



CONTACT INFORMATION

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03/31/98

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: DOUGHBOY GROUP

ALTERNATE NAMES:

COMSTOCK GROUP
PATENTED CLAIMS MS 3758
TROJANOVICH MANGANESE
AMERICAN MANGANESE CLAIMS
LIBERTY MINING CO. CLAIMS
DUNKIRK

Shoup

Irene
GILA COUNTY MILS NUMBER: 135A

LOCATION: TOWNSHIP 1 N RANGE 15 E SECTION 14 QUARTER N2
LATITUDE: N 33DEG 26MIN 05SEC LONGITUDE: W 110DEG 47MIN 50SEC
TOPO MAP NAME: GLOBE - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:

MANGANESE
IRON
ZINC
COPPER
LEAD
SILVER
GOLD

BIBLIOGRAPHY:

ADMMR DOUGHBOY GROUP AND ~~IRENE GROUP FILE~~
BLM MINING DISTRICT SHEET 161
FARNHAM L L ETAL "MNG DPSTS EASTERN AZ" USBM
IC 7990, P 46-48; 1961
PETERSON, N P "GEOL & ORE DPSTS GLOBE-MIAMI
DIST" USGS PP 342, P 128; 1962
USAEC PRELIM RECONN RPT 172-480, P 25



Doughboy Group
TURF Sec. 14 ND

Globe 7.5

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

INFORMATION FROM MINE CARDS IN MUSEUM

USA ARIZONA

Globe landmark

Irene mine

MILS #159

2-AAA¹²

Doughboy Group (file)

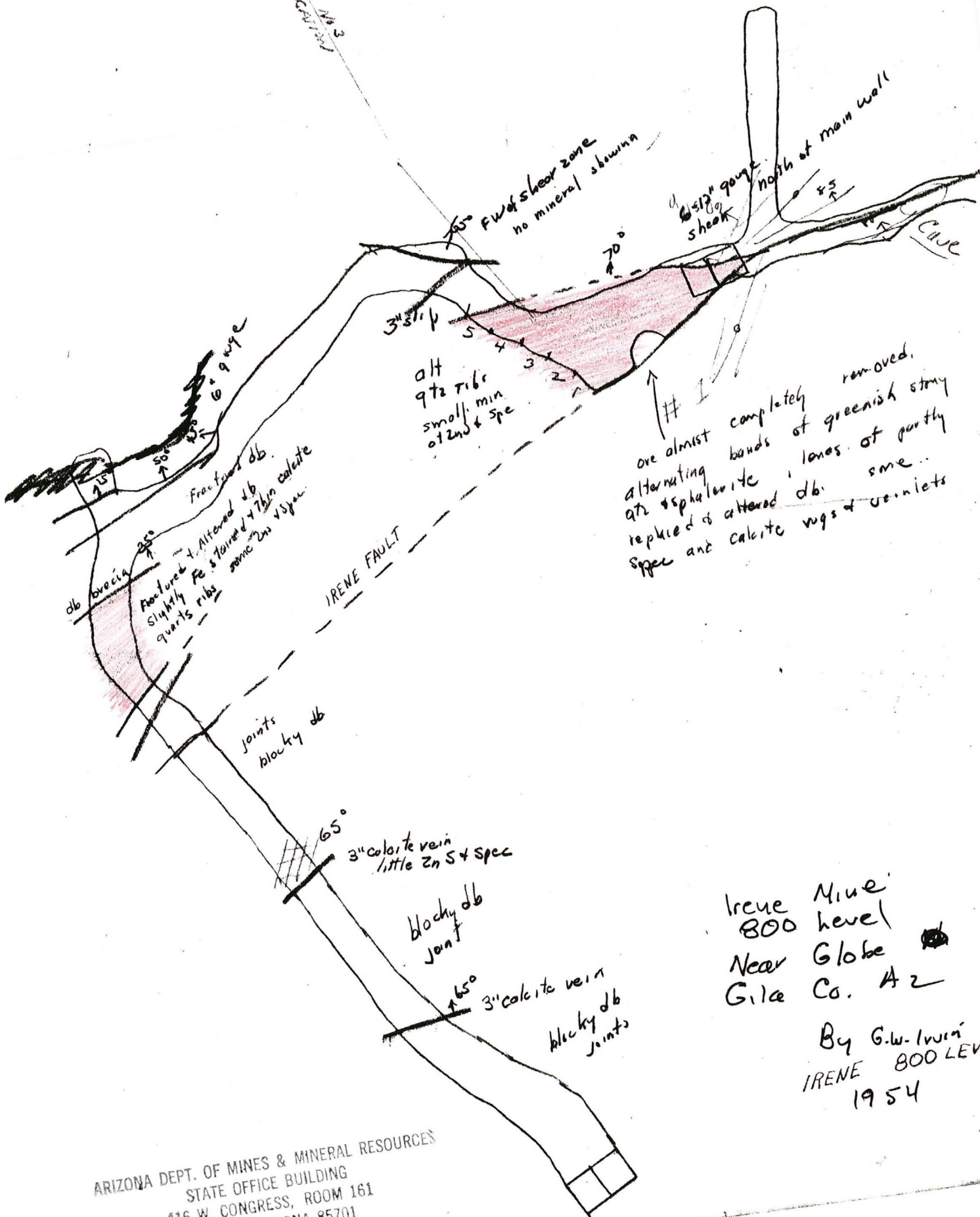
DOUGHBOY GROUP & IRENE GROUP

GILA COUNTY

MG WR 8/24/84: Discussed annual assessment requirements with Mr. John Trojanovich P O Box 2939, Globe, Az. 85502, phone 425-2478 (Tucson phone # 628-5848). He said his family own the patented Doughboy group and the unpatented Irene group in Gila County. He said he would be happy to let us copy his files on the properties. He is the third-generation owner.

Doughboy mine file
Gila Co.

REC. 0.0 HOLE 11-3
210' x 20' x 10'



Irene Mine
800 level
Near Globe
Gila Co. Az

By G.W. Iwani
IRENE 800 LEVEL
1954

ARIZONA DEPARTMENT OF MINERAL RESOURCES
MINERAL BUILDING, FAIRGROUNDS
PHOENIX, ARIZONA

October 16, 1958

To the Owner or Operator of the Arizona Mining Property named below:

ARIZONA-COLORADO [✓]COPPER BELT (Gila County) [✓]copper, lead, silver, gold
(Property) (ore)
& GOLD MINING & MILLING COMPANY PROPERTY
[✓](German Copper Company)

We have an old listing of the above property which we would like to have brought up to date.

Please fill out the enclosed Mine Owner's Report form with as complete detail as possible and attach copies of reports, maps, assay returns, shipment returns or other data which you have not sent us before and which might interest a prospective buyer in looking at the property.

Frank P. Knight

FRANK P. KNIGHT,
Director.

Enc: Mine Owner's Report

ARIZONA DEPARTMENT OF MINERAL RESOURCES
MINERAL BUILDING, FAIRGROUNDS
PHOENIX, ARIZONA

October 2, 1958

To the Owner or Operator of the Arizona Mining Property named below:

German Copper Company (Gila County) copper, lead, silver, gold
(Property) (ore)

We have an old listing of the above property which we would like to have brought up to date.

Please fill out the enclosed Mine Owner's Report form with as complete detail as possible and attach copies of reports, maps, assay returns, shipment returns or other data which you have not sent us before and which might interest a prospective buyer in looking at the property.

Frank P. Knight

FRANK P. KNIGHT,
Director.

Enc: Mine Owner's Report

Daugherty + Irene

1. Comstock Extension
2. Gila County, Arizona
3. Tony Trajanovich
4. W. R. Jones
5. Visited June 21, 1948
6. Lead; zinc ore of very limited extent.
7. Good structure; favorable formations missing at depth; some ore, but only in one diamond drill hole. Of no interest - revisit to check opinion.

8. _____

* * * * *

THE EAGLE-PICHER MINING & SMELTING COMPANY
MIAMI, OKLAHOMA



INTRA-COMPANY
CORRESPONDENCE

TO Grover Duff* - Tucson Office
FROM John W. Chandler - Miami Office
SUBJECT: Exploration Work

DATE April 6, 1951

Dear Grover:

We are presently compiling a record of all the mines and prospects which we have examined for the Company during the past 10 years.

Starting with 1940, and listing the work done by years, such as 1940, 1941, 1942, etc., we would like to have the following information tabulated:

1. Name of property
2. Location - (State and County)
3. Who it was submitted by
4. Who made the examination
5. Time spent on the examination
6. Metals involved
7. General conclusions drawn from examination
8. Remarks - Under this heading could be shown whether we have done drilling or any other work in addition to the examination. Give brief outline. If the property subsequently became a mine unit and was operated so state.

We do not have a complete file in this office on all properties examined by the Company and we will combine your report with the one being made up from our files to make the final report complete. I would appreciate it if you could put someone on this work until it is completed, sending me three copies of your tabulation.

Best regards,

Jack.

John W. Chandler.

JWC/jm

4-25-51 - Mr. Chandler will send us a list of the properties on which they have reports in their files, and we will then send him the information on the others.

GJD

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine A. TROJANOVICH, MANGANESE MINE,
 American Manganese Company, Lessee
District Box 655, Globe, Arizona

Date October 1st, 1942
Engineer FRED H. PERKINS

Subject: PRODUCTION POSSIBILITY SURVEY

American Manganese Company -

Wm. G. Tait, President
Ora L. Morgan, Vice-President
N. H. Burley, Engineer-Manager

American Manganese Company hold by a Lease and Bond the Dunkirk and Kentucky claims located on Irene wash, about six miles northerly from Globe and located in the Copper Hill Mining District. The Company have been prospecting and developing these claims for about fifteen months, employing on an average four men per day.

The development work consists of an open cut about 20' in diameter and 20' deep. All work performed on this property is by hand so far.

In removing ore encountered in prospecting, 250 tons of 39% manganese has been shipped to Stock Pile in Deming, New Mexico and sold. Another 250 tons of ore has accumulated at the mine, because there is no ready sale for this and future ore produced at this mine on account of a 1% to 2.8% zinc content. When the producer takes a loss because of the high zinc content, he cannot make any money out of the operation, consequently is not rushing the work, pending that time when some more satisfactory terms can be arranged for the disposal of the ore.

The short haul over good roads to the railroad shipping point, which is Globe, is a great aid to this mining proposition.

PROBLEM:

The placing of a penalty on this ore because of the less than 3% zinc content; the freakish shape of the ore body, together with the lack of enough development work to know just how the ore body lies, are the chief problem this Company has to date.

The owners are not crowding the development of this ore body on the two claims, Dunkirk and Kentucky, until they know whether United States requirements can be changed to favor this class of ore.

The management can produce three or more cars a week now, if a favorable agreement can be established.

7-8-52

R. M. WRIGHT of

HUNTER SECURITIES CORPORATION
52 Broadway, N. Y. 4, N. Y.

Engin & Mining Jnl
4-53 Vol. 154 No. 4

States they have acquired this property.

See: USBM - I.C. 7990 -(1961) pp 46,48

See: AEC 172-480, p. 25. In AEC files
no uranium.

See: USGS P.P.#340 - Page 119

See: ~~Eagle-Picher "C" Confidential files (Comstock
Ext. Mining Co. report)~~ *Now in this file*

MAPS - Upstairs in flat storage area - Third drawer
MILS Sheet sequence number 0040070016 (p. 1796)

Mining World 4/1953

Mn

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA

FIELD ENGINEERS REPORT

Mine Doughboy Mine (Sec. 14, T1N, R15E)

Date 5-23-58

District Globe

Engineer Lewis A. Smith

Subject: Reported by W. W. Sorsen

Operators: Russell Wright 3845 E. Osborne Rd., Phoenix
W. W. Sorsen, Box 1431, Globe, Arizona
H. C. Smith, Globe, Arizona

Shipments: 100 tons ^{per week} of manganese ore averaging between 32 and 35% of Mn; 10% of Fe; and 9% of SiO₂ per ton. Shipments to Mohave Mining and Milling in Wickenburg, on batch basis of 600 tons minimum. Total shipments have been 1200 tons this year. They now employ 4 men in addition to Sorsen. At present they are negotiating with Kenneth Holmes of the Winterhaven Mill and may soon be shipping to that mill.

Reserves: Amount to about 10,000 tons of 33% Mn ore.

Mine Workings: 200' shaft, the Doughboy, with one level, the 100 foot level, extending both ways from the shaft in about equal distances. They have a drum hoist (18" wide and 1 foot in diameter) powered by an automobile motor. The cable is 1/2 inch and carries a 1/2-ton bucket. Screening plant to separate -1/2 inch material.

Geology: The mine lies in fault zone in Martin Limestone (~~Carboniferous~~ ^{Cambrian}), and is partly filled fissure and replacement favorable beds of the limestone. The mine strikes EW, generally, but weaves somewhat. The limestone dips 35° to the SW and strikes NW to W. The vein is nearly vertical and cuts across the limestone bedding at about 25° to 45°. The vein structure is partly coarse ground, partly vuggy, in certain areas it is composed of solid pöilmelane. The ore shoots are somewhat lenticular narrowing and swelling but all of the vein contains appreciable manganese.

The operators have the mine in good condition but need some financing to place it in full operation.

See DC 1990 p 46
See USGS R.P. #342 - Page 128

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DEPARTMENT OF MINERAL RESOURCES

State of Arizona

MINE OWNER'S REPORT

Note Change
of Address

Date

431 West 7th Street
Los Angeles, 14 California
Sept 5-1946

1. Mine: AMERICAN MANGANESE Company

2. Location: Sec. Twp. Range Nearest Town

Distance Direction Road Condition

3. Mining District & County:

4. Former Name of Mine:

5. Owner:

Address:

6. Operator:

Address:

7. Principal Minerals:

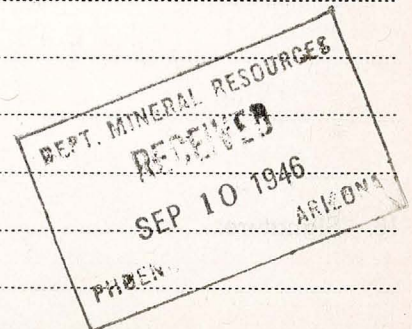
8. Number of Claims: Lode Placer

Patented Unpatented

9. Type of Surrounding Terrain:

10. Geology & Mineralization:

11. Dimension & Value of Ore Body:



ARIZONA DEPARTMENT OF MINERAL RESOURCES
MINERAL BUILDING, FAIRGROUNDS
PHOENIX, ARIZONA

August 8, 1958

To the Owner or Operator of the Arizona Mining Property named below:

Trojanovich Manganese (Gila County)	manganese
(Property)	(ore)

We have an old listing of the above property which we would like to have brought up to date.

Please fill out the enclosed Mine Owner's Report form with as complete detail as possible and attach copies of reports, maps, assay returns, shipment returns or other data which you have not sent us before and which might interest a prospective buyer in looking at the property.

Frank P. Knight

FRANK P. KNIGHT,
Director.

Enc: Mine Owner's Report

INCREASE PRODUCTION SURVEY

By: FRED H. PERKINS

American Manganese Company

Wm. G. Tait, President
Ora L. Morgan, Vice-President
N. H. Burley, Engineer- Manager

October 1st, 1942

A. Trojanovich, Manganese Mine

American Manganese Company, Lessee

Box 655, Globe, Arizona

American Manganese Company hold by a Lease and Bond the Dunkirk and Kentucky claims located on Irene wash, about six miles northerly from Globe and located in the Copper Hill Mining District. The Company have been prospecting and developing these claims for about fifteen months, employing on an average four men per day.

The development work consists of an open cut about 20' in diameter and 20' deep. All work performed on this property is by hand so far.

In removing ore encountered in prospecting, 250 tons of 39% manganese has been shipped to Stock Pile in Deming, New Mexico and sold. Another 250 tons of ore has accumulated at the mine, because there is no ready sale for this and future ore produced at this mine on account of a 1% to 2.8% zinc content. When the producer takes a loss because of the high zinc content, he cannot make any money out of the operation, consequently is not rushing the work, pending that time when some more satisfactory terms can be arranged for the disposal of the ore.

The short haul over good roads to the rail road shipping point, which is Globe, is a great aid to this mining proposition.

INCREASED PRODUCTION SURVEY

October 1st, 1942

By: FRED H. PERKINS

A. Trojanovich, Manganese Mine

American Manganese Company, Lessee

PROBLEM:

The placing of a penalty on this ore because of the less than 3% zinc content; the freakish shape of the ore body, together with the lack of enough development work to know just how the ore body lies, are the chief problem this Company has to date.

The owners are not crowding the development of this ore body on the two claims, Dunkirk and Kentucky, until they know whether United States requirements can be changed to favor this class of ore.

The management can produce three or more cars a week now, if a favorable agreement can be established.

*Douglas Shaft
near Irene Mine - Gila Co.*

COMSTOCK EXTENSION MINING COMPANY, INC.

OFFICES, 408 NORTH 7th AVENUE

Phone
Globe 746

PHOENIX, ARIZONA

Phone
Phoenix 2-6754

REPORT TO STOCKHOLDERS:

In accordance with the expressed desire of the stockholders at the annual meeting held in April 1949 to receive periodic reports from your company, the following brief financial and progress report has been compiled.

The present officers and directors of your company are as follows:

- Roosevelt (Ted) Robb, President
- Boyce Henslee, Chairman of the Board
- Joseph C. Cubitto, Jr., Vice-President & Ass't-Secretary
- William M. Wuensch, Secretary-Treasurer
- Blanton T. Dick, Assistant Secretary
- Tony Trojanovich, Jr., Mine Superintendent
- John H. Evans, Director
- Milan S. Walker, Director
- Charles H. Turner, Director

The financial condition of your company is as follows:

ASSETS

Cash on Hand and in Bank	\$ 12,125.88
Fixed Assets (Equipment and Claims)	945,077.41
Other Assets Including Mine Development	<u>196,985.83</u>
Total Assets	<u>\$1,154,189.12</u>

LIABILITIES AND CAPITAL

Deposits on Capital Stock not yet Issued	17,425.00
Accounts, Notes & Taxes Payable	13,641.41
Officer's Investment	<u>26,003.71</u>
Total Liabilities	\$ 57,070.12
Capital or Net Worth as of July 31, 1950	<u>1,097,119.00</u>
Total Liabilities & Capital	<u>\$1,154,189.12</u>

Since the first of the year we have issued 23,189 shares of capital stock at par value of \$1.00 per share. Of these purchases, all but three hundred shares were

bought by the officers and directors of the company. In addition, \$17,400.00 of the deposits on capital stock shown above represents cash deposited by the officers and directors for which the stock has not as yet been issued. As can be seen by these figures your officers and directors have invested in excess of \$30,000.00 in the past few months in order to continue the exploratory development work on the company's properties. In addition, from August 1, 1948 until January 1, 1950, the directors invested \$65,148.00 during which period only 12,000 shares were sold to the general public.

At the present time we are re-timbering the old Doughboy shaft by which we wish to accomplish two objectives: First, we anticipate the development of commercial ore at the 500 ft. level and secondly after we have reached the 800 ft. level we will contact the old drift running 1200 ft. southeast toward the Irene mine, at which point we should be in the rich sulphide zone. We are also negotiating for a sale on the manganese that is already developed.

You will note another change in the officers of the company. The office of president has been filled by several members of the board and the policy of the board has been to rotate this position inasmuch as no compensation has been paid the president. The addition of two assistant secretaries, the office of Chairman of the Board and Mine Superintendent were designed to increase efficiency and distribute responsibilities.

We wish to extend a cordial invitation to every stockholder to visit and inspect the mine and bring your friends. We are sure you will be impressed with the progress that has been made and what is being done now.

Address all correspondence to the company at P. O. Box 509, Phoenix, Arizona.

Sincerely,


President

THE IRENE MINE NEAR GLOBE, ARIZONA

On Monday May 3, 1954 as requested by Mr. J. W. Chandler, and accompanied by Mr. G. J. Duff, I examined the 800' level of the Irene mine. The object of the visit was to sample the ore exposures and map the geology of the level. Of especial interest was the two diamond drill hole intersections with the level.

The level had been unwatered and the ventilation fan turned on the day before our visit. Upon entering the level we found the vent tube covered with rock at a point indicated on the accompanying map. There were two bad caves beyond this point. Due to the hazards involved no attempt was made to sample or closely examine the drift beyond this point. As indicated on the map five 5' chip samples were taken across the face of the ore. The results of this sampling are also shown on the map.

The vein material appears to consists of bands of quartz and sphalerite accompanied by small masses of specularite and unreplaced diabase. The wall rocks are all blocky diabase.

Excluding the rocks of the Tertiary period the generalized column of this area is quite similar to that of the Magma mine, Superior area.

Because of the small quantities and low grade of ore so far indicated, I would not feel that the Company would be justified in trying to develop the property. In addition expensive methods of mining would be required in the diabase and probable schists zones.

G. W. Irvin
G. W. Irvin

METALS RESERVE COMPANY
WASHINGTON, D. C.

June 3, 1942

Mr. Sam Coupal, Chief
Arizona Bureau Mine Research
Phoenix, Arizona

Dear Mr. Coupal:

The American Manganese Company, 1201 East Seventh Street, Los Angeles, California, has applied for a contract to sell the Metals Reserve Company 5,000 tons of domestic manganese ore from the Dunkirk and Kentucky Claims in Gila County, and has furnished your name as reference.

It will be appreciated if you will advise us regarding the above applicant's financial and moral responsibility, as well as any information which you might have as to whether the amount of ore being offered is or can be made available from the aforementioned claims.

Any information which you can give us will be very helpful, and we assure you it will be held strictly confidential. The enclosed self-addressed franked envelope is for your convenience in replying.

Very truly yours,

Ben F. Ellis
Ben F. Ellis

Enclosure

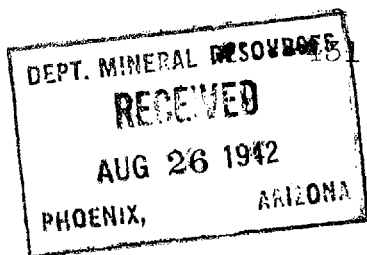


AMERICAN MANGANESE COMPANY

~~GLOBEX ARIZONA~~

151 West 7th Street, Los Angeles, California

August 24, 1



Mr. J.S. Coupal, Director,
Dep't of Mineral Resources,
State of Arizona
413 Home Builders Building
Phoenix, Arizona

Dear Mr. Coupal:

This is a long delayed answer to your letter of the 24th of July, 1942, but it has been overlooked largely due to the fact that Mr. Sinnicks has very busy up north for several weeks. ~~now~~.

This refers to Bentonite which you asked Mr. Hodges of Yuma to send us. The Bentonite was forwarded by a Mr. Riley, I believe, and I turned it over to Mr. Sinnicks as he is really the party on this end that would handle it.

If there is any complaint from your friend Hodges please advise me and I will see that the complaint gets to Mr. Sinnicks for explanation of the delay.

ourselves
Thanking you on behalf of Mr. Sinnicks and ~~myself~~ for the interest taken in this matter and with apologies for not acknowledging your letter sooner, I am,

Yours very truly


Wm. G. Tait

BOARD OF GOVERNORS:
CHARLES F. WILLIS, PHOENIX
CHAIRMAN
DR. N. H. MORRISON, PHOENIX
VICE-CHAIRMAN
A. C. W. BOWEN, WINKELMAN
SHELTON G. DOWELL, DOUGLAS
J. HUBERT SMITH, KINGMAN

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
CAPITOL BUILDING
PHOENIX, ARIZONA

J. S. COUPAL, PHOENIX
DIRECTOR
W. J. GRAHAM, PHOENIX
ASSISTANT TO THE DIRECTOR
AND SECRETARY TO THE
BOARD OF GOVERNORS
FIELD OFFICES AT
GLOBE - KINGMAN
PRESCOTT - TUCSON



Globe, Arizona.
August 24, 1939.

REPLY TO

Mr. J. S. Coupal, Director,
Department of Mineral Resources,
Phoenix, Arizona.

Dear Sir;

On a brief visit to the property of the Liberty Mining Company, Globe, Arizona, in company with Mr. A. Trojanovich on the 19th of this month, the following observations were made:

(1) Since the date of a report on this property made by C. W. Botsford, dated August 7, 1925, additional development work has been done as follows:

A tunnel designated as No. 2 Tunnel has been driven to intersect the vein at the same elevation as No. 1 Tunnel, but at a point approximately 700 feet further along the strike in a northeasterly direction. This No. 2 Tunnel cut the vein at a distance of 325 feet from the portal and was extended on through to the quartzite wall. It was then turned northward and followed the vein for a distance of approximately 240 feet. At this point a vertical raise was driven to connect with a short cross-cut tunnel which cut the vein 180 feet higher up. The raise is timbered throughout, two compartment, with chute and manway.

(2) The vein, where exposed by the more recent work, is of the same general character as shown in the older openings, except that in the No. 2 Tunnel there is evidence of more intensive fault movement and a correspondingly greater degree of oxidation. Limonite and hematite are more noticeable here, and light copper staining is visible at various points.

(3) At no point have the mine openings been carried downward through the zone of oxidation, and such downward development would be the next logical step in further work.

(4) All the workings are remarkably clean, well timbered and in excellent condition; and a renewal of work would not be attended by the extensive repairs ordinarily needed in a property which has been inactive for a considerable period of time.

(5) A road from the mine to Hamm Station on the Arizona Eastern Railroad is already in existence; but it would require probably a thousand or fifteen hundred dollars to put it in good condition. By this route the distance from the mine to the railroad is only 1.6 miles; and it would be a far better and shorter

road than the present one which follows a sand wash for most of it's length.

The above information is supplemental to that contained in my regular formal report on this property.

Yours very truly

Arthur Wolcott
Field Engineer, Eastern District.

THE COPPER HANDBOOK, VOL. XI, WEED - 1912-1913

GERMAN COPPER CO.

Secretary and office: Chas. H. Trotter, 975 West New York St., Indianapolis, Ind. Mine at Globe, Arizona. John H. Murdoch, President; Chas. H. Zollner, Vice-President; John A. Hook, Treasurer. Preceding officers, Wm. Elwarner, Jos. Lauler, David Fair, Wm. Burnett, John I. Carson, and J. B. McMurray, Directors. John H. Faught, Supt.; P. H. Pernot, Consulting Engineer. Organized March 25, 1911, under the laws of Arizona, capitalization \$3,000,000, shares \$5 par, fully paid. 175,000 issued; outstanding debt, \$75,000. Annual meeting, second Tuesday in October. Company is successor, 1911, of the Arizona-Colorado Copper Belt & Gold Mining & Milling Co.

Property, 21 claims, 420 acres, held by location in the Globe district of Arizona. Ore occurs in a large fissure vein cutting through diabase, quartzite, and limestone, and as contact ores between diabase and sedimentary rocks. The vein striking northeast and southwest, dipping 55°, is reported as 9' wide, proven to depth of 900', carrying 2% copper, 2 oz. silver and \$1 gold per ton, principally as chalcopryite, on 800' and 900' levels. Ore developed above 800' estimated at \$125,000.

Developed by 863' shaft, several short tunnels, and a total of 3,000' of underground work. The 800' level is said to block out 2,000 tons of ore with 18,000 tons of 2½% ore reasonably certain. Assessment work only was done in 1912, but mine was unwatered and work resumed, Sept. 1913.

Equipment includes 100-h.p. steam hoist and 7-drill air compressor. Arizona-Eastern railroad is 1 mile from property, which is well located and has merit.

THE COPPER HANDBOOK, 1910-1911

By Horace J. Stevens.

ARIZONA-COLORADO COPPER BELT & GOLD MINING & MILLING COMPANY

Office: 21 I. O. K of P. Building, Indianapolis, Indiana.
Mine Office: Globe, Gila County, Arizona.

✓ Homer Crumerine, President.
Chas. H. Zollner, Vice-President.
Chas. H. Trotter, Secretary.
Chas. Fenger, Sr., Treasurer.

Preceding officers, John I. Carson, J. Frederick McClay, David Fair, Wm. Elwarner, Wm. Burnett, and Jos. Lauler, directors.

John F. Shaw, General Manager and Consulting Engineer.

Organized, September, 1901, under Laws of Arizona, with capitalization of \$2,500,000, shares, \$1.00 par. Property was bonded March, 1910, to the Great Eastern Development Company, bond calling for \$260,000 cash and \$650,000 in stock, March, 1913, but bond was surrendered and property turned back to owners before end of 1910.

Lands, 21 claims, area 400 acres, 3 to 4 miles north-east (N) of Globe, showing veins 3' to 100' estimated width, carrying auriferous and argentiferous copper and lead ores, giving assays of 8% to 30% copper, 20% to 50% lead, 1 ounce to 200 ounces silver, and \$3 to \$30 gold per ton, ore being oxidized above, with sulphides in lower workings, mainly chalcopryrite.

Development includes 7 pits and shafts, deepest 800', cutting several small veins and one vein 40' estimated width, latter at depth of 150'. A crosscut in the 500' level shows 2 veins of 15' to 20' estimated width, carrying flakes of native copper. The Ida May claim has a 300' tunnel, the Little Beauty has a 150' tunnel, the Commerce claim has a 150' tunnel, and the Franklin claim has a 100' shaft.

Mine has about 1000 tons of ore on the dump, estimated by management to average 3% copper, 5 to 6 oz. silver, and \$1.50 par ton gold.

Equipment includes ore-bins near the shaft, and a steam plant with a 100-H.P. boiler, a hoist good for 1200', 5" x 7" auxiliary hoist, and a 12 drill Rand air compressor.

Arizona-Colorado Copper Belt & Gold Mining & Milling Co. (continued)

Company is said to plan a 100-ton mill for 1911. Work was resumed circa October, 1910, and at the end of the year the mine was shipping about 12 tons of ore daily to the Globe smelter from the 800' level. The German Copper Company was organized circa April, 1911, to take over this property.

THE COPPER HANDBOOK, 1909.

By Horace J. Stevens

Office: 305 State Life Building, Indianapolis, Indiana.

Mine Office: Globe, Gila County, Arizona.

*Hon. Robert N. Foree, President and General Manager.

*Chas. H. Zollner, Vice-President.

*Chas. Trotter, Secretary.

Chas. Fenger, Sr., Treasurer.

Trojanovich, A.
c/o Liberty Mining Company
Globe, Arizona - *Box 549*

8-24-39

See LIBERTY MINING COMPANY - Re Report

NOV 22 1945

See TROJANOVICH MANGANESE - re rept.

9-5-46

TROJANOVICH
AMERICAN MANGANESE *file*

Mn

Gila

4 - 4

T 1 N, R 16 E

~~Wm. G. Tait, Box 655, Globe~~
T. Trojanovich, Globe

'43
'46

CES

NOT AT L.A.A.C.

Mr. Wm. G. Tait

RECEIVED
AUG 12 1958
DEPT. MINERAL RESOURCES
PHOENIX, ARIZONA

~~431 West 7th Street~~

~~Los Angeles 14, California~~

NOT AT L.A.A.C.



Dear Jess:

Sorry to have to disappoint you on the Liberty Mine report; but I still lack some necessary information which I must get before I can send it in. The original letter was written as an accommodation to the owner, and I sent Sam a copy just to keep the records straight. Will forward report as soon as possible.

NAME OF MINE: IRENE COUNTY: GILA
OWNER: Liberty Mg. Co., Anton Trojanovich, Jr. DISTRICT:
Box 349, Globe METALS: PB, ZN
OPERATOR AND ADDRESS:

DATE:	OPERATOR AND ADDRESS:	DATE:	MINE STATUS
5/1/44	Tony Trojanovich, Globe Leased to A.S. & R.	5/1/44	AS&R Drilling
		2/15/45	Idle

IRENE MINE

Pb, Zn

Gila

4 - 4

T 1 N, R 15 E

Tony Trojanovich, Globe

'42

NAME OF MINE: COMSTOCK EXTENSION
OWNER:

COUNTY: Gila
DISTRICT:
METALS: Zn, Pb

OPERATOR AND ADDRESS

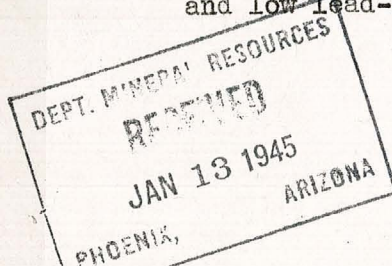
MINE STATUS

Date:	OPERATOR AND ADDRESS	Date:	MINE STATUS
1/46	T. Trojanovich, Globe	1/46	Developing

Mr Dunning;

The Irene mine is down Pinal creek about 3 miles Northwesterly from the Old Dominion dump. The property belongs to old Tony Trojanovich of Globe, and is under option to the A.S. and R. Co. who have been drilling from the surface downwards for several hundred feet.

The mineral encountered and expected is zinc and low lead-copper.



Macfarlane



Mr. Homer Crumerine, Pres.
Arizona-Colorado Copper Belt & Gold Mining &
Milling Company
21 I.O.K. of P. Building
Indianapolis, Indiana



UNKNOWN AT ADDRESS - 112



Mr. Chas. H. Trotter, Secretary
German Copper Co.
975 West New York St.
Indianapolis, Ind.



NO SUCH NUMBER 185

413 Home Builders Bldg.
~~XXXXXXXXXXXXXXXXXXXX~~

June 17, 1942

Mr. Ben F. Ellis
Metals Reserve Company
Washington, D. C.

Dear Mr. Ellis:

I hope you will pardon my delay in replying to your letter of June 3, as I have been out in the field the major part of the time in the past week or ten days.

Regarding the American Manganese Company, I regret that I am unable to give you any definite information regarding the financial and moral responsibility of the parties. I do know that they have a property near Globe which has a potential producing possibility of from ten to fifteen thousand tons of manganese or per year.

I have met Mr. William G. Taite, and have been on the property with him. He seems to me, both capable and responsible, but I have made no investigation as to the financial standing of his company. I do know that they have been active, and apparently have a good standing with the people they are doing business with in Globe.

Very truly yours,

J. S. Coupal,
Director

JSC:GS

June 9, 1942.

413 Home Builders
Bldg.
Phoenix, Arizona.

Chas. Hardy Company
425 Lexington Ave.,
New York City, N.Y.

Dear Sirs:-

I have been asked to write you regarding my observations on the property of the American Manganese Company near Globe, Arizona.

I believe the property capable of producing from 10,000 to 15,000 tons per year. From large representative samples taken at the time I visited the property, last year, the mine run of ore will be about 40 % manganese content.

The property and the ore showings are favorable for low mining costs and additional development work should put in sight a large tonnage of ore.

Trusting that this brief statement will be the information needed, I am,

Very truly yours.

J. S. Coupal.
Director.

cc. to Wm J. Lait
823 Laurel Blvd.
Los Angeles, Calif.
Requested by long distance call
fr. Los Angeles.

Comstock Ext.

January 13, 1947

Mr. Harold Maryott
Miami, Arizona

Dear Mr. Maryott:

I learned at Clifton that the Ozark Mining and Milling Company of Coffeeville, Kansas, a division of the Sherwin Williams Paint Company, is interested in purchasing lead and zinc carbonate ores provided they run 30 percent.

They are also interested in building a mill in Arizona for the treatment of such ores, provided they can be sure of obtaining a sufficient tonnage.

I sincerely hope that you will be able to make a deal with them.

Very truly yours,

Roger I. C. Manning
Field Engineer

RICM:LP

Excerpt from the ARIZONA SILVER BELT, Miami, Arizona.

Christmas Issue, 1909

ZINC NOT HURTFUL TO FLUXING OF ORE BODY

Arizona-Colorado Is Rapidly Preparing to Go on List of Producers

The Arizona-Colorado Copper Belt & Gold Mining & Milling Company, whose property lies about two miles north of the Old Dominion smelting plant, is directing its energies toward placing its mine in a position to produce ore. President Homer Crumrine is making an extensive visit in Globe, with a view to outlining a future policy and to putting the Arizona-Colorado upon a sound operative basis. A few weeks ago, after the crosscut leading south from the shaft on the 900-foot level had been run for a distance of 300 feet, a drift was driven at that depth on the same vein which was opened by similar workings on the 800-foot level. This drift is about sixty feet long and has opened the vein sufficiently to show that practically the same copper values prevail there as have already been developed on the level above.

It was formerly supposed by the management of the Arizona-Colorado mine that the eighth level ore contained enough zinc to make its smelting difficult. The recent operations at a depth of 800 feet, however, have opened the ore body more fully and have revealed the encouraging fact that the zinc first encountered was simply a crustaceous formation on the edges of the ore and is not present in any appreciable quantity in the ore body proper. Consequently, the management will now make a test shipment of ore, probably to the El Paso smelter. The assays already made of the 800-foot level material indicate that the smelter returns on this shipment will be most encouraging and will very likely result in the making of other and perhaps regular shipments in the future. The drift on the eighth level was driven from the 300-foot crosscut at a distance of 170 feet from the shaft. A crosscut run from this drift is twenty-two feet long and is still in the ore.

It is expected that during this week a force of men will be employed in constructing some ore bins at the shaft on the Arizona-Colorado property, preparatory to the taking out and storing of ore for shipment to the smelter. President Crumrine, after having spent over two weeks in Globe, during which time he has made almost daily visits to the mine, is feeling much gratified at the results obtained by Superintendent S. Phillips who has been in charge of the work there in the past.

Excerpt from the ARIZONA SILVER BELT, Miami, Arizona.

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The Copper Handbook. 1909.

Page 324.

Same as preceding, except -

Lands 21 claims, area 400 acres. 3 miles northwest of Globe.

The Copper Handbook. 1910 - 1911.

Office: 21 I. O. K. of P. Bldg., Indianapolis, Ind.

Mine Office: Globe, Gila County, Arizona.

Homer Crumrine, President; Chas. A. Zollner, Vice-President;
Chas. A. Trotter, Secretary; Chas. Feuger, Sr., Treasurer; and
John I. Carson, J. Frederick, McClay, David Farr, Wm. Elwarner,
Wm. Burnett, and Jos. Laufer, Directors. John F. Shaw, Gen'l
Manager and Consultant Engineer.

Property was bonded, March, 1910, to Great Eastern Development Co.,
bond calling for \$260,000 cash and \$650,000 in stock, March, 1913, but
bond was surrendered and property turned back to owners before end of
1910.

Lands: 21 claims; area, 400 acres. 3 to 4 miles northeast of Globe;
showing veins 3' to 100' estimated width, carrying auriferous and argent-
iferous copper and lead ores, giving assays of 8% to 30% copper, 20% to
50% lead, 1 to 200 oz. silver, and \$3.00 to \$30.00 per ton in gold, ore
being oxidized above, with sulphides in lower workings, mainly chalco-
pyrite. Development includes 7 pits and shafts, deepest 800', cutting
several small veins and one vein 40' estimated width, latter at depth of
150'. A crosscut on the 500' level shows two veins, of 15' to 20'
estimated width, carrying flakes of native copper. The Ida May claim
has a 300' tunnel; the Little Beauty claim has a 150' tunnel; the Com-
merce claim has a 150' tunnel, and the Franklin claim has a 100' shaft.

Mine has about 1000 tons of ore on dump, estimated by management to aver-
age 3% copper, 5 oz. to 6 oz. in silver, and \$1.50 gold per ton. Equip-
ment includes ore bins near shaft, and a steam plant with a 100-H.P.
boiler, and a hoist good for 1200', 5 x 7" auxiliary friction hoist, and
a 12-drill Rand air compressor. Company is said to plan a 100-ton mill
for 1911. Work resumed circa Oct. 1910, and at the end of year the mine
was shipping about 12 tons of ore daily, to the Globe smelter, from the
800' level.

The German Copper Company was organized circa Apr., 1911, to take over
this property.

The Copper Handbook. 1912 - 1913. Walter Harvey Weed. Page 383.

GERMAN COPPER COMPANY.

Secretary and Office: Chas. H. Trotter, 375 W. New York St.,
Indianapolis, Indiana.

Mine at Globe, Arizona.

John H. Murdock, President; Chas. A. Zollner, Vice-President;
John A. Hook, Treasurer; and Wm. Elwarner, Jos. Lauter, David
Farr, Wm. Burnett, John L. Carson, and J. B. McMurray, directors.
John H. Faught, Supt.; P. H. Pernot, Consulting Engineer.

Organized, Mar. 25, 1911, Arizona, capitalization \$3,000,000,
shares \$5.00 par, fully paid; 175,000 issued, outstanding debt, \$75,000.
Annual meeting, second Tuesday in October. Company is successor,
1911, of the Arizona-Colorado Belt and Gold M. & M. Co.

Property, 21 claims, 420 acres, held by location. Ore occurs in a large
fissure vein cutting through diabasa, quartzite and limestone, and as
contact ores between diabasa and sedimentary rocks. The veins strike
NE and SW, dipping 55° is reported as 9' wide, proven in depth to 900',
carrying 2% copper, 2 oz. silver, and \$1.00 gold per ton, principally as
chalcopryrite in the 800' and 900' levels. Ore developed above the 800'
estimated at \$125,000.00.

Developed by 863' shaft, several short tunnels, and a total of 3000' of
underground work. The 800' level is said to block out 2000 tons of ore
with 18,000 tons of 2½% ore reasonably certain. Assessment work only
was done in 1912, but mine was unwatered and work resumed, Sept. 1913.

The Mines Handbook. 1913. Walter Harvey Weed.

GERMAN COPPER COMPANY.

Same as 1912 - 1913.

Assessment work only being done at last account.

The Mines Handbook. 1920. Walter Harvey Weed. Page 203

Idle. Same as 1913.

1922

Page 272

Idle. Same as 1913.

1925.

Page 311.

Idle. 142,373 shares issued. Outstanding debt, \$95,000.
Balance as 1913.

1926.

Vol. XVII.

Page 261.

Idle. Same as 1913.

The Mines Handbook changed hands, due to the death of Walter Harvey Weed,
and was published as The Mines Handbook, Vol. XVIII, 1927, by Rand &
Sturgis.

Inactive.

The Mines Handbook was replaced after 10 years by Mines Register, 1937 Edition, Vol. XIX.

No further reference in Mines Register, Vol. XX, 1940 Edition.

Excerpt from

The Copper Handbook. 1905. H. J. Stevens.

Page 199.

ARIZONA-COLORADO COPPER BELT & GOLD MINING & MILLING COMPANY.

Office: 248 Equitable Bldg., Denver, Colo.
Mine Office: Globe, Gila County, Arizona.

Hon. R. L. Force, President and General Manager; Frank A. Wright, Vice-President; Jos. D. Whitham, Secretary and Treasurer; Dayton B. Whitham, Superintendent and Engineer.

Organized, September, 1901, under laws of Arizona, with capitalization \$2,500,000; shares, \$1.00.

Lands, 18 claims, area 370 acres, showing veins assaying from 3' to 100' in width, carrying auriferous and argentiferous oxide and carbonate ores of copper, assaying 8% to 30% copper, 20% to 50% lead, 1 oz. to 200 oz. silver, and \$3.00 to \$30.00 per ton. Has 7 pits and shafts, deepest 165', also several tunnels from 10' to 200' in length. Has 100 H.P. steam equipment. Work was resumed in 1904 after some months of idleness.

SAME NAME. 1906.

Page 209.

Office: 305 State Life Bldg., Indianapolis.
Mine Office: Globe, Gila County, Arizona.

Hon. Robert M. Force, President and General Manager; Chas. A. Trotter, Secretary; C. Fenger, Treasurer; J. Bandhauer, Superintendent.

Organization, same as 1905.

Is sinking 3 shafts, and is planning to crosscut at depth of 500 feet.

SAME NAME. 1907.

Page 319.

Same as 1906.

SAME NAME. 1908.

Page 324.

Offices and organization the same, with Chas. Jollner added as Vice President.

Same description.

Has 7 pits and shafts, deepest 800', cutting several small veins and one vein of 40' estimated width, latter cut at depth of 150'.

Has a 100 H.P. boiler, 1000' hoist, and 10-drill air compressor.

Has shipped a little ore of fair grade.

PROSPECTUS
OF
COMSTOCK EXTENSION MINING COMPANY, INC.
An Arizona Corporation

SALES LITERATURE

"BECAUSE THESE SECURITIES ARE BELIEVED TO BE EXEMPT FROM REGISTRATION, THEY HAVE NOT BEEN REGISTERED WITH THE SECURITIES AND EXCHANGE COMMISSION; BUT SUCH EXEMPTION, IF AVAILABLE, DOES NOT INDICATE THAT THE SECURITIES HAVE BEEN EITHER APPROVED OR DISAPPROVED BY THE COMMISSION OR THAT THE COMMISSION HAS CONSIDERED THE ACCURACY OR COMPLETENESS OF THE STATEMENTS IN THIS COMMUNICATION."

The following is a short prospectus of the Comstock Extension Mining Company. This company is an Arizona corporation, organized under the laws of the State of Arizona, and its capital stock amounts to 1,000,000 shares at the par value of \$1.00 each. The Comstock Extension Mining Company was organized to develop copper and zinc ore on the Irene Group and Doughboy Group of mining claims, situate in the Globe mining district, Gila County, Arizona.

The assets of the corporation consist of the Doughboy claims, which said claims are patented claims, and against which there are no liabilities. The Doughboy group consists of 11 claims, described as follows:

CAMERON, EXCHANGE, BALTIC, IDA MAY,
LITTLE BEAUTY, NELLIE M, JUDGE, SUNSHINE,
ACRE, DUNKIRK, KENTUCKY.

The other assets of the Comstock Extension Mining Company consists of a lease and option from the Liberty Mining Company, a Delaware Corporation, on the following described claims:

TIP TOP, CONFIDENCE, KENTUCK, COMMONER,
COMSTOCK, EMPIRE, DEPENDER, ALICE, EUREKA.

This lease and option was entered on the 31st day of October, 1945, and the Liberty Mining Company agreed to sell these claims to the Comstock Extension Mining Company for the sum of \$300,000.00, payable by paying to the Liberty Mining Company five (5%) percent of all the net smelter returns, provided however, beginning November 1, 1947, the Comstock Extension Mining Company agrees to

make a payment of \$3600.00 toward the payment of the purchase price, and at least \$1800.00 per year thereafter. This amount is payable only in the event five (5%) percent of the net smelter returns have not equalled the above amounts. There are no outstanding debts against the company.

The authorized capital of the Comstock Extension Mining Company is \$1,000,000.00. The former owners of the Doughboy group of claims transferred the claims to the company in consideration of the company issuing to them 600,000 shares of the capital stock. The present control therefore of the Comstock Extension Mining Company is in Tony Trojanovich, Jr., the present president of the company, and the estate of Anton Trojanovich, Sr., Mr. Trojanovich, Sr. having died in November 1945. There are 400,000 shares of stock in the treasury, of which this company has secured a permit from the Arizona Corporation Commission to sell 100,000 shares of stock at the par value of \$1.00 each.

The Comstock Extension Mining Company plans to sink a shaft with the money raised from the sale of stock, and it is hoped that upon the sinking of this shaft that sufficient copper and zinc will be developed to warrant commercial production. It is understood that at present there is no blocked ore, and any material ore production is dependent on what is found by the planned exploratory development work. The plans for the shaft sinking and the work thereon are based largely upon the hearsay reports of the existence of ore bodies which may be reached upon the 150 ft. and 800 ft. level, which reports cannot be verified until the planned work is done, and the Comstock Extension Mining Company has no reason to believe that the persons making such hearsay reports had access to sample-assay or other test data enabling them to determine to what extent the mineral exposures seen by these persons are commercial.

The par value of the stock to be sold is \$1.00 per share and out of this amount the agent will receive 20¢ per share. This is his commission per share for selling said stock.

The aggregate amount of commissions on the sale of 100,000 shares of stock will be \$20,000.00.

Respectfully submitted,
COMSTOCK EXTENSION MINING COMPANY

By Tony Trojanovich, Jr.

THE EAGLE-PICHER COMPANY
MINING AND SMELTING DIVISION
GEOLOGICAL DEPARTMENT,
CARDIN, OKLA.

REPORT

ON THE

COMSTOCK EXTENSION MINING COMPANY, INC.,
AND THE
SHOUP-TROJAN GROUP OF CLAIMS,
GLOBE-MIAMI DISTRICT,
GILA COUNTY,
ARIZONA.

BY

D. C. BROCKIE
and
J. B. ELIZONDO

INTRODUCTION

From August 1 to August 3, 1952, at the request of Mr. J. W. Chandler, we examined the properties of the Comstock Extension Mining Company, Inc., and the adjacent Trojan and Shoup claim groups which are located near Globe, Arizona. In June, 1952, Mr. J. P. Lyden submitted a preliminary report on the area (2)^{*}, which contains an assemblage of all data sent to Eagle-Picher by Mr. H. S. Casey Abbott prior to that time. Mr. Lyden states in his conclusions, that the property submitted by Mr. Abbott is of no immediate interest to our company due to apparent geological reasons. However, due to possibilities on the Trojan and Shoup claim groups, heretofore not realized, as well as other conditions brought forth during our examination, we believe that this area has a definite latency and warrants further consideration.

Before contacting Mr. Tony Trojanovich, General Manager, Stockholder and a Director of the above mentioned company, we had a short discussion with Dr. E. D. Wilson, Geologist for the Arizona Bureau of Mines, who maintains an office at the University of Arizona in Tucson. He kindly supplied us with a recent Arizona Bureau of Mines Bulletin (3), which contains an article on the lead and zinc deposits in the Globe-Miami District, with special reference to the Irene Mine.

He also informed us that the Globe-Miami District is at present being mapped and studied by Mr. Nels P. Peterson of the U. S. Geological Survey with the results soon to be forthcoming.

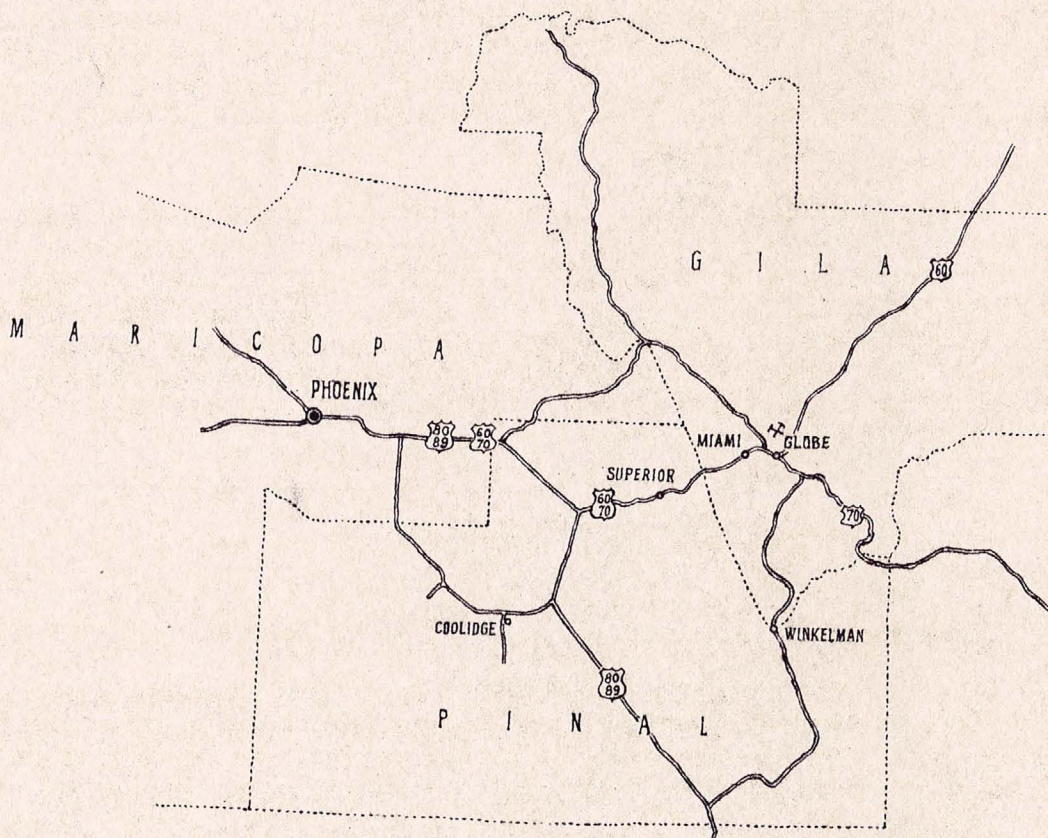
On August 1, we met Mr. Trojanovich at the Irene Mine, who described to us the general history of the property as well as that pertaining to the organization of the company. Later he took us on an underground tour of the Irene, showing us all recent development headings and explaining their proposed plan of sinking to the sulphide zone. This operation will require extending their main winze another 200 to 300 feet--- a program which was already in progress. The following day we made a surface examination of the Irene, Doughboy, Bracco, Trojan and Shoup Claim groups. (The latter two are owned by Mr. Trojanovich and are not connected with the Comstock Extension Mining Company, Inc.) We also saw the underground workings at the New Doughboy shaft, however, we were unable to go below ground at the Doughboy shaft due to operational reasons. The last day was spent mapping surface structures as well as examining drill core.

(* Numbers in parantheses refer to bibliography at end of report)

SKETCH MAP
STATE OF ARIZONA

LOCATION OF COMSTOCK EXTENSION
MINING CO. PROPERTY AND
TROJANOVISH CLAIMS

1952



SCALE ONE INCH EQUALS 31 MILES.

Fig. 1.

Our investigation consisted of making surface and underground observations, collecting samples and trying to determine the position and extent of favorable limestone horizons. In this report we have not attempted to present a detailed account of the general history or geology of the district. These subjects are adequately discussed in U.S.G.S. Globe Folio, Arizona, No. 111, 1904, and in U.S.G.S Professional Paper No. 12, 1903- "Geology of the Globe Copper District, Arizona", both by F. L. Ransome, (4 & 5) which we will refer to the reader.

LOCATION

The mine workings and vein outcrops are located two miles north of Globe in Sections 10, 11, 12, 13, 14 and 15, T. 1 N., R. 15 E., Gila County, Arizona. (See area outlined in red on topographic sheet enclosed with Globe Folio) (4). The company office, which lies adjacent to the main Irene adit, is readily accessible by automobile by first going northwest $2\frac{1}{2}$ miles from the center of Globe on U. S. Highway 60-70; thence north on a private dirt road down Pinal Creek for $1\frac{1}{2}$ miles. At this point the road crosses the creek plus a spur of the Southern Pacific Railroad, then follows up Irene Gulch another two miles to the mine.

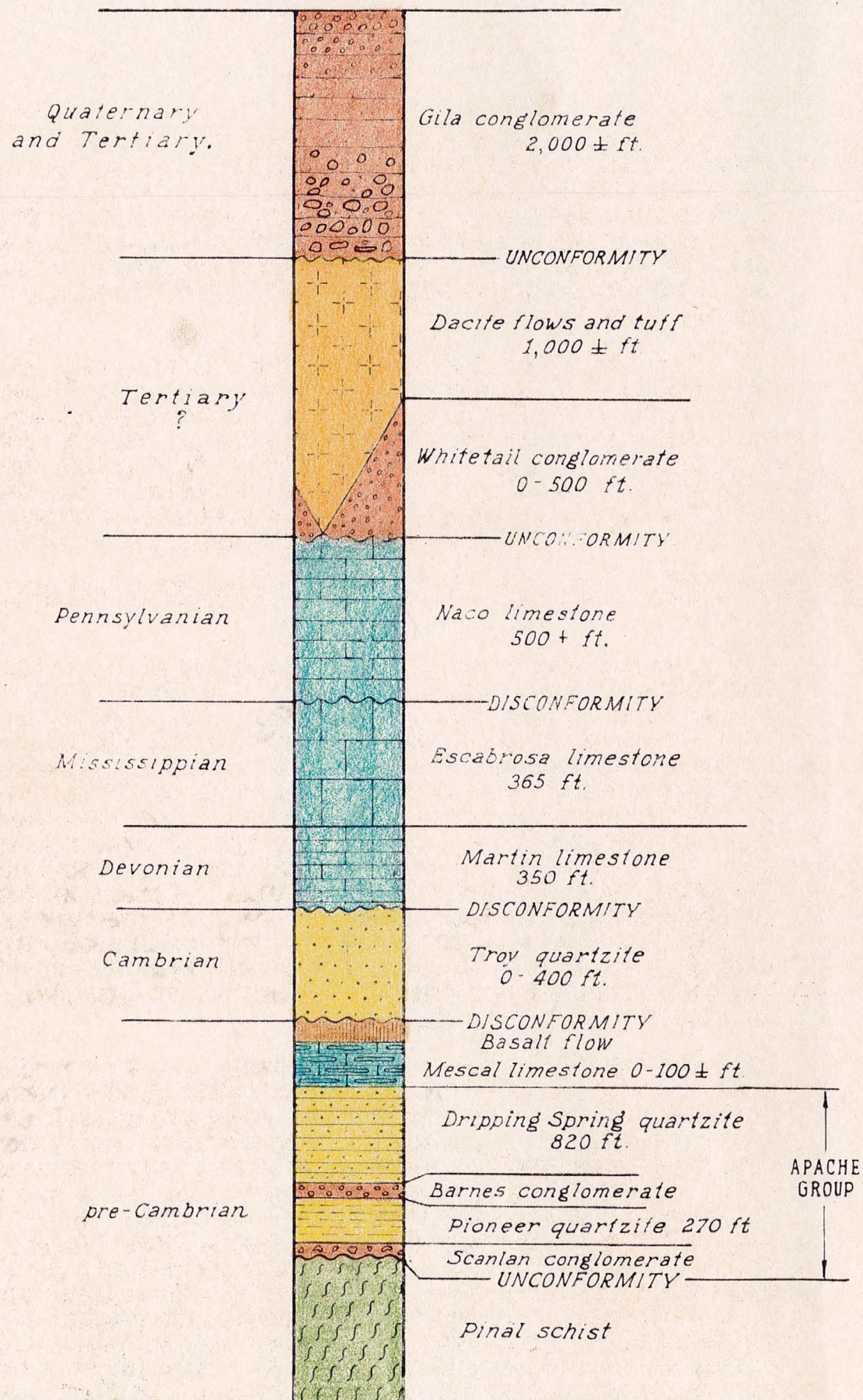
The Comstock Extension Mining Company, Inc., holds three groups of claims: the Doughboy, consisting of nine patented claims; the Irene, consisting of nine unpatented claims; and the Bracco, consisting of eight unpatented claims. The Trojanovich holdings consist of the Trojan and Shoup claim groups which adjoin the Irene and Doughboy to the southwest. These five claim groups are contiguous, lying northwest of and adjoining the Old Dominion holdings.

GEOLOGY AND MINERALIZATION

GENERAL

The area we are concerned with lies on the southwestern slopes of the Globe Hills which appear to be a product of diabase intrusions and block faulting. This portion of the district also forms the northeastern flank of a north-south trending synclinal trough of more extensive nature. (See structural sections in Globe Folio) (4)

The topography is closely related, in its irregularity, to the rock masses that underlie it. Each fault block, by its rock constituents and relative position has helped toward forming the present surface. Areas of diabase tend to become valleys or basins, while quartzite and limestone forms ridges or peaks.



Columnar section of rocks in the Globe-Miami district of Arizona. Fig. 2

The rock formations consist of a series of Paleozoic and pre-Cambrian quartzites and limestones resting unconformably on older Pinal Schist and intruded by large quantities of diabase during Mesozoic (?) time. The above formations are separated by a major unconformity from subsequent Tertiary (?) dacitic flows. As a closing phase, conglomerate was deposited as great coalescing alluvial fans in late Tertiary and Quaternary time. (See Fig. 2)

The faults of the district may conveniently be divided into two systems: 1. a northeast-trending system of pre-mineral faults with which all known ore deposits are associated, and, 2. a northwest-trending system of post-mineral faults that displace the veins. Although faults belonging to the two groups just described have effected the most conspicuous structural units, they are associated with countless fissures running in all directions and adding greatly to the complexity of the fault network.

STRUCTURAL AND STRATIGRAPHIC CHARACTERISTICS OF THE AREA

The surface expression of the Irene vein, which lies a mile northwest of and parallel to the Old Dominion vein system, forms a bold outcrop for 4200 feet on the south side of Irene Gulch. (See topographic sheet enclosed with Globe Folio) (4). This fissure occupies one of the northeast-trending faults previously mentioned, which dips from the vertical to 75°N. Composed of a quartzite breccia, which has been indurated by mineralization and recrystallization, the vein is more resistant to weathering than the adjoining wallrock. Pre-mineral movement has dropped the south side relative to the north. Subsequent erosion beveled the adjoining rock components so that now pre-Cambrian quartzite underlain by diabase makes up the southern block, while diabase with a small sliver of this quartzite forms the northern block. Due to this condition the Mescal or Martin limestone could not be present. (See Fig. 2)

Two parallel veins (?) exhibiting black manganese gossans were observed at 500 and at 1000 feet northwest of the Irene vein. Several wide similar outcrops normal to these veins tend to depict interlacing tension patterns which may be attributed to pre-mineral force couples which acted between the structures. The southwestern projection of the Irene and parallel veins appear to terminate against a northwest-trending fault zone in the vicinity of the New Doughboy shaft. (See topographic sheet enclosed with Globe Folio) (4). The extent and direction of movement along this fault is rather obscure, however, it appears to have dropped a large block of sediments on the southwest side which contains limestone overlain by dacite and conglomerate. This post-mineral covering obliterates any surface evidence of a southwestern continuation of the Irene vein, but there is no reason to suspect its absence. The presence of limestone offers conditions similar to those found at the Old Dominion where metasomatic deposits predominate.

The problem is how extensive are these remnant limestone beds and are they of sufficient thickness to act as potential hosts for replacement deposits? The answer to this, as well as to the presence and character of the ore, would require detailed surface mapping and study with subsequent drilling. We believe such a program is warranted in this portion of the area.

Another rather conspicuous black gossan was noted crossing the road some 500 feet northeast of the Doughboy shaft. According to old reports, a portion of this structure was mined during the early part of this century by "The Arizona-Colorado Copper Belt & Gold Mining Company". The vein lying approximately 200 feet north of the shaft at the surface, was developed to the 900-foot level, with the zone of oxidation extending to the 500-foot level. Its southwestern continuation, in the form of a black outcrop, can be traced along a hill bordering the south side of Irene Gulch for over 3000 feet. (See topographic sheet enclosed with Globe Folio) (4). During the late twenties, the Old Dominion Company drilled a series of holes down Pinal Creek for purposes of grouting to help retard the influx of water into their lower workings. One of these holes, as pointed out by Mr. Trojanovich, is rumored to have cut rich copper ore. This hole appears to line up with the southwestern projection of the above mentioned structure.

DEVELOPMENT AND PRODUCTION

THE IRENE

The following is taken from a report in the Arizona Bureau of Mines Bulletin No. 156, by Nels P. Peterson, on Lead and Zinc Deposits in the Globe-Miami District, (3):

"The underground development of this property consists of two adits which give access to drifts, crosscuts, raises and a winze driven in the mineralized fault zone. The principal ore-shoot is developed by No.1 adit which was driven southward to intersect the vein 150 feet below the outcrop. The vein is explored on the adit level for 300 feet along the strike by drifts and a few crosscuts. A winze, inclined northward 85° has its collar at the hanging wall and remains entirely within the fault zone to a depth of 270 feet below the adit level. At 75 feet, 150 feet and 270 feet below the collar of the winze, short development drifts and crosscuts have been driven. From a point near the collar of the winze, a raise connects with the surface. Adit No.2 intersects the vein fault about 700 feet further east than No. 1 adit, and at 33 feet higher elevation. A drift with

a few minor tributary workings follows the fault east for 280 feet from the intersection".

At the time of our visit, the Comstock Extension Mining Company was just starting to deepen the winze in an effort to reach the sulphide zone. According to Mr. Trojanovich, their original plan was to sink to the 800-foot level (800 feet below adit level) and develop the favorable area indicated between diamond drill holes No. 3 and No. 5, as recommended by Dr. Harrison Schmitt. (6) He implied, however, that due to their limited capital, the ore would have to come in around the 500-foot level in order to continue operations.

Due to the nature of our examination we did not attempt to map or sample this mine. The vein where observed was strongly brecciated and was approximately five feet in width with an occasional bulge approaching ten feet. All workings were obviously in the oxidized zone which made any attempt to estimate metal content hazardous. Small amounts of vanadinite, $Pb_5 Cl (VO_4)_3$ were noted on the 270-foot level, a mineral which is quite abundant in the Defiance vein two miles to the north.

Prior to 1931 several operators made small shipments of oxidized lead ore from a large open stoppe above the adit level and west of the winze. This production, as compiled by Elsing and Heineman, (Elsing, M.J. and Heineman, R.E.S., Arizona Metal production: Univ. Ariz., Arizona Bureau of Mines Bulletin 140, Page 92, 1936) (See reference on Page 137 in the Arizona Bureau of Mines Bulletin No. 156) amounted to 250,000 pounds of lead and 5,000 ounces of silver, having a total value of \$15,000. In 1947, four cars of oxidized ore were shipped to a lead smelter from a small stoppe between the 75-foot level and the adit level.

THE DOUGHBOY

At the time of our examination all rehabilitation work was suspended at the Doughboy shaft due to the removal of a hoisting motor. They had, however, successfully retimbered to the 350-foot level with no major difficulties encountered. Mr. Trojanovich believes that a bulkhead exists in the shaft and may be encountered within the next hundred feet. If this is the case, the remainder of the shaft should be open. He further stated the company plans to resume this work in the near future.

According to the Copper Handbook 1910-11, and 1912-13 and the Arizona Silver Belt Miami, Arizona, Christmas Issue, 1909, the shaft was originally 960 feet deep. Ore mineralization was cut on the 500-foot level and ore on the 800 and 900-foot levels at points 170 and 300 feet south of the shaft. Oxidation seems to have reached as deep as the 500-foot level, but sulphide ore containing copper, zinc and lead was encountered on the 800 and 900-foot levels. This ore was said to assay about 2.0% Cu, 2.0 ounces Ag and \$1.00 in Au with a width of 9-18 feet. Some was

shipped but due to the reported high zinc content hand sorting was necessary. Small amounts of this material is still present around the collar of the shaft. A sample we collected, which was largely specularite with minor amounts of chalcopyrite, assayed:

No.	<u>Au</u>	<u>Ag</u>	<u>Cu%</u>	<u>Total</u>		<u>Non-Sulphide</u>		<u>Fe%</u>	<u>Mn%</u>
	<u>oz/ton</u>	<u>oz/ton</u>		<u>Pb%</u>	<u>Zn%</u>	<u>Pb%</u>	<u>Zn%</u>		
88	tr.	2.5	0.20	0.50	4.25	0.50	0.16	28.40	0.26

Messrs. Trojanovich and Abbot speak of a 1200-foot cross-cut driven in a southerly direction from the Doughboy shaft at the 800-foot level. We can find no reference to this in the literature.

THE NEW DOUGHBOY

The New Doughboy shaft was sunk in 1948 one-half mile south of the "original" Doughboy on what appears to be the northwest-trending fault zone mentioned under "Structural and Stratigraphic Characteristics of the Area". A two-compartment shaft goes down 200 feet from the surface with crosscuts intersecting the vein at the 75 and 200-foot horizons. The workings lie totally within the Doughboy group of claims, however, the southeastern projection of the structure extends immediately into the Trojan group.

On the 75-foot level the vein was cut approximately 75 feet southwest of the shaft at which point considerable stoping was carried out. An incline following the northwest trend of the structure was driven from the surface to a point somewhat below the 75-foot level at an earlier date. The crosscut connects to this incline.

On the 200-foot level two manganiferous zones were encountered. The main vein appears to be 45 feet wide and consists of massive unconsolidated black to gray pyrolusite (MnO_2) with minor amounts of sphalerite and chalcopyrite. A rough channel sample taken along the crosscut normal to the vein assayed:

No.	<u>Width</u>	<u>Au</u>	<u>Ag</u>	<u>Cu%</u>	<u>Total</u>		<u>Non-Sulphide</u>		<u>Fe%</u>	<u>Mn%</u>
		<u>oz/ton</u>	<u>oz/ton</u>		<u>Pb%</u>	<u>Zn%</u>	<u>Pb%</u>	<u>Zn%</u>		
48	35 ft.	tr.	0.2	0.10	tr.	5.90	tr.	0.55	2.00	5.9
49	10 "	tr.	0.6	0.10	tr.	2.90	tr.	0.30	1.30	3.5

A smaller branching vein closer to the shaft with a similar composition assayed:

No.	<u>Width</u>	<u>Au</u>	<u>Ag</u>	<u>Cu%</u>	<u>Total</u>		<u>Non-Sulphide</u>		<u>Fe%</u>	<u>Mn%</u>
		<u>oz/ton</u>	<u>oz/ton</u>		<u>Pb%</u>	<u>Zn%</u>	<u>Pb%</u>	<u>Zn%</u>		
47	7 ft.	tr.	0.1	0.20	tr.	9.00	tr.	1.40	13.90	6.1

During the war years when MnO_2 was in demand some of this

25 to 30% manganese ore was shipped and held within the 3% zinc limits, however, at present the property is idle due to the less than 1% restriction on zinc. A grab sample taken from a small stockpile from which shipments were once made assayed:

No.	<u>Au</u>	<u>Ag</u>	<u>Cu%</u>	<u>Total</u>		<u>Non-Sulphide</u>		<u>Fe%</u>	<u>Mn%</u>
	<u>oz/ton</u>	<u>oz/ton</u>		<u>Pb%</u>	<u>Zn%</u>	<u>Pb%</u>	<u>Zn%</u>		
50	tr.	0.4	0.15	0.15	1.00	tr.	0.25	7.80	27.7

THE TROJAN-SHOUP AREA

Numerous test pits and shallow trenches with an occasional short adit can be seen in the sedimentary area south of Irene Gulch, between the above mentioned northwest-trending fault zone and Pinal Creek. A grab sample taken from the dump of one of the deeper of these pits assayed:

No.	<u>Au</u>	<u>Ag</u>	<u>Cu%</u>	<u>Total</u>		<u>Non-Sulphide</u>	
	<u>oz/ton</u>	<u>oz/ton</u>		<u>Pb%</u>	<u>Zn%</u>	<u>Pb%</u>	<u>Zn%</u>
46	tr.	0.7	1.40	1.25	15.00	0.15	0.80

CONCLUSIONS AND RECOMMENDATIONS

IRENE-DOUGHBOY-BRACCO AREA

Due to the present endeavor of the Comstock Extension Mining Company, Inc., in sinking the Irene Shaft and rehabilitating the Doughboy shaft, it would be advisable to await their findings before making any concrete recommendations pro or con concerning the area outlined by these claim groups.

At the time of our visit they had on hand \$30,000.00 to sink the Irene shaft from the 270-foot level to the known ore zone. (Plus or minus 800 feet below adit level) Undoubtedly this money will not suffice. Should no ore be encountered and their work suspended, it would cost our company comparatively little to see this ore, barring unforeseen circumstances.

It is our belief that the conclusions and recommendations suggested by Mr. Harrison Schmitt concerning the Doughboy shaft are in order. (See letter to Comstock Extension Mining Company, Inc., from Harrison Schmitt, January 1, 1952) (6).

In lieu of the above statements we would like to expound on certain ideas formulated as a result of our examination.

All reports indicate that diabase was a poor host for the formation of large orebodies in the Old Dominion vein. It may, as far as the normal process of metasomatism is concerned, hold true in this area, however, it does not exclude the possibilities for the local of other type deposits.

Assuming some of the movement along the Irene and parallel northeast-trending faults was horizontal before or during the time of ingressing ore solutions, we can reasonably expect the presence of secondary tension type veins. (See "Structural and Stratigraphic Characteristics of the Area") Our observations revealed such structures do exist and are depicted by northwest and west-trending black manganiferous gossans outcropping on the surface between the main Irene adit and New Doughboy shaft. In conjunction with this reasoning one may also expect vein junctions to be prolific due to harsetailing or brecciation.

TROJAN-SHOUP AREA

Piecing together our ideas with the meager assortment of data collected in this portion of the area, we have anything but a clear picture. The structural and stratigraphic pattern appears to indicate numerous possibilities, some of which may be easily substantiated. In our minds the most attractive prospect is the southwestern continuation of the Irene vein system. Does it exist beyond the "crossfault" and lie buried beneath the dacite and conglomerate? The area adjacent to and immediately south of the New Doughboy workings holds the key to this question. Two or three carefully spotted shallow drill holes could easily give us the answer. It might be well to mention that the Comstock Extension Mining Company, Inc., has two Chicago Pneumatic diamond core drills, a CP No. 8 and a CP No. 5, with 4500 feet of drill rods, which according to Mr. Trojanovich could probably be made available for our use.

At present the structural pattern is vague, however, we interpret it as favorable for underlying ore. Of special interest is the southwestern continuation of the Doughboy vein. It extends for over 2000 feet beyond the shaft in the form of a black manganiferous gossan, periodically dotted with shallow pits and trenches. No drilling has ever tested the lower portions except the rumored ore hole on its hypothetical projection near Pinal Creek. (See Structural and Stratigraphic Characteristics of the Area)

The Miami Copper Company, Inc., has recently rehabilitated the Old Dominion shaft down to the 1645-foot level and it is rumored they propose to sink a new shaft in the Gila conglomerate on the southwestern extension of the Old Dominion vein. If the southwestern projection of the Irene vein or the Doughboy structure should prove prolific, the conglomerate area beyond Pinal Creek would also warrant investigation.

In conjunction with the possibilities underlying the Gila conglomerate, we would like to refer the reader to the "Miami Flat" area shown on the "Areal Geology" sheet in the Globe Folio (4). The projection of the southwestern-trending faults north of Globe and the dominantly southeastern-trending pattern in the northwest portion of the quadrangle appears to intersect directly below the Miami Flat. We thus have the possible intersection of two principal zones of deformation in an area where the Tertiary conglomerate has obliterated all structural evidence. If this condition exists, there is every reason to believe that ore mineralization would be present.

At the time of our visit the position and extent of the Shoup claims were approximately pointed out to us by Mr. Trojanovich. It would be of extreme importance for us to obtain a map showing the exact location of this group of claims with respect to the Trojan and Doughboy groups before making any definite move.

MAPPING

What is most needed in the area are plans on the scale of at least 1 inch equal to 200 feet, tying in the surface geology with all past "available" drilling information, plus mapped underground workings where possible (pending rehabilitation of the Doughboy shaft). With this data one could more efficiently evaluate the geological setting and make subsequent recommendations.

AIDS TO GEOLOGICAL INTERPRETATIONS

Certain generalities regarding structural interpretations should be brought forth at this time, in light of the possibilities existing in the area.

The post-diorite and pre-diorite faulting, which was connected with the primary mineralization of the district, can not as a rule, be satisfactorily distinguished on structural grounds from the post-diorite faulting, partly because the latter revived older dislocations.

Faults wholly in diorite or limestone are usually not conspicuous. Their courses in the former rock are often marked by zones of brecciation which are commonly stained black by manganese oxide and sometimes mineralized with secondary copper. The passage of a fault through limestone may produce considerable brecciation; which, however, is likely to be so healed by recrystallization of the calcite as to be detected with some difficulty. (4 & 5)

The evidence of the existence of "intrusion faults" associated with the introduction of diorite is of a more extensive nature than that of the later faults directly traceable on the surface; i.e. "The diorite in the upper workings of the Old Dominion mine shows

a throw of less than 100 feet; a displacement wholly insufficient to explain the juxtaposition of diabase and limestone observed in the lower levels". (4 & 5) Thus, extreme caution should be exercised when making interpretations or recommendations based on surface expressions of late fault displacements in areas covered by dacite.

The diabase, instead of being confined to regular and persistent sills, tends to fill fractures and in many cases greatly displace the severed blocks of sedimentary strata. Thus, where favorable limestone beds lie adjacent to this rock, one may have a tendency to interpret structural continuity of these beds where none exists. This is especially true where the dacite and conglomerate form a partial covering, as in the area southwest of the "cross-fault".

"The ore in the upper workings of the Old Dominion mine was invariably oxidized and was often accompanied by large quantities of hematite or limonite. As a rule the limestone showed very little alteration at a distance of a few inches from the ore or from the iron oxides. In lower horizons the more shaly members proved distinctly inhospitable to mineralization. The limestone also occurred in such small faulted masses that it was rarely possible to determine the stratigraphic horizon of the beds exposed". (4 & 5)

The dacite and Gila conglomerate are post-ore. Exploration in areas covered by these formations should necessarily be directed beneath them; i.e. development headings and mine workings on the southwest end of the Old Dominion vein extend for 4500 feet under such a cover. In this distance the vein has been displaced by three important faults, all of which show no surface expression. (1).

Cardin, Okla.
Jan. 1, 1953.

Respectfully submitted,

DCB:JBB/tp.

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- (2) Lyden, J.P., Data Relative to Comstock Extension Mining Company, Inc., Irene Mine, Globe, Arizona, June, 1952.
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- (4) Ransome, F. L., U. S. G. S. Globe Folio, Arizona, No. 3, 1904.
- (5) Ransome, F.L., Geology of the Globe Copper District, Arizona, U.S.G.S. Professional Paper No. 12, 1903.
- (6) Schmitt, Harrison, Letter to Comstock Extension Mining Company, Inc., January 1, 1952.

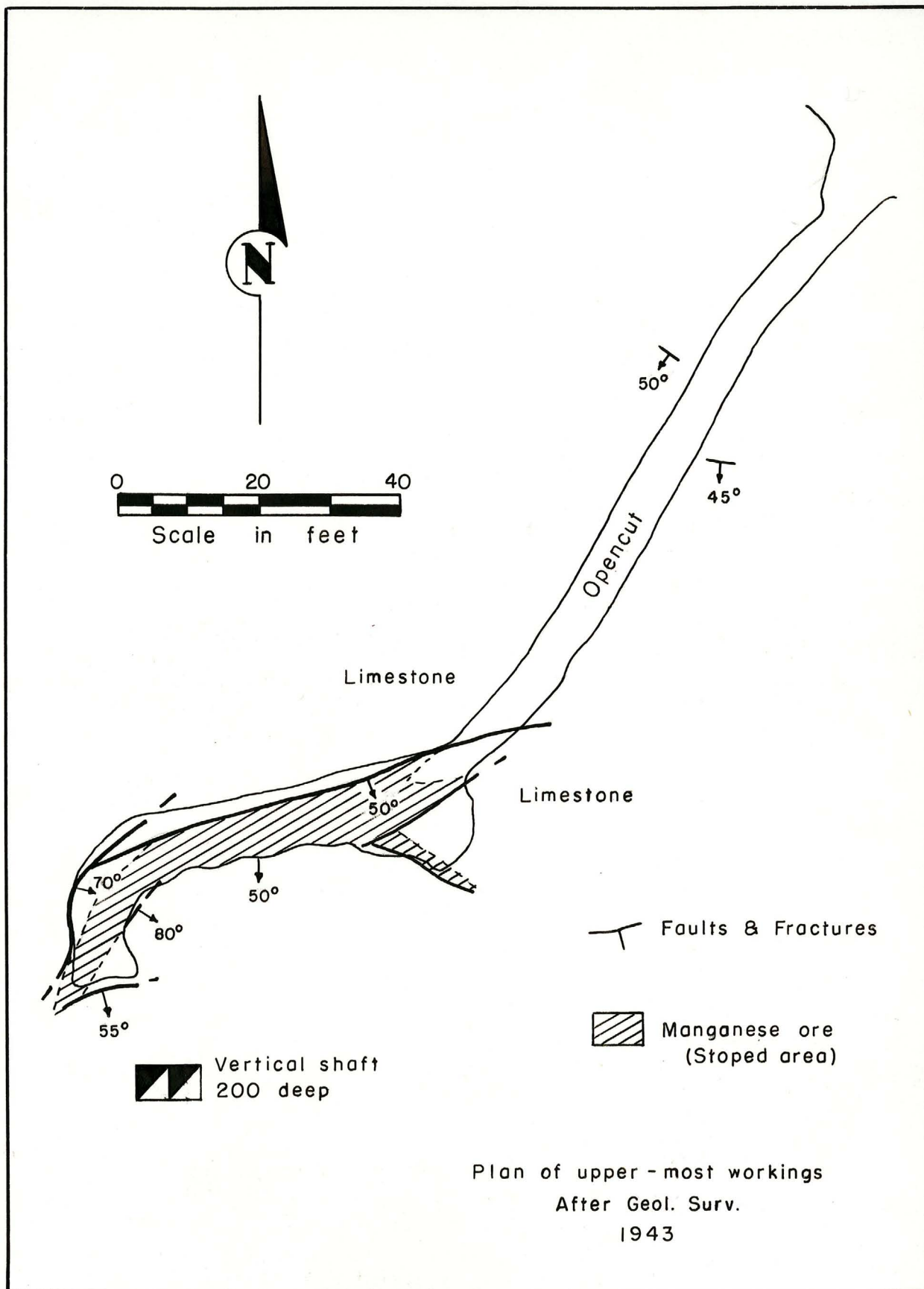
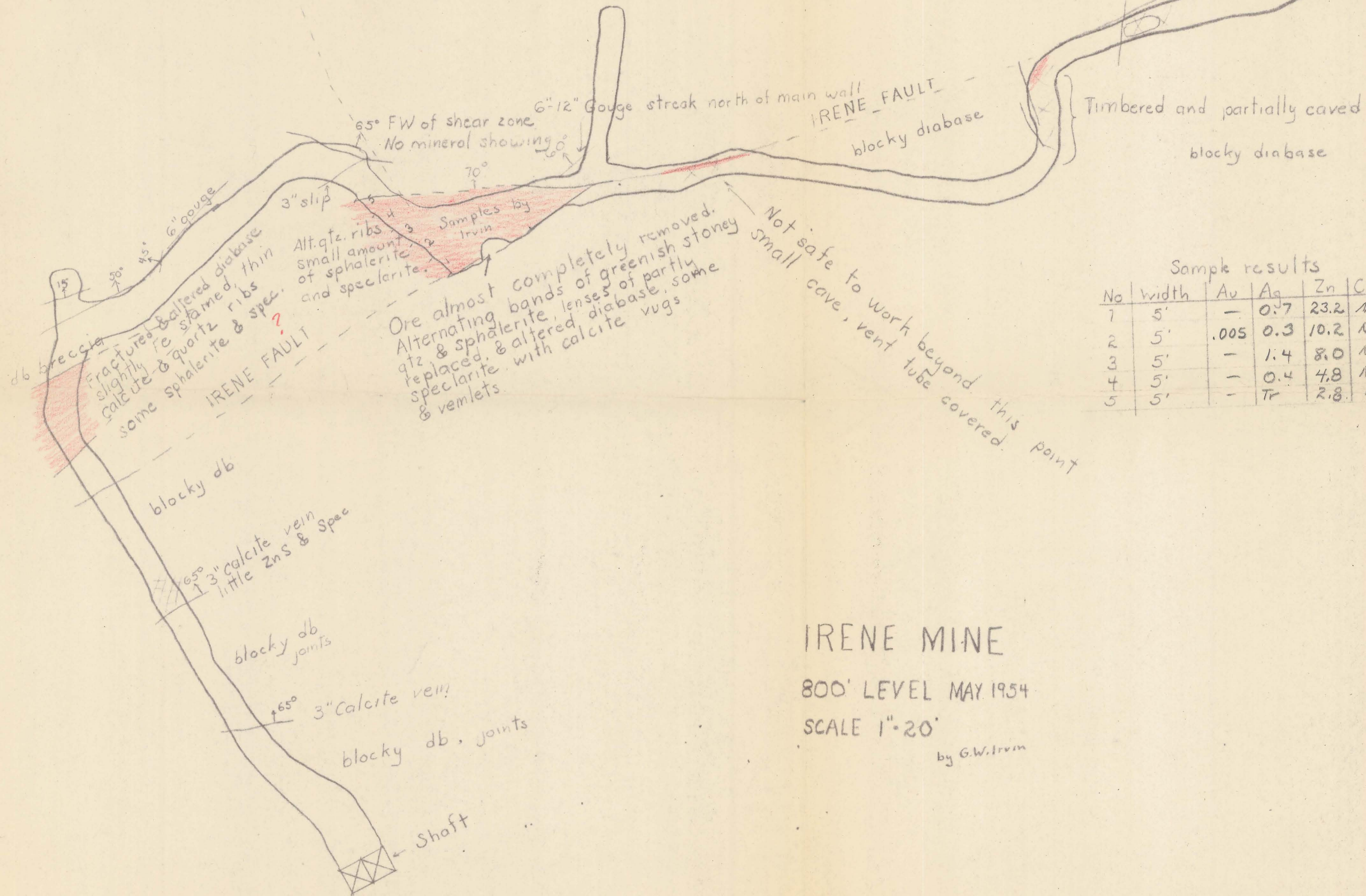


Fig.10-Sketch of New Doughboy Deposit

Geol. Surv.

Approx. location
D.D.H No. 3

Did not go beyond this point
Very dangerous



Sample results

No	width	Au	Ag	Zn	Cu	Office record
1	5'	—	0.7	23.2	Nil	G-480
2	5'	.005	0.3	10.2	Nil	G-481
3	5'	—	1.4	8.0	Nil	G-482
4	5'	—	0.4	4.8	Nil	G-483
5	5'	—	Tr	2.8	Nil	G-484

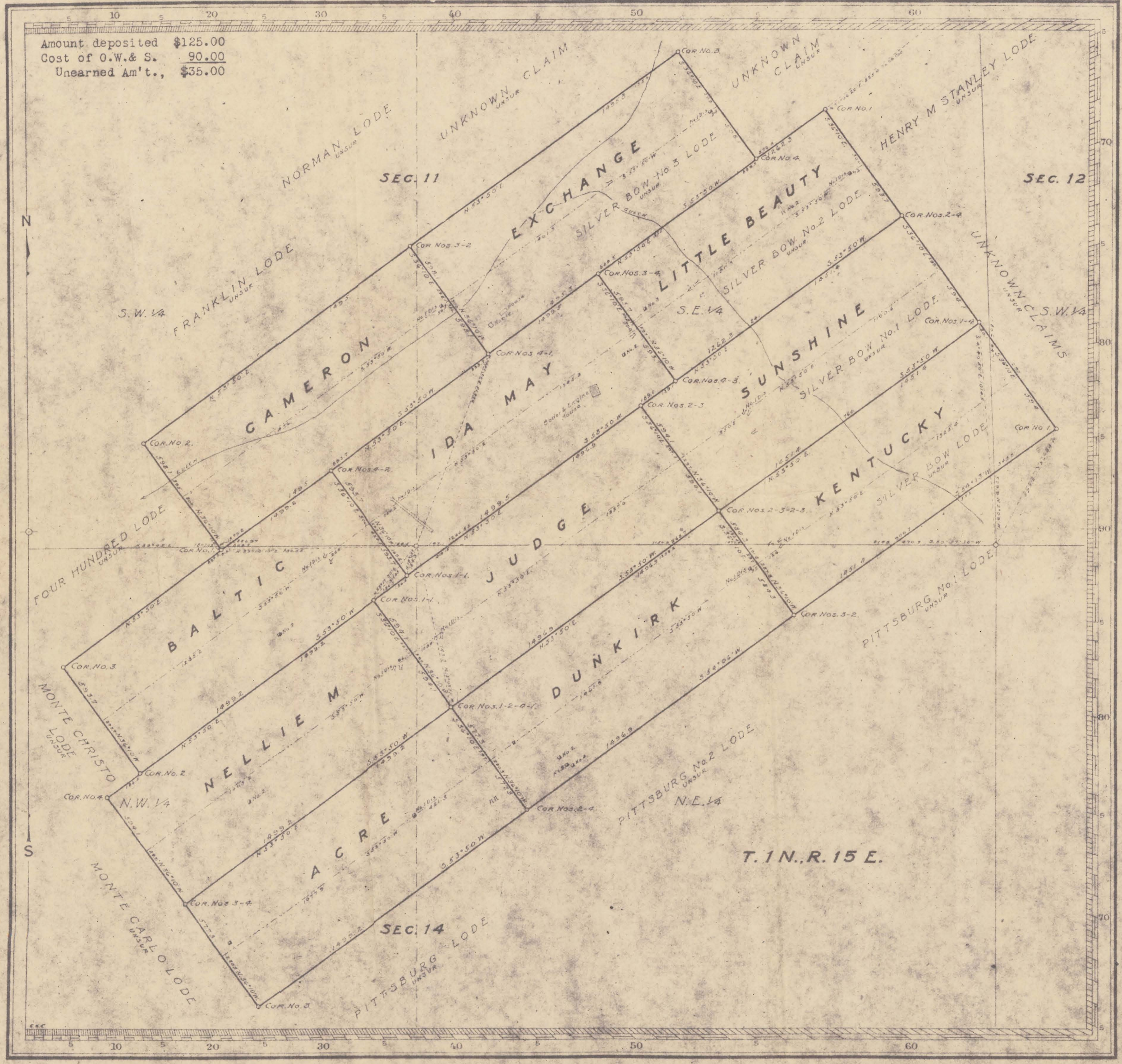
IRENE MINE

800' LEVEL MAY 1954

SCALE 1"=20'

by G.W. Irvin

Note
db - diabase



Amount deposited \$125.00
Cost of O.W. & S. 90.00
Unearned Am't., \$35.00

Claim Located _____ 19__

Mineral Survey No. **3758**

Lot No. _____
ARIZONA Land District

PLAT
OF THE CLAIM OF
The Dough Boy Copper Company

KNOWN AS THE
IDA MAY, LITTLE BEAUTY, JUDGE, EXCHANGE,
NELLIE M., BALTIC, SUNSHINE, CAMERON, DUNKIRK,
KENTUCKY, and ACRE Lodes

IN _____ Globe _____ MINING DISTRICT,
Gila COUNTY, Arizona

Containing an Area of _____ Acres.
Scale of 400 Feet to the inch.
Variation 14° 30' E.

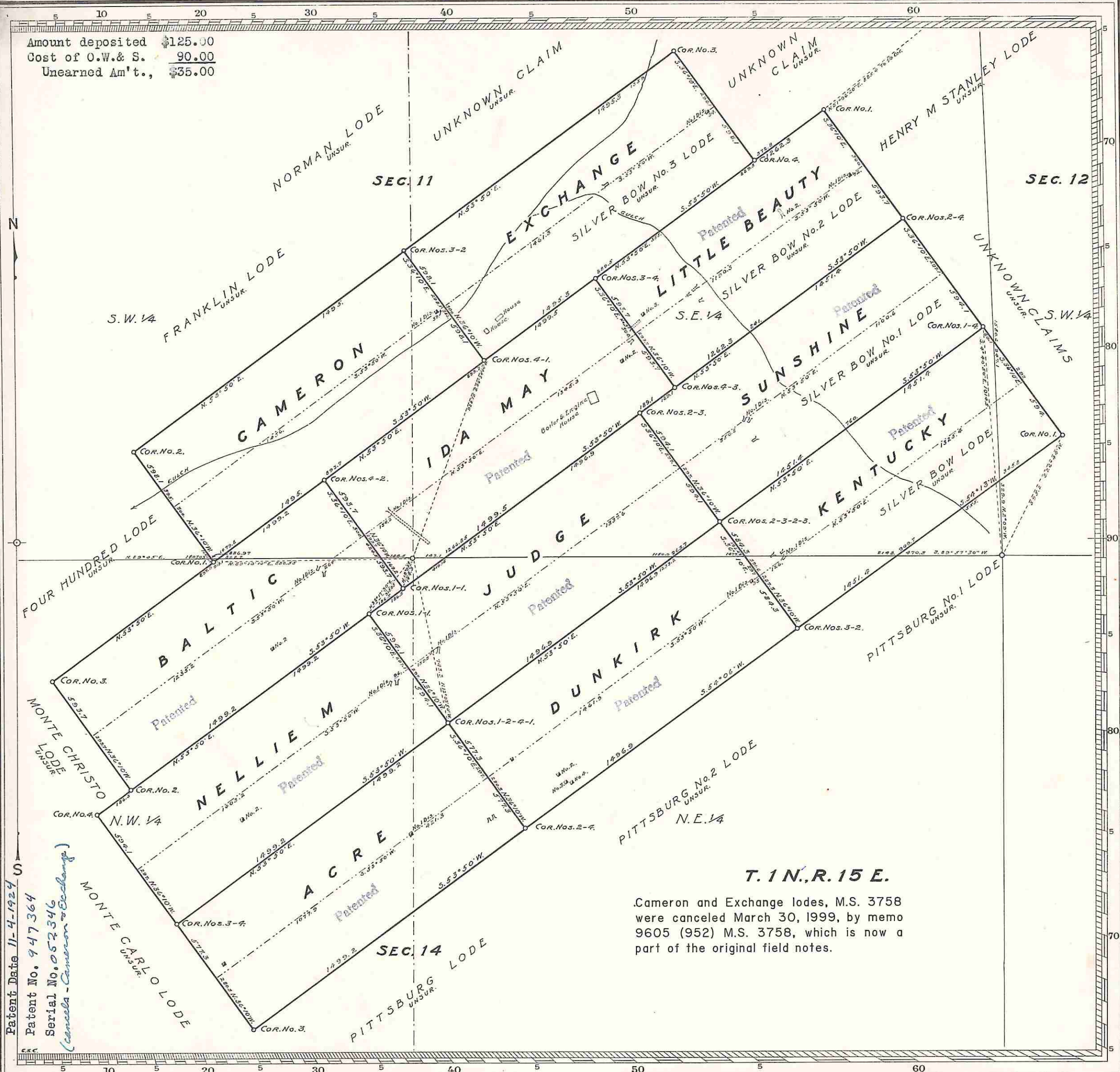
SURVEYED March 29 - April 14 1921 BY
Edwin T. Stewart
U.S. Deputy Mineral Surveyor

The Original Field Notes of the Survey of the Mining Claim of
The Dough Boy Copper Company
known as the
IDA MAY, LITTLE BEAUTY, JUDGE, EXCHANGE,
NELLIE M., BALTIC, SUNSHINE, CAMERON, DUNKIRK,
KENTUCKY, and ACRE Lodes

from which this plat has been made under my direction,
have been examined and approved, and are on file in this Office,
and I hereby certify that they furnish such an accurate descrip-
tion of said Mining Claim as will, if incorporated into a patent,
serve fully to identify the premises, and that such reference is
made therein to natural objects or permanent monuments as
will perpetuate and fix the locus thereof.
I further certify that Five Hundred Dollars worth of labor has
been expended or improvements made upon said Mining Claims
by claimant or its grantors and that
said improvements consist of 8 cuts, 12 shafts and
3 tunnels, also drifts and crosscuts, total
value \$72,610, of which \$13,500 is reserved for
claims not in this survey.

that the location of said improvements is correctly shown
upon this plat, and that no portion of said labor or improve-
ments has been included in the estimate of expenditures
upon any other claim.
And I further certify that this is a correct plat of said Mining
Claim made in conformity with said original field notes of the
survey thereof, and the same is hereby approved.

U.S. Surveyor General's Office. *Frederick D. Smith*
Phoenix, Arizona. U.S. Surveyor General for
June 16 1921 ARIZONA.



Claim Located _____ 19

Mineral Survey No. **3758**

Lot No. _____
ARIZONA Land District.

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June 16, 1921 ARIZONA.