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PRINTED: 09/05/2002

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: TUCSON MICA PROPERTY

ALTERNATE NAMES:

PINAL COUNTY MILS NUMBER: 508

LOCATION: TOWNSHIP 8 S RANGE 13 E SECTION 5 QUARTER SW  
LATITUDE: N 32DEG 45MIN 29SEC LONGITUDE: W 111DEG 02MIN 00SEC  
TOPO MAP NAME: NINETY SIX HILLS SE - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:  
STONE MICA SCHIST

BIBLIOGRAPHY:  
ADMMR TUCSON MICA MINE FILE

TUCSON MICA

This property idle 12-8-62 - AXEL L. JOHNSON, WR - 12-8-62

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**DEPARTMENT OF MINERAL RESOURCES**  
STATE OF ARIZONA  
**FIELD ENGINEERS REPORT**

Mine Tucson Mica

Date July 6, 1960

District Black Mountain District, Pinal Co.

Engineer Axel L. Johnson

Subject: Present Status. Information from Mr. & Mrs. Ralph Ketcham.

References Report of April 8, 1960.

Present Status Mr. & Mrs. Ketcham has informed me that all operations at the property were closed down as of May 1, 1960, and all the machinery has been removed from the property.

The panel separators and screens are now being stored in Tucson, for possible use and sale to other mica operators. The remainder of the equipment and machinery were sold to Bob Barrett.

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA  
FIELD ENGINEERS REPORT

Mine Tucson Mica Date April 8, 1960  
District Black Mountain District, Pinal Co. Engineer Axel L. Johnson  
Subject: Field Engineers Report - Information from H. R. Quigley, Ralph Ketcham, and Personal Visit.

Location: About 51 miles N of Tucson. Drive N on Hwy. #80 to 43 miles N of Tucson or 17½ miles N of Oracle Junction. At Bogard Wash, turn right (east) & drive 6 miles on unimproved road. Secs. 5, 6, 7 & 8 - T. 8 S. - R. 13 E. (Sec. cor of Secs. 5, 6, 7, 8 near middle of claims.

Owner: State of Arizona.

Number of Claims: 24 claims or 480 acres.

Lessees: Freeman Brothers, owners of a ranch adjoining the property. State lease issued to Freeman Brothers, c/o Elmer C. Coker, 840 Security Bldg., Phoenix, Arizona.

Sub-Lessees & Operators:  
Ralph Ketcham, 5502 E. Waverly, Tucson - 75% interest  
H. R. Quigley, 1449 E. 8th St., Tucson - 12½% "  
Harold Nickolds, Tucson - 12½% "  
d.b.a. Tucson Mica Mining Co.

Principal Minerals: Mica associated with quartz and feldspar, occurring in pegmatite veins.

Present Mining Activity: Mica mining and milling operations closed down, at least temporarily. 2 men were working, blasting out quartz rock, which operators expect to sell for use as building stone. Previously, it was reported, that 3 to 4 men had been working at the property.

Geology: Pegmatite veins, containing mica, quartz, and feldspar. Several of these veins traverse the property.

Ore Values: Mr. Quigley estimates that the rock in the pegmatite vein will yield about 20% mica. Field engineer believes that very selective mining will be required to approach this figure, necessitating a considerable amount of rock stripping and removal of waste rock.

Ore in Sight & Probable: No estimate of same reported.

Milling Plant & Operations: Equipment consists of 8" Jaw Crusher, 30' Conveyor Belt, 2 sets of panel separators and screens. (See sketch attached.)

The milling operations are as follows:

The mined rock is dumped into a 2½ ton ore bin, from which it drops into the 8" Jaw Crusher. The crushed rock from the Jaw Crusher is carried by a 30 ft. conveyor belt to the first panel separator and screens unit (see sketch of same attached) equipped with a shaking device, imparting a sidewise motion to the entire unit, which consists of the panel separator on top, a 5/8" screen in the middle, and an 8 mesh screen at the bottom.

The oversize from the panel table separator is wasted and the undersize drops on the 5/8" screen. The oversize from this screen is mostly mica and drops into a container, from which it is later handsorted by picking out additional rock, and the undersize drops down on the 8 mesh screen. The oversize from the 8 mesh screen goes to the second panel separator and screens unit, while the undersize is wasted as rock.

The second panel separator and screens unit (see sketch of same) is equipped with a similar shaking device as the first and consists of a panel separator on top, a 3 mesh screen in the middle, and a 4 mesh screen at the bottom. The oversize from the 8 mesh screen in the first unit is run on top of the panel separator in the second unit.

The oversize from this panel separator is wasted as rock, while the undersize drops down on the 3 mesh screen. The oversize from this screen is mostly mica and drops into a container, from which it is later handsorted, and the undersize drops down on the 4 mesh screen.

Both the oversize and undersize from this screen is wasted as rock, and this screen could be dispensed with.

The panel separator and screens were built by Ralph Ketcham in his shops at Tucson.

The capacity of the milling plant is estimated by the operators at  $1\frac{1}{2}$  to 2 tons of rock per hr., or a maximum of about 15 tons of rock per day, operating at full capacity. It is, therefore, much too small to provide a profitable operation. Mr. Quigley states, however, that if the pilot plant operation should prove successful and if the necessary funds can be procured, they plan on installing 3 additional units of the same size as the first and working two shifts. This would multiply the present mill capacity by 8, giving a capacity of about 120 tons of rock per day, from which he estimates, they will obtain about 24 tons of mica per day, or over 500 tons per month.

Operators have also built a bin for storing the mica. This bin is 10' - 11" x 15' - 9" x 4' - 0" deep, and built with a flat bottom.

Marketing Facilities: Mr. Quigley states that they have a bona fide market for sale of 500 tons of mica per month at \$48 per ton delivered in Los Angeles. Mr. Quigley said that the name of the company was confidential information, but that they were operating from a Los Angeles office.

Specifications call for 98% scrap mica, delivered f.o.b. Los Angeles at \$48 per ton.

Mr. Quigley estimates that the cost of transporting the mica to Los Angeles by truck will be about \$12.00 per ton.

Review of Recent Operations: A small amount of mica rock has been mined and milled to date, as shown by the size of the open cut, which is about 20 ft. long, 10 ft. wide and 6 to 12 ft. in depth. The rock, blasted in this cut, was shoveled by hand into a wheelbarrow, then wheeled for about 100 ft. and dumped into the  $2\frac{1}{2}$  ton ore bin. Operators expect to install a scraper and other labor saving machinery for mining the ore, if and when additional units are added to the milling plant.

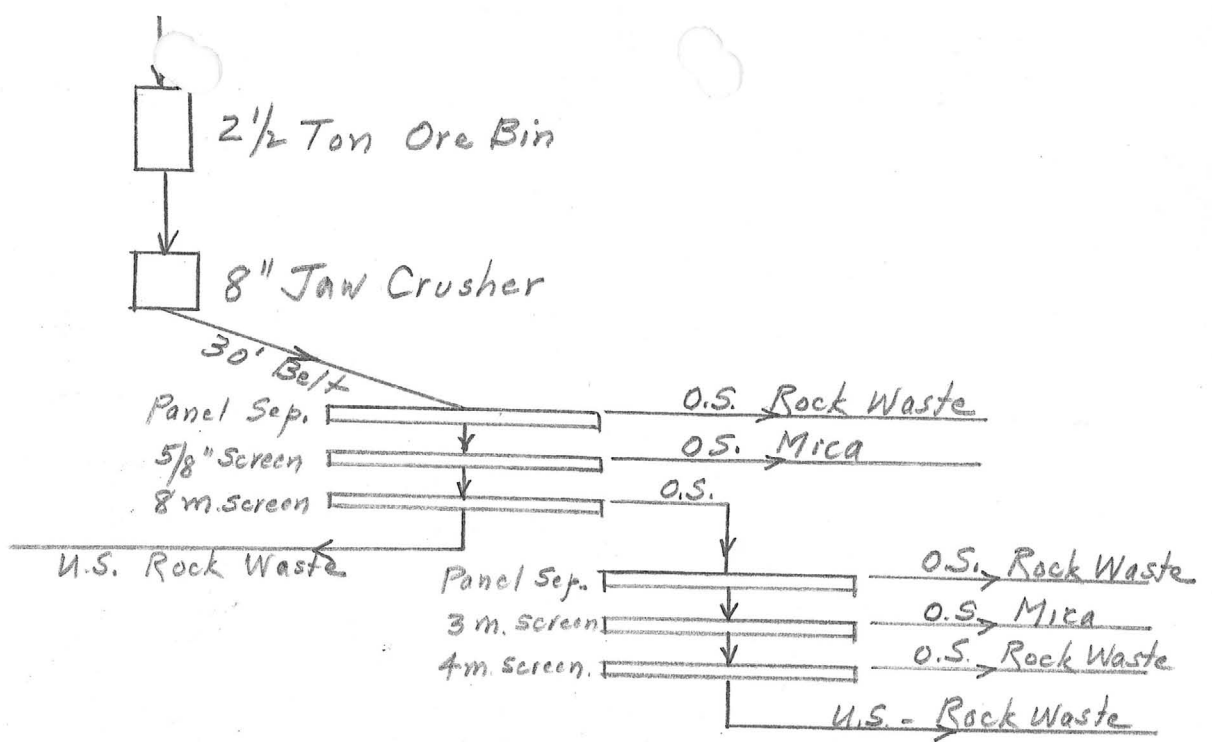
Additional: On account of a disagreement between the sub-lessees and operators, Ralph Ketcham and H. R. Quigley, both parties have informed the field engineer that they wish to sell out their interest in the sub-lease and the milling equipment. It is, therefore, for sale and any reasonable offer will be considered.

Remarks by Field Engineer: This operation could possibly be operated at a profit with efficient mining operations and a milling plant of 120 tons per day or more capacity,

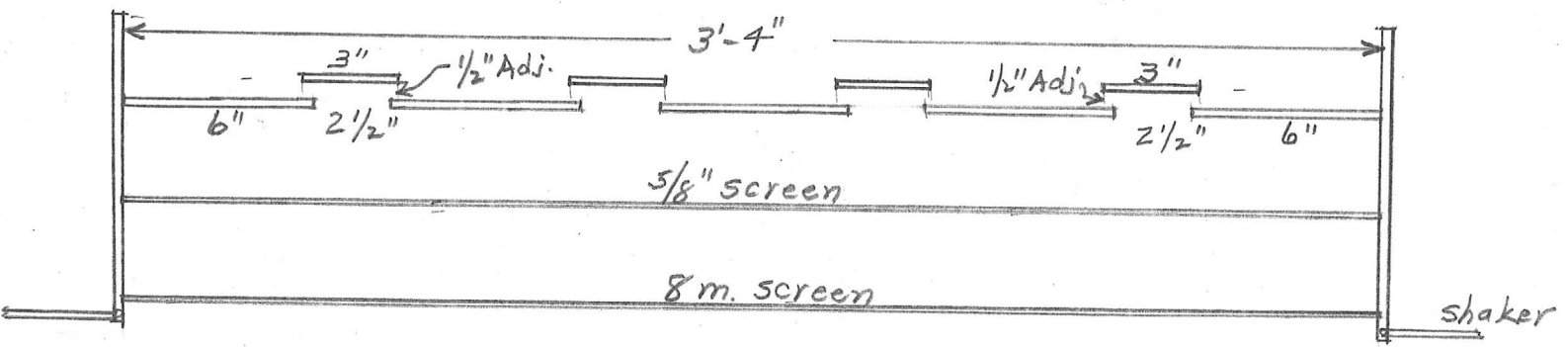
Tucson Mica (continued)

April 8, 1960

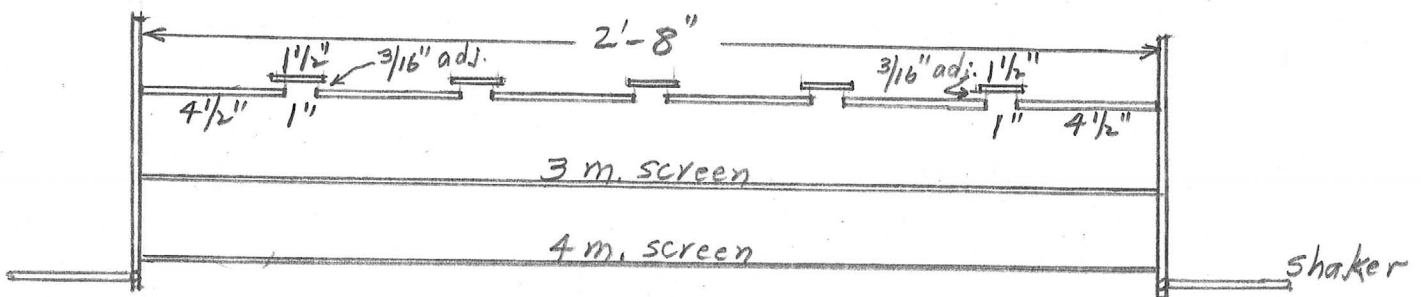
if the quartz rock could be sold as well as the mica. The pegmatite veins on the property should be measured, mapped and extensively explored and tested in order to obtain an estimate of possible ore reserves and average mica content before mill construction and mining operations are attempted.



FLOW SHEET



1<sup>ST</sup> PANEL SEPARATOR & SCREENS UNIT  
3'-4" wide x 6'-4" long on slope



2<sup>ND</sup> PANEL SEPARATOR & SCREENS UNIT  
2'-8" wide x 6'-0" long on slope