CONTACT INFORMATION
Mining Records Curator
Arizona Geological Survey
3550 N. Central Ave, 2nd floor
Phoenix, AZ, 85012
602-771-1601
http://www.azgs.az.gov
inquiries@azgs.az.gov

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INDUCED POLARIZATION SURVEY

OBERAN PROPERTY

YAVAPAI COUNTY, ARIZONA

for

Western Nuclear, Inc.

February 1966

by

Heinrichs Geoexploration Company
P. O. Box 5671 Tucson, Arizona

TABLE OF CONTENTS

INTRODUCTION

At the request of Mr. Ralph H. Light of Western Nuclear, Inc., Denver, Colorado, Heinrichs Geoexploration Company conducted and completed an Induced Polarization Survey on the Oberan Property, Yavapai County, Arizona, during the interim February 14 - 18, 1966.

Three induced polarization lines were run consisting of 3 spreads, giving a total surface coverage of 18,000 feet, of which 10,500 feet are subsurface plotted data. All lines were single spreads, running east-west. Lines 1 and 2 were run in the Golden Gate area and Line 3 in the Camp B area. For exact location with respect to claims refer to the I.P. Location & Interpretation Plan.

The selection of a 500 foot dipole separation was made to maximize ground coverage per unit time, data resolution, and probability of locating economically sized sulfide bodies within about 600 feet of the surface.

The induced polarization measurements were made with the dual frequency technique on a dipole-dipole electrode configuration. Frequencies of 0.05 and 3.0 cycles per second were employed on all lines.

The data are presented on sectional data sheets, one per line, showing resistivity, percent frequency effect (PFE) and metallic conduction factor (MCF) contoured in section, and self potential (SP) in profile form. An induced polarization location and interpretation plan is also included.

Heinrichs personnel involved in the field work were David Godfrey, Crew Chief: John Langs, Project Geophysicist; and Rex Montierth, Technical Assistant. Interpretation, compilation and report by the Geoex staff in Tucson, Arizona under the supervision of Chris S. Ludwig, Senior Geophysicist.

CONCLUSIONS AND RECOMMENDATIONS

All three lines encountered very weak induced polarization response which may be due only to a higher background, or minor sulfides, or both. The location of strongest response correlates with the zones of interest on the claim map, and appears to originate from a mass of limited depth extent, perhaps 200-300 feet, or at least something indicating no improvement in sulfide with depth. Checking this latter factor was one of the major objects of the survey.

The quantity of sulfide possibly causing these effects is likely less than 1% by volume across the zones indicated, lessening with depth. Considering the abundance of near-surface

iron staining, the majority of the response could originate from pyrite.

The resistivities show the mineralization to be mostly in a more conductive zone, and to be related to a contact between the conductive and non-conductive material.

Natural or self potentials (S.P.) show only minor background variations indicating the lack of sizeable quantities of oxidizing sulfides within several hundred feet of the surface in the vicinity of the survey.

Considering these discouraging I.P. and prior drilling results, it is recommended that no further work be done on the property unless some other new and encouraging information is presented.

The surficial indications do suggest that economic possibilities may very well exist somewhere in the regional vicinity in the Yavapai "Schist" and related rocks - on, in, or around the Bradshaw granite mass. The Verde copper deposits at Jerome are a prime example. Further discovery must await additional effort at the right location or locations. Known and favorable prospects with evidence similar to that presented here at the Oberan property are not scarce in the region. Which one or ones may prove out remains to be revealed by a gradual elimination process involving considerable time, or cost, or both. The only alternative to that would be a regional relative evaluation program of combined geology, geophysics, and geochemistry. Such a program would require perhaps at least 50 crew months, not counting drilling, but it could prove fruitful.

INTERPRETATION

Line 1: This line was run near the north end of the Golden Gate area of interest. Very weak effects were noted from 250 E to 750 E, straddling an indicated resistivity contact near 500 E. This contact separates high resistivity, relatively unfractured, unaltered granites and gneisses to the east from fractured, altered, lower resistivity material to the west. The weak anomaly appears to be due to a near-surface (less than 250 feet) source with less than 0.5% total sulfides by volume across the 500 foot zone indicated. No increase with depth is suggested; in fact, the sulfide content below several hundred feet may decrease.

Line 2: This line was centered 1100 feet south of Line 1 and run across the widest portion of the areas of interest. Two fairly well defined contacts appear near Stations 0 E-W and 750 E, confining a lower resistivity zone and the majority of the anomalism

which extends from about 250 E to 1000 E. As on Line 1, the anomalism is very weak and of limited depth extent. Also, the anomalism correlates with the main vein to the east.

The frequency effects increase to the east end of the line in the higher resistivity material, but apparently are not accompanied by an increase in sulfide since the metal factors do not increase.

Line 3: This line was run parallel to and about 3700 feet south of Line 2 with the center shifted about 1900 feet east to better coincide with the zone of interest. Again, a contact was located with related very weak anomalism. The anomalism extends from about 500 W to 250 E with the contact near 0 E-W and higher resistivity material to the east. As on Lines 1 and 2, the source of anomalism is shallow and of limited depth extent. East of the contact, the frequency effects increase as on Line 2, but the metal factors are still background because of the high resistivities and, therefore, no sulfide increase is interpreted here.

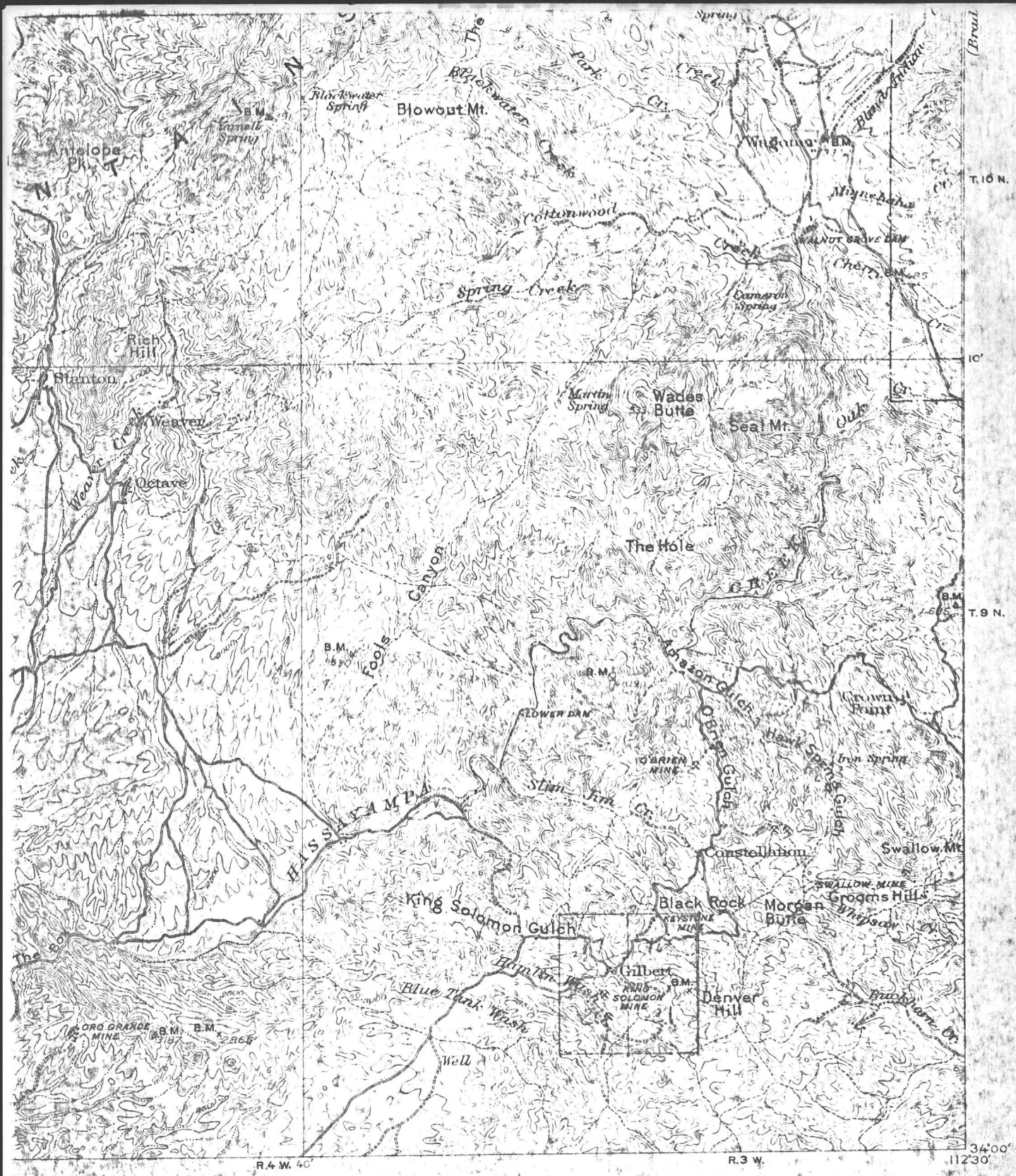
Respectfully submitted,

HEINRICHS GEOEXPLORATION COMPANY

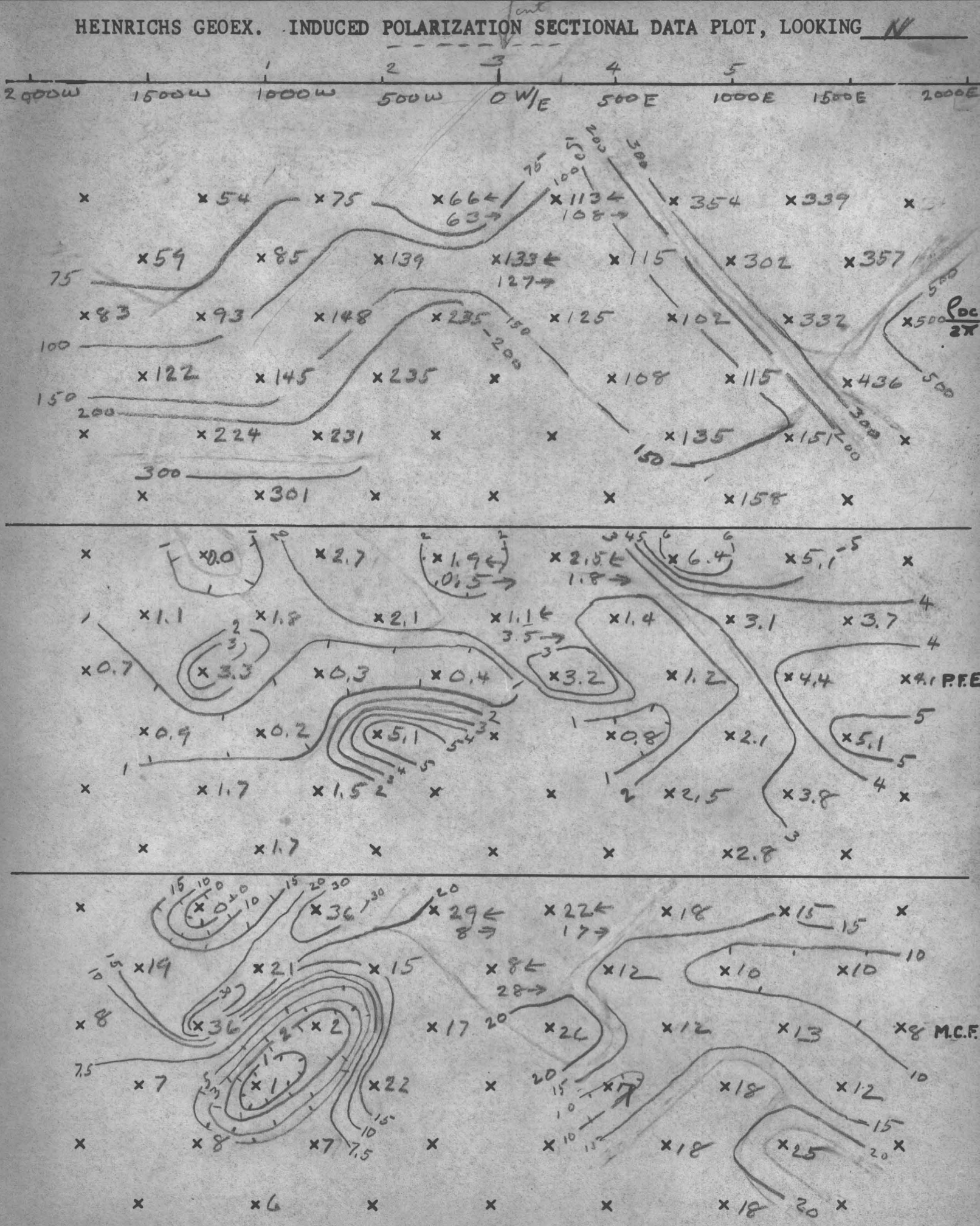
Chris S. Ludwig

Chris S. Ludwig
Senior Geophysicist

February 24, 1966

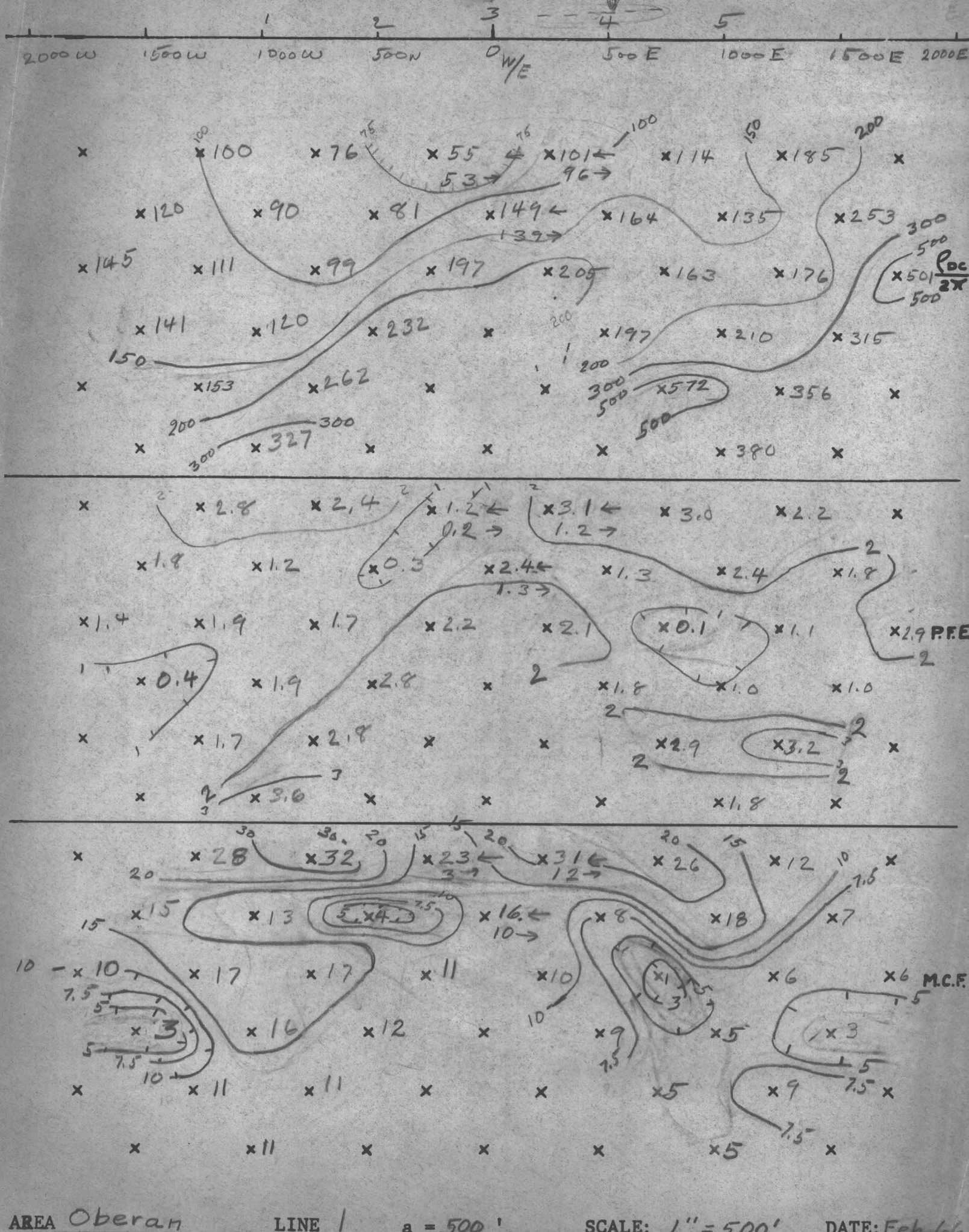

Blowout Mt.
Blackwater Spring
Antelope Pk.
Rich Hill
Blanton
Weaver Creek
Octave
Cottonwood
Spring Creek
Wright
Wades Butte
Seal Mt.
The Hole
Canyon
Fools
Adamson Gulch
O'Brien Gulch
Hawk Spring Gulch
Constellation
Swallow Mt.
Grooms Hills
Black Rock
Morgan Butte
King Solomon Gulch
Gilbert
Denver Hill
Blue Tank Wash
Well
HASSAYAMPA
T. 10 N.
T. 9 N.
R. 4 W.
R. 3 W.
34°00'
112°30'
Polyconic projection.
5 6 7 8 9 Miles
6000 9000 12000 Yards
15000 20000 25000 Feet
4 5 6 Kilometers
100 feet
a level
DIAGRAM OF TOWNSHIP
6 5 4 3 2 1
7 8 9 10 11 12
18 17 16 15 14 13
19 20 21 22 23 24
30 29 28 27 26 25
31 32 33 34 35 36
CONGRESS, ARIZ.
Edition of 1904,
reprinted 1948
N.3400—W.11230/30

HEINRICHS GEOEX. INDUCED POLARIZATION SECTIONAL DATA PLOT, LOOKING N



AREA Oberan LINE 3 a = 500 ' SCALE: 1" = 500 DATE: Feb 66

HEINRICHS GEOEX. INDUCED POLARIZATION SECTIONAL DATA PLOT, LOOKING N



AREA Oberan LINE 1 a = 500' SCALE: 1" = 500' DATE: Feb. 66

INDUCED POLARIZATION SENDER NOTES

project: OBERON Line: I W-V2 Date: 2-15-66

Send	4-5	3-4	4-5	2-3	3-4	4-5	1-2	2-3	3-4	4-5	1-2	2-3
Receive	0-.5W	.5-1W	→	1-1.5W	→	→	1.5-2W	→	→	→	2-2.5W	→
Time												
Range												
Current	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Send	3-4	4-5	1-2	2-3	3-4	4-5		2-3				
Receive	→	→	2.5-3	→	→	→		CAL				
Time												
Range												
Current	2000	2000	2000	2000	2000	2000		1000				

INDUCED POLARIZATION SENDER NOTES

project: OBERON Line: I E 1/2 Date: 2-15-66

Send	1-2	2-3	1-2	3-4	2-3	1-2	4-5	3-4	2-3	1-2	4-5	3-4
Receive	0-.5 F	.5-1 F	→	1-1.5 E	→	→	1.5-2 E	→	→	→	2-2.5 E	—
Time												
Range												
Current	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Send	2-3	1-2	4-5	3-4	2-3	1-2		3-4				
Receive	→	→	2.5-3 E	→	→	→		CAL				
Time												
Range												
Current	2000	2000	2000	2000	2000	2000		1000				

INDUCED POLARIZATION SENDER NOTES

project: OBERON Line: IL W½ Date: 2-16-66

Send	2-3	1-2	1-2	4-5	3-4	4-5	2-3	3-4	4-5	1-2	2-3	3-4
Receive	.5-1 E	→	0-5 E	0-5 W	5-1 W	→	1-1.5 W			1.5-2 W	—	—
Time												
Range												
Current	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Send	4-5	1-2	2-3	3-4	4-5	1-2	2-3	3-4	4-5		4-5	
Receive	→	2-2.5 W	—	—	→	2.5-3 W	—	—	→		CAL	
Time												
Range												
Current	1800	1800	1800	1800	1800	1800	1800	1800	1800		1000	

INDUCED POLARIZATION SENDER NOTES

project: OBREGON Line: II E 1/2 Date: 2-16-66

Send	3-4	2-3	1-2	4-5	3-4	2-3	1-2	4-5	3-4	2-3	1-2	4-5
Receive	1-1.5 E	→	→	1.5-2 E	→	→	→	2-2.5 E	→	→	→	2.5-3 E
Time												
Range												
Current	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Send	3-4	2-3	1-2		4-5							
Receive	→	→	→		CAL							
Time												
Range												
Current	1800	1800	1800		1000							

INDUCED POLARIZATION SENDER NOTES

project: OBERON Line: IV W 1/2 Date: 2-18 66

Send	4-5	3-4	4-5	2-3	3-4	4-5	1-2	2-3	3-4	4-5	1-2	2-3
Receive	0-.5 W	.5-1 W	→	1-1.5 W	→	→	1.5-2 W	→	→	→	2-2.5 W	→
Time												
Range												
Current	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Send	3-4	4-5	1-2	2-3	3-4	4-5		2-3				
Receive	→	→	2.5-3 W	→	→	→		CAL				
Time												
Range												
Current	1800	1800	1800	1800	1800	1800		1000				

INDUCED POLARIZATION SENDER NOTES

project: OBERON Line: 1V E ½ Date: 2-18-66

Send	1-2	2-3	1-2	3-4	2-3	1-2	4-5	3-4	2-3	1-2	4-5	3.4
Receive	0-.5 E	.5-1 E	→	1-1.5 E	——→		1.5-2 E	——	——→		2-2.5 E	—
Time												
Range												
Current	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Send	2-3	1-2	4-5	3-4	2-3	1-2		~~2-3~~	3-4			
Receive	——→		2.5-3 E	——→				CAB	CAL			
Time												
Range												
Current	1800	1800	1800	1800	1800	1800		1000	1000			

INDUCED POLARIZATION - RECEIVER NOTES PAGE 1

Project: Oberon Line: [redacted] 1 - W Int.Cal [redacted] Date: 2/15/66

Send	4-5	3-4	4-5	2-3	3-4	4-5	1-2	2-3	3-4	4-5	1-2	2-3
Rec.	0-5	5-10	→	10-15	→	→	15-20	→	→	→	20-25	→
~~Time~~	300	300	100	300	100	100	300	100	30	30	100	30
DC-1	152	82.5	50.7 50.6	113 114	30.7 30.7	29.0	150 150	33.5 34	15.1 14.6	16.9 17.2	44.3 43.7	16.1 15.4
DC-2	153	84	57.5 57.6	112.5 113	29.8 29.8	30.2	150 150	33.5 34	15 14.6	17.1 17.8	44.3 45.8	16.4 17.0
Σ	305	166.5	112.2 112.2	226.5 227	60.5 60.5	59.2	300 300	67.5 67.5	29.6 29.6	34.6 34.8	90.0 90.1	33.5 33.4
DC-3	151 152.5	82	57.5 57.6	113.5 113	29.8	30.2 29.0				17.1 17.7	44.3 45.8	16.3 17.0
Dc-4	152.5 151.5	84	57.6 54.4	114 114	30.7	29.0 30.3				17.1 17.7		16.3 17.1
Σ	304.0 304	166	112.1 112.0	227.5 227	60.5	59.3 59.3				34.8	90.1	33.4 33.4
DC-AV	304.1	166.2	112.1	227	60.5	59.2	300	67.5	29.65	34.8 34.8	90.1	33.4
AC-1	146	81	54.0	109	29.7	28.5	144	32.9	14.4	16.7	43.7	16.2
AC-2	145	81	54.0	109.5	29.8	28.7	144	32.9	14.4	16.7	43.7	16.2
Σ	291	162	108.0	218.5	59.5	57.2	288	65.8	28.8	33.4	87.4	32.4
S. P.	-7	+4	→	-8	→	→	+3	→	→	→	+4	→
AC-N	.05	.05	→	.05	→	→	.05	→	→	.05	.04	→
Pot Res												

INDUCED POLARIZATION - RECEIVER NOTES PAGE 2

Project: Oberon Line: 1-W Int.Cal Date: 2/15/66

Send	3-4	4-5	1-2	2-3	3-4	4-5		cal.				
Rec.	→	→	25-30	→	→	→		2-3				
~~Time~~ Freq	30	30	30	30	10	30		30				
DC-1	9.1 8.9	11.7 10.8	21.5 22.3	10.1 11.1	6.21 6.66	8.2 9.6		113 113				
DC-2	9.1 8.8	11.7 10.8	21.4 22.3	10.1 11.4	6.75 6.3	8.1 9.3		113 112				
Σ	18.0 17.9	22.5 22.5	43.8 43.3	21.2 21.5	12.89 13.05	17.8 17.4		226 225				
DC-3	9.1 8.9	11.7 10.7	21.4 22.3	9.9 11	6.8 6.16	7.8 9.65		112 113				
Dc-4				9.7 11.5	6.47 6.9	7.6 9.7		113 112				
Σ	18.0	22.4	43.7	20.7 21.2	13.06 13.37	17.45 17.7		225 225				
DC-AV	17.97	22.5	43.7	21.15	13.09	17.5		225				
AC-1	8.7	10.8	21.2	10.7	6.4	8.35		111				
AC-2	8.7	10.8	21.3	10.4	6.3	8.35		111				
Σ	17.4	21.6	42.5	20.8	12.7	16.7		222				
S. P.	+4	→	-3									
AC-N	.04	→	.05	→	→	→						

INDUCED POLARIZATION - RECEIVER NOTES PAGE 3

Project: Oberon Line: 1 - E Int.Cal Date: 2/15/66

Send	1-2	2-3	1-2	3-4	2-3	1-2	4-5	3-4	2-3	1-2	4-5	3-4
Rec.	0-5	5-10	→	10-15	→	→	15-20	→	→	→	20-25	→
~~Time~~ R.	300	300	100	300	100	100	1000	100	100	30	300	100
DC-1	86 93 86	153 155	54.5 57.0	185 182	67.6 64.1	30.7 34.6	295 300	56.1 52.5	23 25	14.5 17.2	99 103	31 25.6
DC-2	86 85	153 155	54.0 57.5	185 182	68.0 64.1	30.6 34.6	295 300	56.1 52.6	25 27.5	14.5 16.6	99 104	31 25.6
Σ	171 171	308 308	111.5 111.5	367 367	131.7 132.2	65.3 65.3	595 595	108.6 108.7	51 52.5	31.7 31.7	203 203	56.6 56.6
DC-3	88 86 84 84		53.5 57.5	185 182	68.1 64.0	30.7 34.6	295 300	56.1 52.5	24.9 27.3	14.6 16.9	99 104	31 25.6
Dc-4	84 84 86 86		55.0 57.3			6.53	5.95	108.6	24.8 27.6	14.5 16.6	99 104	31 25.6
Σ	172 170 170 170		111.5 114.8	367	132.1				52.0 54.9	31.5 33.1	203 208	56.6
DC-AV	171 170	308	111.6	367	131.9	65.7	5.95	108.6	51.9	31.6	203	56.6
AC-1	92 89	149	53.5	173	63.2	31.5	283	52	25.2	15.1	99	27.2
AC-2	82 83	147	53.5	173	63.2	31	283	51	25.2	15.1	97	27.2
Σ	164 167	296	107.0	346	126.4	62.5	566	103	50.4	30.2	194	54.4
S. P.	- 8	+16	→	- 2	→	→	+7	→	→	→	+12	→
AC-N	.06	.06	→	.08	→	→	.06	→	→	→	.06	→

INDUCED POLARIZATION - RECEIVER NOTES PAGE 4

Project: Oberon Line: 1 - E Int.Cal ate: 2/15/66

Send	2-3	1-2	4-5	3-4	2-3	1-2		cal.				
Rec.	→	→	25-30	→	→	→		3-4				
~~Time~~ R.	30	30	300	100	30	30		300				
DC-1	19.4 14.4	9.5 13.7	81 80	25.5 24.2	15.7 16.4	11.7 9.7		104 139				
DC-2	19.6 14.2	7.7 13.6	81 80	25.8 24.2	16.1 16.7	11.8 9.7		104 137				
Σ	33.9 33.8	21.2 21.3		49.9 50.6	32.1 32.5	21.4 21.5		241 241				
DC-3	19.7 14.0	7.6 13.4	81 80	25.9 24.3	15.5 16.8	12.6 9.7						
Dc-4	19.7 14.0	7.7 13.4		5.0.2	15.5 17.2	11.8 10						
Σ	33.7 33.7	22.0 21.1			32.8 33.7	21.7 21.5						
DC-AV	33.75	21.4	161	49.9	32.7	21.8		241				
AC-1	16.2	10.1	76	24	15.4	10.4		117				
AC-2	16.2	10.1	76	24	15.4	10.4		117				
Σ	32.4	20.2	152	48	30.8	20.8		234				
S. P.	+12	→	+8	→	→	→						
AC-N	.06	→	.08	→	→	→						

HEINRICHS GEOEXPLORATION COMPANY
INDUCED POLARIZATION SURVEY COMPUTATION SHEET

Page 2

Project Obelan Line 1-E Field date 2/15/66 Data page 384 Comp. date 2/15/66 . Comp by W.R.D.

(A) Send	1-2	2-3	1-2	3-4	2-3	1-2	4-5	3-4	2-3	1-2		
(B) Receive	0-5	5-10	→	10-15	→	→	15-20	→	→	→		
(C) n separation	300	300	100	300	100	100	100	100	100	30		
(D) I	2	→	→	→	→	→	→	→	→	→		
(E) Vdc (avg)	170.5	308	111.6	367	131.9	65.7	59.5	108.6	51.9	31.6		
(F) DCcal	.415	→	→	→	→	→	→	→	→	→		
(G) Kn x 10^{-3}	1.5	1.5	6	1.5	6	15	1.5	6	15	30		
(H) ρ dc=ExFxGx10^3/D	53	96	139	114.	164	205	185	135	163	197		
(I) Vac Σ	165.5	296	107	346	126.4	62.5	56.6	103	50.4	30.2		
(J) AC noise x 2	neg	→	→	→	→	→	→	→	→	→		
(K) Vac(corr) = $\sqrt{I^2 - J^2}$	→	→	→	→	→	→	→	→	→	→		
(L) AC-DC cal.	.972	→	→	→	→	→	→	→	→	→		
(M) ρ dc/ρac=ExL/K	1.02	1.012	1.014	1.03	1.013	1.021	1.022	1.024	1.001	1.018		
(N) PFE=(M-1)(10^2)	0.2	1.2	1.4	3.0	1.3	2.1	2.2	2.4	0.1	1.8		
(O) MCF=(M-1)(10^5)/H	3	12	10	26	8	10	12	18	1	9		
	?	2	?									

Project _____ Line _____ Field date _____ Data page _____ Comp. date _____ Comp by _____

(A) Send	4-5	3-4	2-3	1-2	4-5	3-4	2-3	1-2		3-4		
(B) Receive	20-25	→	→	→	25-30	→	→	→		cal.		
(C) n separation	300	100	30	30	300	100	30	30		300		
(D) I	→	→	→	→	→	→	→	→		1		
(E) Vdc (avg)	203	56.6	33.7	21.4	161	49.9	32.7	21.8		241		
(F) DCcal	→	→	→	→	→	→	→	→		.415		
(G) Kn x 10^{-3}	6	1.5	30	52.5	15	30	52.5	84.0				
(H) ρ dc=ExFxGx10^3/D	253	176	210	572	501	315	356	380				
(I) Vac Σ	194	54.4	32.4	20.2	152	48	30.8	20.8		234		
(J) AC noise x 2	→	→	→	→	→	→	→	→		→		
(K) Vac (corr) = $\sqrt{I^2 - J^2}$	→	→	→	→	→	→	→	→		→		
(L) AC-DC cal.	→	→	→	→	→	→	→	→		.972		
(M) ρdc/ρac =ExL/K	1.018	1.011	1.01	1.029	1.029	1.01	1.032	1.018				
(N) PFE=(M-1)(10^2)	1.8	1.1	1.0	2.9	2.9	1.0	3.2	1.8				
(O) MCF=(M-1)(10^5)/H	7	6	5	5	6	3	9	5				

1000 / 225 .992

HEINRICHS GEOEXPLORATION COMPANY
INDUCED POLARIZATION SURVEY COMPUTATION SHEET

Page 1

Project Oberon Line 1' W ½ Field date 15 Feb 66 Data page 122 Comp. date 15/2/66 Comp by DF

(A) Send	4-5	3-4	4-5	2-3	3-4	4-5	1-2	2-3	3-4	4-5	1-2	2-3
(B) Receive	0-5W	5-10W	→	10-15W	→	→	15-20W			→	20-25W	
(C) n separation	1	1	2	1	2	3	1	2	3	4	2	3
(D) I	2000											→
(E) Vdc (avg)	304.1	166.2	112.1	227	60.5	59.2	300	67.5	29.65	34.8	90.1	33.4
(F) DCcal	.4444											→
(G) Kn x 10^{-3}	1.5	1.5	6.0	1.5	6.0	15	1.5	6.0	15	30	6.0	15
(H) ρ dc=ExFxGx10^3/D	101	55.3	149	76	81	197	100	90	99	232	120	111
(I) Vac Σ	291	162	108.0	218.5	59.5	57.2	288	65.8	28.8	33.4	87.4	32.4
(J) AC noise x 2	neg											
(K) Vac(corr) = $\sqrt{I^2 - J^2}$												
(L) AC-DC cal.	987											
(M) ρ dc/ρac=ExL/K	1.03	1.01258	1.022	1.024	1.00358	1.022	1.028	1.012	1.017	1.028	1.018	1.019
(N) PFE=(M-1)(10^2)	3.0	1.3	2.4	2.4	0.4	2.2	2.8	1.2	1.7	2.8	1.8	1.9
(O) MCF=(M-1)(10^5)/H	31	23	16	32	4	11	28	13	17	12	15	17

Project ____ Line ____ Field date ____ Data page ____ Comp. date ____ Comp by ____

(A) Send	3-4	4-5	1-2	2-3	3-4	4-5		Cal				
(B) Receive	→	→	25-30W	→	→	→						
(C) n separation	4	5	3	4	5	6						
(D) I	→	→	→	→	→	→		1000				
(E) Vdc (avg)	17.97	22.5	43.7	21.15	13.09	17.5		225				
(F) DCcal	→	→	→	→	→	→						
(G) Kn x 10^{-3}	30	52.5	15	30	52.5	84.0						
(H) ρ dc=ExFxGx10^3/D	120	262	145	141	153	327						
(I) Vac Σ	17.4	21.6	42.5	20.8	12.7	16.7		222				
(J) AC noise x 2	neg											
(K) Vac (corr) = $\sqrt{I^2 - J^2}$												
(L) AC-DC cal.								.987				
(M) ρdc/ρac =ExL/K	1.019	1.028	1.014	1.004	1.017	1.036						
(N) PFE=(M-1)(10^2)	1.9	2.8	1.4	0.4	1.7	3.6						
(O) MCF=(M-1)(10^5)/H	16	11	10	3	11	11						

INDUCED POLARIZATION - RECEIVER NOTES PAGE 5

Project: Oberon Line #2 W½+ Int.Cal Date: 2/16/66

Send	2-3	1-2	1-2	4-5	3-4	4-5	2-3	3-4	4-5	1-2	2-3	3-4
Rec:	300-500W	→	500→0E	0→500W	500-1000W	→	1000-1500W	→	→	15-2000W	→	→
Time	300	100	300	300	300	100	1000	100	30	1000	300	30
DC-1	100 103	30 35	113 114	101 100	114 114.5	30.3 31.5	230 234	29 34	11.8 18.1	355 358	85 87	19.4 21.6
DC-2	100 103	29.5 35	113 114	101 100	114 114.5	30.3 31.5	230 234	29 34	11.7 18.2	355 358	85 87	19.4 21.6
Σ		65 64.5							29.9 29.9			
DC-3	100 103	29.5 35	113 114	101 100	114 114.5	30.3 31.5	230 234	29 34	11.6 18.2			
Dc-4		64.5							29.8			
Σ												
DC-AV	203	64.7	227	201	228.5	61.8	464	63	29.87	713	172	41.0
AC-1	97	31	109	96	110	29.5	220	30.5	14.3	339	82	19.6
AC-2	97	31	109	96	109	29.7	220	30.5	14.25	338	82	19.6
Σ	194	62	218	192	219	59.2	440	61.0	29.55	677	164	39.2
S. P.	+7	→	-7	+2	-7	→	+16	→	→	-15	→	→
AC-N	.06	→	.04	.05	.04	→	.04	→	→	.04	→	→

INDUCED POLARIZATION - RECEIVER NOTES PAGE 6

Project: Oberon Line #2 W ½ + Int.Cal Date: 2/16/66

Send	4-5	1-2	2-3	3-4	4-5	1-2	2-3	3-4	4-5		Cal.	
Rec.	→	2-2500W			→	25-3000W			→		4-5	
Time	30	300	100	30	30	100	30	10	10		300	
DC-1	15.5 12.7	109 110	39.5 41.5	13.6 11.1	13.6 8.5	23.5 20.2	13.6 8.4	4.2 5.1	3.5 5.95		120 120.5	
DC-2	15.6 12.7	109 110	39.5 41.5	14.1 11.1	13.6 8.6	23.5 20.2	13.7 9.4	4.2 5.1	3.5 5.95		120 120.5	
Σ	28.2 28.3		81.0 81.0	24.7 25.2	22.1 22.2	43.7 43.7	22.0 22.1	9.3 9.3	9.45 9.45		240.5 240.5	
DC-3				10.8 14			13.8 8.2				120 120.5	
Dc-4				10.6 14.5							240.3	
Σ				24.8 25.9								
DC-AV	28.25	219	81.0	24.9	22.15	43.7	22.05	9.3	9.45		240.5	
AC-1	13.6	105	38.5	12.1	10.6	21.5	10.6	4.5	4.55		117	
AC-2	13.5	105	39.5	12.1	10.6	21.5	10.6	4.5	4.55		117	
Σ	27.1	210	77.0	24.2	21.6	43.0	21.2	9.0	9.10		234	
S. P.	-15	-4	→	→	→	+18	→	→	→			
AC-N	.04	.05	→	→	→	.04	→	→	→			

INDUCED POLARIZATION - RECEIVER NOTES PAGE 7

Project: Oberon Line # 2E 1/2 — Int.Cal ____ Date: 2/16/66

Send	B-4	2-3	1-2	4-5	3-4	2-3	1-2	4-5	3-4	2-3	1-2	4-5
Rec.	1000-1600			15-2000				2-2500				25-3000
Time	300	100	30	1000	100	100	30	300	30	30	30	100
DC-1	123 124	44.5 44	22.9 21.4	400 403	42 44.5	25 22.3	16 13.3	116 117	23.1 20.1	13.6 17.1	8.6 11.6	31.5 34
DC-2	123 124	44.5 44	22.8 21	400 403	42 44.5	25 22.3	16.3 13.3	116 117	23.1 20.1	13.6 17.1	8.8 11.6	31.5 34
Σ			44.3 43.8				29.3 29.6				20.2 20.4	
DC-3			22.9 21								8.6 11.8	
Dc-4			43.9								19.8	
Σ	247	88.5	43.8	803	86.5	47.3	29.45	233	43.2	30.7	20.1	65.5
DC-AV												
AC-1	118	42.1	21	380	41.5	22.5	13.9	110	20.5	14.5	9.6	31.3
AC-2	118	42.1	21	379	41.5	22.5	13.9	110	20.5	14.6	9.6	31.3
Σ	236	84.2	42	759	83.0	45.0	27.8	220	41.0	29.1	19.2	62.6
S. P.	-2	→	→	+8	→	→	→	+2	→	→	→	+7
AC-N	.07	→	→	.06	→	→	→	.06	→	→	→	.04

INDUCED POLARIZATION - RECEIVER NOTES PAGE 8

Project: oberon Line: #2 E½- Int.Cal Date: 2/12/66

Send	9-4	2-3	1-2			Cal						
Rec.						4-5						
Time	10	10	10			300						
DC-1	9.8 4.3	9.4 2.5	8.3 0.3			120 121						
DC-2	9.9 4.2	9.4 2.5	8.3 0.2			120 121						
Σ	14.1 14.1	11.9 11.9	8.6 8.5									
DC-3	10 4.3		8.4 0.2									
Dc-4	14.3		8.6									
Σ												
DC-AV	14.2	11.9	8.6			241						
AC-1	7	5.8	4.2			119						
AC-2	7	5.8	4.2			119						
Σ	14	11.6	8.4			239						
S. P.	+7	→	→									
AC-N	.04	→	→									

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INDUCED POLARIZATION SURVEY COMPUTATION SHEET

Page 3

Project Oberon Line # 2 W½+ Field date 2/16/66 Data page 526 Comp. date 2/16/66. Comp by T W.L

(A) Send	2-3	1-2	1-2	4-5	3-4	4-5	2-3	3-4	4-5	1-2	2-3	3-4
(B) Receive	1000-500E	→	500-0E	0-500W	500-1000W	→	1000-1500W		→	1500-2000W		
(C) n separation	1	2	1	1	1	2	1	2	3	1	2	3
(D) I	1800											
(E) Vdc (avg)	203	64.7	227	201	228.5	61.8	464	63	29.87	713	172	41.0
(F) DCcal	.408											→
(G) Kn x 10^{-3}	1.5	6	1.5	1.5	1.5	6	1.5	6	15	1.5	6	15
(H) ρ dc=ExFxGx10^3/D (2.)	70.	89.	79.	70.	79.1	85.	161.	87.0	103.	247.	238	142
(I) Vac Σ	194	62	218	192	219	59.2	440	61	28.55	677	164	39.2
(J) AC noise x 2												
(K) Vac(corr) = $\sqrt{I^2 - J^2}$												
(L) AC-DC cal.	.973											
(M) ρ dc/ρac=ExL/K	1019	1013	1011	1018	1014	1016	1027	1003	1000	1022	1020	1018
(N) PFE=(M-1)(10^2) (1.)	1.9	1.3	1.1	1.8	1.4	1.6	2.7	0.3	0	2.2	2.0	1.8
(O) MCF=(M-1)(10^5)/H Ams	27	15	14	26	18	19	17	3	0	9	8	13

Project Line Field date Data page Comp. date Comp by

(A) Send	4-5	1-2	2-3	3-4	4-5	1-2	2-3	3-4	4-5		Cal	
(B) Receive	→	20-25W	→	→	→	25-30W	→	→	→			
(C) n separation	4	2	3	4	5	3	4	5	6			
(D) I									→		1000	
(E) Vdc (avg)	28.25	219	81.0	24.9	22.15	43.7	22.05	9.3	9.45		240.5	
(F) DCcal									→			
(G) Kn x 10^{-3}	30	6	15	30	52.5	15	30	52.5	84			
(H) ρ dc=ExFxGx10^3/D (2)	202	302	280	172	268	151	153	113	184			
(I) Vac Σ	27.1	210	77.0	24.2	21.6	43.0	21.2	9.0	9.10		234	
(J) AC noise x 2												
(K) Vac (corr) = $\sqrt{I^2 - J^2}$												
(L) AC-DC cal.											.973	
(M) ρdc/ρac =ExL/K	1015	1016	1021	1001	.998	.989	1011	1005	1001			
(N) PFE=(M-1)(10^2) (1)	1.5	1.6	2.1	0.1	-.2	-1.1	1.1	0.5	0.1			
(O) MCF=(M-1)(10^5)/H ams	7	5	8	1	-1	-7	7	4	1			

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INDUCED POLARIZATION SURVEY COMPUTATION SHEET

Page 4

Project Oberon Line #2 E½ Field date 2/16/66 Data page 7 & 8 Comp. date 2/16/66 . Comp by M.R.D.

(A) Send	3-4	2-3	1-2	4-5	3-4	2-3	1-2	4-5	3-4	2-3	1-2	4-5
(B) Receive	10-15	→	→	15-20	→	→	→	20-25	→	→	→	25-30
(C) n separation												
(D) I	1800											
(E) Vdc (avg) ①	247	83.5	43.8	803	86.5	42.3	29.45	233	43.2	30.7	20.1	65.5
(F) DCcal	.413											
(G) Kn x 10^{-3}	1.5	6	15	1.5	6	15	30	6	15	30	52.5	15
(H) ρ dc=ExFxGx10^3/D	83	122	151	276	190	163	203	320	149	212	242	225
(I) Vac Σ ②	236	84.2	42	759	83.0	45.0	27.8	220	41.0	29.1	19.2	62.6
(J) AC noise x 2												
(K) Vac(corr) = $\sqrt{I^2 - J^2}$												
(L) AC-DC cal.	.988											
(M) ρ dc/ρac=ExL/K →	1033	1.05	1.031	1049	1029	1039	1046	1048	1041	1042	1032	1.032
(N) PFE=(M-1)(10^2)	3.3	5	3.1	4.7	2.9	3.9	4.6	4.8	4.1	4.2	3.2	3.2
(O) MCF=(M-1)(10^5)/H	40	41	21	17	15	24	23	15	28	20	13	14

Project _____ Line _____ Field date _____ Data page _____ Comp. date _____ Comp by _____

(A) Send	3-4	2-3	1-2		4-5							
(B) Receive	→	→	→		cal.							
(C) n separation												
(D) I	→	→	→									
(E) Vdc (avg)	14.2	11.9	8.6		241							
(F) DCcal	→	→	→		.413							
(G) Kn x 10^{-3}	30	52.5	84.0									
(H) ρ dc=ExFxGx10^3/D	97.6	144	166									
(I) Vac Σ	14	11.6	8.4		238							
(J) AC noise x 2												
(K) Vac (corr) = $\sqrt{I^2 - J^2}$												
(L) AC-DC cal.												
(M) ρdc/ρac =ExL/K	1001	1026	1011									
(N) PFE=(M-1)(10^2)	.1	2.6	1.1									
(O) MCF=(M-1)(10^5)/H	1	18	7									

HEINRICHS GEOEXPLORATION COMPANY

3 INDUCED POLARIZATION SURVEY COMPUTATION SHEET

Page 5

Project Oberon Line 4 W½ Field date 18/2/66 Data page 9210 Comp. date 18/2/66. Comp by J.W.L

(A) Send	4-5	3-4	4-5	2-3	3-4	4-5	1-2	2-3	3-4	4-5	1-2	2-3
(B) Receive	0-5W	5-10W	→	10-15W	→	→	15-20W	→	→	→	20-25W	→
(C) n separation	1	1	2	1	2	3	1	2	3	4	2	3
(D) I	1800	→	→	→	→	→	→	→	→	→	→	→
(E) Vdc (avg)	324	140	95.5	210.5	99.7	66.8	156	60.85	42.6	33.8	42.33	26.6
(F) DCcal	.417	→	→	→	→	→	→	→	→	→	→	→
(G) Kn x 10^{-3}	1.5	1.5	6	1.5	6	15	1.5	6	15	30	6	15
(H) ρ dc=ExFxGx10^3/D (2)	113	66.0	133	75	139	235	54	85	148	235	59	93
(I) Vac Σ (1)	308	182	92	200	95.2	64.8	152	58.4	41.4	31.3	40.7	25.1
(J) AC noise x 2												
(K) Vac(corr) = $\sqrt{I^2 - J^2}$												
(L) AC-DC cal.	.975											
(M) ρ dc/ρac=ExL/K (3)	1025	1019	1011	1027	1021	1004	0	1018	1003	1051	1011	1033
(N) PFE=(M-1)(10^2) (4)	2.5	1.9	1.1	2.7	2.1	0.4	0	1.8	0.3	5.1	1.1	3.3
(O) MCF=(M-1)(10^5)/H Amps	22	29	8	36	15	17	0	21	2	22	19	36

Project _____ Line _____ Field date _____ Data page _____ Comp. date _____ Comp by _____

(A) Send	3-4	4-5	1-2	2-3	3-4	4-5		Cal				
(B) Receive	→	→	25-30W	→	→	→						
(C) n separation	4	5	3	4	5	6						
(D) I	→	→	→	→	→	→						
(E) Vdc (avg)	20.8	12.9	23.87	12.5	12.4	15.47		240				
(F) DCcal	→	→	→	→	→	→		.417				
(G) Kn x 10^{-3}	30	52.5	15	30	52.5	84						
(H) ρ dc=ExFxGx10^3/D (2)	145	231	93	122	224	301						
(I) Vac Σ	20.2	12.2	23.2	16.9	16.7	14.81		234				
(J) AC noise x 2	→	→	→	→	→	→						
(K) Vac (corr) = $\sqrt{I^2 - J^2}$	→	→	→	→	→	→						
(L) AC-DC cal.												
(M) ρdc/ρac =ExL/K	1002	1015	1007	1009	1017	1017						
(N) PFE=(M-1)(10^2) (1)	0.2	1.5	0.7	0.9	1.7	1.7						
(O) MCF=(M-1)(10^5)/H	1	7	8	7	8	6						

$$\frac{(K_m)(DC\,AV)(.410)(1000)}{1800} = .238$$

1.5	× .238 =	.342
6	=	1.368
15	=	3.42
30	=	6.84
52.5	=	12.5
84	=	20.

1st	2nd
246 DC	244 DC
240 AC	233.5

HEINRICHS GEOEXPLORATION COMPANY
INDUCED POLARIZATION SURVEY COMPUTATION SHEET

Page 6

Project Oberon Line 4 - E 3 Field date 2/18/66 Data page 11 & 12 Comp. date 2/18/66 . Comp by MRS

(A) Send	1-2	2-3	1-2	3-4	2-3	1-2	4-5	3-4	2-3	1-2	4-5	3-4
(B) Receive	0-5	5-10	→	10-15	→	→	15-20	→	→	→	20-25	→
(C) n separation	1	1	2	1	2	3	1	2	3	4	2	3
(D) I	1800	→	→	→	→	→	→	→	→	→	→	→
(E) Vdc (avg) ①	183.5	315.0	93.1	103.4	84.0	36.5	99 0.5	22.1	29.8	15.75	26.1	9.7
(F) DCcal	.410	→	→	→	→	→	→	→	→	→	→	→
(G) Kn x 10^{-3}	1.5	1.5	6	1.5	6	15	1.5	6	15	30	10	15
(H) ρ dc=ExFxGx10^3/D	63	108	127	354	115	125	339	302	102	108	357	332
(I) Vac Σ 2	178	305	88.6	95.9	81.6	34.8	922	21.1	29.0	15.4	24.8	9.15
(J) AC noise x 2												
(K) Vac(corr) = $\sqrt{I^2 - J^2}$												
(L) AC-DC cal. Ans	.975	.985	→	→	→	→	→	→	→	→	→	→
(M) ρ dc/ρac=ExL/K	1005	1018	1035	1064	1014	1032	1051	1031	1012	1008	1037	1044
(N) PFE=(M-1)(10^2)	.5	1.8	3.5	6.4	1.4	3.2	5.1	3.1	1.2	0.8	3.7	4.4
(O) MCF=(M-1)(10^5)/H	8	17	28	18	12	26	15	10	12	7	10	13

Project _____ Line _____ Field date _____ Data page _____ Comp. date _____ Comp by _____

(A) Send	2-3	1-2	4-5	3-4	2-3	1-2		3-4	2-3	Finish	Cal.	
(B) Receive	→	→	25-30	→	→	→		cal.	cal.			
(C) n separation	4	5	3	4	5	6						
(D) I	→	→	→	→	→	→		1000				
(E) Vdc (avg) ①	16.8	10.81	.146	63.8	12.04	7.945		244	246			
(F) DCcal	→	→	→	→	→	→						
(G) Kn x 10^{-3}	30	52.5	15	30	52.5	84						
(H) ρ dc=ExFxGx10^3/D	115	135	500	436	151	158						
(I) Vac Σ	16.2	10.4	138	59.7	11.43	7.6		233.5	240			
(J) AC noise x 2												
(K) Vac (corr) = $\sqrt{I^2 - J^2}$												
(L) AC-DC cal.	→	→	→	→	→	→						
(M) ρdc/ρac =ExL/K	1021	1025	1041	1051	1038	1028						
(N) PFE=(M-1)(10^2)	2.1	2.5	4.1	5.1	3.8	2.8						
(O) MCF=(M-1)(10^5)/H	18	18	8	12	25	18						

$$\frac{(1000)(417)(\text{Km})(\text{DcAv})}{1800} = .2317$$

1.5	× .2317	= .3475
6	"	= 1.39
15	"	= 3.475
30	"	= 6.95
52.5	"	= 12.18
84	"	= 19.45

243.5
23975

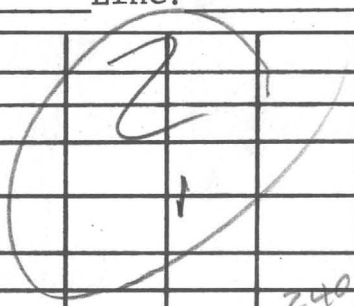
2.5	.0.5	2.0
1.1	0	1.0
1.9	.0.0	1.3

$3\overline{)4.3}$
1.4

INDUCED POLARIZATION - RECEIVER NOTES PAGE _____

Project: _____ Line: _____ Int.Cal _____ Date: _____

Send												
Rec.												
Time	300											
DC-1	120.5 120	123 120										
DC-2	121 120	124 122										
Σ	240.5 241	243 246										
DC-3	122 120	124 122										
Dc-4	242	246										
Σ												
DC-AV	241.1	245.0										
AC-1	119.5	120										
AC-2	120	120										
Σ	239.5	240										
S. P.												
AC-N												



240.5
241
242
3 | 723.5
241.1

243
246
489
3 | 735.0
245.0

241.1
245.0
2 | 486 1
243

INDUCED POLARIZATION - RECEIVER NOTES PAGE 9

Project: Oberon Line 3 4 - W Int.Cal ate: 2/18/66

Send	4-5	3-4	4-5	2-3	3-4	4-5	1-2	2-3	3-4	4-5	1-2	2-3
Rec.	0-5	5-10	→	10-15	→	→	15-20	→	→	→	20-25	→
Time	300	300	100	300	100	100	300	100	30	30	30	30
DC-1	161 163	95.5 94.5	49 46.5	105.5 105	49.7 50	33 33.6	77 79	32.1 29.7	19 23.6	14.6 19.1	21.5 20.7	12.8 13.7
DC-2	161 163	96 95	49 46.5	105.5 105	49.7 50	33 33.6	77 79	32.1 29.8	19.2 23.4	14.7 19.2	21.5 20.8	12.9 13.6
Σ	324 324	190 191	95.5 95.5		99.7	66.6 66.6	156 156	60.8 60.9	42.6 42.6	33.7 33.9	42.4 42.3	26.5 26.5
DC-3		95 94				33.6 33.6			19.2 23.3	14.7 19.1	21.6 20.7	13.7 13.7
Dc-4												
Σ		189				67.2			42.5	33.8	42.3	26.4
DC-AV	324	190	95.5	210.5	99.7	66.8	156	60.85	42.6	33.8	42.33	26.6
AC-1	154	91	46	100	47.8	32.2	76	29.2	20.7	15.6	20.2	12.5
AC-2	154	91	46	100	48	32.6	76	29.2	20.7	15.7	20.5	12.6
Σ	308	182	92	200	95.2	64.8	152	58.4	41.4	31.3	40.7	25.1
S. P.	-9	+16	→	-6	→	→	-6	→	→	→	-1	→
AC-N	.09	.05	→	.07	→	→	.06	→	→	→	.05	→

2
45
48
58
35
186
46.5

INDUCED POLARIZATION - RECEIVER NOTES PAGE 10

Project: Oberon Line 3 4-W Int.Cal Date: 2/18/66

Send	3-4	4-5	1-2	2-3	3-4	4-5		2-3				
Rec.	→	→	25-30	→	→	→		cal.				
Time	30	30	30	30	10	10		300				
DC-1	10.7 10.1	9.5 8.5	12.1 11.7	8.6 9	8.65 8.22	7.75 7.7		120 180				
DC-2	10.7 10.1	9.4 8.4	12.1 11.8	8.7 8.8	8.6 8.8	7.9 7.69		120 120				
Σ		18 17.8	23.8 23.6	17.5 17.6	17.27 17.47	15.45 15.59		240				
DC-3			12.1 11.8	8.6 8.8	8.6 8.8	7.71 7.64						
Dc-4						7.78 7.7						
Σ			23.9	17.4	17.4	15.35 15.48						
DC-AV	20.8	17.9	23.87	17.5	17.4	15.47		240				
AC-1	10.1	8.6	11.6	8.4	8.3	7.4		117				
AC-2	10.1	8.6	11.6	8.5	8.4	7.41		117				
Σ	20.2	17.2	23.2	16.9	16.7	14.81		234				
S. P.	→	→	-7	→	→	→						
AC-N	→	→	.06	→	→	→						

INDUCED POLARIZATION - RECEIVER NOTES PAGE 11

[redacted]roject: Oberon Line: [redacted]3 X-E Int.Cal [redacted]ate: 2/18/66

new chop.

Send	1-2	2-3	1-2	3-4	2-8	1-2	4-5	3-4	2-3	1-2	4-5	3-4
Rec.	0-5	5-10	→	10-15	→	→	15-20	→	→	→	20-25	→
Time	300	300	100	1000	100	30	1000	300	30	30	300	100
DC-1	91.94 90.92	158 157	47.5 45.2	515 519	42.2 40.8	16.1 20.4	441 490	109 112	12.8 16.9	11.1 4.6	131 130	49 48
DC-2	91.94 90.92	158 157	47.8 45.3	515 519	43.2 41	16.1 20.4	492 498	109 112	12.8 17.1	11.2 4.6	131 130	49 48
Σ	181 186 182 186	315 315	93.7 93.7	1034. 1034.	83.0 84.2	36.5 36.5	981 980	221 221	29.7 29.9	15.7 15.8	261 261	
DC-3		158 157	48 45.5		44 40.7				12.7 17.2 29.9			
Dc-4												
Σ		315	93.5		84.7							
DC-AV	183.5	315.0	93.1	1034	84.0	36.5	980.5	221	29.8	15.75	261	97
AC-1	89	152	44.1	479	40.8	17.4	461	105	14.6	7.9	124	45.6
AC-2	89	153	44.5	480	40.8	17.4	461	106	14.5	7.9	124	45.9
Σ	178	305	88.6	959	81.6	34.8	922	211	29.0	15.4	248	91.5
S. P.	-2	+8	→	-13	→	→	+0	→	→	→	0	→
AC-N	.06	.16	→	.10	→	→	.09	→	→	→	.09	→

92 92 93

INDUCED POLARIZATION - RECEIVER NOTES PAGE 12

Project: Oberon Line: 4-E Int.Cal [redacted] Date: 2/18/66

new chop

Send	2-3	1-2	4-5	3-4	2-3	1-2		3-4	2-3			
Rec.		→	25-30			→		cal.	cal.			
Time	30	10	300	100	10	10		300	300			
DC-1	9.1 7.7	4.5 6.34	74 72	330 30.8	7.3 4.75	2.76 5.19		121 123	124 123			
DC-2	9.1 7.7	4.48 6.3	74 72	33.1 30.7	7.35 4.68	2.77 5.19		121 123	123 122			
Σ		10.84 10.98		63.8 63.8	12.05 12.03	7.94 7.95		244	245			
DC-3												
Dc-4												
Σ												
DC-AV	16.8	10.91	146	63.8	12.04	7.945		244	246			
AC-1	8.1	5.2	69	29.6	5.7	3.8		116.5	120			
AC-2	8.1	5.2	69	30.1	5.73	3.8		117	120			
Σ	16.2	10.4	139	59.7	11.43	7.6		233.5	240			
S. P.	→	→	+1	→	→	→						
AC-N	→	→	.06	→	→	→						

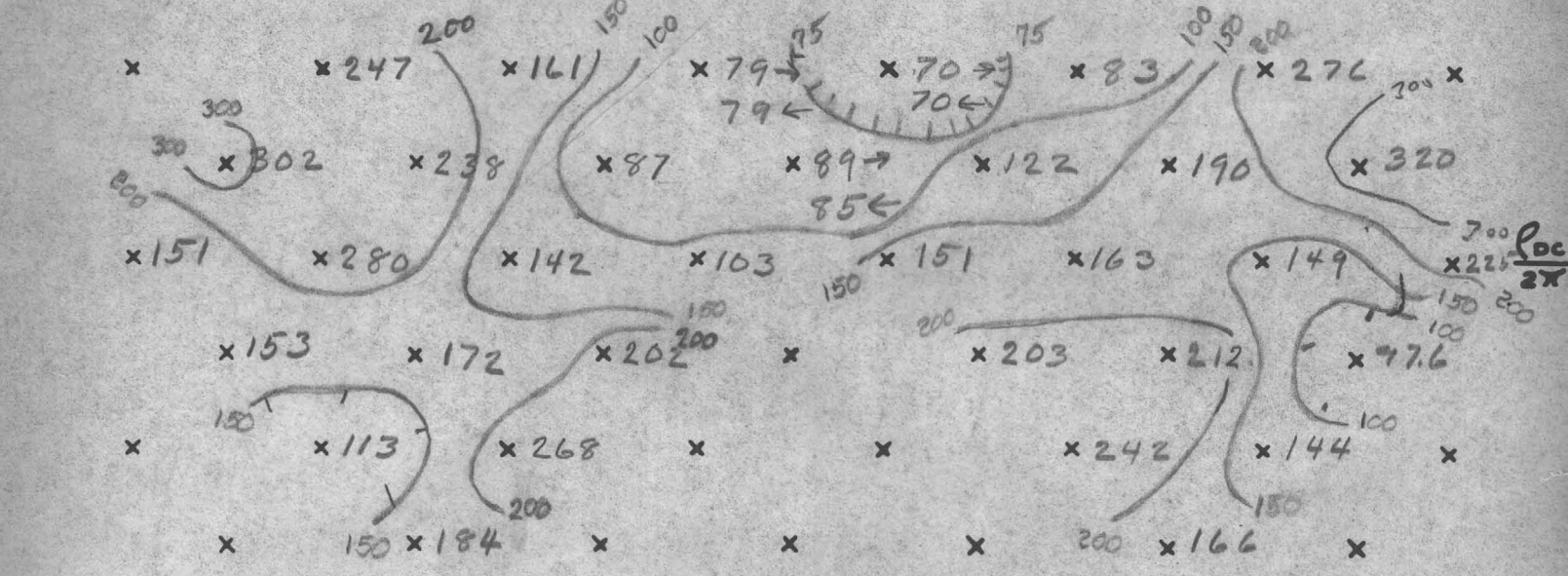
HEINRICHS GEOEX. INDUCED POLARIZATION SECTIONAL DATA PLOT, LOOKING N

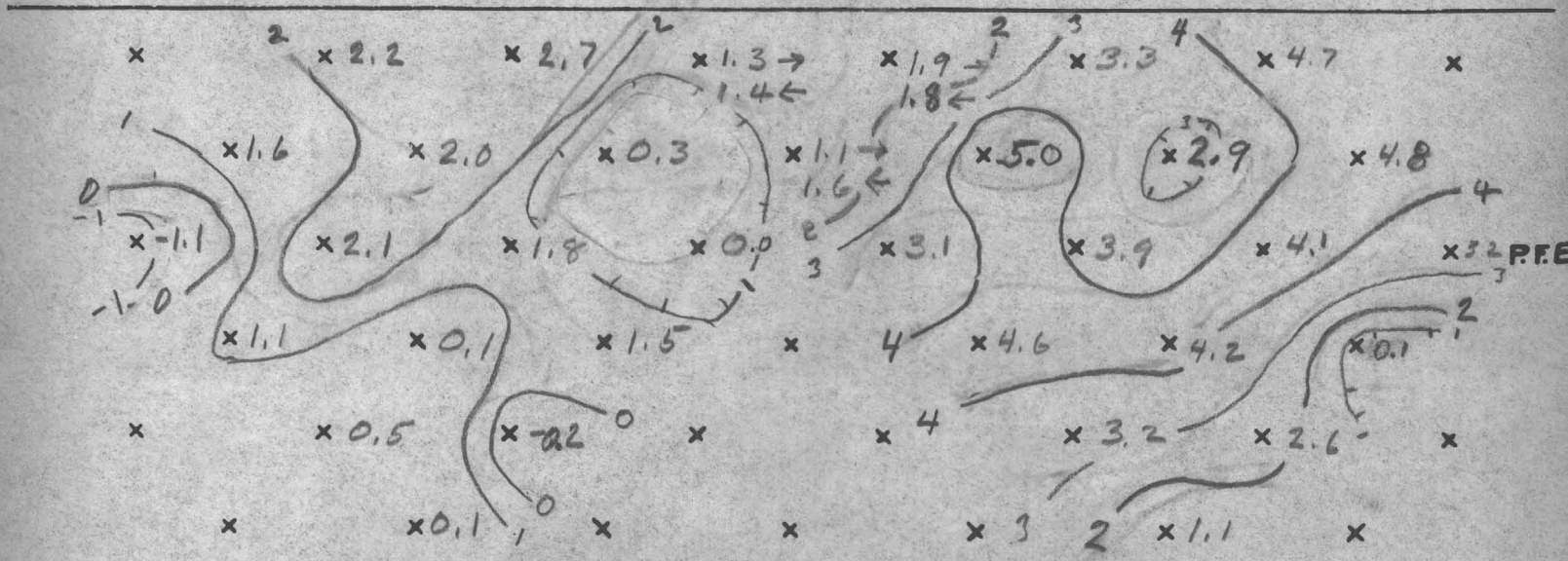
Low res zone

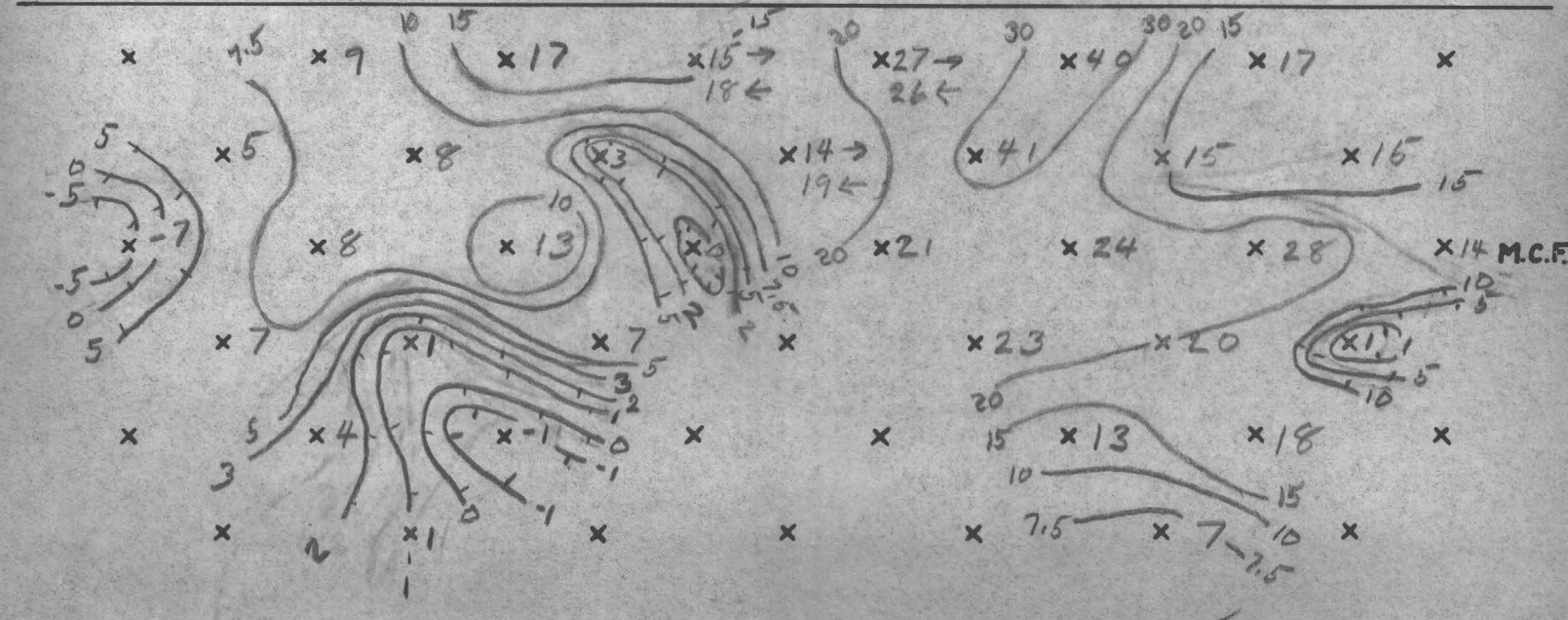
W 1 2 3 4 5 E

2000W 1500W 1000W 500W 0 W/E 500E 1000E 1500E 2000E

resistivity







AREA Oberan LINE 2 a = 500' SCALE: 1"=500' DATE: Feb 66

INDUCED POLARIZATION SURVEY

OBERAN PROPERTY

YAVAPAI COUNTY, ARIZONA

for

Western Nuclear, Inc.

February 1966

by

Heinrichs Geoexploration Company
P. O. Box 5671 Tucson, Arizona

TABLE OF CONTENTS

INTRODUCTION

At the request of Mr. Ralph H. Light of Western Nuclear, Inc., Denver, Colorado, Heinrichs Geoexploration Company conducted and completed an Induced Polarization Survey on the Oberan Property, Yavapai County, Arizona, during the interim February 14 - 18, 1966.

Three induced polarization lines were run consisting of 3 spreads, giving a total surface coverage of 18,000 feet, of which 10,500 feet are subsurface plotted data. All lines were single spreads, running east-west. Lines 1 and 2 were run in the Golden Gate area and Line 3 in the Camp B area. For exact location with respect to claims refer to the I.P. Location & Interpretation Plan.

The selection of a 500 foot dipole separation was made to maximize ground coverage per unit time, data resolution, and probability of locating economically sized sulfide bodies within about 600 feet of the surface.

The induced polarization measurements were made with the dual frequency technique on a dipole-dipole electrode configuration. Frequencies of 0.05 and 3.0 cycles per second were employed on all lines.

The data are presented on sectional data sheets, one per line, showing resistivity, percent frequency effect (PFE) and metallic conduction factor (MCF) contoured in section, and self potential (SP) in profile form. An induced polarization location and interpretation plan is also included.

Heinrichs personnel involved in the field work were David Godfrey, Crew Chief; John Langs, Project Geophysicist; and Rex Montierth, Technical Assistant. Interpretation, compilation and report by the Geoex staff in Tucson, Arizona under the supervision of Chris S. Ludwig, Senior Geophysicist.

CONCLUSIONS AND RECOMMENDATIONS

All three lines encountered very weak induced polarization response which may be due only to a higher background, or minor sulfides, or both. The location of strongest response correlates with the zones of interest on the claim map, and appears to originate from a mass of limited depth extent, perhaps 200-300 feet, or at least something indicating no improvement in sulfide with depth. Checking this latter factor was one of the major objects of the survey.

The quantity of sulfide possibly causing these effects is likely less than 1% by volume across the zones indicated, lessening with depth. Considering the abundance of near-surface

iron staining, the majority of the response could originate from pyrite.

The resistivities show the mineralization to be mostly in a more conductive zone, and to be related to a contact between the conductive and non-conductive material.

Natural or self potentials (S.P.) show only minor background variations indicating the lack of sizeable quantities of oxidizing sulfides within several hundred feet of the surface in the vicinity of the survey.

Considering these discouraging I.P. and prior drilling results, it is recommended that no further work be done on the property unless some other new and encouraging information is presented.

The surficial indications do suggest that economic possibilities may very well exist somewhere in the regional vicinity in the Yavapai "Schist" and related rocks - on, in, or around the Bradshaw granite mass. The Verde copper deposits at Jerome are a prime example. Further discovery must await additional effort at the right location or locations. Known and favorable prospects with evidence similar to that presented here at the Oberan property are not scarce in the region. Which one or ones may prove out remains to be revealed by a gradual elimination process involving considerable time, or cost, or both. The only alternative to that would be a regional relative evaluation program of combined geology, geophysics, and geochemistry. Such a program would require perhaps at least 50 crew months, not counting drilling, but it could prove fruitful.

INTERPRETATION

Line 1: This line was run near the north end of the Golden Gate area of interest. Very weak effects were noted from 250 E to 750 E, straddling an indicated resistivity contact near 500 E. This contact separates high resistivity, relatively unfractured, unaltered granites and gneisses to the east from fractured, altered, lower resistivity material to the west. The weak anomaly appears to be due to a near-surface (less than 250 feet) source with less than 0.5% total sulfides by volume across the 500 foot zone indicated. No increase with depth is suggested; in fact, the sulfide content below several hundred feet may decrease.

Line 2: This line was centered 1100 feet south of Line 1 and run across the widest portion of the areas of interest. Two fairly well defined contacts appear near Stations 0 E-W and 750 E, confining a lower resistivity zone and the majority of the anomalism

which extends from about 250 E to 1000 E. As on Line 1, the anomalism is very weak and of limited depth extent. Also, the anomalism correlates with the main vein to the east.

The frequency effects increase to the east end of the line in the higher resistivity material, but apparently are not accompanied by an increase in sulfide since the metal factors do not increase.

Line 3: This line was run parallel to and about 3700 feet south of Line 2 with the center shifted about 1900 feet east to better coincide with the zone of interest. Again, a contact was located with related very weak anomalism. The anomalism extends from about 500 W to 250 E with the contact near 0 E-W and higher resistivity material to the east. As on Lines 1 and 2, the source of anomalism is shallow and of limited depth extent. East of the contact, the frequency effects increase as on Line 2, but the metal factors are still background because of the high resistivities and, therefore, no sulfide increase is interpreted here.

Respectfully submitted,

HEINRICHS GEOEXPLORATION COMPANY

Chris S. Ludwig

Chris S. Ludwig
Senior Geophysicist

February 24, 1966

RECEIPT FOR CERTIFIED MAIL—20¢

No. 813767

SENT TO
Ralph Light Western Needle

STREET AND NO.
1700 Broadway

CITY, STATE, AND ZIP CODE
Denver, Colorado

POSTMARK OR DATE
3/1/66

If you want a return receipt, check which

☒ 10¢ shows to whom and when delivered

☐ 35¢ shows to whom, when, and address where delivered

If you want delivery only to addressee, check here

☐ 50¢ fee

FEES ADDITIONAL TO 20¢ FEE

POD Form 3800
July 1963

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL

(See other side)

1. Stick postage stamps to your article to pay:

BASIC CHARGES
Certified fee—20¢
Postage (first-class or airmail)

OPTIONAL SERVICES
Return receipt (10¢ or 35¢)
Deliver to addressee only—50¢
Special delivery

2. If you want this receipt postmarked, stick the gummed stub on the left portion of the address side of the article, *leaving the receipt attached,* and present the article at a post office service window or hand it to your rural carrier. (*no extra charge*)
3. If you do not want this receipt postmarked, stick the gummed stub on the left portion of the address side of the article, detach and retain the receipt, and mail the article.
4. If you want a return receipt, write the certified-mail number and your name and address on a return receipt card, Form 3811, and attach it to the back of the article by means of the gummed ends. Endorse front of article RETURN RECEIPT REQUESTED. (*Fees—10¢ or 35¢.*)
5. If you want the article delivered only to the addressee, endorse it on the front DELIVER TO ADDRESSEE ONLY. (*Fee—50¢*). Place the same endorsement in line 2 of the return receipt card.
6. Save this receipt and present it if you make i[redacted]y.

☆ GPO: 1963—O-685359

March 1, 1966

Mr. Ralph H. Light
Vice President of Operations
Western Nuclear
Suite 1420
1700 Broadway
Denver, Colorado

Dear Mr. Light:

Enclosed please find an original and two copies of Induced Polarization Survey, Oberon Property, Yavapai County, Arizona.

If you have any questions on the report, please do not hesitate to contact us.

Statement will follow shortly.

Very truly yours,

HEINRICHS GEOEXPLORATION COMPANY

E. Grover Heinrichs
Vice President

EGH:jc
Enclosures: 3

WESTERN NUCLEAR, INC.

EXECUTIVE OFFICE • SUITE 1420 • 1700 BROADWAY • DENVER, COLORADO 80202 • (303) 255-0471

RALPH H. LIGHT
GENERAL MANAGER

January 28, 1966

Mr. Walter E. Heinrichs Jr.
President and General Manager
Heinrichs Geoex
P.O. Box 5671
808 W. Grant Road
Tucson, Arizona 85703

See Separate F

Dear Walter:

We are enclosing for your review the data Western Nuclear Inc. have gathered on the Oberan and Bluelight properties.

We have one more hole (A1-1) to drill on the Oberan property and this should be completed by February 5th or 6th. To date we have not done any drilling on the Bluelight.

If, after reviewing our data and any information you may have in your files, you deem it prudent to visit the properties please let me know and we will make the necessary arrangements.

Due to other comittments we could not make such a trip until after February 15, 1966.

It was nice to see you again and to meet Chris Ludwig.

Sincerely,

Ralph

RHL/fh

Enclosure

cc: J. A. Larson
E. Newman

MEMORANDUM

Rig around 20-23 well name on

DATE: NOVEMBER 12, 1965

TO: J.A. LARSON, EXECUTIVE VICE PRESIDENT
R.H. LIGHT, VICE PRESIDENT, OPERATIONS

FROM: E. NEWMAN, MANAGER
EXPLORATION & DEVELOPMENT DEPT.

SUBJECT: OBERAN PROJECT

Attached to this memorandum, you will find a folder in which is a property map of the Oberan project as well as a sheet listing progress. This folder is prepared in anticipation of additional exploration activities within the next few months to show the location of, and the progress made, on this exploration. The prepared map shows all previous work and the area of future work, but does not yet show actual drill locations. This will be governed by accessibility and drill site location availability and would be determined prior to the actual start-up of drilling.

In order to keep you current on progress, I would suggest that you keep the folder on the bookcase behind your desk so that it may be updated without having to "paw" through your desk.

E Newman

EN/drq

Attachment

WESTERN NUCLEAR, INC.

MEMORANDUM

DATE: NOVEMBER 10, 1965

TO: R.H. LIGHT, VICE PRESIDENT, OPERATIONS

FROM: E. NEWMAN, MANAGER, EXPLORATION & DEVELOPMENT DEPT.

SUBJECT: OBERAN PROJECT
YAVAPAI COUNTY, ARIZONA

ATTACHMENT: REPORT OF W.T. DAVIS, AUGUST 19, 1965
PROPERTY MAP

The attached report gives a summary of the results obtained on the drilling program conducted on the property from May through August, 1965. The report was not submitted, as it was believed to be incomplete in that no overall property map with vein system had been completed in a presentable form. This has now been done and the delay can only be attributed to the move and the press of other projects and for this we apologize.

The completed map shows the prominent vein system which was obtained through aerial photo coverage. To do the comparable work on the ground would have taken more time than we could afford and would have been much more costly.

As is known, the drilling results were disappointing in that only one hole (the first vertical one in the open cut numbered A2-1) had any values of ore caliber. The other holes had thin mineralized sections. Therefore, the drilling did not substantiate the original reports of high-grade copper ore. Assuming that the initial reports were correct, then the correlation of the high-grade copper in the shaft area; the open pit shipped area; the one ore hole in the open pit; the 70 foot offset from the open pit ore drill hole; and the poor value drill holes in the shaft area, give rise to the supposition that any copper ore is of a small magnitude easily missed in drilling and perhaps too small to be of economic interest. It could also be supposed that these small ore occurances do not go to any depth.

The two obvious areas on the claims have been checked and have not given encouraging results. The only area left on the claims that has not been drilled and which is perhaps the last chance for significant ore possibilities is the area between the Golden Gate and Camp "B" drilled areas in the double hatched area on the attached map.

Much thought has gone into the program which would thoroughly check the last area yet cost the least amount of money, should it not prove fruitful. The advocated geochemical program, I believe would not tell us anything. agree There is sufficient mineralization on the ground which would give a positive anomaly over the vein and we know the location already, so why spend the money when nothing new will be uncovered? Similarly, a ground geophysical survey would not give additional information as there is disagree enough surface mineralization in the gassan to affect it and the information of the previously drilled show enough mineralization to give another positive anomaly. Therefore, in my opinion, any short cut to outline ore possibilities would not tell us anything that we do not already know. Thus, additional drilling is the only other avenue left to assess the remaining possibilities of the claim area.

It is my recommendation that a minimum of two diamond drill holes be drilled in the central area of the claims (double hatched area of the map), one fairly shallow and the other deeper. If these two holes do not bring any better values than the previous work, then the option should be dropped. If, on the other hand, encouraging results are obtained, then one hole should be placed on the vein area on Albert 9 claim, plus further drilling in the central area. The minimum overall cost including drilling, assaying, geologist time and expenses is estimated to be less than $15,000, which has been budgeted. This work, if approved, would start by mid-December or early-January, 1966.

E. Newman

Eric Newman, Manager
Exploration & Development Dept.

EN/drq
Attachment

M E M O R A N D U M

DATE: AUGUST 19, 1965

TO: ERIC NEWMAN, MANAGER, EXPLORATION & DEVELOPMENT DEPT.

FROM: W. T. DAVIS, SENIOR STAFF GEOLOGIST

SUBJECT: RESULTS OF DRILLING COMPLETED ON THE GOLDEN GATE AND CAMP "B" PROPERTIES, YAVAPAI COUNTY, ARIZONA.

Summary and Recommendations

During May of this year, a small drilling program was initiated on property acquired from Nick Oberan to quickly determine the tenor of the ore deposits prior to the planning of large-scale exploration work. The drilling proceeded slowly until a competent contractor took over, and on August 10, 1965, six holes, representing 1953.8 feet of core and plug drilling, had been completed.

The drilling was confined to the most promising vein structures, namely, the Golden Gate vein, which bounds the property on the east and the Camp "B" vein which lies along the south edge.

Of the three holes drilled in the Golden Gate area, two were placed in the open cut of the north end, where considerable oxidized copper is exposed, and a continued open pit operations was thought possible (See Plate 1). One hole, A2-1, showed about 4% copper near the surface, with lesser amounts to 50 feet, and then was barren to 193.8 feet, the depth of the hole. The other hole, drilled 70 feet north, showed only a 3-foot section of 1-1/2% copper at 30 feet and was abandoned at 80 feet because of poor drilling conditions. This drilling indicated local, spotty copper mineralization, which evidently does not extend to any depth. The third hole was drilled in the Golden Gate vein 700 feet south of the open cut to intersect a surface showing at depth. This hole showed only a foot of weak mineralization at 82 feet.

Three holes were drilled in the Camp "B" area (See Plate 2) to intersect this vein in the vicinity of mine levels which indicated high grade values on maps furnished by Mr. Oberan. Hole N2-2 penetrated the vein below and west of the 165' level, which on the map indicated a 70-foot width of several percent copper. In the drill hole the vein was 16.4 feet wide, of which a 4-foot segment assayed 0.65% copper. The other two holes were placed to penetrate the vein below the 270' level in the vicinity of the inclined shaft, which on the map shows an abundance of native copper. One of the holes had values of 0.10% copper in the vein and the other, which intersected

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the vein at a lower level, was completely barren of all values and showed the vein to be only about 3 feet wide.

With these poor results after testing portions of the more promising veins in the area, I feel that the following studies should be made prior to deciding whether to continue the drilling project or to drop the option. A large area of gossen is exposed between the high hill located near the center of the property and the Golden Gate vein to the northeast. In my estimation, this is possibly the last large structure located on the property, and my proposal is to run a geochemical survey over this entire area. Likewise, a geochemical survey should be made along the veins we staked southeast of the Camp "B" mine, which are obviously a continuation of that vein system. A party of two could complete this work in about three weeks, after having base lines established by a survey party, and the total cost should not exceed $3,000.

If the geochemical surveys show copper anomalies in either area, I would go one step further and have a geophysical survey run over the most interesting anomalies. This would give us a closer fix on sulphides existing in the veins for drilling targets. I have contacted Heinrichs Geoexploration Company in Tucson, and their rates are $250 a day for field work and $100 a day for office computations. I would estimate a survey by them would not exceed $4,000.

This proposed expenditure of up to $7,000 would provide information on whether or not the area would be worthy of further development.

General and Assay Data

Camp "B" Area

The Camp "B" vein in the vicinity of the shafts and drill area is largely covered with old mine dumps and alluvial material. For computing the direction and angle of the drill holes, it was necessary to use the bearing of N 46° W between the two shafts sunk on the vein as its strike. The vein dip of 56° to the 270' level and then vertical thereafter was obtained from Mr. Oberan. This information worked quite well for drill holes N2-2 and N2-1, both of which intersected the vein a short distance beyond its projected intersection. This would indicate the vein either has a more northward strike or is beginning to roll over to the vertical before the

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270' level. Drill hole N2-1, the most easterly hole, cut the vein 98 feet vertically below the 270' level, and the vein was displaced to the southwest almost 50 feet (assuming it was vertical at the 270' level).

The narrow width of the vein in this hole and its early penetration raised speculation that it may not be the main vein, so the hole was surveyed by Sperry-Sun at 587' depth. The survey showed the hole had only risen 2° and was bearing 5° more easterly than its original setting. The survey also showed the bottom of the hole to be horizontally 55' northeast of the 270' level, so there was no doubt that the vein had been penetrated. Probably a fault has displaced the vein below the 270' level.

Drilling characteristics in the three holes were quite similar in that an extensive breciated and gouge zone (granite and gneiss) extended to within a short distance of the vein. A grey gneiss preceded the vein, and the vein itself was a breciated gneiss which had been impregnated with mineralizing solutions showing heavy red iron stains, pyrite and sometimes weak copper mineralization. In one hole, a small quartz vein had replaced the breccia. Through the vein the host rock became a very silicious gneiss which gave way to a dark green schist.

Drill Hole N2-1 penetrated the Camp "B" vein between the depths of 337.5 to 344.0' and was assayed in two parts, both of which were barren of gold, silver and copper. No mineralization other than iron staining was noted in the core.

Drill Hole N2-2 penetrated the vein between the depths of 410.0 and 426.4' and was assayed in four composite samples for gold, silver and copper. The section between 420' and 424' showed 0.65% copper, and the remaining core was barren. Pyrite, Chalcopyrite, native copper were noted in minute quantities in the core.

Drill Hole N203 intersected the vein between the depths of 301.6' and 327.0'. The entire vein section showed a trace of gold and silver, and 0.10% copper from 301.6 to 306.3' and from 314.0 to 316.0', and a trace throughout the remainder of the core. Minute quantities of bornite, chalcocite and some pyrite were noted in the core.

Golden Gate Area

Drill Hole A2-1 (vertical) was placed near the center of the 200' wide gossen area at the edge of the open cut located near the south edge of the Albert 2 Claim. The core indicated the vein to be composed of a brecciated granite, which showed diminishing gossen and copper content with depth. The mineralization found is shown in the following table:

Depth	Au	Ag	Cu
13.3'-18.5'	0.12 oz.	0.60 oz.	3.95 %
18.5'-23.5'	0.06	0.40	1.10
23.5'-28.5'	0.06	0.60	0.95
28.5'-31.5'	0.08	0.40	0.55
43.5'-46.3'	0.08	0.40	0.85
46.3'-48.3'	0.10	0.20	0.85

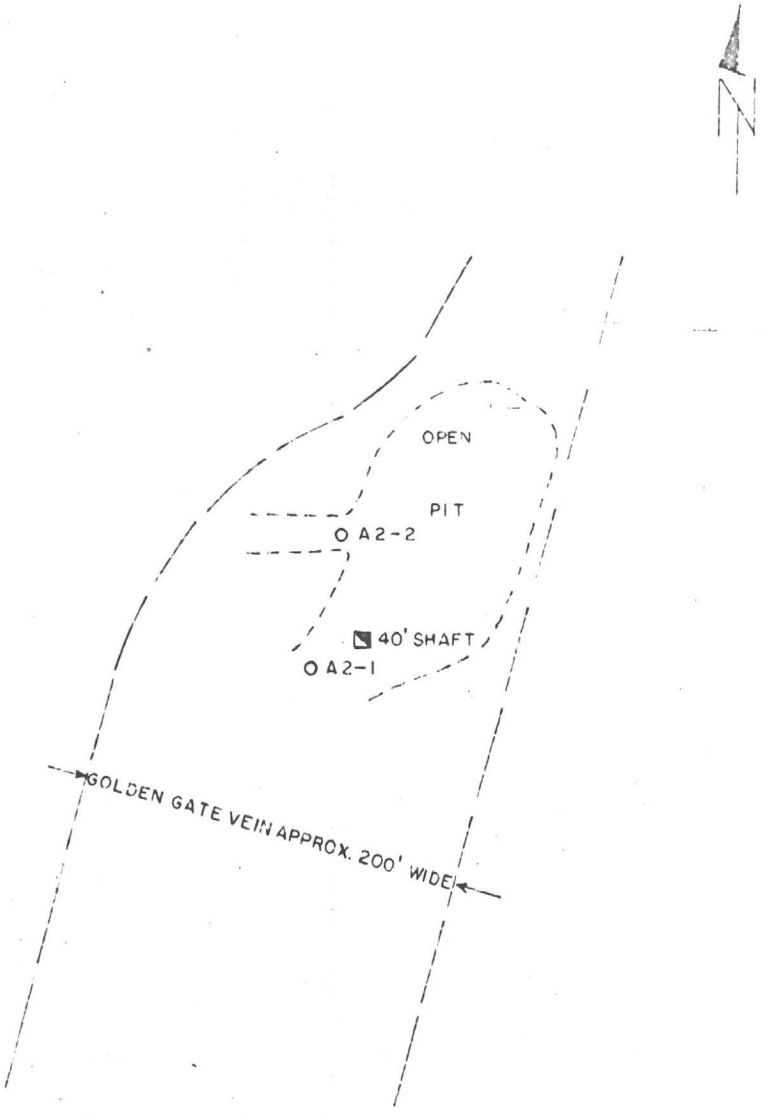
Drill Hole A2-2, also vertical, placed in the open cut 70' north of A2-1 penetrated three feet of mineralization starting at 30' This assayed 0.08 oz. gold, 0.20 oz. silver, and 1.45% copper.

Hole A1-1 was drilled on a 45° angle easterly across the Golden Gate vein, 700 feet south of the open cut on Albert 2 Claim. It was intended to cut a small outcrop in the canyon at depth; however, the vein appears to have mushroomed near the surface, as it did not extend in that direction at depth. A 1 foot assay at 82.0' ran 0.02 oz. gold, 0.40 oz. silver, and was barren of copper. The total depth of this hole was 230 ft.

W. T. Davis

W. T. Davis
Senior Staff Geologist

WTD/vr

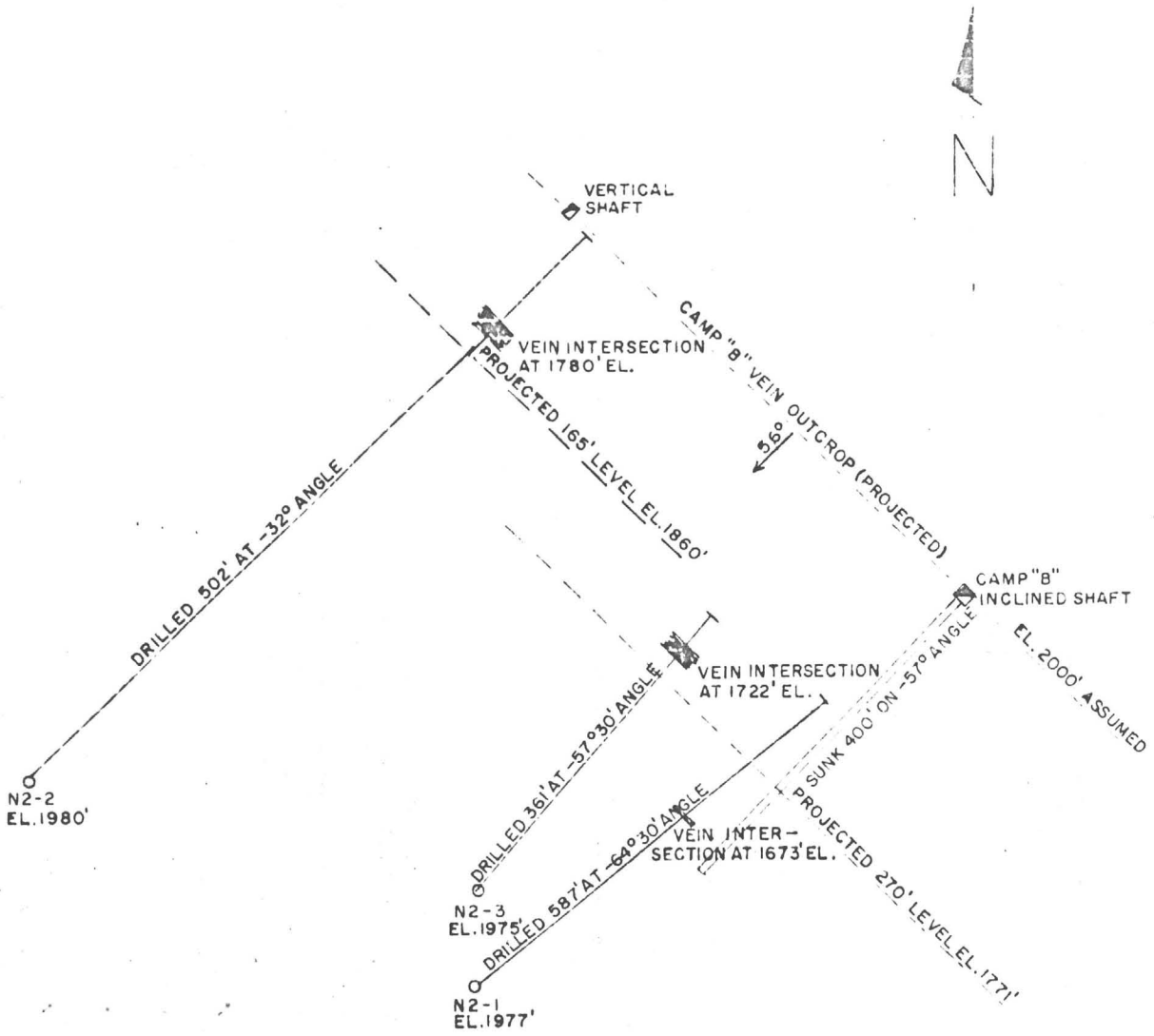


PLAN MAP SHOWING DRILLING IN VICINITY OF ALBERT 2 OPEN CUT

SEC. 16, T. 8 N., R. 3 W., YAVAPAI COUNTY, ARIZONA

SCALE 1"= 100'

PLATE 1

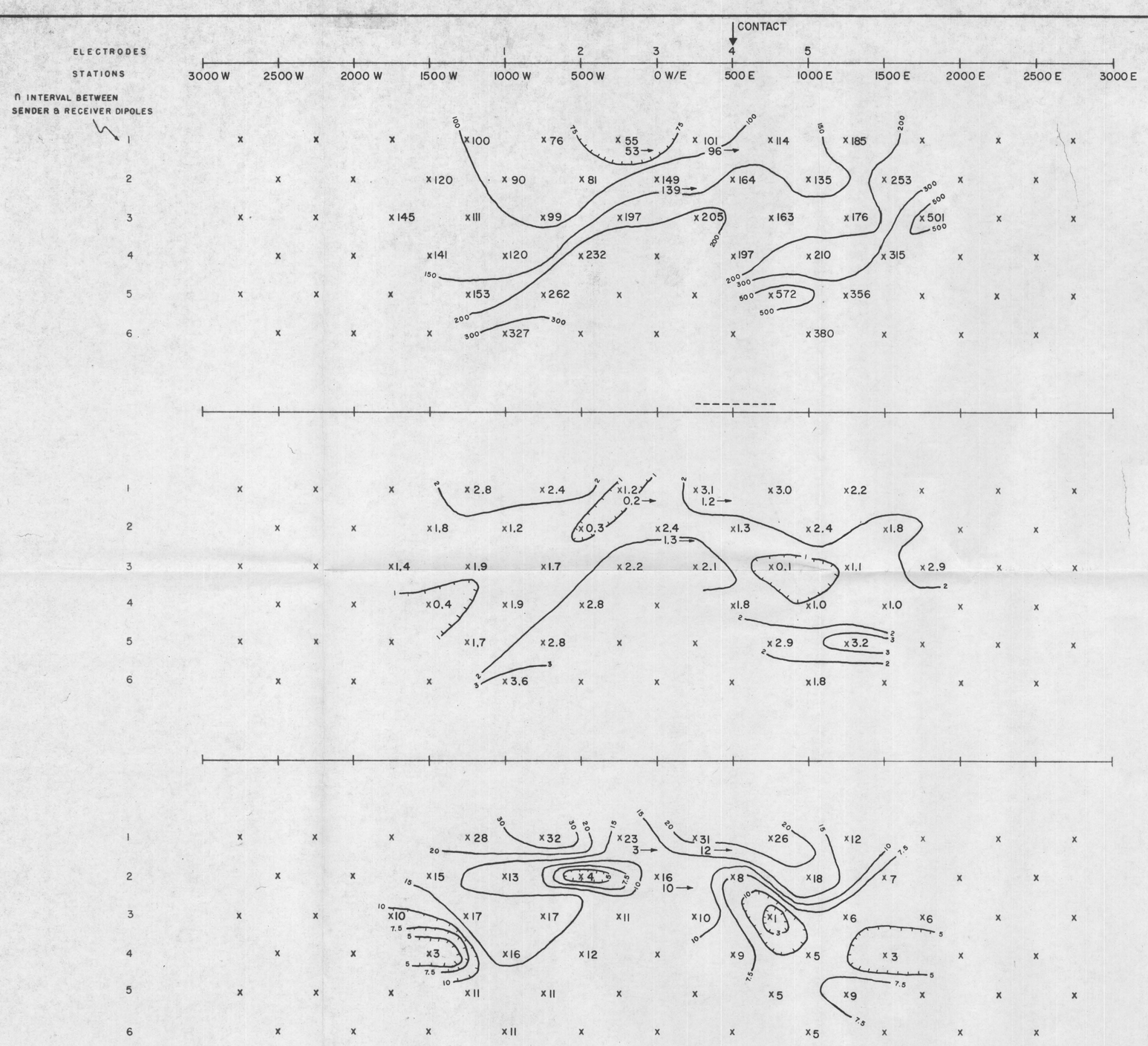


PLAN MAP SHOWING DRILLING IN VICINITY OF CAMP "B" MINE

SEC. 20, T. 8 N., R. 3 W., YAVAPAI COUNTY, ARIZONA

SCALE 1" = 100'

PLATE 2



EXPLANATION

ELECTRODE ARRAY: 500' — n x 500' — 500'

SENDER DIPOLE — RECEIVER DIPOLE

RELATIVE ANOMALY STRENGTH

VERY WEAK — WEAK — MODERATE — STRONG

LOOKING N

OBERAN PROSPECT

SECTIONAL DATA SHEET

LINE NO. 1

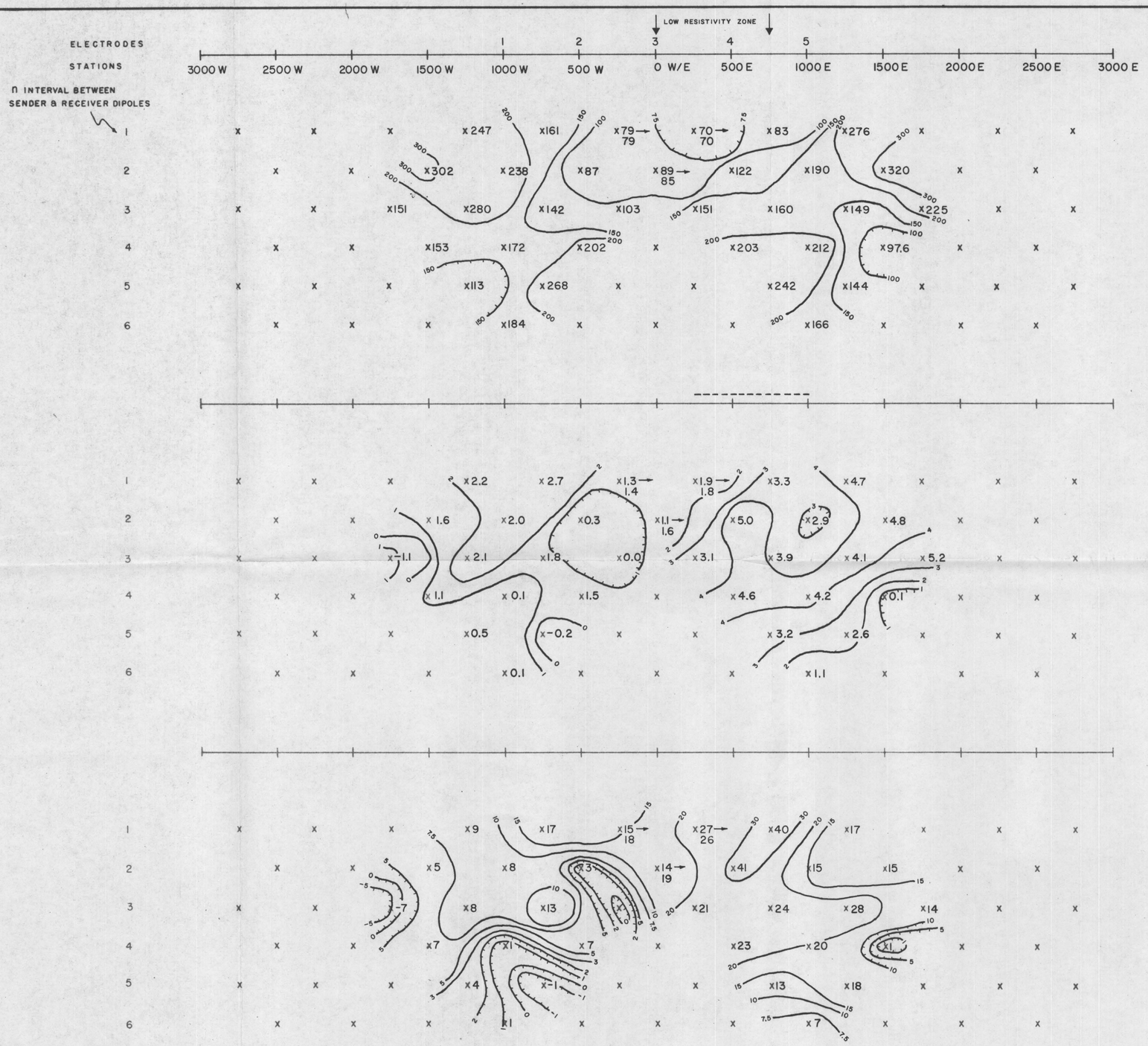
INDUCED POLARIZATION TRAVERSE

HEINRICHS GEOEXPLORATION COMPANY

SCALE: 1" = 500' DATE: FEB. 1966

FOR

WESTERN NUCLEAR, INC.



APPARENT RESISTIVITY (ρ_{DC}) IN UNITS OF OHM FEET 2π

CONTOUR INTERVAL LOGARITHMIC

SENDER FREQUENCY: 0.05 c.p.s.

PERCENT FREQUENCY EFFECT (PFE)

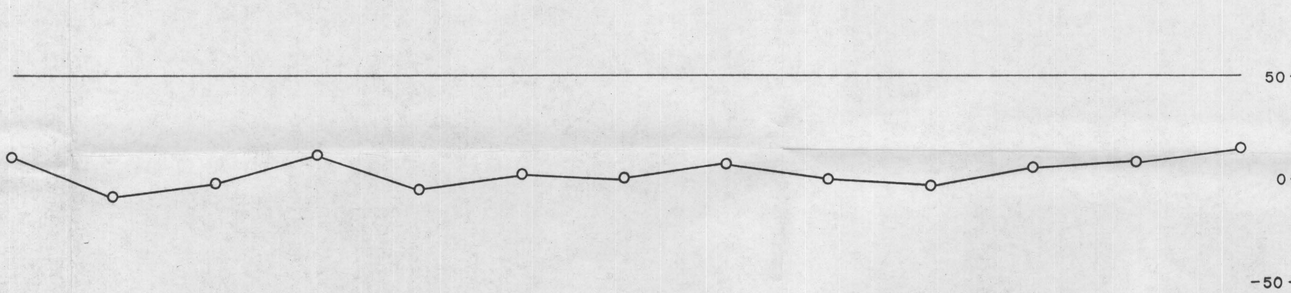
CONTOUR INTERVAL CONSTANT

SENDER FREQUENCIES: 0.05 & 3.0 c.p.s

APPARENT "METALLIC CONDUCTION" FACTOR (MCF)

$\left(MCF = \frac{PFE \times 1000}{\rho_{DC} 2\pi}\right)$

CONTOUR INTERVAL LOGARITHMIC



EXPLANATION

ELECTRODE ARRAY: 500' — n x 500' — 500'

SENDER DIPOLE — RECEIVER DIPOLE

RELATIVE ANOMALY STRENGTH

VERY WEAK — WEAK — MODERATE — STRONG

LOOKING N

OBERAN PROSPECT

SECTIONAL DATA SHEET

LINE NO. 2

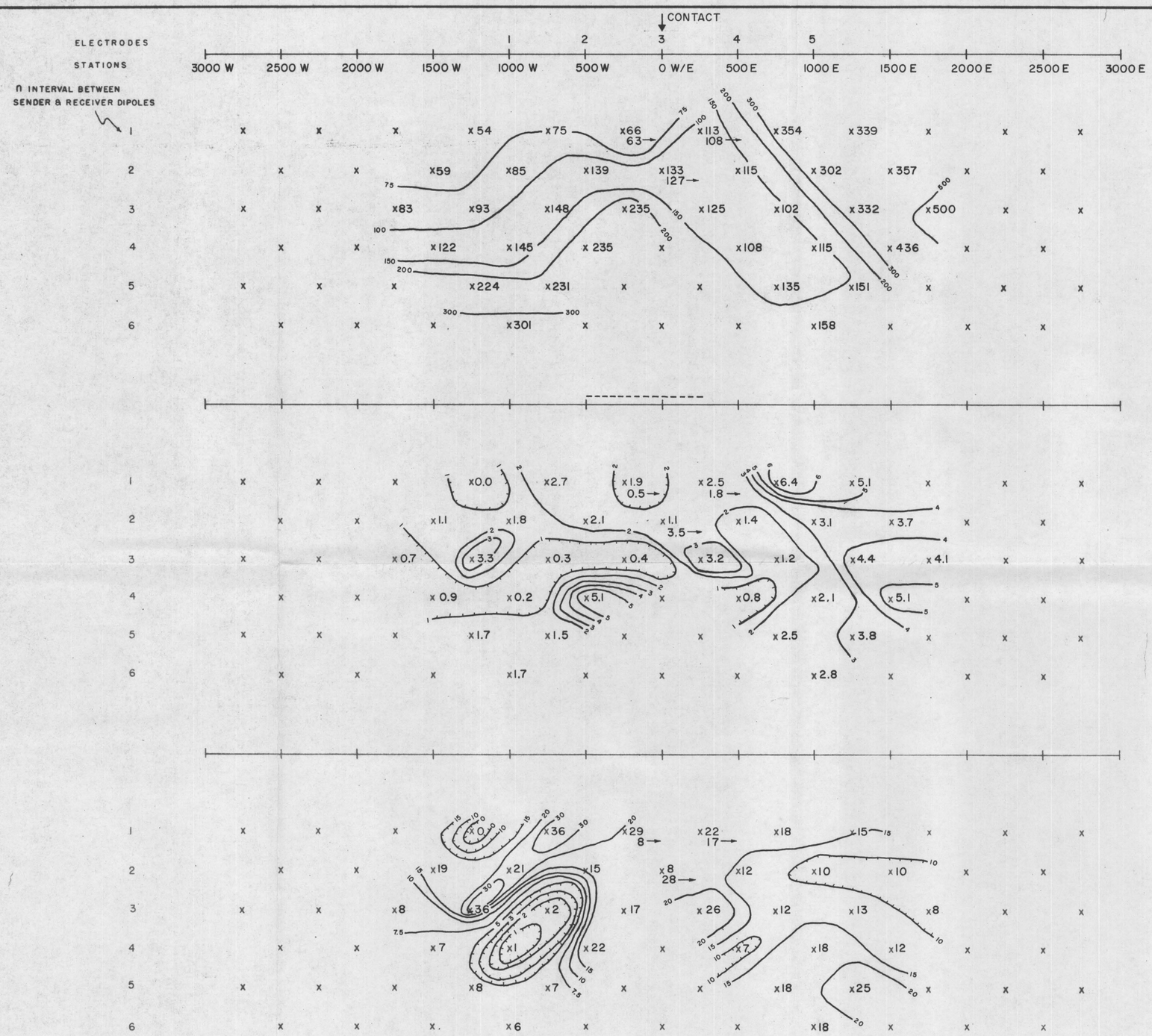
INDUCED POLARIZATION TRAVERSE

HEINRICHS GEOEXPLORATION COMPANY

SCALE: 1" = 500' DATE: FEB. 1966

FOR

WESTERN NUCLEAR, INC.



APPARENT RESISTIVITY (ρ_{DC}) IN UNITS OF OHM FEET 2π

CONTOUR INTERVAL LOGARITHMIC

SENDER FREQUENCY: 0.05 c.p.s.

PERCENT FREQUENCY EFFECT (PFE)

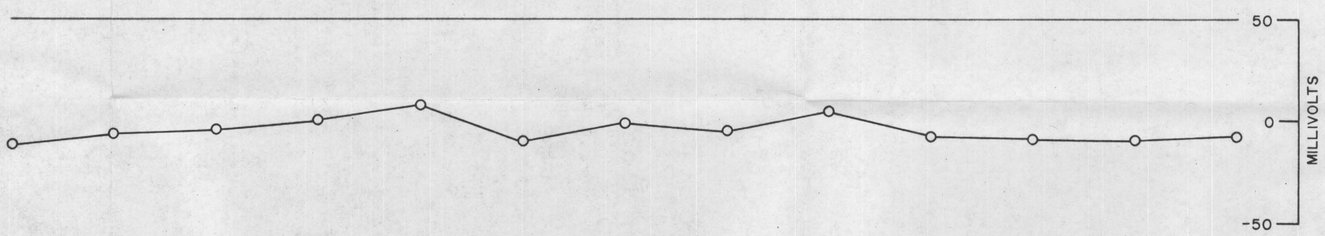
CONTOUR INTERVAL CONSTANT

SENDER FREQUENCIES: 0.05 & 3.0 c.p.s.

APPARENT "METALLIC CONDUCTION" FACTOR (MCF)

$(MCF = \frac{PFE \times 1000}{\rho_{DC}/2\pi})$

CONTOUR INTERVAL LOGARITHMIC



EXPLANATION

ELECTRODE ARRAY: 500' — n x 500' — 500'

SENDER DIPOLE — RECEIVER DIPOLE

RELATIVE ANOMALY STRENGTH

VERY WEAK — WEAK — MODERATE — STRONG

LOOKING N

OBERAN PROSPECT

SECTIONAL DATA SHEET

LINE NO. 3

INDUCED POLARIZATION TRAVERSE

HEINRICHS GEOEXPLORATION COMPANY

SCALE: 1" = 500' DATE: FEB. 1966

FOR

WESTERN NUCLEAR, INC.

R3W

T 8 N

BUCKHORN 2973
SAN FRANCISCO 2973
ALBERT WEDGE NO. 1
ALBERT WEDGE NO. 2
UNITA EXTENSION NO. 6
BULLION 2973
GILBERT HOUSE 2973
GOLDEN GATE WEDGE
ALBERT NO. 5
GOLDEN GATE ANNEX
GOLDEN GATE
GOLDEN GATE NO. 2
ALBERT NO. 3
ALBERT NO. 2
ALBERT 6
QUEEN ESTER 2773

LINE 1
3000 W
3000 E

KING SOLOMON 2773
GOLDEN GATE ANNEX NO. 2
WEDGE NO. 3
AMAI GAMATED COPPER 2418
GOLDEN GATE NO. 4
GOLDEN GATE NO. 3
ALBERT NO. 4
ALBERT NO. 1
ALBERT 7
HEAVY FAULT GOUGE (BRECIATED)

LINE 2
3000 W
3000 E

OLD HOMESTEAD 2418
LAWSON 2418
EXTENSION NO. 1
SCORPION 2418
W.H. BURAGE 2418
GOLDEN GATE EXTENSION NO. 2
GOLDEN GATE EXTENSION NO. 1
ALBERT EXTENSION NO. 2
ALBERT EXTENSION NO. 1
THE ACCIDENT 2418
ALBERT 12
ALBERT 13
NOGI 2418
BATHOLDI 2418
WEDGE NO. 2
ALBERT EXTENSION NO. 3
CHADWIC 2418
MONTAI HILL 2418
EXTENSION NO. 2
EXTENSION NO. 3
METER HILL 2418
WEDGE NO. 1
ALBERT 11
ALBERT 10
ALBERT 9
ALBERT 14
ALBERT 15

LINE 3
3000 W
3000 E

N

NOTE
CLAIM BASE FURNISHED BY WESTERN NUCLEAR

LEGEND

- VERTICAL DRILL HOLE
- ANGLE HOLE SHOWING DIRECTION & HORIZONTAL DISTANCE DRILLED
- VEIN OR GOSSAN FILLED STRUCTURE
- AREAS CONSIDERED FAVORABLE TO ADDITIONAL PROSPECTING
- VERY WEAK ANOMALY

HEINRICHS GEOEXPLORATION COMPANY
P.O. Box 5671 Tucson, Arizona

INDUCED POLARIZATION LOCATION
& INTERPETATION PLAN
OBERAN PROSPECT, YAVAPAI COUNTY, ARIZONA
FOR

WESTERN NUCLEAR, INC.

SCALE: 1" = 400'	CONTOUR INTERVAL:	REVISIONS
	DATA BY: D.G. & J.L.	
DATE: 23 FEB. 1966	SHEET 1 OF 1	
DRAWN BY: W.D.S.	DRAWING NO.:	FILE:

BUCKHORN 2973

SAN FRANCISCO 2973

ALBERT WEDGE NO.1

ALBERT WEDGE NO.2

UNITA EXTENSION NO.6

BULLION 2973

GILBERT HOUSE 2973

GOLDEN GATE WEDGE

ALBERT NO.5

GOLDEN GATE ANNEX

GOLDEN GATE

GOLDEN GATE NO.2

ALBERT NO.2

ALBERT 6

QUEEN ESTER 2773

KING SOLOMON 2773

GOLDEN GATE ANNEX NO.2

GOLDEN GATE NO.4

GOLDEN GATE NO.3

ALBERT NO.4

ALBERT 7

LAWSON 2418

OLD HOMESTEAD 2418

WEDGE NO.3

W.H. BURAGE 2418

SCORPION 2418

GOLDEN GATE EXTENSION NO.1

GOLDEN GATE EXTENSION NO.2

ALBERT EXTENSION NO.2

ALBERT EXTENSION NO.1

THE ACCIDENT 2418

EXTENSION NO.1

N.O.G.I. 2418

BATHOLDI 2418

WEDGE NO.2

ALBERT EXTENSION CHADWICK 2418

WEDGE NO.1

EXTENSION NO.2

METZ HILL 2418

EXTENSION NO.3

MONTAI HILL 2418

ALBERT 12

ALBERT 13

ALBERT 11

ALBERT 10

ALBERT 9

ALBERT 14

ALBERT 15

HEAVY FAULT GOUGE (BRECCIATED)

1100'

N2-2

N2-3

N2-1

LEGEND

- A2-1 — VERTICAL DRILL HOLE
- N2-3 — ANGLE HOLE SHOWING DIRECTION & HORIZONTAL DISTANCE DRILLED
- VEIN OR GOSSAN FILLED STRUCTURE
- AREAS CONSIDERED FAVORABLE TO ADDITIONAL PROSPECTING
- BOUNDARY OF OBERAN OPTION
- WESTERN NUCLEAR, INC. PROPERTY BOUNDARY

DRILL HOLE AND VEIN STRUCTURE MAP

WESTERN NUCLEAR, INC.

OBERAN AND WENCOR PROPERTIES

YAVAPAI COUNTY, ARIZONA

SCALE 1"=400'