



## **CONTACT INFORMATION**

Mining Records Curator  
Arizona Geological Survey  
1520 West Adams St.  
Phoenix, AZ 85007  
602-771-1601  
<http://www.azgs.az.gov>  
[inquiries@azgs.az.gov](mailto:inquiries@azgs.az.gov)

The following file is part of the

Arizona Department of Mines and Mineral Resources 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.

07/16/97

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: SWINGLE PROPERTY

ALTERNATE NAMES:

TABLE MOUNTAIN MN-FE  
PROSPERITY CLAIMS  
WESTERN ANILINE & CHEMICAL CO.  
HAILLE PROPERTY  
BLACK REEF MANGANESE  
BLACK MONSTER CLAIMS

PINAL COUNTY MILS NUMBER: 532

LOCATION: TOWNSHIP 7 S RANGE 18 E SECTION 20 QUARTER C  
LATITUDE: N 32DEG 48MIN 36SEC LONGITUDE: W 110DEG 31MIN 30SEC  
TOPO MAP NAME: HOLY JOE PEAK - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:

IRON  
MANGANESE

BIBLIOGRAPHY:

ADMMR SWINGLE PROPERTY FILE  
HARRER, C.M., RESOURCES OF IRON RESOURCES IN  
AZ, USBM IC 8236, 1964, P. 91  
ADMMR U FILE  
FARNHAM, L.L., MANGANESE DEPOSITS OF EASTERN  
AZ. USBM IC 7990, 1961, P. 147-149  
ADMMR FILES

Mr Fred T Moore

1004 Farmers Ave

Tempe Ariz

~~File~~  
with mine

Mine at Windelman and Hayden

Mangrove it belong to Geo Swingle  
GEO. SWINGLE

of Windelman is well know there

1-7-42

SWINGLE PROPERTY

PINAL COUNTY

SEE: IC 8236 p. 91 - hematite

June 22, 1944

File: ERD

War Price and Rationing Board  
No. 81.7.1  
137 North Second Avenue  
Phoenix, Arizona

Gentlemen:

Mr. George Swingle, Route 1, Box 191, Mesa, Arizona, is making supplemental application for gasoline for use in connection with two monthly round trips to the Black Reef Manganese Mine, located about 14 miles northeast of Mammoth. Mr. Swingle is the owner of the property and he has leased it to Leo Farrington and Fay Addington of Mammoth.

Due to the need of inspecting the property once a month arranging for other business details connected with the operation of the property, it is necessary for Mr. Swingle to visit the property twice a month.

Manganese is one of the essential minerals and I believe Mr. Swingle is entitled to the gasoline to supervise this work.

Yours very truly,

Chas. H. Dunning, Director  
by J. S. Coupal

JSC:LP

"Swingle Property"

MANGANESE Claim

November 10, 1942

Table Mountain

Earl F. Hastings

Reconstruction Finance Corporation ✓  
Preliminary Development Loan

Docket No.

C-ND-Phx. 76

Date Application Received

October 21, 1942

Date of Report

November 10, 1942

1. Name and address of applicant (correspondent):  
Oliver Swingle, 836 Central Avenue, San Francisco, California.
2. Character of project and estimated cost thereof:  
Repair and clean out shaft and cross cut to ore body, \$2,000.00
3. Location of property:  
Table Mountain Mining District, Pinal County, Arizona.
4. Applicant's interest in or ownership of property:  
Applicant is one of three partners owning claims by location.
5. Loan requested:  
\$2,000.00.
6. Loan recommended:  
None.
7. Comments:
  - (A) The value of the only ore sampled is of an unprofitable grade and is of a poor type for other than blast furnace consumption.
  - (B) The material could not be sold to Metals Reserve Company stockpiles, and the tentative Kaiser Co., Inc. schedule would not allow profitable operation.
  - (C) There is no evidence to support the claim of a 50% manganese shipping ore, and the composition ratios of ores below the surface would need be greatly altered as compared to surface analysis to make this possible.
  - (D) Added to the docket is correspondence with the applicant and a copy of a letter from the Kaiser Company, Inc. to the applicant.

DEPARTMENT OF MINERAL RESOURCES

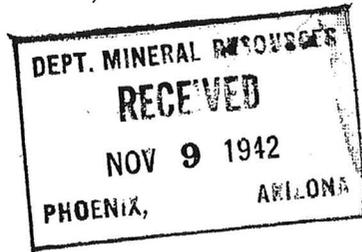
Earl F. Hastings  
Assistant Director and  
Projects Engineer

Manganese Claim

San Francisco California

November 7, 1942

Department of Mineral Resources,  
State of Arizona,  
Phoenix Arizona



Dear Sirs

In reply to your letter of October 22 I have written The Kaiser Company for prices on manganese ore. I am enclosing their reply.

I would like to call to your attention that as stated in my application the the assay I included was the only one I had available here. This was taken of surface material and may be considered the very lowest grade of ore. Assays of better than 50% manganese have been taken from the dump of the old shaft indicating improvement in quality with depth.

Yours Respectfully  
Oliver Swingle  
836 Central Ave.  
San Francisco

# KAISER COMPANY, INC.

IRON AND STEEL DIVISION  
BOX 217  
FONTANA, CALIFORNIA

October 31, 1942

Mr. Oliver Swingle  
836 Central Avenue  
San Francisco, California

Dear Mr. Swingle:

Thank you for your letter of October 26 concerning your manganese deposit.

The Kaiser Company has not asked for nor received any quotations on specifically ferruginous manganese ore and no price schedules on its purchase have been formulated. We plan to obtain on the open market manganese ore for operations in our Fontana steel plant and will accept grades as low as 15% manganese with maximum 0.50% phosphorous, 0.50% zinc, and 0.50% sulphur. Inasmuch as we buy manganese on a purely competitive basis, we have not set up our own definite price schedules, but are contracting bids on quotations acceptable to us. Such quotations should run, f.o.b. Fontana, approximately as follows:

<u>Mn %</u>	<u>Base Price</u>	<u>Pro-rated in Base Price</u>
48.0	\$48.00	\$ 1.00
44.0	35.20	.80
35.0	19.50	.557
30.0	13.50	.45
20.0	7.50	.375
15.0	5.00	.333

In the event you should wish to submit a quotation to us, we would appreciate your sending us samples of your ore for our

Mr. Swingle

October 31, 1942

laboratory analysis. Thank you for bringing this potential source of manganese to our attention.

Very truly yours,

KAISER COMPANY, INC.  
Iron and Steel Division

By:

  
George D. Ramsay  
Mgr., Raw Mat'ls Dept.

WBN:d

H.

October 22, 1942

Oliver Swingle  
836 Central Avenue  
San Francisco, California

Dear Mr. Swingle:

Your Application for a Preliminary Development Loan has been forwarded to this office for review prior to action being taken by the RFC Mine Loan Division.

The outline of payments for manganese ores as accepted at the Deming stockpile is such that the net returns on ores having the typical analysis you outlined would only be approximately \$8.60 net. 25% manganese ores are purchased at the rate of \$10.00 per long ton and there is a 40 cent penalty for each unit less than 25%. In other words, your penalty would be approximately \$1.40 from an original price of \$10.00. The returns on this ore would not pay your development, mining, hauling and freight charges. On the basis of the Deming payments your operation would show no profit and we do not feel that the RFC would approve your loan.

The Henry J. Kaiser Co., Inc., Box 217, Fontana, California, are purchasing ferruginous <sup>MANGANESE</sup> ores for use in their Fontana plant and we understand are paying freight from Arizona points. We suggest that you forward them a copy of the analysis of your ore and get from them a statement as to their net payment for ores of that particular type. With a definite and profitable market your application would be more favorably considered. Exact copies of the Kaiser Companies' reply should be sent to us, that we may add them to your docket before returning it to the RFC.

Very truly yours,

Earl F. Hastings  
Assistant Director  
Projects Engineer

EFH: Ba

13 March 1942

Mr. George Swingle,  
Winkelman, Arizona.

My dear Mr. Swingle:

I am enclosing herewith a copy of mine owner's report filed with this department covering your PROSPERITY MINE located in the Bunker Hill Mining District, Pinal County, Arizona.

I shall be glad to submit this report to anyone making inquiry for a property such as yours.

Assuring you of my desire to be helpful, and with best wishes, I am

Yours very truly,

Charles F. Willis  
Chairman, Board of Governors

CFW-jrf  
encl.

5 February 1942

Mr. George Swingle,  
Winkelman, Arizona.

My dear Mr. Swingle:

Mr. F. F. Schalmo of the Office of Production Management, Phoenix, Arizona, has referred to this department a note written by Mr. Fred T. Moore, 1004 Farmers Avenue, Tempe, Arizona, regarding a manganese property owned by you.

I am enclosing herewith a blank mine owner's report, which I should suggest that you fill out in detail and return to this office so that information may be available concerning your property. Upon receipt of this report, I shall be glad to submit it to anyone making inquiry for a property such as yours.

Assuring you of my desire to be helpful, I am

Yours very truly,

Charles F. Willis  
Chairman, Board of Governors

CFW-jrf

cc- Fred T. Moore

June 22, 1944

File: ERD

War Price and Rationing Board  
No. 81.7.1  
137 North Second Avenue  
Phoenix, Arizona

Gentlemen:

Mr. George Swingle, Route 1, Box 191, Mesa, Arizona, is making supplemental application for gasoline for use in connection with two monthly round trips to the Black Reef Manganese Mine, located about 14 miles northeast of Mammoth. Mr. Swingle is the owner of the property and he has leased it to Leo Farrington and Fay Addington of Mammoth.

Due to the need of inspecting the property once a month arranging for other business details connected with the operation of the property, it is necessary for Mr. Swingle to visit the property twice a month.

Manganese is one of the essential minerals and I believe Mr. Swingle is entitled to the gasoline to supervise this work.

Yours very truly,

Chas. H. Dunning, Director  
by J. S. Coupal

JSC:LP

"Swingle Property"

✓ MANGANESE Claim

November 10, 1942

Table Mountain

Earl F. Hastings

Reconstruction Finance Corporation ✓  
Preliminary Development Loan

Docket No.

C-ND-Phx. 76

Date Application Received

October 21, 1942

Date of Report

November 10, 1942

1. Name and address of applicant (correspondent):  
Oliver Swingle, 836 Central Avenue, San Francisco, California.
2. Character of project and estimated cost thereof:  
Repair and clean out shaft and cross cut to ore body, \$2,000.00
3. Location of property:  
Table Mountain Mining District, Pinal County, Arizona.
4. Applicant's interest in or ownership of property:  
Applicant is one of three partners owning claims by location.
5. Loan requested:  
\$2,000.00.
6. Loan recommended:  
None.
7. Comments:
  - (A) The value of the only ore sampled is of an unprofitable grade and is of a poor type for other than blast furnace consumption.
  - (B) The material could not be sold to Metals Reserve Company stockpiles, and the tentative Kaiser Co., Inc. schedule would not allow profitable operation.
  - (C) There is no evidence to support the claim of a 50% manganese shipping ore, and the composition ratios of ores below the surface would need be greatly altered as compared to surface analysis to make this possible.
  - (D) Added to the docket is correspondence with the applicant and a copy of a letter from the Kaiser Company, Inc. to the applicant.

DEPARTMENT OF MINERAL RESOURCES

Earl F. Hastings  
Assistant Director and  
Projects Engineer

Manganese Claims

San Francisco California

November 7, 1942

Department of Mineral Resources;  
State of Arizona,  
Phoenix Arizona

DEPT. MINERAL RESOURCES  
RECEIVED  
NOV 9 1942  
PHOENIX, ARIZONA

Dear Sir

In reply to your letter of October 22 I have written The Kaiser Company for prices on manganese ore. I am enclosing their reply.

I would like to call to your attention that as stated in my application the the assay I included was the only one I had available here. This was taken of surface material and may be considered the very lowest grade of ore. Assays of better than 50% manganese have been taken from the dump of the old shaft indicating improvement in quality with depth.

Yours Respectfully  
Oliver Swingle  
836 Central ave  
San Francisco

H.

October 22, 1942

Oliver Swingle  
836 Central Avenue  
San Francisco, California

Dear Mr. Swingle:

Your Application for a Preliminary Development Loan has been forwarded to this office for review prior to action being taken by the RFC Mine Loan Division.

The outline of payments for manganese ores as accepted at the Deming stockpile is such that the net returns on ores having the typical analysis you outlined would only be approximately \$8.60 net. 25% manganese ores are purchased at the rate of \$10.00 per long ton and there is a 40 cent penalty for each unit less than 25%. In other words, your penalty would be approximately \$1.40 from an original price of \$10.00. The returns on this ore would not pay your development, mining, hauling and freight charges. On the basis of the Deming payments your operation would show no profit and we do not feel that the RFC would approve your loan.

The Henry J. Kaiser Co., Inc., Box 217, Fontana, California, are purchasing ferruginous <sup>MANGANESE</sup> ores for use in their Fontana plant and we understand are paying freight from Arizona points. We suggest that you forward them a copy of the analysis of your ore and get from them a statement as to their net payment for ores of that particular type. With a definite and profitable market your application would be more favorably considered. Exact copies of the Kaiser Companies' reply should be sent to us, that we may add them to your docket before returning it to the RFC.

Very truly yours,

Earl F. Hastings  
Assistant Director  
Projects Engineer

EFH: Ba

13 March 1942

Mr. George Swingle,  
Winkelman, Arizona.

My dear Mr. Swingle:

I am enclosing herewith a copy of mine owner's report filed with this department covering your PROSPERITY MINE located in the Bunker Hill Mining District, Pinal County, Arizona.

I shall be glad to submit this report to anyone making inquiry for a property such as yours.

Assuring you of my desire to be helpful, and with best wishes, I am

Yours very truly,

Charles F. Willis  
Chairman, Board of Governors

CFW-jrf  
encl.

Card

5 February 1942

Mr. George Swingle,  
Winkelman, Arizona.

My dear Mr. Swingle:

Mr. F. F. Schalmo of the Office of Production Management, Phoenix, Arizona, has referred to this department a note written by Mr. Fred T. Moore, 1004 Farmers Avenue, Tempe, Arizona, regarding a manganese property owned by you.

I am enclosing herewith a blank mine owner's report, which I should suggest that you fill out in detail and return to this office so that information may be available concerning your property. Upon receipt of this report, I shall be glad to submit it to anyone making inquiry for a property such as yours.

Assuring you of my desire to be helpful, I am

Yours very truly,

Charles F. Willis  
Chairman, Board of Governors

CFW-jrf

cc- Fred T. Moore

September 30, 1957

Memorandum

To: Carl Rompasok

From: William A. McKinney

Subject: Smelting a High Iron-Manganese Ore to Produce Manganese Steel

A cursory laboratory investigation was made on a high-grade iron-manganese ore to determine if commercial manganese steel could be produced by direct smelting with coke and scrap iron. The ore sample, assaying 48.1 percent Fe, 16.7 percent Mn and 1.5 percent  $SiO_2$  with negligible amounts of  $Al_2O_3$ , S, P, Pb, Zn and Cu, was from the Swingle property of the Prosperity group of claims northeast of Mammoth, Pinal County, Ariz. The sample was submitted by Tom King, 1352 No. Country Club Road, Tucson, Ariz., and was reported to represent about 100,000 tons of ore. Microscopic examination of the sample revealed that it was a soft, pulverulent black ore composed predominantly of hematite, specularite, pyrolusite and minor amounts of wed, calcite, limonite and quartz.

A 200-gram sample of 10-mesh ore was charged to an Ajax 6 Kw converter-type induction furnace with 8.6 percent lime to flux the silica and alumina and 7.5 percent fluorspar to fluidize the slag; 16.8 percent petroleum coke was added to reduce the iron and manganese to the metallic state. Enough scrap iron also was added to the charge to theoretically produce an alloy steel containing approximately 88 percent iron and 12 percent manganese. On the basis of the iron present in the ore, one ton of scrap iron per ton of ore was necessary to produce the correct ratio of iron to manganese for manganese steel. The furnace charge was brought to a melting temperature of  $1,430^{\circ}C$ . in 30 minutes and then poured into a cast iron mold. The steel assayed 88.8 percent iron but was lower than expected in manganese, containing only 5.05 percent. The bar was hard but somewhat brittle due to the low manganese content. Recoveries of iron and manganese in the steel product were 99.6 and 49.1 percent, respectively. About 7 percent of the manganese was volatilized during smelting. The remaining manganese appeared in the slag which assayed 1.5 percent iron and 21.75 percent manganese. Breakdown of the furnace equipment prevented more extensive testing to reduce volatilization and slagging of the manganese. In view of the high grade character of this ore, additional smelting tests seem warranted to determine if a marketable manganese steel can be produced. Further investigations also could be carried out on a larger scale in the laboratory electric arc furnace using charges up to 50 pounds in size.

cc: JBClemmer (2)  
WRStarna (2)

W. A. McKinney

EH

DEPARTMENT OF MINERAL RESOURCES  
STATE OF ARIZONA  
FIELD ENGINEERS REPORT

Mine Swingle Property Date Nov. 6, 1959  
District Bunker Hill District, Pinal County Engineer Axel L. Johnson  
Subject: Present Status. Information from Willis R. Dees, Atty., Arizona Land Title Bldg., Tucson.

References: Report of Oct. 25, 1957 and May 20, 1955.

Location: Sec. 20, T. 7 S., R. 18 E. At the foot of Table Mountain, about 11 miles NE of Mammoth. Road steep and rough.

Number of Claims: 12 unpatented claims

- Owners:
- (1) 2 unpatented claims, Prosperity #1 and #2, owned by June Dorsey, Hayden, Ariz., who inherited same from her father, George Swingle, Sr., now deceased.
  - (2) 10 unpatented claims owned by Kenneth De Los Rios, Culver City, Calif., who purchased these claims from the former owners, Western Aniline ~~and~~ and Chemical Co., Tucson, Arizona.

Lessees: Kenneth De Los Rios, Culver City, Calif., who is leasing the two claims owned by June Dorsey.

Principal Minerals: High manganese iron ore (spiegeleisen ore)

Present Mining Activity: None

General Remarks: Robert Seklemian of the Geneva Steel Corp., Provo, Utah (subsidiary of U.S. Steel) inquired about this property on Nov. 6, 1959.

See: IC 8236, p. 91 - hematite

Page 1

**DEPARTMENT OF MINERAL RESOURCES**

STATE OF ARIZONA

**FIELD ENGINEERS REPORT**

Not for Publication

(see note under remarks on page 2)

Mine **Swingle Property**

Date **Oct. 25, 1957**

District **Bunker Hill District ---- Pinal Co.**

Engineer **Axel L. Johnson**

Subject: **Field Engineers Report ----- Information from Thomas C. King, Metallurgist & incorporator.**

References See my report of May 20, 1955.

Location Sec. 20 -- T 7 S -- R 18 E. For directions, see report of May 20, 1955.

Number of Claims 12 unpatented claims

Owners 2 claims owned by George Swingle, Sr., Hayden Ariz. --- Prosperity # 1 and # 2.  
10 claims, surrounding above, located and owned by Western Aniline & Chemical Co., Box 6304, Tucson, Ariz.

Lessees Western Aniline & Chemical Co. leasing the 2 claims, owned by George Swingle, Sr. on a royalty basis, and owns the surrounding 10 claims.

Principal Minerals High Manganese iron ore (spiegeleisen ore).

Present Mining Activity None at present, pending testing & research work.

Geology & Mineralization See report of May 20, 1955

Ore Values See report of May 20, 1955, reg. U. S. Bureau of Mines sampling.  
Mr. King reports an aver. of 19.3 % Manganese, 44.6 % Iron & 1.6 % Silica.

Ore in Sight & Probalbe Mr. King reports that results of wagon drilling has indicates 106,000 tons of ore reserves, 50,000 tons of which can be mined by open pit methods.

Milling & Marketing Facilities Mr. King reports that his company is considering the installation of a smelter either in Tucson or Phoenix for the manufacture of Manganese Steel castings to supply the needs of contractors, mining companies and other users of these products in Arizona and the southwest. He reports that tests have been made at the University Station, U. S. Bureau of Mines, Tucson, Arizona, which would indicate that such a smelting operation would be successful. Tests were made in an electric furnace, using 50 % ore, 50 % scrap iron, with the addition of the required amounts of coke, lime and fluorspar.

Present Mine Workings See report of May 20, 1955.

Mining Operations to date Western Aniline & Chemical Co., since acquiring the property in May or June, 1957, has done the following work:

(1) Explored the Swingle claims by means of wagon drilling in July and Aug. 1957, putting down about 17 holes, at variable depths--from 10 to 90 ft. in depth. On account of the dip in the ore formation, and the inability to drill deeper holes by means of wagon drilling, only the top 75 ft. of the ore formation could be explored.

(2) Built a road into the property.

(3) Made electric furnace tests on the ore at the U. S. Bureau of Mines, Tucson.

(4) Incorporated the company under the laws of the State of Arizona Sept. 4, 1957, for 10,000,000 shares at a par value of \$ 1 per share. Incorporators are viz:  
Ewing Williams, 1109 N. Camilla Blvd., Tucson; Dale A. Williams, Amarillo, Texas; Herb Miller, 1352 N. Country Club, Tucson; Thomas C. King, 1350 N. Country Club (P. O. Box 6304) Tucson; Jimmy D. Strickland, 1352 N. Country Club, Tucson; Joe I. Morrison, 810 Calle Margarita, Tucson; Howard G. Strickland, Amarillo, Texas; Willis R. Dees (atty), Arizona Land Title Bldg., Tucson.

## DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA

## FIELD ENGINEERS REPORT

Not for publication

Mine Swingle Property

Date Oct. 25, 1957

District Bunker Hill District, Pinal Co.

Engineer Axel L. Johnson

Subject: Field Engineers Report (continued from page 1)

Proposed Plans

(1) To diamond drill the Swingle property, in the very near future, in order to prove up additional ore reserves.

(2) To acquire additional iron and manganese properties in Arizona in order to have an ample supply for future possible operation of an electric manganese steel foundry. Mr. King mentioned that the company had already acquired some manganese properties near Wickenburg.

Officers No officers of the corporation are listed as yet. However, Thomas C. King is the Metallurgical Engineer in charge of the technical work, and Willis R. Dees of May, Leshar and Dees, Arizona Land Title Bldg., Tucson, Ariz. is the attorney.

Remarks

Mr. King states that the company is a closed corporation and is not engaged in selling stock. He asked me to keep the information he gave me as confidential, as it is not for publication.

SWINGLE PROPERTY

ALJ-ASMOA mtg - 5-23-57 - George Swingle, Hayden, Ariz., stated that he had cancelled the lease on his property to James Concannon, 1918 S. Plumer St., Tucson, Ariz. on account of the fact that Mr. Concannon failed to perform any work on the property, as agreed in the contract (Date of lease agreement - Dec. 1, 1956, and date of cancellation - May 1, 1957); and that he now is looking for some other mine operator to lease the property or purchase same. - Terms suggested by Mr. Swingle -----\$30,000 on a cash sale, or \$50,000 on a lease with option to buy -- 10% royalty with royalty payments to apply on the purchase price.

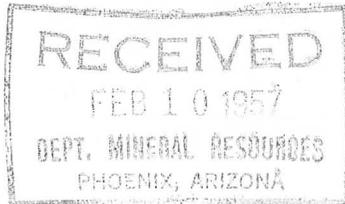
---

SWINGLE, Oliver & George, Sr. (Owners)  
836-Central-Avenue Hayden, Ariz.  
San-Francisco,-Calif.

11010-42

See MANGANESE CLAIM  
Re - "C" loan application

SWINGLE PROPERTY, Bunker Hill Dist., Pinal Co. (2 claims) 5-20-55  
(Same as Black Reef Manganese Mine)



Tucson, Arizona,  
Feb. 10, 1957.

Mr. Frank P. Knight, Director,  
Department of Mineral Resources,  
Phoenix, Arizona.

Since writing you on Friday, I have obtained information on the "Haille Mines".

From the information received, I am satisfied that this is the same property which I examined on May 20, 1955, at the request of Mr. Swingle, owner of same. A copy of this report will be found in your Phoenix office files under the name of "Swingle Property". I am ~~also~~ enclosing a copy of B. M. R. I. 4848 (Feb. 1952), which shows concentration tests of the ore made by U. S. Bureau of Mines (see pp 19-21).

Following is the information I received from the rival claimants of the property:

I called James Concannon of Tucson, who leased the claims held by Mr. Swingle a few months ago. I asked him how he was getting along, and he said that he is now all ready to start operating the property. I asked him about Haille Mines, and he told me that the Haille Mines operated this property in 1950, doing the development now found on same, but that they leased the property from "claim jumpers", who had no legal right to lease it. He made the comment that anyone leasing a property should ascertain that they were leasing the property from the legal owners.

I then got in touch with Lee Knight over the telephone, asking for the location of the mining claims of which he was reportedly part owner. He said that he was the sole owner of the Prosperity Group, 13 1/2 miles NE of Mammoth. I asked him about the Haille Mines, and he said that he was the Haille Mines, and had operated the property some years ago under that name. I asked him if that was near the Swingle claims, and he said that this was the Single Property, and that Mr. Swingle had forfeited his rights in 1947 by default. Mr. Lee Knight also stated that he had 22 claims, 4 of which are patented. Apparently, these include the ones claimed by Mr. Single and leased to Mr. Concannon, where the development work has been done, together with additional surrounding claims. The location of the patented claims (if any), could be checked at the B. L. M. office in Phoenix,

Mr. Swingle, since my examination of the property in May, 1955, has called on me at the Hayden conference several times for advice and for assistance in finding someone to lease and operate the property. As he is old and feeble (way past 80, I think), he has been paying someone else to do the assessment work for him. I have advised him to see an attorney in regard to some other claim jumpers (not Lee Knight or Haille Mines) who located the property, and also his ex-daughter-in-law's claims to the property. I was under the impression that he had attended to that.

It is evident that neither Mr. Concannon nor Mr. Lee Knight knows about each others present claims on the property. I have decided not to discuss the matter any further with either of them before taking the matter up with you first during my next Phoenix visit.

Sincerely,

Axel L. Johnson,  
P. O. Box 5047,  
Tucson, Arizona.

DEPARTMENT OF MINERAL RESOURCES  
STATE OF ARIZONA  
FIELD ENGINEERS REPORT

Mine Swingle Property

Date May 20, 1955

District Bunker Hill District -----Pinal Co.

Engineer Axel L. Johnson

Subject: Field Engineers Report ----- Personal Visit and information from George Swingle.

Location Approx. Sec. 19 or 20 -- T 7 S -- R 18 E. At the foot of Table Mt. Take the Miller Ranch Road east from Mammoth, and go to the Miller Ranch, then about 2 miles past the ranch to the mine. Distance from Mammoth about 11 miles. The first 9 miles is steep and rough in some places. The last 2 miles is very rough and steep and requires a jeep to get over.

Number of Claims 2. (Originally, owners had 6 claims, but only 4 held at present.)

Owners George Oliver Swingle and George Swingle, Sr. Hayden, Arizona.

Principal Metals and Minerals High Manganese iron ore (Spiegeleisen ore)

Number of Men Employed None.

Production Rate No production.

Geology The ore is found as irregular replacements in limestone rock. One ore body about 25 ft. wide, about 150 ft. long, with depth not known, has been opened up. Judging by other iron and manganese showings on the surface, there, no doubt, are several other pockets of this kind of ore to be found on the claims. The ore is a complex iron-manganese oxide, containing hematite, pyrolusite and psilomelane. The manganese and iron minerals are so closely combined that they can not be separated by any milling system. The ore, for this reason, can only be marketed directly as iron ore or spiegeleisen ore. See Bureau of Mines Report of Investigations 4848, issued in February, 1952.----PP. 19 to 21.

Ore Values A 2 ton sample taken by the U. S. Bureau of Mines averaged as follows:  
Manganese---19.9 %; Iron---35.8 %; SiO<sub>2</sub>---2.2 %; Insol---2.6 %; Al<sub>2</sub>O<sub>3</sub>---2.9 %.  
See Bureau of Mines RI 4848 referred to above.

Ore in Sight and Probable Ore in Sight----about ~~2000~~ 200 to 300 tons.  
Probable Ore -----several thousand tons.

Milling and Marketing Facilities None. The Bureau of Mines, according to the report referred to above, tried several milling methods, including tabling, magnetic separation, and flotation, but failed to make a separation of the manganese and the iron, and concluded that the ore could not be milled so as to obtain any marketable manganese concentrate, but could be marketed only as spiegeleisen ore. See report referred to above.

Present Mine Workings 1 open stope----about 25 ft. wide, narrowing down to 8 ft. in width, with maximum length of about 150 ft. and about 10 ft. high.  
1 shaft ---- about 75 ft. deep. Inaccessible. Very little ore.  
1 shaft ---- about 15 ft. deep. Shows ore entire depth.  
1 shaft ---- about 10 ft. deep. No ore showings.  
Numerous open cuts, with ore showings of a few feet near the surface.

Proposed Plans Owners wish to sell or lease the property.

Remarks A road about 2 miles long would have to be built from Miller Ranch to the mine.

NAME OF MINE: Prosperity  
(BLACK REEF)

COUNTY: Pinal  
DISTRICT:  
METALS: Mn.

OPERATOR AND ADDRESS:		MINE STATUS	
DATE:		DATE:	
6/44	Leo L. Farrington & Fay Addington, 11 Grand Ave. Phoenix	6/44	Selling as fertilizer
		5/45	Idle

BLACK REEF MANGANESE MINE  
MAMMOTH, ARIZONA

Owners: Geo. Swingle, Olein Swingle, Mrs. James A. Blake, Rt. 1, Box 191 Mesa

Leasee: Leo L. Farrington & Fay Addington Box 6, Mammoth, Arizona

Location:

The Black Reef Manganese Mine is located in the Bunker Hill Mining District, Pinal County, Arizona. It consists of four contiguous lode mining claims known as Prosperity, Prosperity 1, 2, and 3. The title to these properties is clear and the claims are in good standing as to assessment work. The Mine is at an altitude of from 6000 to 6500 feet. The general contour of the country near the mine is very rugged.

Accessibility:

The mine is reached by a road from the little mining town of Mammoth, a distance of 12 miles. The first mile is on a highway and then enters a ravine, which it follows for 6 miles. The balance is over rocky ground consisting of hogbacks and ridges. This road was built last spring by present operators as a preliminary access to the mine but they intend to make many more improvements.

Geology:

The rock in the immediate vicinity of the ore bodies is a schist and to the Southwest is an extensive deposit of quartzite which may have originally been overlaying the schist but has been eroded from the part containing the orebodies.

Veins:

The main vein strikes in an easterly and westerly direction along the property. It outcrops for over 3000 feet and has a slight dip to the north. On the west end it has been opened up by an opencut 50 feet long and ten feet deep and from 15 to 20 feet wide. At this point the vein is 18 feet wide. Many outcrops of the surface show much greater width than this. Near the mouth of the tunnel and near the hanging wall side of the vein a shaft has been sunk to 100 feet. This work was done many years ago and is now filled with debris but reliable information is that it showed high grade ore of about 35% to 38% Manganese. This Shaft is now being cleaned out. The average value of the 18 feet width at the tunnel entrance is 23% manganese and 4.3% Fe.

To the north of the opencut is a blanket of the same type of ore, 4 feet thick, lying on top of the schist, covering an area of several acres. It has been explored by a number of shallow opencuts.

The ore in the main vein is not blocked out in the strict sense of the word, but the following block can be assumed to be the ore in sight which can be definitely assured as to exist in the vein. Depth 100 feet, width 18 feet, length 1000 feet. This would give a block of 180,000 tons of ore. According to sales records of the operators, the profit per ton should be \$10.00.

This would give the ore reserves a net value of \$1,800,000,000.

Uses:

The ore is ground fine and used as a soil builder, about 400 pounds is worked into an acre of land and it has been proven that it shows great improvement in crops.

Machinery:

Timber and Water:

There is practically no timber on the property. Water occurs in two places and each can furnish a one inch stream of water.

Conclusion:

After further improvements to the road and installation of additional machinery such as a hammer mill, steady shipments of ore can be made from the mine. Considering the large ore reserves and an ever increasing demand for soil builders by agriculture, this mine can be considered to be a very attractive and profitable enterprise.

Phoenix, Arizona  
January 10, 1944

JULIUS MESSER,  
Mining Engineer

DEPARTMENT OF MINERAL RESOURCES  
State of Arizona  
MINE OWNER'S REPORT

Date: March 3, 1942.

- 1. Mine: PROSPERITY MINE
- 2. Location: 12 miles NE of Mammoth, Arizona.
- 3. Mining District & County: Bunker Hill Mining District, Pinal County, Arizona.
- 4. Former Name:
- 5. Owner: George Swingle and associates
- 6. Address (Owner): Winkelman, Ariz. *Hayden 1155*
- 7. Operator:
- 8. Address (Operator):
- 9. President, Owning Co:
- 9A. President, Operating Co:
- 10. Gen. Mgr:
- 14. Principal Minerals: Manganese.
- 11. Mine Supt:
- 15. Production Rate:
- 12. Mill Supt:
- 16. Mill - Type & Cap:
- 13. Men employed:
- 17. Power - Amt. & Type:
- 18. Operations - Present: None.
- 19. Operations - Planned: Deal pending to lease property with a view to shipping manganese ore to nearest market.
- 20. Number Claims, Title, etc: Two unpatented claims. Assessment work has been done to date.
- 21. Description - Topography & Geology: Mountainous country. Property located at foot of Table Mountain.
- 22. Mine Workings, Amt. & Condition: One old shaft over 50 feet deep adjacent to vein. Ore said to be in bottom. Also One crosscut tunnel 40 ft. long, which struck vein 30 ft. below surface, but this has not been driven through vein.

(over)

23. Geology & Mineralization: Country rock consists of lime and quartzite. Manganese vein around 25 to 30 feet wide. Dip about vertical.
24. Ore - Positive & Probable, Ore Dumps, Tailings: No ore tonnage blocked out, but width of vein indicates considerable tonnage and possibly a carload of manganese ore could be mined daily.
- 24A. Dimensions and Value of Ore body: Vein 25 to 30 feet wide and ore runs around 35% Manganese, low in silica.
25. Mine, Mill Equipment & Flow-Sheet: None.
26. Road Conditions, Route: Road leads from Mammoth to mine, a distance of 11 miles from highway. Would cost about \$1,000.00 to put road in shape to haul ore by truck.
27. Water Supply: Ample water for camp use near mine.
28. Brief History: No ore has been shipped from property.
29. Special Problems, Reports Filed: No reports filed. Main road is road referred to above.
30. Remarks:
31. If property for sale - Price, terms and address to negotiate: Property for sale or lease on reasonable terms.
32. Signature: (Signed) GEORGE SWINGLE  
Winkelman, Arizona

## DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA

## FIELD ENGINEERS REPORT

RECEIVED  
MAY 27 1955  
DEPT. MINERAL RESOURCES  
ARIZONA

Mine Swingle Property

Date May 20, 1955

District Bunker Hill District -----Pinal Co.

Engineer Axel L. Johnson

Subject: Field Engineers Report ----- Personal Visit and information from George Swingle.

Location Approx. Sec. 19 or 20 -- T 7 S -- R 18 E. At the foot of Table Mt. Take the Miller Ranch Road east from Mammoth, and go to the Miller Ranch, then about 2 miles past the ranch to the mine. Distance from Mammoth about 11 miles. The first 9 miles is steep and rough in some places. The last 2 miles is very rough and steep and requires a jeep to get over.

Number of Claims 2. Originally, owners had 6 claims, but only 4 held at present.

Owners George Oliver Swingle and George Swingle, Sr. Hayden, Arizona.

Principal Metals and Minerals High Manganese iron ore (Spiegeleisen ore)

Number of Men Employed None.

Production Rate No production.

Geology The ore is found as irregular replacements in limestone rock. One ore body about 25 ft. wide, about 150 ft. long, with depth not known, has been opened up. Judging by other iron and manganese showings on the surface, there, no doubt, are several other pockets of this kind of ore to be found on the claims. The ore is a complex iron-manganese oxide, containing hematite, pyrolusite and psilomelane. The manganese and iron minerals are so closely combined that they can not be separated by any milling system. The ore, for this reason, can only be marketed directly as iron ore or spiegeleisen ore. See Bureau of Mines Report of Investigations 4848, issued in February, 1952.-----PP. 19 to 21.

Ore Values A 2 ton sample taken by the U. S. Bureau of Mines averaged as follows:  
Manganese---19.9 %; Iron---35.8 %; SiO<sub>2</sub>---2.2 %; Insol---2.6 %; Al<sub>2</sub>O<sub>3</sub>---2.9 %.  
See Bureau of Mines RI 4848 referred to above.

Ore in Sight and Probable Ore in Sight----about ~~2000x~~ 200 to 300 tons.  
Probable Ore -----several thousand tons.

Milling and Marketing Facilities None. The Bureau of Mines, according to the report referred to above, tried several milling methods, including tabling, magnetic separation, and flotation, but failed to make a separation of the manganese and the iron, and concluded that the ore could not be milled so as to obtain any marketable manganese concentrate, but could be marketed only as spiegeleisen ore. See report referred to above.

Present Mine Workings 1 open stope----about 25 ft. wide, narrowing down to 8 ft. in width, with maximum length of about 150 ft. and about 10 ft. high.  
1 shaft ---- about 75 ft. deep. Inaccessible. Very little ore.  
1 shaft ---- about 15 ft. deep. Shows ore entire depth.  
1 shaft ---- about 10 ft. deep. No ore showings.  
Numerous open cuts, with ore showings of a few feet near the surface.

Proposed Plans Owners wish to sell or lease the property.

Remarks A road about 2 miles long would have to be built from Miller Ranch to the mine.

DEPARTMENT OF MINERAL RESOURCES  
 State of Arizona  
 MINE OWNER'S REPORT

Date: March 3, 1942.

1. Mine: PROSPERITY MINE
2. Location: 12 miles NE of Mammoth, Arizona.
3. Mining District & County: Bunker Hill Mining District, Pinal County, Arizona.
4. Former Name:
5. Owner: George Swingle and associates
6. Address (Owner): *Hayden - 1943* Winkelman, Ariz.
7. Operator:
8. Address (Operator):
9. President, Owning Co:
- 9A. President, Operating Co:
10. Gen. Mgr:
14. Principal Minerals: Manganese.
11. Mine Supt:
15. Production Rate:
12. Mill Supt:
16. Mill - Type & Cap:
13. Men employed:
17. Power - Amt. & Type:
18. Operations - Present: None.
19. Operations - Planned: Deal pending to lease property with a view to shipping manganese ore to nearest market.
20. Number Claims, Title, etc: Two unpatented claims. Assessment work has been done to date.
21. Description - Topography & Geology: Mountainous country. Property located at foot of Table Mountain.
22. Mine Workings, Amt. & Condition: One old shaft over 50 feet deep adjacent to vein. Ore said to be in bottom. Also One crosscut tunnel 40 ft. long, which struck vein 30 ft. below surface, but this has not been driven through vein.

(over)

23. Geology & Mineralization: Country rock consists of lime and quartzite. Manganese vein around 25 to 30 feet wide. Dip about vertical.
24. Ore - Positive & Probable, Ore Dumps, Tailings: No ore tonnage blocked out, but width of vein indicates considerable tonnage and possibly a carload of manganese ore could be mined daily.
- 24A. Dimensions and Value of Ore body: Vein 25 to 30 feet wide and ore runs around 35% Manganese, low in silica.
25. Mine, Mill Equipment & Flow-Sheet: None.
26. Road Conditions, Route: Road leads from Mammoth to mine, a distance of 11 miles from highway. Would cost about \$1,000.00 to put road in shape to haul ore by truck.
27. Water Supply: Ample water for camp use near mine.
28. Brief History: No ore has been shipped from property.
29. Special Problems, Reports Filed: No reports filed. Main road is road referred to above.
30. Remarks:
31. If property for sale - Price, terms and address to negotiate: Property for sale or lease on reasonable terms.
32. Signature: (Signed) GEORGE SWINALE  
Winkelman, Arizona

DEPARTMENT OF MINERAL RESOURCES  
State of Arizona  
MINE OWNER'S REPORT

Date: March 3, 1942.

1. Mine: PROSPERITY MINE
2. Location: 12 miles NE of Mammoth, Arizona.
3. Mining District & County: Bunker Hill Mining District, Pinal County, Arizona.
4. Former Name:
5. Owner: George Swingle and associates
6. Address (Owner): Winkelman, Ariz.
7. Operator:
8. Address (Operator):
9. President, Owning Co:
- 9A. President, Operating Co:
10. Gen. Mgr:
14. Principal Minerals: Manganese.
11. Mine Supt:
15. Production Rate:
12. Mill Supt:
16. Mill - Type & Cap:
13. Men employed:
17. Power - Amt. & Type:
18. Operations - Present: None.
19. Operations - Planned: Deal pending to lease property with a view to shipping manganese ore to nearest market.
20. Number Claims, Title, etc: Two unpatented claims. Assessment work has been done to date.
21. Description - Topography & Geology: Mountainous country. Property located at foot of Table Mountain.
22. Mine Workings, Amt. & Condition: One old shaft over 50 feet deep adjacent to vein. Ore said to be in bottom. Also One crosscut tunnel 40 ft. long, which struck vein 30 ft. below surface, but this has not been driven through vein.

(over)

23. Geology & Mineralization: Country rock consists of lime and quartzite. Manganese vein around 25 to 30 feet wide. Dip about vertical.
24. Ore - Positive & Probable, Ore Dumps, Tailings: No ore tonnage blocked out, but width of vein indicates considerable tonnage and possibly a carload of manganese ore could be mined daily.
- 24A. Dimensions and Value of Ore body: Vein 25 to 30 feet wide and ore runs around 35% Manganese, low in silica.
25. Mine, Mill Equipment & Flow-Sheet: None.
26. Road Conditions, Route: Road leads from Mammoth to mine, a distance of 11 miles from highway. Would cost about \$1,000.00 to put road in shape to haul ore by truck.
27. Water Supply: Ample water for camp use near mine.
28. Brief History: No ore has been shipped from property.
29. Special Problems, Reports Filed: No reports filed. Main need is road referred to above.
30. Remarks:
31. If property for sale - Price, terms and address to negotiate: Property for sale or lease on reasonable terms.
32. Signature: (Signed) GEORGE SWINGLE  
Winkelman, Arizona

DEPARTMENT OF MINERAL RESOURCES  
State of Arizona  
MINE OWNER'S REPORT

Date: March 3, 1942.

1. Mine: PROSPERITY MINE
2. Location: 12 miles NE of Mammoth, Arizona.
3. Mining District & County: Bunker Hill Mining District, Pinal County, Arizona.
4. Former Name:
5. Owner: George Swingle and associates
6. Address (Owner): Winkelman, Ariz.
7. Operator:
8. Address (Operator):
9. President, Owning Co:
- 9A. President, Operating Co:
10. Gen. Mgr:
14. Principal Minerals: Manganese.
11. Mine Supt:
15. Production Rate:
12. Mill Supt:
16. Mill - Type & Cap:
13. Men employed:
17. Power - Amt. & Type:
18. Operations - Present: None.
19. Operations - Planned: Deal pending to lease property with a view to shipping manganese ore to nearest market.
20. Number Claims, Title, etc: Two unpatented claims. Assessment work has been done to date.
21. Description - Topography & Geology: Mountainous country. Property located at foot of Table Mountain.
22. Mine Workings, Amt. & Condition: One old shaft over 50 feet deep adjacent to vein. Ore said to be in bottom. Also One crosscut tunnel 40 ft. long, which struck vein 30 ft. below surface, but this has not been driven through vein.

(over)

23. Geology & Mineralization: Country rock consists of lime and quartzite. Manganese vein around 25 to 30 feet wide. Dip about vertical.
24. Ore - Positive & Probable, Ore Dumps, Tailings: No ore tonnage blocked out, but width of vein indicates considerable tonnage and possibly a carload of manganese ore could be mined daily.
- 24A. Dimensions and Value of Ore body: Vein 25 to 30 feet wide and ore runs around 35% Manganese, low in silica.
25. Mine, Mill Equipment & Flow-Sheet: None.
26. Road Conditions, Route: Road leads from Mammoth to mine, a distance of 11 miles from highway. Would cost about \$1,000.00 to put road in shape to haul ore by truck.
27. Water Supply: Ample water for camp use near mine.
28. Brief History: No ore has been shipped from property.
29. Special Problems, Reports Filed: No reports filed. Main need is road referred to above.
30. Remarks:
31. If property for sale - Price, terms and address to negotiate: Property for sale or lease on reasonable terms.
32. Signature: (Signed) GEORGE SWINGLE  
Winkelman, Arizona

DEPARTMENT OF MINERAL RESOURCES  
State of Arizona  
MINE OWNER'S REPORT

Date: March 3, 1942.

1. Mine: PROSPERITY MINE
2. Location: 12 miles NE of Mammoth, Arizona.
3. Mining District & County: Bunker Hill Mining District, Pinal County, Arizona.
4. Former Name:
5. Owner: George Swingle and associates
6. Address (Owner): Winkelman, Ariz.
7. Operator:
8. Address (Operator):
9. President, Owning Co:
- 9A. President, Operating Co:
10. Gen. Mgr:
14. Principal Minerals: Manganese.
11. Mine Supt:
15. Production Rate:
12. Mill Supt:
16. Mill - Type & Cap:
13. Men employed:
17. Power - Amt. & Type:
18. Operations - Present: None.
19. Operations - Planned: Deal pending to lease property with a view to shipping manganese ore to nearest market.
20. Number Claims, Title, etc: Two unpatented claims. Assessment work has been done to date.
21. Description - Topography & Geology: Mountainous country. Property located at foot of Table Mountain.
22. Mine Workings, Amt. & Condition: One old shaft over 50 feet deep adjacent to vein. Ore said to be in bottom. Also One crosscut tunnel 40 ft. long, which struck vein 30 ft. below surface, but this has not been driven through vein.

(over)

23. Geology & Mineralization: Country rock consists of lime and quartzite. Manganese vein around 25 to 30 feet wide. Dip about vertical.
24. Ore - Positive & Probable, Ore Dumps, Tailings: No ore tonnage blocked out, but width of vein indicates considerable tonnage and possibly a carload of manganese ore could be mined daily.
- 24A. Dimensions and Value of Ore body: Vein 25 to 30 feet wide and ore runs around 35% Manganese, low in silica.
25. Mine, Mill Equipment & Flow-Sheet: None.
26. Road Conditions, Route: Road leads from Mammoth to mine, a distance of 11 miles from highway. Would cost about \$1,000.00 to put road in shape to haul ore by truck.
27. Water Supply: Ample water for camp use near mine.
28. Brief History: No ore has been shipped from property.
29. Special Problems, Reports Filed: No reports filed. Main need is road referred to above.
30. Remarks:
31. If property for sale - Price, terms and address to negotiate: Property for sale or lease on reasonable terms.
32. Signature: (Signed) GEORGE SWINGLE  
Winkelman, Arizona

DEPARTMENT OF MINERAL RESOURCES  
STATE OF ARIZONA  
MINE OWNER'S REPORT

MP-220

Date March 3, 1942

- 1. Mine Prosperity Mine
- 2. Location: 12 miles N.E. of Mammoth, Pinal Co., Arizona
- 3. Mining District & County Banker Hill
- 4. Former name ✓
- 5. Owner ~~Geo. Swinick~~
- 6. Address (Owner) Windelman, Ariz.
- 7. Operator ✓ Hettrick 3-0424
- 8. Address (Operator)
- 9. President, Owning Co. ✓
- 9A. President, Operating Co.
- 10. Gen. Mgr. ✓
- 14. Principal Minerals
- 11. Mine Supt. ✓
- 15. Production Rate
- 12. Mill Supt. ✓
- 16. Mill: Type & Cap.
- 13. Men Employed ✓
- 17. Power: Amt. & Type
- 18. Operations: Present ; No.

19. Operations: Planned ; Deal pending to lease property with view to shipping manganese ore to nearest market.

20. Number Claims, Title, etc. ; Two unpatented claims. Assessment work has been done to date.

21. Description: Topography & Geography ; Mountainous country - Property located at foot of Table Mt.

22. Mine Workings: Amt. & Condition ; One old shaft over 50 feet deep adjacent to vein. Ore said to be in bottom. Also one cross-cut tunnel 40 ft. long, which struck vein 30 feet below surface; but this has not been driven through vein. (over)

23. Geology & Mineralization: Com. of rock consists of lime and Quartzite. Manganese vein around 25 to 30 feet wide. Dip about vertical.

24. Ore: Positive & Probable, Ore Dumps, Tailings

No ore tonnage blocked out; but width of vein indicates considerable tonnage; and possibly a car load of Mn ore could be mined daily.

24A. Dimensions and Value of Ore body

Vein 25 to 30 feet wide and ore runs around 35% Manganese, low in silica.

25. Mine, Mill Equipment & Flow-Sheet

26. Road Conditions, Route

Road leads from Manmoth to mine, a distance of 11 miles from highway. Would cost about \$1000 to put road in shape to haul ore by track.

27. Water Supply

Ample water for camp use near mine.

28. Brief History

No ore has been shipped from property.

29. Special Problems, Reports Filed

No reports filed. Main need is road repaired to.

30. Remarks

None.

31. If property for sale: Price, terms and address to negotiate.

Property for sale or lease on reasonable terms.

32. Signature

George Swingle

33. Use additional sheets if necessary.