Depth Logged 52.2 m

Map BELEN NW Scale 1:24000 Date: Drilled ____ Logged 6/21/80

State NM County VALENCIA , NE¼ of NE¼ of NE¼ of NE¼ of Sec 20 T 5N R 1W

Instrument DT 101 (JL) Operator J. L. Elevation 5192 ([✓ ft] m)

Comments WINDMILL UP, BUT WELL CONVERTED TO "DONKEY" PUMP (SOCORRO AMS)

JUSTIFY

Card A

Date Logged

Proj No (1–4)	Well No (5–10)	DA (11–12)	13	MO (14–15)	16	YR (17–18)	19*	20*
1114		21	▨	06	▨	80	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)	63	Drilled MO (64–65)	66	Drilled YR (67–68)
	JL	/		▨		▨	

(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 ▨▨	7.5	34.	37.5	107.	0.0

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
12.41	16.22	5192.	▨	F

Use decimals

80: ← Write M if if meters

Segment 1 = Depths Start (21–30) End (31–40) Conductivity K (41–45) ΔK (46–50)

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → (51–60) End (61–70) K (71–75) ΔK (76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

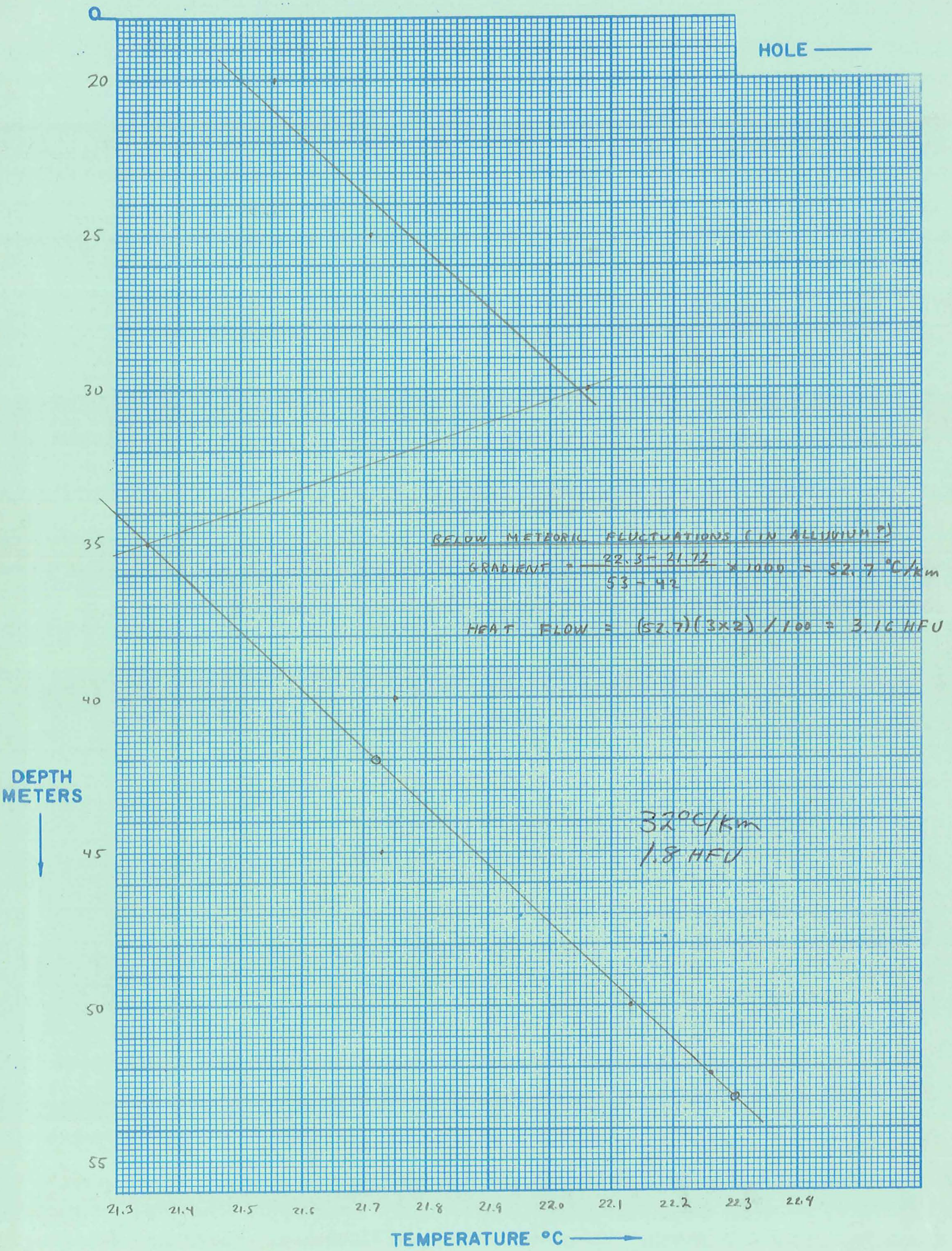
Segment 7

Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start = .999



BELOW METEORIC FLUCTUATIONS (IN ALLUVIUM?)

$$\text{GRADIENT} = \frac{22.3 - 21.72}{53 - 42} \times 1000 = 52.7\ °C/km$$

HEAT FLOW = (52.7)(3×2) / 100 = 3.16 HFU

32°C/km
1.8 HFU

5 min equil. time

FLACK ΔT

Date Logged: 6/21/80

ΔT Well No. 80-49

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	[✓ H_2O] ~~Air~~	Lithology, etc.
20		21.55			6.0		LIGHT BROWN SANDY Qal
			0.16	16			
25		21.71			6.0		W/ ROUNDED PEBBLES &
			0.35	35			
30		22.06			6.0		COBBLES (UP TO 14 cm) OF
			- 0.71	-71			
35		21.35			6.0		QUARTZITE, LIMESTONE, &
			0.40	40			
40		21.75			6.0		BASALT. H_2O @ 5.5m
			-0.02	-2			
45		21.73			6.0		
			0.40	40			
50		22.13			6.0		
			0.13	59.1			
52.2		22.26			6.0		

K=Conductivity

page ____ of ____

Date Logged: ____________________

ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ____ of ____

AMAX EXPLORATION, INC. HUNING ΔT

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-50

Property-Project 1114 Depth Logged 208.3 m

Map BELEN SW Scale 1:24000 Date: Drilled ______ Logged 6/21/80

State NM County SOCORRO, NE ¼ of NW ¼ of NW ¼ of NE ¼ of Sec 15 T 4N R 1E

Instrument DT 101 (JL) Operator J. L. Elevation 5038 [✓ ft] (m)

Comments 10-12' BLADES, 9" CASING, OWNED BY JACK HUNING (SOCORRO AMS)
WAS STOPPED AT ARRIVAL, BUT ONLY BECAUSE LITTLE WIND - HAD BEEN PUMPING; NEEDED JACK TO GET IN;
WINDMILL PUMPED INTERMITTENTLY DURING PROBING

Date Logged

JUSTIFY

Card A

Proj No (1-4)	Well No (5-10)	DA (11-12)	MO (14-15)	YR (17-18)	* (19-20)
1114		21	06	80	CM

*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)
	JL	/			

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

Card B

Map Location **

Scale Unit IN CM (22-23)	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	7.5	34.	30.0	107.	0.0

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
36.85	27.27	5038.		F

Use decimals

← Write M if if meters

Segment 1 = Depths Start (21-30), End (31-40); Conductivity K (41-45), ΔK (46-50)

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

Segment 2 Start → (51-60), End (61-70), K (71-75), ΔK (76-80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

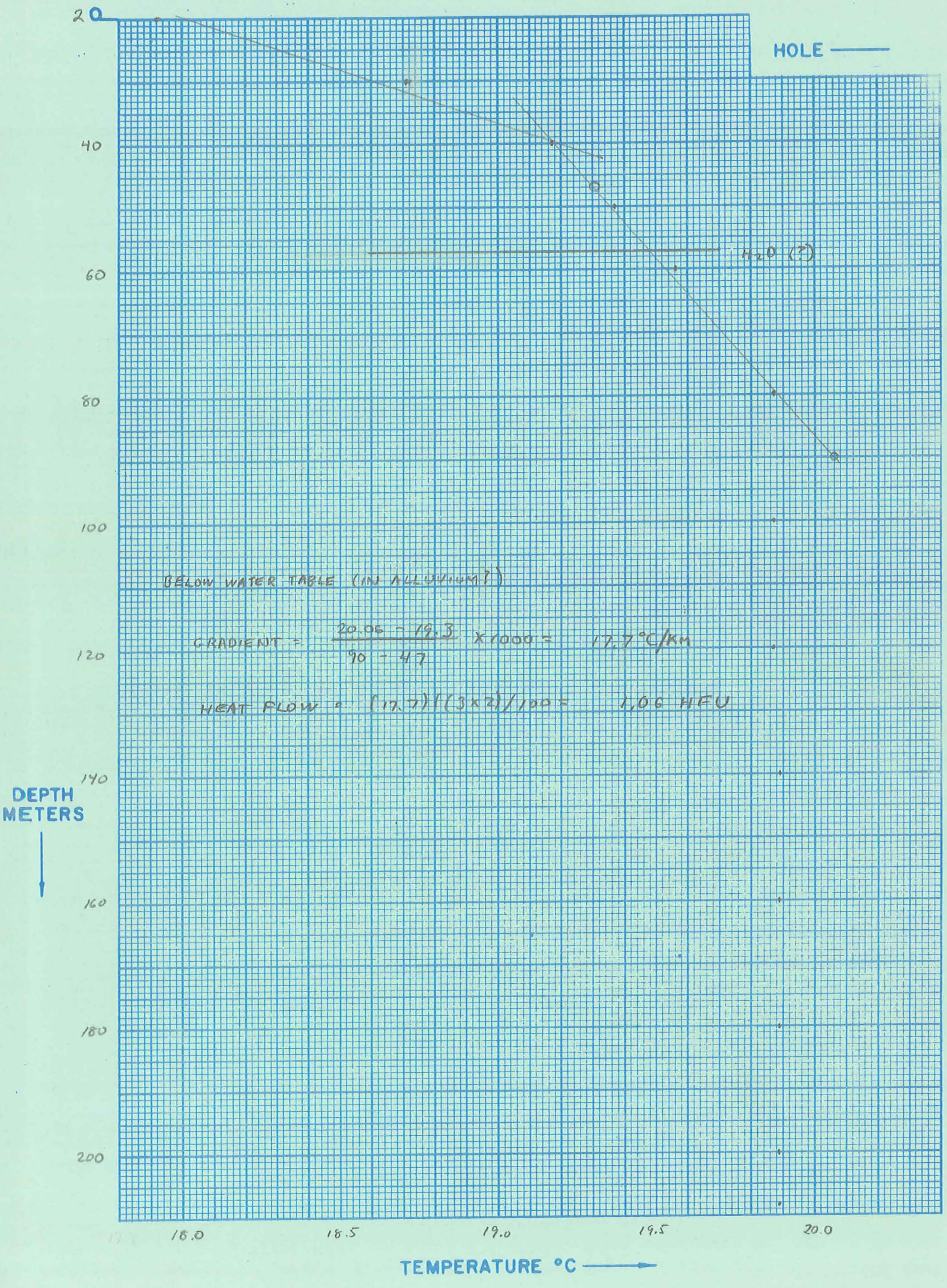
Segment 7

Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start = .999



BELOW WATER TABLE (IN ALLUVIUM?)

$$\text{GRADIENT} = \frac{20.06 - 19.3}{90 - 47} \times 1000 = 17.7\ °C/KM$$

HEAT FLOW = (17.7)((3×2)/100 = 1,06 HFU

3 MIN. EQUIL. TIME

HUNING ΔT

Date Logged: 6/21/80

ΔT Well No. 80-50

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	~~H_2O~~ [✓ Air]	Lithology, etc.
20		17.92					MEDIUM-BROWN, MEDIUM-
			0.79	79			
30		18.71					GRAINED SANDY Qal
			0.46	46			
40		19.17					WITH PEBBLES & COBBLES
			0.20	20			
50		19.37					(UP TO 10 CM) OF
			0.19	19		H_2O	
60		19.56					LS, BASALT, & MEDIUM-
			0.31	15.5			
80		19.87					GRAINED GRANITE
			0	0			
100		19.87					
			0	0			
120		19.87					H_2O @ TD-27.8m
			0.02	1.0			
140		19.89					ASSUMIN TD = 80m
			0	0			
160		19.89					⇒ WATER TABLE @ 57.2 m
			0	0			
180		19.89					
			0	0			
200		19.89					
			0	0			
208.3		19.89					

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

SABINAL ΔT

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-51

Property-Project 1114 Depth Logged 36.0 m

Map VEGUITA QUAD Scale 1:2400 Date: Drilled ______ Logged 6/22/80

State NM County SOCORRO, NW¼ of NE¼ of SE¼ of NW¼ of Sec 2 T 3N R 1E

Instrument DT 101 (JL) Operator J.L. Elevation 4859 [✓ ft] ~~m~~

Comments WOODEN WINDMILL, DISCONNECTED; HOOKED UP TO ELECTRIC PUMP AT SURFACE (NOT RUNNING) 5" CASING (SOCORRO AMS)

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	1	1	4							2	2	▨	0	6	▨	8	0	C	M

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

Site Description (columns 21–50): blank

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

Operator					Editor					Drilled DA			MO			YR	
51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
			J	L	/							▨			▨		

Card B

Map Location **

Scale Unit IN CM					Map Size (7.5, 15., 60.)					N Lat Degree					Min				
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
▨	C	M	▨	▨			7	.	5			3	4	.		3	0	.	0

W Long Degree					Min				
41	42	43	44	45	46	47	48	49	50
	1	0	6	.		5	2	.	5

Use decimals

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

Northing										Easting									
51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70
						8	.	1	0						2	4	.	8	7

Elev									
71	72	73	74	75	76	77	78	79	80
4	8	5	9	.	▨	▨	▨	▨	F

Use decimals

← Write M if if meters

Segment 1 = Depths Start (21–30), End (31–40); Conductivity K (41–45), ΔK (46–50)

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → (51–60), End (61–70), K (71–75), ΔK (76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

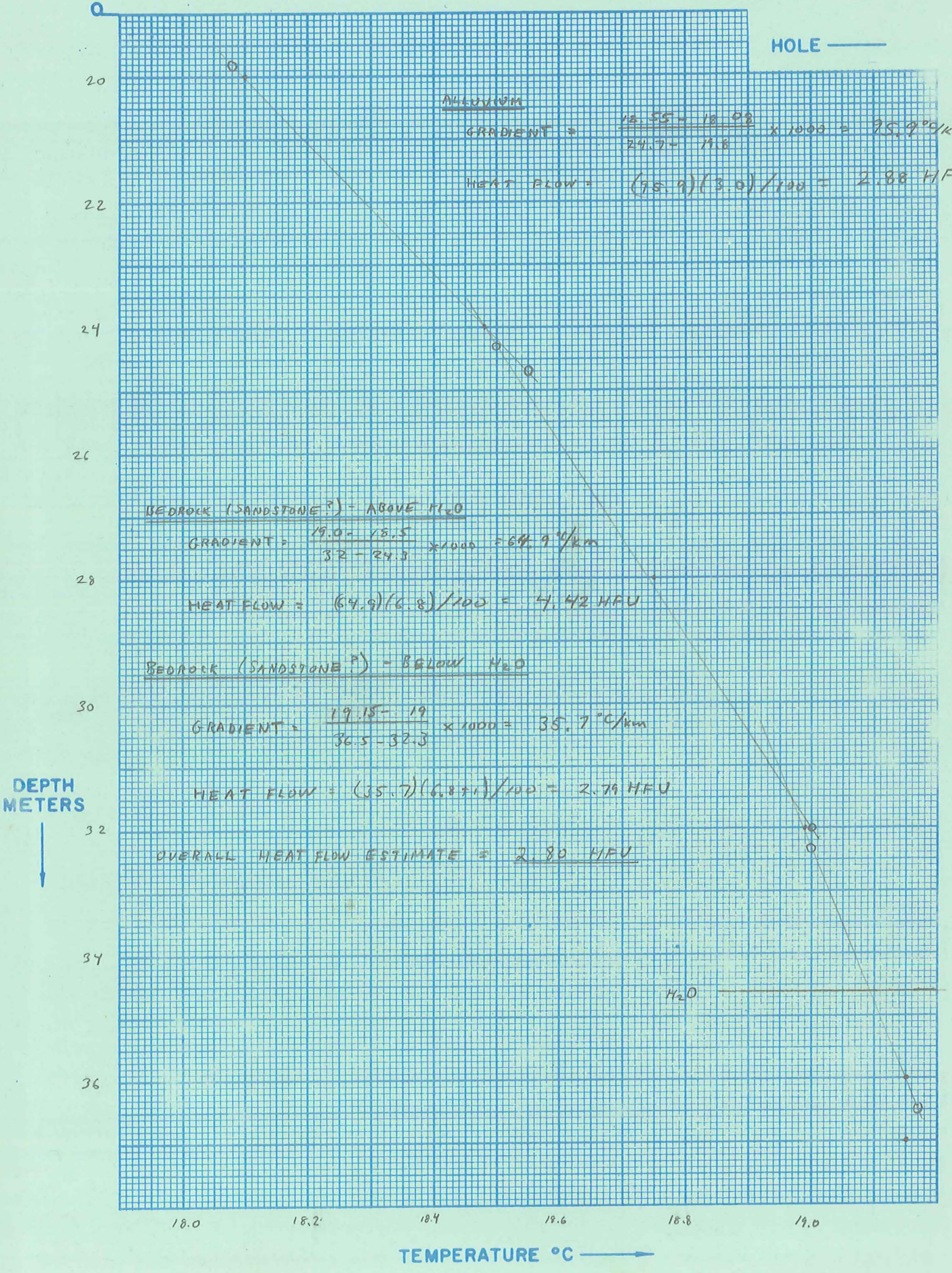
Segment 7

Segment 8 Start →

Segment 9 (21–50)

Segment 10 Start → (51–80)

After final segment Start = .999



ALLUVIUM

GRADIENT = $\frac{18.55 - 18.08}{24.7 - 19.8}$ x 1000 = 95.9°C/km

HEAT FLOW = (95.9)(3.0)/100 = 2.88 HFU

BEDROCK (SANDSTONE ?) - ABOVE H_2O

GRADIENT = $\frac{19.0 - 18.5}{32 - 24.3}$ *1000 = 64.9 °/km

HEAT FLOW = (64.9)(6.8)/100 = 4.42 HFU

BEDROCK (SANDSTONE ?) - BELOW H_2O

GRADIENT = $\frac{19.15 - 19}{36.5 - 32.3}$ x 1000 = 35.7 °C/km

HEAT FLOW = (35.7)(6.8+1)/100 = 2.79 HFU

OVERALL HEAT FLOW ESTIMATE = 2.80 HFU

3 MIN EQUIL TIME

SABINAL ΔT

Date Logged: 6/22/80

ΔT Well No. 80-51

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	~~H_2O~~ [✓ Air]	Lithology, etc.
20		18.10			3.0		LIGHT BROWN SANDY Qal
			0.38	95.0			
24		18.48			3.0		WITH PEBBLES & COBBLES
			0.27	67.5			
28		18.75			6.8		(UP TO 15 cm) OF QUARTZITE
			0.24	60.0			
32		18.99			6.8		AND MEDIUM GRAINED
			0.16	40.0			
36		19.15			6.8 7.8	↓ H_2O	SANDSTONE WITH CALCITE
			0	0			
37		19.15			7.8	↓	CEMENT. THE LATTER
							PREDOMINATES AND IS
							PROBABLY THE BEDROCK
							H_2O @ 34.6 m

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

MARIANO ΔT

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-52

Property-Project 1114 Depth Logged 50.0

Map LA JOYA NW Scale 1:24000 Date: Drilled ____ Logged 6/22/80

State NM County SOCORRO, SE¼ of SE¼ of NW¼ of NW¼ of Sec 14 T 3N R 1W

Instrument DT 101 (JL) Operator JL Elevation 4889 (ft ~~m~~)

Comments 8' BLADES, 6" CASING (SOCORRO AMS)

JUSTIFY

Card A

Proj No (1–4)	Well No (5–10)	Date Logged DA (11–12)	MO (14–15)	YR (17–18)	19 *	20
1114		22	06	80	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)
	JL	/			

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

Card B

Map Location **

Scale Unit IN CM (22–23)	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	7.5	34.	22.5	107.	0.0

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)	80
52.75	31.62	4889.	F

Use decimals

← Write M if if meters

Segment 1 = Depths Start (21–30) End (31–40) Conductivity K (41–45) ΔK (46–50)

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

Segment 2 Start → End (51–60) K (61–70) ΔK (71–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

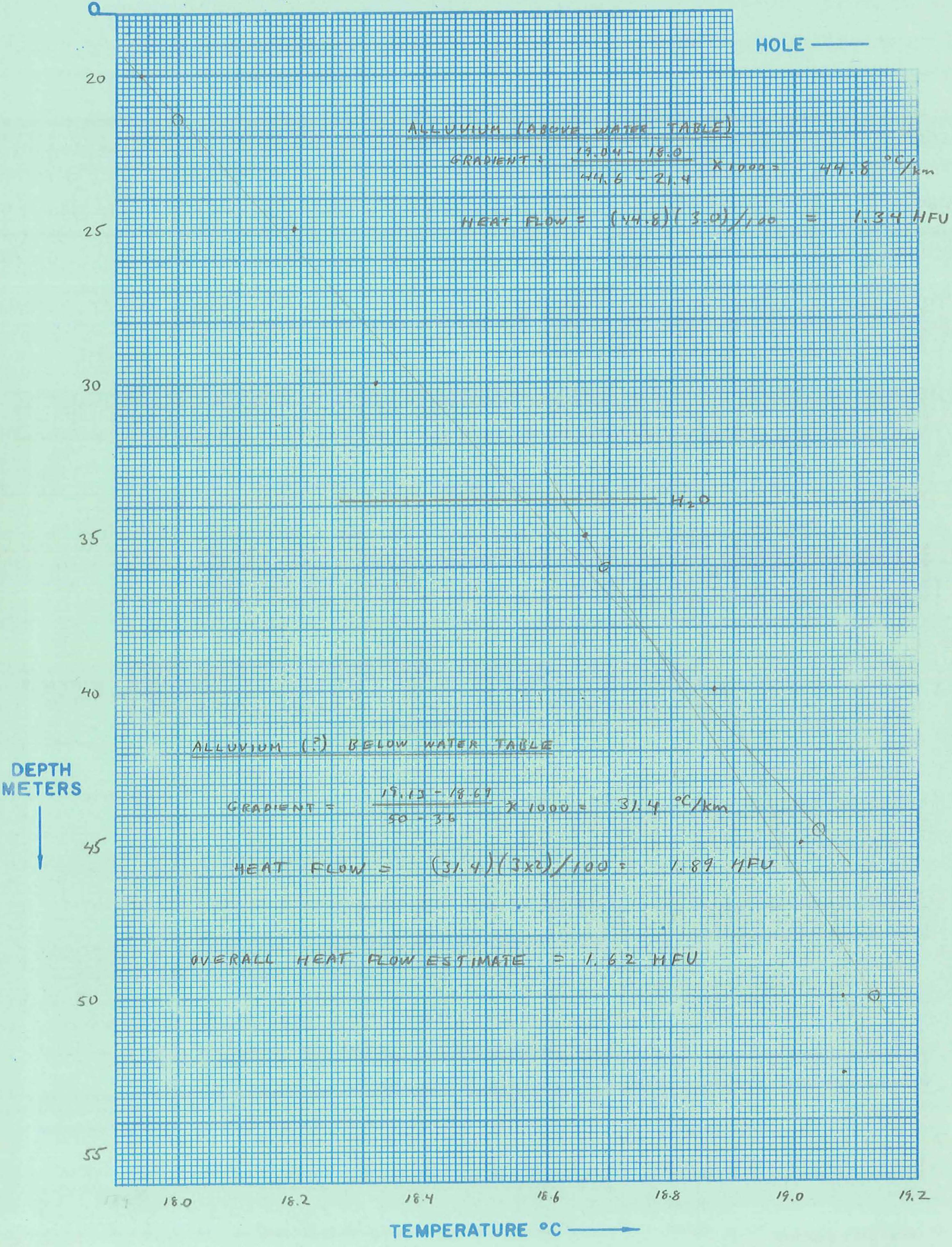
Segment 7

Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment
Start = .999



ALLUVIUM (ABOVE WATER TABLE)

$$\text{GRADIENT} = \frac{19.04 - 18.0}{44.6 - 21.4} \times 1000 = 44.8\ °C/km$$

$$\text{HEAT FLOW} = (44.8)(3.0)/100 = 1.34\ HFU$$

ALLUVIUM (?) BELOW WATER TABLE

$$\text{GRADIENT} = \frac{19.13 - 18.69}{50 - 36} \times 1000 = 31.4\ °C/km$$

$$\text{HEAT FLOW} = (31.4)(3 \times 2)/100 = 1.89\ HFU$$

OVERALL HEAT FLOW ESTIMATE = 1.62 HFU

3 MIN. EQUIL. TIME

MARIANO ΔT

Date Logged: 6/22/80

ΔT Well No. 80-52

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	~~H_2O~~ Air	Lithology, etc.
20		17.94	0.25	50.0	3.0		LIGHT BROWN SANDY Qal
25		18.19	0.13	26.0	3.0		WITH PEBBLES & COBBLES
30		18.32	0.34	68.0	3.0		(UP TO 15 CM) OF
35		18.66	0.21	42.0	3.0	H_2O	QUARTZITE, SANDSTONE,
40		18.87	0.14	28.0	6.0		LIMESTONE, AND GRANITE,
45		19.01	0.07	14.0	6.0		WITH QUARTZITE MOST
50		19.08	0	0	6.0		ABUNDANT.
52.5		19.08			6.0		
							H_2O @ 33.8 m

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

SMOKE ΔT

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-53

Property-Project 1114 Depth Logged 90.0

Map LA JOYA NW Scale 1:24000 Date: Drilled ______ Logged 6/23/80

State NM County Socorro, NW 1/4 of NW 1/4 of SW 1/4 of SW 1/4 of Sec 21 T 3N R 1W

Instrument DT 101 (JL) Operator JL Elevation 5125 ([✓ ft] ~~m~~)

Comments WINDMILL WITH 10' BLADES, 6" CASING, 2 CORRUGATED YELLOW TANKS (SOCORRO AMS)

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	1	1	4							2	3	▨	0	6	▨	8	0	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)

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
																																	J	L	/							▨			▨		

(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				
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
▨	C	M	▨	▨			7	.	5			3	4	.			2	2	. 5		1	0	7	.			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
					4	2	.	5	0						1	6	.	6	3	5	1	2	5	.	▨	▨	▨	▨	F

Use decimals

← Write M if if meters

Segment 1 = Depths Start (21–30), End (31–40); Conductivity K (41–45), ΔK (46–50)

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → (51–60), End (61–70), K (71–75), ΔK (76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

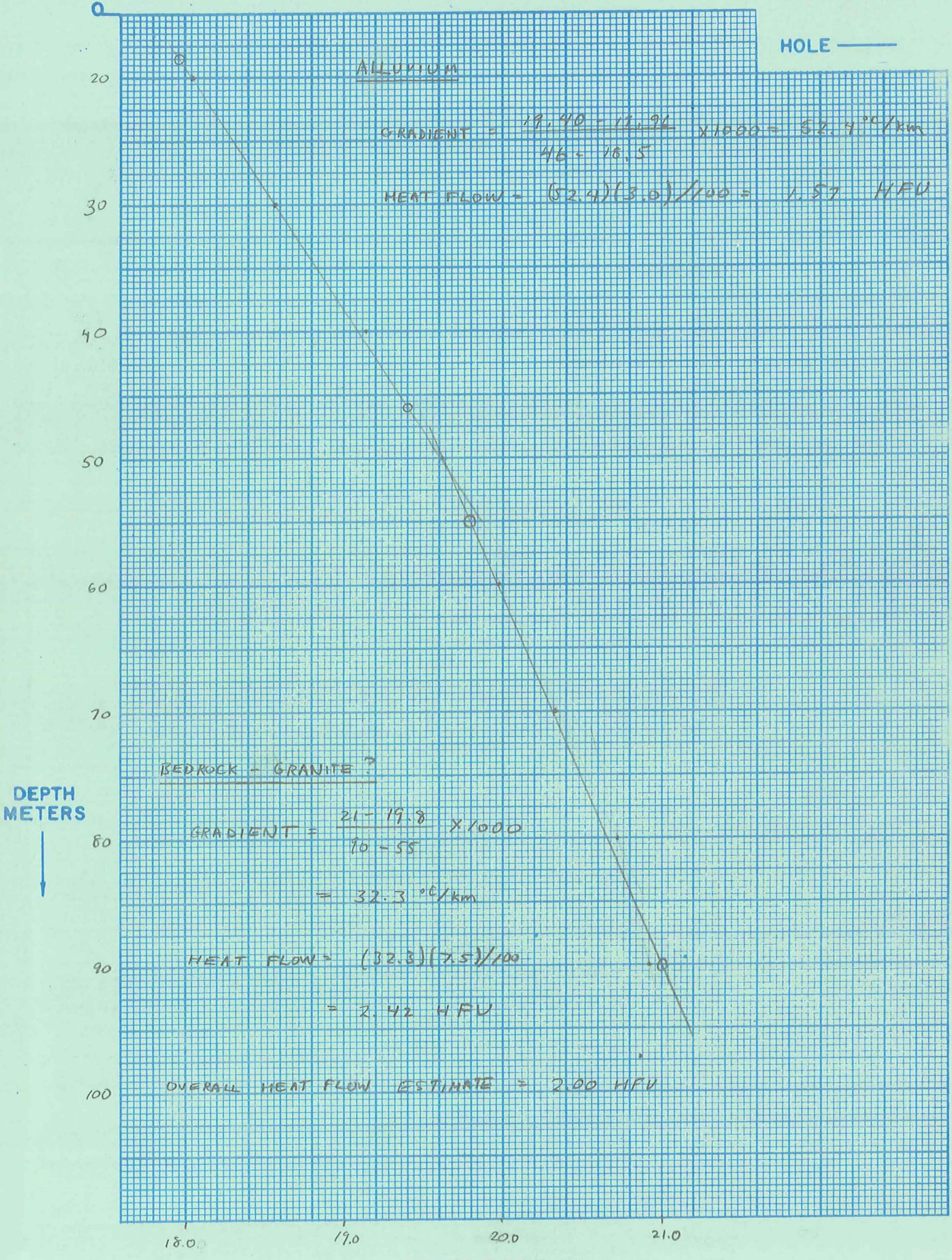
Segment 7

Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start = .999



ALLUVIUM

$$\text{GRADIENT} = \frac{19.40 - 17.96}{46 - 18.5} \times 1000 = 52.4 \text{ °C/km}$$

HEAT FLOW = (52.4)(3.0)/100 = 1.57 HFU

BEDROCK - GRANITE ?

$$\text{GRADIENT} = \frac{21 - 19.8}{90 - 55} \times 1000$$

= 32.3 °C/km

HEAT FLOW = (32.3)(7.5)/100

= 2.42 HFU

OVERALL HEAT FLOW ESTIMATE = 2.00 HFU

3 MIN. EQUIL. TIME

SMOKE ΔT

Date Logged: 6/23/80

ΔT Well No. 80-53

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	~~H_2O~~ [✓ Air]	Lithology, etc.
20		18.05	0.52	52	3.0		LIGHT BROWN COARSE SANDY
30		18.57	0.57	57	3.0		Qal WITH PEBBLES (UP TO
40		19.14	0.48	48	3.0		10 cm) OF GRANITE,
50		19.62	0.36	36	3.0		QUARTZ, FINELY BANDED
60		19.98	0.35	35	7.5		GNEISS, AND SLATE
70		20.33	0.39	39	7.5		
80		20.72	0.20	20	7.5		
90		20.92	-0.05	-6.8	7.5		
97.3		20.87			7.5		

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ____ of ____

CHOCLE DT

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-54

Property-Project 1114 Depth Logged 143.6

Map SQUAW PEAK Scale 1:24000 Date: Drilled ______ Logged 6/23/80

State NM County Socorro, SW¼ of NW¼ of SW¼ of NE¼ of Sec 35 T 4S R 5W

Instrument DT 101 (JL) Operator JL Elevation 6230 ([✓ ft] ~~m~~)

Comments WOODEN WINDMILL, NO LONGER OPERATIVE, 12' BLADES, 6½" CASING (TULAROSA AMS)

JUSTIFY

Card A

Date Logged

Proj No (1-4)	Well No (5-10)	DA (11-12)	MO (14-15)	YR (17-18)	* (19-20)
1114		23	06	80	CM

*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)
	JL	/			

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

Card B

Map Location **

Scale Unit IN CM (22-23)	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	7.5	33.	52.5	107.	22.5

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)	(80)
20.50	17.44	6230.	F

Use decimals

Write M if if meters

Segment 1 = Depths

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

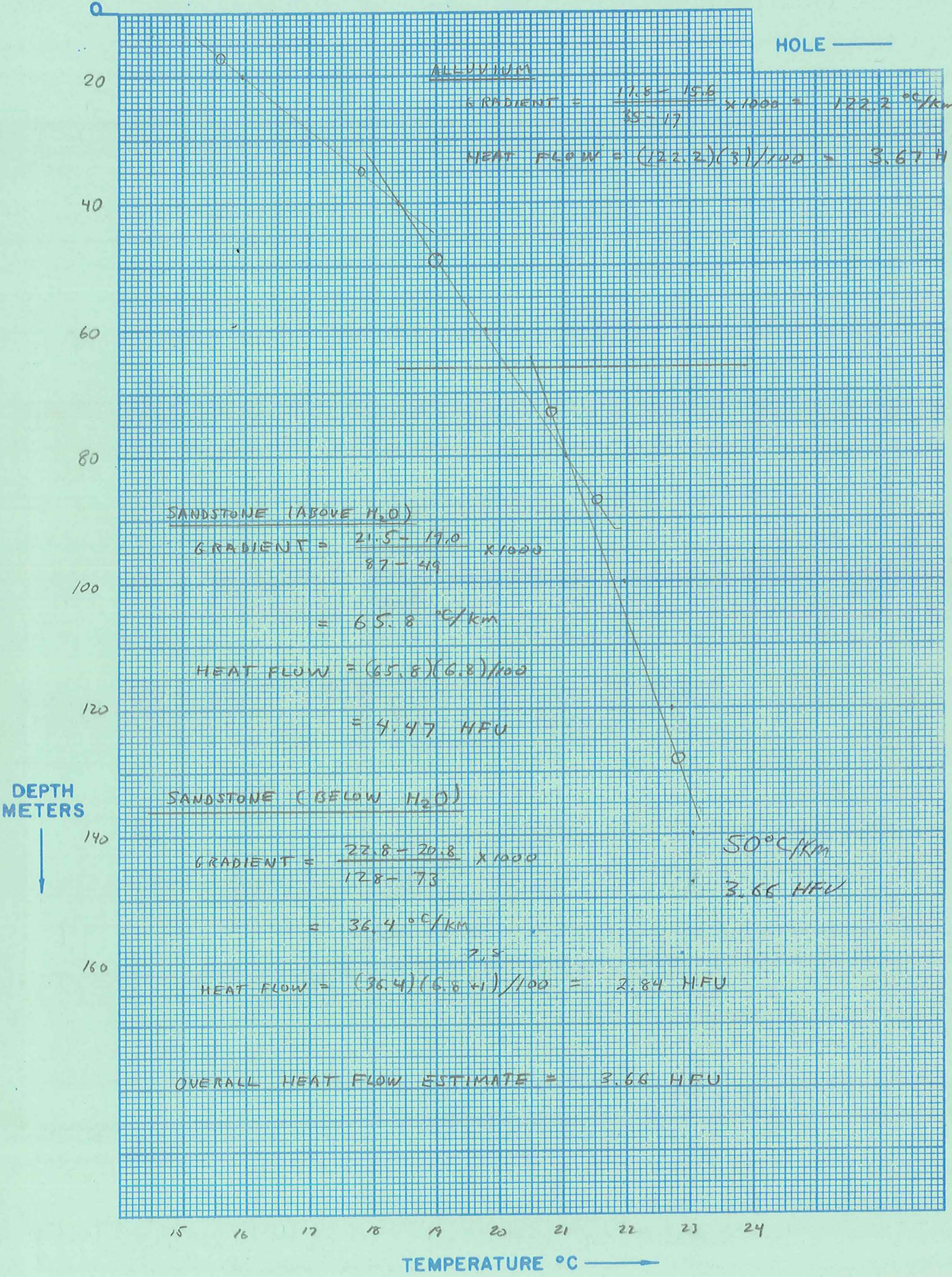
Best cond. (-K)

Downward extrapolations (-ΔK)

	Start (51-60)	End (61-70)	K (71-75)	ΔK (76-80)
Segment 2				
Segment 4				
Segment 6				
Segment 8				
Segment 10				

	(21-30)	(31-40)	(41-45)	(46-50)
Segment 3				
Segment 5				
Segment 7				
Segment 9				

After final segment Start = .999



ALLUVIUM

GRADIENT = $\frac{17.8 - 15.6}{35 - 17} \times 1000$ = 122.2 °C/km

HEAT FLOW = (122.2)(3)/100 = 3.67 HFU

SANDSTONE (ABOVE H_2O)

GRADIENT = $\frac{21.5 - 19.0}{87 - 49} \times 1000$

= 65.8 °C/km

HEAT FLOW = (65.8)(6.8)/100

= 4.47 HFU

SANDSTONE (BELOW H_2O)

GRADIENT = $\frac{22.8 - 20.8}{128 - 73} \times 1000$

= 36.4 °C/km

HEAT FLOW = $(36.4)(\overset{7.5}{6.8+1})/100$ = 2.84 HFU

OVERALL HEAT FLOW ESTIMATE = 3.66 HFU

3 MIN EQUIL. TIME

CHOCLE ΔT

Date Logged: 6/23/80

ΔT Well No. 80-54

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	~~H_2O~~ Air	Lithology, etc.
20		15.97	2.42	121.0	3.0	↓	THIN LAYER OF QAL,
40		18.39	1.39	69.5	6.8		UNDERLAIN BY COARSE-
60		19.78	1.25	62.5	6.8		TO MEDIUM GRAINED RED
80		21.03	0.93	46.5	7.8	H_2O	SANDSTONE. ON EAST
100		21.96	0.75	37.5	7.8	↓	SIDE OF CANYON, DIPPING
120		22.71	0.33	16.5	7.8		ENE, ARE LAYERS OF
140		23.04	0	0	7.8		RHYOLITE, TUFF, +
143.6		23.04			7.8		WELDED TUFF.

H_2O @ 63.0 m (?)

(FIRST "PLUNK" OF PROBE WITH "BOMB")

K=Conductivity

page ____ of ____

Date Logged: ____________________

ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page _____ of _____

WILSON ΔT

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-55

Property-Project 1114 Depth Logged 200.4 m

Map SQUAW PEAK Scale 1:24000 Date: Drilled ______ Logged 6/24/80

State NM County SOCORRO , NE¼ of SE¼ of NE¼ of NE¼ of Sec 33 T 4S R 5W

Instrument DT 101 (JL) Operator JL + WA Elevation 6570 (~~m~~ ft)

Comments 12' BLADES, OPEN HOLE (TULAROSA AMS)

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	1	1	4							2	4	▨	0	6	▨	8	0	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	63	MO 64–65	66	YR 67–68
	JL	/		▨		▨	

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

Card B

Map Location **

Scale Unit IN CM					Map Size (7.5, 15., 60.)					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
▨	C	M	▨	▨			7	.	5			3	3	.		5	2	.	5		1	0	7	.		2	2	.	5

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
					2	1	.	3	0							7	.	1	0	6	5	7	0	.	▨	▨	▨	▨	F

Use decimals

← Write M if if meters

Segment 1 = Depths

Start 21–30 End 31–40

Conductivity K 41–45 ΔK 46–50

Best cond. (−K)

Downward extrapolations (−ΔK)

Segment 2 Start → End 51–60 K 61–70 ΔK 71–80

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

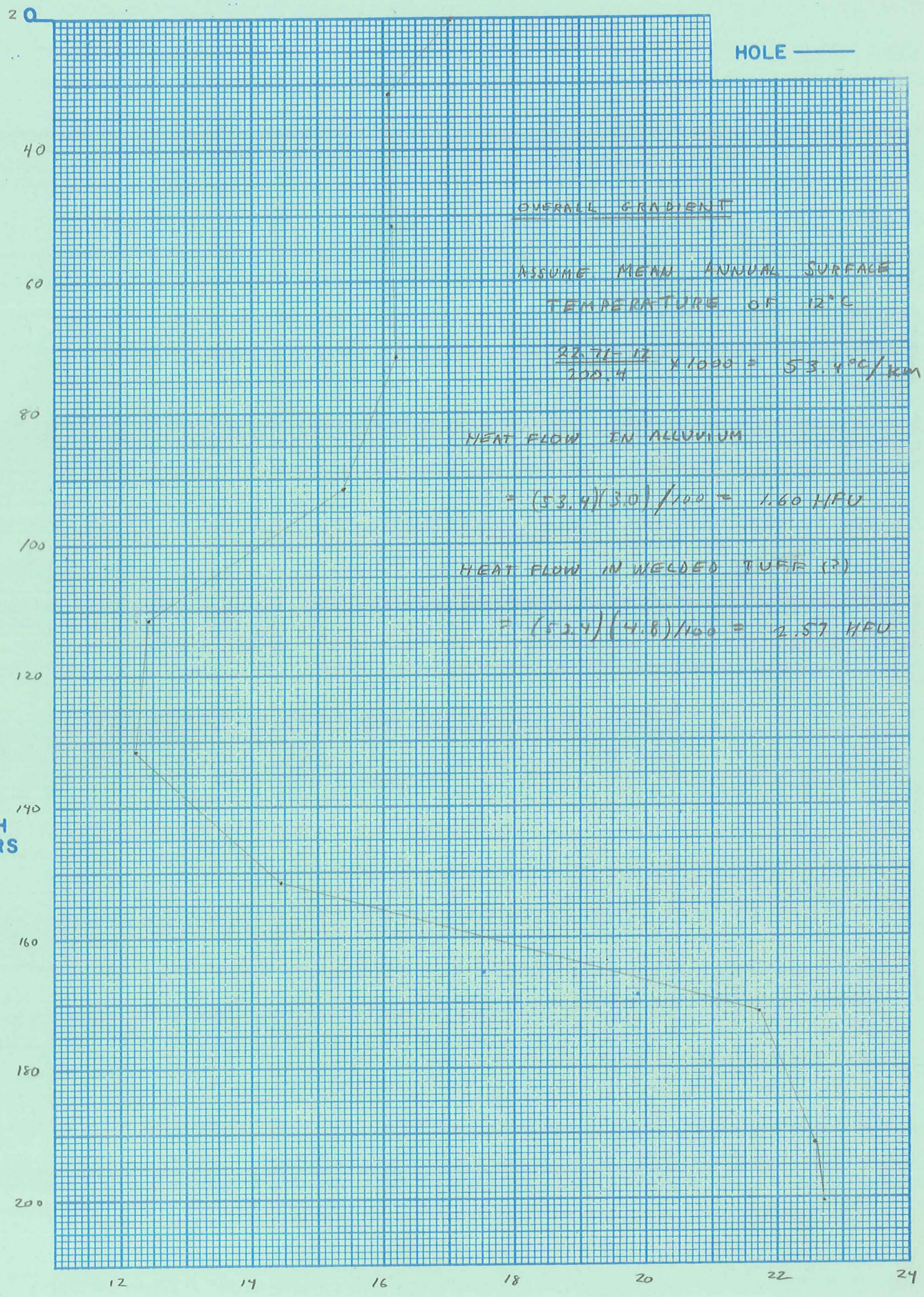
Segment 7

Segment 8 Start →

Segment 9 21–50

Segment 10 Start → 51–80

After final segment Start = .999



OVERALL GRADIENT

ASSUME MEAN ANNUAL SURFACE
TEMPERATURE OF 12°C

$\frac{22.71-12}{200.4} \times 1000 = 53.4$ °C/km

HEAT FLOW IN ALLUVIUM

= (53.4)(3.0)/100 = 1.60 HFU

HEAT FLOW IN WELDED TUFF (?)

= (53.4)(4.8)/100 = 2.57 HFU

3 MIN. EQUIL. TIME

WILSON ΔT

Date Logged: 6/24/80

ΔT Well No. 80-55

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	~~H_2O~~ [✓ Air]	Lithology, etc.
20.0		17.04	-0.96	-82.8	3.0		COARSE-GRAINED, MEDIUM
31.6		16.08	0.03	1.5	3.0		BROWN Qal WITH
51.6		16.11	0.09	4.5	3.0		PEBBLES & COBBLES
71.6		16.20	-0.82	-41.0	3.0		(UP TO 30 CM) OF WELDED
91.6		15.38	-2.94	-147.0	3.0		TUFF & RHYOLITE
111.6		12.44	-0.22	-11.0	3.0		
131.6		12.22	2.22	111.0	3.0		
151.6		14.44	7.27	363.5	3.0		
171.6		21.71	0.87	43.5	4.8		
191.6		22.58	0.13	14.8	4.8		
200.9		22.71			4.8		

K=Conductivity

page ___ of ___

Date Logged: ____________________ ΔT Well No. _____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

ROSEDALE ΔT

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80 - 56

Property-Project 1114 Depth Logged 128 m

Map TENMILE HILL Scale 1:24000 Date: Drilled ______ Logged 6/24/80

State NM County SOCORRO, SE¼ of SW¼ of NW¼ of NE¼ of Sec 2 T 6S R 5W

Instrument DT-101 (JL) Operator JL Elevation 6168 (ft/m)

Comments Windmill, 12' blades, 6" casing, pumping when arrived at site (TULAROSA AMS)

Card A

JUSTIFY

Proj No (1-4)	Well No (5-10)	Date Logged DA (11-12)	MO (14-15)	YR (17-18)	*19	20
1114		24	06	80	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)
	JL				

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

Card B

Map Location * *

Scale Unit IN CM (22-23)	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	7.5	33.	49.0	107.	19.5

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)	80
32.05	18.16	6168.	F

Use decimals

Write M if if meters

Segment 1 = Depths Start (21-30) End (31-40) Conductivity K (41-45) ΔK (46-50)

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → (51-60) End (61-70) K (71-75) ΔK (76-80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

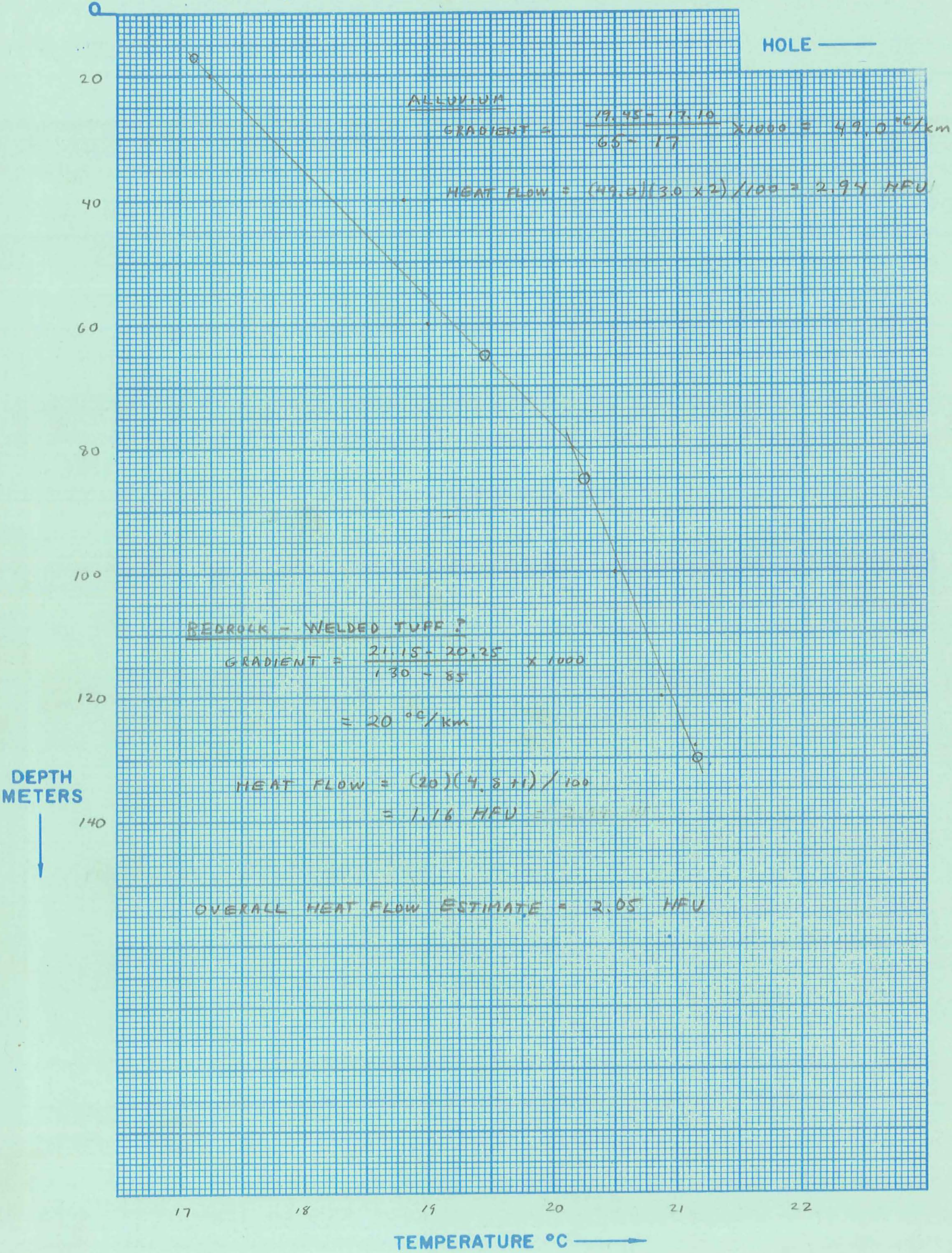
Segment 7

Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start = .999



<u>ALLUVIUM</u>

$$\text{GRADIENT} = \frac{19.45 - 17.10}{65 - 17} \times 1000 = 49.0\ ^{\circ}\text{C/km}$$

$$\text{HEAT FLOW} = (49.0)(3.0 \times 2)/100 = 2.94\ \text{HFU}$$

<u>BEDROCK - WELDED TUFF ?</u>

$$\text{GRADIENT} = \frac{21.15 - 20.25}{130 - 85} \times 1000$$

$$= 20\ ^{\circ}\text{C/km}$$

$$\text{HEAT FLOW} = (20)(4.8 + 1)/100$$

$$= 1.16\ \text{HFU}$$

OVERALL HEAT FLOW ESTIMATE = 2.05 HFU

3 min.
equilibrium
time

Rosedale ΔT

Date Logged: 06/24/80

ΔT Well No. 80-56

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H2O ~~Air~~	Lithology, etc.
20		17.24	1.56	78			H_2O at 11.9m
40		18.80	0.19	9.5			
60		18.99	1.16	58			Rhyolite porphyry(?)
80		20.15	0.34	17			Looks as though it
100		20.49	0.38	19			may really be a
120		20.87	0.27				rhyolitic welded
128		21.14					tuff. Found as
							blocks and pebbles
							in alluvium.

K=Conductivity

page ______ of ______

Date Logged: ____________________ ΔT Well No. ______________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page _____ of _____

Park ΔT

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-57

Property-Project 1114 Depth Logged 76.3

Map Grassy Lookout Scale 7.5, 1/24000 Date: Drilled ______ Logged 6/24/80

State N.M. County Socorro , SE 1/4 of SE 1/4 of SE 1/4 of SE 1/4 of Sec 23 T 6S R 6W

Instrument DT-101 (JL) Operator JL Elevation 7170 (ft/m)

Comments Windmill, 10' blades, 6" casing, may have been pumping before our arrival. (TULAROSA AMS)

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	1	1	4							2	4	▨	0	6	▨	8	0	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)

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
																																	J	L	/							▨			▨		

(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 **				
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
▨	c	m	▨	▨			7	.	5			3	3	.		4	6	.	0		1	0	7	.		2	5	.	5

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
						7	.	3	9						2	9	.	1	3	7	1	7	0	.	▨	▨	▨	▨	F

Use decimals

← Write M if if meters

Segment 1 = Depths Start (21–30), End (31–40); Conductivity K (41–45), ΔK (46–50)

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

Best cond. (-K)

Downward extrapolations (-ΔK)

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

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

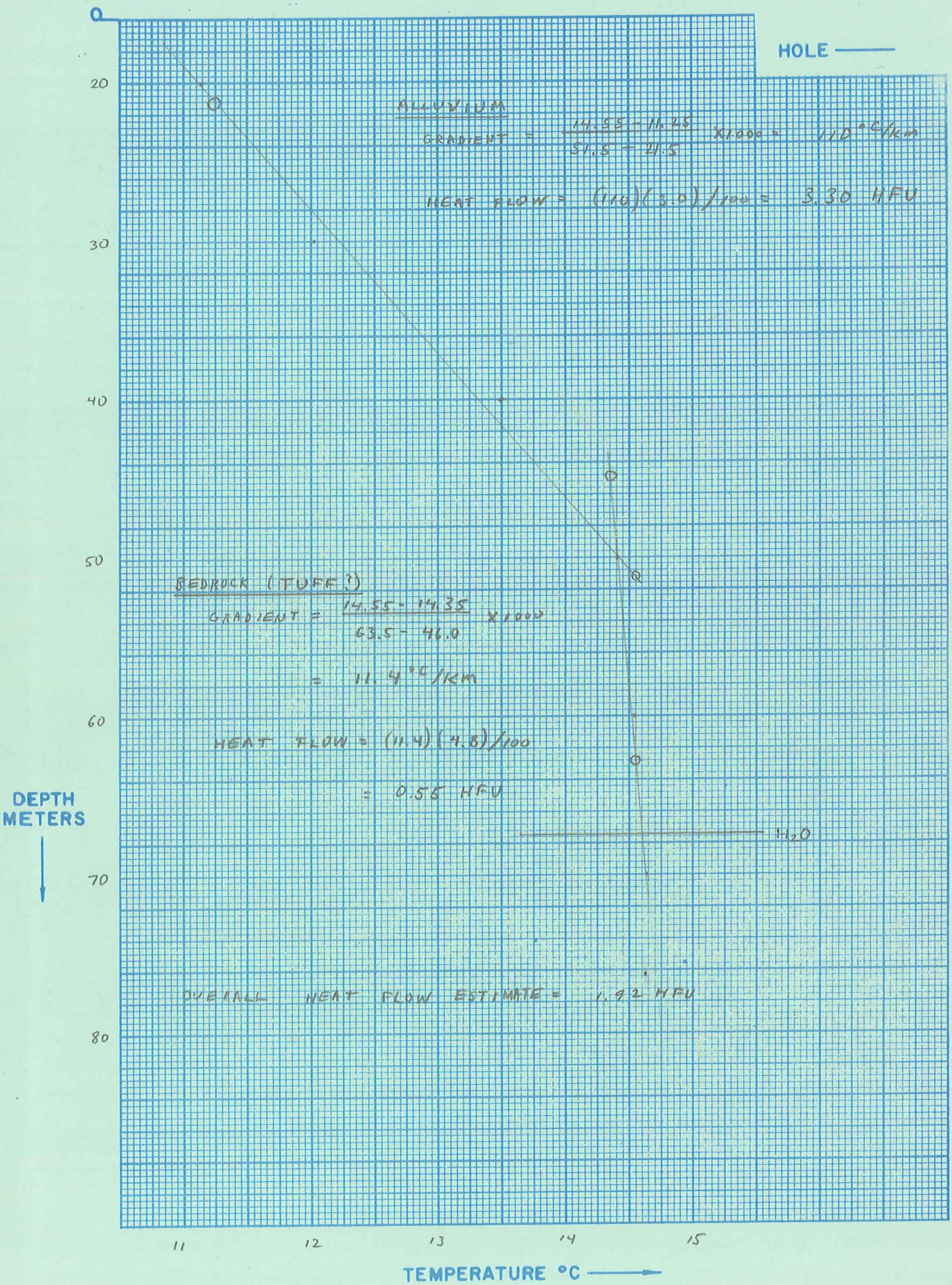
Segment 9

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



ALLUVIUM

$$\text{GRADIENT} = \frac{14.55 - 11.25}{51.5 - 21.5} \times 1000 = 110\ °C/km$$

$$\text{HEAT FLOW} = (110)(3.0)/100 = 3.30\ \text{HFU}$$

BEDROCK (TUFF ?)

$$\text{GRADIENT} = \frac{14.55 - 14.35}{63.5 - 46.0} \times 1000$$

$$= 11.4\ °C/KM$$

$$\text{HEAT FLOW} = (11.4)(4.8)/100$$

$$= 0.55\ \text{HFU}$$

OVERALL HEAT FLOW ESTIMATE = 1.92 HFU

3 min. equilibrium time

Park ΔT

Date Logged: 06/24/80

ΔT Well No. 80-57

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		11.14	0.88	88	3.0	↑	Tan colored ash
30		12.02	1.48	148	3.0		deposits exposed
40		13.50	0.91	91	3.0	air	in roadcut and o/c
50		14.41	0.13	13	4.8		on south side of
60		14.54	0.10	10	4.8		the park. 1 Km from
70		14.64	0.01	-1.6	5.8	↓	o/c to well.
76.3		-14.63			5.8	H_2O	
							H_2O at 67.4m
							(welded) Tuffs exposed in
							cliffs on ridges?

K=Conductivity

page ______ of ______

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page _____ of _____

CIRCLE ΔT

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-58

Property-Project 1114 Depth Logged 37.0

Map MOUNT WITHINGTON Scale 1:24000 Date: Drilled ______ Logged 6/25/80

State NM County Socorro, NE 1/4 of SE 1/4 of NE 1/4 of NE 1/4 of Sec 26 T 4S R 6W

Instrument DT 101 (JL) Operator JL + HO Elevation 7325 ([✓ ft] m)

Comments 10' BLADES, 5" CASING; PUMPING ON ARRIVAL TULAROSA AMS)

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	1	1	4							2	5	▨	0	6	▨	8	0	C	M

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

Site Description (columns 21–50) — (Approx. location, water well?, oil test?, etc.)

Operator					Editor					Drilled DA			MO			YR	
51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
			J	L	/							▨			▨		

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 **				
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
▨	C	M	▨	▨			7	.	5			3	3	.		5	2	.	5		1	0	7	.		3	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
					2	7	.	8	2						2	9	.	6	2	7	3	2	5	.	▨	▨	▨	▨	F

Use decimals

← Write M if if meters

Segment 1 = Depths Start (21–30) End (31–40) Conductivity K (41–45) ΔK (46–50)

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → (51–60) End (61–70) K (71–75) ΔK (76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

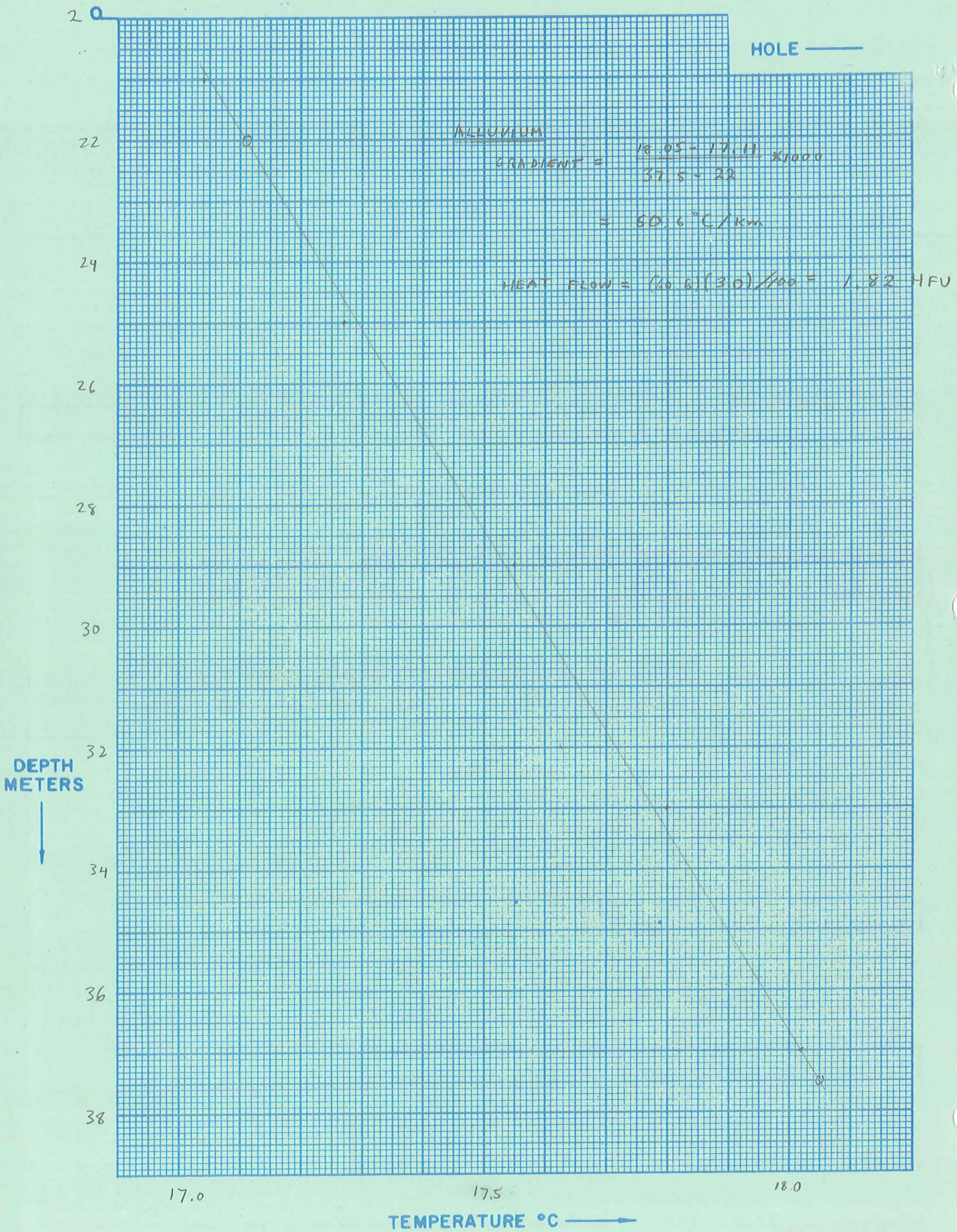
Segment 7

Segment 8 Start →

Segment 9 (21–50)

Segment 10 Start → (51–80)

After final segment Start = .999



ALLUVIUM

$$\text{GRADIENT} = \frac{18.05 - 17.11}{37.5 - 22} \times 1000$$

$$= 60.6\ ^\circ\text{C/km}$$

$$\text{HEAT FLOW} = (60.6)(3.0)/100 = 1.82\ \text{HFU}$$

3 MIN. EQUIL. TIME

CIRCLE ΔT

Date Logged: 6/25/80

ΔT Well No. 80-58

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	[✓ H_2O] ~~ATT~~	Lithology, etc.
21		17.04	0.23	57.5	3.0	↓	Qal WITH PEBBLES + COBBLES
25		17.27	0.28	65.0	3.0		OF WELDED RHYOLITIC TUFF
29		17.55	0.25	62.5	3.0		
33		17.80	0.22	55.0	3.0		
37		18.02			3.0		
							H_2O @ 9.0 m

K=Conductivity

page ____ of ____

Date Logged: ____________________

ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of _____

MONICA ΔT

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-59

Property-Project ______ Depth Logged 53.5

Map MOUNT WITHINGTON Scale 1:24,000 Date: Drilled ______ Logged 6/25/80

State NM County Socorro, NW 1/4 of NW 1/4 of SE 1/4 of NW 1/4 of Sec 9 T 4S R 6W

Instrument DT (U) (JL) Operator JL Elevation 7270 (~~m~~ ff

Comments ABANDONNED WINDMILL, OPEN 6" PIPE (TULAROSA AMS)

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	1	1	4							2	5	▨	0	6	▨	8	0	C	M

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

Site Description (columns 21–50)

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

Operator					Editor					Drilled DA			MO			YR	
51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
			J	L	/							▨			▨		

Card B

Map Location **

Scale Unit IN CM					Map Size (7.5, 15., 60.)					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
▨	C	M	▨	▨			7	.	5			3	3	.		5	2	.	5		1	0	7	.		3	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
					4	7	.	2	0						1	1	.	7	2	7	2	7	0	.	▨	▨	▨	▨	F

Use decimals

Write M if if meters

Segment 1 = Depths Start (21–30), End (31–40); Conductivity K (41–45), ΔK (46–50)

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → End (51–60), (61–70); K (71–75), ΔK (76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

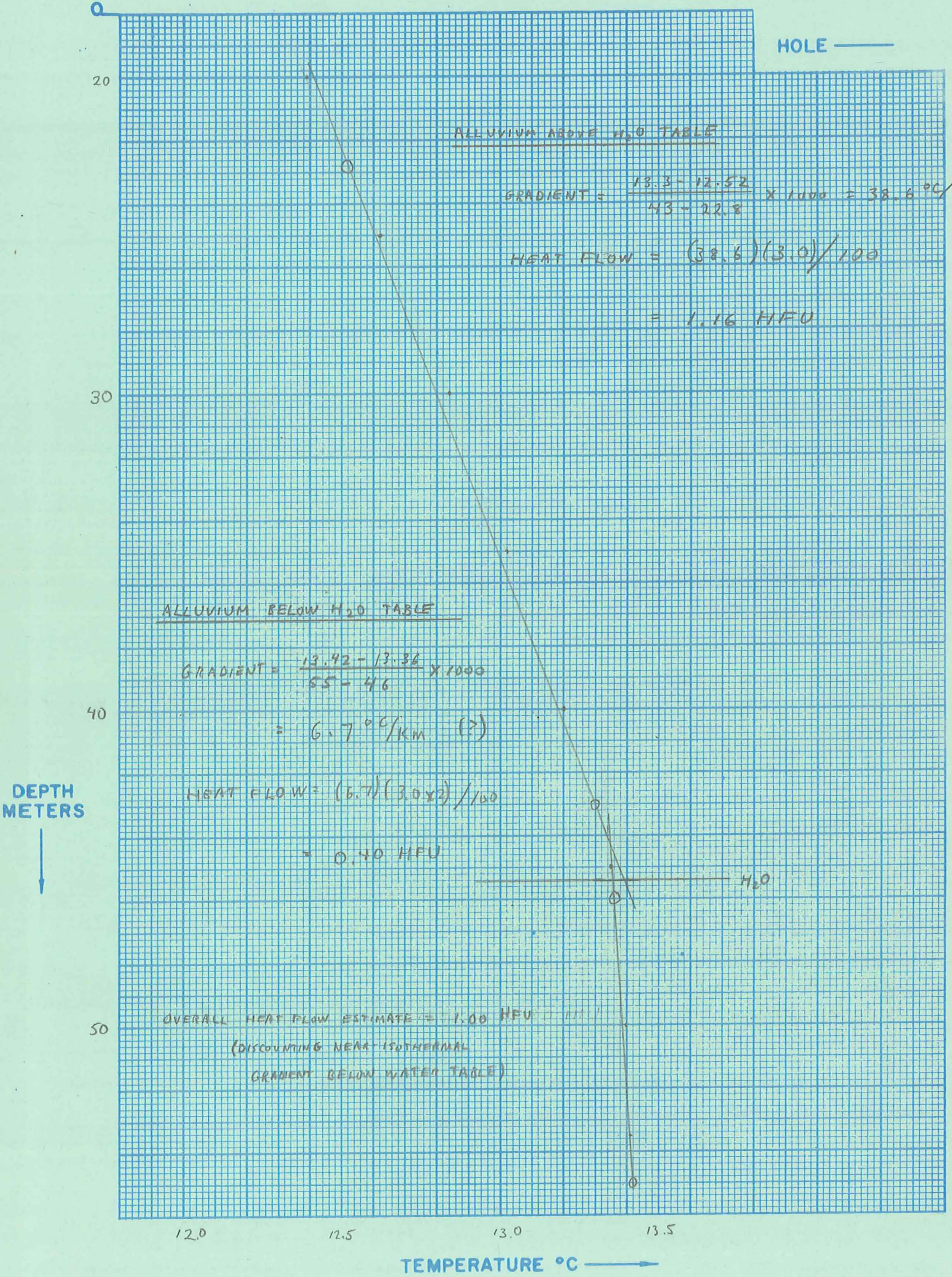
Segment 8 Start →

Segment 9 (21–50)

Segment 10 Start → (51–80)

After final segment Start = .999

HOLE ———



ALLUVIUM ABOVE H_2O TABLE

$$\text{GRADIENT} = \frac{13.3 - 12.52}{43 - 22.8} \times 1000 = 38.6\ °C/km$$

$$\text{HEAT FLOW} = (38.6)(3.0)/100$$

$$= 1.16\ \text{HFU}$$

ALLUVIUM BELOW H_2O TABLE

$$\text{GRADIENT} = \frac{13.42 - 13.36}{55 - 46} \times 1000$$

$$= 6.7\ °C/KM \quad (?)$$

$$\text{HEAT FLOW} = (6.7)(3.0 \times 2)/100$$

$$= 0.40\ \text{HFU}$$

OVERALL HEAT FLOW ESTIMATE = 1.00 HFU
(DISCOUNTING NEAR-ISOTHERMAL
GRADIENT BELOW WATER TABLE)

3 MIN. EQUIL TIME

MONICA ΔT

Date Logged: 6/25/80

ΔT Well No. 80-59

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	~~H_2O~~ [✓ Air]	Lithology, etc.
20		12.39	0.23	46	3.0		Qal WITH COBBLES (UP TO
25		12.62	0.22	44	3.0		10 CM) OF WELDED
30		12.84	0.18	36	3.0		RHYOLITIC TUFF AND QTZ
35		13.02	0.18	36	3.0		RHYOLITE PORPHYRY
40		13.20	0.05	10	3.0		
45		13.35	0.05	10	3.0	↓	H_2O @ 45.4 m
50		13.40	0.01	2.9	6.0	H_2O	
53.5		13.41			6.0	↓	

K=Conductivity

page ____ of ____

Date Logged: ____________________

ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

ESTALINE ΔT

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-60

Property-Project 1114 Depth Logged 51.5

Map MOUNT WITHINGTON Scale 1:24000 Date: Drilled ______ Logged 6/25/80

State NM County SOCORRO , SE 1/4 of NW 1/4 of NE 1/4 of NE 1/4 of Sec 13 T 4S R 6W

Instrument DT 101 (JL) Operator JL Elevation 6955 (ft/m)

Comments 10' BLADES, 7" CASING (TULAROSA AMS)

JUSTIFY

Card A

Date Logged

Proj No (1–4) | Well No (5–10) | DA (11–12) | MO (14–15) | YR (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	1	1	4							2	5	▨	0	6	▨	8	0	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)

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
																																	J	L	/							▨			▨		

(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), Min (36–40) | W Long: Degree (41–45), Min (46–50) **

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
▨	C	M	▨	▨			7	.	5			3	3	.		5	2	.	5		1	0	7	.		3	0	.	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)

51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
					4	0	.	8	7						1	3	.	7	6	6	9	5	5	.	▨	▨	▨	▨	F

Use decimals

← Write M if if meters

Segment 1 = Depths: Start (21–30) | End (31–40) | Conductivity: K (41–45) | ΔK (46–50)

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

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → (51–60) | End (61–70) | K (71–75) | ΔK (76–80)

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

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

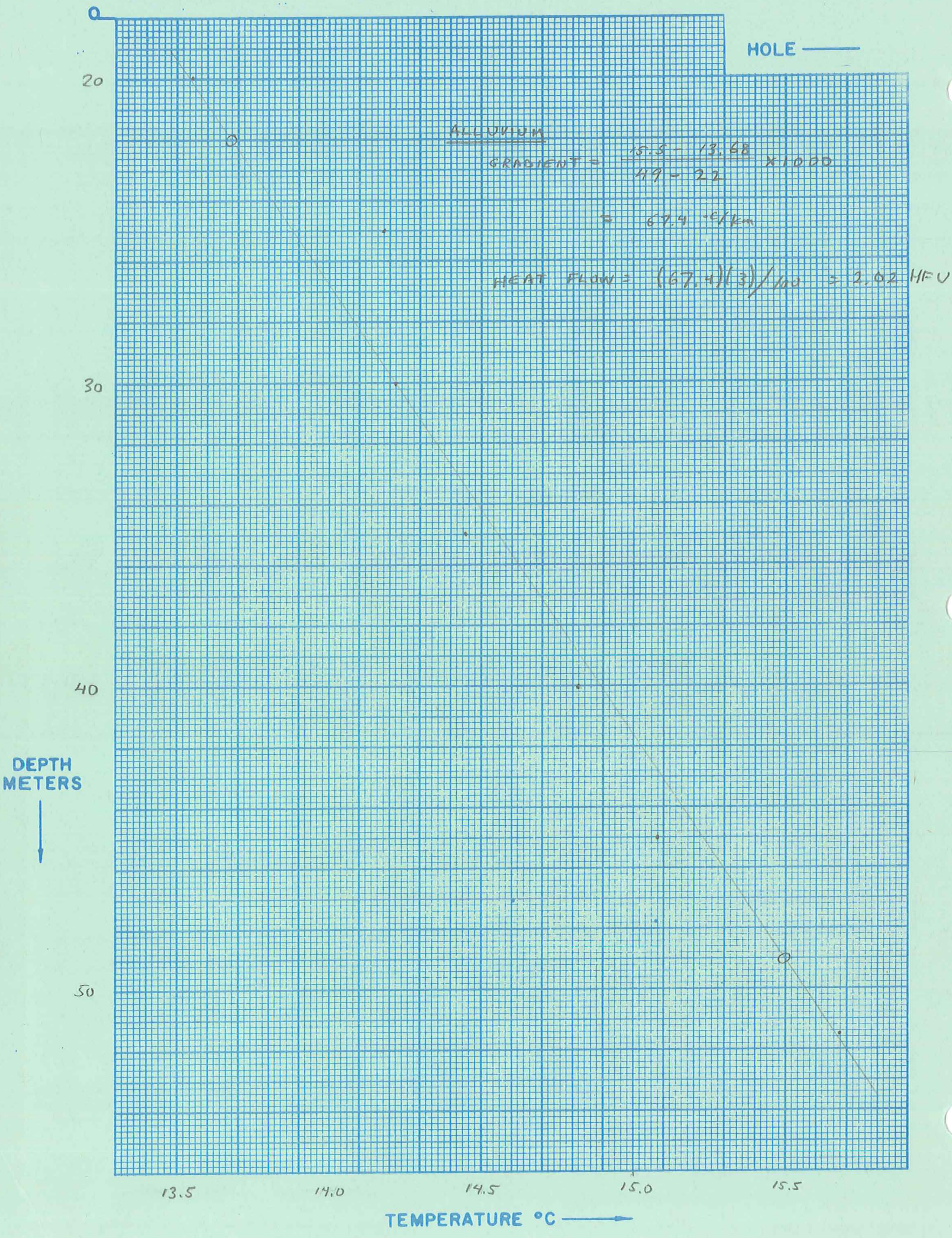
Segment 9

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



ALLUVIUM

$$\text{GRADIENT} = \frac{15.5 - 13.68}{49 - 22} \times 1000$$

$$= 67.4\ °C/km$$

$$\text{HEAT FLOW} = (67.4)(3)/100 = 2.02\ \text{HFU}$$

ESTALINE ΔT

Date Logged: 6/25/80

ΔT Well No. 80-60

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	~~H₂O~~ [✓ Air]	Lithology, etc.
20		13.55			3.0	↓	MED. BROWN Qal WITH
			0.63	126			
25		14.18			3.0		PEBBLES OF RHYOLITE
			0.04	8			
30		14.22			3.0		PORPHYRY RHYOLITE FLOWS
			0.23	46			
35		14.45			3.0		CAPPING HILLS 0.75 km
			0.37	74			
40		14.82			3.0		TO NORTH
			0.36	72			
45		15.18			3.0		
			0.50	76.9			
51.5		15.68			3.0		

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

COOPER DT

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80 - 61

Property-Project 1114 **Depth Logged** 48.0 m

Map LITTLE BLACK PEAK Scale 1:62,500 **Date: Drilled** ______ **Logged** 6/26/80

State NM County LINCOLN, SE¼ of SE¼ of NE¼ of SE¼ of Sec 28 T 4S R 11E

Instrument DT 101 (JL) Operator JL **Elevation** 5900 (ft ~~m~~)

Comments WOODEN WINDMILL, 8' BLADES, "OLD WELL", NEW ONE 7 m TO SOUTH; PUMPING ON ARRIVAL (ROSWELL AMS)

Card A

JUSTIFY

Proj No (1–4)	Well No (5–10)	Date Logged DA (11–12)	MO (14–15)	YR (17–18)	19*	20*
1114		26	06	80	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)
	JL	/			

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

Card B

Map Location **

Scale Unit IN CM (22–23)	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	33.	45.0	106.	0.0

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)	80
31.87	31.49	5900.	F

Use decimals

Write M if if meters

Segment 1 = Depths

Start (21–30) End (31–40)

Conductivity K (41–45) ΔK (46–50)

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → (51–60) End (61–70) K (71–75) ΔK (76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

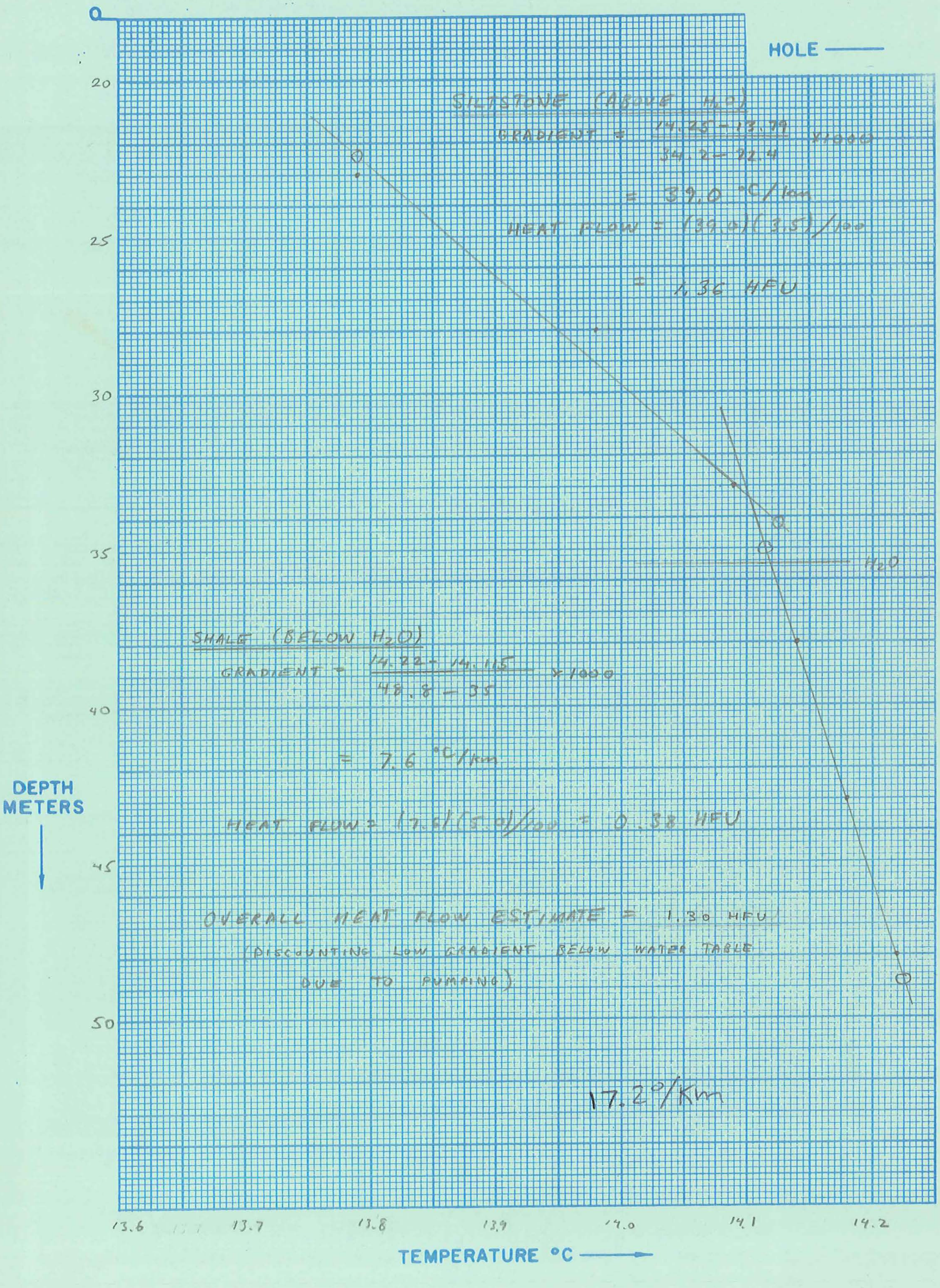
Segment 7

Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start =.999



SILTSTONE (ABOVE H_2O)

GRADIENT = $\frac{14.25 - 13.79}{34.2 - 22.4} \times 1000$

= 39.0 °C/km

HEAT FLOW = (39.0)(3.5)/100

= 1.36 HFU

SHALE (BELOW H_2O)

GRADIENT = $\frac{14.22 - 14.115}{48.8 - 35} \times 1000$

= 7.6 °C/km

HEAT FLOW = (7.6)(5.0)/100 = 0.38 HFU

OVERALL HEAT FLOW ESTIMATE = 1.30 HFU

(DISCOUNTING LOW GRADIENT BELOW WATER TABLE DUE TO PUMPING)

17.2°/Km

3 MIN. EQUIL. TIME

COOPER DT

Date Logged: 6/26/80

ΔT Well No. 80-61

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	~~H_2O~~ Air	Lithology, etc.
23		13.79	0.19	38.0	3.5		FINE SANDY Qal UNDERLAIN
28		13.98	0.11	22.0	3.5		BY RED SILTSTONE (POORLY
33		14.09	0.05	10.0	3.5		CONSOLIDATED). AT 35.1m,
38		14.14	0.04	8.0	5.0	H_2O	"GRAY SHALE" (AS PER
43		14.18	0.04	8.0	5.0		RANCHER).
48		14.22			5.0		H_2O @ 35.1 m (AS PER
							RANCHER)

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ______________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

BURNS DT

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-62

Property-Project 1114 Depth Logged

Map LITTLE BLACK PEAK Scale 1:62,500 Date: Drilled Logged 6/26/80

State NM County LINCOLN, NE¼ of NE¼ of SE¼ of NW¼ of Sec 7 T 6S R 11E

Instrument DT 101 (JL) Operator JL Elevation 5700 (ft)

Comments 6" CASING, 6' BLADES, TURNED OFF ON ARRIVAL (ROSWELL AMS) NEAR ABANDONNED CLAPBOARD HOUSE

JUSTIFY

Card A

Proj No (1–4)	Well No (5–10)	Date Logged DA (11–12)	MO (14–15)	YR (17–18)	19*	20*
1114		26	06	80	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)
	JL	/			

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

Card B

Map Location **

Scale Unit IN CM (22–23)	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	33.	45.0	106.	0.0

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)	80
9.40	22.76	5700.	F

Use decimals

Write M if if meters

Segment 1 = Depths

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

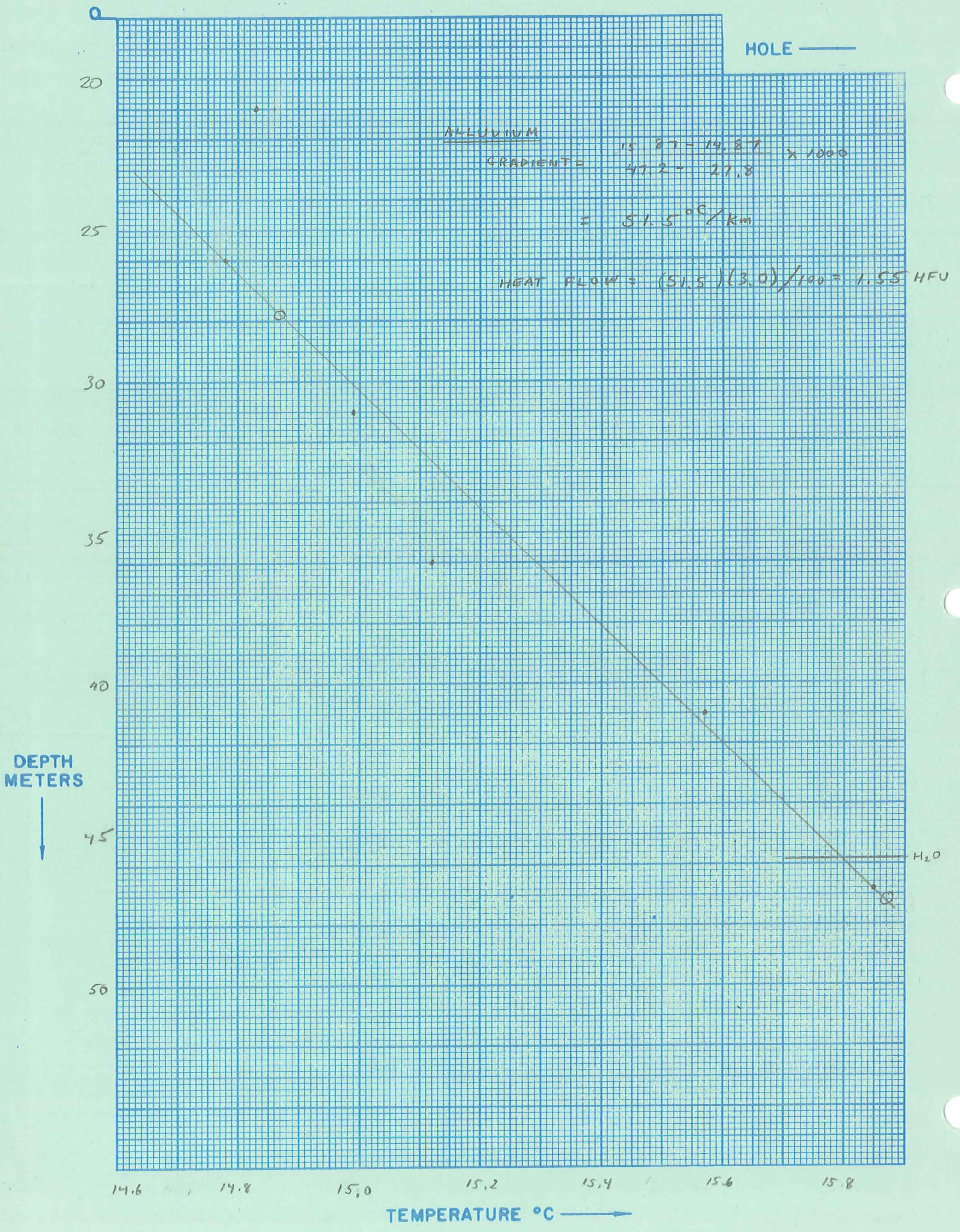
Best cond. (−K)

Downward extrapolations (−ΔK)

	Start (51–60)	End (61–70)	K (71–75)	ΔK (76–80)
Segment 2				
Segment 4				
Segment 6				
Segment 8				
Segment 10				

	Start (21–30)	End (31–40)	K (41–45)	ΔK (46–50)
Segment 3				
Segment 5				
Segment 7				
Segment 9				

After final segment
Start = .999



ALLUVIUM

$$\text{GRADIENT} = \frac{15.87 - 14.87}{47.2 - 27.8} \times 1000$$

$$= 51.5\ {}^{\circ}\text{C}/\text{km}$$

$$\text{HEAT FLOW} = (51.5)(3.0)/100 = 1.55\ \text{HFU}$$

3 MIN. EQUIL. TIME

BURNS ΔT

Date Logged: 6/26/80

ΔT Well No. 80-62

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	~~H_2O~~ ? Air	Lithology, etc.
21		14.83			3.0		MEDIUM BROWN SANDY Qal
			-0.05	-10.0			
26		14.78			3.0		WITH OCCASIONAL COBBLES OF
			0.21	42.0			
31		14.99			3.0		LIGHT TO MED GRAY VOLC.
			0.13	26.0			
36		15.12			3.0		RK - NO QTZ, CALC-ALKALINE
			0.45	90.0			
41		15.57			3.0		FELDSPAR PHENOCRYSTS.
			0,28	48.3			
46.8		15.85			3.0	H_2O	
							H_2O @ 45.8 m

K=Conductivity

page _____ of _____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC. BASIN ΔT

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-63

Property-Project 1114 Depth Logged 68.5

Map CARRIZOZO Scale 1:62,500 Date: Drilled ______ Logged 6/26/80

State NM County LINCOLN, NW¼ of NW¼ of NW¼ of NW¼ of Sec 14 T 8S R 11E

Instrument DT 101 (JL) Operator JL Elevation 5885 ([✓ ft] m)

Comments 6' BLADES, 8" CASING, TURNED OFF BEFORE ARRIVAL (ROSWELL AMS)

JUSTIFY

Card A

Proj No (1–4)	Well No (5–10)	Date Logged DA (11–12)	MO (14–15)	YR (17–18)	19*	20*
1114		26	06	80	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)
	JL	/			

(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	33.	30.0	106.	0.0

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
21.30	32.19	5885.		F

Use decimals

← Write M if if meters

Segment 1 = Depths

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

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → (51–60) End (61–70) K (71–75) ΔK (76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

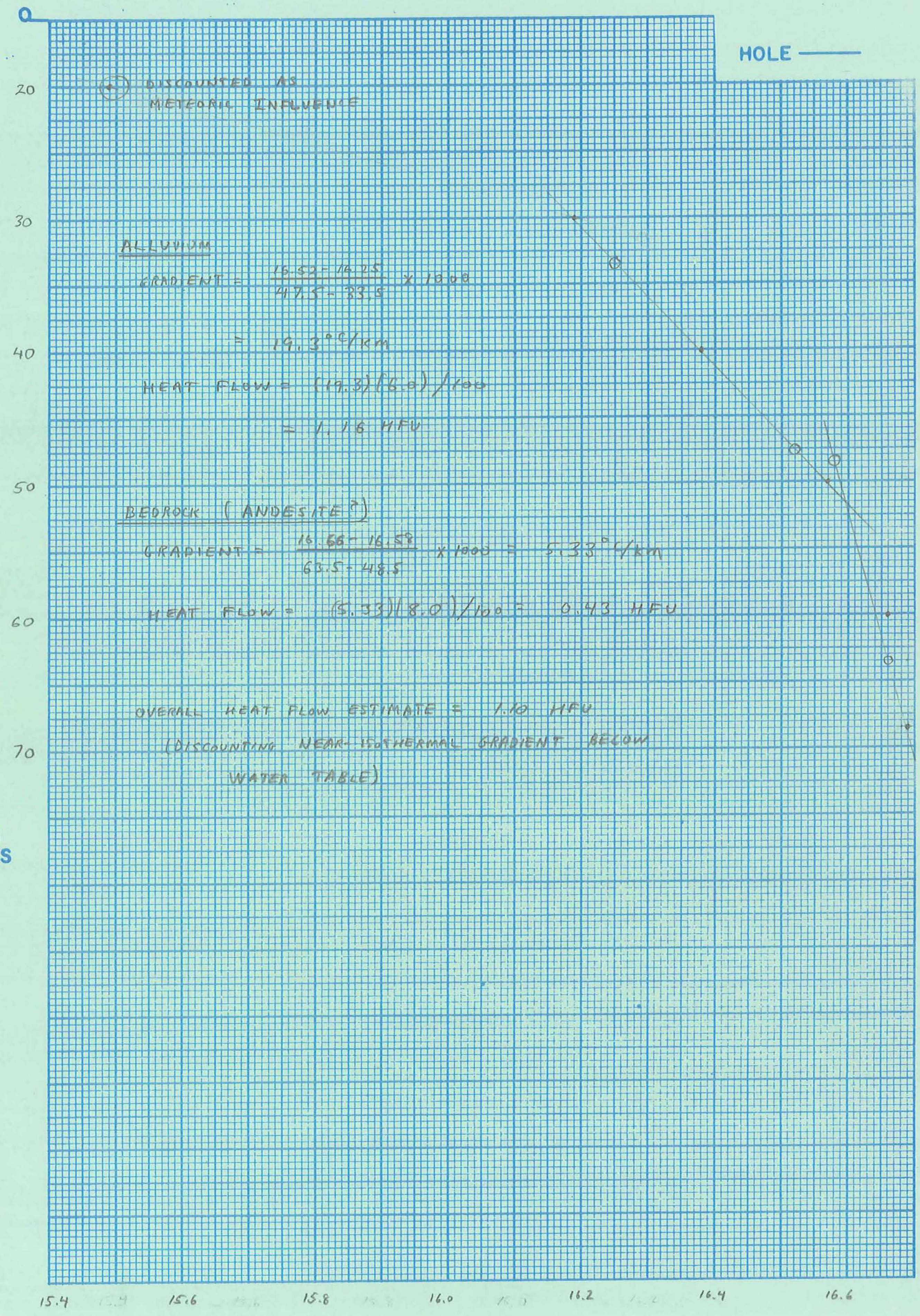
Segment 7

Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start = .999



⊙ DISCOUNTED AS METEORIC INFLUENCE

ALLUVIUM

$$\text{GRADIENT} = \frac{16.52 - 16.25}{47.5 - 33.5} \times 1000$$

$$= 19.3\ °C/KM$$

$$\text{HEAT FLOW} = (19.3)(6.0)/100$$

$$= 1.16\ \text{HFU}$$

BEDROCK (ANDESITE?)

$$\text{GRADIENT} = \frac{16.66 - 16.58}{63.5 - 48.5} \times 1000 = 5.33\ °C/km$$

$$\text{HEAT FLOW} = (5.33)(8.0)/100 = 0.43\ \text{HFU}$$

OVERALL HEAT FLOW ESTIMATE = 1.10 HFU
(DISCOUNTING NEAR-ISOTHERMAL GRADIENT BELOW
WATER TABLE)

BASIN ΔT

Date Logged: 6/26/80

ΔT Well No. 80-63

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O ~~Air~~	Lithology, etc.
20		15.49			6.0	↓	SILTY LIGHT BROWN Qal
			0.70	70			
30		16.19			6.0		WITH COBBLES (UP TO 15 cm) STARTING
			0.19	19			
40		16.38			6.0		0.5 m BELOW SURFACE (AS
			0.19	19			
50		16.57			8.0		SEEN IN TRENCH). COBBLES
			0.09	9			
60		16.66			8.0		ARE ANDESITE PORPH.?
			0.03	3.5			
68.5		16.69			8.0		(DARK, FELSIC, NO QTZ)
							H_2O @ 11.3 M

K=Conductivity

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

POLLY OT

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-64

Property-Project 1114 Depth Logged 40.0

Map CARRIZOZO Scale 1:62,500 Date: Drilled ______ Logged 6/26/80

State NM County LINCOLN, SW¼ of SW¼ of NW¼ of NW¼ of Sec 30 T 8S R 10E

Instrument DT 101 (JL) Operator JL Elevation 5200 (ft/m)

Comments 6' BLADES, 6" CASING, NEAR ABANDONNED ADOBE, NEAR HWY 54, PUMPING ON ARRIVAL (ROSWELL AMS)

JUSTIFY

Card A

Proj No				Well No						Date Logged DA			MO			YR		*	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	1	1	4							2	6	▨	0	6	▨	8	0	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
																																	J	L	/							▨			▨		

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

Card B

Map Location * *

Scale Unit IN CM					Map Size (7.5, 15., 60.)					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
▨	C	M	▨	▨		1	5	.	0			3	3	.		3	0	.	0		1	0	6	.			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
					1	5	.	5	0							7	.	4	6	5	2	0	0	.	▨	▨	▨	▨	F

Use decimals

Write M if ← 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 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

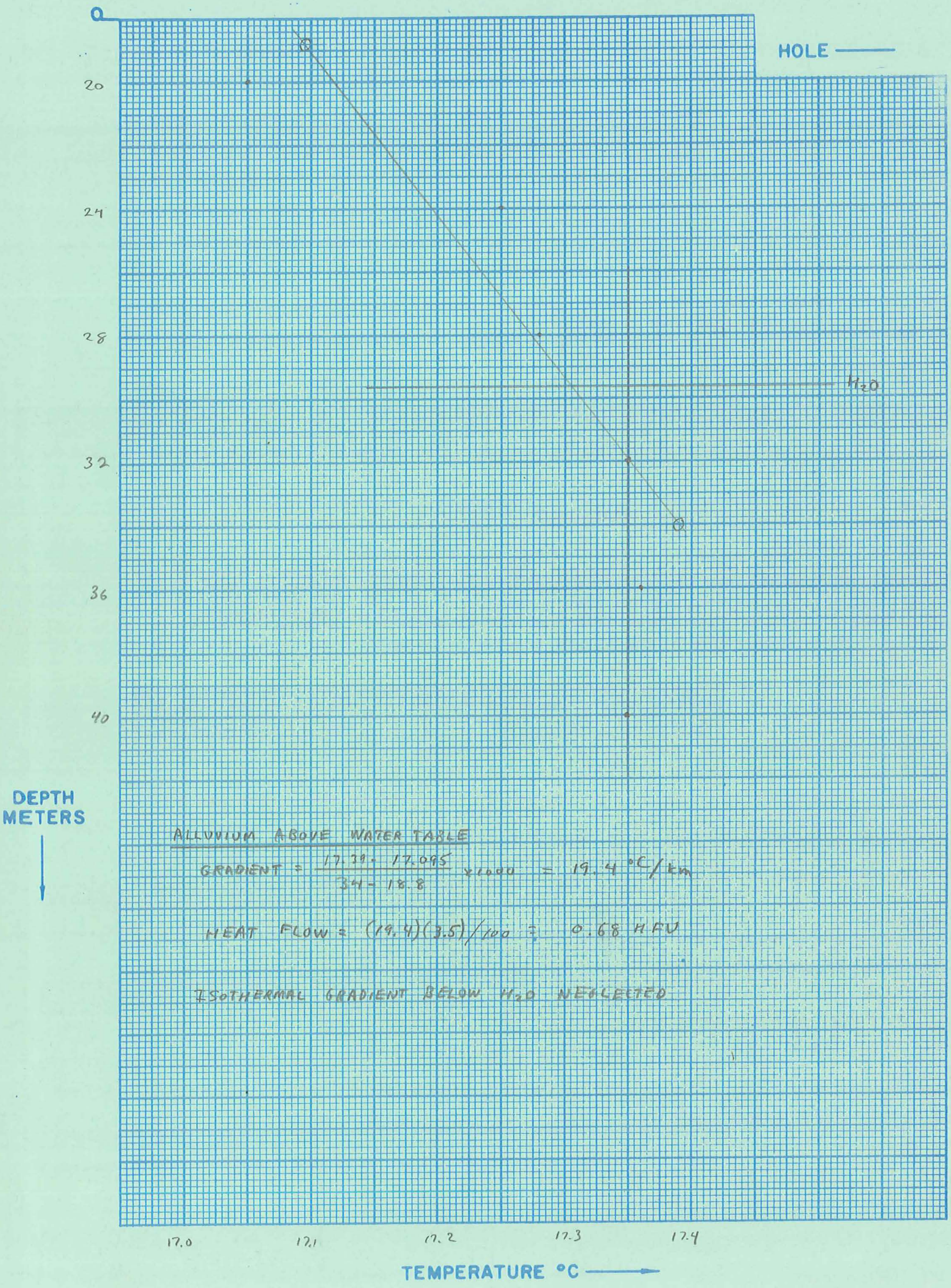
Segment 9

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



ALLUVIUM ABOVE WATER TABLE

$$\text{GRADIENT} = \frac{17.39 - 17.095}{34 - 18.8} \times 1000 = 19.4\ °C/km$$

HEAT FLOW = (19.4)(3.5)/100 = 0.68 HFU

ISOTHERMAL GRADIENT BELOW H_2O NEGLECTED

3 MIN. EQUIL. TIME

POLLY ΔT

Date Logged: 6/26/80

ΔT Well No. 80-64

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		17.05			3.5		SANDY MEDIUM BROWN Qal
			0.20	40			
24		17.25			3.5		WITH ABUNDANT COBBLES
			0.03	6			
28		17.28			3.5		(UP TO 30 cm) OF
			0.07	14			
32		17.35			6.0		ANDESITE PORPHYRY, BASALT,
			0.01	2			
36		17.36			6.0		AND HORNBLENDE-RICH RHYOLITE
			-0.01	-2			
40		17.35			6.0		
							H_2O @ 29.6 m

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

BLUE ΔT

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80 - 65

Property-Project 1114 Depth Logged

Map PUERTO CITO GAP Scale 1:24,000 Date: Drilled Logged 6/27/80

State NM County SOCORRO , NE ¼ of SW ¼ of SE ¼ of SE ¼ of Sec 9 T 6S R 4 W

Instrument DT 101 (JL) Operator JL Elevation 5599 ([✓ ft] m)

Comments 8' BLADES, 9" CASING, TURNED OFF BEFORE ARRIVAL; PROBED DOWN INNER PIPE; WELL SUCKED AIR INTO OUTER ANNULUS (TULAROSA AMS)

JUSTIFY

Card A

Date Logged

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

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

Site Description 21–50	Operator 51 52 53 54 55	Editor 56 57 58 59 60	Drilled DA 61 62	63	Drilled MO 64 65	66	Drilled YR 67 68
	J L	/		▨		▨	

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

Card B

Map Location **

Scale Unit IN CM 21	22 23	24 25	Map Size (7.5, 15., 60.) 26 27 28 29 30	N Lat Degree 31 32 33 34 35	N Lat Min 36 37 38 39 40	W Long Degree 41 42 43 44 45	W Long Min ** 46 47 48 49 50
▨	C M	▨ ▨	7 . 5	3 3 .	4 5 . 0	1 0 7 .	1 5 . 0

Use decimals

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

Northing 51 52 53 54 55 56 57 58 59 60	Easting 61 62 63 64 65 66 67 68 69 70	Elev 71 72 73 74 75	76 77 78 79	80
2 2 . 5 5	1 . 8 9	5 5 9 9 .	▨ ▨ ▨ ▨	F

Use decimals

← Write M if if meters

Segment 1 = Depths Start (21–30) End (31–40); Conductivity K (41–45) ΔK (46–50)

Best cond. (-K)

Downward extrapolations (- Δ K)

Segment 2 Start → (51–60) End (61–70) K (71–75) ΔK (76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

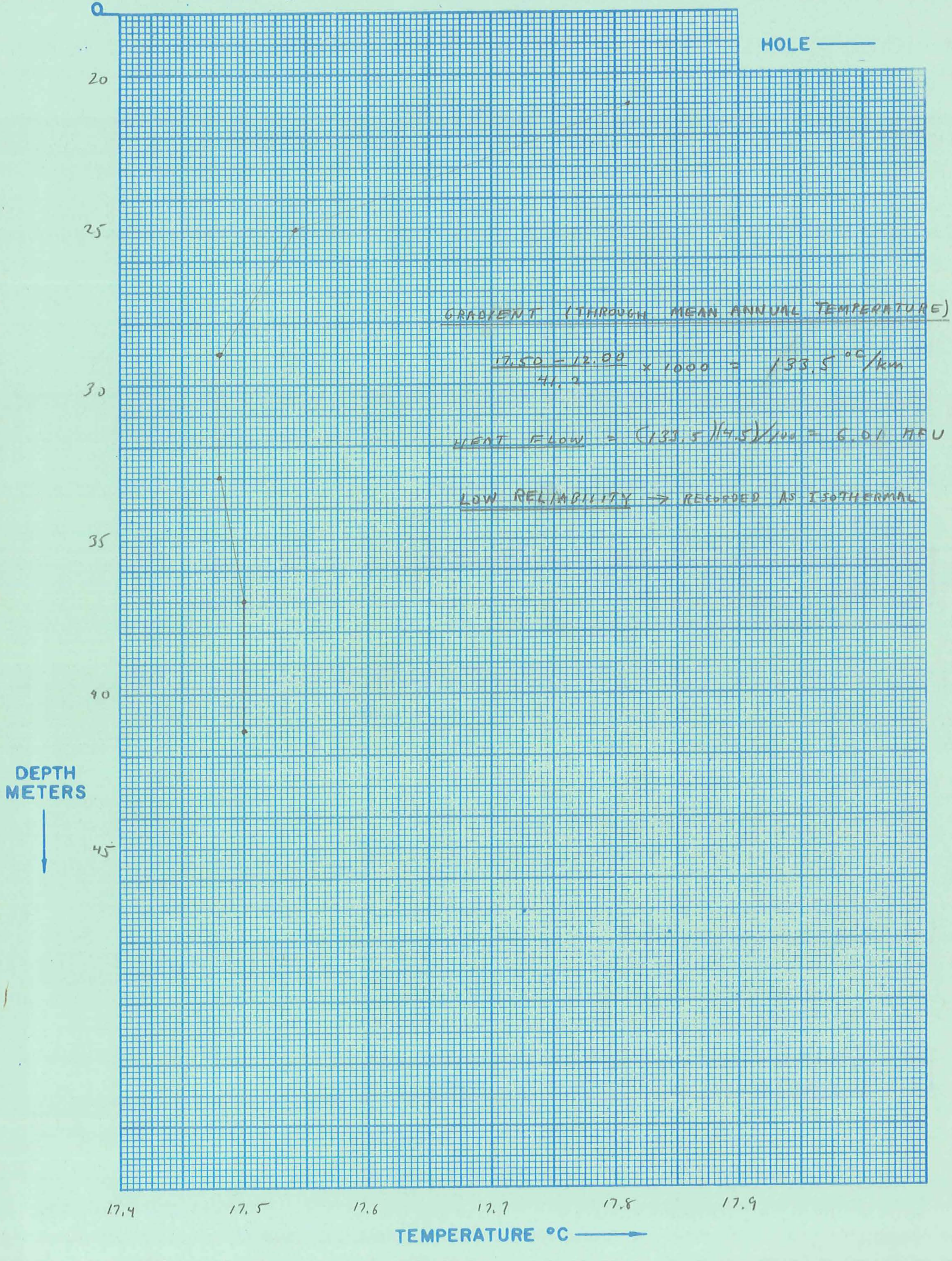
Segment 7

Segment 8 Start →

Segment 9 (21–50)

Segment 10 Start → (51–80)

After final segment Start = .999



GRADIENT (THROUGH MEAN ANNUAL TEMPERATURE)

$$\frac{17.50 - 12.00}{41.2} \times 1000 = 133.5 \text{ °C/km}$$

HEAT FLOW = (133.5)(4.5)/100 = 6.01 HFU

LOW RELIABILITY → RECORDED AS ISOTHERMAL

3 MIN. EQUIL. TIME

BLUE ΔT

Date Logged: 6/27/80

ΔT Well No. 80-65

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	(H2O) ~~Air~~	Lithology, etc.
21		17.81			4.5		MEDIUM BROWN SANDY Qal
			-0.27	-54			
25		17.54			4.5		WITH ABUNDANT COBBLES
			-0.06	-12			
29		17.48			4.5		(UP TO 0.5 m) OF
			0	0			
33		17.48			4.5		ANDESITE PORPHYRY (?),
			0.02	4			
37.2		17.50			4.5		RHYOLITE, & RHYOLITIC
			0	0			
41.2		17.50			4.5	↓	WELDED TUFF
							H_2O @ 15.7 m

K=Conductivity

page ______ of ______

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

GAP ΔT

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-66

Property-Project 1114 Depth Logged 70.4

Map PUERTECITO GAP Scale 1:24,000 Date: Drilled ____ Logged 6/27/80

State NM County SOCORRO , NE¼ of NW¼ of SW¼ of NW¼ of Sec 19 T 5S R 3W

Instrument DT 101 (JL) Operator JL Elevation 6474 (ft

Comments 5" CASING, DONKEY. PUMP, NOT PUMPING (TULAROSA AMS)

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
1	1	1	4							2	7	▨	0	6	▨	8	0	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	63	MO 64–65	66	YR 67–68
	JL	/		▨		▨	

(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 **				
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
▨	C	M	▨	▨			7	.	5			3	3	.		4	5	.	0		1	0	7	.		1	5	.	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	2	.	0	5						2	0	.	1	8	6	4	7	7	.	▨	▨	▨	▨	F

Use decimals

Write M if if meters

Segment 1 = Depths

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

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start →

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

Segment 3

21–30	31–40	41–45	46–50

Segment 4 Start →

51–60	61–70	71–75	76–80

Segment 5

21–30	31–40	41–45	46–50

Segment 6 Start →

51–60	61–70	71–75	76–80

Segment 7

21–30	31–40	41–45	46–50

Segment 8 Start →

51–60	61–70	71–75	76–80

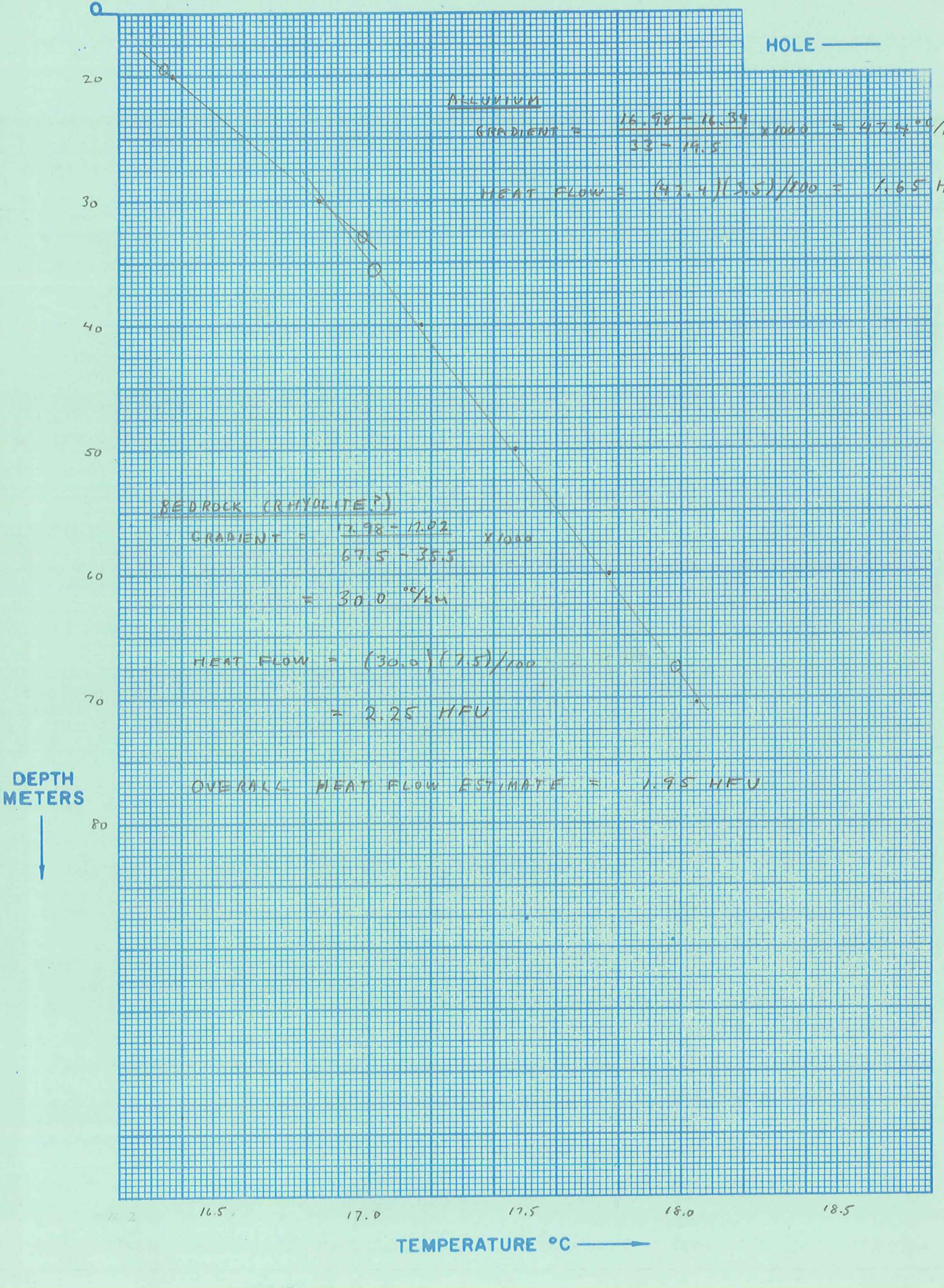
Segment 9

21–30	31–40	41–45	46–50

Segment 10 Start →

51–60	61–70	71–75	76–80

After final segment Start = .999



ALLUVIUM

$$\text{GRADIENT} = \frac{16.98 - 16.34}{33 - 19.5} \times 1000 = 47.4\ °C/km$$

$$\text{HEAT FLOW} = (47.4)(3.5)/100 = 1.65\ \text{HFU}$$

BEDROCK (RHYOLITE?)

$$\text{GRADIENT} = \frac{17.98 - 17.02}{67.5 - 35.5} \times 1000$$

$$= 30.0\ °C/km$$

$$\text{HEAT FLOW} = (30.0)(7.5)/100$$

$$= 2.25\ \text{HFU}$$

OVERALL HEAT FLOW ESTIMATE = 1.95 HFU

GAP ΔT

Date Logged: 6/27/80

ΔT Well No. 80-66

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O [✓ Air]	Lithology, etc.
20		16.37	0.47	47	3.5		COARSE MEDIUM BROWN Qal
30		16.84	0.33	33	3.5		WITH ABUNDANT COBBLES
40		17.17	0.30	30	7.5		(UP TO 20 cm) OF
50		17.47	0.30	30	7.5		QUARTZ-RICH RHYOLITE,
60		17.77	0.28	26.9	7.5		WELDED TUFF, ANDESITE
70.4		18.05			7.5		PORPHYRY (?) AND
							BASALT. RHYOLITE
							PREDOMINATES. TRACE
							Cu MINERALIZATION IN
							SOME COBBLES.

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC. SOUTH ΔT

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-67

Property-Project 1114 Depth Logged 151.5 m

Map PUERTECITO GAP Scale 1:24,000 Date: Drilled 8/10/46 Logged 6/27/80

State NM County SOCORRO, NE¼ of NW¼ of NW¼ of NW¼ of Sec 10 T 6S R 3W

Instrument DT 101 (JL) Operator JL Elevation 5708 ([✓ ft] ~~m~~)

Comments BLADES DOWN, OLD DONKEY PUMP, WELL ABANDONNED, 6" CASING (TULAROSA AMS)

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	1	1	4							2	7	▨	0	6	▨	8	0	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
																																	J	L	/							▨			▨		

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

Card B

Map Location * *

Scale Unit IN CM					Map Size (7.5, 15., 60.)					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
▨	C	M	▨	▨			7	.	5			3	3	.		4	5	.	0		1	0	7	.		1	5	.	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	7	0	8	.	▨	▨	▨	▨	F

Use decimals

Write M if 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)

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

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

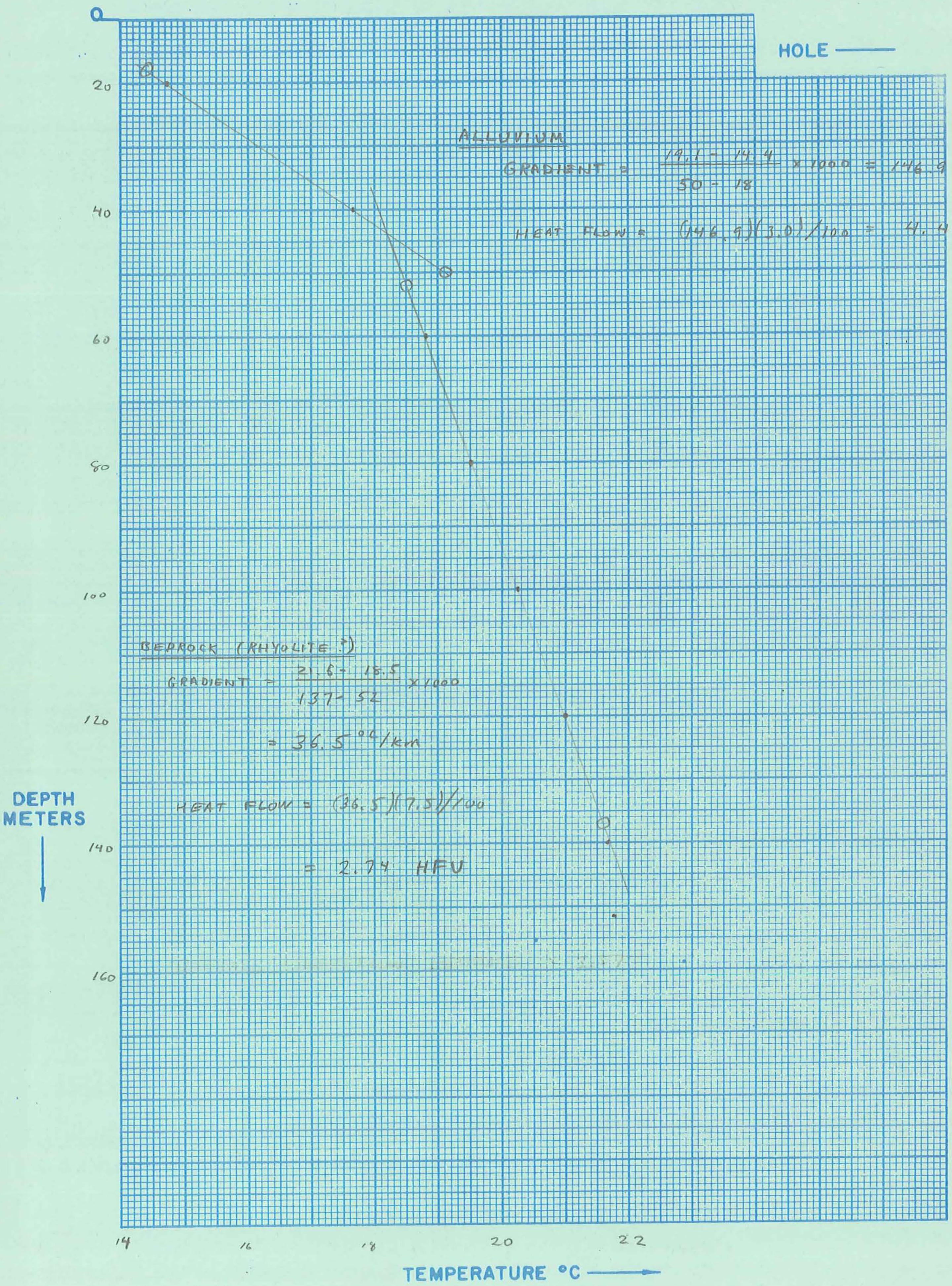
Segment 9

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



ALLUVIUM

$$\text{GRADIENT} = \frac{19.1 - 14.4}{50 - 18} \times 1000 = 146.9 \text{ °C/km}$$

$$\text{HEAT FLOW} = (146.9)(3.0)/100 = 4.41 \text{ HFU}$$

BEDROCK (RHYOLITE ?)

$$\text{GRADIENT} = \frac{21.6 - 18.5}{137 - 52} \times 1000$$

$$= 36.5 \text{ °C/km}$$

$$\text{HEAT FLOW} = (36.5)(7.5)/100$$

$$= 2.74 \text{ HFU}$$

SOUTH ΔT

Date Logged: 6/27/80

ΔT Well No. 80-67

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	~~H2O~~ [✓ Air]	Lithology, etc.
20		14.73			3.0		COARSE SANDY MEDIUM BROWN
			.06				
40		17.67			3.0		Qal WITH ABUNDANT PEBBLES
			1.14				
60		18.81			7.5		AND COBBLES (UP TO 20
			.70				
80		19.51			7.5		CM) OF RHYOLITE &
			.73				
100		20.24			7.5		RHYOLITIC WELDED TUFF
			.76				
120		21.00			7.5		
			.68				
140		21.68			7.5		NO H_2O ENCOUNTERED
			.08				
151.5		21.76			7.5		

K=Conductivity

page ______ of ______

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC. DRIVEWAY ΔT

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-68

Property-Project 1114 **Depth Logged** 73.0 m

Map ARROWHEAD WELL Scale 1: 24,000 **Date: Drilled** ______ **Logged** 6/28/80

State NM County SOCORRO, NE¼ of SW¼ of SW¼ of SE¼ of Sec 16 T 3S R 7W

Instrument DT 101 (JL) Operator JL **Elevation** 7124 (ft m)

Comments 10' BLADES, 6" CASING, TURNED ON AT ARRIVAL BUT NOT PUMPING (SOCORRO AMS)

Card A

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
1	1	1	4							2	8	▨	0	6	▨	8	0	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)	63	Drilled MO (64–65)	66	Drilled YR (67–68)
	JL	/		▨		▨	

(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	7.5	34.	0.0	107.	37.5

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
18.40	22.26	7124.	▨	F

Use decimals

Write M if if meters

Segment 1 = Depths Start (21–30) End (31–40) Conductivity K (41–45) ΔK (46–50)

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start (51–60) End (61–70) K (71–75) ΔK (76–80)

Segment 3

Segment 4 Start

Segment 5

Segment 6 Start

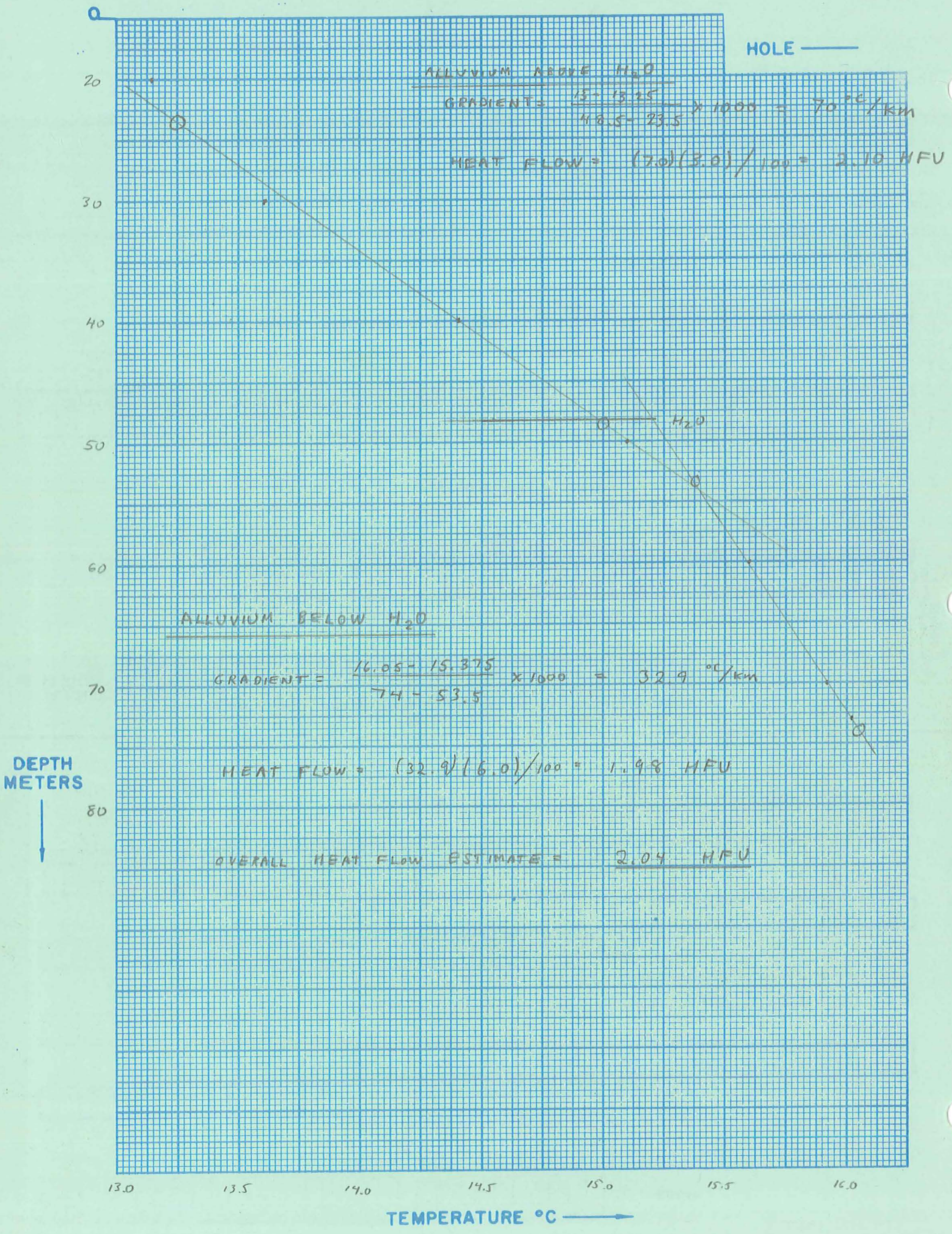
Segment 7

Segment 8 Start

Segment 9

Segment 10 Start

After final segment Start = .999



ALLUVIUM ABOVE H_2O

$$\text{GRADIENT} = \frac{15 - 13.25}{48.5 - 23.5} \times 1000 = 70\ ^\circ\text{C}/\text{km}$$

$$\text{HEAT FLOW} = (7.0)(3.0)/100 = 2.10\ \text{HFU}$$

ALLUVIUM BELOW H_2O

$$\text{GRADIENT} = \frac{16.05 - 15.375}{74 - 53.5} \times 1000 = 32.9\ ^\circ\text{C}/\text{km}$$

$$\text{HEAT FLOW} = (32.9)(6.0)/100 = 1.98\ \text{HFU}$$

OVERALL HEAT FLOW ESTIMATE = 2.04 HFU

DRIVEWAY ΔT

Date Logged: 6/28/80

ΔT Well No. 80-68

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	~~H_2O~~ Air	Lithology, etc.
20		13.14			3.0	↓	MEDIUM-GRAINED SANDY
			0.47	47			
30		13.61			3.0		MEDIUM BROWN Qal
			0.80	80			
40		14.41			3.0		WITH PEBBLES AND
			0.69	69			
50		15.10			3.0	H_2O	COBBLES (UP TO 20 cm)
			0.50	50			
60		15.60			6.0	↓	OF RHYOLITIC TUFF &
			0.32	32			
70		15.92			6.0		WELDED TUFF, ALSO SOME
			0.10	33.3			
73.0		16.02			6.0		RHYOLITE, BUT TUFF.
							PREDOMINATES
							H_2O @ 48.3 m

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

SATATHITE ΔT

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-69

Property-Project 1114

Depth Logged 30.3 m

Map KELLOG WELL

Scale 1:24,000

Date: Drilled

Logged 6/28/80

State NM County CATRON, NW¼ of NW¼ of NW¼ of NW¼ of Sec 1 T 5S R 9W

Instrument DT 101 (JL)

Operator JL

Elevation 6945 (ft ~~m~~)

Comments 8' BLADES, 6" CASING, PUMPING ON ARRIVAL; PROBE DOWN INNER CASING; WINDMILL PUMPED INTERMITTENTLY DURING PROBING

(TULAROSA AMS)

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	1	1	4							2	8	▨	0	6	▨	8	0	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
																																	J	L	/							▨			▨		

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

Card B

Map Location * *

Scale Unit IN CM					Map Size (7.5, 15., 60.)					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
▨	C	M	▨	▨			7	.	5			3	3	.		5	2	.	5		1	0	7	.		4	5	.	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
					1	5	.	2	9							6	.	6	3	6	9	4	5	.	▨	▨	▨	▨	F

Use decimals

Write M if 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)

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

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

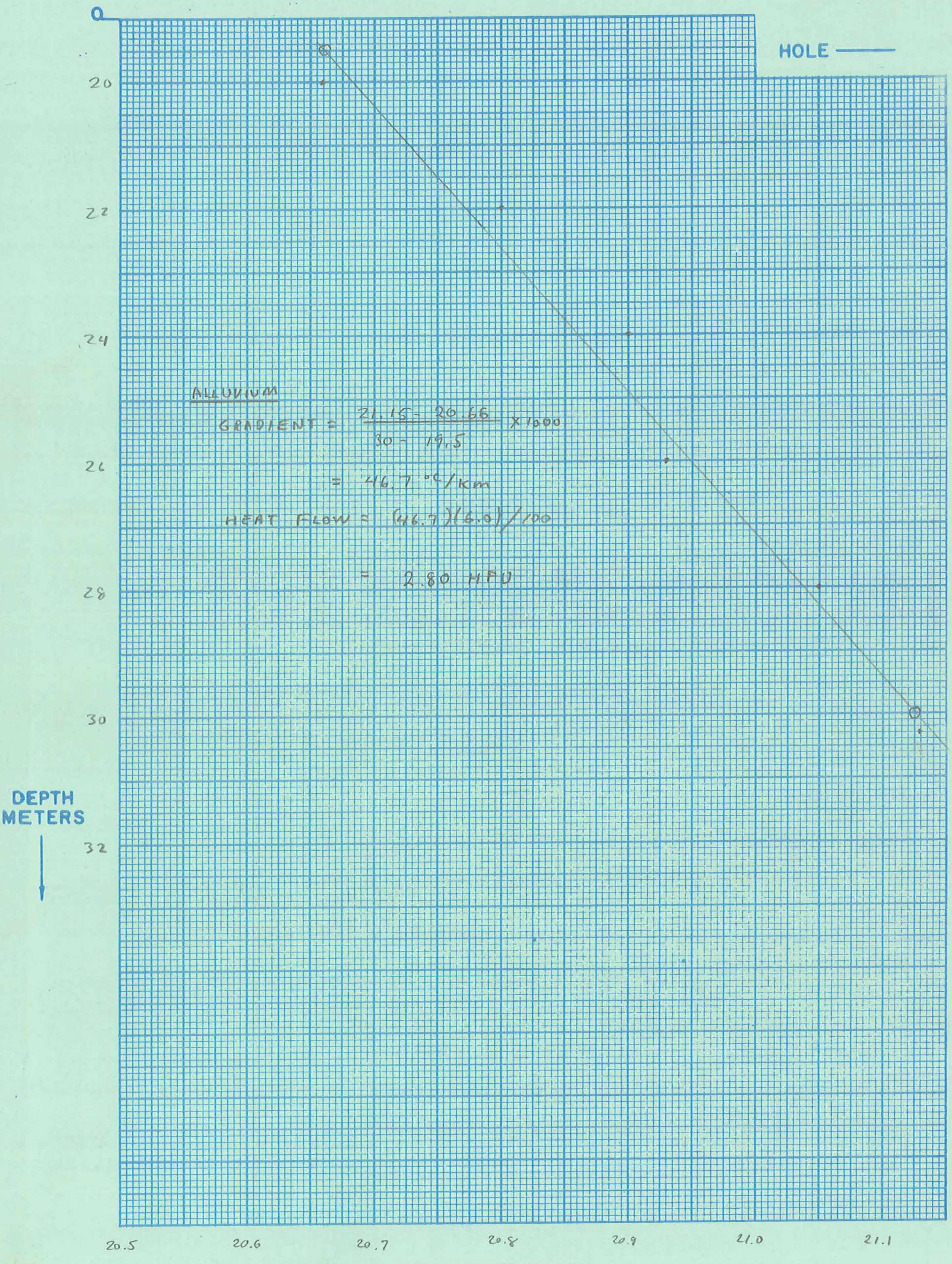
Segment 9

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



ALLUVIUM

$$\text{GRADIENT} = \frac{21.15 - 20.66}{30 - 19.5} \times 1000$$

$$= 46.7\ ^{\circ}\text{C/Km}$$

$$\text{HEAT FLOW} = (46.7)(6.0)/100$$

$$= 2.80\ \text{HFU}$$

SATATHITE ΔT

Date Logged: 6/28/80

ΔT Well No. 80 - 69

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O ~~Air~~	Lithology, etc.
20		20.66	0.14	70	6.0		FINE-GRAINED MEDIUM BROWN
22		20.80	0.10	50	6.0		SANDY Qal WITH PEBBLES
24		20.90	0.03	15	6.0		AND COBBLES (UP TO 10 cm)
26		20.93	0.12	60	6.0		OF BASALT. HILLS TO
28		21.05	0.08	34.8	6.0		SOUTH EAST ARE BASALT-
30.3		21.13			6.0		CAPPED.
							H_2O @ GROUND LEVEL
							IN PIPE. ABUNDANT
							ALGAE IN ADJACENT TANK

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. _____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page _____ of _____

AMAX EXPLORATION, INC. OLD SAND ΔT

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-70

Property-Project 1114 Depth Logged 41.3

Map KELLOG WELL Scale 1:24,000 Date: Drilled ____ Logged 6/28/80

State NM County CATRON , NE¼ of SW¼ of SW¼ of NW¼ of Sec 12 T 4S R 9W

Instrument DT 101 (JL) Operator JL Elevation 6940 (ft/m)

Comments 6' BLADES, 5" CASING; PUMPING UPON ARRIVAL; PROBE DOWN INSIDE PIPE; DID NOT PUMP DURING PROBING (TULAROSA AMS)

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	1	1	4							2	8	▨	0	6	▨	8	0	C	M

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

Site Description (columns 21–50) (Approx. location, water well?, oil test?, etc.)

Operator					Editor					Drilled DA			MO			YR	
51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
			J	L	/							▨			▨		

Card B

Map Location **

Scale Unit IN CM					Map Size (7.5, 15., 60.)					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
▨	C	M	▨	▨			7	.	5			3	3	.		5	2	.	6		1	0	7	.		4	5	.	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
					4	6	.	2	6						6	0	.	8	1	6	9	4	0	.	▨	▨	▨	▨	F

Use decimals

Write M if if meters

Segment 1 = Depths Start (21–30) End (31–40) Conductivity K (41–45) ΔK (46–50)

Best cond. (−K)

Downward extrapolations (−ΔK)

Segment 2 Start → (51–60) End (61–70) K (71–75) ΔK (76–80)

Segment 3 (21–50)

Segment 4 Start → (51–80)

Segment 5 (21–50)

Segment 6 Start → (51–80)

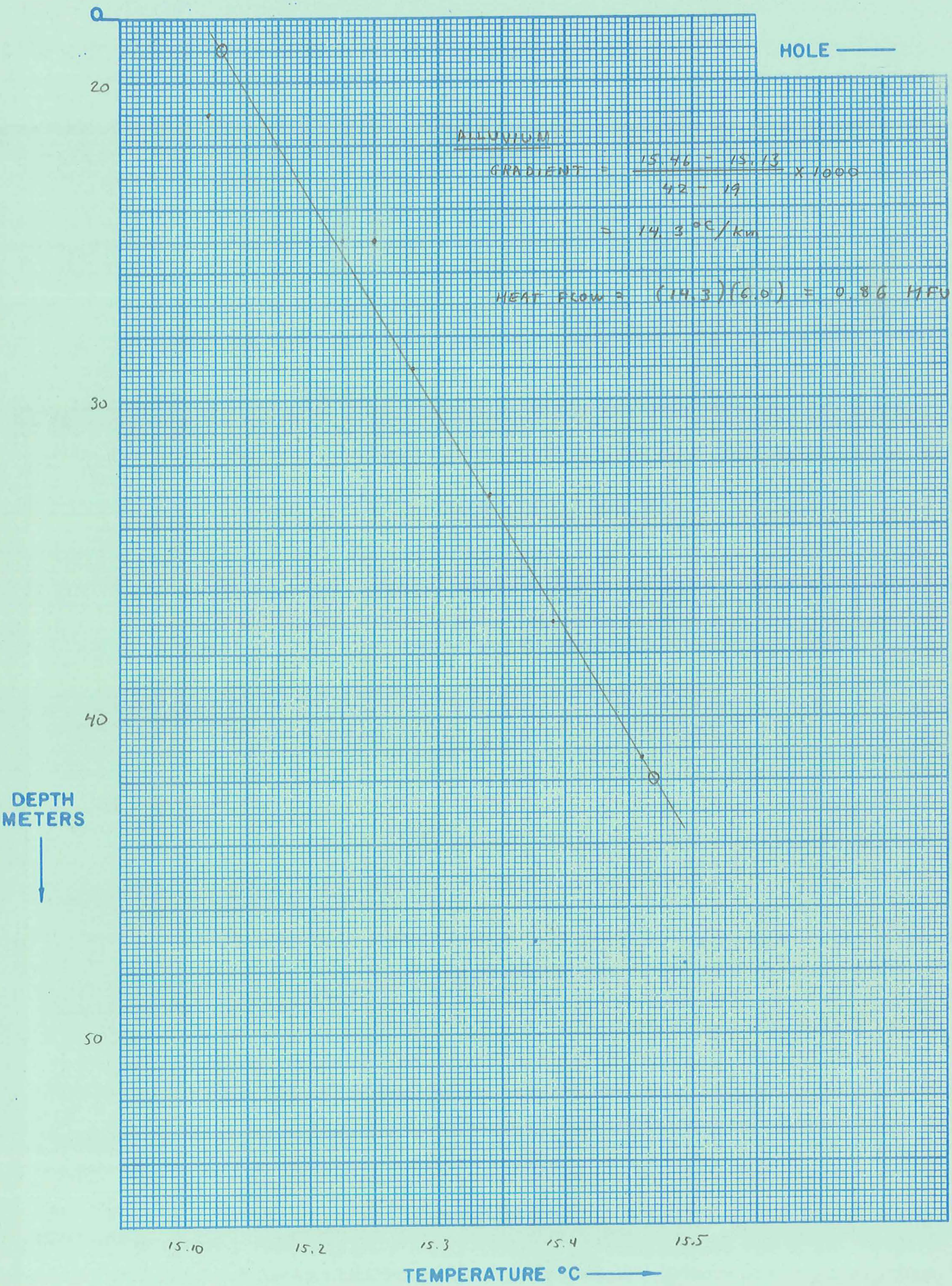
Segment 7 (21–50)

Segment 8 Start → (51–80)

Segment 9 (21–50)

Segment 10 Start → (51–80)

After final segment Start = .999



<u>ALLUVIUM</u>

$$\text{GRADIENT} = \frac{15.46 - 15.13}{42 - 19} \times 1000$$

$$= 14.3\ ^{\circ}\text{C/km}$$

HEAT FLOW = (14.3)(6.0) = 0.86 HFU

OLD SAND ΔT

Date Logged: 6/28/70

ΔT Well No. 80-70

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	[✓ H_2O] ~~Air~~	Lithology, etc.
21		15.12	0.13	32.5	6.0		MEDIUM-GRAINED SANDY
25		15.25	0.03	7.5	6.0		LIGHT BROWN Qal
29		15.28	0.06	15.0	6.0		WITH PEBBLES & COBBLES
33		15.34	0.05	12.5	6.0		(UP TO 25 cm) OF
37		15.39	0.07	16.3	6.0		PUMICE, VESICULAR BASALT
41.3		15.46			6.0	↓	& TUFF BRECCIA
							H_2O @ GROUND SURFACE
							IN PIPE

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page _____ of _____

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

CORNER ΔT

ΔT Well No. 80-71

Property-Project 1114

Depth Logged 80.0 m

Map AUGUSTINE WELL Scale 1:24,000 Date: Drilled ______ Logged 6/28/80

State NM County CATRON , NE¼ of NE¼ of NE¼ of NE ¼ of Sec 2 T 3S R 9W

Instrument DT 101 (JL) Operator JL

Elevation 7052 (ft m)

Comments 6" OPEN HOLE, ABANDONNED WOODEN TOWER (SOCORRO AMS)

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	1	1	4							2	8	▨	0	6	▨	8	0	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
																																	J	L	/							▨			▨		

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

Card B

Map Location * *

Scale Unit IN CM					Map Size (7.5, 15., 60.)					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
▨	C	M	▨	▨			7	.	5			3	4	.			0	.	0		1	0	7	.		4	5	.	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
					3	7	.	8	3							5	.	9	8	7	0	5	2	.	▨	▨	▨	▨	F

Use decimals

← Write M if if meters

Segment != 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 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

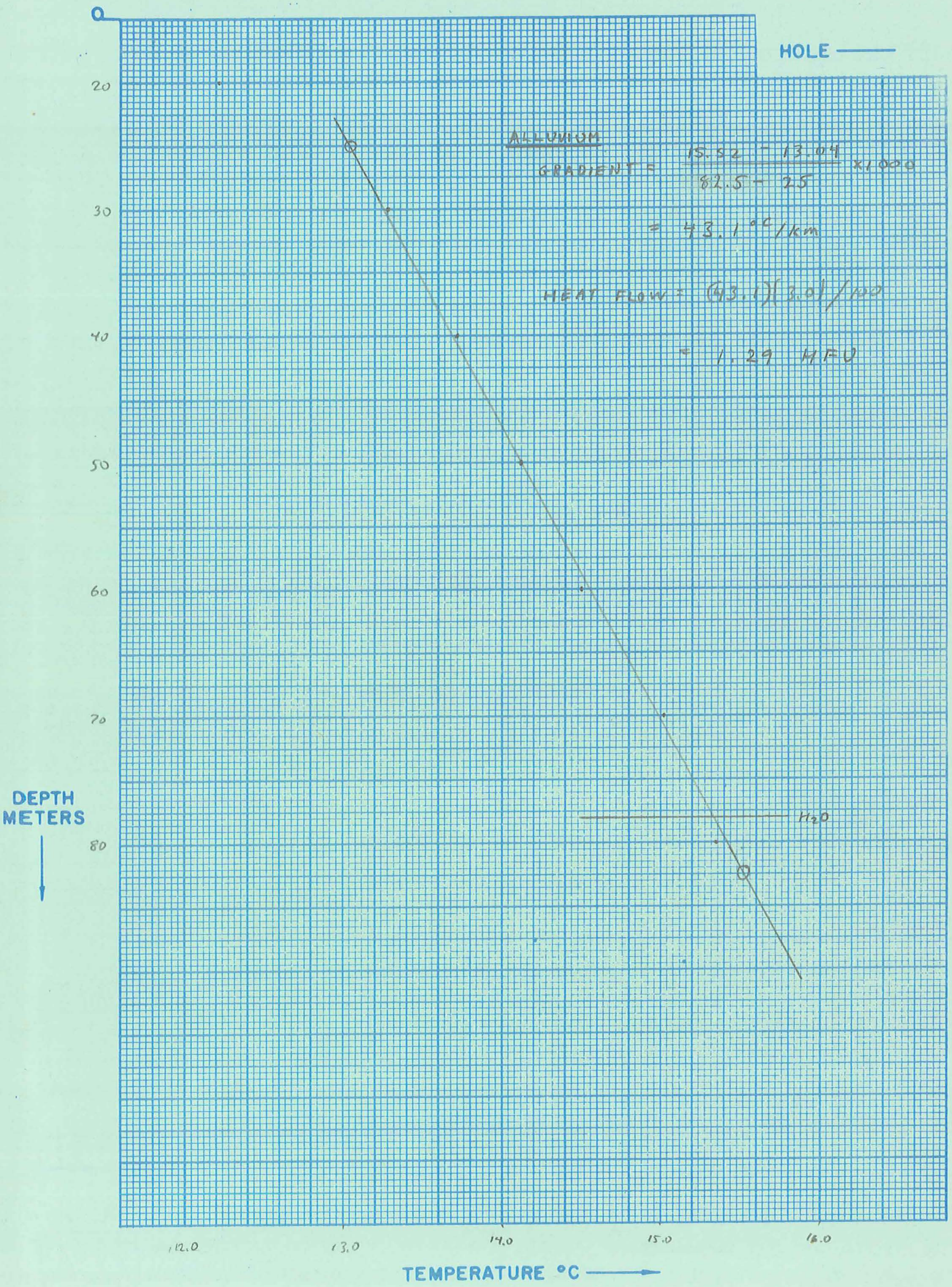
Segment 9

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



ALLUVIUM

$$\text{GRADIENT} = \frac{15.52 - 13.04}{82.5 - 25} \times 1000$$

$$= 43.1\ °C/km$$

$$\text{HEAT FLOW} = (43.1)(3.0)/100$$

$$= 1.29\ \text{HFU}$$

CORNER OT

Date Logged: 6/28/80

ΔT Well No. 80-71

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	~~H_2O~~ Air	Lithology, etc.
20		12.22			3.0	↓	FINE SANDY MEDIUM BROWN
			1.06	106			
30		13.28			3.0		Qal WITH PEBBLES &
			0.44	44			
40		13.72			3,0		COBBLES (UP TO 10 CM)
			0.40	40			
50		14.12			3.0		OF ANDESITE PORPHYRY,
			0.38	38			
60		14.50			3,0		BASALT & RHYOLITE.
			0.52	52			
70		15.02			3.0		H_2O @ 78.0 m
			0.33	33			
80		15.35			3.0	H_2O	

K=Conductivity

page ______ of ______

Date Logged: ____________________ ΔT Well No. ______________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

WARM ΔT

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-72

Property-Project 1114 Depth Logged 70.0 m

Map ARROWHEAD WELL Scale 1:24,000 Date: Drilled ______ Logged 6/28/80

State NM County SOCORRO, NE¼ of NE¼ of NE¼ of NE¼ of Sec 34 T 2S R 7W

Instrument DT 101 (JL) Operator JL Elevation 7021 (ft ~~m~~)

Comments 8' BLADES, 6" CASING; WINDMILL WAS ON BUT NOT PUMPING ON ARRIVAL (SOCORRO AMS)

JUSTIFY

Card A

Date Logged

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

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
1	1	1	4							2	8	▨	0	6	▨	8	0	C	M

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
																																	J	L	/							▨			▨		

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

Card B

Map Location **

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

Scale Unit IN CM					Map Size (7.5, 15., 60.)					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
▨	C	M	▨	▨			7	.	5			3	4	.			0	.	0		1	0	7	.		3	7	.	5

Use decimals

Northing										Easting										Elev									
51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
					4	4	.	6	5						3	1	.	7	9	7	0	2	1	.	▨	▨	▨	▨	F

Use decimals

← Write M if if meters

Segment 1 = Depths

Conductivity

Best cond. (-K)

Downward extrapolations (-ΔK)

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

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

Segment 3

Segment 4

Start →

Segment 5

Segment 6

Start →

Segment 7

Segment 8

Start →

Segment 9

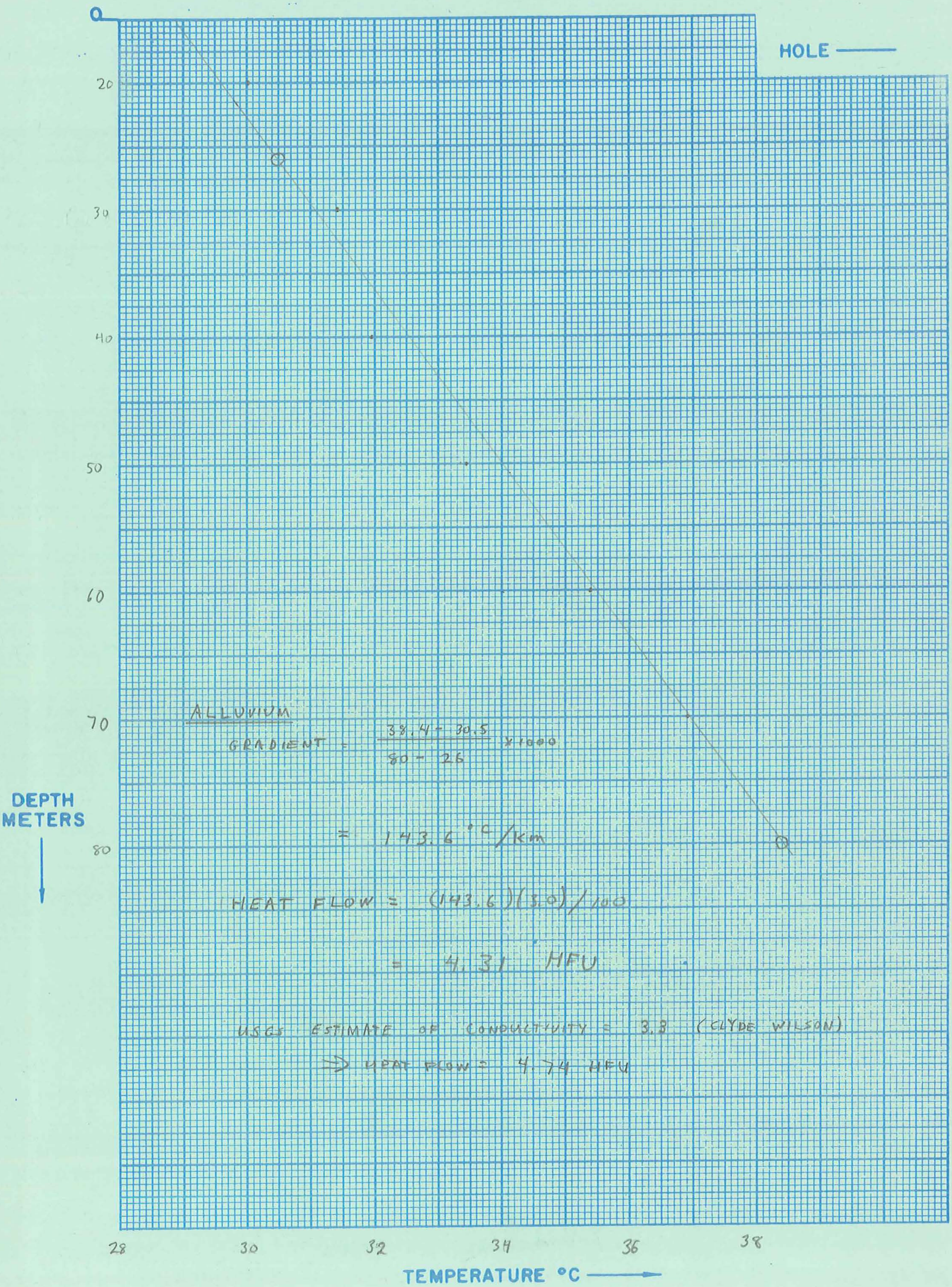
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

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



ALLUVIUM

$$\text{GRADIENT} = \frac{38.4 - 30.5}{80 - 26} \times 1000$$

$$= 143.6\ °C/Km$$

$$\text{HEAT FLOW} = (143.6)(3.0)/100$$

$$= 4.31\ \text{HFU}$$

USGS ESTIMATE OF CONDUCTIVITY = 3.3 (CLYDE WILSON)

$\Rightarrow$ HEAT FLOW = 4.74 HFU

WARMAT

Date Logged: 6/28/80

ΔT Well No. 80-72

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	~~H_2O~~ [✓ Air]	Lithology, etc.
20		30.02	1.40	140	3.0		FINE-GRAINED SANDY LIGHT
30		31.42	0.55	55	3.0		BROWN Qgl WITH PEBBLES
40		31.97	1.48	148	3.0		& COBBLES (UP TO 15 cm)
50		33.45	1.94	194	3.0		OF ANDESITE PORPHYRY,
60		35.39	1.52	152	3.0		VESICULAR BASALT, TUFF,
70.0		36.91			3.0		AND PUMICE.
							NO H_2O ENCOUNTERED

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

EAST ΔT

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-73

Property-Project 1114 Depth Logged 55.9 m

Map ARROWHEAD WELL Scale 1:24000 Date: Drilled ______ Logged 6/28/80

State NM County Socorro, SE¼ of NE¼ of SE¼ of SE¼ of Sec 34 T 25 R 7W

Instruments ΔT 10, (JL) Operator JL Elevation 6986 (ft ~~m~~)

Comments 8' BLADES, 7" CASING, INSULATED; WINDMILL ON BUT NOT RUNNING ON ARRIVAL (SOCORRO AMS)

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
1	1	1	4							2	8	▨	0	6	▨	8	0	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
																																	J	L	/							▨			▨		

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

Card B

Map Location **

Scale Unit IN CM					Map Size (7.5, 15., 60.)					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
▨	C	M	▨	▨			7	.	5			3	4	.			0	.	0		1	0	7	.		3	7	.	5

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
					3	9	.	0	5						3	1	.	7	2	6	9	8	6	.	▨	▨	▨	▨	F

Use decimals

← Write M if if meters

Segment 1 = Depths Conductivity

Best cond. (-K)

Downward extrapolations (-ΔK)

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

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 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

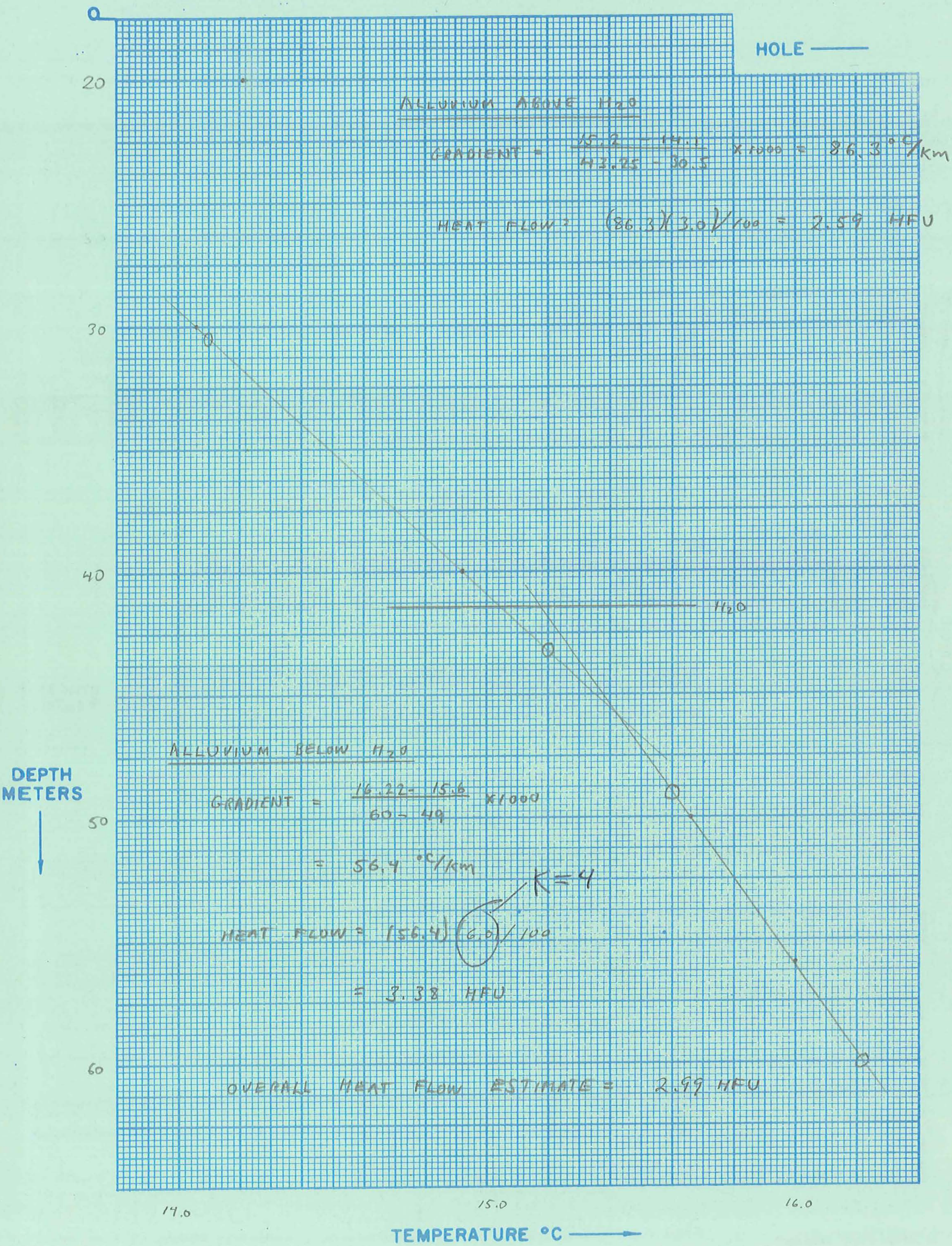
Segment 9

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



ALLUVIUM ABOVE H_2O

$$\text{GRADIENT} = \frac{15.2 - 14.1}{43.25 - 30.5} \times 1000 = 86.3\ °C/km$$

$$\text{HEAT FLOW} = (86.3)(3.0)/100 = 2.59\ \text{HFU}$$

ALLUVIUM BELOW H_2O

$$\text{GRADIENT} = \frac{16.22 - 15.6}{60 - 49} \times 1000$$

$$= 56.4\ °C/km$$

$$\text{HEAT FLOW} = (56.4)\,(6.0)/100$$

K = 4

$$= 3.38\ \text{HFU}$$

OVERALL HEAT FLOW ESTIMATE = 2.99 HFU

EAST ΔT

Date Logged: 6/28/80

ΔT Well No. 80-73

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	~~H_2O~~ [✓ Air]	Lithology, etc.
20		14.21	-0.15	-15.0	3.0		VERY FINE SANDY LIGHT BROWN
30		14.06	0.86	86.0	3.0		Qal WITH VERY FEW
40		14.92	0.74	74.0	3.0		COBBLES (UP TO 10 cm) OF
50		15.66	0.34	57.6		H_2O	ANDESITE (?) & BASALT
55.9		16.00					
							H_2O @ 41.4 m

K=Conductivity

page ____ of ____

Date Logged: ____________________

ΔT Well No. _____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page _____ of _____

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Electric Pole ΔT

ΔT Well No. 80-74

Property-Project 1114 Depth Logged 45m

Map Torreon, N.M Scale 15' 1/62500 Date: Drilled ______ Logged 6/21/80

State N.M County Torrance, NW¼ of NE¼ of SE¼ of SW¼ of Sec 10 T 5N R 6 E

Instrument WA #4 Operator WA + AS Elevation 6710 (ft/m)

Comments No windmill, 6" casing, near electric pole

JUSTIFY

Card A

Date Logged

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

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

Site Description (columns 21–50) | Operator (51–55) | Editor (56–60) | Drilled DA (61–62) | MO (64–65) | YR (67–68)

51	52	53	54	55	56
			W	A	/

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

Card B

Map Location **

Scale Unit IN CM 21	22	23	24	25	Map Size (7.5, 15., 60.) 26	27	28	29	30	N Lat Degree 31	32	33	34	35	Min 36	37	38	39	40	W Long Degree 41	42	43	44	45	Min 46	47	48	49	50
▨	C	M	▨	▨		1	5	.	0			3	4	.		4	0	.	3		1	0	6	.		1	7	.	8

Use decimals

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

Northing 51	52	53	54	55	56	57	58	59	60	Easting 61	62	63	64	65	66	67	68	69	70	Elev 71	72	73	74	75	76	77	78	79	80
					3	0	.	4	0						2	9	.	5	5	6	7	1	0	.	▨	▨	▨	▨	F

Use decimals

Write M if if meters

Segment 1 = Depths Start (21–30) End (31–40) Conductivity K (41–45) ΔK (46–50)

Best cond. (−K)

Downward extrapolations (−ΔK)

Segment 2 Start → (51–60) End (61–70) K (71–75) ΔK (76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

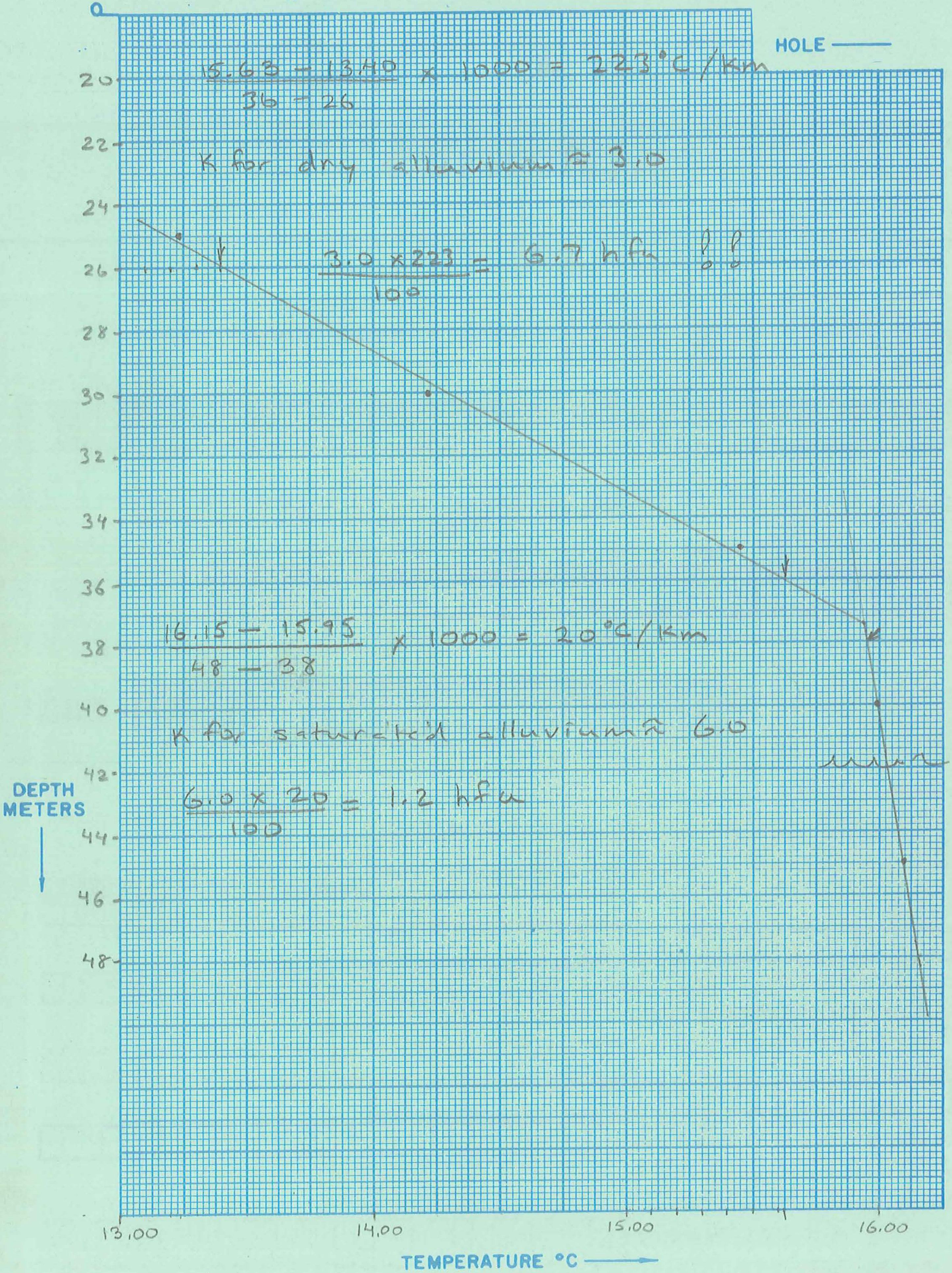
Segment 7

Segment 8 Start →

Segment 9 (21–50)

Segment 10 Start → (51–80)

After final segment Start = .999



$$\frac{15.63 - 13.40}{36 - 26} \times 1000 = 223\,°C/Km$$

K for dry alluvium ≈ 3.0

$$\frac{3.0 \times 223}{100} = 6.7 \text{ hfu} \; !!$$

$$\frac{16.15 - 15.95}{48 - 38} \times 1000 = 20\,°C/Km$$

K for saturated alluvium ≈ 6.0

$$\frac{6.0 \times 20}{100} = 1.2 \text{ hfu}$$

Electric Pole ΔT

Date Logged: 06/21/80

ΔT Well No. 80-74

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		—					Alluvium.
25		13.24	0.98	196			Red-brown soil
30		14.22	1.23	246	air		Nearest o/c miles
35		15.45	0.53	106	↑		to west.
40		15.98	0.12	24			
45		16.10					

K=Conductivity

page ____ of ____

Date Logged: ____________________

ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

Confirmation ΔT

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-75

Property-Project 1114 Depth Logged 50m

Map Torreon Quad. Scale 15' Date: Drilled ______ Logged 6/21/80

State NM County Torrance , ______ of ______ of SE of corner of Sec 11 T5N R6E

Instrument DT-101 #4 Operator WA & AS Elevation 6570 [✓ ft] m

Comments small windmill at sec. corner, 6" casing, H₂O not encountered.

Card A

JUSTIFY

Date Logged

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

(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 **				
21	22	23	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
	C	M		1	5	.	0		3	4	.		3	0	.				1	0	6	.	3	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
					2	7	.	7	3						3	3	.	4	5	6	5	7	0	.					F

Use decimals

← Write M if if meters

Segment 1 = Depths Start (21–30) End (31–40) Conductivity K (41–45) ΔK (46–50)

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → (51–60) End (61–70) K (71–75) ΔK (76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

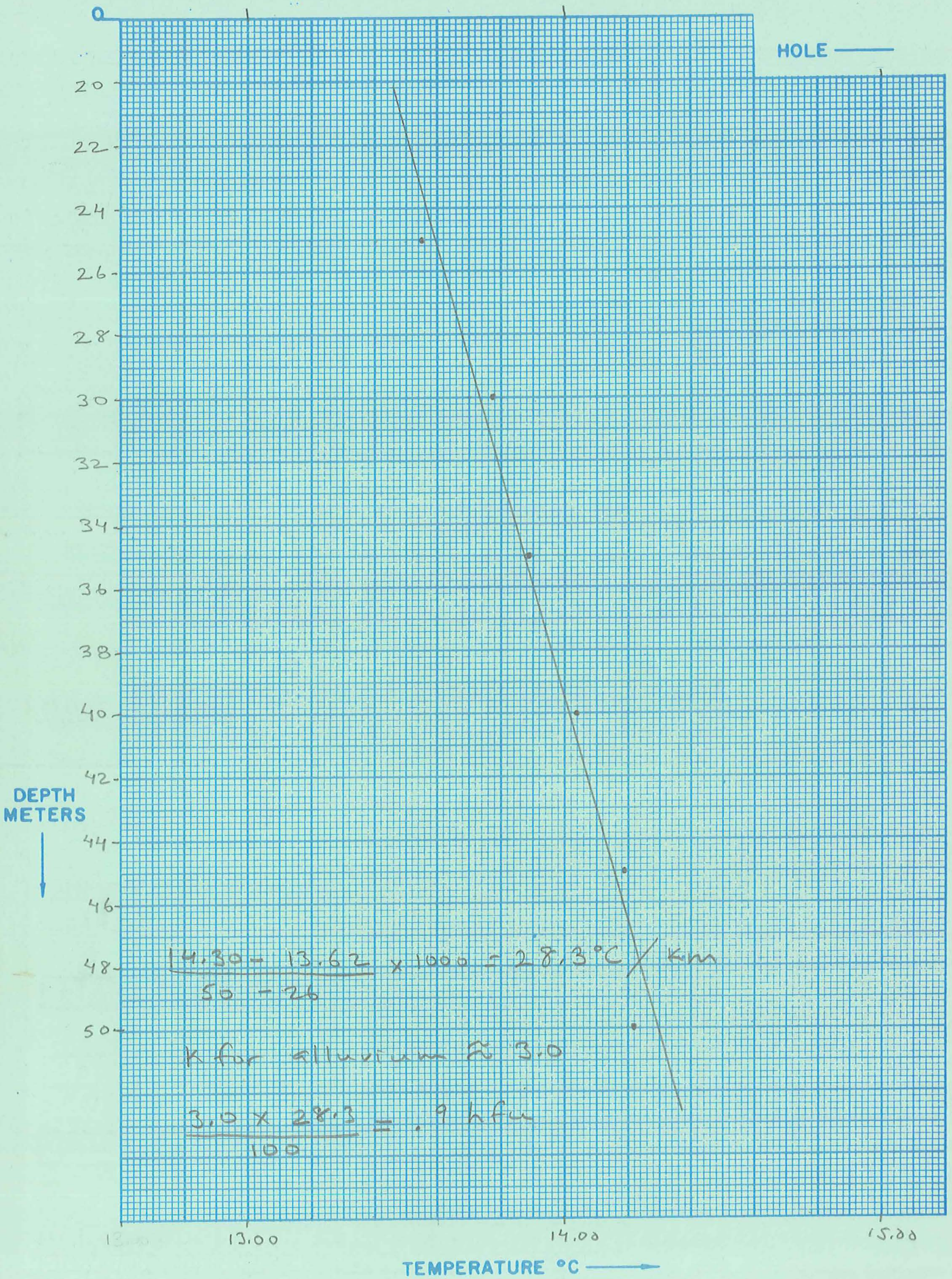
Segment 7

Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start = .999



$$\frac{14.30 - 13.62}{50 - 26} \times 1000 = 28,3\text{°C}/\text{km}$$

K for alluvium ≈ 3.0

$$\frac{3.0 \times 28.3}{100} = .9 \text{ hfu}$$

Confirmation ΔT

Date Logged: 6/21/80

ΔT Well No. 80-75

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
							Alluvium, lt. reddish
							brown. No bedrock
							cropping out in area
25		13.55					
			.21	42			
30		13.76					
			.13	26			
35		13.89					
			.15	30			
40		14.04			↑	↑	
			.15	30			
45		14.19					
			.03	6			
50		14.22			4.0	Air	

K=Conductivity

page ____ of ____

Date Logged: ____________________

ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Swamp ΔT

ΔT Well No. 80-76

Property-Project 1114 Depth Logged 33m

Map Torreon, N.M Scale 15' 1/62500 Date: Drilled ______ Logged 6/21/80

State N.M County Torreon, NE¼ of NW¼ of SW¼ of NW¼ of Sec 28 T 6N R 6E

Instrument WA #4 Operator WA Elevation 6860 [✓ (ft)] (m)

Comments Windmill, 6" casing, 6' blades.

Card A

JUSTIFY

Date Logged

Proj No (1-4)	Well No (5-10)	DA (11-12)	(13)	MO (14-15)	(16)	YR (17-18)	* (19)	* (20)
1114		21	▨	06	▨	80	C	M

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

Drilled

Site Description (21-50)	Operator (51-55)	Editor (56-60)	DA (61-62)	(63)	MO (64-65)	(66)	YR (67-68)
	WA	/		▨		▨	

(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	34.	43.0	106.	19.4

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)
39.65	25.90	6860.	▨	F

Use decimals

Write M if if meters

Segment 1 = Depths

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

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start →

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

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

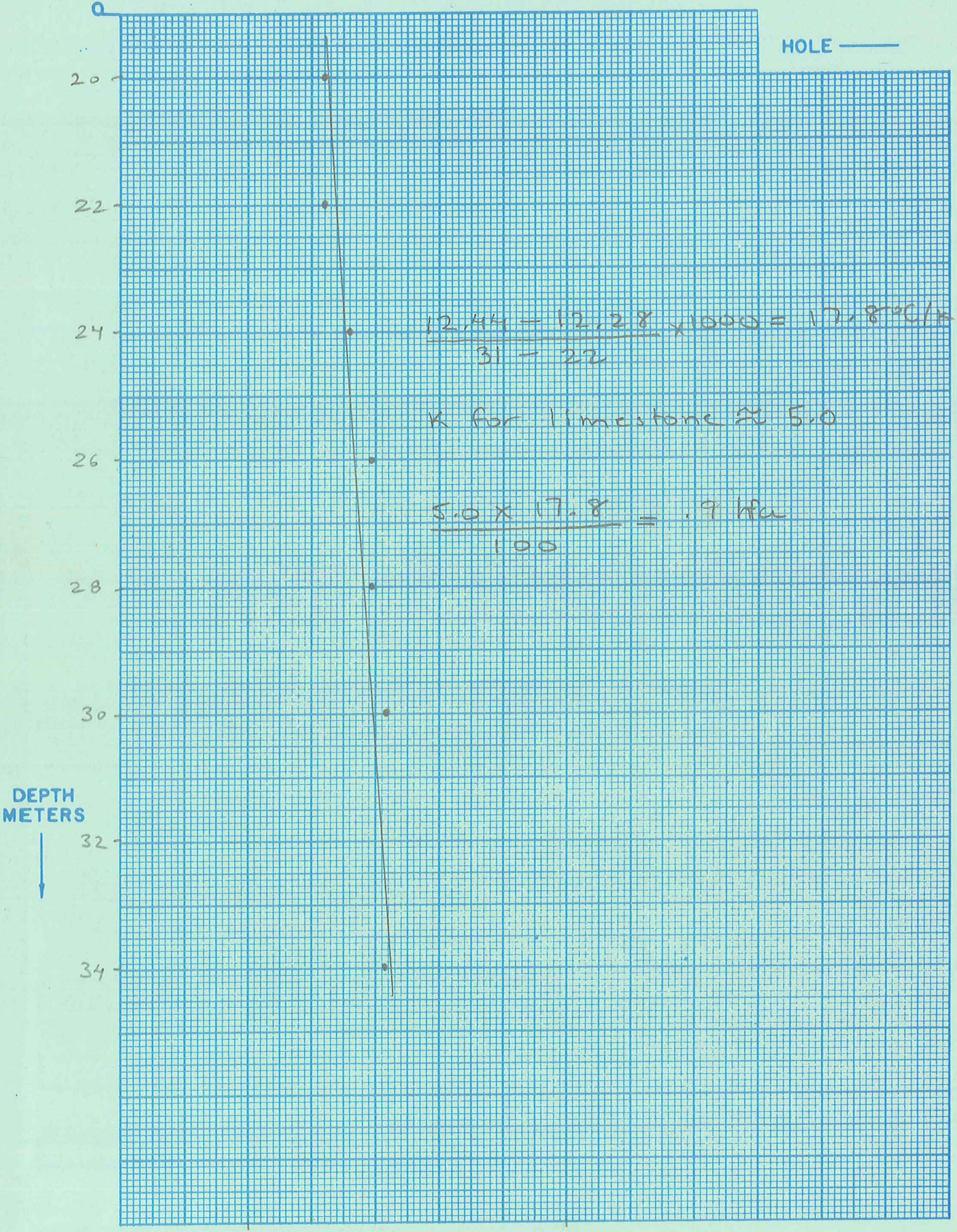
Segment 7

Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start =.999



$$\frac{12.44 - 12.28}{31 - 22} \times 1000 = 17.8\,°C/km$$

K for limestone ≈ 5.0

$$\frac{5.0 \times 17.8}{100} = .9 \text{ hfu}$$

Swamp ΔT

Date Logged: ____________________ ΔT Well No. 80-76

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		12.24	0.00	0			Limestone
22		12.24	0.08	40			below thin cover
24		12.32	0.07	35			of alluvium
26		12.39	0.00	0			
28		12.39	0.04	20			
30		12.43	0.00	0			
33		12.43					

K=Conductivity

page ______ of ______

Date Logged: ____________________

ΔT Well No. ______________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Dead Rats ΔT

ΔT Well No. 80-77

Property-Project 1114 Depth Logged 40 m

Map Torreon, N.M Scale 15' 1/62500 Date: Drilled ____ Logged 06/21/80

State N.M. County Torreon, SE¼ of SE¼ of SW¼ of NE¼ of Sec 18 T 4N R 6E

Instrument WA #4 Operator WA + AS Elevation 7070 (ft/m)

Comments Windmill, disconnected; 6" casing

JUSTIFY

Card A

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

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

Site Description 21–50	Operator 51 52 53 54 55	Editor 56 57 58 59 60	Drilled DA 61 62	63	MO 64 65	66	YR 67 68
	W A	/					

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

Card B

Map Location * *

Scale Unit IN CM 21	22 23	24 25	Map Size (7.5,15.,60.) 26 27 28 29 30	N Lat Degree 31 32 33 34 35	Min 36 37 38 39 40	W Long Degree 41 42 43 44 45	Min 46 47 48 49 50 **
	cm		15.0	34.	34.3	106.	20.8

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 72 73 74 75	76 77 78 79	80
13.00	22.40	7070.		F

Use decimals

Write M if if meters

Segment 1 = Depths

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

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → (51–60) End (61–70) K (71–75) ΔK (76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

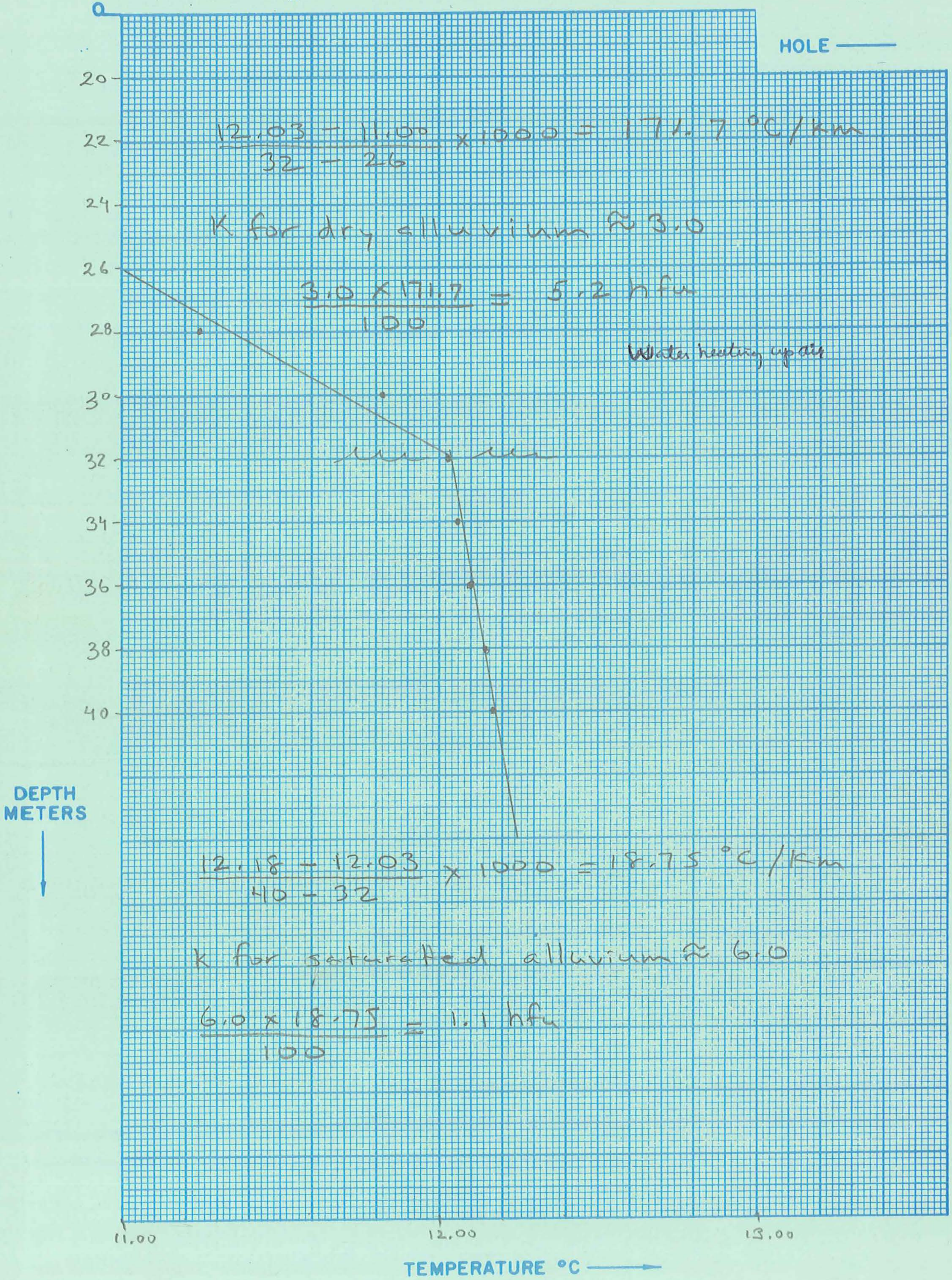
Segment 7

Segment 8 Start →

Segment 9 (21–50)

Segment 10 Start → (51–80)

After final segment Start = .999



$$\frac{12.03 - 11.00}{32 - 26} \times 1000 = 171.7\ °C/km$$

K for dry alluvium ≈ 3.0

$$\frac{3.0 \times 171.7}{100} = 5.2\ hfu$$

$$\frac{12.18 - 12.03}{40 - 32} \times 1000 = 18.75\ °C/Km$$

k for saturated alluvium ≈ 6.0

$$\frac{6.0 \times 18.75}{100} = 1.1\ hfu$$

Dead Rats ΔT

Date Logged: 06/21/80

ΔT Well No. 80-77

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		—					Alluvium on
22		—					surface containing
24		—	getting				abundant pebbles and
26		—	warmer				blocks of quartzite.
28		11,25	0.57	285		air ↑	
30		11.82	0.21	105			
32		12,03	0.03	15			32m
34		12,06	0.04	20		↓	
36		12.10	0.05	25		H_2O	avg. 17.5 °C/km
38		12.15	0.02	10			
40		12.17					

K=Conductivity

page ______ of ______

Date Logged: ____________________

ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

New Well ΔT

ΔT Well No. 80-78

Property-Project 1114 Depth Logged 40m

Map Sierra Larga South Scale 7½' 1/24000 Date: Drilled ______ Logged 6/22/80

State N.M County Socorro, SW¼ of NW¼ of SW¼ of SW¼ of Sec 36 T 2S R 3E

Instrument WA #4 Operator WA Elevation 5974 (ft/m)

Comments Windmill, 10' blades, 6" casing

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	1	1	4							2	2	▨	0	6	▨	8	0	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)	63	MO (64–65)	66	YR (67–68)
	WA	/		▨		▨	

(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 ▨▨	7.5	34.	5.0	106.	35.5

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
40.40	13.10	5974.	▨	F

Use decimals

Write M if ← if meters

Segment 1 = Depths

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

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start →

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

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

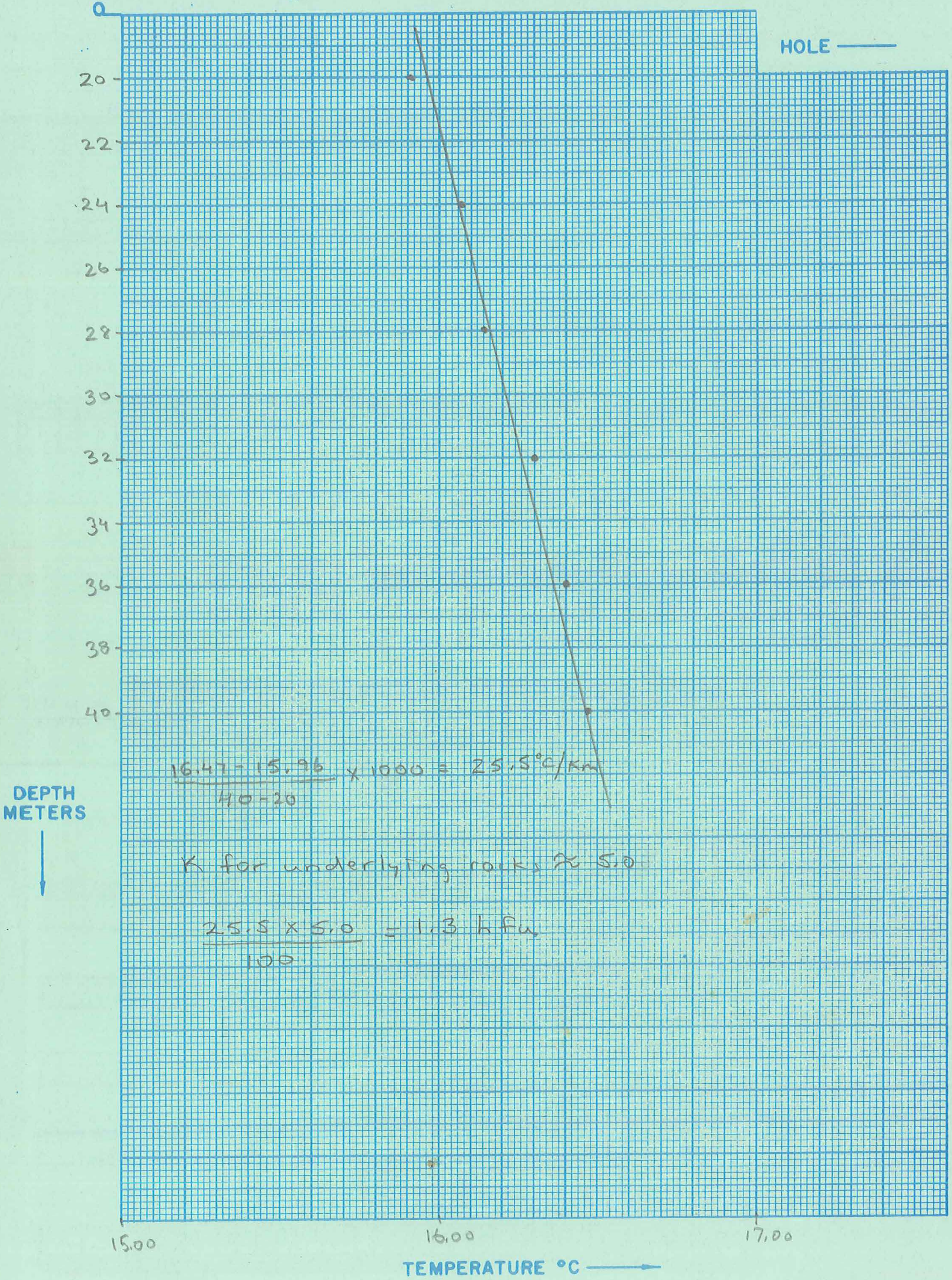
Segment 7

Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start = .999



$$\frac{16.47 - 15.96}{40 - 20} \times 1000 = 25.5\ °C/Km$$

K for underlying rocks $\approx$ 5.0

$$\frac{25.5 \times 5.0}{100} = 1.3 \text{ hfu}$$

New Well ΔT

Date Logged: 6/22/80

ΔT Well No. 80-78

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		15.91	0.16	40		↑	Sedimentery rocks
24		16.07	0.07	17.5			consisting mainly
28		16.14	0.16	40			of limestone
32		16.30	0.10	25			along with sandstone
36		16.40	0.07	17.5			and shale.
40		16.47				air	
			avg =	28			

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Over The Mountain ΔT

ΔT Well No. 80-79

Property-Project 1114 Depth Logged 100 m

Map Sierra Larga South Scale 7.5' 1/24000 Date: Drilled ____ Logged 06/22/80

State N.M County Socorro , SE ¼ of NW ¼ of SW ¼ of SW ¼ of Sec 25 T 2S R 3E

Instrument WA #4 Operator WA Elevation 6098 (ft/m)

Comments Windmill, 10' blades, 6" casing

JUSTIFY

Card A

Proj No	Well No	Date Logged DA		Date Logged MO		Date Logged YR	*	*
1–4	5–10	11–12	13	14–15	16	17–18	19	20
1114		22	▨	06	▨	80	C	M

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

Site Description	Operator	Editor	Drilled DA		Drilled MO		Drilled YR
21–50	51–55	56–60	61–62	63	64–65	66	67–68
	WA	/		▨		▨	

(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 **
21–25	26–30	31–35	36–40	41–45	46–50
cm	.	34.	6.0	106.	35.4

Use decimals

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

Northing	Easting	Elev		
51–60	61–70	71–75	76–79	80
46.70	13.80	6098.	▨	F

Use decimals

← Write M if if meters

Segment 1 = Depths

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

Best cond. (-K)

Downward extrapolations (- Δ K)

Segment 2 Start →

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

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

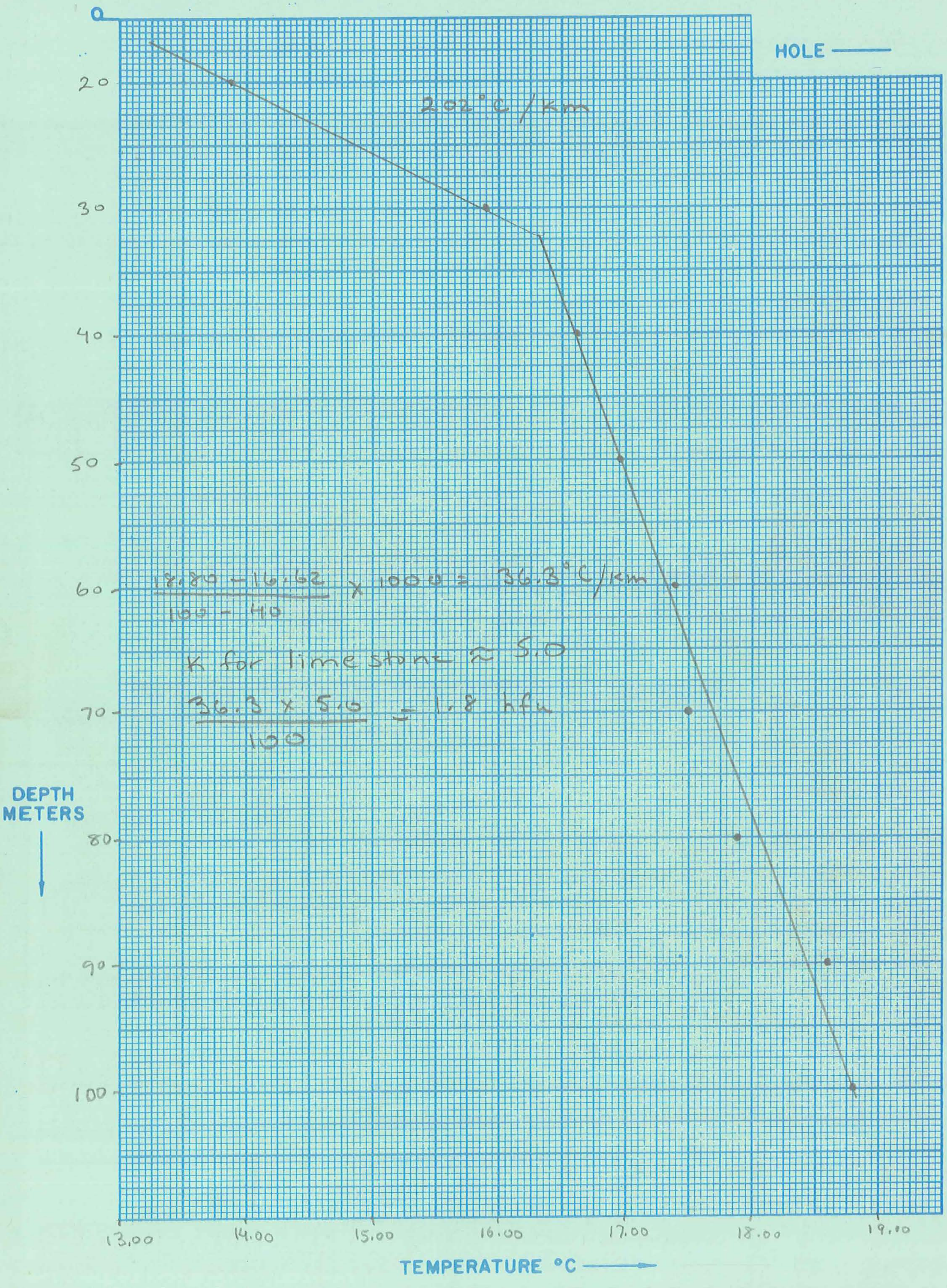
Segment 9

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



$$\frac{18.80 - 16.62}{100 - 40} \times 1000 = 36.3°C/Km$$

K for limestone ≈ 5.0

$$\frac{36.3 \times 5.0}{100} = 1.8 \text{ hfu}$$

Over The Mountain ΔT

Date Logged: 06/22/80

ΔT Well No. 80-79

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		13,88	2.02	202	↑		Limestone
30		15,90	0.72	72			under a thin
40		16,62	0.34	34			covering of
50		16,96	0.38	38			alluvium.
60		17,34	0.65	65			
70		17.99	0.39	39			
80		18.38	0.22	22			
90		18.60	0.20	20			
100		18,80			air		

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

Boulter Well ΔT

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-80

Property-Project 1114 Depth Logged 42m

Map Sierra Larga South Scale 7.5' 1/24000 Date: Drilled ______ Logged 6/22/80

State NM County Socorro, SE 1/4 of SE 1/4 of SW 1/4 of SE 1/4 of Sec 28 T 2S R 4E

Instrument DT-101A #4 Operator WA Elevation 5670 (ft m)

Comments Windmill, 8' blades, 6" casing

Card A

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
1	1	1	4							2	2	▨	0	6	▨	8	0	C	M

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

Site Description

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

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

Operator					Editor					Drilled DA			MO			YR	
51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
			W	A	/							▨			▨		

Card B

Map Location * *

Scale Unit IN CM					Map Size (7.5, 15., 60.)					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
▨	c	m	▨	▨				.				3	4	.			6	.	2		1	0	6	.		3	1	.	8

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
					4	6	.	0	0						3	7	.	5	0	5	6	7	0	.	▨	▨	▨	▨	F

Use decimals

← Write M if 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

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

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

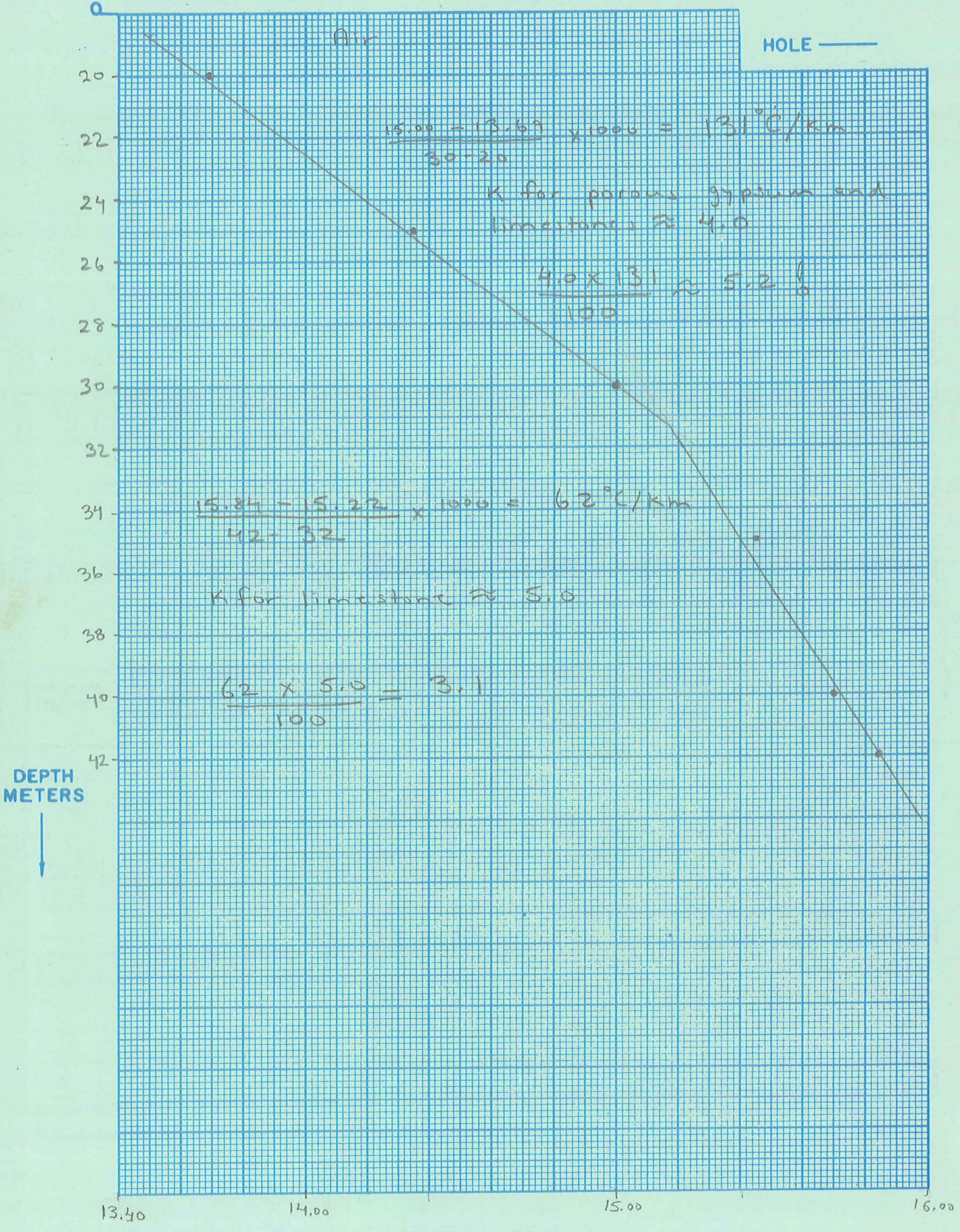
Segment 9

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



$$\frac{15.00 - 13.69}{30-20} \times 1000 = 131\,^{\circ}C/km$$

K for porous gypsum and limestone ≈ 4.0

$$\frac{4.0 \times 131}{100} \approx 5.2 \,!$$

$$\frac{15.84 - 15.22}{42-32} \times 1000 = 62\,^{\circ}C/km$$

K for limestone ≈ 5.0

$$\frac{62 \times 5.0}{100} = 3.1$$

Boulter Well ΔT

Date Logged: 06/22/80

ΔT Well No. 80-80

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		13.69	0.66	132	↑		Alluvium possibly
25		14.35			air		underlain by limestone
			0.65	130			
30		15.00				32m	and gypsum beds.
			0.45	90			
35		15.45			H_2O		Gypsum near
			0.25	50			
40		15.70			↓		surface.
			0.14	70			
42		15.84					

K=Conductivity

page ______ of ______

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page _____ of _____

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Ponciano Well ΔT

ΔT Well No. 80-81

Property-Project 1114 Depth Logged 50m

Map Sierra Larga North Scale 7.5 1/24000 Date: Drilled ______ Logged 6/22/80

State NM County Socorro , SW¼ of NE¼ of NE¼ of NW¼ of Sec 34 T 1S R 3E

Instrument DT-101 #4 Operator WA Elevation 6179 (ft/m)

Comments Windmill, 6" casing; 6' blades.

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
1	1	1	4							2	2		0	6		8	0	C	M

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

Site Description (columns 21–50) (Approx. location, water well?, oil test?, etc.)

Operator (columns 51–55): WA

Editor (columns 56–60): /

Drilled: DA (61–62), MO (64–65), YR (67–68)

Card B

Map Location **

Scale Unit IN CM					Map Size (7.5, 15., 60.)					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
	c	m					7	.	5			3	4	.		1	1	.	1		1	0	6	.		3	6	.	8

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
					2	7	.	7	5							1	.	9	3	6	1	7	9	.					F

Use decimals

Write M if if meters

Segment 1 = Depths Start (21–30), End (31–40); Conductivity K (41–45), ΔK (46–50)

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → End (51–60 / 61–70), K (71–75), ΔK (76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

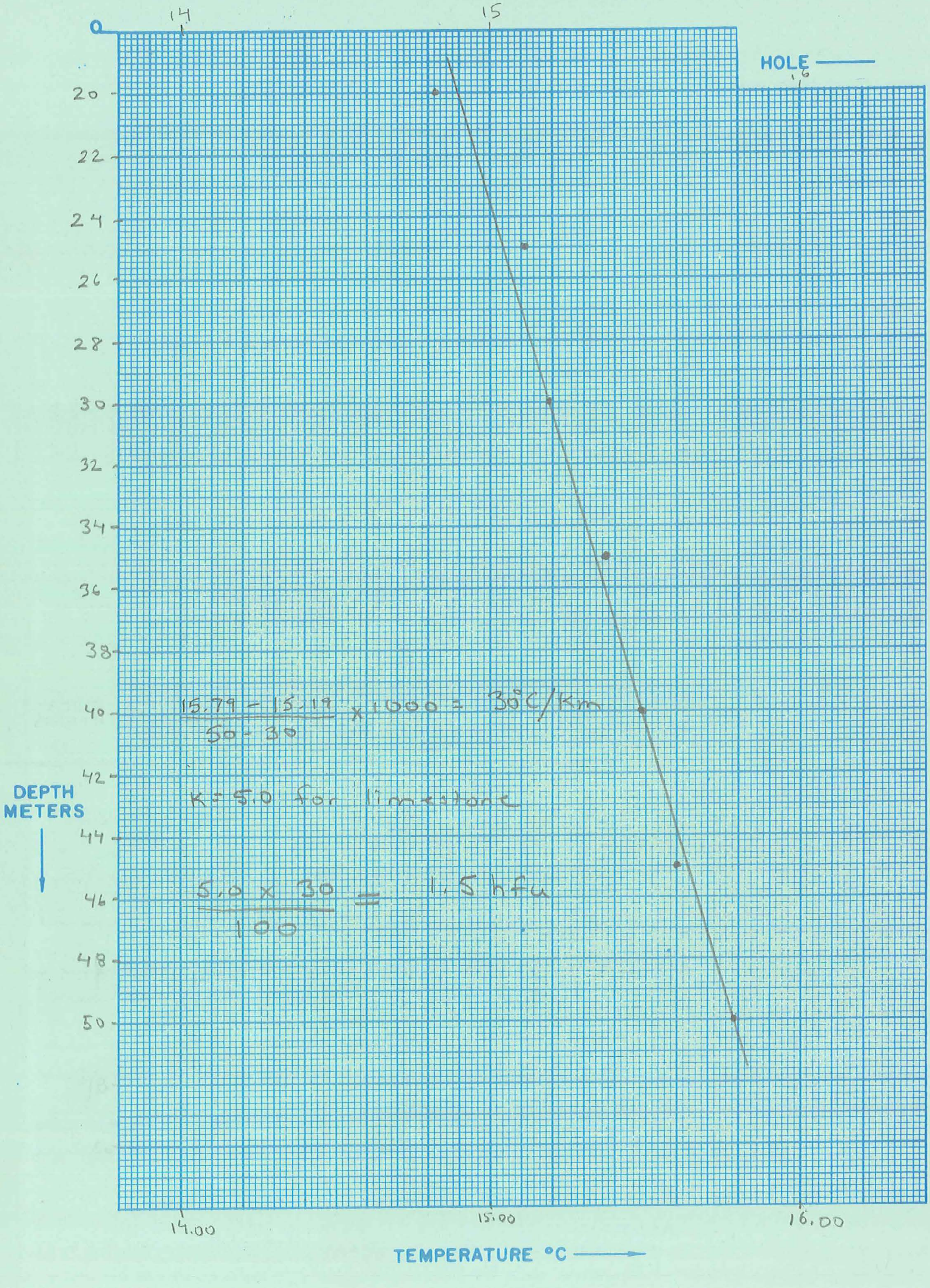
Segment 7

Segment 8 Start →

Segment 9 (21–50)

Segment 10 Start → (51–80)

After final segment Start = .999



$\frac{15.79 - 15.19}{50 - 30} \times 1000 = 30°C/Km$

K = 5.0 for limestone

$\frac{5.0 \times 30}{100} =$ 1.5 hfu

Ponciano Well ΔT

Date Logged: 6/22/80

ΔT Well No. 80-81

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		14.82	0.29	58		↑	Alluvium under-
25		15.11	0.08	16			lain by limestone.
30		15.19	0.18	36			Depth to rock?
35		15.37	0.12	24			perhaps a few m
40		15.49	0.11	22			
45		15.60	0.19	38		air	
50		15.79					

K=Conductivity

page ____ of ____

Date Logged: ____________________

ΔT Well No. _____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page _____ of _____

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Gallina Well ΔT

ΔT Well No. 80-82

Property-Project 1114

Depth Logged 67m

Map Sierra De La Cruz

Scale 7.5' 1/24000

Date: Drilled

Logged 6/23/80

State N.M

County Socorro, NE¼ of NW¼ of NW¼ of SW¼ of Sec 11 T 2S R 2E

Instrument DT-101 #4

Operator WA

Elevation 5482 [✓ ft] m

Comments Windmill 6" casing, 6' blades

JUSTIFY

Card A

Proj No (1–4)	Well No (5–10)	Date Logged DA (11–12)	MO (13–15)	YR (16–18)	19*	20*
1114		23	06	80	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 (63–65)	YR (66–68)
	WA	/			

(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	7.5	34.	9.0	106.	45.1

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 (71–79)	80
11.90	14.60	5482.	F

Use decimals

Write M if if meters

Segment 1 = Depths

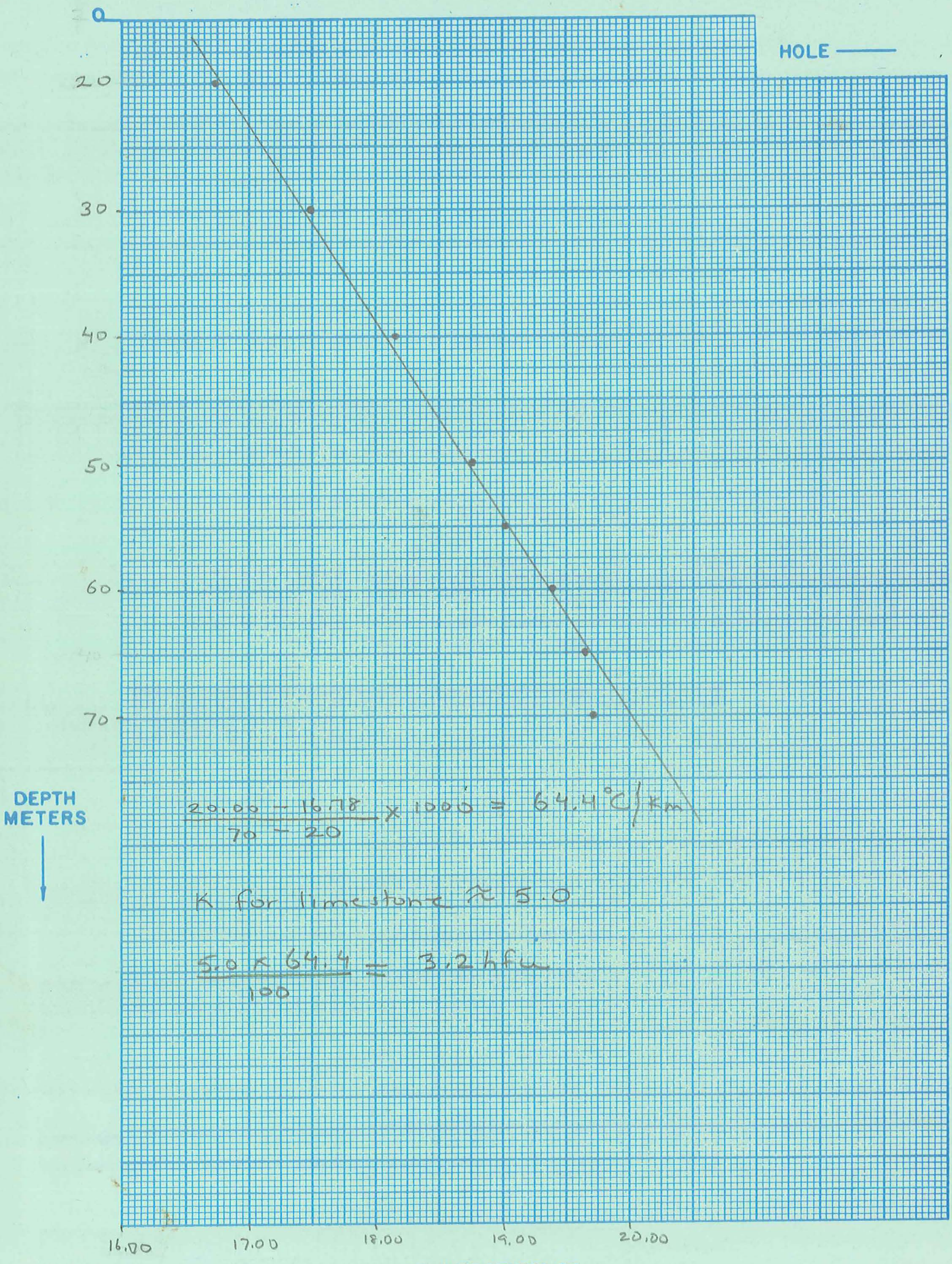
Conductivity

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment	Start	End	K	ΔK
Segment 1 (21–50)				
Segment 2 Start → (51–80)				
Segment 3				
Segment 4 Start →				
Segment 5				
Segment 6 Start →				
Segment 7				
Segment 8 Start →				
Segment 9				
Segment 10 Start →				

After final segment Start = .999



$$\frac{20.00 - 16.78}{70 - 20} \times 1000 = 64.4\,°C/km$$

K for limestone $\approx$ 5.0

$$\frac{5.0 \times 64.4}{100} = 3.2\ hfu$$

Gallina Well ΔT

Date Logged: 06/23/80

ΔT Well No. 80-82

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		16.73	0.75	75		↑	Fossiliferous
30		17.48	0.67	67		air	limestone exposed
40		18.15	0.61	61	45m		on surface
50		18.76	0.26	52			
55		19.02	0.37	74			
60		19.39	0.25	50			
65		19.64	0.08	40		↓	
67		19.72				H_2O	

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Stapleton Well ΔT

ΔT Well No. 80-83

Property-Project 1114 Depth Logged 28m

Map Sierra De La Cruz Scale 7.5 1/24000 Date: Drilled ______ Logged 6/23/80

State N.M. County Socorro , ____ of unsurveyed of ____ of ____ of Sec 22 T 1S R 2E

Instrument DT-101 #4 Operator WA Elevation 5442 (ft m)

Comments Windmill, 6' blades, 3" casing. Water level above surface

No pumping

Card A

JUSTIFY

Proj No (1–4)	Well No (5–10)	Date Logged DA (11–12)	MO (14–15)	YR (17–18)	19*	20*
1114		23	06	80	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)
	WA				

(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	7.5	34.	12.0	106.	42.8

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
36.50	14.25	5442.		F

Use decimals

80: Write M if if meters

Segment 1 = Depths Start (21–30) End (31–40) Conductivity K (41–45) ΔK (46–50)

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → (51–60) End (61–70) K (71–75) ΔK (76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

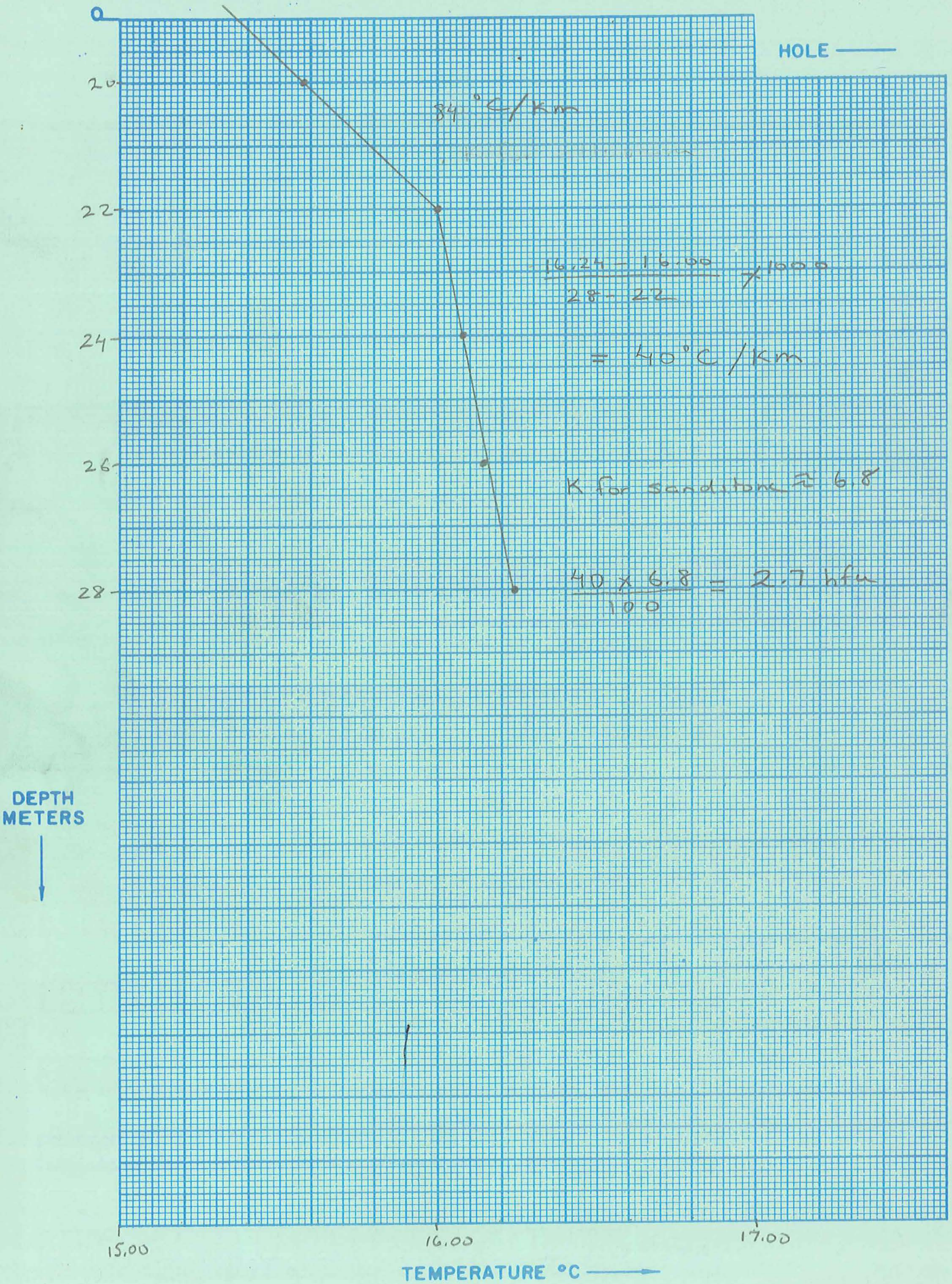
Segment 7

Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start =.999



84 °C/Km

$$\frac{16.24 - 16.00}{28 - 22} \times 1000$$

$= 40$ °C/Km

K for sandstone ≃ 6.8

$$\frac{40 \times 6.8}{100} = 2.7 \text{ hfu}$$

Stapleton Well ΔT

Date Logged: 06/23/80

ΔT Well No. 80-83

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		15.58	0.42	84			Red sandstone
22		16.00	0.08	40			under thin (few
24		16.08	0.06	30		H_2O	m) cover of
26		16.14	0.10	50			alluvium.
28		16.24					

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page _____ of _____

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Joe Well ΔT

ΔT Well No. 80-84

Property-Project 1114 Depth Logged 45m

Map Silver Hill Scale 7.5 1/24000 Date: Drilled ____ Logged 6/25/80

State NM County Socorro, NE1/4 of NW1/4 of NW1/4 of NE1/4 of Sec 17 T 2S R 4W

Instrument DT-101 121 (repaired) Operator WA Elevation 6470 [✓ ft] (m)

Comments Windmill 6" casing 8' blades

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
1	1	1	4							2	5	▨	0	6	▨	8	0	C	M

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

Site Description																														Operator					Editor					Drilled DA			Drilled MO			Drilled 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
																																	W	A	/							▨			▨		

(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 **				
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
▨	c	m	▨	▨			7	.	5			3	4	.			8	.	5	1	0	7	.			1	6	.	6

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
						8	.	1							3	8	.	0	5	6	4	7	0	.	▨	▨	▨	▨	F

Use decimals

Write M if 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 →

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 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

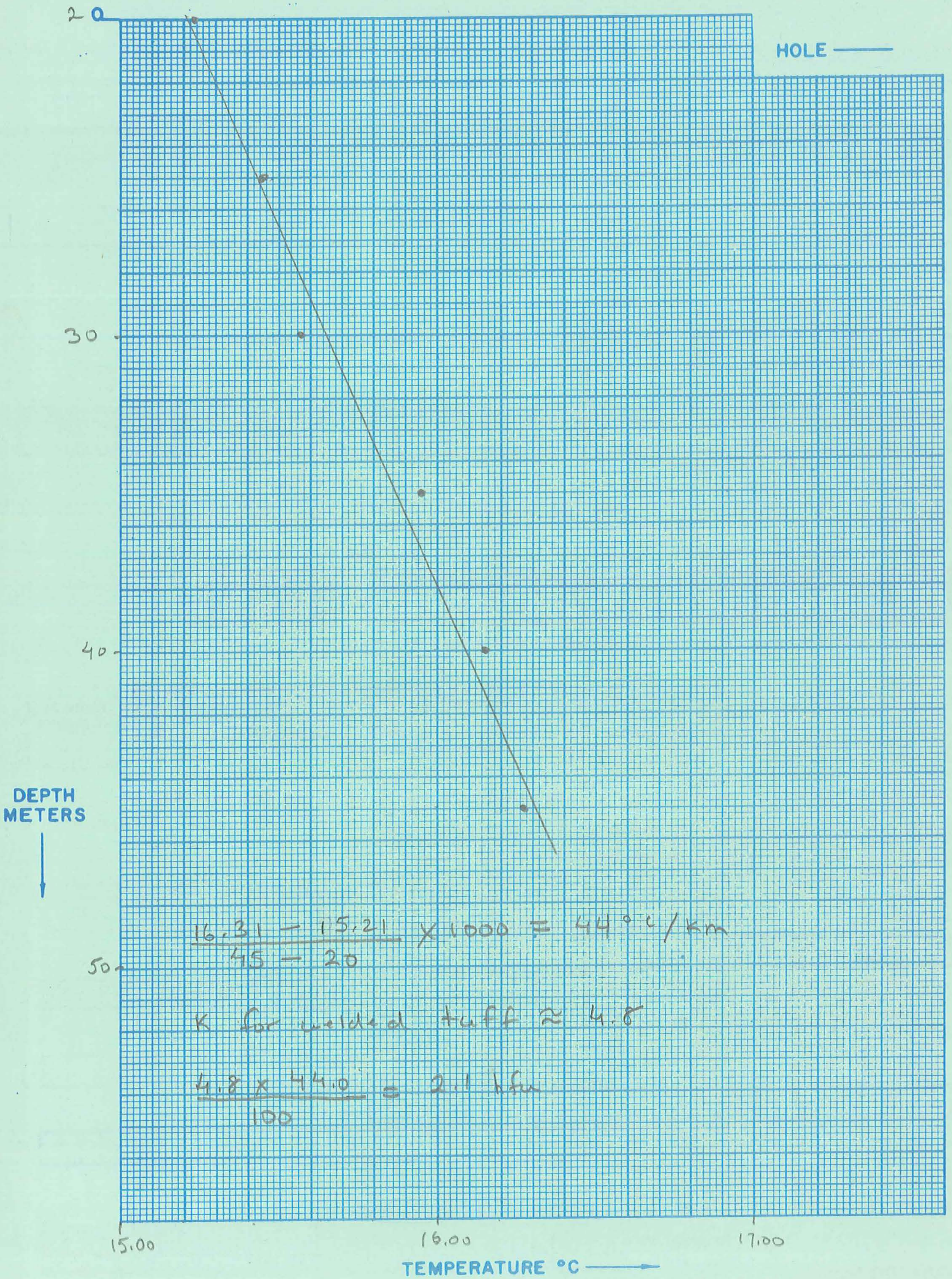
Segment 9

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



$$\frac{16.31 - 15.21}{45 - 20} \times 1000 = 44\ °c/km$$

K for welded tuff ≈ 4.8

$$\frac{4.8 \times 44.0}{100} = 2.1\ hfu$$

Joe Well ΔT

Date Logged: 6/25/80

ΔT Well No. 80-84

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		15.23	0.22	44		↑	Thin cover of
25		15.45	0.25	50			alluvium under-
30		15.70	0.25	50		air	lain by a purplish
35		15.95	0.20	40			pink rhyolitic
40		16.15	0.12	24			welded crystal
45		16.27				H2o	tuff.
			avg =	41.6			

K=Conductivity

page ____ of ____

Date Logged: ____________________

ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Allen Well ΔT

ΔT Well No. 80-85

Property-Project 1114 Depth Logged 35m

Map Silver Hill Scale 7.5' 1/24000 Date: Drilled ____ Logged 6/25/80

State N.M County Socorro , SE1/4 of SW1/4 of SE1/4 of NW1/4 of Sec 36 T 1S R 5W

Instrument DT-101 121 (repaired) Operator WA Elevation 6630 (ft/m)

Comments

Card A

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
1	1	1	4							2	5		0	6		8	0	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	63	MO 64–65	66	YR 67–68
	WA						

(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	7.5	34.	10.8	107.	10.7

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
23.95	23.10	6630.		F

Use decimals

80: Write M if if meters

Segment 1 = Depths

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

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start →

51–60	End 61–70	K 71–75	ΔK 76–80

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

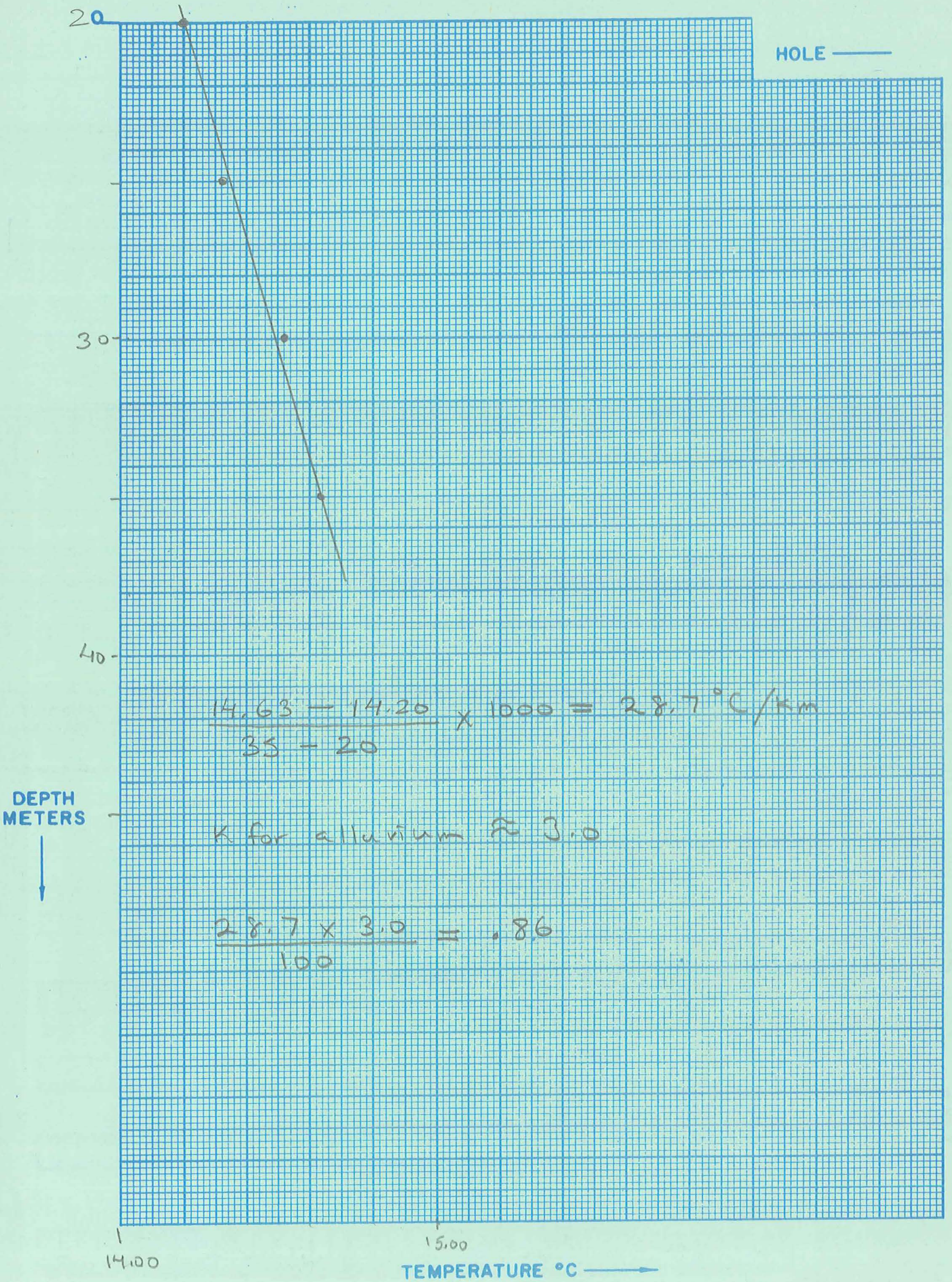
Segment 9

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



$$\frac{14.63 - 14.20}{35 - 20} \times 1000 = 28.7\ ^{\circ}C/km$$

K for alluvium ≈ 3.0

$$\frac{28.7 \times 3.0}{100} = .86$$

Allen Well ΔT

Date Logged: 6/25/80

ΔT Well No. 80-85

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		14.20	0.12	24		↑ air	Alluvium
25		14.32	0.20	40			
30		14.52	0.11	22			
35		14.63				H_2O ↓	
			avg ≈	28.6			

K=Conductivity

page ______ of ______

Date Logged:____________________ ΔT Well No.______________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page _____ of _____

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Driveway Well ΔT

ΔT Well No. 80-86

Property-Project 1114 Depth Logged 135m

Map Arroyo Landavaso Scale 7.5 1/24000 Date: Drilled ______ Logged 6/25/80

State N.M County Socorro, ______ of SE¼ of SW¼ of SE¼ of Sec 14 T 3S R 5W

Instrument DT-101 121 (repaired) Operator WA Elevation 6890 [✓ ft] m

Comments Top missing to windmill, 6" casing

JUSTIFY

Card A

Date Logged

Proj No (1–4)	5	Well No (6–10)	DA (11–12)	MO (13–15)	YR (16–18)	19*	20*
1114			25	06	80	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 (63–65)	YR (66–68)
	WA				

(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	7.5	34.	2.5	107.	19.3

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
18.95	19.50	6890.		F

Use decimals

80 ← Write M if if meters

Segment 1 = Depths

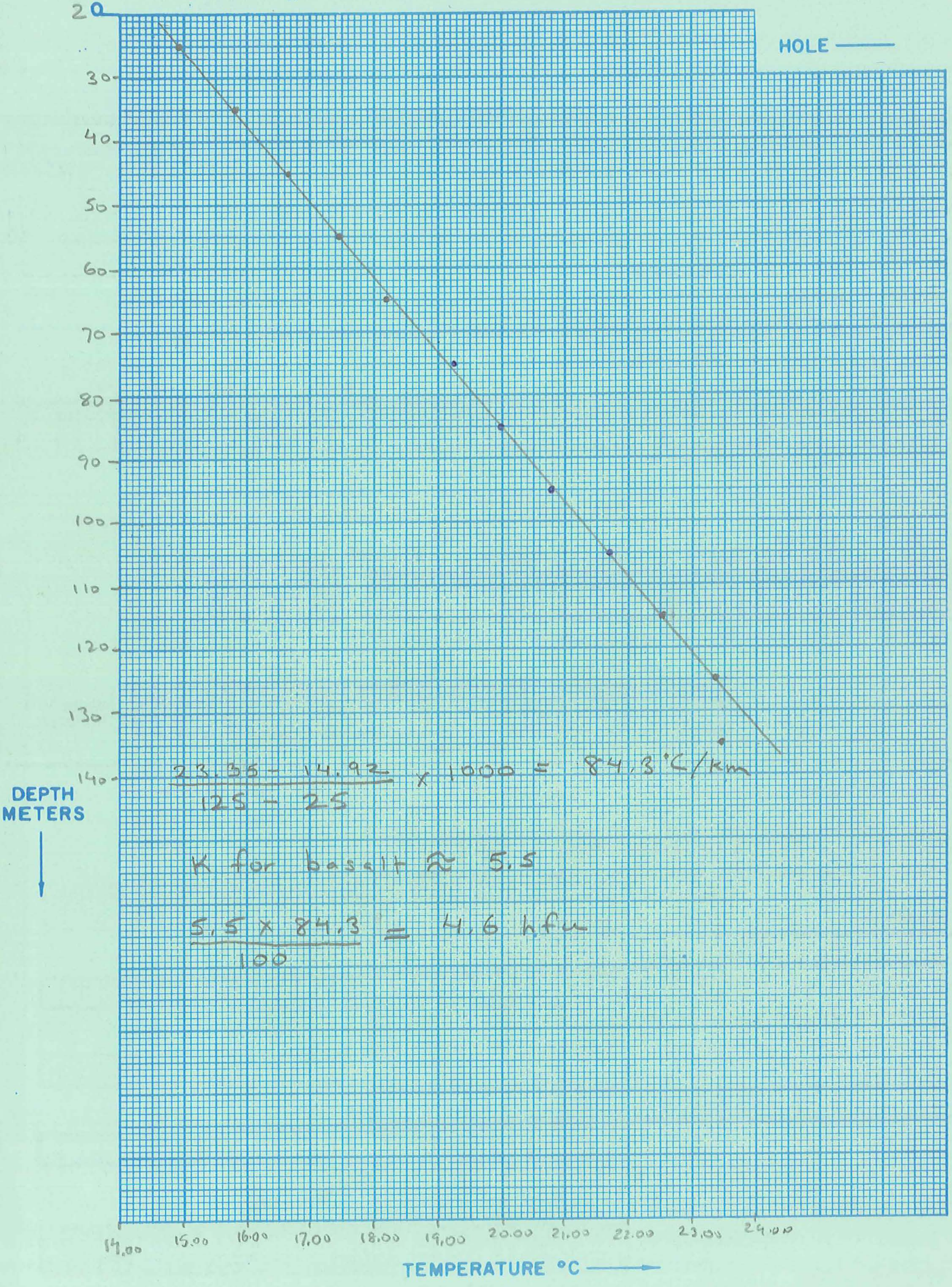
Start (21–30)	End (31–40)	Conductivity K (41–45)	ΔK (46–50)

Best cond. (-K)

Downward extrapolations (-ΔK)

	Start (51–60)	End (61–70)	K (71–75)	ΔK (76–80)
Segment 2				
Segment 3				
Segment 4				
Segment 5				
Segment 6				
Segment 7				
Segment 8				
Segment 9				
Segment 10				

After final segment Start =.999



$\frac{23.35 - 14.92}{125 - 25} \times 1000 = 84.3$ °C/km

K for basalt ≈ 5.5

$\frac{5.5 \times 84.3}{100} = 4.6$ hfu

Driveway Well ΔT

Date Logged: 6/25/80

ΔT Well No. 80-86

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	~~H_2O~~ Air	Lithology, etc.
25		14.92	0.88	88		↓	Alluvium on
35		15.80	0.85	85			surface. Basalt
45		16.65	0.81	81			o/c's 1mile to
55		17.46	0.73	73			SW in hillside
65		18.19	1.07	107			and in creek
75		19.26	0.72	72			walls.
85		19.98	0.81	81		Air ↓	
95		20.79	0.91	91			
105		21.70	0.82	82			
115		22.52	0.83	83			
125		23.35	0.09	9			
135		23.44					

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ____ of ____

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

False Casing ΔT

ΔT Well No. 80-87

Property-Project 1114 Depth Logged 180 m

Map Arroyo Landavaso Scale 7.5' 1/24000 Date: Drilled ____ Logged 6/25/80

State N.M County Socorro, NE 1/4 of NW 1/4 of NW 1/4 of SW 1/4 of Sec 27 T 3S R 5W

Instrument DT-101 121 (repaired) Operator WA Elevation 6872 [✓ ft] (m)

Comments Windmill, 6" casing, 12' blades, pump disconnected.

JUSTIFY

Card A

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

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

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

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

Operator					Editor					Drilled DA			MO			YR	
51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
			W	A	/							▨			▨		

Card B

Map Location **

Scale Unit IN CM					Map Size (7.5, 15., 60.)					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
▨	C	M	▨	▨			7	.	5			3	4	.			1	.	1		1	0	7	.		2	1	.	2

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
						8	.	4	5							7	.	9	5	6	8	7	2	.	▨	▨	▨	▨	F

Use decimals

Write M if 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 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

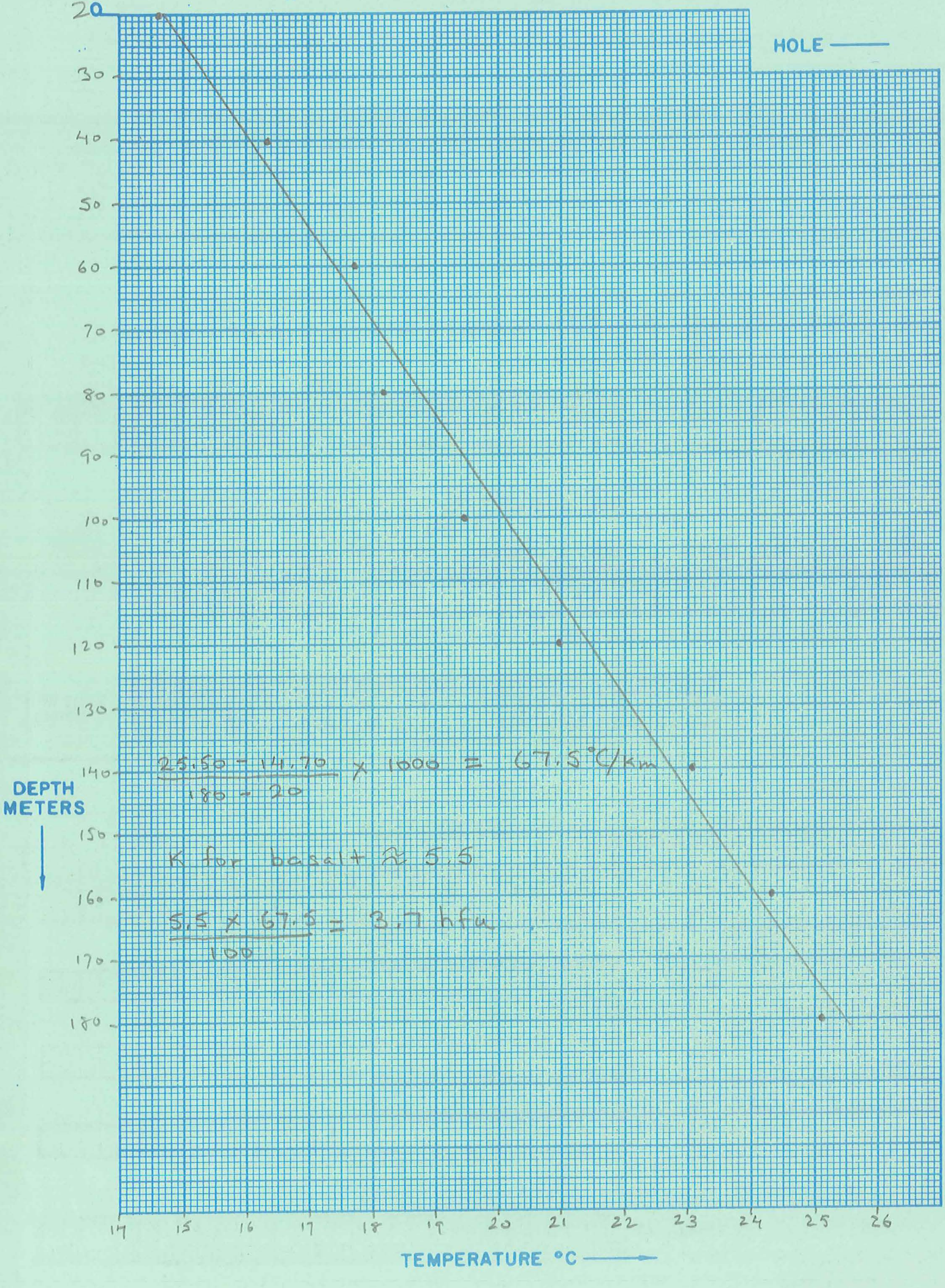
Segment 9

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



$$\frac{25.50 - 14.70}{180 - 20} \times 1000 = 67.5\,°C/km$$

K for basalt ≈ 5.5

$$\frac{5.5 \times 67.5}{100} = 3.7 \text{ hfu}$$

False Casing ΔT

Date Logged: 6/25/80

ΔT Well No. 80-87

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	~~H_2O~~ Air	Lithology, etc.
20		14.61					Alluvium
			1.74	87			
40		16.35					near surface.
			1.38	69			
60		17.73				air	Basalt below ?
			0.45	23			
80		18.18					
			1.28	64			
100		19.46					
			1.51	76			
120		20.97					
			2.09	105			
140		23.06					
			1.24	62			
160		24.30					
			0.80	40			
180		25.10					

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ____ of ____

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Cement Pit ΔT

ΔT Well No. 80-88

Property-Project 1114

Depth Logged 48 m

Map Tres Montosas Scale 7.5' 1/24000 **Date: Drilled** ________ **Logged** 6/25/80

State N.M County Socorro , SW 1/4 of NE 1/4 of NE 1/4 of NW 1/4 of Sec 29 T 3S R 6W

Instrument DT-101 121 (repaired) Operator WA **Elevation** 7074 [✓ ft] (m)

Comments windmill, pump disconnected 6" casing 10' blades

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	1	1	4							2	5	▨	0	6	▨	8	0	C	M

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

Site Description																														Operator					Editor					Drilled DA			Drilled MO			Drilled 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
																																	W	A	/							▨			▨		

(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				**
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
▨	C	M	▨	▨			7	.	5			3	4	.			1	.	3		1	0	7	.		2	9	.	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
					1	0	.	6	2							6	.	0	5	7	0	7	4	.	▨	▨	▨	▨	F

Use decimals

Write M if if meters

Segment 1 = Depths

Conductivity

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

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 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

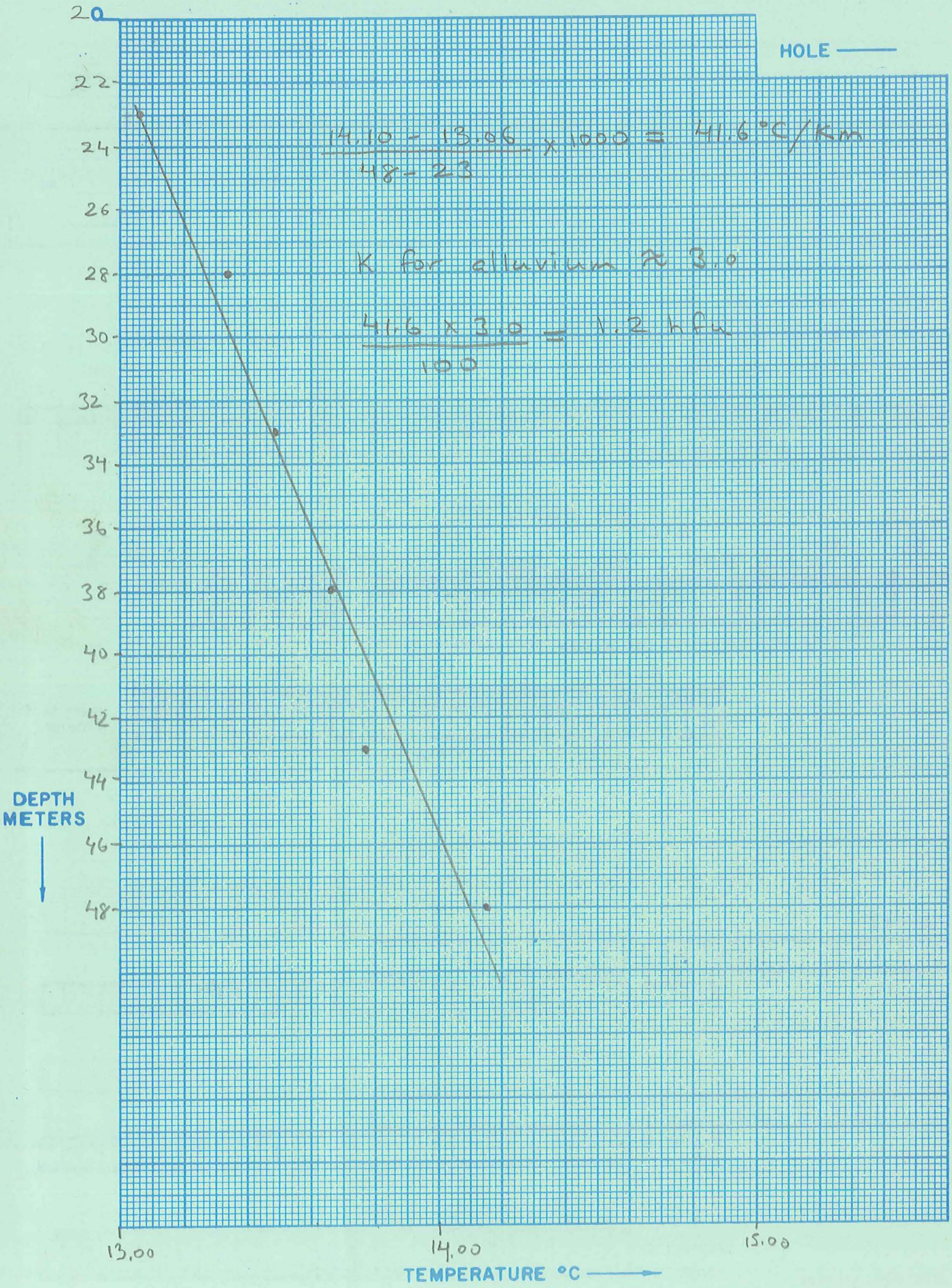
Segment 9

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



$$\frac{14.10 - 13.06}{48 - 23} \times 1000 = 41.6\,°C/Km$$

K for alluvium ≈ 3.0

$$\frac{41.6 \times 3.0}{100} = 1.2 \text{ hfu}$$

Cement Pit ΔT

Date Logged: 06/25/80

ΔT Well No. 80-88

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
23		13.06	0.28	56		↑	Alluvium.
28		13.34	0.15	30			Nearest o/c
33		13.49	0.17	34			1.5mile away.
38		13.66	0.11	22			
43		13.77	0.38	76		air	
48		14.15				↓	

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Rancher Well ΔT

ΔT Well No. 80-89

Property-Project 1114 Depth Logged 28m

Map Capitan Scale 7.5 1/24000 Date: Drilled ______ Logged 6/26/80

State N.M County Lincoln, NE¼ of SE¼ of SW¼ of NE¼ of Sec 24 T 8S R 14E

Instrument DT-101 121 repaired Operator WA Elevation 6660 (ft/m)

Comments windmill, 6" casing 8' blades, well was pumping

Date Logged

JUSTIFY

Card A

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

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

Site Description (columns 21–50) | Operator (51–55) | Editor (56–60) | Drilled DA (61–62), 63, MO (64–65), 66, YR (67–68)

Site Description 21–50	Operator 51–55	Editor 56–60	Drilled DA 61–62	63	MO 64–65	66	YR 67–68
	WA	/					

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

Map Location **

Card B

Scale Unit IN CM 21	22	23	24	25	Map Size (7.5, 15., 60.) 26	27	28	29	30	N Lat Degree 31	32	33	34	35	Min 36	37	38	39	40	W Long Degree 41	42	43	44	45	Min 46	47	48	49	50
	C	M					7	.	5			3	3	.		3	6	.	0		1	0	5	.		3	1	.	0

Use decimals

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

Northing 51	52	53	54	55	56	57	58	59	60	Easting 61	62	63	64	65	66	67	68	69	70	Elev 71	72	73	74	75	76	77	78	79	80
					4	6	.	2	2						3	9	.	2	5	6	6	6	0	.					F

Use decimals

← Write M if if meters

Segment 1 = Depths Start (21–30) End (31–40) Conductivity K (41–45) ΔK (46–50)

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → (51–60) End (61–70) K (71–75) ΔK (76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start = .999

0

HOLE ——

DEPTH
METERS
↓

TEMPERATURE °C →

Rancher Well

Date Logged: 6/26/80

ΔT Well No. 80 ΔT-89

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H2O Air	Lithology, etc.
20		—	—	—			Thin cover of
22		—	—	—			alluvium under-
24		12.40	0.00	0			lain by sandstone.
26		12.40	0.02	10		H_2O	
28		12.38				↓	H_2O at 21 m

K=Conductivity

page ____ of ____

Date Logged: ____________________

ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page _____ of _____

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Elbow ΔT
Road

ΔT Well No. 80-90

Property-Project 1114 Depth Logged 29 m

Map Jacob Spring Scale 7.5 1/24000 Date: Drilled ________ Logged 6/26/80

State N.M County Lincoln, SE1/4 of SE1/4 of SE1/4 of NE1/4 of Sec 27 T 7S R 14E

Instrument DT-101 121 (repaired) Operator WA Elevation 6380 [✓ ft] (m)

Comments Windmill 10' blades, 5" casing, pumping continuously
no shut-off

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
1	1	1	4							2	6	▨	0	6	▨	8	0	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)

21–50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
				W	A	/							▨			▨		

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

Map Location * *

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) **

21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
▨	c	m	▨	▨			7	.	5			3	3	.		4	0	.	3		1	6	5	.		3	3	.	3

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)

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
					2	1	.	4	0						2	7	.	4	5	6	3	8	0	.	▨	▨	▨	▨	F

Use decimals

← Write M if if meters

Segment 1 = Depths Start (21–30) · End (31–40) · Conductivity K (41–45) · ΔK (46–50)

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

Segment 2 Start → (51–60) · End (61–70) · K (71–75) · ΔK (76–80)

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

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

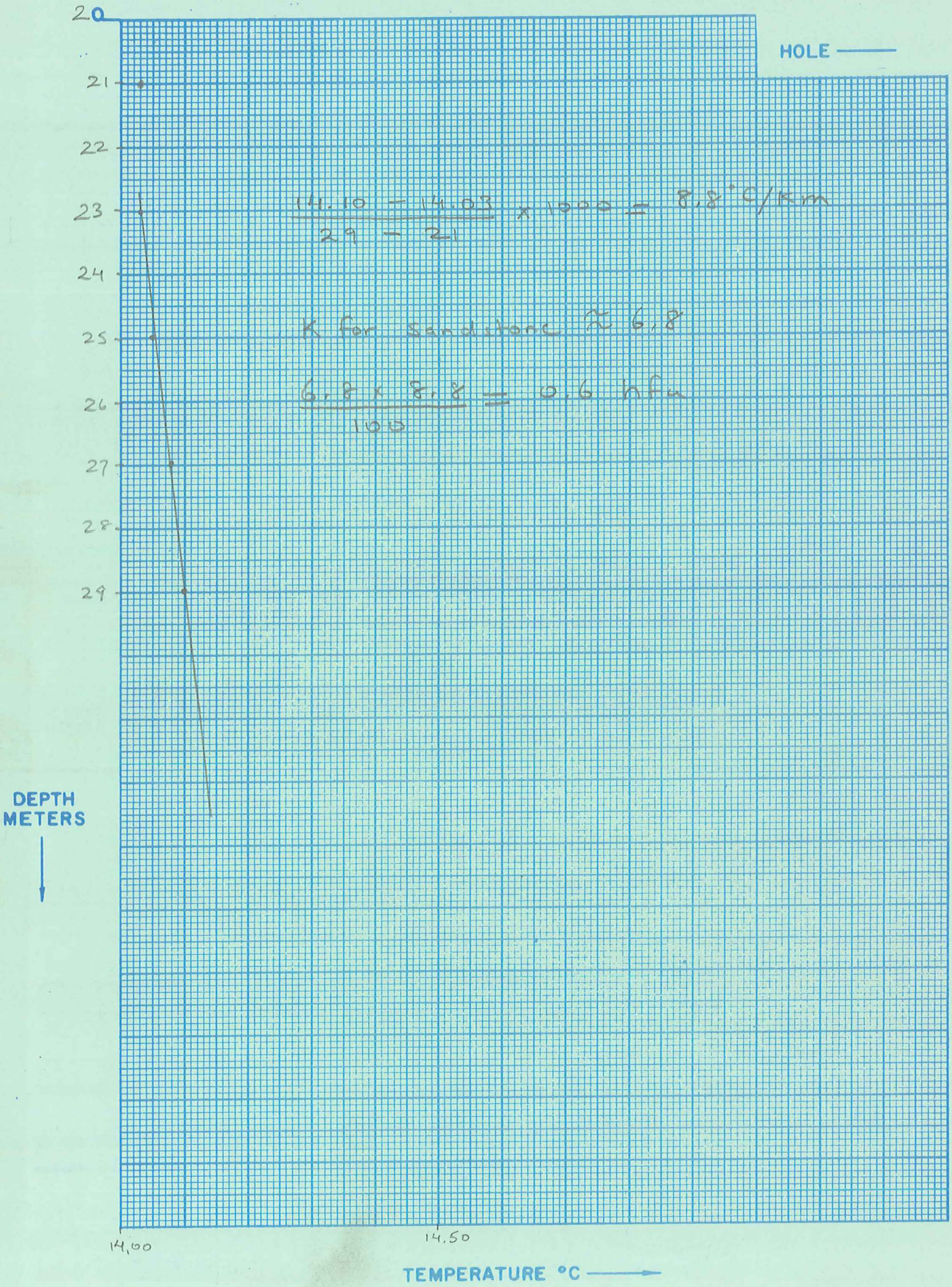
Segment 9

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



$$\frac{14.10 - 14.03}{29 - 21} \times 1000 = 8.8\,°C/Km$$

K for sandstone ≃ 6.8

$$\frac{6.8 \times 8.8}{100} = 0.6 \text{ hfu}$$

Elbow Road ΔT

Date Logged: 6/26/80

ΔT Well No. 80-90

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
21		14.03	0.00	0			Alluvium, possibly
23		14.03	0.02	10			underlain by
25		14.05	0.03	15			sandstone.
27		14.08	0.02	10			
29		14.10					

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ____ of ____

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Carrizo Creek ΔT

ΔT Well No. 80-91

Property-Project 1114 Depth Logged 52 m

Map Jacob Spring Scale 7.5 1/24000 Date: Drilled ______ Logged 6/26/80

State NM County Lincoln, SE ¼ of SE ¼ of SW ¼ of SE ¼ of Sec 8 T 7S R 14E

Instrument DT-101 121 (repaired) Operator ______ Elevation 6530 ([✓ ft] m)

Comments Windmill, 6" casing, 6' blades, pumping when I arrived.

JUSTIFY

Card A

		Date Logged				
Proj No	Well No	DA	MO	YR	*	
1 2 3 4	5 6 7 8 9 10	11 12	14 15	17 18	19	20
1114		26	06	80	C	M

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

			Drilled		
Site Description	Operator	Editor	DA	MO	YR
21–50	51–55	56–60	61 62	64 65	67 68
	WA	/			

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

Card B

Map Location **

		N Lat		W Long	
Scale Unit IN CM	Map Size (7.5, 15., 60.)	Degree	Min	Degree	Min **
22 23	26–30	31–35	36–40	41–45	46–50
CM	7.5	33.	42.5	105.	35.5

Use decimals

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

Northing	Easting	Elev	
51–60	61–70	71–75	80
38.10	11.25	6530.	F

Use decimals

Write M if if meters

Segment 1 = Depths

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

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start →	End	K	ΔK
51–60	61–70	71–75	76–80

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

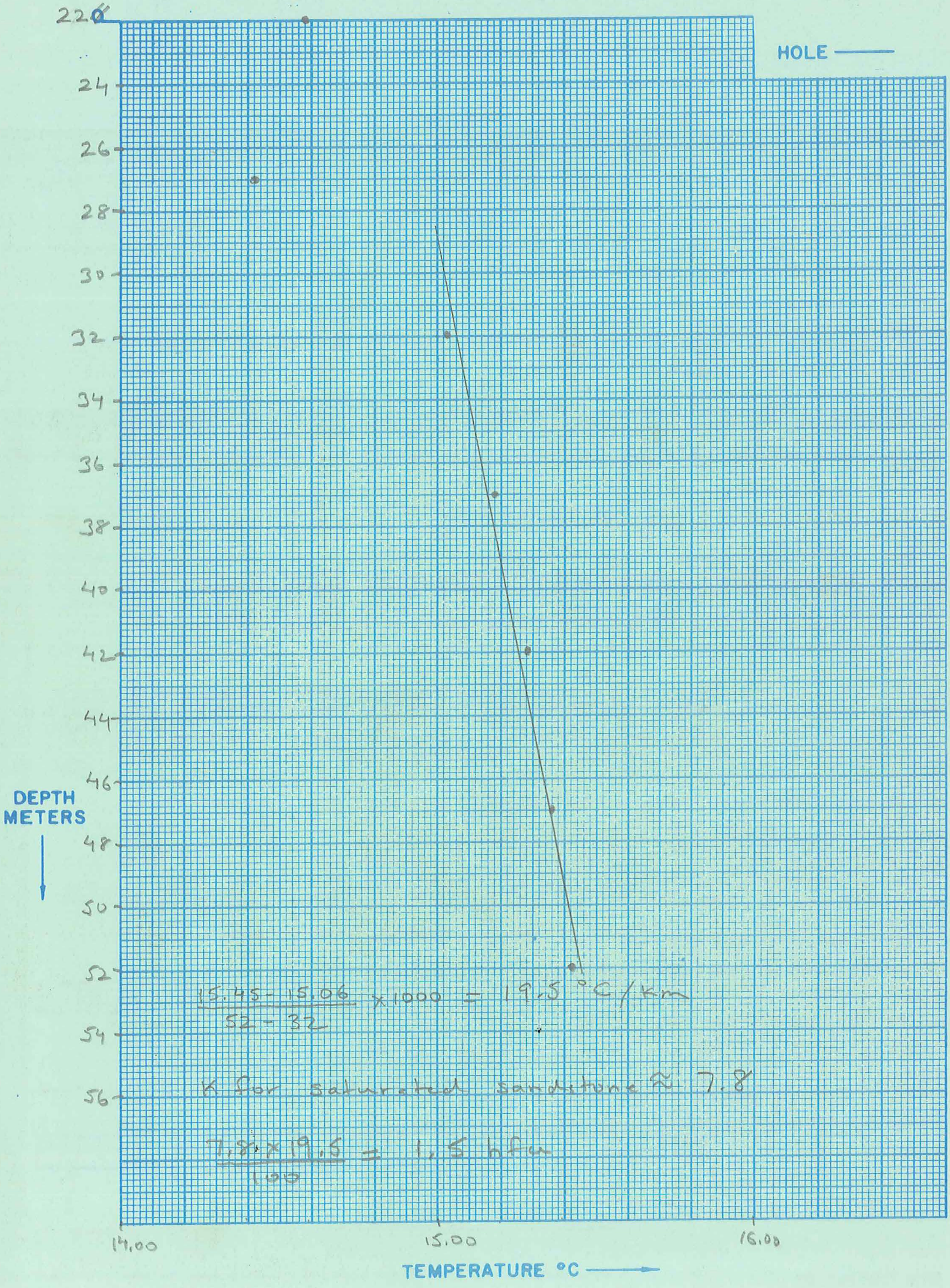
Segment 9

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



$$\frac{15.45 - 15.06}{52 - 32} \times 1000 = 19.5\ °C/km$$

K for saturated sandstone ≈ 7.8

$$\frac{7.8 \times 19.5}{100} = 1.5\ hfu$$

Carrizo Creek ΔT

Date Logged: 6/26/80

ΔT Well No. 80-91

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H2O Air	Lithology, etc.
22		14.58	-0.16	- 32			Alluvium near
27		14.42	0.61	122		air	surface. This
32		15.03	0.15	30			alluvium contains
37		15.18	0.10	20			abundant pebbles and
42		15.28	0.08	16		H2O	blocks of both
47		15.36	0.06	12			sandstone and
52		15.42					latite (?).
							H2O at 34m
42							
47							
52							

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. _____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page _____ of _____

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Johnnie Tank ΔT

ΔT Well No. 80-92

Property-Project 1114

Depth Logged 58 m

Map White Oaks South Scale 7.5 1/24000

Date: Drilled ______ Logged 6/26/80

State N.M County Lincoln, NW1/4 of NE1/4 of SE1/4 of NE1/4 of Sec 28 T7S R13E

Instrument DT-101-12 (repaired) Operator WA Elevation 6915 (ft m)

Comments Windmill. 12" casing, 6' blades.

JUSTIFY

Card A

Date Logged

Proj No (1-4)	Well No (5-10)	DA (11-12)	MO (14-15)	YR (17-18)	19*	20
1114		26	06	80	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)
	WA	/			

(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	7.5	33.	40.5	105.	40.7

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
22.65	28.15	6915.		F

Use decimals

← Write M if if meters

Segment 1 = Depths

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

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → (51-60) End (61-70) K (71-75) ΔK (76-80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

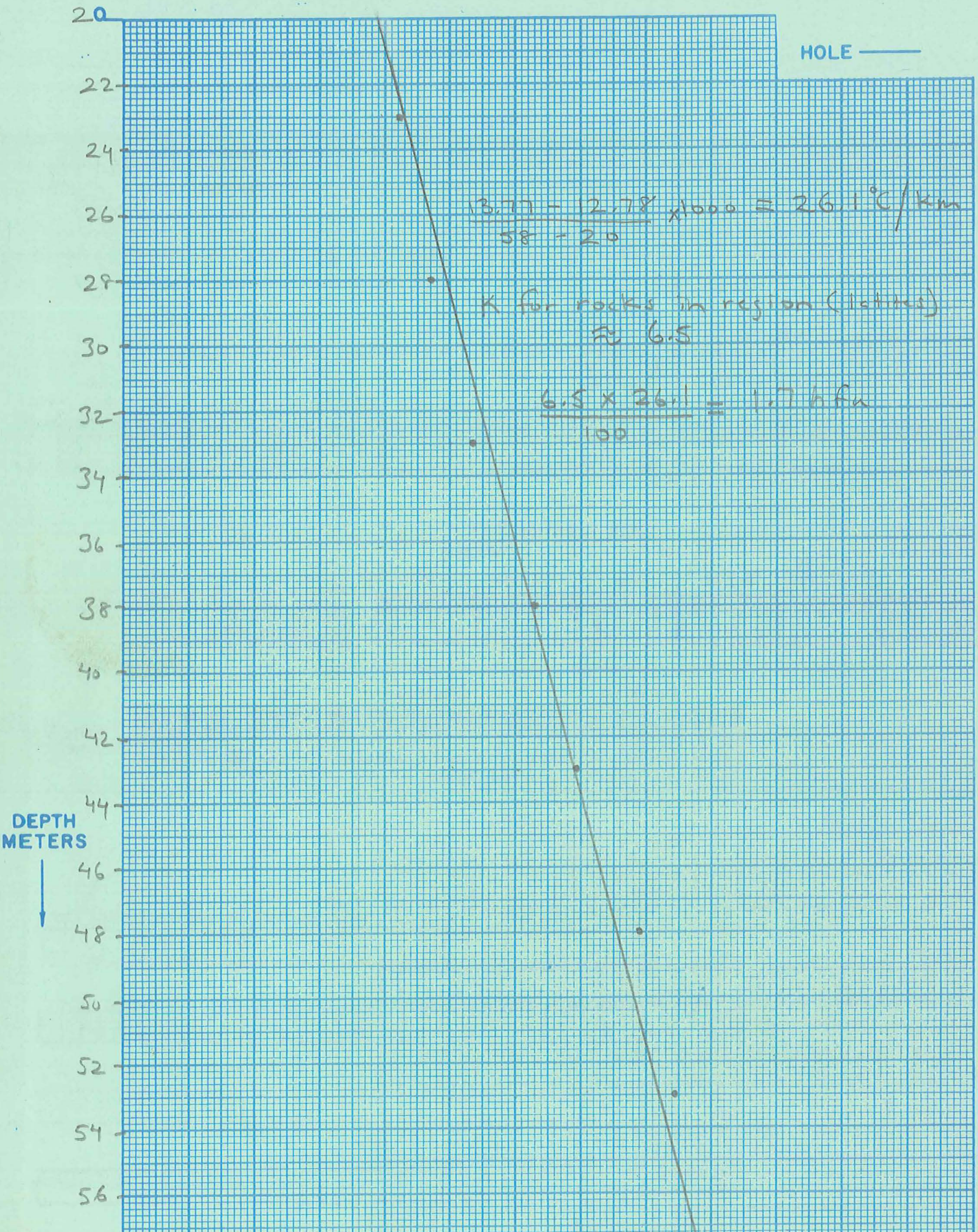
Segment 7

Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start =.999



$$\frac{13.77 - 12.78}{58 - 20} \times 1000 = 26.1\ °C/km$$

K for rocks in region (latites)
≈ 6.5

$$\frac{6.5 \times 26.1}{100} = 1.7\ hfu$$

Johnnie Tank ΔT

Date Logged: 6/26/80

ΔT Well No. 80-92

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O ~~Air~~	Lithology, etc.
23		12.84	0.10	20			Thin cover of
28		12.94	0.13	26			alluvium underlain
33		13.07	0.19	38			by a light colored,
38		13.26	0.13	26		H2O	Fine grained
43		13.39	0.19	38			latite (?). Looks
48		13.58	0.11	22			granitic. Phenos
53		13.69	0.07	14			of biotite, hornblende
58		13.76				↓	and plagioclase (few)
							are visible.

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

Nogal ΔT

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-93

Property-Project 1114 Depth Logged 29 m

Map Nogal Quad Scale 7.5 1/2400 Date: Drilled ______ Logged 6/26/80

State N.M County Lincoln, NW¼ of SW¼ of NE¼ of SE¼ of Sec 31 T 8S R 12E

Instrument DT-101 121 (repaired) Operator WA Elevation 6371 (ft/m)

Comments Windmill, 6" casing 5' blades; pumping when I arrived

---

JUSTIFY

Card A

Date Logged

Proj No 1-4	Well No 5-10	DA 11-12	13	MO 14-15	16	YR 17-18	19*	20
1114		26	▨	06	▨	80	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	63	MO 64-65	66	YR 67-68
	WA	/		▨		▨	

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

Card B

Map Location **

Scale Unit IN CM 21	22-23	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
▨	cm	▨	7.5	33.	34.0	105.	42.8

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
30.40	13.95	6371.	▨	F

Use decimals

← Write M if if meters

Segment 1 = Depths

Start 21-30	End 31-40	Conductivity K 41-45	ΔK 46-50

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start →

51-60	End 61-70	K 71-75	ΔK 76-80

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

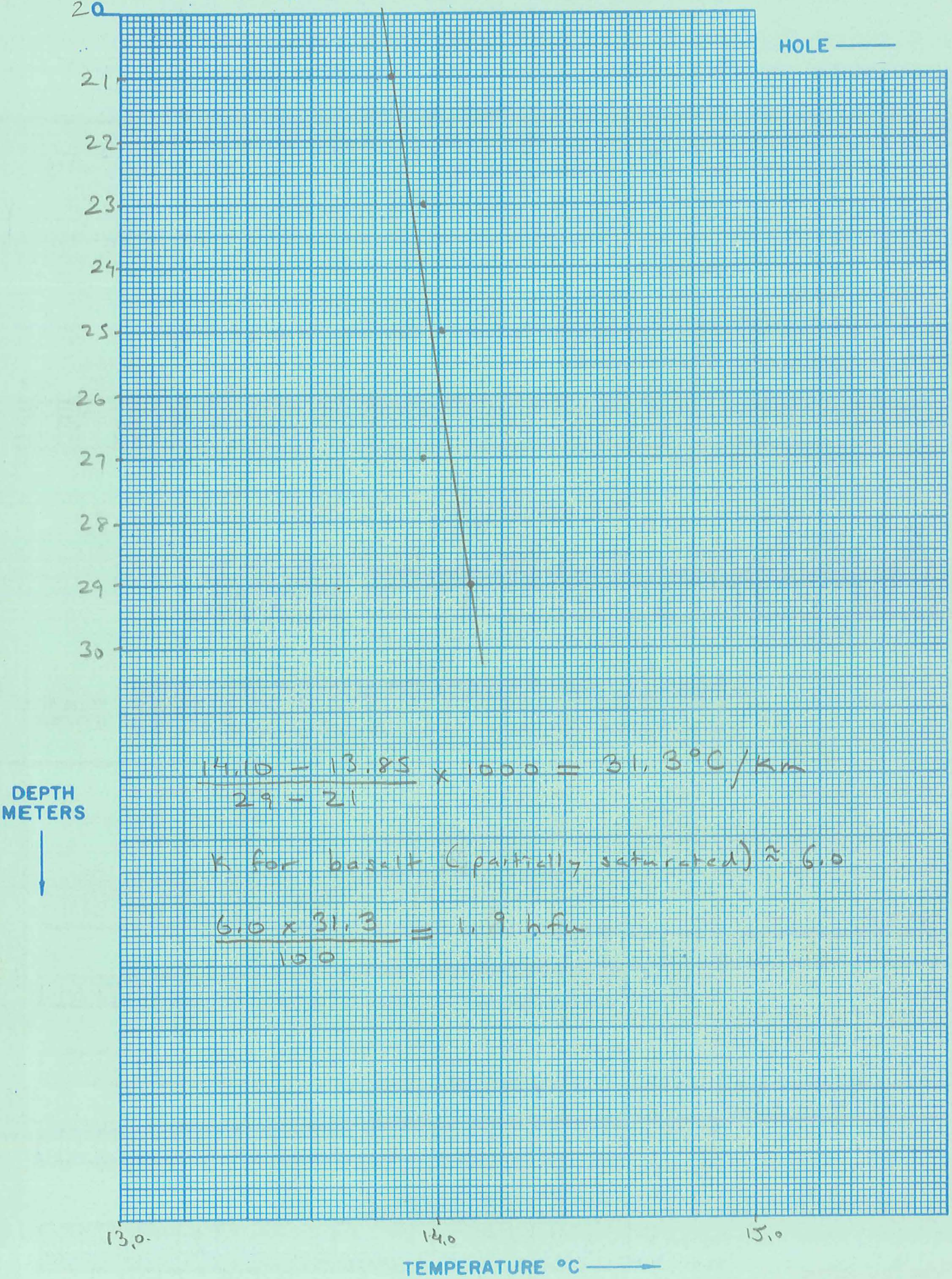
Segment 9

21-30	31-40	41-45	46-50

Segment 10 Start →

51-60	61-70	71-75	76-80

After final segment Start = .999



$$\frac{14.10 - 13.85}{29 - 21} \times 1000 = 31.3\,°C/Km$$

K for basalt (partially saturated) ≈ 6.0

$$\frac{6.0 \times 31.3}{100} = 1.9 \text{ hfu}$$

Nogal ΔT

Date Logged: 6/26/80

ΔT Well No. 80-93

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
21		13.85	0.10	50		air	Thin cover (few
23		13.95	0.06	30			m) of alluvium
25		14.01	-0.06	-30			underlain by a
27		13.95	0.15	75		H_2O	dark purplish
29		14.10				↓	grey basalt to
							basaltic andesite.
							H_2O at 22 m

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ____ of ____

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Galt Peak ΔT

80-94

ΔT Well No. [redacted]

Property-Project 1114 Depth Logged 28 m

Map Nogal Scale 7.5 1/24000 Date: Drilled ____ Logged 6/26/80

State N.M County Lincoln , SE¼ of NE¼ of NE¼ of SE¼ of Sec 11 T 9S R 13E

Instrument DT-101 121 (repaired) Operator WA Elevation 6860 [✓ ft] m

Comments Windmill, 3" casing, 6' blades. Was pumping before I arrived.

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
1	1	1	4							2	6		0	6		8	0	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)

Columns	Entry
21–50 Site Description	
51–55 Operator	WA
56–60 Editor	/
61–68 Drilled DA MO YR	

(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				
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
	c	m					7	.	5			3	3	.		3	2	.	5		1	0	5	.		3	8	.	3

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
						1	8	.	5	3						4	2	.	7	5	6	8	6	0	.				F

Use decimals

Write M if if meters

Segment 1 = Depths: Start (21–30), End (31–40); Conductivity: K (41–45), ΔK (46–50)

Best cond. (−K)

Downward extrapolations (−ΔK)

Segment 2 Start → End (51–60), K (71–75), ΔK (76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

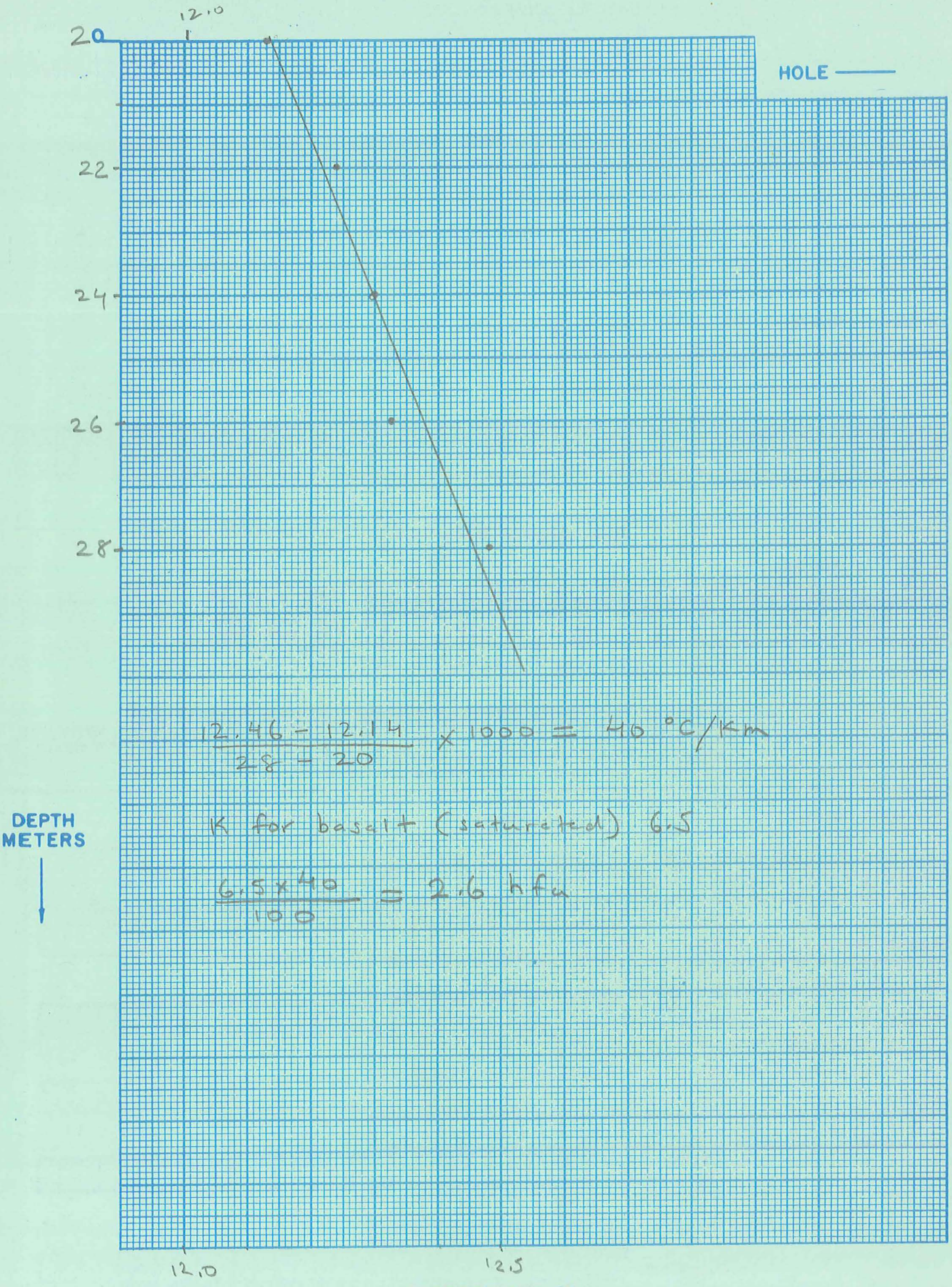
Segment 7

Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start = .999



$$\frac{12.46 - 12.14}{28 - 20} \times 1000 = 40\ °C/Km$$

K for basalt (saturated) 6.5

$$\frac{6.5 \times 40}{100} = 2.6 \text{ hfu}$$

Galt Peak ΔT

Date Logged: 6/26/80

ΔT Well No. 80-94

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O ~~Air~~	Lithology, etc.
20		12.13					Thin cover
			0.11	55			
22		12.24					of alluvium
			0.06	30			
24		12.30				H_2O	underlain by
			0.05	25			
26		12.35					black porphyritic
			0.13	65			
28		12.48				↓	basalt.

K=Conductivity

page ______ of ______

Date Logged: ____________________ ∆T Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	∆T	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page _____ of _____

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Long Walk ΔT

ΔT Well No. 80-95

Property-Project 1114 Depth Logged 48m

Map Carthage Scale 15' 1/62500 Date: Drilled ______ Logged 6/27/80

State N, M County Socorro, SW¼ of SE¼ of SE¼ of NE¼ of Sec 25 T 4S R 3E

Instrument DT-101 121 (repaired) Operator WA Elevation 5092 (ft/m)

Comments Windmill, 6" casing, 8' blades.

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
1	1	1	4							2	7	▨	0	6	▨	8	0	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 (64–65)		Drilled YR (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
	WA	/		▨		▨	

(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 **				
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
▨	c	m	▨	▨		1	5	.	0			3	3	.		5	6	.	0		1	0	6	.		3	4	.	6

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
					3	2	.	5	8						2	5	.	8	3	5	0	9	2	.	▨	▨	▨	▨	F

Use decimals

Write M if if meters

Segment 1 = Depths

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

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start →

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

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

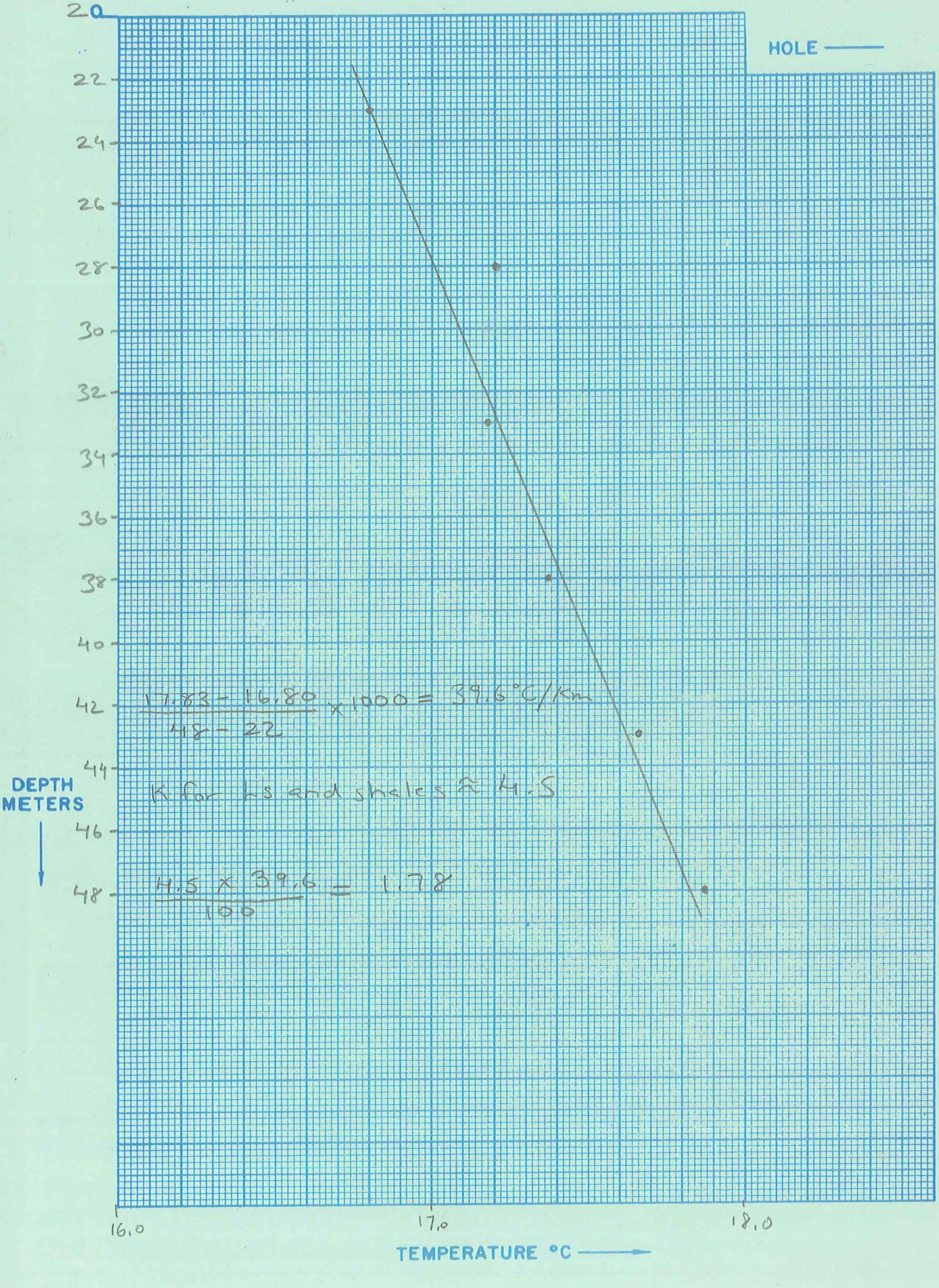
Segment 9

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



$$\frac{17,83 - 16,80}{48 - 22} \times 1000 = 39,6\,°C/Km$$

K for Ls and shales ≈ 4.5

$$\frac{4.5 \times 39,6}{100} = 1.78$$

Long Walk ΔT

Date Logged: 6/27/80

ΔT Well No. 80-95

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	~~H_2O~~ Air	Lithology, etc.
23		16.80	0.40	80		↓	Alluvium on
28		17.20	-0.02	—			surface.
33		17.18	0.19	38			Limestone +shales at
38		17.37	0.26	52			depth? Ls. crops
43		17.63	0.24	48			out near Prairie
48		17.87					Springs.

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ____ of ____

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Hump Cows ΔT

ΔT Well No. 80-96

Property-Project 1114 Depth Logged 43m

Map Carthage Scale 15. 1/62500 Date: Drilled ____ Logged 6/27/80

State N.M County Socorro , SE¼ of SE¼ of SE¼ of SE¼ of Sec 20 T 5S R 4E

Instrument DT-101 121 (repaired) Operator WA Elevation 4975 ([✓ ft] m)

Comments Windmill, 6" casing, 8' blades.

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	1	1	4							2	7	▨	0	6	▨	8	0	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)

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
																																	W	A	/							▨			▨		

(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				
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
▨	C	M	▨	▨		1	5	.	0			3	3	.		5	1	.	5		1	0	6	.		3	2	.	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
					1	8	.	2	5						3	1	.	1	5	4	9	7	5	.	▨	▨	▨	▨	F

Use decimals

← Write M if if meters

Segment 1 = Depths Start (21–30), End (31–40); Conductivity K (41–45), ΔK (46–50)

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

Best cond. (-K)

Downward extrapolations (- Δ K)

Segment 2 Start → (51–60), End (61–70), K (71–75), ΔK (76–80)

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

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

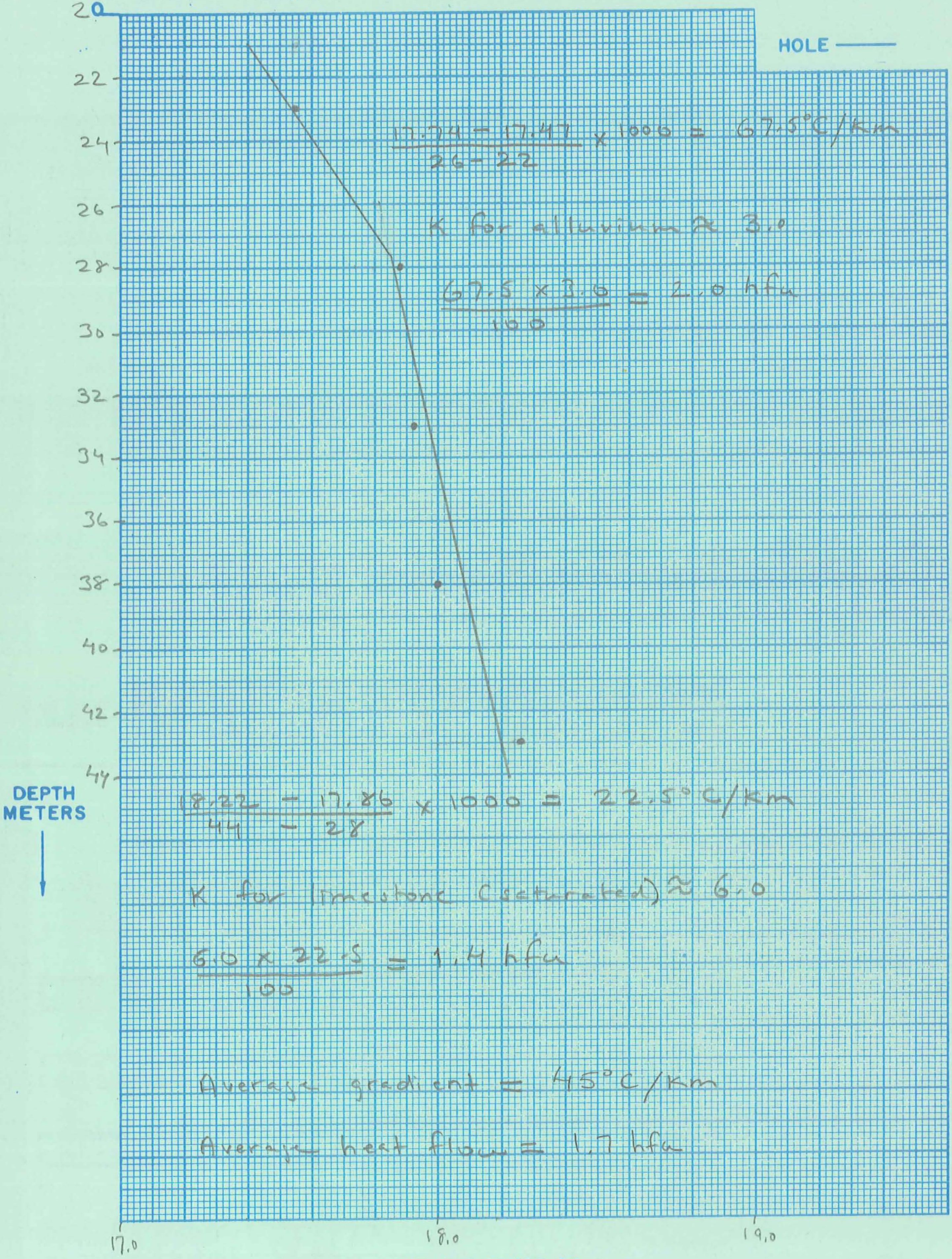
Segment 9

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



$$\frac{17.74 - 17.47}{26 - 22} \times 1000 = 67.5°C/Km$$

K for alluvium ≈ 3.0

$$\frac{67.5 \times 3.0}{100} = 2.0 \text{ hfu}$$

$$\frac{18.22 - 17.86}{44 - 28} \times 1000 = 22.5°C/Km$$

K for limestone (saturated) ≈ 6.0

$$\frac{6.0 \times 22.5}{100} = 1.4 \text{ hfu}$$

Average gradient = 45°C/Km

Average heat flow = 1.7 hfu

Hump Cows ΔT

Date Logged: 6/27/80

ΔT Well No. 80-96

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
23		17.55	0.33	66		air	Alluvium which
28		17.88	0.04	8			contains pebbles
33		17.92	0.08	16			of limestone.
38		18.00	0.23	46		H2O	
43		18.23				↓	
							H2O at 25m

K=Conductivity

page ____ of ____

Date Logged: ____________________

ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Bursom ΔT

ΔT Well No. 80-97

Property-Project 1114
Depth Logged 60 m

Map Carthage
Scale 15' 1/62500
Date: Drilled
Logged 6/27/80

State N.M. County Socorro , SE¼ of NW¼ of SE¼ of SW¼ of Sec 28 T 5 S R 3E

Instrument DT-101 121 (repaired) Operator WA
Elevation 4895 (ft/m)

Comments Windmill, 8' blades, 6" casing; not pumping

JUSTIFY

Card A

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

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

Site Description	Operator	Editor	Drilled DA	Drilled MO	Drilled YR
21–50	51–55	56–60	61–62	63–65	66–68
	WA	/		▨	▨

(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 **				
Column	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
Entry	▨	c	m	▨	▨		1	5	.	0			3	3	.		5	0	.	5		1	0	6	.		3	8	.	0

Use decimals

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

	Northing										Easting										Elev									
Column	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
Entry						1	6	.	2	5						1	6	.	6	8	4	8	9	5	.	▨	▨	▨	▨	F

Use decimals

Write M if if meters

Segment 1 = Depths

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

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start →

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

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

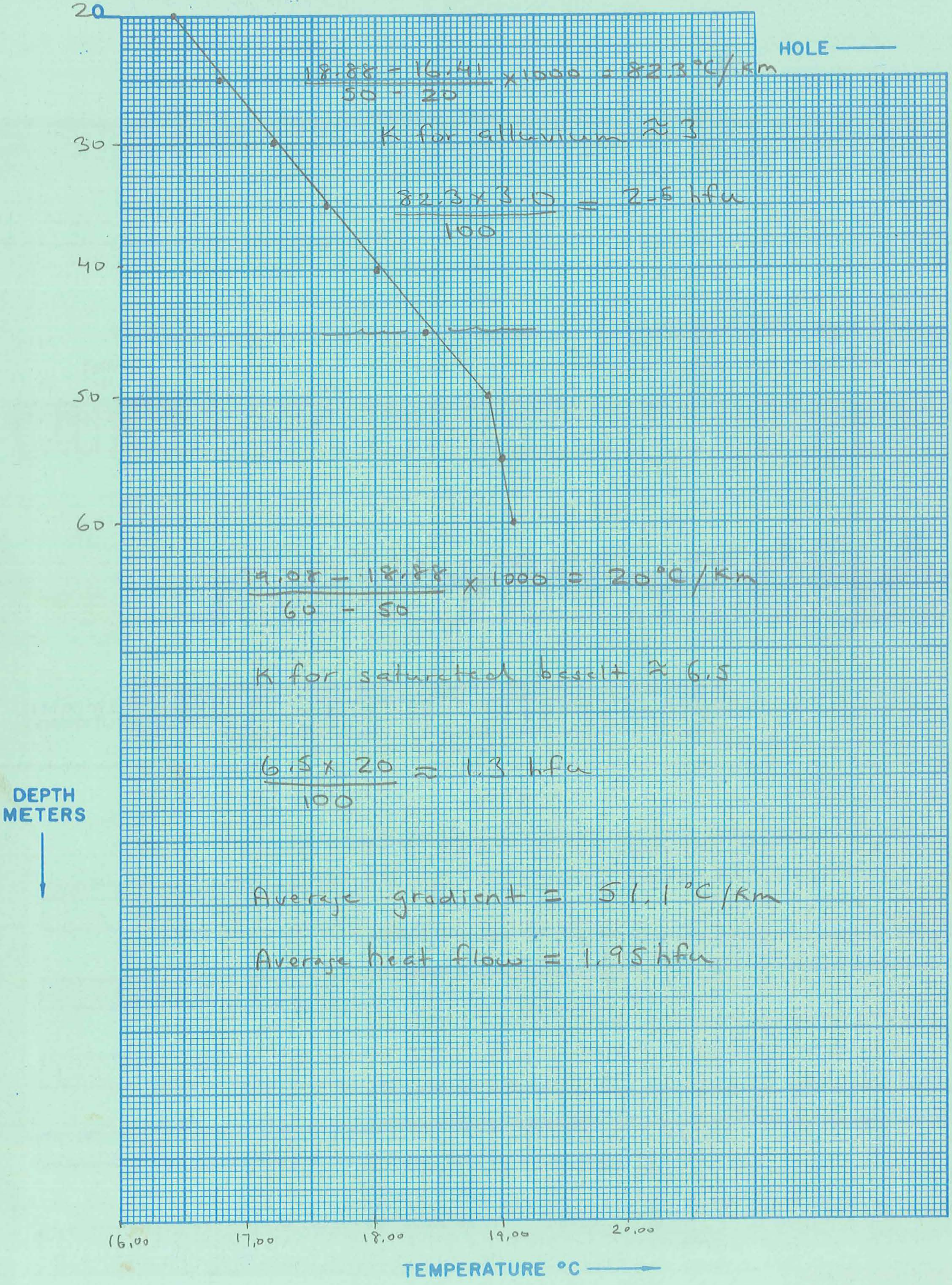
Segment 9

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



$$\frac{18.88 - 16.41}{50 - 20} \times 1000 = 82.3\,°C/km$$

K for alluvium ≈ 3

$$\frac{82.3 \times 3.0}{100} = 2.5 \text{ hfu}$$

$$\frac{19.08 - 18.88}{60 - 50} \times 1000 = 20\,°C/Km$$

K for saturated basalt ≈ 6.5

$$\frac{6.5 \times 20}{100} \approx 1.3 \text{ hfu}$$

Average gradient = 51.1 °C/Km

Average heat flow = 1.95 hfu

Bursom ΔT

Date Logged: 6/27/80

ΔT Well No. 80-97

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		16.41	0.37	74			Alluvium. No
25		16.78	0.42	84			o/c for a few
30		17.20	0.42	84			miles.
35		17.62	0.40	80			Basalt below?
40		18.02	0.38	76			
45		18.40	0.48	96		~	H_2O at 45m
50		18.88	0.12	24			
55		19.00	0.08	16			Nearby hills
60		19.08					appear to be
							composed of
							basalt (to west)

K=Conductivity

page ______ of ______

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Fite Tank ΔT

ΔT Well No. 80-98

Property-Project 1114 Depth Logged 117 m

Map San Antonio Scale 15' 1/62500 Date: Drilled ______ Logged 6/27/80

State N.M County Socorro, SE¼ of NE¼ of SE¼ of SE¼ of Sec 36 T 5S R 1E

Instrument DT-101 121 (repaired) Operator WA ______ Elevation 4804 [✓ ft] (m)

Comments Windmill, 10' blades, 6" casing. Pump disconnected

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	1	1	4							2	7	▨	0	6	▨	8	0	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
																																	W	A	/							▨			▨		

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

Card B

Map Location * *

Scale Unit IN CM					Map Size (7.5, 15., 60.)					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
▨	c	m	▨	▨		1	5	.	0			3	3	.		4	9	.	6		1	0	6	.		4	7	.	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
						1	3	.	3	1						3	2	.	0	5	4	8	0	4	.	▨	▨	▨	F

Use decimals

Write M if meters ←

Segment 1 = Depths

Conductivity

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

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 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

Segment 9

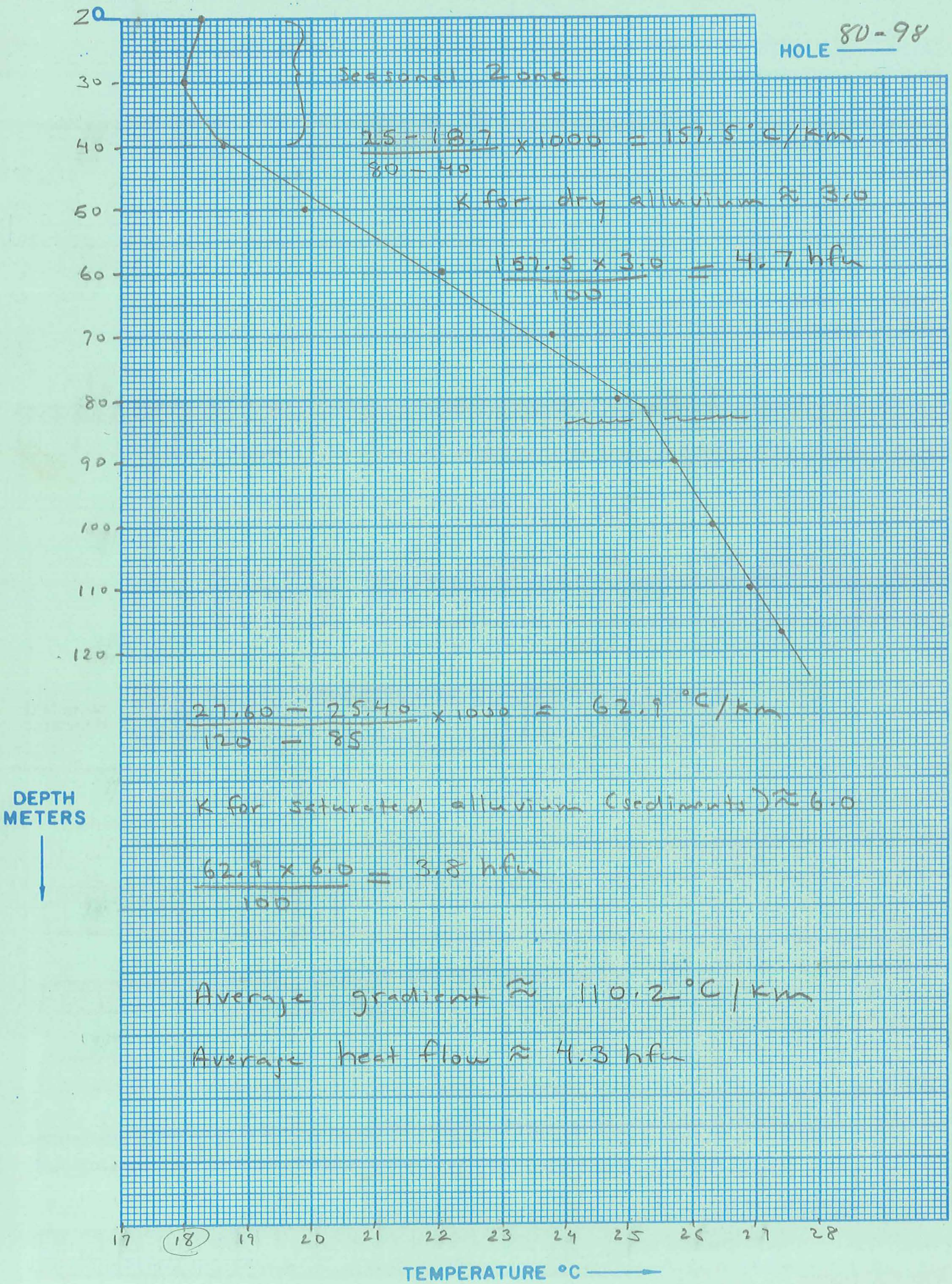
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

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

HOLE 80-98



$\frac{25 - 18.7}{80 - 40} \times 1000 = 157.5$ °C/Km.

K for dry alluvium ≈ 3.0

$\frac{157.5 \times 3.0}{100} = 4.7$ hfu

$\frac{27.60 - 25.40}{120 - 85} \times 1000 = 62.9$ °C/km

K for saturated alluvium (sediments) ≈ 6.0

$\frac{62.9 \times 6.0}{100} = 3.8$ hfu

Average gradient ≈ 110.2 °C/km

Average heat flow ≈ 4.3 hfu

Fite Tank ΔT

Date Logged: 6/27/80

ΔT Well No. 80-98

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		18.27	-0.29	-29			Cover of alluvium
30		17.98	0.62	62			containing blocks
40		18.60	1.30	130			and pebbles of
50		19.90	2.13	213		air	a light colored
60		22.03	1.76	176			sandstone. Similar
70		23.79	1.01	101			+some shales sandstones o/c
80		24.80	0.88	88			in roadcut to
90		25.68	0.62	62		H_2O	north (along
100		26.30	0.60	60			380). Sandstone
110		26.90	0.49				below?
117		27.39					

H_2O at 84m

Major fault nearby. To the west of this fault we have a thick pile of alluvium. I believe that this well lies to the W of the fault, entirely in alluvium.

K=Conductivity

page ____ of ____

Date Logged: ____________________

ΔT Well No. ______________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Deep Well ΔT

ΔT Well No. 80-99

Property-Project 1114 Depth Logged 90m

Map Dog Springs Scale 7.5 1/24000 Date: Drilled ______ Logged 6/28/80

State N.M County Socorro, NW1/4 of NW1/4 of SW1/4 of NW1/4 of Sec 6 T1S R8W

Instrument DT-101 121 (repaired) Operator WA Elevation 7370 (ft/m)

Comments Windmill, 6" casing, 12' blades; Pumping before my arrival

---

Card A

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
1	1	1	4							2	8	▨	0	6	▨	8	0	C	M

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

Site Description

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

Operator					Editor					Drilled DA			MO			YR	
51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
			W	A	/							▨			▨		

(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				
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
▨	C	M	▨	▨			7	.	5			3	4	.		1	5	.	4		1	0	7	.		4	2	.	5

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
						3	.	0	0						1	5	.	2	0	7	3	7	0	.	▨	▨	▨	▨	F

Use decimals

← Write M if if meters

Segment 1 = Depths

Conductivity

Best cond. (-K)

Downward extrapolations (-ΔK)

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

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

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

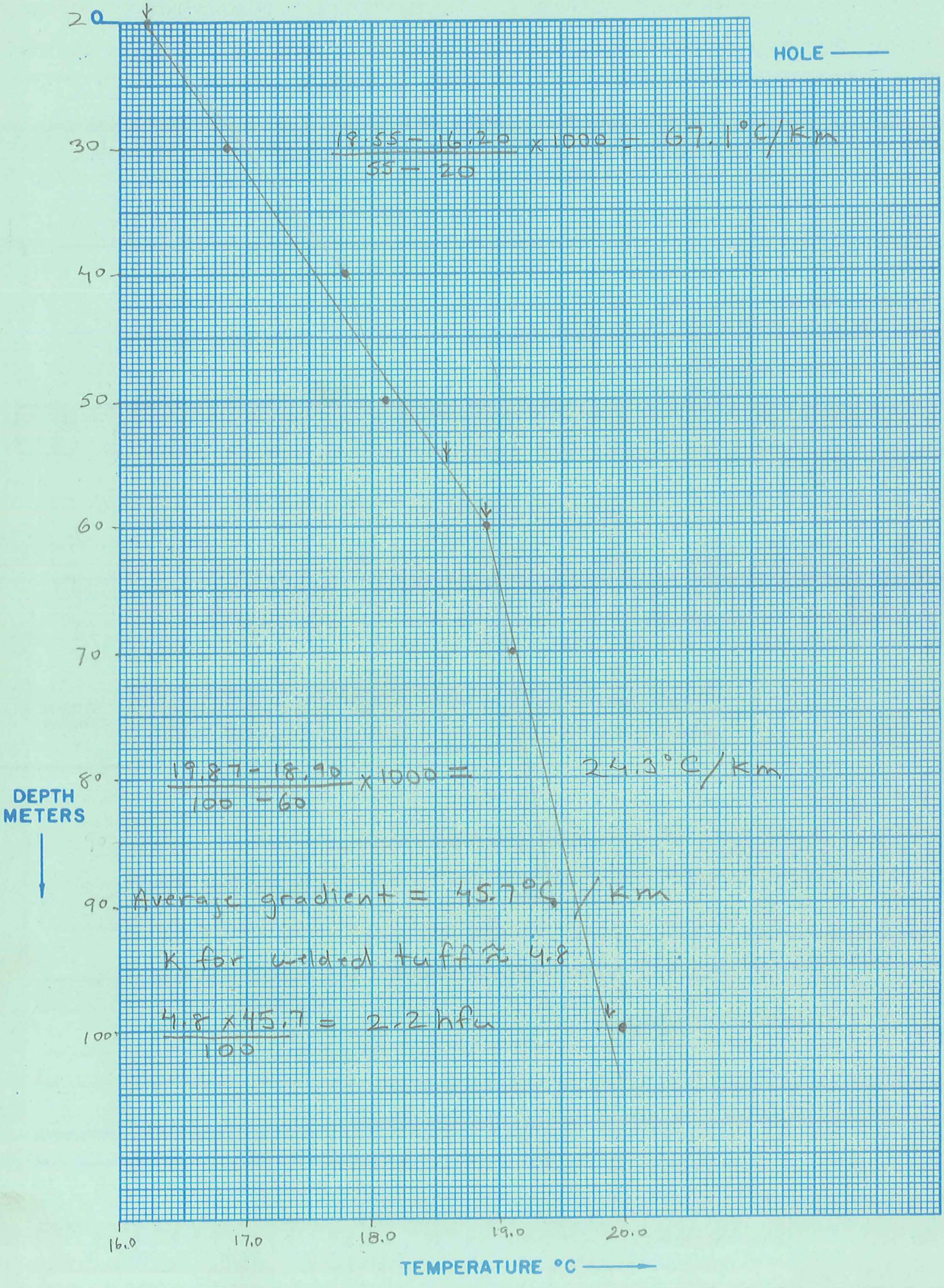
Segment 9

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



$\frac{19.55 - 16.20}{55 - 20} \times 1000 = 67.1$°C/Km

$\frac{19.87 - 18.90}{100 - 60} \times 1000 = 24.3$°C/Km

Average gradient = 45.7°C/Km

K for welded tuff ≈ 4.8

$\frac{4.8 \times 45.7}{100} = 2.2$ hfu

Deep Well ΔT

Date Logged: 6/28/80

ΔT Well No. 80-99

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	~~H_2O~~ Air	Lithology, etc.
20		16.21	0.63	63			Alluvium under-
30		16.84	0.95	95			lain by basalt.
40		17.79	0.31	31			o/c's of basalt
50		18.10	0.80	80			200 m north
60		18.90	0.20	20			of well.
70		19.10	0.33	33			Silicic rocks
80		19.43	0.34	34			(crystal tuffs)
90		19.97					are found as
							blocks and pebbles
							in the alluvium.

Givens (1957; State Bureau of mines and mineral Resources, Bull. 58) has an map showing that the majority of the rocks in this area consist of rhyolite and latite crystal tuffs. minor amounts of basalt are Found.

This well is also deeper than 90 m.

K=Conductivity

page ______ of ______

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page _____ of _____

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Three-section ΔT

ΔT Well No. 80-100

Property-Project 1114

Depth Logged 69 m

Map Lion Mountain Scale 7.5 1/24000

Date: Drilled ______ Logged 6/28/80

State N.M County Socorro, SE¼ of NW¼ of NW¼ of NW¼ of Sec 30 T 1S R 7W

Instrument ΔT-101 125 (repaired) Operator WA

Elevation 7013 [✓ ft] (m)

Comments Windmill removed; open casing (6"), sub pump nearby in new well.

JUSTIFY

Card A

Date Logged

Proj No (1–4)	Well No (5–10)	DA (11–12)	13	MO (14–15)	16	YR (17–18)	19*	20*
1114		28	▨	06	▨	80	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)	63	Drilled MO (64–65)	66	Drilled YR (67–68)
	WA	/		▨		▨	

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

Card B

Map Location **

21	Scale Unit IN CM (22–23)	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)
▨	cm	▨	7.5	34.	11.9	107.	36.6

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
33.45	5.68	7013.	▨	F

Use decimals

Write M if if meters

Segment 1 = Depths

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

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → (51–60) End (61–70) K (71–75) ΔK (76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

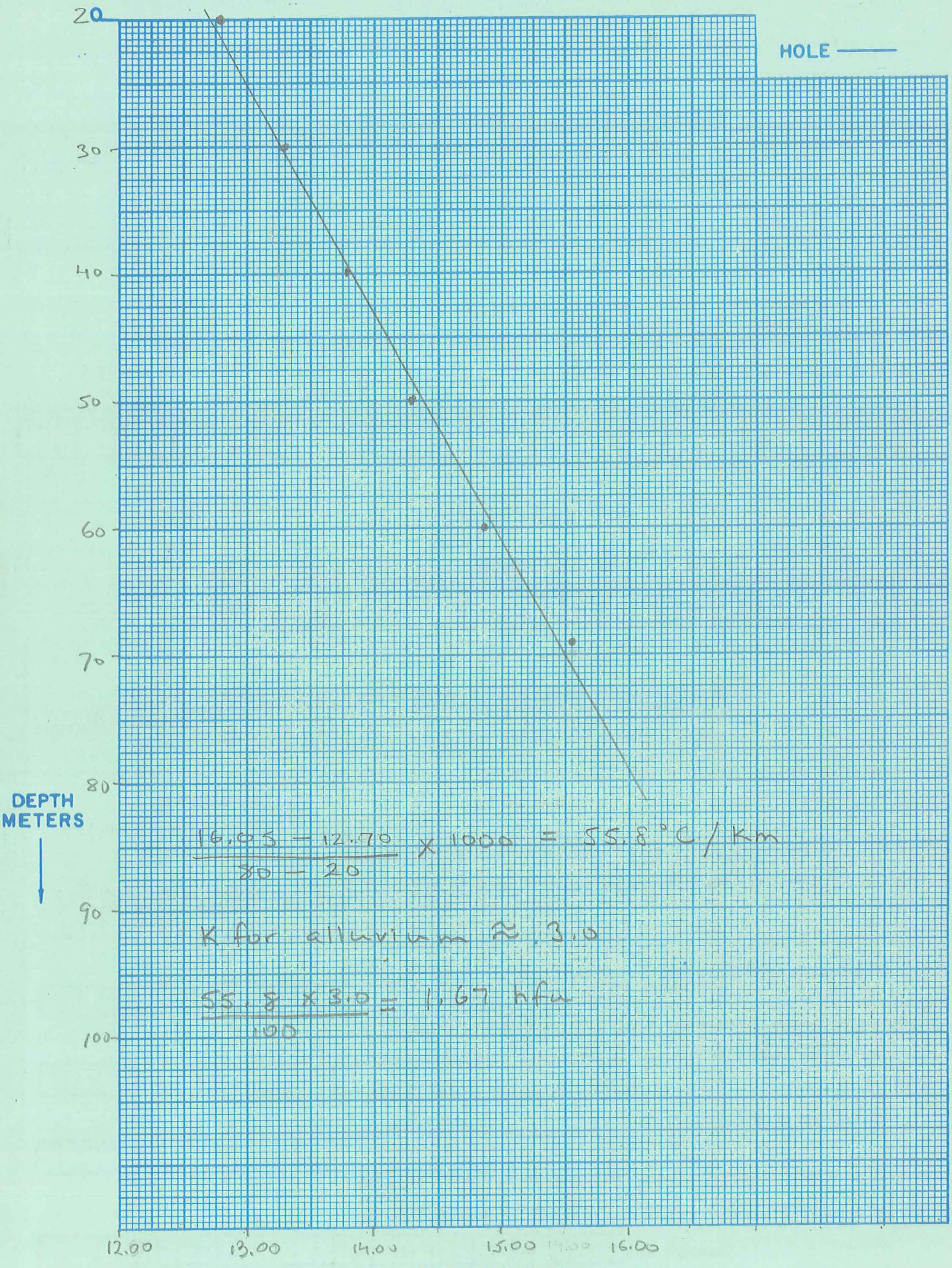
Segment 7

Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start = .999



$$\frac{16.05 - 12.70}{80 - 20} \times 1000 = 55.8\,°C/Km$$

K for alluvium ≈ 3.0

$$\frac{55.8 \times 3.0}{100} = 1.67 \text{ hfu}$$

Three section ΔT

Date Logged: 6/28/80

ΔT Well No. 80-100

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		12.78	0.52	52			Alluvium containing
30		13.30	0.48	48			numerous pebbles
40		13.78	0.50	50		air	of crystal tuff
50		14.28	0.58	58			(purplish pink
60		14.86	0.69				in color).
69		15.55				H2O	
							H2O at 65m

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

High Lonesome ΔT

ΔT Well No. 80-101

Property-Project 1114 Depth Logged 70 m

Map Lion Mountain Scale 7.5 1/24000 Date: Drilled ________ Logged 6/28/80

State N.M County Socorro, NW¼ of SW¼ of SW¼ of NW¼ of Sec 17 T 2S R 7W

Instrument ΔT-101 121 (repaired) Operator WA Elevation 6981 [✓ (ft)] (m)

Comments Windmill, 6" casing, 10' blades.

Date Logged

JUSTIFY

Card A

Proj No: 1114

Well No:

DA: 28

MO: 06

YR: 80

19: C

20: M

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

Site Description

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

Operator: WA

Editor

Drilled DA MO YR

Card B

Map Location * *

Scale Unit IN CM: cm

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

N Lat Degree: 34.

N Lat Min: 11.9

W Long Degree: 107.

W Long Min: 36.6

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

Use decimals

Northing: 4.40

Easting: 12.08

Elev: 6981.

80: F

← Write M if if meters

Use decimals

Segment 1 = Depths

Start End

Conductivity

K ΔK

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start →

End K ΔK

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

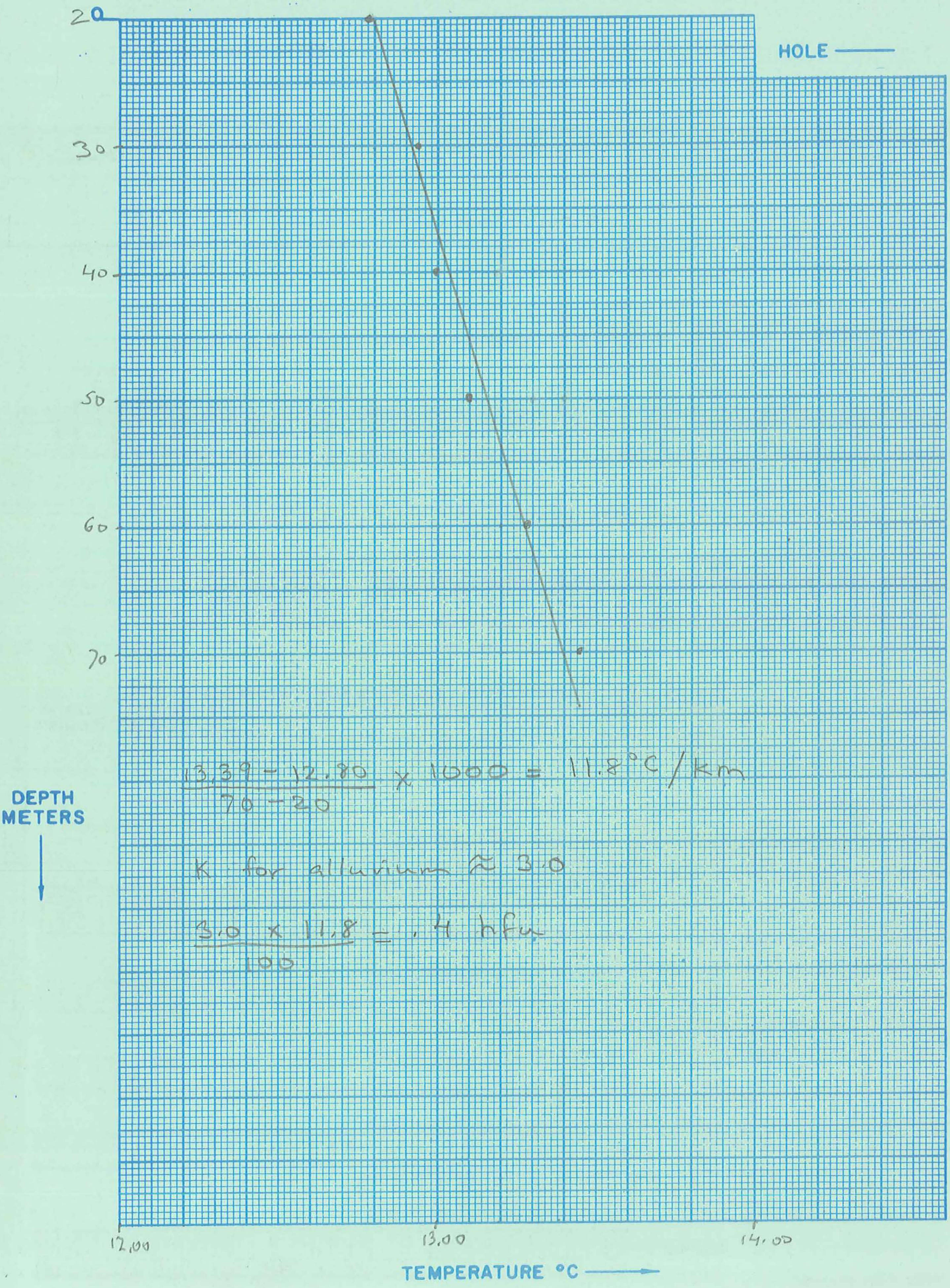
Segment 7

Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start =.999



$$\frac{13.39 - 12.80}{70 - 20} \times 1000 = 11.8\ °C/Km$$

K for alluvium ≈ 3.0

$$\frac{3.0 \times 11.8}{100} = .4\ \text{hfu}$$

High Lonesome ΔT

Date Logged: 6/28/80

ΔT Well No. 80-101

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		12.78	0.16	16			Alluvium (sand)
30		12.94	0.04	4		air	found on the
40		12.98	0.12	12		~	surface. Alluvium
50		13.10	0.18	18			appears to be
60		13.28	0.17	17		H_2O	somewhat thick.
70		13.45					
							H_2O at 43 m

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Piñon Well ΔT

ΔT Well No. 80-102

Property-Project 1114 Depth Logged 57m

Map Gallinas Peak Scale 7.5' 1/24000 Date: Drilled ____ Logged 6/28/80

State N.M County Socorro, ____ of unsurveyed of ____ of ____ of Sec 8 T 2 S R 6 W

Instrument DT-101-121 (repaired) Operator WA Elevation 7450 [✓ ft] (m)

Comments Windmill, 6" casing, 8' blades

JUSTIFY

Card A

	Proj No				Well No						Date Logged DA			MO			YR		*	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	1	1	1	4							2	8	▨	0	6	▨	8	0	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
																																	W	A	/							▨			▨		

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

Card B

Map Location **

Scale Unit IN CM					Map Size (7.5, 15., 60.)					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
▨	C	m	▨	▨			7	.	5			3	4	.			9	.	0		1	0	7	.		2	8	.	9

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
					1	1	.	4	5							7	.	1	8	7	4	5	0	.	▨	▨	▨	▨	F

Use decimals

← Write M if 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 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

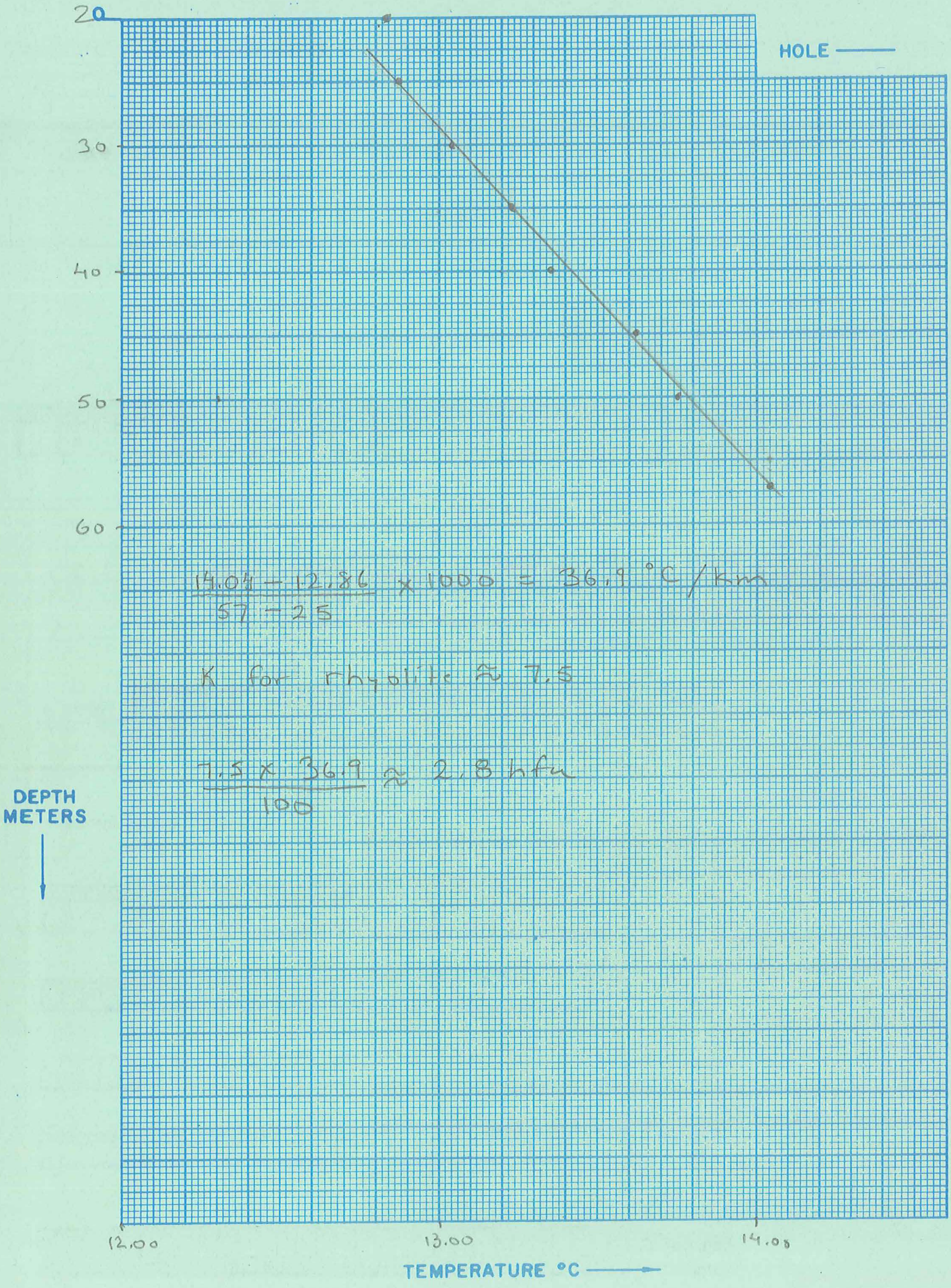
Segment 9

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



$$\frac{14.04 - 12.86}{57 - 25} \times 1000 = 36.9\ ^\circ C/km$$

K for rhyolite ≈ 7.5

$$\frac{7.5 \times 36.9}{100} \approx 2.8 \text{ hfu}$$

Piñon well ΔT

Date Logged: 6/28/80

ΔT Well No. 80-102

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		12.83	0.04	8		|	Thin cover of
25		12.87	0.17	34		|	alluvium containing
30		13.04	0.19	38		|	numerous clasts
35		13.23	0.12	24		air	(angular) of
40		13.35	0.27	54		↓	flow banded and
45		13.62	0.13	26		~	spherulitic
50		13.75	0.29	41.4		H_2O	rhyolite.
57		14.04					
							H_2O at 46m

K=Conductivity

page ______ of ______

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

South Well ΔT

ΔT Well No. 80-103

Property-Project 1114

Depth Logged 60 m

Map Gallinas Peak Scale 7.5' 1/24000

Date: Drilled ______ Logged 6/28/80

State N.M County Socorro , ______ of unsurveyed of ______ of ______ of Sec 5 T 2S R 6W

Instrument DT-101 121 repaired Operator WA

Elevation 7600 [✓ ft] (m)

Comments windmill, 8' blades, 6" casing. Was pumping before I arrived.

JUSTIFY

Card A

Date Logged

Proj No (1-4)	Well No (5-10)	DA (11-12)	MO (14-15)	YR (17-18)	19*	20
1114		28	06	80	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)
	WA	/			

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

Card B

Map Location * *

Scale Unit IN CM (22-23)	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	7.5	34.	10.0	107.	28.5

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
19.85	10.30	7600.		F

Use decimals

80: Write M if if meters

Segment 1 = Depths Start (21-30) End (31-40)

Conductivity K (41-45) ΔK (46-50)

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → (51-60) End (61-70) K (71-75) ΔK (76-80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

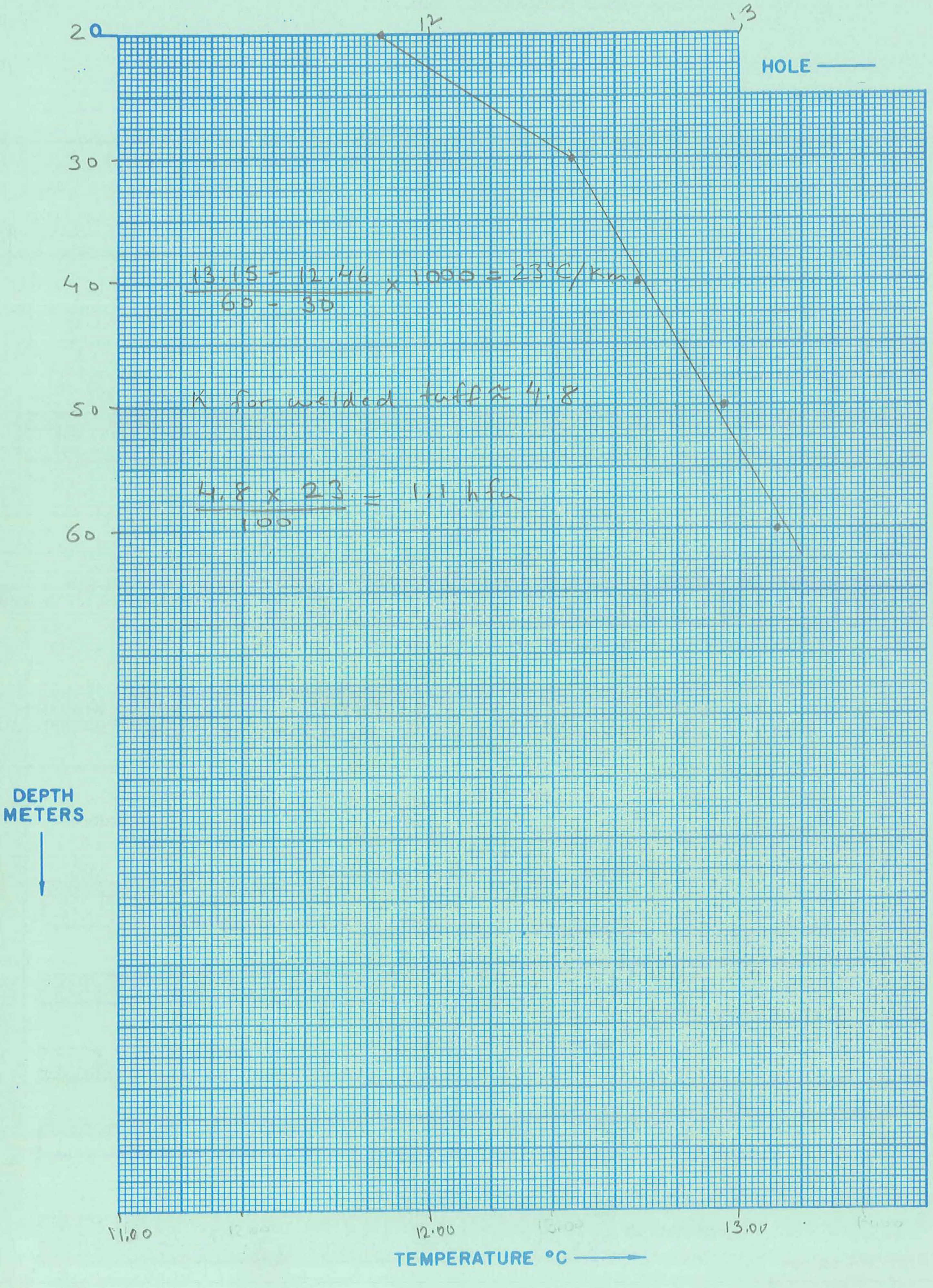
Segment 7

Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start =.999



$$\frac{13.15 - 12.46}{60 - 30} \times 1000 = 23\text{°C/km}$$

K for welded tuff ≈ 4.8

$$\frac{4.8 \times 23}{100} = 1.1 \text{ hfu}$$

South Well ΔT

Date Logged: 6/28/80

ΔT Well No. 80-103

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		11.84	0.52	52			Thin cover of
30		12.46	0.21	21		air	alluvium under-
40		12.67	0.28	28		~	lain by a pinkish
50		12.95	0.17	17		H_2O	crystal-lithic
60		13.12					welded tuff
							(exposed in
							nearby stream
							channel)
							H_2O at 41 m

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Broken ΔT

ΔT Well No. 80-104

Property-Project 1114 Depth Logged 38.7

Map La Joya Scale 7.5" Date: Drilled ______ Logged 6-21-80

State NM County Socorro, ____ of ____ of ____ of ____ of Sec 29 T 2N R 1E (Unsurveyed)

Instrument DT-101 Operator KG Elevation 4829 (ft m)

Comments 8" casing, toppled, dry

Card A

Date Logged

JUSTIFY	Proj No 1	2	3	4	Well No 5	6	7	8	9	10	DA 11	12	13	MO 14	15	16	YR 17	18	* 19	20
	1	1	1	4							2	1	▨	0	6	▨	8	0	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	63	MO 64–65	66	YR 67–68
		KG	/		▨		▨	

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

Card B

Map Location * *

Scale Unit IN CM 21	22	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 **
▨	C	M	▨	▨	7.5	34.	15.	106.	52.5

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
43.4	21.1	4829.	▨	F

Use decimals

← Write M if if meters

Segment 1 = Depths Start 21–30, End 31–40; Conductivity K 41–45, ΔK 46–50

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → 51–60, End 61–70, K 71–75, ΔK 76–80

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

Segment 9

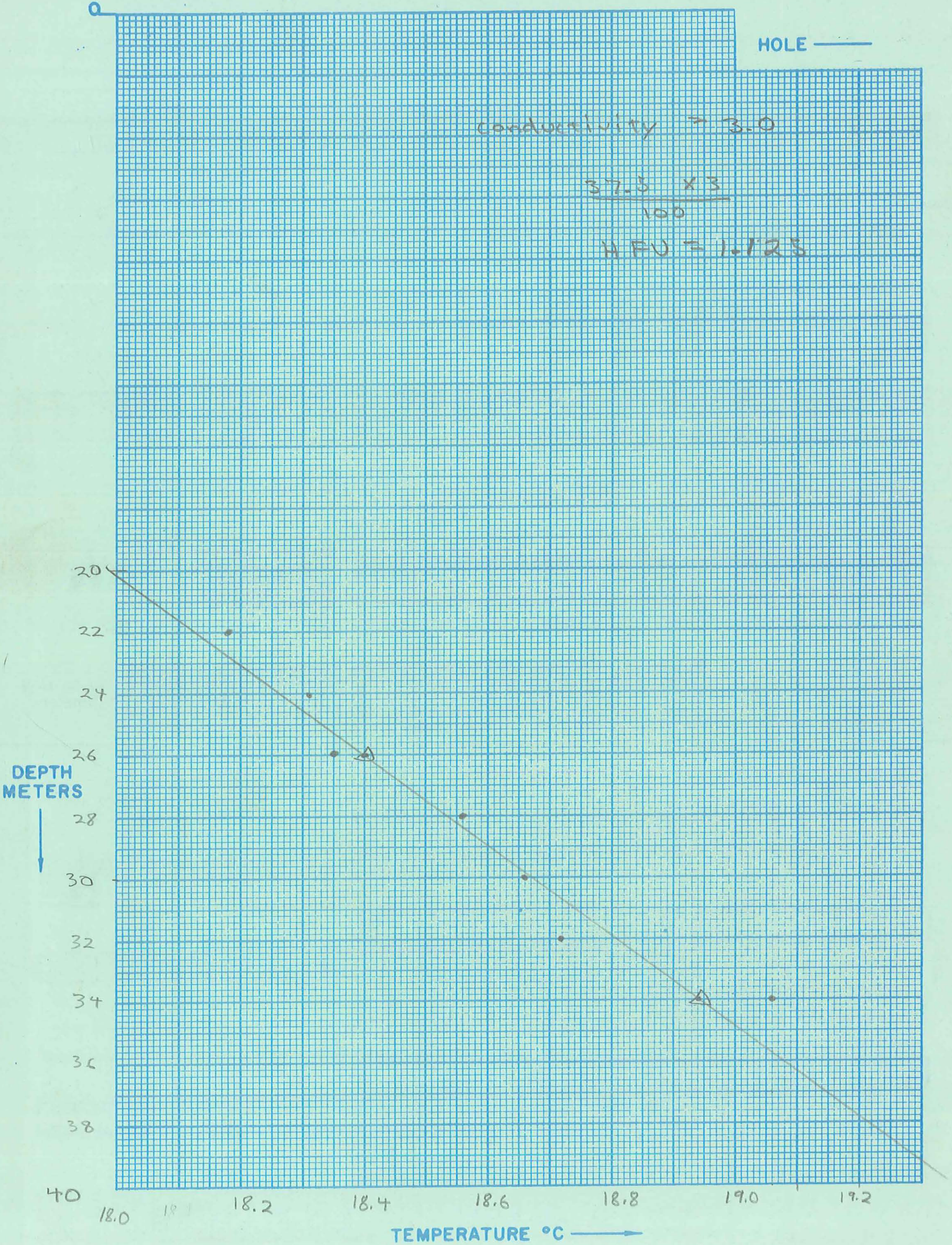
21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

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

slope $\frac{18.74 - 18.4}{34 - 26} = \frac{.3}{8}$ 37.5



conductivity = 3.0

$\frac{37.5 \times 3}{100}$

HFU = 1.125

Broken ΔT

Date Logged: 6-21-80

ΔT Well No. 80-104

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
						Air	Qal, stream (arroyo)
22.0		18.18				↓	conglomerate -
			.13	65			
24.0		18.31					cobble & pebble size
			.04	20			
26.0		18.35					of rounded volcanics
			.21	105			
28.0		18.56					(basalts) & metamorphics
			.10	50			
30.0		18.66					(quartzites, gneisses,
			.06	30			
32.0		18.72					schists etc.)
			.16	80			
34.0		18.88					
38.7		19.06					

K=Conductivity

page ______ of ______

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

Aqua de los Torres ΔT

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-105

Property-Project 1114 Depth Logged 30.5

Map Cerro Montoso Scale 7.5 Date: Drilled ______ Logged 6-22-80

State NM County Socorro, ____ of ____ of ____ unsurveyed of ____ of Sec 2 T 1S R 3E

Instrument DT-101 Operator KG ______ Elevation 5829 (ft/m)

Comments pumping when arrived

JUSTIFY

Card A

Date Logged

Proj No (1–4)	Well No (5–10)	DA (11–12)	MO (14–15)	YR (17–18)	19	20*
1114		22	06	80	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 (64–65)	Drilled YR (67–68)
	KG/				

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

Card B

Map Location **

Scale Unit IN CM (22–23)	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	7.5	34.	15.	106.	37.5

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)	80
.9	7.0	5829.	F

Use decimals

Write M if if meters

Segment 1 = Depths Start (21–30) End (31–40)

Conductivity K (41–45) ΔK (46–50)

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → (51–60) End (61–70) K (71–75) ΔK (76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

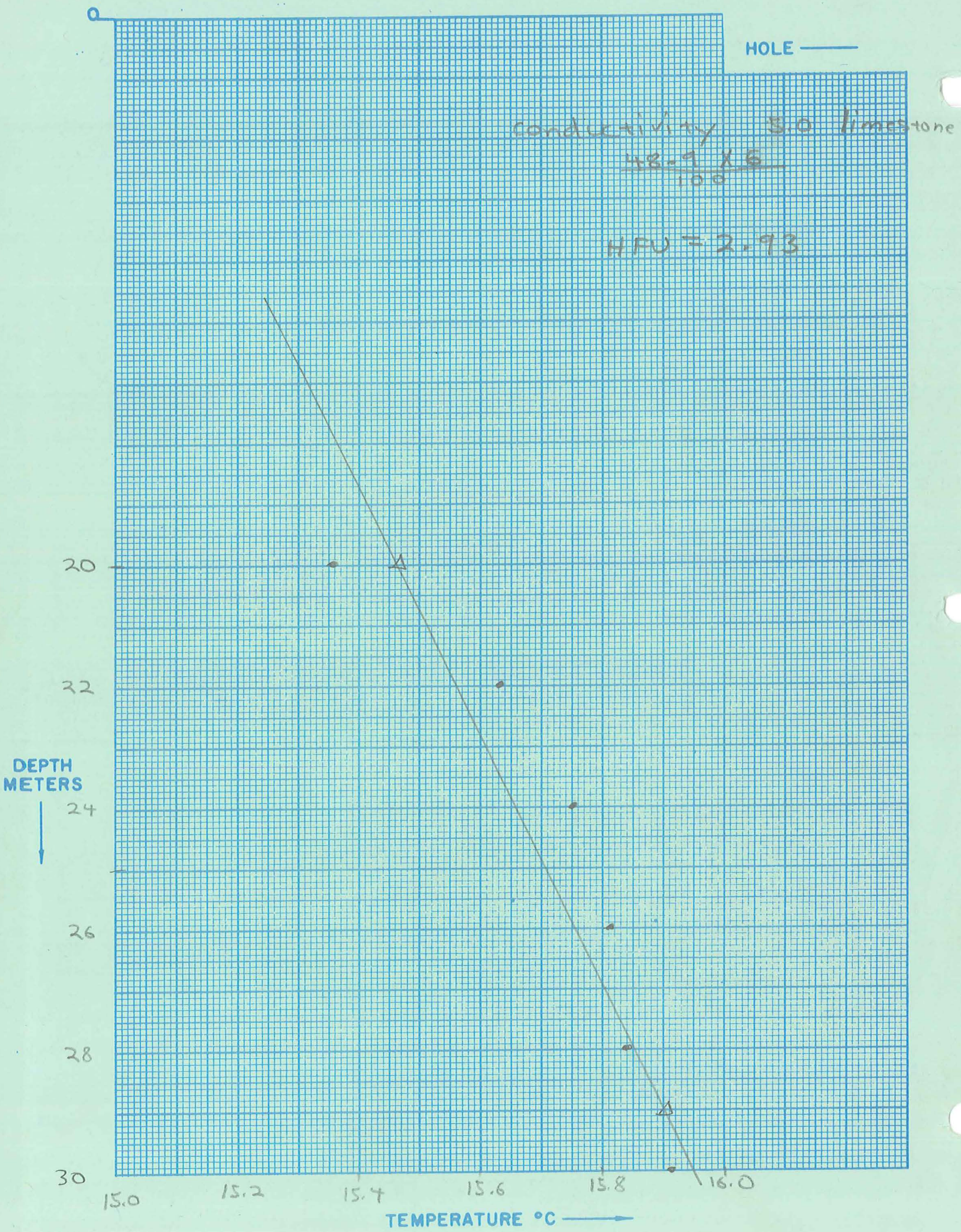
Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start =.999

slope = $\frac{15.9 - 15.46}{29-20}$ 48.89 °C/Km



conductivity 6.0 limestone

$\frac{48.9 \times 6}{100}$

HFU = 2.93

Agua de Los Torres ΔT

Date Logged: 6-22-80

ΔT Well No. 80-105

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
						↑	red brown Qal
20		15.35					fine w/ shale
			.28	140			
22		15.63					limestone + basalt
			.12	60			
24		15.75					conglomerate
			.06	30			
26		15.81					basalt flow
			.03	15			
28		15.84					nearby
			.02	10			
30		15.86					Probably in
30.5		15.86				H_2O	limestone

K=Conductivity

page ______ of ______

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page _____ of _____

U-Butte ΔT

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-106

Property-Project 1114 Depth Logged 50 m

Map Rayo Hills Scale 7.5'' Date: Drilled ______ Logged 6-22-80

State NM County Socorro , NW of NE of SE of NW of Sec 14 T 1N R 4E

Instrument OT-101 Operator KG Elevation 6284 (ft/m)

Comments casing has wood & paper covering it, large tank

JUSTIFY

Card A

	Proj No	Well No	Date Logged DA	MO	YR	*
	1 2 3 4	5 6 7 8 9 10	11 12	13 14 15	16 17 18	19 20
	1114		22	06	80	C M

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

Site Description	Operator	Editor	Drilled DA	MO	YR
21–50	51 52 53 54 55	56 57 58 59 60	61 62	63 64 65	66 67 68
	KG/				

(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
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	34.	15.	106.	30.

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
30.	.3	6284.	F

Use decimals

Write M if 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 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

Segment 9

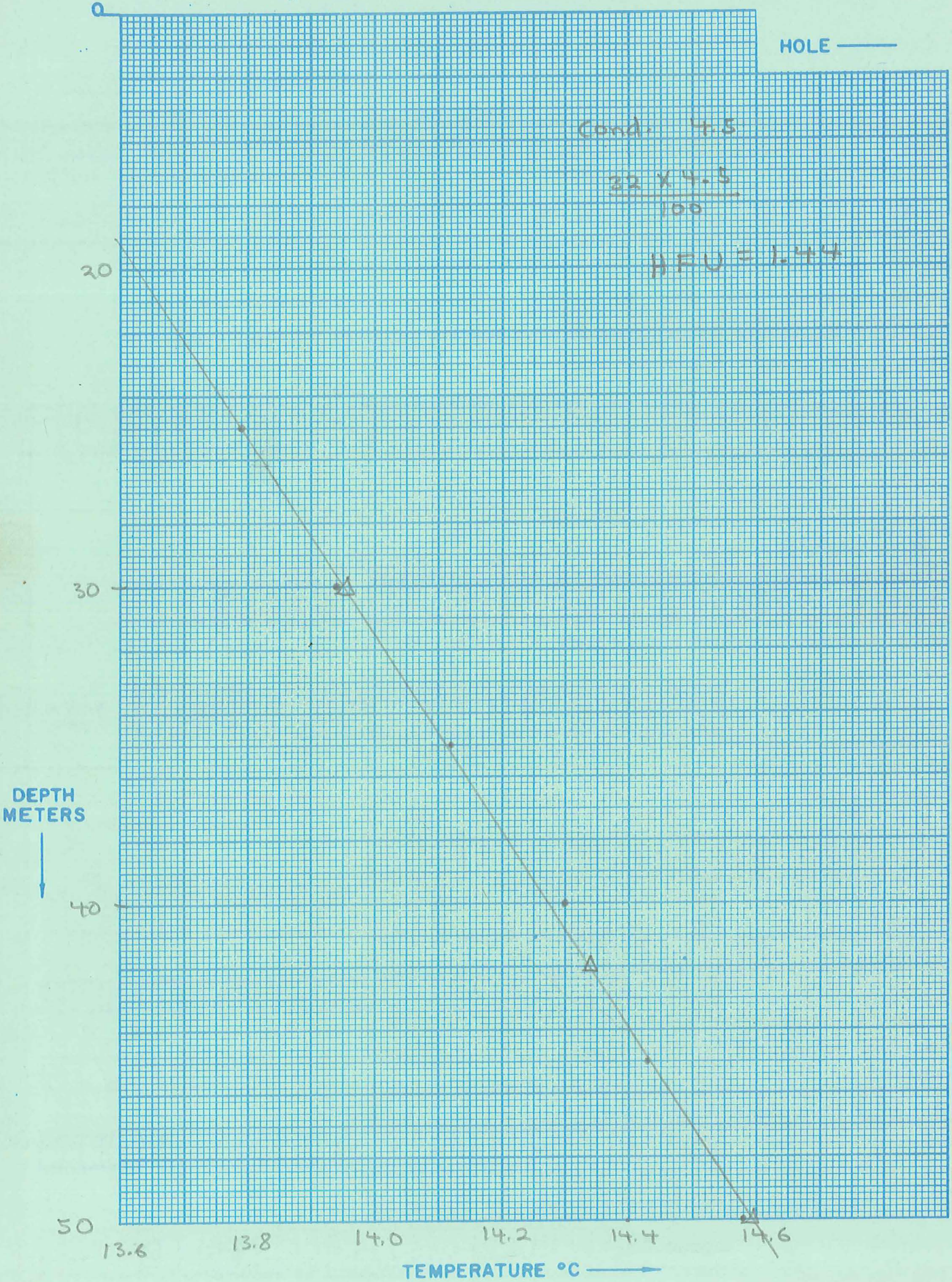
21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

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

gradient $\frac{14.59-13.95}{50-30}$ 32°c/Km



Cond. 4.5

$\frac{32 \times 4.5}{100}$

HFU = 1.44

U-Butte ΔT

Date Logged: 6-22-80

ΔT Well No. 80-106

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
							fine, reddish
25		13.79					medium brown
			.15	30			
30		13.94					Qal, limestone
			.18	39			
35		14.12					& shales underneath
			.18	39			
40		14.30					
			.13	26			
45		14.43					
			.15	30		Air	
50		14.58				H2O	

K=Conductivity

page ____ of ____

Date Logged: ____________________

ΔT Well No. _____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page _____ of _____

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Muddy ΔT

ΔT Well No. 80-107

Property-Project 1114 Depth Logged 136.35

Map Becker Scale 7.5" Date: Drilled ______ Logged 6-21-80

State NM County Socorro, ____ of ____ of unsurveyed of ____ of Sec 6 T 2N R 3E

Instrument DT-101 Operator KG Elevation 5201 (ft m)

Comments 8" casing, full tank, no windmill

Card A

JUSTIFY

Date Logged

Proj No (1-4)	Well No (5-10)	DA (11-12)	13	MO (14-15)	16	YR (17-18)	19*	20*
1114		21		06		80	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)	63	Drilled MO (64-65)	66	Drilled YR (67-68)
	KG/						

(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	7.5	34.	22.5	106.	37.5

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
19.65	1.75	5201.		F

Use decimals

← Write M if if meters

Segment 1 = Depths Start (21-30) End (31-40) Conductivity K (41-45) ΔK (46-50)

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → (51-60) End (61-70) K (71-75) ΔK (76-80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

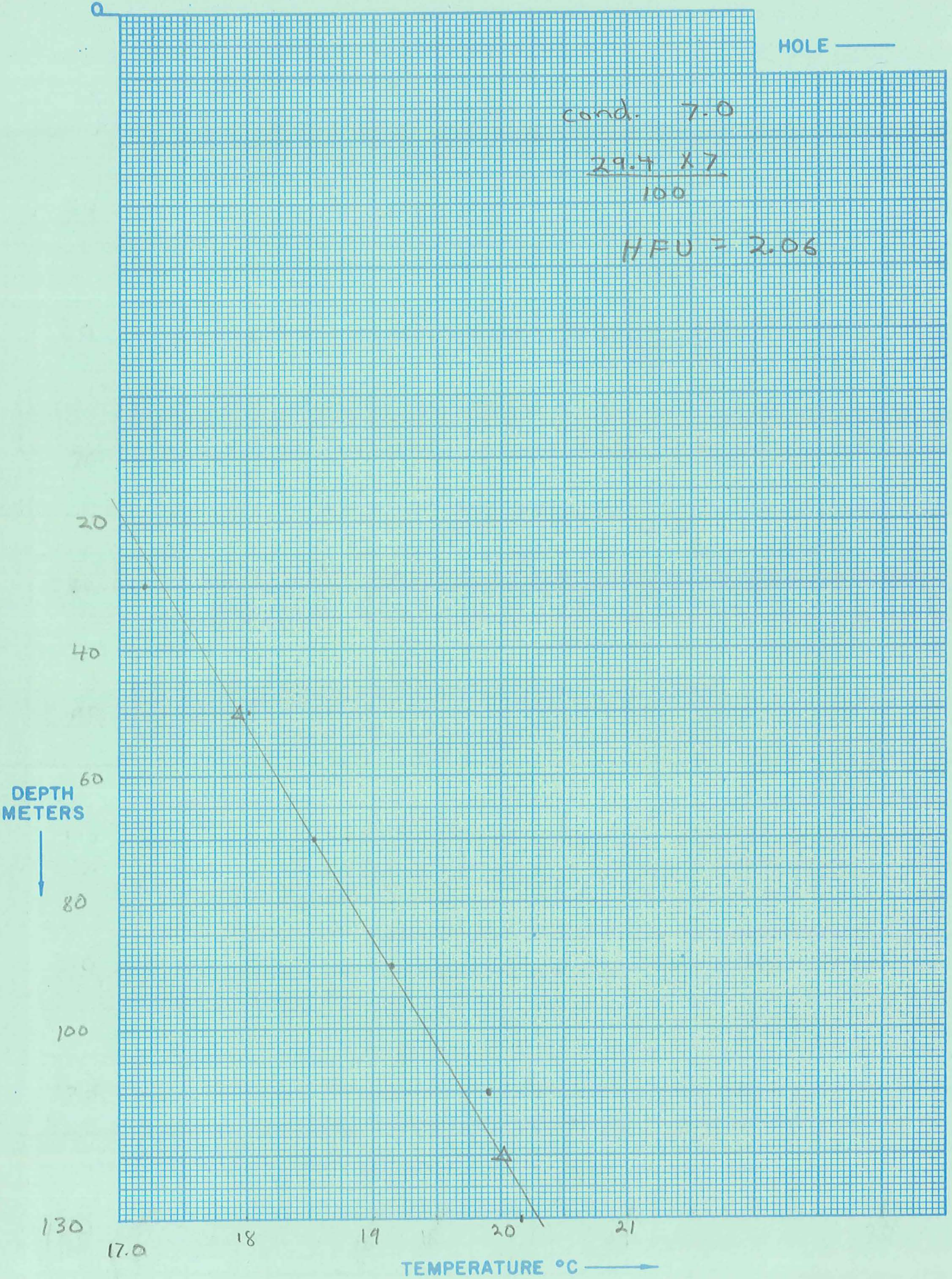
Segment 8 Start →

Segment 9 (21-50)

Segment 10 Start → (51-80)

After final segment Start = .999

$\frac{20 - 17.94}{120 - 50}$ 29.4 °C/Km



cond. 7.0

$\frac{29.4 \times 7}{100}$

HFU = 2.06

Muddy ΔT

Date Logged: 6-21-80

ΔT Well No. 80-107

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
						↑	alluvium, brown
							fine → coarse
							conglomerate:
							schists & gneisses
							w/ medium (quartz?)
30		17.20					phenocrysts.
			.81	40.5			
50		18.01					On flat plain.
			.52	26			
70		18.53					
			.62	31			
90		19.15					
			.75	37.5			
110		19.90					
			.26	13			
130		20.16				Air	
136.35		20.17				H_2O	

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Greasy ΔT

ΔT Well No. 80-108

Property-Project 1114 Depth Logged 30-2

Map White Oaks North Scale 7.5" Date: Drilled ______ Logged 6-26-80

State NM County Lincoln, O of NE of NE of NE of Sec 21 T 6S R 12E

Instrument OT-101 Operator KG Elevation 6733 (ft/m)

Comments gasoline pump attached

JUSTIFY

Card A

Proj No (1-4)	Well No (5-10)	Date Logged DA (11-12)	MO (14-15)	YR (17-18)	* 19	* 20
1114		26	06	80	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)
	KG/				

(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	7.5	33.	48.	105.	45.

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
13.2	28.2	6733.		F

Use decimals

Write M if if meters

Segment 1 = Depths

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

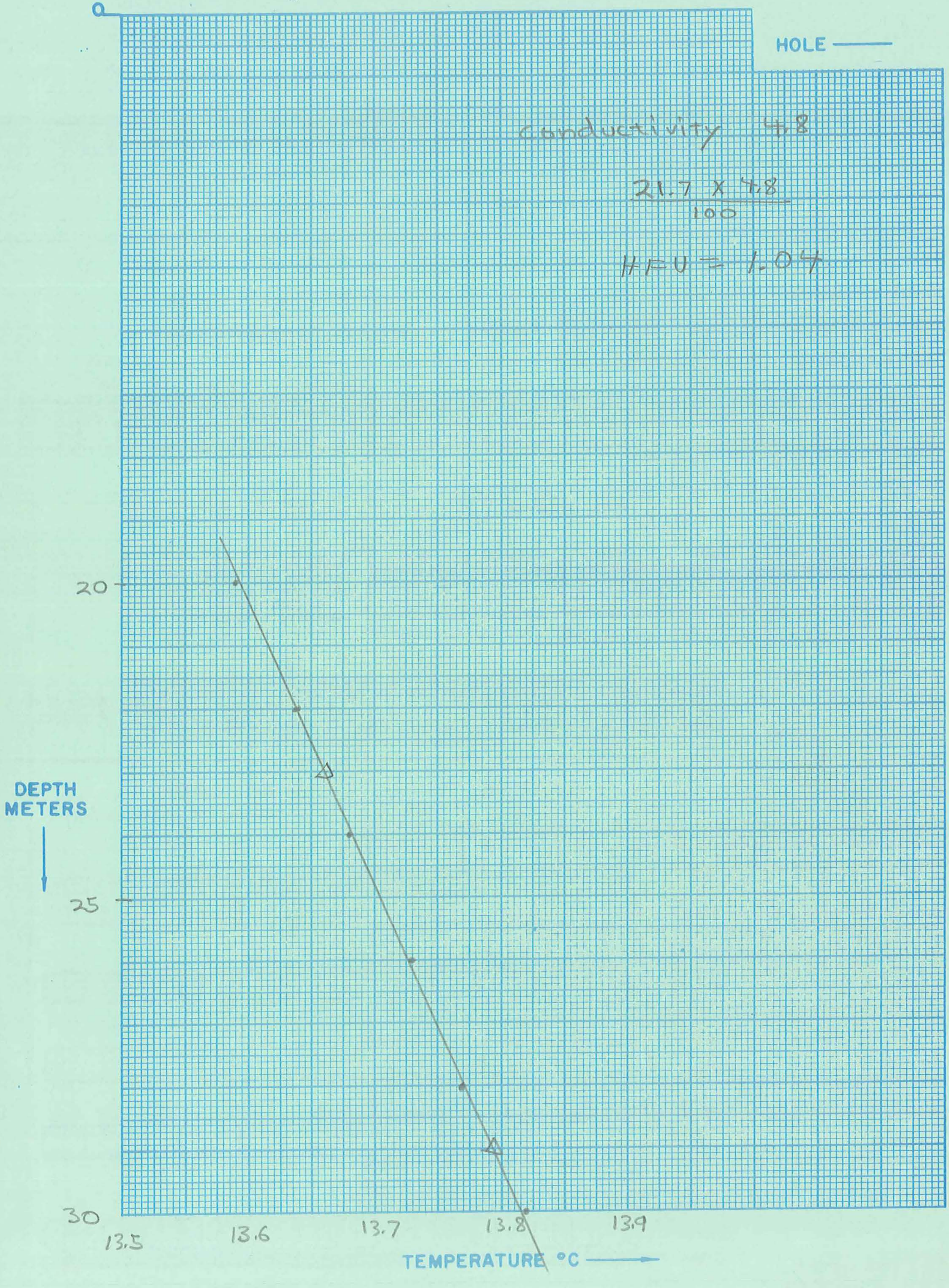
Best cond. (-K)

Downward extrapolations (-ΔK)

	Start (51-60)	End (61-70)	K (71-75)	ΔK (76-80)
Segment 2 Start →				
Segment 3				
Segment 4 Start →				
Segment 5				
Segment 6 Start →				
Segment 7				
Segment 8 Start →				
Segment 9 (21-50)				
Segment 10 Start → (51-80)				

After final segment Start = .999

$\frac{13.79 - 13.66}{29 - 23}$ 21.7 °C/Km



Conductivity 4.8

$\frac{21.7 \times 4.8}{100}$

HFU = 1.04

Greasy ΔT

Date Logged: 6-26-80

ΔT Well No. 80-108

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
						↑	welded crystallithic tuff, gray groundmass with med. → coarse phenocrysts of quartz, plag + hornblende
20.0		13.59					
			.05	25			
22.0		13.64					
			.04	20			
24.0		13.68					
			.05	25			
26.0		13.73					
			.04	20			
28.0		13.77					
			.05	25			
30.0		13.82				air	
30.2		13.85				H_2O ↓	

K=Conductivity

page ______ of ______

Date Logged: ____________________ ΔT Well No. 80-108

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ____ of ____

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Piñon ΔT

ΔT Well No. 80-109

Property-Project 1114 **Depth Logged** 33.85

Map Ancho Scale 7.5' **Date: Drilled** ______ **Logged** 6-26-80

State NM County Lincoln, NW of NW of SW of SE of Sec 29 T 4S R 12E

Instrument DT-101 Operator KG **Elevation** 6255 [✓ ft] m

Comments just been pumping

JUSTIFY

Card A

Proj No (1-4)	Well No (5-10)	Date Logged DA (11-12)	13	MO (14-15)	16	YR (17-18)	* 19	* 20
1114		26	▨	06	▨	80	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)	63	MO (64-65)	66	YR (67-68)
	KG/			▨		▨	

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

Card B

Map Location **

Scale Unit IN CM (21)	(22-23)	(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)
▨	CM	▨	7.5	33.	52.5	105.	45.

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
24.7	16.3	6255.	▨	F

Use decimals

Write M if if meters

Segment != Depths

Conductivity

Best cond. (-K)

Downward extrapolations (-ΔK)

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

Segment 2 Start →

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

Segment 3

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

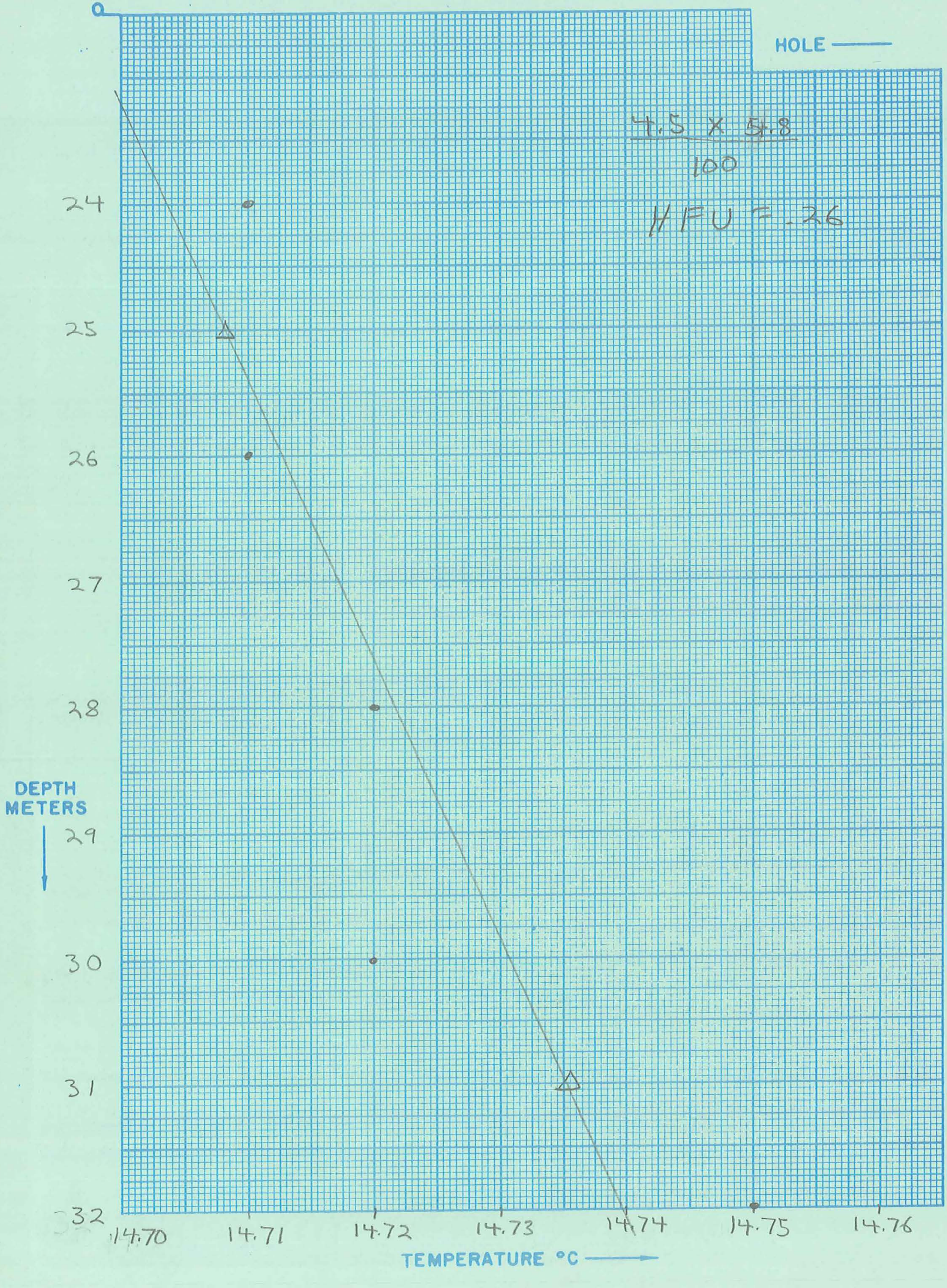
Segment 10 Start →

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

$\frac{14.735-14.708}{31-25}$

4.5 °C/Km



$\frac{4.5 \times 5.8}{100}$

HFU = .26

Piñon ΔT

Date Logged: 6-26-80

ΔT Well No. 80-109

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
							alluvium
							on valley floor
							rhyolitic tuff
24.0		14.71					P some crystalithic
26.0		14.71	0	0			basalts as
28.0		14.72	.01	5			conglomerate
30.0		14.72	0	0			
32.0		14.75	.03	15			
33.9		14.76				H_2O	

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ____ of ____

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Grouchy Cow ΔT

ΔT Well No. 80-110

Property-Project 1114 Depth Logged 38.2

Map Jicarilla Peak Scale 7.5' Date: Drilled ____ Logged 6-26-80

State NM County Lincoln, ____ of O of NE of NW of Sec 10 T 6S R 13E

Instrument DT-101 Operator KG Elevation 6390 (ft/m)

Comments pumping when arrived

Card A

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
	1	1	1	4							2	6	▨	0	6	▨	8	0	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)	63	Drilled MO (64–65)	66	Drilled YR (67–68)
	KG	/		▨		▨	

(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	7.5	33.	45.	105.	37.5

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
26.45	23.05	6390.	▨	F

Use decimals

80: Write M if if meters

Segment 1 = Depths

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

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start →	End (51–60)		K (71–75)	ΔK (76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

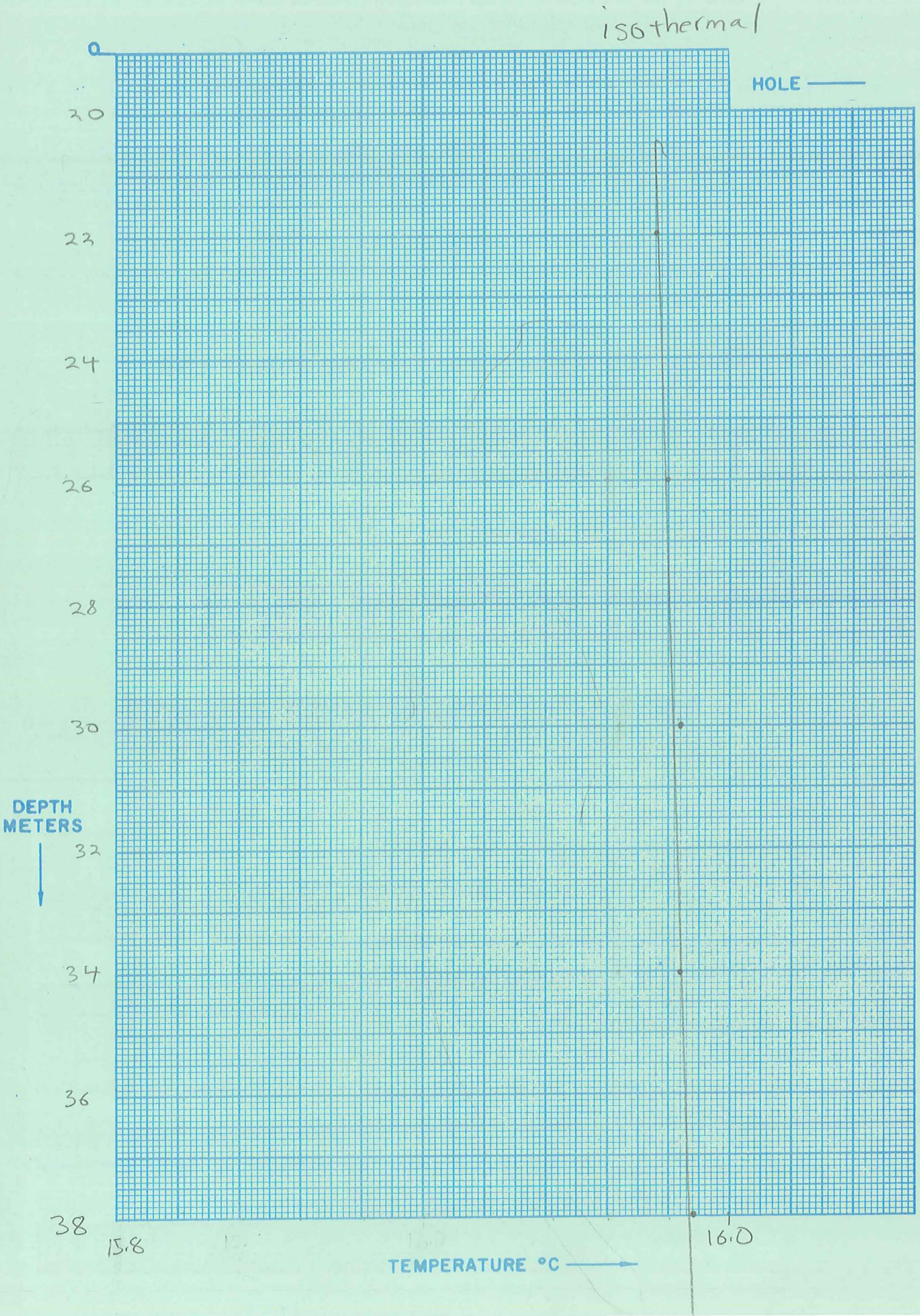
Segment 7

Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start = .999


isothermal
0
HOLE
20
23
24
26
28
30
DEPTH METERS
32
34
36
38
15.8
16.0
TEMPERATURE °C

Grouchy Cow ΔT

Date Logged: 6-26-80

ΔT Well No. 80-110

pumping when arrived

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
						↑	Crystallithic
							welded tuff
				isothermal			with light gray
22.0		15.88					groundmass
26.0		15.90	.02	5			+ coarse qtz
30.0		15.92	.02	5			+ plag phenocrysts
34.0		15.92	0	0			Alteration of
38.0		15.94	.02	5			orange calcitic deposition,
38.2		15.94				H_2O	epidote +
							veins of black
							mineral (magnetite)
							running thru rock

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Hickman ΔT

ΔT Well No. 80-111

Property-Project 1114 Depth Logged 60.65

Map Hickman Ranch Scale 7.5 Date: Drilled ______ Logged 6-24 80

State NM County Socorro, NE of NW of NE of NW of Sec 8 T 7S R 3W

Instrument DT-101 Operator KG Elevation 5120 (ft/m)

Comments Flow when arrived - submersible pump

JUSTIFY

Card A

	Proj No	Well No	Date Logged DA	MO	YR	19	20
Columns	1 2 3 4	5 6 7 8 9 10	11 12	13 14 15	16 17 18	19	20
	1114		24	06	80	C	M

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

	Site Description	Operator	Editor	Drilled DA	MO	YR
Columns	21–50	51–55	56–60	61 62	63 64 65	66 67 68
		KG/				

(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
Columns	21–25	26–30	31–35	36–40	41–45	46–50
	CM	7.5	33.	37.5	107.	15.

Use decimals

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

	Northing	Easting	Elev		
Columns	51–60	61–70	71–75	76–79	80
	46.1	30.0	5120.		F

Use decimals

← Write M if if meters

Segment 1 = Depths Start (21–30), End (31–40); Conductivity K (41–45), ΔK (46–50)

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → End (51–60, 61–70), K (71–75), ΔK (76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

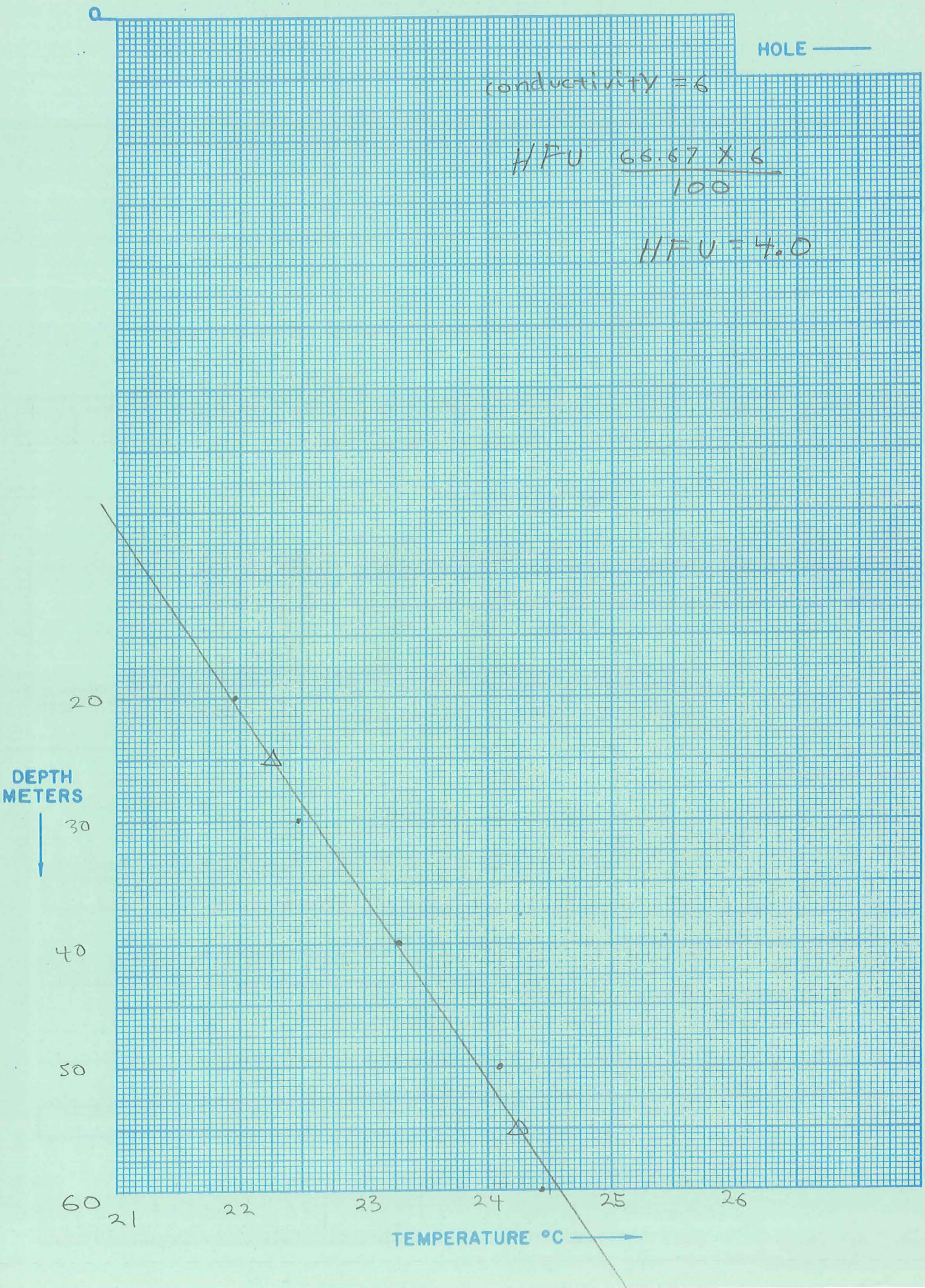
Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start = .999

$\frac{24.25 - 22.25}{55 - 25}$ 66.67 °C/Km



conductivity = 6

HFU $\frac{66.67 \times 6}{100}$

HFU = 4.0

Hickman ΔT

Date Logged: 6-24-80

ΔT Well No. 80-111

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
							Alluvium in
20.0		21.97				H_2O	Gulch - consists
30.0		22.47	.57	57			mostly of welded
40.0		23.3	.83	83			tuffs & some
50.0		24.1	.80	80			black crystal
60.0		24.45	.35	35			rich tuffs
60.65		25.4					

K=Conductivity

page ____ of ____

Date Logged: ____________________

ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ____ of ____

AMAX EXPLORATION, INC. Cholla ΔT

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-112

Property-Project 1114 Depth Logged 72.3

Map San Juan Scale 7.5' Date: Drilled ______ Logged 6-24-80

State NM County Socorro , O of NW of NE of NW of Sec 19 T 7S R 4W

Instrument DT 101 Operator KG Elevation 6125 (ft/m)

Comments Pumping - couldn't turn off

Date Logged

JUSTIFY

Card A

Proj No (1–4)	Well No (5–10)	DA (11–12)	MO (14–15)	YR (17–18)	19	20
1114		24	06	80	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)
	KG/				

(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	7.5	33.	37.5	107.	22.5

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
32.5	30.1	6125.		F

Use decimals

80 ← Write M if if meters

Segment 1 = Depths

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

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → (51–80: End, K, ΔK)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

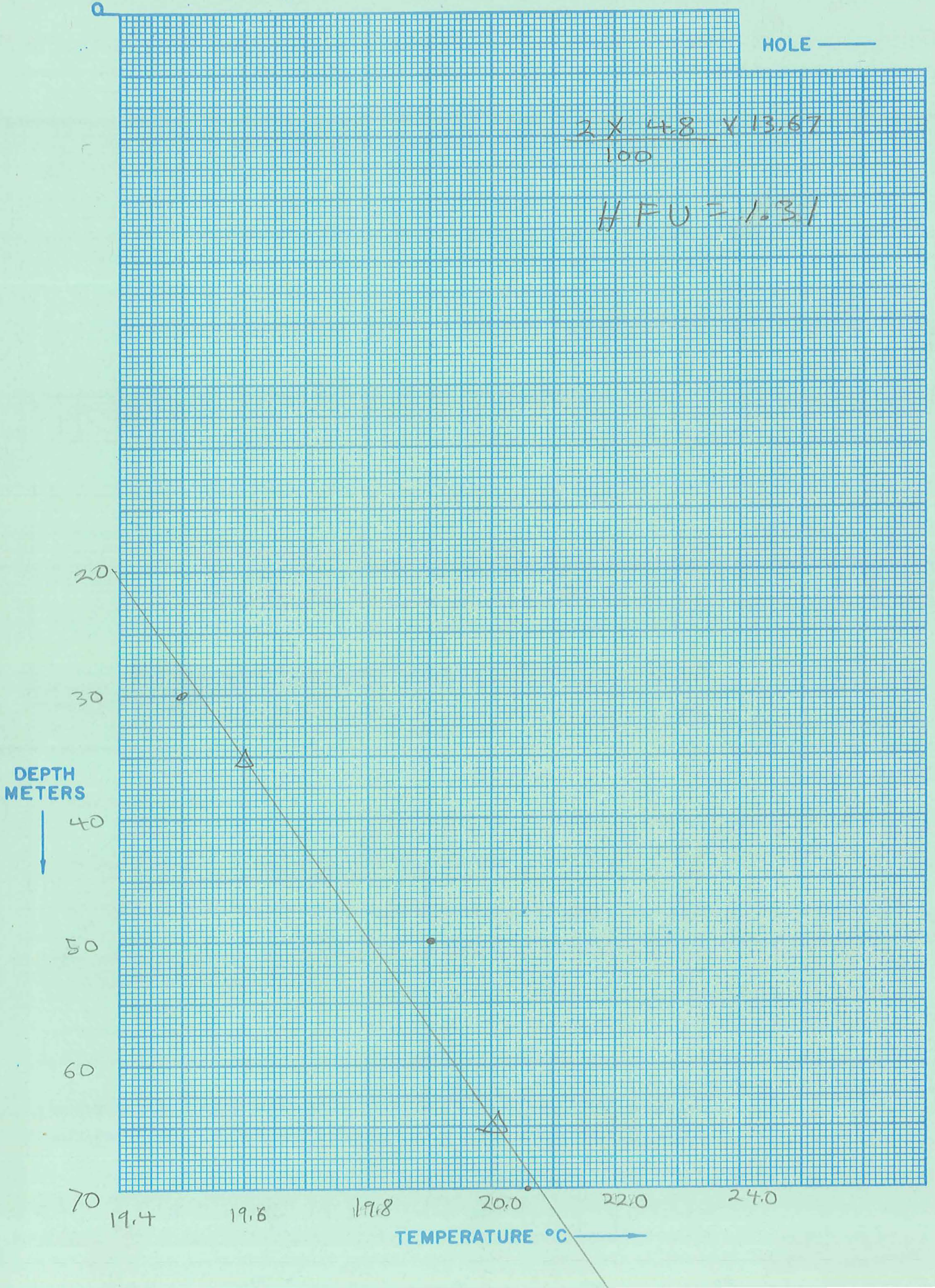
Segment 9

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

$\frac{20.01 - 19.60}{65 - 35}$ 13.67 °C/km



$\frac{2 \times 48 \times 13.67}{100}$

HFU = 1.31

Cholla ΔT

Date Logged: 6-24-80

ΔT Well No. 90-112

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
							Gray ryholite
							& 0 gray Qal
							fine -> medium
							grained
30.0		19.45					
			.4	20			
50.0		19.85					
			.9	45			
70.0		20.75					
72.3		20.60					
						H_2O ↑	

flowing too much for good gradient

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

La Petra ΔT

ΔT Well No. 80-113

Property-Project 1114 Depth Logged 61.4

Map Monticello Scale 7.5 Date: Drilled ______ Logged 6-27-80

State NM County Sierra, SE of SW of SW of SW of Sec 13 T 10S R 6W

Instrument DT-101 Operator KG Elevation 5800 (ft/m)

Comments 8" casing, wires

Card A

JUSTIFY

Date Logged

Proj No (1–4)	Well No (5–10)	DA (11–12)	MO (13–15)	YR (16–18)	19*	20*
1114		27	06	80	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)
	KG				

(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	7.5	33.	22.5	107.	30.

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
27.3	31.4	5800.		F

Use decimals

80: ← Write M if if meters

Segment 1 = Depths

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

Best cond. (−K)

Downward extrapolations (−ΔK)

Segment 2 Start (51–60)	End (61–70)	K (71–75)	ΔK (76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

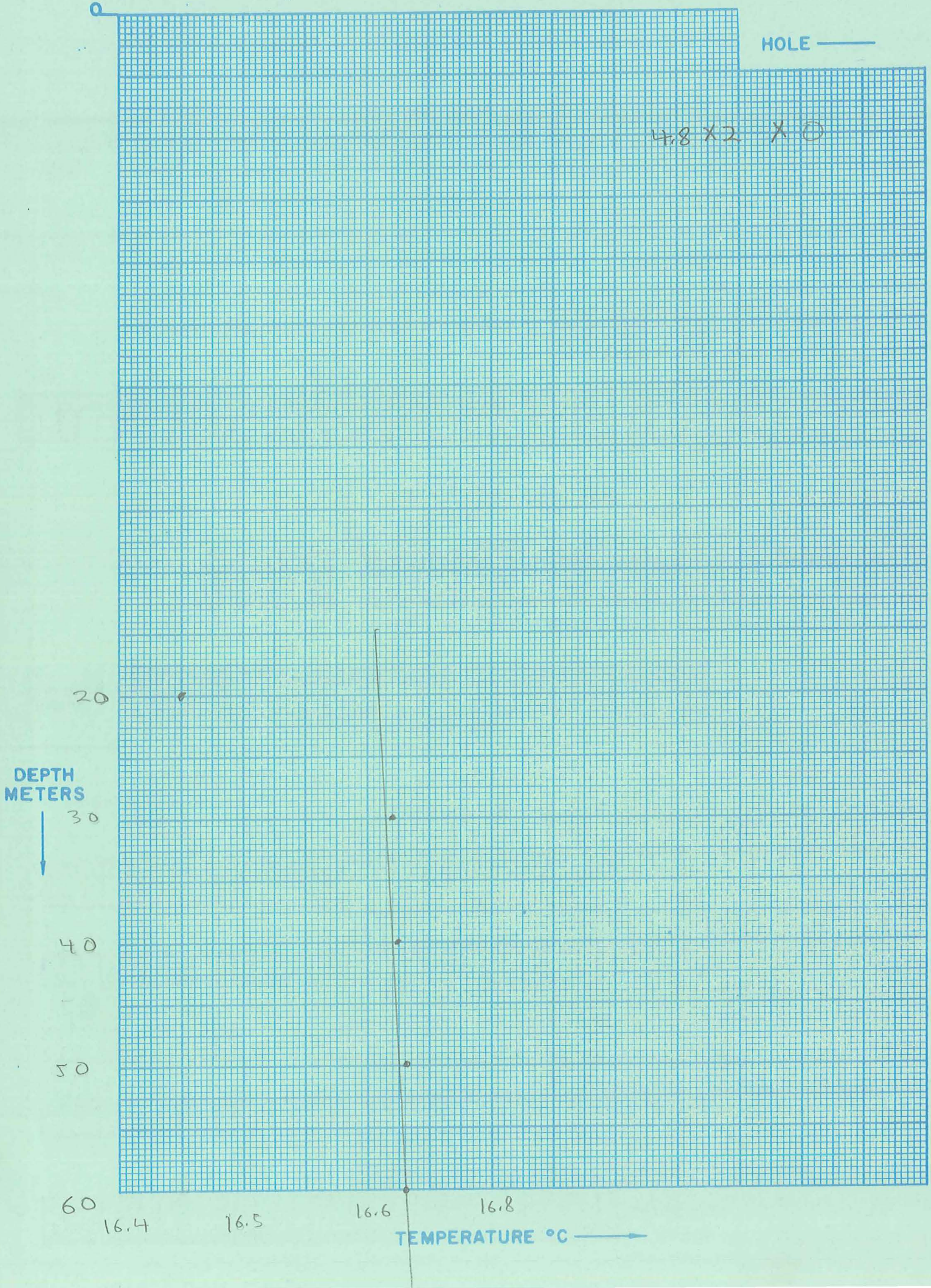
Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start = .999

isothermal ?


0
HOLE
4.8 X2 X 0
20
DEPTH METERS
30
40
50
60
16.4
16.5
16.6
16.8
TEMPERATURE °C

La Petra ΔT

Date Logged: 6-27-80

ΔT Well No. 80-113

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
				isothermal		↑	Highly fractured welded crystal rich, medium gray tuff. Coarse hornblende, quartz and plagioclase phenocrysts with volc. lithic fragments.
20		16.45					
30		16.64	.19	19			
40		16.65	.01	1			
50		16.66	.01	1			
60		16.66	0	0			
61.4		16.68	.02	2			
						H_2O	

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Steel ΔT

ΔT Well No. 80-114

Property-Project 1114

Depth Logged 34.6 m

Map Steel Hill

Scale 7.5'

Date: Drilled ____

Logged 6-27-80

State NM

County Socorro, NE of NW of SE of NW of Sec 10 T 9S R 5W

Instrument DT-101

Operator KG

Elevation 6370 (ft/m)

Comments 8" casing

Card A

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
1	1	1	4							2	7	▨	0	6	▨	8	0	C	M

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

Site Description	Operator	Editor	Drilled DA	Drilled MO	Drilled YR
21–50	51–55	56–60	61–62	64–65	67–68
	KG				

(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 **
21–25	26–30	31–35	36–40	41–45	46–50
CM	7.5	33.	30.	107.	22.5

Use decimals

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

Northing	Easting	Elev		
51–60	61–70	71–75	76–79	80
21.6	12.6	6370.	▨	F

Use decimals

Write M if if meters

Segment 1 = Depths Start	End	Conductivity K	ΔK
21–30	31–40	41–45	46–50

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start →	End	K	ΔK
51–60	61–70	71–75	76–80

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

Segment 9

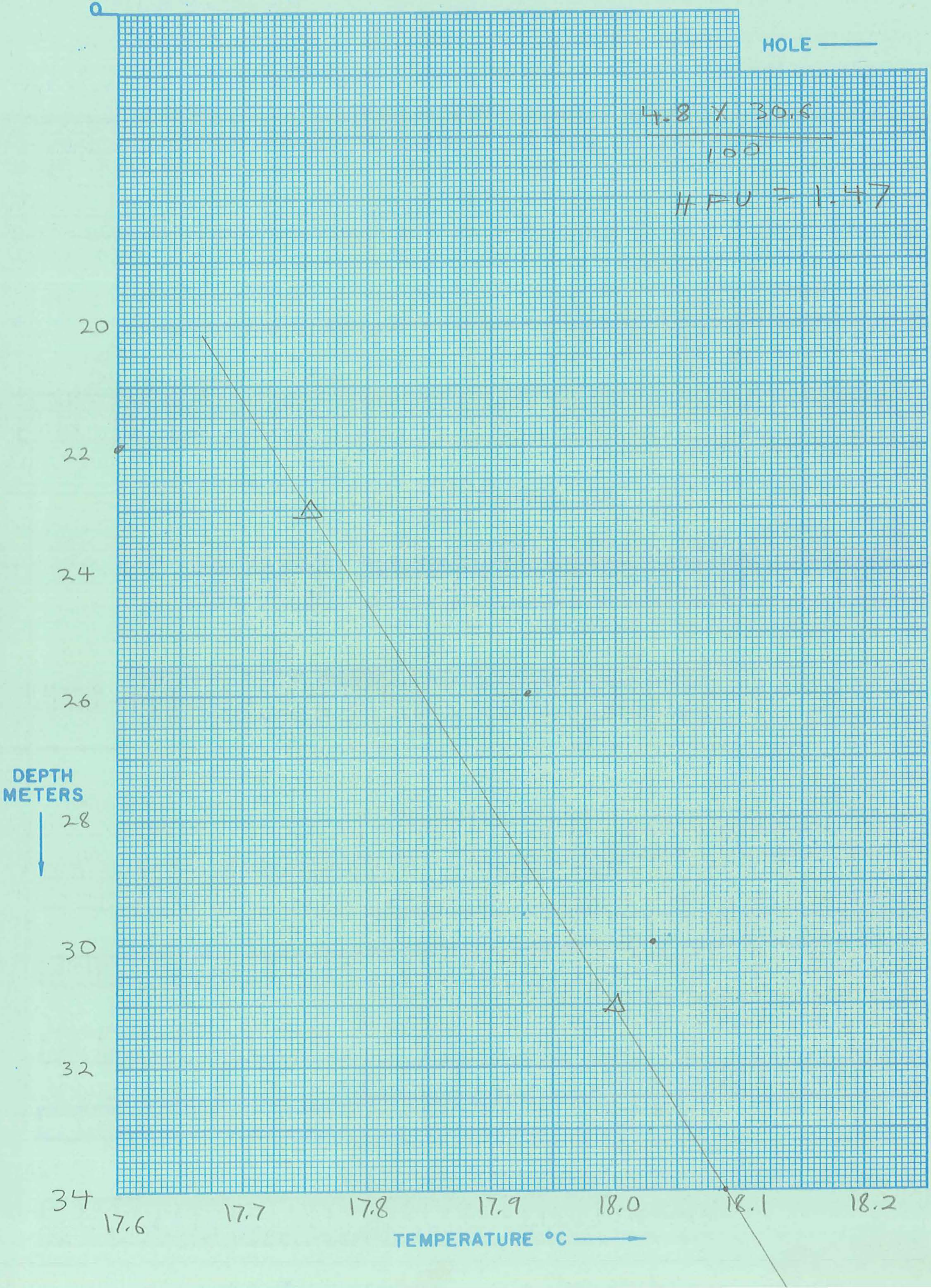
21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

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

$$\frac{18.0 - 17.755}{31 - 23} \quad 30.6$$



$$\frac{4.8 \times 30.6}{100}$$

HFU = 1.47

Steel ΔT

Date Logged: 6-27-80

ΔT Well No. 80-114

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
						↑	Welded rhyolitic
							tuff conglomerate
							Fine quartz
22		17.60					phenocrysts
			.33	82.5			
26		17.93					
			.1	25			
30		18.03					
			.06	15		Air	
34		18.09				H_2O	
34.6		18.15				↓	

K=Conductivity

page ____ of ____

Date Logged: ____________________

ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ____ of ____

AMAX EXPLORATION, INC.

Coupland ΔT

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-115

Property-Project 1114 Depth Logged 63.35

Map Black Hill Scale 7.5' Date: Drilled ______ Logged 6-23-80

State NM County Socorro , O of NE of SE of SW of Sec 30 T 8S R 3W

Instrument OT-101 Operator KD Elevation 5098 (ft/m)

Comments couldn't get probe to bottom

Card A

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
1	1	1	4								2	3		0	6		8	0	C	M

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

Site Description (columns 21–50)

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

Operator					Editor					Drilled DA			MO			YR	
51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
			K	D	/												

Card B

Map Location **

Scale Unit IN CM					Map Size (7.5, 15., 60.)					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
	C	M					7	.	5			3	3	.			3	0	.		1	0	7	.		1	5	.	

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
					3	8	.	2							2	5	.	3		5	0	9	8	.					F

Use decimals

Write M if 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 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

Segment 9

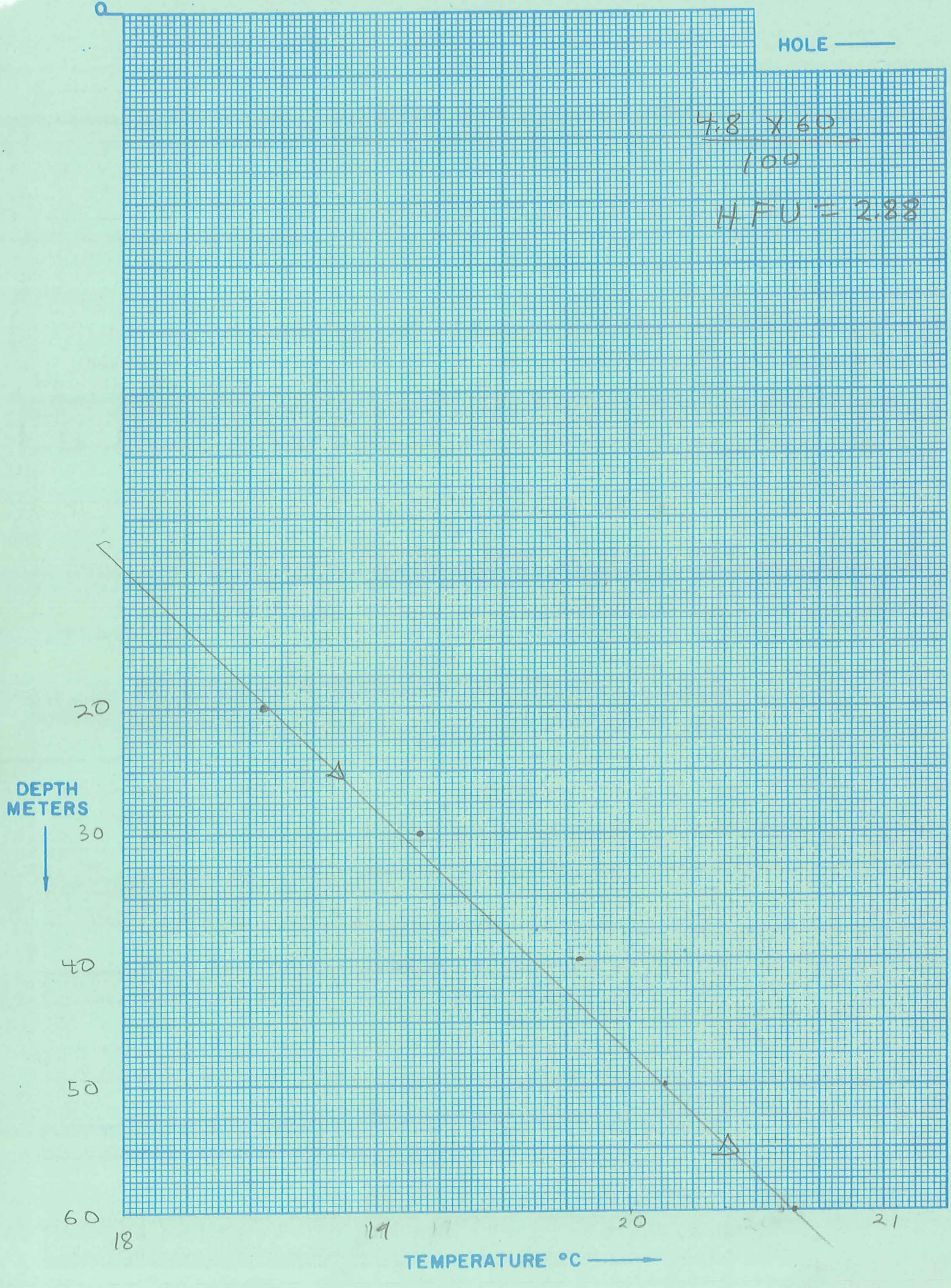
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

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

$\frac{20.75 - 18.95}{55 - 25}$ 60 °C/Km



$\frac{4.8 \times 60}{100}$

HFU = 2.88

coupland ΔT

Date Logged: 6-23-80

ΔT Well No. 80-115

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
						↑	med → coarse
							Qal of
							rhyblite →
20.0		18.60					basalt conglomerate
			.75	75			
30.0		19.35					
			.50	50			
40.0		19.85					
			.42	42			
50.0		20.27					
			.53	53			
60.0		20.8					
63.35m		20.7				Air	

K=Conductivity

page ______ of ______

Date Logged: ______________________

ΔT Well No. ______________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Nogal ΔT

ΔT Well No. 80-116

Property-Project 1114 Depth Logged 89.3 m

Map Black Hill Scale 7.5' Date: Drilled ______ Logged 6-27-80

State NM County Socorro, NE of NE of SW of NE of Sec 20 T 9S R 3W

Instrument DT-101 Operator KG Elevation 4663 (ft/m)

Comments 8" casing

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	1	1	4							2	7	▨	0	6	▨	8	0	C	M

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

Site Description (columns 21–50) — (Approx. location, water well?, oil test?, etc.)

Operator (51–55): KG / — Editor (56–60) — Drilled DA (61–62), 63 ▨, MO (64–65), 66 ▨, YR (67–68)

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				
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
▨	C	M	▨	▨			7	.	5			3	3	.			3	0	.			1	0	7	.		1	5	.

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
						8	.	0	5							3	3	.	4	4	6	6	3	.	▨	▨	▨	▨	F

Use decimals

Write M if if meters

Segment 1 = Depths

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

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → (51–60), End (61–70), K (71–75), ΔK (76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

Segment 9

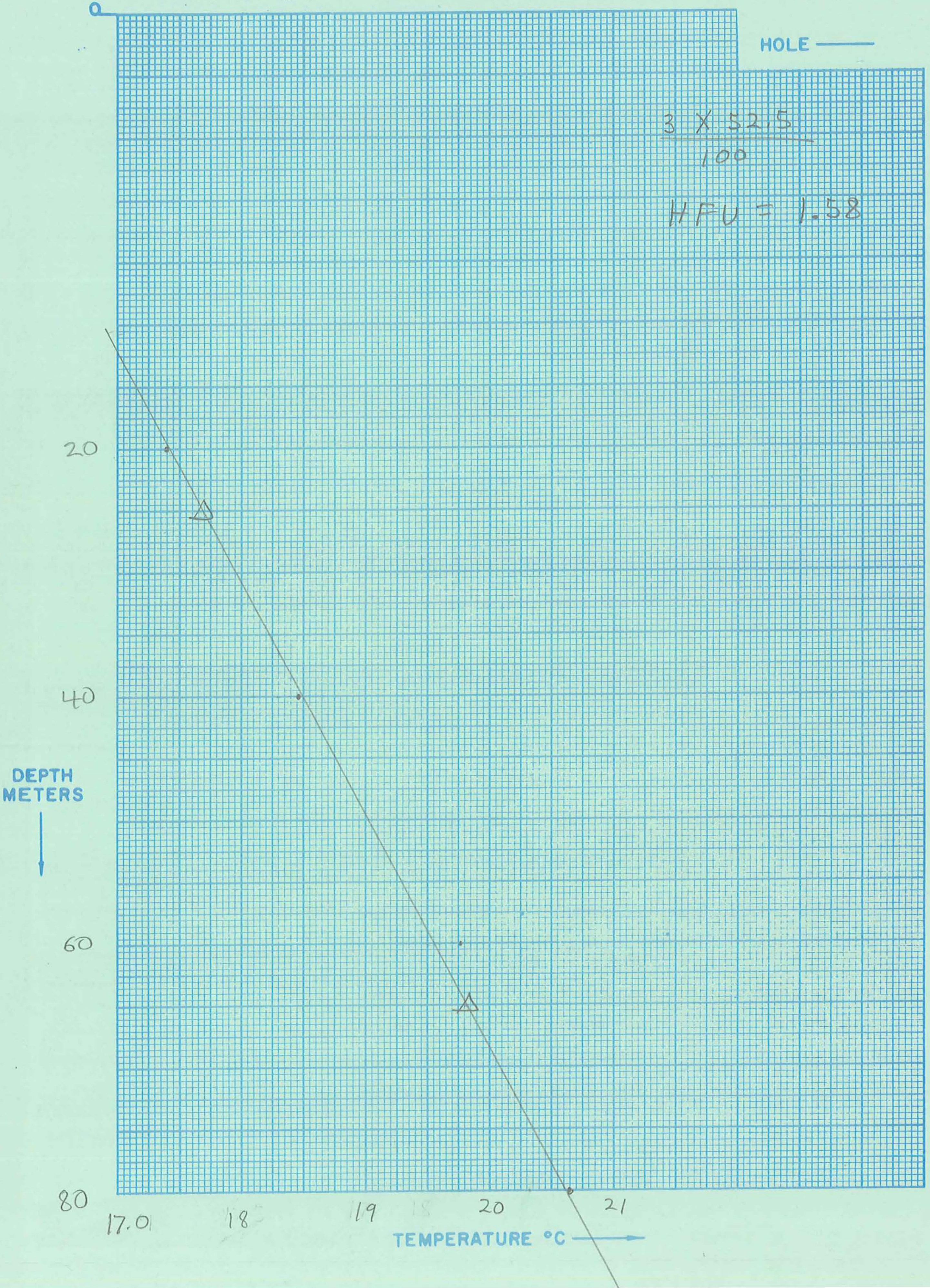
21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

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

$\frac{19.8-17.7}{65-25}$ 52.5 °C/Km



$\frac{3 \times 52.5}{100}$

HFU = 1.58

Nogal ΔT

Date Logged: 6-27-80

ΔT Well No. 80-116

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
							Conglomerate in arroyo consisting primarily of welded tuffs + basalts
20.0		17.40				↑	
40.0		18.48	1.08	54			
60.0		19.78	1.3	65			
80.0		20.65	.87	43.5		Air	
89.3		20.74				H_2O ↓	

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

White Cloud ΔT

ΔT Well No. 80 117

Property-Project 1114 Depth Logged 32m

Map Winston Scale 7.5 Date: Drilled ______ Logged 7/1/80

State NM County Sierra, ____ of ____ of NE of SW of Sec 30 T 11S R 8W

Instrument DT-101 #3 Operator Huntsman Elevation 6800 ([✓ ft] m)

Comments slight angle mineral exploration hole, 3".

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	1	1	4								1		0	7		8	0	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)

21–50	51	52	53	54	55	56	57–60	61	62	63	64	65	66	67	68
	H	U	N	T	S	/									

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

Card B

Map Location * *

Scale Unit IN CM (22–23)	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	7.5	33.	15.	107.	45.

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)	80
32.50	17.00	6800.	F

Use decimals

Write M if if meters

Segment 1 = Depths

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

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2

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

Segment 3

Segment 4 Start

Segment 5

Segment 6 Start

Segment 7

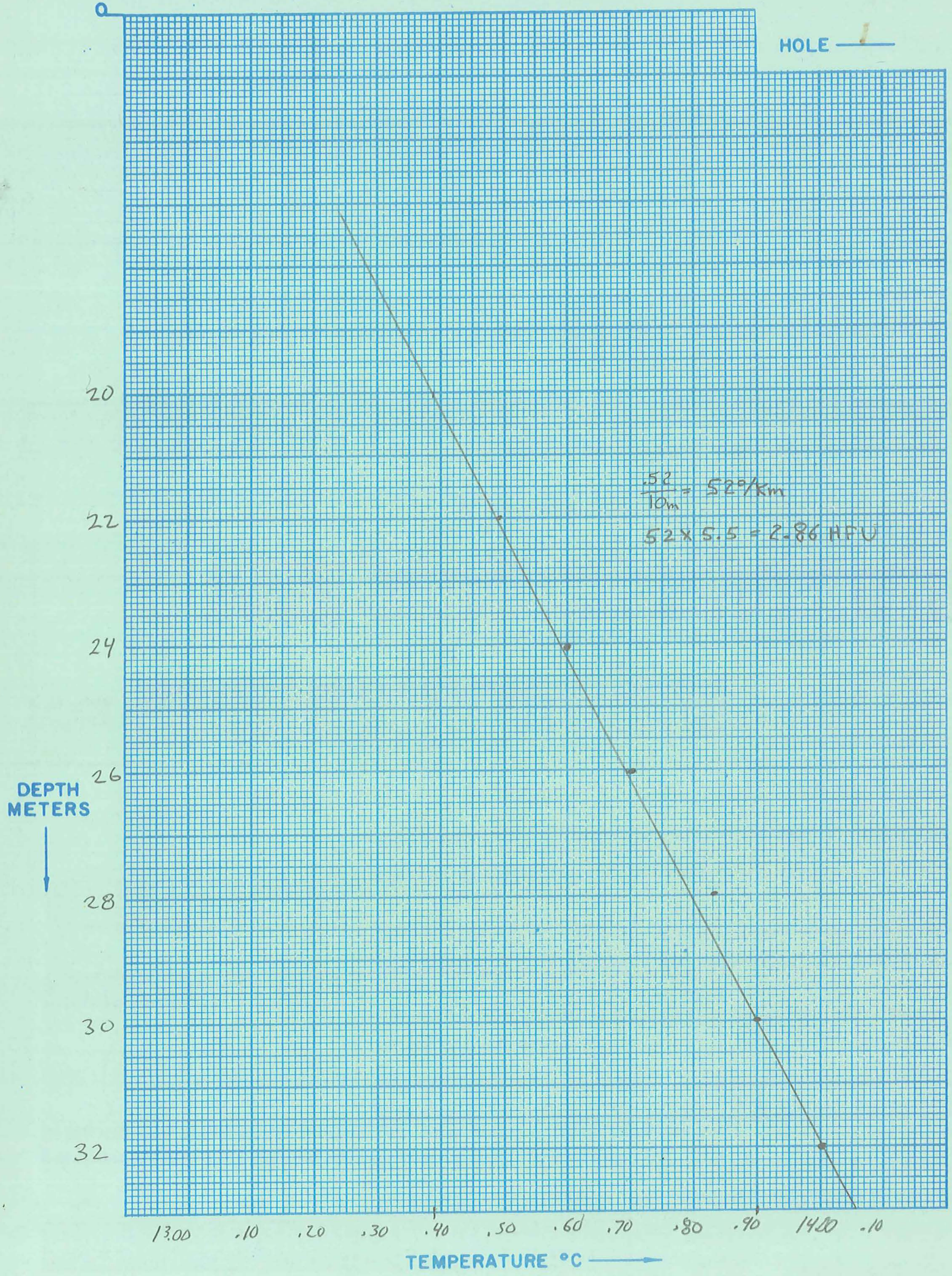
Segment 8 Start

Segment 9

Segment 10 Start

After final segment Start = .999

HOLE 1



$\frac{.52}{10m}$ = 52°/km

52 x 5.5 = 2.86 HFU

White Cloud ΔT

Date Logged: 7/1/80

ΔT Well No. 80 117

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
							Limestone,
							fractured, breccrated
							qtz. & calcite veins.
							Mineralized.
22		13.49					
			.11	55			
24		13.60					
			.10	50			
26		13.70			↑		
			.13	65			
28		13.83				H_2O	
			.07	35°			
30		13.90			5.5	H_2O	
			.10	50			
32		14.00			5.5	H_2O	

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

DEEP ΔT

ΔT Well No. 80 - 118

Property-Project ____________ Depth Logged 70m

Map Iron Mtn Scale 7.5 Date: Drilled ____________ Logged 6/30/80

State N MEX County SIERRA , ______ of NE of NE of NE of Sec 35 T 10S R 8W

Instrument DT 101 Operator Huntsman Elevation 6850 (ft/m)

Comments Windmill w/ Elec Pumper, Tank -

Card A

JUSTIFY

Proj No (1–5)	Well No (6–10)	Date Logged DA (11–12)	MO (13–15)	YR (16–18)	*19	*20
		30	06	80	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 (63–65)	YR (66–68)
	HUNTS	/			

(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	7.5	33.	22 .	107.	45 .

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
13.5	48.	6850.		F

Use decimals

Write M if if meters

Segment 1 = Depths

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

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → (51–60) End (61–70) K (71–75) ΔK (76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

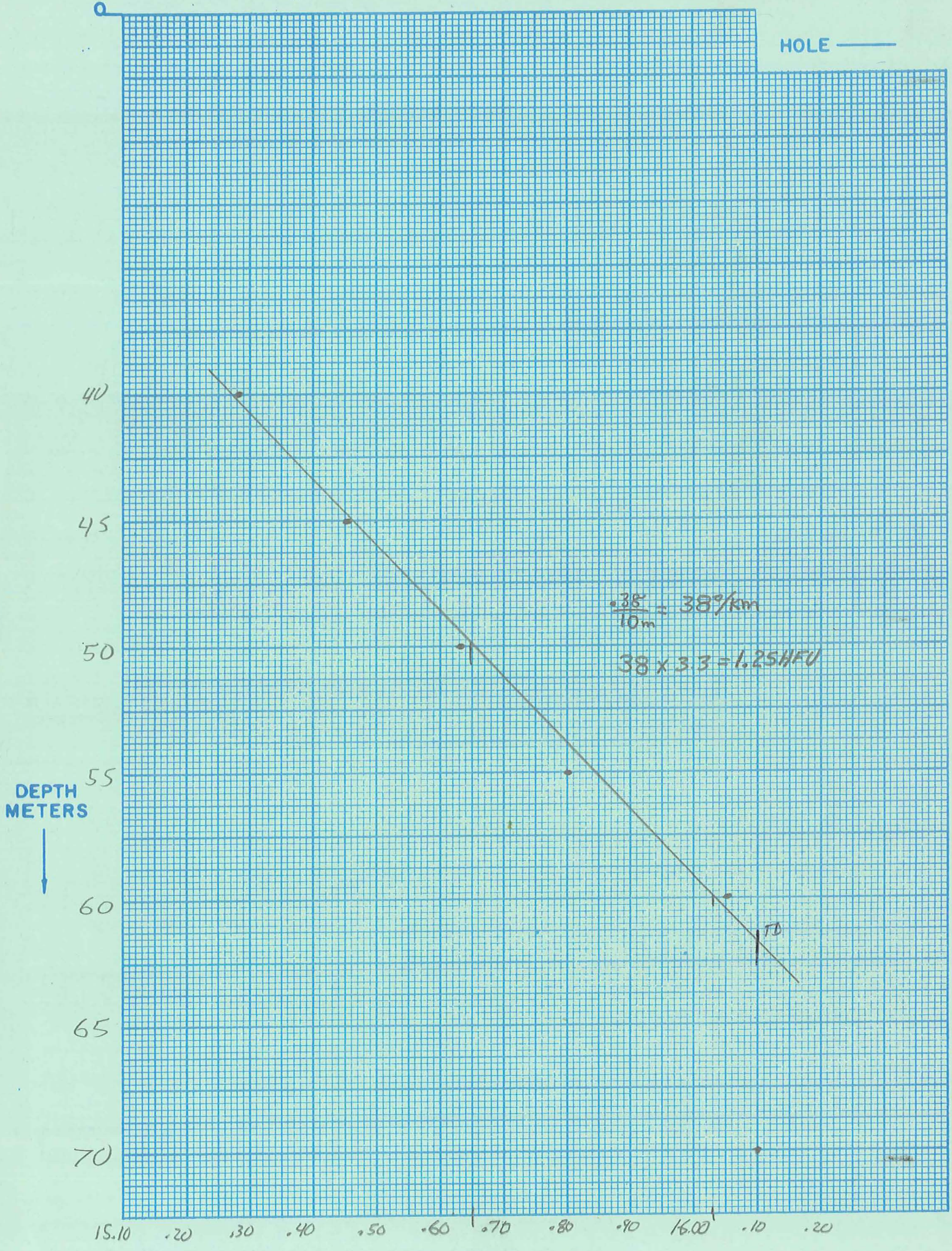
Segment 7

Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start = .999

0
HOLE ——
40
45
50
55
60
65
70
DEPTH METERS
·38°/10m = 38°/km
38 x 3.3 = 1.25HFU
TD
15.10
.20
.30
.40
.50
.60
.70
.80
.90
16.00
.10
.20
TEMPERATURE °C

DEEP ΔT

Date Logged: 6/30/80

ΔT Well No. 80 118

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
					3.3	↑	Mudflows w/Gravels SS-UF - Soft rock
40		15.28			3.3		
45		15.45	.17		3.3		
50		15.63	.18	36°/c	3.3		
55		15.80	.17	34°/km	3.3		
60		16.05	.25	50°/km	3.3		
65			TD		3.3		
70		16.10			3.3	Air	

K=Conductivity

page ____ of ____

Date Logged: ____________________

ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page _____ of _____

AMAX EXPLORATION, INC. PIGEON ΔT

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-119

Property-Project 1114 Depth Logged 76.0 m

Map BAY BUCK PEAKS Scale 1:24 000 Date: Drilled ______ Logged 7/1/80

State NM County SOCORRO, SE¼ of NW¼ of NW¼ of SE¼ of Sec 24 T 6S R 8W

Instrument DT 101 (WA) Operator WA Elevation 7115 ([✓ ft] / m)

Comments 8' BLADES, 6" CASING; ON BUT NOT PUMPING ON ARRIVAL (TULAROSA AMS)

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
1	1	1	4							0	1	▨	0	7	▨	8	0	C	M

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

Site Description	Operator	Editor	Drilled DA		MO		YR
21–50	51–55	56–60	61–62	63	64–65	66	67–68
	WA	/		▨		▨	

(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
21	22–23	24–25	26–30	31–35	36–40	41–45	46–50
▨	CM	▨	7.5	33.	45.0	107.	37.5

Use decimals

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

Northing	Easting	Elev		
51–60	61–70	71–75	76–79	80
11.15	4.10	7115.	▨	F

Use decimals

← Write M if if meters

Segment 1 = Depths Start (21–30) End (31–40) Conductivity K (41–45) ΔK (46–50)

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → (51–60) End (61–70) K (71–75) ΔK (76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

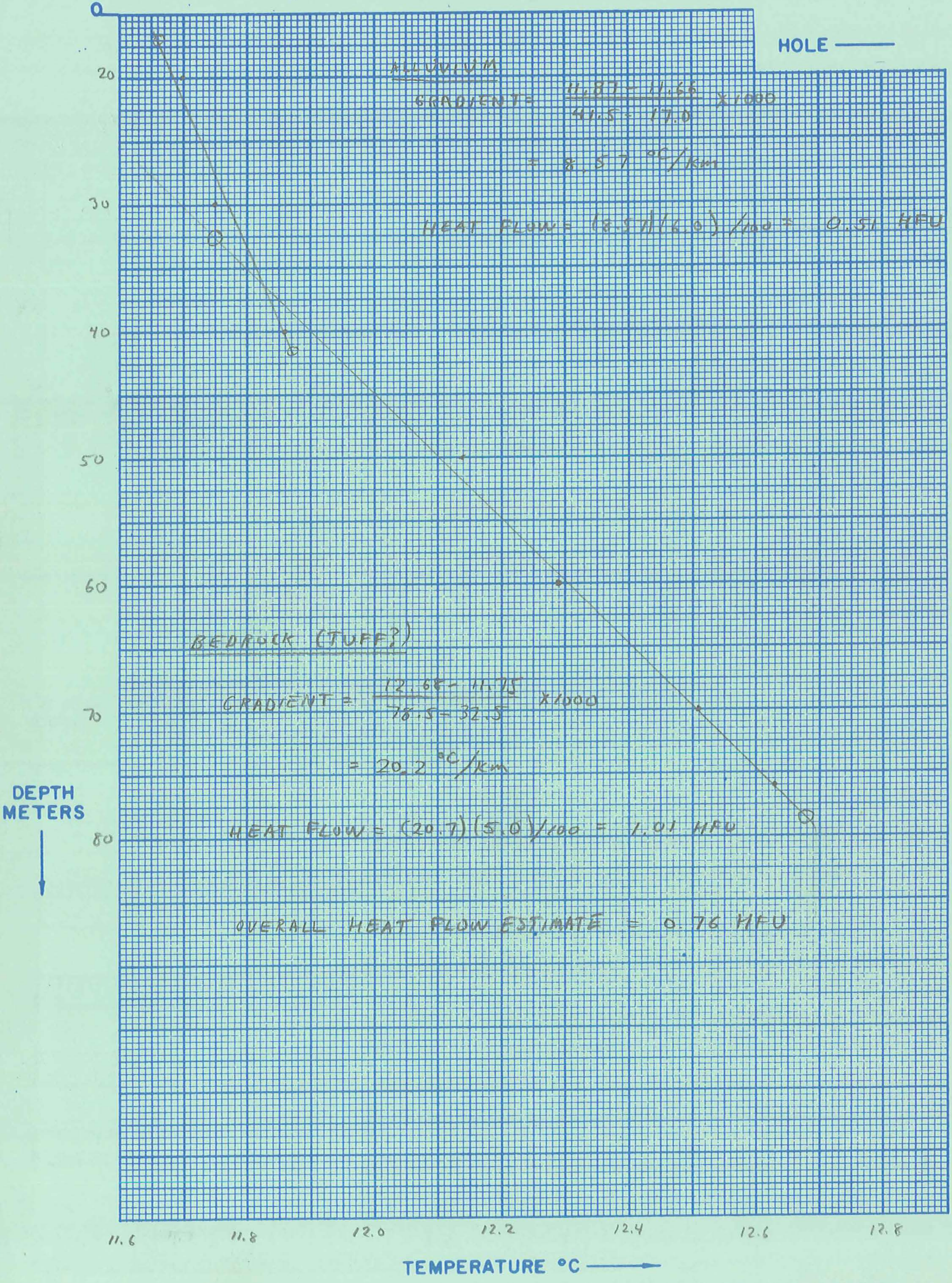
Segment 7

Segment 8 Start →

Segment 9 (21–50)

Segment 10 Start → (51–80)

After final segment Start = .999



ALLUVIUM

$$\text{GRADIENT} = \frac{11.87 - 11.66}{41.5 - 17.0} \times 1000$$

$$= 8.57 \text{ °C/km}$$

HEAT FLOW = (8.57)(6.0)/100 = 0.51 HFU

BEDROCK (TUFF?)

$$\text{GRADIENT} = \frac{12.68 - 11.75}{78.5 - 32.5} \times 1000$$

$$= 20.2 \text{ °C/km}$$

HEAT FLOW = (20.7)(5.0)/100 = 1.01 HFU

OVERALL HEAT FLOW ESTIMATE = 0.76 HFU

PIGEON ΔT

Date Logged: 7/1/80

ΔT Well No. 80-119

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O ~~Att~~	Lithology, etc.
20		11.70	0.05	5	6.0		MEDIUM BROWN, FINE GRAINED
30		11.75	0.11	11			SANDY Qal WITH
40		11.86	0.28	28			PEBBLES & COBBLES (UP
50		12.14	0.15	15			TO 60 cm) OF RHYOLITE
60		12.29	0.22	22			PORPHYRY, ANDESITE
70		12.51	0.12				PORPHYRY (?), AND
76.0		12.63					PUMICEOUS TUFF.
							LARGE COBBLES ARE TUFF, WHICH
							PREDOMINATES.
							H_2O @ 9.0 m

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ______________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page _____ of _____

HILL DT

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80 - 120

Property-Project 1114 Depth Logged 33.0

Map MONTOYA BUTTE Scale 1: 24000 Date: Drilled ____ Logged 7/2/80

State NM County Socorro, SE ¼ of NW ¼ of NE ¼ of NE ¼ of Sec 31 T 8S R 7W

Instrument DT 101 (8H) Operator JL + AS Elevation 6358 (ft ~~m~~)

Comments BLADES GONE, JACK PUMP, 6" CASING; 50 m DEEP (AS PER RANCHER) (TULAROSA AMS)

Card A

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
	1	1	1	4							0	2	▨	0	7	▨	8	0	C	M

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

Site Description (columns 21–50); Operator (51–55); Editor (56–60); Drilled: DA (61–62), MO (64–65), YR (67–68)

Site Description 21–50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
				J	L	/							▨			▨		

(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 **				
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
▨	C	M	▨	▨			7	.	5			3	3	.		3	0	.	0		1	0	7	.		3	7	.	5

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
					3	5	.	5	4						1	2	.	0	9	6	3	5	8	.	▨	▨	▨	▨	F

Use decimals

← Write M if if meters

Segment 1 = Depths: Start (21–30), End (31–40); Conductivity: K (41–45), ΔK (46–50)

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → (51–60), End (61–70), K (71–75), ΔK (76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

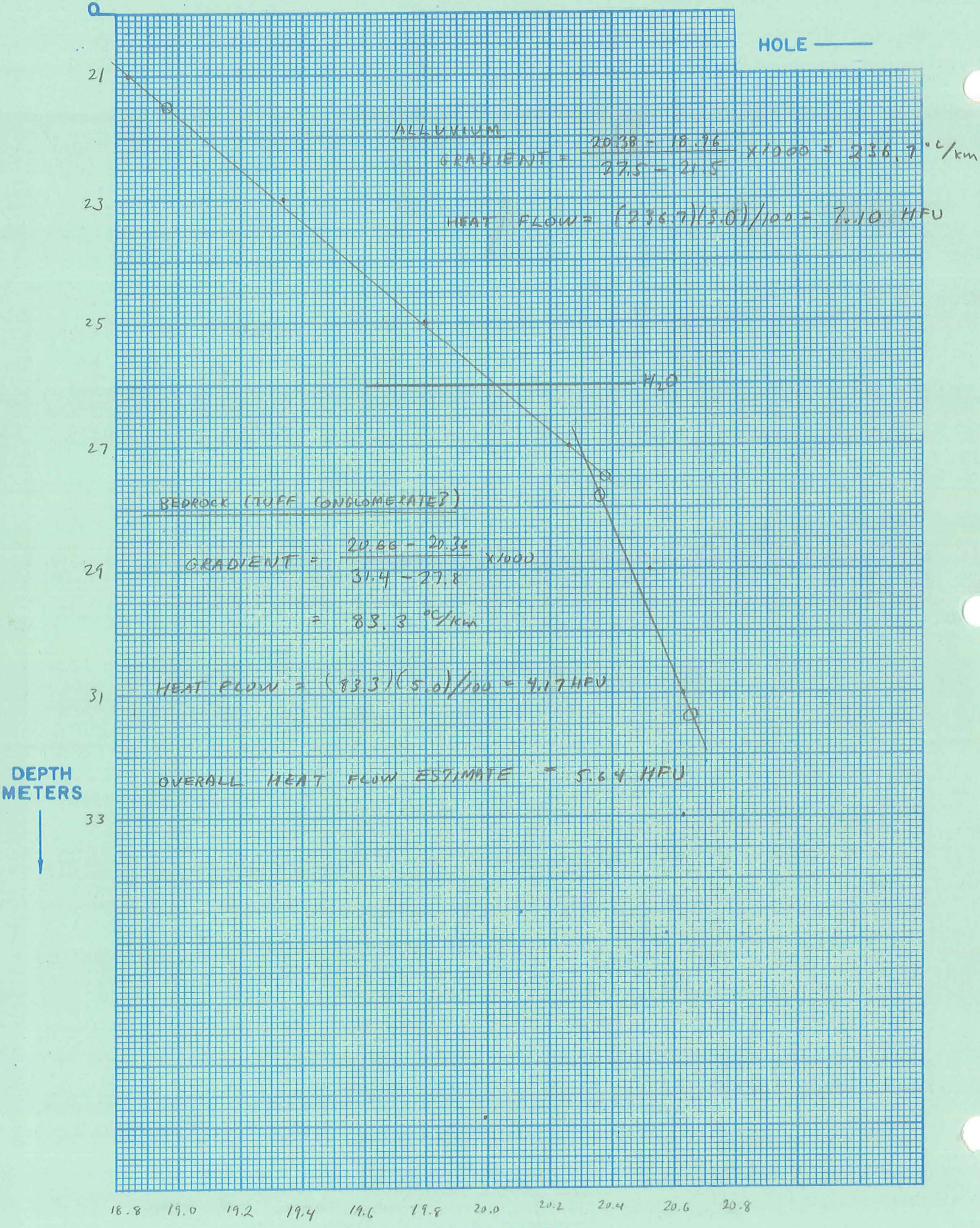
Segment 7

Segment 8 Start →

Segment 9 (21–50)

Segment 10 Start → (51–80)

After final segment Start = .999



ALLUVIUM

$$\text{GRADIENT} = \frac{20.38 - 18.96}{27.5 - 21.5} \times 1000 = 236.7\ ^{\circ}\text{C/km}$$

$$\text{HEAT FLOW} = (236.7)(3.0)/100 = 7.10\ \text{HFU}$$

BEDROCK (TUFF CONGLOMERATE?)

$$\text{GRADIENT} = \frac{20.66 - 20.36}{31.4 - 27.8} \times 1000$$

$$= 83.3\ ^{\circ}\text{C/km}$$

$$\text{HEAT FLOW} = (83.3)(5.0)/100 = 4.17\ \text{HFU}$$

OVERALL HEAT FLOW ESTIMATE = 5.64 HFU

HILL ΔT

Date Logged: 7/2/80

ΔT Well No. 80 - 120

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	~~H_2O~~ Air	Lithology, etc.
21		18.84			3.0		COARSE Qal WITH PEBBLES
			0.50	250			
23		19.34			3.0		& COBBLES OF LIGHT GRAY BANDED
			0.46	230			
25		19.80			3.0		RHYOLITE PORPHYRY & PURPLE
			0.46	230			
27		20.26			3.0	H_2O	VESICULAR ANDESITE PORPHYRY.
			0.26	130			
29		20.52			5.0		TUFF CONGLOMERATE
			0.11	55			
31		20.63			5.0		VISIBLE IN BOTTOM OF
			0	0			
33		20.63			5.0		STREAM BED DOWNSTREAM

H_2O @ 26.0 m

K=Conductivity

page ______ of ______

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC. PINE ΔT

TEMPERATURE/DEPTH LOG

ΔT Well No. 80 - 121

Property-Project 1114 Depth Logged

Map MONTOYA BUTTE Scale 1:24000 Date: Drilled Logged 7/2/80

State County , NW ¼ of NE ¼ of SW ¼ of NE ¼ of Sec 16 T 8S R 7W

Instrument DT 101 (BH) Operator AS + JL Elevation 7035 [✓ ft] (m)

Comments JACK PUMP; 820 ft DEEP (AS PER RANCHER); 10" CASING (TULAROSA AMS)

Card A

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
1	1	1	4							0	2		0	7		8	0	C	M

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

Site Description (columns 21–50) — (Approx. location, water well?, oil test?, etc.)

Operator					Editor					Drilled DA			MO			YR	
51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
		J	L	/													

Card B

Map Location **

Scale Unit IN CM					Map Size (7.5, 15., 60.)					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
	C	M					7	.	5			3	3	.		3	0	.	0		1	0	7	.		3	7	.	5

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	4	.	9	3						2	4	.	3	8	7	0	3	5	.					F

Use decimals

Write M if if meters

Segment 1 = Depths: Start (21–30), End (31–40); Conductivity: K (41–45), ΔK (46–50)

Best cond. (−K) Downward extrapolations (−ΔK): End, K, ΔK

Segment 2 Start → (51–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

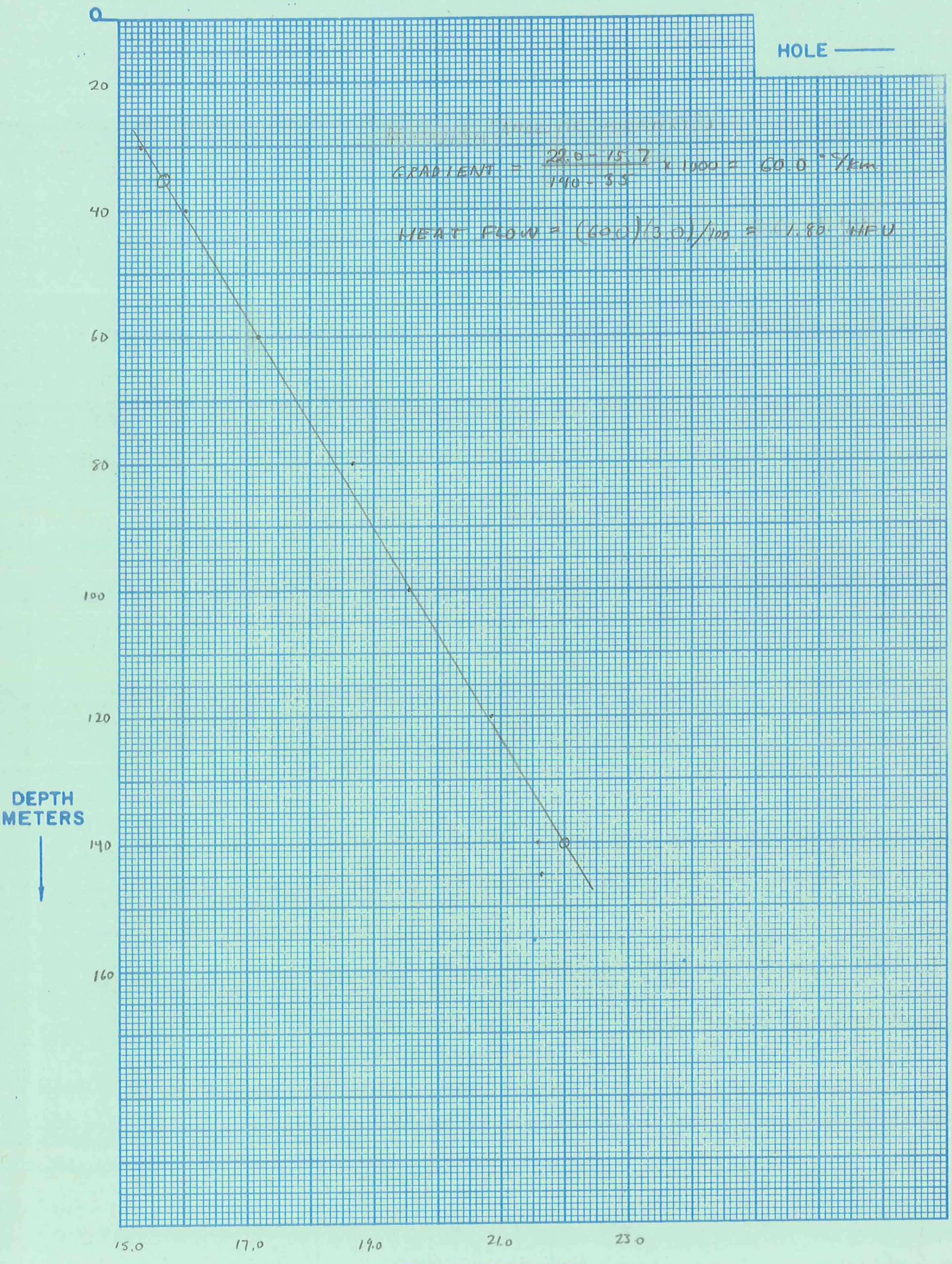
Segment 8 Start →

Segment 9 (21–50)

Segment 10 Start → (51–80)

After final segment Start = .999

HOLE ——



$$\text{GRADIENT} = \frac{22.0 - 15.7}{140 - 35} \times 1000 = 60.0\ °/\text{km}$$

$$\text{HEAT FLOW} = (60.0)(3.0)/100 = 1.80\ \text{HFU}$$

PINE ΔT

Date Logged: 7/2/80

ΔT Well No. 80-121

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H2O [✓ Air]	Lithology, etc.
30		15.34			3.0		MEDIUM BROWN, FINE-GRAINED
			0.71	35.5			
40		16.05			3.0		Qal WITH PEBBLES &
			1.15	57.5			
60		17.20			3.0		COBBLES (UP TO 15 cm)
			1.47	73.5			
80		18.67			3.0		OF VOLCANIC PORPHYRY OF
			0.89	44.5			
100		19.56			3.0		INTERMEDIATE COMPOSITION
			1.30	65.0			
120		20.86			3.0		PHENOCRYSTS (3 mm) OF
			0.74	37.0			
140		21.58			3.0		QTZ & PLAGIOCLASE FELD-
			0.04	8.0			
145.0		21.62			3.0		SPAR).

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ______________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page _____ of _____

McCRACKEN ΔT

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-122

Property-Project 1114 Depth Logged 70.0 m

Map DUSTY Scale 1:24,000 Date: Drilled ____ Logged 7/2/80

State NM County SOCORRO, SW 1/4 of SW 1/4 of NW 1/4 of SW 1/4 of Sec 21 T 7S R 8W

Instrument ΔT 101 (BH) Operator AS + JL Elevation 6630 [✓ ft] ~~m~~

Comments JACK PUMP WITH ELECTRIC MOTOR, 6" CASING (TULAROSA AMS)

Card A

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
1	1	1	4							0	2	▨	0	7	▨	8	0	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
																																	J	L	/							▨			▨		

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

Card B

Map Location * *

Scale Unit IN CM					Map Size (7.5, 15., 60.)					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
▨	C	M	▨	▨			7	.	5			3	3	.		3	7	.	5		1	0	7	.		4	5	.	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
					2	7	.	6	8						2	8	.	3	7	6	6	3	0	.	▨	▨	▨	▨	F

Use decimals

← Write M if 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 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

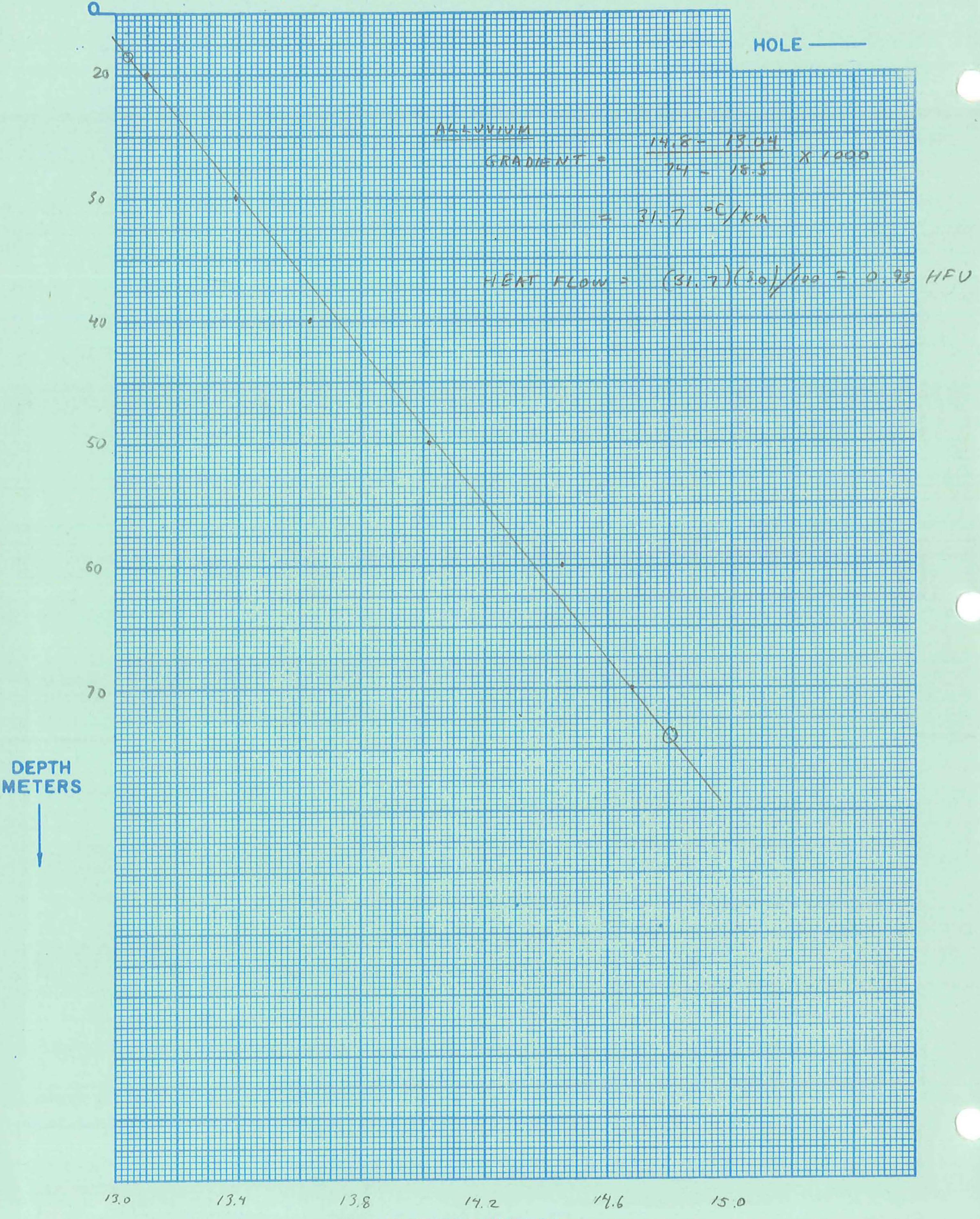
Segment 9

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



ALLUVIUM

$$\text{GRADIENT} = \frac{14.8 - 13.04}{74 - 18.5} \times 1000$$

$$= 31.7\ °C/km$$

$$\text{HEAT FLOW} = (31.7)(3.0)/100 = 0.95\ \text{HFU}$$

McCRACKEN ΔT

Date Logged: 7/2/80

ΔT Well No. 80-122

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		13.10	0.29	29	3.0		LIGHT BROWN SILTY
30		13.39	0.24	24	3.0		Qal WITH PEBBLES &
40		13.63	0.39	39	3.0		COBBLES OF VOLCANIC
50		14.02	0.43	43	3.0		PORPHYRY OF INTERMEDIATE
60		14.45	0.23	23	3.0		COMPOSITION, BASALT,
70		14.68			3.0		AND PUMICEOUS TUFF.
							THE FORMER PREDOMINATES

K=Conductivity

page ____ of ____

Date Logged: ____________________   ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC. LEWIS oT

TEMPERATURE/DEPTH LOG

ΔT Well No. 80 - 123

Property-Project 11 14 Depth Logged 34.1 m

Map CUCHILLO Scale 1:24,000 Date: Drilled ____ Logged 7/3/80

State NM County SIERRA , NE ¼ of SE ¼ of NE ¼ of SW ¼ of Sec 28 T 12S R 5W

Instrument DT 101 JL Operator JL Elevation 4775 [✓ ft] m

Comments WELL IS WEST OF POND BY WINDMILL; 14" CASING, GASOLINE PUMP, (TULAROSA AMS)
EASTERNMOST OF 2 WELLS WITHIN 2m OF EACH OTHER

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	1	1	4							0	3	▨	0	7	▨	8	0	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
																																	J	L	/							▨			▨		

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

Card B

Map Location **

Scale Unit IN CM					Map Size (7.5, 15., 60.)					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
▨	C	M	▨	▨			7	.	5			3	3	.	0	7	.	5			1	0	7	.		2	2	.	5

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	5	.	8	0							6	.	0	6	4	7	7	5	.	▨	▨	▨	▨	F

Use decimals

Write M if 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 →

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 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

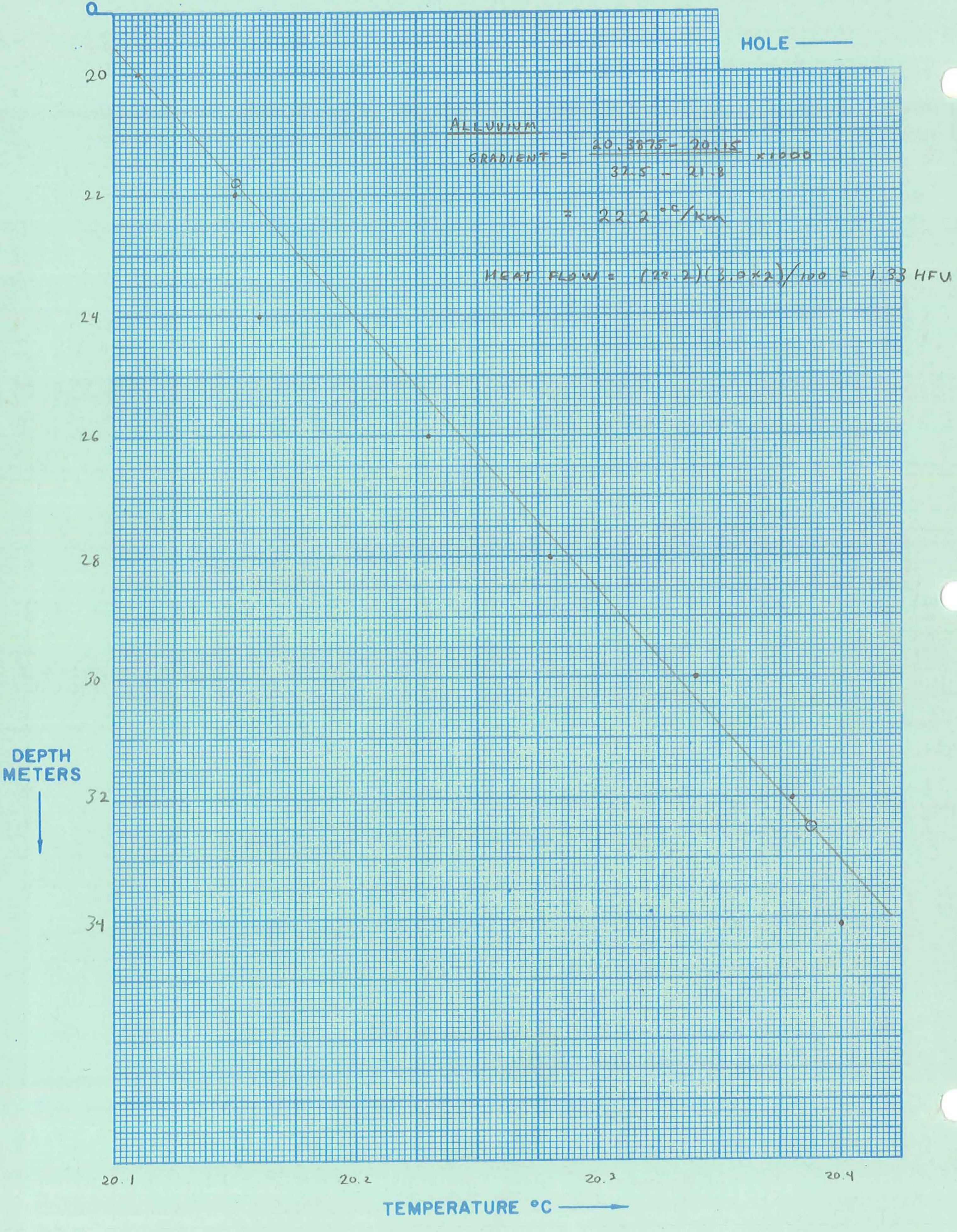
Segment 9

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



ALLUVIUM

$$\text{GRADIENT} = \frac{20.3875 - 20.15}{32.5 - 21.8} \times 1000$$

$$= 22.2\ °C/km$$

$$\text{HEAT FLOW} = (22.2)(3.0 \times 2)/100 = 1.33\ \text{HFU}$$

FIELD COPY: TEMPERATURES TAKEN EVERY MINUTE
UNTIL EQUILIBRIUM ACHIEVED. READINGS IN WATER.

LEWIS oT

Date Logged: 7/3/80

ΔT Well No. 80-123

Depth (meters)	# OF MIN. ~~Instr. Reading~~	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O ~~Air~~	Lithology, etc.
34.1	1 min	20.40°	0.02		6.0		H_2O @ 3.7 m
32.0	1 min	20.38	0.04	20	6.0		MED. BRN. SILTY gal
30.0	1 min	20.34	0.06	30	6.0		ALL THE WAY TO BOTTOM
28.0	1 min	20.28	0.05	25	6.0		OCCASIONAL COBBLES (UP TO
26.0	1 min	20.23	0.07	15	6.0		10 cm)
24.0	1 min	20.20			6.0		
	2 min	20.19					
	3 min	20.16	0.01				
22.0	1 min	20.15	0.04	20	6.0		
20.	1 min	20.11			6.0		

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ____ of ____

TEMPERATURES RECORDED ARE AT FULL EQUILIBRIUM

LEWIS ΔT

Date Logged: 7/3/80

ΔT Well No. 80-123

Depth (meters)	# OF MIN ~~Instr. Reading~~	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O ~~Air~~	Lithology, etc.
20	1	20.11			6.0		MEDIUM BROWN SILTY Qal
			0.04	20			
22	1	20.15			6.0		THROUGHOUT DEPTH OF HOLE.
			0.01	5			
24	3	20.16			6.0		OCCASIONAL COBBLES (UP
			0.07	35			
26	1	20.23			6.0		TO 10 CM). H_2O @ 3.7 m
			0.05	25			
28	1	20.28			6.0		
			0.06	30			
30	1	20.34			6.0		
			0.04	20			
32	1	20.38			6.0		
			0.02	9.5			
34.1	1	20.40			6.0	↓	

K=Conductivity

page —— of ——

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

RENO ΔT

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80 - 124

Property-Project 1114 Depth Logged 57.7

Map THUMB TANK PEAK Scale 1: 24,000 Date: Drilled ______ Logged 7/3/80

State NM County SIERRA? , NE¼ of SW¼ of NW¼ of NE¼ of Sec 27 T 12S R 7W

Instrument DT 101 (JL) Operator JL Elevation 5830 ([✓ ft] ~~m~~)

Comments 5" PIPE WITHIN 6" CASING, COVERED WITH ROCK; WINDMILL TOWER ON RIDGE IN BEDROCK; BLADES GONE (TULAROSA AMS)

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	1	1	4							0	3	▨	0	7	▨	8	0	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
																																	J	L	/							▨			▨		

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

Card B

Map Location **

Scale Unit IN CM					Map Size (7.5, 15., 60.)					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
▨	C	M	▨	▨			7	.	5			3	3	.		0	7	.	5		1	0	7	.		3	7	.	5

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	4	.	3	2						3	0	.	8	0	5	8	3	0	.	▨	▨	▨	▨	F

Use decimals

Write M if if meters

Segment 1 = Depths

Conductivity

Best cond. (-K)

Downward extrapolations (-ΔK)

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

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 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

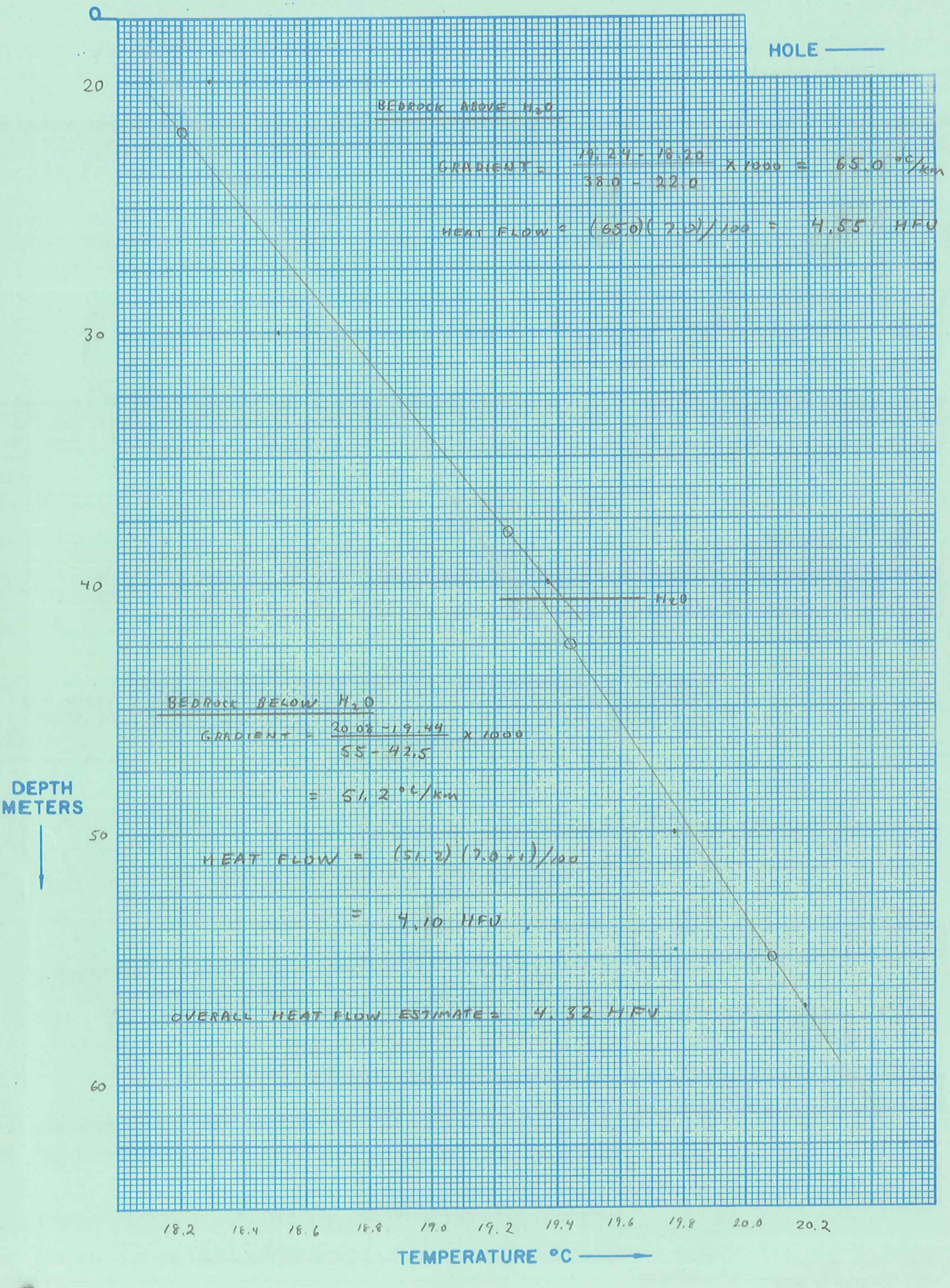
Segment 9

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



BEDROCK ABOVE H_2O

GRADIENT = $\frac{19.24 - 18.20}{38.0 - 22.0} \times 1000 = 65.0$ °C/km

HEAT FLOW = $(65.0)(7.0)/100 = 4.55$ HFU

BEDROCK BELOW H_2O

GRADIENT = $\frac{20.08 - 19.44}{55 - 42.5} \times 1000$

$= 51.2$ °C/km

HEAT FLOW = $(51.2)(7.0+1)/100$

$= 4.10$ HFU

OVERALL HEAT FLOW ESTIMATE = 4.32 HFU

FIELD COPY: TEMPERATURES TAKEN EVERY MINUTE
UNTIL EQUILIBRIUM ACHIEVED

RENO ΔT

Date Logged: 7/3/80

ΔT Well No. 80 - 124

Depth (meters)	# of MIN ~~Instr. Reading~~	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
57.7	1 min	20.19	0.42		7.0		H_2O @ 40.7 m
50.0	1 min	19.77					LIGHT PURPLE VOLCANIC ROCK
40,0	1	19.39					OF INTERMEDIATE COMPOSITION
	2	19.37	0.40	40			WITH FLECKS OF OXIDIZED
30	1	18.82					IRON & MN STAINING ON
	2	18.68					FRACTURES
	3	18.58					
	4	18.55					
	5	18.52					
	6	18.51					
20	1	18.38					
	2	18.36					
	3	18.32					
	4	18.31					
	5	18.29					

K=Conductivity

page ______ of ______

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page _____ of _____

TEMPERATURES RECORDED ARE AT FULL EQUILIBAIUM

RENO ΔT

Date Logged: 7/3/80

ΔT Well No. 80-124

OF MIN.

Depth (meters)	~~Instr. Reading~~	Temp. °C	ΔT	Grad. °C/km	K (Est.)	~~H_2O~~ [✓ Air]	Lithology, etc.
20	5	18.29			7.0		LIGHT PURPLE VOLCANIC ROCK
			0.22	22			
30	6	18.51			7.0		OF INTERMEDIATE COMPOSITION
			0.86	86			
40	2	19.37			7.0		WITH FLECKS OF OXIDIZED
			0.40	40			
50	1	19.77			8.0	H_2O	IRON & Mn STAINING ON
			0.42	54.5			
57.7	1	20.19			8.0		FRACTURES.
							H_2O @ 40.7 m

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page _____ of _____

HOPKINS ΔT

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-125

Property-Project 1114
Depth Logged 97.8 m

Map WILLIAMSBURG NW Scale
Date: Drilled Logged 7/3/80

State NM County SIERRA, NW¼ of NE¼ of SW¼ of SE¼ of Sec 13 T 13S R 6W

Instrument DT 101 (JL) Operator JL
Elevation 5021 ([✓ ft] ~~m~~)

Comments PUMP PIPE PULLED, 2" PIPE IN 6" CASING, 8' BLADES ON WINDMILL (TULAROSA AMS) IN MIDDLE OF SECTION WHICH IS LEASED FOR GEOTHERMAL

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	1	1	4							0	3		0	7		8	0	C	M

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

Site Description — Operator — Editor — Drilled DA MO YR

21–50 Site Description	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
				J	L	/												

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

Card B

Map Location **

Scale Unit IN CM — Map Size (7.5, 15., 60.) — 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
	C	M					7	.	5			3	3	.			7	.	5		1	0	7	.		3	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
					2	2	.	8	5						3	5	.	7	6	5	0	2	1	.					F

Use decimals

← Write M if 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 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

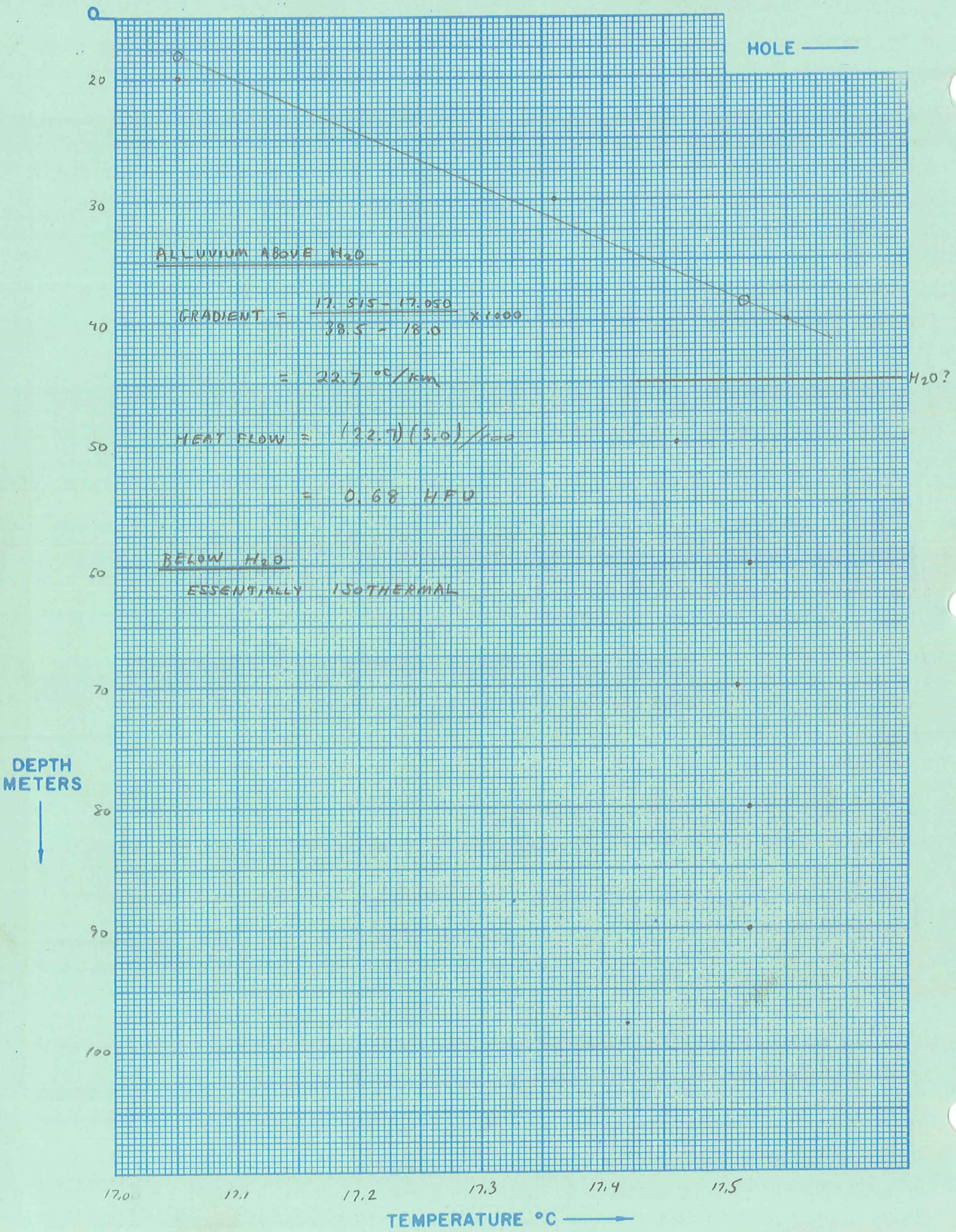
Segment 9

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



ALLUVIUM ABOVE H_2O

$$\text{GRADIENT} = \frac{17.515 - 17.050}{38.5 - 18.0} \times 1000$$

$$= 22.7\ °C/km$$

$$\text{HEAT FLOW} = (22.7)(3.0)/100$$

$$= 0.68\ \text{HFU}$$

BELOW H_2O

ESSENTIALLY ISOTHERMAL

FIELD COPY : TEMPERATURES TAKEN EVERY MINUTE
UNTIL EQUILIBRIUM ACHIEVED.

HOPKINS ΔT

Date Logged: 7/3/80

ΔT Well No. 80-125

Depth (meters)	MINUTES ~~Instr. Reading~~	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
97.8	1 min	17.42			3.0		MEDIUM BROWN MEDIUM
90.0	1	17.50					GRAINED SANDY Qal WITH
	2	17.52					PEBBLES & COBBLES (UP TO
80.0	1	17.53					20 cm) OF ANDESITE,
	2	17.52					ANDESITE PORPHYRY, &
70.0	1	17.51					RHYOLITE PORPHYRY
	2	17.51					
60	1	17.52					CABLE WAS MOIST AT
	2	17.52					BOTTOM, BUT NO CLEAR
50	1	17.48					WATER LEVEL WAS
	2	17.46					DISTINGUISHED
	3	17.46					
40	1	17.51					
	2	17.52					
	3	17.55					
	4	17.55					
30	1	17.47					
	2	17.46					
	3	17.43					
	4	17.42					
	5	17.40					
	6	17.39					
	7	17.38					
	8	17.37					
	9	17.36					
	10	17.36					
20	1	17.26					

K=Conductivity (over)

page ____ of ____

p. 2

Date Logged: 7/3/80

ΔT Well No. ______

Depth (meters)	MINUTES ~~Instr~~. ~~Reading~~	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20	2	17.21					
	3	17.14					
	4	17.11					
	5	17.08					
	6	17.05					
	7	17.05					

K=Conductivity

page ______ of ______

TEMPERATURES RECORDED ARE AT FULL EQUILIBRIUM

HOPKINS ΔT

Date Logged: 7/3/80

ΔT Well No. 80-125

Depth (meters)	# OF MIN. ~~Instr. Reading~~	Temp. °C	ΔT	Grad. °C/km	K (Est.)	~~H_2O~~ [✓ Air]	Lithology, etc.
20	6	17.05	0.31	31	3.0	↓	MEDIUM-BROWN MEDIUM-
30	9	17.36	0.19	19			GRAINED SANDY Qal WITH
40	3	17.55	-0.09	-9		↓	PEBBLES & COBBLES (UP
50	2	17.46	0.06	6		H_2O?	TO 20 CM) OF ANDESITE,
60	1	17.52	-0.01	-1			ANDESITE PORPHYRY, &
70	1	17.51	0.01	1			RHYOLITE PORPHYRY.
80	2	17.52	0	0			NO CLEAR H_2O LEVEL
90	2	17.52	-0.10	-10			DISTINGUISHED, BUT
97.8	1	17.42				↓	BOTTOM OF CABLE WAS
							MOIST. H_2O LEVEL HYPOTHESIZED
							ON BASIS OF EQUILIBRATING
							TIMES AND GRADIENTS

K=Conductivity

page ____ of ____

Date Logged: ____________________

ΔT Well No. ______________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Rouse Camp ΔT

ΔT Well No. 80-126

Property-Project 1114 Depth Logged 65m

Map Chise Quad Scale ____ Date: Drilled ____ Logged 6/30/80

State N.M County Sierra , SE ¼ of NE ¼ of NW ¼ of NW ¼ of Sec 21 T 11S R 7W

Instrument DT-101 121 (repaired) Operator WA Elevation 6262 [✓ ft] m

Comments Windmill, 8" casing, 10' blades. Pumping before I arrived.

Card A

JUSTIFY

Proj No (1–4)	Well No (5–10)	Date Logged DA (11–12)	MO (14–15)	YR (17–18)	* (19–20)
1114		30	06	80	CM

*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)
	WA				

(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	7.5	33.	22.7	107.	34.0

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
44.15	21.30	6262.		F

Use decimals

Write M if if meters

Segment 1 = Depths

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

Best cond. (-K)

Downward extrapolations (- Δ K)

Segment 2 Start →

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

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

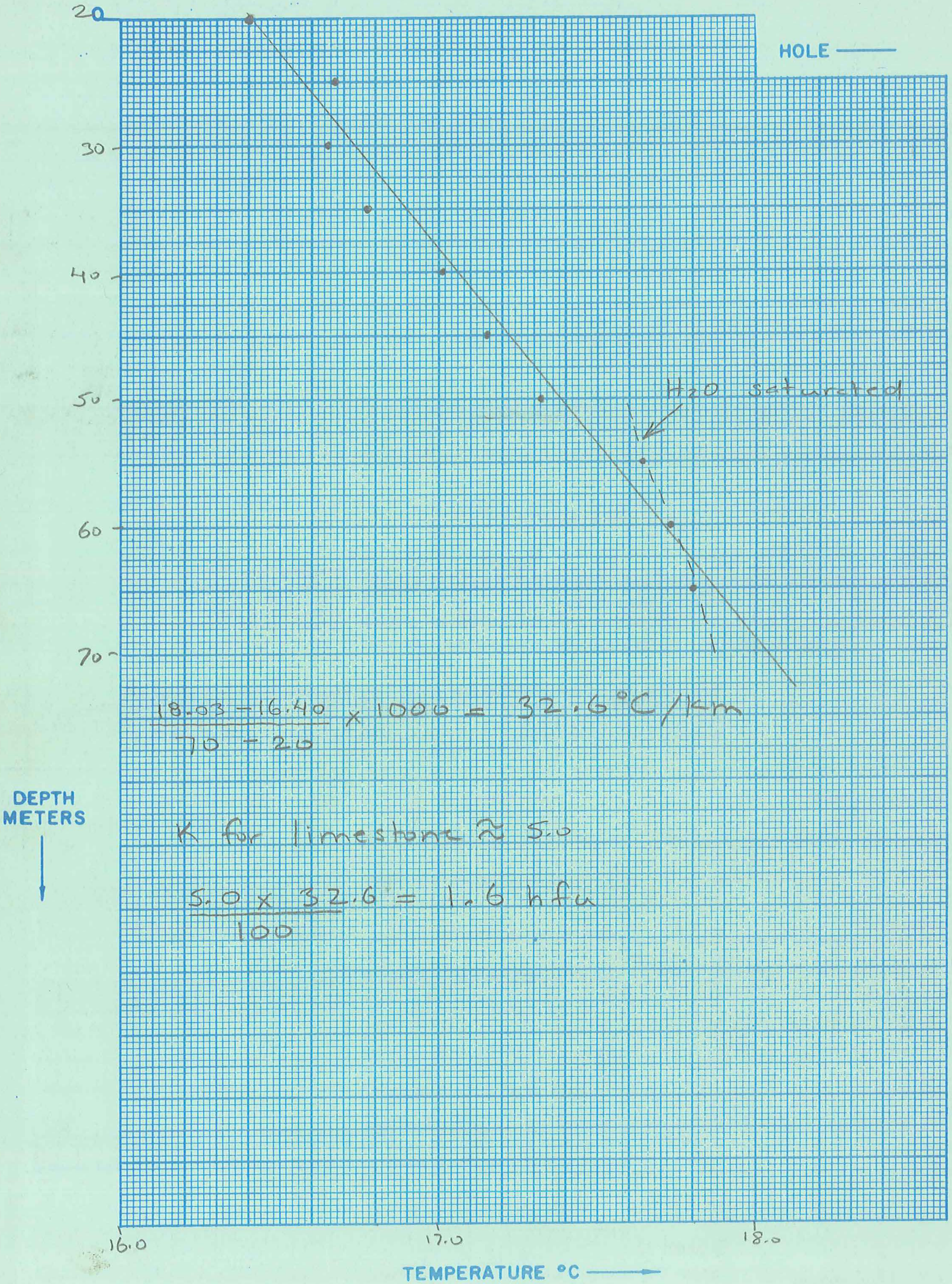
Segment 7

Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start = .999



$$\frac{18.03 - 16.40}{70 - 20} \times 1000 = 32.6 \text{ °C/km}$$

K for limestone ≈ 5.0

$$\frac{5.0 \times 32.6}{100} = 1.6 \text{ hfu}$$

Rouse Camp ΔT

Date Logged: 6/30/80

ΔT Well No. 80-126

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		16.40					
			0.27	54			Thin cover of
25		16.67					alluvium underlain
			-0.02	-4			
30		16.65					by a thin volcanic
			0.12	24			
35		16.77				air	breccia unit which
			0.24	48			
40		17.01					is in turn under-
			0.14	28			
45		17.15					lain by a thicker
			0.17	34			
50		17.32					limestone unit.
			0.32	64			
55		17.64				H_2O	
			0.09	18			
60		17.73					
			0.07	14			
65		17.80					H_2O at 47m

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

South Well ΔT

ΔT Well No. 80-127

Property-Project 1114 Depth Logged 94m

Map Chise Scale 7.5 1/24000 Date: Drilled ______ Logged 6/30/80

State N.M County Sierra , NW¼ of NW¼ of NE¼ of NE¼ of Sec 11 T 12S R 7W

Instrument DT-101 121 (repaired) Operator WA Elevation 5680 [✓ ft] m

Comments windmill, disconnected 10" casing

JUSTIFY

Card A

Date Logged

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

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

Site Description 21–50	Operator 51	52	53	54	55	Editor 56	57	58	59	60	Drilled DA 61	62	63	MO 64	65	66	YR 67	68
				W	A	/							▨			▨		

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

Card B

Map Location **

Scale Unit IN CM 21	22	23	24	25	Map Size (7.5, 15., 60.) 26	27	28	29	30	N Lat Degree 31	32	33	34	35	N Lat Min 36	37	38	39	40	W Long Degree 41	42	43	44	45	W Long Min 46	47	48	49	50
▨	C	M	▨	▨			7	.	5			3	3	.		1	7	.	4		1	0	7	.		3	1	.	6

Use decimals

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

Northing 51	52	53	54	55	56	57	58	59	60	Easting 61	62	63	64	65	66	67	68	69	70	Elev 71	72	73	74	75	76	77	78	79	80
					1	8	.	0	5						3	8	.	3	0	5	6	8	0	.	▨	▨	▨	▨	F

Use decimals

Write M if if meters

Segment 1 = Depths Start 21–30, End 31–40; Conductivity K 41–45, ΔK 46–50

Best cond. (−K)

Downward extrapolations (−ΔK)

Segment 2 Start → 51–60, End 61–70; K 71–75, ΔK 76–80

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

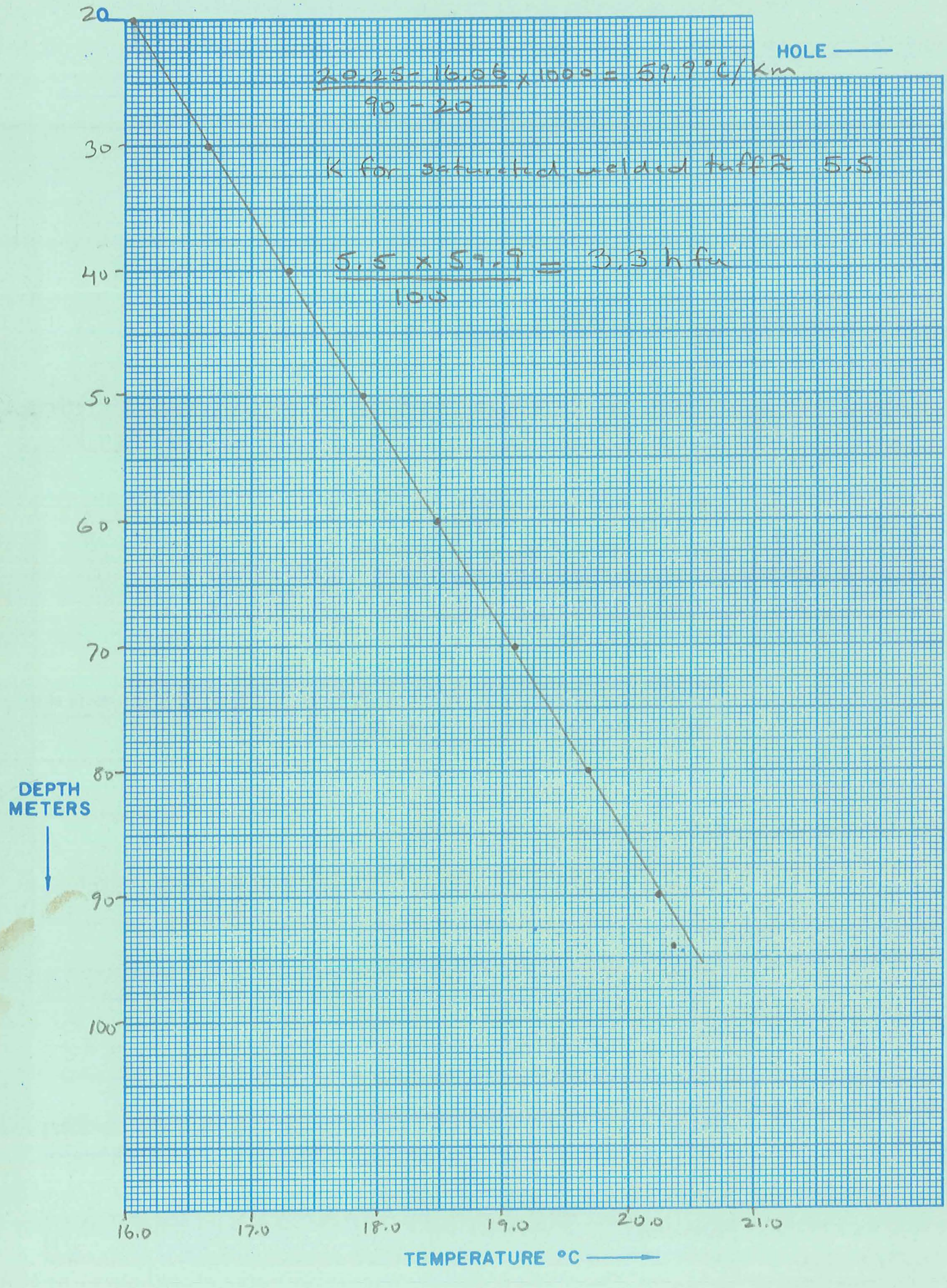
Segment 7

Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start =.999



$$\frac{20.25 - 16.06}{90 - 20} \times 1000 = 59.9\,°C/km$$

K for saturated welded tuff ≈ 5.5

$$\frac{5.5 \times 59.9}{100} = 3.3 \text{ hfu}$$

South Well ΔT

Date Logged: 6/30/80

ΔT Well No. 80-127

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O ~~Air~~	Lithology, etc.
20		16.06	0.60	60			Thin cover of
30		16.66	0.64	64			alluvium under-
40		17.30	0.58	58			lain by rhyolitic
50		17.88	0.61	61		H_2O	crystal tuffs.
60		18.49	0.62	62			Exposed nearby
70		19.11	0.56	56			are porous ash
80		19.67	0.56	56			deposits (unwelded)
90		20.23	0.13				
94		20.36					

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Priest Tank

ΔT Well No. 80-128

Property-Project 1114 Depth Logged 130 m

Map Priest Tank Scale 7.5' 1/24000 Date: Drilled ______ Logged 6/30/80

State N.M. County Sierra , SW 1/4 of SE 1/4 of SE 1/4 of SE 1/4 of Sec 25 T 11S R6W

Instrument DT-101 121 repaired Operator WA Elevation 5280 (ft/m)

Comments Windmill, 10" casing, 8' blades ; pumping at the time.

Card A

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
1	1	1	4							3	0	▨	0	6	▨	8	0	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
																																	W	A	/							▨			▨		

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

Card B

Map Location **

Scale Unit IN CM					Map Size (7.5, 15., 60.)					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
▨	c	m	▨	▨				.				3	3	.		1	9	.	9		1	0	7	.		2	4	.	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
					3	8	.	2	0						3	7	.	4		5	2	8	0	.	▨	▨	▨	▨	F

Use decimals

Write M if 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 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

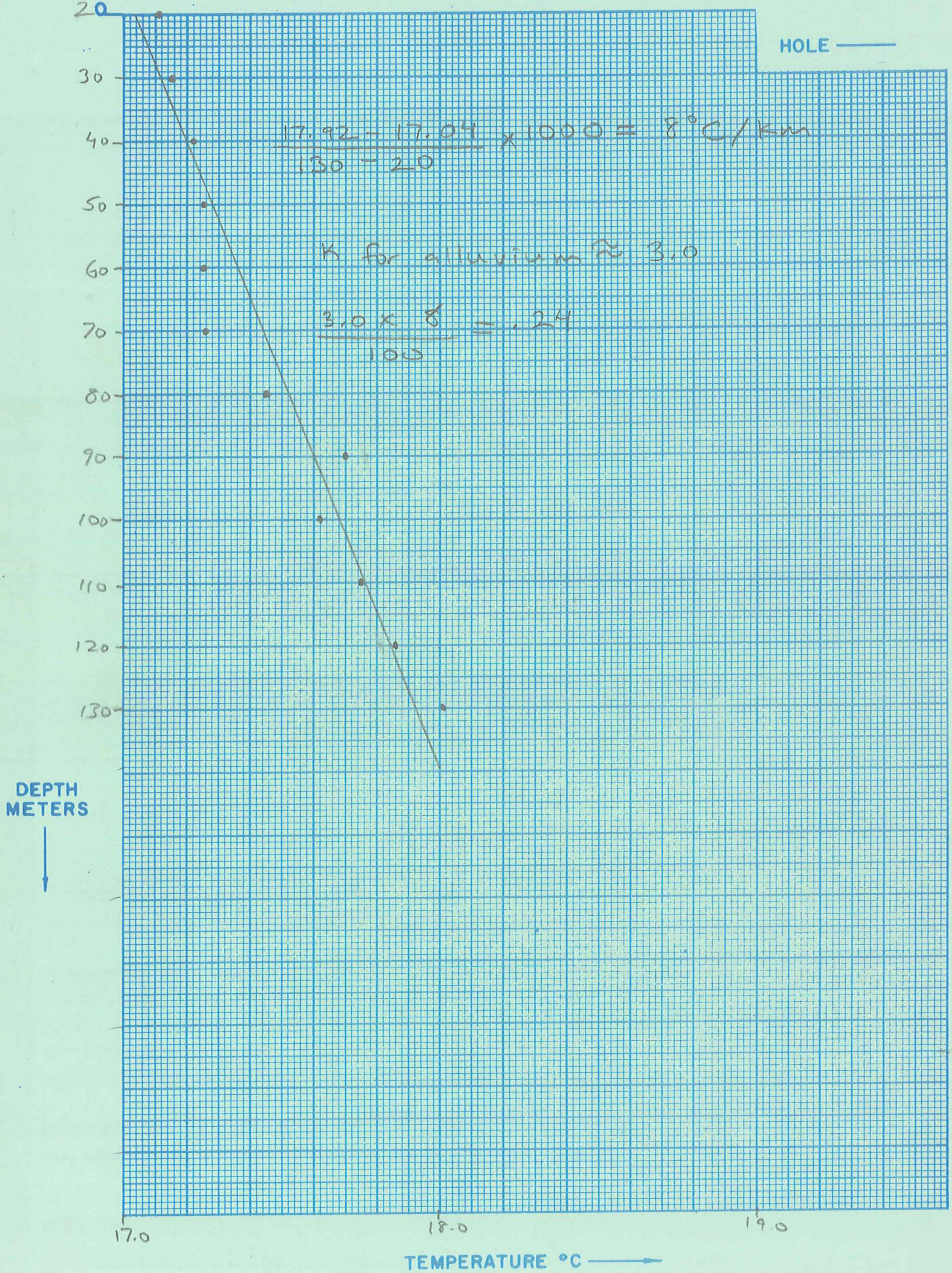
Segment 9

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



$\frac{17.92 - 17.04}{130 - 20} \times 1000 = 8^{\circ}C/km$

K for alluvium ≈ 3.0

$\frac{3.0 \times 8}{100} = .24$

Priest Tank ΔT

Date Logged: 6/30/80

ΔT Well No. 80-128

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		17.11					Alluvium.
			0.04	4			
30		17.15					
			0.07	7			
40		17.22					
			0.03	3			
50		17.25				air	H_2O at 25m
			0.00	0			
60		17.25					
			0.01	1			
70		17.26					
			0.19	19			
80		17.45					
			0.25	25			
90		17.70				↓	
			-0.08	-8			
100		17.62					
			0.13	13			
110		17.75				H_2O	
			0.11	11			
120		17.86					
			0.19	19			
130		18.05				↓	

K=Conductivity

page 1 of

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Alamosa ΔT

ΔT Well No. 80-129

Property-Project 1114 Depth Logged 54m

Map Huerfano Scale 7.5 1/24000 Date: Drilled ______ Logged 6/30/80

State N.M County Sierria , SE¼ of NW¼ of NE¼ of SW¼ of Sec 28 T 11S R 5W

Instrument DT-101 121 (repaired) Operator WA Elevation 4895 ([✓ ft] m)

Comments sub-pump, 1' casing. Was not pumping

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	1	1	4							3	0		0	6		8	0	C	M

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

Site Description																														Operator					Editor					Drilled DA			Drilled MO			Drilled 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
																																	W	A	/												

(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 **				
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
	c	m					7	.	5			3	3	.		1	9	.	3		1	0	7	.		2	1	.	7

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
					3	4	.	2	0							5	.	3	0	4	8	9	5	.					F

Use decimals

Write M if 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

Start →

Segment 5

Segment 6

Start →

Segment 7

Segment 8

Start →

Segment 9

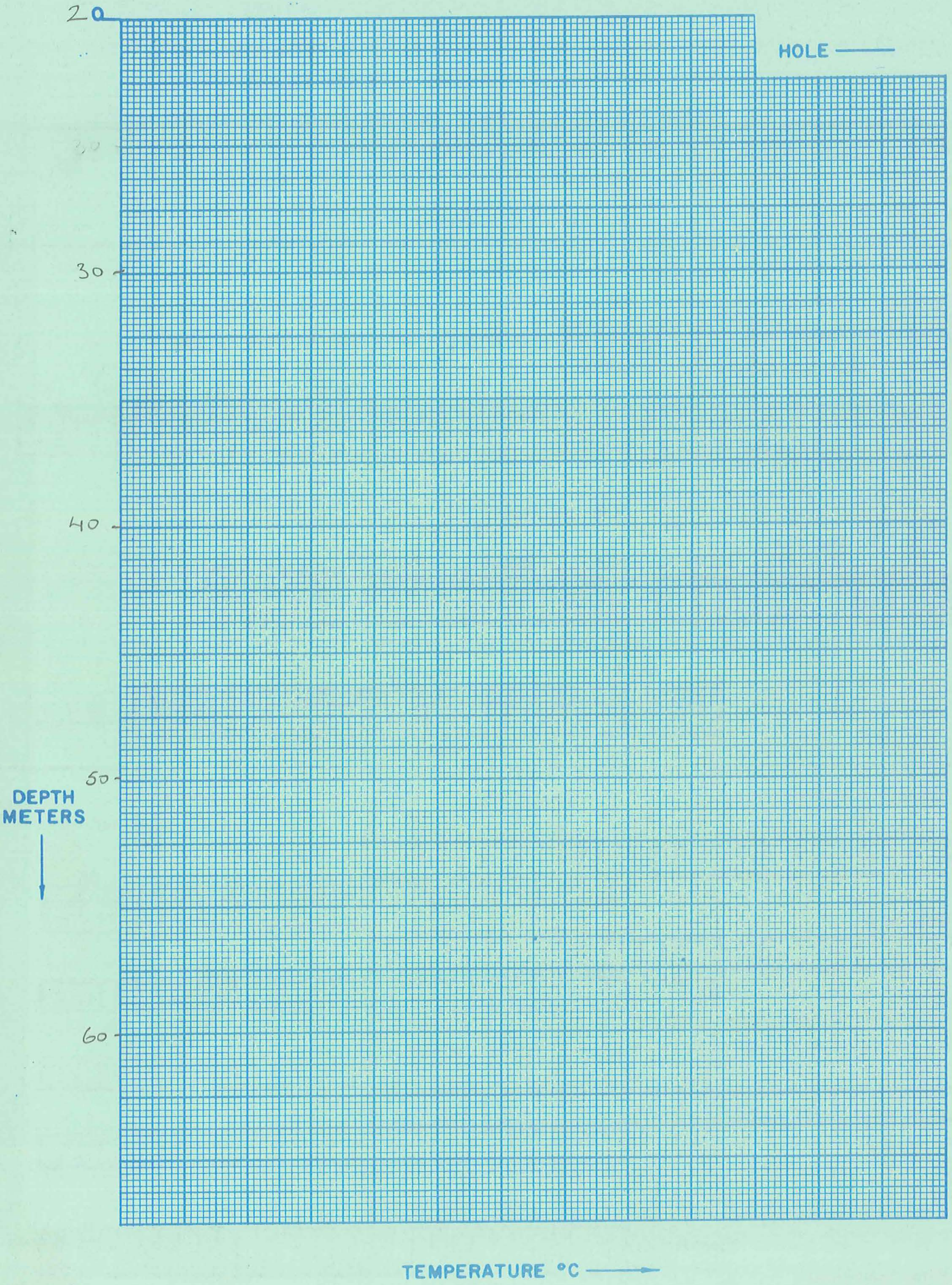
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

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


HOLE ——
20
30
40
50
60
DEPTH METERS
TEMPERATURE °C

Alamosa ΔT

Date Logged: 6/30/80

ΔT Well No. 80-129

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O ~~Air~~	Lithology, etc.
20		—		—			Alluvium.
25		31.94					
30		31.94	0.00	0			
35		31.94	0.00	0			
40		31.94	0.00	0			
45		32.28	0.34	68			
50		32.43	0.15	30			
54		32.57	0.14	35			

K=Conductivity

page ____ of ____

Date Logged: ____________________

ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

Payne ΔT.

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-130

Property-Project 1114 Depth Logged 59 m

Map Taralosa Scale 7.5 1/24000 Date: Drilled ____ Logged 7/2/80

State N.M County Sierria, ____ of ____ of NW¼ of SE¼ of Sec 2 T 10S R 7W

Instrument DT-101 121 (repaired) Operator WA + BH Elevation 5877 (ft m)

Comments Windmill, 8" casing, 7' blades. Was pumping before we arrived.

RT 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	1	1	4							0	2	▨	0	7	▨	8	0	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
																																										▨			▨		

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

Card B

Map Location **

Scale Unit IN CM					Map Size (7.5, 15., 60.)					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
▨	C	M	▨	▨			7	.	5			3	3	.	2	2	.				1	0	7	.		3	7	.	

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
					4	1	.	5	0						3	7	.	0	0	5	8	7	7	.	▨	▨	▨	▨	F

Use decimals

← Write M if if meters

Segment 1 = Depths

Conductivity

Best cond. (-K)

Downward extrapolations (-ΔK)

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

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 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

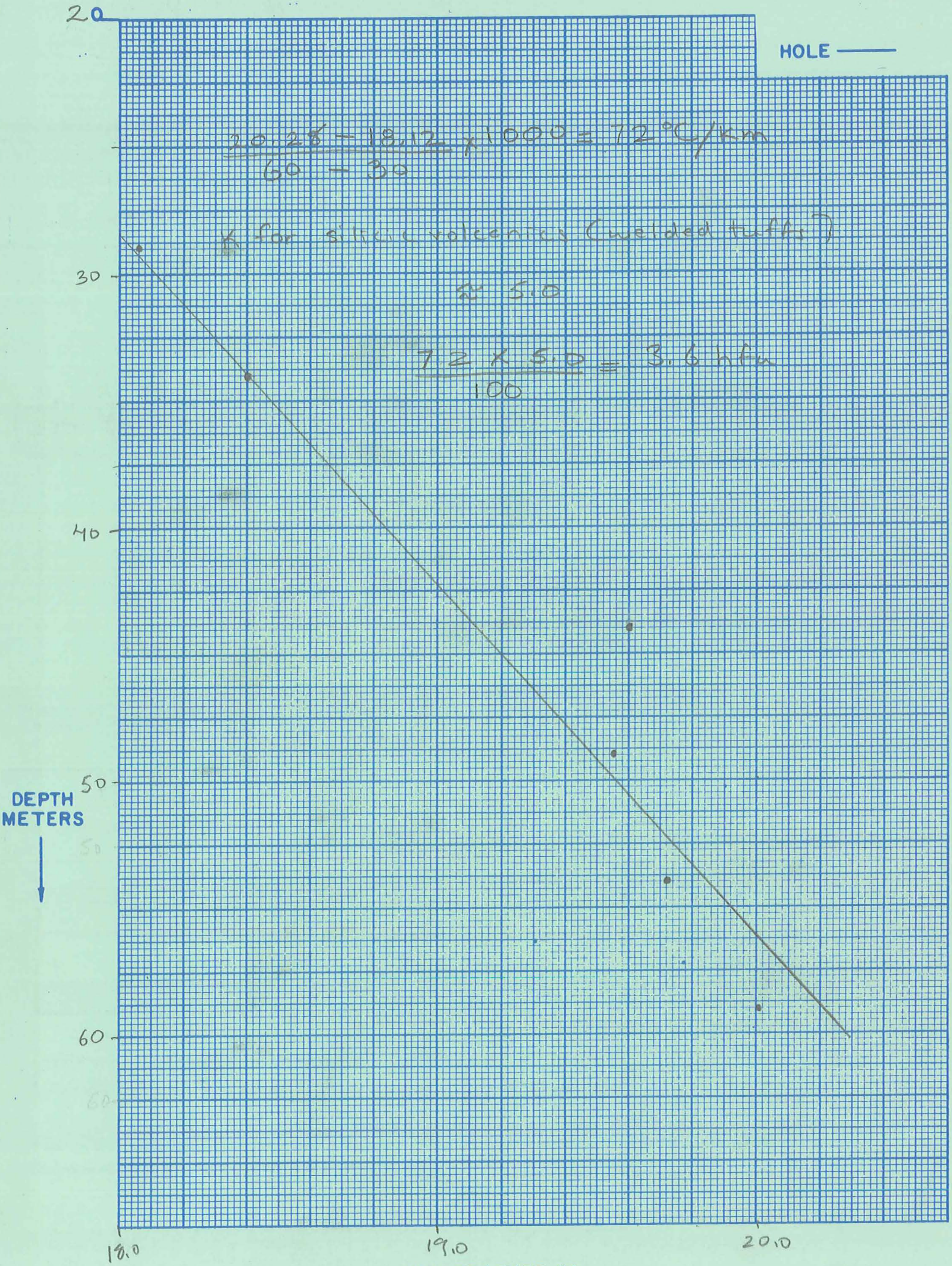
Segment 9

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



$$\frac{20.28 - 18.12}{60 - 30} \times 1000 = 72\ °C/km$$

K for silicic volcanics (welded tuffs?)

≈ 5.0

$$\frac{72 \times 5.0}{100} = 3.6\ hfu$$

Payne ΔT

Date Logged: 7/2/80

ΔT Well No. 80-130

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
24							Thin cover of
29		18.04	0.36	36			alluvium underlain
34		18.40	1.20	60			by silicic volcanic
39		—	—	—			rocks, consisting
44		19.60	-0.05	-10			of ash deposits,
49		19.55	0.17	34			some (minor) basalts,
54		19.72	0.30	60			welded tuffs and
59		20.02					some that look
							like granites.

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

No. 2 Windmill ΔT

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-131

Property-Project 1114 Depth Logged 45 m

Map Bell Mtn. Scale 7.5 1/24000 Date: Drilled ______ Logged 7/3/80

State N.M County Sierra, NE¼ of SW¼ of NE¼ of NW¼ of Sec 29 T 14S R 7W

Instrument DT-101 121 repaired Operator CWA Elevation 5980 ([✓ ft] m)

Comments Windmill, 6" casing 8' blades

Date Logged

RT 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
1	1	1	4							0	3	▨	0	7	▨	8	0	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
																																W	A		/							▨			▨		

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

Card B

Map Location **

Scale Unit IN CM					Map Size (7.5, 15., 60.)					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
▨	C	M	▨	▨			7	.	5			3	3	.			3	.	9		1	0	7	.		3	5	.	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
					3	0	.	1							1	6	.	0	0	5	9	8	0	.	▨	▨	▨	▨	F

Use decimals

← Write M if 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 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

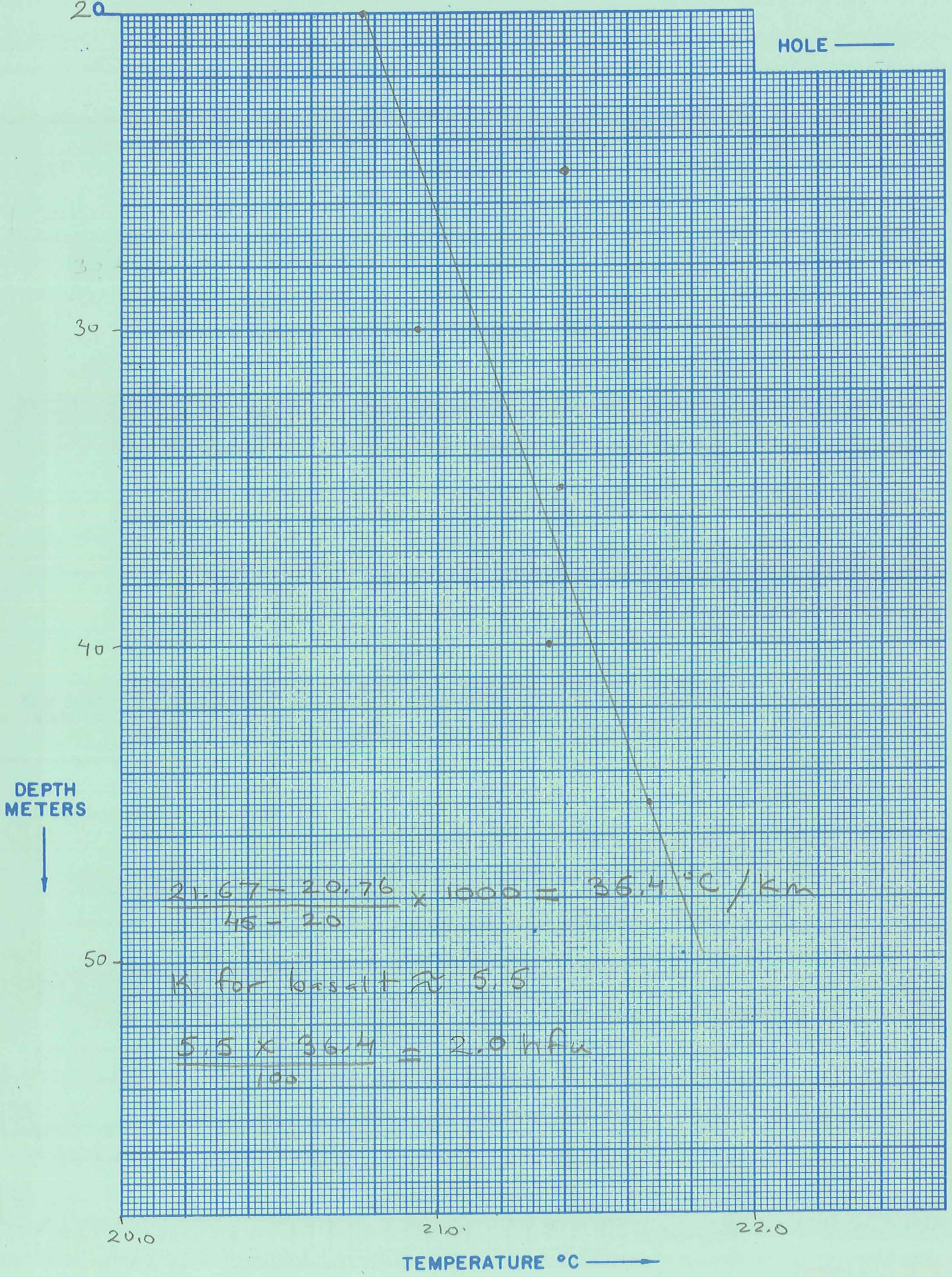
Segment 9

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



$$\frac{21.67 - 20.76}{45 - 20} \times 1000 = 36.4\ °C/Km$$

K for basalt ≈ 5.5

$$\frac{5.5 \times 36.4}{100} = 2.0 \text{ hfu}$$

No. 2 Windmill ΔT

Date Logged: 7/3/80

ΔT Well No. 80-13L

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	~~H_2O~~ Air	Lithology, etc.
20		20.76	0.74	148		↓	Thin cover
25		21.40	-0.47	-94			of alluvium
30		20.93	0.46	92			underlain by
35		21.39	-0.04	-8			a dk. grey olivine
40		21.35	0.32	64			basalt,
45		21.67					

K=Conductivity

page _____ of _____

Date Logged: ____________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ____ of ____

Pete ΔT

Photo 1, 10

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-132

Property-Project 1114 **Depth Logged** 32.8

Map Romero Canyon Scale 7.5 **Date: Drilled** ______ **Logged** 6-30-80

State NM County Sierra , SE of SW of NE of NE of Sec 18 T 10S R 3W

Instrument OT-101 Operator X9 **Elevation** 4590 (ft / m)

Comments 8" casing, probe hard to get down - sticks

Date Logged

JUSTIFY

Card A

Proj No (1-4)	Well No (5-10)	DA (11-12)	(13)	MO (14-15)	(16)	YR (17-18)	* (19)	* (20)
1114		30	▨	06	▨	80	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)	(63)	MO (64-65)	(66)	YR (67-68)
	X9	/		▨		▨	

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

Card B

Map Location * *

(21)	Scale Unit IN CM (22-23)	(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) **
▨	CM	▨	7.5	33.	22.5	107.	15.

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)
32.4	27.3	4590.	▨	F

Use decimals

← Write M if if meters

Segment 1 = Depths Start (21-30), End (31-40); Conductivity K (41-45), ΔK (46-50)

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → (51-60), End (61-70), K (71-75), ΔK (76-80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

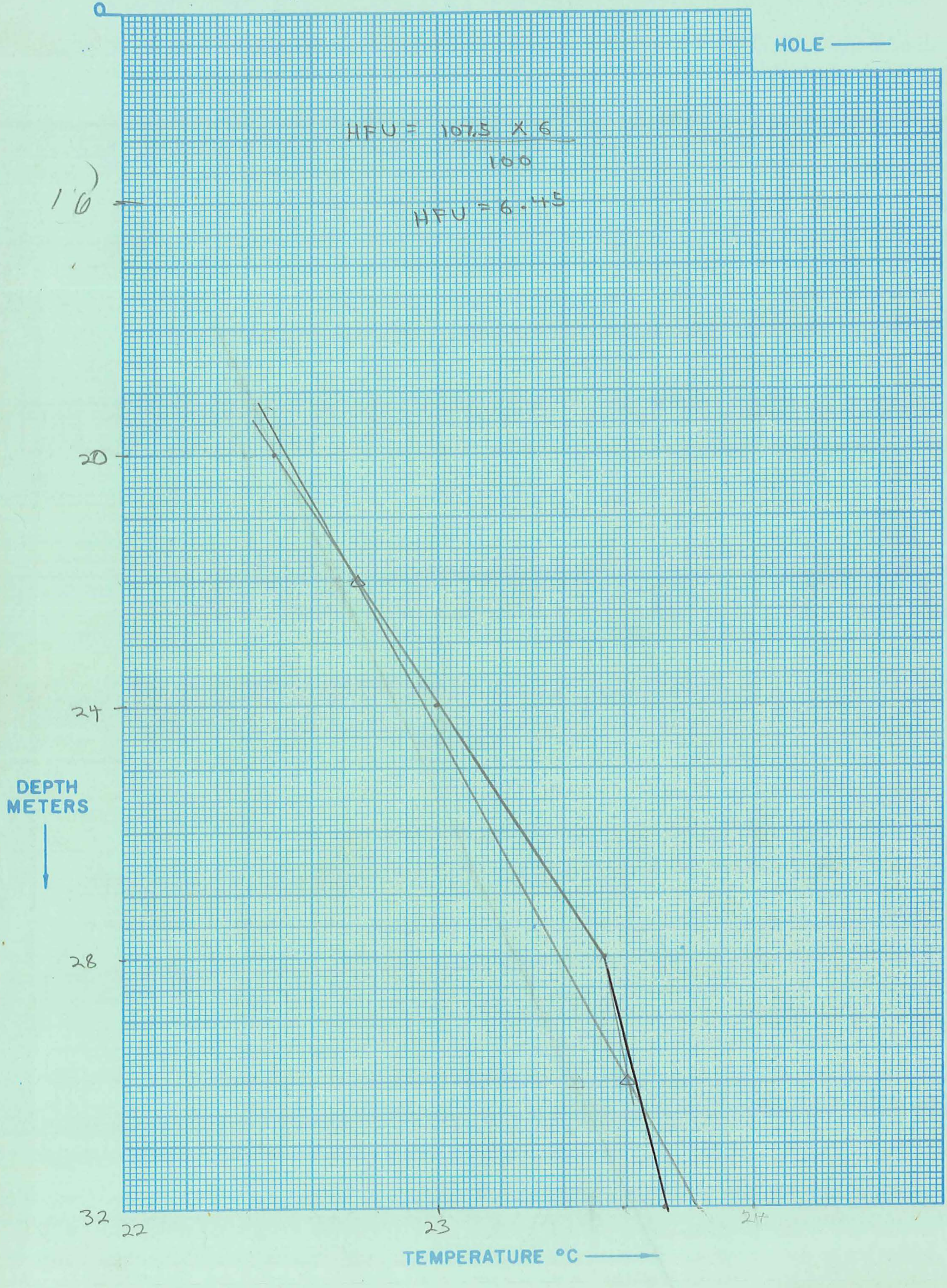
Segment 8 Start →

Segment 9 (21-50)

Segment 10 Start → (51-80)

After final segment Start = .999

$$\frac{23.6 - 22.74}{30-22} = 107.5$$



$$HFU = \frac{107.5 \times 6}{100}$$

$$HFU = 6.45$$

Pete ΔT

Date Logged: 6-30-80

ΔT Well No. 80-132

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
						H_2O	Alluvial, fan
							rhyolitic welded
							tuffs & basaltic
							coarse conglomerate
							on a hill.
20.0		22.48					
			.52	130.0			
24.0		23.0					
			.53	132.5			
28.0		23.53					
			.19	47.5			
32.0		23.72					
32.8		23.76					

K=Conductivity

page ____ of ____

Date Logged: ____________________

ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ____ of ____

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Best Cook ΔT

ΔT Well No. 80-133

Property-Project 1114
Depth Logged 75.75

Map Crocker
Scale 7.5
Date: Drilled
Logged 7-1-80

State NM County Sierra, of unsurveyed of of of Sec 21 T 12S R 3W

Instrument DT-101
Operator KG
Elevation 4745 (ft/m)

Comments pumping when arrived, 8" casing

JUSTIFY

Card A

Date Logged

Proj No	Well No	DA	MO	YR	* 19	20
1114		01	07	80	C	M

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

Site Description	Operator	Editor	Drilled DA	MO	YR
	KG				

(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	7.5	33.	15.	107.	7.5

Use decimals

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

Northing	Easting	Elev	80
10.95	6.95	4745.	F

Use decimals

Write M if if meters

Segment 1 = Depths Start End Conductivity K ΔK

Best cond. (-K)

Downward extrapolations (- Δ K)

Segment 2 Start → End K ΔK

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

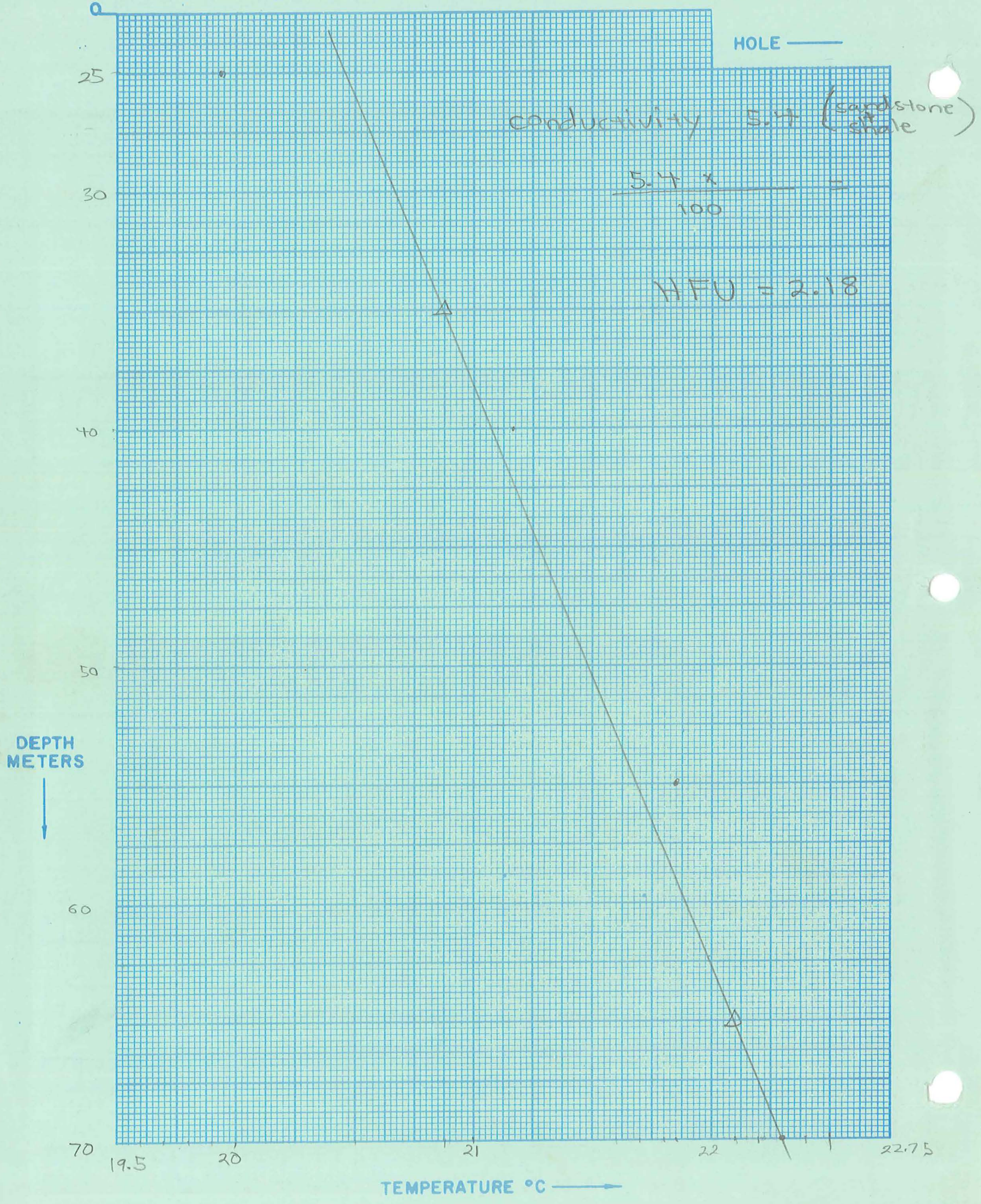
Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start =.999

$\frac{22.1-20.89}{65-35} = 40.33$ °C/Km



conductivity 5.4 (sandstone & shale)

$\frac{5.4 \times}{100} =$

HFU = 2.18

Bert Cook ΔT

Date Logged: 7-1-80

ΔT Well No. 80-133

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
			x	15			silicified medium grained sandstone + silicified shale Mafic (dacitic?) intrusives and scoriaceous black basalt boulders lying around surface. Area tilted + folded
25.0		19.93					
			1.24^3	83			
40.0		21.17				Air	
			68	45			
55.0		21.85				H_2O	
			45	30	@ 46.75m		
70.0		22.30					
75.75		22.32					

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ____ of ____

AMAX EXPLORATION, INC.

Lava ΔT

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-134

Property-Project 1114

Depth Logged 66.3

Map Lava

Scale 7.5'

Date: Drilled

Logged 7-1-80

State NM County Sierra , of of of of Sec ~~10~~ 34 T 9S R 2w

Instrument DT-101

Operator KG

Elevation 4597 (ft m)

Comments abandoned, 8" casing

Date Logged

JUSTIFY

Card A

Proj No (1-4)	Well No (5-10)	DA (11-12)	MO (14-15)	YR (17-18)	* 19	20
1114		01	07	80	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)
	KG/				

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

Card B

Map Location * *

Scale Unit IN CM (22-23)	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	7.5	33.	22.5	107.	7.5

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)	80
46.2	25.8	4597.	F

Use decimals

← Write M if if meters

Segment 1 = Depths

Start

End

Conductivity

K

ΔK

Best cond. (-K)

Downward extrapolations (-ΔK)

End

K

ΔK

Segment 2 Start →

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

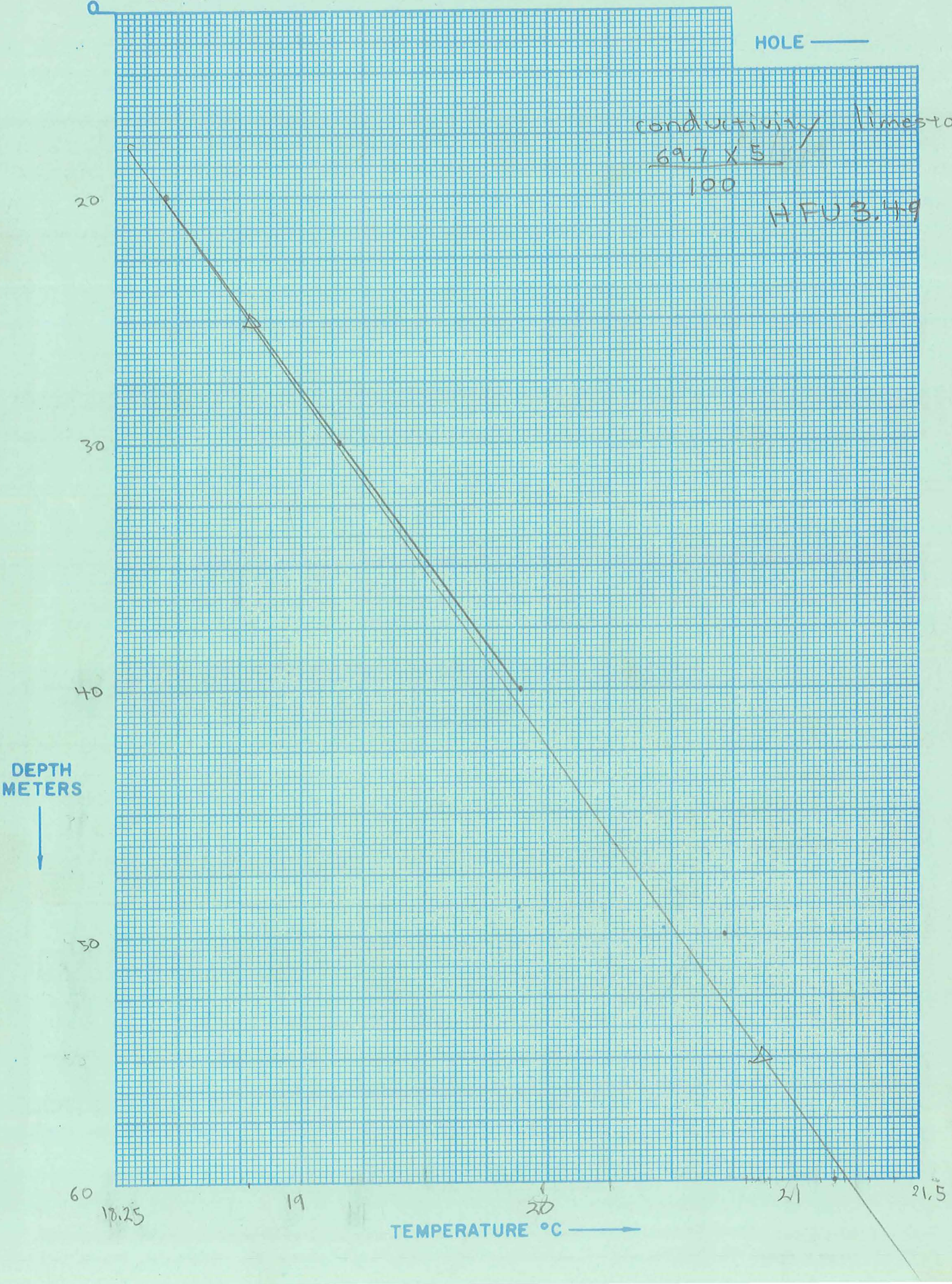
Segment 9

Segment 10 Start →

After final segment Start = .999

$$\frac{20.88 - 18.79}{55 - 25}$$

69.7 °c/km



conductivity / limestone

$$\frac{69.7 \times 5}{100}$$

HFU 3.49

Lava ΔT

Date Logged: 7-1-80

ΔT Well No. 80-134

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
							Basalt flow
							near by, & boulders
							on surface.
							conglomerate and
20		18.45					fossiliferous gray
30		19.16	.71	73			limestone at
40		19.89	.73	73			depth.
50		20.72	.83	83			
60		21.17	.45	45	H_2O @ 59.6	Air H_2O	
66.3		21.27					
6.7 59.6							

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Malpais ΔT

ΔT Well No. 80-135

Property-Project 1114 **Depth Logged** 45.6 m

Map Malpais Well Scale 15' **Date: Drilled** ______ **Logged** ______

State NM County Sierra , ____ of ____ of ____ of unsurveyed ____ of Sec 1 T 10S R 1W

Instrument DT-101 Operator KG **Elevation** 4720 (ft/m)

Comments 8" casing, old well next to it, started pumping in middle

Date Logged

JUSTIFY

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

Card A

Proj No (1-5)	Well No (6-10)	DA (11-12)	MO (14-15)	YR (17-18)	* (19-20)
1114		02	07	80	CM

Site Description (21-50)	Operator (51-55)	Editor (56-60)	Drilled DA (61-62)	Drilled MO (64-65)	Drilled YR (67-68)
	KG/				

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

Card B

Map Location **

Scale Unit IN CM (22-23)	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.	33.	15.	107.	00.

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)	80
39.95	16.5	4720.	F

Use decimals

Write M if if meters

Segment 1 = Depths

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

Best cond. (-K)

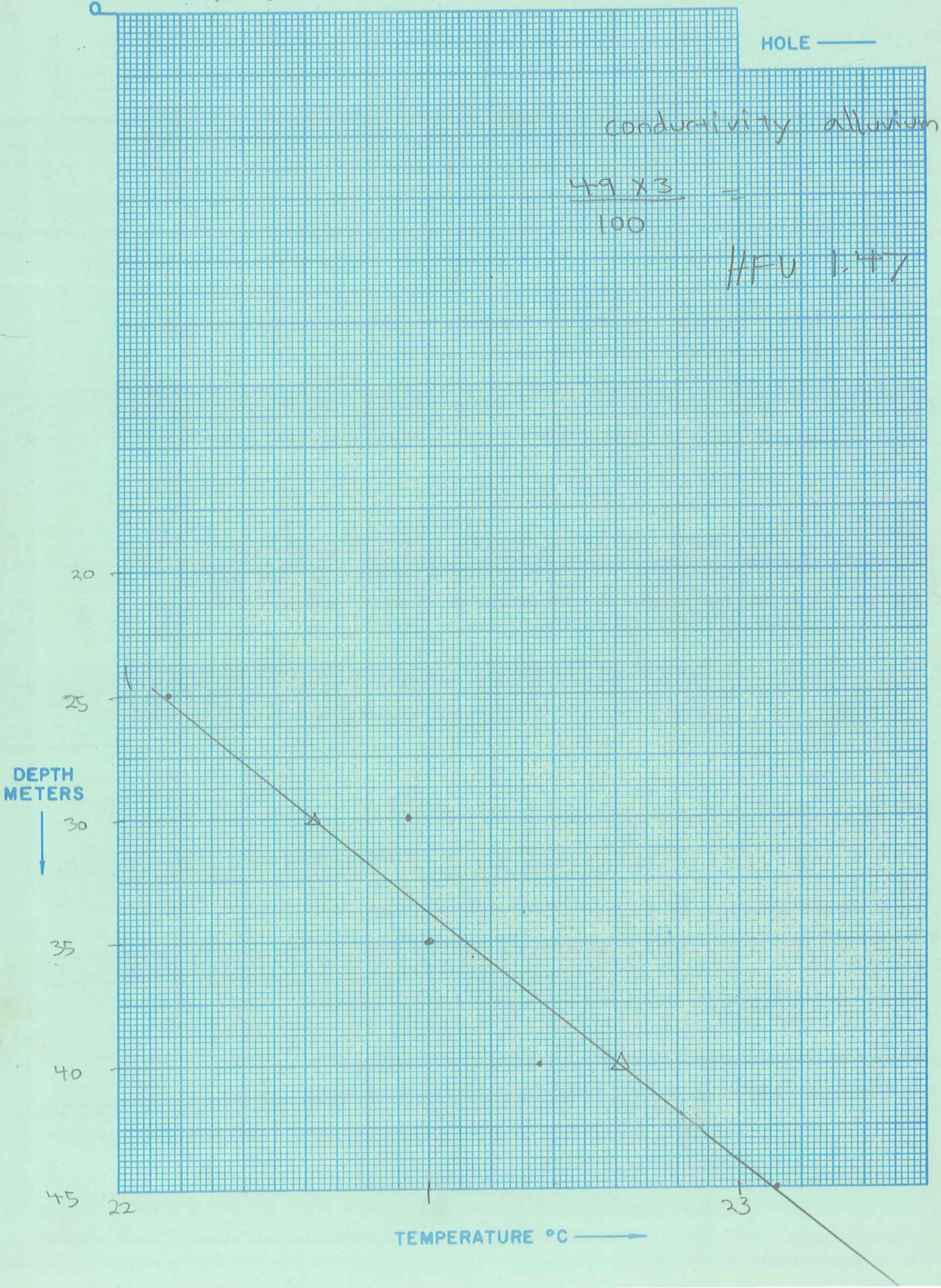
Downward extrapolations (-ΔK)

	Start (51-60)	End (61-70)	K (71-75)	ΔK (76-80)
Segment 2				
Segment 4				
Segment 6				
Segment 8				
Segment 10				

	21-30	31-40	41-45	46-50
Segment 3				
Segment 5				
Segment 7				
Segment 9				

After final segment Start = .999

$$\frac{22.8 - 22.31}{40-30} = 49\ ^{\circ}\mathrm{C}/\mathrm{km}$$



conductivity alluvium

$$\frac{49 \times 3}{100} =$$

HFU 1.47

Malpais ΔT

Date Logged: 7-2-80

ΔT Well No. 80-135

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
							Lava flow next
							to well. Fine ->
							medium reddish brown
25.0		22.08					alluvium with
			.39	78			
30.0		22.47					quartz, chert and
			.03	6			
35.0		22.50					limestone pebbles +
			.18	36			
40.0		22.68			Air		cobbles.
			.38	76			
45.0		23.06			H_2O @	43.5m	
45.6		23.06					
2.1							

K=Conductivity

page ____ of ____

Date Logged: ____________________

ΔT Well No. ______________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

Black ΔT

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-136

Property-Project 1114 Depth Logged 59.25

Map Malpais Well Scale 15' Date: Drilled ______ Logged 7-2-80

State NM County Socorro, NE of SW of SW of NW of Sec 36 T9S R1E

Instrument OT-101 Operator KG Elevation 4760 (ft/m)

Comments Broken, 4" casing on top

Card A

JUSTIFY

Date Logged

Proj No (1–4)	Well No (5–10)	DA (11–12)	MO (14–15)	YR (17–18)	* 19	20
1114		02	07	80	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)
	KG	/			

(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	33.	15.	107.	00.

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
41.4	29.9	4760.		F

Use decimals

← Write M if if meters

Segment 1 = Depths Start (21–30) End (31–40) Conductivity K (41–45) ΔK (46–50)

Best cond. (-K)

Downward extrapolations (-ΔK)

Segment 2 Start → End (51–60) (61–70) K (71–75) ΔK (76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

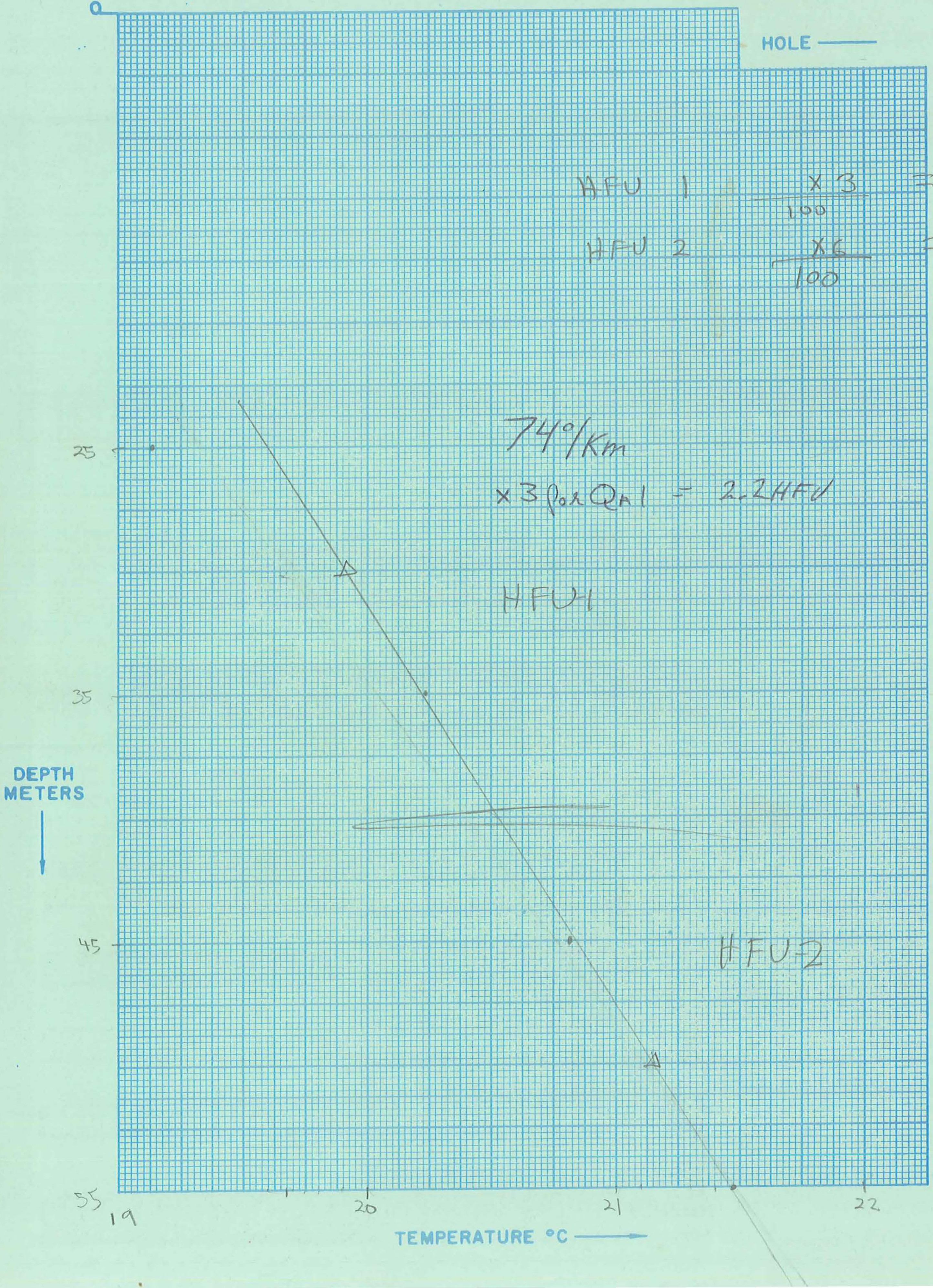
Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start = .999

$\frac{21.15 - 19.9}{40-30} = 125\ ^\circ\mathrm{C}/\mathrm{Km}$



HFU 1 $\frac{\times 3}{100}$ = 3.75

HFU 2 $\frac{\times 6}{100}$ = 7.5

74°/Km

x 3 por QA1 = 2.2 HFU

Black ΔT

Date Logged: 7-2-80

ΔT Well No. 80-136

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
							Scoriaceous
							basalt flows
							surrounding well.
							fine → med grained
							brown allurium
25		19.26					
			.98	98			
35		20.24				Air	
			.58	58		H_2O	
45		20.82				@ 37.25	
			.65	65			
55		21.47					
59.25		21.87					

K=Conductivity

page ______ of ______

Date Logged: ____________________

ΔT Well No. _____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Hayfield ΔT

ΔT Well No. 80-137

Property-Project 1114

Depth Logged 75m

Map Malpais Well Scale 15′

Date: Drilled ______ Logged 7-3-80

State NM County Sierra, ____ of ____ of ____ of ____ of Sec 3 T 12S R 1W

Instrument DT-101 Operator KG

Elevation 4880 (ft m)

Comments 8" casing, tank & corral

JUSTIFY

Card A

Date Logged

Proj No (1–4)	Well No (5–10)	DA (11–12)	MO (14–15)	YR (17–18)	19*	20*
1114		03	07	80	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)
	KG/				

(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	33.	15.	107.	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 (71–79)	80
6.8	9.4	4880.	F

Use decimals

← Write M if if meters

Segment 1 = Depths

Conductivity

Best cond. (-K)

Downward extrapolations (-ΔK)

	Start (21–30)	End (31–40)	K (41–45)	ΔK (46–50)
Segment 1				

	Start (51–60)	End (61–70)	K (71–75)	ΔK (76–80)
Segment 2 Start →				

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

Segment 9

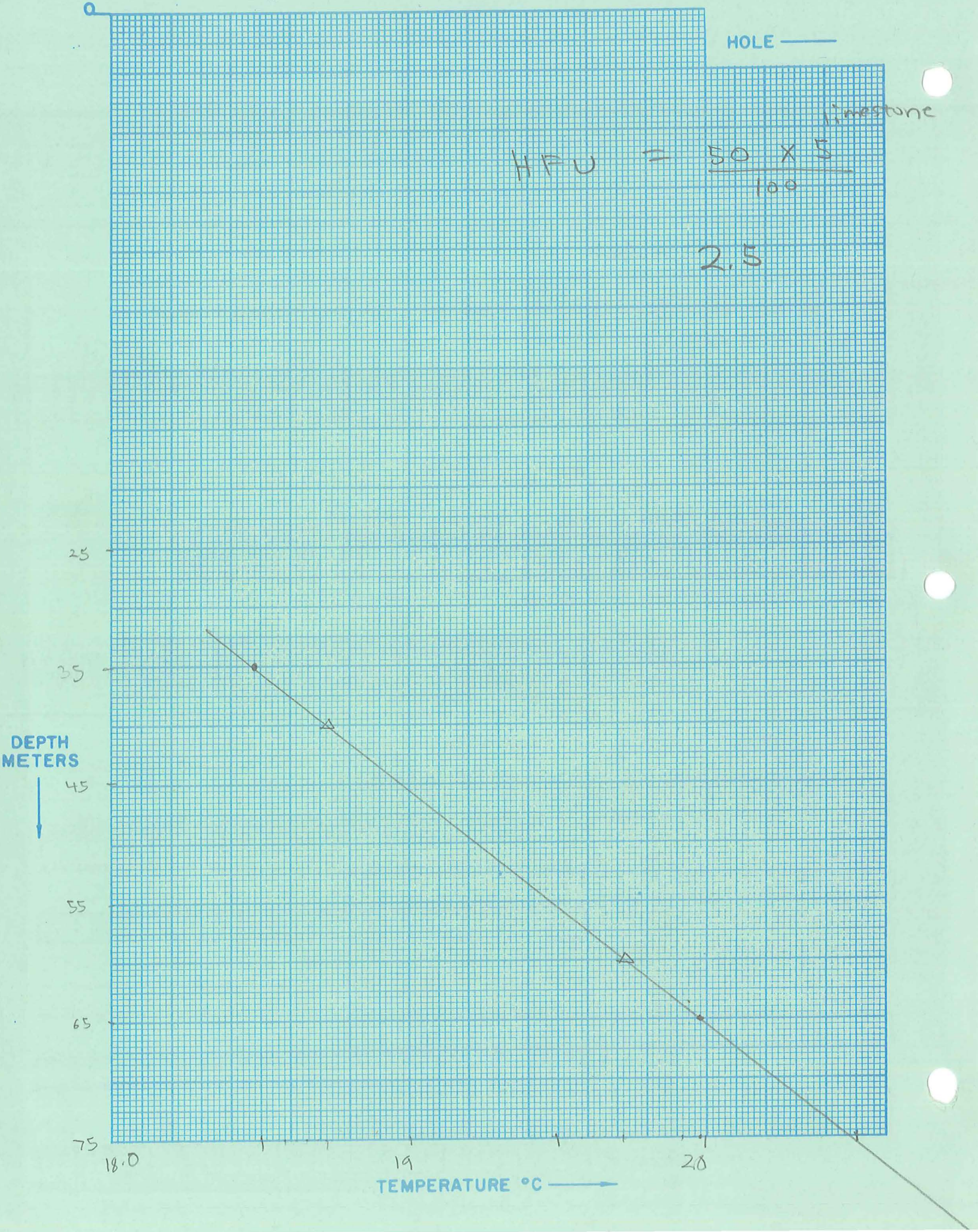
21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

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

$\frac{19.78 - 18.78}{60-40}$, 50 °c/Km



Limestone

$HFU = \frac{50 \times 5}{100}$

2.5

Hayfield ΔT

Date Logged: 7-3-80

ΔT Well No. 80-137

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
							Qal with
							limestone and
							basalt pebbles.
							Lots of caliche.
35		18.49					Limestone underneath.
40							Fine -> med size
45				49.33°			alluvium brown-red.
50							
55		18.30					
65		19.97	1.67	167			
75 m		20.04	.07	7		Air	
			$\frac{2}{7}$				

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

Rescue ΔT

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-138

Property-Project 1114 Depth Logged 100m

Map Sowell Scale 15' Date: Drilled ______ Logged 7-3-80

State NM County Socorro , SW of NW of NE of NE of Sec 29 T 12S R 2E

Instrument DT-101 Operator KG + AS Elevation 6290 (ft/m)

Comments 10" casing, gasoline pump

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 1 1 4		0 3	▨	0 7	▨	8 0	C	M

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

Site Description	Operator	Editor	Drilled DA		Drilled MO		Drilled YR
21–50	51 52 53 54 55	56 57 58 59 60	61 62	63	64 65	66	67 68
	KG/			▨		▨	

(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 **
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.	33.	0.	107.	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
42.5	36.35	6290.	▨	F

Use decimals

← Write M if 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 (-Δ K)

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 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

Segment 9

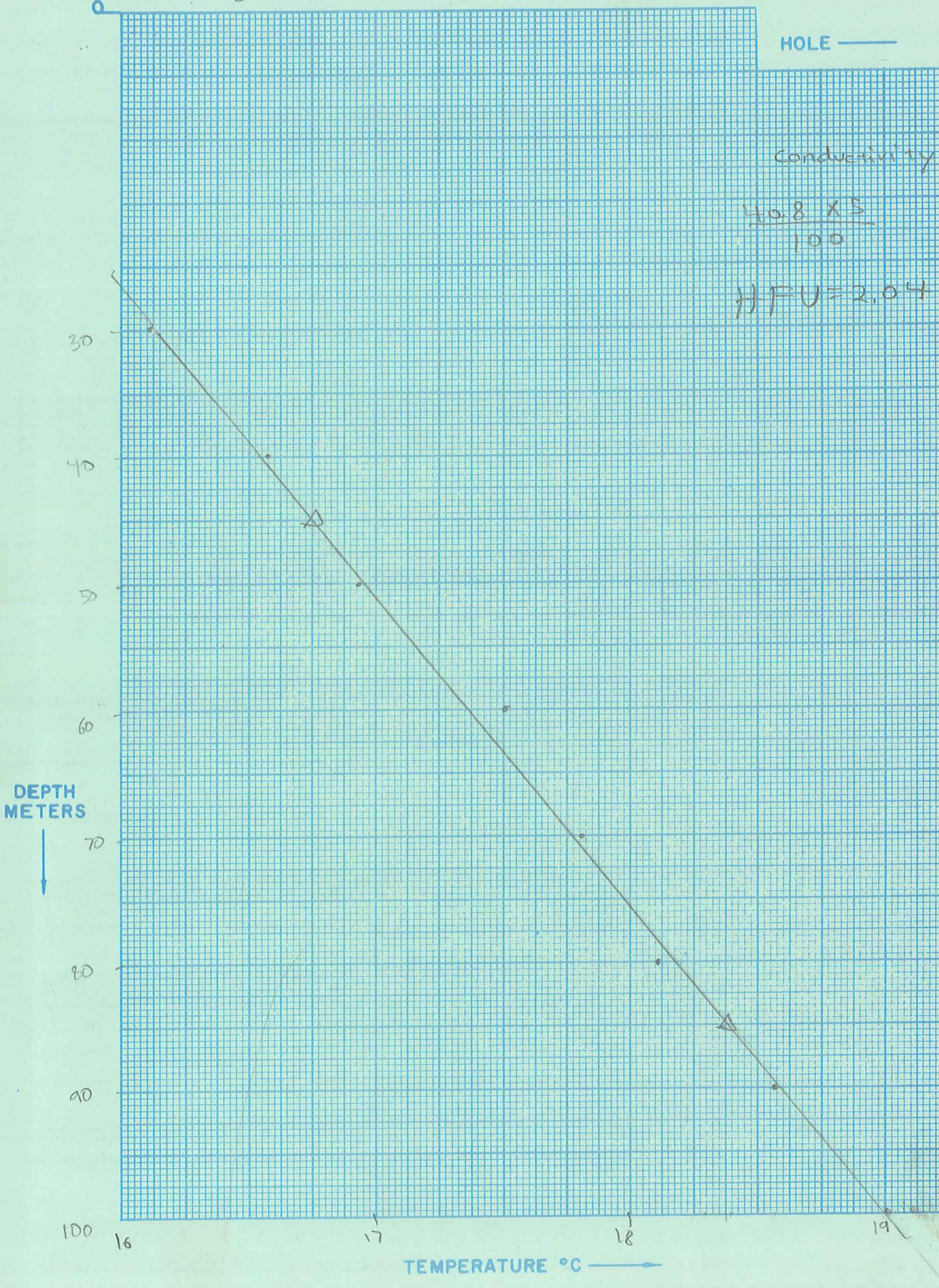
21 22 23 24 25 26 27 28 29 30	31 32 33 34 35 36 37 38 39 40	41 42 43 44 45	46 47 48 49 50

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

$$\frac{18.38 - 16.75}{85 - 45} = 40.8\ °C/Km$$



Conductivity limestone

$$\frac{40.8 \times 5}{100}$$

HFU = 2.04

Rescue ΔT

Date Logged: 7-3-80

ΔT Well No. 80-138 .

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
							Qal on surface
							consisting mainly
							of limestone pebbles
							+ cobbles. Dark
							gray fossiliferous
30		16.24					limestone underneath
			.41	41			
40		16.65					
			.48	48			
50		35 17.13					
			.39	39			
60		17.52					
			.35	35			
70		17.87					
			.35	35			
80		13 18.22					
			.30	30			
90		18.64					
			.37	37		Air	
100m		19.01					

K=Conductivity

page ______ of ______

Date Logged: ____________________ ΔT Well No. ______________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

Oil Test ΔT

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80-139

Property-Project 1114 Depth Logged 70m

Map Sowell Scale 15' Date: Drilled ______ Logged 7/3/80

State NM County Sierra, ______ of ______ of SE of NE of Sec 17 T 13S R 1E

Instrument DT-101 #2 Operator Shenker ______ Elevation 5300 [✓ ft] m

Comments 8" cased windmill, pumping - H_2O sample
Near Leeman Fed. No. 1 Oil Test - Shell Oil
Ser. No. - NM 058839-A

Card A

JUSTIFY

	Proj No	Well No	Date Logged DA	Date Logged MO	Date Logged YR	19*	20*
Columns	1–5	6–10	11–12	14–15	17–18	19	20
	1114		03	07	80	C	M

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

	Site Description	Operator	Editor	Drilled DA	Drilled MO	Drilled YR
Columns	21–50	51–55	56–60	61–62	64–65	67–68
		KS/				

(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
Columns	21–25	26–30	31–35	36–40	41–45	46–50
	CM	15.	33.	0.	107.	0.

Use decimals

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

	Northing	Easting	Elev		
Columns	51–60	61–70	71–75	76–79	80
	31.95	21.6	5300.		F

Use decimals

Write M if ← if meters

Segment 1 = Depths

	Start	End	Conductivity K	ΔK
Columns	21–30	31–40	41–45	46–50

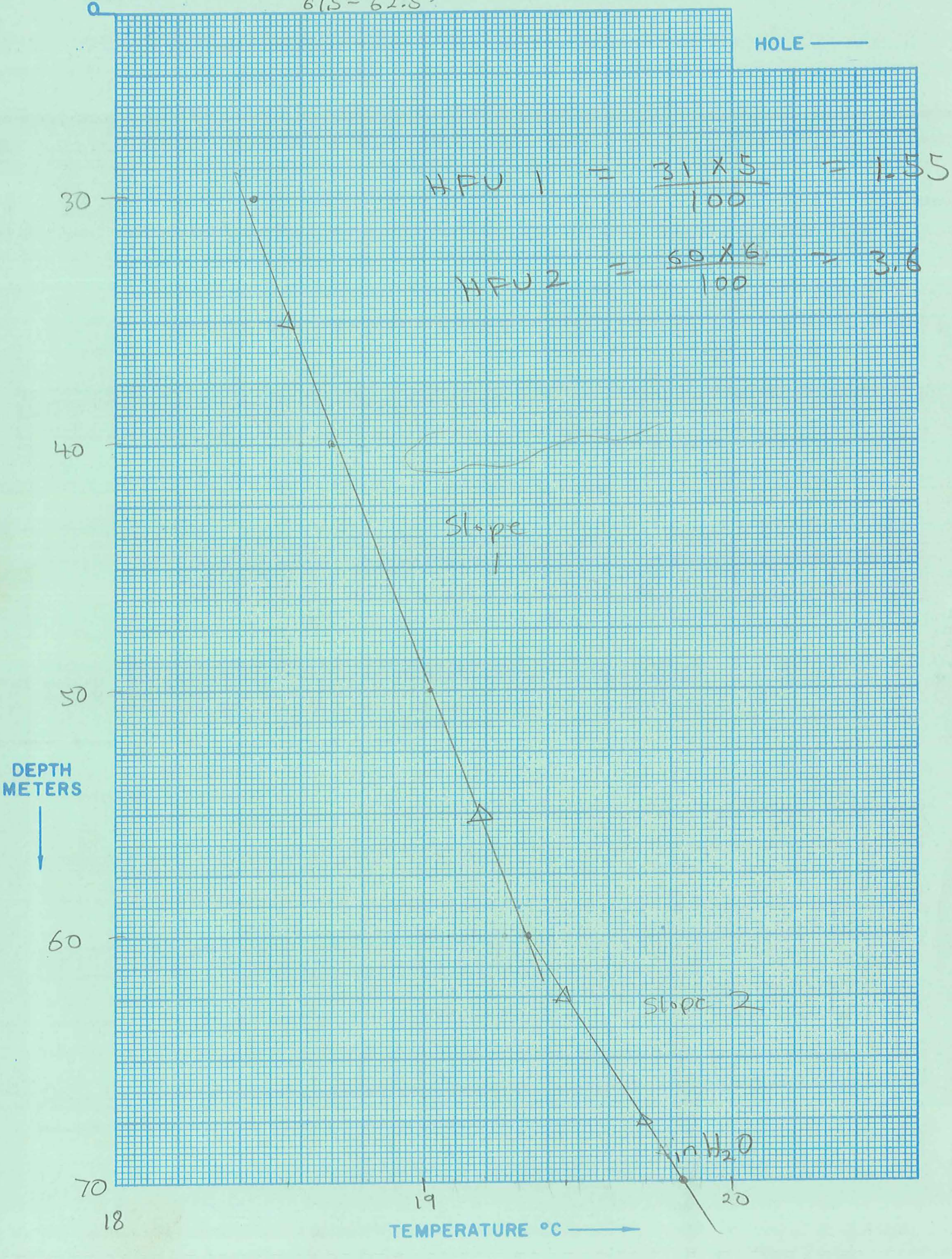
Best cond. (-K)

Downward extrapolations (-ΔK)

	Start	End	K	ΔK
Columns	51–60	61–70	71–75	76–80
Segment 2 Start →				
Segment 3				
Segment 4 Start →				
Segment 5				
Segment 6 Start →				
Segment 7				
Segment 8 Start →				
Segment 9				
Segment 10 Start →				

After final segment
Start = .999

$\frac{19.18 - 18.56}{55 - 35} = 31$ °C/Km $\frac{19.76 - 19.46}{67.5 - 62.5} = 60$ °C/Km



HPU 1 $= \frac{31 \times 5}{100} = 1.55$

HPU 2 $= \frac{60 \times 6}{100} = 3.6$

Oil Test ΔT

Date Logged: 7/3/80

ΔT Well No. 80-139

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
							Limestone covered by alluvium.
30		18.45	.25	25			
40		18.70	.32	32			
50		19.02	.30	30		↑	
60		19.32	.52	52	↑	Air	
70		19.84			5,5 5,0	H_2O	

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page _____ of _____

VERN ΔT

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80 140

Property-Project 1114 Depth Logged 80.0 m

Map HILLSBORO Scale 1:62,500 Date: Drilled ____ Logged 7/19/80

State NM County SIERRA, SE ¼ of NW ¼ of SE ¼ of NE ¼ of Sec 18 T 16S R 7W

Instrument DT 101 (BH) Operator AS - JL Elevation 5400 (ft)

Comments OPEN 6" CASING; 350' DEEP (AS PER VERN CUNNINGHAM (LAS CRUCES AMS)

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
1	1	1	4							1	9		0	7		8	0	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
																																	J	L	/												

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

Card B

Map Location * *

Scale Unit IN CM					Map Size (7.5, 15., 60.)					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
	C	M				1	5	.	0			3	2	.		4	5	.	0		1	0	7	.		4	5	.	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
					2	9	.	6	1						2	3	.	4	5	5	4	0	0	.					F

Use decimals

Write M if 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 →

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

Start →

Segment 5

Segment 6

Start →

Segment 7

Segment 8

Start →

Segment 9

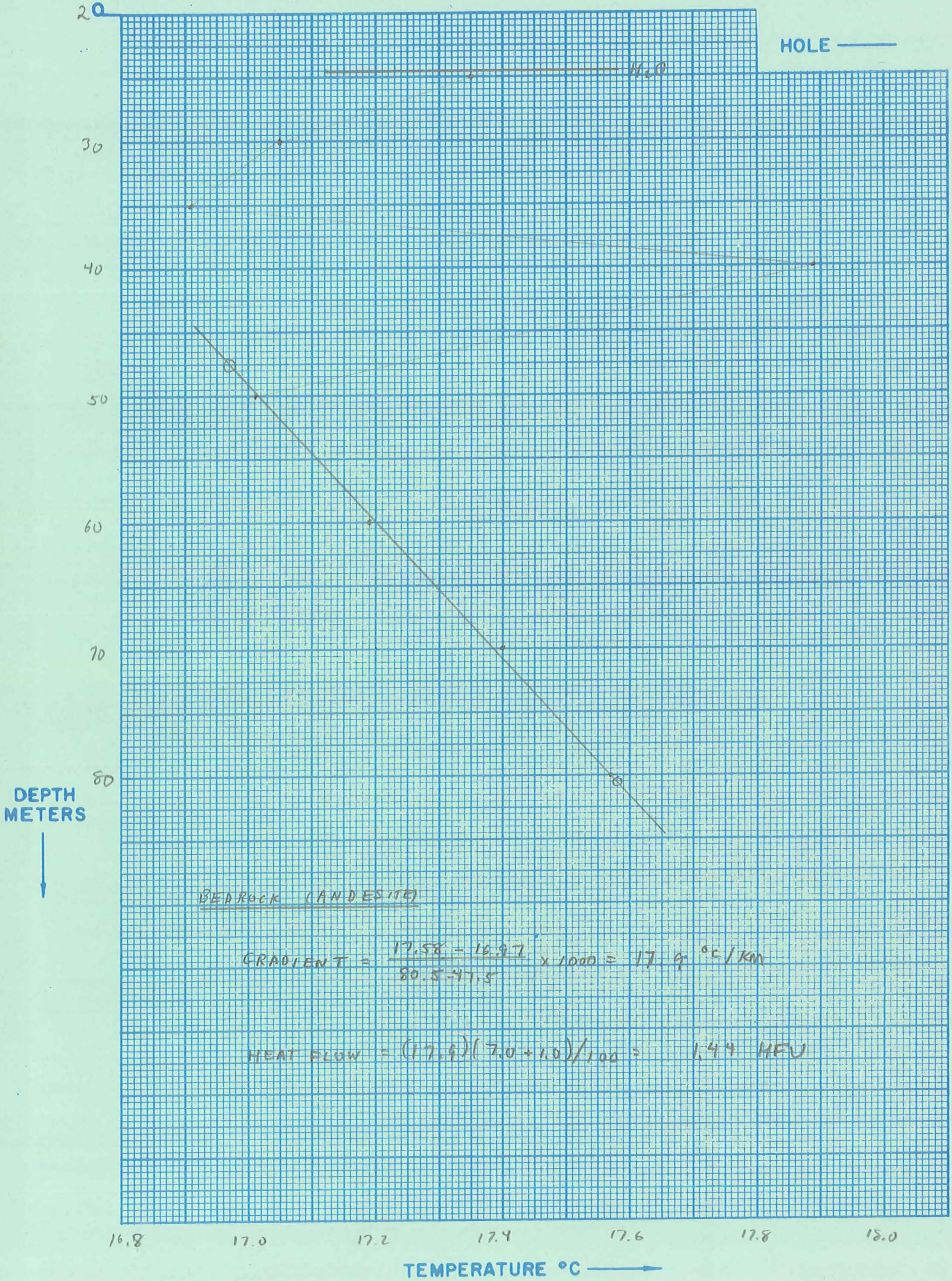
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

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



BEDROCK (ANDESITE)

$$\text{GRADIENT} = \frac{17.58 - 16.97}{80.5 - 47.5} \times 1000 = 17.9\ °C/KM$$

$$\text{HEAT FLOW} = (17.9)(7.0 + 1.0)/100 = 1.44\ \text{HFU}$$

VERN ΔT

Date Logged: 7/19/80

ΔT Well No. 80 140

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	[✓ H_2O] ~~Air~~	Lithology, etc.
25		17.35			6.0		MEDIUM BROWN, FINE SANDY
			-0.30	-60			
30		17.05			6.0		Qal WITH PEBBLES &
			-0.14	-28			
35		16.91			6.0		COBBLES (UP TO 20 CM) OF
			0.98	196			
40		17.89			6.0		RHYOLITE PORPHYRY &
			-0.88	-88			
50		17.01			8.0		QUARTZ LATITE PORPHYRY.
			0.18	18			
60		17.19			8.0		DRILL CUTTINGS OF
			0.21	21			
70		17.40			8.0		ANDESITE. H_2O @ 24.0 m
			0.17	17			
80		17.57			8.0		

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

GIFT ΔT

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

ΔT Well No. 80 - 141

Property-Project 1114 **Depth Logged** 46.5

Map HILLSBORO Scale 1:62,500 **Date: Drilled** ____ **Logged** 7/19/80

State NM County SIERRA , SE¼ of NW¼ of NW¼ of SE¼ of Sec 1 T 16S R 7W

Instrument DT 101 (BH) Operator JL **Elevation** 5320 ([✓ ft] ~~m~~)

Comments OPEN 8" CASING, 8 m NE OF WINDMILL; LAS CRUCES AMS

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	1	1	4							1	9	▨	0	7	▨	8	0	C	M

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

Site Description (columns 21–50); Operator (51–55); Editor (56–60); Drilled DA (61–62), 63 ▨, MO (64–65), 66 ▨, YR (67–68)

21–50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
				J	L	/							▨			▨		

(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 **				
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
▨	C	M	▨	▨		1	5	.	0			3	2	.		4	5	.	0		1	0	7	.		4	5	.	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
					3	4	.	3	2						3	5	.	3	9	5	3	2	0	.	▨	▨	▨	▨	F

Use decimals

Write M if if meters

Segment 1 = Depths

Conductivity

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

Best cond. (-K)

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

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

Segment 9

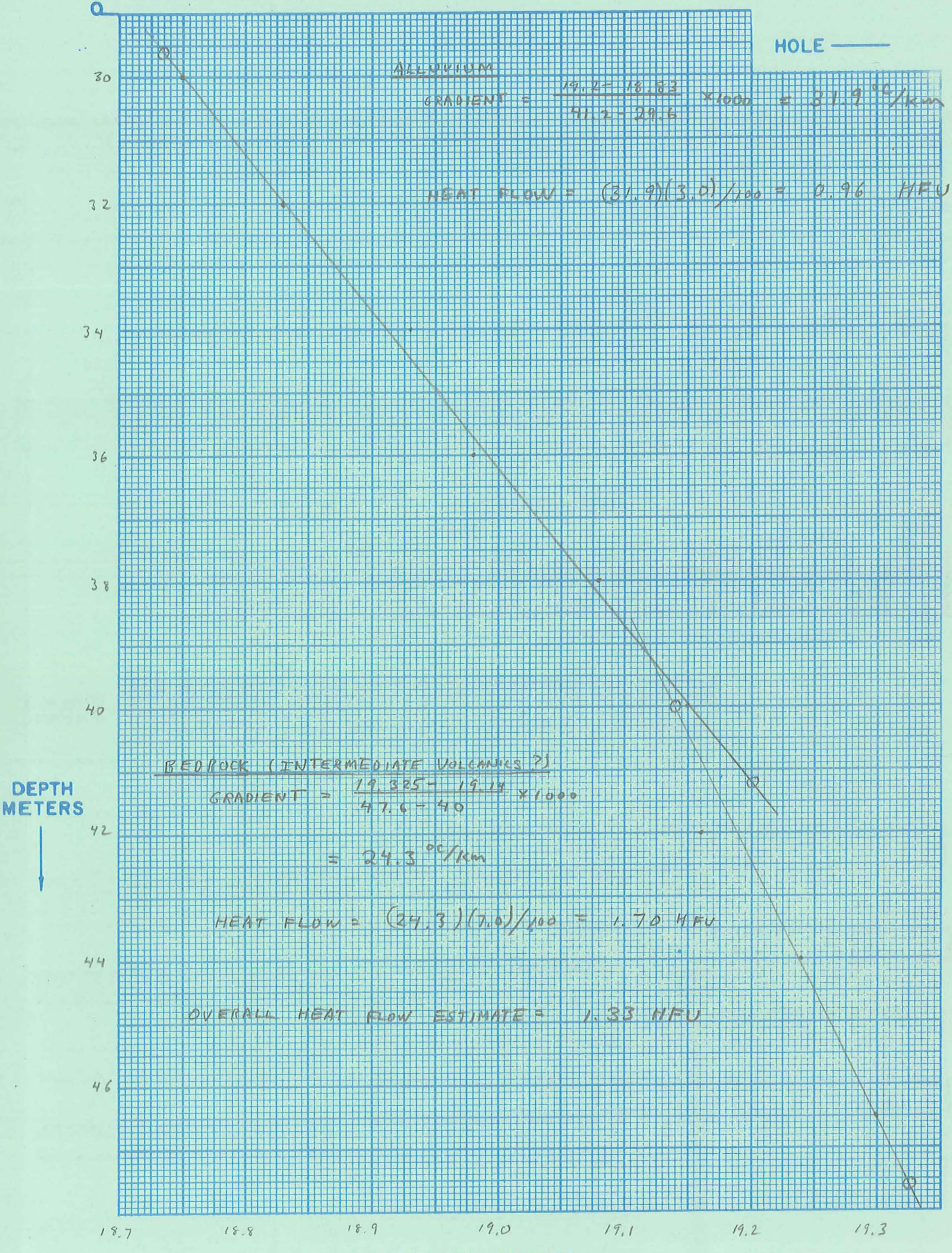
21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

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

HOLE ——



ALLUVIUM

$$\text{GRADIENT} = \frac{19.2 - 18.83}{41.2 - 29.6} \times 1000 = 31.9\ °C/km$$

$$\text{HEAT FLOW} = (31.9)(3.0)/100 = 0.96\ \text{HFU}$$

BEDROCK (INTERMEDIATE VOLCANICS ?)

$$\text{GRADIENT} = \frac{19.325 - 19.14}{47.6 - 40} \times 1000$$

$$= 24.3\ °C/km$$

$$\text{HEAT FLOW} = (24.3)(7.0)/100 = 1.70\ \text{HFU}$$

OVERALL HEAT FLOW ESTIMATE = 1.33 HFU

GIFT ΔT

Date Logged: 7/19/80

ΔT Well No. 80-141

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O [✓ Air]	Lithology, etc.
30		18.75	0.08	40	3.0		MED. BROWN. SILTY Qal
32		18.83	0.10	50	3.0		WITH FEW PEBBLES OF INTERMEDIATE
34		18.93	0.05	25	3.0		TO BASALTIC VOLCANIC PORPHYRIES.
36		18.98	0.10	50	3.0		PHENOCRYSTS (UP TO 7mm) OF
38		19.08	0.07	35	3.0		AMPHIBOLE IN BASALT COBBLE
40		19.15	0.01	5	7.0		
42.5		19.16	0.08	40	7.0		
44		19.24	0.06	24	7.0		
46.5		19.30			7.0		

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

BHT

ΔT Well No. ____________

Property-Project ____________ Depth Logged 120m

Map ORGAN PEAK Scale 7.5 Date: Drilled ____________ Logged 7/22/80

State N MEX County DONA ANA , ______ of SW of SW of NE of Sec 13 T 22 S R 2E

Instrument DT 101 Operator HUNTSMAN Elevation 4465 (ft / m)

Comments WINDMILL OFF HIGHWAY BY HOUSE - 2 STORAGE TANKS

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
1	1	1	4							2	2	▨		7	▨	8	0	C	M

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

Site Description (columns 21–50); Operator (51–55); Editor (56–60); Drilled: DA (61–62), MO (64–65), YR (67–68)

21–50 Site Description	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
	H	U	N	T	S	/							▨			▨		

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

Map Location * *

Card B

Scale Unit IN CM					Map Size (7.5, 15., 60.)					N Lat Degree					N Lat Min					W Long Degree					W Long 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
▨	C	M	▨	▨			7	.	5			3	2	.	2	2		.			1	0	6	.	4	5		.	

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
						9	.								2	5	.							.	▨	▨	▨	▨	F

Use decimals

← Write M if if meters

Segment 1 = Depths

Conductivity

Best cond. (-K)

Downward extrapolations (-Δ 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

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 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 ———

DEPTH
METERS
↓

TEMPERATURE °C →

BHT

Date Logged: ______________________ ΔT Well No. ______________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
70		23.5					
80		23.85					
90		24.0				Air	
100		24.15			3.3	H_2O	Alv-SS. 3.3 DRY - Sm Rk Chips CHERT
105		24.1					
110		23.80				↓	
115		23.40					
120		23.48				H_2O	

K=Conductivity

page ____ of ____

Date Logged: ____________

ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ____ of ____

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Rope ΔT

ΔT Well No. 80-142

Property-Project 1114 Depth Logged 28m

Map Caballo Scale 7.5 1/24000 Date: Drilled ____ Logged 7/15/80

State N.M County Sierria , SW1/4 of SW1/4 of NE1/4 of NE1/4 of Sec 11 T 16S R 5W

Instrument DT-101 121 (repaired) Operator WA Elevation 4262 (ft/m)

Comments Windmill 6' blades, 6" casing. Was not pumping

Card A

RT JUSTIFY

Date Logged

Proj No (1–4)	Well No (5–10)	DA (11–12)	MO (14–15)	YR (17–18)	19*	20*
1114		15	07	80	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 (64–65)	Drilled YR (67–68)
	WA	/			

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

Card B

Map Location **

Scale Unit IN CM (22–23)	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	7.5	32.	56.3	107.	19.7

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)	80
27.63	21.93	4262.	F

Use decimals

Write M if if meters

Segment 1 = Depths

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

Best cond. (-K)

Downward extrapolations (-ΔK)

	Start (51–60)	End (61–70)	K (71–75)	ΔK (76–80)
Segment 2				

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

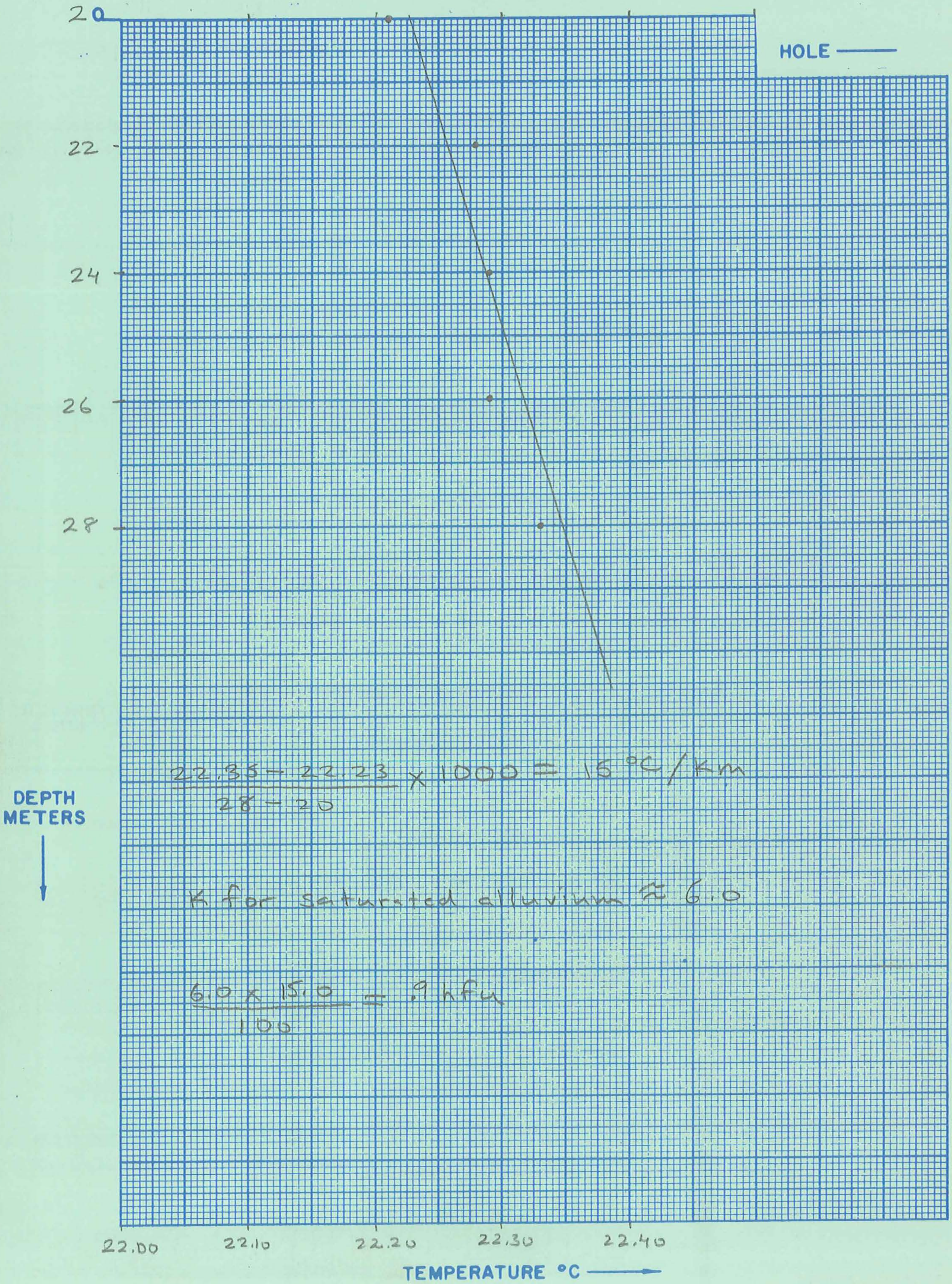
Segment 7

Segment 8 Start →

Segment 9 (21–50)

Segment 10 Start → (51–80)

After final segment Start = .999



$$\frac{22.35 - 22.23}{28 - 20} \times 1000 = 15\ °C/Km$$

K for saturated alluvium ≈ 6.0

$$\frac{6.0 \times 15.0}{100} = .9\ hfu$$

Rope ΔT

Date Logged: 7/15/80

ΔT Well No. 80-142

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		22.21	0.07	35			Alluvium
22		22.28	0.01	5			
24		22.29	0.00	0		H2o	
26		22.29	0.04	20			
28		22.33					
							H2o at 19m

K=Conductivity

page ______ of ______

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page _____ of _____

AMAX EXPLORATION, INC.   Dam ΔT

TEMPERATURE/DEPTH LOG

ΔT Well No. 80 - 143

Property-Project 1114   Depth Logged 42m

Map Garfield   Scale 7.5   Date: Drilled ____   Logged 7/15/80

State N.M   County Sierria , SW¼ of NW¼ of SW¼ of SE¼ of Sec 20 T 17S R 4W

Instrument DT-101-121 repaired   Operator WA   Elevation 4244 ([✓ ft] m)

Comments Windmill, 6" casing, 6' blades

RT 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	1	1	4							1	5	▨	0	7	▨	8	0	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
																																	W	A	/							▨			▨		

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

Card B

Map Location **

Scale Unit IN CM					Map Size (7.5, 15., 60.)					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
▨	c	m	▨	▨			7	.	5			3	2	.		4	8	.	5		1	0	7	.		1	6	.	6

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
					2	8	.	2	1						3	9	.	7	5	4	2	4	4	.	▨	▨	▨	▨	F

Use decimals

← Write M if 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 →

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 Start →

Segment 5

Segment 6 Start →

Segment 7

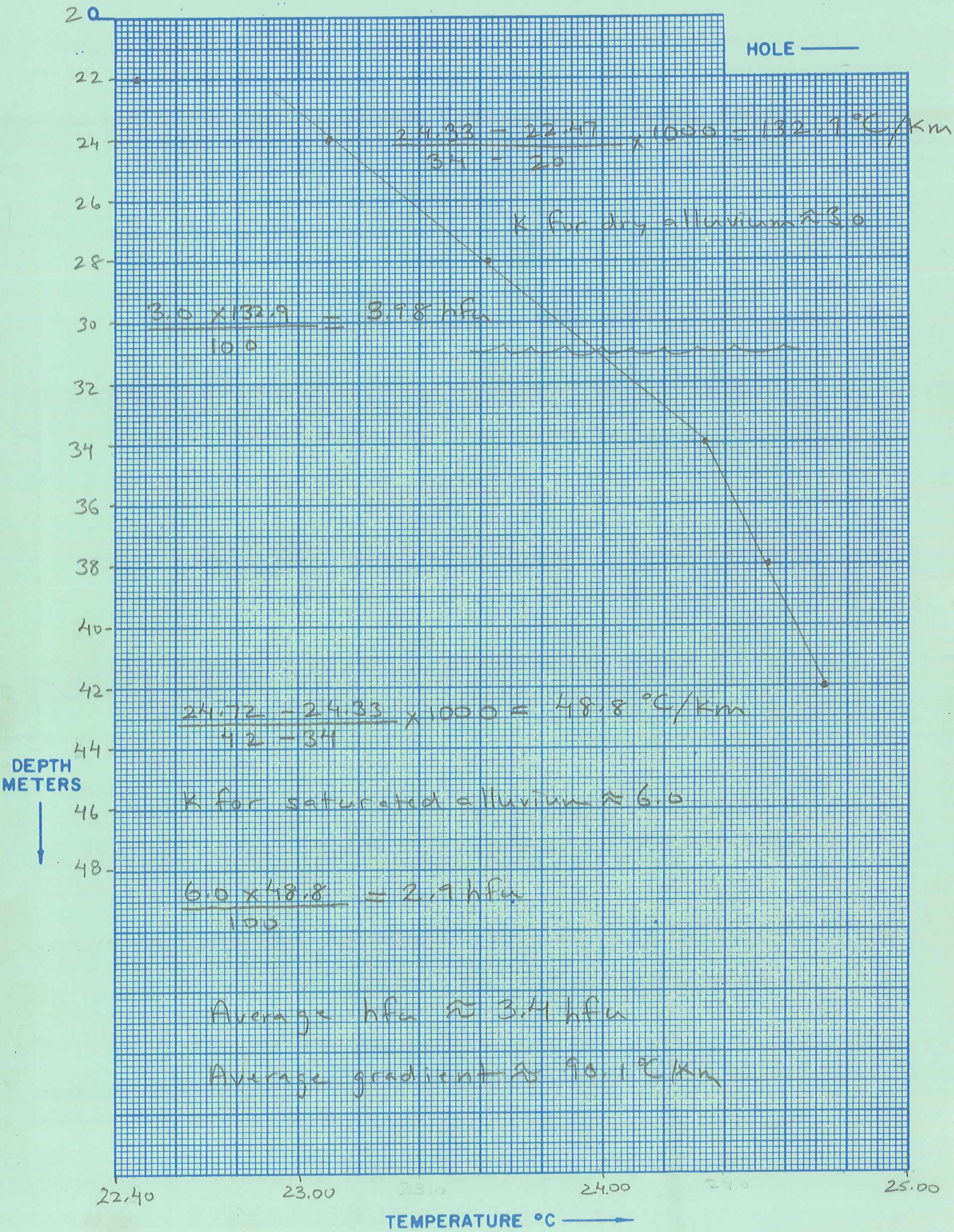
Segment 8 Start →

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



$$\frac{24.33 - 22.47}{34 - 20} \times 1000 = 132.9\ °C/Km$$

K for dry alluvium ≈ 3.0

$$\frac{3.0 \times 132.9}{100} = 3.98\ \text{hfu}$$

$$\frac{24.72 - 24.33}{42 - 34} \times 1000 = 48.8\ °C/Km$$

K for saturated alluvium ≈ 6.0

$$\frac{6.0 \times 48.8}{100} = 2.9\ \text{hfu}$$

Average hfu ≈ 3.4 hfu

Average gradient ≈ 90.1 °C/Km

Dam ΔT

Date Logged: 7/15/80

ΔT Well No. 80-143

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		22.47	0.63	156			Alluvium
24		23.10	0.52	130		air	
28		23.62	0.71	118			
34		24.33	0.21	53		H2O	
38		24.54	0.18	45			H2O at 31m
42		24.72					

K=Conductivity

page ______ of ______

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ____ of ____

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Greyback ΔT.

ΔT Well No. 80 - 144

Property-Project 1114 Depth Logged 110 m

Map Skute Stone Arroyo Scale 7.5 Date: Drilled ______ Logged 7/15/80

State N.M County Sierra , NE¼ of SW¼ of NE¼ of NW¼ of Sec 36 T15S R6W

Instrument DT-101 121 repaired Operator WA Elevation 4743 ([✓ ft] m)

Comments Windmill, 6" casing, 10' blades ; pumping during measurement

no shutoff mechanism

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
1	1	1	4							1	5		0	7		8	0	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)	63	MO (64–65)	66	YR (67–68)
	WA	/					

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

Card B

Map Location * *

Scale Unit IN CM					Map Size (7.5, 15., 60.)					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
	c	m					7	.	5			3	2	.		5	8	.	0		1	0	7	.		2	4	.	8

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
					4	1	.	9	2						3	3	.	6	5	4	7	4	3	.					F

Use decimals

← Write M if if meters

Segment 1 = Depths Start (21–30) End (31–40) Conductivity K (41–45) ΔK (46–50)

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

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 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

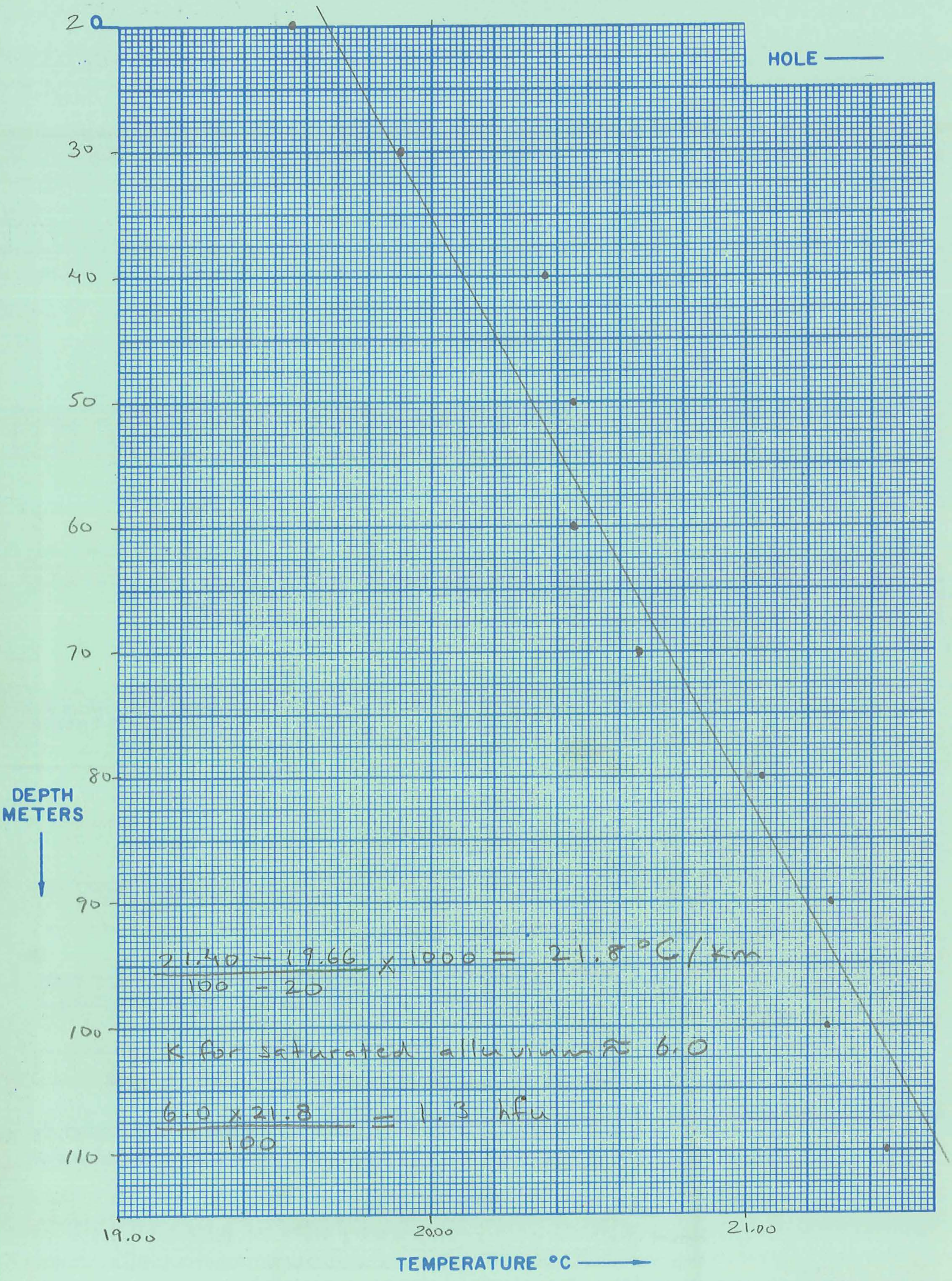
Segment 9

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



$$\frac{21.40 - 19.66}{100 - 20} \times 1000 = 21.8\ °C/km$$

K for saturated alluvium ≈ 6.0

$$\frac{6.0 \times 21.8}{100} = 1.3\ \text{hfu}$$

Greyback ΔT

Date Logged: 7/15/80

ΔT Well No. 80 - 144

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O ~~Air~~	Lithology, etc.
20		19.55	0.35	35			Alluvium
30		19.90	0.46	46			containing numerous
40		20.36	0.09	9			pebbles and blocks
50		20.45	0.00	0			of volcanic products.
60		20.45	0.21	21			
70		20.66	0.39	39			
80		21.05	0.24	24			
90		21.27	-0.01	-1			Well pumped H_2O
100		21.26	0.24	24			while probing.
110		21.45					H_2O flowed
							occasionally.

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Greenhorn ΔT

ΔT Well No. 80-145

Property-Project 1114 Depth Logged 105m

Map Skute Stone Arroyo Scale 7.5 Date: Drilled ______ Logged 7/15/80

State N.M County Sierra, SE¼ of SE¼ of NE¼ of SE¼ of Sec 4 T 16S R 6W

Instrument DT-101 121 repaired Operator WA Elevation 4936 [✓ ft] (m)

Comments Windmill, 6" casing, 8' blades. Not pumping.

Card A

Date Logged

RT JUSTIFY

Proj No	Well No	DA	MO	YR	19*	20*
1114		15	07	80	C	M

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

Site Description	Operator	Editor	Drilled DA	Drilled MO	Drilled YR
	WA	/			

(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	7.5	33.	56.5	107.	27.0

Use decimals

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

Northing	Easting	Elev	80
31.05	17.55	4936.	F

Use decimals

← Write M if if meters

Segment 1 = Depths: Start, End; Conductivity: K, ΔK

Best cond. (-K)

Downward extrapolations (-ΔK): End, K, ΔK

Segment 2 Start →

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

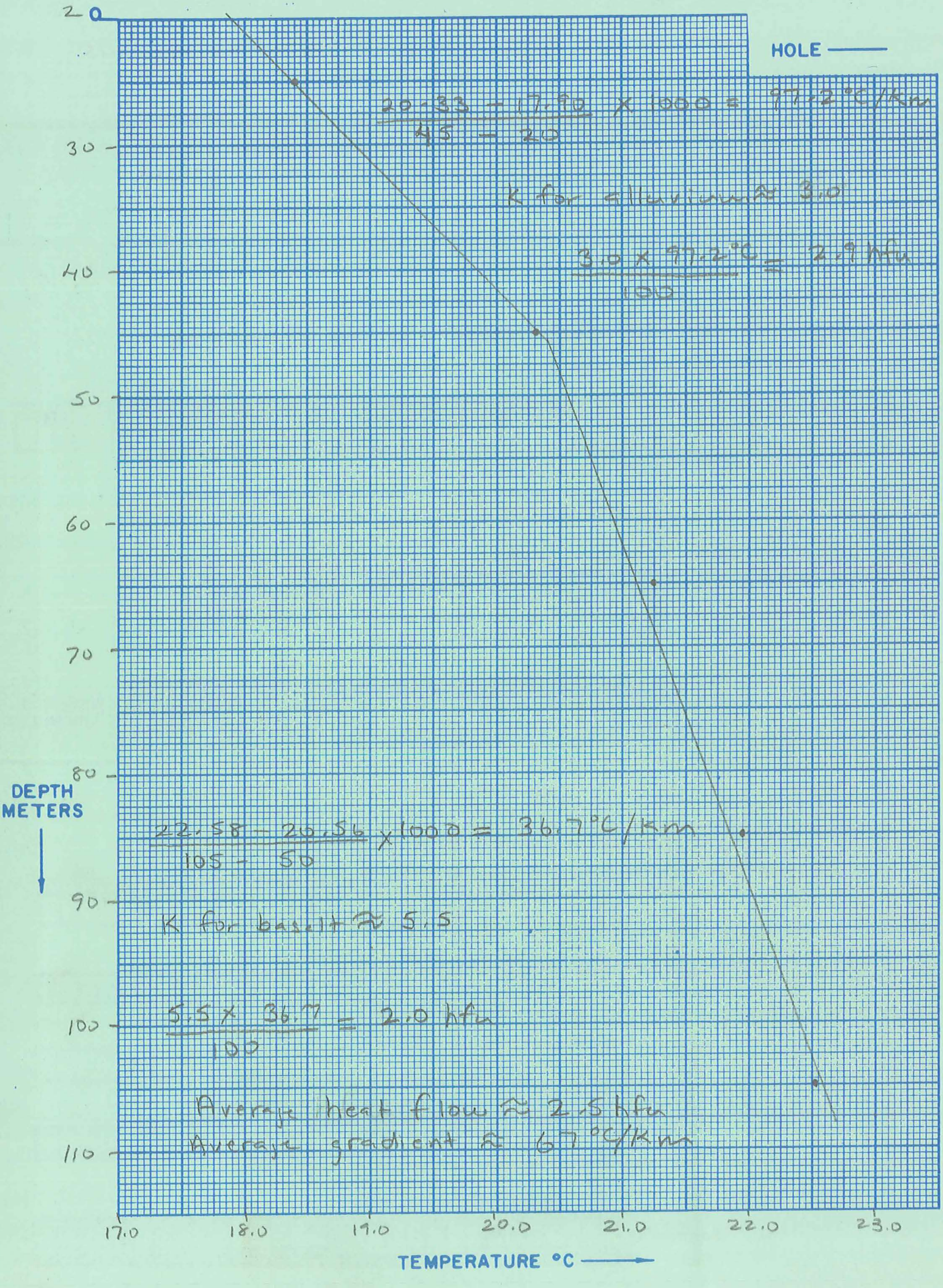
Segment 7

Segment 8 Start →

Segment 9

Segment 10 Start →

After final segment Start = .999



$$\frac{20.33 - 17.90}{45 - 20} \times 1000 = 97.2\,°C/Km$$

K for alluvium ≈ 3.0

$$\frac{3.0 \times 97.2°C}{100} = 2.9 \text{ hfu}$$

$$\frac{22.58 - 20.56}{105 - 50} \times 1000 = 36.7\,°C/Km$$

K for basalt ≈ 5.5

$$\frac{5.5 \times 36.7}{100} = 2.0 \text{ hfu}$$

Average heat flow ≈ 2.5 hfu
Average gradient ≈ 67 °C/Km

Greenhorn ΔT

Date Logged: 7/15/80

ΔT Well No. 80-145

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
25		18.40	1.90	95			Alluvium on
35		—					surface, dk
45		20.30	0.95	48		Air	colored basalt (?)
55		—					below? "Basalt" is
65		21.25	0.69	35			dk grey to black
75		—					in color, generally
85		21.94	0.58	29		H_2O	porphyritic, with
95		—					phenos of plag and
105		22.52					pyroxene (?). Found
							as blocks, cobbles,
							and pebbles in
							alluvium. Source
							may be hills to
							west ??
							H_2O at ≃75m

K=Conductivity

page ____ of ____

Date Logged: ____________________

ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Sibley Gap ΔT

ΔT Well No. 80-146

Property-Project 1114 Depth Logged 38 m

Map Hillsboro Scale 15' Date: Drilled ______ Logged ______

State N.M County Sierra , NW¼ of SE¼ of NW¼ of SW¼ of Sec 23 T 17S R 7W

Instrument DT-101 121 (repaired) Operator WA Elevation 5320 [✓ ft] m

Comments 5" casing, sub-pump, was not on at the moment.

Card A

RT JUSTIFY

Proj No (1–4)	Well No (5–10)	Date Logged DA (11–12)	13	Date Logged MO (14–15)	16	Date Logged YR (17–18)	19*	20*
1114		16	▨	07	▨	80	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)	63	Drilled MO (64–65)	66	Drilled YR (67–68)
	WA			▨		▨	

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

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)
cm	▨	15.0	32.	48.7	107.	32.0

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
11.30	31.96	5320.	▨	F

Use decimals

80 ← Write M if if meters

Segment 1 = Depths Start (21–30) End (31–40) Conductivity K (41–45) ΔK (46–50)

Best cond. (−K)

Downward extrapolations (−ΔK)

Segment 2 Start → (51–60) End (61–70) K (71–75) ΔK (76–80)

Segment 3

Segment 4 Start →

Segment 5

Segment 6 Start →

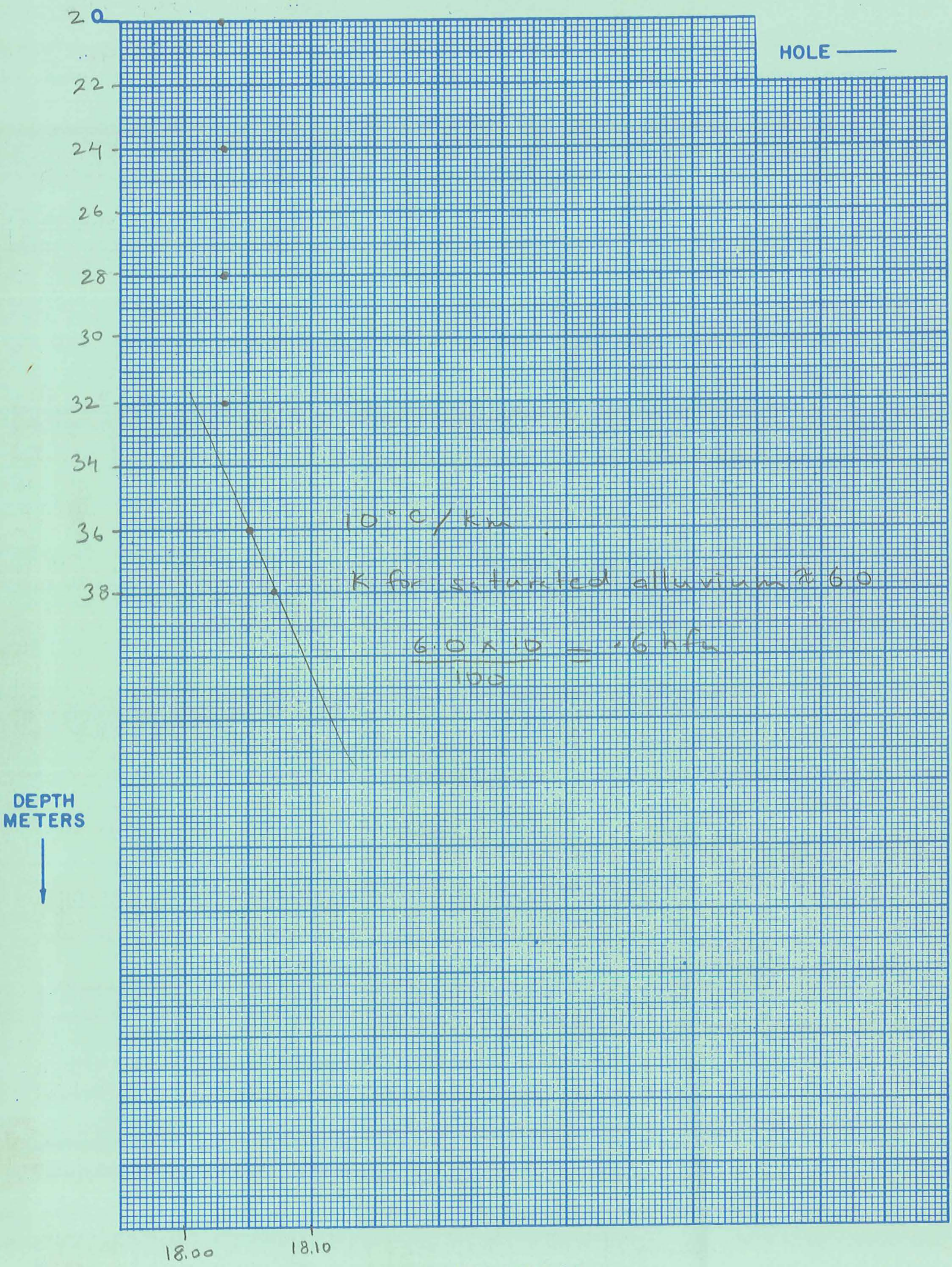
Segment 7

Segment 8 Start →

Segment 9 (21–50)

Segment 10 Start → (51–80)

After final segment Start = .999



10°C/km

K for saturated alluvium ≈ 6.0

$$\frac{6.0 \times 10}{100} = .6 \text{ hfu}$$

Sibley Gap ΔT

Date Logged: 7/16/80

ΔT Well No. 80-146

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		18.03	0	0			Alluvium underlain
24		18.03	0	0			by (maybe) xtal
28		18.03	0	0			tuffs (welded).
32		18.03	0.02	10		H2O	These tuffs o/c
36		18.05	0.02	10			in hills to east.
38		18.07					

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

BHT

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Berrenda ΔT

ΔT Well No. 80-147

Property-Project 1114 Depth Logged 50m

Map Clark Spr. Canyon Scale 7.5' Date: Drilled ______ Logged 7/16/80

State N.M County Sierra , ______ of ______ of ______ of ______ of Sec 8 T 18S R 6W

Instrument DT-101-121 (repaired) Operator WA Elevation 4729 [✓ (ft] m)

Comments Windmill, 4" casing 6' blades; may have been pumping. Tank was full, spinning slowly when I arrived.

RT 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	1	1	4							1	6	▨	0	7	▨	8	0	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
																																	WA		/							▨			▨		

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

Card B

Map Location * *

Scale Unit IN CM					Map Size (7.5, 15., 60.)					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
▨	c	m	▨	▨			7	.	5			3	2	.		4	6	.	0		1	0	7	.		2	8	.	7

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	0							8	.	7	0	4	7	2	9	.	▨	▨	▨	▨	F

Use decimals

← Write M if 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 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

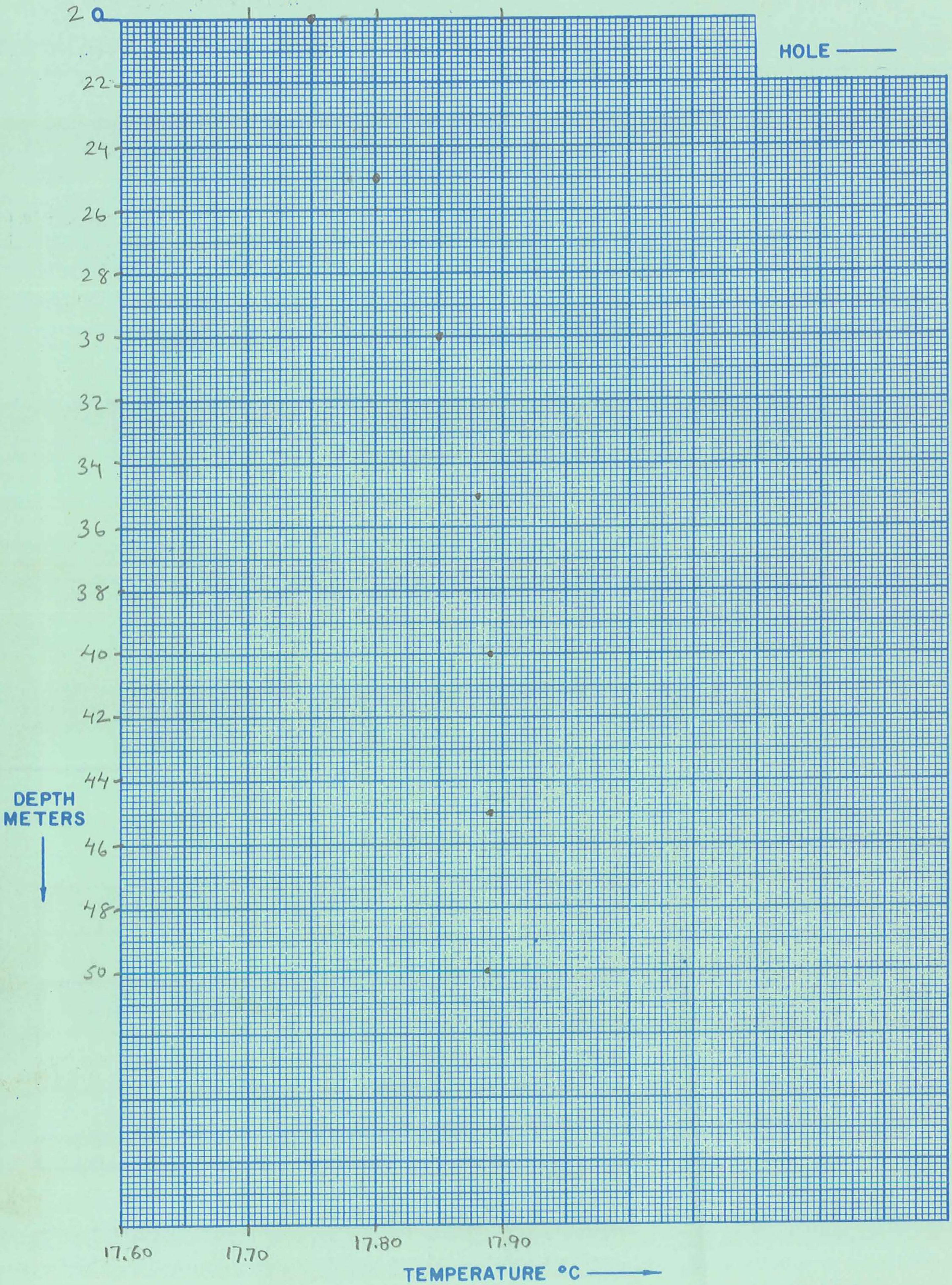
Segment 9

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


HOLE
20
22
24
26
28
30
32
34
36
38
40
42
44
46
48
50
DEPTH METERS
17.60
17.70
17.80
17.90
TEMPERATURE °C

BHT Berrenda ΔT

Date Logged: 7/16/80

ΔT Well No. 80-147

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		17.75	0.05	10			Alluvium
25		17.80	0.05	10			containing numerous
30		17.85	0.03	6			blocks and pebbles
35		17.88	0.01	2			of welded xtal
40		17.89	0.00	0			tuff.
45		17.89	-0.01	-2			
50		17.88					

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Sibley ΔT

ΔT Well No. 80-148

Property-Project 1114 Depth Logged 32m

Map Clark Spr. Canyon Scale 7.5 Date: Drilled ______ Logged 7/16/80

State N.M County Sierria , SE¼ of SE¼ of SW¼ of SE¼ of Sec 36 T 17S R 6W

Instrument DT-101 121 Operator WA Elevation 4581 [✓ ft] (m)

Comments Windmill, 5" casing, 6' blades; Pumping before I arrived. No shut-off mechanism.

Date Logged

RT 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
1	1	1	4							1	6	▨	0	7	▨	8	0	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
																																	W	A	/							▨			▨		

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

Card B

Map Location **

Scale Unit IN CM					Map Size (7.5, 15., 60.)					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
▨	C	M	▨	▨			7	.	5			3	2	.		4	6	.	9		1	0	7	.		2	4	.	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
					1	4	.	2	3						3	6	.	2	5	4	5	8	1	.	▨	▨	▨	▨	F

Use decimals

← Write M if if meters

Segment 1 = Depths

Conductivity

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

Best cond. (-K)

Downward extrapolations (- Δ K)

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 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

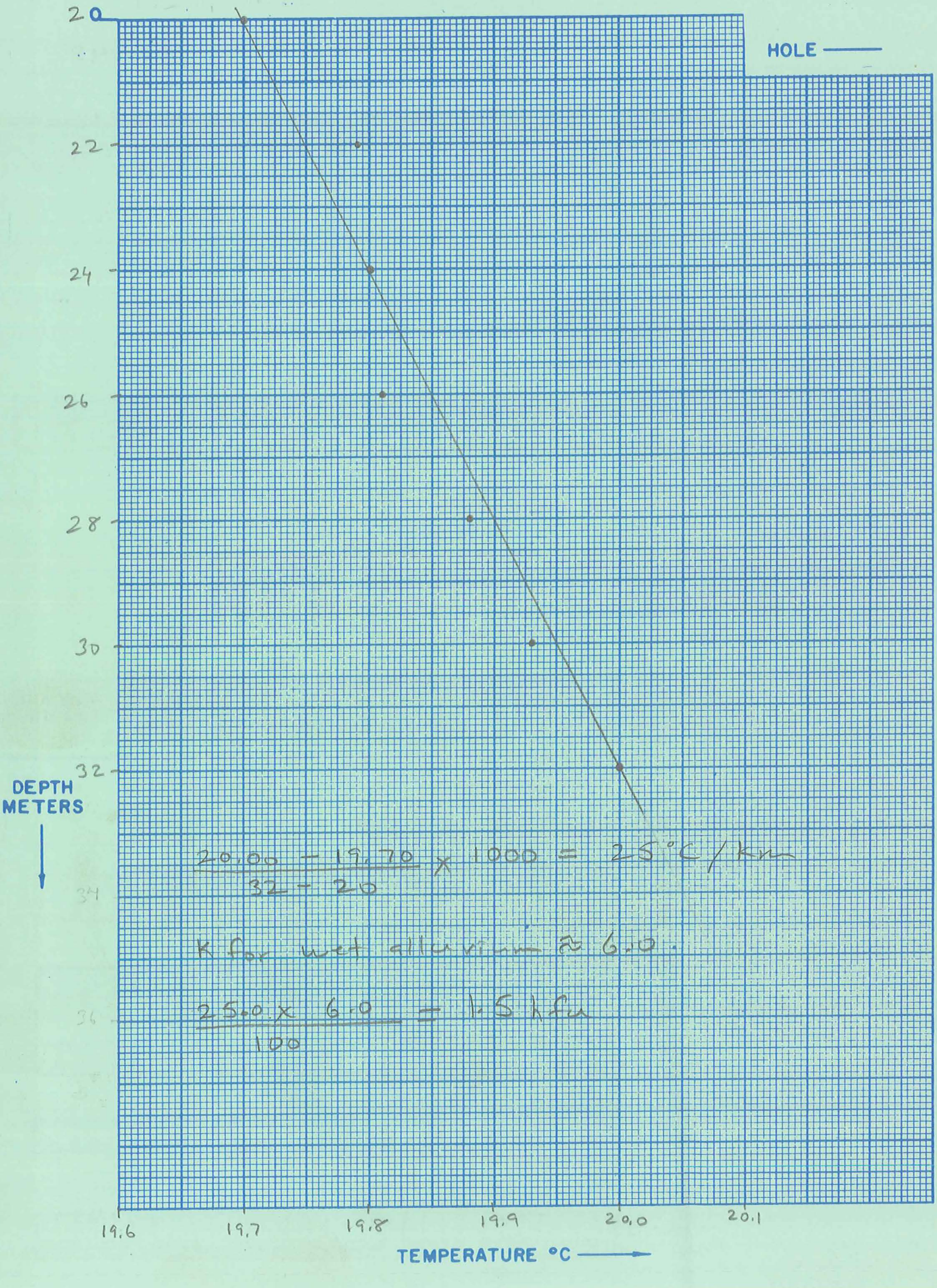
Segment 9

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



$$\frac{20.00 - 19.70}{32 - 20} \times 1000 = 25\,°C/km$$

K for wet alluvium ≈ 6.0.

$$\frac{25.0 \times 6.0}{100} = 1.5 \text{ hfu}$$

Sibley ΔT

Date Logged: 7/16/80

ΔT Well No. 80-148

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
20		19.70	0.09	45			Alluvium
22		19.79	0.01	5		↓	
24		19.80	0.01	5			
26		19.81	0.07	35		H20	H2O at 22m
28		19.88	0.05	25		↓	
30		19.93	0.07	35			
32		20.00					

K=Conductivity

page ______ of ______

Date Logged: ____________________

ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ____ of ____

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Town Mtn ΔT

ΔT Well No. 80-149

Property-Project 1114 Depth Logged 63

Map Lake Valley Scale 15.0' Date: Drilled ______ Logged 7/19/80

State N.M County Sierra, SW¼ of NE¼ of SW¼ of NE¼ of Sec 29 T18S R7W

Instrument DT-101 121 Operator WA Elevation 5450 ([✓ ft] m)

Comments Windmill disconnected, 1' casing, sub-pump.

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*
1114		19	07	80	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)
	WA	/			

(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	32.	43.	107.	32.4

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
38.10	26.20	5450.		F

Use decimals

Write M if if meters

Segment 1 = Depths

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

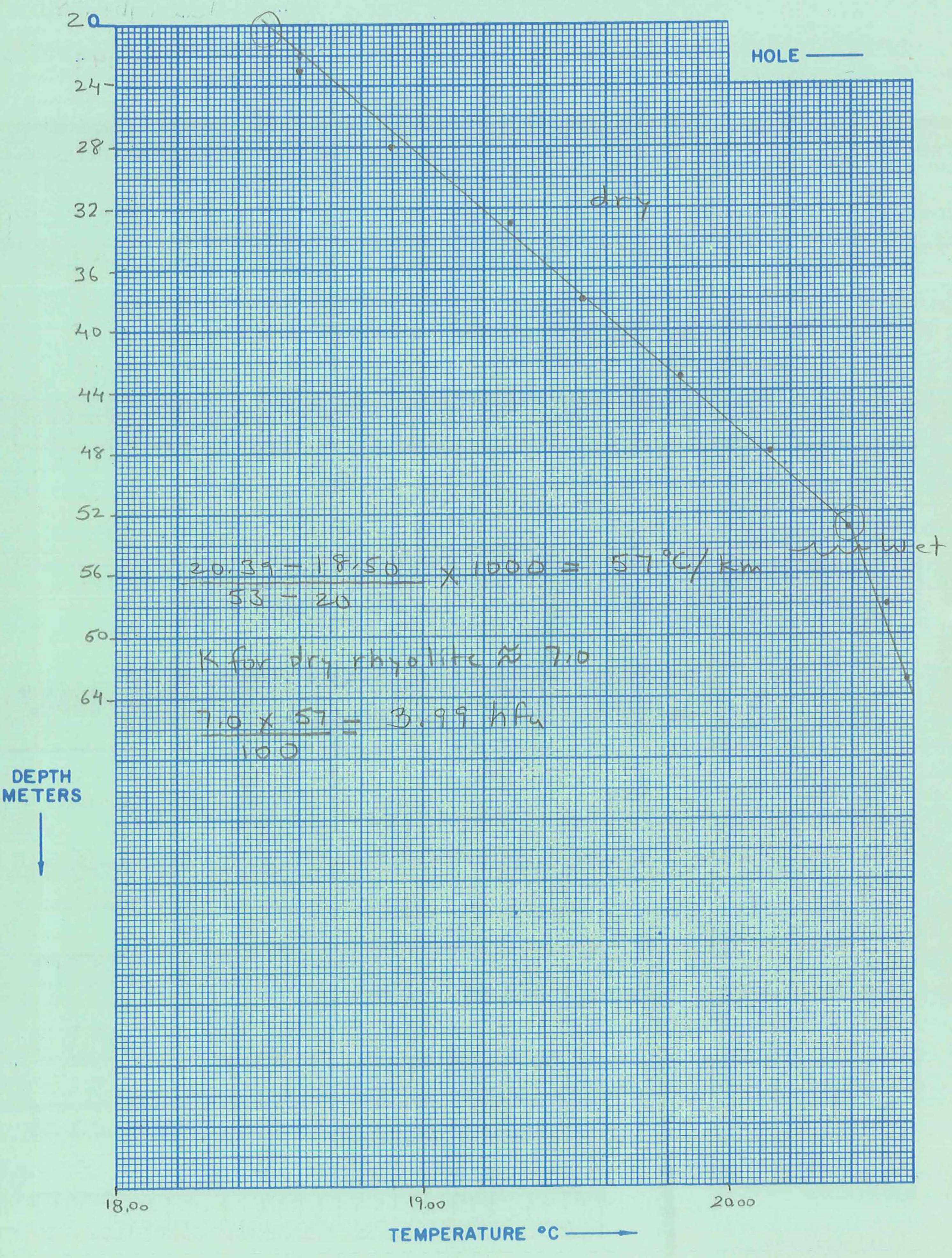
Best cond. (-K)

Downward extrapolations (-ΔK)

	Start (51-60)	End (61-70)	K (71-75)	ΔK (76-80)
Segment 2				
Segment 4				
Segment 6				
Segment 8				
Segment 10				

	Start (21-30)	End (31-40)	K (41-45)	ΔK (46-50)
Segment 3				
Segment 5				
Segment 7				
Segment 9				

After final segment Start = .999



$$\frac{20.39 - 18.50}{53 - 20} \times 1000 = 57\,°C/Km$$

K for dry rhyolite ≈ 7.0

$$\frac{7.0 \times 57}{100} = 3.99 \text{ hfu}$$

Town Mtn ΔT

Date Logged: 7/19/80

ΔT Well No. 80-149

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
23		18.60	0.30	60			Thin cover of
28		18.90	0.39	78			alluvium underlain
33		19.29	0.32	64			by the Mimbres
38		19.52	0.32	64		air	Peak Rhyolite?
43		19.84	0.29	58			See State Bur. of
48		20.13	0.26	52		↓	Mines + Min. Res.
53		20.39	0.12	24			Bull. 37. Andesites,
58		20.51	0.07	14		H_2O	and welded tuffs
63		20.58				↓	nearby.
							H_2O at 55m

K=Conductivity

page ___ of ___

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

Cotton ΔT

ΔT Well No. 80-150

Property-Project 1114 Depth Logged 32 m

Map Lake Valley Scale 15.0' Date: Drilled ______ Logged 7/19/80

State N.M County Sierra , NW¼ of SW¼ of SE¼ of SW¼ of Sec 28 T 19S R 7W

Instrument DT-101 121 Operator WA Elevation 5060 ([✓ ft] m)

Comments Windmill disconnected, sub-pump; 8' casing

RT 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	1	1	2							1	9		0	7		8	0	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
																																	W	A	/												

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

Card B

Map Location * *

Scale Unit IN CM					Map Size (7.5, 15., 60.)					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
	c	m				1	5	.	0			3	2	.		3	7	.	5		1	0	7	.		3	4	.	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
					2	1	.	1	5						2	7	.	0	5	5	0	6	0	.					F

Use decimals

← Write M if if meters

Segment 1 = Depths

Conductivity

Best cond. (-K)

Downward extrapolations (- Δ 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

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 Start →

Segment 5

Segment 6 Start →

Segment 7

Segment 8 Start →

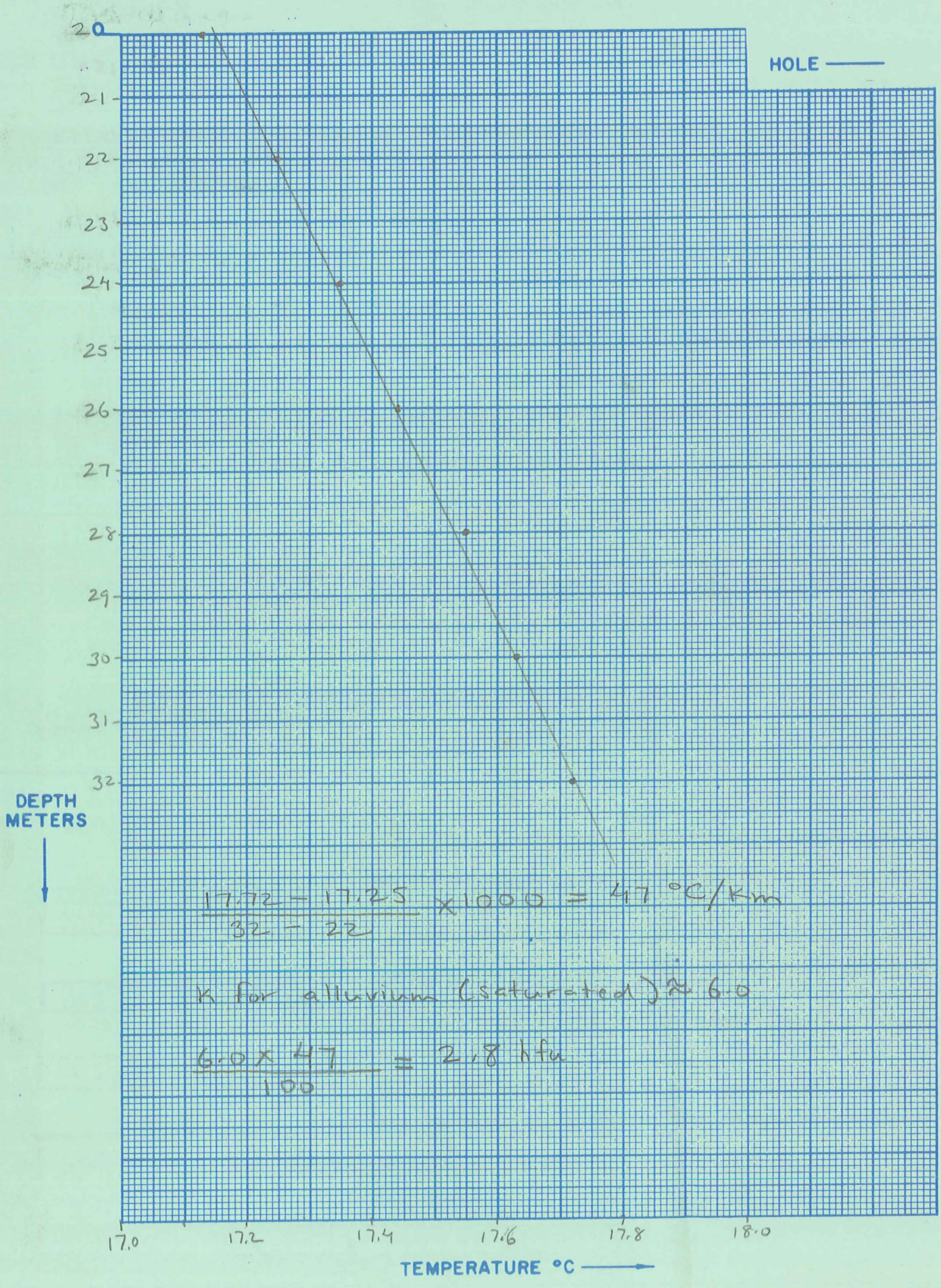
Segment 9

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



$$\frac{17.72 - 17.25}{32 - 22} \times 1000 = 47 \text{ °C/Km}$$

K for alluvium (saturated) $\approx$ 6.0

$$\frac{6.0 \times 47}{100} = 2.8 \text{ hfu}$$

Cotton ΔT

Date Logged: 7/19/80

ΔT Well No. 80-150

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O ~~Air~~	Lithology, etc.
20		17.13	0.12	60		H_2O	Alluvium
22		17.25	0.10	50			Hills 1 mile to
24		17.35	0.09	45			west are composed
26		17.44	0.11	55			of pyroxene
28		17.55	0.08	40			andesite. Also
30		17.63	0.09	45			below??
32		17.72					

K=Conductivity

page ____ of ____

Date Logged: ____________________ ΔT Well No. ____________

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.

K=Conductivity

page ______ of ______