CONTACT INFORMATION
Mining Records Curator
Arizona Geological Survey
416 W. Congress St., Suite 100
Tucson, Arizona 85701
602-771-1601
http://www.azgs.az.gov
inquiries@azgs.az.gov

The following file is part of the Doug K. Martin Mining Collection

ACCESS STATEMENT

These digitized collections are accessible for purposes of education and research. We have indicated what we know about copyright and rights of privacy, publicity, or trademark. Due to the nature of archival collections, we are not always able to identify this information. We are eager to hear from any rights owners, so that we may obtain accurate information. Upon request, we will remove material from public view while we address a rights issue.

CONSTRAINTS STATEMENT

The Arizona Geological Survey does not claim to control all rights for all materials in its collection. These rights include, but are not limited to: copyright, privacy rights, and cultural protection rights. The User hereby assumes all responsibility for obtaining any rights to use the material in excess of "fair use."

The Survey makes no intellectual property claims to the products created by individual authors in the manuscript collections, except when the author deeded those rights to the Survey or when those authors were employed by the State of Arizona and created intellectual products as a function of their official duties. The Survey does maintain property rights to the physical and digital representations of the works.

QUALITY STATEMENT

The Arizona Geological Survey is not responsible for the accuracy of the records, information, or opinions that may be contained in the files. The Survey collects, catalogs, and archives data on mineral properties regardless of its views of the veracity or accuracy of those data.

GERALD WEATHERS
REGISTERED PROFESSIONAL GEOLOGIST
MINERAL EXPLORATION

AREA CODE 602
~~955-3590~~

3928 EAST MEADOWBROOK AVE.
PHOENIX, ARIZONA 85018

AN APPRAISAL OF THE POSTMASTER MINE

YAVAPAI COUNTY, ARIZONA

May, 1975

TABLE OF CONTENTS

	PAGE
INTRODUCTION	1
MINERAL TITLE	2
POSTMASTER RESERVES	2
PRODUCTION	3
MINE POTENTIAL	4
A. Downdip from the 630 level	4
B. New Era and Sheffield Veins	6
EXTRALATERAL OR APEX RIGHTS	6
VEINS	7
BENEFICIATION	7
CONCLUSIONS	8
RECOMMENDATIONS	8

ILLUSTRATIONS

		Page
Map 1 (A)	Status of Mineral Titles	10
Map 1 (B)	Status of Mineral Titles	11
Map 2	Vertical Projection - Postmaster Mine	12
Map 3	New Era Claim - showing Surface Veins	13
Map 4	Horizontal Downdip Projection Of Postmaster Vein	14
Map 5	Original Postmaster Claim Map	15

EXHIBITS

Exhibit I	J. M. Garrett letter	16
	Old Workings tabulation	17

COPY

AN APPRAISAL OF THE POSTMASTER MINE

YAVAPAI COUNTY, ARIZONA

COPY

INTRODUCTION

The writer was authorized by Mr. J. T. Orchard to examine the Postmaster Mine and its environs located in Section 22, T 12½ N, R 1 W, Big Bug Mining District, Yavapai County, Arizona. The first examination was made in September 1974 (with follow-up investigations) to determine the mineral title of the formerly owned unpatented mining claims adjacent to the Postmaster Patented property, as well as the availability, for claiming, of the area surrounding the Postmaster Mine. Reports were submitted describing the results of these brief investigations.

Mr. Orchard has requested an evaluation of the mineral potential of the mine and has furnished reports by various Mining Engineers who examined it prior to 1942. Since the underground workings are inaccessible, the following evaluation and recommendations are based on a study of the data supplied by Mr. Orchard, government publications, a recent Geological report on a nearby mine with a similar geological setting, and on the geological information obtained while traversing the property in search for claim monuments.

MINERAL TITLE

Secs. 34, 35, T 13 N, R 1 W

Copies of the map showing the status of mineral rights in Sections 34 and 35 north of the Postmaster Mine were obtained from the Bureau of Land Management in Phoenix. The land withdrawn for classification by the Federal government (A4456) was claimed by Inspiration on May 15, 1974. These claims were recorded with the B.L.M. (Refer to Map No. 1). - 1981 INSPIRATION DID NOT CONTINUE TO HOLD THESE CLAIMS, THUS 10 CLAIMS WERE STAKED AROUND THE PAT PROPERTY FOR POSTMASTER OWNERS. (SEE ATTACHED MAP)

POSTMASTER RESERVES

Calculated by M. B. Lovelace
With Values Updated

Mr. M. B. Lovelace examined the Postmaster Mine for the Postmaster Mining Co. presenting the results of his investigation in a report dated December 15, 1941.

The underground workings are not accessible for check sampling; however, subsequent examinations and reports by other Mining Engineers as well as shipment records indicate Mr. Lovelace's estimates to be acceptable except for critical reviews concerning the estimated tonnage weight per sample assay. For instance, the grade of the Block D tonnage estimate is based on three sample assays.

The value per ton of the mineral in place presented in the following tabulation may change due to fluctuating market values.

Mr. Lovelace's reserve calculations with mineral values updated to May 15, 1975 are as follows:(1)

PROVEN ORE: (Refer to Map 2 - Vertical Section Postmaster Mine)

		Tons	Value/Ton	Gross Value	10-14-80
	AU AG CU PB ZN				
Block A	.19 5.7 .44 .6 .3	6,789	87.84	$ 596,352	1,696,318
Block B	.3 7.5 .6 1.3 1.6	4,887	105.76	516,834	1,736,402
		11,676		$1,113,186	3,432,720
PROBABLE ORE:					
Block C	.15 4.5 .2 .3 .3	8,427	69.84	588,508	1,659,103
Block D	.54 2.8 1.2 1.2 .3	6,258	123.28	771,486	2,680,991
Block E	.22 2 .24 .1 2	7,590	64.80	491,832	1,477,718
		22,275		$ 1,851,826	5,817,813
POSSIBLE ORE:					
Block F	AU .58	31,047			12,244,936
Block G		21,267			
					21,495,469

Total proven and probable reserves are 33,951 tons in place with a gross value of $2,965,012 based on the Lovelace report. (The term "ore" has been omitted - G.W.)

PRODUCTION

Mr. Lovelace estimated 12,500 tons valued at $256,375 were produced before 1905. 2,044 tons valued at $62,778 were shipped by the Postmaster Company during the period 1940-1942. In addition, 89 tons of the reserves were shipped to the Clarkdale Smelter (now closed)

(1) Gold $164/oz; silver $4.30/oz.; copper .64¢/lb; lead .23¢ lb; zinc .39¢/lb.

10-14-80 AU #680 AG #21 CU .98 PB 0.45 ZN 0.37

in 1942, which J. M. Garrett, one of the mine owners, wrote "yielded $6.32 more per ton than the Lovelace estimate" (Refer to attached letter).

No records of shipments from the Postmaster Mine after 1942 have been received.

MINE POTENTIAL

A. Downdip from the 630 level

Detailed information concerning the extent and grade of the mineralization at depth in a nearby mine is presented in the AIME publication, "Ore Deposits in the United States 1933/1937, Volume Two". In this publication, Messrs. Gilmour and Still have authored an article entitled, "The Geology of the Iron King Mine" pp 1239-57. The Iron King Mine is located a few miles east of the Postmaster Mine along the same mineralized belt, in a similar geological environment. The writers refer to the Iron King ore body as massive sulfide lenses arranged en echelon, striking N 26° E, dipping 78° NW and plunging 60° to the north. These tabular ore bodies, ranging from 100 feet to more than 2,000 feet in strike length, and up to 20 feet in width, are described as alternating bands of massive sulfides and metandesite. Fig. 7, "The Vertical Longitudinal Section of the Iron King Mine Showing Contours of the Product of Width and Dollar Value" illustrates the greatest dollar value of the lenses to start about 900 feet below the surface and continue to about 1,700 feet below the surface before decreasing.

COPY

The mineralized lens partially developed and mined on the Postmaster Mine appears to be similar to the Iron King occurrence.

Its change in mineral values with depth is tabulated as follows:

Level	Vein Width	Average Au	Ag	Cu	Pb	Zn
100	3.0'					
300	2.52'	.143	.28	.94	.76	.62
500	3.5'	.325	4.96	.65	.7	1.57
600	3.5'	.187	5.69	.44	.6	3.0
630	3/7'	.223	2.0	.24	.14	2.0
630	Select - Garrett 1945	7.425	17.0	1.0		
630	Select - Lovelace	1.30	24.48	0.9	35.1	
630	Select - Garrett 1942	.45	21.55	1.35		
630	Select - Garrett 1942	.40	13.80	0.80		

The above data suggests the silver-gold values and the vein width could be increasing with depth. If both mines continue to compare favorably, geologically, at depth, then the mineral content and width of the Postmaster lens should gradually increase starting about 300 feet below the 600 level, to a maximum width and mineral value, then decrease in value downward, resembling a bi-convex lens on end.

B. New Era and Sheffield Veins

Two veins, the New Era and Sheffield veins, are shown to parallel the Postmaster Vein. (Refer to Map No. 3). Other than surface prospecting these veins, according to the Engineering reports, have hardly been explored. Should the similarity in vein systems between the Iron King and the Postmaster continue, then these three veins may all be interrelated resulting in an increase in the overall mineable width.

EXTRALATERAL OR APEX RIGHTS

The Postmaster vein was projected downdip to the 600 level, to depict its location in relation to the claim side lines. (Refer to Map No. 4). This downdip projection continued, is as follows:

Horizontal Projection of Vein Downdip

Level	64°	68°	71°	(dip angles by Lovelace)
400	175'	150'	130'	
500	219	187	163	
600	263	225	195	
800	350	300	260	
1000	438	375	325	

Note that the Postmaster vein, as projected, will extend beyond the claim sidelines 300 feet northward starting at about the 800 level, dependent upon its dip.

"By specific provision in the mining law, the locator of a lode claim is given the right to follow the vein on its downward course beyond the side lines of his mining claim. End lines must be parallel and extralateral rights are confined within planes passed vertically downward through these end lines". (1)

It was recommended that the property owners seek legal advice for problems of this nature.

VEINS

The surface structure is mapped as three parallel veins trending N 50° E, dipping steeply to the northwest through the New Era and Postmaster Claims, but curving westerly beyond the shaft through the Sheffield Claim. The underground workings indicate the 165 level continues southwesterly along the vein from the shaft and that the vein probably projects southwesterly through the contiguous Frankie Claim. (Map No. 5).

The property is covered with a heavy growth of brush and the outcropping veins weather more than the host rock, so that the surface continuity of the veins is obscure and difficult to trace. In addition, the rock between the mapped veins has been frequently subjected to alteration, indicating the veins may represent a broader interrelated intersecting vein system rather than curving parallel veins.

BENEFICIATION

The nearby Iron King Mine and its milling facilities are no longer in operation, nor is presently any other nearby custom milling service available, although one is under construction at Hayden.

(1) Laws and Regulations Governing Mineral Rights in Arizona - Verity Department of Mineral Resources, Arizona.

COPY

A study of the average sample assay per level as well as the mineral suite suggests that ore from this mine will require beneficiation before becoming marketable.

CONCLUSIONS

The Postmaster Mine contains reserves of gold, silver, copper, lead and zinc minerals in a three-foot wide lens partially developed and mined to the 630' level. The mine is judged to have an ore grade potential both downdip and across a wider interrelated structure, based upon its geological analogy to the nearby Iron King Mine.

Inspiration Copper Company has blanketed the area around the Postmaster Mine with claims, are conducting Geological-Geophysical surveys over the area and have submitted an offer for the Postmaster Property.

RECOMMENDATIONS

To enhance the value of your property, I recommend that a GEO PHYSICAL (V.L.F.) Geochemical survey be conducted over the surface. ~~The geochemical survey will include collecting soil and/or rock samples across the veins (on a grid system) to be submitted for geochemical determinations followed by preparation of a geochemical anomaly map based upon these values.~~ The map would delineate areas of surface mineralization, indicating possible underlying mineralized lenses and will also assist to definitely establish the surface vein system and its relation to the Postmaster vein.

Estimated cost $4,000; estimated timerequired - one month.

If negotiations with Inspiration Copper Company are unsatisfactory, the owners may consider probing the downdip target area by means of a diamond core drilling program.

It is not recommended that any attempt be made to mine the reserves prior to extensive bulk sampling of the reserves and benefiaiation tests of the samples collected.

May 27, 1975

Gerald Weathers

Old workings

Shaft: 450'. (Ventura Claim)

Drifts:	SW	NE.
100'	?	400
165'	800'	600
240'	275'	—
300'	225	200
375'	75'	—
450'	35'	30'
	1410	1730
		1410
		2640

(Sheffield Claim).

165' above. 650' W of Shaft 150' W

125' " (above) 200' W of above. 300' W.

200' NE. Tunnel 60' to W.
across canyon. 50' NE Tunnel thru hill 150'
" " NE. 100' Tunnel 75'

462 ft. Xcut Tunnel @ 165' level.

PROPOSED EXPLORATION:
Sink: 400'
Drift: 500' E + 500' W. on. 550
" " 650.
750.

J. M. GARRETT
BOX 145
TUCSON, ARIZONA

January 2, 1945

Gentlemen:

Subsequent to the Lovelace Report of Dec. 15,1941 the following data was recorded:

1) A cleanup shipment of ore mined in the 30 foot winze below East drift on 600 level produced 89.0 dry tons which assayed Au...0.425 oz.; Ag...17.0 oz.;Cu...1.0%, with net smelter returns of $1,709.49 (exclusive of M.R.C. premium payments). This yields an average of $19.20 net per ton which is considerably higher than the $12.87 gross per ton valuation estimated in the Lovelace report for Block "E"(probable ore) from whence this ore came.

2) A 7 ton sample was cut from the East drift on 500 level near face of drift for a differential flotation mill test run at the Iron King Mill, Humboldt, Arizona. This 6.84 dry tons assayed Au... 0.22 oz.; Ag... 6.6 oz.; Cu... 0.3%; Pb.. 1.8% Zn... 3.3 %, average. The foregoing compares with the Lovelace estimate for Block "C" probable ore as Au...0.147 oz.; Ag...4.54 oz.; Cu... 0.22%; Pb...0.32%; Zn...2.81% average.

3) The #2 raise was driven from 600 to 500 level.

4) The #7 was driven from the 500 to the 400 level- the working tunnel level.

5) A raise was driven 90 feet above the 400 level, East drift, toward the 165 level. This was driven to improve mine air and to provide a second manway exit.

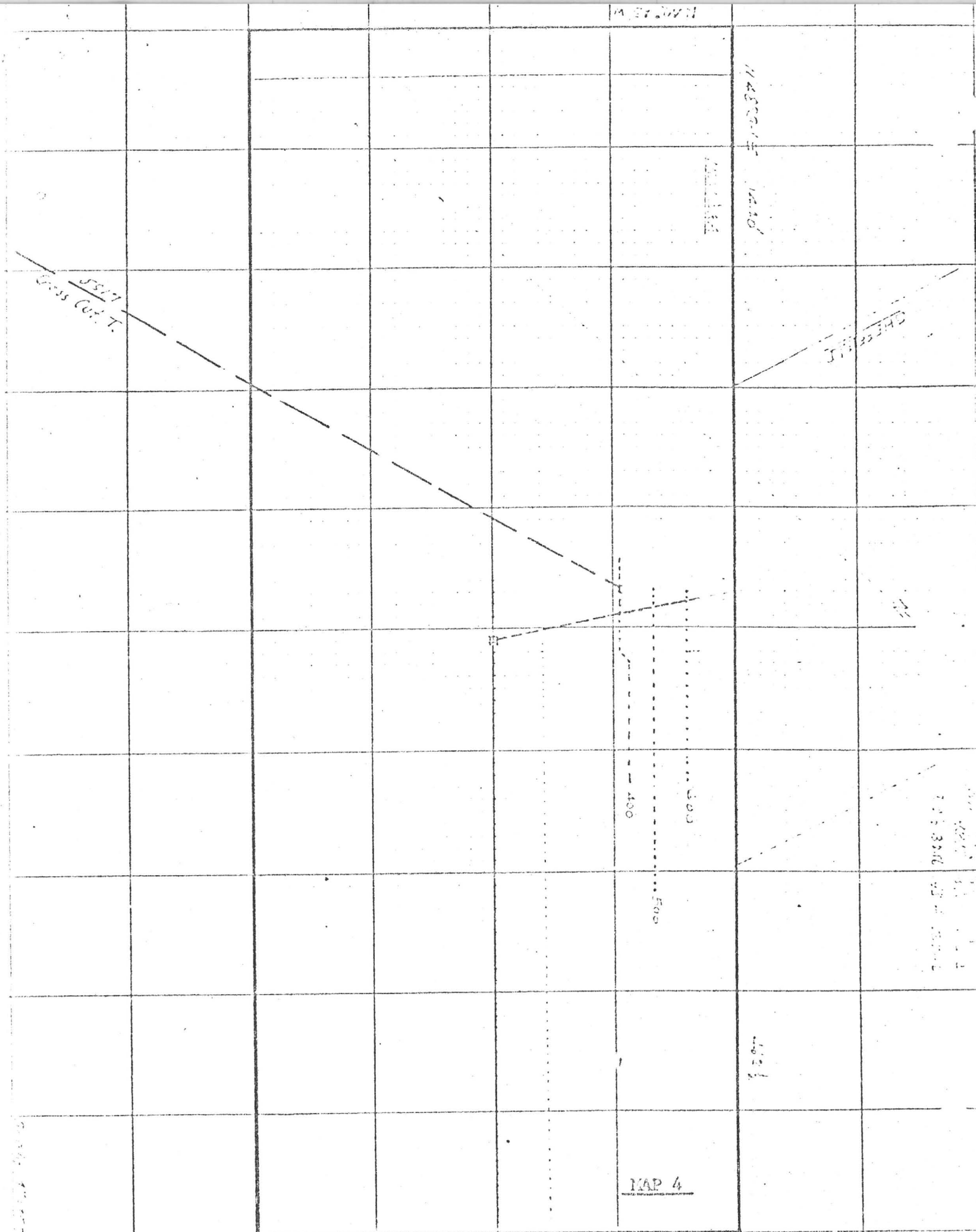
6) All machinery and equipment was removed from the mine property except the 1½ inch waterlines, airlines, mine rail ties and ladders below the 400 level and extending down to sump below the 600 level at shaft.
Buildings now on the property consist of the following:
Compressor House, corrugated iron.
Blacksmith House "
Change House "
Powder House "
60 ton ore bin, heavy timbers.

Yours very truly,

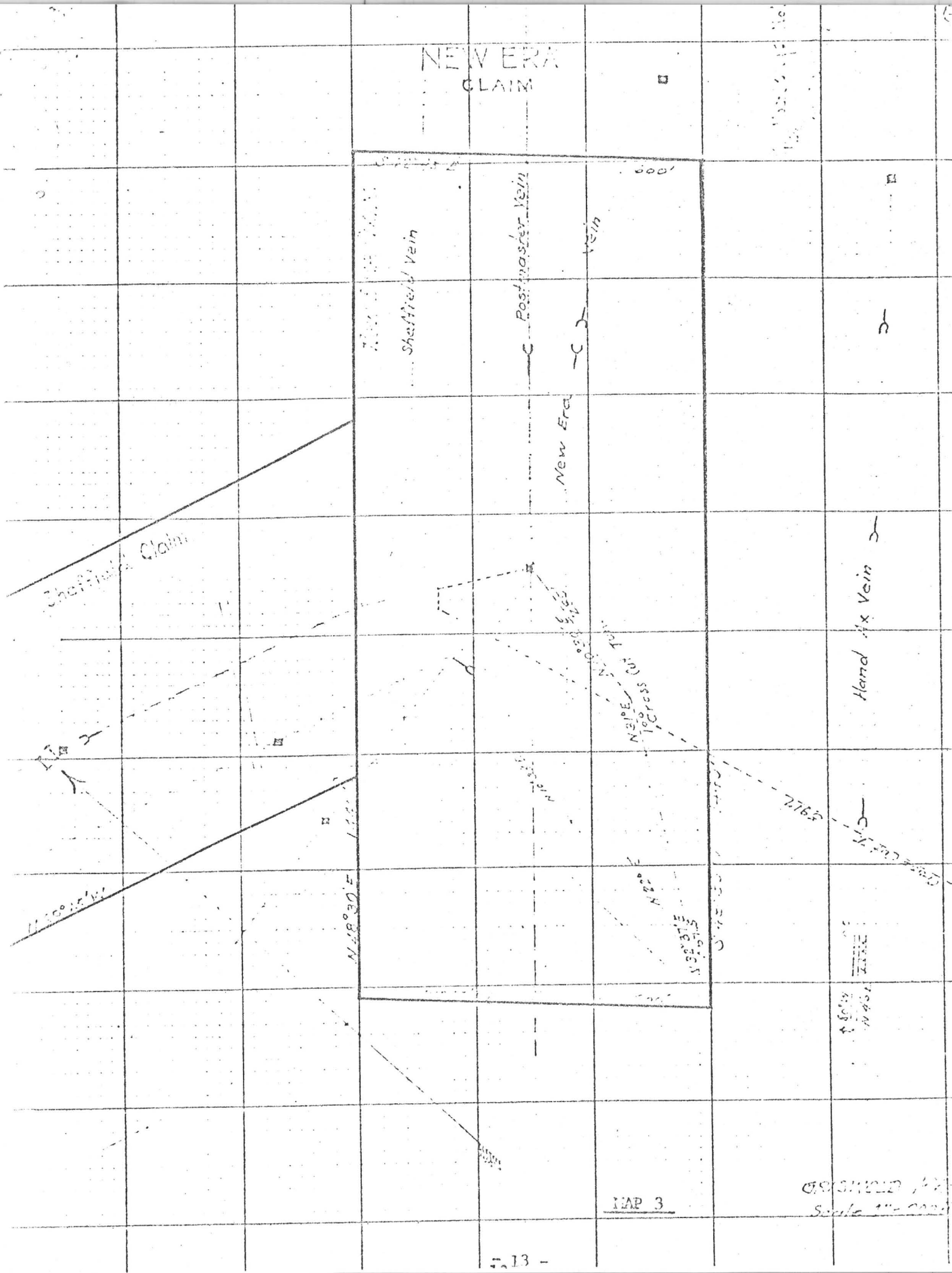
J.M. Garrett

JMG/mc

EXHIBIT I

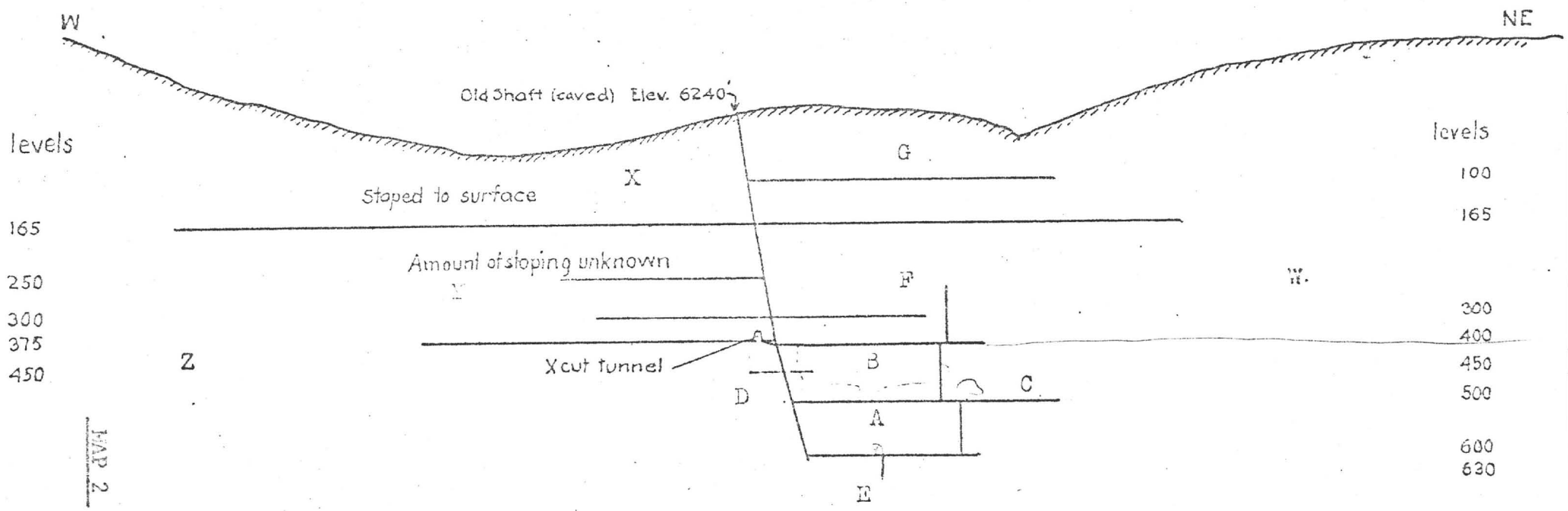


MAP 4


NEW ERA
CLAIM
Sheffield Vein
Postmaster Vein
New Era Vein
Sheffield Claim
Hand Ax Vein
N31°E
To Cross (U)
N18°30'E
N38°E
MAP 3

Vertical Projection

POSTMASTER MINE ETC
Big Bug District.
Yavapai County,
Arizona.



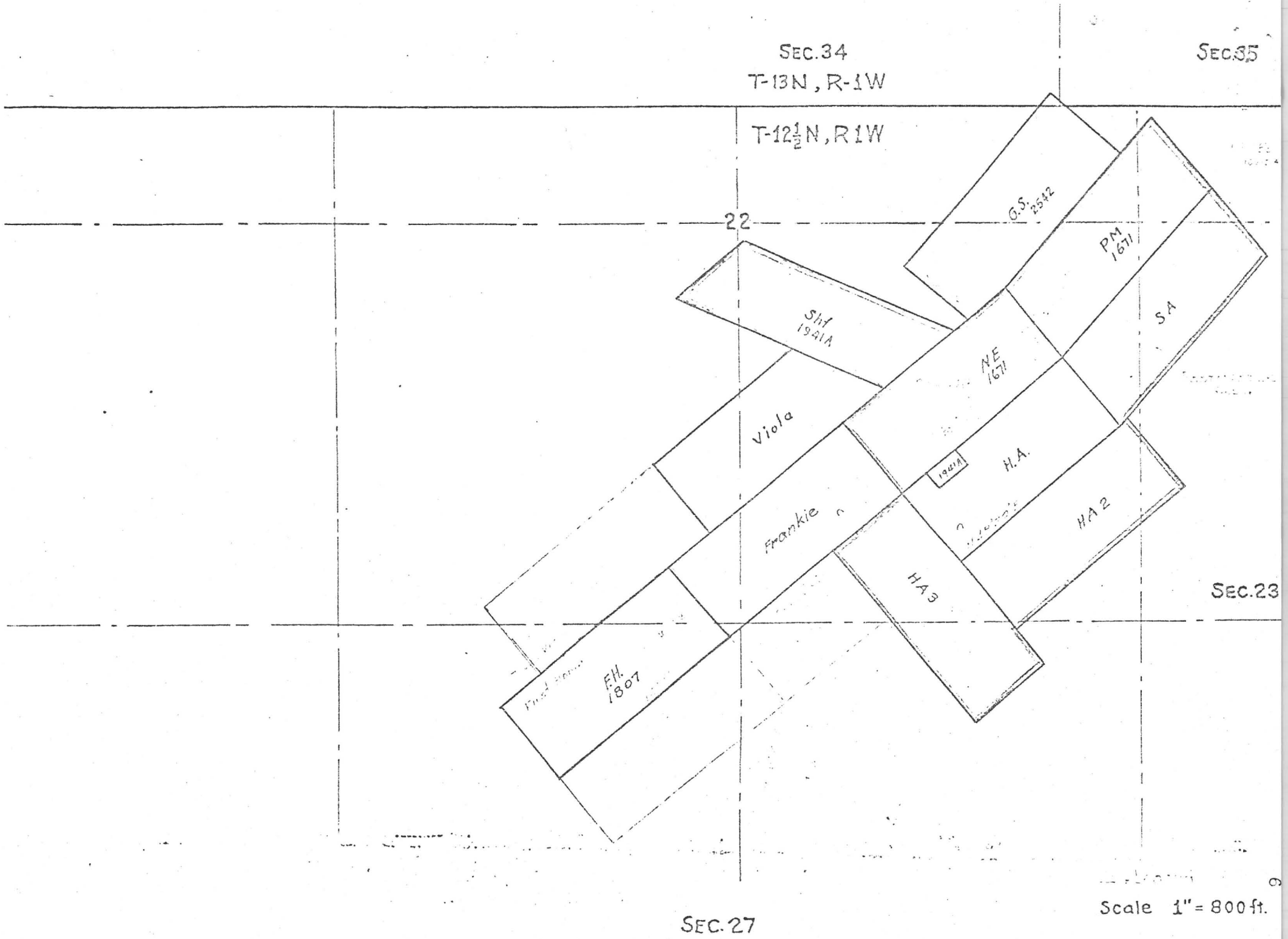
Sheffield Claim >< New Era Claim >< Postmaster Claim

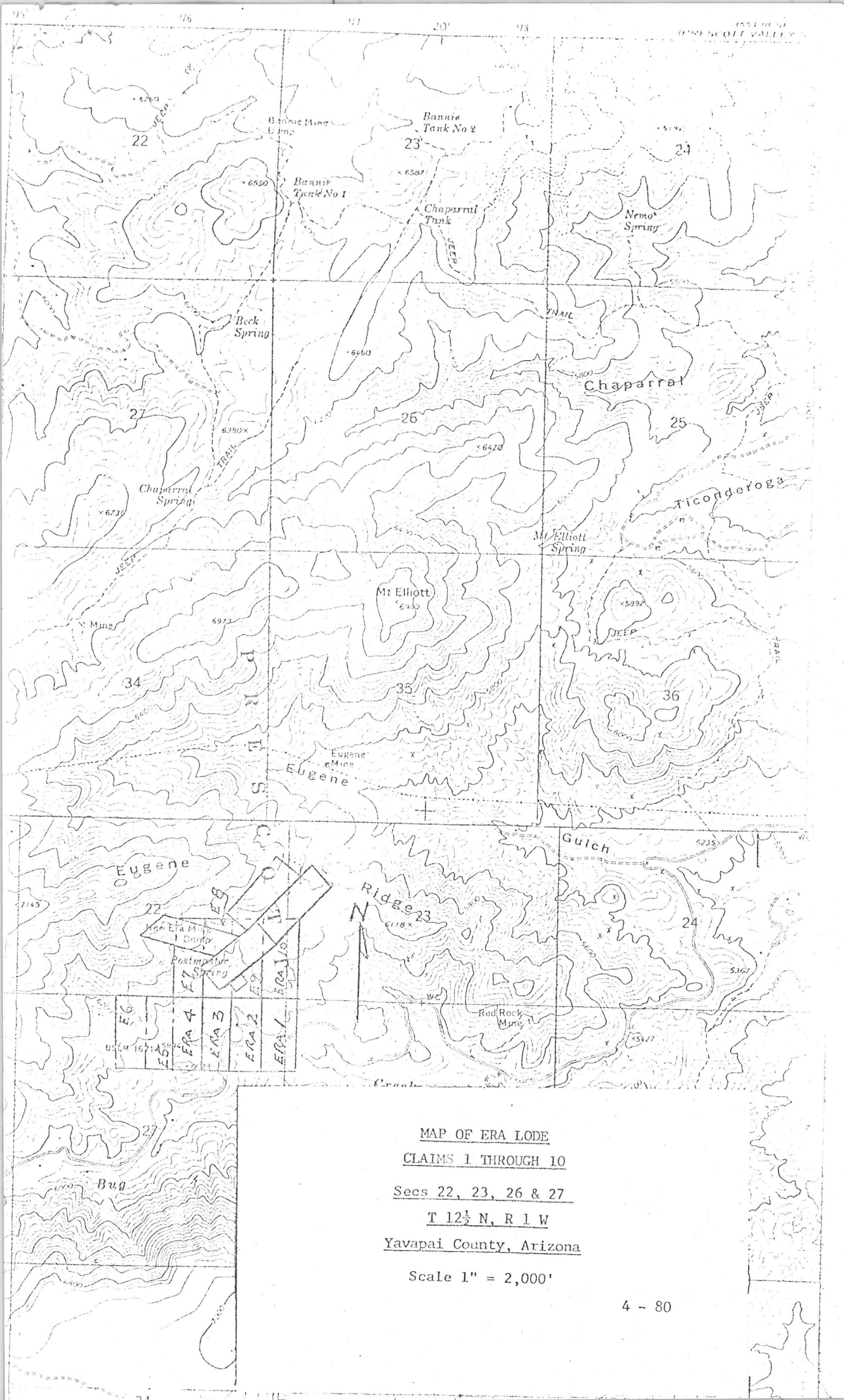
Note: This sketch is projection of Vertical section of Postmaster Vein development into the plane of the vein itself. Parallel veins, "New Era" and "Hand-Ax" have not been explored.

☐ Developed by Oriental Mining Co.

☐ " " Postmaster Mining Group

Scale
1 Inch = 200 ft.


SEC. 34
T-13N, R-1W
SEC. 35
T-12½N, R1W
22
G.S. 2542
PM 1671
SA
Shf 1941A
NE 1671
Viola
H.A.
1941A
Frankie
HA 2
HA 3
SEC. 23
F.H. 1807
SEC. 27
Scale 1" = 800 ft.



MAP OF ERA LODE

CLAIMS 1 THROUGH 10

Secs 22, 23, 26 & 27

T 12½ N, R 1 W

Yavapai County, Arizona

Scale 1" = 2,000'

4 - 80

J. M. GARRETT
BOX 145
TUCSON, ARIZONA

January 2, 1945

Gentlemen:

Subsequent to the Lovelace Report of Dec. 15,1941 the following data was recorded:

1) A cleanup shipment of ore mined in the 30 foot winze below East drift on 600 level produced 89.0 dry tons which assayed Au...0.425 oz.; Ag...17.0 oz.;Cu...1.0%, with net smelter returns of $1,709.49 (exclusive of M.R.C. premium payments). This yields an average of $19.20 net per ton which is considerably higher than the $12.87 gross per ton valuation estimated in the Lovelace report for Block "E"(probable ore) from whence this ore came.

2) A 7 ton sample was cut from the East drift on 500 level near face of drift for a differential flotation mill test run at the Iron King Mill, Humboldt, Arizona. This 6.84 dry tons assayed Au... 0.22 oz.; Ag... 6.6 oz.; Cu... 0.3%; Pb.. 1.8% Zn... 3.3 %, average. The foregoing compares with the Lovelace estimate for Block "C" probable ore as Au...0.147 oz.; Ag...4.54 oz.; Cu... 0.22%; Pb...0.32%; Zn...2.81% average.

3) The #2 raise was driven from 600 to 500 level.

4) The #7 was driven from the 500 to the 400 level- the working tunnel level.

5) A raise was driven 90 feet above the 400 level, East drift, toward the 165 level. This was driven to improve mine air and to provide a second manway exit.

6) All machinery and equipment was removed from the mine property except the 1½ inch waterlines, airlines, mine rail ties and ladders below the 400 level and extending down to sump below the 600 level at shaft.
Buildings now on the property consist of the following:
Compressor House, corrugated iron.
Blacksmith House "
Change House "
Powder House "
60 ton ore bin, heavy timbers.

Yours very truly,

J.M. Garrett

JMG/mc

J. M. GARRETT
BOX 145
TUCSON, ARIZONA

January 2, 1945

Gentlemen:

Subsequent to the Lovelace Report of Dec. 15,1941 the following data was recorded:

1) A cleanup shipment of ore mined in the 30 foot winze below East drift on 600 level produced 89.0 dry tons which assayed Au...0.425 oz.; Ag...17.0 oz.;Cu...1.0%, with net smelter returns of $1,709.49 (exclusive of M.R.C. premium payments). This yields an average of $19.20 net per ton which is considerably higher than the $12.87 gross per ton valuation estimated in the Lovelace report for Block "E"(probable ore) from whence this ore came.

2) A 7 ton sample was cut from the East drift on 500 level near face of drift for a differential flotation mill test run at the Iron King Mill, Humboldt, Arizona. This 6.84 dry tons assayed Au... 0.22 oz.; Ag... 6.6 oz.; Cu... 0.3%; Pb.. 1.8% Zn... 3.3 %, average. The foregoing compares with the Lovelace estimate for Block "C" probable ore as Au...0.147 oz.; Ag...4.54 oz.; Cu... 0.22%; Pb...0.32%; Zn...2.81% average.

3) The #2 raise was driven from 600 to 500 level.

4) The #7 was driven from the 500 to the 400 level- the working tunnel level.

5) A raise was driven 90 feet above the 400 level, East drift, toward the 165 level. This was driven to improve mine air and to provide a second manway exit.

6) All machinery and equipment was removed from the mine property except the 1½ inch waterlines, airlines, mine rail ties and ladders below the 400 level and extending down to sump below the 600 level at shaft.
Buildings now on the property consist of the following:

Compressor House,	corrugated iron.
Blacksmith House	"
Change House	"
Powder House	"
60 ton ore bin, heavy timbers.	

Yours very truly,

J.M. Garrett

JMG/mc

Old workings

Shaft: 450'. (Hawkeye Claim)

Drifts:	SW	NE.
100'	?	400
165'	800'	600
240'	275'	—
300'	225	200
375'	75'	—
450'	35'	30'
	1410	1730
		1410
		3140

(Sheffield Claim).

165' above. 650' W of Shaft 150' W.

125' " (above) 200' W of above. 300' W.

200' NE. Tunnel 60' to W.
across canyon. 50' NE Tunnel thru hill 150'
" " NE. 100' Tunnel 75'

462 ft. Xcut Tunnel @ 165' level.

PROPOSED EXPLORATION:
Sink: 400'
Drift: 500' E + 500' W. on. 550
" " 650.
750.

Old workings

Shaft: 450'. (Hawkeye Claim)

Drift:	SW	NE.
100'	?	400
165'	800'	600
240'	275'	—
300'	225	200
375'	75'	—
450'	35'	30'
	1410	1230
		1410
		2640

(Sheffield Claim).

165' above. 650' W of Shaft 150' W

125' " (above) 200' W of above. 300' W.

200' NE. Tunnel 60' to W.
across canyon. 50' NE Tunnel thru hill 150'
" " NE. 100' Tunnel 75'

462 ft. Xcut Tunnel @ 165' level.

PROPOSED EXPLORATION:
Sink: 400'
Drift: 500' E + 500' W. on. 550
" " 650.
750.