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

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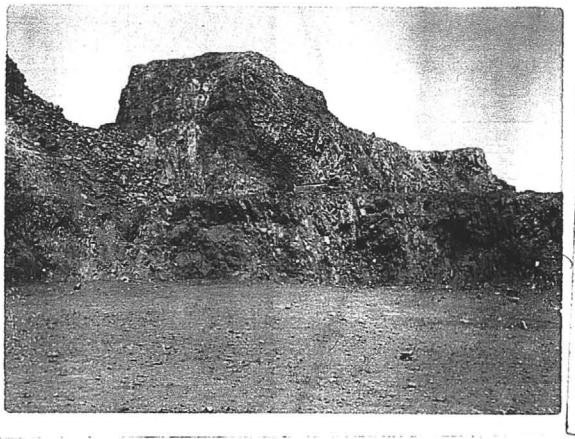
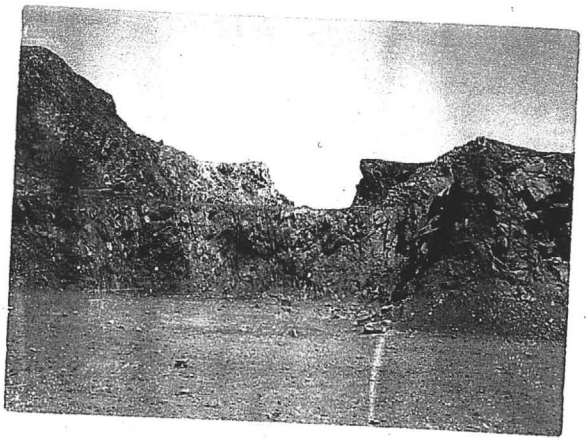
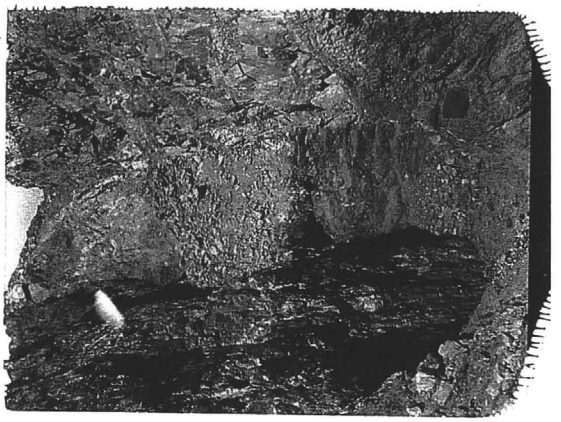
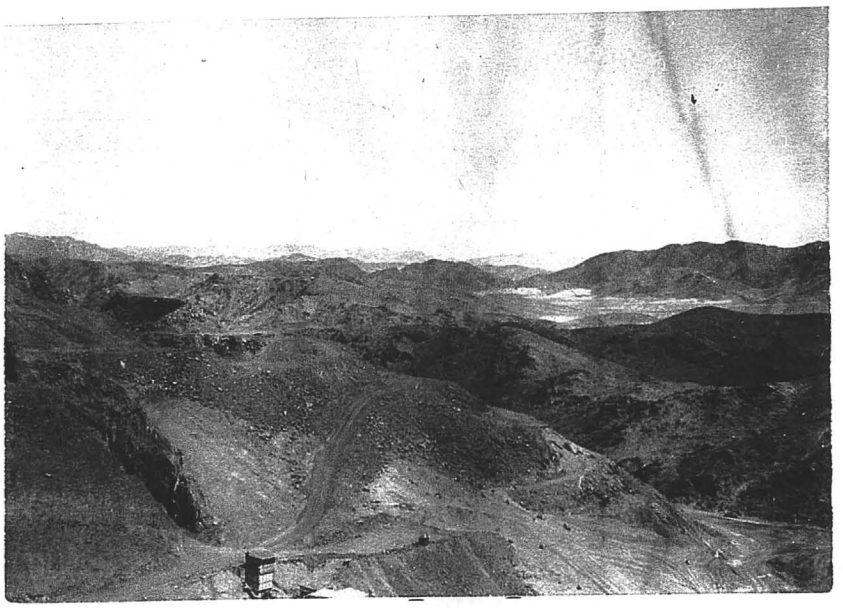
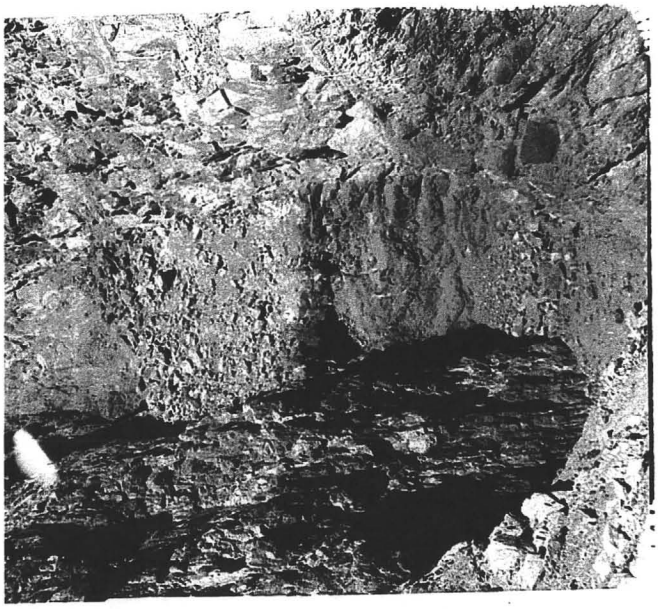
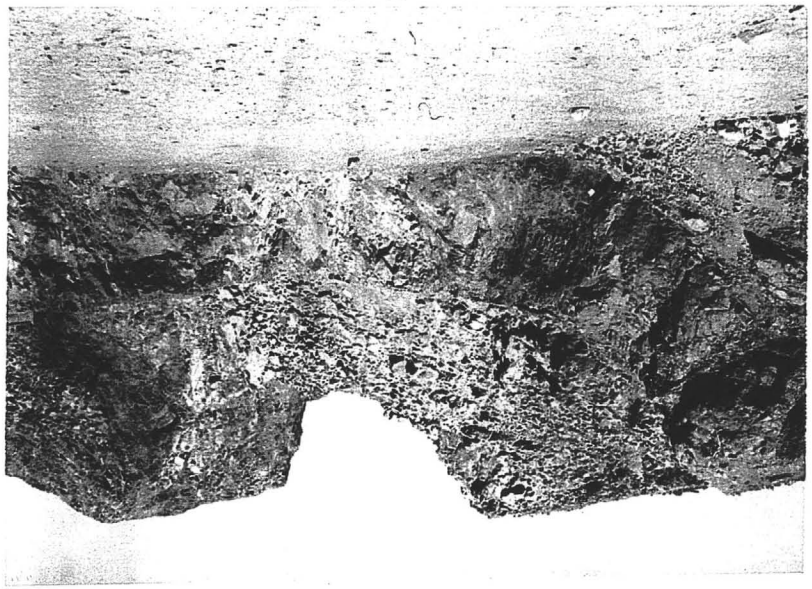
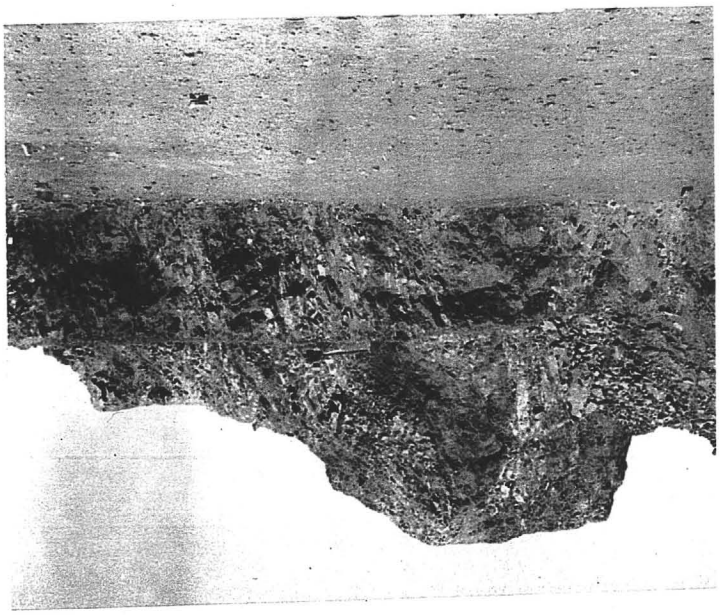



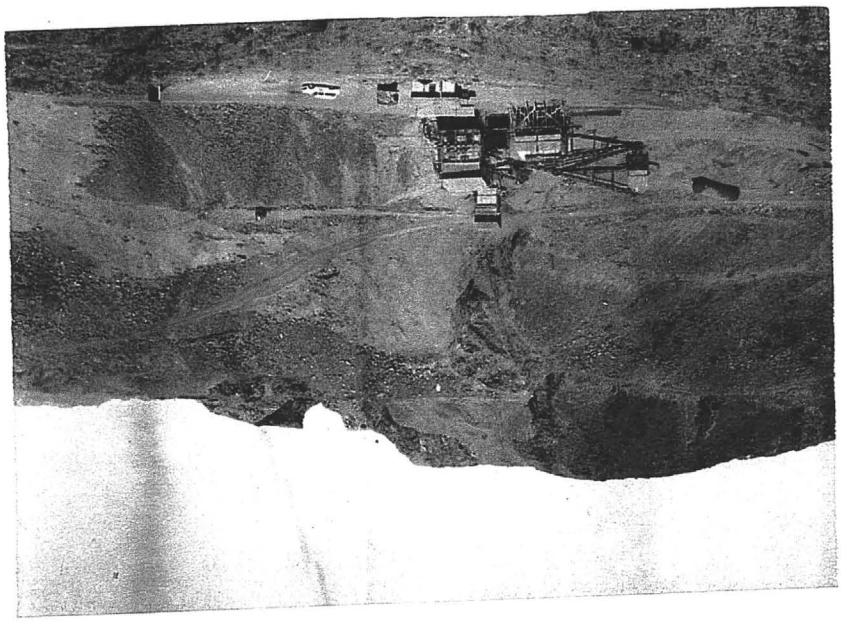


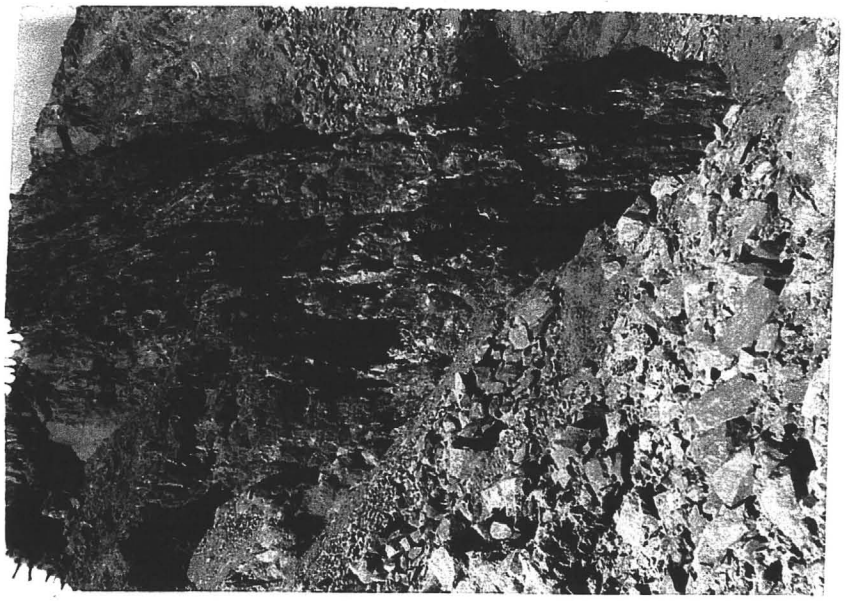


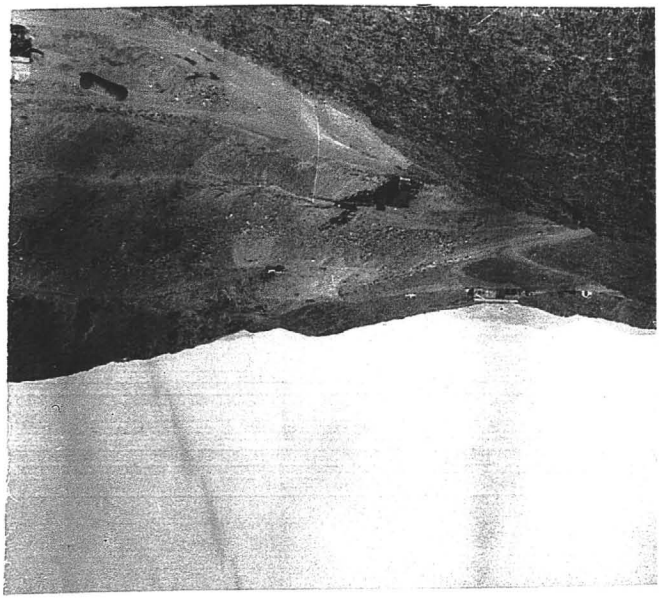












MAR 62

MAR 62

MAR 62

5

4

3

8

9

10

17

16

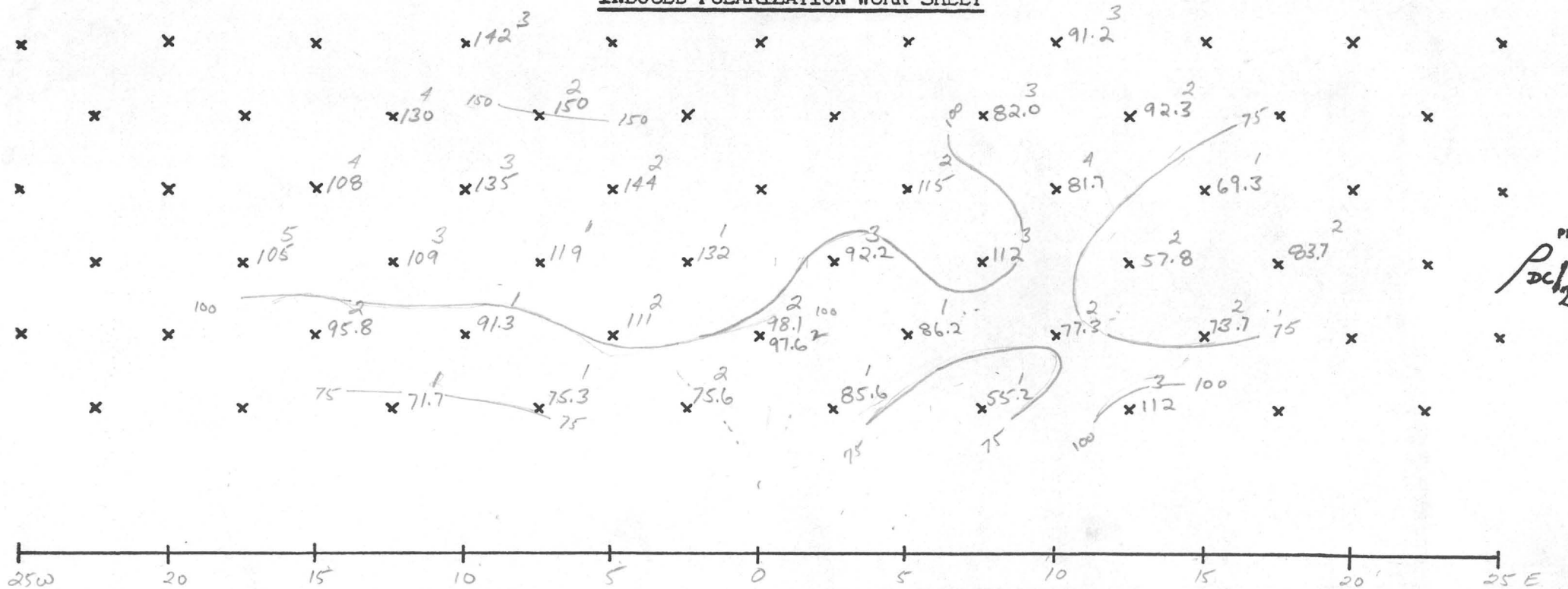
N 9° E

S-81° E

I.P. Location

HEINRICHS GEOEXPLORATION COMPANY P.O. Box 5671 Tucson, Arizona		
VERTICAL MAGNETIC INTENSITY PIMA CLAIM GROUP FOR GRIFFITH ANNESLEY		
SCALE: 1" = 400'	CONTOUR INTERVAL: 50 γ	REVISIONS
	DATA BY: E.G.H. -- J.P.M.	
DATE: 7/64	SHEET OF	
DRAWN BY: J.P.M. & J.W.L.	DRAWING NO.:	FILE:

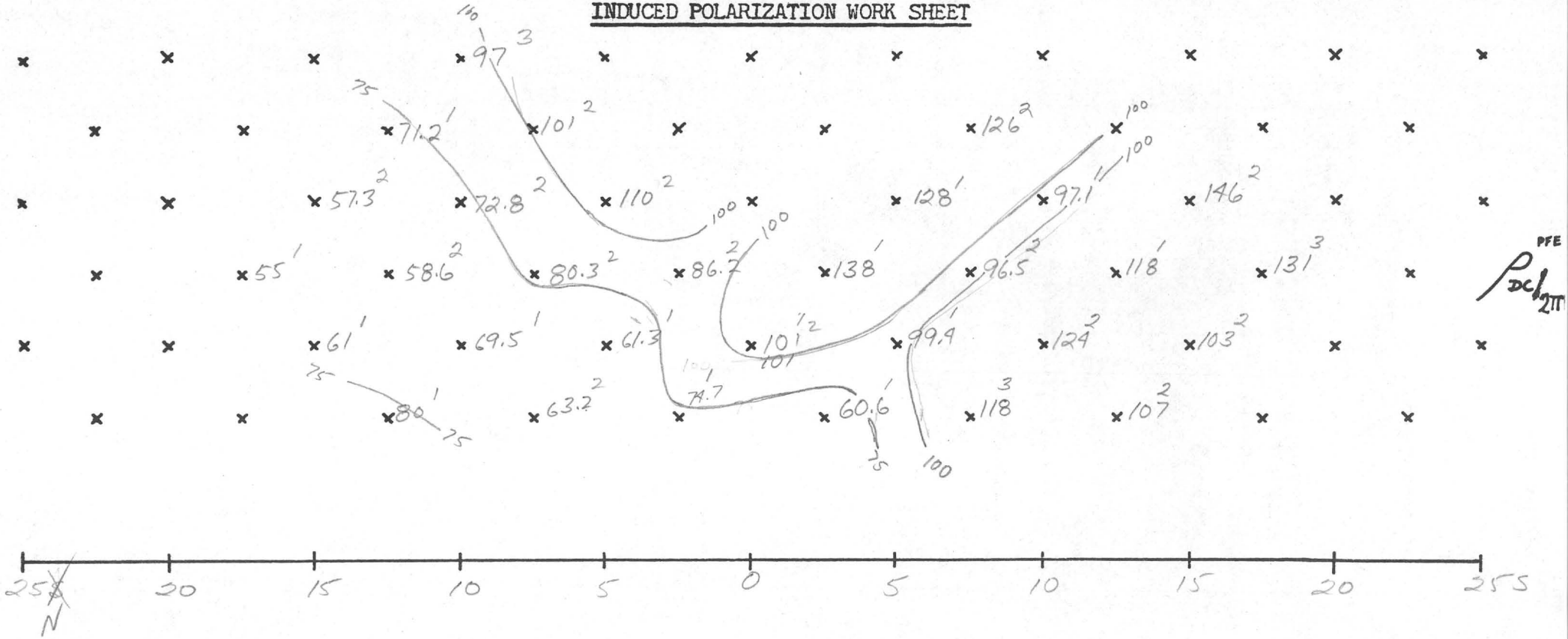
INDUCED POLARIZATION WORK SHEET

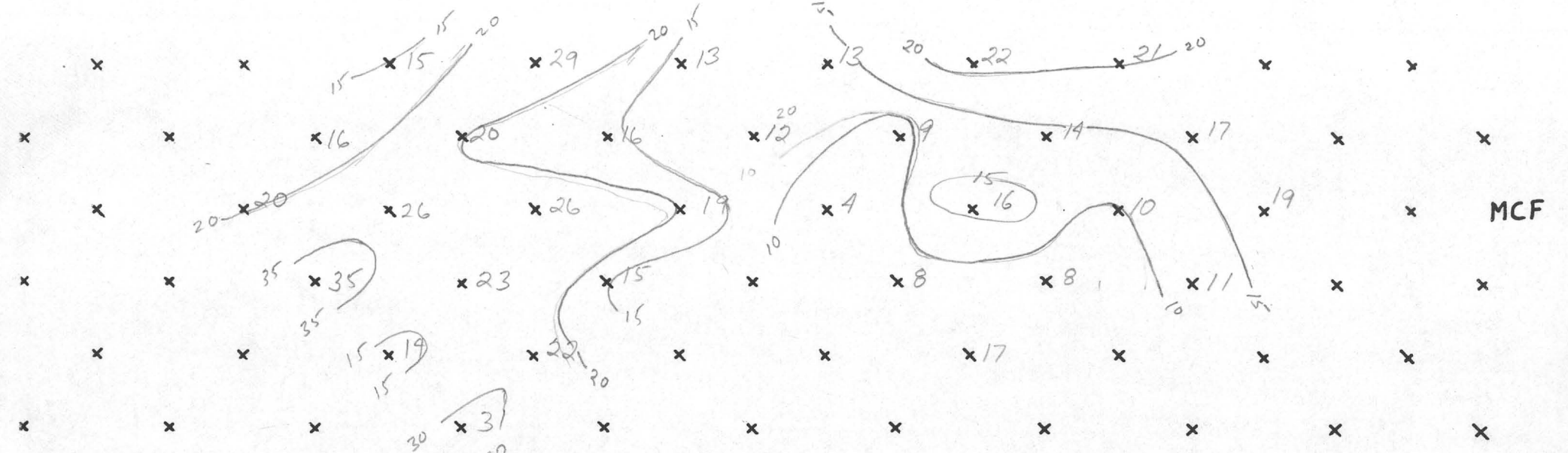


Area Pina Claim Annesley Scale Date

Line 1 N:S

INDUCED POLARIZATION WORK SHEET





Area Pima Claims – Annesley Scale Date

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

UNITED STATES
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS

ARIZONA
ARIVACA QUADRANGLE
15-MINUTE SERIES

(Baboquivari Peak) (Palo Alto Ranch) (Twin Buttes)

111°30′ 31°45′ R. 8 E. 640000 FEET R. 9 E. 25′ 20′ R. 10 E. 111°15′ R. 11 E. 31°45′

T. 19 S. 270000 FEET T. 19 S.

T. 20 S. T. 20 S.

40′

SASABE, SONORA 15 MI.
MEXICAN BORDER 13 MI.

(Presumido Peak) (Tubac)

T. 21 S. T. 21 S.

35′

T. 22 S. 910000 YARDS T. 22 S.

31°30′ 111°30′ R. 8 E. 1160000 YARDS R. 9 E. 25′ (Oro Blanco) 20′ R. 10 E. 700000 FEET R. 11 E. 31°30′ 111°15′ (Tubac)

190000 FEET

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

SCALE 1:62500

1 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

APPROXIMATE MEAN DECLINATION, 1941
14°
TRUE NORTH
MAGNETIC NORTH

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

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

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

HEINRICHS GEOEXPLORATION COMPANY	
P.O. Box 5671 Tucson, Arizona	
VERTICAL MAGNETIC INTENSITY	
PIMA CLAIM GROUP	
FOR	
GRIFFITH ANNESLEY	
SCALE: 1" = 400'	CONTOUR INTERVAL: 50 γ
	DATA BY: E.G.H. & J.P.M.
DATE: 6-29-64	SHEET OF
DRAWN BY: J.P.M.	DRAWING NO.:

REVISIONS

FILE:

CHARLES E. MELBYE AND ASSOCIATES

MINING - GEOLOGICAL - GEOPHYSICAL - ENGINEERS

April 28, 1964

Mr. Griffith Annesley
164 North Euclid Avenue
Pasadena, California

PRELIMINARY EVALUATION
PIMA COPPER PROPERTY

Ora Blanco District
Pima County, Arizona

INTRODUCTION

On April 27, 1964, a preliminary evaluation was made of the Pima property to determine whether or not it merits further exploration. A reconnaissance was completed of all the cuts and excavations as well as of important outcrop areas, and a study was made of the complete maps and report by James L. Papadakis, geologist. The writer was accompanied by Griffith Annesley.

Location is six miles northwest of Arivaca, Arizona, on a well graveled and maintained road. Arivaca is about 60 miles southwest of Tucson. The main portion of the property lies in Sections 9 & 10, T21S, R9E.

HISTORY

No mining or exploration of any consequence has been done on the property. The past 10 years has seen some random excavations and shallow drill-holes unguided by any geological or geophysical work and therefore largely wasted effort. The first serious technical work was the mapping by James L. Papadakis in 1963 which appears to be carefully done.

GEOLOGY

The detailed geological features are well covered in the Papadakis report, but a few of the important economic factors should be empahsized.

Rock Types

Most of the rock exposed consists of the Cretaceous Oro Blanco Conglomerate, the predominant rock type throughout the Oro Blanco Mountains. Occasional sandstones and shales are interbedded. The only igneous rock mapped is the series of discontinuous aplite dikes trending N25°E through

2020 FOOTHILLS ROAD

P. O. BOX 309 GOLDEN, COLORADO CRestview 9-1542

the east half of Section 9. A thin layer of alluvium covers the west half of Section 9 and northward into Sections 3 and 4.

Structure

Two fault systems are evident, a N-S to N20°E system, which seems related to the dike system, and a northwest system in the form of cross faults with apparent considerable displacement. Some of the mapped faults are very weak and more in the nature of jointing. Considerable fracturing and brecciation is evident near some of these faults. The general NW dip indicates the deposits to be on the NW flank of an anticline since a reversal occurs two miles south.

Mineralization and Alteration

Copper mineralization is all oxidized and consists mainly of chrysocolla with lesser amounts of malachite. These minerals occur as fracture fillings, coatings, and impregnations or disseminations in the rock. Considerable jasper, quartz, and iron oxides occur as gangue minerals. Both the aplite and the conglomerate are equally mineralized. No distinct veins were seen but rather random mineralized fractures and zones. Copper mineralization of this type can be seen in pits for 7,000 feet N-S and for 2,500 feet E-W.

Alteration of the host rock, an important guide to ore localization, was observed throughout the area of copper mineralization. Under this alteration discussion would be included contact metamorphic minerals such as would be expected as a halo near a buried igneous intrusive. Epidote and garnet are fairly widespread and alteration of the conglomerate consists of silicification, secondary biotite, and possible sericite. Limonitic staining has produced a distinct halo at the north end of the property on Section 9.

Copper mineralization and alteration are related partly to the NE dike and fault system, as is shown by strong copper mineralization in the pits on Section 9, but similar copper oxides can be seen throughout random fractures 1,500 feet east of this zone.

CONCLUSIONS

1. The presence of secondary copper mineralization, together with contact metamorphism and alteration, over a substantial area, 7,000' x 2,500', strongly indicates the possibility of an intrusive buried at a shallow depth. The dikes could also be feeders from the main stock. If an intrusive is present, the prospect would be very promising since a source for the copper mineralization would be provided and a most favorable host rock would be present.

2. Similar intrusive rocks outcrop two miles SW and one mile NE, thereby suggesting an intrusive belt through the Pima property but which has not been uncovered by erosion.

3. Copper oxides not only coat fractures but permeate the rock as

disseminations, indicating strength to the mineralization.

4. The property is situated in a favorable district with numerous other copper mines and prospects in close proximity.

RECOMMENDATIONS

1. A magnetic survey should first be run over the entire area of known copper mineralization to determine whether an intrusive lies at some reasonable depth. If this is indicated, the property would become very attractive and further work would be recommended.

2. In conjunction with the magnetic survey, a geochemical survey for copper and molybdenum should be run.

Respectfully submitted,

Charles E. Melbye

Charles E. Melbye
Geological Engineer

CEM:vs

July 9, 1964

Mr. Griffith Annesley
164 North Euclid
Pasadena, California

Dear Mr. Annesley:

On June 23, 24, 26 and July 6 and 8, 1964 a reconnaissance magnetic survey was run by Heinrichs Geoexploration Co. over the Pima Claim Group in the Oro Blanco Mining District, Pima County, Arizona. The magnetometer was run by Mr. E. Grover Heinrichs and Mr. J. P. Matthews, Jr., assisted by Mr. R. E. Palmer.

The purpose of this survey was to delineate any possible extension of the known mineralization discussed by Mr. C. E. Melbye. The magnetic survey has shown an anomalous zone which is centered approximately 1,000 feet east and 500 feet south of the northwest corner of Section 16. This anomaly appears to be at an intersection of a northeast and northwest magnetic trend. This correlates well with the geology map of Mr. J. L. Papadakis which indicates faulting along both of these magnetic trends, with considerable cross-faulting and brecciation in this zone. A rough calculation on the magnetic anomaly would indicate a depth to the source of less than 200 feet.

On Saturday, June 27th and Thursday, July 9th a discussion was held concerning the property in question. Present were Messers Griffith Annesley, E. Grover Heinrichs, John Langs, Walter E. Heinrichs, Jr. and Phil Matthews. During these discussions it was decided that the area showed promise both geologically and geophysically and was worthy of continued work.

COPY

Several prospecting methods were suggested; geochemical sampling, detailed magnetics, induced polarization and resistivity. The geochemical sampling and detailed magnetics were temporarily set aside and I. P. was recommended as a follow up on the detailed magnetic survey because of its ability to detect sulfide mineralization in the subsurface.

The proposed I. P. lines will be centered at a point 2100 ft. east and 400 ft. south of the NW Cor. Sec. 16. One line 9° Azimuth and the other 99° Azimuth. The coverage will investigate the zone of intense cross-faulting and brecciation as indicated by the geology and magnetics of this area.

Aerial photos are now being sought both in Phoenix and Tucson and if available, should be in our hands in the next day or so.

We plan to begin this project sometime during the week of July 13th; however, we will be in phone contact with you prior to that time.

Very truly yours,

HEINRICHS GEOEXPLORATION CO.

Walter E. Heinrichs, Jr.
President & General Manager

J. P. Matthews, Jr.
Geophysicist

WEH:JPM/jh
cc: Extra Encl.

COPY

HEINRICHS GEOEXPLORATION COMPANY

INDUCED POLARIZATION SURVEY COMPUTATION SHEET

Page 1

Project Pima Claim Grp Line 2 W½ Field date 7-16-64 Data page _____ Comp. date 7-17-64. Comp by J.P.M.

(A) Send	3-4	4-5	2-3	3-4	4-5	1-2	2-3	3-4	4-5	1-2	2-3	3-4
(B) Receive	5-10 W	10-15				15-20				20-25		
(C) n separation												
(D) I	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
(E) Vdc (avg)	91.55	29.7	91.1	33.5	16.0	86.9	27.7	14.4	8.72	29.0	13.2	8.20
(F) DCcal	1.10											
(G) Kn x 10^{-3}	1.5	6	1.5	6	15	1.5	6	15	30	6	15	30
(H) ρdc=ExFxGx10^3/D	75.6	98.1	75.3	111	132	71.7	91.3	119	144	95.8	109	135
(I) Vac Σ	91.0	29.4	91.0	33.2	16.0	86.6	27.6	14.4	8.6	28.6	12.9	8.04
(J) AC noise x 2								1.6	1.6		1.6	1.6
(K) Vac(corr) = $\sqrt{I^2 - J^2}$								14.3	8.46		12.8	7.9
(L) AC-DC cal.	1.01											
(M) ρ dc/ρac=ExL/K	1.017	1.020	1.012	1.020	1.010	1.013	1.014	1.010	1.024	1.023	1.034	1.03
(N) PFE=(M-1)(10^2)	1.7	2.0	1.2	2.0	1.0	1.3	1.4	1.0	2.4	2.3	3.4	3.0
(O) MCF=(M-1)(10^5)/H	26	20	16	18	8	18	15	8	17	24	31	22

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

(A) Send	4-5	1-5	2-3	3-4	4-5		Com.					
(B) Receive	20-25	35-30					2-3					
(C) n separation												
(D) I	2000	2000	2000	2000	2000		1000					
(E) Vdc (avg)	5.2	12.72	6.57	4.52	3.07		90.8					
(F) DCcal	1.1						1.10					
(G) Kn x 10^{-3}	52.5	15	30	52.5	84							
(H) ρ dc=ExFxGx10^3/D	150	105	108	130	192							
(I) Vac Σ	5.16	12.30	6.4	4.4	3.0		91.6					
(J) AC noise x 2	1.6	1.6	1.6	1.6	1.6							
(K) Vac (corr) = $\sqrt{I^2 - J^2}$	4.91	12.1	6.21	4.12	2.55							
(L) AC-DC cal.	1.01						1.01					
(M) ρdc/ρac =ExL/K	1.018	1.045	1.036	1.036	1.034							
(N) PFE=(M-1)(10^2)	1.8	4.5	3.6	3.6	3.4							
(O) MCF=(M-1)(10^5)/H	12	43	33	28	24							

INDUCED POLARIZATION SENDER NOTES

Project: Pima Cl. Gr. Line: 2 W Date: 7-16-64

Send	3/4	4/5	2/3	3/4	4/5	1/2	2/3	3/4	4/5	1/2	2/3	3/4
Receive												
Time												
Range												
Current	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Send	4/5	1/2	2/3	3/4	4/5		CAL					
Receive												
Time												
Range												
Current	2000	2000	2000	2000	2000		1000					

DUCED POLARIZATION - RECEIVER NOTES PAGE

Project: Pima Group Line: 2 500' W½ Int.Cal Date: 7-16

Send	3-4	4-5	2-3	3-4	4-5	1-2	2-3	3-4	4-5	1-2	2-3	3-4
Rec.	5-10W	———	10-15	———	———	15-20	———	———	———	20-25	———	———
Time	100	30	100	30	30	100	30	30	10	30	10	10
DC-1	46.0 45.5	14.7 15.1	45 45.8	16.8 16.7	7.7 8.3	43.8 42.8	13.5 14.3	8.2 8.2	4.30 4.42	14.3 14.7	6.8 6.4	4.0 4.2
DC-2	46.0 45.5	14.7 15.0	45.8 45.9	16.5 16.0	7.7 8.3	44.0 43.0	13.9 14.3	8.2 8.2	4.30 4.45	14.3 14.7	6.80 6.55	3.80 4.22
Σ	91.5 91.5	29.8 29.7	90.8 91.2	33.4 33.5	16.0 16.0	86.6 87.0	27.8 27.7	16.4 16.4	8.72 8.75	29.0 29.0	13.2 13.15	8.2 8.02
DC-3	46.0 45.6	14.7 15.0	45.5 46.0	16.5 17.0	8.3 7.9	43.3 44.0	13.9 14.3	8.2 8.2	4.25 4.45	14.2 14.8	6.9 6.3	3.9 4.3
Dc-4	46.0 45.6	14.5 15.2	45.5 45.6	16.5 17.0		43.0 44.0	27.7		4.20 4.50		7.0 6.2	3.9 4.3
Σ	91.6 91.6	29.7	91.6 91.0	33.5 33.5	16.0	87.3 87.0		14.4	8.70 8.70	29	13.2 13.2	8.2 8.2
DC-AV	91.55	29.7	91.1	33.5	16.0	86.9	27.7	14.9	8.72	29.0	13.2	8.20
AC-1	45.5	14.7	45.5	16.6	8.0	43.3	13.8	8.2	4.3	14.3	6.45	4.02
AC-2	45.5	14.7	45.5	16.6	8.0	43.3	13.8	7.2	4.3	14.3	6.45	4.02
Σ	91.0	29.4	91.0	33.2	16.0	86.6	27.6	14.4	8.6	28.6	12.90	8.04
S. P.	-9.4	———	+6.4	———	———	+14.9	———	———	———	+3.9	———	———
AC-N	.08	———	.1	———	———	.08	———	———	———	.08	———	———
T.C	48.0	———	48	———	———	48	———	———	———	48.0	———	———

DUCED POLARIZATION - RECEIVER NOTES PAGE

Project: _____ Line: 2 500' W 1/2 Int.Cal _____ Date: 7-16

Send	4-5	1-2	2-3	3-4	4-5		CAL 2-3					
Rec.	20-25	25-30										
Time	10	10	10	3								
DC-1	2.8 2.3	6.3 6.42	3.3 8.3	2.17 3.37	1.50 1.53		45.0 96.0					
DC-2	2.8 2.4	6.4 6.32	3.30 3.25	2.67 2.93	1.60 1.47		45 45.7		3.07 1.0			
Σ	5.1 5.2	12.72	6.6 6.55	4.54 4.50	3.03 3.07		91.0 90.7		03 07			
DC-3	2.8 2.9	6.40 6.32	3.4 3.2	2.1 2.5	1.6 1.5				27			
Dc-4	2.8 2.0		3.90 3.15	2.2 2.3	1.57 1.50		45.0 45.7					
Σ	5.2 5.2	12.72	6.6 6.55	4.6 4.5	3.1 3.07		90.7					
DC-AV	5.2	12.72	6.57	4.52	3.07		908					
AC-1	2.60	6.15	3.2	2.2	1.50		45.8					
AC-2	2.56	6.15	3.2	2.2	1.56		45.8					
Σ	5.16	12.30	6.4	4.4	3.00		91.6					
S. P.	13.9	-13.9										
AC-N	.08	.08										
I.C.	48.0	48.0										

INDUCED POLARIZATION SENDER NOTES

Project: Pima Cl. Co. Line: 2 E² Date: 7-16-64

Send	2/3	1/2	3/4	2/3	1/2	4/5	3/4	2/3	1/2	4/5	3/4	2/3
Receive	→	→	→	→	→	→	→	→	→	→	→	→
Time												
Range	2.0	→	→	→	→	→	→	→	→	→	→	→
Current	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Send	1/2	4/5	3/4	2/3	1/2			CAL				
Receive	→	→	→	→	→							
Time												
Range												
Current	2000	2000	2000	2000	2000			1000				

...ICED POLARIZATION - RECEIVER NOTES PAGE

Project: Pima Group Line: 2 500' E'ly Int.Cal Date: 7-16

Send	2-3	1-2	3-4	2-3	1-2	4-5	3-4	2-3	1-2	4-5	3-4	2-3
Rec.	5-10	———	10-15	———	———	15-20	———	———	———	20-25	———	———
Time	100	30	100	30	10	100	30	10	10	30	10	3
DC-1	53.0 50.8	15.0 14.9	34 32.8	12.5 13.7	5.6 5.6	68.0 68.0	11.7 11.7	6.90 6.75	3.80 3.25	10.8 11.5	3.6 3.6	2.5 2.45
DC-2	52.0 51	15.0 14.5	34.0 32.8	12.5 13.6	5.54 5.64	68.0 68.0	11.7 11.6	70 6.6	3.75 3.25	11.5 10.8	3.5 3.65	2.5 2.48
Σ	103.8 104	29.4 29.5	66.8 66.8	26.2 26.1	11.2 11.28		23.4 23.3	13.65 13.6	7.00 7.05	22.3	7.1 7.15	4.95 4.95
DC-3	52.0 51.8	15.0 14.6	34.0 32.8	12.6 13.5	5.5 5.65	68.0 68.0	11.7 11.7	7.0 6.6	3.75 3.20	11.4 10.9	3.5 3.65	2.50 2.45
Dc-4		14.9 14.7				IDC			6.95			2.50 2.45
Σ	103.8	29.6 29.6	66.8	26.1	11.15		23.4	13.6		22.3	7.15	5.00 4.95
DC-AV	103.8	29.6	66.8	26.13	11.17	136	23.4	13.6	7.00	22.3	7.15	4.96
AC-1	52.0	14.7	33.4	13.0	5.5	66.5	11.6	6.68	3.47	11.0	3.55	2.4
AC-2	51.8	14.7	33.3	13.0	5.5	66.5	11.5	6.70	3.47	11.0	3.50	2.4
Σ	103.8	29.4	66.7	26.0	11.0	133.0	23.1	13.38	6.94	22.0	7.05	4.8
S. P.	+3.5	———	+11.9	———	———	+12	———	———	———	+1.0	———	———
AC-N	.04	———	.06	———	———	.07	———	———	———	.07	———	———
	48.0	———	48.0	———	———	48.0	———	———	———	98.0	———	———

UCED POLARIZATION - RECEIVER NOTES PAGE

Project: Pima Line: 2 500 E½ Int.Cal Date: 7-16

Send	1-2	4-5	3-4	2-3	1-2		CAL					
Rec.	20-25	25-30	←	←	→							
Time PNG	3	10	10	3	3							
DC-1	1.42 1.43	4.95 5.20	2.0 2.2	1.55 1.63	1.0 .98		45.0 45.3					
DC-2	1.42 1.42	4.95 5.20	2.0 2.2	1.53 1.66	1.00 .98		45.5 45.2					
Σ	2.85 2.84	10.15 10.15	4.2 4.2	3.18 3.19	1.98		90.8 90.7					
DC-3	1.41 1.43	4.95 5.20	2.2 2.0	1.52 1.70	1.05 .92		45.5 45.3					
Dc-4				1.50 1.72			~~90.8~~					
Σ	2.84	10.15	4.2	3.22 3.22	1.97		90.8					
DC-AV	2.84	10.15	4.2	3.20	1.975		90.8					
AC-1	1.4	5.0	2.10	1.58	9.70		45.8					
AC-2	1.4	5.0	2.10	1.59	9.70		45.9					
Σ	2.80	10.0	4.20	3.17	19.40		91.7					
S. P.	+1.0	+4.5	←	←	→							
AC-N	.07	.04	←	←	→							
I.C.	48.0	48.0	←	←	→							

HEINRICHS GEOEXPLORATION COMPANY

INDUCED POLARIZATION SURVEY COMPUTATION SHEET

Page_____

Project Pima Claim Grp Line 2 E½ Field date 7-16-64 Data page_____ Comp. date 7-18-64. Comp by J.P.M.

(A) Send	2-3	1-2	3-4	2-3	1-2	4-5	3-4	2-3	1-2	4-5	3-4	2-3
(B) Receive	5-10	→	10-15	→	→	15-20	→	→	→	20-25	→	→
(C) ~~n separation~~ RNG												
(D) I	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
(E) Vdc (avg)	103.8	29.6	66.8	26.13	11.17	136	23.4	13.6	7.0	22.3	7.15	4.96
(F) DCcal	1.10	→	→	→	→	→	→	→	→	→	→	→
(G) Kn x 10^{-3}	1.5	6	1.5	6	15	1.5	6	15	30	6	15	30
(H) ρdc=ExFxGx10^3/D	85.6	97.6	55.2	86.2	92.2	112	77.3	112	115	73.7	57.8	81.7
(I) Vac Σ												
(J) AC noise x 2	103.8	29.4	66.7	26.0	11.0	133	23.1	13.38	6.94	22.0	7.05	4.8
(K) Vac(corr) = $\sqrt{I^2 - J^2}$	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
(L) AC-DC cal.	1.01	→	→	→	→	→	→	→	→	→	→	→
(M) ρdc/ρac=ExL/K	1.01	1.016	1.012	1.014	1.025	1.033	1.023	1.028	1.018	1.023	1.029	1.043
(N) PFE=(M-1)(10^2)	1.0	1.6	1.2	1.4	2.5	3.3	2.3	2.8	1.8	2.3	2.4	4.3
(O) MCF=(M-1)(10^5)/H	12	16	22	16	27	29	30	25	16	31	42	52.7

Project_____ Line_____ Field date_____ Data page_____ Comp. date_____ Comp by_____

(A) Send	1-2	4-5	3-4	2-3	1-2		CAL					
(B) Receive	20-25	25-30	→	→	→		3-4					
(C) ~~n separation~~ RNG.							~~100~~					
(D) I	2000	2000	2000	2000	2000		1000					
(E) Vdc (avg)	2.84	10.15	4.2	3.2	1.975		90.8					
(F) DCcal	1.10	→	→	→	→		1.10					
(G) Kn x 10^{-3}	52.5	15	30	52.5	84							
(H) ρdc=ExFxGx10^3/D	82.0	83.7	69.3	92.3	91.2							
(I) Vac Σ	2.80	10.0	4.20	3.17	19.40		91.7					
(J) AC noise x 2	✓	✓	✓	✓	✓							
(K) Vac (corr) = $\sqrt{I^2 - J^2}$												
(L) AC-DC cal.	1.01	→	→	→	→		1.01					
(M) ρdc/ρac =ExL/K	1.024	1.024	1.01	1.020	1.028							
(N) PFE=(M-1)(10^2)	2.6	2.4	1.0	2.0	2.8							
(O) MCF=(M-1)(10^5)/H	32	29	14	22	31							

ORE RESERVE STUDY

Iron Age Mine
San Bernadino County, California

March 1962

for

GRIFFITH ANNESLEY
164 North Euclid Avenue
Pasadena, California

by

HEINRICHS GEOEXPLORATION COMPANY
P. O. BOX 5671 TUCSON, ARIZONA

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Ore Reserves Indicated	2
Reserve Tonnage	4
Magnetometer Survey	5
Iron Age Mine Reports	6
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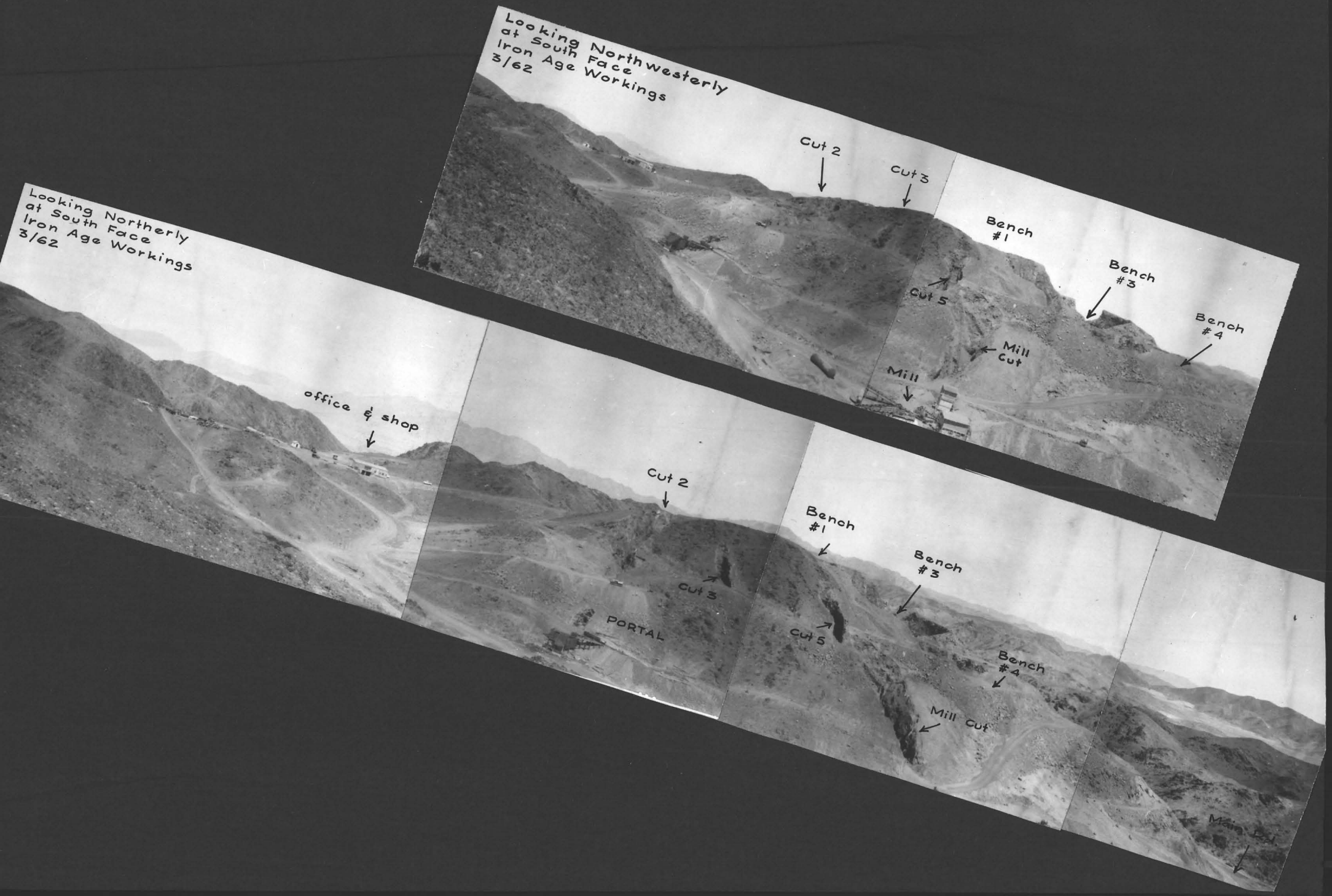
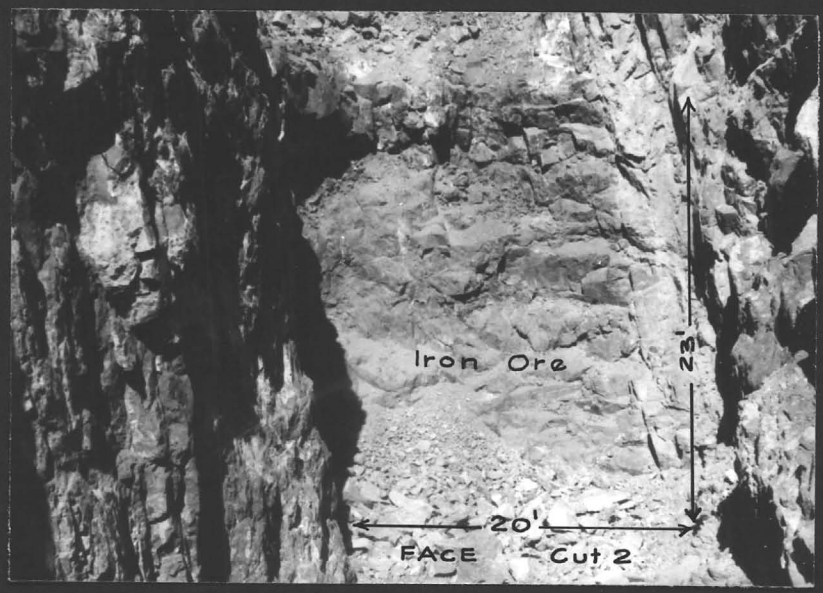
Panorama looking Northwest
Panorama looking North
Face cut #2, closeup
Face Cut #2, distant
Face Bench 4

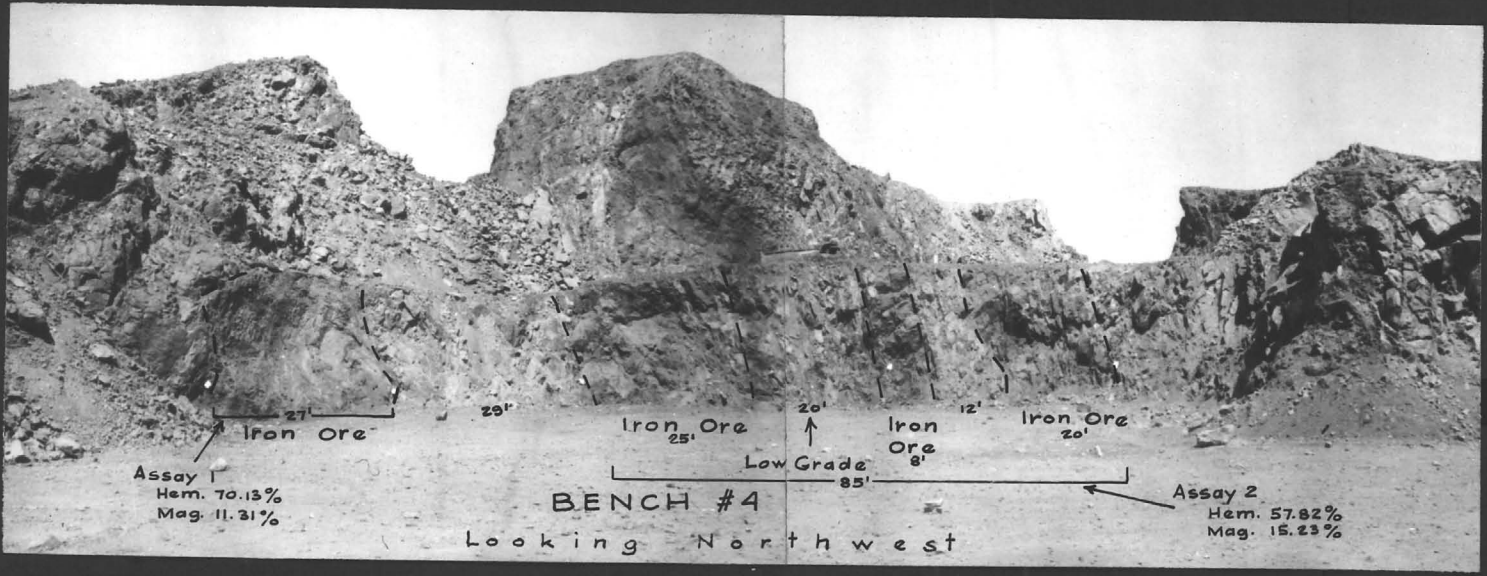
In Map Pocket

Map #1----------Topography
Map #2----------Outcrop, Magnetite Ore Zone and Magnetometer Survey
Map #3----------Topo Profile 1 N
Map #4----------Topo Profile 0 N/S
Map #5----------Topo Profile 1 S
Map #6----------Topo Profile 2 S


Looking Northwesterly
at South Face
Iron Age Workings
3/62
Cut 2
Cut 3
Bench #1
Bench #3
Bench #4
Cut 5
Mill Cut
Mill
Looking Northerly
at South Face
Iron Age Workings
3/62
office & shop
Cut 2
Cut 3
PORTAL
Bench #1
Bench #3
Cut 5
Bench #4
Mill Cut
Main Dr.


Iron Ore
20'
FACE
Cut 2

Iron Ore
20'
FACE
Cut 2
IRON ORE
STRINGERS


27'
Iron Ore
29'
Iron Ore
25'
20'
Iron Ore
8'
12'
Iron Ore
20'
Low Grade
85'
Assay 1
Hem. 70.13%
Mag. 11.31%
Assay 2
Hem. 57.82%
Mag. 15.23%
BENCH #4
Looking Northwest

File Annesley

TransAmerican Marketing Corporation

April 5,1967

check files

J. Harold Courtwright
American Smelting & Mining Co.
110 East Helen
Tucson, Arizona

MR. ~~SB~~ Noted - R fw
READ AND RETURN .....
PREPARE ANSWERS ..... HANDLE .....
FILE ..... INITIALS .....

J. H. C.
APR 6 1967
S. I. B.
APR 7 1967

Dear Mr. Courtwright:

Enclosed is the information which I agreed to send in our phone conversation of April 5th.

We feel this is the largest open pit porphyry copper property in North America. The location is in Pima County, just six miles Northwest of Arivaca, Arizona, on a well graveled and maintained road. Arivaca is about 60 miles southwest of Tucson.

Extensive geological work, magnetometer surveys, and some drilling has been performed by Charles E. Melbye- Geological Engineer, C.E. Melbye and associates of Golden, Colorado, is one of the most outstanding independent geologecal engineering firms of the world today. Mr. Melbye has recently become the head of the mining department for Union Pacific Railroad.

TransAmerican Marketing Corporation is a principal owner of the property and is desirous of an immediate sale. The sale will be based on a cash offer plus a % override plus a performance agreement.

We now have one attractive offer from a major U.S. firm who is anxious to move onto the property. Because of circumstances, time is of the essence. We would, however, like to give you the opportunity to investigate this prospect before we accept their offer. This property has all the earmarks of a 15,000 ton per day operation.

I will look forward to hearing from you.

Sincerely,

Phil Meisinger

TransAmerican Marketing Corp.
Phil Meisinger

PM/im

CHARLES E. MELBYE AND ASSOCIATES

MINING - GEOLOGICAL - GEOPHYSICAL - ENGINEERS

S. I. B.
APR 7 1967

J. H. C.
APR 6 1967

April 28, 1964

Mr. Griffith Annesley
164 North Euclid Avenue
Pasadena, California

PRELIMINARY EVALUATION
PIMA COPPER PROPERTY
Ora Blanco District
Pima County, Arizona

INTRODUCTION

On April 27, 1964, a preliminary evaluation was made of the Pima property to determine whether or not it merits further exploration. A reconnaissance was completed of all the cuts and excavations as well as of important outcrop areas, and a study was made of the complete maps and report by James L. Papadakis, geologist. The writer was accompanied by Griffith Annesley.

Location is six miles northwest of Arivaca, Arizona, on a well graveled and maintained road. Arivaca is about 60 miles southwest of Tucson. The main portion of the property lies in Sections 9 & 10, T21S, R9E.

HISTORY

No mining or exploration of any consequence has been done on the property. The past 10 years has seen some random excavations and shallow drillholes unguided by any geological or geophysical work and therefore largely wasted effort. The first serious technical work was the mapping by James L. Papadakis in 1963 which appears to be carefully done.

GEOLOGY

The detailed geological features are well covered in the Papadakis report, but a few of the important economic factors should be empahsized.

Rock Types

Most of the rock exposed consists of the Cretaceous Oro Blanco Conglomerate, the predominant rock type throughout the Oro Blanco Mountains. Occasional sandstones and shales are interbedded. The only igneous rock mapped is the series of discontinuous aplite dikes trending N25°E through

2020 FOOTHILLS ROAD

P. O. BOX 309 GOLDEN, COLORADO CRestview 9-1542

the east half of Section 9. A thin layer of alluvium covers the west half of Section 9 and northward into Sections 3 and 4.

Structure

Two fault systems are evident, a N-S to N20°E system, which seems related to the dike system, and a northwest system in the form of cross faults with apparent considerable displacement. Some of the mapped faults are very weak and more in the nature of jointing. Considerable fracturing and brecciation is evident near some of these faults. The general NW dip indicates the deposits to be on the NW flank of an anticline since a reversal occurs two miles south.

Mineralization and Alteration

Copper mineralization is all oxidized and consists mainly of chrysocolla with lesser amounts of malachite. These minerals occur as fracture fillings, coatings, and impregnations or disseminations in the rock. Considerable jasper, quartz, and iron oxides occur as gangue minerals. Both the aplite and the conglomerate are equally mineralized. No distinct veins were seen but rather random mineralized fractures and zones. Copper mineralization of this type can be seen in pits for 7,000 feet N-S and for 2,500 feet E-W.

Alteration of the host rock, an important guide to ore localization, was observed throughout the area of copper mineralization. Under this alteration discussion would be included contact metamorphic minerals such as would be expected as a halo near a buried igneous intrusive. Epidote and garnet are fairly widespread and alteration of the conglomerate consists of silicification, secondary biotite, and possible sericite. Limonitic staining has produced a distinct halo at the north end of the property on Section 9.

Copper mineralization and alteration are related partly to the NE dike and fault system, as is shown by strong copper mineralization in the pits on Section 9, but similar copper oxides can be seen throughout random fractures 1,500 feet east of this zone.

CONCLUSIONS

1. The presence of secondary copper mineralization, together with contact metamorphism and alteration, over a substantial area, 7,000' x 2,500', strongly indicates the possibility of an intrusive buried at a shallow depth. The dikes could also be feeders from the main stock. If an intrusive is present, the prospect would be very promising since a source for the copper mineralization would be provided and a most favorable host rock would be present.

2. Similar intrusive rocks outcrop two miles SW and one mile NE, thereby suggesting an intrusive belt through the Pima property but which has not been uncovered by erosion.

3. Copper oxides not only coat fractures but permeate the rock as

disseminations, indicating strength to the mineralization.

4. The property is situated in a favorable district with numerous other copper mines and prospects in close proximity.

RECOMMENDATIONS

1. A magnetic survey should first be run over the entire area of known copper mineralization to determine whether an intrusive lies at some reasonable depth. If this is indicated, the property would become very attractive and further work would be recommended.

2. In conjunction with the magnetic survey, a geochemical survey for copper and molybdenum should be run.

Respectfully submitted,

Charles E. Melbye
Geological Engineer

CEM:vs

A

HEINRICHS GEOEXPLORATION COMPANY

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

July 9, 1964

Mr. Griffith Annesley
164 North Euclid
Pasadena, California

Dear Mr. Annesley:

On June 23, 24, 26 and July 6 and 8, 1964 a reconnaissance magnetic survey was run by Heinrichs Geoexploration Co. over the Pima Claim Group in the Oro Blanco Mining District, Pima County, Arizona. The magnetometer was run by Mr. E. Grover Heinrichs and Mr. J. P. Matthews, Jr., assisted by Mr. R. E. Palmer.

The purpose of this survey was to delineate any possible extension of the known mineralization discussed by Mr. C. E. Melbye. The magnetic survey has shown an anomalous zone which is centered approximately 1,000 feet east and 500 feet south of the northwest corner of Section 16. This anomaly appears to be at an intersection of a northeast and northwest magnetic trend. This correlates well with the geology map of Mr. J. L. Papadakis which indicates faulting along both of these magnetic trends, with considerable cross-faulting and brecciation in this zone. A rough calculation on the magnetic anomaly would indicate a depth to the source of less than 200 feet.

On Saturday, June 27th and Thursday, July 9th a discussion was held concerning the property in question. Present were Messers Griffith Annesley, E. Grover Heinrichs, John Langs, Walter E. Heinrichs, Jr. and Phil Matthews. During these discussions it was decided that the area showed promise both geologically and geophysically and was worthy of continued work.

Several prospecting methods were suggested; geochemical sampling, detailed magnetics, induced polarization and resistivity. The geochemical sampling and detailed magnetics were temporarily set aside and I. P. was recommended as a follow up on the detailed magnetic survey because of its ability to detect sulfide mineralization in the subsurface.

The proposed I. P. lines will be centered at a point 2100 ft. east and 400 ft. south of the NW Cor. Sec. 16. One line 9° Azimuth and the other 99° Azimuth. The coverage will investigate the zone of intense cross-faulting and brecciation as indicated by the geology and magnetics of this area. These two I. P. Survey lines will have a dipole spacing of 500 ft. giving a detailed picture of the subsurface to an approximate depth of 750 ft. and combined will cover an area roughly circular in shape, having a diameter of about 3,500 ft. The resultant data will provide nominal recon S. P., and precise resistivity, and sulfide appraisal. Should sulfides be indicated as submarginal or absent, it will not necessarily prove or disprove the oxide situation in the area or even the presence of sulfides outside the area covered by the survey or at a greater depth.

Aerial photos are now being sought both in Phoenix and Tucson and if available, should be in our hands in the next day or so.

We plan to begin this project sometime during the week of July 13; however, we will be in phone contact with you prior to that time.

Very truly yours,

HEINRICHS GEOEXPLORATION CO.

Walter E. Heinrichs, Jr.
President & General Manager

J. P. Matthews, Jr.
Geophysicist

WEH:JPM/jh
cc: Extra Encl.

CHARLES E. MELBYE AND ASSOCIATES

MINING · GEOLOGICAL · GEOPHYSICAL · ENGINEERS

January 7, 1965

Mr. Griffith Annesley
157 So. Los Robles Avenue
Pasadena, California

Dear Mr. Annesley: Re: Pima property, Arivaca, Arizona

In regard to the Pima property near Arivaca, Arizona, I have reviewed the recently completed magnetic survey with respect to my previous geologic examination of the claims early in 1964.

My recommendation at that time was to run a magnetic survey to determine whether an intrusive might be buried below the Oro Blanco conglomerate, which intrusive could be the location or source of economic copper mineralization. The magnetic survey has disclosed a fairly substantial high, about 4000 feet in diameter, at the south end of the property. It is about the size and magnitude to be expected from a buried intrusive at fairly shallow depths or from a contact halo of magnetite. As there is a slightly greater quantity of contact silicates, such as garnet and epidote, at the south end of the property, this helps confirm the magnetic interpretation.

In view of the above data and the presence of fairly intense faulting and copper oxides, I would recommend one drill hole to test the area. This should be drilled to at least 1000 feet. Examination and interpretation of the cores should determine whether deeper drilling or additional drilling would be warranted.

Sincerely,

Charles E. Melbye

Charles E. Melbye
Reg. Prof. Geologist No. 344

M/am

P. O. BOX 309 2020 FOOTHILLS ROAD 303: 279-1542
GOLDEN, COLORADO 80402

C

CHARLES E. MELBYE AND ASSOCIATES

MINING · GEOLOGICAL · GEOPHYSICAL · ENGINEERS

January 25, 1966

Mr. Griffith Annesley
157 South Los Robles Ave.
Pasadena, California

Re: Pima Copper Prospect
Pima County, Arizona

Dear Mr. Annesley:

This letter is to summarize conclusions regarding the drilling program on the Pima claims, which commenced on Jan. 16 and was terminated on Jan. 20, 1966.

Two five-inch holes were drilled with a Mayhew Model 1500 rotary drill, which had a 25,000 lb pull-down pressure on the bit. Samples were collected in a Duclone collector. assays ?

The first hole was intended to be shallow for geological test purposes and went to 140 feet. However, the second hole was planned to go to a depth of about 1000 feet in the center of the magnetic anomaly, but it was stopped at 167 feet due to the very hard siliceous Ore Blanco conglomerate which caused excessive bit wear. Only 5 feet could be drilled with each bit at the rate of about 5 feet per hour, which made it obvious that diamond core drilling must be employed, and rotary drilling was terminated.

Some valuable information was gained from this hole, as the last 7 feet encountered considerable epidote, which is a contact metamorphic mineral caused by alteration of the conglomerate by an intrusive at depth below. This increase of epidote implies that the hole is getting nearer the intrusive, although there is no way of predicting this distance, since epidote can be found in a halo hundreds of feet from an intrusive. It is, however, a favorable indicator since the prime purpose of the hole is to determine the presence of an intrusive below the conglomerate.

Sincerely yours,

Charles E. Melbye

CEM:am

Charles E. Melbye

P. O. BOX 309 2020 FOOTHILLS ROAD 303: 279-1542
GOLDEN, COLORADO 80402

D

THEORETICAL VALUE OF AN OPEN PIT PORPHYRY COPPER PROPERTY

3,500 FEET IN DIAMETER AND 500 FEET DEEP IN THE SUPERGENE ENRICHED ZONE, VALUED AT 0.75% COPPER AND PRICED AT 36¢ POUND

This hypothesis could very well apply to the Pima Property situated about 6 miles W-N-W of Arivaca in S-W Pima County.

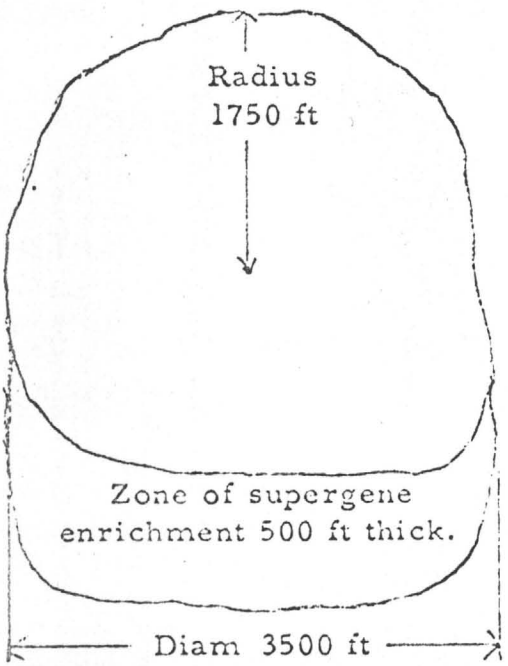
Pima County already hosts some of the newest and largest open pit mines in the U. S. including the A. S. & R Mission Mine, Pima Mine, Duval Mine, Anaconda Mine & Banner Mine with some new ones on the way to production. Each of these mines produce from 5,000 to over 15,000 tons a day of Cu ore.

A large open pit property similar to any of the above will generate as much revenue as an extensive oil field and that is why the oil and other large companies are constantly searching to either find or buy a good looking prospect with at least an anomaly and good geology in evidence.

The figures given below do not include the low grade gold and silver ore already found all over this property which in itself is too lean to be worked alone but could add another $4-6 per ton to the revenue that may be derived from an open pit copper operation.

In addition molybdenum is usually found in small but worthwhile amounts in this area with the other minerals, thus adding more probable revenue.

The present area held by Griffith Annesley is 4 square miles but the final lease will probably be about 1280 acres or about 2 square miles.



Formula

$$\frac{3.14 \times 1750 \times 1750 \times 500}{12.5 \text{ (cu ft per solid ton)}} = \text{Weight} =$$

384,650,000 tons x $5.40 per ton =

$2,077,110,000 = gross value of pit.

Note

This type of property could contain millions of additional tons of marginal ore both above and below the known zone of supergene enrichment which will depend on the future price of copper and other metals and the constant effort to decrease the cost of production to become additional positive profitable ore.

D

INTRODUCTION

At the verbal request of Mr. Griffith Annesley on March 20, 1962 in Tucson, an ore reserve field appraisal of the Iron Age Mine was made between 24 and 27 March 1962 by Mr. E. Grover Heinrichs. This report was compiled from the resultant field work and studying and comparing previous reports which were released for this purpose by Mr. I. W. McManaman, General Partner, Iron Age Mine.

The field work consisted of magnetometer surveys as well as sampling and measuring exposed iron outcrops.

Our first visit to the property was in 1959 at which time ore reserves were estimated. The operation reportedly has produced about 170,000 tons of ore since then. In general the vein-like ore occurences are much better exposed and are wider in the area of benches 1, 3 & 4 than when originally observed, indicating some increase in width with depth which enhances the present over all ore reserve picture.

ORE RESERVES INDICATED

Calculations were made by computing the area of each individual zone in square feet as indicated on the plan map. The area of each zone was determined by magnetic observations and by measured outcrop in place. Two assays were taken which revealed some interesting comparisons that are commented on under the heading of "Assay Results" which follows.

The depth of each zone was computed two ways. One was to figure each zone down to an elevation of 2,000' above sea level which is 30' above the lowest elevation on the property at which an iron outcrop was observed. (Also, note U.S.G.S. Bull. 430, Plate 11, not included herein.) The other was to figure the zone down 100' from an arbitrary level at the outcrop occurrence or bench level as applicable. The latter, of course, is a more conservative figure except for the Mill Cut Zone which has a floor elevation of 2,060' and a 100' depth would take ore to a lower depth in these calculations, or to 1,960' which is not too unrealistic as iron outcrop was observed at 1,970' elevation as previously mentioned. No reasonable evidence has been observed to indicate any cut off of the ore at this elevation anywhere on the hill.

In converting cubic feet to tons of material <u>in place</u> a conservative over all factor of 10 cubic feet per ton was used.

Actually the high grade iron ore may approach 7 cubic feet per ton or even less, in which case, the ore tonnage estimates would be increased proportionately. For example, 7 cubic feet per ton would allow for about 40% more tonnage than 10 cu. ft. per ton. On the other hand, no allowance was made for waste and dilution which represent a decrease in true available tonnage.

Another basis for presenting tonnage reserves is in terms of available tons per vertical foot mined. This is estimated to be at the average rate of 5,836 tons of ore per vertical foot.

The following tabulation separately lists the ore zones, the area involved, the depth to 100', the depth to the 2,000' elevation and the total magnetometer ore indicated at each separate depth calculation and remarks as to the control used to arrive at the area calculation.

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2b	3,650	156	568,400	56,840	100	365,000	36,500	"	"	"
3	2,500	135	337,500	33,750	100	250,000	25,000	"	"	"
4	5,250	135	708,750	70,875	100	525,000	52,500	"	"	"
W	3,000	150	450,000	45,000	100	300,000	30,000	"		
X	2,500	150	375,000	37,500	100	250,000	25,000	"		
Cut Z	1,300	115	149,500	14,950	100	130,000	13,000	"	"	"
Mill Cut	2,900	50	145,000	14,500	100	290,000	29,000			"
TOTALS				878,855			583,600			

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Respectfully submitted,

HEINRICHS GEOEXPLORATION CO.

E. Grover Heinrichs
Vice President & Field Engineer

Walter E. Heinrichs, Jr.
President & General Manager

Registered Professional Engineer Mining
CERTIFICATE EXPIRES
WALTER E. HEINRICHS JR.
DEC. 31, 1962
ARIZONA, U. S. A.

April 4, 1962
P. O. Box 5671
Tucson, Arizona

W. E. HAWLEY, PRES.

TELE: EMPIRE 4-2741

HAWLEY & HAWLEY

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BOX 4
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IDENTIFICATION	GOLD OZS	SILVER OZS	LEAD %	COPPER %	ZINC %	INSOL. %	IRON %	Fe 0 %	Fe 0 %
								23	34
Sample #1-952								70.13	11.31
#2-953								57.82 (Hema-tite)	15.23 (Magna-tite)

CC:
ADD:
CITY:
ADD:
CITY:

REMARKS:

ANALYSIS CERT. BY P Richard

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1.50 Preparation
16.00 Analyses

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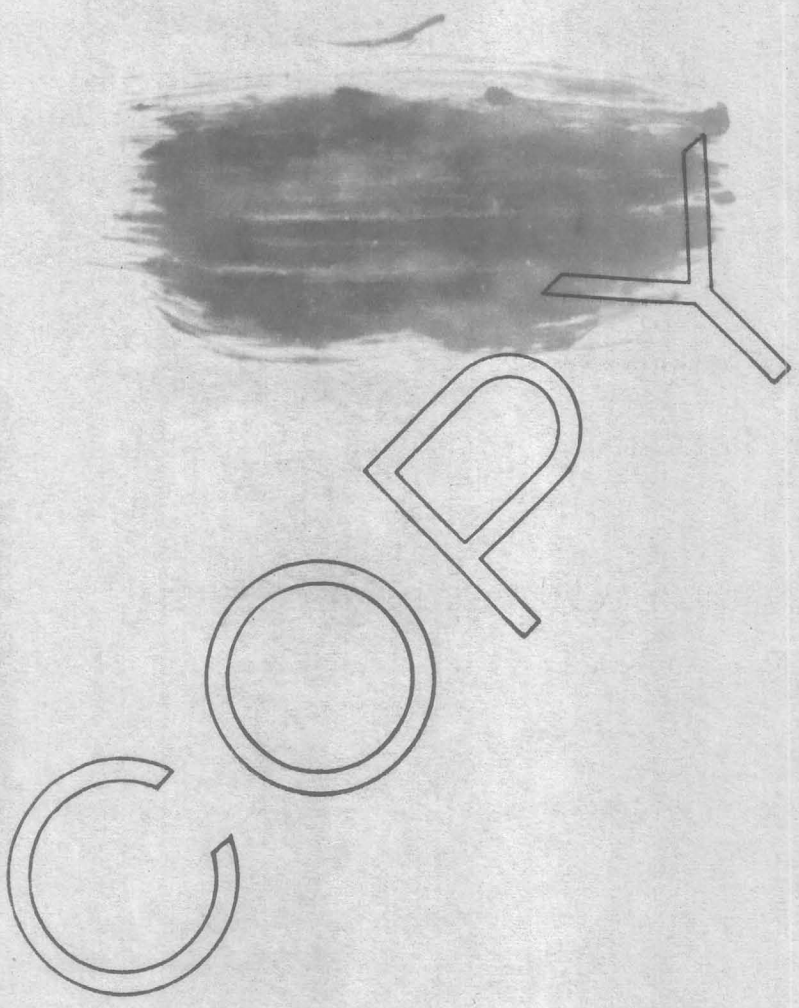

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P.O. Box 5671 Tucson, Arizona		
E-W X-SECTION LINE 2 S FOR IRON AGE MINE		
SCALE: Horizontal: 1"=50' Vertical: 1"=10'	CONTOUR INTERVAL:	REVISIONS
	DATA BY: E. G. H.	
DATE: March 1962	SHEET 6 OF 6	
DRAWN BY: I. B.	DRAWING NO.: 6	FILE: IRON AGE/62

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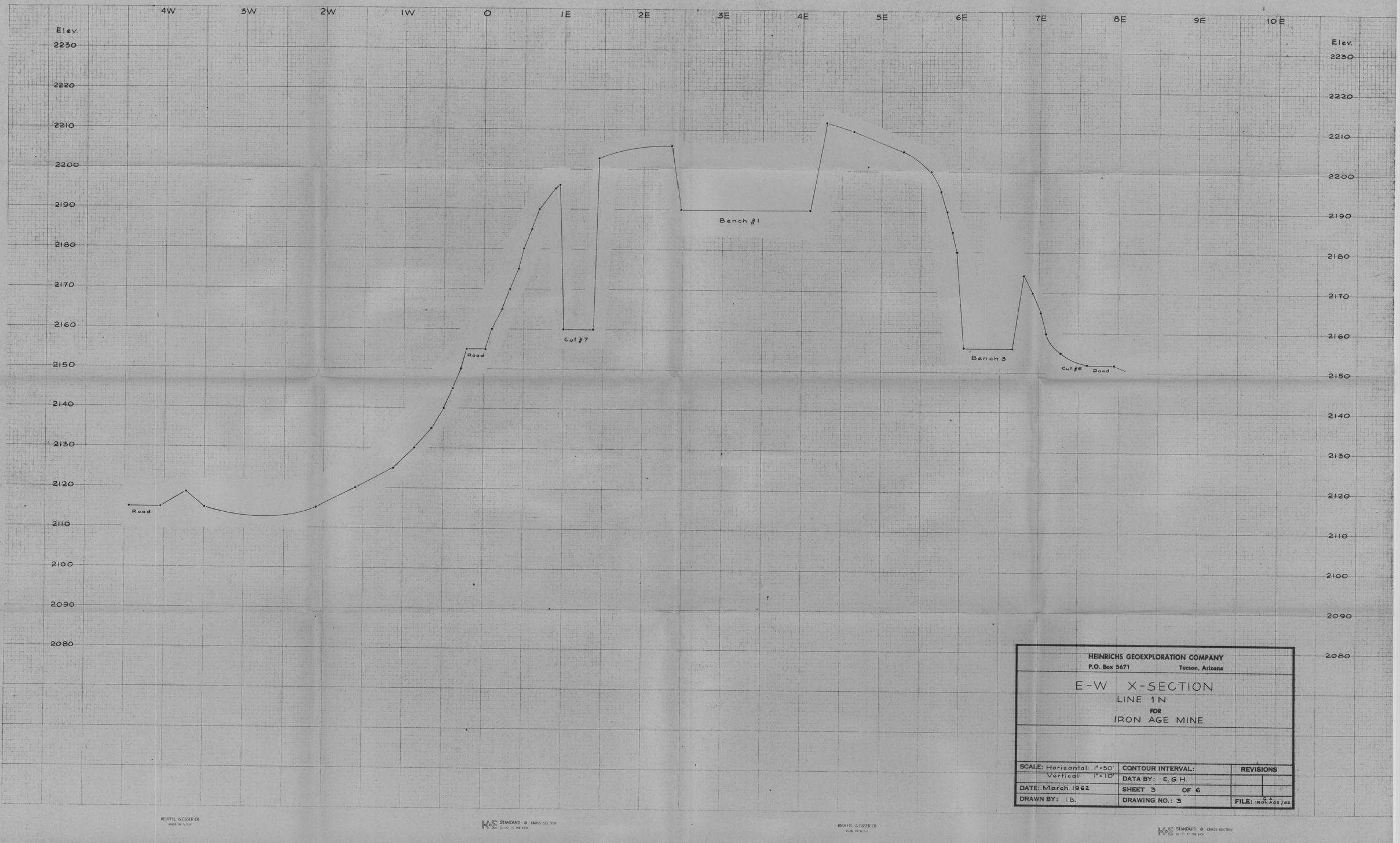

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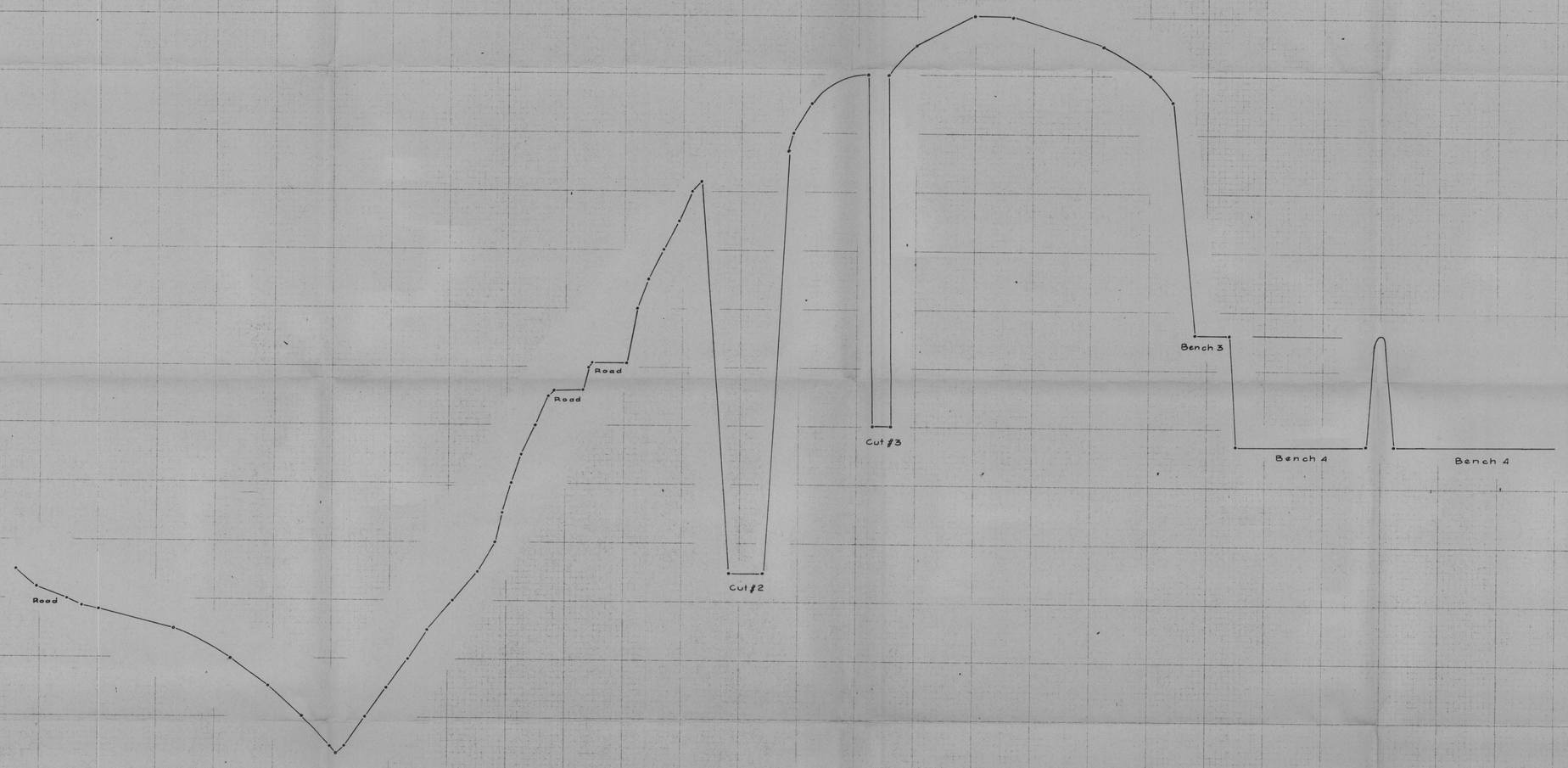

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E-W X-SECTION LINE 15 FOR IRON AGE MINE		
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	DATA BY: E. G. H.	
DATE: March 1962	SHEET 5 OF 6	
DRAWN BY: I. B.	DRAWING NO.: 5	FILE: G.A. IRON AGE / 62

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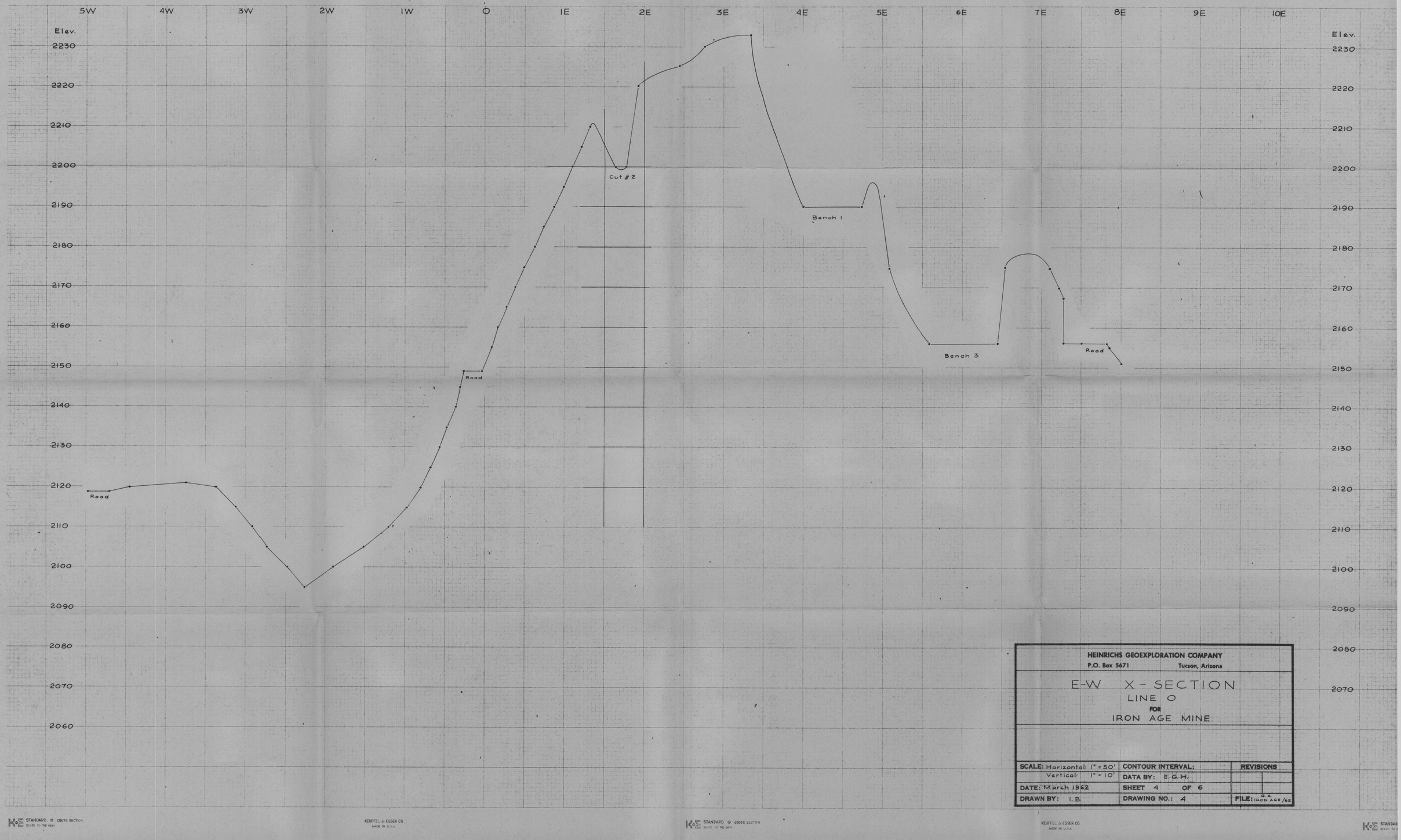

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P.O. Box 5671 Tucson, Arizona		
E-W X-SECTION LINE 0 FOR IRON AGE MINE		
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DATE: March 1962	SHEET 4 OF 6	
DRAWN BY: I. B.	DRAWING NO.: 4	FILE: G.A. IRON AGE/62

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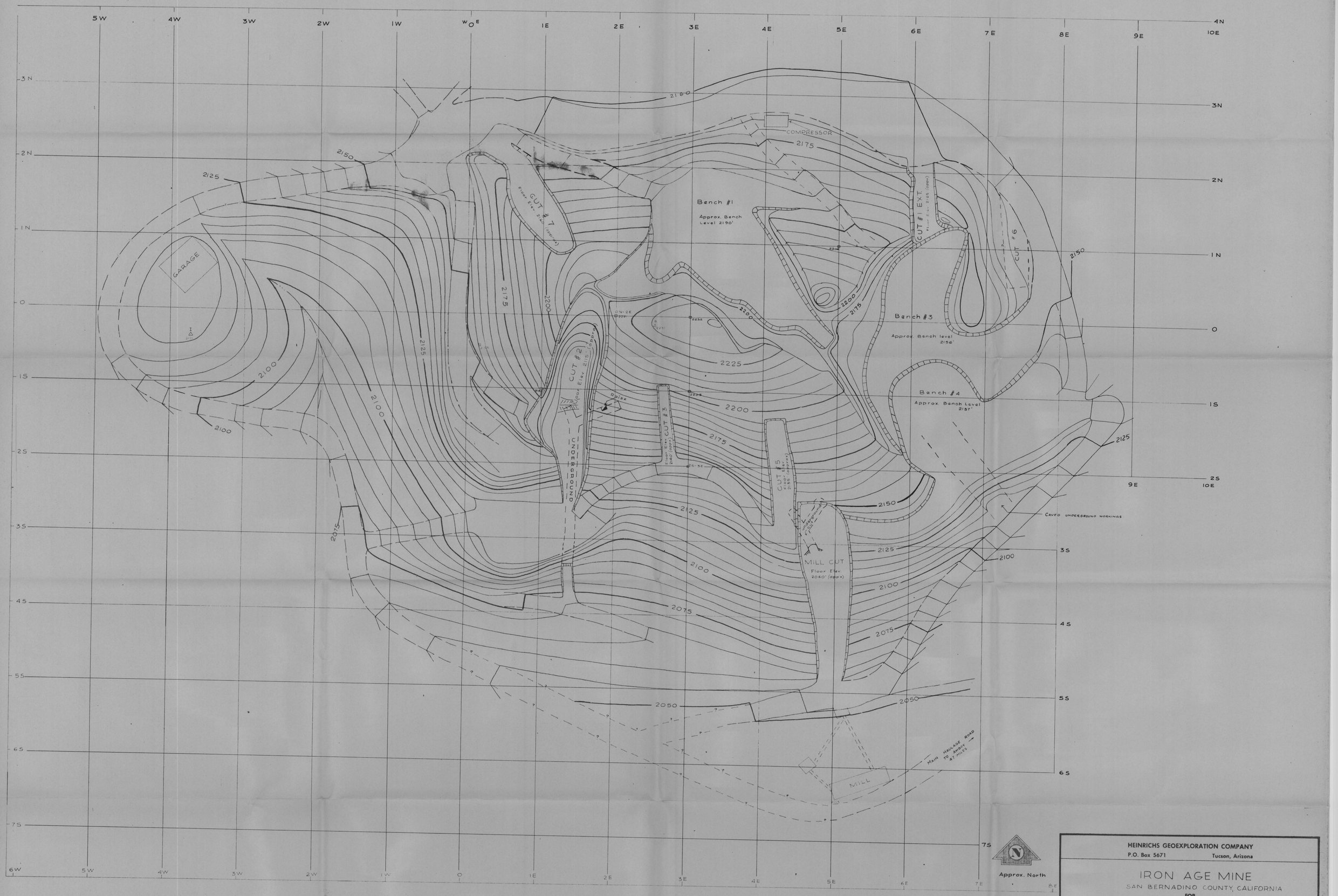


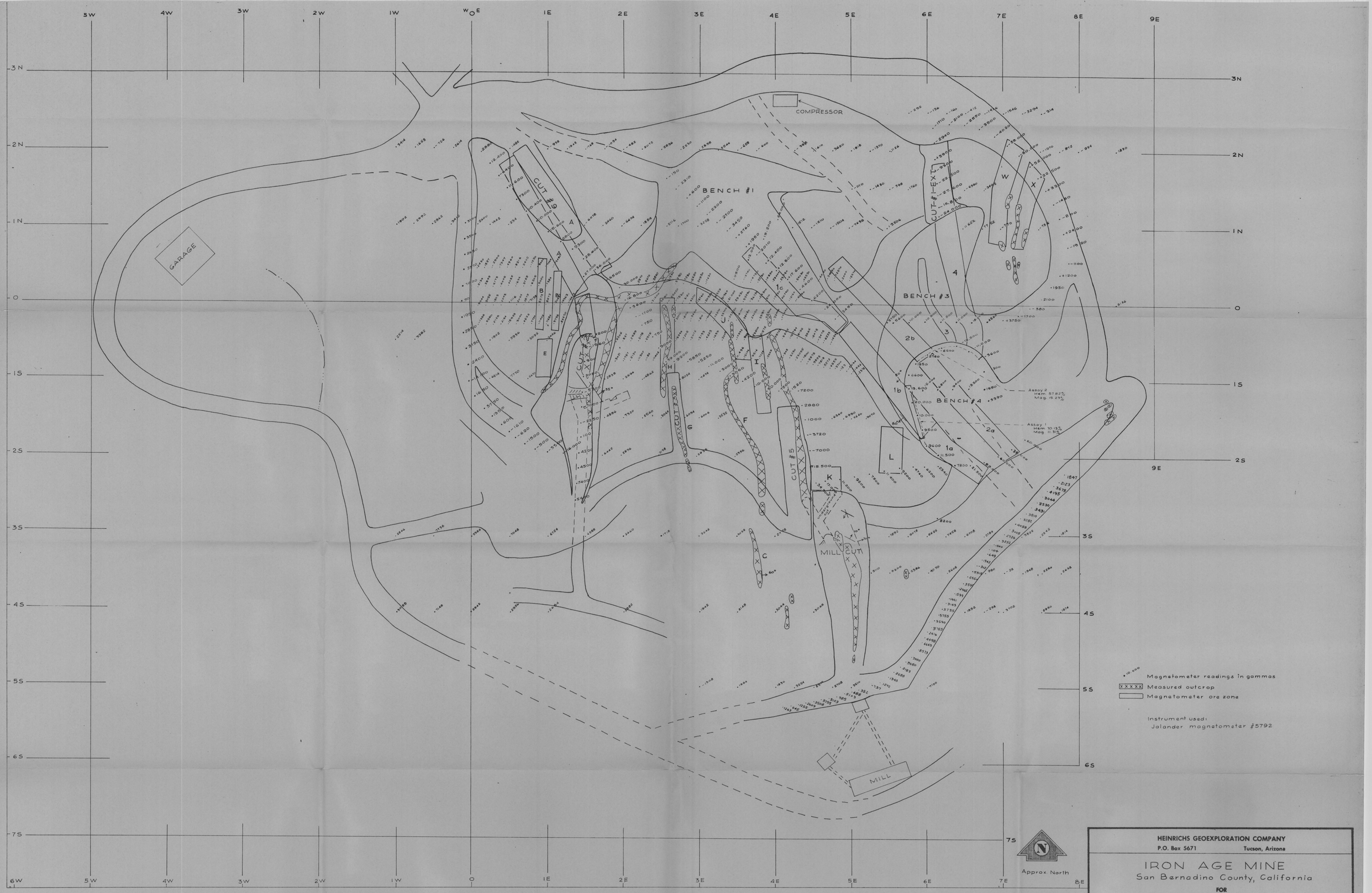
HEINRICHS GEOEXPLORATION COMPANY
P.O. Box 5671 Tucson, Arizona

IRON AGE MINE

SAN BERNADINO COUNTY, CALIFORNIA
FOR
GRIFFITH ANNESLEY

TOPOGRAPHIC MAP

SCALE: 1" = 50'	CONTOUR INTERVAL: 1" = 5'	REVISIONS
	DATA BY: E. G. H.	
DATE: March 1962	SHEET 1 OF 2	
DRAWN BY: I.B.	DRAWING NO.: 1	FILE: Iron Age /62



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

IRON AGE MINE
San Bernadino County, California
FOR
GRIFFITH ANNESLEY

OUTCROP & MAGNETIC ORE ZONE MAP
MAGNETIC VERTICAL INTENSITY
SURVEY

SCALE: 1" = 50'	CONTOUR INTERVAL:	REVISIONS
	DATA BY: E. G. H.	
DATE: March 1962	SHEET 2 OF 6	
DRAWN BY: I. B.	DRAWING NO.: 2	FILE: IRON AGE /62

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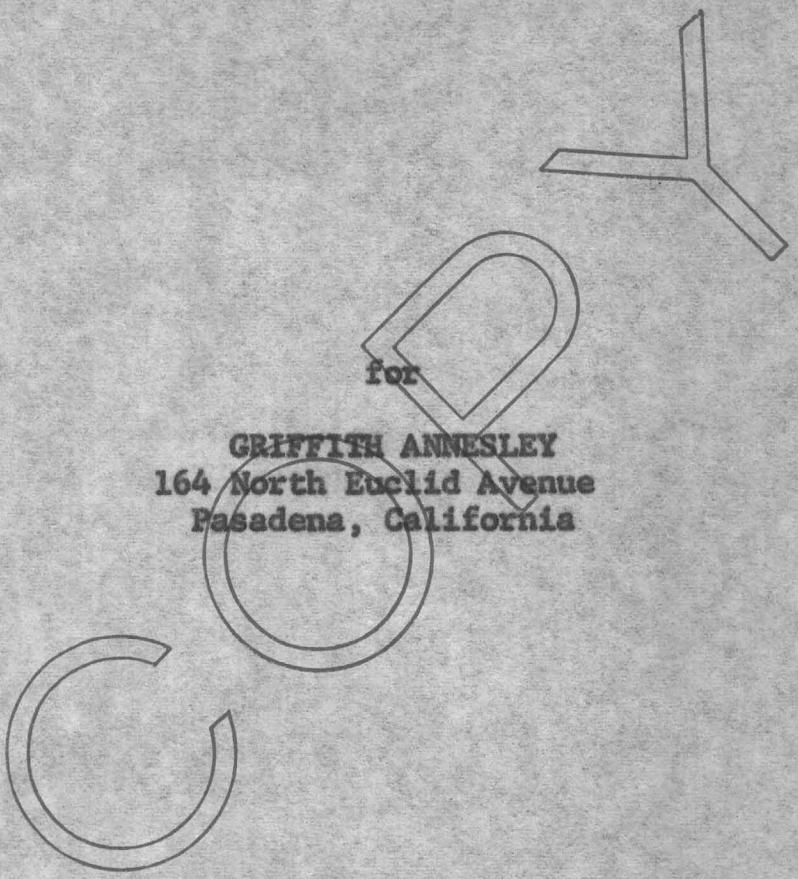
ORE RESERVE STUDY

Iron Age Mine
San Bernadino County, California

March 1962



for

GRIFFITH ANNESLEY
164 North Euclid Avenue
Pasadena, California

by

HEINRICHS GEOEXPLORATION COMPANY
P. O. BOX 5671 TUCSON, ARIZONA

TABLE OF CONTENTS

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Introduction	1
Ore Reserves Indicated	2
Reserve Tonnage	4
Magnetometer Survey	5
Iron Age Mine Reports	6
Assay Results	7
Mining Methods	8
Assay Certificate	10

Panorama looking Northwest
Panorama looking North
Face cut #2, closeup
Face Cut #2, distant
Face Bench 4

In Map Pocket

Map #1----------Topography
Map #2----------Outcrop, Magnetite Ore Zone and Magnetometer Survey
Map #3----------Topo Profile 1 N
Map #4----------Topo Profile 0 N/S
Map #5----------Topo Profile 1 S
Map #6----------Topo Profile 2 S

COPY

INTRODUCTION

At the verbal request of Mr. Griffith Annesley on March 20, 1962 in Tucson, an ore reserve field appraisal of the Iron Age Mine was made between 24 and 27 March 1962 by Mr. E. Grover Heinrichs. This report was compiled from the resultant field work and studying and comparing previous reports which were released for this purpose by Mr. I. W. McManaman, General Partner, Iron Age Mine.

The field work consisted of magnetometer surveys as well as sampling and measuring exposed iron outcrops.

Our first visit to the property was in 1959 at which time ore reserves were estimated. The operation reportedly has produced about 170,000 tons of ore since then. In general the vein-like ore occurences are much better exposed and are wider in the area of benches 1, 3 & 4 than when originally observed, indicating some increase in width with depth which enhances the present over all ore reserve picture.

ORE RESERVES INDICATED

Calculations were made by computing the area of each individual zone in square feet as indicated on the plan map. The area of each zone was determined by magnetic observations and by measured outcrop in place. Two assays were taken which revealed some interesting comparisons that are commented on under the heading of "Assay Results" which follows.

The depth of each zone was computed two ways. One was to figure each zone down to an elevation of 2,000' above sea level which is 30' above the lowest elevation on the property at which an iron outcrop was observed. (Also, note U.S.G.S. Bull. 430, Plate 11, not included herein.) The other was to figure the zone down 100' from an arbitrary level at the outcrop occurrence or bench level as applicable. The latter, of course, is a more conservative figure except for the Mill Cut Zone which has a floor elevation of 2,060' and a 100' depth would take ore to a lower depth in these calculations, or to 1,960' which is not too unrealistic as iron outcrop was observed at 1,970' elevation as previously mentioned. No reasonable evidence has been observed to indicate any cut off of the ore at this elevation anywhere on the hill.

In converting cubic feet to tons of material <u>in place</u> a conservative over all factor of 10 cubic feet per ton was used.

Actually the high grade iron ore may approach 7 cubic feet per ton or even less, in which case, the ore tonnage estimates would be increased proportionately. For example, 7 cubic feet per ton would allow for about 40% more tonnage than 10 cu. ft. per ton. On the other hand, no allowance was made for waste and dilution which represent a decrease in true available tonnage.

Another basis for presenting tonnage reserves is in terms of available tons per vertical foot mined. This is estimated to be at the average rate of 5,836 tons of ore per vertical foot.

The following tabulation separately lists the ore zones, the area involved, the depth to 100', the depth to the 2,000' elevation and the total magnetometer ore indicated at each separate depth calculation and remarks as to the control used to arrive at the area calculation.

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RESERVE TONNAGE CALCULATIONS

March 1962

Determined by Magnetometer Surveys and Exposure measurements.
Factor of 10 cubic ft. per ton material in place.

ZONE	SQ. FT.	DEPTH TO 2,000' elev.	CU. FT.	TONS TOTAL ORE	100' DEPTH (Arbitrary)	CU. FT.	TONS TOTAL ORE	CONTROL
A	8,000	160	1,280,000	128,000	100	800,000	80,000	Magnetics & Measurement
B	1,750	175	306,250	30,625	100	175,000	17,500	"
C	560	90	50,400	5,040	100	56,000	5,600	"
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Vice President & Field Engineer

Walter E. Heinrichs, Jr.
President & General Manager

Registered Professional Engineer (Mining)
CERTIFICATE EXPIRES
WALTER E. HEINRICHS, JR.
DEC. 31, 1962
ARIZONA, U. S. A.

April 4, 1962
P. O. Box 3671
Tucson, Arizona

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Vertical Intensity

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Notes by
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Pima Claim Group Project

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Line A starting 120' N-W of center of pit. 800' N 26° E

Sta	time	Scale Read		
Base	0828	+1	52	By pit N 64° W,
0+00	0856	+1	50	Line 1 100' sta
1		"	51	Flats
2		"	51	
3		"	52	
4		"	52	
5		"	52	
6		"	52	
7		"	52	
8		"	50	
9		"	50	
10	0907	"	50	
11		"	50	70' to fence line
12		"	50	
13		"	50	
14		"	52	
15		"	52	in small wash
16		"	52	edge of hill
17		"	52	up hill
18		"	53	" "
19		"	52	" "
20	0916	"	53	30' N To Cl. Post
21		"	52	top of hill
22		"	52	

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Starting point. pace
location of section cor.
Section cor. not located.

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Line A Cond

Sta	time	Scale	Read		
23	0920	+1	53		
24		"	53		
25		"	53		
26	0924	"	53		
	Starting		S 26° W	800'	
	From Sta 26, line 1.				
400 SW	0930	+1	52	400' SW	Bat. 176
800 SW		+1	56		
	Starting		S 64° E	Toward pt	
Line B.	800 S 26° W from line A				
Sta	time	Scale	Read		
1	0935	+1	56		
2		"	56		
3		"	56-		
4		"	57		
5		"	57-		
6		"	56-		
7		"	57-	Betw 2 sharp	
8		"	55-	drains, gram, o.c.	
9		"	53-		
10		"	54	bank of wash	
11		"	54-	" " "	
12		"	55-		
13		"	52-		
14		"	55-	60' to fence	
15	0950	"	52		

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Line B Cond

Sta	time	Scale	Read	
16	0952	+1	55-	
17		"	55-	
18		"	53-	125' to dlb el. post
19		"	52-	
20		"	54-	
21		"	53-	
22		"	53-	
23		"	54-	
24		"	53-	
25		"	52	
26	1006	"	52	Base Sta at pit
27		"	52	N of main pit 40'
28		"	52	edge of pit
29		"	52	main road
30		"	53	30' to main road
31		"	52	
32		"	55	
33		"	55	
34		"	53	edge of wash
35		"	52	fork in wash
36		"	52	
37		"	52	
38		"	53	40' to road
39		"	53	
40		"	52	
41		"	52	
42	1028	"	52	

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Line B Cond

Sta	Time	Scale	Read	
43		+1	53	
44		"	52	
45		"	52	
46		"	52	
47		"	52	
48		"	52	
49		"	52	
50		"	52	
51		"	53	
52	1036	"	52	

Starting N 26° E 800' to ext Line A back to Base 0+00 L-A

4+00 NE		+1	48	
8+00 NE		"	50	Same as 52N-A

Starting back towards 0+00 A N 64° W

51N		+1	50	edge of sharp
50		"	48	bluff 10' hi
49		"	48	
48		"	48	
47		"	49	
46		"	49	
45		"	49	
44		"	49	
43		"	50	
42		"	50	
41		"	50	
40	1100	"	50	

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Line A Cond

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Sta	time	Scale	Read.		
39	1100	+1	50		
38		"	50		
37		"	51		
36		"	51		
35		"	51	road	25' N
34		"	51		
33		"	51		
32		"	51		
31		"	51		
30		"	51		
29		"	51		
28		"	51		
27		"	50		
26	1112	"	50	closure	

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Line C starting at Oxide pit #2
N 64° W

Sta	Time	Scale	Read	
0+00	1205	+1	72	Base #2
1N		"	72	is 220' South-E
2N		"	77	of base line
3		"	75	
4		"	76	
5		"	78	
6		"	77	
7		"	77	
8		"	77	
9		"	76	
10		"	76	dlb d. post 20'N
11		"	75	
11.5		"	75	
11.75		"	92	
12		"	70	pit 80' N
12.5		"	75	
13		"	75	
14		"	75	
15		"	75	
16		"	74	
17		"	74	
18		"	74	
19		"	72	
20		"	75	
21		"	73	wash

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Line C Cond

Sta	time	Scale	Read	
22	1230	+1	73	wash
23		"	72	"
24		"	72	"
25		"	73	
26		"	72	50' el. post
27		"	72	
28		"	70	
29		"	71	
30		"	71	wide open Flat wash
31		"	71	"

Starting S 26° W

1 SW	1243	+1	71	wash
2		"	71	on side hill out of wash
3		"	70	
4		"	71	
5		"	72	
6		"	72	
7		"	72	in wash
8		"	73	"

Starting S 64° E Line D

30	1252	+1	72	wash
29		"	73	"
28		"	73	"
27		"	74	dlb el. post iron pin
26		"	75	
25		"	73	

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Line D Cond.

Sta	time	Scale	Read	
24	1258	+1	74	wash
23		"	75	"
22		"	76	"
21		"	76	"
20.5		"	78	
20		"	79	
19.5		"	78	
19		"	79	
18		"	79	
17		"	79	
16		"	79	
15		"	81	
14		"	82	
13		"	84	
12		"	84	
11		"	83	
10		"	91	
9.5		"	82	
9		"	82	
8		"	82	
7		"	84	
6		"	84	
5		"	84	
4		"	82	
3.5		"	77	
3		"	76	
2		"	74	road
Base #2	1327	"	72	
Base #1	1338	"	52	

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Line D Cond

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Sta	time	Scale	Read	
2	1348	+1	74	
1N		"	74	
0		"	95	Sta numbered N/S from 0
1S		"	72	going uphill
2		"	72	"
3		"	72	"
4		"	73	"
5		"	70	"
6		"	67	100' southerly dlb Sl pt.
7		"	66	uphill
8		"	78	"
9		"	72	"
10		"	68	"
11		"	67	"
12		"	69	"
13		"	42	"
13.5		"	65	"
14		"	68	"
15		"	67	"
16		"	62	"
16.5		"	63	Top of main ridge
17		"	62	down hill
18	1418	"	63	"
19		"	62	
20		"	59	

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Line D Cond

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Sta	time	Scale	Read	
21		+1	62	
22		"	58	
23		"	59	
24		"	57	
25		"	58	
26		"	57	200' from wash
	N 26° E			
2NE		"	58	
4		"	56	
6	1440	"	57	
8NE		"	57	

Starting N 64° W on line C
Southerly half toward base

26				Same as 8NE above
25	1450	+1	56	
24		"	56	up hill
23		"	55	"
22		"	54	"
21		"	56	"
20		"	54	"
19		"	55	N 20' left past
18		"	55	"
17		"	56	"
16		"	57	Top N 75° W side of hill
15		"	57	down hill

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Line C Cond N-W

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sta	Time	Scale	Read	
14	1510	+ 1	57	
13		"	57	
12		"	59	
11		"	60	
10		"	61	
9		"	61	
8		"	61	
7		"	62	
6		"	63	
5		"	65	
4		"	66	10' to d lb cl. post
3		"	67	
2		"	68	
1		"	68	
0		"	71	
Base 2	1525	"	72	+ 120'
Base 1	1538	"	52	

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Sta	Time	Scale	Read	
Base 1	0800	+1	52	
L-D. 2N	0825	"	73	
				Starting S26°W from 2N Line D
4+00		+1	82	
8+00		"	80	Same as 0+00 Line E
				Starting N64°W on Line E. all sta N or S of 0+00
1N	0840	+1	80	
2N		"	80	
3		"	79	road
4		"	84	small wash
5		"	84	
6		"	84	
7		"	82	
8		"	82	
9		"	82	
10		"	82	
11		"	82	
12		"	82	
13		"	82	
14		"	82	
15		"	82	

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Fine E Cond

Sta	time	Scale	Read	
16N	0850	+1	85	
17		"	82	
18		"	82	
19		"	82	
20		"	82	
21		"	80	
22		"	80	
23		"	80	
24		"	80	cl. post 120'S
25	+10'	"	79	
26		"	78	
27		"	76	
28		"	76	
29		"	77	
30		"	77	bank of flat wash
31		"	77	big flat wash
32		"	77	" " "
33		"	77	under big mesquite tree near sandy wash
	Starting		S26°W	
4+00	0910	+1	88	wash
5+00		"	88	
6+00		"	92	
7+00		"	93	
8+00		"	95	

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Line F S64°E

Sta	time	Scale	Read	
33 N				same as 8+00
32 N	0918	+1	95	S26°W on pre page
31	+108	"	92	wash
30		"	92	"
29		"	92	bank of wash
28		"	91	"
27		"	89	wash
26		"	86	
25		"	87	
24		"	87	
23		"	85	
22		"	87	
21		"	90	wash
20		"	87	"
19		"	85	"
18		"	85	"
19		"	85	
16		"	85	
15		"	86	
14		"	86	
13		"	87	
12		"	86	
11		"	85	
10		"	85	30' to road
9		"	86	
8		"	86	
7		"	84	
6		"	85	

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(15) 6-24-69

Line F Cond

Sta	time	Scale	Read	
5N	0943	+1	85	
4	+108	"	85	
3		"	85	
2		"	82	
1N		"	84	
0+00		"	82	
1S		"	81	
2S		"	78	
3S		"	78	
4S		"	78	
5		"	75	mineralized pit
6	+208	"	79	
7		"	77	4 cl. post S 100'
8	1005	"	73	
9		"	72	
10		"	72	
11		"	71	
12		"	72	
	Starting N 26° E			
2.65		"	68	
3.60		"	68	
5		"	65	
6		"	65	
7		"	62	
8		"	64	

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Line E Cond from Southern end

Sta	Time	Scale	Read	
12	Same as 8 pre-page		N26°E	
115	1020	+1	65	
105	+20X	"	64	
9		"	65	
8		"	67	
7		"	67	
6		"	67	
5		"	69	
4		"	72	
3		"	72	40' pit & post
2		"	72	
1		"	75	
0+00	1030	"	75	50% change
Base 1	1040	"	50	
Base 2	1045	"	70	

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Starting S 26°W from Line F
Sta 10N

	Sta	Time	Scale	Read	
L-F	10N	1134	+1	84	
	1SW		"	82	
	2SW		"	80	
	3SW		"	80	
	4SW		"	80	40' to road
	5SW		"	82	
	6SW		"	80	
	7SW		"	82	25' easterly cl. post
	8SW		"	85	

Starting N 64°W on Line G
8SW is same as 10N on G

10N	1200	+1	85 / 1840	
11	-10	"	82 / 1810	
12		"	80 / 1790	
13		"	79 / 1780	
14		"	79 / 1780	
15		"	79 / 1780	
16		"	82 / 1810	
17		"	83 / 1820	
18		"	85 / 1840	
19		"	85 / 1840	
20		"	85 / 1840	
20.5		"	87 / 1860	
21		"	92 / 1910	

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Line G Cond

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Sta	Time	Scale	Read	
21.5	1210	+1	92 / 910	
22	-10$	+1	82 / 810	
23		"	85 / 840	
24		"	95 / 940	argil ?
25		"	87 / 860	Top of hill
26		"	82 / 810	
27		"	73 / 720	
28		"	70 / 690	
29		"	75 / 740	
30		"	80 / 790	
31		"	78 / 770	
32		"	77 / 760	
33		"	75 / 740	
34		"	75 / 740	
35		"	75 / 740	big flat wash
36		"	79 / 780	" "
37		"	79 / 780	" "
38		"	82 / 810	" "
39		"	80 / 790	" "
40		"	80 / 790	" "
41		"	78 / 770	50' To sandy wash in big wash
42		"	78 / 770	" " " "
43		"	77 / 760	45' to fence " "
44		"	77 / 760	Starting out of wash
45		"	82 / 810	bank of wash
46		"	80 / 790	
47		"	80 / 790	
48		"	82 / 810	
49		"	82 / 810	
50		"	79 / 780	Sharp wash

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Line G Cond

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Sta	time	Scale	Read	
51	1245	+1	77 / 760	
52	-10	"	75 / 740	
53		"	75 / 740	
54		"	74 / 730	
55		"	74 / 730	
56		"	72 / 710	
57		"	71 / 700	
58		"	72 / 710	
59		"	71 / 20 100	past road
60		"	69 / 680	
61		"	70 / 690	
62		"	70 / 690	

Starting S 26° W

1SW	-20	"	70 /	
2SW		"	70 /	
3SW		"	70 /	
4SW		"	70 /	
5SW		"	70 /	
6SW		"	68 /	
7SW		"	67 /	
8SW		"	67 /	

Starting S 64° E Line H

8SW	15	Same as	62 N L-H	
62N				
61N	1315	+1	69 /	
60N		"	70 /	

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Cond. Line H

(20)

6-24-64

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Sta	Time	Scale	Read		
59N	-30'	+1	70	670	
58		"	67	640'	40' to road
57		"	70	670	
56		"	70	670	
55		"	69	660	
54		"	68	650	
53		"	70	670	
52		"	71	680	
51		"	71	680	
50		"	71	680	
49		"	72	690	
48		"	72	690	
47		"	72	690	
46		"	72	690	edge of big wash
45		"	75	720	down hill to wash
44		"	75	720'	" "
43		"	77	740	" "
42		"	75	720	55' to fence
41		"	77	740	sandy wash (big)
40		"	78	750	big wash
39		"	77	740'	"
38		"	77	740	
37		"	75	720	
36		"	75	720	
35		"	80	770	
34		"	82	790	
33		"	83	800	
32		"	86	830	
31		"	83	800	
30		"	79	760	

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Line H Cond.

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Sta	time	Scale	Read		
29	1340	+1	78	750	big wash
28	-308	"	75	720	"
27		"	76	730	"
26		"	76	730	old post
25		"	73	700	big wash
24		"	70	670	"
23		"	70	670	"
22		"	71	680	"
21		"	75	720	out of wash
20		"	85	820	
19		"	85	820	
18		"	92	890	
17		"	100	970	
16		"	97	940	granite o.c.
15		"	88	850	
14		"	84	810	"
13		"	85	820	
12		"	90	870	
11		"	87	840	
10	-308	"	85	820	
9		"	86	830	
8		"	95	920	
7		"	98	950	
6		"	90	870	by road
5		"	105	1020	on "
4	1420	"	95	920	
3		"	90	870	
2		"	87	840	
1		"	85	820	
0+00		"	82	790	

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Line H Cond (22)

S 64° E

Sta	time	Scale	Read
1S	-40$	+1	80 / 760
2		"	80 / 760
3		"	82 / 780
4		"	85 / 810
5		"	82 / 780
6		"	85 / 810

Starting N 26° E

1NE		"	82 / 780
2		"	82 / 780 cl. post 20' NW
3		"	82 / 780
4		"	80 / 760
5		"	79 / 750 cl. post
6		"	77 / 730
7NE		"	78 / 740

Starting N 73° W on Line G

6S	Same as 7NE		
5S		"	77 / 730
4S	1442	"	75 / 710
3		"	78 / 740
2		"	80 / 760
1S		"	82 / 780
0+00		"	82 / 780
1N		"	86 / 820
2N		"	84 / 800

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(23) 6-24

Line G Cond

Sta	time	Scale	Read	
3N	-408	+1	80	760
4N		"	89	840
5		"	85	810
6		"	90	860
7		"	85	810
8		"	85	30' to road 810
9		"	84	800
10N	1453	"	87	closure 830
X from Tr.			9° - 400'	
Base	1527	"	57	

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(29) 6-26-64

Pima Claim Group

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Sta	time	Scale	Read	
Base	1740	+1	54	-2 52

Starting Line I at pit at end of road. N 64° W

0+00	0808	+1	79	770
1N		"	86	840
2		"	80	780
3		"	85	830
4		"	86	840
5		"	82	800
6		"	86	890
7		"	76	740
8		"	85	830
9		"	83	810
10		"	80	780
11		"	77	750
12		"	73	710
13		"	66	640
14		"	64	620
15		"	63	610
16		"	63	610
17		"	64	620
18		"	66	640
19		"	66	640
20		"	67	650
21		"	67	650
22		"	66	640
23		"	68	660
24		"	68	660

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Line I Cond

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Sta	time	Scale	Read		
25	0830	+1	73	710	
26		"	76	740	
27		"	77	750	
28		"	77	750	
29		"	77	750	
30		"	73	710	
31		"	68	660	
32		"	67	650 big wash	
33		"	67	650 "	"
34		"	70	680 "	"
35		"	68	660 "	"
36		"	68	660	"
37		"	66	640 "	"
38		"	66	640 "	"
39		"	66	640 "	"
40		"	65	630	
	S 26° W				
4+00		"	63	620 big wash	
8+00		"	62	610	
	S 64° E		Line J		
40N					
39N		"	65	640 big wash	
38		"	64	630 "	"
37		"	64	630 "	"
36		"	65	640 "	"
35		"	64	630 "	"
34		"	64	630 "	"

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Line J Cond

Sta	Time	Scale	Read	
33	0910	+1	64	630 D/S wash
32		"	62	610 " "
31		"	61	600 " "
30		"	63	620 " "
29		"	60	590 U/S of wash
28		"	61	600
27		"	60	590
26		"	63	620
25		"	65	640
24		"	66	650 by water control
23		"	73	dam 720
22		"	72	710
21		"	72	710
20		"	69	680
19		"	67	660
18		"	63	620
17		"	61	600
16		"	60	590
15		"	58	570
14		"	60	590
13		"	59	580
12		"	61	600
11		"	61	600
10		"	60	590
9		"	64	630
8		"	81	800
7		"	75	740
6		"	65	640
5		"	60	590

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Line J Cond (21)

Sta	time	Scale	Read		
4	0935	+1	64	630	
3		"	66	650	
2		"	68	670	
1		"	68	670	
0+00		"	73	720	
1S		"	80	up hill	790
2		"	63	"	620
3		"	68	"	670
4		"	67	"	660
5		"	68	"	670

N26°E

4+00		"	64	630 Side of hill	
8+00			69	680 " "	

N64°W Line I

5S					
4S		+1	73	720	
3S		"	73	720	
2S		"	75	740	
1S		"	83	820	
0+00	1000	"	77	760	

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(28)

Cond. Line F. Starting at sta 33 N 64°W

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Sta	time	Scale	Read	
33N	1048	+1	96	950 big wash
34		"	93	" 920 "
35		"	88	" 870 "
36		"	88	" 870 "
37		"	87	" 860 "
38		"	87	" 860 "
39		"	85	" 840 "
40		"	82	" 810 " 70° To fence
41		"	80	" 790 "
42		"	78	770 edge of wash
43		"	80	790
44		"	81	800
45		"	78	770
46		"	79	780
47		"	78	770
48		"	78	770
49		"	76	750
50		"	78	770
51		"	77	760
52		"	77	760
53		"	78	770
54		"	77	760
55		"	77	760
56		"	75	740
57		"	72	710
58		"	73	720
59		"	72	710
60	1118	"	73	720

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Starting N 26° E
To Line E

Sta	time	Scale	Read	
4+00 BE		+1	75	740
800		"	77	760

Starting back on Line E

60				
59		+1	77	760
58		"	77	760
57		"	80	790
56		"	80	790
55		"	81	800
54		"	80	790
53		"	82	810
52		"	80	790
51		"	81	800
50		"	80	790
49		"	82	810
48		"	78	770
47		"	80	790
46		"	79	780
45		"	80	800
44		"	81	810
43		"	80	800
42		"	80	800
41		"	81	810
40		"	79	by fence 790
39		"	81	big wash 810
38		"	81	" " 810

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Line E Cond

Sta	time	Scale	Read		
37	1150	+1	80	big wash	800
36		"	77	" "	770
35		"	80	" "	800
34		"	80	" "	800
33		"	79	" "	790
Base 1	1225	"	52		

Line K N64°W Starting 800' S26°W FROM BASE 1

Sta	time	Scale	Read	
0+00	1258	+1	57	by road 570
1N		"	57	570
2		"	56	560
3		"	57	570
4		"	60	600
5		"	60	600
6		"	58	580
7		"	58	580
8		"	58	580
9		"	55	550
10		"	59	590
11		"	56	550
12		"	61	600
13		"	54	wash 530
14		"	57	560
15		"	56	550

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Line K Cond

Sta	Time	Scale	Read		
16	1312	+1	58	570	
17		"	56	550	
18		"	56	550	15' from fence
19		"	55	540	
20		"	55	540	
21		"	53	520	
22		"	53	520	
23		"	53	520	
24		"	52	510	
25		"	53	520	
26		"	56	550	
	Starting 526'W				
4+00		"	61	600	
8+00		"	69	680	
	Starting Line L				S64°E

Sta	Time	Scale	Read	
26				
25N		+1	68	670
24N		"	67	660
23		"	70	690
22		"	68	670
21		"	67	660
20		"	63	620
19		"	64	630
18		"	63	620
17		"	61	600

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Line L Cond

Sta	Time	Scale	Read	
16	1333	+1	61	600
15		"	63	620
14		"	63	620
13		"	65	640
12		"	63	620
11		"	65	640
10		"	62	610
9		"	61	600
8		"	63	620
7		"	64	630
6		"	63	620
5		"	62	610
4		"	63	620
3		"	60	590
2		"	61	75' 600 to road
1		"	63	620
0+00		"	66	by pit 650
15		"	61	600
25		"	60	590
3		"	63	620
4		"	62	610
5		"	62	610
6		"	66	650
7		"	62	~~by pit~~ 610
8		"	63	by pit 620
9		"	63	620
10		"	61	600

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Line L Cond

Sta	time	Scale	Read		
11	1400	+1	59	580	
12		"	60	590	570
13		"	58	75' to road	
14		"	55	# 540	
15		"	55	540	
16		"	55	540	
17		"	57	560	
18		"	57	560	
19		"	55	540	
20		"	53	520	
21		"	53	510	
22		"	52	500	
23		"	56	540	
24		"	56	540	
25		"	53	510	
26		"	54	520	
	N 26° E				
				520	
4+00		"	54	50' N to P.T	
8+00		"	55	530	

Cond Line K

26 S					
25		+1	55	530	
24		"	55	530	
23		"	55	530	
22		"	56	540	
21		"	56	540	

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Line K Cond

Sta	time	Scale	Read			
20	1430	+1	56	540		
19		"	56	540		
18		"	55	530		
17		"	57	550		
16		"	56	540		
15		"	57	550		
14		"	57	550		
13		"	56	540	550	
12		"	57	40' to road		
11		"	58	560		
10		"	58	560		
9		"	57	550		
8		"	58	560		
7		"	60	580		
6		"	60	580		
5		"	60	580		
4		"	58	560		
3		"	58	560		
2		"	57	550		
1		"	57	by pit		550
0+00		"	59	570		
Base	1453	"	59	520		

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PIMA CLAIM GROUP 1

7/8/64

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BASE A 130 +1 520

STATION ON ROAD LINE E 3N

ORIGINAL RDG. 79 ↑ @ 1840 REPEAT 80 ↑

STARTING AT 0 ON LINE J

GOING N64°W

0	800
1	800
2	830
3	830
4	880
5	870
6	870
7	850
8	830
9	830
10	850
11	850
12	880
13	880
14	890
15	830
16	820
17	810
18	800
19	790
20	800
21	780
22	750
23	770
24	770

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25		780	
26		790	
27		830	
28		870	
29		860	
30		880	
		830	TIE WITH L.E
4/5		950	
30	2:30	920	
29		850	
28		820	
27		830	
26		830	
25		860	
24		920	
23		880	
22		920	
21		1000	
20		960	
19		950	
18		1000	
17		980	
16		960	
15		920	
14		870	
13		840	
12		820	
11		790	
10		790	

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3

9		800	Road
8		780	
7		790	
6		830	
5		870	
4		850	
3		850	
2		870	
1		850	
0		860	
J/0		800	closure 800'
9	3:10	830	
2		870	
		880	
		790	
		810	
		740	
		810	
16		830	
17		800	
18		930	
19		860	
20		840	
21		750	
		960	50 ft
22		950	
		900	50 ft
23		820	
24		620	

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25		630
26		600
27		670
28		630
29		670
30		620
4/N		670
8/N	Line 250 N from line in middle —	
30		820
~~29~~		800
28		780
27		910
26		950
25		930
24		920
23		860
22		850
21		850
19		840
18		800 — 910 $50 ft
17		1000 Road
		910 50 ft
16		900
15		870
14		870
13		820
12		780

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	11	780		
	10	770		
	9	790		
	8	800		
	7	770		
	6	770		
	5	760		
	4	740		
	3	750		
	2	720		
	1	780		
	0	720		
	4/5	700		
	0	700		
	1	700		
	2	740		
	3	740		
	4	730		
	5	720		
	6	760		
	7	770		
	8	770		
	9	830	250	NORTH OF END

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Fred + Ron

Pima Claim Group

7-6-64

①

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Line J

Sta	Time	Scale	Read	Remarks
BASE A	0730	-2	144	2190 TIME APP
0	08:00	+4810	138	670
1	~~48~~		137	700
2			136	730
3	520 Base		137	700
4			135	760
5			134	790
6			134	790
7			135	760 5 ft to Claim
8			135	760
9			136	730
10			136	730
11			136	730
12			134	790
13			134	790
14			135	760
15			137	700
16			138	670
17			139	640
18			138	670
19			137	700
20			138	670
21			137	700
22			138	670
23			137	700
24			137	700
25			137	700
26			136	730
27			136	730
28			135	760

144
30
4320
4140
180

138
30
4140

700

520

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(2)

Fred + Ron
7/6/64

Sta	Time	Scale	Read	Remarks
29			134-790	Big Wash

Starting South 26° W
to line K (75 ft. to next line
100 ft from end)

30		-2	132	850
29			135	760
28			135	760
27			136	730
26			136	730
25			132	850
24			134	790
23			133	820
22			130	910 Claim 25 ft N
21			130	910
20			131	880
19			131	880
18			129	940
17			130	910
16			132	850
15			133	820
14			135	760
13			136	730
12			136	730
11			135	760 Road (off 75 ft)
10			134	790 Road off 75 ft
9			134	790
8			133	820
7			130	910

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3

Fred + Ron

7/6/64

Linck contd:

6		131	880
5		133	820
4		132	850
3		133	820
2		134	790
1		136	730 (off 200 ft)
Ln J1		136	730
BASE A		143	

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(4)

Fred + Ron

7/6/64

Sta	Time	Scale	Read		Remarks
H-5	5 and 10:00	-2	138	670	should be
	Line L				
0			140	610	830
1	830		138	670	890
2	610		137	700	920
3	220		137	700	920
4			136	730	950
5			136	730	950
6			138	670	890
7			137	700	920
8			139	640	860
9			136	730	950
10			136	730	950
11			133	820	1040
12			135	760	980
13			137	700	920
14			138	670	890
15			133	820	1040
16			135	760	980
17			136	730	950
18			135	760	980
19			135	760	980
20			136	730	950
21			139	640	860
22			131	880	1100
23			143	520	730
24			142	550	770
25			143	520	740
26			144	490	710

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(5)

Fred - Ron

7/6/64

Line L cont'd:

27	144	490	
28	144	490	
29	144	490	
29	146	430	
			125' long (wide)

Line M

30	133	820	Stop wash
29	133	820	
28	136	730	
27	130	910	
26	127	1000	
25	128	970	flag overgrown ditch
24	128	970	
22	133	820	
22	132	850	
21	132	850	
20	133	820	
19	132	850	
18	128	970	tape out
17	127	1000	Road
16	129	940	
15	130	910	
14	132	850	
13	133	820	
12	134	790	
11	135	760	
10	135	760	
9	136	730	
8	135	760	

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Fred - For

6

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7/6/64

Line M cont'd:

7	135	760
6	136	730
5	136	730
4	136	730
3	135	760
2	135	760
1	134	796
0	135	760

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520
432
88 +

415
88
503