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

from the desk of

Donald L. Everhart

AIR MAIL

2/21/75

To Bruce Imsuila

The attached is self-explanatory. Obviously we know nothing of this + hold no particular briefs. Plz handle as you see fit.

DLE

MEMORANDUM

COPIES TO: Mr. M.A. Upham

SCAN

MINING & EXPLORATION

Referred JBI 2/21/75 Answered

RECEIVED FEB 19 1975

File - Adm. - Com. - Loc. - Opt. - Eqp. - Prac.

Subject

TO Dr. D.L. Everhart

FROM Lionel A. York

DATE February 12th, 1975

SUBJECT Porphyry Type Copper prospect

I am forwarding the enclosed brief description of a base metal prospect located 15 miles from the Twin Butte deposits, as it could be of interest to you. Furthermore, your department would be more familiar with the area and might even have received a copy of the data submitted to me.

Best regards.

Lionel

COPY

January 22, 1975

Gentlemen:

I am submitting the following brief details of a "Porphyry Type" copper prospect that I have an interest in.

This property is located 55 miles southwest of Tucson, Arizona and is approximately 15 miles from the Twin Butte open-pit mine deposits.

Two relatively shallow holes have been drilled. These holes intersected lead, silver and copper sulfide mineralization. Data includes assays, I.P., ground mag and geochem anomalies.

This property is in a favorable geological environment and should be thoroughly explored by a drilling program.

If your company is interested in a project of this type, please contact:

Steve Tima
2242 East Lincoln Drive
Phoenix, Arizona U.S.A.
85016
(602) 955-3535

Or I can be reached at (602) 887-3205 after 4:30 p.m. or on weekends.

Sincerely yours,

Leslie W. Lawrence

Leslie W. Lawrence
1349 West Kleindale Road
Tucson, Arizona U.S.A.
85705

LWL:mo

March 3, 1975

Mr. Steve Tima
2242 East Lincoln Drive
Phoenix, Arizona 85016

Dear Mr. Tima:

I am in receipt of a letter from Leslie W. Lawrence of Tucson indicating that you are the person to contact regarding a porphyry copper prospect located approximately 55 miles southwest of Tucson and 15 miles from the Twin Buttes Mine. If you have any reports or other summary data regarding this prospect, I would be happy to review this material and return it to you.

Very truly yours,

J. Bruce Imswiler

J. Bruce Imswiler
Manager of Exploration
Western U.S.A.

:btr

2510

Liberty Project — 400' Array

Line "C" — ±600' East of Line "A"

STATION	I	ΔV	I.P	I.P/ΔV	ρ	
600	1840	240	2.28	9.5	325	Fence @ Δ700
1000	2050	190	1.94	10.2	230	
1400	1880	192	1.98	10.3	255	Prospects @ 1400 ±
1800	1480	140	1.30	9.3	235	Prospects @ Δ22–23
2200	2350	210	1.47	7.0	225	
2600						

Line "D" — 400' Array

±950' East of Line "C"

STATION	I	ΔV	I.P.	I.P/ΔV	ρ	
600	1940	245	2.14	8.7	325	Δ700 @ Section corner 9/10 16/15
1000	2200	200	1.58	7.9	230	
1400	1720	190	1.38	7.3	280	
1800	1770	172	1.01	5.9	245	
2200	2040	160	1.06	6.6	195	

628

Liberty Project

100' Array

Line "C" Detail Survey

STATION	I	ΔV	I.P.	I.P./ΔV	ρ	
8+50	1020	290	.82	2.8	179	Fence @ Δ7+00
9+50	1660	525	2.06	3.9	199	
10+50	1440	555	1.62	2.9	242	
11+50	960	390	1.36	3.5	255	
12+50	1100	465	1.62	3.5	265	
13+50	1200	560	2.03	3.6	293	
14+50	1070	400	1.60	4.0	235	
15+50	1360	520	1.68	3.2	240	
16+50	1000	315	.82	2.6	198	

100' Array Line "F" 200' west of "C"

STATION	I	ΔV	I.P.	I.P./ΔV	ρ	
16+50	780	340	.88	2.6	274	Prospects @ 16+50±
15+50	910	455	1.84	4.0 ✓	314	Fence @ ±7+00
14+50	830	290	1.18	4.1 ✓	219	
13+50	690	388	1.46	3.8	353	
12+50	920	445	1.78	4.0	311	Prospect @ Δ11+10
11+50	970	375	1.28	3.4	243	
10+50	720	308	.91	3.0	269	
9+50	1370	340	1.46	4.3	156	

2510

Liberty Project — 400' Array

Line "A" ±60' West of old "Gate"

STATION	I	ΔV	I.P.	I.P./ΔV	ρ	
600	1900	200	2.00	10.0	265	Δ700 @ Fence
1000	1700	240	2.60	10.8	355	
1400	1820	195	17.4	8.9	270	
1800	2180	260	2.50	9.6	300	
2200	2180	190	1.60	8.4	220	
2600	1700	83	.70	8.4	120	
3000	3010	146	.74	5.1	120	

Line "B" 400' Array

±800' West of Line "A"

STATION	I	ΔV	I.P.	I.P./ΔV	ρ	
600	1350	250	1.52	6.1	465	Fence @ Δ700
1000	1490	260	2.68	10.3	440	Dike @ Δ1000
1400	1960	260	2.74	10.6	330	
1800	1680	150	1.37	9.1	225	
2200	2200	116	.55	4.8	130	

Liberty Project 400'

2510

Line "A"

STATION	I	ΔV	I.P	I.P/ΔV	ρ
200N	1815	227	2.20	9.7	314
200S	1350	223	1.86	8.3	415
600S	1530	285	1.88	6.6	468

2510

400' Array Line "E" 300' EAST OF "A"

STATION	I	ΔV	I.P.	I.P/ΔV	ρ	
600	1540	200	1.25(?)	6.3	326	All @ Fence
1000	800	104	.82 (?)	7.9	326	High Noise Today
1400	1100	108	1.07(?)	10.0	246	
1800	1580	177	1.26(?)	7.1	281	
2200	1000	82	.64(?)	7.8	206	

March 31, 1975

International Minerals & Chemical Corporation
390 Freeport Blvd, Suite 12
Sparks, Nevada

Dear Mr. Imswiler,

In reference to your letter of March 3rd 1975, we are enclosing the data on the Liberty project.

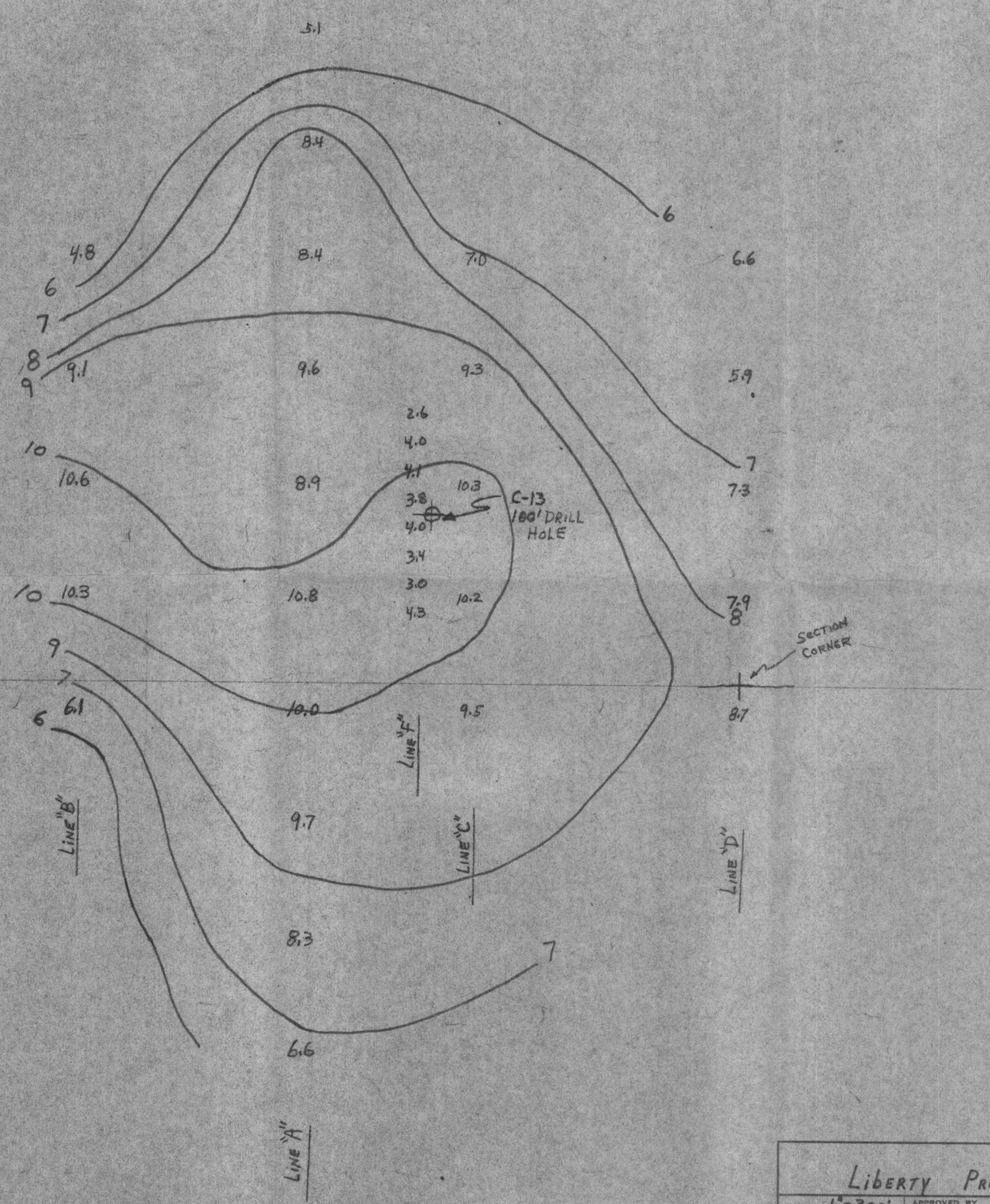
This copper-silver prospect has a greater potential than the anomalus area that is presented here, as we control only a small portion of the mineralized area.

Thank you for letting us present this information.

Yours truly,

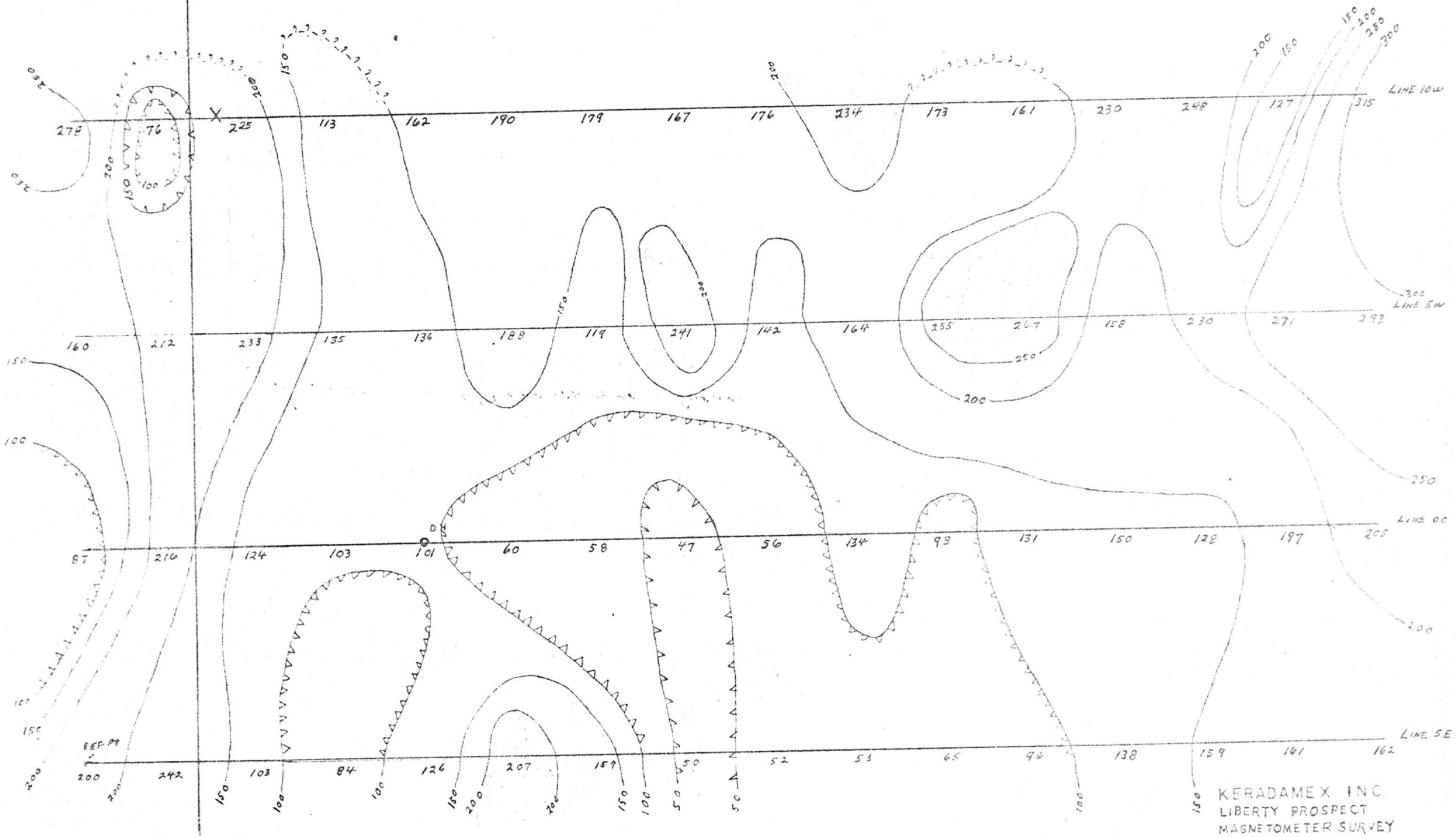
Leslie W. Lawrence

Leslie W. Lawrence
1349 West Kleindale Road
Tucson, Arizona 85705



Chargeability ~ Milliseconds

Liberty Project			
SCALE: 1"=300' DATE: OCT. '73	APPROVED BY		DRAWN BY JDS
Induced Polarization Data Sheet			
400 Ft. Array (Line "F" 100 Ft. Array)			DRAWING NUMBER



200 & Above

150 To 200

100 To 150

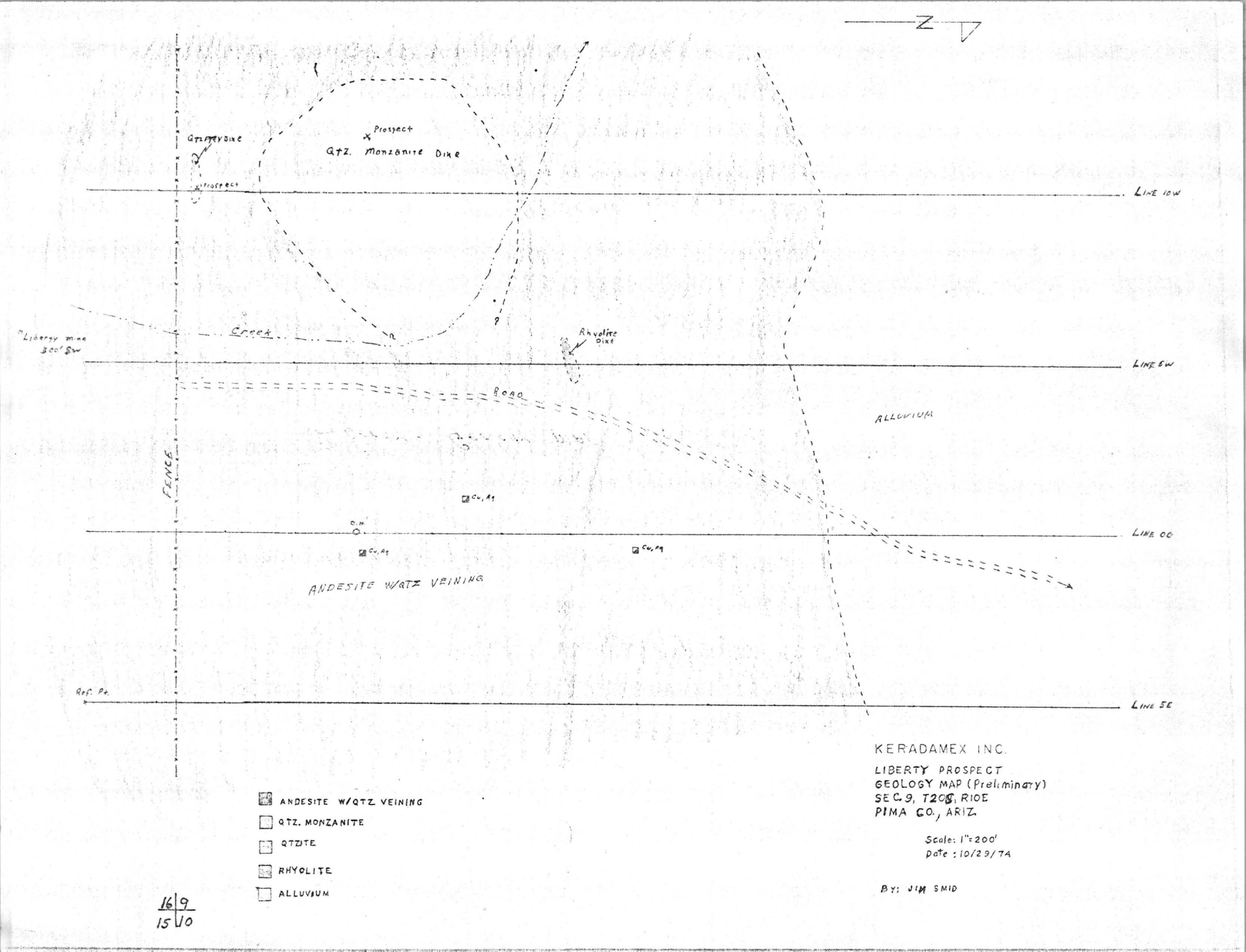
50 To 100

KERADAMEX INC
LIBERTY PROSPECT
MAGNETOMETER SURVEY
SEC 9, T20S R10E
PIMA CO., ARIZ.
CONTOUR INTERVAL 50 GAMMAS

SCALE, 1" = 200'
Date 10/28/74

BY JIM SMID

16 | 9
15 | 10



KERADAMEX INC.

LIBERTY PROSPECT
GEOLOGY MAP (Preliminary)
SEC. 9, T20S, R10E
PIMA CO., ARIZ.

Scale: 1" = 200'
Date: 10/29/74

By: Jim Smid

CLYDE R. CAVINESS
CONSULTANT GEOLOGIST

PHONE (602) 296-9073

7526 EAST PALMA
TUCSON, ARIZONA 85710

R.10E. T.20S.
Pima Co., Arizona

Liberty Project

Tima Prospect Assay

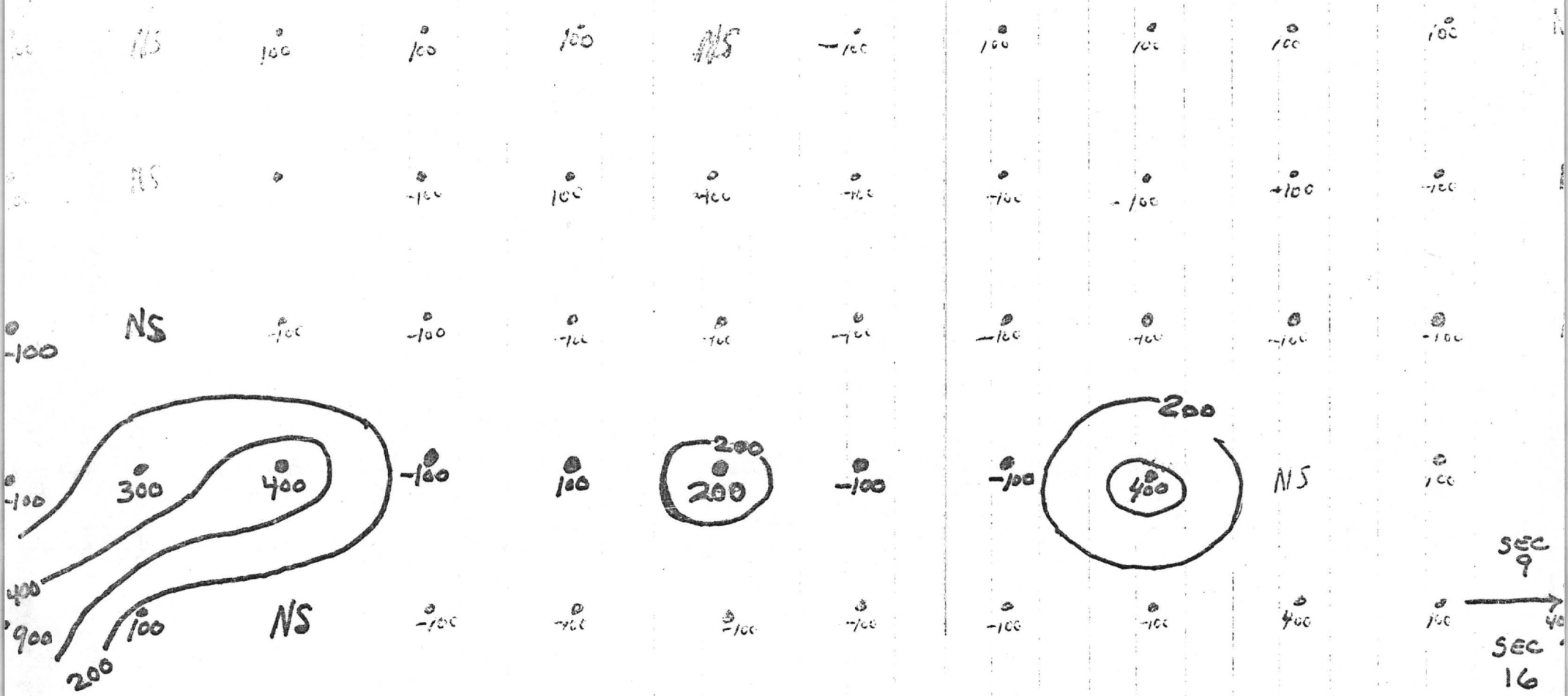
Interval	Total Cu%	Interval	Total Cu%
1	.09	27	-.01
2	.01	28	-.01
4	-.01	29	-.01
5	-.01	30	-.01
6	-.01	31	-.01
7	-.01	32	-.01
8	-.01	33	-.01
9	-.01	34	-.01
10	.04	35	-.01
11	.01	38	-.01
12	.04	39	.01
13	.01	40	-.01
14	.01	41	-.01
16	.04	42	-.01
17	-.01	43	.01
18	-.01	44	.01
19	.02	45	-.01
20	.01	48	.01
21	-.01	49	.01
22	.04	51	.01
23	.03	52	.01
24	-.01	53	.01
25	-.01	55	-.01
		56	.01
		57	.01
		58	.01
		59	.01
		60	.36

51 samples @ $1.50

Total: $76.50

CRC

Please remit to: C.R. Caviness
Box AR
Parker, Arizona 85344



PPM: CU

3600

SCALE: 1" = 300 FT.

LIBERTY MINE

LABORATORY REPORT

Mariposa Spectrographic Laboratory

Star Route, Mariposa, California 95338
Telephone 966-2591

CHARGES: $5.00
LAB NO. 20904
SUBMITTED BY:

Date 8/3/73 PM

Qualitative Spectrographic Analysis

Mr. James Sorrell
438 W. Columbia
Tucson, Arizona 85714

ELEMENTS FOUND
AND ESTIMATED PERCENTAGE RANGE
OF CONCENTRATION

SAMPLE MARK

Liberty #9

VEIN SAMPLES

ELEMENT	Not Less Than %	Not More Than %	ELEMENT	Not Less Than %	Not More Than %	ELEMENT	Not Less Than %	Not More Than %
Aluminum	0.03	0.10	Lithium			Thallium		
Antimony	2.0	4.0	Magnesium	0.04	0.12	Thorium		
Arsenic	0.01	0.05	Manganese	.008	0.04	Tin		
Barium	.0007	.003	Mercury	0.01	0.05	Titanium	.0006	.002
Beryllium			Molybdenum	.0006	.002	Tungsten		
Bismuth	.006	0.02	Nickel	.0004	.0008	Uranium		
Boron			Osmium			Vanadium	.008	0.04
Calcium	.002	.008	Palladium			Zinc	0.20	0.40
Cadmium	.008	0.04	Phosphorus			Zirconium		
Cesium			Platinum Not detected in sample			RARE EARTHS:		
Chromium	-----	.0004	Potassium			Cerium		
Cobalt	.0004	.0007	Rhenium			Dysprosium		
Columbium			Rhodium			Erbium		
Copper	0.40	0.80	Rubidium			Europium		
Gallium	-----	.002	Ruthenium			Gadolinium		
Germanium			Scandium			Holmium		
Gold	-----	.0015	Silicon (as SiO2)	50.0	70.0	Lanthanum		
Hafnium			Silver (2 oz.)	0.03	0.10	Neodymium		
Indium			Sodium			Praseodymium		
Iridium			Strontium			Samarium		
Iron	4.0	8.0	Tantalum			Ytterbium		
Lead	3.0	6.0	Tellurium			Yttrium		

Remarks: Percentages not shown in this report to equal 100% are largely due to sulphur, due to the presence of sulphide minerals.

Respectfully Submitted

Joe P. Sorrell (Spectrographer)

MARIPOSA SPECTROGRAPHIC LABORATORY

percent to ton (2,000 lbs.)
1.0% = 20.0 Lbs. AVOIR.
0.10% = 2.0 Lbs. AVOIR.
0.01% = 3.2 oz. AVOIR
0.001% = 0.32 oz. AVOIR.
0.0001% = 0.032 oz. AVOIR.

LABORATORY REPORT

Mariposa Spectrographic Laboratory

Star Route, Mariposa, California 95338
Telephone 966-2591

CHARGES: $5.00
LAB NO. 20206
SUBMITTED BY:

Date 9/2/73

Qualitative Spectrographic Analysis

Mr. James Sorrell
438 W. Columbia
Tucson, Arizona 85714

ELEMENTS FOUND
AND ESTIMATED PERCENTAGE RANGE
OF CONCENTRATION

SAMPLE MARK

Liberty #9

VEIN SAMPLES

ELEMENT	Not Less Than %	Not More Than %	ELEMENT	Not Less Than %	Not More Than %	ELEMENT	Not Less Than %	Not More Than %
Aluminum	3.0	6.0	Lithium			Thallium		
Antimony	0.10	0.30	Magnesium	0.20	0.40	Thorium		
Arsenic			Manganese	.005	0.01	Tin		
Barium	.001	.006	Mercury	0.03	0.10	Titanium	0.01	0.06
Beryllium			Molybdenum	.0007	.003	Tungsten		
Bismuth	.002	.007	Nickel	.0004	.0008	Uranium		
Boron			Osmium			Vanadium	0.10	0.30
Calcium	0.08	0.20	Palladium			Zinc	0.40	1.0
Cadmium	.002	.005	Phosphorus			Zirconium		
Cesium			Platinum Not detected in sample			RARE EARTHS:		
Chromium	.0006	.002	Potassium	0.03	0.10	Cerium		
Cobalt	.0004	.0007	Rhenium			Dysprosium		
Columbium			Rhodium			Erbium		
Copper	0.20	0.40	Rubidium			Europium		
Gallium	.002	.006	Ruthenium			Gadolinium		
Germanium			Scandium			Holmium		
Gold Below detection limit			Silicon (as Si02)	70.0	85.0	Lanthanum		
Hafnium			Silver (12 oz.)	0.02	0.06	Neodymium		
Indium			Sodium			Praseodymium		
Iridium			Strontium	.0006	.002	Samarium		
Iron	3.0	6.0	Tantalum			Ytterbium		
Lead	0.5	1.5	Tellurium			Yttrium		

Remarks: This sample is principally composed of Quartz, along with Pyrite, Limonite, unidentified minerals containing Vanadium and Aluminum, Galena, Sphalerite.

Respectfully Submitted

Scott J. Lewis (Spectrographer)

MARIPOSA SPECTROGRAPHIC LABORATORY

percent to ton (2,000 lbs.)
1.0% = 20.0 Lbs. AVOIR.
0.10% = 2.0 Lbs. AVOIR.
0.01% = 3.2 oz. AVOIR
0.001% = 0.32 oz. AVOIR.
0.0001% = 0.032 oz. AVOIR.

LABORATORY REPORT

Mariposa Spectrographic Laboratory

Star Route, Mariposa, California 95338
Telephone 966-2591

CHARGES: $5.00
LAB NO. 21493
SUBMITTED BY:

Date 10/15/73 PM

Qualitative Spectrographic Analysis

Mr. James Sorrell
438 West Columbia
Tucson, Arizona 85714

ELEMENTS FOUND
AND ESTIMATED PERCENTAGE RANGE
OF CONCENTRATION

SAMPLE MARK

(Liberty A-8, 75 ft.)
CORE

ELEMENT	Not Less Than %	Not More Than %	ELEMENT	Not Less Than %	Not More Than %	ELEMENT	Not Less Than %	Not More Than %
Aluminum	4.0	10.0	Lithium	.008	0.02	Thallium		
Antimony			Magnesium MgO	3.0	7.0	Thorium		
Arsenic			Manganese	0.03	0.10	Tin	.008	0.04
Barium	.002	.008	Mercury			Titanium	0.10	0.30
Beryllium			Molybdenum			Tungsten		
Bismuth			Nickel	.0007	.003	Uranium		
Boron			Osmium			Vanadium	.002	.006
Calcium as CaO	4.0	10.0	Palladium			Zinc 250 ppm	0.01	0.04
Cadmium			Phosphorus			Zirconium		
Cesium			Platinum Not detected in sample			RARE EARTHS:		
Chromium	.0008	.004	Potassium	0.03	0.10	Cerium		
Cobalt	.0007	.003	Rhenium			Dysprosium		
Columbium			Rhodium			Erbium		
Copper 75 ppm	.005	0.01	Rubidium			Europium		
Gallium	.002	.008	Ruthenium			Gadolinium		
Germanium			Scandium			Holmium		
Gold Not detected in sample			Silicon (as SiO2)	40.0	60.0	Lanthanum		
Hafnium			Silver 10 ppm	.00008	.0003	Neodymium		
Indium			Sodium	0.5	1.5	Praseodymium		
Iridium			Strontium	.002	.008	Samarium		
Iron	4.0	8.0	Tantalum			Ytterbium		
Lead 140 ppm	.008	0.02	Tellurium			Yttrium		

Remarks: See letter.

Respectfully Submitted

(Spectrographer)

MARIPOSA SPECTROGRAPHIC LABORATORY

percent to ton (2,000 lbs.)
1.0% = 20.0 Lbs. AVOIR.
0.10% = 2.0 Lbs. AVOIR.
0.01% = 3.2 oz. AVOIR
0.001% = 0.32 oz. AVOIR.
0.0001% = 0.032 oz. AVOIR.

LABORATORY REPORT

Mariposa Spectrographic Laboratory

Star Route, Mariposa, California 95338
Telephone 966-2591

CHARGES: $5.00
LAB NO. 20204
SUBMITTED BY:

Date 9/2/73

Qualitative Spectrographic Analysis

Mr. James Sorrell
438 W. Columbia
Tucson, Arizona 85714

ELEMENTS FOUND
AND ESTIMATED PERCENTAGE RANGE
OF CONCENTRATION

SAMPLE MARK

L-QV

Vein SAMPLES

ELEMENT	Not Less Than %	Not More Than %	ELEMENT	Not Less Than %	Not More Than %	ELEMENT	Not Less Than %	Not More Than %
Aluminum	.0007	.003	Lithium			Thallium		
Antimony	0.5	1.5	Magnesium	.001	.006	Thorium		
Arsenic			Manganese	.002	.008	Tin		
Barium	.0006	.002	Mercury	0.01	0.06	Titanium	.0006	.002
Beryllium			Molybdenum	.0004	.0007	Tungsten		
Bismuth	----	.003	Nickel	----	.0004	Uranium		
Boron			Osmium			Vanadium	.001	.006
Calcium	0.20	0.40	Palladium			Zinc	0.20	0.40
Cadmium	.002	.008	Phosphorus			Zirconium		
Cesium			Platinum Not detected in sample			RARE EARTHS:		
Chromium			Potassium			Cerium		
Cobalt	----	.0004	Rhenium			Dysprosium		
Columbium			Rhodium			Erbium		
Copper	0.5	1.5	Rubidium			Europium		
Gallium			Ruthenium			Gadolinium		
Germanium			Scandium			Holmium		
Gold Below detection limit			Silicon (as SiO2)	80.0	90.0	Lanthanum		
Hafnium			Silver (25 oz.)	0.05	0.15	Neodymium		
Indium			Sodium			Praseodymium		
Iridium			Strontium			Samarium		
Iron	2.0	5.0	Tantalum			Ytterbium		
Lead	0.40	0.80	Tellurium			Yttrium		

Remarks: This sample is principally composed of Quartz, along with Pyrite, Tetrahedrite, Galena, and Sphalerite. Source mineral of Mercury is uncertain, but may be the Sphalerite.

Respectfully Submitted

(Spectrographer)

MARIPOSA SPECTROGRAPHIC LABORATORY

percent to ton (2,000 lbs.)
1.0% = 20.0 Lbs. AVOIR.
0.10% = 2.0 Lbs. AVOIR.
0.01% = 3.2 oz. AVOIR
0.001% = 0.32 oz. AVOIR.
0.0001% = 0.032 oz. AVOIR.

LABORATORY REPORT

Mariposa Spectrographic Laboratory

Star Route, Mariposa, California 95338
Telephone 966-2591

CHARGES: $5.00
LAB NO. 20207
SUBMITTED BY:

Date 9/2/73

Qualitative Spectrographic Analysis

Mr. James Sorrell
438 W. Columbia
Tucson, Arizona 85714

ELEMENTS FOUND
AND ESTIMATED PERCENTAGE RANGE
OF CONCENTRATION

SAMPLE MARK

Liberty #16

Vein Samples

ELEMENT	Not Less Than %	Not More Than %	ELEMENT	Not Less Than %	Not More Than %	ELEMENT	Not Less Than %	Not More Than %
Aluminum	0.20	0.40	Lithium			Thallium		
Antimony	2.0	4.0	Magnesium	.001	.006	Thorium		
Arsenic			Manganese	0.05	0.15	Tin	.002	.004
Barium	0.03	0.10	Mercury	----	.008	Titanium	.0006	.002
Beryllium			Molybdenum	.005	0.01	Tungsten		
Bismuth	----	.002	Nickel	----	.0004	Uranium		
Boron			Osmium			Vanadium	.0005	.001
Calcium as CaO	0.40	1.0	Palladium			Zinc	0.05	0.15
Cadmium	0.03	0.10	Phosphorus			Zirconium		
Cesium			Platinum Not detected in sample			RARE EARTHS:		
Chromium	.0004	.0009	Potassium	0.04	0.12	Cerium		
Cobalt	.0004	.0007	Rhenium			Dysprosium		
Columbium			Rhodium			Erbium		
Copper	2.0	4.0	Rubidium			Europium		
Gallium			Ruthenium			Gadolinium		
Germanium			Scandium			Holmium		
Gold	----	.0015	Silicon (as SiO2)	10.0	30.0	Lanthanum		
Hafnium			Silver 700+ oz.	2.0	4.0	Neodymium		
Indium			Sodium	0.03	0.10	Praseodymium		
Iridium			Strontium	.002	.008	Samarium		
Iron	1.0	3.0	Tantalum			Ytterbium		
Lead	20.0	40.0	Tellurium			Yttrium		

Remarks: See letter.

Respectfully Submitted

(Spectrographer)

MARIPOSA SPECTROGRAPHIC LABORATORY

percent to ton (2,000 lbs.)
1.0% = 20.0 Lbs. AVOIR.
0.10% = 2.0 Lbs. AVOIR.
0.01% = 3.2 oz. AVOIR
0.001% = 0.32 oz. AVOIR.
0.0001% = 0.032 oz. AVOIR.

ARIZONA TESTING LABORATORIES

A DIVISION OF CLAUDE E. McLEAN & SON LABORATORIES, INC.
817 WEST MADISON ST. PHOENIX, ARIZONA 85007 PHONE 254-6181

For: Mr. Steve Tima
2242 East Lincoln Drive
Phoenix, Arizona 85016

Date: February 11, 1974

Lab. No.: 6127

Sample: Ore

Marked: 100', 1-26-74

Received: 2-8-74

Submitted by: same

Liberty DRill Hole

REPORT OF LABORATORY TESTS

Silver = less than 1 ppm

Copper = 65 ppm

Lead = 310 ppm

Respectfully submitted,

ARIZONA TESTING LABORATORIES

Claude E. McLean, Jr.

Liberty Project

C L & E CORPORATION
Copper Basin Project
ASSAY REPORT

Date 1 / 8 / 74

~~Company Drill Hole No.~~ Tima P

Page No. 1

	Sample #		Ag ppm			
1	1		1			
2	2		-1			
3	4		-1			
4	5		1			
5	6		-1			
6	7		-1			
7	8		-1			
8	9		1			
9	10		1			
10	11		1			
11	12		-1			
12	13		-1			
13	14		-1			
14	16		-1			
15	17		2			
16	18		-1			
17	19		-1			

	Sample #		Ag ppm			
18	20		-1			
19	21		1			
20	22		-1			
21	23		-1			
22	24		-1			
23	25		-1			
24	27		-1			
25	28		-1			
26	29		30			
27	30		5			
28	31		-1			
29	32		-1			
30	33		-1			
31	34		-1			
32	35		-1			
33	38		-1			
34	39		-1			

C L & E CORPORATION
Copper Basin Project
ASSAY REPORT

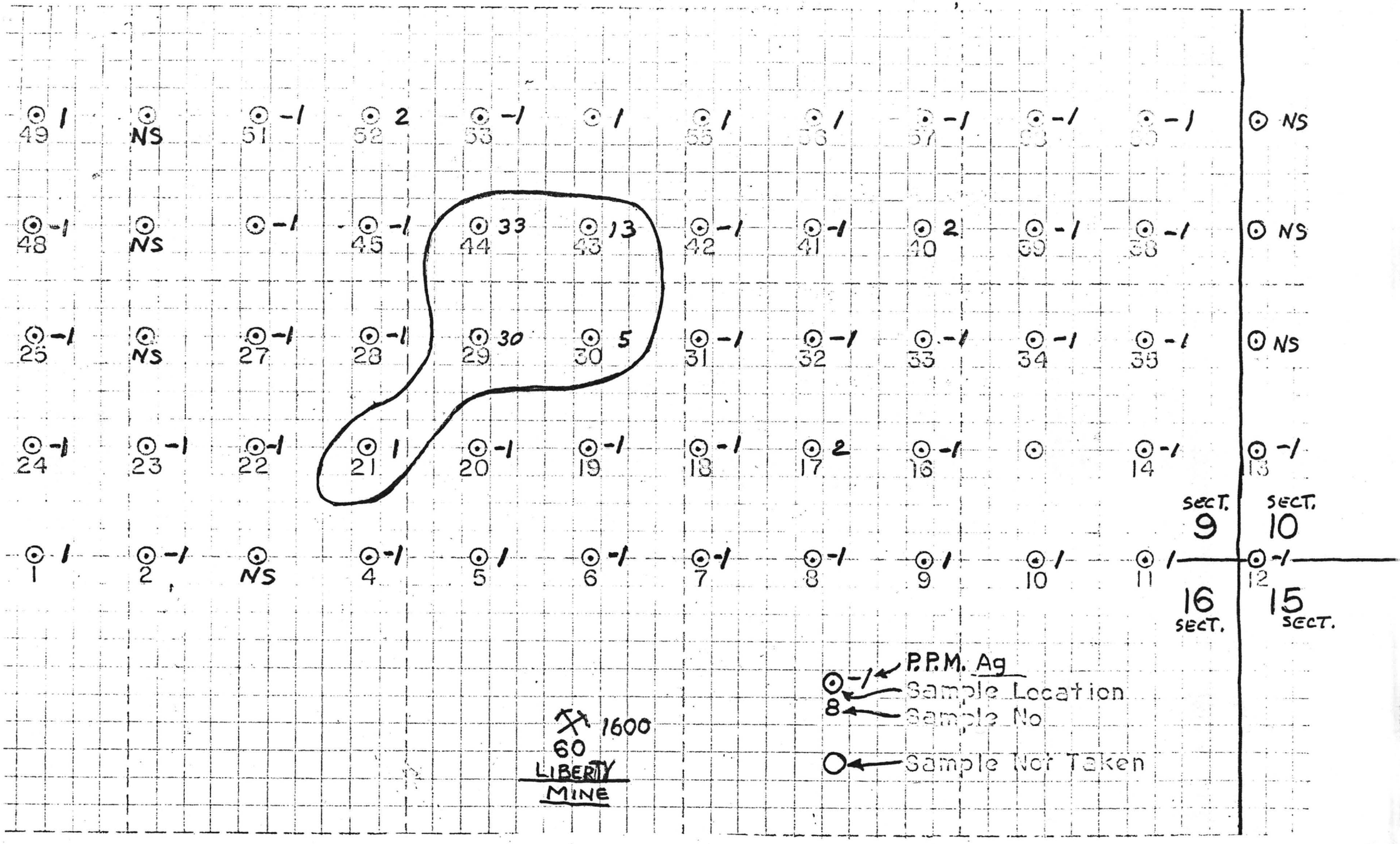
Date 1 / 8 /74

~~[illegible]~~ Tima P

Page No. 2

	Sample #		Ag ppm			
35	40		2			
36	41		-1			
37	42		-1			
38	43		13			
39	44		33			
40	45		-1			
41	48		-1			
42	49		1			
43	51		-1			
44	52		2			
45	53		-1			
46	55		1			
47	56		1			
48	57		-1			
49	58		-1			
50	59		-1			
51	60		1600			

D. [illegible]



Note DDH Perc may be [illegible]

1"=300'

SOUTHWESTERN ASSAYERS & CHEMISTS, Inc.

REGISTERED ASSAYERS

FELIX K. DURAZO
ARIZONA REG. NO. 8205
WIL WRIGHT
ARIZONA REG. NO. 5875

P.O. BOX 7517
TUCSON, ARIZONA 85725

710 E. EVANS BLVD.
PHONE 602-294-5811

Lawrence Exploration Company

JOB# 015232
RECEIVED 2-9-74
REPORTED 2-12-74

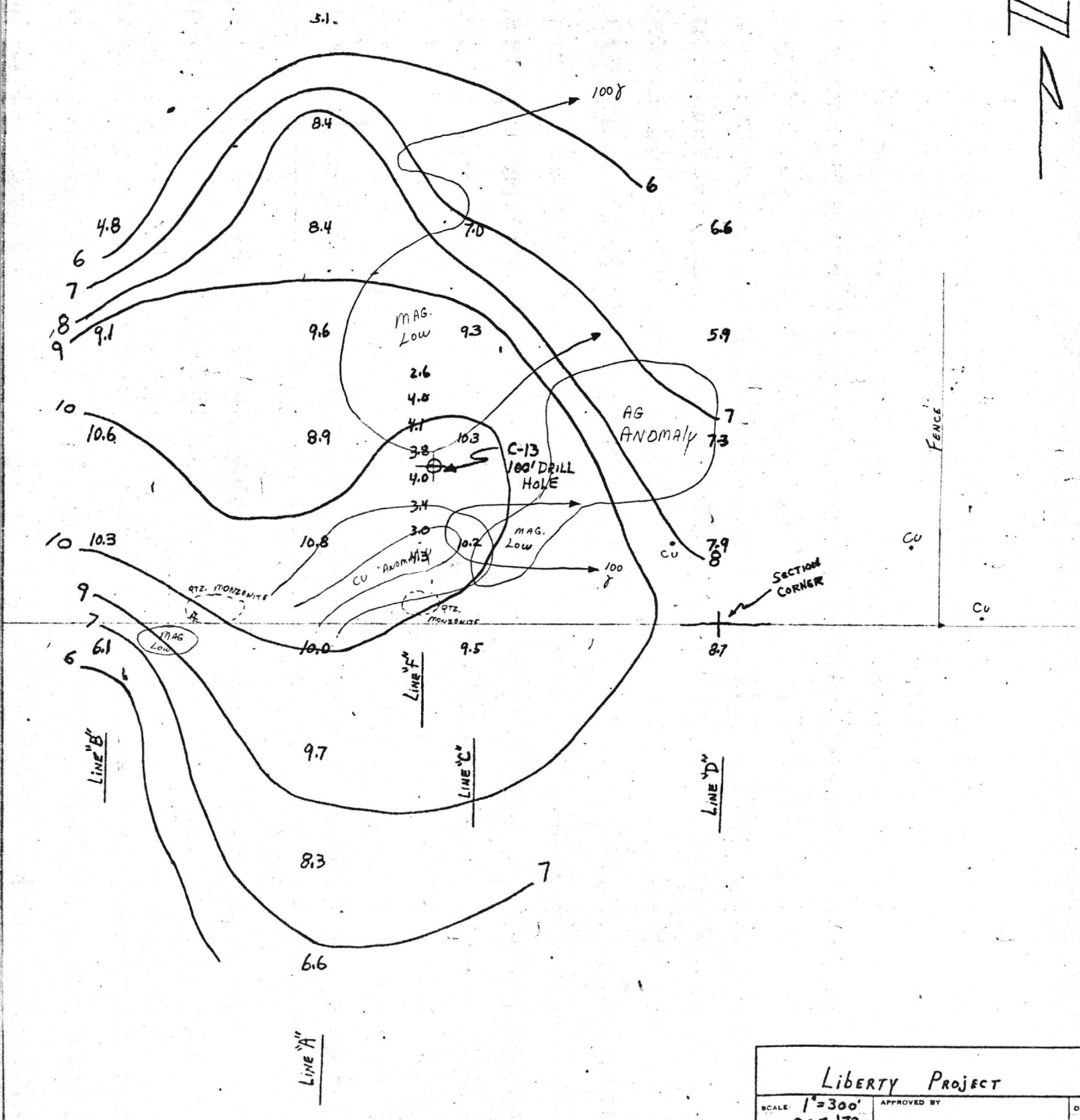
SAMPLE NUMBER	GOLD OZ.*	SILVER ~~XXX~~PPM	LEAD PPM	COPPER PPM	ZINC %		MOLYBDENUM %
Liberty-C-13: D.H.							
10-20		1	286	42			
20-30		2	300	48			
30-40		1	250	32			
40-50		2	500	21			
50-60		1	660	37			
60-70		< 1	105	43			
70-80		< 1	242	12			
80-90		1	178	11			
90-100		< 1	150	11			

REGISTERED ASSAYER CERTIFICATE NO. 8205 FELIX K. DURAZO DATE SIGNED 2-12-74 Arizona U.S.A.

CHARGE $ 47.25

INVOICE

* Gold and Silver reported in troy oz. per 2,000 lb. ton.



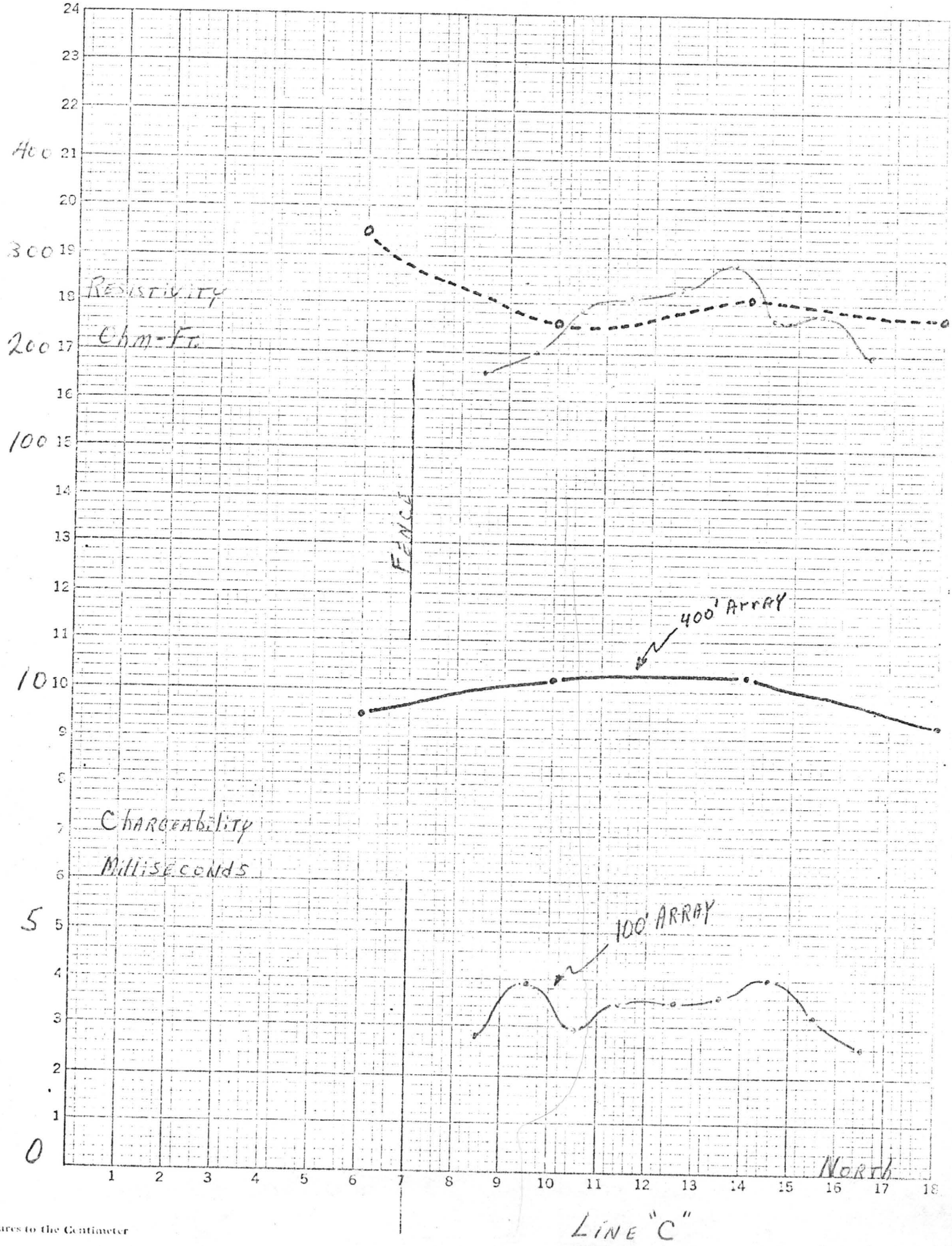
Chargeability ~ Millisecounds

Liberty Project

SCALE: 1"=300'
DATE: OCT. '73
APPROVED BY
DRAW

Induced Polarization Data Sh

400 Ft Array (Line "F" 100 Ft Array)



5 Squares to the Centimeter

GEOLOGY OF THE CERRO COLORADO MINING DISTRICT

PIMA COUNTY, ARIZONA

by

Richard D. Jones

A Thesis
submitted to the faculty of the

Department of Geology

in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

in the Graduate College, University of Arizona

1957

Approved: Willard P. Lacy, 5/16/57.
Director of Thesis Date

ABSTRACT

The Cerro Colorado mining district is located in southeastern Pima County, Arizona, 50 miles from Tucson.

Volcanic rocks and some sedimentary rocks of unknown age and correlation are exposed within the district. Quartz latite porphyry, as flows or shallow intrusives, and sandstone and arkose are the oldest rocks. These are overlain by a younger series, consisting of limestone, conglomerates, and andesite porphyry flows, breccias, and agglomerates.

Structures of the district include major east-west faults having strike slip movement, northeast, northwest, and north-south faults, a northward trending syncline, and an arcuate arrangement of quartz porphyry dikes and sills. Dike rocks of miscellaneous other compositions are also present. The arcuate structure suggests the presence of an upward thrusting underlying intrusion, but the structure may be due to deflection of the dikes along major fault trends.

Mineralization in the district is confined to narrow quartz veins with infrequent sulphide mineralization. Total production, largely argentiferous tetrahedrite and galena, was $316,000.

Future Possibilities

It is not likely that ore deposits of any appreciable size will be found in the Cerro Colorado mining district in the near future. The extensive prospecting which has been carried out in the district since the early days has undoubtedly uncovered any mineral deposits which are exposed at the surface. Other deposits, however, may be concealed beneath the thin cover which overlies much of the district. With the largely residual soil, and the thinness of the overburden in most places, it would seem likely that geochemical prospecting techniques are best suited for finding any shallow mineral deposits remaining.

It is possible that ore deposits do exist at some considerable depth, perhaps in or about the source from which the volcanics were derived. Structural conditions not unlike those in this district have localized ore deposits elsewhere in the southwestern United States. Although the surface mineralization is rather sparse, it may be that erosion has not cut deeply enough to expose more intense mineralization. Until such time that methods are devised for exploration at great depths, the district is not a good ore possibility.

Pima Co., Arizona

Liberty Project

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