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Anaconda Copper Mining Company

GEOLOGICAL DEPARTMENT

Report on

OPHIR GOLD MINING COMPANY'S PROPERTY

Tooele County, Utah

By

D. C. Gilbert
July 10 1941

1125-10-6

Ophir, Utah

July 10, 1941

Mr. Tom Lyon

807 Kearns Bldg.

Salt Lake City, Utah

Dear Sir:

Recently I examined the Ophir Gold Mining Company's property south of Ophir, Tooele County, Utah, at your request. I was accompanied by Mr. Zenos Walker who is one of the principals in this company.

The property comprises about twelve lode locations west of the Porphyry Knob, which latter is about one mile southerly from the old Chloride Point mine. The Bothwell interests own two patented claims within the area covered by the Ophir Gold locations. Annual labor for these locations was performed last year by cutting a number of deep trenches with a bull-dozer.

The chief factor of interest in this ground is the outcrop of the Mercur ore beds across the surface. These beds roughly coincide with the Long Trail shale member of the lower Great Blue limestone; they form the host rock for both the Mercur and Chloride Point ore shoots. Some erratic shoots of gold ore were recently mined from them in the Rover Flat area about one mile southerly from the Ophir Gold property.

The fact that the Mercur ore beds in the Ophir Gold area are dipping easterly into the porphyry intrusives lends some color to the thought that they might here be productive. Mr. Walker hoped that International Smelting and Refining Company might be interested in diamond drilling the ground, with the principal object of testing the Madison limestone at considerable depth. This would be much too risky, not only because diamond drilling for the erratic ore shoots which might exist would probably furnish

little information of value, but also because the Mercur ore beds would probably be somewhat productive if ore existed in the deeper Madison.

I informed Mr. Walker that I believed you would show no interest in his property unless some ore were discovered first, to encourage further work. His bull-dozer cuts failed to disclose any ore what-so-ever, as shown by the attached assay certificate; the highest assay was a trace of gold and 0.4 oz. silver per ton. I also informed him that in a property so far removed from areas of known production, the owners must expect to make an initial ore discovery before outside parties would become interested.

The Ophir Gold property contains some of the factors which we usually associate with a good prospect. These are a stratigraphic horizon which has been productive in the vicinity; a porphyry intrusive; some faulting and (probably) fissuring. Some ore discovery may eventually be made here, but I do not recommend any expenditure by International Smelting and Refining Company in the preliminary prospecting of the ground.

Very truly yours,



D. C. Gilbert

TELEPHONE WASATCH 1199

Hand Sample Serial 20616-22

ASSAY CERTIFICATE
 UNION ASSAY OFFICE, INC.

J. V. SADLER, President.
 A. C. SELBY, Vice-Pres. & Treas.
 A. C. SELBY, Jr., Secretary.

Salt Lake City, Utah

Mine I. H. 1096 Ophir Gold Mfg. Co.
 Geol. (Zeros Walker)

June 27, 1943

RESULTS PER TON OF 2000 POUNDS

NO.	CLASS	GOLD Ozs. per Ton	VALUE GOLD	SILVER Ozs. per Ton	LEAD Per Cent Wet	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent
1		Trace		0.1								
2		Trace		0.2								
3		Trace		0.2								
4		None		0.1								
5		Trace		0.4								
6		None		0.2								
7		Trace		0.2								

Remarks.....

Charges \$.....

(Signature)

OPHIR GOLD
MINING
COMPANY

LOCATION OF MINE
OPHIR and CAMP FLOYD MINING DISTRICT
TOOELE COUNTY, UTAH

Report

Office of the Company
COMMERCIAL BANK BLDG.

8 West Center
Provo, Utah

OPHIR GOLD MINING COMPANY

R E P O R T

Much interest is now being taken in the southwest part of the Oquirrh Mountains, which are just southwest of Salt Lake City, Utah. These mountains have become world famous from having produced the \$2,600,000,000 copper mine of Bingham; the \$45,000,000 silver-lead-zinc mines of Stockton, Dry Canyon, and Ophir; and the \$24,000,000 gold mines of Mercur.

Attention is mainly focused on the Camp Floyd and Ophir Mining Districts, Tooele County, Utah, where the U. S. Geological Survey show that the Ophir anticline (a large long fold) and its ore replaceable geological formations, make a geological connection between Stockton, Dry Canyon, Ophir, Lion Hill, Rover Hill and Mercur.

From these new geological facts, published in U. S. G. S. Professional Paper 173, indications are that other large Utah mines are in the making. The survey shows that the Dry Canyon and Ophir highly mineralized beds extend south along the anticline under the Mercur beds.

The Ophir Gold Mining Company has acquired 37¹ mining claims or 700² acres of ground on Rover Hill which is on the anticline. It is halfway between Ophir and Mercur. It is about 25 miles south of Tooele City, Utah and about 30 miles west of Lehi, Utah County, Utah.

Good roads connect this area with the smelters and mills of Tooele and Salt Lake Counties, and with Utah labor centers.

So far, the area south of Ophir on to Mercur has had only shallow mining, just open-cut and near surface mining. From now on it will be mostly deep zone mining.

1. Now 48 claims
2. Now 900 acres

--HISTORY--

The mining history of the Ophir anticline is the combined history of the mines it embraces. Mining has been continuous along it since 1870. All of the mines were located from outcroppings by miners and prospectors, and until just lately they have been considered isolated ore bodies. But this has changed since 1925-1926 when the survey by the U.S.G.S. was made of the Stockton and Fairfield Quadrangles just south of Bingham.

--GEOLOGY--

The survey shows that there is a direct geological connection between these mines. They are all in a line along the Ophir anticline. They were all mineralized alike from a common undermass of igneous material from which magmatic solutions with their mineral^s ascended along fissures up to beds that were favorable to replacement. It is in these replaced mineralized beds that the rich mines have been found.

Well, these geological facts began to put science in the prospecting for ore bodies along the Ophir anticline. The geologically minded prospectors were able to visualize the extension of ore bodies into new ground, and especially so into deeper zones.

Not long after the report came out, geologists and miners of the Hidden Treasure mine in Dry Canyon recommended diamond drilling new ground. The results were the discovery of large rich ore bodies. Soon after this the directors of the Mercur Dome Gold Mining Company of Mercur decided that a good ore body could be found in the Mercur Dome ground if they would go down to the Madison Limestone formation. The company soon started to sink an incline shaft down to strike the projected ore body. When the shaft was down 1019 feet a large body of vanadium ore was found. Lead, zinc, and gold leads were also found.

It is rather surprising that none of the earlier Mercur mining companies had ever gone down over 350 feet. All the work was shallow or near surface work. Yet one company alone, the "Mercur Consolidated" mined over \$16,000,000 of ore.

It is evident from the geology of Rover Hill and the Ophir anticline, that whichever way the ore carrying solutions ran, be it from Mercur to Ophir or Ophir to Mercur, the solutions ran through the Ophir Gold Mining Company ground.

The writer had a very pleasant talk with Dr. Hyrum Schnider, head of the University of Utah Geology Department. We were talking about how surface prospecting in Utah is about over, and that geology and diamond drilling will have to take its place. He said: "Well, the old mines are fast being depleted leaving ghost town mining camps. If Utah is to hold her leading place as a mining state, new large ore bodies will have to be opened up. That means more detailed geological surveys will be needed. Of course diamond drilling actually shows what the formations are and what they have.."

A great deal of credit is due to the U. S. Bureau of Mines' geologists, mineralogists, engineers, and directors for the discovery of vanadium ore in the Mercur Dome. It is significant here that they first found a vanadium "lead" in Ophir and projected the body on into Mercur. They knew that the Mercur Dome shaft was down into the Madison Limestone formation--the same formation where the ore was found in the eroded and exposed beds of Ophir. They at once went to Mercur and obtained permission to explore the Madison beds down the Mercur Dome shaft. They soon found vanadium pentoxide, V_2O_5 , ore as expected, and found a much larger body than they found in Ophir.

This is a definite scientific proof of the extension of ore bodies from Ophir on into Mercur.

The Bureau of Mines is to be congratulated on its fine work. Again it is important that this projected ore body goes thru the Ophir Gold Mining Company ground on Rover Hill.

--MINERALS--

The mineral or metals found along the Ophir anticline are at Mercur: Gold Silver, Mercury, Vanadium, Lead, Zinc, Antimony, and Manganese; at Lion Hill: Silver, Lead, Zinc, Antimony, Gold and Manganese; at Ophir and Dry Canyon: Lead, Silver, Zinc, Copper, Gold, Vanadium and Manganese; at Rover Hill, although Rover Hill is practically virgin ground, there are "leads" there showing Silver, Lead, Zinc, Gold and Antimony.

ORE INDICATORS ON ROVER HILL

Explanation of Fig 12
Professional Paper 173 Page 97

This figure is important because it shows that large masses of jasperoid cross Rover Hill and again that the igneous intrusive "Birdseye Porphyry" outcrops on the east side of Rover Hill.

Both the jasperoid and porphyry are good ore indicators. Thus the report on page 97 says: "(2) silicification, or replacement of the lime by silica to form jasperoids with their accompanying ore minerals."

On Lion Hill adjoining the Ophir Gold ground on the north, much of the ore is associated with bodies of jasperoid and porphyry sills. They are considered by the miners as "good leads to ore".

Further on page 98 the report says: "certain masses of jasperoid, however particularly on Rover Hill, are associated with distinct fissures". Well, these together are very important practical leads to an ore body. Further this is scientific evidence that the Ophir Gold Mining Company ground has the setting for a large producing mine.

It is interesting to learn what Harold Mitchell, one of the geologists that made the above U. S. G. S. survey, has to say about this area in a later report. In his "Report of Proposed Gold Operations at Mercur" he says the following about the Mercur Mining District which includes Rover Hill:

"IN GENERAL"

Production at Mercur, Utah, from U. S. G. S. Professional Paper No. 111.

	<u>SILVER</u>	<u>GOLD</u>	<u>TOTAL VALUE</u>
1871-1881	46,000 oz.	- - - -	55,936.00
1890-1900	- - - - -	382,790 oz.	7,912,973.00
1900-1913	2,760	538,052	<u>11,124,115.00</u>
			<u>\$19,093,024.00</u>

" If the mineralization at Mercur has been accomplished, according to Emmons, Spurr, and Butler, of the U.S. Geological Survey, by solutions coming in along more or less vertical fissures from an underlying mass of igneous material, then the underlying beds of limestone which have never been tapped in the Mercur District, but which have been so productive in Ophir, three miles to the north, will also be heavily mineralized in Mercur.

"The discovery as pointed out by Butler in U.S.G.S. Paper 111, Page 390, that the so-called porphyry sills of the early report on this district are in fact altered sediments, throws an entirely different light on the genesis of ore in this district. This discovery, made subsequent to the abandonment of mining operations at Mercur explains why the early operators neglected to prospect the known productive limestones that underlie the ore producing Mono-Mercur shales at Mercur, namely, the Humbug, Deseret, and Madison limestone

"At Ophir and Dry Canyon, five miles northwest of Mercur, erosion has cut deep canyons into the sediments and exposed the formations down to and including 400 feet of Cambrian quartzite. A system of northwest fissures cut the limestones and shales, and at the intersection of the fissures with certain limestones, ore deposits occur. The Mono mine in Ophir occurs in the same shale as the ore deposits at Mercur. The Utah Queen and Kearsarge mines are found in the Humbug formation which underlies the Mono-Mercur shales. The Queen of the Hills mine is found in the Deseret formation which underlies the Humbug.

The Hidden Treasure, Sacramento, and Chicago mines, occur in the Madison formation, which underlies the Deseret.

All of the above mentioned formations underlie the Mercur District, and can be tested by drill holes estimated at 1,500 feet in depth.

"Production of Dry Canyon and Ophir, U.S.G.S. Professional Paper No. 111, pp. 366-7.

Mono Mine, in Mono-Mercur shale	\$1,000,000.00
Queen of the Hills, Deseret Formation	1,000,000.00
Kearsarge, Humbug Formation	1,000,000.00
Utah Queen " "	500,000.00
Hidden Treasure and others, Madison formation	14,000,000.00

"The persistent character of the sediments and their ability to be replaced by ore solutions is well demonstrated by the fact that the Deseret Formation at Ophir is correlated with the Pine Canyon formation at Tintic, 30 miles to the south, at which place the same formation is a prolific ore producer. Mercur lies between Ophir and Tintic in the same mountain range."

"These underlying formations should be prospected at Mercur and Mercur is the only mining district of proportions in the State which has not been prospected at depth.

"At Mercur mineralization occurred at the intersection of northeast fissures with certain limestones and shales. Mineralizing fissures where they have been observed at Stockton, Dry Canyon, Ophir, and Mercur, do not contain mineral in commercial quantity, except where they intersect limestones favorable to replacement. In most cases the foot and the hanging wall of the ore body is sharply defined and the mineralizing fissures both above and below the ore body is a mere crack showing little or no mineral.

"At Mercur the only member prospected has been the Mono-Mercur shales, which have produced in excess of \$19,000,000.00

Work to the northwest of Mercur, at Ophir and Dry Canyon, has disclosed the fact that below the member developed at Mercur are several other productive limestones that have been subjected to the same geological processes, and

should produce ore at Mercur. In Stockton, Dry Canyon, and Ophir these limestones have produced more than \$45,000,000.00

"A geological set-up of this kind, in a proven mineralized area underlain by known ore producing limestones that represent entirely virgin ground, together with a complete duplication of factors that are known to produce ore, will probably never be duplicated in this State again."

Harold Mitchell, Geologist,

1934

The company has already built roads to and over the property, and has also done a lot of work with a bulldozer to remove the overburden to show up the fissures and beds.

It has had trained and experienced geologists, mining engineers, and miners, study the ground, and help formulate a practical economic program for the mine development.

With all this scientific and practical mining knowledge and experience pointing to success, the officers of the Ophir Gold Mining Company feel certain that a large ore body can soon be reached, and that the Oquirrh Range will again give Utah a large rich mine.

The company will soon give those looking for a good investment a chance to buy common stock in the company and help open up this new mine.

OPHIR GOLD MINING COMPANY

By: Zenos Porter
President and Manager.

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Roy, Utah
September 7, 1949

Mr. F. E. Porter
Ogden, Utah

Dear Sir:

The following are some of the terms I think the board of directors and stockholders of the Ophir Gold Mining Company will accept in a bond and lease and option to purchase agreement.

The purchase price for the forty-eight (48) claims, or about nine hundred (900) acres, to be two hundred thirty-five thousand dollars (\$235,000) for a period of twenty (20) years.

Royalties to be:

Two (2) per cent for ore of seven dollars (\$7) net value and less. Then one (1) per cent to be added for each dollar increase in net value up to thirty dollars (\$30), which gives a twenty-five (25) per cent royalty for the thirty dollars (\$30) net value ore. The royalty to remain twenty-five (25) per cent for all ores above the thirty dollar (\$30) net value.

All payment to be applied on the purchase price.

If your company will let our company retain the surface rights and the mineral rights to a depth of two hundred and fifty (250) feet the purchase price will be lowered to one hundred eighty thousand dollars (\$180,000).

Six thousand five hundred dollars (\$6,500) to be paid when the agreement is consummated, and five thousand dollars (\$5,000) to be paid every year thereafter during the life of the contract.

Mr. F. A. Porter
Page Two

September 7, 1949

Annual labor on the claims to be kept up.
Tunnel rights to be given.

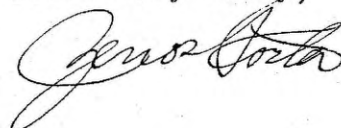
The names of the forty-eight (48) claims are:

Atomic Metals	1-5
Aspen Ores	1-6
Black Ledge	1-2
Complex Ores	1-4
Midway Crown	1-10
Mecur Silver Bar	2 & 4
Ophir Anticline Metals	1-2
Rare Metals	1-9
Rover Rare Metals	1-4
Rover Hill Anticline	2, 3 & 7
Rover Hill Anticline Fraction	1

Enclosed you will find a map which shows the location of the claims. They are all lode claims, located in the Ophir or Camp Floyd Mining Districts, Tooele County, Utah. They are recorded in the Tooele County Records office, Tooele, Utah.

As soon as you desire, a directors meeting of the company can be called to consider all details of an agreement.

Yours very truly,



ER
Enclosure

Utah
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September 2, 1948

Mr. Zenos Porter
Roy, Utah

Dear Mr. Porter:

Your letter of August 25, regarding a possible lease and option on the property of the Ophir Gold Mining Company in the Ophir district, has been given careful consideration by the Geological Department of this company.

I wish to inform you we are not interested at the present time in obtaining control of this property under the terms submitted in your letter.

Very truly yours,

MBK:S

M. B. Kildale

Proy, Utah

Sept. 23 1947

Mr F. E. Porter
Ogden, Utah

Dear Sir:

Herein is submitted the terms I think our board of directors will accept concerning the bond and lease and option to purchase agreement between the company you represent and the Ogden Gold Mining Co, ~~according to our latest conversation~~

The purchase price for the 37 claims to be \$43,400.⁰⁰, forty three thousand four hundred dollars for the first five years, then for each year and every year after the 5 years, \$5,000.⁰⁰, five thousand dollars is to be added to the purchase price. Thus the sixth year will be \$48,400.⁰⁰ and for the seventh year it will be \$53,400.⁰⁰ etc. ending at \$108,400.⁰⁰ one hundred and eight thousand four hundred dollars for the 20th year.

2

Five thousand dollars, \$5,000.⁰⁰ to be paid down when the contract is ratified. Then at the end of each year thereafter two thousand dollars, \$2,000.⁰⁰ will be paid as a minimum for royalties.

Royalties to be paid:

On ore with net value of \$10.00 or less per ton,
5%

Then one percent is to be added for each dollar increase in the ^{net} value of the ore.

This increase to be made until the net value of the ore is \$30.⁰⁰ per ton when the royalty will be 25%. Then for all values above the \$30.00 the royalty will remain 25%.

All money paid in to be applied to the purchase price, if your company decides to make the purchase.

The claims to be included in the lease are situated in Toole County Utah and consist of the following claims:

- The Rover Hill Anticline group of 7.
- The Rover Hill Anticline Fraction No 1.
- The Mercur Silver Bar No 2.
- The Mercur Silver Bar No 4.
- The Ophir Anticline Metals No 1.
- The Ophir Anticline Metals No 2.
- The Midway Crown group of 11.
- The Rare Metals group of 9.

A total of 32 claims, which the company controls either by ownership or by an option. Notices containing a more particular record of the claims are of record in the office of the County Recorder of Teton County, Utah all of the said claims are either on or in the vicinity of Rover Hill between Mercur and Ophir.

Altho. I am president of the Ophir Gold Mining Company, it is of course understood that all terms of the contract will have to be ratified by the board of directors to make them binding.

yours very truly
Gen. J. B. ...

Roy, Utah

Aug. 25, 1948

International Smelting and Refining Co.
Salt Lake City, Utah.

Gentlemen:

The following are some of the terms I think the directors of the Ophir Gold Mining Co. will accept in a bond and lease and option to purchase agreement.

The purchase price for the 43 claims - about 800 acres - to be \$325,000.⁰⁰ for the first 5 years, and \$6000.⁰⁰ to be added for each year after the 5 years for 15 years, making 20 years the total time, and \$415,000.⁰⁰ the final purchase price.

\$6,500.⁰⁰ to be paid down when the contract is ratified.

A yearly minimum royalty of \$5000.⁰⁰ to be paid by the end of each year of the contract.

2

Royalties to be:

50% for ore of \$10.⁰⁰ net value and less.

Then 1% to be added for each dollar increase in net value up to \$30.⁰⁰ - making it 25% for \$30.⁰⁰

The royalties to remain 25% until the net value reaches \$50.⁰⁰. For \$50.⁰⁰ net value and over the royalty to be 35%.

All amounts paid in to be applied to the purchase price.

The terms of the earlier letter were rejected by the directors of the company, which leaves this letter the only one to date to be considered.

Due to pending propositions, the company must receive a reply by Sept. 25, 1948.

I will appreciate hearing from you sooner.

Yours very truly,

James Porter

Sept 21 - 1949

Mr. Mike Kildale
Chief Geologist
Go International Smelting & Mining Co.
Salt Lake City, Utah

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Dear Kildale: Am enclosing to you
for your files, the papers I received
from Zeno Porter, as I will be
unable to be down for a few weeks.

He came to see me after I received
the papers and I explained to him
that we were not interested at this
time sufficiently to make any cash
payments.

Your friend
Frank E. Porter

1512-10-6

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American Heritage Center
University of Wyoming

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