AMAX EXPLORATION, INC.

GEOTHERMAL BRANCH

Information Transmittal Form

To: O'Brien Resources (Company) Grass Valley, CA (Address)

Attention: Dale Corman (Name) President (Title)

Authority: Contract McCoy

Date of Contract _____ Sections _____

Enclosed Items: ☐ Maps ☐ Logs ☐ Reports ☐ Analyses ☐ Plans ☐ Schedules ☐ AFE

Item	Description	Copy			Date
		Field	Draft	Final	
Lith logs	25-9 and 38-9 holes			X	3/81
temp logs	" " "				
	SP, gamma & resistivity well				
	logs for same holes.				

Sent by: H. Dean Pilkington (Name) 10/23/81 (Date)

Receipt acknowledged by: _____ (Name) _____ (Date)

LITHOLOGIC LOG

Project: McCoy

Hole: 25-9

Elevation: 5776 Date Drilled 26/3/81 thru 3/5/81

Location: NWSW Sec 9 T22N R40E Method: rotary/air/ and/or mud

Geologist: Avery Gamma:

Depth ( )	Description
0- 15'	Overburden: Edwards Creek tuff float, and Triassic basal conglomerate float in mud-silt-sand.
15- 65'	Triassic basal conglomerate (T_{rc}): Strongly cemented sub-rounded to subangular gravel and pebble size clasts of brown, reddish brown, red, gray and green chert; white gray and brown quartzite. Cement is SiO_2, with much iron staining along clast edges, in fractures, and in cement itself. Few boulder-size clasts of chert/quartzite.
65- 75'	Same as above, with addition of rounded reddish-purple f.c. quartzite, and yellow-brown chert fragments.
75- 85'	Same as above, with appearance of reddish brown, finely crushed siltstone making up approximately 20-30 % of total sample.
85- 95'	Same as 15'-65', with quartzite clasts ≃80% of total. rounded chert pebbles ≃10% of total. reddish-brown siltstone ≃10% of total.
95-125'	Same as above, but siltstone now ≃30-40% of total.
125-155'	Same T_{rc}, with appearance of buff (orange-gray) ss pebbles, and reddish-buff silt-st. pebbles (both well-rounded/rounded) - new material ≃25-35% of total.
155-215'	T_{rc} with finely crushed, orange-gray silty sand-st. making up between 20% and 55% of total sample in this interval. Rounded-subrounded pebbles (chert/quartzite) still constitute up to 80% of total.
215-225'	Same as above. Silty ss <20% of total now.
225-245'	T_{rc} with 80% white qtzite/qtzite conglomerate that is densely cemented, l.g. qtzite with gravel-size, subangular clasts. Iron staining on fracture faces, and some hydrous copper oxide coatings on some fragments (qtzite retains sedimentary features as opposed to older quartzites such as Valmy, etc.).

LITHOLOGIC LOG

Project: McCoy

Hole: 25-9

Elevation: _____ Date Drilled: _____

Location: _____ Method: _____

Geologist: Avery Gamma: _____

Depth (')	Description
245-260'	Gray-orange sand-st./silty sand-st. conglomerate similar to 155-215' interval.
260-300'	T_{rc} (as before) with iron stained gravel-pebble conglomerate. Addition of a few limestone pebble-size fragments (angular). Some larger fragments of conglomerate (chert-quartzite) in last 20'.
300-320'	Chert T_{rc} conglomerate (60-40%), orange gray silty ss (as in 245-260') (40-60%).
320-330'	90% chert pebble conglomerate (T_{rc}). One clast shows FeS_2, $CuFeS_2$ mineralization (as granular coating on pebble and as stringer vein through pebble).
330-350'	T_{rc} with orange-gray silty ss as in 300-320'. Percent of silty ss drops from 50% to 20% over this interval.
350-360'	80% qtzite chert/qtzite pebble conglomerate: (T_{rc}).
360-390'	Same as 330-350'
390-410'	90% gravel-pebble-boulder chert/qtzite conglomerate: (T_{rc}), 10% silty ss.
410-420'	Gravel size chert/qtzite conglomerate with qtzite (35%): (T_{rc}).
420-440'	Gray-orange silty ss (35%), chert/qtzite conglomerate (65%): (T_{rc}).
440-450'	Same T_{rc} conglomerate with $CuFeS_2$, bornite, pyrite mineralization as granular fracture fillings, coatings, stringers in pebbles of qtzite. Few green/red banded chert clasts.
450-500'	T_{rc} (as before) with up to 50% orange-gray ss sand. (m.g., subrounded grains). Purple color to some conglomerate fragments. Color of ss becomes darker throughout interval.

LITHOLOGIC LOG

Project: McCoy

Hole: 25-9

Elevation: _____ Date Drilled: _____

Location: _____ Method: _____

Geologist: _____ Gamma: _____

Depth (')	Description
500-560'	T_{rc} (as before but now all gravel size subrounded to subangular clasts of chert and quartzite with 20-60% orange-gray silty sandstone).
560-580'	T_{rc} as before but now 70% quartzite; 20% silty-ss; 10% chert gravels and pebbles.
580-620'	T_{rc} as before but no orange-gray silty ss.
620-640'	T_{rc} as before with 5-30% silty ss.
640-650'	T_{rc} pebble conglomerate (chert & quartzite about 30-50%).
650-720'	T_{rc} chert, quartzite, and dark brown to reddish brown silicified siltstone gravels and pebbles, rounded to angular, with varying ratios of up to 40% siltstone, 60% quartzite.
720-730'	90% reddish dk. brown silicified siltstone. 10% gravels (T_{rc}).
730-760'	T_{rc} silicified siltstone as above with a siltstone/chert gravel conglomerate in a siltstone matrix (up to 70% matrix).
760-780'	T_{rc} chert/qtzite pebble-gravel conglomerate with siltstone.
780-790'	T_{rc} as above w/20% silt-st. pebbles. Pyrite and chalcopyrite? As granular fracture fillings, coatings.
790-800'	Quartzite: v.f.g. w/distinct black grains in otherwise white quartzite w/blebs or nodules of black, sulfide-rich silicified siltstone.
800-820'	T_{rc} chert/qtzite pebble-gravel conglomerate w/minor pyrite (granular).
820-840'	T_{rc} as before but no mineralization.

LITHOLOGIC LOG

Project: McCoy

Hole: 25-9

Elevation: _____ Date Drilled: _____

Location: _____ Method: _____

Geologist: Avery Gamma: _____

Depth (')	Description
840-850'	T_{rc} as before with 20% brown silicified silt-st.
850-880'	Quartzite: f.c. to l.g., dense, well-cemented (gray). Very minor sulfide mineralization (pyrite) as before. T_{rc}
880-900'	30% quartzite as above, 60% dk. gray, dense, silicifed silt-st. Slight effervescence in dilute HCl, with minor sulfide mineralization as granular coatings and in stringers. Very few chips of gray ls with dk. gray silt-st. inclusions (silt-st. slightly calcareous).
900-920'	20% gray Ls, (hardness ≃ 2 1/2); 30% gray-dk. gray calcareous silt-st., (hardness ≃2 1/2-3); gray-lt. gray calcareous ss (hardness ≃4 1/2) and a f.c. silty ss make up 50% of total. T_{rc}
920-940'	As above, with 50% of total sample comprised of dense, gray, non-calcareous quartzite (hardness ≃ 6-7). T_{rc}
940-960'	Quartzite, as above with 50% qtzite/chert gravel conglomerate.
960-970'	30-40% reddish-brown silicified silt-st., some with calcite stringer veings (H ≃4), 50-60% gray, dense, f.c. quartzite (some brownish-gray) (H 6) and about 10% chert/quartzite gravel conglomerate. Minor sulfides (granular pyrite c-pyrite).
970-980'	90% mottled and banded lt. gray - v. dk. gray calcareous silt-st. (H ≃2 1/2 to 3 1/2). Some fragments have f.c. appearance. Minor sulfides as granular fracture fillings, veinlets? 10% or less silt-st. as before. T_{rc}
980-990'	80% gray-dk. gray f.g-f.c. quartzite w/minor sulfides as before. 20% chert/qtzite gravel conglomerate w/minor sulfides as before. T_{rc}

LITHOLOGIC LOG

Project: McCoy

Hole: 25-9

Elevation: _____ Date Drilled: _____

Location: _____ Method: _____

Geologist: _____ Gamma: _____

Depth (ft)	Description
990-1090'	30-90% chert/qtzite subrounded-subangular gravel conglomerate with green, gray, brown chert and gray qtzite (as before, T_{rc}) 10-70%. F.g.-f.c. gray quartzite.
1090-1100'	40-50% conglomerate as above; 60-50% orange-gray sandy silt-st.
1100-1200'	30-50% greenish gray chert, rounded-angular pebble-gravel size chips-clasts. 30-50% gray, brownish-gray f.g. qtzite; 10-40% silty ss (orange-gray). T_{rc}
1200-1440'	50-95% chert, qtzite, chert/qtzite conglomerate (T_{rc}) as before. 5-50% buff, orange-gray or lt. brown-tan silty ss to sandy ss. Appearance of purple/red-gray qtzite, conglomerate. T_{rc}
1440-1460'	60-70% tan-lt. brown sandy silt-st. 30-40% gravel conglomerate. T_{rc}
1460-1540'	40-80% gravel-pebble (T_{rc}) conglomerate. Mostly v.f. gravels, rounded-angular. 20-60% orange-gray to lt. brown silty-ss and sandy silt-st.
1540-1600'	Chocolate-brown qtzite/chert gravel-pebble conglomerate (60% of total). Brown silty-ss, orange-gray sandy ss (40%). T_{rc}
1600-1620'	80-100% chert/qtzite conglomerate w/bedded chert (angular chert clasts 40%).
1620-1640'	50% reddish-purple, silicified, subrounded to rounded silt-st. pebbles and finely crushed silt-st. containing large angular quartz phenocrysts. Many pebbles are graywacke (clay/silt-st. matrix with quartz phenocrysts - see sample!). 30-40% T_{rc} conglomerate as before. 10-20% grayish green qtzite and chert. Havallah Formation.
1640-1650'	Fault zone: about 2% of total is greenish-white, soft (H< 2), w/greasy feel, splintery soapstone (tall and/or other clay minerals). Does not expand when heated. 40%

LITHOLOGIC LOG

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Hole: 25-9

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Location: _____ Method: _____

Geologist: _____ Gamma: _____

Depth (')	Description
	brown, lt. brown, red-brown, white, gray v.f.g. qtzite. 58% (!) red-purple silicified siltstone conglomerate or fault breccia with very angular clasts of chert, qtzite, and silt-st. Many have calcite veins, caps. Calcite shows stress in curved cleavage faces.
1650-1660	As above, but no clay minerals present. Few pebbles of graywacke with micaceous flakes (muscovite). Appearance of green/lime-green chert w/iron staining (PPh?). (Note: basal T_{rc} unit mapped east of 864-90 contains siltstones and conglomerates with identical micaceous flakes).
1660-1690	As above (1640-1660), but increasing amount of green, green w/red iron stains on micro-fractures chert (20-75% of total). Fault breccia still present (10-50%). Very little graywacke (PPh).
1690-1740	As above with 30-60% green, gray, dk. green chert. 20-30% silty graywacke which is now slightly calcareous and has pheocrysts of qtzite (no micaceous flakes). 0-10% brown qtzite (f.g.).
1740-1750	No sample.
1750-1880	40-80% green-gray chert as angular gravel size chips. 15-45% reddish brown-purple silicified siltstone gravel size chips. 5-30% gray brown quartzite gravel size chips (P_{ph}). 5-30% graywacke (calcareous w/SiO_2 phenocrysts - not micaceous).
1880-2000	80-90% chert and dark purple/brown silicified silt-st.; 10-20% buff to gray quartzite; occasional rock fragments of T_{rc} chert gravel-pebble conglomerate from uphole - very iron-stained. (Note: Both the chert (green, lime-green, dk. green iron stained on micro-fractures green) and the silicified silt-st. (dark reddish-purple brown to reddish orange to gray-orange) were mapped as outcrops and low "rubble" hills 1-2 miles east of 25-9 and 1-3 miles east of 864-90. Hand samples of these PP Havallah sequence rocks are available - see Avery's rock collection!).

AMAX EXPLORATION, INC.

TEMPERATURE/DEPTH LOG

864-65

ΔT Well No. 25-9

Property-Project McCoy Depth Logged 600m

Map ____ Scale 7½ Date: Drilled 5-2-81 Logged 8-5-81

State NV County Churchill, ____ of ____ of NW of SW of Sec 9 T22N R40E

Instrument #46 Operator JED Elevation ____ (ft m)

Comments 2⅜ pipe Filled with H2O hung in open hole. Temps From upper 90 m of hole Taken on 5-15-81

Card A

JUSTIFY	Proj No	Well No	DA	MO	YR	*
	864	65	08	05	81	C M

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

Site Description	Operator	Editor	Drilled DA	Drilled MO	Drilled YR
9.05 KM S WHITEHORSE MINE	JED	DP	02	05	81

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

Card B

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	39.	45.0	117.	30.0	

Map Location * *

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

Use decimals

Northing	Easting	Elev	
16.7	3.85	.	F

Write M if meters

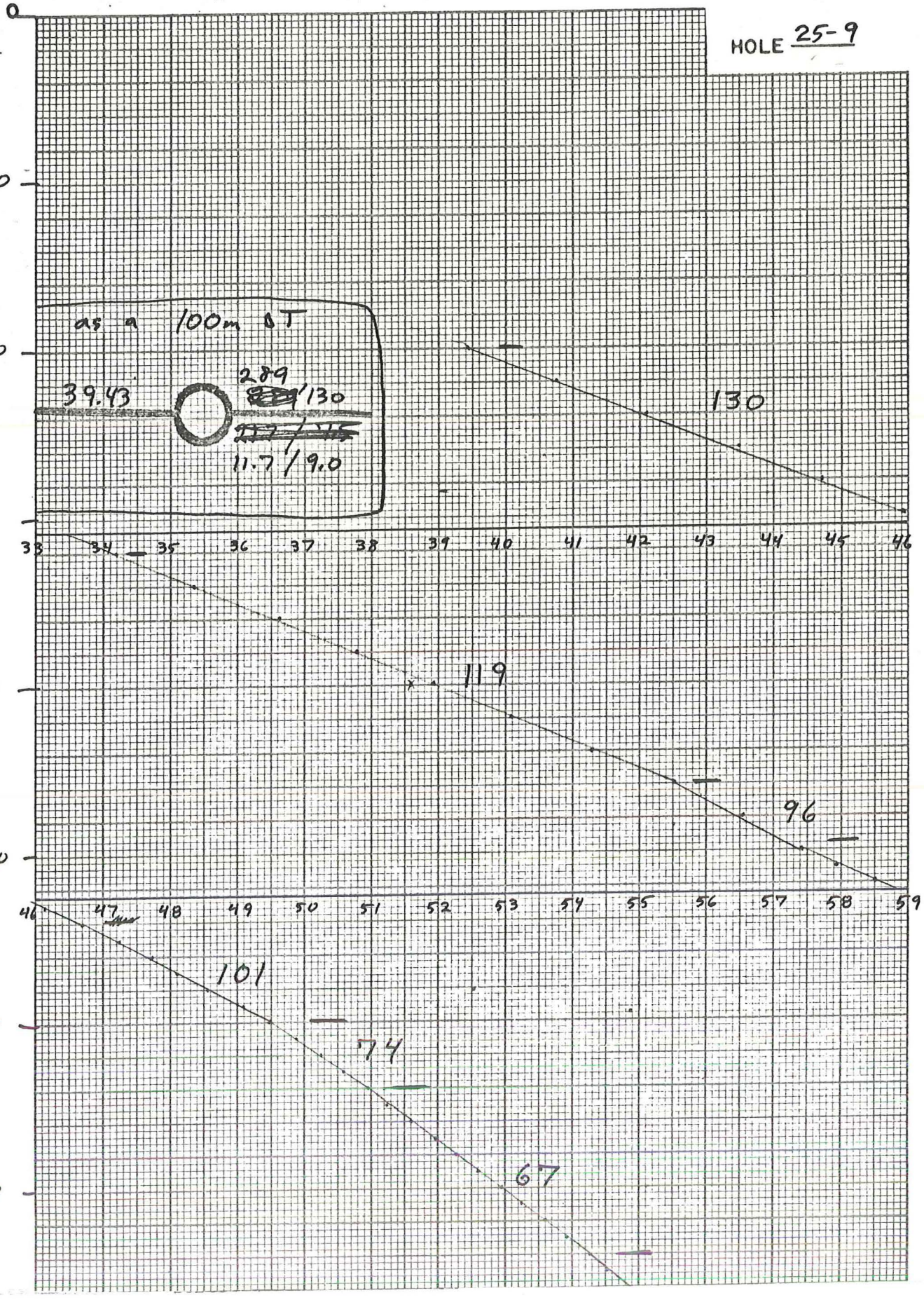
Use decimals

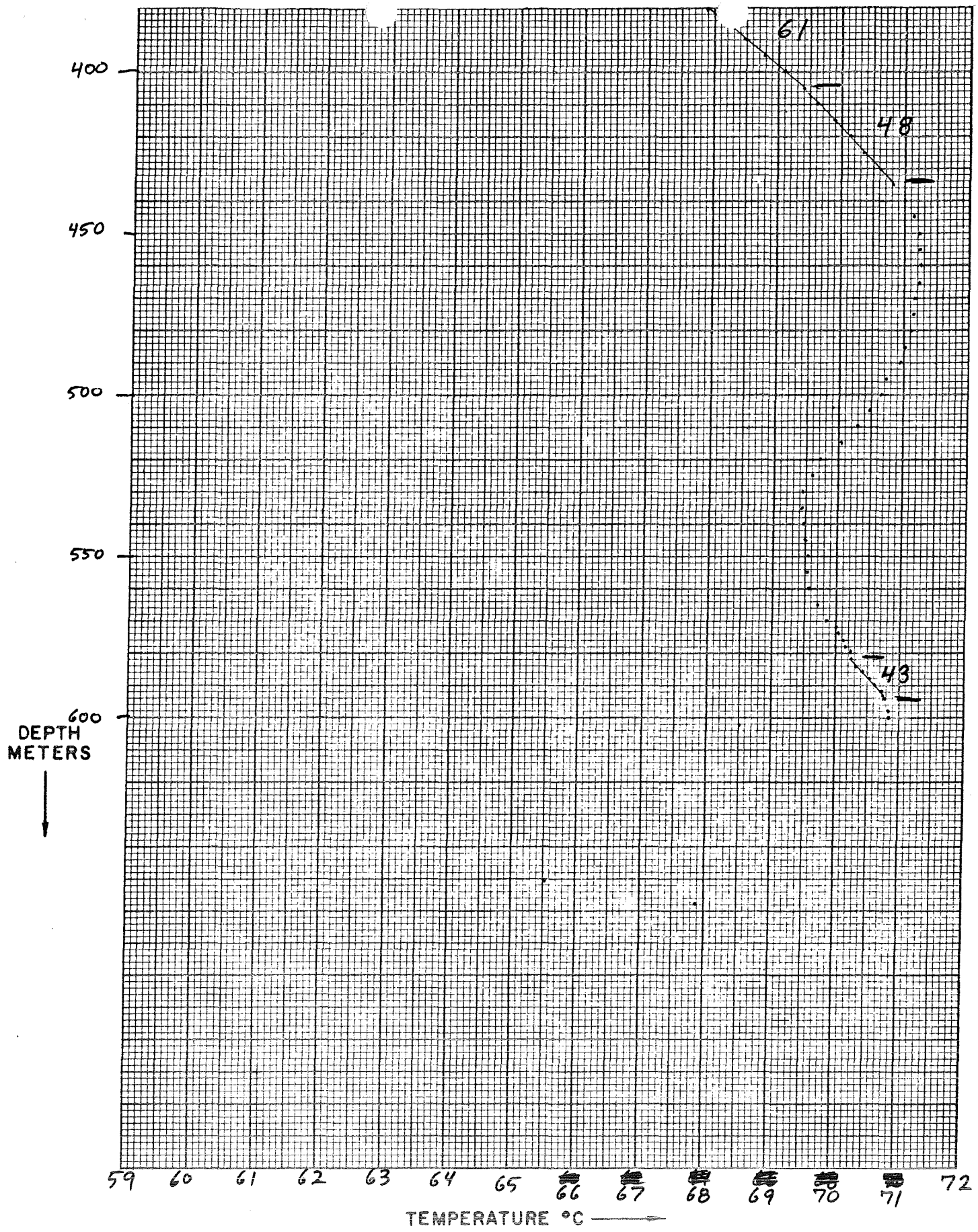
Segment ! = Depths

Start	End	Conductivity K	ΔK	Best cond. (-K) Downward extrapolations (-ΔK)
100.0	160.0	-9.0	-0.5	

	Start	End	K	ΔK
Segment 2	160.0	230.0		
Segment 3	230.0	250.0		
Segment 4	250.0	300.0		
Segment 5	300.0	320.0		
Segment 6	320.0	370.0		
Segment 7	370.0	405.0		
Segment 8	405.0	435.0		
Segment 9				

HOLE 25-9


0
50
100
150
200
250
300
350
DEPTH METERS
as a 100m ΔT
39.43
289
130
11.7 / 9.0
130
119
96
101
74
67
33 34 35 36 37 38 39 40 41 42 43 44 45 46
46 47 48 49 50 51 52 53 54 55 56 57 58 59


61
48
43
400
450
500
550
600
DEPTH METERS
59
60
61
62
63
64
65
66
67
68
69
70
71
72
TEMPERATURE °C

Date Logged: 5-15-81

ΔT Well No. _____

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
90	55.04	38.02					
100	52.24	39.43					
110	49.72	40.76					
120	47.31	42.10					
130	44.94	43.48					
140	42.93	44.71					
150	41.05	45.92					
160	39.15	47.20					
170	37.50	48.37					
180	35.79	49.63					
190	34.30	50.79					
CONTINUED ON NEXT PAGE,							

K=Conductivity

Date Logged: _____ ΔT Well No. 25-9

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
200	33.30	51.60					Cable in .0973 out .1309
			5.82				
250	26.94	57.42					
			0.54	108			
255	26.42	57.96					
			0.55	110			
260	25.90	58.51					
			0.65	130			
265	25.30	59.16					
			0.54	108			
270	24.81	59.70					
			0.56	112			
275	24.32	60.26					
			0.46	92			
280	23.92	60.72					
			0.37	74			
285	23.61	61.09					
			0.45	90			
290	23.23	61.54					
			0.56	112			
295	22.77	62.10					
			0.27	54			
300	22.47	62.47					
			0.40	80			
305	22.15	62.87					
			0.39	78			
310	21.85	63.26					
			0.33	66			
315	21.60	63.59					
			0.35	70			
320	21.33	63.94					
			0.29	58			
325	21.11	64.23					
			0.34	72			
330	20.84	64.60					
			0.37	74			
335	20.57	64.97					
			0.30	60			
340	20.35	65.27					
			0.34	68			
345	20.11	65.61					
			0.34	68			
350	19.87	65.95					
			0.31	62			
365	19.65	66.26					
			0.35	70			
360	19.41	66.61					
			0.31	62			
365	19.20	66.92					
			0.35	70			
370	18.97	67.27					
			0.26	52			
375	18.80	67.53					

K=Conductivity

Date Logged: _____ ΔT Well No. 25-9

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
380	18.56	67.89	0.36	72			
385	18.37	68.19	0.30	60			
390	18.18	68.49	0.30	60			
395	18.00	68.77	0.28	56			
400	17.80	69.09	0.32	64			
405	17.61	69.40	0.31	62			
410	17.48	69.61	0.21	42			
415	17.31	69.89	0.28	56			
420	17.17	70.13	0.26	52			
425	17.03	70.36	0.23	46			
430	16.90	70.59	0.23	46			
435	16.76	70.83	0.24	48			
440	16.66	71.00	0.17	34			
445	16.58	71.14	0.14	28			
450	16.54	71.21	0.07	14			
455	16.53	71.23	0.02	4			
460	16.52	71.24	0.01	2			
465	16.53	71.23	-0.01	-2			
470	16.56	71.17	-0.06	-12			
475	16.58	71.14	-0.03	-6			
480	16.60	71.10	-0.04	-8			
485	16.64	71.03	-0.07	-14			
490	16.69	70.95	-0.08	-16			
495	16.76	70.83	-0.12	-24			
500	16.86	70.65	-0.18	-36			
505	16.96	70.48	-0.17	-34			
510	17.07	70.30	-0.18	-36			

K=Conductivity

Date Logged: _____ ΔT Well No. 25-9

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
515	17.21	70.06	-0.24	-48			
520	17.36	69.81	-0.35	-70			
525	17.49	69.60	-0.21	-42			
530	17.58	69.45	-0.15	-30			
535	17.58	69.45	0.00	0			
540	17.57	69.47	0.02	4			
545	17.54	69.51	0.04	8			
550	17.52	69.55	0.04	8			
555	17.52	69.55	0.00	0			
560	17.50	69.58	0.03	6			
565	17.42	69.71	0.13	26			
570	17.32	69.88	0.17	34			
572	17.24	70.01	0.13	65			
574	17.21	70.06	0.05	25			
576	17.17	70.13	0.07	35			
578	17.15	70.16	0.03	15			
580	17.12	70.21	0.05	25			
582	17.10	70.25	0.04	20			
584	17.06	70.31	0.06	30			
586	16.99	70.43	0.12	60			
588	16.93	70.53	0.10	50			
590	16.88	70.62	0.09	45			
592	16.83	70.71	0.09	45			
594	16.80	70.76	0.05	25			
596	—	—	~~0.08~~	~~20~~			
598	16.75	70.84					
600	16.74	70.86	0.04	20			

K=Conductivity

Date Logged: _____ ΔT Well No. 25-9

Depth (meters)	Instr. Reading	Temp. °C	ΔT	Grad. °C/km	K (Est.)	H_2O Air	Lithology, etc.
598	16.73	70.88	0.02	10			
~~600~~	~~16.73~~						
~~602~~	~~16.73~~						
~~604~~	~~16.72~~						

K=Conductivity