CONTACT INFORMATION
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Arizona Geological Survey
3550 N. Central Ave, 2nd floor
Phoenix, AZ, 85012
602-771-1601
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inquiries@azgs.az.gov

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Chris / C.S.L.
Inc. / DBC

HEINRICHS GEOEXPLORATION COMPANY

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

October 23, 1967

Mr. W. R. Ransone
Geochemical Surveys
P. O. Box 19508
3806 Cedar Springs Road
Dallas 19, Texas

Dear Bill:

This confirms your visit accompanied by Phil Stewart, to our Tucson office last week. Chris Ludwig and I were most interested to learn of your project and progress, and we will look forward to further word.

We understand you desire us to briefly review your complete geochemical results in the area west of the Sierrita Mountains, mainly in T16S, 17, 18, 19, 20S, R10E, with a little in the east part of T19S, R9E, Pima County, Arizona and to make preliminary reconnaissance geological mapping correlation with appropriate interpretation, conclusions and recommendations. All liability and costs for a trespass on areas assigned by you to be covered, will be borne by you.

It is anticipated this may take a week or so in the field with one professional man at $150.00 per day plus expenses, not including a helper. If a helper is required, we would charge $25.00 per day for his services. Tucson office work reviewing your data would only require two or three days at $125.00 per day plus any directly incidental expenses only, such as communications, reproductions, etc.

It will be most helpful to see the data on the other elements right away, in addition to the silver, and also the detail sample analysis specifications and methodology used. Chris Ludwig, myself, or others of the staff should have some worthwhile comment for you regarding this and, of course, it would have bearing on planning the initial follow up work.

If this meets with your approval, you may so indicate by executing as provided below on the extra carbon copy enclosed and returning the same to us with an advance of $500.00 in lieu of credit investigation.

At present, qualified personnel are available or would be available on a one or two week notice.

Enclosed are the articles which were mentioned might be of special interest to you. Also our services price sheet.

Very truly yours,

HEINRICHS GEOEXPLORATION COMPANY

Walter E. Heinrichs, Jr.

Walter E. Heinrichs, Jr. by jc
President & General Manager

(dictated but not signed)

APPROVED: W. R. Ransone

TITLE: Managing Partner

DATE: Oct. 25, 1967

WEH:jc
Enclosures: extra copy
Literature

Film No. 788

Date 3-14-68

GEOCHEMICAL SURVEYS
SPECTROGRAPHIC ANALYSIS

PROSPECT Tinaja

COUNTY, STATE Pima, Arizona

PAGE 1

core hole # 1

Rack 9	Sample No.	Fe	PPB	PARTS PER MILLION															
			Hg	Ba	B	Au	Pb	Bi	Ga	Mn	Cr	Ni	V	Be	Ti	Mo	Sn	Y
10		W-1																
11	1-5'-1			1000	20	<10	20	<10	35	1000	200	10	50	<1	3500	20	<10	20
12	1-10'-2			1000	15		20		35	750	75	7	50		3500	10		20
13	1-15-3			750	10		20		35	350	150	7	35		2000	15		15
14	1-20'-4			750	10		20		35	350	150	7	35		3500	15		35
15	1-25'-5			750	15		20		50	350	200	5	50		3500	20		20
16	1-30'-6			750	15		15		10	350	200	7	20		2000	10		15
17	1-35'-7			1000	15		20		20	350	150	5	35		2000	7		15
18	1-40-8			1000	15		20		35	500	200	7	50		3500	15		35
19	1-45-9			750	20		20		20	350	200	7	35		3500	10		15
20	1-50-10			1000	20		20		35	750	350	10	50		2000	15		15
21	1-55'-11			500	35		5		7	200	<5	2	10		1000	<2		5
22	1-57'-12			1000	35		35		35	750	500	5	50		3500	50		10
23																		
24																		
25																		
26																		
27																		
28																		
29																		
30																		
31																		
32																		
33																		

Weighed by Layne Catts Run by Layne Catts Read by ~~Tinaja~~ Burroughs

Film No. 784

Date _____

GEOCHEMICAL SURVEYS
SPECTROGRAPHIC ANALYSIS

PROSPECT ~~Pima~~ Tinaja

COUNTY, STATE Pima, Arizona

Core Hole #1

Rack 9	Sample No.	PARTS PER MILLION Cd	Cu	Zr	Ag	La	Zn	Sc	Co	Sr	As	Sb	W
10													
11	1-5'-1	<50	200	200	<.5	<20	<200	<5	<5	500	<200	<100	<50
12	1-10'-2		200	200		<20				500			
13	1-15'-3		150	200		<20				350			
14	1-20'-4		150	200		20				200			
15	1-25-5		150	200		20				350			
16	1-30'-6		150	200		20				200			
17	1-35'-7		150	200		20				200			
18	1-40'-8		150	200		20				200			
19	1-45-9		150	200		20				350			
20	1-50'-10		200	200		20				200			
21	1-55'-11		100	50		<20				75			
22	1-57'-12		500	200		20				100			
23													
24													
25													
26													
27													
28													
29													
30													
31													
32													
33													

DAILY DRILLING TIME REPORT

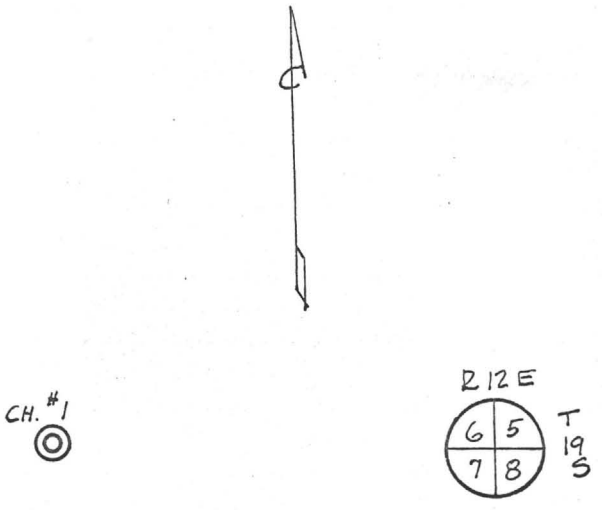
COMPANY _____ DATE March 4, 1968 RIG NO. 333

PROSPECT Tinaja SHIFT _____ COUNTY Pima, Ariz.

LAND OWNER _____ DRILLER L.E. WHITE HOLE NO. Core Hole #1

DEPTH		TIME EACH 5 FT.			FORMATION	SHUT DOWN AND REMARKS
From	To	Begin	End	Drlg. Time		
0	5	8:45	8:50	5 min.	Gray Rock with Clay	Alluvium
5	10	8:50	9:00	10 min	" " " "	"
10	15	9:00	9:10	10 min	" " " "	"
15	20	9:10	9:30	20 min	" " " "	"
20	25	9:30	9:50	20 min	" " " "	"
25	30	9:50	10:35	50 min	" " " "	"
30	35	10:35	11:25	45 min	" " " "	"
35	40	11:25	11:55	30 min	" " " "	"
40	45	11:55	12:20	30 min	" " " "	"
45	50	12:20	12:55	35 min.	" " " "	"
50	55	12:55	1:10	15 min.	Gray & Red Rock & Sand	"
55	57	1:10	1:15	5 min.	" " " "	" Soil getting damp
	Total Drilling Time - 4hrs. 30 min.					Probably the limit for air drilling in this area.

Signed R. E. Key



TINAJA PROSPECT
PIMA CO. ARIZ.
CORE HOLE LOCATION
Mar. 5, 1968
Survey by R.E. Kay
Scale 1" = 50'

GEOCHEMICAL SURVEYS
2505 TURTLE CREEK BOULEVARD
DALLAS, TEXAS 75219

MAILING ADDRESS
P. O. BOX 19508

TELEPHONE
LAKESIDE 1-5145

March 19, 1968

HEINRICHS GEOEX
GEOPHYSICAL ENGINEERS
TUCSON, ARIZONA

MAR 21 1968

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

DBC

Heinrichs Geoexploration Company
P. O. Box 5671
Tucson, Arizona 85703

Gentlemen:

In your letter of October 23, 1967, you enclosed your services price sheet. We have misplaced this and would like to have another. We are sorry for any inconvenience caused you.

Very truly yours,

GEOCHEMICAL SURVEYS

Sandra Dawson

(Mrs.) Sandra Dawson

GEOCHEMICAL SURVEYS
2505 TURTLE CREEK BOULEVARD
DALLAS, TEXAS 75219

MAILING ADDRESS
P. O. BOX 19508

TELEPHONE
LAKESIDE 1-5145

March 5, 1968

GEOEX
MAR 7 1968
BOX 5671 TUCSON, ARIZONA 85703
Phone: (AREA 602) 623-0578

Heinrichs Geoexploration Company
806 West Grant Road
Tucson, Arizona 85703

Attention: Mr. Donald Cooley

Gentlemen:

We are in receipt of your statement of February 29 being Interim billing #2 for the Silver Hills, Arizona Area. As we have no plans to be in Arizona in the near future to discuss with you the results of this work and others which you have done for us, we would appreciate it if you could furnish us with such maps and written reports as you might have at this time.

In checking the notice of location document for the Tinaja claims numbered 37 through 54, we note that they appear to be properly located in reference to quarter corner locations of Section 36, T 18 S, R 12 E, but that they are identified as being approximately 2600 feet North of Tinaja claims 19 through 36. They are in fact in excess of 5000 feet North of such claims. We doubt that this is a problem, but would want to bring it to your attention.

Yours very truly,

GEOCHEMICAL SURVEYS

W. R. Ransone

W. R. Ransone

WRR:RSU:bac

GEOCHEMICAL SURVEYS
2505 Turtle Creek Boulevard
DALLAS, TEXAS 75219

MAILING ADDRESS
P. O. BOX 19508

TELEPHONE
LAKESIDE 1-5145

March 4, 1968

Raymond E. Kay
P.O. Box 1009
Tucson, Arizona 85702
Phone 326-2845

Marley Cattle Company
5001 E. Washington
Phoenix, Arizona

Re: Geophysical Permit

Dear Sir:

We thank you for your cooperation in permitting a soil analysis survey on your property and we sincerely hope that the conduct of our crew was satisfactory and no damages were incurred. We have contacted your ranch foreman, Mr. Caswell, and he expressed his satisfaction with the crew's conduct. As a result of our survey we have found areas of interest where we would like to do additional geophysical work and possibly drill some test holes.

The geophysical work would be done by a geophysical contractor using lightweight panel trucks. This portion of the work should be completed within 30 days. If the results of this work proved interesting enough, we would like to drill a few test holes to depths of 500 feet. This should take an additional 30 days to complete.

We hope that our past record will be considered favorably in our request to continue geophysical work in the following areas on your ranch:

T 18 S, R 13 E	Sections: 17, 18, 19, 20, 28, 29, 30, 31, 32
T 19 S, R 12 E	Sections: 4, 5, 6, 7, 8, 9
T 20 S, R 10 E	Sections: 5, 8, 9, 10
T 19 S, R 10 E	Sections: 21, 22, 27, 28, 32

This work would be for a period of 60 days beginning March 4, 1968.

All conditions formerly agreed on will be extended to cover this request and we will also assume full responsibility for any damages during the course of, or as a result of this work, which might be incurred by any contracting crew in our employ.

Your favorable consideration of this request will be greatly appreciated and we hope you will indicate your approval by signing and returning one copy of this letter.

Approved this 8 day of March, 1968

By: [signature]

Yours very truly,

Raymond E. Kay

Raymond E. Kay

GEOCHEMICAL SURVEYS
2505 TURTLE CREEK BOULEVARD
DALLAS, TEXAS 75219

MAILING ADDRESS
P. O. BOX 19508

TELEPHONE
LAKESIDE 1-5145

January 26, 1968

Mr. Don B. Cooley
Heinrichs Geoexploration Company
P. O. Box 5671
Tucson, Arizona

Dear Don:

I am enclosing our latest map of the mercury values in Sections 9, 10, 16 and 17, T20S, R10E, Pima County. The most recent samples have been numbered by hand.

I am also enclosing data on samples taken by our drill truck with the corresponding sample numbers. These values have not been entered on the map since they would have been difficult to number and interpret. I suggest that you note them in some other fashion as an additional set of clues in this area however.

The sample point number is the smaller number above and to the left of the small circle.

Sincerely,

Philip B. Stewart

PBS:sd
Enclosures

GEOCHEMICAL SURVEYS
2505 TURTLE CREEK BOULEVARD
DALLAS, TEXAS 75219

MAILING ADDRESS
P. O. BOX 19508

TELEPHONE
LAKESIDE 1-5145

January 19, 1968

DBC

Mr. E. Grover Heinrichs
Heinrichs Geoexploration Company
P. O. Box 5671
Tucson, Arizona

Dear Grover:

As indicated on the copy of your letter we have approved the costs of the program as set forth. The only slight modification I might suggest would be to use Ray Kay and his crew as much as possible perhaps in setting out panels etc.

Tinaja Peak should be the first order of business. We tentatively plan to have our core rig in Tucson about the third week in February by which time I would assume you will have finished the I. P. work in the area.

We have not yet received permission from Mr. Kemper Marley, who has the grazing leases in the Tinaja Peak and Canoa areas, to do geophysical work and core drilling. We anticipate getting this approval prior to your starting date. However, so that we don't get crossways with him could you give me an estimate when the I. P. crew might be available.

We anticipate that the Silver Peak area would be the last to be worked by I. P. which should give us time to work a deal of some kind with Mr. Walter Bopp.

Sincerely,

Philip B. Stewart

PBS:sd
Enclosure

Show Don Cooley
Send copy to Geochemical Surveys

January 9th. 1968.

Done 1-11-68

Mr. Heinrich,

Heinrichs Geoexploration Co,,

808 West Grant Road,

Tucson Arizona.

Dear Mr. Heinrich,

You are hereby requested to Cease and Desist in your geochemical, geophysical and subsurface exploration on all Mining Claims located and consistently maintained by me, covering all of section I6 and the east half of section I7, T. 20. S. R. IO E.

All matters pertaining hereto are duly recorded with the State and the Department of Interior.

Yours truly,

CC: Attys at Law.

Walter Bopp.

Walter Bopp,
43 So. 6th Ave., Tucson Arizona

GEOCHEMICAL SURVEYS
2505 TURTLE CREEK BOULEVARD
DALLAS, TEXAS 75219

MAILING ADDRESS
P. O. BOX 19508

214
TELEPHONE
LAKESIDE 1-5145

P.O. Box 6508

January 2, 1967

DON

Mr. Chris Ludwig
Heinrichs Geoexploration Co.
808 West Grant Road
Tucson, Arizona

Dear Chris:

I am enclosing the geochemical maps I talked with you about last week. Please call me if you have any questions.

Sincerely,

Phil

Philip B. Stewart

PBS:sd
Enclosures

GEOCHEMICAL SURVEYS
3806 CEDAR SPRINGS ROAD
DALLAS, TEXAS 75219

MAILING ADDRESS
P. O. BOX 19508

TELEPHONE
LAKESIDE 1-5145

December 11, 1967

Mr. Donald B. Cooley
Geologist
Heinrichs Geoexploration Company
P. O. Box 5671
Tucson, Arizona 85703

Dear Don:

There have been some further delays on the detail samples and I don't expect the maps to be ready until the end of this week or possibly the first of next. We will send them to you as soon as they are available.

Your suggested scale of 1" = 1,000' would be perfectly satisfactory.

Yours very truly,

Philip B. Stewart

PBS:sg

P.S. Does Heinrichs offer a claim-staking service? If so, what are the charges?

Don C.

GEOCHEMICAL SURVEYS
3806 CEDAR SPRINGS ROAD
DALLAS, TEXAS 75219

MAILING ADDRESS
P. O. BOX 19508

TELEPHONE
LAKESIDE 1-5145

November 27, 1967

Mr. Donald B. Cooley
Heinrichs Geoexploration
808 West Grant Road
Tucson, Arizona

Dear Don:

At the time Geochemical executed the letter agreement with Heinrichs Geoexploration and deposited $500 with your firm, it was certainly our impression that a firm consulting basis had been established. I can recall nothing about my last visit to your firm that would alter that view.

Several things have slowed us up in the meantime. Accurate location of sample points was necessary in the southern most area of interest. This took considerably longer than anticipated, thereby holding up completion of detailed sampling.

However, by the end of this week I anticipate sending you an accurate map of the entire area. We are still interested, and I reiterate this, in the geology of Areas 4, 5 & 6 as outlined in red.

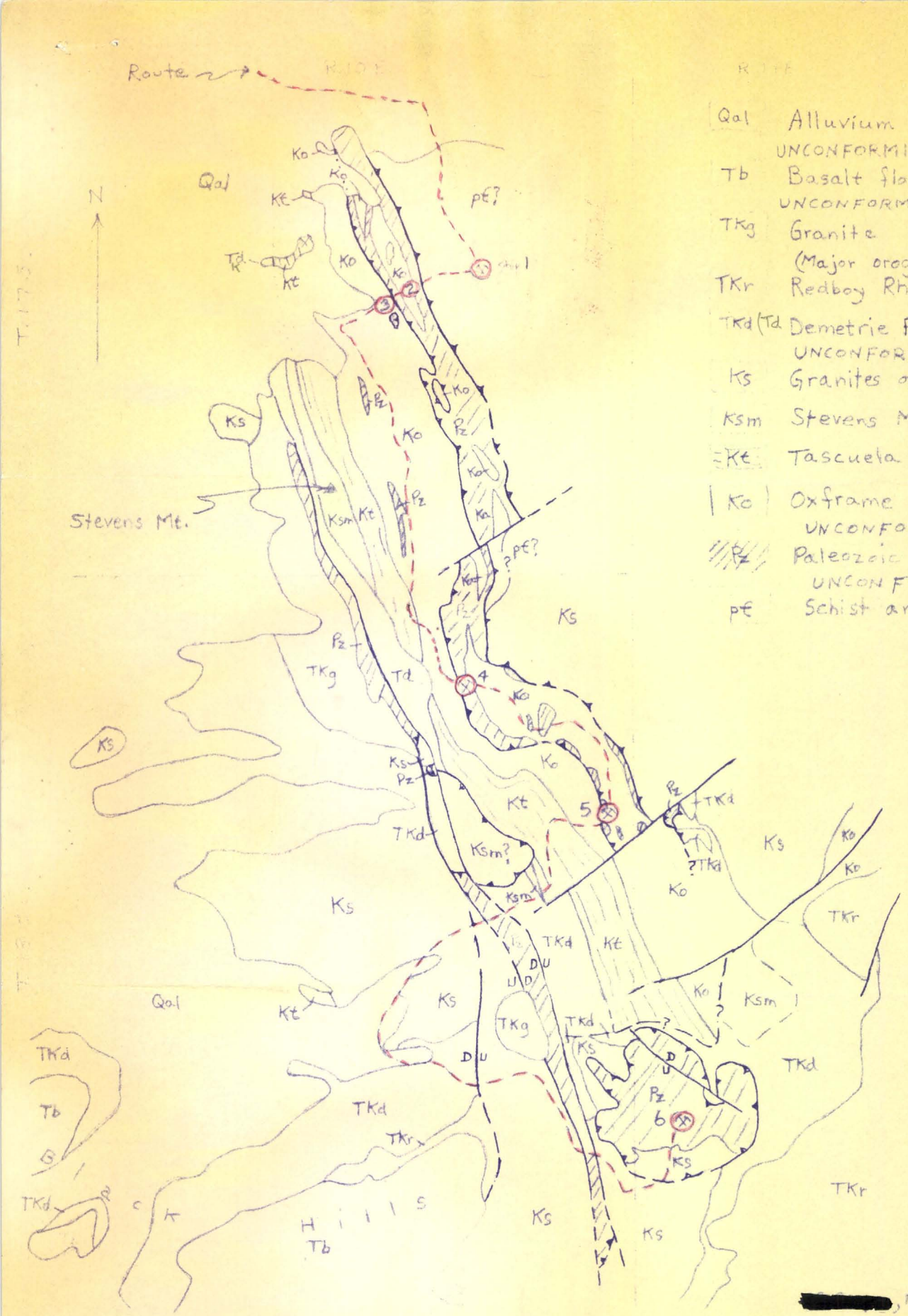
The detailed sample results will not be ready before the latter part of next week at which time I will send them to you.

Due to various reasons Mr. Wong has not yet been able to photograph the area. When he does and has prints, Ray Kay will advise you.

Sincerely,

Philip B. Stewart

PBS:sd



Qal Alluvium

UNCONFORMITY

Tb Basalt flows

UNCONFORMITY

TKg Granite

(Major orogeny)

TKr Redboy Rhyolite

TKd (Td Demetrie Form. (= "Silver Bell")

UNCONFORMITY

Ks Granites of the Sierrita Mts

Ksm Stevens Mt. Rhyolite

Kt Tascuela Redbeds

Ko Oxframe Formation

UNCONFORMITY

Pz Paleozoic undifferentiated

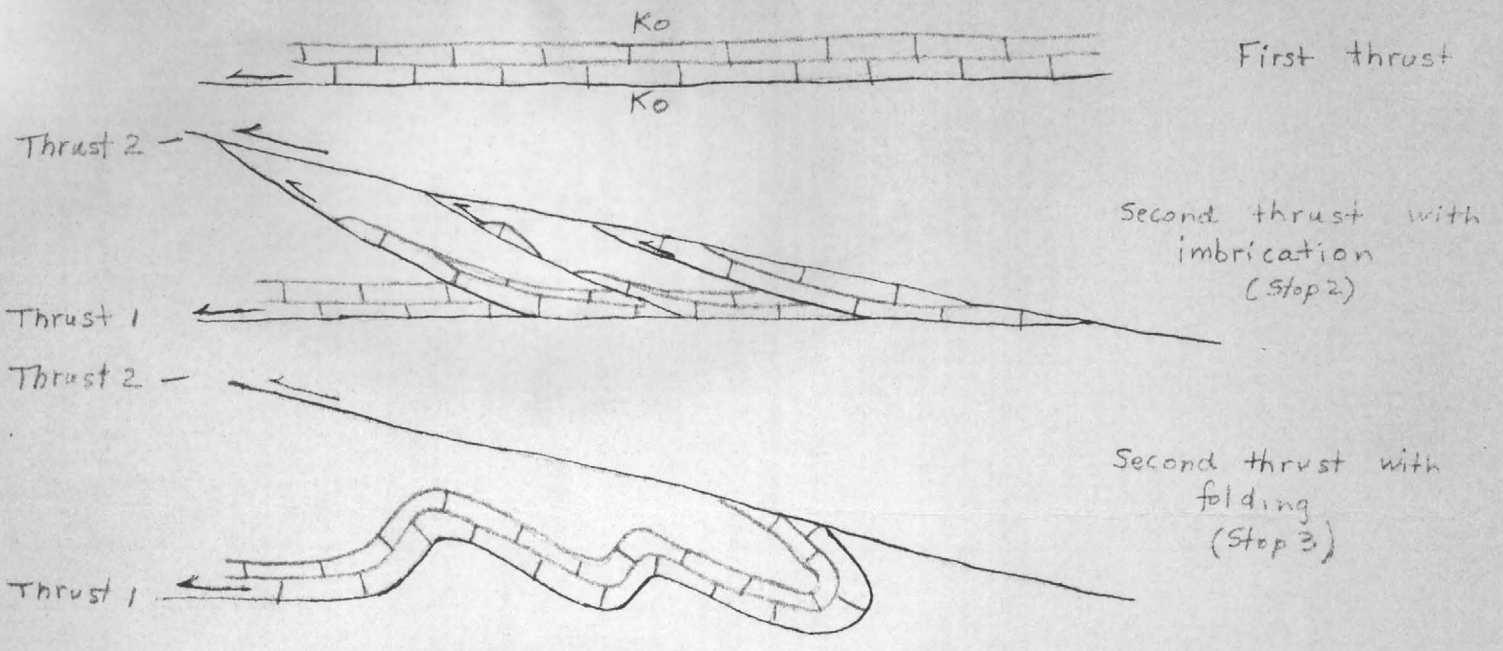
UNCONFORMITY

pE Schist and granite

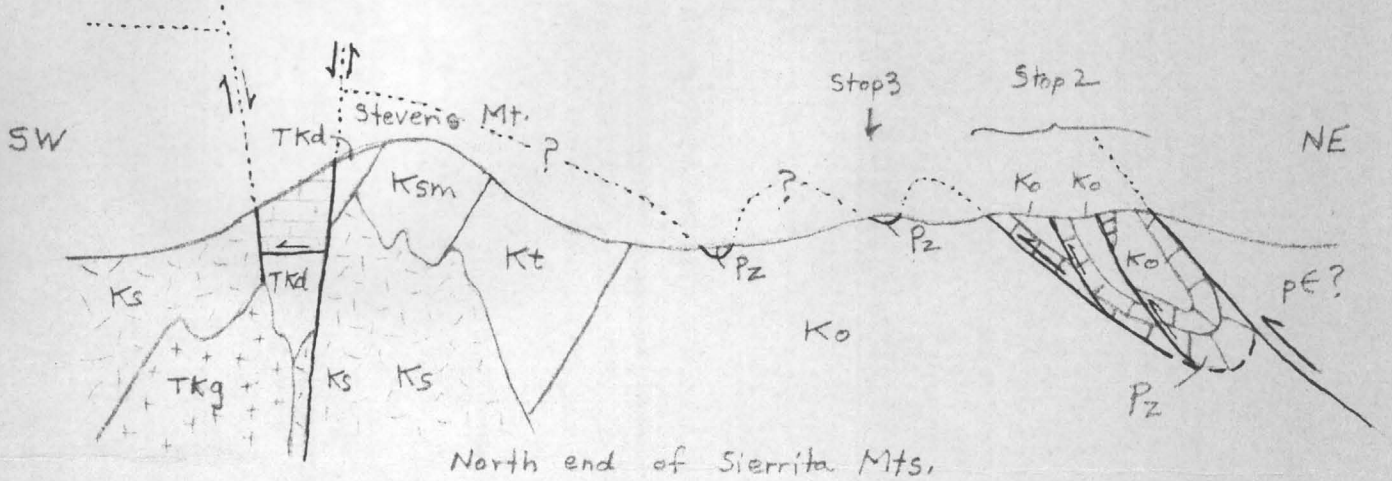
[redacted], March 1962

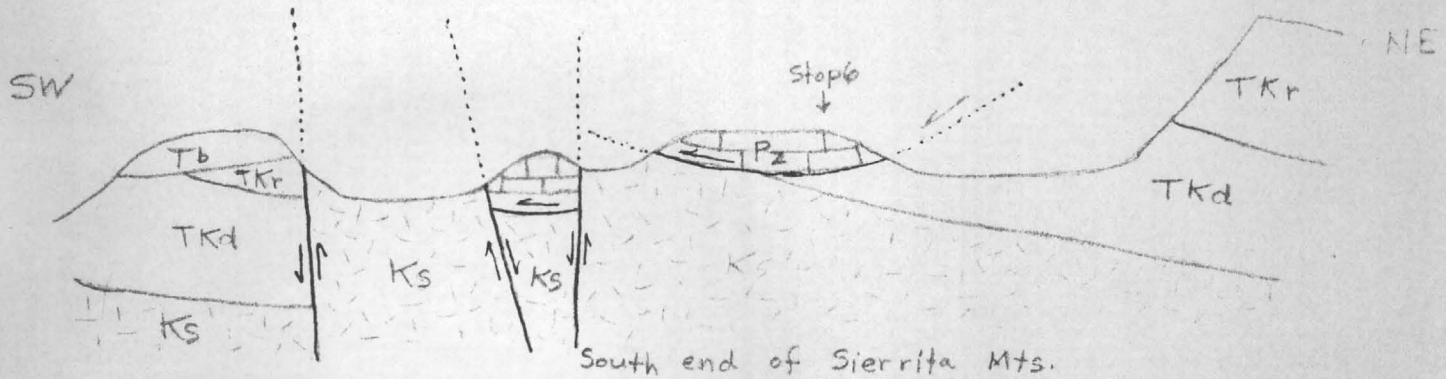
WEST SIDE OF SIERRITA MOUNTAINS

MILES



IDEALIZED SECTIONS SHOWING MULTIPLE THRUSTS





SKETCH SECTIONS — NOT TO SCALE

[redacted], March 1962.

INDUCED POLARIZATION, RESISTIVITY AND SELF POTENTIAL ELECTRICAL GEOPHYSICAL SURVEY CANOA AREA, TWIN BUTTES MINING DISTRICT PIMA COUNTY, ARIZONA

For

Geochemical Surveys

April 1968

By

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

TABLE OF CONTENTS

PAGE

GENERAL LOCATION

INTRODUCTION 1

CONCLUSIONS AND RECOMMENDATIONS 2

INTERPRETATION 3

IN MAP POCKET: (Total: 4 pieces)

Induced Polarization Location and Interpretation Plan

Sectional Data Sheets (All a=1,000')
Line 1 (Spreads 1 & 2)
Line 2
Line 3

INTRODUCTION

At the request of Mr. W. R. Ransone of Geochemical Surveys, Heinrichs Geoexploration Company conducted a reconnaissance induced polarization survey over parts of the Canoa Area, Twin Buttes Mining District, Pima County, Arizona. The field work was done in the interim April 9 to April 18, 1968.

Three lines were surveyed, consisting of four spreads total, giving a combined surface coverage of 43,000 feet of which 28,000 feet is "subsurface" plotted data. All four spreads were surveyed on a 1,000 foot dipole spacing and a line spacing of approximately 3,000 feet. The lines were oriented N49E-S49W off a common baseline. See the plan for details of location with respect to the land net and geochemical anomalism.

The induced polarization work was done with the dual frequency system utilizing sending frequencies of 0.15 and 1.0 Hz. The electrode configuration used was the standard collinear dipole-dipole array which on a 1,000 foot spacing typically gives resolvable penetration within the zone from about 300 to 1,200 or 1,500 feet below surface.

The purpose of the survey was to locate any important sulfide anomalism possibly related to a copper-molybdenum geochemical anomaly and to define any significant electrically responsive geologic structures.

Data are presented on sectional data sheets, one for each line, showing resistivity, percent frequency effect (PFE) and metallic conduction factor (MCF) contoured in section with self potential (SP) plotted in profile form. The Induced Polarization Location and Interpretation Plan shows the surface projected anomalism and the line locations with respect to roads and section corners, etc. This plan overlays a 1"=2,000' blow-up of a portion of the U.S.G.S. Twin Buttes Quadrangle and

also shows the aerial photograph centers flown February 2, 1968 by us and also your geochemical anomalism.

Heinrichs personnel involved in the field work were J. King, geophysical crew chief, and D. McCoy and D. Carlson, technical assistants. Report and interpretation by Chris S. Ludwig, Senior Geophysicist with the assistance of the Geoex staff.

CONCLUSIONS AND RECOMMENDATIONS

Definite sulfide related induced polarization anomalism was seen on Lines 1 and 2 and indications on Line 3. The anomalism appears to correlate with the main copper geochemical anomaly just south of the Twin Buttes Road. This geochemical anomaly is quite possibly a related halo effect derived directly from the sulfide source which causes the I.P. effects.

The other geochemical anomalism, mainly in Section 31, does not show any detectable polarization response and is therefore probably a transported anomaly, or an anomaly from an oxidized source, perhaps similar in cause to the nearby Tinaja Peak anomalism previously investigated and recorded in our report dated April 24, 1968.

The sulfide anomaly appears to have a northwest-southeast trend and perhaps weakens and deepens to the southeast. However, only Line 1 completely crossed the anomaly, Lines 2 and 3 show end of line effects which cannot be interpreted in detail because the data are not complete. On Line 1 the depth indicated to the top of anomalism and to bedrock is from about 300 to 500 feet over the strongest part of the anomaly (near 55NE). The anomalous shoulder to the southwest is somewhat deeper (500 to 750 feet) and weaker. Because of the depth of anomalism and the probability of alluvium being the majority of overlying material, it is possible that the geochemical anomalism is not a halo from this sulfide zone but was coincidently transported to this position. However, the degree of coincidence favors the halo interpretation.

The strength of anomalism on the stronger part of Line 1 indicates about 1.0 or 2.0% total sulfide by volume (2.0 to 4.0% by weight) averaged across approximately 1,000 feet width. There are weaker fringes, particularly to the southwest and the ends of Lines 2 and 3.

The strength of anomalism is such as to be of possible economic interest if the sulfides are high in copper, as the geochemical anomalism would suggest. There has been nearby drilling as evidenced in the aerial photographs and field crew observations and a detailed field investigation to determine the extent of past work may be of help. It is known that various parties have been active in the past in the immediate and nearby vicinity with I.P. and some follow-up drilling, but with little encouragement. However, with the additional aid of geochemistry to help concentrate drilling on the more apparently cupriferous portions of the large sulfide body, an economic discovery could result providing land is available or obtainable.

If such a program is considered, more detailed I.P. and perhaps detailed geochemistry are recommended with follow-up drilling.

INTERPRETATION

Line 1

Anomalous polarization response is seen from about Station 25NE to 65NE with the strongest portion from 50NE to 60NE. The northeast boundary is quite sharp whereas to the southwest the anomalous source drops down from the strongest portion as a weak flank to the southwest for 2,500 feet.

The depth to the top of the strongest (and most shallow) part of the anomaly is 300 to 500 feet dropping to about 500 to 750 feet on the southwest flank. The resistivity indicated alluvial thickness is also quite similar in depth, suggesting mineralization at or near the bedrock surface on the strongest anomaly although the deeper southwest flank source may be several hundred feet deeper than the bedrock surface.

Aside from the anomaly as described, the degree of polarization on the remainder of the line is only of a background nature. The resistivity indicates a general bedrock high sloping away from the anomaly. South of about 10SW, the resistivity shows a three layer situation, with the nearest surface layer being relatively resistive, the middle layer conductive,and the bottom layer resistive. This is interpreted as being a flattish lying volcanic sequence perhaps setting on crystalline bedrock or a relatively tight volcanic formation.

The self potential shows only minor background variations indicative of a lack of significant quantities of oxidizing sulfides within several hundred feet of the surface, in agreement with the I.P. data.

Line 2

The northeast end of this line from Station 25NE shows weak but definite deep sulfide anomalism. Probably this zone correlates with the southwest flank of the Line 1 anomalism and is at least as deep. The polarization effects south of the anomaly are background only.

The resistivity shows, in general, a three layer situation again, even over the anomaly. Over the anomaly, it is believed that the layers are likely dry alluvium over wet alluvium (or more clayey alluvium) over bedrock. At about 5SW there is a character change, south of which the layering may be a volcanic or volcanic-alluvium sequence. As on Line 1, there is no self potential anomalism.

Line 3

This line is considerably lower in resistivity than the other two lines and therefore more affected by inductive coupling interference which causes the increased PFE's with depth. After correcting for this interference, the northeast end of the line shows very weak, possibly anomalous response at a depth in excess of 1,000 feet. This possible anomalism is likely a southeast extension, or fringe, or lateral response of the sulfide zone seen on Lines 1 and 2.

The resistivity northeast of 10SW shows a relatively uniform material, probably alluvium, likely 1,200 or 1,500 feet thick. Southwest of 10SW is a three layer situation again, which is interpreted the same as the southwest ends of the other lines. Again, the self potentials are background in strength.

Respectfully submitted,

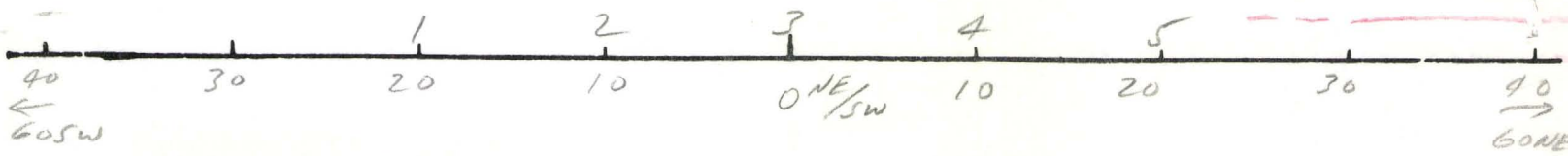
HEINRICHS GEOEXPLORATION COMPANY

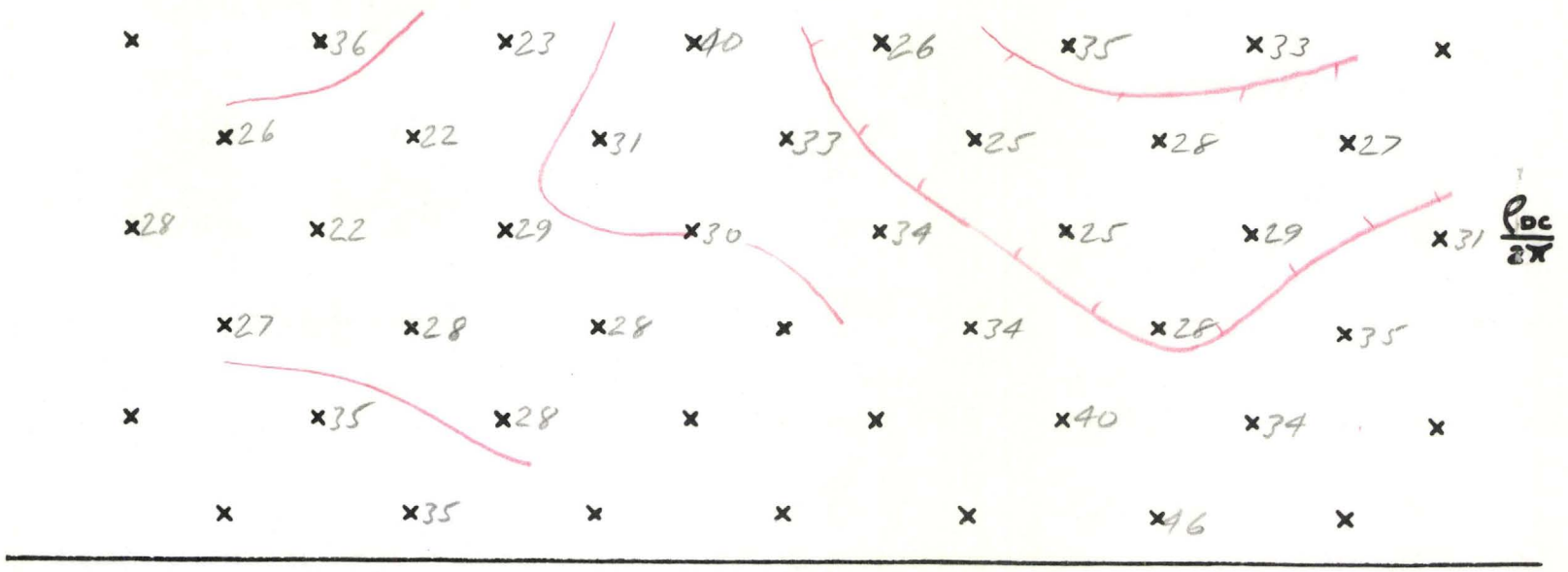
Chris S. Ludwig
Senior Geophysicist

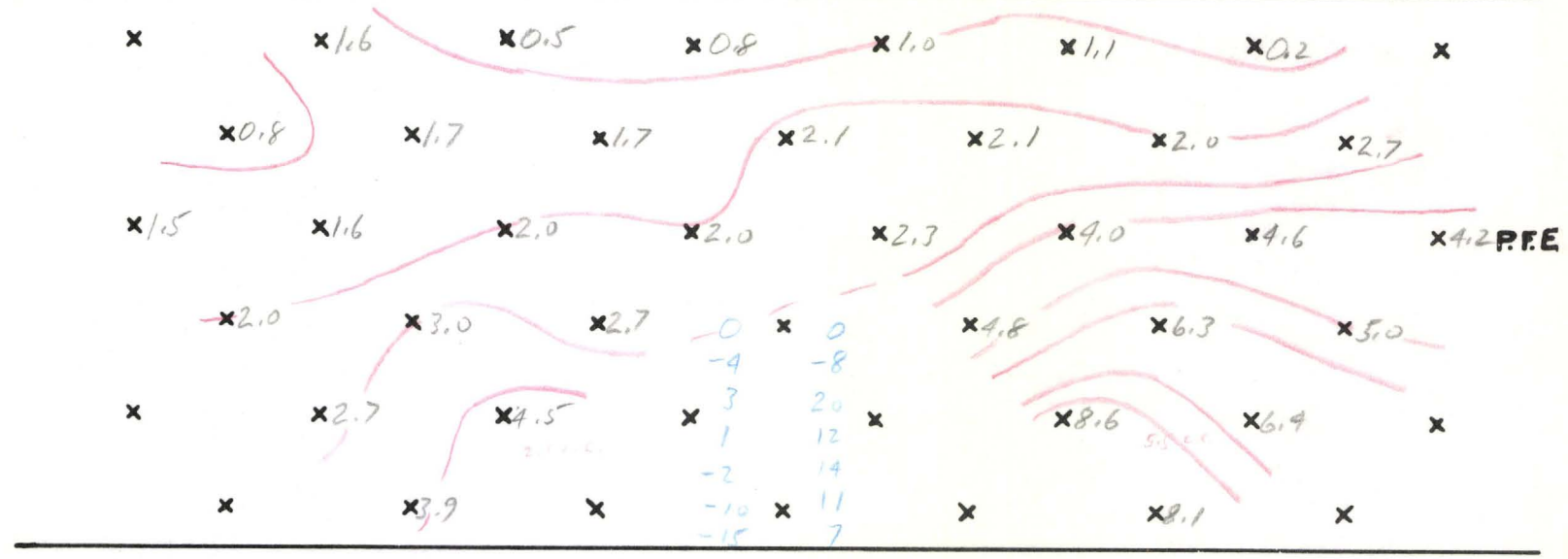
APPROVED:_____
Walter E. Heinrichs, Jr.
President & General Manager

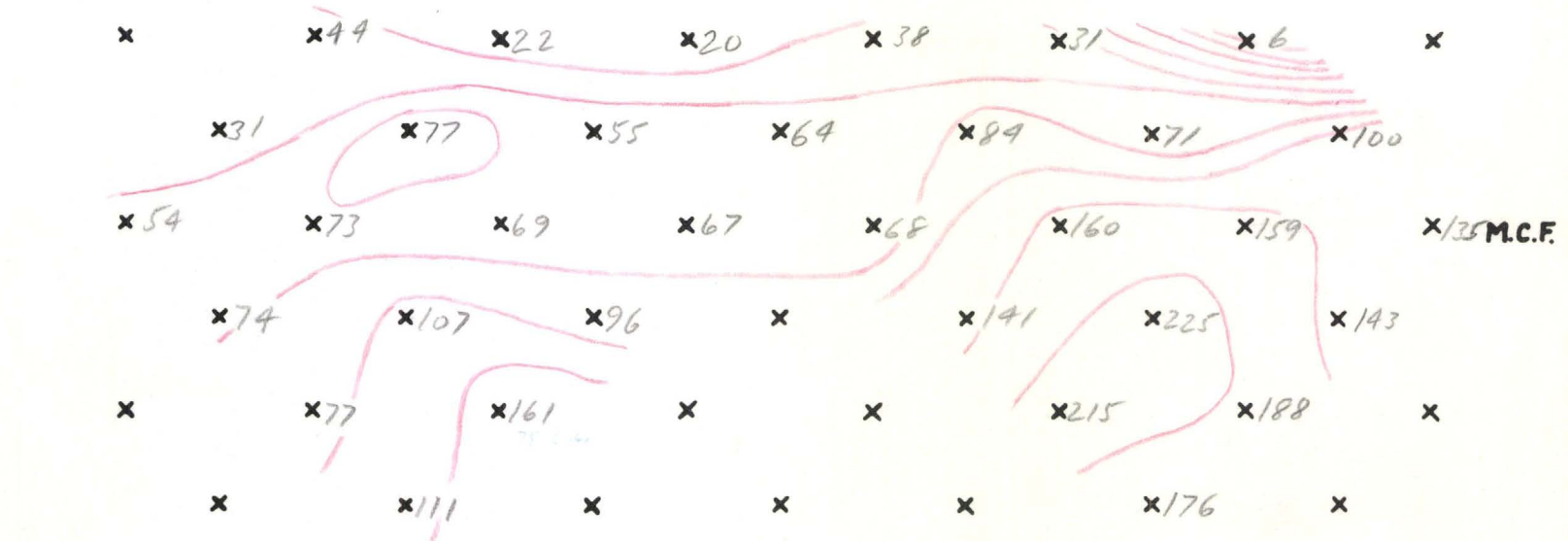
May 1, 1968
Tucson, Arizona

HEINRICHS GEOEX. INDUCED POLARIZATION SECTIONAL DATA PLOT, LOOKING N41°W









AREA Canoe - G.S. LINE 2 a = 1000' SCALE: 1" = 1000' DATE: Apr. '68

HEINRICHS GEOEXPLORATION COMPANY

INDUCED POLARIZATION SURVEY COMPUTATION SHEET

Page_____

Project Canoa - G.S. Line 2 - N½ Field date_____ Data page_____ Comp. date 4/15/68. Comp by C.S.L.

(A) Send	12	23	12	34	23	12	45	34	23	12		
(B) Receive	—	—	—	—	—	—	—	—	—	—		
(C) n separation												
(D) I	8.5	10	8.5	10	10	8.5	9	10	10	8.5		
(E) Vdc (avg)	230	175.7	46.2	231	42.6	19.31	20.1	46.4	16.87	9.80		
(F) DCcal												
(G) Kn x 10^{-3}	3	3	12	3	12	30	3	12	30	60		
(H) ρ dc=ExFxGx10^3/D	(40)	26	32+33	35	25	34	33	28	25	34		
(I) Vac Σ	230	175.0	45.6	230	42.0	19.00	202	45.8	16.33	9.42		
(J) AC noise x 2												
(K) Vac(corr) = $\sqrt{I^2 - J^2}$												
(L) AC-DC cal.												
(M) ρ dc/ρac=ExL/K												
(N) PFE=(M-1)(10^2)	0.7 0.8	1.1 1.0	2.0 2.1	1.1	2.1	2.3	0.2	2.0	4.0	4.8		
(O) MCF=(M-1)(10^5)/H	20	38	64	31	84	68	6	71	160	141		

Project_____ Line_____ Field date_____ Data page_____ Comp. date_____ Comp by_____

(A) Send	45	34	23	12	45	34	23	12		CAL	—	
(B) Receive	—	—	—	—	—	—	—	—		—	—	
(C) n separation												
(D) I	9	10	10	8.5	9	10	10	8.5		2000	—	
(E) Vdc (avg)	41.0	19.73	9.52	6.49	18.94	11.86	6.55	4.69		402	401	
(F) DCcal										.995	.499	
(G) Kn x 10^{-3}	12	30	60	105	30	60	105	168		.498	avg	
(H) ρ dc=ExFxGx10^3/D	27	29	28	40	31	35	34	46				
(I) Vac Σ	40.2	19.00	9.02	6.02	18.31	11.37	6.20	4.37		404	405	
(J) AC noise x 2												
(K) Vac (corr) = $\sqrt{I^2 - J^2}$												
(L) AC-DC cal.										1.005	1.010	
(M) ρdc/ρac =ExL/K											1.0107 avg	
(N) PFE=(M-1)(10^2)	2.7	4.6	6.3	8.6	4.2	5.0	6.4	8.1				
(O) MCF=(M-1)(10^5)/H	100	159	225	215	135	143	148	176				

HEINRICHS GEOEXPLORATION COMPANY

INDUCED POLARIZATION SURVEY COMPUTATION SHEET

Page_____

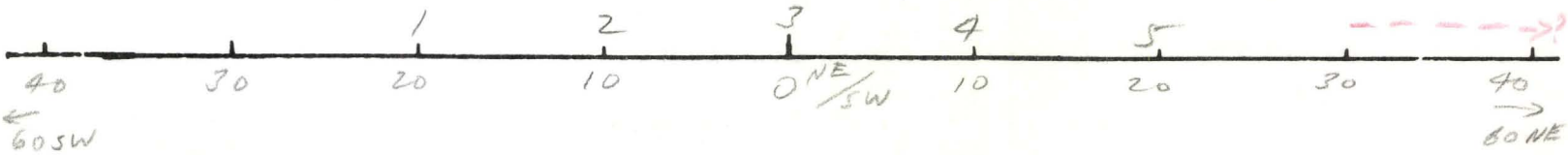
Project Canon - G. S. Line 2 - 5½ Field date_____ Data page_____ Comp. date 4/13/68. Comp by C.S.L.

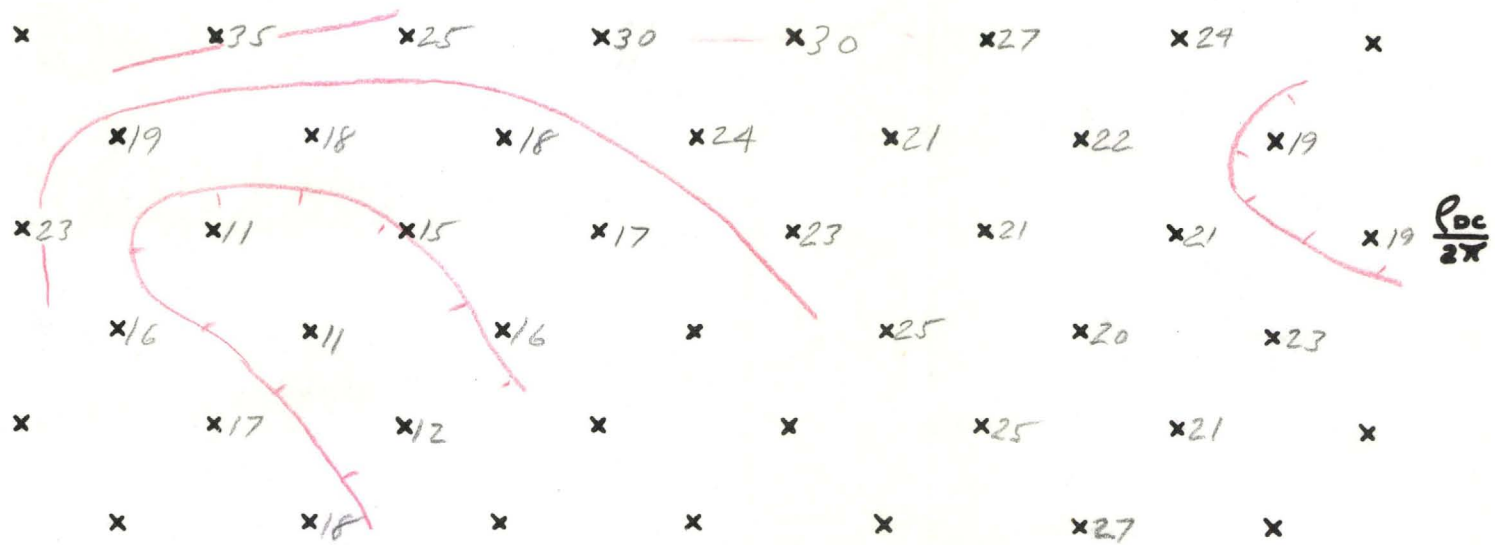
(A) Send	45	34	45	23	34	45	12	23	34	45		
(B) Receive												
(C) n separation												
(D) I	9	10	9	10	10	9	8.5	9	10	9		
(E) Vdc (avg)	157.4	269	49.8	156.0	51.4	18.17	204.2	33.7	19.29	8.58		
(F) DCcal												
(G) Kn x 10^{-3}	3	3	12	3	12	30	3	12	30	60		
(H) ρ dc=ExFxGx10^3/D	26	40	33	23	31	30	36	22	29	28		
(I) Vac Σ	157.0	268	49.0	156.0	50.8	17.90	202.0	33.3	19.00	8.40		
(J) AC noise x 2												
(K) Vac(corr) = $\sqrt{I^2 - J^2}$												
(L) AC-DC cal.												
(M) ρ dc/ρac=ExL/K	0.8	0.9	2.2	0.5	1.7	2.0	1.6	1.7	2.0	2.7		
(N) PFE=(M-1)(10^2)	1.8	1.9	3.2	1.5	2.7	3.0	2.6	2.7	3.0	3.7		
(O) MCF=(M-1)(10^5)/H				65	87	100	72	123	103	132		
				22	55	67	44	77	69	96		

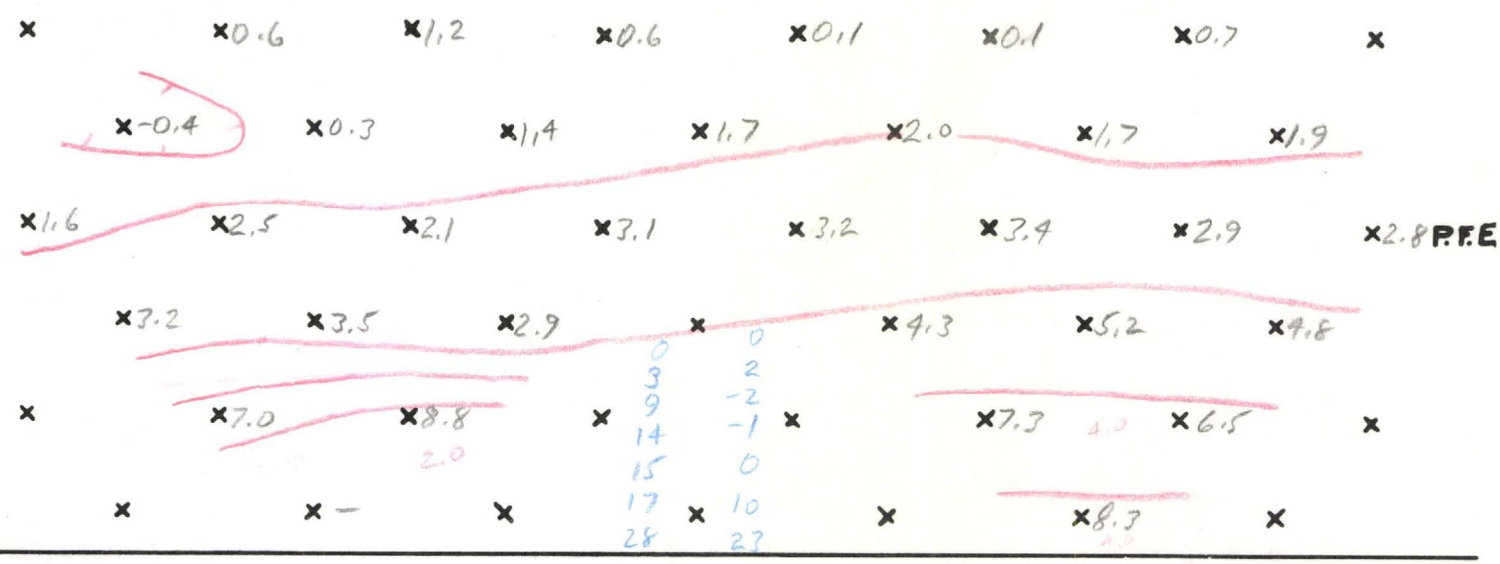
Project_____ Line_____ Field date_____ Data page_____ Comp. date_____ Comp by_____

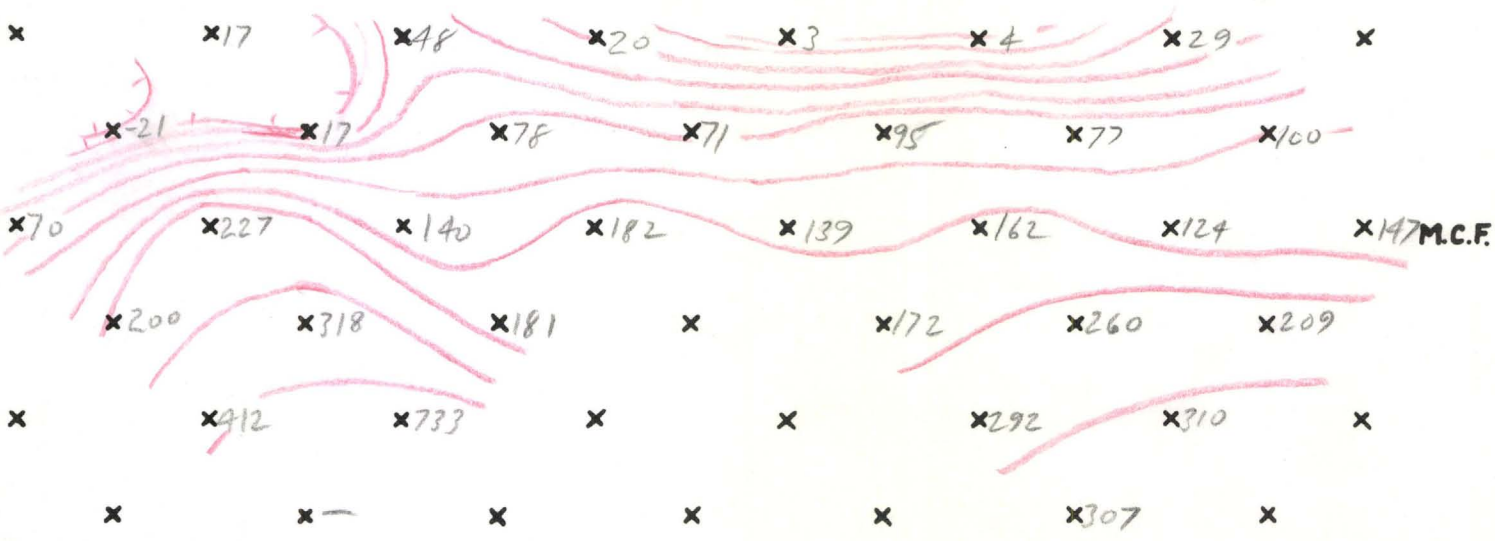
(A) Send	12	23	34	45	12	23	34	45		CAL		
(B) Receive												
(C) n separation												
(D) I	8.5	10	10	9	8.5	10	10	9		2000		
(E) Vdc (avg)	36.5	14.69	9.43	4.80	15.76	9.03	6.74	3.72		403	401	
(F) DCcal										.496	.499	
(G) Kn x 10^{-3}	12	30	60	105	30	60	105	168			.498 avg.	
(H) ρ dc=ExFxGx10^3/D	26	22	28	28	28	27	35	35				
(I) Vac Σ	36.4	14.53	9.20	4.62	15.60	8.90	6.60	3.60		404	408	
(J) AC noise x 2												
(K) Vac (corr) = $\sqrt{I^2 - J^2}$												
(L) AC-DC cal.										1.012	1.017	
(M) ρdc/ρac =ExL/K	0.8	1.6	3.0	4.5	1.5	2.0	2.7	3.9			1.015 avg.	
(N) PFE=(M-1)(10^2)	1.8	2.6	4.0	5.5	2.5	3.0	3.7	4.9			1.005 after	
(O) MCF=(M-1)(10^5)/H	69	118	143	196	89	111	106	140				
	31	73	107	161	54	74	77	111				

HEINRICHS GEOEX. INDUCED POLARIZATION SECTIONAL DATA PLOT, LOOKING N 41° W









AREA Canoe - G. S. LINE 3 a = 1000' SCALE: 1" = 1000' DATE: Apr. '68

GEOCHEMICAL SURVEYS
2505 TURTLE CREEK BOULEVARD
DALLAS, TEXAS 75219

MAILING ADDRESS
P. O. BOX 19508

TELEPHONE
LAKESIDE 1-5145

April 30, 1968

Mr. Chris Ludwig
Heinrichs Geoexploration Company
P. O. Box 5671
Tucson, Arizona 85703

Dear Mr. Ludwig:

Mr. Stewart asked that I return the enclosed photos to you.

Yours very truly,

GEOCHEMICAL SURVEYS

Sandra Dawson

(Mrs.) Sandra Dawson

Enclosure

May 1, 1968

Mr. W. R. Ransone
Geochemical Surveys
P. O. Box 19508
Dallas, Texas 75219

Dear Mr. Ransone:

Enclosed is an original and two copies of the report, Induced Polarization, Resistivity and Self Potential Electrical Geophysical Survey, Canoa Area, Twin Buttes Mining District, Pima County, Arizona.

Reproducible sepias will follow shortly.

If you have any questions, please let us know.

Very truly yours,

HEINRICHS GEOEXPLORATION COMPANY

Chris S. Ludwig
Senior Geophysicist

CSL:jc
Enclosures
Via Certified Mail
914601

RECEIPT FOR CERTIFIED MAIL—30¢

No. 914601

SENT TO W. R Ransone
STREET AND NO. Geochem Surveys P O B 19508
P. O., STATE, AND ZIP CODE Dallas, Texas

POSTMARK OR DATE 5/1/68

EXTRA SERVICES FOR ADDITIONAL FEES

Return Receipt
Shows to whom and date delivered ☑ 10¢ fee
Shows to whom, date, and where delivered ☐ 35¢ fee
Deliver to Addressee Only ☐ 50¢ fee

POD Form 3800 Mar. 1966 NO INSURANCE COVERAGE PROVIDED—NOT FOR INTERNATIONAL MAIL (See other side)

HEINRICHS GEOEX. INDUCED POLARIZATION 5-1 SECTIONAL DATA PLOT, LOOKING N

HEINRICHS GEOEX. INDUCED POLARIZATION 5-2 SECTIONAL DATA PLOT, LOOKING _____

AREA Canoe G. S. LINE 1 a = 1000 ' SCALE: 1" = 1000' DATE:

LINE a = ' SCALE: DATE:

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 237-68 4-11-68
LINE 1 HALF S SP. 1 DATE

PAGE

SEND	45	34	45	23	34	45	12	23	34	45
RECEIVE	0-10S	10-20S	—	20-30S	—	—	30-40S	—	—	—
RANGE	100	100	30	100	30	30	300	30	10	10
DC 1	820840	670670	266246	811820	180166	10592	120118	186154	628581	421370
DC 2	820840	670670	264249	811820	180166	10594	120118	186154	629586	420388
DC 3	820840	670670	261251	811820	180166	10494	120118	186154	631571	418370
DC 4			258254			10494			638571	416391
DC 5									640569	411392
DC 6										
DC 7										
DC 8										
DC AVG.	166.0	134.0	51.1	163.1	34.6	19.79	238	34.0	12.09	8.07
AC 1	83.0	67.0	25.5	81.8	17.4	9.80	120	17.0	6.01	4.00
AC 2	83.0	67.0	25.5	81.8	17.4	9.80	120	17.0	6.01	4.00
AC AVG.	166.0	134.0	51.0	163.6	34.8	19.60	240	34.0	12.02	8.00
S.P.	-1.7	-5.9	—	-1.1	—	—	+0.6	—	—	—
AC NOISE	<1	<1	—	<1	—	—	<1	—	—	—
POT RES.	2.6	2.0	—	0.7	—	—	1.1	—	—	—

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 237-68 4-1-68
LINE 1 HALF S SP. 1 DATE

PAGE

SEND	12	23	34	45	12	23	34	45	CAL	CAL
RECEIVE	40-50S				50-60S				34/24	12/24
RANGE	30	10	10	3	10	10	3	3	94S	
DC 1	196 186	701 730	370 272	256 236	971 928	480 465	224 286		1006	
DC 2	196 186	700 740	360 370	241 236	951 946	541 382	190 251		925	
DC 3	196 186	700 726	370 282	245 241	936 961	492 440	214			
DC 4		716 730	353 308	236 254	924 970	552 372				
DC 5		702 725	342 306	224 256	898	441 556				
DC 6			346 300	230 261		556			201	200
DC 7				210 268			3 CPS JAMMING		200	199
DC 8									201	200
DC AVG.	38.2	14.35	6.46	4.81	18.85	9.64	4.84		200	199
AC 1	19.1	7.11	3.20	2.36	9.40	4.80	2.40	1.90	401	399
AC 2	19.1	7.11	3.20	2.36	9.40	4.80	2.40		201	200
AC AVG.	38.2	14.22	6.40	4.72	18.80	9.60	4.80	3.80	201	
S.P.	-16.2				-5.5				402	403
AC NOISE	2.1				2.1					
POT RES.	0.9				2.6					

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 237-68 4-10-68
LINE 1 HALF N SP. 1 DATE

PAGE

SEND	12	23	12	34	23	12	45	34	23	12
RECEIVE	0-10N	10-20N	—	20-30N	—	—	30-40N	—	—	—
RANGE	100	100	100	100	30	30	100	30	30	10
DC 1	911 926	840 829	310 329	790 802	261 284	170 154	888 849	245 238	145 154	916 920
DC 2	911 926	840 829	310 329	790 802	260 284	169 155	888 849	245 238	145 154	930 901
DC 3	911 926	840 829	310 329	790 802	261 284	166 146	888 849	245 238	145 154	941 898
DC 4					261 284	160 154				942 894
DC 5					261 284					938 902
DC 6										931 921
DC 7										
DC 8										
DC AVG.	183.7	166.9	63.9	159.2	54.5	31.8	173.7	48.3	29.9	18.39
AC 1	91.2	83.0	31.8	79.1	26.8	15.6	85.8	23.6	14.4	8.81
AC 2	91.2	83.0	31.8	79.1	26.8	15.6	85.8	23.6	14.4	8.81
AC AVG.	182.4	166.0	63.6	158.2	53.6	31.2	171.6	47.2	28.8	17.62
S.P.	-3.6	-4.6	—	+11.1	—	—	+25.5			
AC NOISE	2.3	2.3	—	2.3	—	—	2.2			
POT RES.	2.6	1.2	—	2.2			2.6			

NEW CAL ON REVERSE

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT 237-68 LINE 1 HALF W. SP. 1 DATE 4-11-68

PAGE

SEND	4-5	3-4	4-5	2-3	3-4	4-5	1-2	2-3	3-4	4-5
RECEIVE	0-10 SW	10-20 SW	→	20-30 SW	→	→	30-40 SW	→	→	→
RANGE	Hi	→	→	→	Hi	→	→	→	→	→
VOLTAGE	500	470	500	500	470	500	480	500	460	500
CURRENT	7.0	6.5	7.0	8.0	6.5	7.0	9.0	8.0	6.5	7.0
SEND	1-2	2-3	3-4	4-5	1-2	2-3	3-4	4-5	CAL	CAL
RECEIVE	40-50 SW	→	→	→	50-60 SW	→	→	→	3-4	1-2
RANGE	Hi	→	→	→	Hi	→	→	→	Hi	Hi
VOLTAGE	480	500	470	500	480	500	470	500	160	120
CURRENT	9.0	8.0	6.5	7.0	9.0	8.0	6.5	7.0	2.0	2.0

FREQUENCIES .15Hz 1.0Hz

SENDER NO. 6644-5

OPERATOR McCoy

RECEIVER NO. 15674

OPERATOR King

COMMENTS:

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT 237-68 LINE / HALF N SP. / DATE 4-10-68

PAGE

SEND	1-2	2-3	1-2	3-4	2-3	1-2	4-5	3-4	2-3	1-2
RECEIVE	0-10 NE	10-20	→	20-30	NE	→	~~30~~ 40	30-40	NE	→
RANGE	Hi	→	→	→	→	Hi	→	→	→	→
VOLTAGE	480	440	480	460	440	480	500	480	500	480
CURRENT	9.0	7.0	9.0	6.0	7.0	9.0	7.0	6.5	8.0	9.0
SEND	4-5	3-4	2-3	1-2	4-5	3-4	2-3	1-2	CAL	CAL
RECEIVE	40-50	NE	→	→	50-60	NE	→	→	2-3	4-5
RANGE	Hi	→	→	→	Hi	→	→	→	Hi	Hi
VOLTAGE	500	470	500	480	500	480	500	480	140	160
CURRENT	7.0	6.5	8.0	9.0	7.0	6.5	8.0	9.0	2.0	2.0

FREQUENCIES .15Hz 1.0Hz

SENDER NO. 6649-S

OPERATOR McCoy

RECEIVER NO. 1587-R

OPERATOR Kling

COMMENTS:

FUNNY DAY - EVERYTHING WORKS!

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 237-68 4-10-68
LINE 1 HALF N SP. 1 DATE

PAGE

SEND	45	34	23	12	45	34	23	12	CAL	CAL
RECEIVE	40-50 N				50-60 N				2A/23	2A/45
RANGE	100	30	10	10	30	10	10	10		
DC 1	326 312	126 130	9.78 901	620652	126 139	630602	460 520	390 330		
DC 2	320 312	126 130	978 911	618 658	126 139	628 600	468 510	390 321		
DC 3	320 312	126 130	960 914	621652	126 139	628 600	468 520	400 326		
DC 4			975 910	624650		631601	468 521	395 331		
DC 5			971 925	618 642		630598	458 510	396 320		
DC 6				622650			466 528	398 321	200	200
DC 7								401 311	201	200
DC 8									200	200
DC AVG.	63.2	25.6	18.83	12.71	26.5	12.30	9.81	7.19	201	200
AC 1	30.8	12.4	8.92	6.00	12.5	5.78	4.55	3.30	401	400
AC 2	30.8	12.4	8.92	6.00	12.5	5.78	4.56	3.30	200	200
AC AVG.	61.6	24.8	17.84	12.00	25.0	11.56	9.11	6.60	200	200
S.P.	-10.8				-2.1				400	400
AC NOISE	1.2				1.2					
POT RES.	2.2				0.7					

HEINRICHS GEOEXPLORATION COMPANY

INDUCED POLARIZATION SURVEY COMPUTATION SHEET

Page_____

Project G.S. Canada Line 1 - 5½ Field date_____ Data page_____ Comp. date 4/12/68 Comp by C.S.L.

(A) Send	45	34	45	23	34	45	12	23	34	45		
(B) Receive	—	—	—	—	—	—	—	—	—	—		
(C) n separation												
(D) I	7	6.5	7	8	6.5	7	9	8	6.5	7		
(E) Vdc (avg)	166.0	134.0	51.1	163.1	34.6	19.79	238	34.0	12.09	8.07		
(F) DCcal												
(G) Kn x 10^{-3}	3	3	12	3	12	30	3	12	30	60		
(H) ρ dc=ExFxGx10^3/D	36	31	44	31	32	42	40	26	28	35		
(I) Vac Σ	166.0	134.0	51.0	163.6	34.8	19.60	240	34.0	12.02	8.00		
(J) AC noise x 2												
(K) Vac(corr) = $\sqrt{I^2 - J^2}$												
(L) AC-DC cal.												
(M) ρ dc/ρac=ExL/K												
(N) PFE=(M-1)(10^2)	0.2	0.2	0.4	-0.1	-0.3	1.2	-0.6	0.2	0.8	1.1		
(O) MCF=(M-1)(10^5)/H				-3	-9	29	-15	8	29	31		

Project_____ Line_____ Field date_____ Data page_____ Comp. date_____ Comp by_____

(A) Send	12	23	34	45	12	23	34	45		CAL	—	
(B) Receive	—	—	—	—	—	—	—	—		—	—	
(C) n separation												
(D) I	9	8	6.5	7	9	8	6.5	7		2000	—	
(E) Vdc (avg)	38.2	14.35	6.46	4.81	18.85	9.64	4.84	—		401	399	
(F) DCcal										1.499	.501	
(G) Kn x 10^{-3}	12	30	60	105	30	60	105	168		0.500		
(H) ρ dc=ExFxGx10^3/D	25	27	30	36	31	36	39	46				
(I) Vac Σ	38.2	14.22	6.40	4.72	18.80	9.60	4.80	3.80		402	400	
(J) AC noise x 2												
(K) Vac (corr) = $\sqrt{I^2 - J^2}$												
(L) AC-DC cal.										1.002	1.003	
(M) ρdc/ρac =ExL/K											1.0025	
(N) PFE=(M-1)(10^2)	0.2	1.2	1.2	2.2	0.5	0.7	1.1	X				
(O) MCF=(M-1)(10^5)/H	8	44	40	61	16	19	28	X				

HEINRICHS GEOEXPLORATION COMPANY

INDUCED POLARIZATION SURVEY COMPUTATION SHEET

Page_____

Project G.S. Canon Line 1 - N½ Field date_____ Data page_____ Comp. date 9/12/68. Comp by C. S.L.

(A) Send	12	23	12	34	23	12	45	34	23	12		
(B) Receive												
(C) n separation												
(D) I	9	7	9	6	7	9	7	6.5	8	9		
(E) Vdc (avg)	183.7	166.9	63.9	159.2	54.5	31.8	173.7	48.3	29.9	18.39		
(F) DCcal	.500											
(G) Kn x 10^{-3}	3	3	12	3	12	30	3	12	30	60		
(H) ρ dc=ExFxGx10^3/D	31	36	43	40	47	53	37	45	56	61		
(I) Vac Σ	182.4	166.0	63.6	158.2	53.6	31.2	171.6	47.2	28.8	17.62		
(J) AC noise x 2												
(K) Vac(corr) = $\sqrt{I^2 - J^2}$												
(L) AC-DC cal.	.999					→	1.005					
(M) ρ dc/ρac=ExL/K												
(N) PFE=(M-1)(10^2)	0.6	0.403	0.4	0.5	1.6	1.8	1.7	2.8	4.3	4.9		
(O) MCF=(M-1)(10^5)/H	13	8	9	13	34	34	46	62	77	80		

Project_____ Line_____ Field date_____ Data page_____ Comp. date_____ Comp by_____

(A) Send	45	34	23	12	45	34	23	12		C+C		
(B) Receive												
(C) n separation												
(D) I	7	6.5	8	9	7	6.5	8	9		2000		
(E) Vdc (avg)	63.2	25.6	18.83	12.71	26.5	12.30	9.81	7.19		401	400	400
(F) DCcal								→		.999	.500	
(G) Kn x 10^{-3}	12	30	60	105	30	60	105	168			.499	.500
(H) ρ dc=ExFxGx10^3/D	54	59	71	74	57	57	64	67				
(I) Vac Σ	61.6	24.8	17.84	12.00	25.0	11.56	9.11	6.60		400	400	402
(J) AC noise x 2												
(K) Vac (corr) = $\sqrt{I^2 - J^2}$												
(L) AC-DC cal.								→		.998	1.000	1.005
(M) ρdc/ρac =ExL/K											.999	
(N) PFE=(M-1)(10^2)	3.1	3.7	6.1	6.14	6.5	6.9	8.2	9.5				
(O) MCF=(M-1)(10^5)/H	57	63	86	86	114	121	128	142				

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 237-68 4-15-68
LINE 3 HALF N SP. 1 DATE

PAGE

SEND	12	23	12	34	23	12	45	34	23	12
RECEIVE	0-10 N	10-20N	—	20-30N	—	—	30-40W	—	—	—
RANGE	100	100	30	100	30	10	100	30	10	10
DC 1	530535	211 211	124 125	910 925	111 138	506 509	775 785	195 180	410 574	266288
DC 2	530535	210 212	126 121	710 925	116 131	476 509	775 785	195 181	506 480	246 258
DC 3	530535	210 210	126 126	910 925	119 135	501 470	775 785	194 181	501 480	272 266
DC 4		212 212	120 129		115 135	492 510			491 501	296 291
DC 5						472 505			474 489	276 289
DC 6									510 472	266 260
DC 7										292 271
DC 8										
DC AVG.	106.5	42.2	24.87	183.5	25.06	9.86	156.0	37.5	9.81	5.46
AC 1	55.0	22.0	12.6	94.0	12.6	4.90	78.4	18.6	4.80	2.65
AC 2	55.0	22.0	12.6	94.0	12.6	4.90	78.4	18.7	4.80	2.65
AC AVG.	110.0	44.0	25.2	188.0	25.2	9.80	156.8	37.3	9.60	5.30
S.P.	+2.3	-4.4	—	+1.0	—	—	+1.2	—	—	—
AC NOISE	4.3	2.2	—	3.2	—	—	2.7	—	—	—
POT RES.	2.7	1.0	—	1.4	—	—	1.3	—	—	—

CAL 9-16-68

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT 237-68 LINE 3 HALF NE SP. 1 DATE 4-15-68

PAGE

SEND	1-2	2-3	1-2	3-4	2-3	1-2	4-5	3-4	2-3	1-2
RECEIVE	0-10 E	10-20 E	→	20-30 E	→	→	30-40 E	→	→	→
RANGE	Hi	→	→	→	→	Hi	→	→	→	→
VOLTAGE	480	500	480	440	500	480	460	440	500	480
CURRENT	6.5	7.0	6.5	10.0	7.0	6.5	9.5	10.2	7.0	6.5
SEND	4-5	3-4	2-3	1-2	4-5	3-4	2-3	1-2	CAL	CAL
RECEIVE	40-50 E	→	→	→	50-60 E	→	→	→	2-3	4-5
RANGE	Hi	→	→	→	Hi	→	→	→	Hi	Hi
VOLTAGE	460	440	500	480	460	440	500	480	170	100
CURRENT	9.5	10.0	7.0	6.5	9.5	10.0	7.0	6.5	2.0	2.0

FREQUENCIES .15 Hz 1.0 Hz

SENDER NO. 6694-S

OPERATOR McCoy

RECEIVER NO. 1567A-R

OPERATOR King

COMMENTS: Line Voltage a little shakey!

Cal for 4-16-68

on the back of sheet #1

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 237-68 4-15-68
LINE 3 HALF N SP. 1 DATE

PAGE

SEND	45	34	23	12	45	34	23	12	CAL	CAL
RECEIVE	40-50 N	—	—	—	50-60 N	—	—	—	2A/23	2A/45
RANGE	30	10	3	3	16	16	3	3		
DC 1	146 158	680 776	229 256	151 174	625 560	365 396	131 155	115 89		
DC 2	145 155	665 778	225 249	139 175	631 575	371 386	134 148	134 76		
DC 3	146 156	664 762	234 248	145 165	612 579	380 376	136 151	110 104		
DC 4	144 160	682 755	221 246	152 171	541 658	385 361	126 148	98 121		
DC 5		690 741	235 226	144 179	540 650	390 380	146 124	110 104		
DC 6					556 664	370 381	144 156	126 95	202	200
DC 7							116 155	106 120	201	202
DC 8								85 124	202	200
DC AVG.	30.2	14.39	4.75	3.18	11.89	7.57	2.82	2.14	201	202
AC 1	15.0	7.08	2.28	1.50	5.85	3.65	1.34	1.00	403	402
AC 2	15.0	7.08	2.29	1.50	5.85	3.66	1.34		209	209
AC AVG.	30.0	14.16	4.57	3.00	11.70	7.31	2.68	2.00	209	209
S.P.	+10.4	—	—	—	+12.8	—	—	—	418	418
AC NOISE	1.1	—	—	—	1.1	—	—	—	SEE	CAL
POT RES.	1.1	—	—	—	2.8	—	—	—	4-16-68	

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 237-68 4-16-68
LINE 3 HALF S SP. 1 DATE

PAGE

SEND	45	34	45	23	34	45	12	23	34	45
RECEIVE	0-10S	10-20S	—	20-30S	—	—	30-40S	—	—	—
RANGE	300	300	30	100	30	10	100	30	10	3
DC 1	104 101	116 126	196 185	608 558	150 150	506 560	771 752	101 106	520 518	256 256
DC 2	104 101	116 126	190 184	608 558	156 150	498 565	772 751	101 105	525 510	241 242
DC 3	109 101	116 126	191 185	608 558	150 150	491 570	776 750	101 105	526 511	244 255
DC 4			195 184			490 570	776 750		520 514	256 254
DC 5										267 238
DC 6										278 234
DC 7										
DC 8										
DC AVG.	205	242	37.6	116.6	30.0	10.61	152.5	20.64	10.36	5.13
AC 1	104	125	19.0	58.8	15.1	5.25	77.4	10.5	5.18	2.55
AC 2	104	125	19.0	58.8	15.1	5.26	77.4	10.5	5.18	2.54
AC AVG.	208	250	38.0	117.6	30.2	10.51	154.8	21.00	10.36	5.09
S.P.	+3.2	+6.2	—	+5.2	—	—	+1.4	—	—	—
AC NOISE	<.1	<.1	—	<.1	—	—	<.1	—	—	—
POT RES.	1.3	1.1	—	1.7	—	—	1.4	—	—	—

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT 237-68 LINE 3 HALF SW SP. 1 DATE 4-16-68

PAGE

SEND	4-5	3-4	4-5	2-3	3-4	4-5	1-2	2-3	3-4	4-5
RECEIVE	0-10 SW	10-20 SW →		20-30 SW →			30-40 SW →			
RANGE	Hi									
VOLTAGE	500	440	460	500	440	460	480	500	440	460
CURRENT	10.0	10.0	9.5	7.0	10.0	9.5	6.5	7.0	10.0	9.5
SEND	1-2	2-3	3-4	4-5	1-2	2-3	3-4	4-5	CAL	CAL
RECEIVE	40-50	SW →			50-60	SW →			3-4	1-2
RANGE	Hi	→			Hi	→			Hi	Hi
VOLTAGE	480	500	440	460	480	500	440	460	90	140
CURRENT	6.5	7.0	10.0	9.5	6.5	7.0	10.0	9.5	2.0	2.0

FREQUENCIES .15Hz 1.0Hz

SENDER NO. 6644-S

OPERATOR McCoy

RECEIVER NO. 1567-R

OPERATOR Kling

COMMENTS:

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 237-68 4-16-68
LINE 3 HALF S SP. 1 DATE

PAGE

SEND	12	23	34	45	12	23	34	45	CAL	CAL
RECEIVE	40-505	—	—	—	50-605	—	—	—	2A/34	2A/12
RANGE	30	3	3	3	10	3	3	3		
DC 1	100 104	258 254	201 181	118 104	540 448	190 176	139 185			
DC 2	101 104	261 255	208 172	125 101	558 431	181 186	148 185			
DC 3	101 104	270 246	175 206	114 120	564 316	191 198	146 190			
DC 4	101 104	286 238	172 204	101 126	506 488	199 209	130 200			
DC 5		275 256	169 189	93 129	512 470	152 215	120 210			
DC 6		266 250	178 214	94 130	591 448	144 226	198 138		202	201
DC 7			164 211	91 141	560 430		188 126		200	202
DC 8									202	201
DC AVG.	20.49	5.17	3.75	2.23	9.95	3.64	3.27		200	202
AC 1	10.5	2.58	1.85	1.05	5.00	1.80	1.56	1.02	402	403
AC 2	10.5	2.57	1.85	1.05	5.00	1.80	1.56		206	205
AC AVG.	21.0	5.15	3.70	2.10	10.00	3.60	3.12	2.04	206	205
S.P.	+2.0	—	—	—	+10.6	—	—	—	+12	+10
AC NOISE	2.1	—	—	—	2.1	—	—	—		
POT RES.	2.2	—	—	—	0.9	—	—	—		

HEINRICHS GEOEXPLORATION COMPANY

INDUCED POLARIZATION SURVEY COMPUTATION SHEET Page_____

Project Canoe - G.S. Line 3 - N½ Field date_____ Data page_____ Comp. date_____. Comp by C.S.L.

(A) Send	12	23	12	34	23	12	45	34	23	12		
(B) Receive												
(C) n separation												
(D) I	6.5	7	6.5	10	7	6.5	9.5	10	7	6.5		
(E) Vdc (avg)	106.5	42.2	24.87	183.5	25.06	9.86	156.0	37.5	9.81	5.146		
(F) DCcal												
(G) Kn x 10^{-3}	3	3	12	3	12	30	3	12	30	60		
(H) ρ dc=ExFxGx10^3/D	24	28?	23	27	21	23	24	22	21	25		
(I) Vac Σ	110.0	44.0	25.2	184.0	25.20	9.80	156.8	37.3	9.60	5.30		
(J) AC noise x 2												
(K) Vac(corr) = $\sqrt{I^2 - J^2}$												
(L) AC-DC cal.	1.039						1.012					
(M) ρ dc/ρac=ExL/K												
(N) PFE=(M-1)(10^2)	0.6	-0.4	2.5	1.4	3.3	4.5	0.7	1.7	3.4	4.3		
(O) MCF=(M-1)(10^5)/H				52	157	196	29	77	162	172		

Project_____ Line_____ Field date 4 Data page_____ Comp. date_____ Comp by_____

(A) Send	45	34	23	12	45	34	23	12		CAL		
(B) Receive												
(C) n separation												
(D) I	9.5	10	7	6.5	9.5	10	7	6.5		2000		
(E) Vdc (avg)	30.2	14.39	4.75	3.18	11.89	3.57	2.82	2.14		403	402	405
(F) DCcal										1.496	1.495	1.494
(G) Kn x 10^{-3}	12	30	60	105	30	60	105	168			1.496	
(H) ρ dc=ExFxGx10^3/D	19	21	20	25	19	23	21	27				
(I) Vac Σ	30.0	14.19	4.57	3.00	11.70	3.31	2.68	2.00		418	418	410
(J) AC noise x 2												
(K) Vac (corr) = $\sqrt{I^2 - J^2}$												
(L) AC-DC cal.										1.037	1.040	1.012
(M) ρdc/ρac =ExL/K											1.039	
(N) PFE=(M-1)(10^2)	1.9	2.6	5.2	7.3	2.8	4.8	6.5	8.3				
(O) MCF=(M-1)(10^5)/H	100	124	260	292	147	209	310	307				

HEINRICHS GEOEXPLORATION COMPANY
INDUCED POLARIZATION SURVEY COMPUTATION SHEET

Page_____

Project Canon - G.S. Line 3 - 5½ Field date_____ Data page_____ Comp. date 4/17/68 Comp by C.C.L.

(A) Send	45	34	45	23	34	45	12	23	34	45		
(B) Receive												
(C) n separation												
(D) I	10	10	9.5	7	10	9.5	6.5	7	10	9.5		
(E) Vdc (avg)	205	242	37.6	116.6	30.0	10.61	152.5	20.64	10.36	5113		
(F) DCcal												
(G) Kn x 10^{-3}	3	3	12	3	12	30	3	12	30	60		
(H) ρ dc=ExFxGx10^3/D	31 30	36 30	(24)	25	18	17	35	18	15	16		
(I) Vac Σ	208	250	38.0	117.6	30.2	10.51	154.8	21.00	10.36	5.09		
(J) AC noise x 2												
(K) Vac(corr) = $\sqrt{I^2 - J^2}$												
(L) AC-DC cal.												
(M) ρ dc/ρac=ExL/K												
(N) PFE=(M-1)(10^2)	0.6 0.1	-1.2 0.6	1.0 1.7	1.2	1.4	3.1	0.6	0.3	2.1	2.9		
(O) MCF=(M-1)(10^5)/H	3	20	71	48	78	182	17	17	140	181		

Project_____ Line_____ Field date_____ Data page_____ Comp. date_____ Comp by_____

(A) Send	12	23	34	45	12	23	34	45		CAL		
(B) Receive												
(C) n separation												
(D) I	6.5	7	10	9.5	6.5	7	10	9.5		2000		
(E) Vdc (avg)	20.49	5.17	3.75	2.257	9.95	3.64	3.27			402	403	
(F) DCcal										.498	.496	
(G) Kn x 10^{-3}	12	30	60	105	30	60	105	168			.497 avg	
(H) ρ dc=ExFxGx10^3/D	19	11	11	12	23	16	17	18				
(I) Vac Σ	21.00	5.15	3.70	2.10	10.00	3.60	3.12	2.04		412	410	
(J) AC noise x 2												
(K) Vac (corr) = $\sqrt{I^2 - J^2}$												
(L) AC-DC cal.										1.025	1.017	
(M) ρdc/ρac =ExL/K											1.021 avg	
(N) PFE=(M-1)(10^2)	-0.4	2.5	3.5	8.8	1.6	3.2	7.0	X				
(O) MCF=(M-1)(10^5)/H	-21	227	318	733	70	200	412	X				

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 237-68 4-18-68
LINE 2 HALF NE SP. 2 DATE

PAGE

SEND	12	23	12	34	23	12	45	34	23	12
RECEIVE	70-80 NE	80-90 NE	—	90-100 NE	—	—	100-110 NE	—	—	—
RANGE	300	300	100	300	100	30	100	100	30	10
DC 1	106 106	115 116	320 341	121 126	410 400	162 189	830 829	370 356	175 195	87 97
DC 2	106 106	115 116	320 341	121 126	418 391	156 194	831 824	371 356	175 195	83 99
DC 3	106 106	115 116	320 341	121 126	421 390	154 196	836 820	371 350	175 195	83 97
DC 4					422 390	156 202	835 821	370 350	175 195	87 94
DC 5										88 92
DC 6										91 92
DC 7										90 92
DC 8										
DC AVG.	212	231	66.1	247	81.2	34.9	165.7	72.1	37.0	18.19
AC 1	105	115	32.0	125	40.5	16.9	83.1	36.0	18.4	8.70
AC 2	105	115	32.0	125	40.5	16.9	83.1	36.0	18.4	8.70
AC AVG.	210	230	64.0	250	81.0	33.8	166.2	72.0	36.8	17.40
S.P.	-4.3	+20.9	—	+9.2	—	—	-10.8	—	—	—
AC NOISE	<.1	<.1	—	<.1	—	—	<.1	—	—	—
POT RES.	2.7	2.3	—	2.8	—	—	2.0	—	—	—

HEINRICHS GEOEXPLORATION CO. PROJECT 237-68 1-18-68

I.P. RECEIVER NOTES WINDY LINE 2 HALF NE SP. 2 DATE

PAGE

SEND	45	34	23	12	45	34	23	12	CAL	CAL
RECEIVE	110-120	NE	—	—	120-130	NE	—	—	2A/23	2A/45
RANGE	30	30	10	10	30	10	10	3	300	300
DC 1	209 212	135 134	846 825	435 455	93 102	706 765	486 560	285 288		
DC 2	209 212	135 133	856 811	430 460	95 104	715 749	472 561	286 264		
DC 3	210 214	135 135	858 815	438 465	95 104	732 736	480 581	296 256		
DC 4	210 210	134 135	851 815	430 468	96 100	745 732	491 541	264/271		
DC 5				426 460	100 96	735 732	489 541	}	204	202
DC 6						736 731	500 425	}	204	201
DC 7								NOISE	204	202
DC 8									204	201
DC AVG.	42.1	26.9	16.70	8.93	1.954	14.71	10.25	5.63?	408	403
AC 1	21,1	13.5	8.25	4.25	1.00	7.26	5.10	2.68	205	204
AC 2	21.1	13.5	8.26	4.26		7.27	5.12	2.70	205	204
AC AVG.	42.2	27.0	16.51	8.51	2.000	14.53	10.22	5.38	410	408
S.P.	+3.7	—	—	—	-2.8	—	—	—		
AC NOISE	2.1	—	—	—	2.1	—	—	—		
POT RES.	2.4	—	—	—	1.8	—	—	—		

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT 237 - 68 LINE 1 HALF NE SP. 2 DATE 4-18-68

PAGE

SEND	1-2	2-3	1-2	3-4	2-3	1-2	4-5	3-4	2-3	1-2
RECEIVE	70-80 NE	80-90	→	90-100 NE	→	→	100-110 NE	→	→	→
RANGE	Hi	→	→	→	→	Hi	→	→	→	→
VOLTAGE	480	420	480	380	420	460	470	380	420	460
CURRENT	9.0	10.0	9.0	10.0	10.0	9.0	6.0	10.0	10.0	9.0
SEND	4-5	3-4	2-3	1-2	4-5	3-4	2-3	1-2	CAL	CAL
RECEIVE	110-120 NE	→	→	→	120-130 NE	→	→	→	2-3	4-5
RANGE	Hi	→	→	→	Hi	→	→	→	Hi	Hi
VOLTAGE	470	380	420	460	460	380	420	460	100	150
CURRENT	6.0	10.0	10.0	9.0	6.0	10.0	10.0	9.0	2.0	2.0

FREQUENCIES .15Hz 1.0Hz

SENDER NO. 6644-S

OPERATOR McCoy

RECEIVER NO. 15874-R

OPERATOR King

COMMENTS: LINE LAID OUT & READY TO ROLL at 12:00 PM.

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 237-68 4-18-68
LINE 6 HALF SW SP. 2 DATE

PAGE

SEND	45	54	45	23	34	45	12	23	34	45
RECEIVE	60-70N	50-60N		40-50N			30-40N			
RANGE	100	300	30	300	100	30	300	100	30	10
DC 1	698 685	121 114	225 208	136 140	470 490	121 145	129 126	550 526	235 254	760 775
DC 2	698 685	121 114	226 206	136 140	470 490	121 145	124 126	556 526	238 252	761 770
DC 3	698 685	121 114	226 206	136 140	470 490	121 145	124 126	550 526	246 250	760 776
DC 4									241 249	749 800
DC 5										721 811
DC 6										
DC 7										
DC 8										
DC AVG.	13.83	235	43.3	276	96.0	26.6	250	107.6	49.1	15.33
AC 1	6.90	116	21.0	134	46.1	12.6	120	51.5	23.6	7.38
AC 2	6.90	116	21.0	134	46.1	12.6	120	51.5	23.6	7.39
AC AVG.	13.80	232	42.0	268	92.2	25.2	240	103.0	47.2	14.77
S.P.	+1.0	+8.6	—	+13.3	—	—	+4.5	—	—	—
AC NOISE	2.1	2.1	—	2.1	—	—	2.1	—	—	—
POT RES.	2.1	2.7	—	2.8	—	—	2.9	—	—	—

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 237-68 4-18-68
LINE 1 HALF SW SP. 2 DATE

PAGE

SEND	12	23	34	45	12	23	34	45	CAL	CAL
RECEIVE	20-30N				10-20N				2A/34	2A/12
RANGE	100	30	30	10	30	30	10	3	300	
DC 1	355 316	221 195	111 111	345 420	170 166	126 127	78 67			
DC 2	360 301	225 192	111 111	360 406	180 166	121 145	83 61			
DC 3	365 300	226 192	112 110	370 404	186 154	114 151	79 66			
DC 4	371 298	226 192	114 108	376 402	194 145	108 156	83 62			
DC 5				361 396		104 164	74 73		203	201
DC 6				380 372			73 77		204	201
DC 7							67 82		203	201
DC 8							62 87		204	201
DC AVG.	66.7	41.8	22.2	7.69	34.4	26.0	14.68		407	402
AC 1	32.0	20.0	10.6	3.66	16.4	12.6	7.10	2.65	205	202
AC 2	32.0	20.0	10.7	3.67	16.4	12.6	7.12	2.66	205	204
AC AVG.	64.0	40.0	21.3	7.33	32.8	25.2	14.22	5.31	410	408
S.P.	+3.7				+41.0					
AC NOISE	2.1				2.1					
POT RES.	1.3				2.8					

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT 237-68 LINE 1 HALF SW SP. 2 DATE 4-18-68

PAGE

SEND	4-5	3-4	4-5	2-3	3-4	4-5	1-2	2-3	3-4	4-5
RECEIVE	70-60 SW	60-50 SW	→	50-40 SW	→	→	40-30 SW	→	→	
RANGE	Hi	→	→	→	→	Hi	→	→	→	→
VOLTAGE	460	380	460	410	370	450	460	410	370	450
CURRENT	6.0	10.0	6.0	10.0	10.0	6.0	9.0	10.0	10.0	6.0
SEND	1-2	2-3	3-4	4-5	1-2	2-3	3-4	4-5	CAL	CAL
RECEIVE	30-20 SW	→	→	→	20-10 SW	→	→	→	3-4	1-2
RANGE	Hi	→	→	→	Hi	→	→	→	Hi	Hi
VOLTAGE	460	410	370	450	460	410	370	450	90	120
CURRENT	9.0	10.0	10.0	6.0	9.0	10.0	10.0	6.0	2.0	2.0

FREQUENCIES .15 Hz 1.0 Hz

SENDER NO. 6644-5

OPERATOR McCoy

RECEIVER NO. 1527A R

OPERATOR King

COMMENTS: RADIO WORKS - SENDER SENDS - RECEIVER RECEIVES - GENERATORS GENERATE - OPERATORS OPERATE POT MAN POTTED AND WE GOT THE LINE COMPLETED

HEINRICHS GEOEXPLORATION COMPANY

INDUCED POLARIZATION SURVEY COMPUTATION SHEET

Page_____

Project Lawn - G.S. Line 2 - S 2 NE¼ Field date_____ Data page_____ Comp. date 4/19/68 Comp by C.S.L.

(A) Send	12	23	12	34	23	12	45	34	23	12		
(B) Receive												
(C) n separation												
(D) I	9	10	9	10	10	9	6	10	10	9		
(E) Vdc (avg)	212	231	66.1	247	81.2	34.9	165.7	72.1	37.0	18.19		
(F) DCcal												
(G) Kn x 10^{-3}	3	3	12	3	12	30	3	12	30	60		
(H) ρ dc=ExFxGx10^3/D	(85)	(84)	(43)	37	48	57	41	43	55	60		
(I) Vac Σ	210	230	64.0	250	81.0	33.8	166.2	72.0	36.8	17.90		
(J) AC noise x 2												
(K) Vac(corr) =$\sqrt{I^2 - J^2}$												
(L) AC-DC cal.												
(M) ρ dc/ρac=ExL/K												
(N) PFE=(M-1)(10^2)	1.9 2.2	(1.3)	(4.2)	-0.3	1.1	4.2	0.6	4.0	1.4	5.4		
(O) MCF=(M-1)(10^5)/H	63	38	98	-8	23	74	15	23	25	90		

Project_____ Line_____ Field date_____ Data page_____ Comp. date_____ Comp by_____

(A) Send	45	34	23	12	45	34	23	12		C+L	—	
(B) Receive												
(C) n separation												
(D) I	6	10	10	9	6	10	10	9		2000	—	
(E) Vdc (avg)	42.1	26.9	16.70	8.93	1.984	19.71	10.25	5.63?		408	403	
(F) DCcal										.490	.496	
(G) Kn x 10^{-3}	12	30	60	105	30	60	105	168		1498		
(H) ρ dc=ExFxGx10^3/D	42	40	49	51	49	44	53	52				
(I) Vac Σ	42.2	27.0	16.51	8.51	2.000	19.53	10.22	5.38		410	408	
(J) AC noise x 2												
(K) Vac (corr) =$\sqrt{I^2 - J^2}$												
(L) AC-DC cal.										1.005	1.012	
(M) ρdc/ρac =ExL/K										1.009		
(N) PFE=(M-1)(10^2)	0.7	0.5	2.1	5.9	0.1	2.1	1.2	5.6?				
(O) MCF=(M-1)(10^5)/H	17	13	43	116	2	48	23	108				

HEINRICHS GEOEXPLORATION COMPANY

INDUCED POLARIZATION SURVEY COMPUTATION SHEET

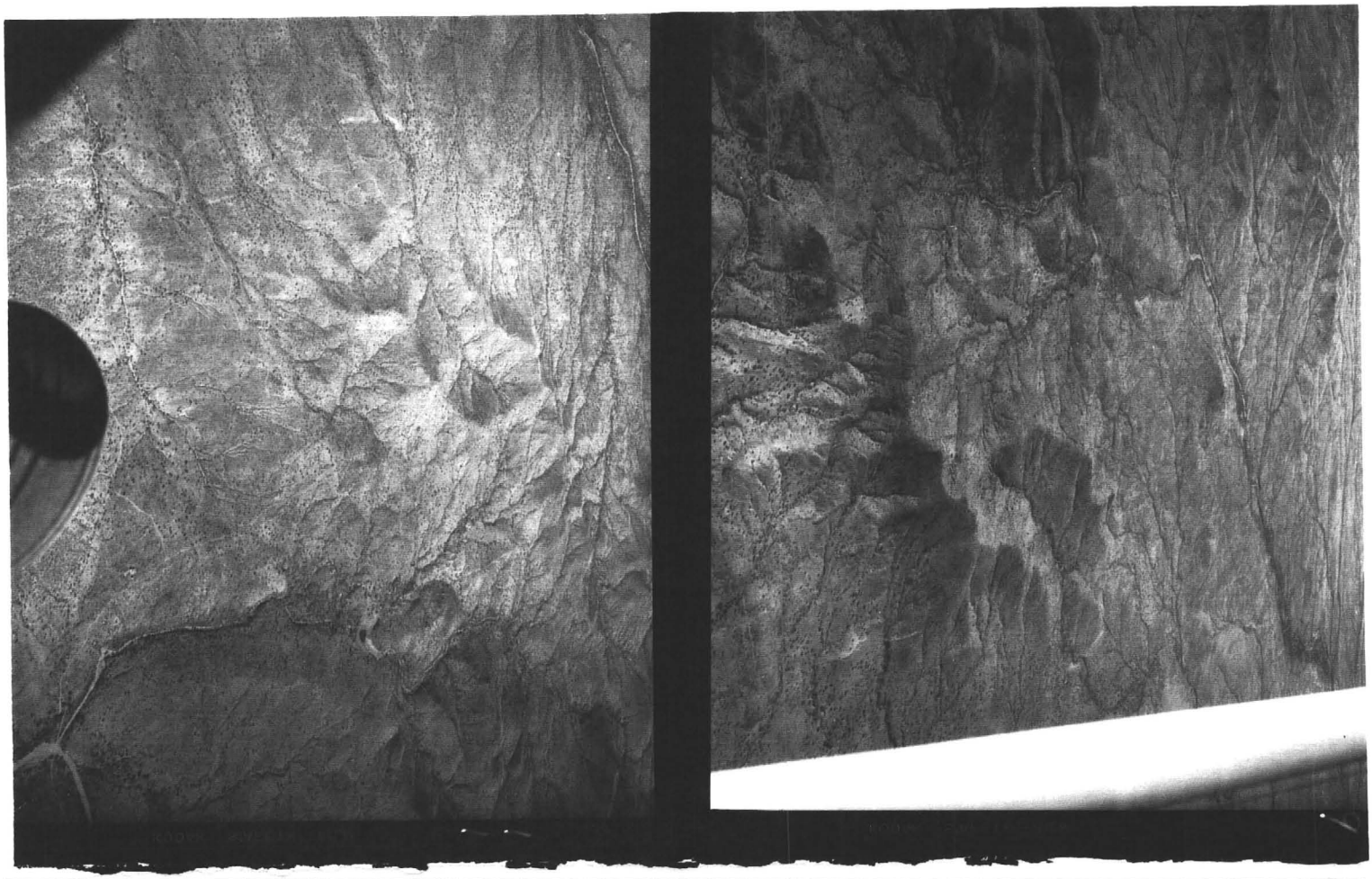
Page_____

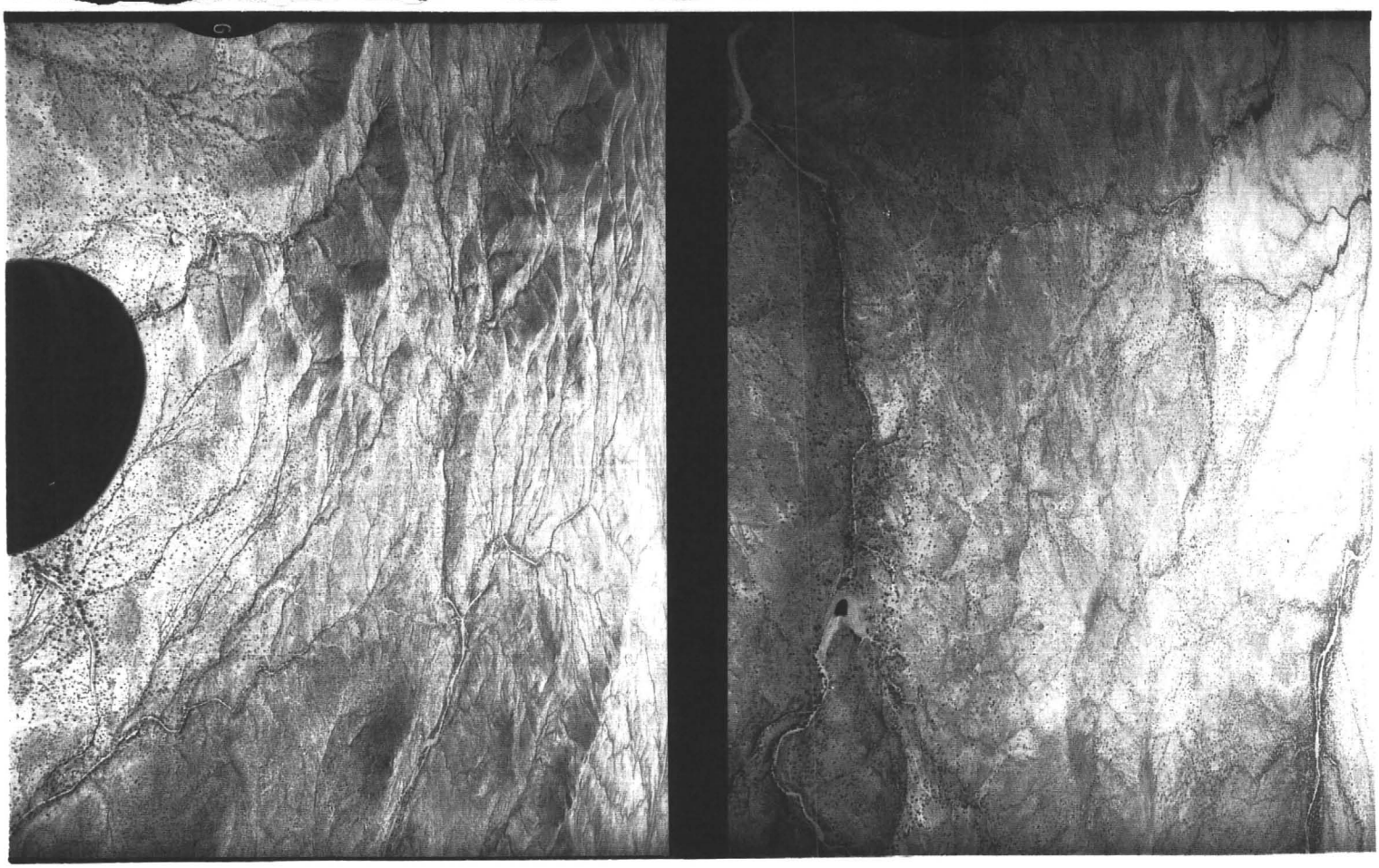
Project Canon - G.S. Line 1-52 SW½ Field date_____ Data page_____ Comp. date 4/19/68. Comp by C.S.L.

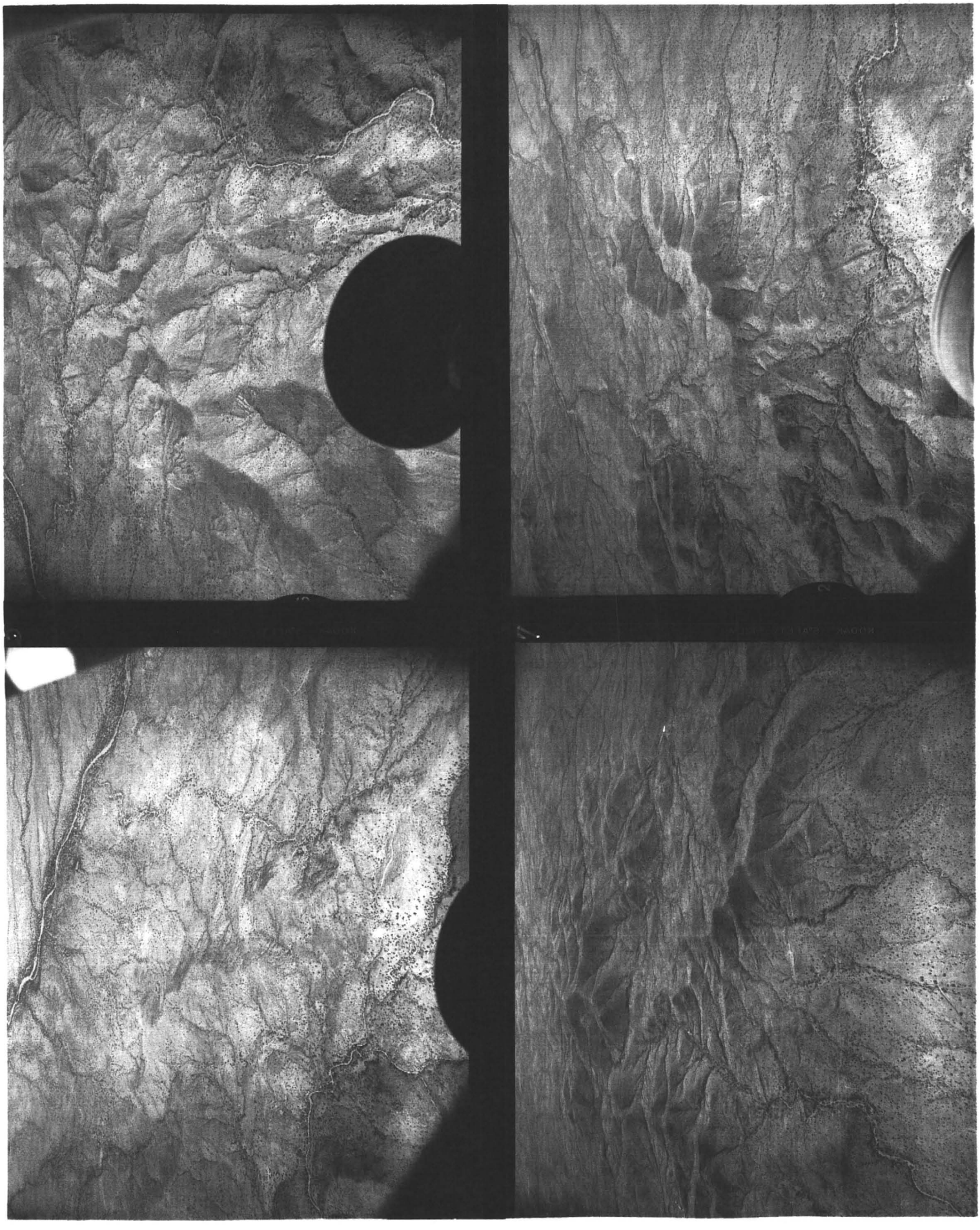
(A) Send	45	34	45	23	34	45	12	23	34	45		
(B) Receive												
(C) n separation												
(D) I	6	10	6	10	10	6	9	10	10	6		
(E) Vdc (avg)	138.3	235	43.3	276	96.0	26.6	250	107.6	49.1	15.33		
(F) DCcal												
(G) Kn x 10^{-3}	3	3	12	3	12	30	3	12	30	60		
(H) ρ dc=ExFxGx10^3/D	34	35	43	41	57	66	41	64	73	76		
(I) Vac Σ	138.0	232	42.0	268	92.2	25.2	240	103.0	47.2	14.77		
(J) AC noise x 2												
(K) Vac(corr) = $\sqrt{I^2 - J^2}$												
(L) AC-DC cal.												
(M) ρ dc/ρac=ExL/K												
(N) PFE=(M-1)(10^2)	1.3	2.4	4.2	4.1	5.3	6.7	5.3	5.6	5.2	4.9		
(O) MCF=(M-1)(10^5)/H				100	93	102	129	88	71	64		

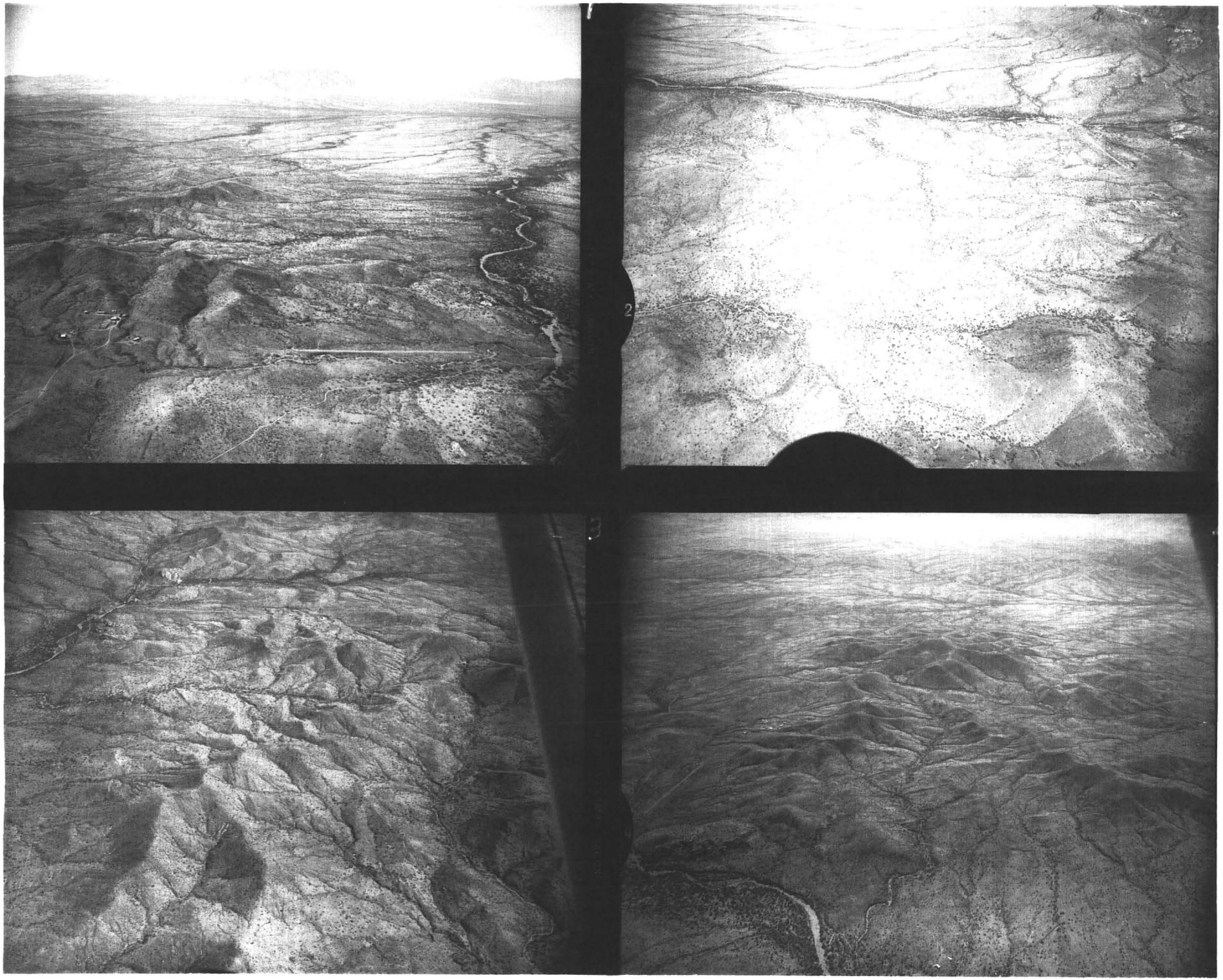
Project_____ Line_____ Field date_____ Data page_____ Comp. date_____ Comp by_____

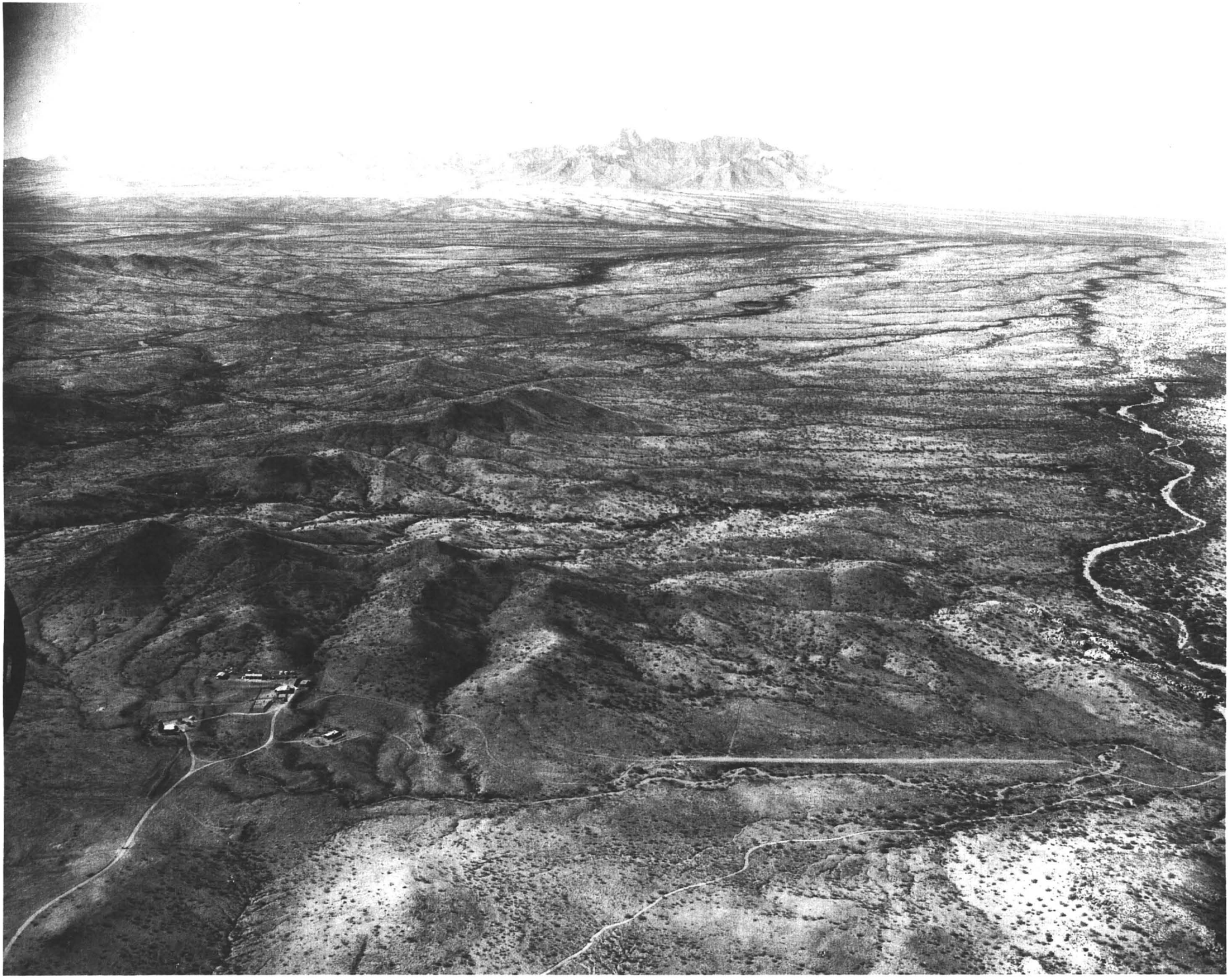
(A) Send	12	23	34	45	12	23	34	45		CAL		
(B) Receive												
(C) n separation												
(D) I	9	10	10	6	9	10	10	6		2000		
(E) Vdc (avg)	66.7	41.8	22.2	7.69	34.4	26.0	14.68	—		407	402	
(F) DCcal										.491	.498	
(G) Kn x 10^{-3}	12	30	60	105	30	60	105	168		.494 avg		
(H) ρ dc=ExFxGx10^3/D	44	62	66	67	57	77	76	76				
(I) Vac Σ	69.0	40.0	21.3	7.33	32.8	25.2	14.22	5.31		410	408	
(J) AC noise x 2												
(K) Vac (corr) = $\sqrt{I^2 - J^2}$												
(L) AC-DC cal.										1.007	1.015	
(M) ρdc/ρac =ExL/K										1.011 avg		
(N) PFE=(M-1)(10^2)	5.4	5.6	5.4	6.1	6.0 6.2	4.3	4.4	X				
(O) MCF=(M-1)(10^5)/H	123	90	82	91	105 109	56	58					











HEINRICHS GEOEXPLORATION COMPANY

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

January 17, 1968

Mr. Phillip B. Stewart
Geochemical Surveys
2505 Turtle Creek Boulevard
Dallas, Texas 75219

Re: Proposed Claim Staking, Aerial Photography and Geophysics, Tinaja Peak, Project and Silver Peak and Canoa Peak Project, Pima County, Arizona

Dear Mr. Stewart:

This letter is in reference to the conference between you and Mr. Ransone and our Mr. E. Grover Heinrichs, Mr. Donald Cooley, and Chris S. Ludwig, and pertains to the proposed work in the Tinaja Peak, Silver Hill and Canoa Areas, Pima County, Arizona.

I will break the different phases down separately in case you wish to modify the program.

1. Claim staking in the Tinaja Peak Area

This will consist of surveying and posting and filing locations only on the three half sections desired (S½ Section 31, T18S, R12E; S½ Section 8 and N½ Section 7, T19S, R12E).

Our charges are $150.00 per day for a three man crew plus $12.00 per day and 12¢ per mile for a vehicle plus miscellaneous related expenses at our cost.

As you requested, we will start on this phase as soon as a crew is available, hopefully later this week. We estimate one week of field work.

2. Aerial photography in all three areas

MINERAL ENGINEERING CONSULTANTS AND CONTRACTORS. GEOPHYSICAL, GEOLOGICAL AND ECONOMIC APPRAISALS.

The photographic work will consist of approximately 50 photos at a scale of 1"=1,000' (we can enlarge to 1"=500' later if desired). Terrain clearance will be 6,000 feet and there will be enough overlap on the photos to give complete stereoscopic coverage if a detailed contour map is ever desired and to aid geologic mapping. Several section corners should be paneled in each area.

Our charges will be $500.00 for flying and photos at 1"=1,000 feet (approximately). Paneling will be at $100.00 per day for a two man crew plus vehicle and expenses as specified in the claim staking charges. We expect that two or three days for paneling will be sufficient. You mentioned the possibility of your Mr. Kay doing the paneling or perhaps accompanying us to help locate corners. Enlargements, if desired, 18" x 18", will be at cost.

3. Induced Polarization in all areas

In the Tinaja and Canoa Areas, 1,000 foot dipole lines are recommended to obtain depth and coverage needed. Heavy duty gear is recommended and is charged at $275.00/day for a three man crew plus vehicle and related expenses as before.

In the Silver Hill Area, 250 foot and 500 foot dipole lines are to be preferred and medium duty gear will suffice. Charges: $250.00 per day for a three man crew plus vehicle and expenses.

Since a month's work or more has been outlined, an I.P. crew can be contracted on a monthly basis at a reduced rate of $10.00 per work day to be credited at the end of each calendar month of work.

We recommend running a hand magnetometer survey down the I.P. lines to give additional structural and geologic information, particularly in covered areas during the course of the I.P. work.

This can be done for $50.00 per day additional on the I.P. rate, or $150.00 per two man crew day plus expenses if each area is to be covered magnetically and separately from the I.P. crew operation.

Office work such as compilation, computation, and reports are at $125.00 per staff day. Communications and supplies at our cost. Standby time for weather or at client's request, one-half the daily rate. Breakdown of our equipment in excess of one hour per day will be made up or not charged.

Total estimated cost on all three projects is approximately $10.000.00 including report and interpretation.

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 be available as work progresses.

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

Indication of your understanding and approval of the above by executing as provided below on the attached copy of this letter and returning it to us, will be most appreciated.

Very truly yours,
HEINRICHS GEOEXPLORATION COMPANY

E. Grover Heinrichs
Vice President

DATE: 1/19/68
ACCEPTED BY: Rudolph B. Stewart
TITLE: Coordinator
EGH:jc

Ruby Star Ranch
Well
Tank
Tank
Tank
Shafts
Prospects
Prospects
Twin Buttes
Twin Buttes
Cem
Well
Well
Tank
Tank
Tank
Tank
Water Tank
Water Tanks
Well
Well
Canoa Ranch
BM 3412
BM 3431
BM 3419
BM 3572
BM 3431
BM 3319
BM 3256
BM 3134
BM 3038
BM 2937
BM 2967
SAHUARITA
ROAD
TWIN BUTTES ROAD
Demetrie Wash
Wash
Wash
HIGHWAY
SAHUARITA 9.3 MI.
TUCSON 27 MI.
R-12-E
T 17 S
55'
50'

TUCSON 50 MI.
ROBLES RANCH (JUNC. ARIZ. 86) 26 MI.

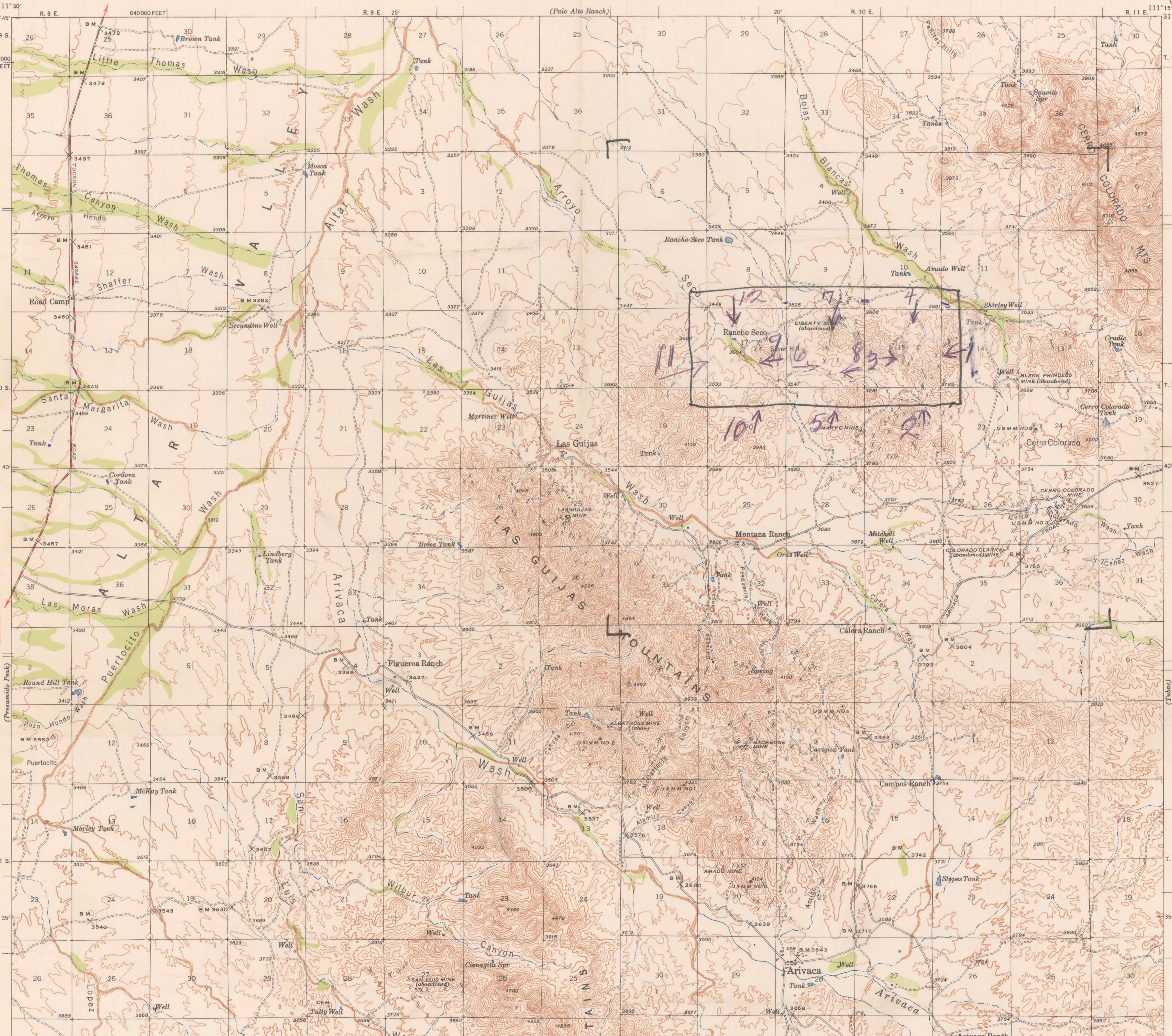
(Baboquivari Peak)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

UNITED STATES
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS

ARIZONA
ARIVACA QUADRANGLE
15-MINUTE SERIES

(Twin Buttes)



R. 8 E.
R. 9 E.
R. 10 E.
R. 11 E.
640000 FEET
(Palo Alto Ranch)
T. 19 S.
T. 20 S.
T. 21 S.
T. 22 S.
270000 FEET
190000 FEET
910000 YARDS
1160000 YARDS
700000 FEET
(Tubac)
(Presumido Peak)
(Oro Blanco)
SASABE, SONORA 15 MI.
MEXICAN BORDER 13 MI.
Brown Tank
Little Thomas Wash
Tank
ALTAR VALLEY
Altar Wash
Mosca Tank
Thomas Canyon Wash
Arroyo Hondo
TUCSON SASABE ROAD
Shaffer Wash
Road Camp
Secundino Well
Las Guijas
Santa Margarita Wash
Martinez Well
Cordova Tank
Lindberg Tank
Boice Tank
Las Moras Wash
Puertocito Wash
Arivaca
Figueroa Ranch
Round Hill Tank
Pozo Hondo Wash
Puertocito
McKay Tank
Morley Tank
San Luis
Wilbur
Lopez
Tully Well
San Luis Well
Agua Blanca Spring
Lopez Ranch
Castle Rock Tank
Lopez Tank
Canoa Ranch
Reata Wash
REATA MINE (abandoned)
Bolas Blancas Wash
Peñitas Hills
Saucito Spr
Tanks
CERRO COLORADO MTS
Rancho Seco Tank
Arroyo Seco
Amado Well
Shirley Well
Rancho Seco
LIBERTY MINE (abandoned)
Silver Hill
BLACK PRINCESS MINE (abandoned)
MARY G MINE
Cerro Colorado Tank
Cerro Colorado
Cradle Tank
LAS GUIJAS MOUNTAINS
LAS GUIJAS MINE
Montana Ranch
Oras Well
Mitchell Well
CERRO COLORADO MINE
COLORADO CLARK (abandoned) MINE
Calera Wash
Calera Ranch
Cañez Wash
Durazno Canyon
Pesqueria
ALBATROSS MINE (aban)
BACKBONE MINE
Caviglia Tank
McCafferty Canyon
Alamito Canyon
Campos Ranch
AMADO MINE
Amigo Wash
Stopes Tank
Arivaca Creek
Arivaca Ranch
Cienagita Spr
SAN LUIS MINE (abandoned)
SAN LUIS MOUNTAINS
Fraquita Wash
Sapo Tank
Yellow Jacket Wash
AJAX MINE (aban)
EDWARDS MINE (abandoned)
Carriza Well
Clark Ranch
Cedar Creek
Bartolo Well
Lower Tank
Corona Wash
BROUSE MINE
Upper Tank
CORONADO NATIONAL FOREST
Las Jarillas Ranch
PIMA CO
SANTA CRUZ CO
Tonkin Well
ALASKA MINE (abandoned)
Chimney Canyon
Oro Blanco Wash
Fraquita Peak
ORO BLANCO MTS
Yellow Jacket Spr
111° 30′
31° 45′
111° 15′
31° 30′
40′
35′
25′
20′

(Presumido Peak)

(Ruby)

Topography by S. C. Kain
Surveyed in 1940 - 41

TRUE NORTH
MAGNETIC NORTH
14°
APPROXIMATE MEAN DECLINATION, 1941

SCALE 1:62500

1 ½ 0 1 2 3 4 MILES

3000 0 3000 6000 9000 12000 15000 18000 21000 FEET

1 .5 0 1 2 3 4 5 KILOMETERS

Contour interval 50 feet
Datum is mean sea level

INTERIOR-GEOLOGICAL SURVEY, WASHINGTON, D. C.—1956
M R-1022

Sections lines in T. 22 S., R. 11 E. are omitted because of insufficient data

Polyconic projection. 1927 North American datum
5000 yard grid based on U. S. zone system F
10000 foot grid based on Arizona (Central) rectangular coordinate system

ARIVACA, ARIZ.

N3130—W11115/15

1941

ROAD CLASSIFICATION

Heavy-duty 4 LANE | 6 LANE Light-duty
Medium-duty 4 LANE | 6 LANE Unimproved dirt
U. S. Route State Route

FOR SALE BY U. S. GEOLOGICAL SURVEY, FEDERAL CENTER, DENVER, COLORADO OR WASHINGTON 25, D. C.
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

TUCSON 50 MI.
ROBLES RANCH (JUNC. ARIZ. 86) 26 MI.

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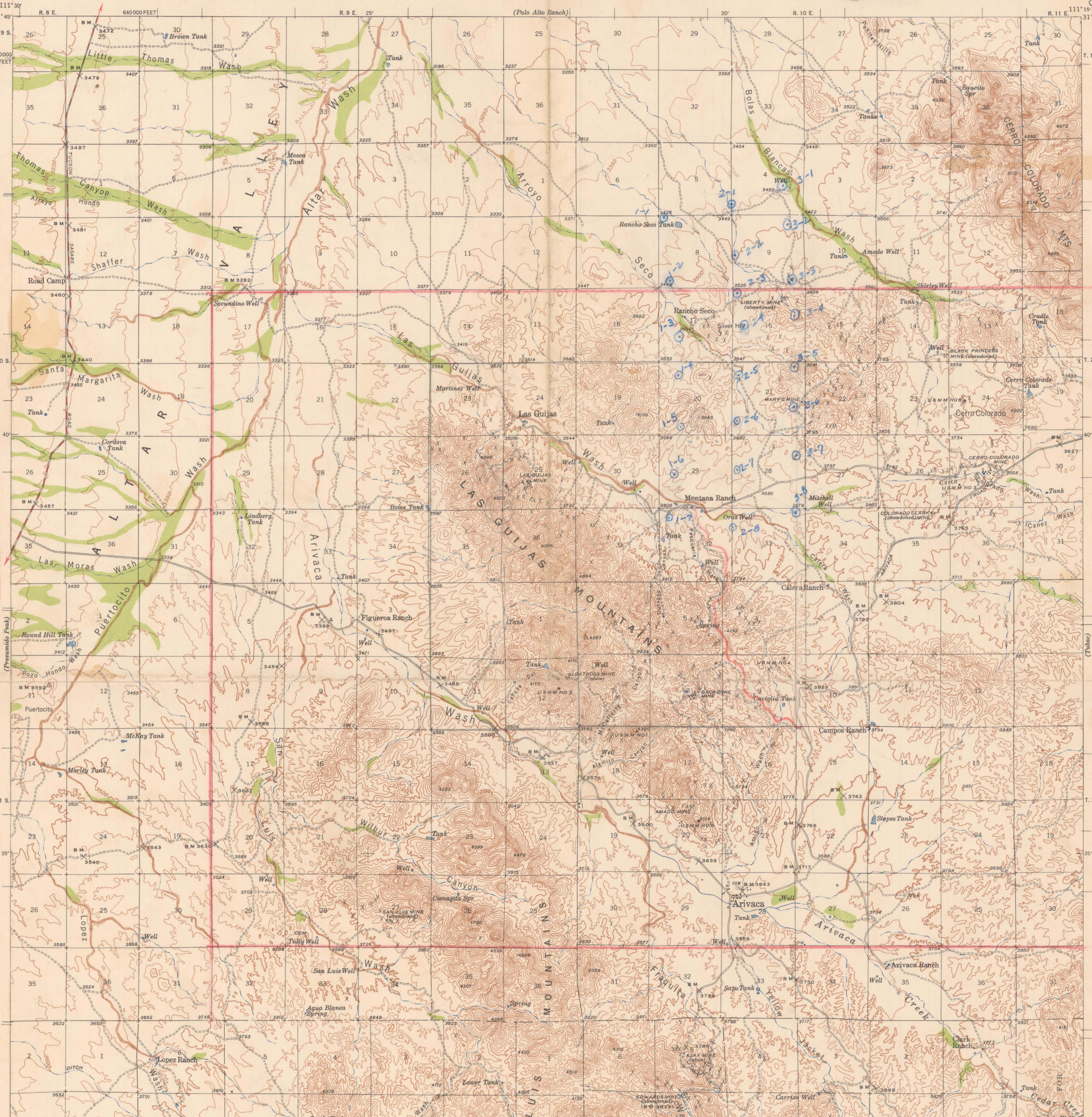

(Baboquivari Peak)
(Twin Buttes)
(Palo Alto Ranch)
(Presumido Peak)
(Tubac)
(Oro Blanco)
(Ruby)
SASABE, SONORA 15 MI.
MEXICAN BORDER 13 MI.
ALTAR VALLEY
Little Thomas Wash
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Shaffer Wash
Road Camp
Secundino Well
Santa Margarita Wash
Las Moras Wash
Puertocito Wash
Puertocito
Pozo Hondo Wash
Round Hill Tank
McKay Tank
Morley Tank
Lopez Ranch
Lopez Tank
Canoa Ranch
Brown Tank
Mosca Tank
Altar Wash
Arroyo Seco
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LIBERTY MINE (abandoned)
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Montana Ranch
Oras Well
Mitchell Well
MARY G MINE
COLORADO CLARK (abandoned) MINE
Calera Ranch
Calera Wash
Canez Wash
Caviglia Tank
BACKBONE MINE
ALBATROSS MINE
Campos Ranch
Stopes Tank
AMADO MINE
Wilbur Canyon
Cienagita Spr
SAN LUIS MINE (abandoned)
Tully Well
San Luis Well
Agua Blanca Spring
SAN LUIS MOUNTAINS
Arivaca Creek
Arivaca Ranch
Sapo Tank
Fraquita Wash
Yellow Jacket Wash
AJAX MINE (aban)
EDWARDS MINE (abandoned)
Carrizo Well
Clark Ranch
Cedar Creek
Bartolo Well
Tonkin Well
ALASKA MINE (abandoned)
Oro Blanco Wash
Chimney Canyon
Las Jarillas Ranch
Castle Rock Tank
Lower Tank
Upper Tank
BRODSE MINE
REATA MINE (abandoned)
Reata Wash
PIMA CO
SANTA CRUZ CO
CORONADO NATIONAL FOREST
Fraquita Peak
ORO BLANCO MTS
Yellow Jacket Spr

Topography by S. C. Kain
Surveyed in 1940 - 41

TRUE NORTH
MAGNETIC NORTH
14°
APPROXIMATE MEAN
DECLINATION, 1941

SCALE 1:62500

1 ½ 0 1 2 3 4 MILES

3000 0 3000 6000 9000 12000 15000 18000 21000 FEET

1 .5 0 1 2 3 4 5 KILOMETERS

Contour interval 50 feet
Datum is mean sea level

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D. C.—1956
M R-1022

Sections lines in T. 22 S., R. 11 E. are omitted because of insufficient data

Polyconic projection. 1927 North American datum
5000 yard grid based on U. S. zone system F
10000 foot grid based on Arizona (Central) rectangular coordinate system

ARIVACA, ARIZ.
[redacted]
N3130—W11115/15
1941

ROAD CLASSIFICATION
Heavy-duty 4 LANE 6 LANE Light-duty
Medium-duty 4 LANE 6 LANE Unimproved dirt
U. S. Route State Route

FOR SALE BY U. S. GEOLOGICAL SURVEY, FEDERAL CENTER, DENVER, COLORADO OR WASHINGTON 25, D. C.
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

N 17°10'30" W To Common Corner of Claims 800'
77, 78, 79, 80

1, N 17° 19' W

2. Roughly N 20° 55' E

(3.) 189°

4 94

R-10-E

T 20 S

8 9 10

16 17

SECTION 9, 10, 16 & 17
SIERRITA PROSPECT
PIMA COUNTY, ARIZONA
SCALE 1"= 500'
MERCURY PPB.
1-2-68

Induced Polarization, Resistivity and Self Potential Electrical Geophysical Survey, Canoa Area, Twin Buttes Mining District, Pima County, Arizona

for

Geochemical Surveys

April 1968

INDUCED POLARIZATION, RESISTIVITY AND SELF POTENTIAL ELECTRICAL GEOPHYSICAL SURVEY CANOA AREA, TWIN BUTTES MINING DISTRICT PIMA COUNTY, ARIZONA

For

Geochemical Surveys

April 1968

By

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

TABLE OF CONTENTS

PAGE

GENERAL LOCATION

INTRODUCTION 1

CONCLUSIONS AND RECOMMENDATIONS 2

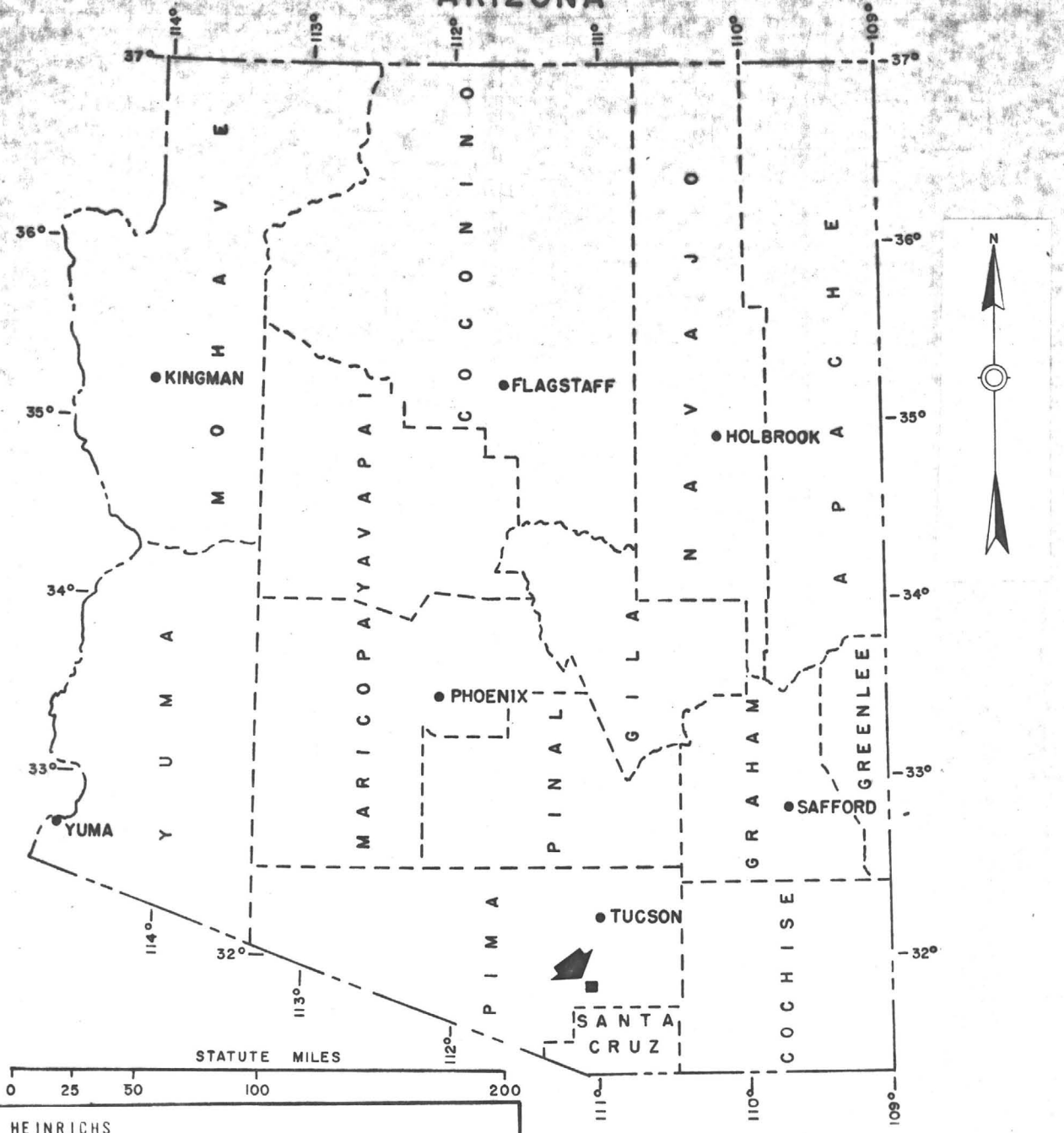
INTERPRETATION 3

IN MAP POCKET: (Total: 4 pieces)

Induced Polarization Location and Interpretation Plan

Sectional Data Sheets (All a=1,000')
- Line 1 (Spreads 1 & 2)
- Line 2
- Line 3

GENERAL LOCATION OF
CANOA AREA
for
GEOCHEMICAL SURVEYS
ARIZONA



HEINRICHS
GEOEXPLORATION COMPANY

BOX 5671 TUCSON, ARIZONA 85703
PH: 602 623-0578 CABLE: GEOEX, TUCSON

GEOPHYSICAL ENGINEERS SYDNEY VANCOUVER

INTRODUCTION

At the request of Mr. W. R. Ransone of Geochemical Surveys, Heinrichs Geoexploration Company conducted a reconnaissance induced polarization survey over parts of the Canoa Area, Twin Buttes Mining District, Pima County, Arizona. The field work was done in the interim April 9 to April 18, 1968.

Three lines were surveyed, consisting of four spreads total, giving a combined surface coverage of 43,000 feet of which 28,000 feet is "subsurface" plotted data. All four spreads were surveyed on a 1,000 foot dipole spacing and a line spacing of approximately 3,000 feet. The lines were oriented N49E-S49W off a common baseline. See the plan for details of location with respect to the land net and geochemical anomalism.

The induced polarization work was done with the dual frequency system utilizing sending frequencies of 0.15 and 1.0 Hz. The electrode configuration used was the standard collinear dipole-dipole array which on a 1,000 foot spacing typically gives resolvable penetration within the zone from about 300 to 1,200 or 1,500 feet below surface.

The purpose of the survey was to locate any important sulfide anomalism possibly related to a copper-molybdenum geochemical anomaly and to define any significant electrically responsive geologic structures.

Data are presented on sectional data sheets, one for each line, showing resistivity, percent frequency effect (PFE) and metallic conduction factor (MCF) contoured in section with self potential (SP) plotted in profile form. The Induced Polarization Location and Interpretation Plan shows the surface projected anomalism and the line locations with respect to roads and section corners, etc. This plan overlays a 1"=2,000' blow-up of a portion of the U.S.G.S. Twin Buttes Quadrangle and

also shows the aerial photograph centers flown February 2, 1968 by us and also your geochemical anomalism.

Heinrichs personnel involved in the field work were J. King, geophysical crew chief, and D. McCoy and D. Carlson, technical assistants. Report and interpretation by Chris S. Ludwig, Senior Geophysicist with the assistance of the Geoex staff.

CONCLUSIONS AND RECOMMENDATIONS

Definite sulfide related induced polarization anomalism was seen on Lines 1 and 2 and indications on Line 3. The anomalism appears to correlate with the main copper geochemical anomaly just south of the Twin Buttes Road. This geochemical anomaly is quite possibly a related halo effect derived directly from the sulfide source which causes the I.P. effects.

The other geochemical anomalism, mainly in Section 31, does not show any detectable polarization response and is therefore probably a transported anomaly, or an anomaly from an oxidized source, perhaps similar in cause to the nearby Tinaja Peak anomalism previously investigated and recorded in our report dated April 24, 1968.

The sulfide anomaly appears to have a northwest-southeast trend and perhaps weakens and deepens to the southeast. However, only Line 1 completely crossed the anomaly, Lines 2 and 3 show end of line effects which cannot be interpreted in detail because the data are not complete. On Line 1 the depth indicated to the top of anomalism and to bedrock is from about 300 to 500 feet over the strongest part of the anomaly (near 55NE). The anomalous shoulder to the southwest is somewhat deeper (500 to 750 feet) and weaker. Because of the depth of anomalism and the probability of alluvium being the majority of overlying material, it is possible that the geochemical anomalism is not a halo from this sulfide zone but was coincidently transported to this position. However, the degree of coincidence favors the halo interpretation.

The strength of anomalism on the stronger part of Line 1 indicates about 1.0 or 2.0% total sulfide by volume (2.0 to 4.0% by weight) averaged across approximately 1,000 feet width. There are weaker fringes, particularly to the southwest and the ends of Lines 2 and 3.

The strength of anomalism is such as to be of possible economic interest if the sulfides are high in copper, as the geochemical anomalism would suggest. There has been nearby drilling as evidenced in the aerial photographs and field crew observations and a detailed field investigation to determine the extent of past work may be of help. It is known that various parties have been active in the past in the immediate and nearby vicinity with I.P. and some follow-up drilling, but with little encouragement. However, with the additional aid of geochemistry to help concentrate drilling on the more apparently cupriferous portions of the large sulfide body, an economic discovery could result providing land is available or obtainable.

If such a program is considered, more detailed I.P. and perhaps detailed geochemistry are recommended with follow-up drilling.

INTERPRETATION

Line 1

Anomalous polarization response is seen from about Station 25NE to 65NE with the strongest portion from 50NE to 60NE. The northeast boundary is quite sharp whereas to the southwest the anomalous source drops down from the strongest portion as a weak flank to the southwest for 2,500 feet.

The depth to the top of the strongest (and most shallow) part of the anomaly is 300 to 500 feet dropping to about 500 to 750 feet on the southwest flank. The resistivity indicated alluvial thickness is also quite similar in depth, suggesting mineralization at or near the bedrock surface on the strongest anomaly although the deeper southwest flank source may be several hundred feet deeper than the bedrock surface.

Aside from the anomaly as described, the degree of polarization on the remainder of the line is only of a background nature. The resistivity indicates a general bedrock high sloping away from the anomaly. South of about 10SW, the resistivity shows a three layer situation, with the nearest surface layer being relatively resistive, the middle layer conductive,and the bottom layer resistive. This is interpreted as being a flattish lying volcanic sequence perhaps setting on crystalline bedrock or a relatively tight volcanic formation.

The self potential shows only minor background variations indicative of a lack of significant quantities of oxidizing sulfides within several hundred feet of the surface, in agreement with the I.P. data.

Line 2

The northeast end of this line from Station 25NE shows weak but definite deep sulfide anomalism. Probably this zone correlates with the southwest flank of the Line 1 anomalism and is at least as deep. The polarization effects south of the anomaly are background only.

The resistivity shows, in general, a three layer situation again, even over the anomaly. Over the anomaly, it is believed that the layers are likely dry alluvium over wet alluvium (or more clayey alluvium) over bedrock. At about 5SW there is a character change, south of which the layering may be a volcanic or volcanic-alluvium sequence. As on Line 1, there is no self potential anomalism.

Line 3

This line is considerably lower in resistivity than the other two lines and therefore more affected by inductive coupling interference which causes the increased PFE's with depth. After correcting for this interference, the northeast end of the line shows very weak, possibly anomalous response at a depth in excess of 1,000 feet. This possible anomalism is likely a southeast extension, or fringe, or lateral response of the sulfide zone seen on Lines 1 and 2.

The resistivity northeast of 10SW shows a relatively uniform material, probably alluvium, likely 1,200 or 1,500 feet thick. Southwest of 10SW is a three layer situation again, which is interpreted the same as the southwest ends of the other lines. Again, the self potentials are background in strength.

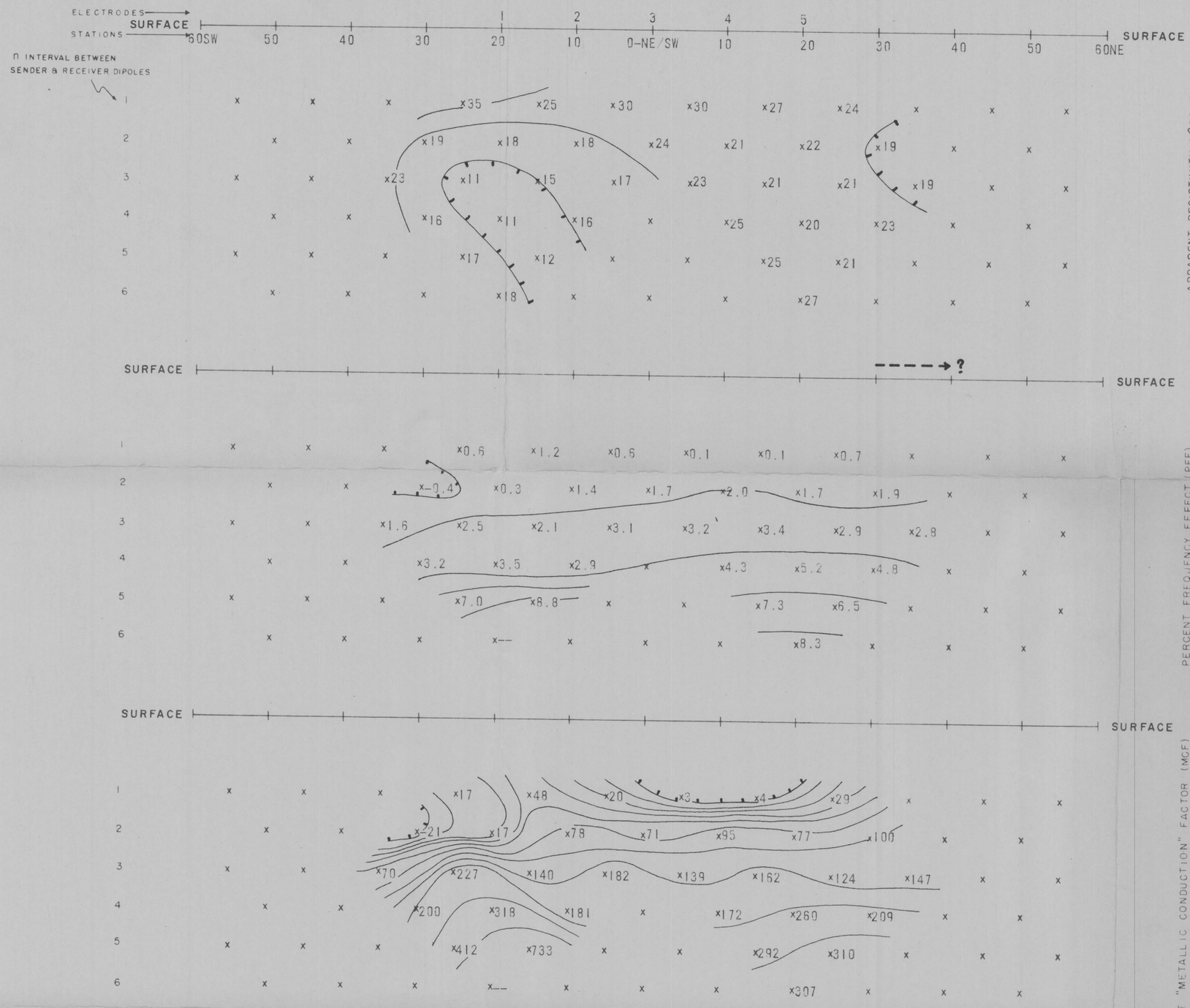
Respectfully submitted,

HEINRICHS GEOEXPLORATION COMPANY

Chris S. Ludwig
Senior Geophysicist

APPROVED: _____
Walter E. Heinrichs, Jr.
President & General Manager

May 1, 1968
Tucson, Arizona



APPARENT RESISTIVITY ($\rho_a = 2\pi$ DV/I) IN UNITS OF OHM FEET

CONTOUR INTERVAL LOGARITHMIC

SENDER FREQUENCY: 0.15 c.p.s.

PERCENT FREQUENCY EFFECT (PFE)

CONTOUR INTERVAL CONSTANT

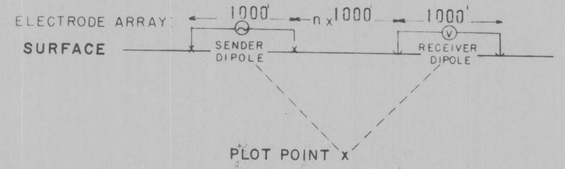
SENDER FREQUENCIES: 0.15 & 1.0 cps

APPARENT "METALLIC CONDUCTION" FACTOR (MCF)

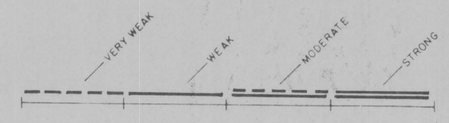
$\left(MCF = \frac{PFE \times 1000}{\rho_a 2\pi}\right)$

CONTOUR INTERVAL LOGARITHMIC

EXPLANATION



RELATIVE ANOMALY STRENGTH



LOOKING N 41° W

CANOA AREA

SECTIONAL DATA SHEET

LINE NO. 3

INDUCED POLARIZATION TRAVERSE

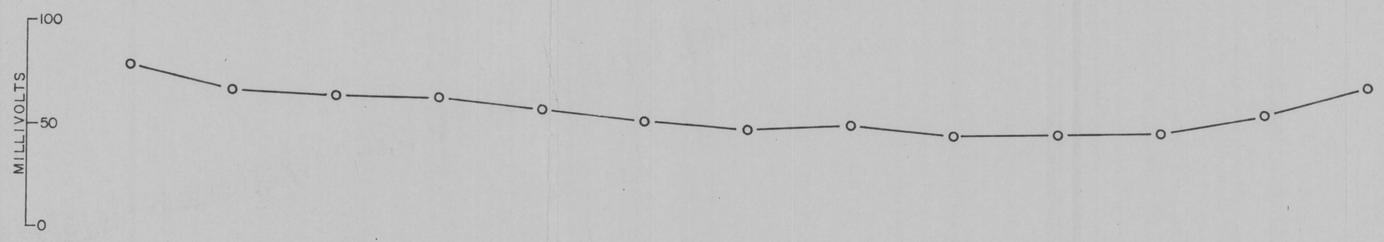
HEINRICHS GEOEXPLORATION COMPANY

SCALE: 1" = 1000' DATE: APR 1968

FOR

GEOCHEMICAL SURVEYS

SELF POTENTIAL



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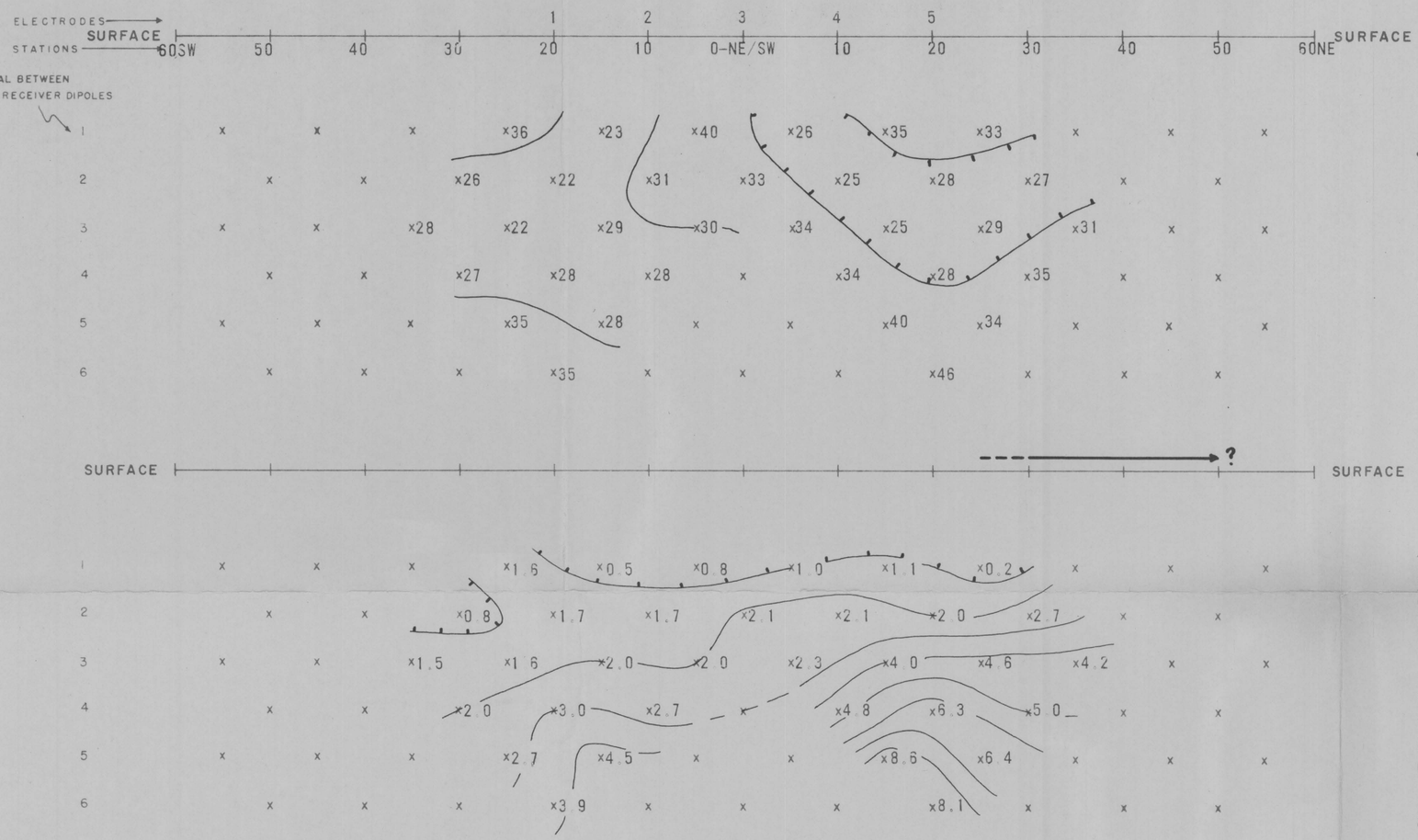
sydney

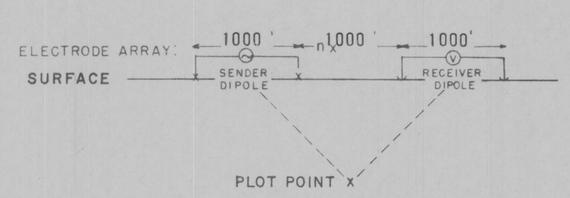


APPARENT RESISTIVITY (ρ_{DC}) IN UNITS OF OHM FEET 2π

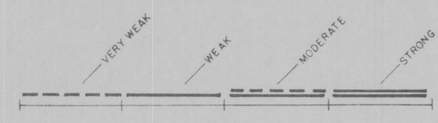
CONTOUR INTERVAL LOGARITHMIC
SENDER FREQUENCY: 0.15 c.p.s.

PERCENT FREQUENCY EFFECT (PFE)
CONTOUR INTERVAL CONSTANT
SENDER FREQUENCIES: 0.1 & 1.0 c.p.s

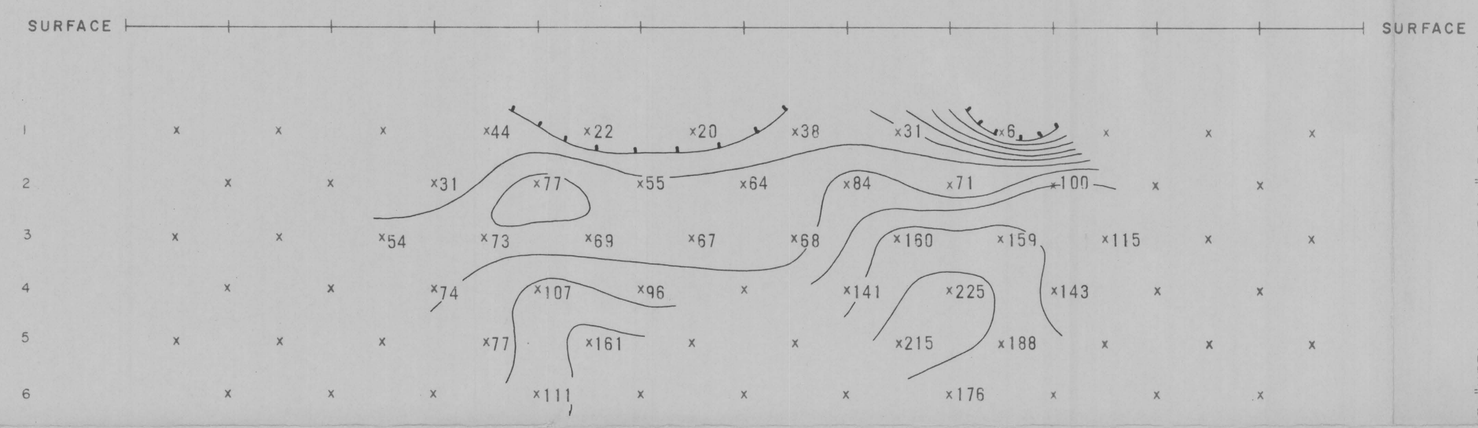
EXPLANATION



RELATIVE ANOMALY STRENGTH

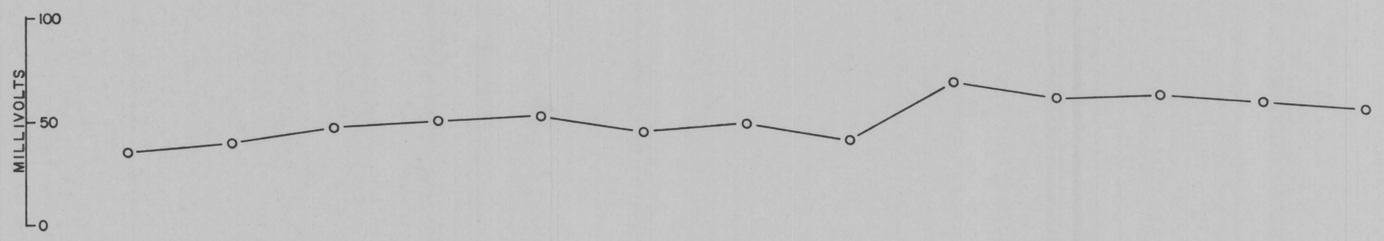


LOOKING N 41° W



APPARENT "METALLIC CONDUCTION" FACTOR (MCF)
$\left(MCF = \frac{PFE \times 1000}{\rho_{DC}/2\pi}\right)$
CONTOUR INTERVAL LOGARITHMIC

SELF POTENTIAL



CANOA AREA

SECTIONAL DATA SHEET
LINE NO. 2
INDUCED POLARIZATION TRAVERSE

HEINRICHS GEOEXPLORATION COMPANY
SCALE: 1" = 1000' DATE: APR 1968

FOR

GEOCHEMICAL SURVEYS

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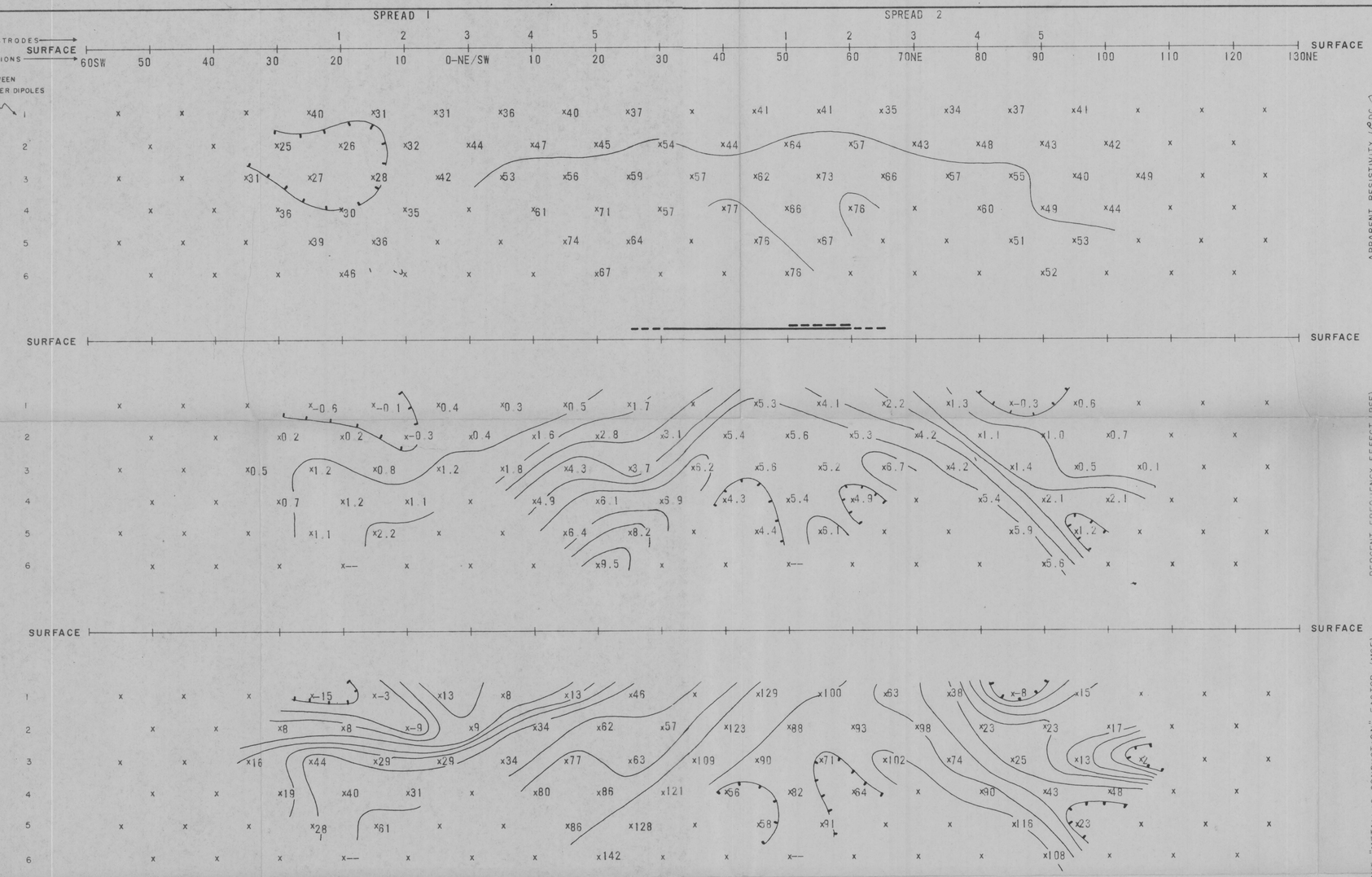
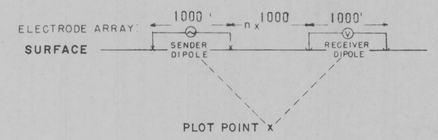


APPARENT RESISTIVITY ($\rho_a = 2\pi$)
IN UNITS OF OHM FEET
CONTOUR INTERVAL LOGARITHMIC
SENDER FREQUENCY: 0.15 c.p.s.

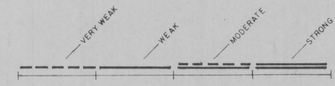
PERCENT FREQUENCY EFFECT (PFE)
CONTOUR INTERVAL CONSTANT
SENDER FREQUENCIES: 0.15 & 1.0 c.p.s.

APPARENT "METALLIC CONDUCTION" FACTOR (MCF)
(MCF = PFE x 1000 / $\rho_a 2\pi$)
CONTOUR INTERVAL LOGARITHMIC

EXPLANATION



RELATIVE ANOMALY STRENGTH



LOOKING N 41° W

CANOA AREA

SECTIONAL DATA SHEET

LINE NO. 1 (SPREADS 1 & 2)

INDUCED POLARIZATION TRAVERSE

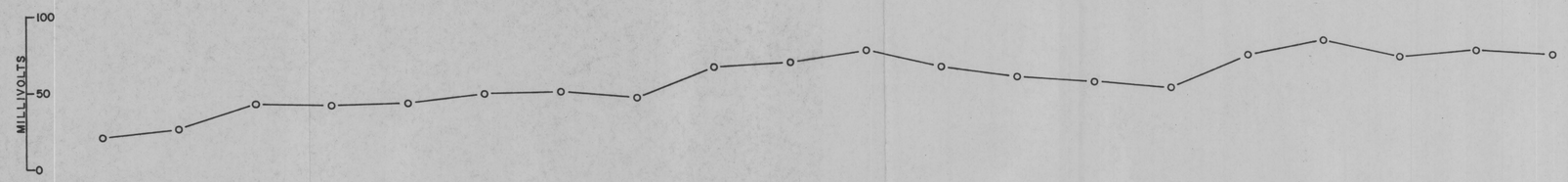
HEINRICHS GEOEXPLORATION COMPANY

SCALE: 1" = 1000' DATE: APR 1968

FOR

GEOCHEMICAL SURVEYS

SELF POTENTIAL



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geophysical engineers

R 12 E | R 13 E

T 18 S
T 19 S

SAN IGNACIO DE LA CANOA

TWIN BUTTES ROAD

SPREAD

89

B1-1 B1-2 B1-3 B1-4 B1-5 B1-6 B1-7

B2-1 B2-2 B2-3 B2-4 B2-5 B2-6 B2-7

B3-1 B3-2 B3-3 B3-4 B3-5 B3-6 B3-7

L E G E N D

OUTLINE OF GEOCHEMICAL ANOMALY

C — COPPER

M — MOLYBDENUM

ROADS

B2-4 CENTER OF PHOTOS FLOWN ON 2-2-68 AT 1" = 1000' ±.

RELATIVE ANOMALY STRENGTH

VERY WEAK — WEAK — MODERATE — STRONG

I.P. LINE NO. → ②

STATIONS — ELECTRODES

BASE MAP FROM U.S.G.S.

N

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INDUCED POLARIZATION LOCATION AND INTERPRETATION PLAN
CANOA AREA
PIMA COUNTY, ARIZONA

FOR

GEOCHEMICAL SURVEYS

SCALE: 1" = 2000' | DRAWN BY: JAY DOWNS | DATE: APRIL 1968