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DUAL FREQUENCY

INDUCED POLARIZATION SURVEY

of the

ORIZABA CLAIM GROUP

PINAL COUNTY, ARIZONA

For

Inspiration Consolidated Copper Company
Inspiration, Arizona

August and September 1969

By

Heinrichs Geoexploration Company
P.O. Box 5671 Tucson, Arizona 85703
Phone: 623-0578 Area Code: 602

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Copy of Geophysical Report for Assessment Work 1969-1970

Maps

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Sectional Data Sheet - Line 1, Spread 1

Sectional Data Sheet - Line 2, Spread 1

GENERAL LOCATION
of
ORIZABA CLAIM GROUP
for
INSPIRATION CONSOLIDATED COPPER CO.

ARIZONA

HEINRICHS
GEOEXPLORATION COMPANY
GEOPHYSICAL ENGINEERS

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(SYDNEY)
39 Hume Street
Crows Nest, NSW
Phone: 439-1793

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Cable: GEOEX, Tucson

File

INTRODUCTION

At the request of Mr. Hugh Olmstead, and on behalf of Inspiration Consolidated Copper Company, Heinrichs GEOEXploration Company conducted and completed a dual frequency induced polarization survey over the Orizaba Claim Group, Pinal County, Arizona. The field work was completed in two phases, from August 19 to August 21, 1969 and September 29 and 30, 1969 in order to satisfy the 1968 - 1969 and 1969 - 1970 assessment years annual labor requirements. Separate geophysical reports of the basic findings for each of these periods for the purpose of filing with the affidavits of labor, are appended to this final technical report.

Heavy duty geophysical equipment was used because of the expected low resistivity ground conditions and the long dipole lengths used. Accordingly, a GEOEX Mark 4 B Sender and Mark 4 power unit were employed in conjunction with a Mark 4 C series receiver. All data was obtained using sending frequencies of 0.1 and 1.0 Hz. The conventional dipole-dipole electrode array with dipole lengths of 1500 feet was used on two lines, each line consisting of one spread employing 5 sending electrodes or 4 sending dipoles for each spread.

The work done for the 1968 - 1969 assessment period was on Line 1, oriented east-west, centered approximately 450 feet west of the southwest corner of Section 24, T. 9 S., R. 4 E. The 1969 - 1970 assessment period work was done on Line 2, centered on the same point as Line 1, but oriented in an approximately north-south direction. These lines are plotted on the "Induced Polarization Location and Interpretation Plan" herewith attached.

Detailed presentation of all survey data is shown on attached sectional data sheets; one for each line, with contoured apparent resistivity, percent frequency effects (PFE), and metallic conduction factor (MCF); plotted in accordance with the procedures discussed in the appended "Basis of the Induced Polarization Method". Also presented on the sectional data sheets are the self potential profile and interpretation.

The GEOEX personnel who worked on the project are: Mr. Ronald Palmer, Crew Chief; Mr. Dave Chaffin, Sender Operator; and Mr. Mike Dunn, Field Technician. The planning, supervision, interpretation of data and compilation of this report was done by Mr. Paul Head, graduate Geophysical Engineer, assisted by the Geoex Tucson Staff, under the overall direction of Mr. Walter E. Heinrichs, Jr. an Arizona Registered Professional Engineer.

CONCLUSIONS AND RECOMMENDATIONS

Very weak I.P. anomalism is detected on both lines near their common center. This may be due to mineralization associated with the Orizaba Mine. The anomaly pattern is characteristic of that which would be expected from a polarizing body that is small relative to the dipole spacing used. We believe that Line 1 crosses the polarizing body at an angle greater than 45°, whereas Line 2 is probably oriented more nearly parallel to it. However, the broad coverage and lack of added parallel lines crossing the feature prevents any truly quantitive determination of strike direction.

The weak open-ended anomaly on the east end of Line 1 is very probably unrelated to the mineralization near the Orizaba Mine and based on the resistivity data appears to be located in an entirely different resistivity enviroment. The Orizaba Mine is located on the high resistivity side of a distinct resistivity interface that probably represents a rock type change. The eastern anomaly appears to be associated with even more electrically resistive rocks and may be relatively deep. The depth and location of the source of this anomaly is not defined due to insufficient coverage to the east.

This survey has provided the necessary amount of work on the claim group to satisfy two years of assessment work and in addition has indicated the existance of mineralization near the Orizaba Mine. It has not answered the question of precisely where to drill most effectively to evaluate such mineralization. To aid in this, we recommend three additional 500 foot dipole spreads to increase resolution and more accurately locate the best drill sites. These spreads should be oriented east-west, with one spread centered on the same center as Line 1 of this survey and the other two located 500 feet on each side of Line 1. The frequency effect anomaly on the east end of Line 1 should be further defined by centering an additional spread of 1500 foot dipoles on Line 1 at 90 E. The results of this additional I. P. work might better define economic potential drill targets and/or indicate the need for a continuing geophysical program.

INTERPRETATION

Line 1, Spread 1, a = 1500 Feet

Two resistivity features were detected on this line. A simple, two media, interface near 15.0 W separating 20 to 30 ohm feet/2 pi material from material of 100 to 150 ohm feet/2 pi, and one edge of a pattern probably related to a resistive tabular body at depth. This incomplete pattern seems to be centered somewhere between 45.0 and 75.0 E.

The frequency effects on the west half of this spread are somewhat affected by electromagnetic coupling, which cannot be completely corrected by assuming a simple homogeneous half space because of the electrical interface at 15.0 W. The east half is virtually unaffected. We have plotted the coupling corrected values, for both Line 1 and Line 2, because there is some improvement shown in the interpretability of the resulting data pattern.

Very weak, but definite, frequency effects are noted between 7.5 E and 7.5 W which seem to be caused by a small polarizing body at or relatively near the surface and which may extend to depth. A weak anomaly begins at about 67.5 E and continues east beyond the limit of this survey. We believe that these anomaly patterns are reinforcing each other and therefore may have resulted in the easterly anomaly being graded somewhat too strongly.

A strong self potential gradient, decreasing to the east, is noted for which we have no geological explanation. We do not expect this S.P. effect to be caused by oxidizing sulphides.

Line 2, Spread 1, a = 1500 Feet

This line was centered at 0.0 on Line 1 and oriented N 5 W north of LIne 1 in order to avoid the hills, and S 5 W south of Line 1, to avoid heavy brush.

The resistivity pattern to the north is incomplete, but suggests the existance of an electrical interface near 45 NW. The southwest half of this line indicates low resistivity material beginning at about 30.5 SW. However, the data pattern is such as to make placement of the interface quite uncertain. We would expect the true resistivity of the material traversed by this line to range from about 200 ohm feet/2 pi on the northwest through 50 to 60 ohm feet/2 pi near the center and as low as 25 ohm feet/2 pi on the southwest.

A very weak but definite frequency effect anomaly is noted between 7.5 SW and 7.5 NW. The I. P. anomaly is that which might be expected from a small near surface polarizing body, possibly located to one side of the line and having little depth extent, or being relatively small in horizontal projection cross-section.

Weak self potential effects are noted which seem to have no definite relation to the I. P. survey.

Respectfully submitted,

HEINRICHS GEOEXPLORATION COMPANY

Paul A Head

Paul A. Head
Geophysicist

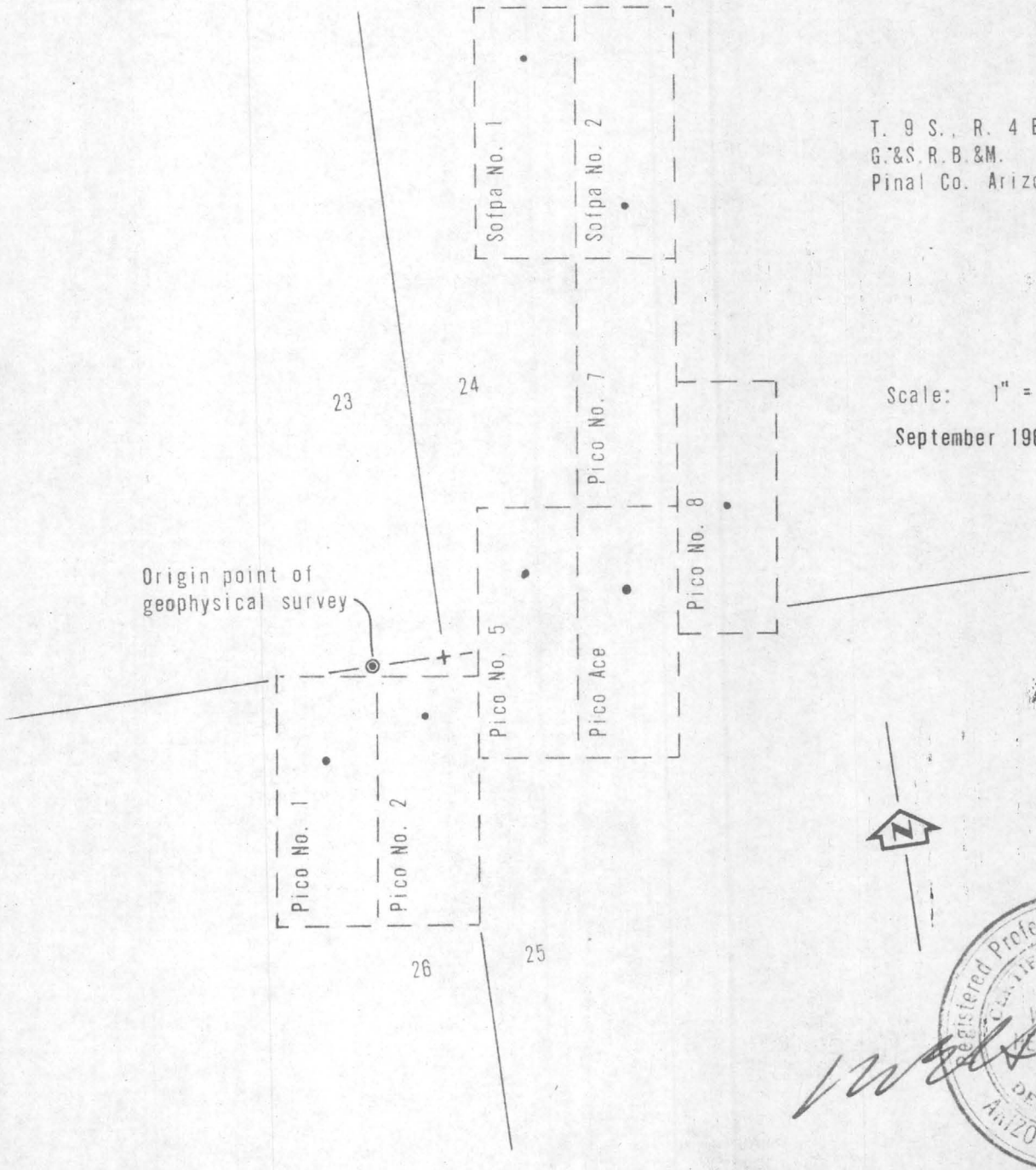
APPROVED:

Registered Professional Engineer (Mining) CERTIFICATE EXPIRES WALTER E. HEINRICHS, JR. DEC. 31, 1969 ARIZONA, U. S. A.

Walter E. Heinrichs, Jr.
President

ORIZABA CLAIM GROUP

Base Map from Ira W. Wagnon



T. 9 S., R. 4 E.
G.&S.R.B.&M.
Pinal Co. Arizona

Scale: 1" = 1 000'

September 1969

HEINRICHS
GEOEXPLORATION COMPANY
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Phone: 602/623-0578 Cable: GEOEX, Tucson
geophysical engineers
vancouver
sydney

445-69

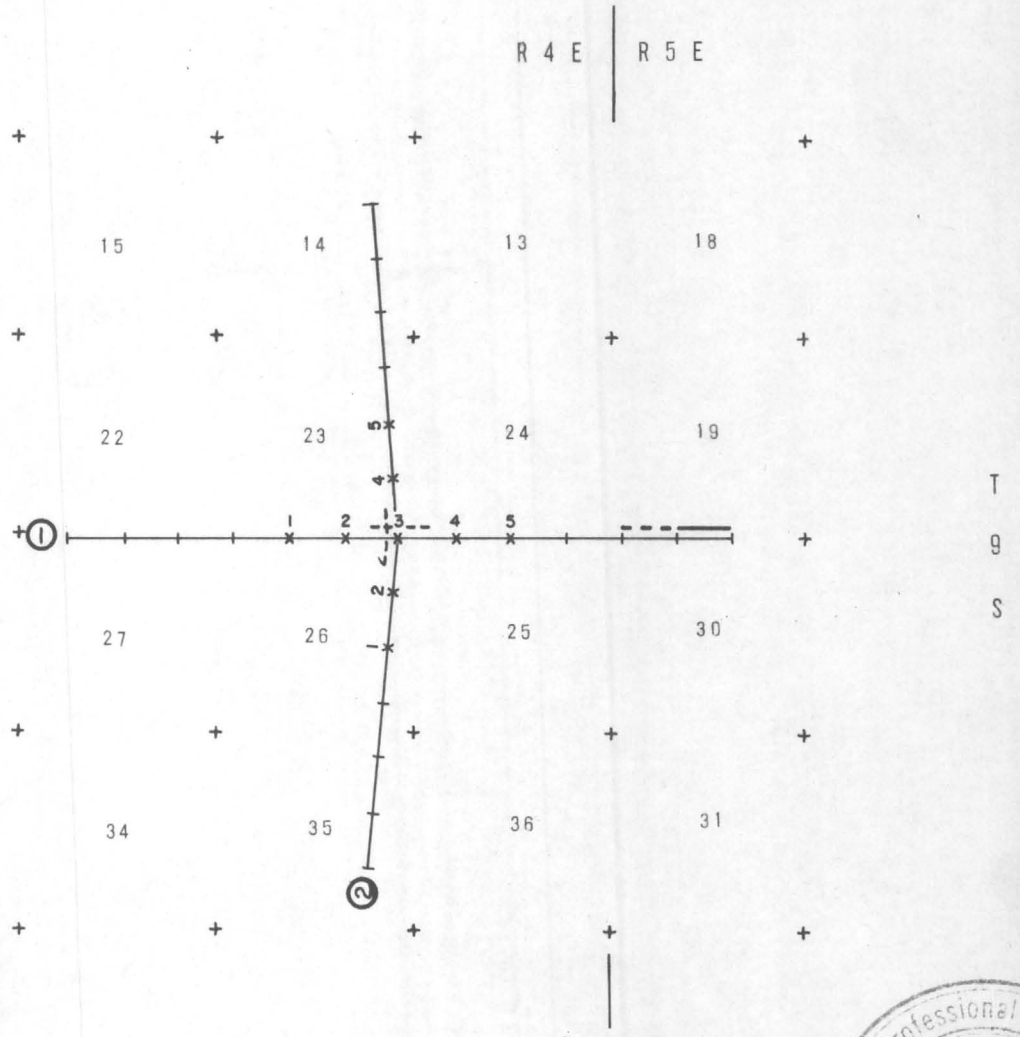
INDUCED POLARIZATION LOCATION AND INTERPRETATION PLAN

of

ORIZABA CLAIM GROUP
PINAL CO., ARIZONA

for

INSPIRATION CONSOLIDATED COPPER CO.



September 1969 Scale 1:62 500

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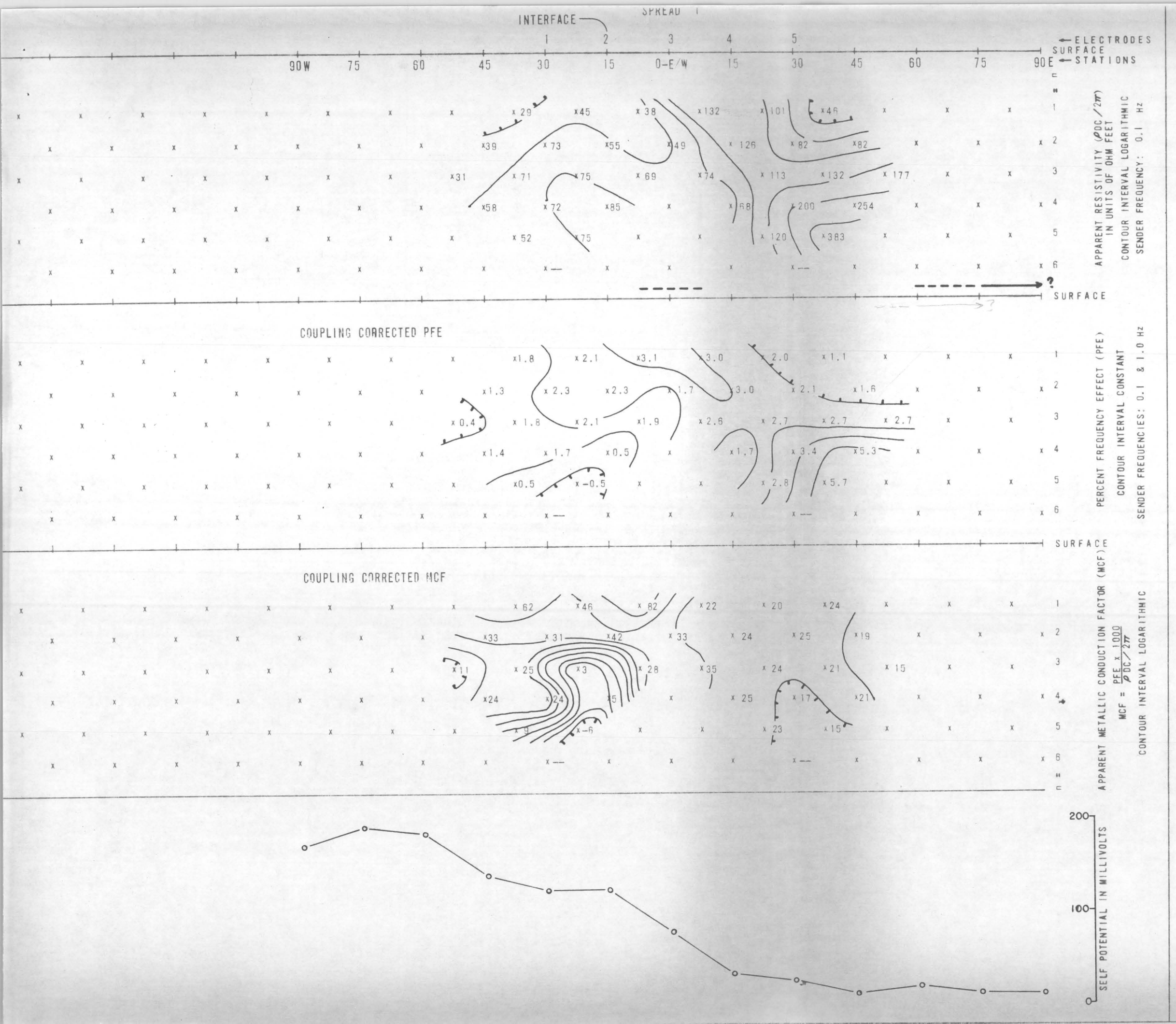
geophysical engineers
vancouver
sydney

445-69



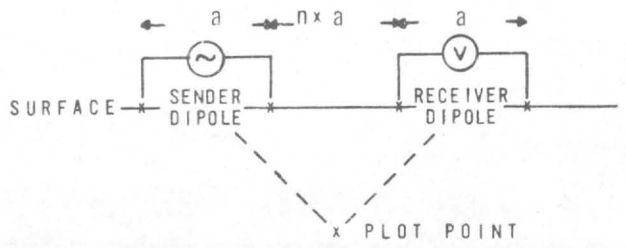
LINE NO.
1
SPREAD(S)
1

INDUCED POLARIZATION TRAVERSE
SECTIONAL DATA SHEET
for

INSPIRATION CONSOLIDATED COPPER CO.

RELATIVE ANOMALY STRENGTH

DIPOLE DIPOLE ELECTRODE ARRAY



AREA

ORIZABA CLAIMS AREA
LOOKING

NORTH
DATE
AUGUST 1969

SCALE
a = 1500'

HEINRICHS
GEOEXPLORATION COMPANY
GEOPHYSICAL ENGINEERS

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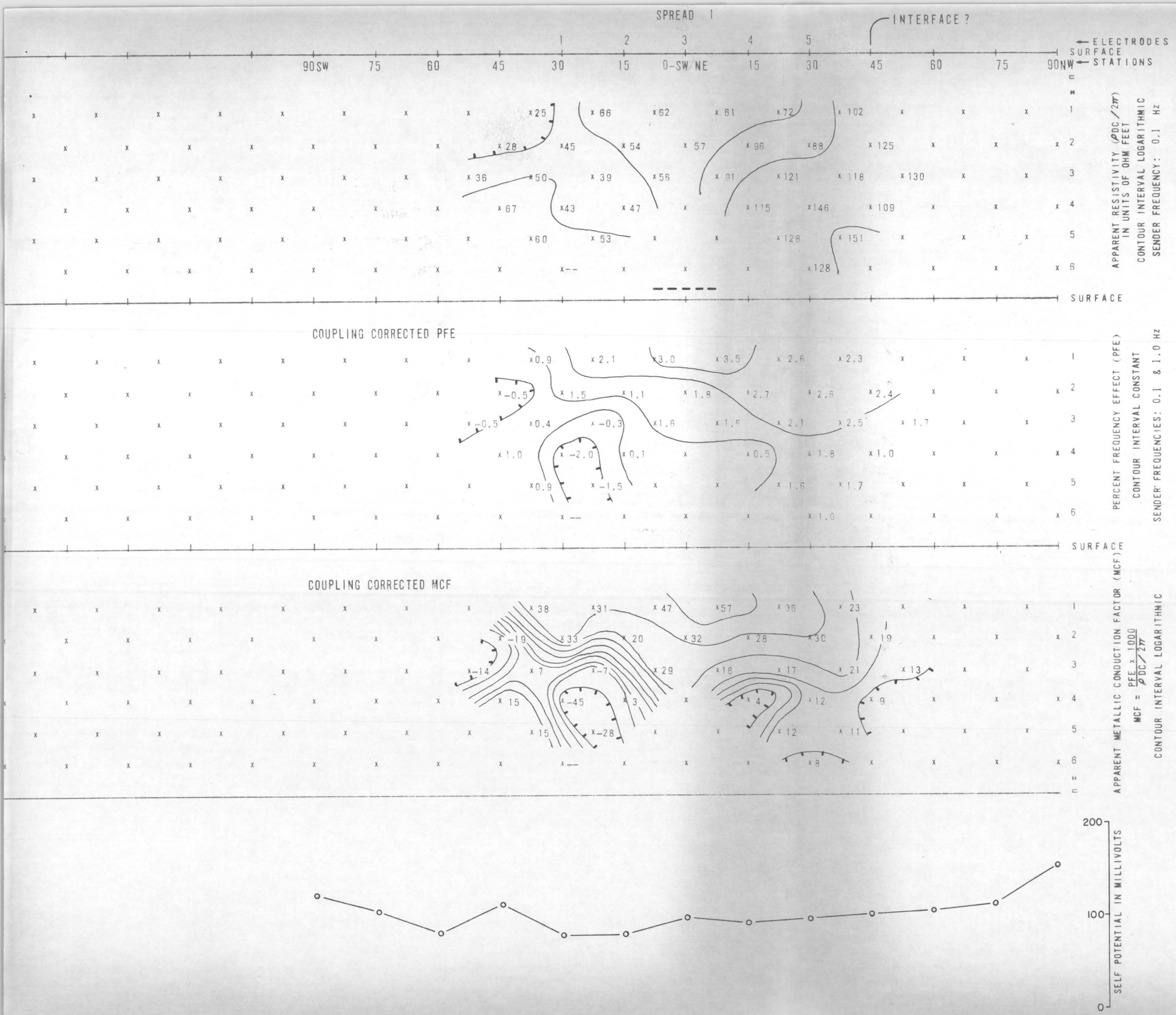
Cable: GEOEX, Tucson

File

LINE NO. 2

SPREAD(S) 1

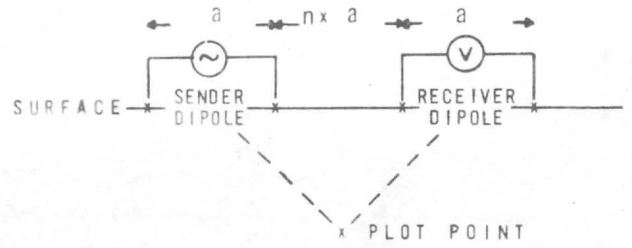
INDUCED POLARIZATION TRAVERSE SECTIONAL DATA SHEET for INSPIRATION CONSOLIDATED COPPER CO.



RELATIVE ANOMALY STRENGTH

VERY WEAK — WEAK — MODERATE — STRONG

DIPOLE DIPOLE ELECTRODE ARRAY



AREA

ORIZABA CLAIMS AREA

LOOKING

WESTERLY

DATE

SEPT 1969

SCALE

a = 1500'

HEINRICHS
GEOEXPLORATION COMPANY
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File

REPORT OF GEOPHYSICAL SURVEY

This geophysical survey was performed on the group of eight contiguous claims described below as a part of the requirement for annual labor for the period from September 1, 1968 to September 1, 1969 and was completed in August 1969.

These claims consist of a contiguous group situated in Sections 23, 24, 25 and 26, all in T. 9 S., R. 4 E., G. & S. R. B. & M, in the Silver Reef Mining District, Pinal County, Arizona. These claims are under option or owned by Inspiration Consolidated Copper Company, a Maine Corporation, duly qualified to do business in the State of Arizona. This geophysical survey was performed by the undersigned at the request of and at the expense of said owners or optionee.

These claims are more particularly described on the claim notices which are recorded in the records of Pinal County, Arizona as follows:

Name of Claim	Docket No.	Page No.
Pico Ace	125	152
Pico No. 1	125	153
Pico No. 2	125	154
Pico No. 5	125	157
Pico No. 7	125	159
Pico No. 8	125	160
Sofpa No. 1	126	587
Sofpa No. 2	126	588

The work was done on these claims and was done for the benefit of the group as a whole. The geophysical work consists of one profile of induced polarization work including resistivity and self potential data. The location of the work performed in relation to points of discovery and boundaries of the claims, and the nature and extent thereof, is shown on a plot identified as: "Induced Polarization Location and Interpretation Plan" and on a second plot identified as "Orizaba Claim Group". These plots are attached hereto and by this reference are made a part thereof.

The cost of the geophysical work on this group of eight contiguous claims was in excess of eight hundred dollars ($800.00).

The basic findings of the geophysical survey are as follows:

Induced polarization Line 1 was surveyed east-west using 1500 foot dipoles, resulting in a maximum exploration depth of 2,000 feet and effectively covered a strip of ground 1,000 feet on each side of the line. The resulting data is of reconnaissance nature and revealed the presence of a zone of very weak polarization effects in the vicinity of the southwest corner of Section 24. In addition, a dis-

tinct resistivity change is noted approximately 2,000 feet west of the section corner. No S.P. variations of significance were observed.

All of this work was done under the supervision of Mr. Walter E. Heinrichs, Jr., Arizona Registered Professional Engineer No. 2449. The persons who worked on this geophysical survey were: Mr. Ronald Palmer, field crew chief; Mr. David Chaffin, sender operator and Mr. Michael Dunn, field technician. Data reduction and interpretation was done by Mr. Paul A. Head, a graduate geophysical engineer.

Paul A Head
Paul A. Head, Geophysicist

STATE OF ARIZONA)
) ss.
COUNTY OF PINAL)

WALTER E. HEINRICHS, JR., being first duly sworn deposes and says:

That he is the President and General Manager of Heinrichs GEOEXploration Company of Tucson, Arizona; that he has read the foregoing report of Geophysical Survey, knows the contents thereof, and that the same is true.

Walter E. Heinrichs, Jr.

Subscribed and sworn to before me this 12th day of October 1969

M. Jean Heinrichs
Notary Public

My commission expires: July 21, 1973

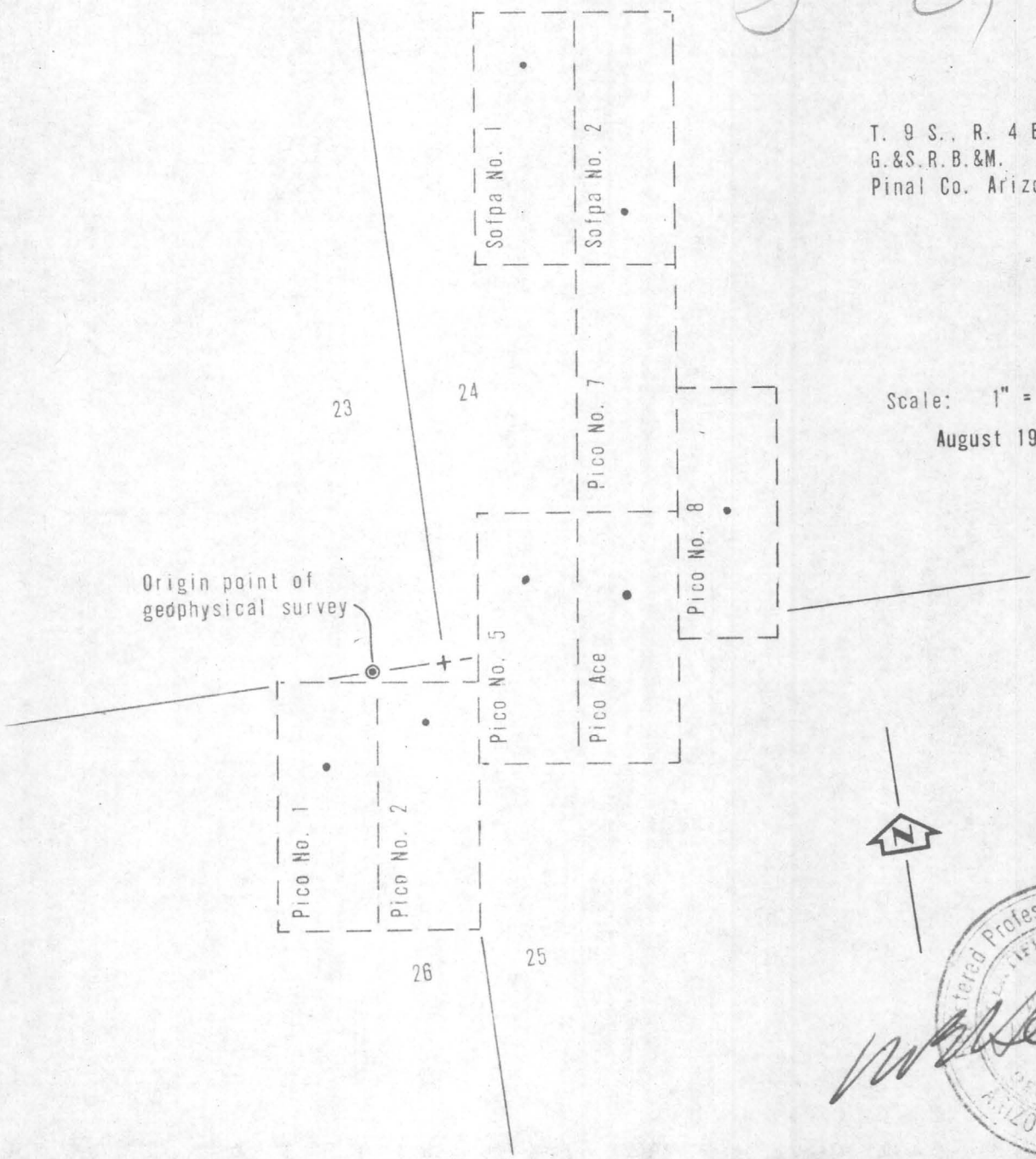
ORIZABA CLAIM GROUP

Base Map from Ira W. Wagnon

File Cy

T. 9 S., R. 4 E.
G.&S.R.B.&M.
Pinal Co. Arizona

Scale: 1" = 1 000'
August 1969



Registered Professional Engineer
CERTIFICATE EXPIRES
DEC. 31, 1969
ARIZONA, U.S.A.

HEINRICHS
GEOEXPLORATION COMPANY
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Phone: 602/623-0578 Cable: GEOEX, Tucson
vancouver
sydney
geophysical engineers

445-69

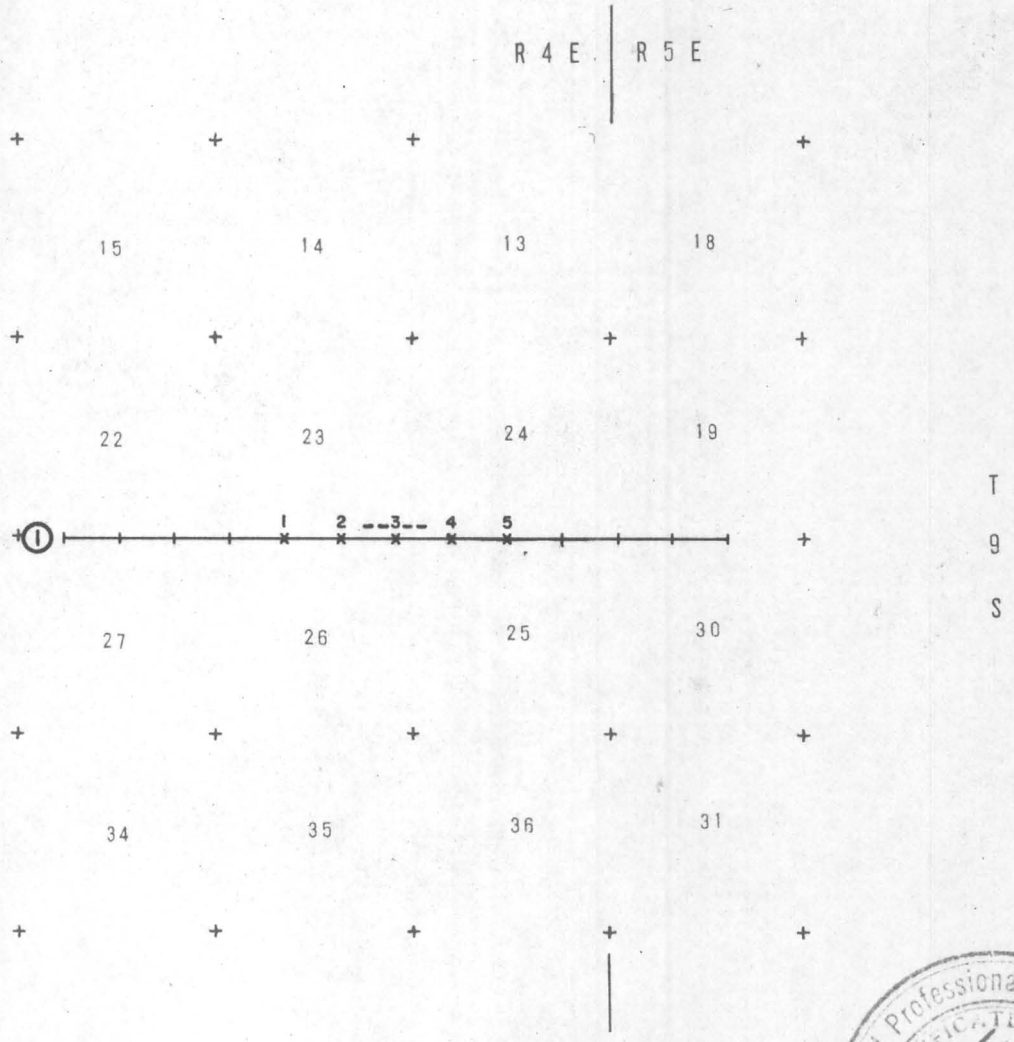
INDUCED POLARIZATION LOCATION
AND INTERPRETATION PLAN

of

ORIZABA CLAIM GROUP
PINAL CO., ARIZONA

for

INSPIRATION CONSOLIDATED COPPER CO.



August 1969 N Scale 1:62 500

HEINRICHS
GEOEXPLORATION COMPANY
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geophysical engineers
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445-69

REPORT OF GEOPHYSICAL SURVEY

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The work was done on these claims and was done for the benefit of the group as a whole. The geophysical work consists of one profile of induced polarization work including resistivity and self potential data. The location of the work performed in relation to points of discovery and boundaries of the claims, and the nature and extent thereof, is shown on a plot identified as: "Induced Polarization Location and Interpretation Plan" and on a second plot identified as "Orizaba Claim Group". These plots are attached hereto and by this reference are made a part thereof.

The cost of the geophysical work on this group of eight contiguous claims was in excess of eight hundred dollars ($800).

The basic findings of the geophysical survey are as follows:

Induced polarization Line 2 was surveyed in two segments, one oriented N 5° W and the other S 5° W, from a point 450 feet west of the southwest corner of Section 24, using 1,500 foot dipole lengths. This survey examined a strip of ground

about 1,000 feet wide on each side of the line and to a maximum depth of about 2,000 feet. The resulting reconnaissance data detected a very weak induced polarization anomaly near the southwest corner of Section 24. No significant S. P. or resistivity gradients were encountered.

All of this work was done under the supervision of Mr. Walter E. Heinrichs, Jr., Arizona Registered Professional Engineer No. 2449. The persons who worked on this geophysical survey were: Mr. Ronald Palmer, field crew chief; Mr. David Chaffin, sender operator and Mr. Michael Dunn, field technician. Data reduction and interpretation was done by Mr. Paul A. Head, a graduate geophysical engineer.

Paul A Head
Paul A. Head, Geophysicist

STATE OF ARIZONA)
) ss.
COUNTY OF PINAL)

WALTER E. HEINRICHS, JR., being first duly sworn deposes and says:

That he is the President and General Manager of Heinrichs GEOEXploration Company of Tucson, Arizona; that he has read the foregoing report of Geophysical Survey, knows the contents thereof, and that the same is true.

Walter E. Heinrichs, Jr.

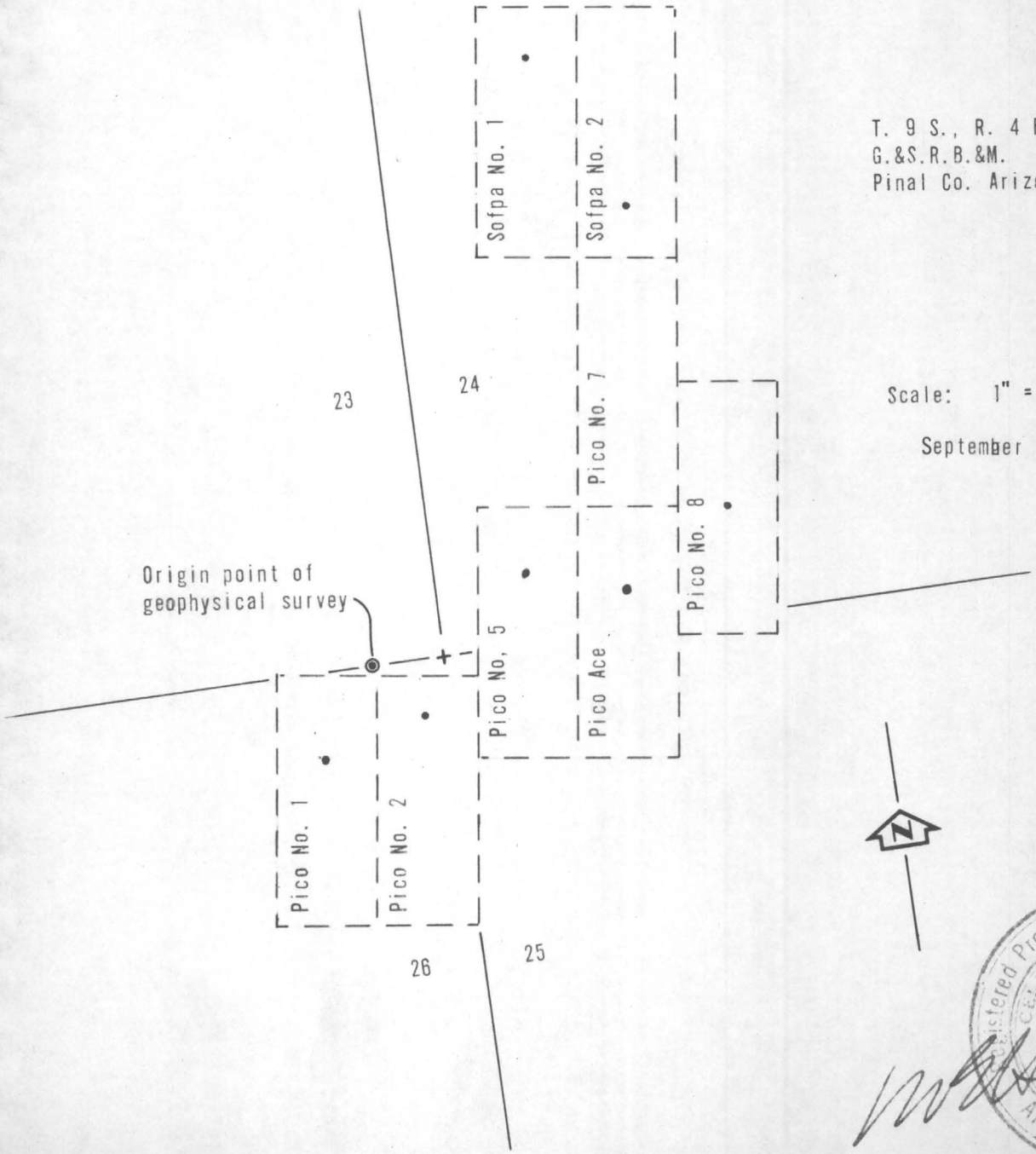
Subscribed and sworn to before me this 1st day of October 1969.

M. Jean Heinrichs
Notary Public

My commission expires: July 20, 1973

ORIZABA CLAIM GROUP

Base Map from Ira W. Wagnon



T. 9 S., R. 4 E.
G.&S.R.B.&M.
Pinal Co. Arizona

Scale: 1" = 1 000'

September 1969

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File

INDUCED POLARIZATION LOCATION
AND INTERPRETATION PLAN

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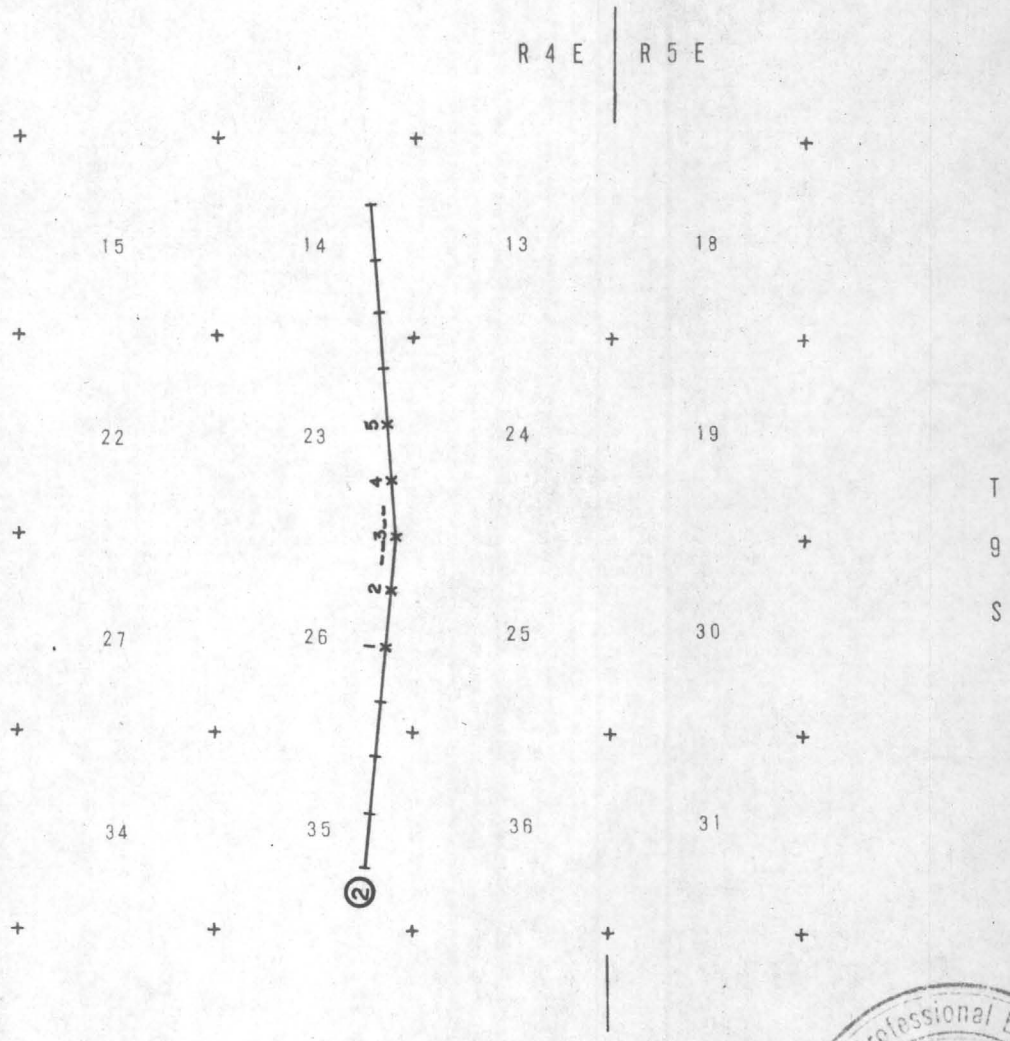
ORIZABA CLAIM GROUP
PINAL CO., ARIZONA

for

INSPIRATION CONSOLIDATED COPPER CO.



September 1969 Scale 1:62 500

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vancouver
sydney

445-69

JOB 445 LINE 2 SPREAD 1

LOOKING N 85 W [redacted] DATE Sept 30 A= 1500 feet

CENTER 0.0 LABEL SW/NE FREQ. 1.0 - 0.1

COUPLING yes

10-1-69

MD

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Orizaba - 445
LINE 2 HALF S5W SP. 1 DATE 9-30

PAGE 1

SEND	4-5	3-4	4-5	2-3	3-4	4-5	1-2	2-3	3-4	4-5
RECEIVE	0-15S	15-30S	→	30-45S	→	→	45-60S	→	→	→
RANGE	1	1	1	1	1	.1	1	.1	.1	.1
DC 1	+3.1	+2.9	+1.6	+1.4	+0.7	+1.7	+0.5	+1.2	+0.4	+1.4
DC 2										
DC 3										
DC 4										
DC 5										
DC 6										
DC 7										
DC 8										
DC AVG.										
AC 1	53.1	40.9	12.75	43.7	15.0	4.96	16.5	7.41	3.51	1.57
AC 2	-0.1	+0.5	0	+0.2	+0.1	0	+0.1	0	+0.1	0
AC AVG.										
S.P.	-17.7	-0.5		+33.3			-29.7			
AC NOISE	.05	.07		.06			.06			
POT RES.										

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Orizaba - 445
LINE 2 HALF S SP. 1 DATE 9-30

SEND	1-2	2-3	3-4	4-5	1-2	2-3	3-4	4-5	cal	
RECEIVE	60-75S →				75-90S →				1-2	
RANGE	.1	.1	.1	.1	.1	.1	.1		10	
DC 1	-0.3	+0.7	-0.5	+0.7	+0.3	+1.6	+2.6		-0.8	
DC 2										
DC 3										
DC 4								To Much Noise		
DC 5										
DC 6										
DC 7										
DC 8										
DC AVG.										
AC 1	4.75	3.32	1.94	1.01	2.44	2.21	1.50		203.	
AC 2	+0.1	+0.2	-0.2	+0.1	0	+0.2	0		+0.1	
AC AVG.										
S.P.	+23.2				+15.7					
AC NOISE	.07				.07					
POT RES.										

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT Inspir. Orizaba 445 PAGE 1

LINE 2 HALF 5 SP. 1 DATE 9/30

SEND	4-5	3-4	4-5	2-3	3-4	4-5	1-2	2-3	3-4	4-5
RECEIVE	0-15s	15s-30s	→	30s-45s	→	→	45s-60s	→	→	→
RANGE	30x133.3	30x100	30x133.3	30x100	30x166.6	30x133.3	30x100	30x100	30x133.3	10x300
VOLTAGE	840	445	840	715	750	840	675	710	595	620
CURRENT	4.0	3.0	4.0	3.0	5.0	4.0	3.0	3.0	4.0	3.0
SEND	1-2	2-3	3-4	4-5	1-2	2-3	3-4	4-5		cal
RECEIVE	60s-75s	→	→	→	75s-90s	→	→	→		1-2
RANGE	10x300	10x300	10x400	10x300	10x300	10x300	10x400	10x300		10x200
VOLTAGE	680	720	600	620	675	710	600	620		510
CURRENT	3.0	3.0	4.0	3.0	3.0	3.0	4.0	3.0		2.0

FREQUENCIES 0.1 1.0

SENDER NO. 6644-S

OPERATOR D Chaffin

RECEIVER NO. MK 4C

OPERATOR REP

COMMENTS:

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Orizaba - 445
LINE 2 HALF NSW SP. 1 DATE 9-30

SEND	1-2	2-3	1-2	3-4	2-3	1-2	4-5	3-4	2-3	1-2
RECEIVE	0-15N	15-30N	→	30-45N	→	→	45-60N	→	→	→
RANGE	1	1	.1	1	1	.1	1	1	.1	.1
DC 1	+1.4	+2.1	+0.8	+1.6	+1.8	+1.1	+1.3	+1.7	+1.2	+0.1
DC 2										
DC 3										
DC 4										
DC 5										
DC 6										
DC 7										
DC 8										
DC AVG.										
AC 1	40.8	40.2	9.24	63.2	15.7	604	67.1	19.3	8.00	3.82
AC 2	+0.1	+0.2	+0.1	+0.3	+0.2	+0.4	+0.3	+0.1	0	+0.3
AC AVG.										
S.P.	-3.5	+2.3		+3.9			+4.5			
AC NOISE	.11	.09		.08			.06			
POT RES.										

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Orizaba - 445
LINE 2 HALF N SP. 1 DATE 9-30

SEND	4-5	3-4	2-3	1-2	4-5	3-4	2-3	1-2	cal	
RECEIVE	60-75N →				75-90N →				4-5	
RANGE	1	1	.1	.1	.1	.1	.1	.1	10	
DC 1	+1.5	+1.7	+1.2	+1.3	+0.8	+0.5	+1.3	+1.3	-1.1	
DC 2										
DC 3										
DC 4										
DC 5										
DC 6										
DC 7										
DC 8										
DC AVG.										
AC 1	20.6	10.35	4.81	2.41	8.60	3.61	2.84	1.51	202.5	
AC 2	+0.3	+0.2	+0.3	0	0	0	+0.1	+0.2	+0.2	
AC AVG.										
S.P.	+6.4				+42.0					
AC NOISE	.08				.08					
POT RES.										

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT Orizaba 445

LINE 2 HALF N SP. 1 DATE 9/30

PAGE 2

SEND	1-2	2-3	1-2	3-4	2-3	1-2	4-5	3-4	2-3	1-2
RECEIVE	0-15N	15-30N		30-45	N →		45-60 N →			
RANGE	10x300	10x300	10x300	10x400	10x300	10x300	10x300	10x400	10x300	10x300
VOLTAGE	660	700	660	590	700	660	600	585	695	650
CURRENT	3.0	3.0	3.0	4.0	3.0	3.0	3.0	4.0	3.0	3.0
SEND	4-5	3-4	2-3	1-2	4-5	3-4	2-3	1-2		4-5
RECEIVE	60-75N →				75-90 N →					cal
RANGE	10x300	10x400	10x300	10x300	10x300	10x300	10x300	10x300		10x200
VOLTAGE	600	580	700	650	600	430	700	650		545
CURRENT	3.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0		2.0

FREQUENCIES 0.1 1.0

SENDER NO. 6644-S

OPERATOR DC

RECEIVER NO. MK 4C

OPERATOR REP

COMMENTS:

HEINRICHS GEOEX JOB 445/69 LINE 2 SPREAD 1 LOOKING N85W 9/30/69 A= 1500 FEET 1.0 - 0.1 Hz

4.000	3.000	4.000	3.000	5.000	4.000	3.000	3.000	4.000	3.000	I	3.000	3.000	4.000	3.000	3.000	3.000	4.000	3.000	2.000		
31	29	16	14	7	17	5	12	4	14	DC	-3	7	-5	7	3	16	26			-8	LEFT
31	29	16	14	7	17	5	12	4	14		-3	7	-5	7	3	16	26			-8	SIDE
1	1	2	1	2	3	1	2	3	4	N	2	3	4	5	3	4	5	6			
3.1	2.9	1.6	1.4	.7	1.7	.5	1.2	.4	1.4	PFEA	-.3	.7	-.5	.7	.3	1.6	2.6	0.0		-.8	
53.10	40.90	12.75	43.70	15.00	4.960	16.50	7.410	3.510	1.570	AC1	4.750	3.320	1.940	1.010	2.440	2.210	1.500	0.000	203.0		
-.1	.5	0.0	.2	.1	0.0	.1	0.0	.1	0.0	AC2	.1	.2	-.2	.1	0.0	.2	0.0	0.0	.1		
53.07	41.00	12.75	43.74	15.01	4.960	16.51	7.410	3.512	1.570	ACA	4.752	3.323	1.938	1.011	2.440	2.212	1.500	0.000	203.1		
61.15	62.68	57.88	66.00	54.00	56.35	24.70	44.68	39.37	47.42	RHO	28.22	49.80	43.13	53.02	36.46	66.89	60.17	*000.0		.985	DC CAL
4.0	3.5	2.4	2.1	1.5	2.5	1.3	2.0	1.2	2.2	PFE	.5	1.4	.4	1.5	1.1	2.3	3.4	*000.0		.850	AC CAL
65	56	42	33	28	45	53	46	30	47	MCF	18	29	10	28	32	35	57	*00000			
.1	.1	.4	.1	.4	.9	.4	.6	1.5	2.1	CPFE	1.0	1.1	2.4	3.0	1.6	1.4	2.5	0.0			
3.9	3.4	2.1	2.1	1.1	1.6	.9	1.5	-.3	.1	CCPFE	-.5	.4	-2.0	-1.5	-.5	1.0	.9	*000.0			
64	54	36	31	20	29	38	33	-7	3	CCMCF	-19	7	-45	-28	-14	15	15	*00000			

3.000	3.000	3.000	4.000	3.000	3.000	3.000	4.000	3.000	3.000	I	3.000	4.000	3.000	3.000	3.000	3.000	3.000	3.000	2.000		
14	21	8	16	18	11	13	17	12	1	DC	15	17	12	13	8	5	13	13		-11	RIGHT
14	21	8	16	18	11	13	17	12	1		15	17	12	13	8	5	13	13		-11	SIDE
1	1	2	1	2	3	1	2	3	4	N	2	3	4	5	3	4	5	6			
1.4	2.1	.8	1.6	1.8	1.1	1.3	1.7	1.2	.1	PFEA	1.5	1.7	1.2	1.3	.8	.5	1.3	1.3		-1.1	
40.80	40.20	9.240	63.20	15.70	6.040	67.10	19.30	8.000	3.820	AC1	20.60	10.35	4.810	2.410	8.600	3.610	2.840	1.510	202.5		
.1	.2	.1	.3	.2	.4	.3	.1	0.0	.3	AC2	.3	.2	.3	0.0	0.0	0.0	.1	.2	.2		
40.82	40.24	9.245	63.29	15.72	6.052	67.20	19.31	8.000	3.826	ACA	20.63	10.36	4.817	2.410	8.600	3.610	2.841	1.512	202.7		
61.95	61.46	55.80	72.12	95.74	91.45	101.8	88.18	121.2	114.5	RHO	125.2	118.2	145.8	128.0	129.8	108.7	150.8	128.3		.987	DC CAL
2.5	3.2	1.9	2.6	2.9	2.1	2.3	2.8	2.4	1.1	PFE	2.5	2.8	2.2	2.5	2.0	1.7	2.4	2.4		1.200	AC CAL
41	52	35	37	30	23	23	32	20	10	MCF	20	24	15	20	15	16	16	19			
.1	.1	.4	.1	.2	.5	.0	.2	.3	.7	CPFE	.1	.3	.5	.9	.3	.7	.8	1.4			
2.5	3.1	1.5	2.6	2.7	1.6	2.3	2.6	2.1	.5	CCPFE	2.4	2.5	1.8	1.6	1.7	1.0	1.7	1.0			
40	50	28	36	28	18	23	30	17	4	CCMCF	19	21	12	12	13	9	11	8			

BUSINESS FORMS PRINTING COMPANY ENGINEERED FOR HIGH SPEED PRINTERS

Extra Copy

HEINRICHS GEOEX JOB 445/69 LINE 2 SPREAD 1 LOOKING N85W 9/30/69 A= 1500 FEET

4.000	3.000	4.000	3.000	5.000	4.000	3.000	3.000	4.000	3.000	I	3.000	3.000	4.000	3.000	3.000	3.000	4.000	3.000	2.000	
31	29	16	14	7	17	5	12	4	14	DC	-3	7	-5	7	3	16	26		-8	LEFT
31	29	16	14	7	17	5	12	4	14		-3	7	-5	7	3	16	26		-8	SIDE
1	1	2	1	2	3	1	2	3	4	N	2	3	4	5	3	4	5	6		
3.1	2.9	1.6	1.4	.7	1.7	.5	1.2	.4	1.4	PFEA	-.3	.7	-.5	.7	.3	1.6	2.6	0.0	-.8	
53.10	40.90	12.75	43.70	15.00	4.960	16.50	7.410	3.510	1.570	AC1	4.750	3.320	1.940	1.010	2.440	2.210	1.500	0.000	203.0	
-.1	.5	0.0	.2	.1	0.0	.1	0.0	.1	0.0	AC2	.1	.2	-.2	.1	0.0	.2	0.0	0.0	.1	
53.07	41.00	12.75	43.74	15.01	4.960	16.51	7.410	3.512	1.570	ACA	4.752	3.323	1.938	1.011	2.440	2.212	1.500	0.000	203.1	
61.15	62.68	57.88	66.00	54.00	56.35	24.70	44.68	39.37	47.42	RHO	28.22	49.80	43.13	53.02	36.46	66.89	60.17*000.0		.985	DC CAL
4.0	3.5	2.4	2.1	1.5	2.5	1.3	2.0	1.2	2.2	PFE	.5	1.4	.4	1.5	1.1	2.3	3.4*000.0		.850	AC CAL
65	56	42	33	28	45	53	46	30	47	MCF	18	29	10	28	32	35	57*00000			
.1	.1	.4	.1	.4	.9	.4	.6	1.5	2.1	CPFE	1.0	1.1	2.4	3.0	1.6	1.4	2.5	0.0		
3.9	3.4	2.1	2.1	1.1	1.6	.9	1.5	-.3	.1	CCPFE	-.5	.4	-2.0	-1.5	-.5	1.0	.9*000.0			
64	54	36	31	20	29	38	33	-7	3	CCMCF	-19	7	-45	-28	-14	15	15*00000			

3.000	3.000	3.000	4.000	3.000	3.000	3.000	4.000	3.000	3.000	I	3.000	4.000	3.000	3.000	3.000	3.000	3.000	3.000	2.000	
14	21	8	16	18	11	13	17	12	1	DC	15	17	12	13	8	5	13	13	-11	RIGHT
14	21	8	16	18	11	13	17	12	1		15	17	12	13	8	5	13	13	-11	SIDE
1	1	2	1	2	3	1	2	3	4	N	2	3	4	5	3	4	5	6		
1.4	2.1	.8	1.6	1.8	1.1	1.3	1.7	1.2	.1	PFEA	1.5	1.7	1.2	1.3	.8	.5	1.3	1.3	-1.1	
40.80	40.20	9.240	63.20	15.70	6.040	67.10	19.30	8.000	3.820	AC1	20.60	10.35	4.810	2.410	8.600	3.610	2.840	1.510	202.5	
.1	.2	.1	.3	.2	.4	.3	.1	0.0	.3	AC2	.3	.2	.3	0.0	0.0	0.0	.1	.2	.2	
40.82	40.24	9.245	63.29	15.72	6.052	67.20	19.31	8.000	3.826	ACA	20.63	10.36	4.817	2.410	8.600	3.610	2.841	1.512	202.7	
61.95	61.46	55.80	72.12	95.74	91.45	101.8	88.18	121.2	114.5	RHO	125.2	118.2	145.8	128.0	129.8	108.7	150.8	128.3	.987	DC CAL
2.5	3.2	1.9	2.6	2.9	2.1	2.3	2.8	2.4	1.1	PFE	2.5	2.8	2.2	2.5	2.0	1.7	2.4	2.4	1.200	AC CAL
41	52	35	37	30	23	23	32	20	10	MCF	20	24	15	20	15	16	16	19		
.1	.1	.4	.1	.2	.5	.0	.2	.3	.7	CPFE	.1	.3	.5	.9	.3	.7	.8	1.4		
2.5	3.1	1.5	2.6	2.7	1.6	2.3	2.6	2.1	.5	CCPFE	2.4	2.5	1.8	1.6	1.7	1.0	1.7	1.0		
40	50	28	36	28	18	23	30	17	4	CCMCF	19	21	12	12	13	9	11	8		

BUSINESS FORMS PRINTING COMPANY ENGINEERED FOR HIGH SPEED PRINTERS

HEINRICHS GEOEX JOB 445/69 LINE 2 SPREAD 1 LOOKING N85W 9/30/69 A= 1500 FEET

```
                                        1         2         3         4         5
  ↑---------↑---------↑---------↑---------X---------X---------X---------X---------X---------↑---------↑---------↑---------↑ SURFACE
  90SW      75        60        45        30        15        0SW/NE    15        30        45        60        75        90NE

N                                                                                                                                RHO/2PI
1       X         X         X         X25       X66       X62→      X61→      X72       X102      X         X         X         X
                                                            63        61
2  X         X         X         X28       X45       X54       X56→      X96       X88       X125      X         X         X
                                                                  58
3       X         X         X36       X50       X39       X56       X91       X121      X118      X130      X         X         X
4  X         X         X         X67       X43       X47       X         X115      X146      X109      X         X         X
5       X         X         X         X60       X53       X         X         X128      X151      X         X         X         X
6  X         X         X         X         X--       X         X         X         X128      X         X         X         X

                                        1         2         3         4         5
  ↑---------↑---------↑---------↑---------X---------X---------X---------X---------X---------↑---------↑---------↑---------↑ SURFACE
  90SW      75        60        45        30        15        0SW/NE    15        30        45        60        75        90NE

N                                                                                                                                PFE
1       X         X         X         X1.3      X2.1      X2.5→     X3.2→     X2.6      X2.3      X         X         X         X
                                                            3.5       4.0
2  X         X         X         X.5       X2.0      X1.5      X1.9→     X2.9      X2.8      X2.5      X         X         X
                                                                  2.4
3       X         X         X1.1      X1.4      X1.2      X2.5      X2.1      X2.4      X2.8      X2.0      X         X         X
4  X         X         X         X2.3      X.4       X2.2      X         X1.1      X2.2      X1.7      X         X         X
5       X         X         X         X3.4      X1.5      X         X         X2.5      X2.4      X         X         X         X
6  X         X         X         X         X--       X         X         X         X2.4      X         X         X         X
```

BUSINESS FORMS PRINTING COMPANY ENGINEERED FOR HIGH SPEED PRINTERS

	90SW	75	60	45	30	15	0SW/NE	15	30	45	60	75	90NE	SURFACE
					1	2	3	4	5					

MCF

N														
1	X	X	X	X53	X33	X41↱ 56	X52↱ 65	X37	X23	X	X	X	X	
2	X	X	X	X18	X46	X28	X35↱ 42	X30	X32	X20	X	X	X	
3	X	X	X32	X29	X30	X45	X23	X20	X24	X15	X	X	X	
4	X	X	X	X35	X10	X47	X	X10	X15	X16	X	X	X	
5	X	X	X	X57	X28	X	X	X20	X16	X	X	X	X	
6	X	X	X	X	X--	X	X	X	X19	X	X	X	X	

	90SW	75	60	45	30	15	0SW/NE	15	30	45	60	75	90NE	SURFACE
					1	2	3	4	5					

CCPFE

N														
1	X	X	X	X.9	X2.1	X2.5↱ 3.4	X3.1↱ 3.9	X2.6	X2.3	X	X	X	X	
2	X	X	X	X-.5	X1.5	X1.1	X1.5↱ 2.1	X2.7	X2.6	X2.4	X	X	X	
3	X	X	X-.5	X.4	X-.3	X1.6	X1.6	X2.1	X2.5	X1.7	X	X	X	
4	X	X	X	X1.0	X-2.0	X.1	X	X.5	X1.8	X1.0	X	X	X	
5	X	X	X	X.9	X-1.5	X	X	X1.6	X1.7	X	X	X	X	
6	X	X	X	X	X--	X	X	X	X1.0	X	X	X	X	

BUSINESS FORMS PRINTING COMPANY ENGINEERED FOR HIGH SPEED PRINTERS

	90SW	75	60	45	30	15	0SW/NE	15	30	45	60	75	90NE	SURFACE
					1	2	3	4	5					
N														CCMCF
1	X	X	X	X38	X31	X40↱ 54	X50↱ 64	X36	X23	X	X	X	X	
2	X	X	X	X-19	X33	X20	X28↱ 36	X28	X30	X19	X	X	X	
3	X	X	X-14	X7	X-7	X29	X18	X17	X21	X13	X	X	X	
4	X	X	X	X15	X-45	X3	X	X4	X12	X9	X	X	X	
5	X	X	X	X15	X-28	X	X	X12	X11	X	X	X	X	
6	X	X	X	X	X--	X	X	X	X8	X	X	X	X	

BUSINESS FORMS PRINTING COMPANY BLUE SPACE ENGINEERED FOR HIGH SPEED PRINTERS

HEINRICHS GEOEX JOB 445/69 LINE 2 SPREAD 1 LOOKING N85W 9/30/69 A= 1500 FEET 1.0 0.1 Hz

	90SW	75	60	45	30	15	0SW/NE	15	30	45	60	75	90NE	SURFACE
					1	2	3	4	5					

RHO/2PI

N														
1	X	X	X	X25	X66	X62 63	X61 61	X72	X102	X	X	X	X	
2	X	X	X	X28	X45	X54	X56 58	X96	X88	X125	X	X	X	
3	X	X	X36	X50	X39	X56	X91	X121	X118	X130	X	X	X	
4	X	X	X	X67	X43	X47	X	X115	X146	X109	X	X	X	
5	X	X	X	X60	X53	X	X	X128	X151	X	X	X	X	
6	X	X	X	X	X--	X	X	X	X128	X	X	X	X	

	90SW	75	60	45	30	15	0SW/NE	15	30	45	60	75	90NE	SURFACE
					1	2	3	4	5					

PFE

N														
1	X	X	X	X1.3	X2.1	X2.5 3.5	X3.2 4.0	X2.6	X2.3	X	X	X	X	
2	X	X	X	X.5	X2.0	X1.5	X1.9 2.4	X2.9	X2.8	X2.5	X	X	X	
3	X	X	X1.1	X1.4	X1.2	X2.5	X2.1	X2.4	X2.8	X2.0	X	X	X	
4	X	X	X	X2.3	X.4	X2.2	X	X1.1	X2.2	X1.7	X	X	X	
5	X	X	X	X3.4	X1.5	X	X	X2.5	X2.4	X	X	X	X	
6	X	X	X	X	X--	X	X	X	X2.4	X	X	X	X	

BUSINESS FORMS PRINTING COMPANY ENGINEERED FOR HIGH SPEED PRINTERS BLUE SPACE AIR

	90SW	75	60	45	30	15	0SW/NE	15	30	45	60	75	90NE	SURFACE
					1	2	3	4	5					

MCF

N														
1	X	X	X	X53	X33	X41 56	X52 65	X37	X23	X	X	X	X	
2	X	X	X	X18	X46	X28	X35 42	X30	X32	X20	X	X	X	
3	X	X	X32	X29	X30	X45	X23	X20	X24	X15	X	X	X	
4	X	X	X	X35	X10	X47	X	X10	X15	X16	X	X	X	
5	X	X	X	X57	X28	X	X	X20	X16	X	X	X	X	
6	X	X	X	X	X--	X	X	X	X19	X	X	X	X	

	90SW	75	60	45	30	15	0SW/NE	15	30	45	60	75	90NE	SURFACE
					1	2	3	4	5					

CCPFE

N														
1	X	X	X	X.9	X2.1	X2.5 3.4 3.0	X3.1 3.9 3.5	X2.6	X2.3	X	X	X	X	
2	X	X	X	X-.5	X1.5	X1.1	X1.5 2.1 1.8	X2.7	X2.6	X2.4	X	X	X	
3	X	X	X-.5	X.4	X-.3	X1.6	X1.6	X2.1	X2.5	X1.7	X	X	X	
4	X	X	X	X1.0	X-2.0	X.1	X	X.5	X1.8	X1.0	X	X	X	
5	X	X	X	X.9	X-1.5	X	X	X1.6	X1.7	X	X	X	X	
6	X	X	X	X	X--	X	X	X	X1.0	X	X	X	X	

BUSINESS FORMS PRINTING COMPANY BLUE SPACE SAVER ENGINEERED FOR HIGH SPEED PRINTERS

	90SW	75	60	45	30	15	0SW/NE	15	30	45	60	75	90NE	SURFACE
					1	2	3	4	5					
N														CCMCF
1	X	X	X	X38	X31	X40 (47) 54		X50 (57) 64	X36	X23	X	X	X	X
2	X	X	X	X-19	X33	X20	X28 (32) 36	X28	X30	X19	X	X	X	
3	X	X	X-14	X7	X-7	X29		X18	X17	X21	X13	X	X	X
4	X	X	X	X15	X-45	X3	X	X4	X12	X9	X	X	X	
5	X	X	X	X15	X-28	X	X	X12	X11	X	X	X	X	X
6	X	X	X	X	X--	X	X	X	X8	X	X	X	X	

BUSINESS FORMS PRINTING COMPANY BLUE SPACE AR ENGINEERED FOR HIGH SPEED PRINTERS

JOB 445 LINE 1 SPREAD 1

LOOKING N DATE Aug 21 A= 1500

CENTER 0 LABEL W / E FREQ. 1.0 - 0.1

COUPLING YES

a=1500'

PAGE 1

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Orizaba - 445
LINE 1 HALF E SP. 1 DATE 8-21-69

SEND	1-2	2-3	1-2	3-4	2-3	1-2	4-5	3-4	2-3	1-2
RECEIVE	0-15E	15-30E	→	30-45E	→	→	45-60E	→	→	→
RANGE	1	10	1	1	1	1	1	1	1	.1
DC 1	+3.3	+2.9	+2.4	+1.3	+2.3	+2.4	+0.6	+1.5	+2.3	+2.1
DC 2										
DC 3										
DC 4										
DC 5										
DC 6										
DC 7										
DC 8										
DC AVG.										
AC 1	74.7	17.5	25.3	56.0	41.6	14.6	30.7	11.4	14.9	67.8
AC 2	0	+0.6	+0.2	+0.1	0	0	+0.3	0	0	-0.2
AC AVG.										
S.P.	+44.6	+2.0		+15.1			+45.8			
AC NOISE	.08	.09		.08			.08			
POT RES.										

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Orizaba - 445
LINE 1 HALF E SP. 1 DATE 8-21-69

SEND	4-5	3-4	2-3	1-2	4-5	3-4	2-3	1-2		cal
RECEIVE	60-75E	→	→	→	75-90E	→	→	→		4-5
RANGE	1	.1	1	.1	1	.1	1	.1		10
DC 1	+1.1	+2.2	+2.9	+3.1	+2.1	+4.8	+5.4	?		-0.4
DC 2										
DC 3										
DC 4										
DC 5										
DC 6										
DC 7										
DC 8										
DC AVG.										
AC 1	13.6	72x3	13.1	67x1	11.7	68x1	14.0	67x2		20x3
AC 2	+0.2	0	0	+0.2	0	+0.2	+0.6	0.0		+0.8
AC AVG.										
S.P.	+6.9				-22.0					
AC NOISE	.11				.20					
POT RES.										

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PAGE 1

PROJECT ORIZABA - 445

LINE 1 HALF E SP. 1 DATE 8-21-69

SEND	1-2	2-3	1-2	3-4	2-3	1-2	4-5	3-4	2-3	1-2
RECEIVE	0-15E	15-30E	→	30-45E	→	→	45-60E	→	→	→
RANGE	20x450	20x300	20x450	10x250	20x300	20x450	10x300	10x250	20x300	20x450
VOLTAGE	345	410	345	1800	410	345	990	1000	410	345
CURRENT	9.0 10x500	6.0 7x750	9.0 10x500	2.5 5x1000	6.0 7x750	9.0 10x500	3.0 5x1000	2.5 5x1000	6.0 7x750	9.0 10x500
SEND	4-5	3-4	2-3	1-2	4-5	3-4	2-3	1-2		cal
RECEIVE	60-75E	→	→	→	75-90E	→	→	→		4-5
RANGE	10x300	10x250	20x300	20x450	10x300	10x250	20x300	20x350		10x200
VOLTAGE	990	1800	410	350	990	1000	410	270		325
CURRENT	3.0 5x1000	2.5 5x1000	6.0 7x750	9.0 10x500	3.0 5x1000	2.5 5x1000	6.0 7x750	7.0 10x500		2.0 5x1000

FREQUENCIES 1.0 0.1

SENDER NO. Mark 4B

OPERATOR Gary Cruze

RECEIVER NO. Mark 4C

OPERATOR Ron Palmer

COMMENTS:

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Orizaba - 445
LINE 1 HALF W SP. 1 DATE 8-21-69

SEND	4-5	3-4	4-5	2-3	3-4	4-5	1-2	2-3	3-4	4-5
RECEIVE	0-15W	15-30W	→	30-45W	→	→	45-60W	→	→	→
RANGE	1	1	.1	1	.1	.1	1	1	.1	.1
DC 1	+1.5	+1.4	-0.1	+1.2	+1.6	+1.8	+1.2	+1.5	+1.1	+0.5
DC 2										
DC 3										
DC 4										
DC 5										
DC 6										
DC 7										
DC 8										
DC AVG.										
AC 1	85.7	21.1	81x2	61.0	77x5	46x1	52.5	20.5	42x3	28x9
AC 2	+0.1	-0.1	-0.5	0	-0.2	+0.4	+0.3	0	0	+0.2
AC AVG.										
S.P.	-49.2	-4.5		-13.5			+10.5			
AC NOISE	.09	.10		.11			.09			
POT RES.										

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Orizaba - 445
LINE 1 HALF W SP. 1 DATE 8-21-69

SEND	1-2	2-3	3-4	4-5	1-2	2-3	3-4	4-5		cal
RECEIVE	60-75W →			→	75-90W →			→		1-2
RANGE	1	.1	.1	.1	.1	.1	.01	[redacted]		10
DC 1	+1.1	+1.5	+2.1	+0.5	+1.5	+1.9	+2.6	?		-0.4
DC 2										
DC 3										
DC 4										
DC 5										
DC 6										
DC 7										
DC 8										
DC AVG.										
AC 1	17.5	79x8	20x0	14x5	56x3	32x3	81x8			206.0
AC 2	+0.4	+0.2	+0.4	+0.2	+0.4	-0.2	+0.2			+1.3
AC AVG.										
S.P.	-7.3				-2.1					
AC NOISE	.10				.12					
POT RES.										

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT Orizaba - 445
LINE 1 HALF W SP. 1 DATE 8-31-69

SEND	4-5	3-4	4-5	2-3	3-4	4-5	1-2	2-3	3-4	4-5
RECEIVE	0-15W	15-30W	→	30-45W	→	→	45-60W	→	→	→
RANGE	10x300	10x250	10x300	20x300	10x250	10x300	20 x400	20x250	10x250	10x360
VOLTAGE	980	990	990	400	985	980	310	330	980	980
CURRENT	3.0 5x1000	2.5 5x1000	3.0 5x1000	6.0 7x750	2.5 5x1000	3.0 5x1000	8.0 10x500	5.0 7x750	2.5 5x1000	3.0 5x1000
SEND	1-2	2-3	3-4	4-5	1-2	2-3	3-4	4-5		cal
RECEIVE	60-75W	→	→	→	75-90W	→	→	→		1-2
RANGE	20x400	20x250	10x250	10x300	20x400	20x250	10x250			10x200
VOLTAGE	310	330	980	975	310	330	980			80
CURRENT	8.0 10x500	5.0 7x750	2.5 5x1000	3.0 5x1000	8.0 10x500	5.0 7x750	2.5 5x1000			2.0 5x1000

FREQUENCIES 1.0 0.1
SENDER NO. Mark 4B
OPERATOR Gary Cruze
RECEIVER NO. Mark 4C
OPERATOR Ron Palmer

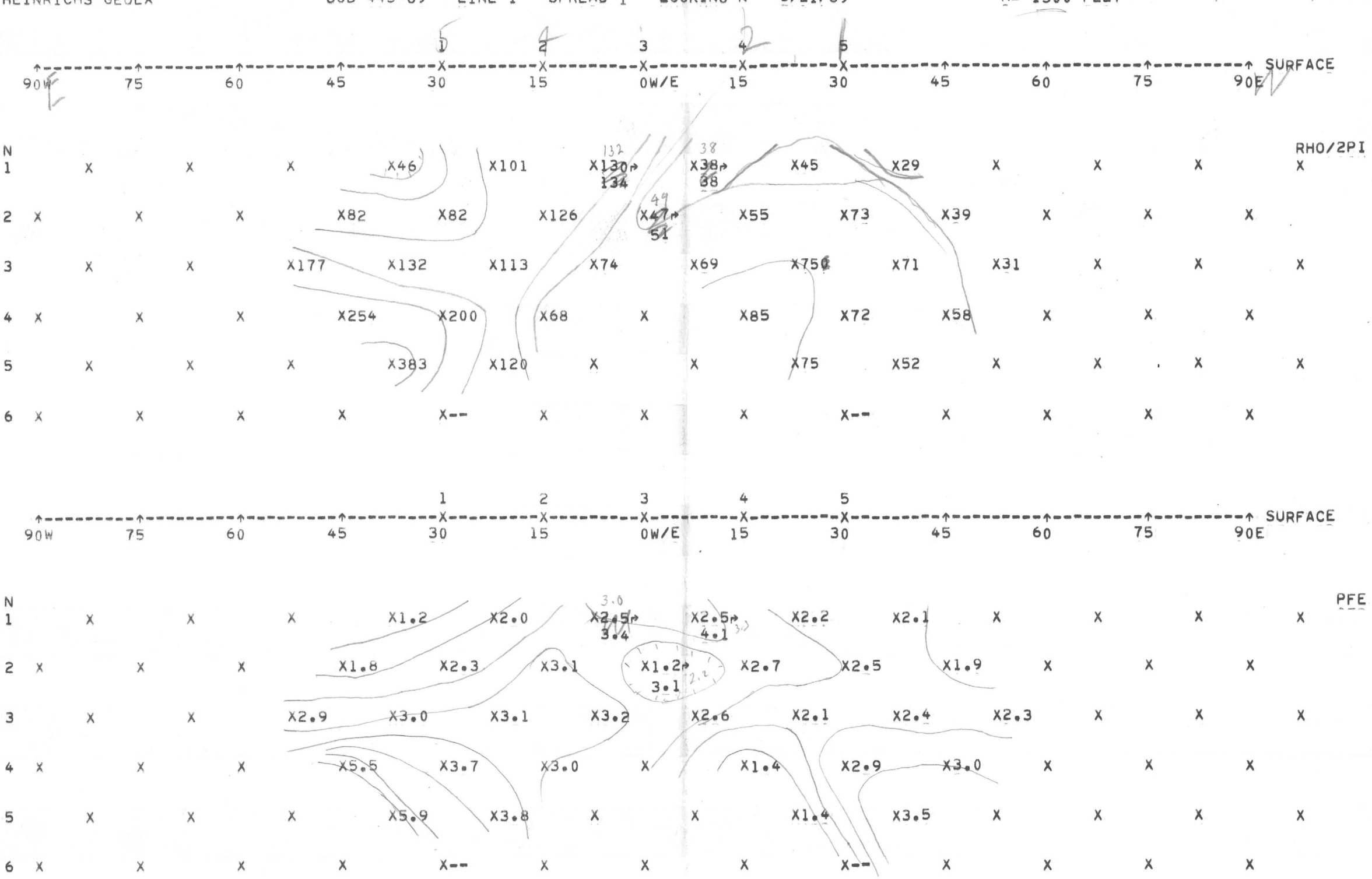
COMMENTS:

HEINRICHS GEOEX JOB 445-69 LINE 1 SPREAD 1 LOOKING N 8/21/69 A= 1500 FEET 1.0 0.1

9.000	6.000	9.000	2.500	6.000	9.000	3.000	2.500	6.000	9.000	I	3.000	2.500	6.000	9.000	3.000	2.500	6.000	7.000	2.000	
33	29	24	13	23	24	6	15	23	21	DC	11	22	29	31	21	48	54		-4	LEFT
33	29	24	13	23	24	6	15	23	21		11	22	29	31	21	48	54		-4	SIDE
1	1	2	1	2	3	1	2	3	4	N	2	3	4	5	3	4	5	6		
3.3	2.9	2.4	1.3	2.3	2.4	.6	1.5	2.3	2.1	PFEA	1.1	2.2	2.9	3.1	2.1	4.8	5.4	0.0	-.4	
74.70	175.0	25.30	56.00	41.60	14.60	30.70	11.40	14.90	6.780	AC1	13.60	7.230	13.10	6.710	11.70	6.810	14.00	0.000	203.0	203.0 0.861
0.0	.6	.2	.1	0.0	0.0	.3	0.0	0.0	-.2	AC2	.2	0.0	0.0	.2	0.0	.2	.6	0.0	.8	
74.70	175.5	25.33	56.03	41.60	14.60	30.75	11.40	14.90	6.773	ACA	13.61	7.230	13.10	6.717	11.70	6.817	14.04	0.000	203.8	
38.15	133.6	51.24	101.0	126.3	73.93	45.82	82.40	113.1	68.46	RHO	81.60	131.5	200.0	119.7	177.2	254.1	383.0*000.0		.981	DC CAL
4.1	3.4	3.1	2.0	3.1	3.2	1.2	2.3	3.1	3.0	PFE	1.8	3.0	3.7	3.8	2.9	5.5	5.9*000.0		.800	AC CAL
107	25	60	20	25	43	27	28	27	44	MCF	22	23	19	32	16	22	15*00000			
.2	.0	.5	.0	.1	.6	.1	.2	.4	1.3	CPFE	.2	.3	.3	1.0	.2	.2	.2	0.0		
3.9	3.4	2.6	2.0	3.0	2.6	1.1	2.1	2.7	1.7	CCPFE	1.6	2.7	3.4	2.8	2.7	5.3	5.7*000.0			
102	25	51	20	24	35	24	25	24	25	CCMCF	19	21	17	23	15	21	15*00000			

3.000	2.500	3.000	6.000	2.500	3.000	8.000	5.000	2.500	3.000	I	8.000	5.000	2.500	3.000	8.000	5.000	2.500	2.500	2.000	
15	14	-1	12	16	18	12	15	11	5	DC	11	15	21	5	15	19	26		-4	RIGHT
15	14	-1	12	16	18	12	15	11	5		11	15	21	5	15	19	26		-4	SIDE
1	1	2	1	2	3	1	2	3	4	N	2	3	4	5	3	4	5	6		
1.5	1.4	-.1	1.2	1.6	1.8	1.2	1.5	1.1	.5	PFEA	1.1	1.5	2.1	.5	1.5	1.9	2.6	0.0	-.4	
85.70	21.10	8.120	61.00	7.750	4.610	52.50	20.50	42.30	2.890	AC1	17.50	7.980	2.000	1.450	5.630	3.230	.818	0.000	206.0	
.1	-.1	-.5	0.0	-.2	.4	.3	0.0	0.0	.2	AC2	.4	.2	.4	.2	.4	-.2	.2	0.0	1.3	
85.74	21.09	8.100	61.00	7.742	4.619	52.58	20.50	42.30	2.893	ACA	17.53	7.988	2.004	1.451	5.641	3.227	.819	0.000	207.3	
130.1	37.53	47.44	45.12	55.25	68.61	29.13	73.00	750.2	84.93	RHO	38.80	71.05	71.64	74.57	31.33	57.73	51.53*000.0		.965	DC CAL
2.5	2.5	1.2	2.2	2.7	2.6	2.1	2.5	2.1	1.4	PFE	1.9	2.4	2.9	1.4	2.3	3.0	3.5*000.0		1.050	AC CAL
19	67	25	50	50	39	72	35	3	17	MCF	50	34	41	19	75	53	69*00000			
.0	.2	.5	.2	.4	.7	.3	.3	0.0	1.0	CPFE	.7	.7	1.2	1.9	2.0	1.6	3.1	0.0		
2.5	2.3	.7	2.1	2.3	1.9	1.8	2.3	2.1	.5	CCPFE	1.3	1.8	1.7	-.5	.4	1.4	.5*000.0			
19	61	14	46	42	28	62	31	3	5	CCMCF	33	25	24	-6	11	24	9*00000			

HEINRICHS GEOEX JOB 445-69 LINE 1 SPREAD 1 LOOKING N 8/21/69 A= 1500 FEET 1.0 6.1 Hz



	90W	75	60	45	30	15	0W/E	15	30	45	60	75	90E	SURFACE
N					1	2	3	4	5					

MCF

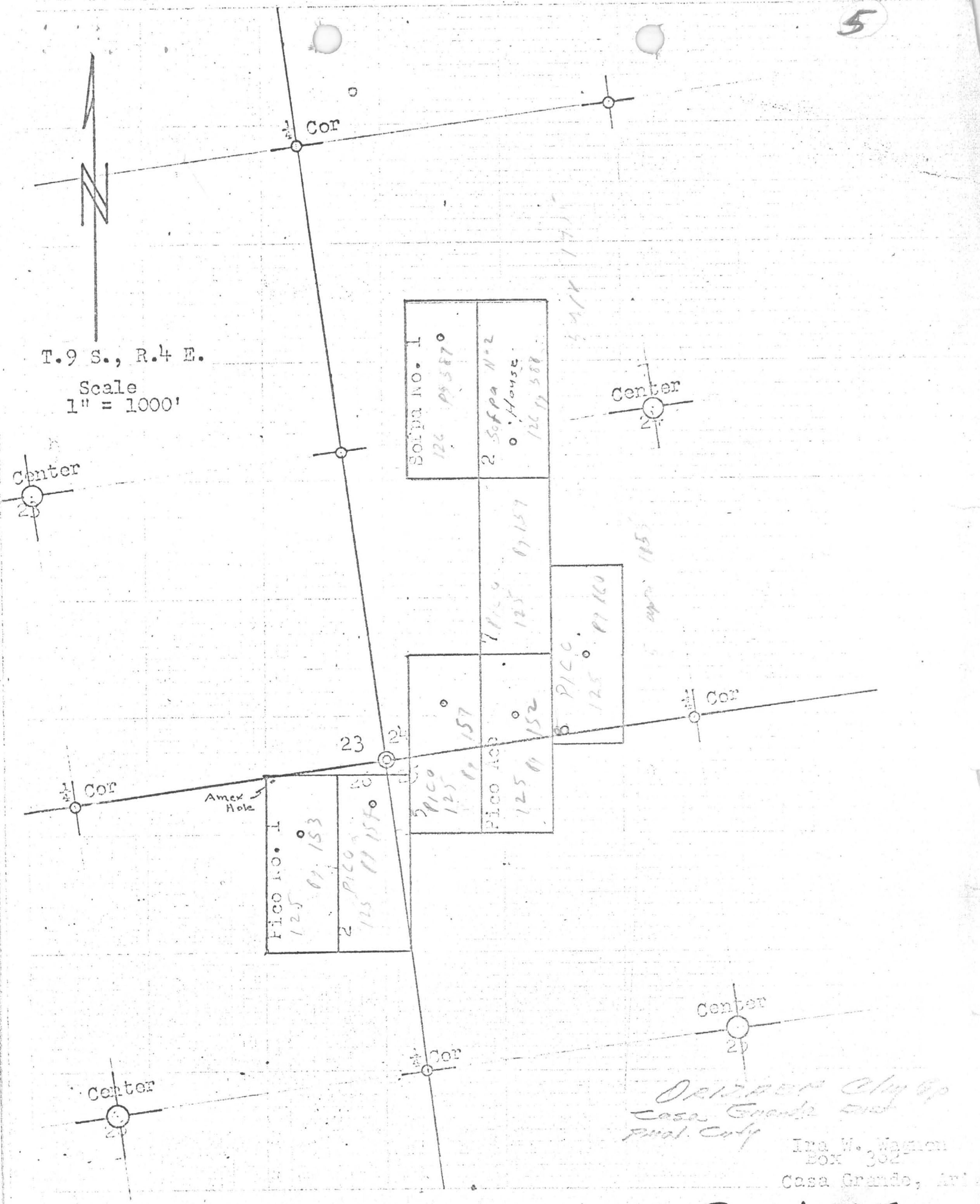
N														
1	X	X	X	X27	X20	X19 25	X67 107	X50	X72	X	X	X	X	
2	X	X	X	X22	X28	X25	X25 60	X50	X35	X50	X	X	X	
3	X	X	X16	X23	X27	X43	X39	X3	X34	X75	X	X	X	
4	X	X	X	X22	X19	X44	X	X17	X41	X53	X	X	X	
5	X	X	X	X15	X32	X	X	X19	X69	X	X	X	X	
6	X	X	X	X	X--	X	X	X	X--	X	X	X	X	

	90W	75	60	45	30	15	0W/E	15	30	45	60	75	90E	SURFACE
N					1	2	3	4	5					

CCPFE

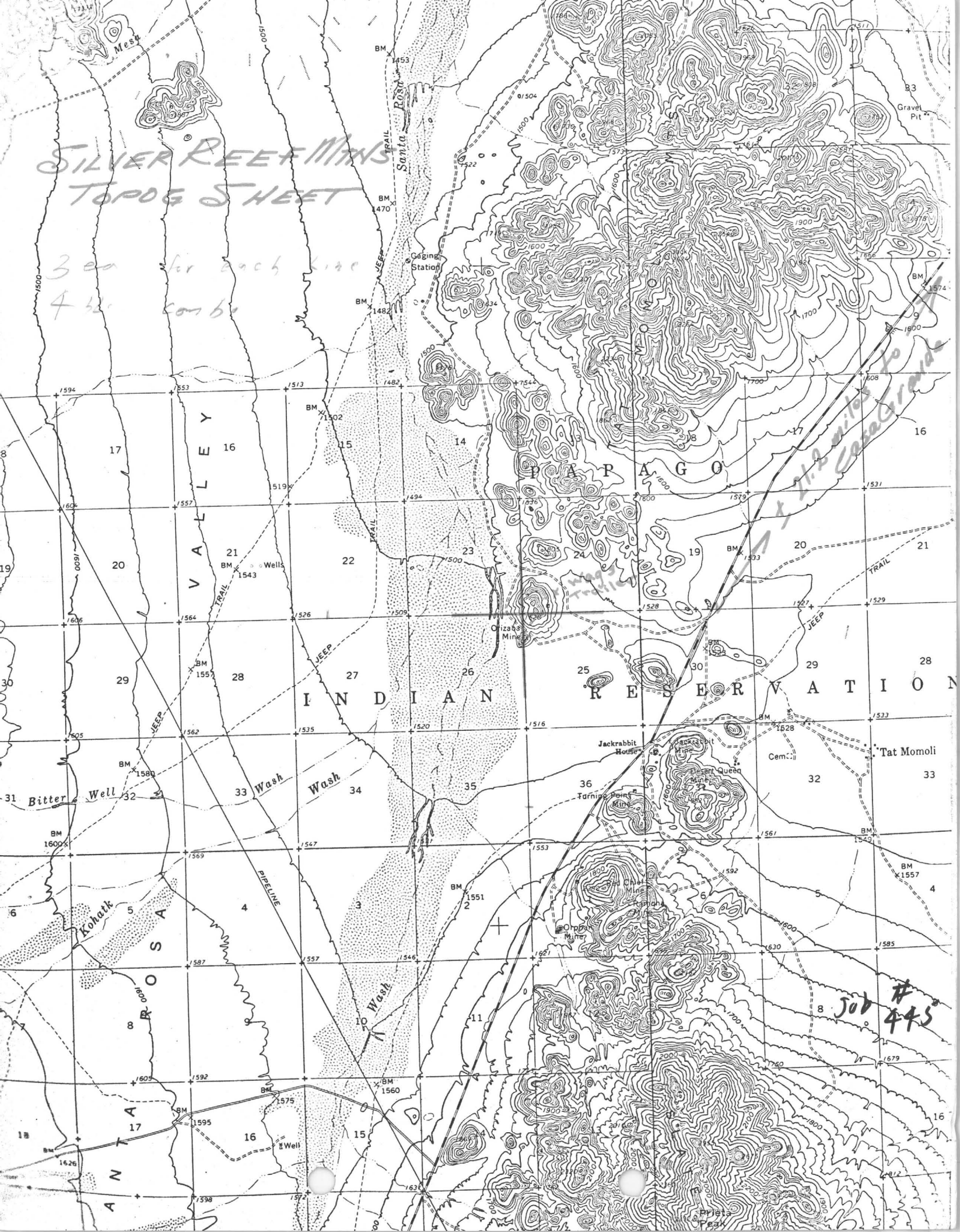
N														
1	X	X	X	X1.1	X2.0	~~X2.5~~ 3.4 (3.0)	~~X2.3~~ 3.9 (3.1)	X2.1	X1.8	X	X	X	X	
2	X	X	X	X1.6	X2.1	X3.0	X.7 2.6 (1.7)	X2.3	X2.3	X1.3	X	X	X	
3	X	X	X2.7	X2.7	X2.7	X2.6	X1.9	X2.1	X1.8	X.4	X	X	X	
4	X	X	X	X5.3	X3.4	X1.7	X	X.5	X1.7	X1.4	X	X	X	
5	X	X	X	X5.7	X2.8	X	X	X-.5	X.5	X	X	X	X	
6	X	X	X	X	X--	X	X	X	X--	X	X	X	X	

												1		2		3		4		5										SURFACE
	90W		75		60		45				30		15		0W/E		15		30		45		60		75		90E			
N																														CCMCF
1		X		X		X		X24		X20		X19 22 25			X61 82 102		X46		X62		X		X		X		X			
2	X		X		X		X19		X25		X24		X14 33 51			X42		X31		X33		X		X		X				
3		X		X		X15		X21		X24		X35		X28		X3		X25		X11		X		X		X				
4	X		X		X		X21		X17		X25		X		X5		X24		X24		X		X		X					
5		X		X		X		X15		X23		X		X		X-6		X9		X		X		X		X				
6	X		X		X		X		X--		X		X		X		X--		X		X		X		X					



T.9 S., R.4 E.
Scale
1" = 1000'
¼ Cor
Center
23
24
Solpa No. 1
2 Sofpa No 2
House
Pico No. 1
2 Pico
Amex Hole
Ira W.
Box 302
Casa Grande,

Job #445


SILVER REEF MTNS
TOPOG SHEET
3 ea for each line
4 bbl combo
Mesa
Santa Rosa
Gaging Station
Gravel Pit
PAPAGO
INDIAN RESERVATION
VALLEY
Wells
Orizaba Mine
Jackrabbit House
Jackrabbit Mine
Desert Queen Mine
Turning Point Mine
Tat Momoli
Cem
Bitter Well
Wash
Kohatk
PIPELINE
Red Chief Mine
Orphan Mine
Well
Prieta Peak
Job # 445
1 21.2 miles to Casa Grande

Mr. Paul Head

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

August 8, 1969

HEINRICHS GEOEX
GEOPHYSICAL ENGINEERS
TUCSON, ARIZONA

REC'D AUG 9 1969

BOX 5671 TUCSON, ARIZONA 85703
Phone: (AREA 602) 623-0578

Dear Mr. Head:

Enclosed are two plan maps showing the locations of Ira Wagnon's claim and a drill hole section which I thought maybe of some value to you. When you do your initial survey of the area, you should contact Mr. Ira Wagnon who resides in a trailer near where the X is on the topog map.

I feel the first line should go east-west near the section line between sections 24 and 25. If this is favorable, we would consider another one north-south between 23 & 24. The east-west line should run from about 2000 ft. west of section corner 23, 24, 25 & 26, and extend for at least 2500 feet east of the same section corner.

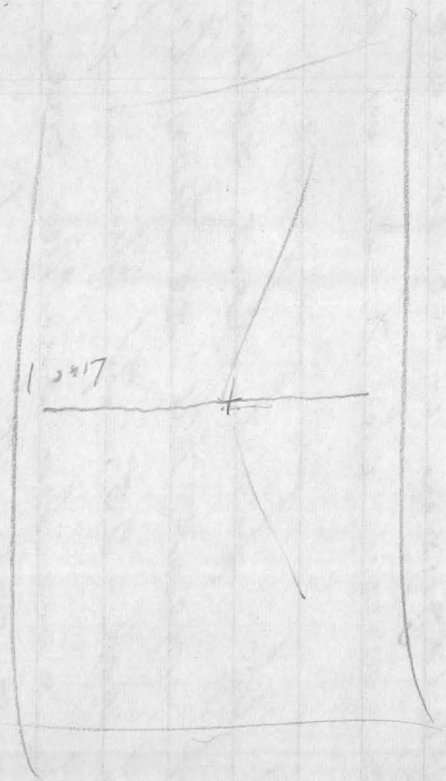
I will appreciate your forwarding the ~~other~~ information on the survey which we discussed on the telephone August 8, 1969.

Sincerely yours
Heinrich Olmstead

encl: 3

File Job #445

Origin point of Geo Sur.



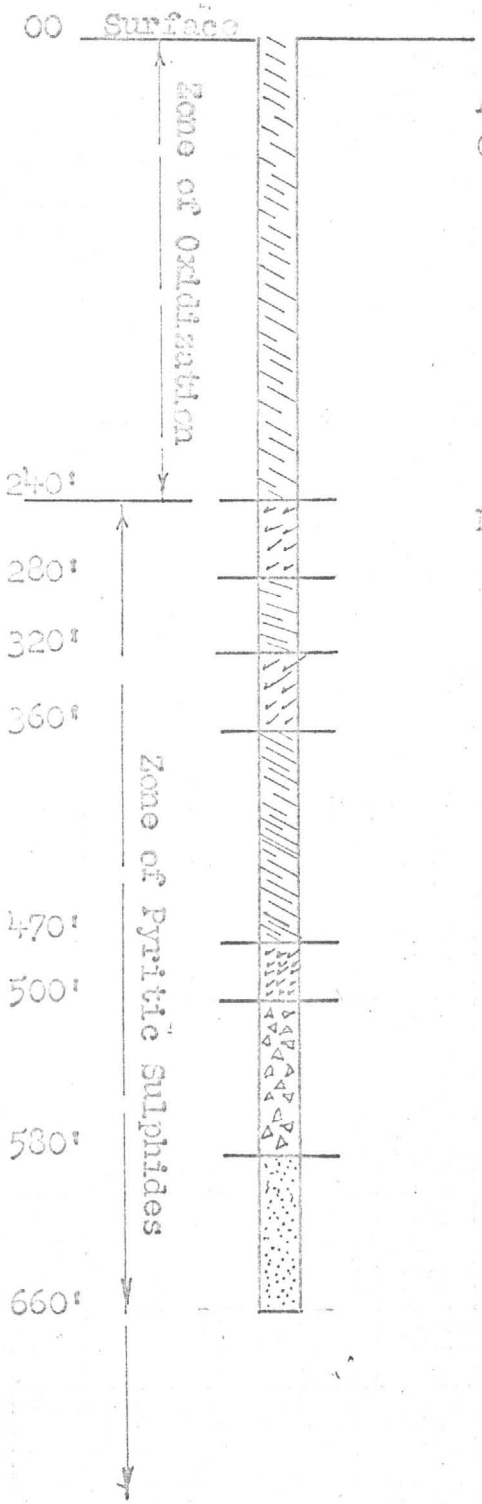
PICO MINE

Log of Diamond Drill hole #1

S 45° E of NW Cor. Pico No.1

Scale: 1" - 100'

CASA GRANDE DISTRICT, PINAL COUNTY ARIZONA



Altered sediments & iron oxides -- Completely leached -- no sulphides.

Shows bedding dipping east

Diabase sill cutting sediments --

Altered limestone -- badly crushed.

Diabase sill

Altered Limestone-- impregnated with sulphides -- some Cu. & Mo.

Diabase interformational sill -- very basic -- ore

Altered andesite -- intensely brecciated with ore in fractures.

White apilite, or fine-grain alaskite showing more ore -- the best of the core -- thickness unknown.

Job #445

Copy to RRH 7-20-69

Grover Paul H.

HEINRICHS GEOEX
GEOPHYSICAL ENGINEERS
TUCSON, ARIZONA

REC'D AUG 14 1969

BOX 5671 TUCSON, ARIZONA 85703
Phone: (AREA 602) 623-0578

HEINRICHS GEOEXPLORATION COMPANY

806 WEST GRANT ROAD, TUCSON, ARIZONA, 85703. P.O. BOX 5671. PHONE: (AREA CODE 602) 623-0578

August 11, 1969

Inspiration Consolidated Copper Co.
Inspiration, Arizona 85537

Attn: Mr. Hugh Olmstead, Ch. Geologist

Re: I. P. Job # 445

Gentlemen:

Confirming our communications with Mr. Hugh Olmstead on August 7 and 8, we propose for our mutual understanding the following conditions:

1. Beginning on or about August 25, 1969, GEOEX will furnish personnel and induced polarization equipment to survey an area as designated by Inspiration Consolidated Copper Co. in the vicinity of Casa Grande, Pinal County, Arizona.

2. The field work and charges will be split with two time periods to satisfy assessment work requirements for the years 1969 and 1970.

3. Excessive bad weather delay over eight hours and client requested standby time will be charged at $100.00 per day. Breakdown time of our equipment in excess of one hour per day will be made up and is not considered as standby time.

4. Frequencies of 1.0 and 0.1 Hz will be used obtaining data to the n=4 level. In order to realize an optimum zone of exploration of 300 to 2,000 ft. deep an electrode spacing of 1,500 ft. will be used.

5. Two standard five electrode sending arrays, located as directed by Inspiration Consolidated Copper Co. in Mr. Olmstead's letter of August 8 will be completed for a total of $1,750.00 including two separate reports of labor done suitable to satisfy the assessment requirements for the years 1969 and 1970, as well as one over all final technical report summarizing both phases. The induced polarization survey will be done on and for the benefit of the Orizaba Claim Group as shown on the enclosed map unless otherwise directed by Inspiration.

6. Additional work will be charged on a daily rate of $400.00 per day including all expenses and final report. An additional charge of $10.00 per standard five electrode spread will be made for computer processing and electromagnetic coupling corrections.

All property permits, brushing and trespassing-liability and related costs incurred on behalf of client assumed by client. Charges for extra equipment and personnel employed, if mutually desired, are extra.

GEOEX will save client harmless from all workmen's compensation, public liability and property damage liability incurred by GEOex employees.

Preliminary reports or copies of rough field plotting sheets will not be available as work progresses.

Payments due on presentation. Billings may be submitted periodically with final payment after completion of final report.

Please indicate your understanding and approval of the terms of this agreement with your signature in the space provided below and on the attached copy of this agreement and return the signed copy to us.

Sincerely yours,
HEINRICHS GEOEXPLORATION CO.

Walter E. Heinrichs, Jr., President

WEH:jh
cc: Extra Encl.

Date: 8-12-1969

Accepted by: Hugh W. Olmstead
Inspiration Cons. Copper Co.

Title: Chief Explor Geol.