DMA Form 1

DEFENSE MINERALS ADMINISTRATION
Control Slip

CONTROLLED DOCUMENT

DMA Docket No. DMEA-2804

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EXPLORATION ASSISTANCE

Any action taken to change the type of request for assistance must be promptly reported to the Reports and Records Branch. Use DMA Form 2 for submitting these reports.

Routing Slip

Cys to USBM, USGS and Region III

To: Code 400 Rm 3538 Date 12/9/52

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2804

August 11, 1953

Memorandum

To: R. E. Adams, Chief, Operations Control and Statistics Division, DMEA

From: Iron and Ferro-Alloys Division, DMEA

Subject: Removal of application from the active file
Docket No. DMEA 2804 - Manganese
Great Western Consolidated Mining and Milling Corporation
Black Marvel mine
San Bernardino County, California

The applicant was notified on December 15, 1952, that additional data needed to be furnished before the referenced application could be processed. No data were received, and on March 3, 1953, we again asked the applicant in the interest of expediting the Defense Minerals Exploration Program to provide us with the required information.

Because the data had not been received by April 3, 1953, the applicant was then advised that unless the requested information was received by May 11, 1953, the application would be removed from the active file and the case closed.

By letter of May 4, 1953, the applicant requested 90 days from date of his letter to complete his prospecting program and submit an amended application containing the necessary data. The applicant was advised by letter of May 26, 1953, that his application for exploration assistance would be kept open until August 11, 1953, for submission of the requested data.

To date, however, we have not received the necessary information and we are, therefore, removing the subject docket from our Division files. The docket is transmitted herewith.

FAHutledge:foc
8-11-53
cc: Docket
Code 400
Adm. Reading File

W. S. Martin, Acting Chief
Iron and Ferro-Alloys Division

MAY 6 1953

Mr. Chester A. Phillips, President
Great Western Consolidated Mining
and Milling Corporation
4207 St. Charles Place
Los Angeles 19, California

Re: Docket No. DMEA 2804 - Manganese
Great Western Consolidated Mining
and Milling Corporation
Black Marvel Mine
San Bernardino County, California

Dear Mr. Phillips:

This will acknowledge your letter of May 4, 1953, asking for additional time to submit the information requested in our letter of December 15, 1952.

Because you have a prospecting program now in progress and have advised us of your intention to submit an amended application for exploration assistance, we will keep the docket open until not later than August 11, 1953, to give you an opportunity to submit the necessary data.

Sincerely yours,

C. O. Mittendorf

Administrator

cc: N. B. Belcher, USBM
M. D. Crittenden, USGS

ccl Docket
Code 400
Reg. 3
Adm. Read. File

FARUTLEDGE:foc
5-7-53

Copy to: Mr. Paul W. Pretzel, Vice President
Great Western Consolidated Mining
and Milling Corporation
Chicago 2, Illinois

400

400

Mr. Paul K. Kretzel, Vice President
Great Western Consolidated Mining
and Milling Corporation
[illegible] West Washington Street
Chicago 2, Illinois

APR 3 1953

Re: Docket No. DMA 2[illegible] - Manganese
Great Western Consolidated Mining
and Milling Corporation
Black Marvel Mine
San Bernardino County, California

Dear Mr. Kretzel:

Reference is made to your application for exploration assistance at the Black Marvel Mine. On December 15, 1952, we wrote you requesting additional information needed to process the subject application.

This information was not received and on March 3, 1953, we again wrote you requesting that these data be furnished. We wish to cooperate fully in the matter of allowing ample time for the submission of the necessary data, but if the required data have not been received by May 11, 1953, we will then remove the application from the active file and consider the matter closed.

Sincerely yours,

C. O. Mittendorf

Administrator

cc: Docket
Field Team, Region 3
Code 400
Adm. Rend. File
M. A. Melcher, USGS
A. D. Crittenden, USGS

PAHutledge/hhb
4/2/53

400

Mr. Paul W. Pretzel, Vice President
Great Western Consolidated Mining
and Milling Corporation
[illegible] West Washington Street
Chicago 2, Illinois

MAR 8 1953

Re: Docket No. [illegible]A 2004 - Manganese
Black Marvel Mine
San Bernardino County, California

Dear Mr. Pretzel:

Reference is made to your application for exploration assistance at the Black Marvel Mine. On December 15, 1952, we wrote you requesting additional information needed to process the subject application.

In the interest of expediting the Defense Minerals Program it would be appreciated if you would promptly provide us with the required information.

Sincerely yours,

W. S. Martin

W. S. Martin, Acting Chief
Iron and Ferro-Alloys Division

cc: Docket
Field Team, Region 3
Code 400
Admin. Asst. File
M. D. Melcher, [illegible]
R. B. Crittenden, [illegible]

Shutlodge/hhb
3/2/53

DEC 15 1952

Mr. Paul W. Fretzel, Vice President
Great Western Consolidated Mining
and Milling Corporation
69 West Washington Street
Chicago 2, Illinois

Re: Docket No. DMEA 2804 - Manganese
Black Marvel Mine
San Bernardino County, California

Dear Mr. Fretzel:

We are in receipt of your application for exploration assistance on the above-noted project.

In order to continue with the processing of this application, we will need more definite information, as follows:

1. We will need the book number and page number of record of the six additional claims mentioned in the Quit Claim Deed.

2. Sketches showing the general geology of the mineralized zone, with widths and length as far as possible. These sketches should show location of any workings, such as, trenches and pits.

3. Your exploration will need to be more definitely outlined. That is, you should include in your application the location, number and depth of proposed shafts, the location and length of drifts and crosscuts, and the location, length and depth of trenches.

4. Development of ore bodies and stoping of same are not a part of this program and cannot be included in an exploration contract.

5. As far as possible give unestimated cost of each part of the project, as well as the total.

6. We note that in your estimates of rentals, the rent practically equals the purchase price. Hence, it would be more economical to purchase this equipment and take a salvage value at the end of the project.

7. Under purchased equipment, it would be more economical to use detachable bits rather than buy a drill sharpener and use a full time blacksmith.

8. Under the head of furnished equipment, only a depreciation value is allowed. This is usually placed at one-sixtieth (1/60) of the value for each month used.

9. Your wage rates, as listed, are much higher than the general wages throughout the area.

We are enclosing our booklet which gives a detailed explanation of the Defense Minerals Exploration Program.

Sincerely yours,

G. C. Selfridge, Chief
Iron and Ferro-Alloy Division

Enclosure

TLChapman:lm
12/22/52

cc: Admin. Reading File
Docket
W. R. Malcher, DMEM
W. D. Grittenden, USGS
Field Team Reg. III
G. C. Selfridge
T. L. Chapman

IN REPLY REFER TO:

400

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

December 10, 1952

Memorandum

To: G. C. Selfridge

From: M. D. Crittenden

Subject: DMEA 2804 (DMPA 2733) Manganese
Great Western Consolidated Mining & Milling Co.
69 West Washington Street
Chicago 2, Illinois

The above docket was originally submitted to D. M. P. A. and was designated DMPA 2733. A copy of my memorandum to D. M. P. A. is enclosed. It describes the property briefly and summarizes the information available in our files.

Discussing the area with Mr. Wilson today leads me to the conclusion that the property might possibly yield as much as 100,000 tons of material, averaging 10 to 15 percent Mn. The ore mineral is hard psilomelane, the gangue is andesite and calcite. Modern sink-float treatment and the existing price of $2.30 per unit might make operation feasible.

In its present form, the proposal is essentially the same as that presented to D. M. P. A., and is not suitable for exploration assistance. If modified to include exploration only, I would recommend that the application be referred to the field for check sampling to reappraise the grade and possible tonnage of ore in the ground, and for a recommendation as to the feasibility of operation.

M. D. Crittenden

Enclosure

GREAT WESTERN INC. MINING CO.

BLACK MARBLE MINE

DOCKET 7 UNIT

SAN BERNARDINO CO. CALIF.

CONTRACT DATE JULY 30, 1951

C.A. PHILLIPS TO GREAT WESTERN INC. MINING CO.

BOOK OF CLAIMS		BOOK OF MINES	PAGE
TREASURE	NO. 1	209	400
TREASURE	NO. 2	219	3
TREASURE	NO. 3	219	3
TREASURE	NO. 4	219	4

PROPERTIES WITH (6) SIX PATENTED CLAIMS TO BE LOCATED & ACQUIRED CONTINUOUS.

RECORD CLAIMS DATE MAY 12, 1950

IN DOCKET MINA 2733

[illegible] MINE [illegible]

The property, as a whole, may be regarded as an open-pit operation. Underground mining would not be practical, nor profitable, due to the highly fractured and broken condition of the country rock.

The ore, psilomelane, occurs in solidly fixed veins, veinlets and stringers in thickness of 1/2" to 2" and in a widely disseminated form throughout the mineralized areas. In general, where vein material exists, the ore is cleft on a vertical plane, clearly separated from the wall rock and is distinct and highly concentrated.

In the mineralized areas, between wall rock, the ore is combined in many pieces with the igneous intrusives.

The wide dispersion of the ore does not warrant the cost of an expensive exploration program. Present development work has exposed sufficient tonnage to warrant the construction of small milling operation of approximately 50-100 tons per day. Further exploration will continue with development of present exposed ore at a fraction of cost of an exploration program.

Trenching of the mineralized areas, to explore the potential values, would, undoubtedly, determine the mineral content of the areas opened. However, ores recovered in the trenching operation would be suitable for milling and accordingly, stock-piles would be required at the proposed mill site.

Stock-piling of suitable milling ores would require considerable investment in time, money and equipment, which, in the judgment of the author, would be in excess of the cost of a mill. Core drilling, no doubt,

would be unsatisfactory in determining the true tonnage of probable ore, due to possible misleading results; i.e., mineralized areas of good quality of ore may be by-passed, or encountered, as the case might be, causing an unbalanced estimate of conditions. Further, the initial cost of a core drilling campaign over the entire area of what is presumed to be mineralized, would be prohibitive. (NOTE: Recent quotations of contract drilling averages $8.50 per lineal foot of hole.)

Comparative cost estimates of any type of exploration program favor continuation of open-pit operations, allowing development progress to expose positive ore.

Other factors of importance, when considering any type of exploration program, would be time and season, if cost of such operations is not considered.

A reasonable length of time required for a comprehensive core drilling, or trenching exploration program would be 90 days to 120 days. This period should be added to the time required to design, erect and begin operation of mill. A total elapsed time of six months would be a reasonable estimate, before mill returns could be expected.

It is the considered judgment of the author, any program other than immediate erection of recommended type and size of mill, together with progressive development of selective, open-pit mining, would not warrant further consideration of the property as a producing and profitable investment.

PRODUCTION CONCLUSION

The available tonnage of positive, broken ore, together with assumed tonnage of probable ore on Claim No. 1, may be regarded as sufficient to warrant the erection of 50 ton capacity concentrating mill.

A fair value of exploration work completed on Claim No. 1, at present day cost, would be approximately $35,000.00 to $50,000.00. The available tonnage, though it is reduced to an amount equal to that required for mill feed for a period no longer than one year, 365 days of operation, at 50 tons per day, would encourage the management to invest sufficient capital in the property to construct the required milling facilities and install necessary mining equipment and camp for employees.

NOTE: Cost estimates covering required equipment, camp facilities and mill investment, are shown in seperate category.

Attention is directed to report of Bennard & Drake. Assays indicate an average Sn content of samples at 24.35%. Ore grading 24.35% Sn content is below the minimum quality suited to ship to government stock-pile depots, due to the high freight rate involved, together with the cost of mining, handling and assaying. There are other factors to be considered in shipping low grade ores to government stock-pile depots, which would prohibit profitable operation; the most important of which is the investment in producing the ore and speculation on the cash returns, after the ore is milled and processed at the depot.

INTRODUCTION CONCLUSION

DIRECT SHIPMENT TO STEEL MILLS.

Investigation of markets for low grade, run-of-mine manganese ores, indicate opportunities for ready sale of ores averaging 20% Mn. Sales to steel producers can be made on a basis of approximately $0.75 per unit, 20% Mn content, f.o.b. cars mine shipping point.

This subject has been given due consideration in our analyses of the economics of the operation. However, there are factors to be considered before entering into contracts for the sale of low grade ores, namely: (1) Method of sampling; (2) Payment basis for ores averaging above 20% Mn; (3) Size, or screen analysis; (4) Tonnage flow, minimum weekly, or monthly shipments; (5) Acceptance of ores before shipment, or loading. The purchaser would be required to install assayer, or buyer, at the mine, one who would be in authority to approve all loadings and shipments.

A study of probable difficulties arising in sales to steel mill purchasers, other than ordinarily expected, clearly indicates the need of some form of milling facilities to recover the fine particles of high grade ore which are objectionable in blast furnace operation. It is presumed, although no tests have been made, the fine particles rejected in the screening of ore to definite size, would be of higher Mn content and, therefore, may be of such quality as would support the increase in cost of freight and other charges for shipment to stock-pile depots, after sintering or briquetting. Assaying of the concentrates ore before shipment to depot would eliminate, to some degree, one of the hazards involved.

PRODUCTION CONSTRUCTION

GOVERNMENT STOCK-PILE PROGRAM

Specific reference is made to government stock-pile program, wherein the government offers management a very liberal incentive to explore potential producing properties for strategic minerals. Manganese is regarded as one of the essentially important minerals in the stock-piling program and, in consequence, the defense minerals agencies are offering all possible assistance to the mining industry to encourage the development of additional production.

Consideration has been given to United States Department of the Interior, Defense Minerals Administration Bulletin M0-5, National Defense Appendix, Title 32A, Sec. 9, "Ratio of contribution..." "The government will contribute to the exploration project, upon the terms specified in the contract, a certain percentage of the total cost of the project, depending upon the mineral which is the subject of exploration, as follows:....Para. b... "In the case of antimony, manganese, mercury, tungsten-75%."

Reviewing previous comment herein, the reader will note the property does not lend itself to further exploration, when the costof such work is considered in relation to production of immediately available ore deposits. A reasonable estimate of the cost of core drilling the entire property, based on cost of $8.50 per foot of hole, withoutconsideration of the cost of assays, etc., would be $153,000.00. This estimate is calculated on the basis of 18 holes on each claim, 100' depth; a total of 160 holes.

PRODUCTION CONCLUSION

An exploration program involving trenching of the claims will require an equal amount of equipment, camp, and operating tools, such as compressors, shovels, tractors, trucks and allied equipment, as would be required for use in production from the present explored areas. Therefore, it is the opinion of the author, such an exploration program will not be conducive to economic management and expenditure of capital.

In summarizing the foregoing remarks, the management should consider investment in milling facilities in preference to expenditure of initial capital for further exploration of the property. It is noteworthy to mention the fact that any exploration program expense would equal approximately 60% of the initial cost of milling facilities.

GOVERNMENT LOANS

Attention of management is directed to the Defense Production Act of 1950, Sec. 302, regulations prescribed by Chairman, National Security Resources Board, Title 32A, Chapter VI. Under the above Act and pursuant to Executive Order 10161, loans are made by the government, where conditions warrant, for the development of properties containing defense minerals. It is the considered judgment of the author, the subject property would be regarded as acceptable for loans in the amount required to equip and operate a mill of capacity to 100 tons per day.

OPERATIONS	COSTS
	Labor
	Mining
	Hauling
	Milling
	Freight & Handling
	Overhead & Supervision

Labor

The lack of industry and operating mines in the area of the subject property will necessitate advance anticipation of all labor requirements. Needles, California, one hundred miles east, may furnish required common labor. Most available laborers at Needles are full-blooded Indians, principally of the Chemehuevis Tribe. Mudjoi, Mojave and other Arizona Indians, together with Mexicans, make up the bulk of common labor used on railroad section work.

Barstow, California, forty-one miles west, is headquarters for floating semi-skilled miners, muckers and similar mine labor. The Management will experience no difficulty in obtaining experienced semi-skilled mine labor, all of whom are thoroughly acclimated and adjusted to life in isolated camps. Rates of compensation for common labor range from $1.50 per hour $1.90. The latter may be regarded as semi-skilled when operating air tools, drilling, mucking, etc.

Skilled labor, such as shovel operators, cat skinners, maintenance men, etc., demand rates from $2.00 to $2.50 per hour. Such labor is in plentiful supply, if camp conditions are good.

OPERATING COSTS

Mining

Mining costs can be readily adjusted to fixed limits when the mine is in production. Preliminary preparations of operating areas, construction of hauling routes from high ground, preparation of stock-piles and other organizational work, will, of necessity, be regarded as investment to the extent of the cost. A reasonable estimate of the cost of installation of equipment, preparation of hauling routes, opening of working areas, removal of waste, etc., would be conservatively estimated at $20,000.00. A considerable portion of this amount would be recovered in ore values when the mine is in productive operation.

Equipment required for successful and continuous operation of the mine would include:

1-Power Shovel, 3/4 cu.yd. capacity dipper with combination drag-line

1-Tractor with dozer, similar to Cat D7

1-Air Compressor, 365 CFM, portable, Diesel

1-Air Compressor, 160 CFM, portable, gasoline

1-I-R, or equal, Drill sharpener

3-Trucks, preferably 3½ ton, dump bodies 5 c.y. capacity

1-Truck, preferably a 2 x 4, Dodge Power Wagon or equal

1-Lot, drill steel, drill bits, blacksmith forge, tools, etc.

1-Lot, Air hose, 300', couplings, etc.

1-Lot, tanks, fuel, air receiver, water storage

1-Lot, pipe, 1" to 3". Total, approximately 1000'

1-Lot, wire rope, ½" approximately 1000' reel

OPERATIONS COSTS

Mining - Cont'd.

1-Truck, used, fitted with water tank, for supply.

The following tabulation of prices will apply to the foregoing list of equipment required for mine operation:

1-Shovel	$25,000.00
1-Tractor	18,700.00
1-Compressor	9,000.00
1-Compressor	2,000.00
1-Drill Sharpener	4,000.00
1-Power Wagon Truck	3,400.00
3-Trucks at $6,700.00 each	20,100.00
1-Lot steel	2,400.00
1-Lot air hose	250.00
1-Lot pipe	550.00
1-Lot Tanks, air receiver	1,600.00
1-Lot, wire rope	400.00
1-Truck, used, water tank	2,000.00
TOTAL	$89,700.00

OPERATING COST - Daily

1-Shovel Operator	$ 20.00
1-Helper	12.00
1-Blacksmith, tool dresser	16.00
1-Drill runner	16.00

Cont'd.

OPERATING COST - Daily - Cont'd.

2-Helpers at $12.00 each	24.00
3-Truck Drivers at $16.00 each	48.00
1-Cat skinner	20.00
Total labor, direct	$156.00
Pit foreman, indirect labor	20.00
Total labor	$176.00

Other factors of cost should include insurance, fuel, overhead and executive salaries. These items should be distributed on an over-all basis of total cost of operation of all departments and activities.

Interest

Calculated on a basis of 6% interest per annum, a carrying charge on equipment investment should be:

Investment	$89,700.00	
Int. at 6%	$ 5,382.00	
Daily charge against production based on 300 operating days per year	$	17.94

Depreciation

Calculated on a basis of 20% depreciation per annum, a carrying charge on equipment investment should be:

Investment	$88,700.00
Annual charge at 20%	17,940.00
Daily charge against production based on 300 operating days	59.80

[illegible] [illegible]

Repairs

Using customary figures for anticipated repairs on new, modern equipment, at rate of 5% first year, 10% second year, 15% for third year and 20% for fourth and fifth years of operation, we conclude an average of 14% of original cost to cover all maintenance repairs and labor charges for installations. Obsolescence and salvage values are not considered in the analysis.

Therefore:	Investment	$89,700.00
	Repair cost (est.) @ 14% of cost	12,558.00
	Daily charge based on 300 days operation	41.86

[illegible]	Daily charges	
	Labor, direct & indirect	176.00
	Interest	15.2733
	Depreciation	59.80
	Repairs	41.86
		$ 292.9333

Comment:

It is to be presumed the above charges will apply, as a whole on all operating days. However, all charges other than labor, are fixed, and must be supported in any analysis of cost that does not give consideration for full operating periods of 300 working days per annum. Therefore, cost of mining ore will be adjusted in exact relation to number of days of mill operation.

OPERATING COSTS

MINE Sand Cost

Assuming daily average tonnage for mill feed to be fifty (50) tons per day, we have a net cost of mining, per ton, less fuel, insurance, overhead and fixed charges:

Total operating cost	$298.9333
Tons per day, fifty (50)	
Cost per ton of mined ore (net) delivered at mill	$ 5.8586

MILL COST

Machinery-equipment

Buildings-Sheds-Laboratory
Power House-Office

Outside equipment:
Storage Bins, Conveyors,
Ore re-handling unit

Accepting the customary figures for concentrating mill using tables, based on cost of $1,000.00 per ton of capacity, we have a total cost of machinery and equipment for milling operations:

50 net tons capacity @ $1,000.00 per ton	$50,000.00
Buildings, approximate floor space 6500 sq.ft. @ $3.00 per sq.ft.	19,500.00
Magnetic Separation	25,000.00
Outside equipment, est.	6,700.00
Total cost (installed)	$101,200.00

LABOR OPERATING

Supervision

1-Metallurgist-Chemist-Assayer (per day)	$ 25.00
1-Assistant (assayer)	16.00
3-Mill foremen (3 shifts) @1.90 per hour	45.60
9-Millmen @ 1.75	126.00
	$212.60

Power

Assumed cost of power @ .025¢ per KWH 300 KWH per day (Includes camp lighting, etc.	7.50
	$220.10

Net cost per ton of ore milled, based on capacity of 50 tons per day $ 4.40

Depreciation, Obsolescence, Interest, Maintenance

Basing our calculation on the assumed life of the mine and active market for the ore, at five years the following fixed charges would be in effect:

Investment: Millmachinery & appurtenances	$101,200.00
Assumed life, 5 years, or 20% annual fixed charges	20,200.00
Daily charge (300 operating days per year)	67.166
Fixed charge per ton of ore milled based on capacity rate of 50 tons per diem	1.3432

OPERATIONAL COSTS

CAMP EQUIPMENT BUILDINGS

Isolation of the mine and operations demand necessary housing and boarding facilities be permanently established at convenient point in the area. Suitable ground for such facilities is open to location on Town Site.

The following estimate is prepared to cover all required housing and other facilities, to accommodate the number of men engaged in all operations:

Buildings

1- Bunk House for single men	30' x 60'	
1- Recreational building	23' x 40'	
1- Mess building, including kitchen, commissary stores	30' x 50'	
10- Dwellings	12' x 15'	
1- Staff House 6 room	20' x 40'	
1- Office	13' x 30'	
Total floor area, square feet:	7,270	
Estimated cost, including block foundation, insulation, @ $2.25 per sq.ft.		$16,357.50

CAMP FURNISHINGS

35 single cots with mattresses at $21.00 each	735.00
70 blankets, pillows at $8.50 each	585.00
15 Heating stoves at (aver.) $42.00 each	630.00
Total camp furnishings	$1,950.00

[illegible] [illegible]

[illegible] - Cont'd.

Commissary & Kitchen

Fully equipped kitchen, range, utensils, machines	$3,500.00
Refrigerators, ice, freezers, lot	900.00
Table equipment, chin-ware, cutlery	350.00
Heating & cooling devices	500.00
Total commissary-mess	$5,250.00

Office equipment

Full equipment, machines, filing cabinets, desks and furnishings	$ 530.00

[illegible] [illegible]

Buildings, etc.	$24,087.50
Depreciation, @ 20% annually	4,817.50
Daily fixed charge, 300 operating days per year	16.058
Cost per ton of milled ore	.32

[illegible]

Cost per ton of mined ore at mill	$ 5.8586
Cost per ton of milled ore	4.70
Fixed charges - mill - per ton	1.3492
Camp, commissary, buildings, etc. per ton of milled ore	.32
Total cost per ton, mined, milled ore	$ 11.9278
Executive Supervision @ $10,000.00 per annum Cost daily, per ton	.66
Office assistants-2 @ $350.00 mo.) Cost per ton	.56
Grand Total, cost per ton, (50 tons daily)	$ 13.1478

[illegible] [illegible]

Investment

Installation mine mach'y & equipment.	[illegible]
Machinery-equipment mine	89,700.00
Mill installed	121,500.00
Camp buildings	16,357.50
Camp furnishings	1,997.37
Camp commissary-mess	5,200.00
Office equipment	533.60
Total	$ 234,367.50

Working Capital

Estimated on 45 day period after mill is in operation

Mine Labor	$ 7,920.00
Mill Labor	3,924.00
Executive-office personnel	2,700.00
Lower purchased	337.50
Total	$ 20,861.50
Miscellaneous	4,538.50
	$ 25,000.00
Investment	$ 234,367.50
Grand Total	$ 259,367.50

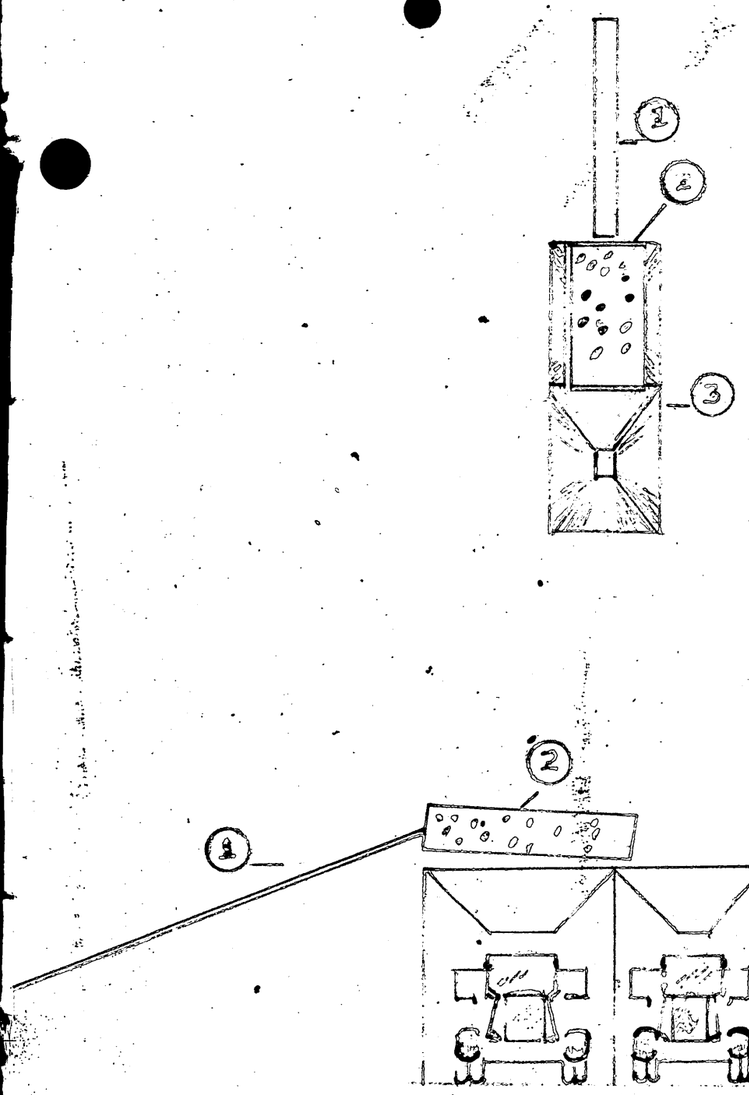
[illegible]

5 25

[illegible]
MINING & [illegible]

President

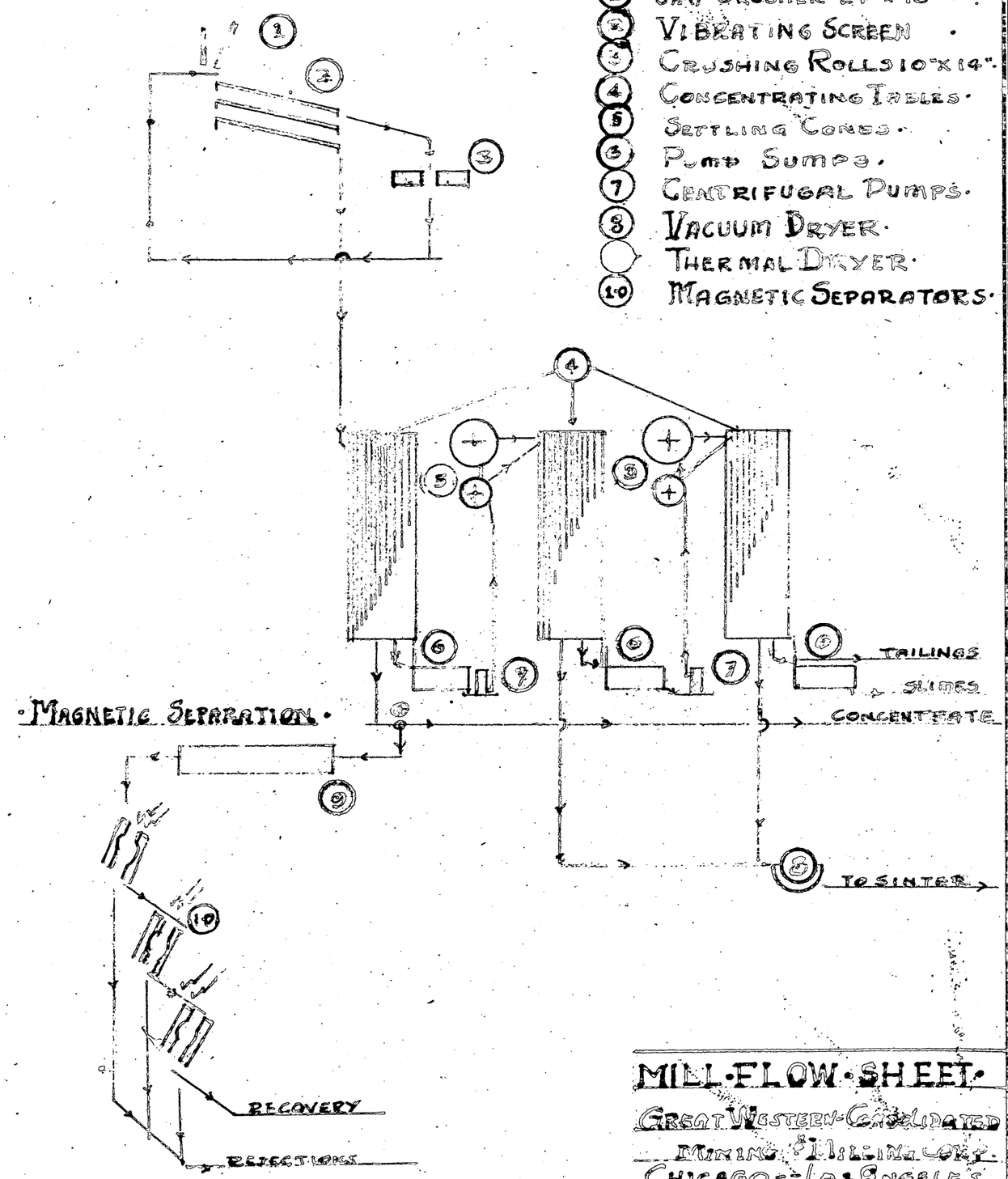
July 24, 1952



1. Conveyor - 20" belt
2. Trommel Screen
3. Bins.

·SELECTIVE MINING·
·&·
·ORE SEPARATION·
- for -
GRADED MATERIAL

July 25, 1952 | C.A.P.



1. Jaw Crusher 24" x 15".
2. Vibrating Screen
3. Crushing Rolls 10" x 14".
4. Concentrating Tables.
5. Settling Cones.
6. Pump Sumps.
7. Centrifugal Pumps.
8. Vacuum Dryer.
9. Thermal Dryer.
10. Magnetic Separators.

·MAGNETIC SEPARATION·

MILL·FLOW·SHEET·
Great Western Consolidated
Mining & Milling Co.
Chicago -- Los Angeles

July 25 '52 | C.A.P.

[illegible]

Owner: Great Western Consolidated Mining & Milling Corp.

Title: Black Gravel Manganese Claims

Number of Claims: 15 **Area:** 300 acres

Location: San Bernardino County, California
Twp 9-N, Range 6-E, Section 19

Principal Ore: Manganese (Psilomelane)

Other minerals: None

[illegible]

The property lies in the [illegible] extension of the Rody Mountains and foothills. Approach to the property is from the Hector Station on the Santa Fe Railway, by way of trail through a dry wash. Distance from Hector Station is approximately 6 miles. The general terrain is even and well defined, with easy slope, approximately 3%, bearing to the south and west. The entire area from foothills to Santa Fe rail line is open and free from heavy brush. Shallow dry washes cut [illegible] through the area. Depth and width of washes indicate considerable absorption of meteoric waters, with no apparent run-off.

[illegible]

The climate, in general, may be regarded as hot and dry during summer months and temperate during winter months. Relative humidity averages about 40%. Summer temperatures average 90-115 degrees F. Winter month temperatures average 70-100 degrees F. Heavy [illegible] [illegible].

ACCESS

Except for one circuitous trail route through a dry wash, passing through a culvert under the main line of the Santa Fe Railway, there is no other means of ingress to the property. The present route does not permit hauling of materials other than camp supplies. Other routes to the property from Highway 66 can be laid out, reducing the distance by approximately four miles.

RAILROAD TRANSPORTATION

Shipping facilities, in the form of loading ramp and side-trackage, can be arranged, at Siegel Station, Santa Fe Railway. Siegel Station lies approximately 4.5 miles from the base of southeast edge of the subject property. No transportation facilities are available for passenger travel. Bus stops on Highway 66 are located at Ludlow, 11 miles east, and Fox Station, 11 miles west. The area surrounding Siegel Station is barren and desolate. There are no settlements or habitations, gas or service stations, except at Ludlow on the east and Fox Station on the west, both located on Highway 66.

WATER

Known water supplies exist west of the Siegel lava beds. At Fox Station ground water stands at 28' below the surface. Tests of Fox Well indicate an unlimited supply. One well is located at a point approximately 6 miles N-E of Fox. Water from this well is used for

WATER - Continued

range cattle. Average depth of both known wells is 300'. Geology of the wells is unknown. We have been given to understand there were no logs made. The author, in company of competent field crew, made a number of magnetometer tests in the area of Pisgah and the subject property. Ground water reactions were clearly identified in numerous locations, ranging in depth from 350' to 600'. Reactions indicated a plentiful supply available. Magnetometer reactions were checked with wells of known supply and depth. All water supplies available may be regarded as suitable for cooking and drinking, although it is slightly alkalin...possibly soda. The water supplies of the area have not been chemically analyzed.

SURVEY

The area under observation has not been surveyed in recent years. There are, however, wooden stakes found which indicate corner markers, although the original markings have weathered and are unintelligible. The area adjacent to the Santa Fe Railway may contain bench marks and other identifying points, from which the original survey may be checked.

GENERAL

The remote location of the property requires trucking of all supplies, food-stuffs, etc., from Barstow, California, the nearest point, a distance of 37 miles. Small tools and other items are available at Barstow in retail establishments. Los Angeles, 175 miles, will be the center/source

of buying items of machinery and wholesale merchandise/supplies. Jobbers of fuel oil, gasoline, etc., deliver quantities in bulk.

[illegible]

A survey of the area indicates the possibility of development of numerous small manganese deposits, which have, in the past, been producers of high grade, 40-45% Mn, ore. There are three well known deposits, two of which have recently opened and are operated by hand tools and labor. These properties may be of interest to the management as a source of supply of high grade milling ore. No examinations of these properties were made during the survey. Information was obtained through sources considered reliable.

GENERAL GEOLOGY

The Cady Mountain Region belongs in the Basin Range geological province. This province, according to Herr, extends from the Sierras on the west, to Utah on the east and from Idaho to Arizona.

The Cady Mountain Range lies in the north-central portion of San Bernardino County, California, Long. 116° 19' W to 116° 30' W and 34° 35' N lat to 35° N latitude. Altitudes range from 2000' at the base of the range to 4500', a peak in the east-central portion. The average altitude is approximately 3000'. The surrounding area at the base of the Range is desert land of recent alluvium.

The area under observation contains a series of igneous intrusives, in parallel, which enclose dacite, diorite and calcite. The ore in mineralized

areas is principally composed of quiloselino, with some showing of pyrolusite. The mineralized areas lie in parallel, in widths from 15' to 60', separated by narrow belts of soft, highly fractured, lime-rock. These bedded areas appear to pinch out at depth, as they are not evident, to any great extent, in the side slopes of the walls of the gulches. The mineralized areas persist in the dikes throughout the property. It is reasonable to suppose the mineralized areas can be expected to be consistent in possible ore.

[illegible] PROPERTY [illegible] [illegible] of [illegible]

The Treasure Claims, as they are known, were originally discovered and located in May, 1930. Original locators were Ernest F. Logan and Ray Page, residents of San Bernardino, California. The property was acquired by present owners June 9, 1952, through purchase from Ernest F. Logan. Quit-claim deed to the property is on file in County Recorder's Office at San Bernardino, California. Recorded June 6, 1952, Book No. 2963, Page 231, Official Records, San Bernardino County, California.
The property has been exploited in the past for high grade manganese ore. No machine mining has been attempted, due to limited finances of the owners and operators. All work was carried on in a desultory manner by hand tools and labor. Manganese ore of 50-55% in content was mined and shipped to Coast Steel Mills during and prior to the late war, 1941-1945. All mining and development to date has been carried on in Claim No. 1, where the original discovery was made.

THE PROPERTY HISTORY GEOLOGY EXPLORATION PROGRESS - Cont'd.

Outcropping of high grade ore, in veins, veinlets, stringers, etc., is in evidence on all claims. Most of these outcroppings can be traced on the surface for distances of 300' to 500' and in places from 100' to 700', on different claims and at different levels. These outcroppings clearly indicate widespread deposition of the ore. All samples taken from widely separate areas show no appreciable difference in the nature of the ores. Most showings in place are from 6" to 30" in width on the surface and appear to be divided, or split, on a vertical cleavage along the strike. The mineralized areas lie between nearly vertical, 800, wall rock.

Claim No. 1

Claim No. 1 lies in the center of three of the original four claims. Altitude at the point of discovery monument is 3000' and about 750' above the altitude of lower end of extension claims. A narrow access road leads to the old workings from lower levels. The outstanding mineralized area of this Claim extends a distance of approximately 600' from the discovery point and maintains a width of twenty to thirty feet. Depth of the zone has not been explored, although the entire area has been opened on the surface. A reasonable estimate of the developed area would be 12,000 square feet. A calcite "horse" extends through the center of the mineralized zone which is approximately 15' in width. The exposed area has been assayed and shows an average of 21.34 oz.

[illegible]

Other claims in the group, numbering 15, are all in similar vein system and igneous intrusions identified on Claim No. 1. All claims lie in the direction (NS-SE) of the dike system of the area. The prominence of outcroppings on all unexplored claims indicate considerable tonnage of high grade ore is available to open-pit mining operation methods.

SUMMARY OF ORE POSSIBLE ORE

Claim No. 1. Positive, or broken ore, to the amount of two thousand net tons is available on dumps and on the surface. This ore was rejected during periods of hand-tool mining, while high-grading the property. Assays indicate this ore averages 27.37% Sn.

PROBABLE ORE

Claim No. 1. Probable ore exposed in explored areas, based on estimate of 60' depth throughout the length of mineralized areas is calculated to be

Length of exposed area.....600'

Width of exposed area, average.....20'

Depth of exposed area, assumed.....60'

Total cubic area.....720,000 cubic feet.

Weight per cubic foot, estimated.....180#

Total tonnage.....(net).....64,300

[illegible] ORE

Claim No. 2 Elevation 3300'

Outcropping indicates a similar general condition on all claims at higher elevation above Claim No. 1.

Assuming, none other than surface showings can be considered, we limit our estimate to high grade ore veins. A well defined vein is in evidence paralleling the explored area in Claim No. 1. No noticeable showings appear on slope of north half of Claim No. 1 and south half of Claim No. 2, although a lense of high grade ore is in evidence at west end of Claim No. 1, which extends into Claim No. 2.

Inability to follow the vein system for any appreciable distance on the surface of Claim No. 2, precludes the possibility of estimating any definite amount of ore. Exploration by trenching, or open cut, will prove up the Claim.

Claim No. 3.

Well defined veins of various widths appear on the surface. At some points on the down slope to the south and west, ore veins have a tendency to develop on a lenticular horizon. A prospect hole on the north side of the Claim does not confirm this impression, although a distinct showing of ore is apparent at the prospect hole. Surface outcroppings of minor proportions are prominent over the Claim, except on the contact with the fractured lime rock, which cuts through the lower (SW) side of Claim No. 1.

Exploration by trenching, or open excavation, will prove up this Claim.

MONTANA ORE

CLAIM NO. 4

Claim No. 4 lies in the lower SW end of the group. The general structure of the formations are similar, in all respects, to Claim No. 1, except for its elevation. A mineralized area of approximately 40' in width is in evidence for the greater portion of the length of the Claim. There are no distinct showings of vein material, although the wide dissemination of ore is very clear in places. It is reasonable to suppose this claim will carry high grade ore values comparable with others. Reference is made to observations taken on Claim No. 7, which adjoins No. 4.
It is presumed, the mineralization mentioned in Claim No. 7 continues into Claim No. 4.

CLAIM NO. 5

Claim No. 5 is the lowest point on the SW extension of the group. Evidence of continuation of the vein system was found at various points on the Claim.
There were no distinct showings, or outcropping.

CLAIM NO. 6

Claim No. 6 is a continuation of Claim No. 5 to the SW. No surface indications were found, although it is apparent the same conditions prevail, as that to be found on Claim No. 5.
Exploration on this Claim must be done below the normal grade of the area.

PROPOSED OFFS

Claim No. 7

Claim No. 7 adjoins Claim No. 4 on the western end, No. 6 on the south and No. 8 on the NW.

The elevation of the greater portion of the Claim lies at an altitude of approximately 100' above the lower Claims. The vein system is very prominent on both sides, at the hanging wall and the foot wall. The mineralized area is approximately 40' in width and extends a distance of 300' in parallel with all other dikes in the area.

The two prominent veins are similar in all respects with those on other claims, except in that they are more solid and closely formed.

Float material of high grade quality is scattered over the entire mineralized area, which may be regarded as an indication of broken projections from underlying ore veins. There is no indication of the float moving from higher ground, for the reason the mineralized area is most prominent at the highest point on the Claim.

It is reasonable to expect the vein to persist to a depth of at least ten (10) feet, and we have, accordingly, concluded the probable ore will be 300' x 2' x 10' in deposit at each wall. Therefore, the total estimated tonnage would be 600' x 4' x 10', or 24,000 cubic feet, or 216 net tons. The ore in place on this Claim might well be considered positive ore, due to its prominence and accessibility.

OTHER CLAIMS PROPERTIES

All other Claims rightfully belong in the same category of Claims Nos. 2 - 3 - 4 - 5, which we will conservatively estimate to contain one thousand tons of possible ore on each claim.

SUMMARY OF ORE	REPORT		
Positive Ore	Claim No. 1	Tons	2,000
Probable Ore	Claim No. 1	"	64,300
Probable Ore	Claim No. 7	"	216
Total combined probable and positive ore:			68,516

POSSIBLE ORE — ESTIMATED

Assuming all surface outcropping and indications on all other claims of the group would be limited to one thousand net tons per claim, without further exploration, we, therefore, would identify a total of 12,000 tons.

GRAND TOTAL ALL ORE

Positive Ore	2,000 tons
Probable Ore	64,300 "
	216 "
Possible Ore	12,000 "
Total	78,516 "

WEIGHT OF ORE IN SHOVEL

According to all assays to date the average Mn content of the ore is 24.35%. Assuming a loss of 9.35% in mine-run ore when mine is operating with power shovels and large tonnages, we conclude a fair average of total tonnage to be 15% Mn content.

Accordingly, we have a total of 11,770 tons of Mn, removing 85% of the total tonnage, as waste material.

INTRODUCTION [illegible] & [illegible] REPORT

Analysis of the attached report covering laboratory tests and assays, clearly indicate the high potential recoveries to be obtained from run-of-mine ore, averaging 30% and plus. Sheet 1, paragraph 1, indicates an average recovery of 43.25% manganese, from three (3) classified screen tests in 38% (by weight) of lot 1 original feed.

yield, not recovery

To conclude from the above results, a mill having a capacity of 50 tons per day, will produce 19 net tons of 43.25% concentrates.

It will be noted (K & D report, para. 2, sheet 4), there is a loss of 23% of the total contained manganese in the mill feed. A reasonable conclusion in this instance indicates (1) a low efficiency of the flow-sheet, or (2) that portion of the Mn lost in milling is not recoverable in the flow-sheet employed. Further recovery of the Mn content of the mill tailings should be a subject of further research when mill is in operation.

CONCLUSIONS

In concluding analysis of the report of Gossard & Drake we can determine the following data:

Mill feed at 50 tons per day

Recovery 38% of feed, or 19 tons of concentrates of 43.25% Mn

Mill efficiency 77%

Additional Mn values are evident in mill feed fines at -35 mesh.

[illegible]

[illegible]
[illegible]

June 23, 1952

[illegible]

Sample #21960 "Low Average Grade Ore"

The small sample (287 g) was crushed to -4 mesh, avoiding the production of fines as far as possible. The crushed sample was screened, sieved, and sink-float separations were made on the various coarser fractions, as shown in the following diagram. A heavy liquid of sp. gr. 2.92 was used in the sink float separations.

[illegible]
#21960 Mn 27.37

57.3%

10.1%

26.5%

6.1%

-4 + 6 mesh		-6 + 20 mesh		-20 + 35 mesh		-35 mesh
21960A		21960B		21960C		21960D Mn 28.08
(79.1%)	(21.9)	(63.6%)	(36.4)	(62.2%)	(37.8)	
Heavy	Light	Heavy	Light	Heavy	Light	
21960AH	21960AL	21960BH	21960BL	21960CH	21960CL	
43.0%	14.3%	16.9%	9.6%	3.8%	2.3%	
Mn 38.30	Mn 11.38	Mn 37.25	Mn 10.28	Mn 10.00	Mn 9.36	
Fe 1.00		Fe 1.30		Fe 1.33		

As shown in this diagram, three manganese concentrates were obtained, ranging from 38.30% to 10.00 Manganese. These 3 concentrates represented 63.7% of the weight of the original feed, and the average manganese content in the concentrates was 34.07%.

The recovery of Manganese in the concentrates was 79.3%; i.e. 79.3% of the Manganese present in the original feed was recovered in the 3 concentrates.

6/23/52

The - 35 mesh fines contained 28.08% manganese, and it is very probable that further manganese recovery could be made from them.

The combined tails represented 26.2% of the original weight, and had an average manganese content of 13.80%.

A chemical analysis was made on the feed sample, #21960, as follows:

Silica, SiO_2	15.75
Iron, Fe	1.50
Alumina, Al_2O_3	9.49
Lime, CaO	7.40
Magnesia, MgO	2.10
Manganese, Mn	27.37

A spectrographic analysis was also made on this feed sample, with the following results:

Large amount	Manganese Silicon Aluminum Calcium
Small amount 1%	Sodium Potassium Magnesium Barium Iron
Very Small amount 0.1%	Strontium Lead Titanium
Traces 0.01% to 0.001%	Lithium Copper Silver Chromium Zinc

No values were found in addition to the manganese content.

6/23/52

A second sample of approximately 300 lbs. was also available, which was described as being average mine run.

Sample #21961 (Av. Mine Run)

A representative portion of this sample was cut out, and screened through a 35 mesh screen in order to determine the amount of fines originally present. The coarser material was then crushed to -4 mesh, screened, and sink-float separations were again made on the coarser fraction, using the same heavy liquid.

[illegible]
#21961 Mn 21.34

42.2%

34.2%

8.6%

6.0%

9.0%

-4 + 8 mesh	-8 + 20 mesh	-20 + 35 mesh	Original -35 mesh	Crusher -35 mesh
			Mn 12.48	Mn 18.35
			Fe 1.66	Fe 1.44

(45.4%) (54.6%) (45.1%) (54.9%) (39.4%) (60.6%)

Heavy	Light	Heavy	Light	Heavy	Light
#21961[illegible]	#21961[illegible]	#21961[illegible]	#21961[illegible]	#21961[illegible]	#21961[illegible]
19.2%	23.[illegible]%	15.4%	18.8%	3.4%	5.2%
Mn 42.75	Mn 6.97	Mn 43.67	Mn 4.04	Mn 44.02	Mn 2.75
Fe 1.11		Fe .56		Fe 1.11	

15% loss in fines.

6/23/52

The three manganese concentrates obtained ranged from 42.75% to 44.22%, averaging 43.25% Mn. The combined concentrates represented 38.0% by weight of the original feed.

The recovery of manganese in the concentrates was 77.0%; i. e. 77.0% of the manganese present in the original feed was recovered in the three concentrates.

The -35 mesh fines originally present in the mine run ore sample contained 12.48% Mn; the -35 mesh fines produced in the crushing operation contained 18.35% manganese. It is very probable that additional manganese recovery could be made from both types of fines.

The combined tails from the sink-float operation represented 47% of the weight of the original feed, and averaged 5.33% manganese.

Chemical analysis was made on the composite concentrates:

Silica, SiO_2	5.35
Alumina, Al_2O_3	1.81
Lime, CaO	3.65
Manganese, Mn	43.25
Iron, Fe	.78
Copper, Cu	.065
Sulfur	.05
Phosphorus	.047
Lead, Pb	under .01
Zinc	trace

6/23/52

A spectrographic analysis was also made on the combined composites:

Sample #21961 Manganese Concentrates

Large Amount.....	Manganese
Small Amount.....	Barium
X%	Sodium
	Aluminum
	Iron
	Silicon
Very small amount.....	Strontium
0.X%	Magnesium
	Titanium
Traces.....	Copper
0.0X% to	Silver
0.000X	Chromium
	Lead
	Zinc

Sheet No. 5 of 5.

[illegible] [illegible] & [illegible]

Consideration has been given to the character of the installation of mining equipment and mill capacity, predicated upon the estimated life of the mine. We have two alternatives in our calculations, viz: positive ore and probable ore as the first; possible ore, the second. Further calculations cannot be made until additional ore has been proven existent. Therefore, in the first instance we have a total of 54,516 net tons of positive and probable ore. Basing our production calculations on a minimum capacity mill of 50 net tons of mine run ore per 24 hour day, a total life of the mine will be 1091 days of continuous operation, or approximately 3.5 years.

Assuming development work would prove the possible ore referred to, the life of the mine would be extended 240 operating days, or 20 months, 1.75 years. Total assumed life of mine, 5.25 years.

[illegible] [illegible]

Tests conducted by Kennard & Drake, report attached, have determined the ore to be amenable to sink and float and flotation concentration. Tests were made from different samples, although general of the property, to determine the most economical and effective method of concentration. Results of these tests and recommendations of Kennard & Drake, show a preference for simple table concentration. General design of mill is included in separate part of this report; also estimates of cost of construction are included in proper category.

6/23/52

The three manganese concentrates obtained ranged from 42.75% to 44.22%, averaging 43.25% Mn. The combined concentrates represented 38.0% by weight of the original feed.

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Sulfur	.05
Phosphorus	.047
Lead, Pb	under .01
Zinc	trace

6/23/52

A spectrographic analysis was also made on the combined composites:

Sample #21961 Manganese Concentrates

Large Amount.....	Manganese
Small Amount..... X%	Barium Sodium Aluminum Iron Silicon
Very small amount..... 0.X%	Strontium Magnesium Titanium
Traces..... 0.0X% to 0.000X	Copper Silver Chromium Lead Zinc

Sheet No. 5 of 5.

PRODUCTION MINE & MILL

Consideration has been given to the character of the installation of mining equipment and mill capacity, predicated upon the estimated life of the mine. We have two alternatives in our calculations, viz: positive ore and probable ore as the first; possible ore, the second. Further calculations cannot be made until additional ore has been proven existent. Therefore, in the first instance we have a total of 54,516 net tons of positive and probable ore. Basing our production calculations on a minimum capacity mill of 50 net tons of mine run ore per 24 hour day, a total life of the mine will be 1291 days of continuous operation, or approximately 3.5 years.

Assuming development work would prove the possible ore referred to, the life of the mine would be extended 240 operating days, or 20 months, 1.75 years. Total assumed life of mine, 4.25 years.

MILL FLOW SHEET

Tests conducted by Kennard & Drake, report attached, have determined the ore to be amenable to sink and float and flotation concentration. Tests were made from different samples, although general of the property, to determine the most economical and effective method of concentration. Results of these tests and recommendations of Kennard & Drake, show a preference for simple table concentration. General design of mill is included in separate part of this report; also estimates of cost of construction are included in proper category.

Deed to Mining Claim

QUITCLAIM

This Indenture, *made the* 5th *day of* June, *19* 52
Between

Ernest Franklin Logan
San Bernardino, California
the party of the first part,

And

Chester Arthur Phillips
Los Angeles, California
the party of the second part,

Witnesseth: *That the said party of the first part, for and in consideration of the sum of* One Hundred * * * * * * * * * * *Dollars, lawful money of the United States of America, to* HIM *in hand paid by the said party of the second part, the receipt whereof is hereby acknowledged, has remised, released and forever quitclaimed, and by these presents does remise, release, and forever quitclaim, unto the said party of the second part, and to* his *heirs and assigns,* to wit:

all his right, title and interest in and to the following described unpatented lode mining claims lying and being in UNKNOWN mining District of San Bernardino County California, the location notice of which are recorded in the office of the County Recorder of said San Bernardino County, California in the records of mines of said Recorder's office at the Book and Page hereinafter described to which said description reference is hereby made:

Name of Claims	Book of Mines	Page
Treasure No. 1	209	400
Treasure No. 2	219	3
Treasure No. 3	219	3
Treasure No. 4	219	4

together with six (6) adjoining claims to be located upon and numbered consecutively. Deed to which will be quit-claimed after recording.

Original claims filed May 17, 1930

Together *with all the Dips, Spurs and Angles, and also all the metals, ores, gold and silver bearing quartz, rock and earth and kindred mineral substances therein; and all the rights, privileges and franchises thereto incident, appendant and appurtenant, or therewith usually had and enjoyed; and also, all and singular, the tenements, hereditaments and appurtenances thereunto belonging, or in any wise appertaining, the rents, issues and profits thereof; and also all the estate, right, title, interest, property possession, claim and demand whatsoever, as well*

DEED—TO MINING CLAIM—QUITCLAIM—WOLCOTTS FORM 784 — 336 PRINTED WORDS

in law as in equity, of the said party of the first part, of, in or to the said premises, and every part and parcel thereto with the appurtenances, together with the right to re-locate any or all of said claims and change the boundaries or monuments to conform with surrounding geographical lines.

To have and to hold, *all and singular the said premises, together with the appurtenances and privileges thereunto incident, unto said party of the second part.*

In Witness Whereof, *the said party of the first part has hereunto set* his *hand and seal the day and year first above written.*

Ernest Franklin Logan

Ernest Franklin Logan

STATE OF California
County of San Bernardino } SS

ON THIS 5th day of June, A.D., 1952, before me, A. E. Holmes, a Notary Public in and for said County and State, personally appeared Ernest Franklin Logan, known to me, (or proved to me on the oath of), to be the person whose name is subscribed to the within Instrument, and acknowledged to me that he executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

SEAL

A. E. HOLMES, Notary Public
My Commission Expires
April 20, 1953

A. E. Holmes
Notary Public in and for said County and State.

231

No.

Deed to Mining Claim

Quitclaim

Ernest Franklin Logan

To

Chester Arthur Phillips

Dated June 5, 1952, 19

Order No.

When recorded, please mail this Instrument to

Chester A. Phillips
4207 St. Charles Place
Los Angeles, 19
California

RECORDED
REQUEST OF

GRANTEE

INDEXED
231

COMPARED

JUN 6 9 25 AM '52
BOOK 2963 PAGE 231
OFFICIAL-RECORDS
SAN BERNARDINO COUNTY, CALIF.
TED R. CARPENTER, RECORDER

L. L. Atwood Dep.

2.00
8

D E E D T O M I N I N G C L A I M

QUITCLAIM

THIS INDENTURE, made the 30 day of July, 1952
BETWEEN

Chester Arthur Phillips
Los Angeles, California
The party of the first part,

AND

Great Western Consolidated Mining & Milling Corp.
Chicago, Illinois
the party of the second part,

WITNESSETH: That the said party of the first part, for and in consideration of the sum of Ten Dollars, lawful money of the United States of America, to hime in hand paid by the said party of the second part, the receipt whereof is hereby acknowledged, has remised, released and forever quitclaimed, and by these presents does remise, release, and forever quitclaim, unto the said party of the second part, and to his heirs and assigns, to wit:

all his right, title and interest in and to the following described unpatented lode mining claims lying and being in unknown mining District of San Bernardino County California, the location notice of which are recorded in the office of the County Recorder of said San Bernardino County, California in the records of mines of said Recorder's office at the Book and Page hereinafter described to which said description reference is hereby made:

Name of Claims	Book of Mines	Page
Treasure No. 1	209	400
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Treasure No. 4	219	4

together with six (6) adjoining claims to be located upon and numbered consecutively. Deed to which will be quit-claimed after recording.

Original claims filed May 17, 1930

TOGETHER with all the Dips, Spurs and Angles, and also all the metals, ores, gold and silver bearing quartz, rock and earth and kindred mineral substances therein; and all the rights, privileges and franchises thereto incident, appendant and appurtenant, or therewith usually had and enjoyed; and also, all and singular, the tenements, hereditaments and appurtenances thereunto belonging, or in any wise appertaining, the rents, issues and profits thereof; and also all the estate, right, title, interest, property possession, claim and demand whatsoever, as well in law as in equity, of the

said party of the first part, of, in or to the said premises, and every part and parcel thereto with the appurtenances, together with the right to re-locate any or all of said claims and change the boundaries or monuments to conform with surrounding geographical lines.
TO HAVE AND TO HOLD, all and singular the said premises, together with the appurtenances and privileges thereunto incident, unto said party of the second part.

IN WITNESS THEREOF, the said party of the first part has hereunto set his hand and seal the day and year first above written.

Chester A. Phillips
Chester Arthur Phillips

STATE OF ILLINOIS)
) SS
County of COOK)

ON THIS 30 day of July ,A.D., 1952, before me, PAUL W. PRETZEL a Notary Public in and for said County and State, personally appeared CHESTER A. PHILLIPS known to me, ~~(or proved to me on the oath of~~), to be the person whose name is subscribed to the within Instrument, and acknowledged to me that he executed the same.
IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

(NOTARIAL SEAL)

Paul W. Pretzel
Notary Public in and for said County and State.

No. 332 "Endorsed" Recorded at request of Attorney, Sep. 11, 1952 at 11:40 A.M. in Book 3019, Page 434, Official Records, San Bernardino County, Calif., Ted R. Carpenter, Recorder, by Chas. A. Ferguson, Deputy. Fee $2.10/8.

Compared

o o o o o

COUNTY OF SAN BERNARDINO
STATE OF CALIFORNIA } ss.

I, TED R. CARPENTER, County Recorder in and for the County of San Bernardino, State of California, do hereby certify that the foregoing is a full, true and correct copy of DEED TO MINING CLAIM

recorded in book 3019 of OFFICIAL RECORDS page 434 of San Bernardino County Records.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, this 18th day of September 18, 1952, 19~~44~~.

TED R. CARPENTER, County Recorder,

Eleanor Ferguson, Deputy.

400 918

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

AUG 11 1953

Memorandum

To: R. E. Adams, Chief, Operations Control and Statistics Division, DMEA

From: Iron and Ferro-Alloys Division, DMEA

Subject: Removal of application from the active file
Docket No. DMEA 2804 - Manganese
Great Western Consolidated Mining and Milling Corporation
Black Marvel mine
San Bernardino County, California

The applicant was notified on December 15, 1952, that additional data needed to be furnished before the referenced application could be processed. No data were received, and on March 3, 1953, we again asked the applicant in the interest of expediting the Defense Minerals Exploration Program to provide us with the required information.

Because the data had not been received by April 3, 1953, the applicant was then advised that unless the requested information was received by May 11, 1953, the application would be removed from the active file and the case closed.

By letter of May 4, 1953, the applicant requested 90 days from date of his letter to complete his prospecting program and submit an amended application containing the necessary data. The applicant was advised by letter of May 26, 1953, that his application for exploration assistance would be kept open until August 11, 1953, for submission of the requested data.

To data, however, we have not received the necessary information and we are, therefore, removing the subject docket from our Division files. The docket is transmitted herewith.

W. S. Martin

W. S. Martin, Acting Chief
Iron and Ferro-Alloys Division

Withdrawn

FILE COPY
SURNAME:

400

Rutledge
Martin

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C.

August 11, 1953

Memorandum

To: R. E. Adams, Chief, Operations Control and Statistics Division, DMEA

From: Iron and Ferro-Alloys Division, DMEA

Subject: Removal of application from the active file
Docket No. DMEA 2804 - Manganese
Great Western Consolidated Mining and Milling Corporation
Black Marvel mine
San Bernardino County, California

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To date, however, we have not received the necessary information and we are, therefore, removing the subject docket from our Division files. The docket is transmitted herewith.

FARutledge:foc
8-11-53
cc: Docket
Code 400
Adm. Reading File

SIGNED
W. S. Martin, Acting Chief
Iron and Ferro-Alloys Division

F.C.S.
8-12-53

FILE COPY
SURNAME:

Rutledge
Martin
Hoffman

UNITED STATES
DEPARTMENT OF THE INTERIOR 400
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C.

MAY 26 1953

Mr. Chester A. Phillips, President
Great Western Consolidated Mining
and Milling Corporation
4207 St. Charles Place
Los Angeles 19, California

Re: Docket No. DMEA 2804 - Manganese
Great Western Consolidated Mining
and Milling Corporation
Black Marvel Mine
San Bernardino County, California

Dear Mr. Phillips:

This will acknowledge your letter of May 4, 1953, asking for additional time to submit the information requested in our letter of December 15, 1952.

Because you have a prospecting program now in progress and have advised us of your intention to submit an amended application for exploration assistance, we will keep the docket open until not later than August 11, 1953, to give you an opportunity to submit the necessary data.

Sincerely yours,

C. O. Mitchell (for)

Administrator

Mel S. 5-26-53

Copy to: Mr. Paul W. Pretzel, Vice President
Great Western Consolidated Mining
and Milling Corporation
Chicago 2, Illinois

cc: N. B. Melcher, USBM
M. D. Crittenden, USGS

ccl Docket
Code 400
Reg. 3
Adm. Read. File

FARUTLEDGE:foc
5-7-53

TELEPHONE: PARKWAY 6286

GREAT WESTERN CONSOLIDATED MINING & MILLING CORP.

BLACK MARVEL
MANGANESE MINES
LUDLOW P.O.
SAN BERNARDINO COUNTY
CALIFORNIA

WESTERN OFFICE:
4207 ST. CHARLES PLACE
LOS ANGELES 19, CALIFORNIA

EXECUTIVE OFFICES:
704 N. NORTHWEST HIGHWAY
PARK RIDGE, ILL.
TALCOTT 3-5254

REPLY TO:

Docket

May 4, 1953

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 6 1953

WSM

U S Department of the Interior
Defense Minerals Exploration Administration
Washingto, 25 D. C.

Re: Docket No. DMEA 2804 Manganese
Black Marvel Mine
San Bernardino County, Calif.

Attention: C. O. Mittendorf,
Administrator

Dear Mr. Mittendorf:

Your valued favor of the 3rd ultimo advising of your intention of closing the above file on May 11, 1953 in the absence of data previously requested by your office.

Delay in reply to original request for more specific data from your office, has been due to our decision to broaden our surface workings and complete discovery work on extension claims, before preparing maps, etc. The work we have been advancing consisted of trenching adjacent to discovery areas on extension claims, access road construction to upper claims, etc.

Our purpose in advancing the above mentioned work prior to completing our application in accordance with your wishes, has been due to an effort to reduce our program to one specific area which would produce the best possible results with the least out-lay of time and money.

We have not, as yet, completed suitable hauling roads from the upper claims and accordingly, request you to advance the date of completion of our application for a period of at least 90 days from date. We feel certain we will have made a definite decision by that time, as to where and in what manner, we wish to open an extensive exploration program.

We will appreciate an expression from you outlining your comment.

Yours very truly,

GREAT WESTERN CONSOLIDATED MINING & MILLING CORP.

Chester A. Phillips PRESIDENT

kl
cc/Chgo

400

FILE COPY
SURNAME:

Rutledge
Martin

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C.

Mr. Paul W. Pretzel, Vice President
Great Western Consolidated Mining
and Milling Corporation
69 West Washington Street
Chicago 2, Illinois

J. C. 4/3/53

Re: Docket No. DMEA 2804 - Manganese
Great Western Consolidated Mining
and Milling Corporation
Black Marvel Mine
San Bernardino County, California

Dear Mr. Pretzel:

Reference is made to your application for exploration assistance at the Black Marvel mine. On December 15, 1952, we wrote you requesting additional information needed to process the subject application.

This information was not received and on March 3, 1953, we again wrote you requesting that these data be furnished. We wish to cooperate fully in the matter of allowing ample time for the submission of the necessary data, but if the required data have not been received by May 11, 1953, we will then remove the application from the active file and consider the matter closed.

Sincerely yours,

C. O. Mittendorf (for)

Administrator

cc: Docket
Field Team, Region 3
Code 400
Admn. Read. File
N. B. Melcher, USBM
M. D. Crittenden, USGS

FARutledge/hhb
4/2/53

FILE COPY
SURNAME:

Rutledge
Martin

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C.

Mr. Paul W. Pretzel, Vice President
Great Western Consolidated Mining
and Milling Corporation
69 West Washington Street
Chicago 2, Illinois

MAR 3 1953

F.C. 3/3/53

Re: Docket No. DMEA 2804 - Manganese
Black Marvel Mine
San Bernardino County, California

Dear Mr. Pretzel:

Reference is made to your application for exploration assistance at the Black Marvel Mine. On December 15, 1952, we wrote you requesting additional information needed to process the subject application.

In the interest of expediting the Defense Minerals Program it would be appreciated if you would promptly provide us with the required information.

Sincerely yours,

W. S. Martin, Acting Chief
Iron and Ferro-Alloys Division

cc: Docket
Field Team, Region 3
Code 400
Admn. Read. File
N. B. Melcher, USBM
M. D. Crittenden, USGS

FARutledge/hhb
3/2/53

FILE COPY
SURNAME: 400

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

Chapman
Selfridge

DEC 15 1952

Mr. Paul W. Pretzel, Vice President
Great Western Consolidated Mining
and Milling Corporation
69 West Washington Street
Chicago 2, Illinois

Re: Docket No. DMEA 2804 - Manganese
Black Marvel Mine
San Bernardino County, California

Dear Mr. Pretzel:

We are in receipt of your application for exploration assistance on the above-noted project.

In order to continue with the processing of this application, we will need more definite information, as follows:

1. We will need the book number and page number of record of the six additional claims mentioned in the Quit Claim Deed.

2. Sketches showing the general geology of the mineralized zone, with widths and length as far as possible. These sketches should show location of any workings, such as, trenches and pits.

3. Your exploration will need to be more definitely outlined. That is, you should include in your application the location, number and depth of proposed shafts, the location and length of drifts and crosscuts, and the location, length and depth of trenches.

4. Development of ore bodies and stoping of same are not a part of this program and cannot be included in an exploration contract.

5. As far as possible give unestimated cost of each part of the project, as well as the total.

6. We note that in your estimates of rentals, the rent practically equals the purchase price. Hence, it would be more economical to purchase this equipment and take a salvage value at the end of the project.

7. Under purchased equipment, it would be more economical to use detachable bits rather than buy a drill sharpener and use a full time blacksmith.

8. Under the head of furnished equipment, only a depreciation value is allowed. This is usually placed at one-sixtieth (1/60) of the value for each month used.

9. Your wage rates, as listed, are much higher than the general wages throughout the area.

We are enclosing our booklet which gives a detailed explanation of the Defense Minerals Exploration Program.

Sincerely yours,

SIGNED

G. C. Selfridge, Chief
Iron and Ferro-Alloy Division

J.H. 12-15-52

Enclosure

TLChapman'lm
12/12/52

cc: Admn. Reading File
Docket
N. B. Melcher, USBM
M. D. Crittenden, USGS
Field Team Reg. III
G. C. Selfridge
T. L. Chapman

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

December 10, 1952

12/17/52

Memorandum

To: G. C. Selfridge

From: M. D. Crittenden

Subject: DMEA 2804 (DMPA 2733) Manganese
Great Western Consolidated Mining & Milling Co.
69 West Washington Street
Chicago 2, Illinois

The above docket was originally submitted to D. M. P. A. and was designated DMPA 2733. A copy of my memorandum to D. M. P. A. is enclosed. It describes the property briefly and summarizes the information available in our files.

Discussing the area with Mr. Wilson today leads me to the conclusion that the property might possibly yield as much as 100,000 tons of material, averaging 10 to 15 percent Mn. The ore mineral is hard psilomelane, the gangue is andesite and calcite. Modern sink-float treatment and the existing price of $2.30 per unit might make operation feasible.

In its present form, the proposal is essentially the same as that presented to D. M. P. A., and is <u>not</u> suitable for exploration assistance. If modified to include exploration only, I would recommend that the application be referred to the field for check sampling to reappraise the grade and possible tonnage of ore in the ground, and for a recommendation as to the feasibility of operation.

M. D. Crittenden

M. D. Crittenden

Enclosure

Copy retained 400

G-MD-CF

October 30, 1952

Memorandum

To: H. A. Waite

From: M. D. Crittenden

Subject: DMPA-2733 - Manganese
Great Western Consolidated Mining & Milling Corp.
69 West Washington St.
Chicago 2, Illinois

The proposal: The above company requests a loan of $200,000 to equip, develop and operate a manganese deposit known as the Black Marvel (formerly Logan, Transoceanic, or Treasure).

The deposit: The mine is in T. 9 N., R. 6 E. in the Cady Mts. between Barstow and Ludlow, San Bernardino County, California. It consists of 4 claims located by C. F. Logan and L. W. Page in 1930, and 6 adjoining claims located in 1952. Copies of the deeds conveying title from the original locators to the applicant are attached.

The property was examined for the Geological Survey by T. F. Wilson in March, 1943 (Calif. State Div. Mines Bull. 152, pp. 200 and 201, 1950). At that time about 9 or 10 open cuts were distributed along an ore zone 600 feet in length. One cut was 125 feet long, 30 feet wide and 10 to 15 feet deep. Two others are 50 feet long, 10 feet wide, and 10 to 15 feet deep.

The deposit consists of a fissure zone that strikes northwest and dips northeast in andesite wall rock. It consists of definite veinlets of manganese oxide and calcite scattered over a zone 50 feet wide. They are not distributed uniformly, however, but are concentrated along belts separated by barren wall rock. Few individual veins attain a thickness of 1 foot; most are a fraction of an inch to 3 or 4 inches thick. The average grade of the 50-foot zone is probably not over 5 or 10 percent Mn. Products assaying 15 to 45 percent Mn have been obtained by selective mining or sorting. A zone 10 feet or so thick may average 10-15 percent Mn. A bulk sample taken by the Bureau of Mines for metallurgical testing assayed 12.1 percent Mn.

Reserves: In 1943 Wilson estimated reserves of 5000 tons averaging 5 to 10 percent Mn, based on a length of 330 feet, a width of 10 feet, and a depth of 15 feet. This is probably a very conservative estimate, but I disagree with the applicant's conclusion that it is cheaper to put in a mill than to explore the deposit. Even if the Survey geologist had estimated 50,000 tons, without adequate sampling and assaying of the surface, and without some indication of the grade and persistence at depth I would not regard it as sufficient basis for a loan of $200,000. The "all or nothing" attitude expressed by the applicant is obvious pressure to avoid delays and I suspect also to avoid spending any of his own money on exploration. Like so many others, this is a likely DMEA exploration project, not a development loan.

Metallurgy: The Bureau of Mines (RI-4117) has reported the results of metallurgical tests on a sample that assayed 12.1 percent Mn. By flotation they obtained an 82 percent recovery in sintered concentrates assaying 35 to 40 percent Mn, and a 77.7 percent recovery in a sintered concentrate assaying 46 percent Mn.

M. D. Crittenden

MDCrittenden:gt

Copies to: Dir's reading file-4212
Branch reading file
N.B.Melcher - Int. 3513

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

December 10, 1952

Memorandum

To: G. C. Selfridge

From: M. D. Crittenden

Subject: DMEA 2804 (DMPA 2733) Manganese
Great Western Consolidated Mining & Milling Co.
69 West Washington Street
Chicago 2, Illinois

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M. D. Crittenden

Enclosure

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

December 10, 1952

Memorandum

To: G. C. Selfridge

From: M. D. Crittenden

Subject: DMEA 2804 (DMPA 2733) Manganese
Great Western Consolidated Mining & Milling Co.
69 West Washington Street
Chicago 2, Illinois

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M. D. Crittenden

Enclosure

Form MF-103
(Revised June 1951)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.1.

MF-103 Should Be Filed With General Technical Data Form MF-100

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEFENSE PRODUCTION ACT OF 1950

Not To Be Filled in by Applicant

Docket No. 20 MEW 2804
Metal or Mineral
Date Received 12/8/52
Amount $
Participation (Government %)

Great Western Consolidated
Mining & Milling Corp.
69 West Washington Street
Chicago 2, Illinois

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 8 1952

Name and address of applicant

December 1, 1952

Date

10-28-52

If you have already filed MF-100, give date filed ~~loan~~, type of assistance requested 2743 for tax amortization 2733 for loan purposes,

DMA Docket Number (if available)

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four copies each, of the signed application form, General Technical Data Form MF-100, and answers to questions as specified, to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive office thereof, with your name and address on each sheet of the application and all accompanying papers. If you have previously filed MF-100, it is not necessary to file it again. However, you should indicate in space provided above the type of assistance previously applied for (loans, procurement contracts, etc.) and DMA Docket Number, if available. *When a question is inapplicable it should be so stated in the form.* Additional sheets should be attached in answering any questions or in supplying additional information. IF YOU CANNOT ANSWER A QUESTION, SO STATE.

1. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property.

   (*b*) If you are not the owner of the property, submit a copy of the lease, purchase option, or other agreements under which you are authorized to operate the property with each copy of your application.

   (*c*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted.

   NOTE: (1) If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*c*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

   (2) If applicant is not the owner of the property or if there are any liens or encumbrances against the property, copy of agreements of claimants, lienors, encumbrances, and lessors subordinating their interests in the property to the interest of the Government under the Exploration Project Contract will be required for attachment to the Contract.

2. (*a*) What metals or minerals do you expect to find?

   (*b*) Furnish statement of the geologic features of your property, giving type of ore deposit and reasons for expecting to find commercial ore bodies. Illustrate with maps or sketches. If you have a geologic or engineering report, or assay maps showing width and grade, please send them with application, stating whether or not you wish to have them returned.

The information requested in questions 3, 4, 5, 6, 7, 8, and 9 below should be answered specifically and in detail, as this information will be attached to and incorporated as part of the Exploration Project Contract, if such contract is entered into with you by the Government.

ANSWER EACH QUESTION ON SEPARATE SHEETS OF PAPER AND SUBMIT A COPY OF EACH ANSWER FOR EACH COPY OF YOUR APPLICATION.

3. (*a*) Describe fully the proposed work and give the total cost of the project.

   (*b*) State the time required to start the project and to complete it.

4. Submit a map or sketch of the property involved showing a plan (and cross section, if needed) of the present mine workings and the *location of the proposed exploration work* as related to geologic features, such as contacts, veins, ore-bearing beds, etc.

5. Furnish an itemized list of existing facilities, buildings, installations, and fixtures with a statement of the cost of any necessary rehabilitation or repairs to put into useful and operable condition.

6. Furnish a detailed list of additional facilities, buildings, and fixtures to be purchased, installed, or erected by you, with the estimated cost of each item.

7. Furnish a detailed list of operating equipment, separated into items to be—

   (*a*) Rented

   (*b*) Purchased

   (*c*) Furnished by you

   with the rental, purchase price, or depreciation of each item, as the case may be, to be charged as a cost of the project.

8. Furnish an itemized schedule of labor, by numbers and classes (miners, muckers, etc.) and of supervisors by numbers and positions, with the maximum wages or salaries to be paid to each.

9. Furnish a detailed list with estimated cost of each item for materials, supplies, engineering, assaying, accounting, power, water, utilities, and any other items not provided for above.

10. (*a*) How much are you prepared to invest in the proposed project?

    (*b*) Is this amount sufficient to pay your part of the cost of the project, in accordance with the regulations on Government participation (Sec. 9 of MO–5)?

11. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions.

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

Great Western Consolidated Mining & Milling Corp.
(Name of company)

By [signature]
(Signature of authorized official)

12-1-52
(Date)

V. Pres
(Title)

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

U. S. GOVERNMENT PRINTING OFFICE 16—64067-2

Great Western Consolidated Mining & Milling Corp.
69 West Washington Street
Chicago 2, Illinois

1. (a) Real property consists of four (4) proven claims and twelve (12) unproven claims. Proven claims have been worked intermittently for past twenty (20) years. All prior operations have been conducted by hand labor producing high grade ore.

   (b) Owners.

   (c) All claims lie in Section 28, Range 6, Twp. 9 N., SanBernarino County, California. Loan is requested for purpose of exploring potential ore bodies at depth on claims Nos. 1, 2, 3, 4,
   Note: (1) Both areas same
   (2) Applicants are legal owners of property.
   (3) No liens or encumbrances exist against property.

Great Western Consolidated Mining & Milling Corp.
69 West Washington Street
Chicago 2, Illinois

2. (a) Manganese

(b) The engineering report involving this property is attached to and made a part of our application in your department file #2733.

Great Western Consolidated Mining & Milling Corp.
69 West Washington Street
Chicago 2, Illinois

3. (a) 800 lineal foot shaft, 1200 lineal feet cross cut, 800 lineal feet stoping, 4500 lineal feet surface trench, 20' wide, 10' deep.
Total estimate $195,750.00

(b) Project will open immediately after loan application is approved. Completion time estimates to be one year after opening.

Great Western Consolidated Mining & Milling Corp.
69 West Washington Street
Chicago 2, Illinois

5. No buildings or facilities on property.

Great Western Consolidated Mining & Milling Corp.
69 West Washington Street
Chicago 2, Illinois

6. Facilities required:

Camp buildings.....	$ 5,000.00
Camp equipment for 40 men.....	3,000.00
Out buildings - 3	1,500.00
Sanitary and water facilities.....	1,000.00
Office building equipment.....	1,200.00
	$ 12,700.00

Great Western Consolidated Mining & Milling Corp.
69 West Washington Street
Chicago 2, Illinois

7. (a) Rented equipment

1. pick up truck - 12 months (12 hr. day basis)...	$ 1800.00
1. HD dump truck - 12 months (3 months).....	3600.00
1. Grease-Oil-Fuel truck - 12 months (full time)..	2700.00
1. tractor - 12 months (3 months).....	3300.00
1. Grader - 12 months (3 months).....	3000.00
1. Diesel shovel 3/4 yd. (4 months).....	6000.00
1. Air Compr. 210 CFM - 12 hr. day (12 months)...	7200.00
1. Air Compr. 500 CFM 24 hr day (12 months).....	16800.00
1. 315' Dusie compressor (standby).....	600.00

(b) Purchased equipment

Mining tools, air tools, steel pipe, valve fittings, mine cars, rail.....	3970.00
Drill sharpener.....	3500.00
Blacksmith.....	1600.00

(c) Furnished equipment

Mine ventilation equipment.....	2640.00
1. 75 KW Diesel Power Unit.....	1500.00
1. 25 KW Diesel Power Unit.....	500.00
1. Mucking Machine.....	5250.00

Great Western Consolidated Mining & Milling Corp.
69 West Washington Street
Chicago 2, Illinois

8. Schedule of labor

Superintendent - monthly		$650.00
Foreman - monthly - top level		450.00
Office: Acct. monthly		400.00
Time Keeper - monthly		300.00
Cooks - monthly	1 @ $250.00	250.00
Bull Cooks - monthly	2 @ $175.00	350.00
Miners - hourly	6 @ $2.50	2.50
Muckers - hourly	6 @ $2.00	2.00
Shifter - hourly	3	2.75
Hoistmen - hourly	3	2.25
Powderman - hourly	3	2.50
Machine Operators		
Shovel		3.00
Oiler		2.35
Tractor & Grader		2.65
Mechanics - machy		2.75
Laborers		2.00

Great Western Consolidated Mining & Milling Corp.
69 West Washington Street
Chicago 2, Illinois

91 Materials - Engineering

Engineering, mapping, assays.....	2500.00
Materials and supplies, powder, caps, fuses.....	3500.00
Drill steel and bits.....	1250.00
Fuel oil, grease, diesel, etc. (50,000 gals).	12000.00
Gasoline - 13000 gals - 26.9¢.....	3500.00

(Power - 1 75 KW Diesel Unit
1 25 KW Standby
Noted on equipment list)

Great Western Consolidated Mining & Milling Corp.
69 West Washington Street
Chicago 2, Illinois

10. (a) 25% of total

(b) Yes

Great Western Consolidated Mining & Milling Corp.
69 West Washington Street
Chicago 2, Illinois

11. None

December 9, 1952

Subject: DMEA-2804
Re: Exploration Assistance

Mr. Paul W. Pretzel, Vice Pres.
Great Western Consolidated
Mining & Milling Corp.
69 West Washington Street
Chicago 2, Illinois

My dear Mr. Pretzel:

The receipt of your application dated December 1, 1952 for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-2804 and referred to the Iron and Ferro-Alloys Division.

Kindly refer to DMEA-2804 in any future correspondence relating to your application.

Sincerely yours,

ROBERT E. ADAMS

Robert E. Adams, Chief
Operation's Control and
Statistics Division

25451

LAW OFFICES
PRETZEL & STOUFFER
69 W. WASHINGTON STREET
CHICAGO 2, ILLINOIS

PAUL W. PRETZEL
RALPH E. STOUFFER, JR.
LAWRENCE P. HICKEY

December 4, 1952

FINANCIAL 6-1973

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 8 1952

Defense Minerals Administration
Department of the Interior
Washington 25, D.C.

Re: Great Western Consolidated
Mining & Milling Corp.

Gentlemen:

Enclosed you will find form MF 103. Please acknowledge receipt of same to the undersigned.

Yours very truly,

PRETZEL & STOUFFER

BY _____
Paul W. Pretzel

PWP:gc

Form MF-103
(Revised June 1951)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.1.

MF-103 Should Be Filed With General Technical Data Form MF-100

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEFENSE PRODUCTION ACT OF 1950

Not To Be Filled in by Applicant

Docket No. DMEA-2804
Metal or Mineral
Date Received 12/8/52
Amount $
Participation (Government %)

Great Western Consolidated
Mining & Milling Corp.
69 West Washington Street
Chicago 2, Illinois

Name and address of applicant

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 8 1952

Date December 1, 1952

If you have already filed MF-100, give date filed 10-28-52, type of assistance requested loan,

DMA Docket Number (if available) 2743 for tax amortization
2733 for loan purposes

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four copies each, of the signed application form, General Technical Data Form MF-100, and answers to questions as specified, to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive office thereof, with your name and address on each sheet of the application and all accompanying papers. If you have previously filed MF-100, it is not necessary to file it again. However, you should indicate in space provided above the type of assistance previously applied for (loans, procurement contracts, etc.) and DMA Docket Number, if available. *When a question is inapplicable it should be so stated in the form.* Additional sheets should be attached in answering any questions or in supplying additional information. IF YOU CANNOT ANSWER A QUESTION, SO STATE.

1. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property.

   (*b*) If you are not the owner of the property, submit a copy of the lease, purchase option, or other agreements under which you are authorized to operate the property with each copy of your application.

   (*c*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted.

   NOTE: (1) If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*c*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

   (2) If applicant is not the owner of the property or if there are any liens or encumbrances against the property, copy of agreements of claimants, lienors, encumbrances, and lessors subordinating their interests in the property to the interest of the Government under the Exploration Project Contract will be required for attachment to the Contract.

2. (*a*) What metals or minerals do you expect to find?

   (*b*) Furnish statement of the geologic features of your property, giving type of ore deposit and reasons for expecting to find commercial ore bodies. Illustrate with maps or sketches. If you have a geologic or engineering report, or assay maps showing width and grade, please send them with application, stating whether or not you wish to have them returned.

The information requested in questions 3, 4, 5, 6, 7, 8, and 9 below should be answered specifically and in detail, as this information will be attached to and incorporated as part of the Exploration Project Contract, if such contract is entered into with you by the Government.

ANSWER EACH QUESTION ON SEPARATE SHEETS OF PAPER AND SUBMIT A COPY OF EACH ANSWER FOR EACH COPY OF YOUR APPLICATION.

3. (*a*) Describe fully the proposed work and give the total cost of the project.

   (*b*) State the time required to start the project and to complete it.

4. Submit a map or sketch of the property involved showing a plan (and cross section, if needed) of the present mine workings and the *location of the proposed exploration work* as related to geologic features, such as contacts, veins, ore-bearing beds, etc.

5. Furnish an itemized list of existing facilities, buildings, installations, and fixtures with a statement of the cost of any necessary rehabilitation or repairs to put into useful and operable condition.

6. Furnish a detailed list of additional facilities, buildings, and fixtures to be purchased, installed, or erected by you, with the estimated cost of each item.

7. Furnish a detailed list of operating equipment, separated into items to be—

   (*a*) Rented

   (*b*) Purchased

   (*c*) Furnished by you

   with the rental, purchase price, or depreciation of each item, as the case may be, to be charged as a cost of the project.

8. Furnish an itemized schedule of labor, by numbers and classes (miners, muckers, etc.) and of supervisors by numbers and positions, with the maximum wages or salaries to be paid to each.

9. Furnish a detailed list with estimated cost of each item for materials, supplies, engineering, assaying, accounting, power, water, utilities, and any other items not provided for above.

10. (*a*) How much are you prepared to invest in the proposed project?

    (*b*) Is this amount sufficient to pay your part of the cost of the project, in accordance with the regulations on Government participation (Sec. 9 of MO–5)?

11. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions.

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

Great Western Consolidated Mining & Milling Corp.
(Name of company)

By [signature]
(Signature of authorized official)

12-1-52
(Date)

Vice Pres.
(Title)

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

U. S. GOVERNMENT PRINTING OFFICE 16—64067-2

Great Western Consolidated Mining & Milling Corp.
69 West Washington Street
Chicago 2, Illinois

1. (a) Real property consists of four (4) proven claims and twelve (12) unproven claims. Proven claims have been worked intermittently for past twenty (20) years. All prior operations have been conducted by hand labor producing high grade ore.

   (b) Owners.

   (c) All claims lie in Section 28, Range 6, Twp. 9 N., SanBernarino County, California. Loan is requested for purpose of exploring potential ore bodies at depth on claims Nos. 1, 2, 3, 4,

   Note: (1) Both areas same
   (2) Applicants are legal owners of property.
   (3) No liens or encumberances exist against property.

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2. (a) Manganese

(b) The engineering report involving this property is attached to and made a part of our application in your department file #2733.

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3. (a) 800 lineal foot shart, 1200 lineal feet cross cut, 600 lineal feet stoping, 4500 lineal feet surface trench, 20' wide, 10' deep.
Total estimate $195,750.00

(b) Project will open immediately after loan application is approved. Completion time estimates to be one year after opening.

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5. No buildings or facilities on property.

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6. Facilities required:

Camp buildings.....	$ 5,000.00
Camp equipment for 40 men.....	3,000.00
Out buildings - 3	1,500.00
Sanitary and water facilities.....	1,000.00
Office building equipment.....	1,200.00
	$ 12,700.00

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7. (a) Rented equipment

1. pick up truck - 12 months (12 hr. day basis)...	$ 1800.00
1. HD dump truck - 12 months (3 months).....	3600.00
1. Grease-Oil-Fuel truck - 12 months (full time)..	2700.00
1. tractor - 12 months (3 months).....	3300.00
1. Grader - 12 months (3 months).....	3000.00
1. Diesel shovel 3/4 yd. (4 months).....	6000.00
1. Air Compr. 210 CFM - 12 hr. day (12 months)...	7200.00
1. Air Compr. 500 CFM 24 hr day (12 months).....	16800.00
1. 315' Dusie compressor (standby).....	600.00

(b) Purchased equipment

Mining tools, air tools, steel pipe, valve fittings, mine oars, rail.....	3970.00
Drill sharpener.....	3500.00
Blacksmith.....	1600.00

(c) Furnished equipment

Mine ventilation equipment.....	2640.00
1. 75 KW Diesel Power Unit.....	1500.00
1. 25 KW Diesel Power Unit.....	500.00
1. Mucking Machine.....	5250.00

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8. Schedule of labor

Superintendent - monthly		$650.00
Foreman - momthly - top level		450.00
Office: Acct. monthly		400.00
Time Keeper - monthly		300.00
Cooks - monthly	1 @ $250.00	250.00
Bull Cooks - monthly	2 @ $175.00	350.00

Miners - hourly	6 @ $2.50	2.50
Muckers - hourly	6 @ $2.00	2.00
Shifter - hourly	3	2.75
Hoistmen - hourly	3	2.25
Powderman - hourly	3	2.50
Machine Operators		
Shovel		3.00
Oiler		2.35
Tractor & Grader		2.65
Mechanics - machy		2.75
Laborers		2.00

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91 Materials - Engineering

Engineering, mapping, assays.....	$ 2500.00
Materials and supplies, powder, caps, fuses.....	3500.00
Drill steel and bits.....	1250.00
Fuel oil, grease, diesel, etc. (50,000 gals).	12000.00
Gasoline - 13000 gals - 26.9¢.....	3500.00

(Power - 1 75 KW Diesel Unit
1 25 KW Standby
Noted on equipment list)

Great Western Consolidated Mining & Milling Corp.
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10. (a) 25% of total

(b) Yes

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11. None