CONTACT INFORMATION
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Arizona Geological Survey
3550 N. Central Ave, 2nd floor
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602-771-1601
http://www.azgs.az.gov
inquiries@azgs.az.gov

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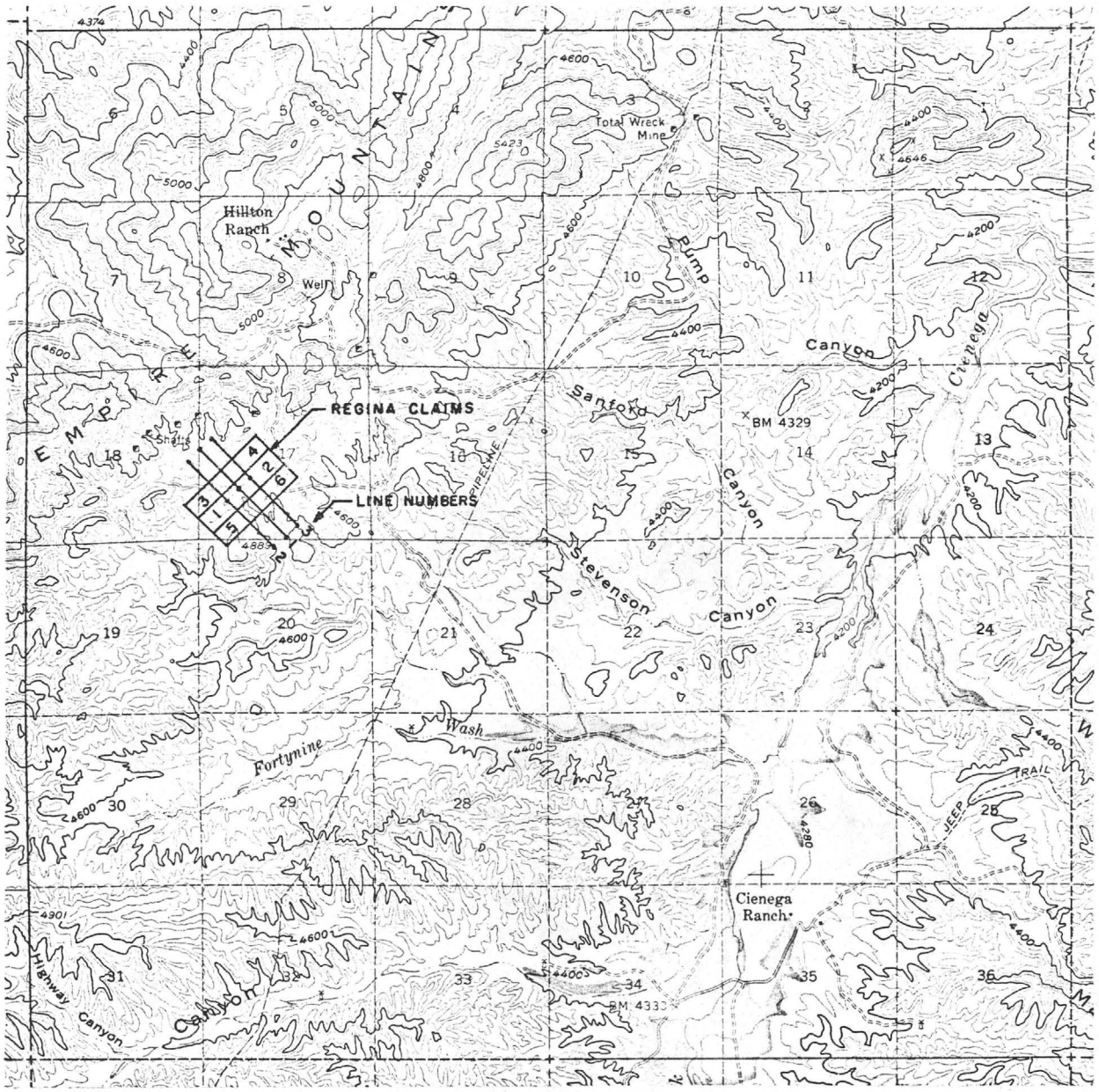
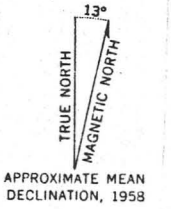
INDUCED POLARIZATION TRAVERSE & CLAIM LOCATION PLAN
of
VERDE QUEEN AREA (REGINA CLAIMS)
PIMA COUNTY ARIZONA
for
NORTH AMERICAN MINES
by
HEINRICHS GEOEXPLORATION COMPANY
Job number 900-74 February 1974

T.18 S., R 17 E.





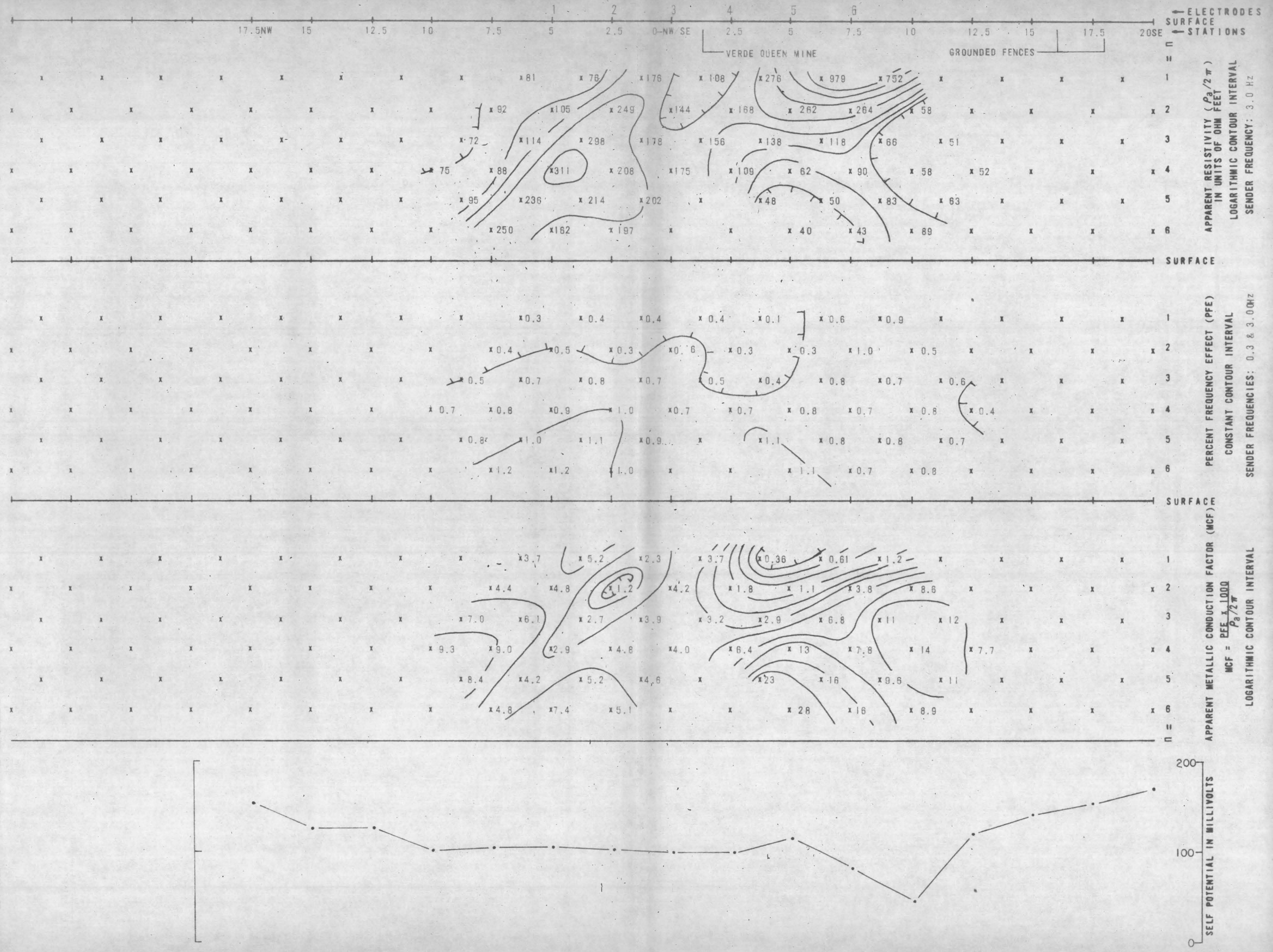
SCALE 1:62500

1 ½ 0 1 2 3 4 MILES

3000 0 3000 6000 9000 12000 15000 18000 21000 FEET

1 .5 0 1 2 3 4 5 KILOMETERS

CONTOUR INTERVAL 40 FEET
DATUM IS MEAN SEA LEVEL

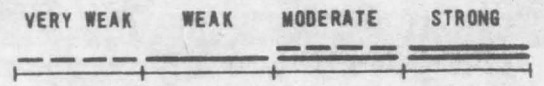


900-74

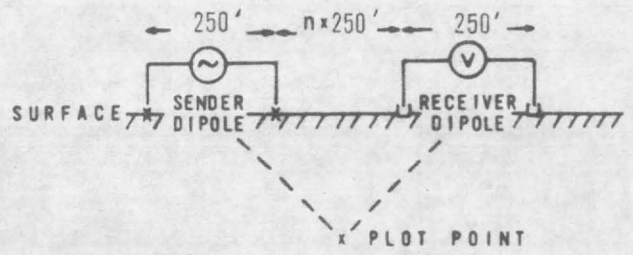
LINE NO.
1
SPREAD(S)
1
BEARING
N 45° W

INDUCED POLARIZATION TRAVERSE SECTIONAL DATA SHEET of VERDE QUEEN AREA for NORTH AMERICAN MINES

RELATIVE ANOMALY STRENGTH



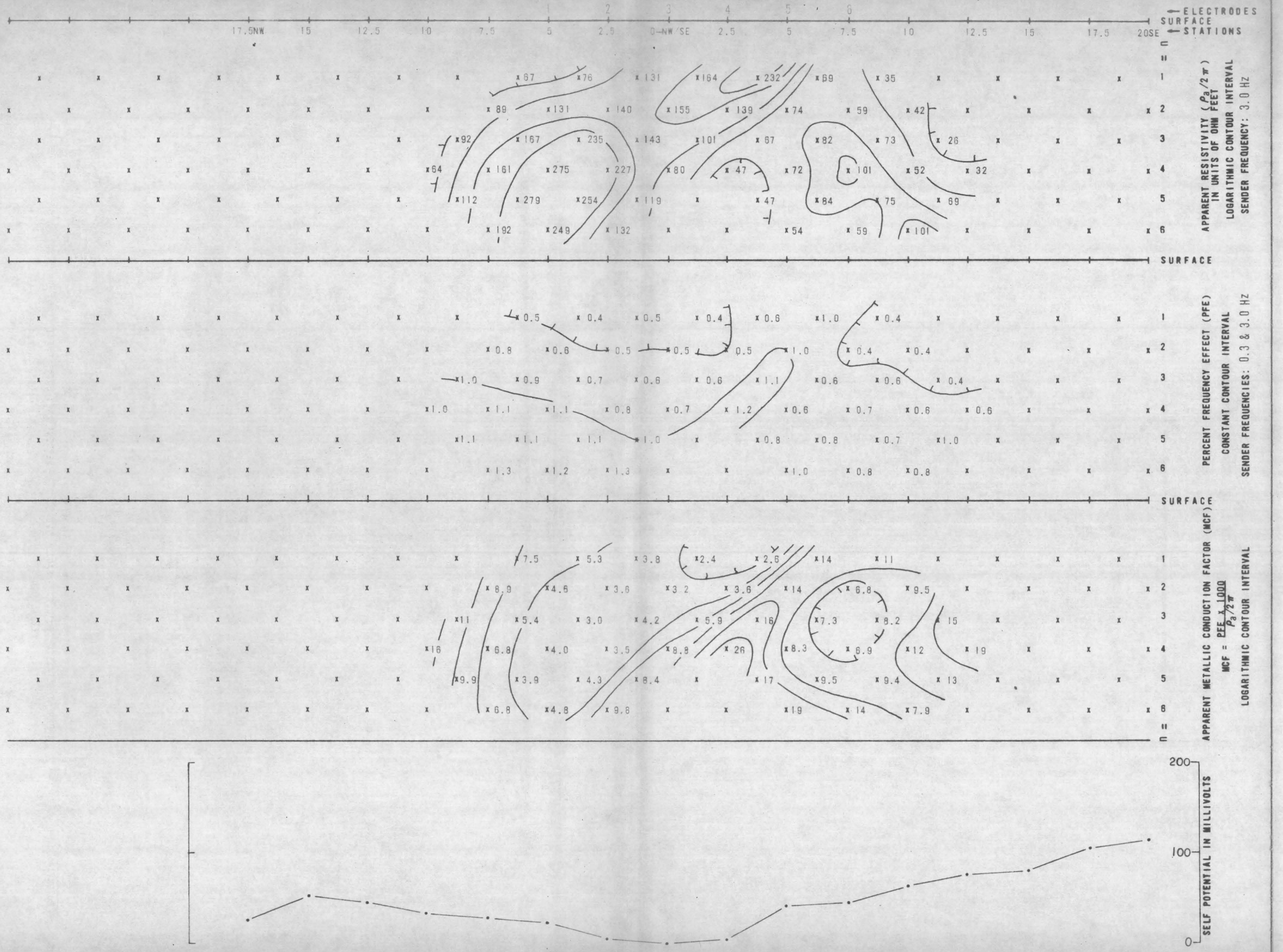
DIPOLE-DIPOLE ELECTRODE ARRAY



DATE

FEBRUARY 1974

HEINRICHS GEOEXPLORATION COMPANY
806 W. GRANT ROAD, POST OFFICE BOX 5964, TUCSON, ARIZ., 85703, PHONE: (602)623-0578



900-74

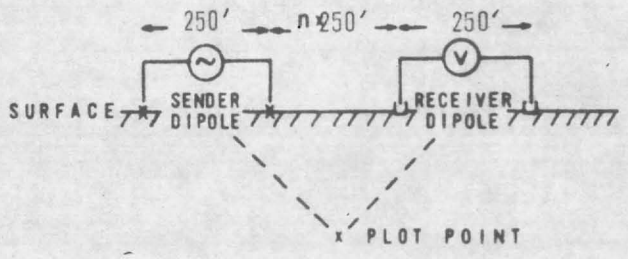
LINE NO.
2
SPREAD(S)
1
BEARING
N 45° W

INDUCED POLARIZATION TRAVERSE SECTIONAL DATA SHEET of VERDE QUEEN AREA for NORTH AMERICAN MINES

RELATIVE ANOMALY STRENGTH

VERY WEAK WEAK MODERATE STRONG

DIPOLE-DIPOLE ELECTRODE ARRAY



DATE

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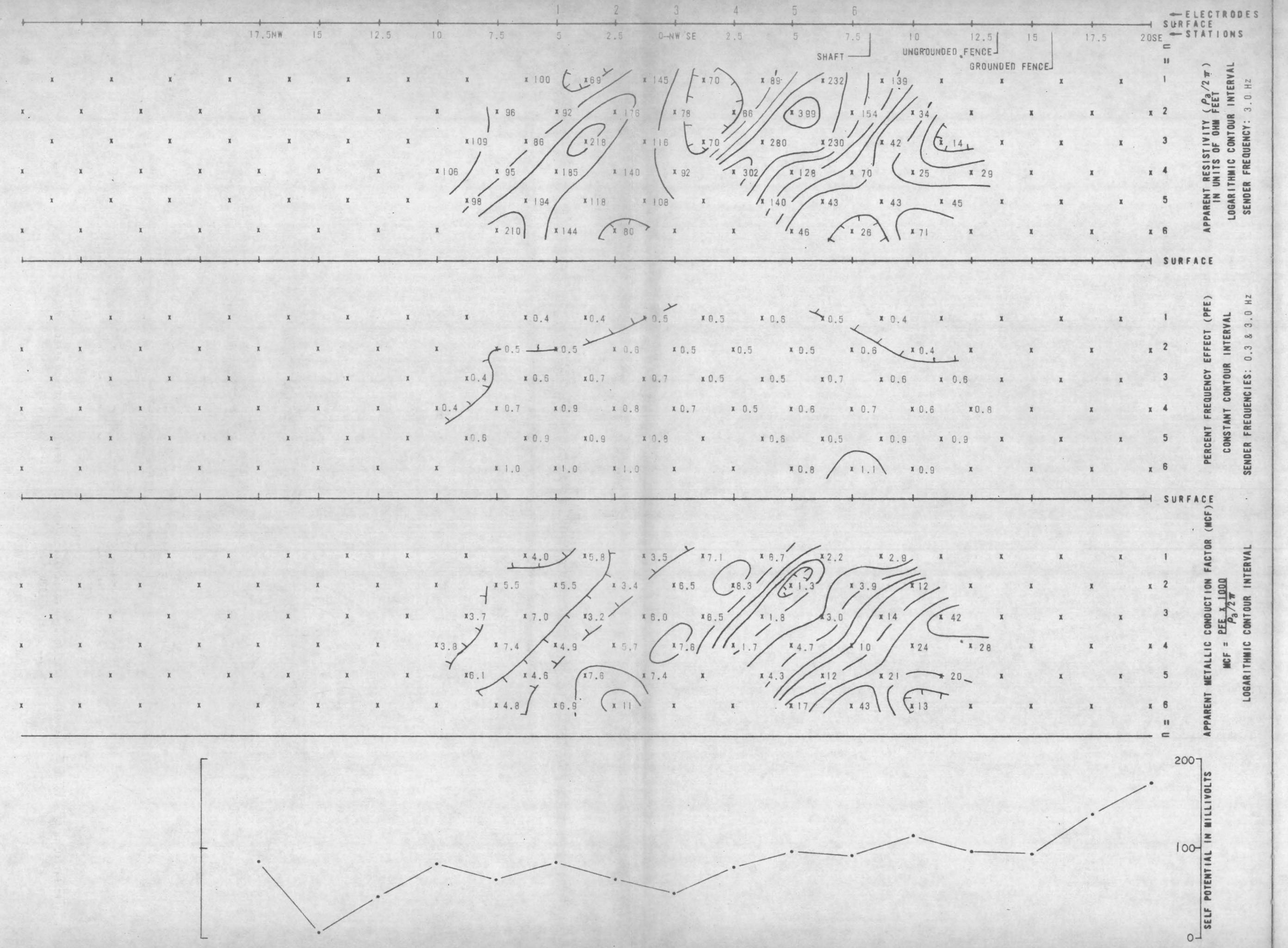


900-74

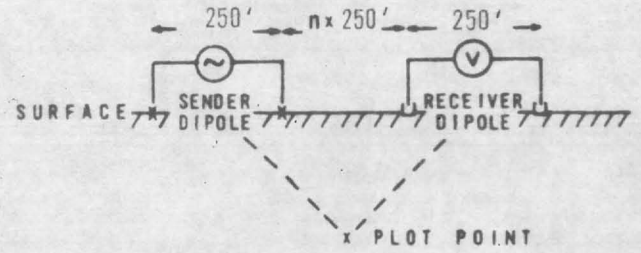
LINE NO.
3
SPREAD(S)
1
BEARING
N 45° W

INDUCED POLARIZATION TRAVERSE SECTIONAL DATA SHEET of VERDE QUEEN AREA for NORTH AMERICAN MINES

RELATIVE ANOMALY STRENGTH

VERY WEAK — WEAK — MODERATE — STRONG

DIPOLE-DIPOLE ELECTRODE ARRAY



DATE

FEBRUARY 1974

HEINRICHS GEOEXPLORATION COMPANY
806 W. GRANT ROAD, POST OFFICE BOX 5964, TUCSON, ARIZ., 85703, PHONE: (602)623-0578

North American Mines
50 Congress Street
Boston, Massachusetts

Attention: Mr. Q. A. Shaw, President

Re: GEOEX Job #900
Regina Claims
Verde Queen Area
Pima County, Arizona

An old mine known as the Verde Queen is located in the Empire mining district, Pima County, Arizona, more particularly Section 17, Township 18 South, Range 17 East. The written description of it as found in "Mineral Deposits of the Santa Rita and Patagonia Mountains, Arizona", (F.C.Schrader, 1915), U.S.G.S. Bulletin 582, in conjunction with its proximity to other mines around a Laramide intrusive in the district, indicated it to be a possible zone worthy of reconnaissance testing by induced polarization. Initial visits to the site were made and it was noted that the ground was apparently open for location of mineral claims and that several of its old dumps consist of unusually high proportions of gossan and massive hematite indicating a strongly mineralized contact zone and/or vein between limestone and quartzite. Also noted was the unfavorable feature of an apparent lack of any discernable sulfides. After a brief inspection of the site by Mr. Q. A. Shaw it was agreed that North American Mines would take up an initial land position and have a reconnaissance induced polarization survey made over the property.

Six (6) claims named the Regina 1, 2, 3, 4, 5 and 6 were located on February 7, 1974, and three induced polarization lines were run on a bearing of N45°W- S45°E using dipole separations of 250 feet with the lines being 500 feet apart. Thus the maximum penetration was to a depth of 500 feet. One line for deeper penetration on a 750 foot dipole separation was originally planned but due to the complete lack of any anomalism of interest shown by the initial coverage it was felt the property no longer justified any additional expense to North American Mines.

There is a very minor increase in response strength with depth on Line 1, which was centered over the old mine workings. However, it is not interpreted as significantly relating to even remotely interesting sulfide mineralization regarding mining possibilities. In the light of all factors to be considered it is concluded that there are no longer mineral roots below the old workings, possibly as a result of movement by thrust faulting or the sulfides are too deep and/or too narrow to be detectable by I.P. The induced polarization survey results are herewith included in the usual drafted plan and section forms for file purposes.

Respectfully submitted,

Heinrichs GEOEXploration Company

Chris S. Ludwig

Chris S. Ludwig
Chief Geophysicist

CSL:mt

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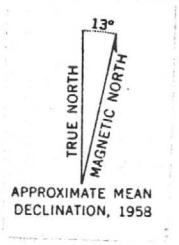

SCALE 1:62500

1 ½ 0 1 2 3 4 MILES

3000 0 3000 6000 9000 12000 15000 18000 21000 FEET

1.5 0 1 2 3 4 5 KILOMETERS

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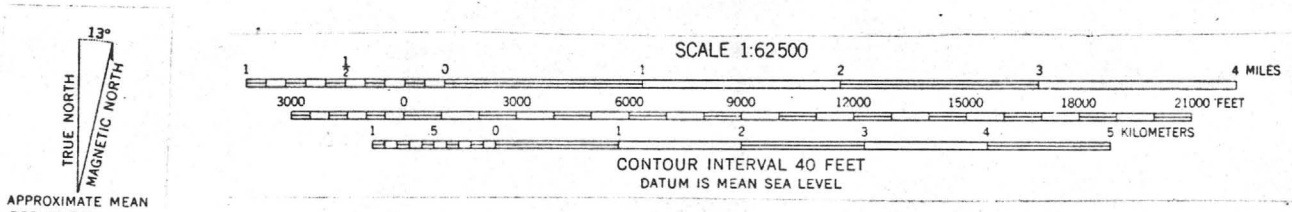

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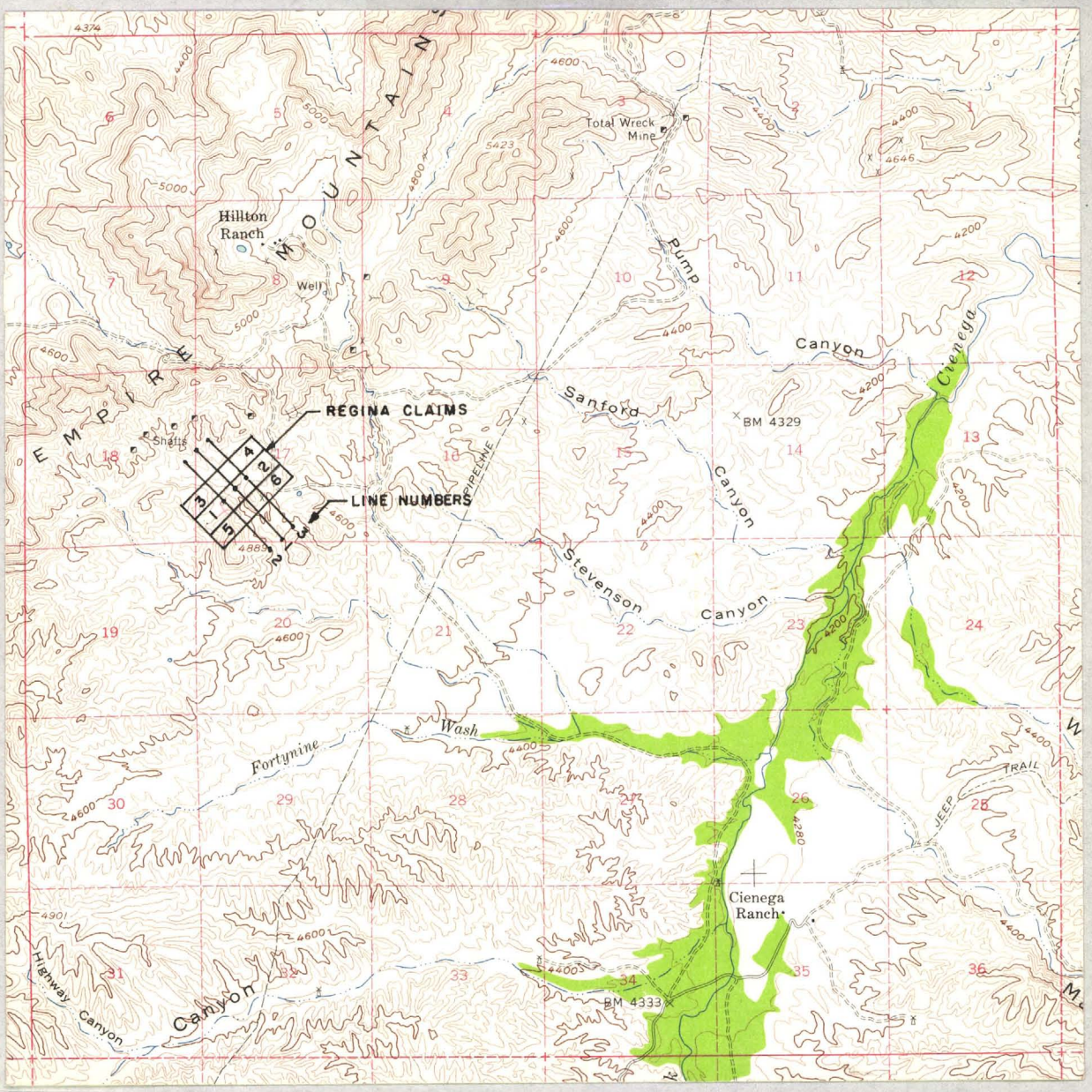
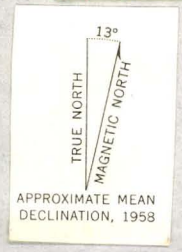
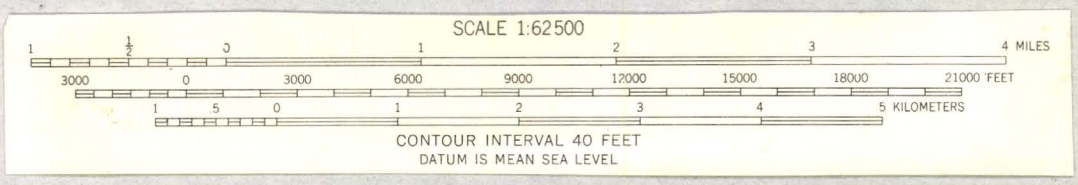






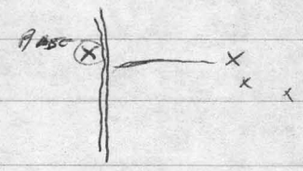
Jb# 437

CALERA PROJECT

MAGNETIC SURVEY — 12/12/73 - MARLATT & MARTIN

SECTION 8, R12E, T20S, SANTA CRUZ CO, ARIZ.

A SMALL CAIRN OF ROCKS WITH A WHITE ONE ON TOP SET UP AT BASE STATION — WEST SIDE OF THE ROAD OPPOSITE THE PITS WITH COPPER & MAGNETITE



INSTUMENT TUNED : 47

BASE STATION READING 49785 @ 10:40

SURVEY CONTROL : BRUNTON & PACE

LINE 1 EAST & WEST ACROSS BASE

1+00 W	50016	
2+00 W	49818	
3+00 W	49651	LIMESTONE CAP
4+00 W	50220	
5+00 W	49755	
6+00 W	49679	
7+00 W	49797	
8+00 W	743	
9+00 W	765	EAST BANK CALERA DRAW
10+00 W	747	
11+00 W	777	
12+00 W	732	GRANITIC
13+00 W	703	
14+00 W	711	
15+00 W	713	TIME : 11:05 RIDGE TOP

15+00 W & 5+00 N 654

CALERA PROJECT

LINE 2 EAST & WEST, 10+00 N.

15+00 W	49735	11:22 A.M.	BIG OPEN PLACE IN WASH
14+00 W	730		
13+00 W	735		
12+00 W	748		
11+00 W	657		
10+00 W	683		
9+00 W	698		
8+00 W	704		
7+00 W	716		
6+00 W	716		
5+00 W	728		
4+00 W	758		
3+00 W	791		
2+00 W	885		
1+00 W	896		
0 E/W	907		
1+00 E	895	11:35 A.M.	EAST EDGE OF ROAD

LINE 3 SOUTH ON ROAD

1E/9N	49840	" " "	
1E/8N	776	" " "	
1E/7N	861	" " "	
1E/6N	845	" " "	
1E/5N	704	" " "	
1E/4N	722	WEST OF ROAD	
1E/3N	669	" " "	LIMESTONE
1E/2N	646	" " "	
1E/1N	754	ON ROAD	
0-0	717	" "	
BASE	775	11:45	

AT 0-0 WE SHOULD HAVE BEEN AT BASE + WERE ACTUALLY ABOUT 75' NORTH OF BASE.

CALERA PROJECT

LINE 1 GOING EAST FROM BASE

BASE	49772	12:00	
1+00E	738		
2+00E	50043		
3+00E	49916		WEST SIDE OF PROSPECTS
4+00E	50021		EAST " " "
5+00E	50364		
6+00E	49949		POSSIBLE CONTACT
7+00E	958		REMNANT LIMESTONE
8+00E	50236		
9+00E	49628		SADDLE
10+00E	768		
11+00E	774		
12+00E	763		
13+00E	813		
14+00E	847		GRANITIC
15+00E	877		

BASE 49776 12:53

LINE 2 10 NORTH & GOING EAST

1+00E	49880	
2+00E	947	
3+00E	948	
4+00E	909	
5+00E	849	
6+00E	880	
7+00E	769	OLD MINES
8+00E	782	
9+00E	874	
10+00E	855	

CALERA PROJECT

LINE 4 GOING S 30 W FROM 10N/10E

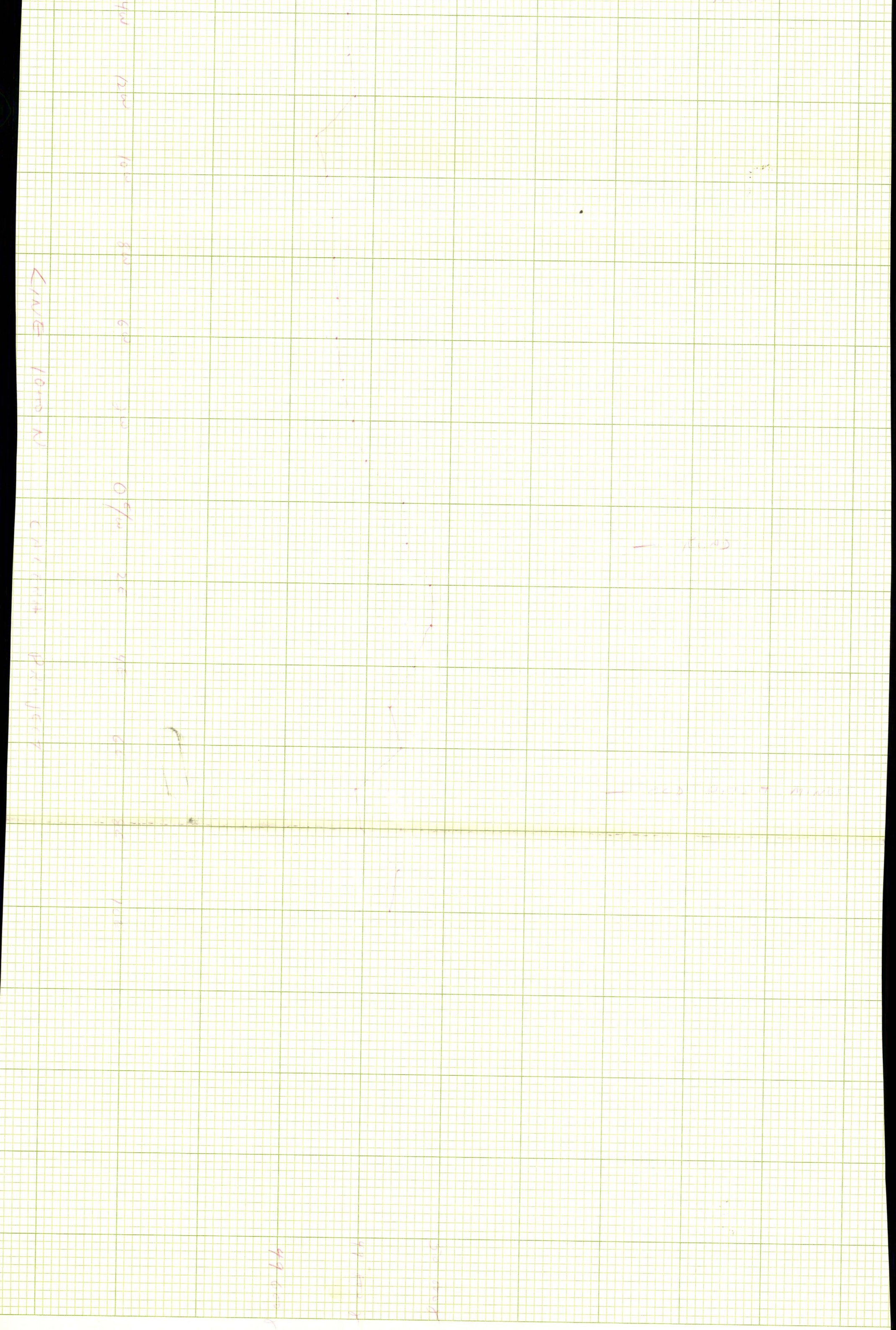
1+00	49784	
2+00	838	
3+00	815	
4+00	801	
5+00	636	
6+00	962	
7+00	749	
8+00	646	
9+00	526	
10+00	770	
11+00	645	
12+00	693	
13+00	402	
14+00	760	= ≅ 1+00 E OF BASE
BASE	49771	1:23 pm.

ROAD TRAVERSE OUT, STARTING FROM BASE. READINGS ≅ EVERY 500 FEET FROM ODOMETER OF TRUCK.

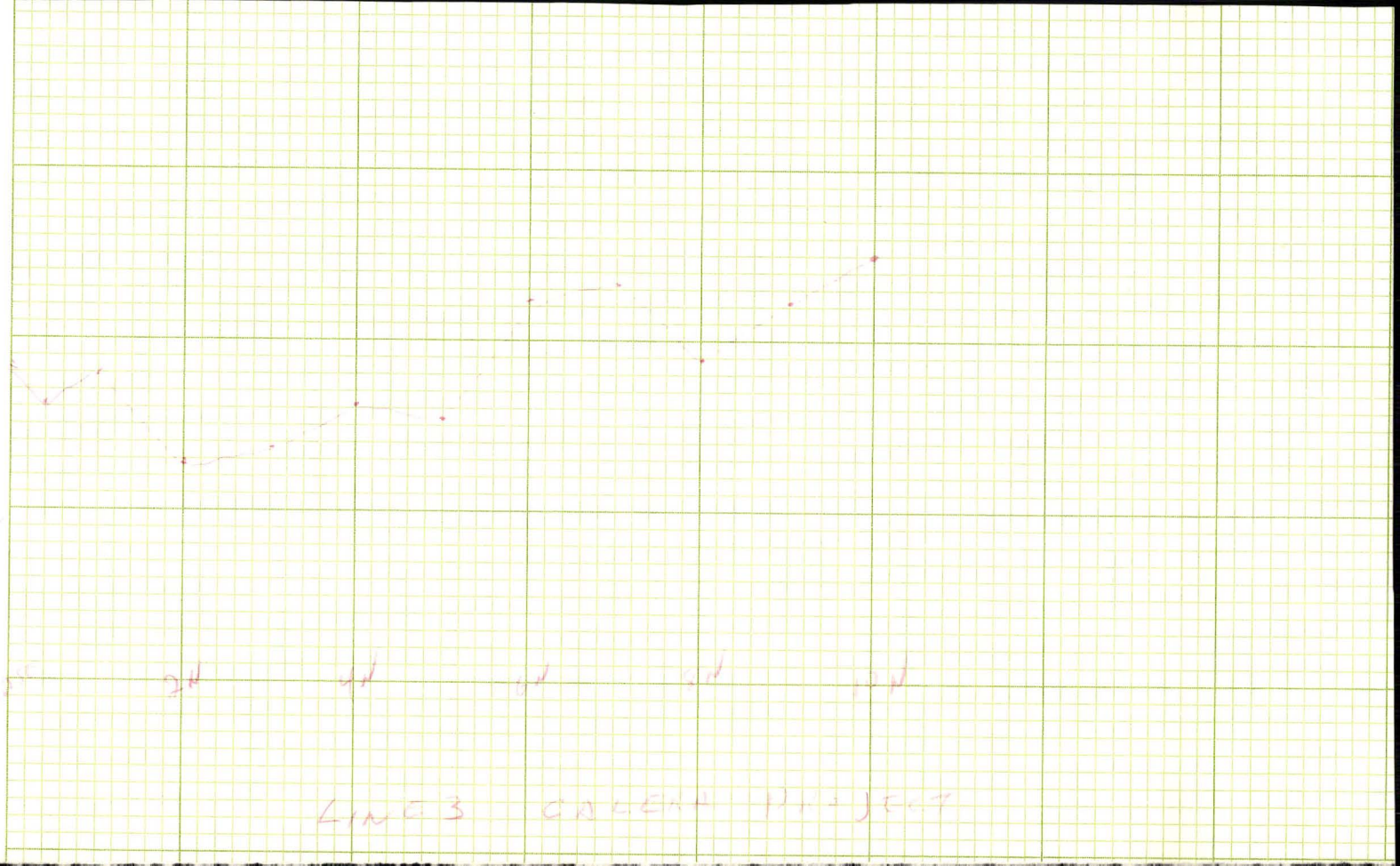
500	49873	
1000	820	A LITTLE SO. OF RD. SET. ↑
1500	50233	
2000	49814	
2500	846	ROAD ENTERS CALERA DRAW
3000	816	200' NORTH OF GATE/FENCE
3500	801	GRANITE
4000	807	
4500	869	MARBLE OUTCROP
5000	770	
5500	683	
6000	627	
6500	541	

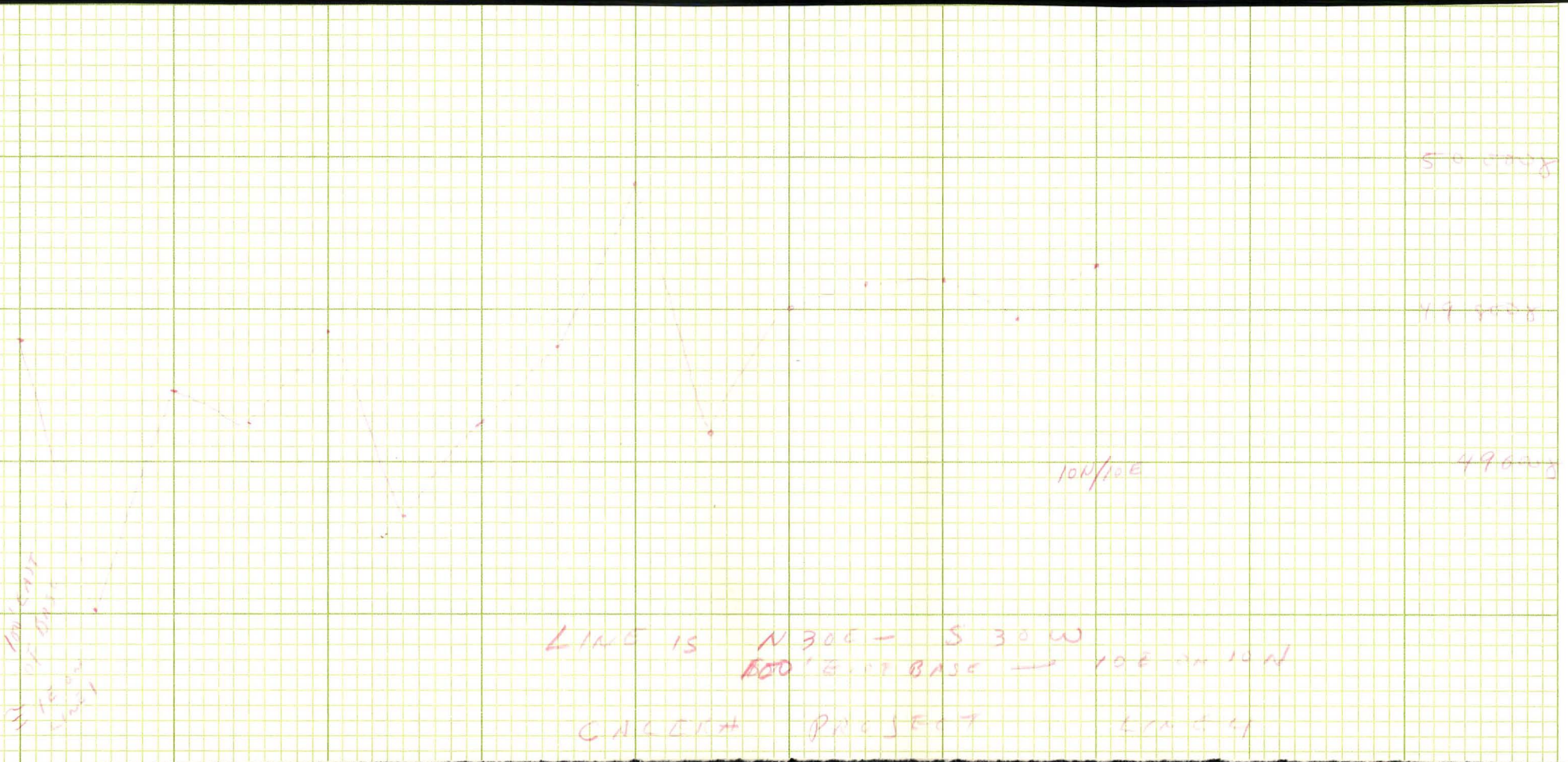
CALERA PROJECT

7000	49704	2:10 p.m.	WINDMILL & CEMENT TANK
7500	858		GRANITE
8000	50141		" (GREY)
8500	49979		LEAVE WASH GRANITE
9000	941		ROAD JUNCTION → TURN E. SECT. 17
9500	820		
10000	930		
10500	993		RHYOLITE OR ANDESITE
11000	886		
11500	835		RED GRANITE
12000	817		
12500	847		ROAD JUNCTION ↑
13000	840		ROAD JUNCTION ↑
13500	883		
14000	816		
14500	936		
15000	881		
15500	718		
16000	720		
16500	822		
17000	629		
17500	691		
18000	763		
18500	723		ROAD JUNCTION ↑
19000	752		
19500	615	2:45 pm	
20000	687		
20500	644		
21000	661		
21500	713		
22000	762		300' ± FROM WINDMILL & FENCE. SECTION 10.



K+E STANDARD ® CROSS SECTION
10×10 TO THE INCH


50000 Y
49800 Y
49600 Y
LINES CURRENT PROJECT



STANDARD CROSS SECTION
10×10 TO THE INCH

KEUFFEL & ESSER CO.
MADE IN U.S.A.

KEUFFEL & ESSER

E Jot 900

March 5, 1974

Mr. Q. A. Shaw
North American Mines
Room 525
50 Congress Street
Boston, Mass. 02109

COPY

Dear Quinny:

Thanks very much for the pictures which arrived today. Your camera does a good job.

I'm sorry the Verde Queen area gave no encouragement, though as I told you at the time this was a possibility because of a distinct lack of much known or reported sulfide involvement with otherwise high grade secondary mineralization. The I.P. results tend to confirm postulated thrust faulting with former roots conceivably some large distance away in an uncertain direction.

We are making initial inquiries about some other properties brought to our attention in highly favorable districts, but at this time our preliminary information is too scanty to refer to you.

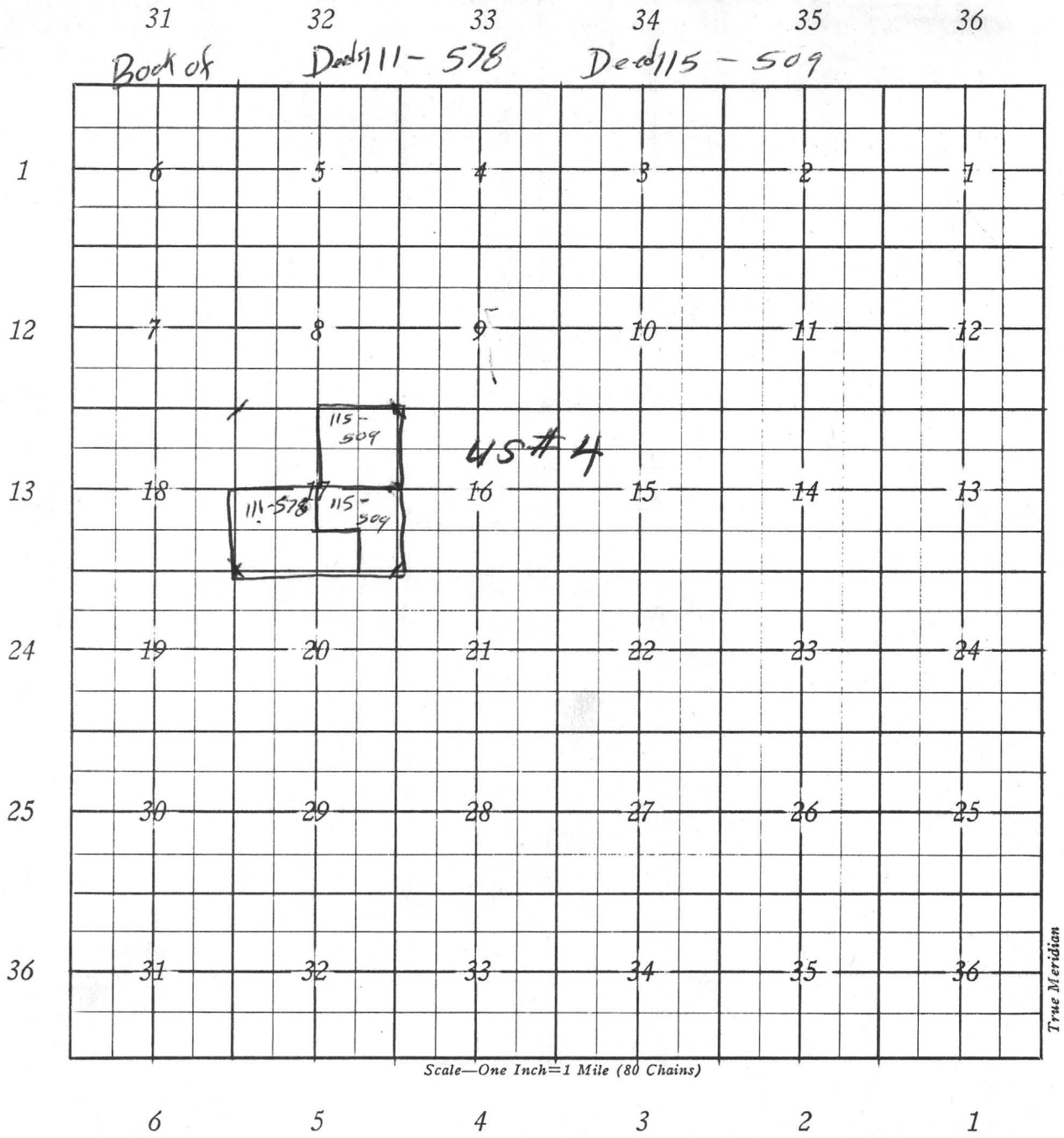
I trust you are finding the Boston winter as relatively mild as my family reports for their area some fifty miles away. Here our weather has been also excellent, and there are signs of impending spring.

Thanks again, and best regards,

J. W. Marlatt

JWM:mt

Township 18 S Range 17 E Meridian



Remarks:

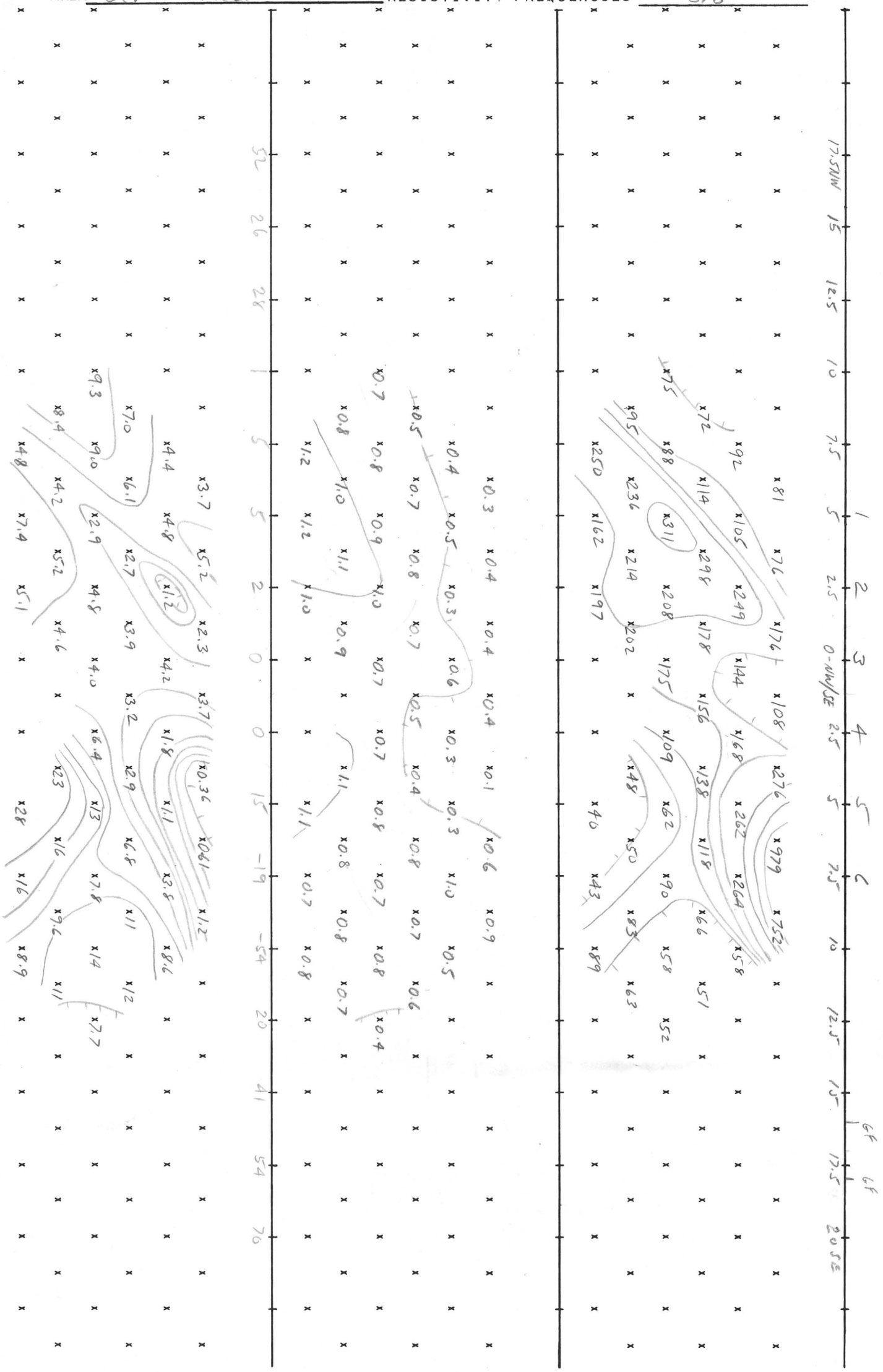
~~Stewart TITLE employee~~ ~~Rich Holmen~~ ~~TITLE Data~~ (~~327-6883 unlisted number~~)

US# #4 Jon: 327-3365 - Direct Line

JOB# 900 LINE# 1 SP 1 a = 250' BEARING N45°W

CLIENT N.A.M. DATE February 1974 FREQUENCIES 0.3 & 3.0 Hz

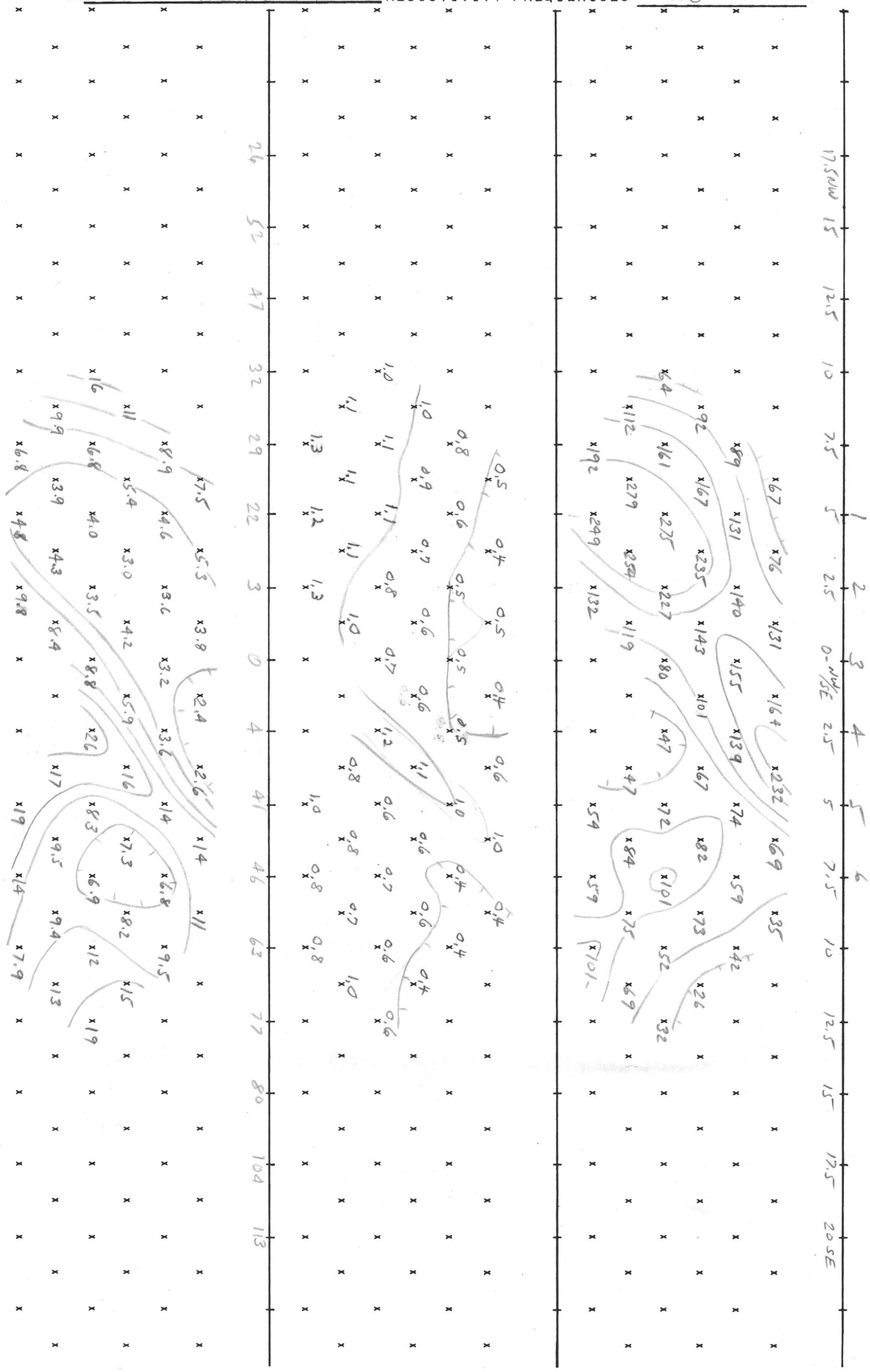
AREA Verde Queen RESISTIVITY FREQUENCIES 3.0



JOB# 900 LINE# 2 SP 1 a = 250' BEARING N45°W

CLIENT N.A.M. DATE February, 1974 FREQUENCIES 0.3 & 3.0 Hz

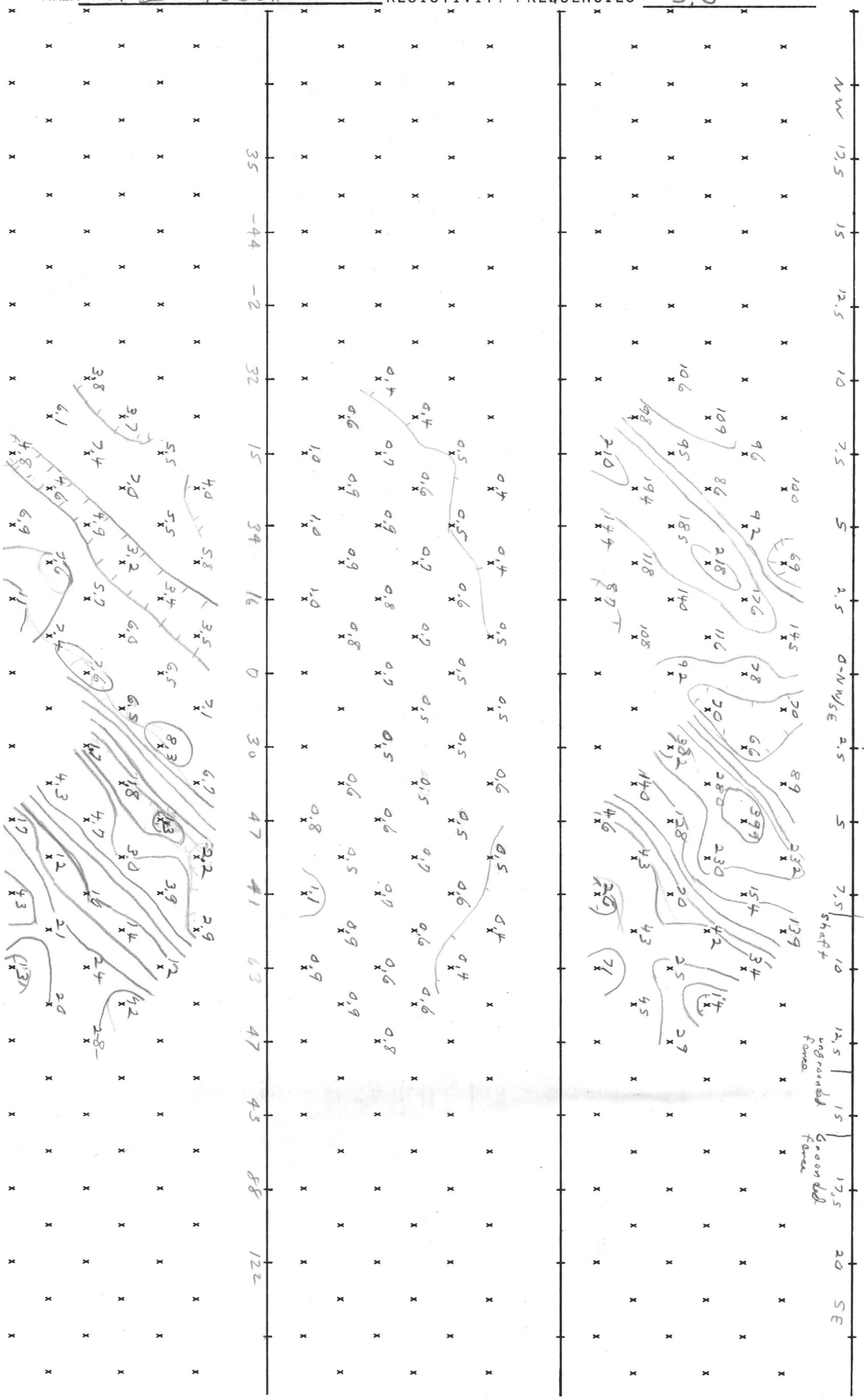
AREA Verde Queen RESISTIVITY FREQUENCIES 3.0



JOB# 900 LINE# 3 SP 1 a = 250' BEARING N45°W

CLIENT N.A.M. DATE Feb 1974 FREQUENCIES 0.3 & 3.0 Hz

AREA Verde Queen RESISTIVITY FREQUENCIES 3.0



I. P. RECEIVER NOTES, JOB No. 900, AREA Verde Quar

LINE 3, HALF NW, SP. 1, a = 250', BEARING N45W

SENDER STA. 0.0 = ELECTRODE No. 3, DATE 2-13-74

PAGE 1

HEINRICHS GEOEX

SEND	4-5	5-6	3-4	4-5	5-6	2-3	3-4	4-5	5-6	Cal
RECEIVE	0 —	2.5NW	2.5 —	—	SNW	5 —	—	—	7.5NW	
MULTIPLIER	10	1.0	10	1.0	1.0	1.0	1.0	1.0	1.0	1.0
PFE	0.5	0.5	0.5	0.5	0.5	0.4	0.6	0.7	0.7	0.0
CUR. (AMPS)	2	2	1	2	2	1	1	2	2	1.0
POINT No.										
SEP. (n)	1	2	1	2	3	1	2	3	4	
H. F. MV	186	43.9	193	52.4	18.3	92.6	58.5	31.0	12.3	1016
DRIFT	—	—	—	—	—	—	—	—	—	—
1.0 PFE K_n/1000										
0.3 PFE P_{CAL}										
0.1 PFE PFE_c	0.5	0.5	0.5	0.5	0.5	0.4	0.6	0.7	0.7	
3.0 MV $P/2\pi$	70	66	145	78	69	69	176	116	92	
DRIFT MCF	7.1	7.5	3.5	6.5	7.3	5.8	3.4	6.0	7.6	
S. P.	+16		+18			-19				
NOISE										
POT RES.										
CULT & CMTS										

I. P. RECEIVER NOTES, JOB NO. 900, AREA Ver de Queen

LINE 3, HALF NW, SP. 1, a = 250', BEARING N45W

SENDER STA. 0.0 = ELECTRODE NO. 3, DATE 2-13-74

PAGE 2

HEINRICHS GEOEX

SEND	1-2	2-3	3-4	4-5	5-6	1-2	2-3	3-4	4-5	5-6
RECEIVE	7.5	—	—	—	10NW	10	—	—	—	12.5NW
MULTIPLIER	10	1.0	1.0	1.0	0.1	1.0	1.0	1.0	0.1	0.1
PFE	0.4	0.5	0.7	0.8	0.8	0.5	0.6	0.9	0.9	1.0
CUR. (AMPS)	2	1	1	2	2	2	1	1	2	2
POINT NO.										
SEP. (n)	1	2	3	4	5	2	3	4	5	6
H. F. MV	267	30.6	29.1	18.6	8.25	64.5	11.4	12.3	9.01	4.15
DRIFT	—	—	-0.1	—	+0.1	—	—	—	—	—
1.0 PFE $K_n/1000$										
0.3 PFE ρ_{CAL}										
0.1 PFE PFE_c	0.4	0.5	0.7	0.8	0.8	0.5	0.6	0.9	0.9	1.0
3.0 MV $\rho/2\pi$	100	92	218	140	108	96	86	185	118	87
DRIFT MCF	4.0	5.5	3.2	5.7	7.4	5.5	7.0	4.9	7.6	11
S. P.	+17					-34				
NOISE										
POT RES.										
CULT & CMTS										

I. P. RECEIVER NOTES, JOB NO. 900, AREA Verde Queen

LINE 3, HALF NW, SP. 1, a = 250', BEARING N45W

SENDER STA. 0.0 = ELECTRODE NO. 3, DATE 2-13-74

HEINRICHS GEOEX

SEND		1-2	2-3	3-4	4-5	1-2	2-3	3-4			
RECEIVE		12.5	—	—	15NW	15	—	17.5NW			
MULTIPLIER		1.0	0.1	0.1	0.1	1.0	0.1	0.1			
PFE		0.4	0.7	1.0	1.0	0.4	0.6	0.9			
CUR. (AMPS)		2	1	1	2	2	1	1			
POINT NO.											
SEP. (n)		3	4	5	6	4	5	6			
H. F. MV		29.1	6.35	7.40	6.87	14.1	3.72	5.00			
DRIFT		-0.1	—	+0.2	—	-0.1	-0.1	-0.2			
1.0 PFE	$K_n/1000$										
0.3 PFE	ρ_{CAL}										
0.1 PFE	PFE_c	0.4	0.7	0.9	1.0	0.4	0.6	1.0			
3.0 MV	$\rho/2\pi$	109	95	194	144	106	98	210			
DRIFT	MCF	3.7	2.4	4.6	6.9	3.8	6.1	4.8			
S. P.		-42				+79					
NOISE											
POT RES.											
CULT & CMTS											

I. P. RECEIVER NOTES, JOB No. 700, AREA Verde Queen

LINE 3, HALF SE, SP. 1, a = 250', BEARING S45E

SENDER STA. 0.0 = ELECTRODE No. 3, DATE 2-13-74

PAGE 4

HEINRICHS GEOEX

SEND	—	—	3-4	2-3	1-2	4-5	3-4	2-3	1-2	
RECEIVE	0-2.5SE	2.5-5SE	5 —	—	7.5SE	7.5 —	—	—	10SE	
MULTIPLIER	1		1.0	1.0	1.0	1.0	1.0	1.0	1.0	
PFE			0.6	0.6	0.4	0.5	0.5	0.5	0.5	
CUR. (AMPS)			1	1	2	2	1	1	2	
POINT No.										
SEP. (n)			1	2	3	1	2	3	4	
H. F. Mv			11.8	22.1	19.0	61.8	13.3	37.3	40.3	
DRIFT			+0.1	—	-0.1	—	—	—	—	
1.0 PFE / K_n/1000										
0.3 PFE / ρ_{CAL}										
0.1 PFE / PFE_c			0.6	0.6	0.4	0.5	0.5	0.5	0.5	
3.0 MV / $\rho/2\pi$			89	66	71	232	399	280	302	
DRIFT / MCF			6.7	9.0	5.6	2.2	1.3	1.8	1.7	
S. P.	+30	+17	-6			+22				
NOISE										
POT RES.										
CULT & CMTS										

I. P. RECEIVER NOTES, JOB No. 900, AREA Verde Queen

LINE 3, HALF 5E, SR. 1, a = 250', BEARING S45E

SENDER STA. 0.0 = ELECTRODE No. 3, DATE 2-13-74

PAGE 5

HEINRICHS GEOEX

SEND	5-6	4-5	3-4	2-3	1-2	5-6	4-5	3-4	2-3	1-2
RECEIVE	10				12.5 SE	12.5				15 SE
MULTIPLIER	1.0	1.0	1.0	0.1	0.1	1.0	1.0	0.1	0.1	0.1
PFE	0.4	0.6	0.7	0.6	0.6	0.4	0.6	0.7	0.5	0.8
CUR. (AMPS)	2	2	1	1	2	2	2	1	1	2
POINT No.										
SEP. (n)	1	2	3	4	5	2	3	4	5	6
H. F. MV	371	103	30.7	9.18	10.7	22.4	11.3	4.64	1.62	2.21
DRIFT	—	—	—	-0.1	—	—	+0.1	—	—	—
1.0 PFE / K_n/1000										
0.3 PFE / ρ_{CAL}										
0.1 PFE / PFE_c	0.4	0.6	0.7	0.6	0.6	0.4	0.6	0.7	0.5	0.8
3.0 MV / $\rho/2\pi$	139	154	230	128	140	37	42	70	43	46
DRIFT / MCF	2.9	3.9	3.0	4.7	4.3	12	14	10	12	17
S. P.	-16					-4				
NOISE										
POT RES.										
CULT & CMTS	*					* Fence at ≈ 13.5 Ungrounded				

* Mine Shaft at ≈ 8.0 SE; in wash

I. P. RECEIVER NOTES, JOB NO. 900, AREA Verde Queer

LINE 3, HALF SE, SP. 1, a = 250', BEARING S 45 E

SENDER STA. 0.0 = ELECTRODE NO. 3, DATE 2-13-74

PAGE 6

HEINRICHS GEOEX

SEND	5-6	4-5	3-4	2-3	5-6	4-5	3-4			
RECEIVE	15	—	—	17.5 SE	17.5	—	20 SE			
MULTIPLIER	0.1	0.1	0.1	.01	0.1	0.1	0.1			
PFE	0.6	0.6	1.0	1.0?	0.8	0.9	0.9			
CUR. (AMPS)	2	2	1	1	2	2	1			
POINT NO.										
SEP. (n)	3	4	5	6	4	5	6			
H. F. MV	3.84	3.38	1.63	.613	3.81	3.41	1.70			
DRIFT	—	—	+0.2	-0.2	—	—	-0.1			
1.0 PFE K_n/1000										
0.3 PFE ρ_{CAL}										
0.1 PFE PFE_c	0.6	0.6	0.9	1.1	0.8	0.9	0.9			
3.0 MV $\rho/2\pi$	14	25	43	26	29	45	71			
DRIFT MCF	42	24	21	43	28	20	13			
S. P.	+45				+34					
NOISE										
POT RES.										
CULT & CMTS	*									

*6 ND Fence at ≈ 15.5

I. P. SENDER NOTES

JOB No. 900 AREA Verde Quiver

LINE 3, HALF NW, SP. 1, DATE 2-13-74

PAGE 1

HEINRICHS GEOEX

SEND	4-5	5-6	3-4	4-5	5-6	2-3	3-4	4-5	5-6	
RECEIVE	0 —	2.5NW	2.5 —	—	5NW	5 —	—	—	7.5NW	
RANGE	200X10	200X10	100X10	200X10	200X10	100X10	100X10	200X10	200X10	
VOLTAGE	360	680	520	360	640	520	520	360	660	
CURRENT	2.0	2.0	1.0	2.0	2.0	1.0	1.0	2.0	2.0	
SEND	1-2	2-3	3-4	4-5	5-6	1-2	2-3	3-4	4-5	5-6
RECEIVE	7.5 —	—	—	—	10NW	10 —	—	—	—	12.5NW
RANGE	200X10	100X10	100X10	200X10	200X10	200X10	100X10	100X10	200X10	200X10
VOLTAGE	380	520	520	360	640	340	540	520	340	640
CURRENT	2.0	1.0	1.0	2.0	2.0	2.0	1.0	1.0	2.0	2.0

FREQUENCIES 3.0 4 0.3

SENDER No. 9662

OPERATOR Borgeson

RECEIVER No. D.D

OPERATOR RCP

COMMENTS:

L.P. SENDER NOTES

JOB No. 900 AREA Ver de Queen

LINE 3, HALF NW 1/2 SE, SP. 1, DATE 2-13-79

PAGE 2

HEINRICHS GEOEX

SEND	1-2	2-3	3-4	4-5	1-2	2-3	3-4			
RECEIVE	12,5	—	—	15 NW	15	—	17,5 NW			
RANGE	200x10	100x10	100x10	200x10	200x10	100x10	100x10			
VOLTAGE	340	340	320	340	380	540	520			
CURRENT	2.0	1.0	1.0	2.0	2.0	1.0	1.0			
SEND	3-4	2-3	1-2	4-5	3-4	2-3	1-2			
RECEIVE	5	—	7,5 SE	7,5	—	—	10 SE			
RANGE	100x10	100x10	200x10	200x10	100x10	100x10	200x10			
VOLTAGE	520	520	380	360	520	520	380			
CURRENT	1.0	1.0	2.0	2.0	1.0	1.0	2.0			

FREQUENCIES	COMMENTS:
SENDER No.	
OPERATOR	
RECEIVER No.	
OPERATOR	

I.P. SENDER NOTES

JOB No. 900 AREA Ver de Queen

LINE 3, HALF SE, SP. 1, DATE 2-13-74

PAGE 3

HEINRICHS GEOEX

SEND	5-6	4-5	3-4	2-3	1-2	5-6	4-5	3-4	2-3	1-2
RECEIVE	10				12.5 SE	12.5				15 SE
RANGE	200X10	200X10	100X10	100X10	200X10	200X10	200X10	100X10	100X10	200X10
VOLTAGE	620	360	520	520	380	620	350	500	520	380
CURRENT	2.0	2.0	1.0	1.0	2.0	2.0	2.0	1.0	1.0	2.0
SEND	5-6	4-5	3-4	2-3	5-6	4-5	3-4			
RECEIVE	15			17.5 SE	17.5		20 SE			
RANGE	200X10	200X10	100X10	100X10	200 X10	200X10	100X10			
VOLTAGE	620	340	500	520	620	350	500			
CURRENT	2.0	2.0	1.0	1.0	2.0	2.0	1.0			

FREQUENCIES	COMMENTS:
SENDER No.	
OPERATOR	
RECEIVER No.	
OPERATOR	

I. P. RECEIVER NOTES, JOB No. 900, AREA Verde Queen

LINE 2, HALF NW, SR. 1, a = 250', BEARING N 45 W

SENDER STA. 0.0 = ELECTRODE No. 3, DATE 2-12-74

PAGE 1

HEINRICHS GEOEX

SEND	4-5	5-6	3-4	4-5	5-6	2-3	3-4	4-5	5-6	Cal
RECEIVE	0	2.5NW	2.5		5NW	5			7.5NW	2-12-74
MULTIPLIER	1.0	1.0	1.0	1.0	0.1	10	1.0	0.1	0.1	1.0
PFE	0.4	0.4	0.5	0.5	0.6	0.4	0.5	0.6	0.7	0.0
CUR. (AMPS)	0.3	0.6	0.6	0.3	0.6	2.0	0.6	0.3	0.6	1.0
POINT No.										
SEP. (n)										
H. F. MV	65.6	26.4	105	15.5	7.81	202	28.0	5.73	3.19	1016
DRIFT	—	—	+0.1	—	—	—	—	—	—	—
1.0 PFE K_n/1000	0.75	3	.75	3	7.5	.75	3	7.5	15	
0.3 PFE ρ_{CAL}										
0.1 PFE PFE_c										
3.0 MV $\rho/2\pi$	164	132	131	155	98	76	140	143	80	
DRIFT MCF	2.4	3.0	3.8	3.2	6.1	5.3	3.6	4.2	8.8	
S. P.	+3		+19			+7				
NOISE										
POT RES.										
CULT & CMTS										

I. P. RECEIVER NOTES, JOB No. 900, AREA Verde Queen

LINE 2, HALF NW, SR. 1, a = 250', BEARING N45W

SENDER STA. 0.0 = ELECTRODE No. 3, DATE 2-12-74

PAGE 2

HEINRICHS GEOEX

SEND	1-2	2-3	3-4	4-5	5-6	1-2	2-3	3-4	4-5	5-6
RECEIVE	7.5				10NW	10			12	5NW
MULTIPLIER	10	1.0	1.0	0.1	0.1	1.0	1.0	1.0	0.1	0.1
PFE	0.5	0.6	0.7	0.8	1.0	0.8	0.9	1.1	1.1	1.3
CUR. (AMPS)	2.0	2.0	0.6	0.3	0.6	2.0	2.0	0.6	0.3	0.6
POINT NO.										
SEP. (n)										
H. F. MV	178	87.5	18.8	4.53	2.72	59.6	44.5	11.0	2.90	1.89
DRIFT	—	—	—	—	—	—	—	—	—	—
1.0 PFE K_n/1000	.75	3	7.5	15	26.25	3	7.5	15	26.25	42
0.3 PFE ρ_{CAL}										
0.1 PFE PFE_c										
3.0 MV $\rho/2\pi$	67	131	235	227	119	89	167	275	254	132
DRIFT MCF	7.5	4.6	3.0	3.5	8.4	8.9	5.9	4.0	4.3	9.8
S. P.	+3					+15				
NOISE										
POT RES.										
CULT & CMTS										

I. P. RECEIVER NOTES, JOB No. 700, AREA Verde Queen

LINE 2, HALF NW, SP. 1, a = 250', BEARING N45W

SENDER STA. 0,0 = ELECTRODE No. 3, DATE 2-12-74

PAGE 3

HEINRICHS GEOEX

SEND	1-2	2-3	3-4	4-5	1-2	2-3	3-4			
RECEIVE	12.5	—	—	15NW	15	—	12.5NW			
MULTIPLIER	1.0	1.0	0.1	0.1	0.1	0.1	0.1			
PFE	1.0	1.1	1.1	1.1	1.0	1.1	1.4			
CUR. (AMPS)	2.0	2.0	0.6	0.3	2.0	2.0	0.6			
POINT No.										
SEP. (n)										
H. F. MV	24.6	21.5	6.37	1.78	8.54	8.50	2.74			
DRIFT	—	—	—	-0.2	—	—	+0.1			
1.0 PFE K_n/1000	7.5	15	26.25	42	15	26.25	42			
0.3 PFE ρ_{CAL}										
0.1 PFE PFE_c				1.2			1.3			
3.0 MV $\rho/2\pi$	92	161	279	249	64	112	192			
DRIFT MCF	11	6.8	3.9	4.8	16	9.9	7.3			
S. P.	+5				-26		6.8			
NOISE										
POT RES.										
CULT & CMTS										

I. P. RECEIVER NOTES, JOB No. 900, AREA Verde Queen

LINE 2, HALF 1S E, SP. 1, a = 250', BEARING S45E

SENDER STA. 0,0 = ELECTRODE No. 3, DATE 2-12-74

PAGE 4

HEINRICHS GEOEX

SEND	—	—	3-4	2-3	1-2	4-5	3-4	2-3	1-2	
RECEIVE	0-2.5SE	2.5-5SE	5 —	—	7.5SE	2.5 —	—	—	10SE	
MULTIPLIER			1.0	1.0	1.0	1.0	1.0	1.0	0.1	
PFE			0.6	0.5	0.6	1.0	1.0	1.1	1.2	
CUR. (AMPS)			0.6	2.0	2.0	0.3	0.6	2.0	2.0	
POINT No.										
SEP. (n)										
H. F. MV			186	97.1	27.6	27.7	14.7	17.8	6.27	
DRIFT			—	—	—	—	—	+0.1	—	
1.0 PFE $K_n/1000$			.75	3	7.5	.75	3	7.5	15	
0.3 PFE ρ_{CAL}										
0.1 PFE PFE_c										
3.0 MV $\rho/2\pi$			232	146	104	69	74	67	47	
DRIFT MCF			2.6	3.4	5.8	14	14	16	26	
S. P.	+4	+37	+5			+17				
NOISE										
POT RES.										
CULT & CMTS										

I. P. RECEIVER NOTES, JOB NO. 900, AREA Verde Queen

LINE 2, HALF SE, SP. 1, a = 250', BEARING S 45 E

SENDER STA. 0,0 = ELECTRODE NO. 3, DATE 2-12-74

PAGE 5

HEINRICHS GEOEX

SEND		5-6	4-5	3-4	2-3	1-2	5-6	4-5	3-4	2-3	1-2
RECEIVE		10				12.5 SE	12.5				15 SE
MULTIPLIER		1.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
PFE		0.4	0.4	0.6	0.6	0.8	0.4	0.6	0.7	0.8	1.0
CUR. (AMPS)		0.6	0.3	0.6	2.0	2.0	0.6	0.3	0.6	2.0	2.0
POINT NO.											
SEP. (n)											
H. F. MV		27.9	5.88	6.60	9.62	3.60	8.46	2.93	4.03	6.41	2.55
DRIFT		—	—	—	—	—	—	—	—	—	—
1.0 PFE	$K_n/1000$	.75	3	7.5	15	26.25	3	7.5	15	26.25	42
0.3 PFE	ρ_{CAL}										
0.1 PFE	PFE_C										
3.0 MV	$\rho/2\pi$	35	59	82	72	47	42	73	101	84	54
DRIFT	MCF	11	6.8	7.3	8.3	17	9.5	8.2	6.9	9.5	19
S. P.		+14					+3				
NOISE											
POT RES.											
CULT & CMTS											

I. P. RECEIVER NOTES, JOB No. 900, AREA Verde Queen

LINE 2, HALF SE, SP. 1, a = 250', BEARING S 45 E

SENDER STA. 0.0 = ELECTRODE No. 3, DATE 2-12-74

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HEINRICHS GEOEX

SEND		5-6	4-5	3-4	2-3	5-6	4-5	3-4			
RECEIVE		15			17.5 SE	17.5		20 SE			
MULTIPLIER		0.1	0.1	0.1	0.1	0.1	.01	0.1			
PFE		0.4	0.6	0.7	0.8	0.6	0.9	0.8			
CUR. (AMPS)		0.6	0.3	0.6	2.0	0.6	0.3	0.6			
POINT No.											
SEP. (n)											
H. F. Mv		2.08	1.03	1.71	2.81	1.27	.791	1.44			
DRIFT		—	+0.1	—	—	—	-0.2	—			
1.0 PFE	K_n/1000	7.5	15	26.25	42	15	26.25	42			
0.3 PFE	ρ_{CAL}										
0.1 PFE	PFE_C										
3.0 MV	$\rho/2\pi$	26	52	75	59	32	69	101			
DRIFT	MCF	15	0.4-0.8	9.4	14	19	13	7.9			
S. P.		+24				+9					
NOISE											
POT RES.											
CULT & CMTS											

I. P. SENDER NOTES

JOB No. 900 AREA Ver de Queen

LINE 2, HALF NW, SP. 1, DATE 2-12-74

PAGE 1

HEINRICHS GEOEX

SEND	4-5	5-6	3-4	4-5	5-6	2-3	3-4	4-5	5-6	
RECEIVE	0 —	2.5 NW	2.5 —		5 NW	5 —			7.5 NW	
RANGE	100 x 3	200 x 3	200 x 3	100 x 3	200 x 3	200 x 10	200 x 3	100 x 3	200 x 3	
VOLTAGE	610	670	720	610	670	580	720	610	670	
CURRENT	0.3	0.6	0.6	0.3	0.6	2.0	0.6	0.3	0.6	
SEND	1-2	2-3	3-4	4-5	5-6	1-2	2-3	3-4	4-5	5-6
RECEIVE	7.5 —				10 NW	10 —				12.5 NW
RANGE	200 x 10	200 x 10	200 x 3	100 x 3	200 x 3	200 x 10	200 x 10	200 x 3	100 x 3	200 x 3
VOLTAGE	500	580	720	610	670	500	575	715	605	670
CURRENT	2.0	2.0	0.6	0.3	0.6	2.0	2.0	0.6	0.3	0.6

FREQUENCIES 3.0 & 0.3

SENDER No.

OPERATOR

RECEIVER No. D. D

OPERATOR R C P

COMMENTS:

I. P. SENDER NOTES

JOB No. 900 AREA Verde Queen

LINE 2, HALF NW & SE, SP. 1, DATE 2-12-74

PAGE 2

HEINRICHS GEOEX

SEND	1-2	2-3	3-4	4-5	1-2	2-3	3-4			
RECEIVE	12.5			15 NW	15		17.5 NW			
RANGE	200 x10	200 x10	200 x3	100 x3	200 x10	200 x10	200 x3			
VOLTAGE	495	575	715	600	495	570	710			
CURRENT	2.0	2.0	0.6	0.3	2.0	2.0	0.6			
SEND	3-4	2-3	1-2	4-5	3-4	2-3	1-2			
RECEIVE	5		7.5 SE	7.5			10 SE			
RANGE	200 x3	200 x10	200 x10	100 x3	200 x3	200 x10	200 x10			
VOLTAGE	700	570	490	595	700	570	490			
CURRENT	0.6	2.0	2.0	0.3	0.6	2.0	2.0			

FREQUENCIES	COMMENTS:
SENDER No.	
OPERATOR	
RECEIVER No.	
OPERATOR	

I. P. SENDER NOTES

JOB No. 900 AREA Verde Queen

LINE 2, HALF SE, SP. 1, DATE 2-12-74

PAGE 3

HEINRICHS GEOEX

SEND	5-6	4-5	3-4	2-3	1-2	5-6	4-5	3-4	2-3	1-2
RECEIVE	10				12.5 SE	12.5				15 SE
RANGE	200 x3	100 x3	200 x3	200 x10	200 x10	200 x3	100 x3	200 x3	200 x10	200 x10
VOLTAGE	650	595	705	570	485	650	595	700	570	480
CURRENT	0.6	0.3	0.6	2.0	2.0	0.6	0.3	0.6	2.0	2.0
SEND	5-6	4-5	3-4	2-3	5-6	4-5	3-4			
RECEIVE	15			17.5 SE	17.5		20 SE			
RANGE	200 x3	100 x3	200 x3	200 x10	200 x3	100 x3	200 x3			
VOLTAGE	650	590	700	570	640	590	700			
CURRENT	0.6	0.3	0.6	2.0	0.6	0.3	0.6			

FREQUENCIES	COMMENTS:
SENDER No.	
OPERATOR	
RECEIVER No.	
OPERATOR	

I. P. RECEIVER NOTES, JOB NO. 700 AREA Verde Queen

LINE 1, HALF NW, SR. 1, a = 250', BEARING N45W

SENDER STA. 0.0 = ELECTRODE NO. 3, DATE 2-11-74

PAGE 1

HEINRICHS GEOEX

SEND	4-5	5-6	3-4	4-5	5-6	2-3	3-4	4-5	5-6	Cal
RECEIVE	0	2.5NW	2.5		5.0NW	5.0			7.5NW	2-11-74
MULTIPLIER	1.0	1.0	10	1.0	0.1	10	10	1.0	0.1	1.0
PFE	0.4	0.3	0.4	0.6	0.5	0.4	0.3	0.7	0.7	0.0
CUR. (AMPS)	0.6	0.3	2.0	0.6	0.3	1.5	2.0	0.6	0.3	1.0
POINT NO.										
SEP. (n)										
H. F. MV	86.8	15.8	469	28.8	6.21	153	166	14.2	3.50	1009
DRIFT	—	—	—	—	—	—	—	—	—	—
1.0 PFE K_n/1000	.75	3	.75	3	7.5	.75	3	7.5	15	
0.3 PFE ρ_{CAL}										
0.1 PFE PFE_c										
3.0 MV $\rho/2\pi$	108	158	176	144	155	76	249	178	175	
DRIFT MCF	3.7	1.9	2.3	4.2	3.2	5.2	1.2	3.9	4.6	
S. P.	+2.3		+2.9			0.0				
NOISE										
POT RES.										
CULT & CMTS										

I. P. RECEIVER NOTES, JOB NO. 900 [redacted] AREA Verde Queen

LINE 1, HALF NW, SP. 1, a = 250', BEARING N45W

SENDER STA. 0.0 = ELECTRODE NO. 3, DATE 2-11-74

PAGE 2

HEINRICHS GEOEX

SEND		1-2	2-3	3-4	4-5	5-6	1-2	2-3	3-4	4-5	5-6
RECEIVE		7.5				10 NW	10				12.5 NW
MULTIPLIER		1.0	1.0	1.0	0.1	0.1	1.0	1.0	1.0	0.1	0.1
PFE		0.3	0.5	0.8	1.0	0.9	0.4	0.7	0.9	1.1	1.0
CUR. (AMPS)		1.5	1.5	2.0	0.6	0.3	1.5	1.5	2.0	0.6	0.3
POINT NO.											
SEP. (n)											
H. F. MV		162	52.6	79.5	8.34	2.31	45.9	22.9	41.5	4.88	1.41
DRIFT		—	—	—	—	—	—	—	—	—	—
1.0 PFE	K_n/1000	.75	3	7.5	15	2.31 (0.2)	3	7.5	15	26.25	42
0.3 PFE	ρ_{CAL}					26.25					
0.1 PFE	PFE_c										
3.0 MV	$\rho/2\pi$	81	105	298	208	202	92	114	311	214	197
DRIFT	MCF	3.7	4.8	2.7	4.8	4.6	4.4	6.1	2.9	5.2	5.1
S. P.		-4.0					+27.2				
NOISE											
POT RES.											
CULT & CMTS											

I. P. RECEIVER NOTES, JOB NO. 90[redacted] AREA Verde Quean

LINE 1, HALF NW, SR. 1, a = 250', BEARING N45W

SENDER STA. 0.0 = ELECTRODE NO. 3, DATE 2-11-74

PAGE 3

HEINRICHS GEOEX

SEND		1-2	2-3	3-4	4-5	1-2	2-3	3-4			
RECEIVE		12.5			15NW	15		17.5NW			
MULTIPLIER		1.0	0.1	1.0	0.1	0.1	0.1	1.0			
PFE		0.5	0.8	1.0	1.2	0.7	0.8	1.2			
CUR. (AMPS)		1.5	1.5	2.0	0.6	1.5	1.5	2.0			
POINT NO.											
SEP. (n)											
H. F. MV		14.3	8.85	18.0	2.32	7.54	5.42	11.9			
DRIFT											
1.0 PFE	K_n/1000	7.5	15	26.25	42	15	26.25	42			
0.3 PFE	ρ_{CAL}										
0.1 PFE	PFE_c										
3.0 MV	$\rho/2\pi$	72	88	236	162	75	95	250			
DRIFT	MCF	7.0	9.0	4.2	7.4	9.3	8.4	4.8			
S. P.		-2.9				+26.3					
NOISE											
POT RES.											
CULT & CMTS											

I. P. RECEIVER NOTES, JOB NO. 900[redacted] AREA Verde Queen

LINE 1, HALF SE, SR. 1, a = 250', BEARING S+SE

SENDER STA. 0,0 = ELECTRODE NO. 3, DATE 2-11-74

PAGE 4

HEINRICHS GEOEX

SEND	—	—	3-4	2-3	1-2	4-5	3-4	2-3	1-2	
RECEIVE	0-2.5SE	2.5-5.0SE	5.0	—	7.5SE	7.5	—	—	10 SE	
MULTIPLIER			10	1.0	1.0	10	10	1.0	1.0	
PFE			0.1	0.3	0.5	0.6	0.3	0.4	0.7	
CUR. (AMPS)			2.0	1.5	1.5	0.6	2.0	1.5	1.5	
POINT NO.										
SEP. (n)										
H. F. MV			735	88.7	31.7	783	175	27.6	10.9	
DRIFT			—	—	—	—	—	—	—	
1.0 PFE K_n/1000			.75	3	7.5	.75	3	7.5	15	
0.3 PFE ρ_{CAL}										
0.1 PFE PFE_c										
3.0 MV $\rho/2\pi$			276	177	158	979	262	138	109	
DRIFT MCF			0.36	1.7	3.2	0.61	1.1	2.9	6.4	
S. P.	0.0	+14.9	-33.8			-35.3				
NOISE										
POT RES.										
CULT & CMTS										

I. P. RECEIVER NOTES, JOB No. 900 [redacted] AREA Verde Queen

LINE 1, HALF 5E, SP. 1, a = 250', BEARING 54S E

SENDER STA. 0.0 = ELECTRODE No. 1, DATE 2-11-74

PAGE 5

HEINRICHS GEOEX

SEND	5-6	4-5	3-4	2-3	1-2	5-6	4-5	3-4	2-3	1-2
RECEIVE	10				12.5SE	12.5				15SE
MULTIPLIER	10	1.0	1.0	0.1	0.1	0.1	0.1	1.0	0.1	0.1
PFE	0.9	1.0	0.8	0.8	1.1	0.5	0.7	0.7	0.8	1.2
CUR. (AMPS)	0.3	0.6	2.0	1.5	1.5	0.3	0.6	2.0	1.5	1.5
POINT NO.										
SEP. (n)										
H. F. MV	301	527	31.5	6.25	2.77	5.84	5.25	12.0	2.87	1.42
DRIFT	—	—	—	—	—	—	—	—	—	+0.2
1.0 PFE K_n/1000	.75	3	7.5	15	26.25	3	7.5	15	26.25	42
0.3 PFE ρ_{CAL}										
0.1 PFE PFE_c										1.1
3.0 MV $\rho/2\pi$	752	2640	118	62	48	58	66	90	50	40
DRIFT MCF	1.2	0.38	6.8	13	23	8.6	11	7.8	16	1.0-1.4
S. P.	+74.0					+20.8				28
NOISE										
POT RES.										
CULT & CMTS										

I. P. RECEIVER NOTES, JOB No. 900[redacted] AREA Verle Queen

LINE 1, HALF SE, SR. 1, a = 250, BEARING S45E

SENDER STA. 0.0 = ELECTRODE No. 3, DATE 2-11-74

PAGE 6

HEINRICHS GEOEX

SEND	5-6	4-5	3-4	2-3	5-6	4-5	3-4			
RECEIVE	15 —		—	17.5SE	17.5 —	—	20SE			
MULTIPLIER	0.1	0.1	0.1	0.1	0.1	0.1	0.1			
PFE	0.6	0.8	0.8	0.7	0.4	0.7	0.8			
CUR. (AMPS)	0.3	0.6	2.0	1.5	0.3	0.6	2.0			
POINT No.										
SEP. (n)										
H. F. Mv	2.03	2.34	6.33	1.54	1.04	1.43	4.26			
DRIFT	—	+0.1	—	—	—	—	-0.1			
1.0 PFE $K_n/1000$	7.5	15	26.25	42	15	26.25	42			
0.3 PFE ρ_{CAL}										
0.1 PFE PFE_c										
3.0 MV $\rho/2\pi$	51	58	83	43	52	63	89			
DRIFT MCF	12	14	9.6	16	7.7	11	8.9			
S. P.	+13.8				+16.1					
NOISE										
POT RES.										
CULT & CMTS					*					

GND. fences at ≈ 1600 & 1800

I. P. SENDER NOTES

JOB No. 900 AREA VERDE QUEEN

LINE 1, HALF NW, SP. 1, DATE 2-11-74

PAGE 1

HEINRICHS GEOEX

SEND	4-5	5-6	3-4	4-5	5-6	2-3	3-4	4-5	5-6	CAL
RECEIVE	0 →	2.5 NW	2.5	→	5.0 NW	5.0			7.5 NW	
RANGE	200 X 3	100 X 3	200 X 10	200 X 3	100 X 3	150 X 10	200 X 10	200 X 3	100 X 3	
VOLTAGE	800	620	800	800	610	650	790	800	610	
CURRENT	0.6	0.3	2.0	0.6	0.3	1.5	2.0	0.6	0.3	
SEND	1-2	2-3	3-4	4-5	5-6	1-2	2-3	3-4	4-5	5-6
RECEIVE	7.5				10. NW	10				12.5
RANGE	150/10	150/10	200/10	200/3	100 X 3	150/10	150/10	200/10	200/3	100/3
VOLTAGE	810	650	790	800	610	800	640	780	790	600
CURRENT	1.5	1.5	2.0	0.6	0.3	1.5	1.5	2.0	0.6	0.3

FREQUENCIES 3.0 + 0.3

SENDER No. 9662-S

OPERATOR MARLATT

RECEIVER No.

OPERATOR

COMMENTS:

I. P. SENDER NOTES

JOB No. 900 AREA VERDE QUEEN

LINE 1, HALF NW, SP. 1, DATE 2-11-74

PAGE 2

HEINRICHS GEOEX

SEND	1-2	2-3	3-4	4-5	1-2	2-3	3-4			
RECEIVE	12.5	→	→	15. NW	15	→	17.5			
RANGE	150/10	150/10	200 x10	200 x3	150 x10	150 x10	200 x10			
VOLTAGE	800	640	785	790	800	640	770			
CURRENT	1.5	1.5	2.0	0.6	1.5	1.5	2.0			
SEND										
RECEIVE										
RANGE										
VOLTAGE										
CURRENT										

FREQUENCIES	3.0 x 0.3
SENDER No.	
OPERATOR	
RECEIVER No.	
OPERATOR	

COMMENTS:

I. P. SENDER NOTES

JOB No. 900 AREA VERO QUEEN

LINE 1, HALF SE, SP. 1, DATE 2-11-74

PAGE 3

HEINRICHS GEOEX

SEND	3-4	2-3	1-2	4-5	3-4	2-3	1-2	5-6	4-5	-3-4
RECEIVE	5-0	→	7.5 SE	7.5	—	—	10 SE	10	—	—
RANGE	200 x10	150 x10	150 x10	200 x3	200 x10	150 x10	150 x10	100 x3	200 x3	200 x10
VOLTAGE	760	630	790	780	760	630	785	600	775	760
CURRENT	2.0	1.5	1.5	0.6	2.0	1.5	1.5	0.3	0.6	2.0
SEND	2-3	1-2	5-6	4-5	3-4	2-3	1-2			
RECEIVE	—	12.5	12.5	—	—	—	15 SE			
RANGE	150 x10	150 x10	100 x3	200 x3	200 x10	150 x10	150 x10			
VOLTAGE	630	780	600	770	750	620	775			
CURRENT	1.5	1.5	0.3	0.6	2.0	1.5	1.5			

FREQUENCIES	
SENDER No.	
OPERATOR	
RECEIVER No.	
OPERATOR	

COMMENTS:

I. P. SENDER NOTES

JOB No. 900 AREA VERDE QUEEN

LINE 1, HALF SE, SP. 1, DATE 2-11-74

PAGE 4

HEINRICHS GEOEX

SEND	5-6	4-5	3-4	2-3	5-6	4-5	3-4			
RECEIVE	15	→	→	17.5	17.5	→	20.5			
RANGE	100 x 3	200 x 3	200 x 10	150 x 10	100 x 3	200 x 3	200 x 10			
VOLTAGE	600	770	755	620	600	770	750			
CURRENT	0.3	0.6	2.0	1.5	0.3	0.6	2.0			
SEND										
RECEIVE										
RANGE										
VOLTAGE										
CURRENT										

FREQUENCIES	COMMENTS:
SENDER No.	
OPERATOR	
RECEIVER No.	
OPERATOR	

Notice of Location
(LODE)

NOTICE IS HEREBY GIVEN that the REGINA No 1 lode mining claim was located by NORTH AMERICAN MINES, A DELAWARE CORP. AUTHORIZED TO DO BUSINESS IN ARIZONA on FEBRUARY 7th, 1974. This claim is 1,500 feet in length along the vein or deposit of mineral-bearing rock in place and 300 feet in width on each side of the middle of said vein or deposit at which this notice is posted. The general course of this claim is NORTHEAST – SOUTHWEST and is situated in the EMPIRE Mining District, PIMA County, Arizona. This claim runs from the location monument or stake on which the notice is posted 50 feet in a NORTHEAST direction to the NORTHEAST center end monument or stake and 1450 feet in a SOUTHWEST direction from the location monument or stake to the SOUTHWEST center end monument or stake, and is also marked by two corner monuments or stakes at each end of the claim, one on each side of and 300 feet from the center end monuments or stakes, making the claim in the form of a parallelogram.

THIS CLAIM IS ONE OF A CONTIGUOUS GROUP LOCATED IN SECTION 17, T. 18 S., R 17 E. THE APPROXIMATE DISTANCE TO THE NORTHWEST CORNER OF SECTION 17 IS 4400 FEET ON A BEARING OF N 20° W.

REGINA No 3	REGINA No 4
REGINA No 1	REGINA No 2
REGINA No 5	REGINA No 6

HEINRICHS GEOEXPLORATION CO.
P.O. BOX 5964 TUCSON, ARIZONA
AGENT FOR NORTH AMERICAN MINES
J. W. [illegible]
Locator

WITNESS: C. S. Ludwig

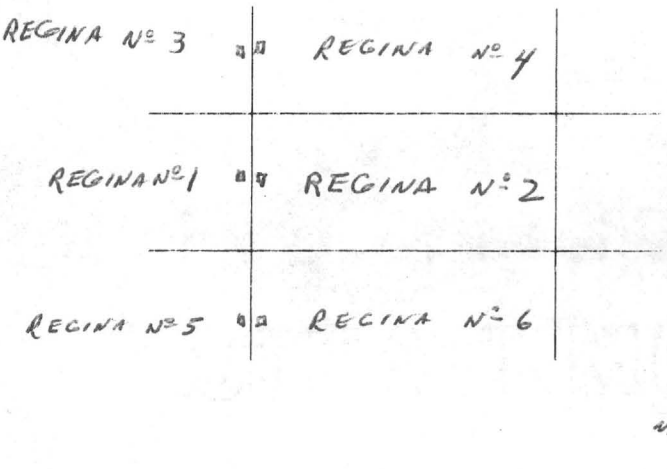
NORTH

Write on the above lines the locality of the claim with reference to some natural object or permanent monument whereby the claim can be identified. Give the section, township and range if known and, if possible, the direction and distance from the nearest public survey marker. It is advisable to make a sketch in the space above, showing the adjoining and overlapping claims. If this is an amendment of a location notice, give the name and book and page of recording of the claim being amended.

Notice of Location
(LODE)

NOTICE IS HEREBY GIVEN that the REGINA Nº 2 lode mining claim was located by NORTH AMERICAN MINES, A DELAWARE CORP. AUTHORIZED TO DO BUSINESS IN ARIZONA on FEBRUARY 7th, 1974. This claim is 1,500 feet in length along the vein or deposit of mineral-bearing rock in place and 300 feet in width on each side of the middle of said vein or deposit at which this notice is posted. The general course of this claim is NORTHEAST - SOUTHWEST and is situated in the EMPIRE Mining District, PIMA County, Arizona. This claim runs from the location monument or stake on which the notice is posted 50 feet in a SOUTHWEST direction to the SOUTHWEST center end monument or stake and 1450 feet in a NORTHEAST direction from the location monument or stake to the NORTHEAST center end monument or stake, and is also marked by two corner monuments or stakes at each end of the claim, one on each side of and 300 feet from the center end monuments or stakes, making the claim in the form of a parallelogram.

THIS CLAIM IS ONE OF A CONTIGUOUS GROUP LOCATED IN SECTION 17, T18S, R17E. THE APPROXIMATE DISTANCE TO THE NORTHWEST CORNER OF SECTION 17 IS 4400 FEET ON A BEARING OF N 20° W.



HEINRICHS GEO EXPLORATION CO.
P.O. BOX 5964 TUCSON, ARIZONA
AGENT FOR NORTH AMERICAN MINES
J. W. Marlatt
Locator

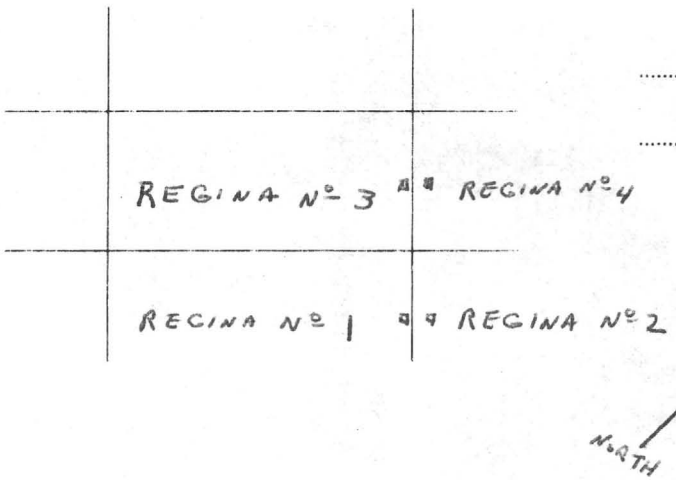
WITNESS: Chris J. Ludwig

Write on the above lines the locality of the claim with reference to some natural object or permanent monument whereby the claim can be identified. Give the section, township and range if known and, if possible, the direction and distance from the nearest public survey marker. It is advisable to make a sketch in the space above, showing the adjoining and overlapping claims. If this is an amendment of a location notice, give the name and book and page of recording of the claim being amended.

Notice of Location
(LODE)

NOTICE IS HEREBY GIVEN that the REGINA Nº 3 lode mining claim was located by NORTH AMERICAN MINES, A DELAWARE CORP. AUTHORIZED TO DO BUSINESS IN ARIZONA on FEBRUARY 7th, 1974. This claim is 1,500 feet in length along the vein or deposit of mineral-bearing rock in place and 300 feet in width on each side of the middle of said vein or deposit at which this notice is posted. The general course of this claim is NORTHEAST - SOUTHWEST and is situated in the EMPIRE Mining District, PIMA County, Arizona. This claim runs from the location monument or stake on which the notice is posted 50 feet in a NORTHEAST direction to the NORTHEAST center end monument or stake and 1450 feet in a SOUTHWEST direction from the location monument or stake to the SOUTHWEST center end monument or stake, and is also marked by two corner monuments or stakes at each end of the claim, one on each side of and 300 feet from the center end monuments or stakes, making the claim in the form of a parallelogram.

THIS CLAIM IS ONE OF A CONTIGUOUS GROUP LOCATED IN SECTION 17, T18S, R17E. THE APPROXIMATE DISTANCE TO THE NORTHWEST CORNER OF SECTION 17 IS 3900 FEET ON A BEARING OF N 16° W.



HEINRICHS GEOEXPLORATION CO.
P.O. BOX 5964 TUCSON, ARIZONA
AGENT FOR NORTH AMERICAN MINES.
J. W. Mandatt
Locator

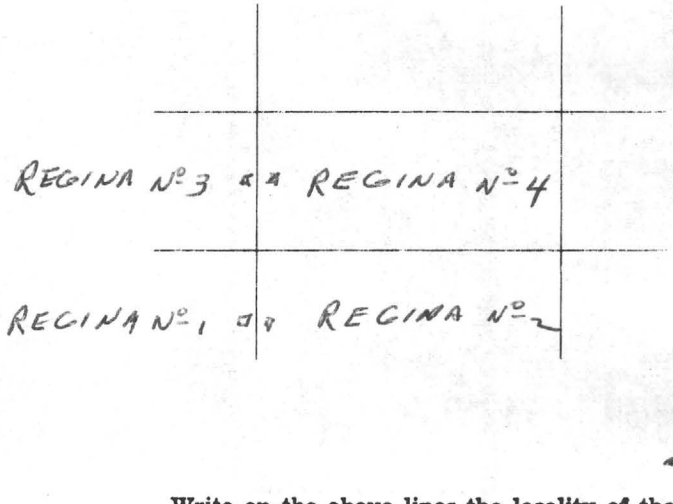
WITNESS: Chris S. Ludwig

Write on the above lines the locality of the claim with reference to some natural object or permanent monument whereby the claim can be identified. Give the section, township and range if known and, if possible, the direction and distance from the nearest public survey marker. It is advisable to make a sketch in the space above, showing the adjoining and overlapping claims. If this is an amendment of a location notice, give the name and book and page of recording of the claim being amended.

Notice of Location
(LODE)

NOTICE IS HEREBY GIVEN that the REGINA Nº 4 lode mining claim was located by NORTH AMERICAN MINES, A DELAWARE CORP. AUTHORIZED TO DO BUSINESS IN ARIZONA on FEBRUARY 7th, 1974. This claim is 1,500 feet in length along the vein or deposit of mineral-bearing rock in place and 300 feet in width on each side of the middle of said vein or deposit at which this notice is posted. The general course of this claim is NORTHEAST - SOUTHWEST and is situated in the EMPIRE Mining District, PIMA County, Arizona. This claim runs from the location monument or stake on which the notice is posted 50 feet in a SOUTHWEST direction to the SOUTHWEST center end monument or stake and 1450 feet in a NORTHEAST direction from the location monument or stake to the NORTHEAST center end monument or stake, and is also marked by two corner monuments or stakes at each end of the claim, one on each side of and 300 feet from the center end monuments or stakes, making the claim in the form of a parallelogram.

THIS CLAIM IS ONE OF A CONTIGUOUS GROUP LOCATED IN SECTION 17, T18S, R17E. THE APPROXIMATE DISTANCE TO THE NORTHWEST CORNER OF SECTION 17 IS 3900 FEET ON A BEARING OF N 16° W.



HEINRICHS GEO EXPLORATION CO.
P.O. BOX 5964 TUCSON, ARIZONA
AGENT FOR NORTH AMERICAN MINES.
J. W. Marlatt
Locator

WITNESS: Chris S. Ludwig

Write on the above lines the locality of the claim with reference to some natural object or permanent monument whereby the claim can be identified. Give the section, township and range if known and, if possible, the direction and distance from the nearest public survey marker. It is advisable to make a sketch in the space above, showing the adjoining and overlapping claims. If this is an amendment of a location notice, give the name and book and page of recording of the claim being amended.

Notice of Location
(LODE)

NOTICE IS HEREBY GIVEN that the REGINA Nº 5 lode mining claim was located by NORTH AMERICAN MINES, A DELAWARE CORP. AUTHORIZED TO DO BUSINESS IN ARIZONA on FEBRUARY 7th, 1974. This claim is 1,500 feet in length along the vein or deposit of mineral-bearing rock in place and 300 feet in width on each side of the middle of said vein or deposit at which this notice is posted. The general course of this claim is NORTHEAST - SOUTHWEST and is situated in the EMPIRE Mining District, PIMA County, Arizona. This claim runs from the location monument or stake on which the notice is posted 50 feet in a NORTHEAST direction to the NORTHEAST center end monument or stake and 1450 feet in a SOUTHWEST direction from the location monument or stake to the SOUTHWEST center end monument or stake, and is also marked by two corner monuments or stakes at each end of the claim, one on each side of and 300 feet from the center end monuments or stakes, making the claim in the form of a parallelogram.

THIS CLAIM IS ONE OF A CONTIGUOUS GROUP LOCATED IN SECTION 17, T18S, R17E. THE APPROXIMATE DISTANCE TO THE NORTHWEST CORNER OF SECTION 17 IS 4900 FEET ON A BEARING OF N23°W.

REGINA Nº 1	REGINA Nº 2
REGINA Nº 5	REGINA Nº 6

HEINRICHS GEOEXPLORATION CO.
P.O. BOX 5964 TUCSON, ARIZONA
AGENT FOR NORTH AMERICAN MINES.

J. W. Marlatt
Locator

WITNESS: Chris S. Ludwig

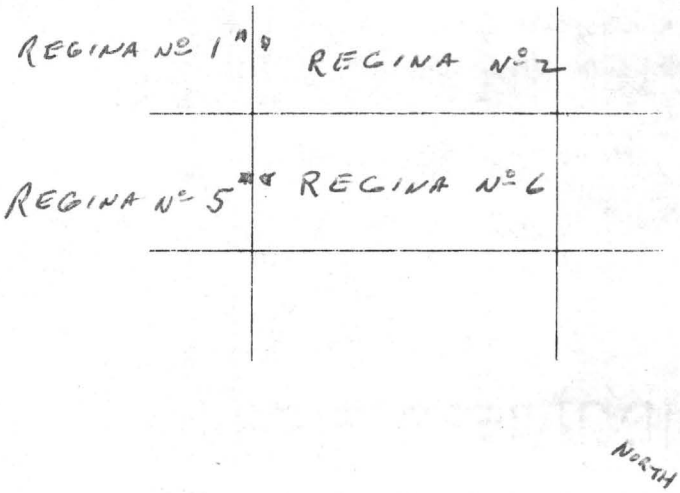
NORTH

Write on the above lines the locality of the claim with reference to some natural object or permanent monument whereby the claim can be identified. Give the section, township and range if known and, if possible, the direction and distance from the nearest public survey marker. It is advisable to make a sketch in the space above, showing the adjoining and overlapping claims. If this is an amendment of a location notice, give the name and book and page of recording of the claim being amended.

Notice of Location
(LODE)

NOTICE IS HEREBY GIVEN that the REGINA No 6 lode mining claim was located by NORTH AMERICAN MINES, A DELAWARE CORP. AUTHORIZED TO DO BUSINESS IN ARIZONA on FEBRUARY 7th, 1974. This claim is 1,500 feet in length along the vein or deposit of mineral-bearing rock in place and 300 feet in width on each side of the middle of said vein or deposit at which this notice is posted. The general course of this claim is NORTHEAST - SOUTHWEST and is situated in the EMPIRE Mining District, PIMA County, Arizona. This claim runs from the location monument or stake on which the notice is posted 50 feet in a SOUTHWEST direction to the SOUTHWEST center end monument or stake and 1450 feet in a NORTHEAST direction from the location monument or stake to the NORTHEAST center end monument or stake, and is also marked by two corner monuments or stakes at each end of the claim, one on each side of and 300 feet from the center end monuments or stakes, making the claim in the form of a parallelogram.

THIS CLAIM IS ONE OF A CONTIGUOUS GROUP LOCATED IN SECTION 17, T18S, R17E. THE APPROXIMATE DISTANCE TO THE NORTHWEST CORNER OF SECTION 17 IS 4900 FEET ON A BEARING OF N 23° W.



HEINRICHS GEOEXPLORATION CO.
P.O. BOX 5964 TUCSON, ARIZONA
AGENT FOR NORTH AMERICAN MINES
J. W. Marlatt
Locator
WITNESS: Chris S. Ludwig

Write on the above lines the locality of the claim with reference to some natural object or permanent monument whereby the claim can be identified. Give the section, township and range if known and, if possible, the direction and distance from the nearest public survey marker. It is advisable to make a sketch in the space above, showing the adjoining and overlapping claims. If this is an amendment of a location notice, give the name and book and page of recording of the claim being amended.

EMPIRE DISTRICT

SCHRADER, FRANK C., 1915, MINERAL DEPOSITS OF THE SANTA RITA AND PATAGONIA MOUNTAINS ARIZONA: U.S. GEOL. SURVEY BULL 582, 373 p.

SIX MINING CAMPS

CALIFORNIA, MONTANA, HAVEAY, TOTAL WRECK, COPPER OR HILTON, AND PROSPECT

MONOCLINE PALEOZOIC LMS & QTZITE UNDERLAIN by INTRUSIVE GRANITE & FLANKED & PARTIALLY COVERED by MESOZOIC SEDIMENTS.

LATE RHYOLITE.

BIOTITE-HNBE GRANITIC INTRUSIVE GENERALLY ASSOCIATED WITH INTRUSIVE ROCKS.

OXIDE Ag Cu, Pb ORES by PRODUCT Au

TOTAL WRECK 1879-1911- @ 10,000 TONS ≈ $60 ORE 500' DEEP 5000' OF DRIFT

VEINS 1 & 2 APPROX E-W MAIN VEIN DISPLACES #1 & 2 STRIKES N 45° E

HOST ROCK LMS & QTZITE

IRREG. REPLACEMENT ORE BODIES

Ag-Pb WITH Cu IN DEEPER PORTIONS OF MINE

COPPER CAMP

3 MILES SW OF TOTAL WRECK

VEINS TREND NE

JEROME VEIN 1½ MILE LONG

VERDE QUEEN ON E VEIN Cu, Pb, & Ag ORES gray LMS-QTZITE ON FOOTWALL 280' SHAFT 3 LEVELS AT 50, 150, 280' BELOW SURFACE WITH 75', 175', & 50' OF DRIFTS - 4-$7 IN GOLD "CONSIDERABLE GOOD ORE IN SIGHT?" / RHYOLITE DIKE 2-25' WIDE ORE MINERALS UNDER FOOTWALL.

JEROME No 2 40' WIDE lms hanging wall, a 12 foot wall

Copper Point Prospect gT/lms contact

skarn garnetiferous epidotized ferruginous gangue cpy, py, cc, malachite & specularite.

Empire Project, 1970, Miami Cu Co.

U.S. Geol. Survey Empire Mt. 15' Quad 1950

Alderding Herbert, 1938 Univ Ariz Unpb

Phd dissertation

Alexy

Butler W, C, 1969 dp Paleozoic Strat.

Adjoins Chief Claim

Jerome No 2 adjoins Verde Queen on the west 49 claim adjoins above on S

Geochem

~~A South trending sil zone~~

The most favorable zone geochemically is in sections 17, 20, 29 and 32 T 18S and R 17E and continuing in sections 5 & 8 T 19S R 18E. Which strikes approximately N-S. An apparent N 45°E striking zone is present from sec 32 T 18S R 17E toward the Total Wreck Mine and extending irregularly three miles to the east. Both trends are irregular and have a width of from 2-3 miles. The NW feature is parallel to and related? to Cienega Creek and the reason for the N trend is unknown.

FEISS, WM. JULIAN, 1929, THE GEOLOGY AND ORE DEPOSITS OF HILTANO CAMP, ARIZONA: UNPB. M.S. THESIS UNIV. OF ARIZONA, TUCSON, 40p

S. SIDE OF EMPIRE MTNS. DIST. ABOUT 2 SQUARE MILES TOTAL WRECK MOST IMPORTANT PROPERTY $450,000. Pb-Ag ORE. FROM 15 CLAIMS.

TOTAL WRECK, PRINCE, GOPHER, & CHIEF

WATER IN PRINCE SHAFT 450'

MINERAL DEPOSITS ASSOC. INTRUSIVE ROCK WITHIN LMS. PENN. & PM. LMS & QTZT.

SMALL REPLACEMENT OREBODIES IN LMS

NACO LMS 1600' LT. GRAY QTZT BEDS

SNYDER HILL FM. QTZTITIC SS - BROWN TO BRICK RED IN COLOR AT BASE THEN LMS GRAY almost LITHOGRAPHIC

CRET. CONGLOMERATE LMS PEBBLES WITH $CaCO_3$ CEMENT

CRET ARKOSE

CONTACT META. RX

LARGE GRANODIORITE STOCK EMPIRE PEAK

QTZ PORPHYRY DIKES COMMON

GABBRO SILLS &

MINERALIZATION GRANODIORITE-NACO CONTACT PY EXPOSED IN PIT NEAR EMPIRE CK.

ANDRADITE & T, TREM., EPIDOTE

SILICA BLOWS POST MINERAL

ORE SMALL POCKETS IN LMS.

ALBERDING, HERBERT, 1938, THE GEOLOGY OF THE NORTHERN EMPIRE MOUNTAINS, ARIZONA: UNIV OF ARIZ. UNPB. PHD DISSERTATION. 106 p.

STRATIGRAPHY POST NACO CIENAGA BEDS SNYDER HILL FM, & K SERIES

CIENEGA BEDS - 690' THICK MARBLES grading TO DOLOMITE - SANDY SHALES

SNYDER HILL FM. ~~400-650 REDDISH SANDY LMS~~, 850' THICK THIN BEDS gy - black LMS WITH QTZITE.

K ROCKS -

Sycamore STOCK QTz MONZONITE

QTz DIORITE DIKES

SYENITE Porphyry DIKE

TOTAL WRECK FOULT WEEKLY MINERALIZED ALONG ITS LENGTH

MAIN VEIN (FAULT) TOTAL WRECK

TOTAL WRECK

ONE IN 3 VEINS & REPLACEMENTS ARGENTIFEROUS Pb LITTLE Cu IN BOTTOM OF MINE

ALEXIS, CARL O., 1939, THE GEOLOGY OF THE LEAD MOUNTAIN AREA PIMA COUNTY, ARIZONA: UNPB. M. S. THESIS UNIV. of ARIZ., 60P

DOMING by SYCAMORE STOCK CAUSE BEDDING PHAIM FAULTING

CLAIMS PRINCE, CHIEF, COPPER TOP RED CLOUD, GOPHER, SOLD IN 1902 TO VERDE QUEEN MINING Co - PROPERTY OF HILTON FAMILY (1939)

1927-28 PRINCE LEASED TO CALUMET & ARIZONA Co.

VEINS IN THE STOCK SMALL & NON PERSISTANT

CONTACT DEPOSITS

EMPIRE PK SMALL DEP. on COPPER POINT prospect 8' METTALIZED EXPOSURE

REPLACEMENT

PRINCE - GOPHER, CHIEF & 49 MINES REPLACEMENT DEPOSITS.

PRINCE 450' DEEP

500' SULFIDE PROPERT py galena, HEMATITE & MAGNETITE

GOPHER N. OF PRINCE SNYDER HILL FM. NE TRENDING FISSURE WATER 30' below 300' LEVEL

CHIEF 200' DEEP INCLINE ADIT

49 MINE NW OF CHIEF - DIKE INTRUSION FOLLOWED by MINERALIZATION. ONE both SIDES OF DIKE (rhyolite DIKE)

MARVIN, THOMAS C., 1942, THE GEOLOGY OF THE HILTON RANCH AREA, PIMA COUNTY, ARIZONA: UNPB. M.S. THESIS UNIV OF ARIZONA, TUCSON, 60p.

PALEOZOICS INCLUDE -

UP C.	ABRIGO	GRAY LMS THIN CHERT LAYERS
UP DEV.	MARTIN	TH. BEDDED BLUE LMS
MISS.	ESCABROSA	COARSE GRAINED MARBLE
PENN	NACO	GREEN HORNFELS SHALY LS
PM.	MANZANO GROUP (Lgyp.)	BLUE GRAY LMS CHERT QTZTE.
PM.	SNYDER HILL LMS.	BLUE CHERTY LMS
K	SHALES	RED SH, SS,

OVERTHRUST FROM SE. WITH ~~TEAR~~ TEAR FAULTS IN UPPER BLOCK

LONE MTN. MINE $150,000

SYCAMORE STOCK QTZ MONZONITE
RHYOLITED ANDESITE PORPHYRY
APLITE, DIORITE

LONE MOUNTAIN MINE 60 TONS 1900
70' SHAFT 1924
200' LEVEL by INCLINED SHAFT 1925
300' by VERTICAL SHAFT 1926
CLOSED IN 1928

BUTLER, WILLIAM C., 1969, THE UPPER PALEOZOIC STRATIGRAPHY OF TOTAL WRECK RIDGE, PIMA COUNTY, ARIZONA: UNPB. M.S. THESIS UNIV of ARIZONA TUCSON 138 p.

3000' PM. MARINE STRATA ON TOTAL WRECK RIDGE

SNYDER HILL LMS → RAIN VALLEY FM. 150'
→ CONCHA LMS 515'
ORANGE-OUTCROP SCHERRER FM 575'
EPITAPH DOLOMITE 1005
gy. P. / gray. / recrystallized COHINA LMS 345'
ERPE FM ? CONTACT MARBLE