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ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: MOSSBERGER MICA

ALTERNATE NAMES:

YAVAPAI COUNTY MILS NUMBER: 1373

LOCATION: TOWNSHIP 11 N RANGE 1 E SECTION 29 QUARTER NE
LATITUDE: N 34DEG 16MIN 13SEC LONGITUDE: W 112DEG 16MIN 36SEC
TOPO MAP NAME: BATTLE FLAT - 7.5 MIN

CURRENT STATUS: EXP PROSPECT

COMMODITY:
MICA
FELDSPAR

BIBLIOGRAPHY:
ADMMR MOSSBERGER MICA FILE

11/09/98

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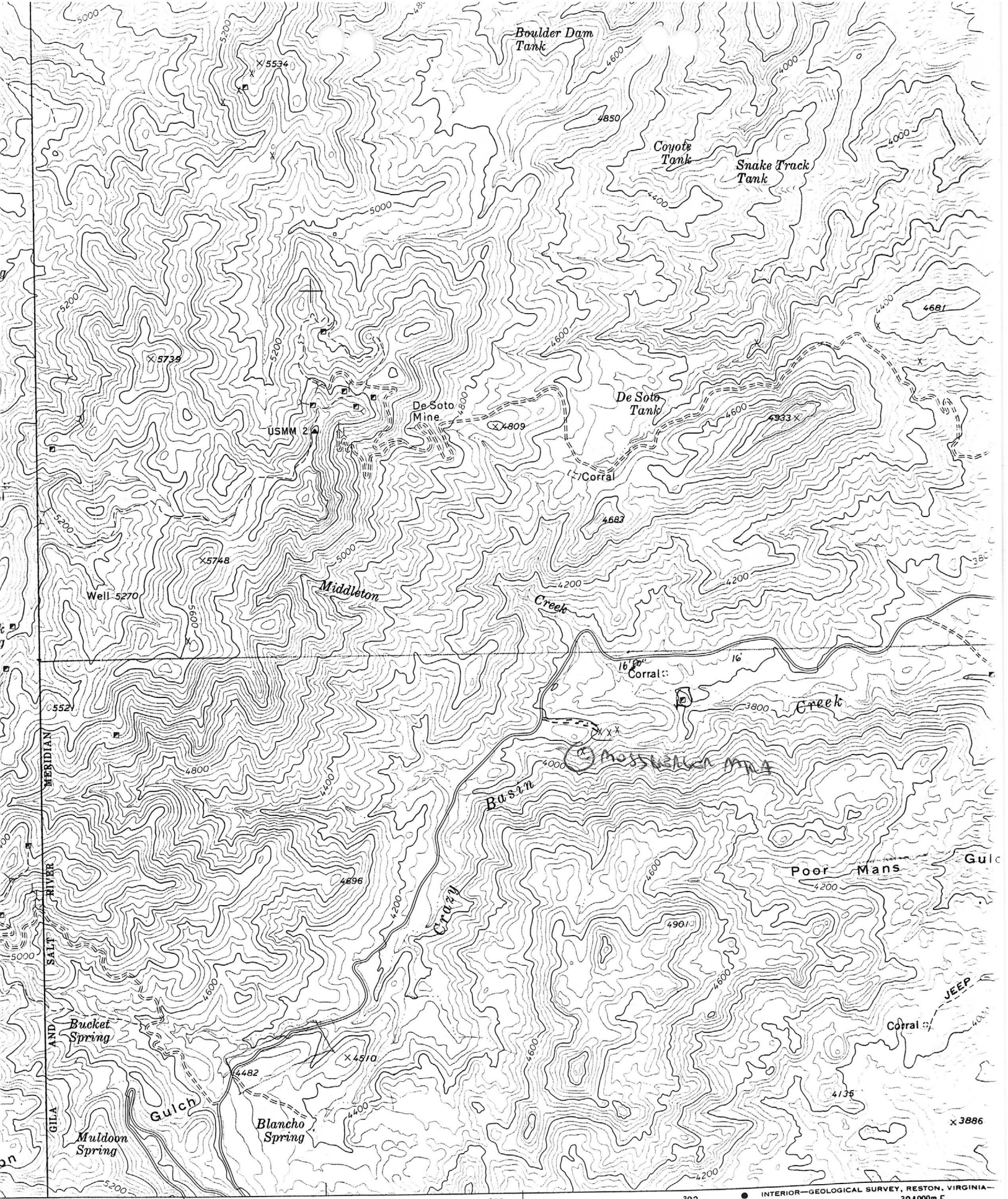
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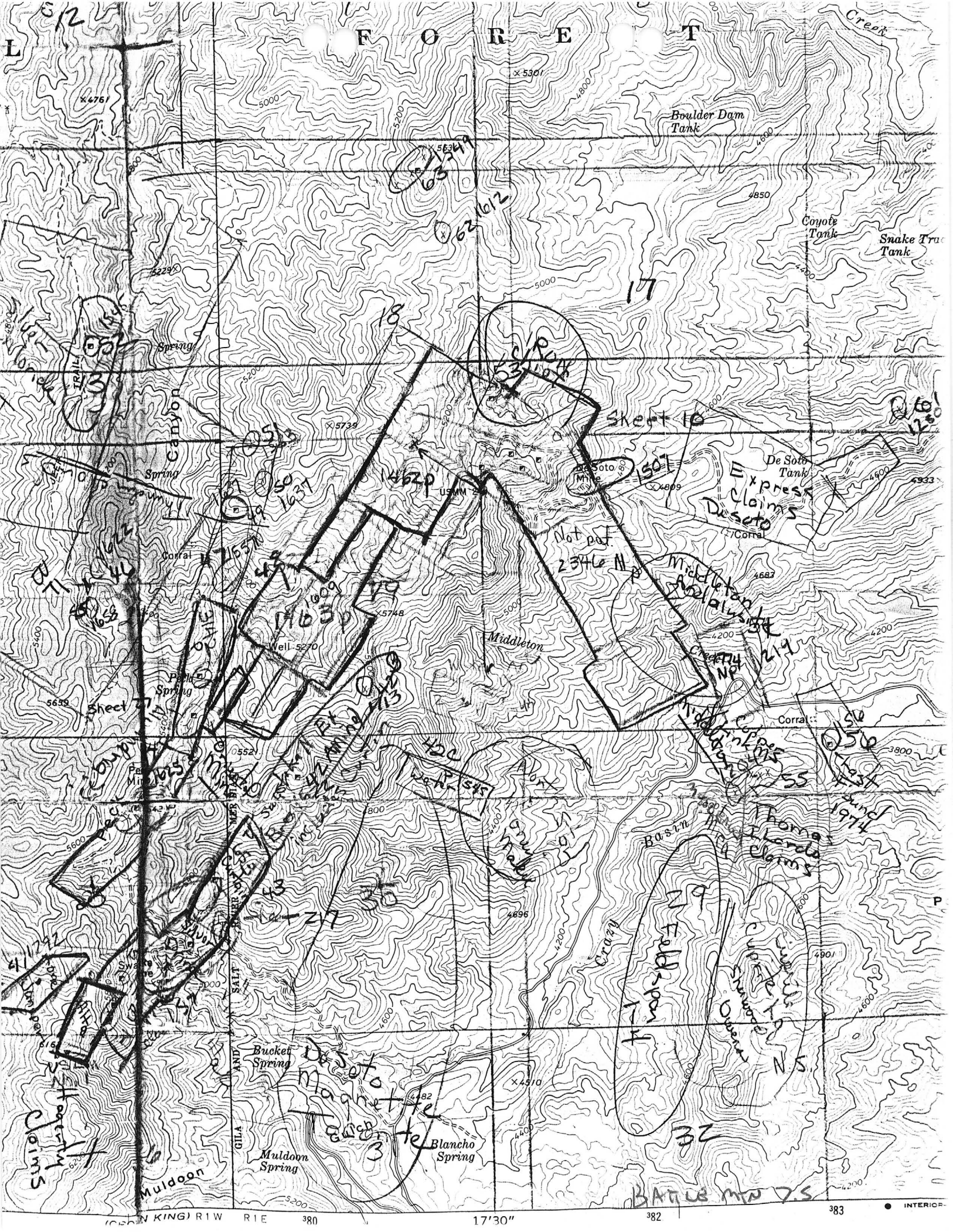
● INTERIOR-GEOLOGICAL SURVEY, RESTON, VIRGINIA
384000m E

ROAD CLASSIFICATION

- Primary highway, hard surface.....
- Secondary highway,
- Light-duty road, ha improved surface

BATTLE FLAT 7.5

CROWN KING 6 MI.



F O R E T

Boulder Dam Tank

Coyote Tank

Snake Trunk Tank

Sheet 10

Express Claims De Soto

Not part 2546 M

Middletown

Corral

Thomas

Crazy

Falls Spring

Blanco Spring

Bucket Spring

Muldoon Spring

Claims

Muldoon

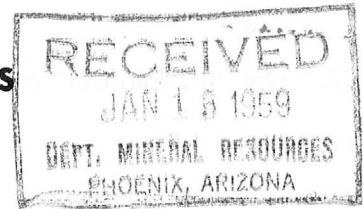
GILA AND SALT RIVERS

~~MOJAVE MICA~~
~~THOMAS ILARDO CLAIMS~~

YAVAPAI COUNTY
T11N R1E Sec 29 NE $\frac{1}{4}$

KAP WR 1/20/84: A visit was made to a mica pegmatite occurrence in the NE $\frac{1}{4}$ Sec 29 T11N R1E. Mica sample #12084-1 was taken from a shallow inclined shaft. Of significance to the mica occurrence is the partially zoned pegmatite dike which strikes N60E and dips to the north. This is emplaced in a schist-gneiss-granit mass where the schist is localized at the contact with the pegmatite. The pegmatite dike is partially zoned with a quartz core and a feldspar mica zone at the contact with the country rock. The feldspar-mica zone is only present along 20-30% of the contact. The pegmatite is over 500' long, but has only been prospected in a couple of locations.

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



Date Jan. 8, 1959

1. Mine: Mossberger # 1-2-3-4-5-6-7
2. Location: Sec. _____ Twp. _____ Range _____ Nearest Town Crown King Distance 9 miles
Direction East Nearest R.R. Mayer Distance appx. 20 mi.
Road Conditions good
3. Mining District and County: Yavapai
4. Former Name of Mine: _____
5. Owner: James H. Mossberger
Address: 718 1/2 Mill ave, Apt #2 Tempe Ariz. (P.O. Box 452)
6. Operator: _____
Address: _____
7. Principal Minerals: Mica
8. Number of Claims: Lode 7 Patented _____ Unpatented _____
Placer _____ Patented _____ Unpatented _____
9. Type of Surrounding Terrain: Rocky

10. Geology and Mineralization: Mica. Has been tested radon content. White mica will make paint grade. white quartz other minerals - runs 8- to 2570 mica. located in Gold & Silver Territory.

11. Dimension and Value of Ore Body: Estimated from 20 to 70,000 Tons mica.

Please give as complete information as possible and attach copies of engineer's reports, shipment returns, maps, etc. if you wish to have them available in this Department's files for inspection by prospective lessors or buyers.

(over)

TONNAGE and GRADE ESTIMATE

of

CERTAIN MICA PROPERTIES

in

CLEATOR / CROWN KING AREA
YAVAPAI COUNTY, ARIZONA

by

R. E. Mieritz
Mining Consultant
Phoenix, Arizona

December 15, 1956

Richard E. Mieritz

MINING CONSULTANT

December 15, 1956

Dr. C. A. Farris
Mr. W. L. Clarey
1832 E. Abram Street
Arlington, Texas

Dear Sirs:

On December 11, accompanied by Mr. Clarey, I personally visited three mica prospects in the Cleator-Crown King area, Yavapai County, Arizona. Purpose of the examination was to obtain information on which to base and provide you with a reasonable tonnage and grade estimate for each property.

The properties covered during the very brief examination are; Mossberger(7 Claims), Black Magic(5 Claims), and the Kale Hilltop(7 Claims) all in the Bradshaw Mining District. A well maintained county road between Cordes, Cleator and Crown King passes through each property and services each by connecting with paved State Highway 69 at Cordes Junction.

Conditions Effecting Reserve Calculations:

Similar geologic conditions exist on each property, namely strong pegmatic structures intruding the granites, quartz monzonite and schists. The pegmatic structures are mineralogically composed of feldspars, probably orthoclase, quartz stringers and phenocrysts and mica(muscovite-usually white or light colored) in varying degrees of content. These pegmatic structures are strong and quite persistent as to width regularity, cross country traverse and possibly depthwise. Moreover, the mineralogical contents appear to remain somewhat constant, (feldspars 60%, quartz, 10-30 % and mica 10-30%). This criteria is definitely advantageous to reserve estimates, mineability and mill feed operation.

Even though the above criteria are basically factual and important in any reserve estimate, it must be borne in mind that my estimates are concluded primarily from limited "spot" observations and distant observation from prominent vantage points. No structure was personally traced and paced more than 200 feet or so. You can therefore realize and appreciate the conditions under which the estimates are being made.

Mr. Clarey states that most structures have been previously traced out for as much as 3000 to 4500 feet on each property. You will note that figures used in my calculations are only a fraction of these figures. Time did not permit actual observation or inspection to such lengths, consequently I am not justified in assuming continuity of mica content beyond the lengths used in my calculations.

The mica content for each property has been predicted on the results of but one sample taken at each property. Location of each sample was chosen with care so as to obtain the most representative sample possible, not in a lean area nor in a concentrated area. It is my opinion that the samples taken cannot be projected beyond the limits used in my calculations.

MOSSBERGER PROPERTY

A six foot chip sample was taken normal to the strike of a strong pegmatic structure near the dry wash bottom as a means to approximate an average mica content to be applied to my tonnage calculations. This sample is identified as number 1.

The mica on this property is varied colored from clear to light green, however, a single lamination of the colored mica is very transparent and colorless. Mica content of the structures is controlled by its disseminations and book concentrations, thus reducing to a minimum the "barren" or "lean" zones and providing for economical mine operation and good mill production.

Three separate structures were observed on this property. Their on the ground position more or less forms an A, although I am not certain of their actual junctions with each other. None-the-less, I have ascribed a 600 foot length to each structure, a 50 foot surface relief height, a 150 foot depth below lowest exposure and an average 10 foot width.

| | | | | |
|-----------------------|---------------|---|------------------|-------|
| Structure 1- | 600'x200'x10' | = | 1,200,000 | cuft. |
| Structure 2- | 600'x200'x10' | = | 1,200,000 | " |
| Structure 3- | 600'x200'x10' | = | 1,200,000 | " |
| | | | <u>3,600,000</u> | " |
| 12cuft tonnage factor | | = | 300,000 | Tons |
| 25% Barren material | | = | <u>75,000</u> | Tons |
| Reserve- 20-25% Mica | | = | 225,000 | Tons |

Primarily "scrap" production.

BLACK MAGIC PROPERTY

This property has been worked by previous owners or lessors since there still remains two crushers, two vibrating screens and miscellaneous items.

Besides the main structure which has an observed length of plus 1000 feet, several bluff side exposures were noted, however, none of the latter structures were inspected.

The strong structure on which some quarrying had been done is approximately 30 feet wide at this point and contains pearly and light green to brown mica as disseminations, book concentrations and as veinlets paralleling the nearly vertical foot and hanging walls. Probably some "punch" mica may be available.

A 12 foot chip sample was taken across the face of the exposure and normal to the apparent strike of the structure. This sample was designated as number 2.

The following tonnage calculation is ascribed to the property. Only the main structure has been considered. A 600 foot length, a 75 foot surface relief above creek floor, a 175 foot depth below creek floor and an average 15 foot width.

| | | |
|------------------------------------|---|---------------------|
| Structure 1- 600'x250'x15' | = | 2,250,000 cuft. |
| 12 cuft. Tonnage factor | = | 187,500 Tons |
| 25% Barren material | = | - 46,875 " |
| Reserve- 20-30% Mica | = | <u>141,000 Tons</u> |
| Predominately scrap, some "punch". | | |

KALE HILLTOP PROPERTY

There are many pegmatic structures on this property which have been freshly exposed by the road cut and a pit. The material observed indicates the mica content has been materially reduced as compared to the previous discussed properties to the north. This reduction indicates a closer proximity to the original magma rock; quartz monzonite. Moreover, the mica appears to have lost its continuity behavior which tends to promote sporadic mineralization, thus more barren material.

Sample number 3 was taken in a surface pit over a 5 foot width normal to the strike of the structure. I do not believe this sample would be representative of the overall material, the latter being somewhat lower in mica content.

No structure appeared to be particularly strong in direction, width or mica content, consequently I hesitate to provide a tonnage estimate for any individual structure. I would however, ascribe 175,000 tons of a 10-20 % mica content after a reduction of an equivalent tonnage for "barren" material.

SAMPLING and ASSAY RESULTS

The following three samples were taken by the writer, placed in trust with Mr. Clarey and assayed for mica content by Martin and Carlisle Chemical Laboratory, Inc., of Albuquerque, New Mexico.

Although extreme care and caution were exercised during the sampling, the writer feels he may have unavoidably "salted" the samples to some degree because of the varying mineral hardness of feldspar, quartz and mica, the tendency being to get more of the softer material and less of the harder. However, a trend is indicated by the samples, at least for numbers 1 and 2. Visual examination of the pit from which sample 3 had been obtained did not indicate a mica content such as is represented by the assay. For this reason I have not projected the mica content of the Kale-Hilltop to more than the 20% limit.

| <u>Sample No.</u> | <u>Property</u> | <u>Sample Length</u> | <u>Mica Content</u> |
|-------------------|-----------------|----------------------|---------------------|
| 1 | Mossberger | 6 ft. | 20.6% |
| 2 | Black Magic | 12 ft. | 37.2% |
| 3 | Kale-Hilltop | 5 ft. | 34.3% |

RECAPITULATION

The following schedule indicates what tonnage could be available for early mining of the two properties which are thought to be more promising.

| <u>Property</u> | <u>Reserve</u> | <u>% Mica</u> |
|---------------------------------------|----------------|---------------|
| Mossberger | 225,000 tons | 20-25 % |
| Black Magic | 141,000 tons | 20-30 % |
| Total | 366,000 tons | 20 % plus |
| Concentrate Ratio, assume 5.5 to 1 | 66,600 tons | |
| 90% Mill Recovery | 60,000 tons | 100 % |

CONCLUSIONS

The writer concludes the following:

- (1)- that some 365,000 tons of 20% mica "ore" material is available for a mining and milling operation from the Mossberger and Black Magic properties,
- (2)- that each property individually can provide sufficient mica "ore" material to meet a minimum requirement of 100,000 tons,
- (3)- that the estimates are conservative, leaving ample margin for increasing same by closer and more detailed examination, sampling etc,
- (4)- that the Mossberger property will primarily produce "scrap" mica whereas the Black Magic property can be expected to produce upwards of 5% "punch" mica, the balance being "scrap" mica, and
- (5)- that the Mossberger and Black Magic properties should be thoroughly geologized, sampled and reported on prior to moving in of equipment for mining and mill erection.

Respectfully submitted,

R. E. Mieritz, P. E.