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Cu. Citrus Service 1971

Sec. 25 T17N R14W

see Feb 4, 1970

76.0360

Erosion films

1969 - 1976

NOTES

hugs - no self

etc.

Geothermal files

250.0214 ✓

250.0060

Wm. H. Crutchfield, Jr.

Water

Albuquerque, New Mexico
June 27, 1975

76.0360
Exploration

FILE MEMO

Pegmatites - euxemite, samarskite, beryl
Sec. 21, T16 $\frac{1}{2}$ N, R12W

Pegmatites in adjoining Sec. 26 non-SFP

See file 76.0276 Wikieup, Arizona
July 21, 1958

Copper - NW/4 SE/4; NE/4 SW/4; Sec. 19, T17N, R12W
July 26, 1957
File 76.0276

Uranium - Hecla Mining Corp.
Artillery Peaks area circa 1970
extensive mapping just east of
Sec. 21, T12N, R13W
large low grade

Wm. H. Crutchfield ✓

Santa Fe Pacific Railroad Company

OFFICE OF LAND COMMISSIONER

4549 Produce Plaza

Los Angeles 58, California

October 14, 1958

76.0276

Sec. 21, T16-1/2N, R12W, Mohave
County, Arizona, containing
504.00 acres

Proposed Mining Lease with
Mohave Mining & Milling Co.

C-15-2-SFP

Mr. Robert R. Piatt
Mohave Mining & Milling Co.
P. O. Box 1106
Wickenburg, Arizona

Dear Mr. Piatt:

With our letter of August 6, 1958, we forwarded to you for your consideration a mining lease on the land described in the caption of this letter.

If this lease meets with your approval, we would appreciate your executing it in accordance with our instructions in our above-mentioned letter of August 6th.

Very truly yours,

(Sgd.) H. L. Briggs

DJW:bf

bcc: Mr. W. H. Crutchfield, Jr. - Your 76.0276

Los Angeles, July 21, 1958
76.0276 ✓

Sec. 21, T16²N, R12W, Mohave
County, Arizona

Application for Mining Lease
from Mohave Mining & Milling
Co.

C-15-2-SFP

Mr. H. L. Briggs:

On July 16, 1958 I made a reconnaissance examination of a portion of the above section. Accompanying me was Mr. Robert R. Piatt, Ore Scout for the Mohave Mining and Milling Company, Wickenburg, Arizona.

As background, this section was brought to Mohave Mining and Milling Company's attention about 1955 by Mr. Harry Carpenter of Wickenburg, who with a Mr. Ernest Roberts had located four non-contiguous mining claims in Section 21. On June 28, 1955, Mr. L. E. Whitney, Geologist for Mohave Mining and Milling, made an examination of the section and determined that beryl, possibly some lithium minerals, radioactive euxenite, and tantalum-columbite occurred in various pegmatite dikes which are not only contained in Section 21, but are common throughout the general region.

Mohave Mining and Milling Company subsequently found that Carpenter's and Roberts' claims were in Section 21 and not Section 20, as these men had reported. Hence this company's present attempt to deal with us directly.

At the time of my visit I found a claim notice originally dated April 2, 1954, held by both Carpenter and Roberts, but amended on September 16, 1957 in Roberts' name only. This claim, of course, is invalid. An interesting item of information regarding these claims is that the above men had asked a price of \$5,000.00 for each claim.

My examination was certainly too brief to do more than indicate that Section 21 is worthy of further exploration for the various pegmatite minerals indicated. It should be noted that the mineralization in any one pegmatite is spotty. Some undoubtedly contain only quartz, feldspar, and mica. Others may contain these plus beryl only. Others, these three common minerals, plus euxenite, samarskite, bismuthinite, and fergusonite. Specimens of these latter rare minerals were shown to me on claims in non-railroad Section 26. The point is that, in my opinion, any one company will have to mine many pegmatites

- 2 -

both on railroad and non-railroad land to come up with commercial concentrates of the aforementioned scarce minerals. The common and abundant quartz, feldspar, and lesser mica, would probably have to be also recovered to make exploitation of the rare minerals more attractive.

In short, it is my opinion that Section 21 is worthy of detailed exploration. I therefor recommend that Mohave Mining and Milling Company be granted a lease to undertake such work.

W. H. Crutchfield, Jr.

cc-Mr. R. D. Lutton

Los Angeles, July 21, 1958

76.0276

MEMO TO FILE:

Instructions to reach the pegmatite claims in Section 21, T16 $\frac{1}{2}$ N, R12W, Mohave County, Arizona

From Wikieup proceed North on Highway 93 for 5.8 miles. Turn right through cattle guard. (Mail box opposite turn-off has the name Cornwall) Proceed through gate at about 0.5 miles from Highway 93. Between the gate at 0.5 miles and a gate at about 0.7 miles from Highway 93 is a fork in the road. The right fork leads to a ranchhouse. Take left fork following East down a fence line to said gate at 0.7 miles. From this gate take climbing, winding road for about 7.3 miles to campsite of 3 Crystals No. 3 claim. Incidentally, by keeping to the left from this campsite, the road continues for about 1.0 miles to a small ranchhouse on Section 26. The W. H. Snyder's and a Mr. Edgerton have pegmatite claims in this section containing beryl, euxenite, bismuthinite, tantalum-columbite and fergusonite.

Apart from wet weather, the full length of this road to the campsite could be traversed by an ordinary automobile. There are no high centers, but sharp rocks would be a danger to tires. The road from the campsite into the Snyder ranchhouse is good until the last 200 feet is reached. An ordinary car might not be able to pull the last steep grade near the ranchhouse.

WHC, Jr.

cc-Mr. H. L. Briggs

Los Angeles, July 26, 1957

76.0276

Mr. H. L. Briggs:

Subject: Your C-15-2-SFP concerning application for lode mining lease from Othor Scott located in NW/4 SE/4; NE/4 SW/4; Sec. 19, T17N, R12W, Mohave County, Arizona

Based on my visit, May 3rd, to the copper prospect at the above described location, I recommend that this prospect be leased to Mr. Scott. The following details my reasoning behind this recommendation:

The 15' to 20' strike showing of chrysocolla (copper silicate) contained in a 3" to 12" thick, coarse sandstone member, striking approximately north-south and dipping east into a hillside at approximately 20°, would be of little or no interest, in my opinion, to any particular mining company or syndicate. However, one or two individuals with prudent exploration, might possibly find extensions of this copper bearing sandstone member away from the vicinity of the existing discovery pit.

I would not personally recommend that the Santa Fe Pacific undertake such exploration in this particular case. However, since Mr. Scott is willing to do so, some benefit will accrue to Santa Fe Pacific even if at the very least nothing more is realized than lease monies. Further, if such exploration is carried out prudently, positive or negative information, not obtainable otherwise, could be obtained concerning the true merits of this prospect. Lastly, there is the intangible benefit that may arise from the fact that responsive and cooperative action in Mr. Scott's behalf may prove to be an incentive for local prospectors to search over other Santa Fe Pacific land in the region.

cc-Mr. T. O. Evans

W. H. Crutchfield, Jr.

MEMORANDUM

(new)
76.0276

Los Angeles 58, California
July 24, 1957

NW/4 SE/4; NE/4 SW/4; Sec. 19,
T17N, R12W, Mohave County,
Arizona

Application for Lode Mining
Lease from Other Scott

C-15-2-SFP

Mr. Crutchfield:

Reference is made to Mr. Evans' memorandum dated July 19, 1957, relating to proposed lease to Mr. Other Scott on a portion of Section 19, Township 17 North, Range 12 West, Mohave County, Arizona. We shall appreciate your recommendation as to issuing a mining lease for copper minerals to Mr. Scott.

H. L. Briggs



JLS:bf

- MEMORANDUM -

(new)
76.0276

File: 175-28

Grants, New Mexico
July 19, 1957

Mr. H. L. Briggs:

This refers to your letter of July 15 concerning lease to Mr. Othor Scott for part of Section 19, T17N, R12W, Mohave County, Arizona, upon which there is said to be an outcropping of copper minerals.

Since you and Mr. Crutchfield have visited this property recently, I believe you are better informed than I am concerning it. If you must have our opinion, we can arrange to visit the property but there will be some delay in getting our report to you because of several items requiring immediate attention.

With only a few exceptions, we made no attempts to evaluate mineral occurrences, other than uranium, during the course of our serial exploration program, embracing about four and one-half million acres in New Mexico and Arizona. We were given one years time in which to complete the entire program and we managed to finish it with one week to spare.

T. O. Evans *TS*

cc: Mr. W. H. Crutchfield, Jr.
Mining Engineer
Los Angeles, California

76,0276

Swenarton - Int. 3585



DEPARTMENT OF THE INTERIOR INFORMATION SERVICE

BUREAU OF MINES

For Release JULY 20, 1958

MINES BUREAU PRODUCES RARE-EARTH ELEMENT, CERIUM, AS HIGH-PURITY METAL

High-purity cerium metal, which may help science develop "super alloys", now is being produced experimentally at Bureau of Mines laboratories in Reno, Nev., the Department of the Interior announced today.

Almost totally free of iron, carbon, and hydrogen, the metal made at Reno is an excellent "getter," that is, it attracts and absorbs impurities that enter other metals when they are molten. Thus, the Bureau hopes it will be useful in producing other metals in purer form. These, in turn, would be blended to make new and stronger alloys that can withstand the high temperatures encountered in rocket and missile applications.

Electrical conductivity of the Bureau-produced cerium, an indicator of purity, is over three times as high as that of the commercial variety, metallurgists at Reno reported.

The metal has such a high affinity for other elements it must be made in a specially designed air-tight apparatus under a shielding blanket of inert gas, such as helium. At present, it takes Bureau metallurgists eight hours to produce a single pound of the pure cerium in a small electrolytic cell. This so-called "dry box" was designed and built by Bureau scientists and is similar to one the Bureau developed for welding titanium metal.

Cerium, named for the asteroid Ceres, is the most abundant member of the rare-earth family, a group of 15 elements tied together by nature so closely as to defy conventional separation methods. In impure form, cerium is widely used in manufacturing glass, porcelain, and certain alloys. It is the sparking ingredient in lighter flints, has important uses in photography, and also is used in treating nervous disorders. Cerium-group oxides are used in the cores of arc-light carbons when an intense white light is required, as in television, photography, motion-picture projection, and searchlights.

Although the ordinary commercial grade of cerium has many uses, the high-purity metal is both difficult and costly to obtain, hence relatively few uses have been developed for this superior product so far. However, the Bureau predicts it will ultimately make possible alloys suitable for fabricating electronic and automation devices for which there is a fast-growing demand. In addition, it may find use as a flame-sprayed coating for metals and alloys used in making nose cones and other rocket and missile parts that are subject to intense heating by air friction. Such a coating tends to reflect heat and protect the parts from corrosion, making them less likely to burn up at high speeds. As more of the pure metal becomes available for experimentation, other uses undoubtedly will be found, the Bureau said.

Development of pure cerium is an outgrowth of continuing Bureau research on the rare-earth elements, according to Mines Director Marling J. Ankeny, who said the Bureau has been conducting these studies on a modest scale for several years. Progress in this type of research is extremely slow as a rule, Ankeny emphasized, and even now the most that can be said of pure cerium is that it is very promising. "After all," he pointed out, "science has known of cerium's existence for more than a century and a half, and it has taken us till now to extract it in such pure form."

In reporting recently on another phase of its pure-metals research, the Bureau announced that high-purity chromium metal made at its Albany, Oreg., laboratory is now being used in the experimental treatment of cancer by medical scientists.

x x x

MEMORANDUM

Los Angeles 58, California
June 30, 1958

Sec. 21, T16 $\frac{1}{2}$ N, R12W, Mohave
County, Arizona

Application for Mining Lease
from Mohave Mining & Milling
Co.

C-15-2-SFP

Mr. Crutchfield:

Your 76.0276

In your letter dated June 26, 1958, in connection with application for a uranium mining lease from Mohave Mining & Milling Co., you state that the only practical way to resolve the matter is to visit the locality. We certainly concur, and it will be appreciated if you will do this as soon as you can so arrange.

H. L. Briggs ✓

JLS:bf
Enclosure (cc of above memorandum)

*July 15
Take care application forms.*

*Telephoned Mr. Piatt
10:25 AM July 9th.
Will meet him at Arcadia
Lodge Tuesday evening
July 15th for trip
to deposit July 16th.
WHL Jr.
7-9-58*

Euxenite - 692

Niobate & Titanate of yttrium, erbium, cerium & uranium

Columbium - 693

Niobate & tantalate of Fe & Mn

TANTALUM -

} passing from niobate to tantalate

Fergusonite - 694

metaniobate (and tantalate) of yttrium with erbium, cerium, uranium, also Fe Ca

Bismuthite - 411

Bismutite - secondary carbonate

B_2S_3

SAMARSKITE -

cerium & yttrium

YO_2 Fe Ca

NB, TA

#

76.0276

Los Angeles, June 26, 1958

76.0276

Subject: Application for Mining Lease
from Mohave Mining and Milling Co.
Sec 21, T16 $\frac{1}{2}$ N, R12W,
Mohave County, Arizona

Mr. H. L. Briggs:

I do not have any detailed information regarding the beryl, feldspar, lithium, etc. minerals of the area noted above. A general knowledge of the area, however, has shown that pegmatites do exist. It is in such pegmatites that beryl, etc. does occur. The only practical way to resolve this matter is for me to visit the locality accompanied by the representative from Mohave Mining and Milling Company.

The Mohave Mining and Milling Company has a good record of mining, milling, ^{sintering}~~centering~~, and shipping manganese ore and concentrates. This record extends over the past four years. In this regard, Mr. Piatt mentions shipping 50 to 60 cars of manganese ore and concentrates a month. Each car has been giving us a net revenue of \$1000. In short, these people have been good customers, and as such warrant consideration toward their present request.

W. H. Crutchfield, Jr.

WHC:c

76.0276

M E M O R A N D U M

Los Angeles 58, California
June 24, 1958

Sec. 21, T16 $\frac{1}{2}$ N, R12W, Mohave
County, Arizona

Application for Mining Lease
from Mohave Mining & Milling
Co.

C-15-2-SFP

Mr. Crutchfield:

Enclosed is photocopy of letter from Robert R. Piatt of Mohave Mining & Milling Co., Wickenburg, Arizona, wherein application is made for a mining lease on Santa Fe Pacific minerals in Section 21, Township 16 $\frac{1}{2}$ North, Range 12 West, Mohave County, Arizona.

Please give us a report on the prospects for this property and your recommendation as to leasing to the applicant. It will also be appreciated if you will give us any information you have or can develop on this applicant which will be of assistance in determining whether or not they are capable, both from a financial standpoint and mining ability, to conduct the kind of operation we desire.

H. L. Briggs

JLS

JLS:bf
Enclosure

MOHAVE MINING & MILLING CO.

76.0276

P.O. BOX 1106, WICKENBURG, ARIZONA

PHONE MUTUAL 4-5457 -

June 20, 1958

*Encl. said
Attn: J.L.A.
6/23*

Santa Fe Pacific Railroad Company
Office of Land Commissioner
4549 Produce Plaza
Los Angeles 58, California

0-15-2-87P

Re: Sec. 21, T 16 $\frac{1}{2}$ N. R 12 W

Gentlemen:

Confirming my conversation of today, with Mr. J. L. Stevens, we are interested in leasing the above described land for exploration, development and possible mining of beryl, feldspar, lithium minerals, mica and all other pegmatite commodities; also manganese and other minerals encountered.

Mohave Mining & Milling Company is now shipping from Wickenburg, Arizona to the General Services Administration, Fort Worth, Texas, between 50 and 60 cars of manganese ore and concentrates per month.

References:

Pacific National Bank of San Francisco,
San Francisco, California

Traffic Department, Santa Fe Railway Co.,
Phoenix, Arizona

Will you kindly advise us the terms of your lease. ✓

Very truly yours,

MOHAVE MINING & MILLING CO.,

Robert R. Piatt

Robert R. Piatt

RRP:hmm

RECORDED

JUN 23 1958

COMMERCIAL

76.0276

INTER OFFICE MEMORANDUM

TO: Mr. H. F. Lynn

July 1, 1955

FROM: L. E. Whitney

SUBJECT: CARPENTER AND ROBERTS BERYL PROPERTY

On June 28, 1955 I made an inspection of the beryl claims brought to our attention by Mr. Harry Carpenter, who was formerly employed by us at Box Canyon mine.

The property consists of four non-contiguous claims located in Section 20, T 16 $\frac{1}{2}$ N., R 12 W, about 14 miles from Wickiup, Arizona and are reached via a fair dirt road leaving State Highway 93 six miles north of Wickiup. The claims are held by location by Mr. Carpenter and Ernest Roberts of Wickenburg. Overlapping claims have recently been staked by other parties for uranium but should not affect the title of the Carpenter claims.

The mineralization consists of numerous pegmatite dikes in a granitic country rock. The pegmatites contain quartz, feldspar, muscovite, beryl, tourmaline, possibly some lithium minerals, and a radioactive mineral that has been identified by the Bureau of Mines as euxenite, a rare earth and uranium tantalate - columbate.

The beryl occurs as greenish crystals ranging in size up to six inches in diameter and eighteen inches long. Apparently the beryl is confined to the narrower dikes and apophyses projecting from the larger ones. At least a dozen exposures of beryl have been opened by shallow pits and several hundred pounds of hand-~~collected~~ crystals are said to have been shipped to a mill in Colorado.

Mr. Carpenter wants to sell any or all of the claims for \$5,000 per claim. I am not familiar enough with the economics or metallurgy of pegmatites to pass an opinion on the value of the property, but I believe a production of perhaps 30 to 50 tons of mill feed per day could be obtained

with mining costs running from moderate to high. Revenue might be derived from the mica, lithium and columbium-tantalum as well as the beryl if a separation could be made economically.

LEW:ch