CONTACT INFORMATION
Mining Records Curator
Arizona Geological Survey
1520 West Adams St.
Phoenix, AZ 85007
602-771-1601
http://www.azgs.az.gov
inquiries@azgs.az.gov

The following file is part of the

Arizona Department of Mines and Mineral Resources Mining Collection

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PRINTED: 06/24/2002

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: SAN ANTONIO MINE

ALTERNATE NAMES:
- CROWLER #1, 2, 3, 4
- SUNSHINE
- VALENTINA MINING CLAIM
- DESERT WHITE QUEEN

PIMA COUNTY MILS NUMBER: 9

LOCATION: TOWNSHIP 13 S RANGE 7 W SECTION 11 QUARTER SE
LATITUDE: N 32DEG 18MIN 25SEC LONGITUDE: W 112DEG 57MIN 00SEC
TOPO MAP NAME: AJO - 15 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:
- SILICON
- COPPER
- FELDSPAR
- MICA
- URANIUM

BIBLIOGRAPHY:

- AZBM BULL. 189, P. 83, 1974
- US AEC PRR PIMA CO. 1955, P. 645
- ADMMR SAN ANTANIO GROUP FILE
- GJBX 143, 1981, RADIOACTIVE OCCURRANCE, P.234
- AZBM BULL. 155
- USBM MINERAL YEAR BOOK, 1963
- ELEVATORSKI,E.A.,1978, AZ INDUSTRIAL MINERALS ADMMR MINERAL RPT NO. 2, P. 50

06/03/97

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: SAN ANTONIO MINE

ALTERNATE NAMES:
CROWLER #1, 2, 3, 4
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USBM MINERAL YEAR BOOK, 1963
ELEVATORSKI,E.A.,1978, AZ INDUSTRIAL MINERALS
ADMMR MINERAL RPT NO. 2, P. 50

SAN ANTONIO GROUP

PIMA
AJO DIST.
T13S, R7W, Sec 11

ABM Bull. 180, p. 345, 402

MILS Sheet sequence number 0040190381 SAN ANTONIO MINE

GJBX 143 1981 Radioactive Occurrences and Uranium Production in AZ
p. 234, ABG&MT Report

USAEC Preliminary Reconnaissance Report p. 645

ABM Bull 189, p. 83

ABM Bull 155

USBM Mineral Yearbook 1963

Arizona Department of Mines and Mineral Resources

INFORMATION FROM MINE CARDS IN MUSEUM

ARIZONA

PIMA

~~PINAL~~ COUNTY

MM 3003 A RARE EARTH SILICATE

3003 B

San Antonio Mine

MLS #9

4-AKA's

San Antonio Lab

San Antonio Corp

KENNAMETAL

KENNAMETAL INC.
P.O. Box 231
Latrobe, PA 15650

Phone 412-537-3311
writer's direct dial number
412-539-5132

May 18, 1981

San Antonio Mica Mine
P.O. Box 397
Ajo, AZ 85321

Attn: Mr. Richard L. Ballesteros

Subj: Tantalite

Dear Mr. Ballesteros,

Thank you for your letter of May 14.

We are regular consumers of Tantalite concentrates and are certainly interested in an opportunity to check out a sample of your production. Would you kindly sent this to my attention.

Re pricing, this depends to such a large extent on the quality of the ore, the level of Ta_2O_5 contained, as well as combined pentoxides.

We shall revert to this subject as soon as we have had the opportunity to test this sample in our laboratory.

Yours sincerely,

Kennametal Inc.

Derek Rushbrook

DAR/slm

RECORDED BY: JE
DEPUTY RECORDER
2012 RD15
W
MICHAEL BALLESTEROS

120 E 3RD ST
SAFFORD AZ 85546

City/State/Zip Code: _____

DOCKET: 9343
PAGE: 1945
NO. OF PAGES: 2
SEQUENCE: 92109610
07/29/92
AFFPL 15:49:00

MAIL
AMOUNT PAID $ 12.00

SAN ANTONIO Mine (file)

Space above this line for Recorder's use

AFFIDAVIT OF PERFORMANCE OF ANNUAL WORK

(Mining Claim)

RECEIVED
B.L.M. AZ STATE OFFICE
AUG 11 12 14 PM '92
PHOENIX, ARIZONA

State of Arizona)
) ss.
County of Pima)

I, Richard L. Ballesteros Sr.
Name

San Antonio Mine - P.O. Box 397
Address

AJO, Arizona, 85321
City, State, Zip

being first duly sworn according to law, depose and say that I am a citizen of the United States, more than eighteen years of age, and that all of the facts set forth in this affidavit are true and correct according to the best of my knowledge, information and belief:

1. That I am personally acquainted with the mining claim named San Antonio Mine Group LLC: 1 thru 25 AMC-77467-77491, situated in the AJO Mining District, Pima County, AJO, Arizona, the location of which is recorded in the office of the County Recorder of said County in Book 76 to 96, Page(s) 461. Notice of location is posted in Section 1-11-12, Township 13 South, Range 7-West, Gila River Base and Meridian;
2. That between the dates of August 12 1991 and August 31 1992 at least Two-thousand-six hundred fifty — ($ 2650.00) dollars worth of work and improvements were done and performed upon this claim not including location work;
3. That the work and improvements were made by and at the expense of Richard L. Ballesteros Sr. San Antonio Mine - P.O. Box 397 AJO, Ariz 85321, owner(s) of the mine for the purpose of complying with the laws of the United States pertaining to assessments of annual work;
4. That the following individuals were employed to perform the work and improvements alleged herein: Charles Ballesteros - Richard C. Ballesteros - Clifford Lopez David Perez - Forbeat LOA;
5. The work and improvements performed were Road Improvements, ORE Vein Discovery work, Cleaning discovery shafts - Drilling for ASSAYing ORE body discoverys, And Stockpileing ores on each Claims Said. Clearing brush for to see And work on Claims.

FORM 01

9343 1945

Dated: July 7, 1992

Richard Ballesteros Sr.
Signature

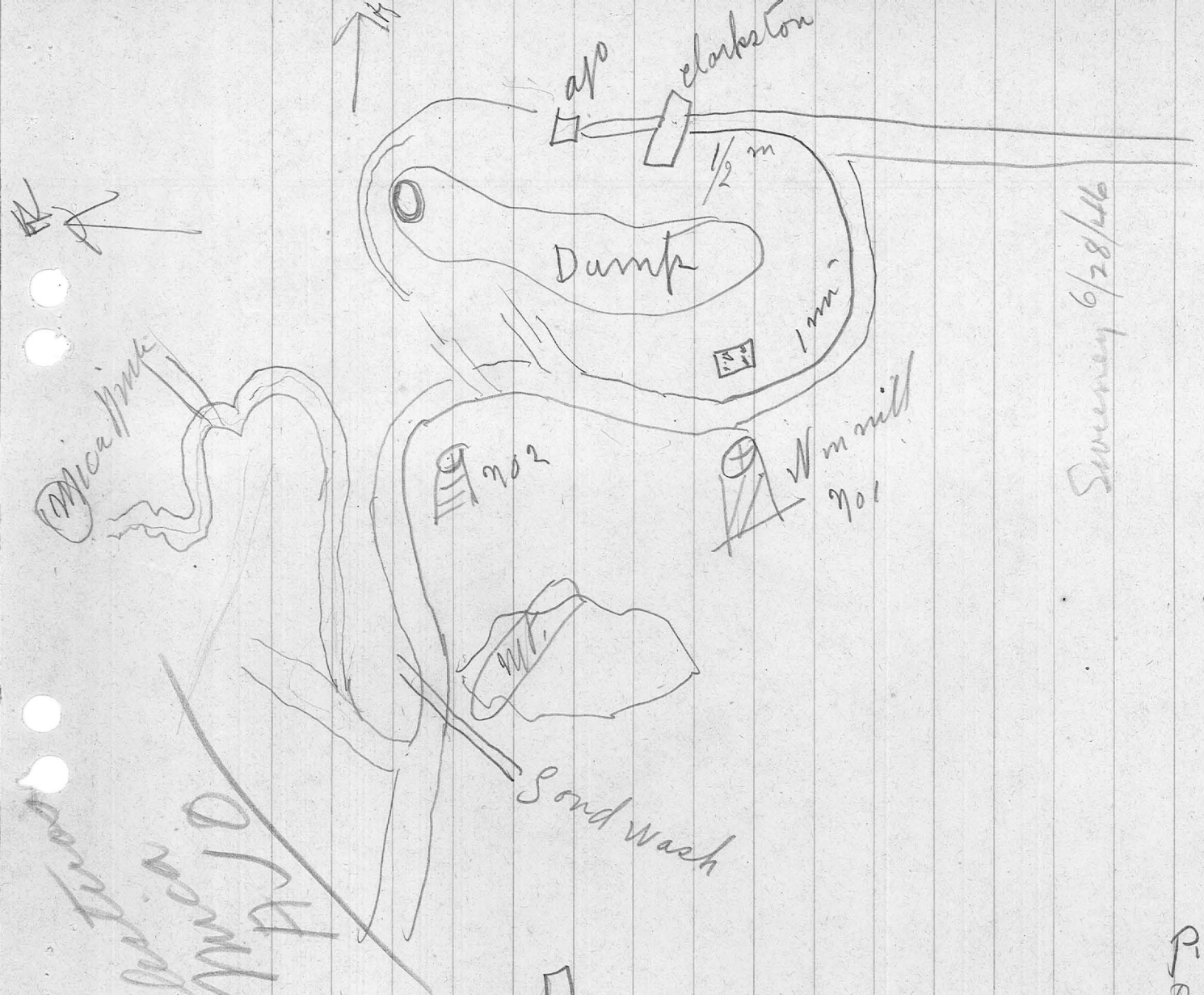
SUBSCRIBED AND SWORN TO before me, a Notary Public, this 7th day of July 1992 19 ___, by Richard Ballesteros Sr.

My Commission Expires: _____

V.I. Schnell
Notary Public

OFFICIAL SEAL
V.I. SCHNELL
NOTARY PUBLIC-STATE OF ARIZONA
PIMA COUNTY
My Comm. Expires Dec. 18, 1993

9943 1946



P. H. McGee
R. L. Ballardini
aug 24-44

Desert White Queen

July 23, 1946

Mr. Richard Ballesteros
Box 558
Tempe, Arizona

Dear Mr. Ballesteros:

If your Ajo mica property is not tied up, I believe we have some good people who would be interested.

This is C. T. Carpenter who is well known to this office and to me personally.

If you say so and will set the time, I will have him look you up at Tempe.

Yours very truly,

Chas. H. Dunning
Director

CHD:LP

June 6, 1942

MEMORANDUM

Desert White Queen
Mica - near Ajo

Owners: R. L. Ballasteros and
Jesus Acevedo

Mr. Lyon of Ajo has given up lease.
Property now open for new lease.

To equip need - power, crusher, rolls and screens for cleaning product. Extimated cost $2500 to $3000.

Market.
Can sell product to
Sierra Minerals Co. - Los Angeles
50 tons a month @ $21.00 per ton f.o.b. L.A.
Must clean to 5% silica or to
maus purple - L. A.
200 tons per month @ $7.50 per ton f.o.b. Ajo
rough cleaned

Will lease or sell property.

Lease on 10% of net returns f.o.b. car.
net - meaning - after deducting mining,
milling & hauling.costs.

MINING JOURNAL 3/28/42

[redacted]

SAN ANTONIO MINE (file)

Pima

Oct 26 1991

Dear President of Phelps Dodge Corporation

A contract by your chief engineer at the time, Robert E. West for the New Cornelia branch mine in 1951 for 10,883.92 tons of Barren Quartzs was never paid, our records show. Consider this a bill.

10,883.92 tons of Barren Quartz @ .25¢ A ton.

10,883.92 X .25¢ = 2,720.98

Please remit to: San Antonio Mine
Richard Ballesteros
P. O. Box 397
Ajo Az. 85321

Truely Yours
Fred Broberg
S.A Mica Mine

cc. Ken A. Phillips chief State of Arizona Dept. of Mines and Mineral Resources Engineer

P.O. Box 397 • Ajo, AZ 85321 • 602 387-5030

STATE BAR OF ARIZONA, 363 NORTH FIRST AVENUE, PHOENIX, ARIZONA 85003, (602) 252-4804

May 23, 1990

Richard L. Ballesteros
P. O. Box 397
Ajo, Arizona 85321

(San Antonio Mine) file
PIMA COUNTY

Re: Ballesteros v. Tognoni
ARB 068-90

Dear Mr. Ballesteros:

Enclosed please find a copy of Mr. Tognoni's response to your Petition for Arbitration. As you will note, Mr. Tognoni states that he has no interest in taking your mine, neither does he intend to pursue the payment of any fees. Based upon Mr. Tognoni's response, I am assuming that this matter can be dismissed. If I do not hear differently from you within ten (10) days of receipt of this letter, I will assume that there is no need to proceed with the fee arbitration, and, likewise, we will dismiss the file.

Should you have any questions, please do not hesitate to contact this office at any time.

Sincerely,

Regina Williams

Regina Williams
Special Services Coordinator

RW/ms

cc: Hale C. Tognoni

HALE C. TOGNONI, P.E., J.D.
CITIBANK PLAZA
4041 N. CENTRAL AVE. SUITE 890
PHOENIX, ARIZONA 85012
(602) 263-0771
FAX (602) 274-6442

May 11, 1990

Regina Williams
Special Services Coordinator
State Bar of Arizona
363 North First Avenue
Phoenix, Arizona 85003

Re: Ballesteros v. Tognoni
ARB 068-90

Dear Ms. Williams:

This letter is in follow up to our telephone conversation of Tuesday, May 8, 1990 concerning the arbitration of Mr. Ballesteros' legal bill.

As I stated on the telephone, I have no intention of spending any time collecting or arguing about fees from Mr. Ballesteros, nor do I have any interest in taking his mine.

If Mr. Ballesteros is able to sell his mine and make use of the contract I prepared for him and obtain sufficient funds through the sale of that property to pay his legal bill or a portion thereof, I will be happy to accept whatever he feels is owed.

In the event I have no further communication from Mr. Ballesteros, his legal bill with this office will eventually be written off our books.

If you require additional documentation from me, please feel free to call.

Sincerely,

Hale C Tognoni

Hale C. Tognoni

HCT:dm

Date Printed: 07/13/1999

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

INFORMATION SUMMARY

Information from: **Nick Carter**

Company:

Address:
City, State ZIP:
Phone:

MINE: **San Antonio**

ADMMR Mine File: San Antonio
County: **Pima**
AzMILS Number: **9**

SUMMARY

Nick Carter reported he remains interested in the quartz and mica production possibilities of the San Antonio Mine in Pima County. He further reported that Richard Ballesteros passed away on April 1, 1998. He son, Charles, who took over the mine property died on November 22, 1998. The affairs of the mining property are now reportedly being handled by Charles' widow Lisa. The claims are inside a withdrawal area whose withdrawal post date the location of the claims.

Ken A. Phillips, Chief Engineer Date: July 12, 1999

Veneta Mineraria S.p.A.
già Miniera di Fragnè

Sede Legale e Direzione Generale:
20132 Milano, Via Palmanova 24
Telefono: (02) 28391
Telex: 311117 - VENEMI I
Telefax (02) 2839311

Capitale soci[illegible] 2.500.000.000
Registri Imprese Trib. Milano
n. 219301/5988/1
Codice Fiscale n. 00164930067
Partita IVA 06878810156

CCIAA Milano n. 1019940
CCIAA Vercelli n. 87404
CCIAA Bergamo n. 238107
CCIAA Padova n. 100923

Milan, 10/11/97

SAN ANTONIO MICA MINE

PO BOX 584
AJO ARIZONA 85321

Att. Mr Ballesteros

Dear Sirs,

Thank you for your letter dated 12 October, we are of course interested in the product you are offering and we should be very pleased to receive mica, feldspar and tulc specifications and price idea for FCL C&F north Italian port.

Best regards

VENETA MINERARIA SPA
già Miniera di Fragnè

G. Zuccoli

Stabilimenti:
13021 Alagna Valsesia (VC)
Miniera Torrente Otro
Tel. (0163) 922933

24043 Caravaggio (BG)
V.le E. Unita, 29
Tel. (0363) 50025

35042 Este (PD)
Via Belle, 2
Tel. (0429) 601982

F. ANN RODRIGUEZ, RECORDER
RECORDED BY: [illegible]C
[illegible]PUTY RECORDER
1212 ROOE
W
LUZ H BALLESTEROS

7129 W MEADOWBROOK
PHOENIX AZ 85033

DOCKET: 10290
PAGE: 1870
NO. OF PAGES: 2
SEQUENCE: 96077529
05/08/96
AFFPL 15:34:00

MAIL
AMOUNT PAID $ 15.00

Return Document to:

Luz H. Ballesteros
~~Po Box~~ Po Box 534
~~Ajo AZ~~ 85321

For BLM Use Only

Waiver 017
6-84

AZ-3850-1 (July 1992)

Telephone # (602)- 691-0918

CHECK ONE

☑ **AFFIDAVIT OF PERFORMANCE OF ANNUAL WORK**
Also fill in ITEMS 1 through 9 and the reverse side of this document.

☑ **NOTICE OF INTENTION TO HOLD**
I intend to hold the claim(s) /site(s) listed on the reverse side of this document for the calender year 19 96. Also fill in ITEMS 1 through 4 and ITEM 9.

NOTICES OF INTENTION TO HOLD ARE FOR MILL SITES AND TUNNEL SITES OR FOR MINING CLAIMS WHEN ASSESSMENT WORK HAS NOT BEEN DONE, REGARDLESS OF WHETHER THE ANNUAL ASSESSMENT HAS BEEN SUSPENDED, DEFERRED, OR NOT YET ACCRUED. THE FILING OF A NOTICE OF INTENTION TO HOLD SHALL NOT RELIEVE THE OWNER OF COMPLYING WITH FEDERAL AND STATE LAWS PERTAINING TO THE PERFORMANCE OF ANNUAL ASSESSMENT WORK. NOTICES OF INTENTION TO HOLD FOR MILL SITES OR TUNNEL SITES NEED NOT BE COUNTY RECORDED. FOR MINING CLAIMS THE FORM FILED WITH BLM MUST BE IDENTICAL TO THE ONE THAT WAS OR WILL BE FILED WITH THE COUNTY.

Evidence of Annual Assessment Work or a Notice of Intention to Hold must be filed each calendar year following the calendar year in which the Claim/site was located.

ALL CLAIMS LISTED ON A SINGLE AFFIDAVIT MUST BE CONTIGUOUS.

1. State of Arizona, County of Pima ss:
2. I, (Name) Luz H. Ballesteros
3. Reside at (Address) San Antonio Mine Rd. P.O. Box 397
City AJO, County Pima, State AZ, Zip 85321

being duly sworn, deposes and says that he/she is a citizen of the United States, more than eighteen years of age, that all of the facts set forth in this affidavit/notice, subject to the provisions and penalties of 18 USC 1001 pertaining to the filing of false, fictitious, or fraudulent statements with the United States, are true and correct according to the best of my knowledge, information and belief.

4. Owner's Name and Address (If not shown in items 1-3 above) CHECK HERE IF THIS IS A CHANGE OF ADDRESS ☐
SAME

5. That I am personally acquainted with the mining claim(s). The work and improvements were made by and at the expense of the owner(s) of said claim(s). Said contiguous group of claims, listed on the reverse side of this document, are situated in the Growler Mining District, Pima County, Arizona

6. That between the dates starting at 12 o'clock noon on September 1, 19 95 and ending at 12 o'clock noon on September 1, 19 96 at least $ 800.00 + dollars worth of work and improvements were done and performed upon said claim(s) or upon one or more of a contiguous group of claims for the benefit of all, or wholly or partly outside of a contiguous group of claims for the benefit of all, not including the location work.

7. That the following persons were employed to perform the work and improvements described herein: Charles Ballesteros, Richard C. Ballesteros Jr. Miguel Carrasco Clifford Lopez

8. That the work and improvements performed ware: Road Improvements to claims. Ore vein discovery work. Cleaning & widening ore vein deposits, drilling for assaying & sampling ore. Stock pile products on each said claim above. Clearing all debris & shafts on all claims.

9. Dated ____________, Signature Luz H. Ballesteros

SUBSCRIBED AND SWORN TO before me, a Notary Public, this 4th day of April 19 96

by Luz H. Ballesteros

Notary Public [illegible signature]

MY COMMISSION EXPIRES My Commission Expires April 9, 1999

This form is for the purpose of complying with the laws of the United States Department of the Interior, Bureau of Land Management and the State of Arizona pertaining to assessment work and/or a notice of intention to hold. 30 USC 28; 43 CFR 3833.2, ARS 27-208. Subject to Paperwork Reduction Act and Privacy Act statements available at the BLM AZ State Office. The form is not copyrighted. It may be reproduced without restriction.

For BLM Use Only

RECEIVED
BLM AZ STATE OFFICE
APR 4 12 26 PM '96
PHOENIX, ARIZONA

Waiver 017

10290 1870

If the claims/sites have consecutive BLM #'s and are in the same Township, Range and Section(s) they may be listed as follows:

SAMPLE 1-10 A MC 19640-49 Dkt/Pg # 1025/1-10 (or) RECORDING # 9106173-82 4N 20W 36

CLAIM/SITE NAME	SERIAL NUMBER	Dkt/Pg or Recording # of ORIGINAL LOCATION NOTICE!	TWN SHP	RNG	SEC(S)
1. San Antonio Group #1	A MC 77467	75 - 607	T13S	7W	11SE
2. San Antonio Group #2	A MC 77468	76 - 31 - 32	T13S	7W	12SW
3. San Antonio Group #3	A MC 77469	917 - 183	T13S	7W	11NE
4. San Antonio Group #5	A MC 77471	917 - 185	T13S	7W	11NESE
5. San Antonio Group #6	A MC 77472	4524 - 411	T13S	7W	12NW
6. San Antonio Group #2	A MC 77478	1930 - 120	T13S	7W	12NE
7.	A MC				
8.	A MC				
9.	A MC				
10.	A MC				
11.	A MC				
12.	A MC				
13.	A MC				
14.	A MC				
15.	A MC				
16.	A MC				
17.	A MC				
18.	A MC				
19.	A MC				
20.	A MC				
21.	A MC				
22.	A MC				
23.	A MC				
24.	A MC				
25.	A MC				
26.	A MC				
27.	A MC				
28.	A MC				
29.	A MC				
30.	A MC				

FILE WITH: Bureau of Land Management, 3707 North 7th Street, P. O. Box 16563, Phoenix, Arizona 85011 and the respective county recorder, ON OR BEFORE DECEMBER 30th (NOT THE 31st). BLM REQUIRES A $5.00 NONREFUNDABLE SERVICE CHARGE FOR EACH MINING CLAIM, MILL SITE OR TUNNEL SITE. ANNUAL FILINGS THAT ARE NOT ACCOMPANIED BY PROPER SERVICE CHARGES WILL BE RETURNED WITHOUT FURTHER ACTION BY BLM.

(March 1984)

DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIPT AND ACCOUNTING ADVICE

NO. 231457

Subject

Applicant

Remitter

Assignor

SERIAL NO.

REFER TO THE ABOVE CASE SERIAL NUMBER IN ALL CORRESPONDENCE. PLEASE INFORM THIS OFFICE OF ANY CHANGE IN ADDRESS.

NOTE: This notice is a receipt for monies paid the United States. If these monies are for required fees in connection with your application to lease, purchase, enter, or otherwise acquire an interest in public lands or resources, this receipt is not an authorization to utilize the land applied for and it does not convey any right, title, or interest in the land for which application is made.

Mailing Address: Wood For AZ.:
Home Address for Phoenix, is:
7129 W Meadowbrook
Phx, AZ 85033
Phone: (602) 691-0918

SAN ANTONIO GROUP PIMA

It was reported that Richard Ballesteros is mining mica at the San Antonio mine S.W. of Ajo; Sec. 11, T13S, R7W. GWI WR 7/17/75

References: ABM Bull. 180, p. 345, 402

KAP WR 6/6/80: Richard Ballesteros is still trying to set up his mica processing plant at his mica mine at Ajo.

KAP WR 3/13/81: Mr. Ballesteros reported he has obtained assays from some gold ores on his San Antonio Claims, Ajo District, Pima County. The highest of the assays ran 1.5 tr.oz/ton gold and 8.0 tr.oz/ton silver.

KAP WR 3/27/81: Richard Ballesteros reported he believes he has a tantalum occurrence in one of the pegmatite deposits in the San Antonio Claim Group.

KAP WR 8/3/84: A visit was made to the San Antonio Mine (f) Ajo District, Pima County. Samples of feldspars and mica were taken. A separate report has been written.

KAP WR 8/10/84: Samples of feldspar from the San Antonio Mine (file) were delivered to the American Rockwool plant in Casa Grande. After initial testing with a torch, they concluded they would like to purchase a 5 ton sample.

KAP WR 3/15/85: Richard Ballesteros (San Antonio Mine - file) Ajo District, Pima County, reported he had stopped by American Rockwool's plant in Casa Grande to discuss selling feldspar from his mine. He said American Rockwool will not pay a price sufficient to cover mining costs.

SAN ANTONIO GROUP PIMA COUNTY

Interview with John O'Neil, Gen. Supt., New Cornelia Branch - Phelps Dodge Corp.

O'Neil said that Richard Ballesteros delivered small silica flux shipments each month presumably from a new pit near the north end of his claims. The quartz is of good grade. Memo LAS 12-3-63

Mr. West said Richard Ballesteros continued to deliver 50-100 tons per month of 90-93 percent silica flux. Most of it is being mined from a lense that lies about ½-3/4 mile north of the main pit. This is in monzonite and unlike the main pit material, it contains very little mica. Ajo conf. - LAS 12-1-64

Conference with Robert West - Chief Engineer - New Cornelia Branch, Phelps Dodge

Richard Ballesteros delivers 40-50 tons per month of 88-91 percent silica flux to the New Cornelis Smelter. He is obtaining this from a place that is about 3/4 mile north of the original pit. LAS Memo 4-8-65

Mr. Smith says only 1 man operation. 1-1966

Mr. Ballesteros said the County was going to discontinue maintaining the road to his mine and he wished help to prevent them from doing this. LAS WR 12-9-66

Tried to locate Mr. Richard Ballesteros to discuss his silica pit and mica deposit. First two inquiries led nowhere. Talked with Mr. Henry C. Crumb, Branch Manager at the Valley National Bank - he said that Mr. Ballesteros was very hard to find as he lived about ten miles out of town on a "jeep" road and has no phone. He advised me to not try to get out there. He advised that Mr. Forest Ricard, Smelter Supt. as being the man in most frequent contact with Mr. Ballesteros. Memo CLH 2-6-68

Talked with Dick Ballesteros, operator of the San Antonio mine, south of Ajo. He is not hauling silica at present but is overhauling his equipment to start mining his mica deposit. He is working two men. CLH WR 4-13-68

Went to Mr. Ballestera's mica mine 12 miles west of Ajo. He hasn't operated for a couple months due to the poor condition of his road and the fact the Buckeye Mica plant has been closed. In the meanwhile he has found a tungsten prospect in Sonora. GW WR 10/20/71

Went to Balesteras' mine, on the way stopped at one of the core rigs drilling aout a ¼ mile SW of the New Cornelia waste dump. The operator said he worked for Longyear Company and had been on the job about a week having been in Mina, Nevada. From the number of rods on the stand, this rig was coring around 100' and was in a dark gray brecciated material. Three other rigs were in sight of the Loop road. Mr. Balesteras was not available but apparently there has been no activity at the mine for some time. GW WR 4/19/72

MINE: San Antonio Group (file) DATE: August 3, 1984

DISTRICT: Ajo ENGINEER: Kan A. Phillips

COUNTY: Pima

On the above date, a visit was made to Mr. Richard Ballesteros' San Antonio Group of 25 claims about 6 miles southwest of Ajo. A separate "Mine and Prospect Field Visit Data Summary" has been prepared to accompany this narrative.

Richard L. Ballesteros, his wife, one young daughter and adult son live at the mine site and have continuously since the early 1950's. Other sons and daughters have over the years moved away and begun their own families.

Over the years Mr. Ballesteros has operated the San Antonio Group to produce silica smelter flux and mica. Approximately 10,000 ton of silica has been mined from zones in a simple, erratically zoned pegmatite on the San Antonio #1 claim. A similar pegmatite on the San Antonio #5 claim has produced 8,000 - 10,000 tons.

The San Antonio #1 claim has produced both silica and mica. A soft greenish white muscovite (sericite) was selectively mined, hand sorted, and shipped to the Buckeye Mica Company. Additional mica bearing rock was crushed and the mica screened before shipping. The pegmatite dike contains relatively clean zones of quartz and mica. Some of the feldspar has been reported to by soda feldspar. Samples of 5 exposures were taken from pits, cuts and walls in the dike. Two were of white feldspar - possibly soda spar, one of coarse grained granitic - pegmatitic texture and two of mica one of which was soft greenish mica and the other a stiffer tan colored mica.

The San Antonio #5 claim has produced silica flux and what Mr. Ballesteros felt was some siliceous gold ore. The silica was mined from two separate pits in a single pegmatite on the claim. Some of the silica mined and shipped as flux included highly fractured ironstained copper oxide stained quartz. However, he never received any precious metal or copper credit. The Fe - Cux quartz zone forms a narrow (3-5') lens within the pegmatite. A grab sample of this iron stained quartz was taken for a gold assay. The zoning of this pegmatite is also erratic but in general the zones are larger than on #1 and cleaner. A soft greenish muscovite (sericite) occurs in some of the feldspar zones. The feldspar is flesh to pink in color and one particular zone might be proven to contain 20,000-100,000 tons of potassium feldspar. The pegmatite generally trends north-south with the zoning in perpendicular lenses. In addition to the iron stained quartz sample, one sample of mica and one sample of the pink feldspar were taken.

On San Antonio #15 Mr. Ballesteros reported a small outcrop of serpentine of which a sample was obtained for lapidary testing. He reported the serpentine outcrops 3-5' wide over a distance of only 12 feet. He did not want to show the outcrop. Upon return to the department office Mr. Art Bloyd, Curator, Arizona Mineral Museum (part of the Arizona Department of Mines and Mineral Resources) sliced and polished a specimen of the serpentine. As a result, he feels the material has value for either lapidary work (as a semiprecious genstone) or for carving.

The claims, as well as Mr. Ballesteros' home are now located within the boundaries of the Cabeza Prieta Game Range. However, his location is believed to predate expansion of the range.

The mica samples taken are to be submitted to E.M. Science for evaluation for their specific needs as to color, brightness, trace mineral content and durability.

The feldspar samples have been initially tested by American Rockwool in Casa Grande for possible blending in their cupla charge for melting prior to spinning (blowing) rockwool. Based on the results of their tests, they would like to purchase a 5 ton bulk sample.

The pegmatites visited have potential to produce hand sorted quartz, feldspar, mica bearing rock and bulk K spar without additional prospecting or exploration.

KAP:sk

MINE AND PROSPECT FIELD VISIT DATA SUMMARY

Sheet 1 of 2

COMMODITIES Feldspar quartz, silica flux, mica, gold

MILS ID No. Pima MIL Index #9 Date August 3, 1984

ENGINEER Ken A. Phillips

INFORMATION FROM: Field visit and interview with Richard Ballesteros

PROPERTY SUMMARY

I. MINE NAME San Antonio OTHER POSSIBLE NAMES San Antonio Group (file) of 25 claims AMC #77467-77491 INCLUDING ANY CLAIM NAMES NOTED

II. LOCATION: T 13S R 7W SEC(S) 11 MINE DISTRICT Ajo

ELEV. 1800' COUNTY Pima TOPO QUAD. Ajo 15'

DIRECTIONS As shown on copy of Ajo 15' topo

MAP ATTACHED X

III. OWNERSHIP: NAME Richard Ballesteros PHONE none

ADDRESS: P.O. Box 397

COMPANY NAME IF ANY: None

PERTINENT PEOPLE Floyd Ballesteros

IV. PROPERTY AND HOLDINGS: Unpatented claims - 25 (mostly in Sec 11 - some in 1 & 12)

V. PAST PRODUCTION - NOTED, KNOWN, PROBABLE, UNKNOWN, NONE Over 60,000 ton of silica for smelter flux, small tonnage of mica (reported by R. Ballesteros)

VI. CURRENT STATUS: Idle but maintained

VII. WORKINGS: Numerous pits and cuts in pegmatite exposed on San Antonio #1 and San Antonio #5

VIII. GEOLOGY AND MINERALOGY: DEPOSIT TYPE: Pegmatite

LENGTH: 400-800' WIDTH: 100-300' VEIN STRIKE N-S to NW-SW DIP

HOST ROCK: Monzonite locally intruted by diabase (Smith, LA, 1961)

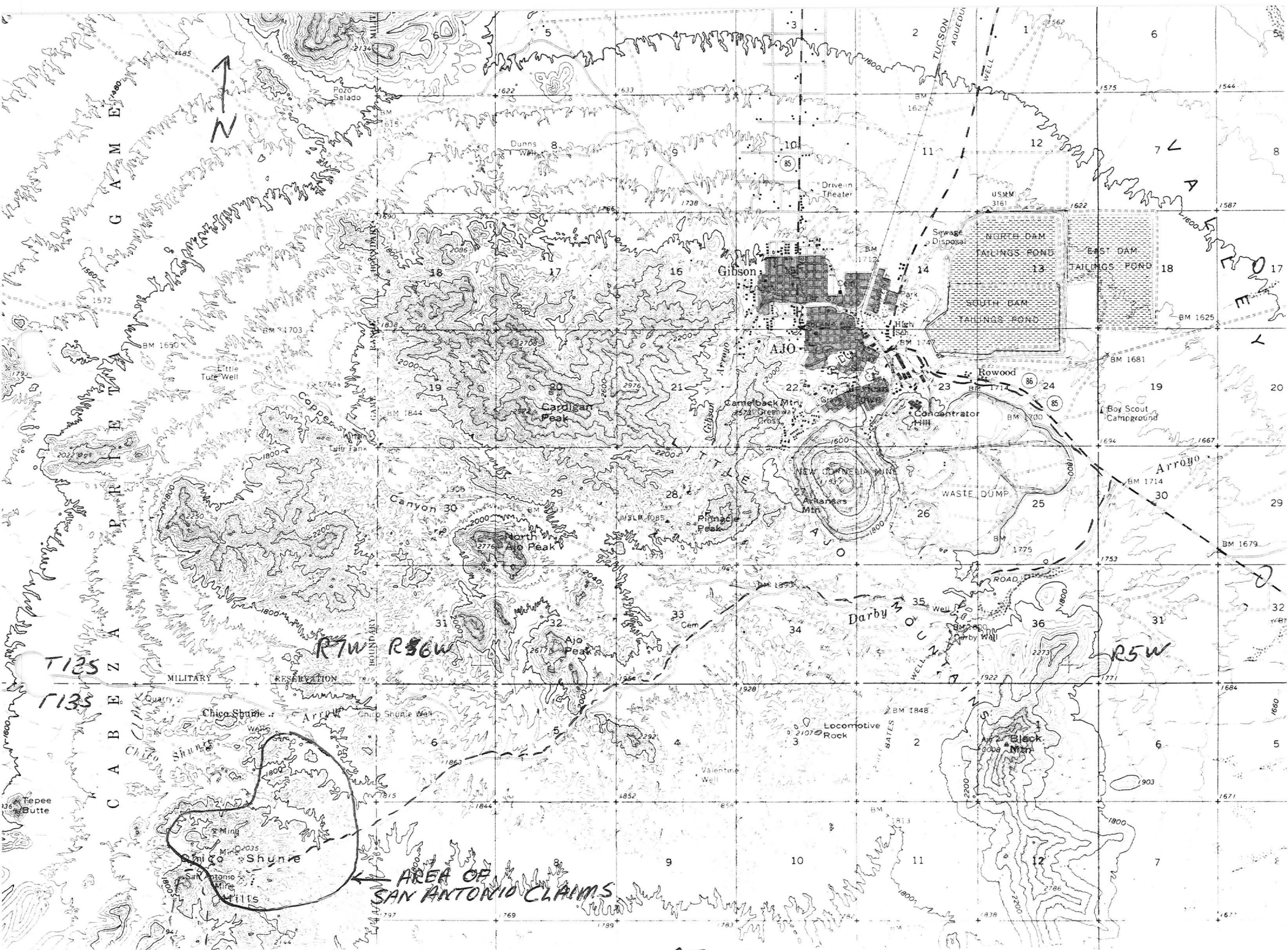
ECONOMIC MINERALS: Soda feldspar, K-feldspar, muscovite, sericite, quartz

COMMENTS:

IX. EQUIPMENT ON SIGHT: Small crawler-dozer (D-4 size), trommel, screens, crusher, rubber tired loader (small), misc camp equipment, tools, sample piles. Mr. Ballesteros and family live on property.

X. SAMPLING: NOTE TYPE IF ANY, DRILLING? Six samples were taken at time of visit and described in text of accompanying narrative.

XI. REFERENCES AND REMARKS ADMMR San Antonio Group (file)
Lewis A. Smith Mine visit report Nov. 7, 1961



VALENTINA
1-3

FROM AJO, ARIZONA 15' QUAD

San Antonio Mine, Pima Co.
(File)

PHELPS DODGE CORPORATION

NEW CORNELIA BRANCH

ENGINEERING DEPARTMENT

May 6, 1958

Memo to: Mr. Robert E. West, Chief Engineer

Re: Total Barren Quartz Hauled by Gilbert and Ballesteros from Mica Mine

AKA for above

Hauled by Gilbert:

Year	Tons
July-December ~~First Year~~ or 1951	10,883.92
or 1952	21,492.45
January-December 1953	5,343.10
Total Gilbert	37,719.47

February 1952 First Royalty Payment.

Hauled by Ballesteros:

Year	Tons
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1956	1,712.13
1957	2,953.61
1958 (Through April)	1,026.54
Total Ballesteros	11,470.92

GRAND TOTAL MICA MINE 49,190.39

Very truly yours,

Robert E. West
Chief Engineer

JDG:lcb

San Antonio file

May 29, 1981

Ms. Ann McDonald
P.O. Box 1431
Wickenburg, Arizona 85358

Dear Ms. McDonald:

Mr. Richard Ballesteros was in our office today to discuss his pegmatite mining properties in the Ajo District. Among the items he discussed was your letter to him regarding his mica deposit. He has some questions we were unable to answer.

Your letter refers to Sid Anderson's mention of his property. Although Mr. Ballesteros has been trying to contact Anderson, at my suggestion, he had not yet been able to make contact. Further, I had suggested that Sid Anderson contact Mr. Ballesteros as Mr. Anderson was looking for rare metal pegmatite deposits that might interest a firm that was then looking at his occurrences in the Picacho District; but he has not succeeded in doing so. Is letter related to such a chain of events?

Mr. Ballesteros has been besieged by every sort of mine promoter and he is skeptical of what may appear as an unsolicited contact to visit his property. You may wish to contact him and explain your interest and position, prior to your trip to Ajo.

Please feel free to contact this office any time we may be of further assistance.

Sincerely,

Ken A. Phillips
Mineral Resources Engineer

KAP:mw

bc: Mr. Ballesteros

San Antonio
or
Sunshine Mica
or
Valentina

October 5, 1979

Dear Sirs:

The following is a brief but concise history of the San Antonio Mine Group under the ownership of Richard L. Ballesteros & family from 1944 - 1979, approximately 35 years or better.

Actually, Richard Ballesteros first arrived to view the property in 1936. At this time the only site was San Antonio #1 which only had a few small diggings and was mostly a beautiful quartz-capped hill, then owned by Mr. Jesus Acevedo.

From 1936 until 1944 he spent much time traveling between Tempe--where he was employed by the Arizona Highway Department--and Ajo, Arizona to work on the property and thus purchase it from Mr. Acevedo little by little. He finally became half owner with Mr. McGee in 1944 and full owner in 1948. By 1950 the San Antonio Mica Mine was in full production of muscovite mica, was being worked by the Sunshine Mica Company, and was paying Mr. Ballesteros a royalty for the product. Also, Phelps Dodge had a similar contract with Mr. Ballesteros on the extraction of silica quartz from the mine.

It was at this time that Richard L. Ballesteros moved his entire family from the comforts of city life in Tempe to the rugged and pioneering life of a mining camp at the San Antonio Mica Mine, which, up until this time, had been inhabited by only a handful of unruly miners.

the money. The only logical thing left to do was to continue mining the silica and deliver it to the Phelps Dodge smelter in Ajo. This represented a tremendous cut in income considering that mica had been selling at approximately $35.00 per ton, whereas silica was then selling at $5.00 per ton for 93% pure. In other words, the family was in for hard times. All hired help was dispensed with, and the brunt of the labor was carried out by the family.

However, the strength of a united family with a pioneering spirit persevered and the Ballesteros family hung on more often than not--living from pay check to pay check through a lot of hard work, sweat, trails and tribulations. Accounts of their hardships could fill several pages, but that is not the point of this letter.

The point is that for many years this family has loyally served the cause of developing the mining industry of this state with a deep-rooted ecological consciousness up to the present time. The Ballesteros certainly deserve the consideration of the Federal and State Governments pertaining to their status with their mining claims: both the San Antonio Group 1 - 25 and the Valentina Group 1 - 3. How many cases of living history like this one will you find in the archives of the mining dockets of this state or country? How many families have stuck together for so many years and gone through so much to keep alive a hope, a dream that they believe in? This is the essence which has inspired this nation to its greatness; this is one of the basic elements of the American spirt.

Sincerely yours,

Floyd Ballesteros

FB/lk

OCTOBER 15, 1979

DIRECTOR OF B.L. M.
OFFICE OF PUBLIC LAW

RE: SEC. 314 OF PUBLIC LAND 94579
UNDER LAND POLICY AND MAMAGEMENT ACT

DEAR SIR:

I, RICHARD LUJAN BALLESTEROS AND FAMILY, WOULD LIKE TO KEEP AND MINE THE SAN ANTONIO MINE GROUP NO. 1 TO 25 , AND THE VALENTINA MINING CLAIM NO. 1 TO 3 ON THE SAN ANTONIO GROUP.

WE LIVE ON THE SAN ANTONIO CLAIM AND HAVE BEEN MINING AND SHIPPING SILICA TO PHELPS DODGE CORPORATION SINCE 1950.

WE MINE SILICA AND FELSPAR ON VALENTINA 1-2-3. WE ARE OPENING THEM UP FOR EXPLORATION WORK AS MINERALIZED CLAIMS (COPPER, SILVER, AND GOLD.) THIS WILL BE THE MAIN FUTURE PRODUCTION OF VALENTINA CLAIMS 1-2-3., AS WILL IT ALSO BE ON THE SAN ANTONIO CLAIMS.

I HAVE BEEN MINING MICA AND SILICA ON THESE CLAIMS SINCE 1939 AND WOULD LIKE TO CONTINUE TO DO SO ON THESE SAME CLAIMS.

RESPECTFULLY SUBMITTED,

Richard L. Ballesteros

RICHARD L. BALLESTEROS
P O Box 397
Ajo, Arizona 85321

RLB:BEB

Signed and deposed the above as correct and true on this 15th day of October, 1979, in Ajo, County of Pima, State of Arizona.

E. L. Hughes

Notary Public

My commission expires

My Commission Expires May 31, 1982

ARIZONA DEPARTMENT OF MINERAL RESOURCES
Mineral Building, Fairgrounds
Phoenix, Arizona

1. Information from: Richard L. Ballesteros

   Address: P.O. Box 397, Ajo, Arizona 85321

2. Mine: San Antonio Group 3. No. of Claims - Patented

   San Antonio #1 was originally Growler #1 & #2 Unpatented 25

   San Antonio #2 was originally Growler #3 & #4

4. Location:

5. Sec 1 & 12 Tp 13 S Range 7 W 6. Mining District Ajo, Pima County

7. Owner: Richard L. Ballesteros

8. Address: P.O. Box 397, Ajo, Arizona 85321

9. Operating Co.:

10. Address:

11. President: 12. Gen. Mgr.:

13. Principal Metals: Mica, Quartz, Feldspar, Uranium 14. No. Employed:

15. Mill, Type & Capacity: Crush, roll and screening

16. Present Operations: (a) Down ☐ (b) Assessment work ☐ (c) Exploration ☐
    (d) Production ☒ (e) Rate tpd.

17. New Work Planned: Mr. Ballesteros is considering repairing his mica mill and going into production producing a crude scrap mica product.

18. Miscl. Notes: Mr. Ballesteros reported he had last shipped mica to the Buckeye Mica Company in 1977. He has produced highly pure flake mica for "Christmas Snow" of which 25 tons was reportedly used in the movie "Snow White". He has shipped over 60,000 tons of silica flux to Phelps Dodge, New Cornelia Branch, but is no longer interested in mining flux.

    Copies of some information were made for the San Antonio Group file.

Date: July 24, 1979

Ken A. Phillips
(Signature)

Ken A. Phillips
(Field Engineer)

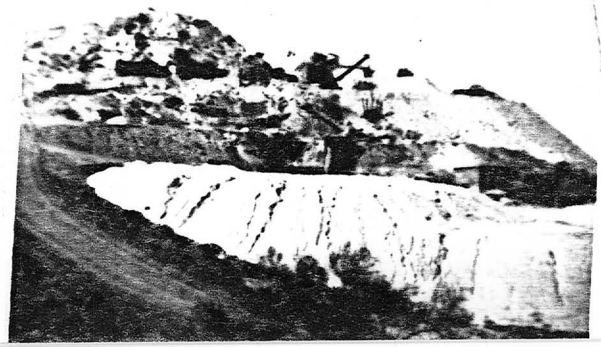
mw

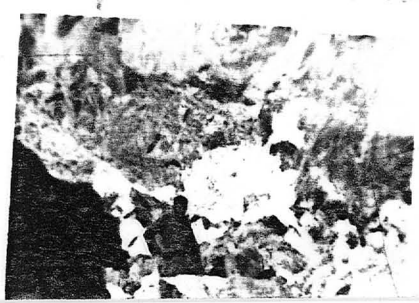
THIS MINE WAS DISCOVERD BY R.L. BALLESTEROS
ON 1937= BIFORE THE GABESA PIRIETA GAME RIFUGE WAS AMAIDED BY AN ACT OF CONGRE
THE SAN ANTONIO NO1 +2 WERE FERST, DISCOVERD: AS THE MICA MINE IN 1937= ROAD
BUILT TO IT= IN 1940 FIRST, MICA SHIPMENTS MADE: TO CALIF & BACK EAST, BY LEACE
PUMIS CORPORATION= BY WHITTEKER=CLARK + DANIELS, OF NEW YORK, INPORTERS
+ EXPORTERS= TILL 1950= I TOOK OVER IN-GA150-TIL NOW=
NOW IS A GROUP OF CLAIMS FROM 1T27.= ITS CALL SAN ANTONIO GROUP= IF19
THIS CLAIMS=ARE ALL RECORDED PROPERLY + WELL AT PIMA COUNTY=
RECORDER OFFICE=(and) SO, AS ALL MY EARLY ASSAMENT= WORK
IAN FAMILY LIVED IN=CLAIM NO1=SINCE=1950=

-1249-

THIS PICTURE WAS TAKEN Pumis Corp WERE MINING MICA THIS IS PART OF MILLING, OPERATION

Dozing Slice N5 1968



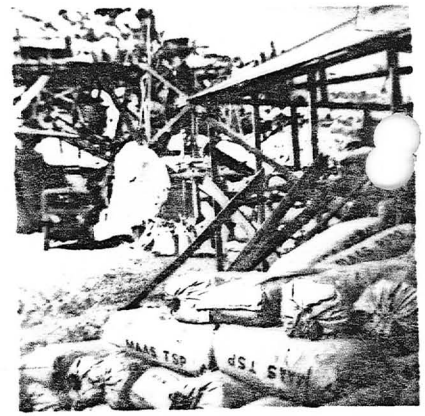


Equipment at work

SAN ANTONIO GROUP FILE
PIMA COUNTY

BUILT TO IT = IN 1940 FIRST MICA SHIPMENTS [illegible]
PUMIS CORPORATION = BY WHITTEXER = CLARK + DANIELS, OF NEW YORK, IMPORTERS
+ EXPORTERS = TILL 1950 = I TOOK OVER IN - 6/1/50 - TIL NOW =
NOW IS A GROUP OF CLAIMS FROM 1 T 27. = ITS CALL SAN ANTONIO GROUP = SF 1976 =
THIS CLAIMS = ARE ALL RECORDED PROPERLY + WELL AT PIMA COUNTY =
RECORDER OFFICE = (and) SO, AS ALL MY EARLY ASSAMENT = WORK.
IAN FAMILY LOCATED = LIVED IN = CLAIM NO 1 = SINCE = 1950 =

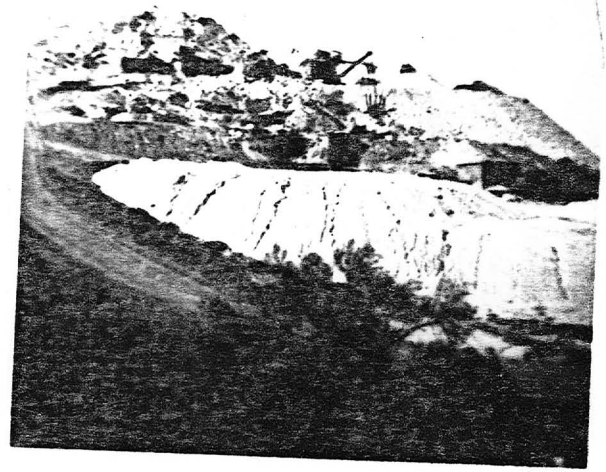
-L249-



THIS PICTURE WAS TAKEN Pumis Corp WERE MINING MICA THIS IS PART OF MILLING OPERATION

Dozing Silica No 5 1968

Equipment at Work
MINING SILICA + MICA
1951 TO 1968 -

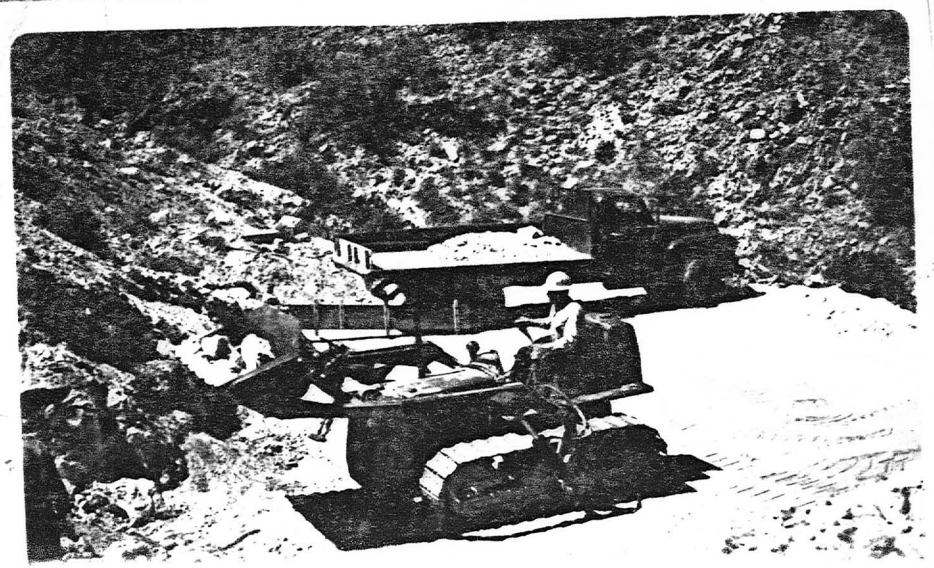


AT MINE CENTER INSPECTING FALLING ROCKS = AT DEEP CUT =

IS A PEGMETIET & FELDSPARE FORMATION
UNDER-A-SILICA CAPPING OF ABOUT 30 FT Deep
AS PICTURE SHOWS. LOOK IN TO CUT
CUT IS 25 FT WIDE X 150 FT LONG 80 FT, Deep
NO 2 = DIPOSITE

This is NO 2 DIPOSITE where = URINNITE
U_3O_2 BROWN, ORANGE CRUSTS OF Cubic U_3O_2.
down WHERE THE TWO BOYS ARE SATTING

WE TOOK THE SILICA OUT- AS SHE AND ON
THIS PICTURE ON RIGHT + FOUND THE
URENIUM ORE AFTE TAKE SILICA OUT
CUT OF SIDE HILL 120' LONG X 40 FT WIDE
BY 100 FT DEEP - WHERE TUCK & TRACK LOADER
ARE →



IS A PEGMETIET & FELdSPARE FORMATION

UNDER A SILICA CAPPING OF ABOUT 80 FT Deep AS PITURES how. Torn INTO CUT CuT IS 25 ft wide x 150 FT Long 80 FT, Deep. NO 2 = DIPOSITE

This is NO 2 DIPOSITE where = URANINITE UO_2 BROWN, ORANGE CRUSTS OF Cubic UO_2. down where The Two Boys are SATTING

WE TOOK THE Silica out - As Shown on This PICTURE on Right & Found THE URENIUM ORE AFTE TAKE SILICA OUT Cut of SIDE HILL - 120' LONG x 40 ft wide By 100 FT DEEP - WHERE Truck & TRACK Loader ARE →

This is NO 1 DIPOSIT CARNOTITA $K_2(UO_2)$ This COMMON BLACK FLURITE & BY WHITE GRANITE dikES

This is No 1 -

FORM 9-1359
(REV. 11-63)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Topographic Division
345 Middlefield Rd, Menlo Park, Calif.

ORDER FORM

IN REPLY REFER TO
5941 P

Attn: Map Information Office

Type of reproductions CONTACT PRINTS **QUANTITY** 3

Paper DWSM
(For aerial photographs, specify kind, weight, and finish)

Area Arizona
(Describe fully—give latitude, longitude, and quadrangle name, if applicable)

PRESENT TIME + FAMILY 1974

Symbol	Roll No.		Account No.
		One	
VAHP	3	2	
	4	1	

Purchase Order No.

Please send reproductions to Mr. Richard Ballesteros
(Name and address—please print or type)

Date 4/5/65 P. O. Box 397
(Street address—please print or type)

Signature Memo 4/2/65 Ajo, Arizona
(City or town, state—please print or type)

MIO No. **Amount Received $** 4.00 **Amount Due $** REFUND $1.00

FINAL STATEMENT OF ACCOUNT

Prints shipped (Date) **via**

Total charge $3.00 **Refund** $1.00 **Balance due**

Statement rendered by **Date** 4-15-65

Remarks

16—75116c-1

CUSTOMER'S NOTIFICATION COPY

KERR-McGEE RESOURCES CORPORATION
2045 N. FORBES BOULEVARD, SUITE 106 • TUCSON, ARIZONA 85705

PHONE
(602) 623-7581

February 1, 1977

Mr. Richard L. Ballesteros
P. O. Box 392
Ajo, Arizona 85321

Dear Mr. Ballesteros:

Your son, Floyd, paid us a short visit this afternoon. He told us of your pegmatite mica mine located near Ajo and invited us to come give it a visit.

After looking at our schedules for the immediate future, it was decided that I might be able to break away for a day or two during the week of February 7th. I can not say for sure which day it will be, but hopefully it will be Tuesday, the 8th.

With your permission, I would like to take a look around the area and maybe collect a couple of samples for assay. Results of such assays will, of course, be forwarded to you.

Yours truly,

KERR-McGEE RESOURCES CORPORATION

Nile O. Jones

Nile O. Jones
Geologist

NOJ/pld

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Ballesteros Silica Pit - San Antonio Group Date November 7, 1961

District Growler District, Pima Co. Engineer Lewis A. Smith

Subject: Mine visit.

Location: Sec. 11, T. 14 S., R. 7 W.

Property: 6 claims

Owner: Richard Ballesteros, Ajo, Arizona

Minerals: Quartz (flux and building stone), mica and Tungsten

Work: Three pits have been worked for quartz for flux.

(1) The "main" pit occupies a bold hill and covers an oval shaped area of approximately 500 x 200 feet. Three irregular benches occupy a maximum vertical depth of 75-80 feet.

(2) The second pit lies 1/4 mile north of the main (1) pit. This is a hillside cut up to 30' deep, 50 feet wide, and 75-80 feet long. The quartz occurrence is narrow and tabular.

(3) The third pit is a cut 20 feet wide, 100 feet long and up to 30 feet deep. The quartz occurrence is similar to that in pit 2.

Geology: The "main" pit lies in a granite knob which is surrounded by a large area of monzonite which is said by Phelps Dodge engineers to be earlier than the "Cornelia" Monzonite in which the present Cornelia Pit is located. The monzonite is locally invaded by basic dikes which are considered to be diabase. A band of this diabase rims the east granite-monzonite contact. The granite knob contains segregations of white quartz and mica. Around the periphyry of the granite sericitization and copper oxide staining are locally prevalent. Some chloritization of the monzonite along short shears, is present in the area. The monzonite is variable in texture from fine to coarse grained. It apparently varies in ferromagnesian mineral content from place to place, causing the rock color to vary from dark gray to light gray. It is severely shattered by conjugate fracturing and locally shows a little limonite indicative of copper-iron mineralization but generally is not hydrothermally altered. The monzonite around the granitic mass was severely altered in a "halo" band several tens of feet out from the contact. Some red quartz is now being marketed in Phoenix for mural-mosaic making.

In pit No. 2 the quartz was in a tabular lense up to several feet wide in the middle and which tends to pinch out at the two ends. Detritus obscures the terminations to some extent near the ends. This quartz was stained by chrysocolla and redish iron oxides along the hangingwall of the tabular body. The iron oxides here indicated that some copper and strong iron sulphides were once locally present. Further work in depth is suggested here. The fracture along which the quartz body and iron oxides apparently entered, continues both NW and SW away from the quartz area. Here also was a band of brecciated gray colored quartz of unknown extent, which is cemented by a calichelike material. Under the ultraviolet light this cement shows the presence of considerable powellite and a little scheelite. Similar material in local areas was seen in the "main" pit and this also shows some powellite.

Ballesteros Silica Pit (continued)

Pit No. 3 also showed a tabular body of quartz which generally trends about N 40-45° E and is essentially vertical in dip. This is mainly worked out except for a branching irregular appendage which appears to generally strike (along its long axis) about N-S. No definite estimate of the quartz extent can be seen without further work. Since most of the close to surface quartz in all three pits largely has been removed the chance of future production would seem to lie in the development of these appendages and in depth exploration. The present price of flux would appear to be insufficient to warrant underground mining. Much "float" quartz lies in a detrital blanket on the slopes of the main pit knob. This might be recoverable by screening and washing if water was available in the area. However, it is not felt by Ballesteros that this would pay, even if the water was available, mainly because the mica segregations in much of the quartz, would have to be removed. If the mica could be cleanly separated as a by-product the operation might be made to pay. However, before this is undertaken further knowledge of the available reserve of such material would have to be made available. Superficial observation indicates that this blanket is not deep.

SAN ANTONIO GROUP

PIMA COUNTY

This property active: Sept. 1958
Feb. 1959
Oct. 1959
Feb. 1960
Sept. 1960
Feb. 1961
Oct. 1961

San Antonio Mine, Pima Co.
(file)

PHELPS DODGE CORPORATION

NEW CORNELIA BRANCH

ENGINEERING DEPARTMENT

May 6, 1958

Memo to: Mr. Robert E. West, Chief Engineer

Re: Total Barren Quartz Hauled by Gilbert and Ballesteros from Mica Mine

AKA for above

Hauled by Gilbert:

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1957	2,953.61
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Total Ballesteros	11,470.92
GRAND TOTAL MICA MINE	49,190.39

Very truly yours,

Robert E. West
Chief Engineer

JDG:lcb

cc. Support Office

Brought in by Mr. Ballesteros 2-24-58

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

Brought in by Mr. Ballesteros 2-24-58 Date 2-24-58

1. Mine: San Antonio Group.
2. Location: Sec. 11 Twp. 13 South Range 7 West Nearest Town Ajo Distance 12 Miles S.W.
   Direction South West Nearest R.R. New Cornelia of SP Distance 12 Miles
   Road Conditions Excelent 30 ft Wide Road. Gravel Road.
3. Mining District and County: Ajo Mining Dist. Pima County
4. Former Name of Mine: Desert white Queen
5. Owner: Richard L Ballesteros
   Address: Box 395 Ajo Arizona
6. Operator:
   Address:
7. Principal Minerals: Mica Silica Feldspare Copper Uranium
8. Number of Claims: Lode 12 Patented Unpatented Lode Claims
   Placer Patented Unpatented
9. Type of Surrounding Terrain: Pegmatites of Granite & Ocha Clays Rhyolites
10. Geology and Mineralization: Copper & uranium & Lithium & Beitile
11. Dimension and Value of Ore Body: Micas & Others and Clays 25 to 35%
    Feldspare & Others and Clays - 85 to 90%
    Copper 1 to 12% & Uranium Clays or Better uranium .02 to .05 of 1%
    & Others and Clays - Silica 8 to 95% & Uranium Clays

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 leasors or buyers.

(over)

12. Ore "Blocked Out" or "In Sight":

Ore Probable:

13. Mine Workings—Amount and Condition:

	No.	Feet	Condition
Shafts			
Raises			
Tunnels			
Crosscuts			
Stopes			

14. Water Supply:

15. Brief History:

16. Remarks:

17. If Property for Sale, List Approximate Price and Terms:

18. Signature:

ARIZONA DEPARTMENT OF MINERAL RESOURCES
MINERAL BUILDING, FAIRGROUNDS
PHOENIX, ARIZONA

~~December 10, 1957~~

February 11, 1958

To the Owner or Operator of the Arizona Mining Property named below:

Desert White Queen	Mica
(Property)	(ore)

We have an old listing of the above property which we would like to have brought up to date.

Please fill out the enclosed Mine Owner's Report form with as complete detail as possible and attach copies of reports, maps, assay returns, shipment returns or other data which you have not sent us before and which might interest a prospective buyer in looking at the property.

FRANK P. KNIGHT,
Director.

Enc: Mine Owner's Report

Desert White Queen

BALLESTEROS, Richard L.
Box 558
Tempe, Arizona

10-7-44

See B file - re determination of samples by U.S. B of Mines
See B file - re mica deposit (letter from Hoyt) 10-30-44
See GROWLER - re gas application 12-5-44
See DESERT WHITE QUEEN - re sketch 6-46
See DESERT WHITE QUEEN - prospective operator 7-23-46
" " " " - re flotation test by A.B.of Mines 8-16-46

UNIVERSITY OF ARIZONA

ARIZONA BUREAU OF MINES

ORE TESTING SERVICE

Ore No. 1022 Growler Test No. 1

Conditions and Reagents

Table 1

Point of Addition	Conditions			Reagents Pounds Per Ton									
	Time Mins.	% Solids	pH	H_2SO_4	CD								
Ball mill	10												
" "	10												
" "	15												
Conditioner	5		5.2	8.0									
Rougher	6				0.6								
Cleaner	3		7.0										
Recleaner	3		6.6 2.1	1.1 2.2									

Remarks: Froth voluminous CD - ARMEEN - CD

Tucson Top Water

Metallurgical Products

Product	Tons in 100 Tons Feed	Assays						% of Total					

Remarks: Products not saved

UNIVERSITY OF ARIZONA

ARIZONA BUREAU OF MINES

ORE TESTING SERVICE

Ore No. 1022-Growler Test No. 2

Conditions and Reagents

Table 2

Point of Addition	Conditions			Reagents Pounds Per Ton								
	Time Mins.	% Solids	pH	H_2SO_4	CD							
Ball Mill	10	50										
Stage screened	10 10	50 50										
Conditioner	5		5.1	0.4								
Rougher cell	6		5.3		0.32							
Cleaner cell	5		4.7	0.15	0.04							
Recleaner cell	3		4.0	0.05	0.05							

Remarks: Deslimed before conditioning - C.D. - Amine - ARMEEN - CD
Floated in Distilled Water

Metallurgical Products

Table 3

Product	Tons in 100 Tons Feed	Assays						% of Total					
		Mica											
Heads	100.0												
+ 48-mesh	20.2	95.0	Estimated by examination under microscope										
Recleaned concentrate	11.9	95.0	"	"	"	"		"					
Recleaner tailing	2.8												
Cleaner tailing	11.0												
Tailing	41.7												
Slimes	12.4												

Remarks: No feldspars in concentrate and + 48-mesh mica.
Few grains of quartz in concentrate.

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ARIZONA BUREAU OF MINES

ORE TESTING SERVICE

Ore No. 1022 - Growler Test No. 3

Conditions and Reagents

Table 4

Point of Addition	Conditions			Reagents Pounds Per Ton									
	Time Mins.	% Solids	pH	H_2SO_4	HF	CD							
Ball Mill	10	40						Stage ground to 48-mesh					
	10 20	40 40											
Conditioner	5		5.1	1.8		0.5							
Rougher cell Cleaner cell	6 4		4.4	.7	1.0	0.05							
Recleaner cell	3		4.6	.3		0.05							

Remarks: Deslimed before conditioning - CD - Amine - ARMEEN - CD
Floated with distilled water.

Metallurgical Products

Table 5

Product	Tons in 100 Tons Feed	Assays						% of Total					
		Mica											
Heads	100.0												
Mica + Mesh	6.2	98.0	Estimated by microscopic examination										
Mica Concentrate	20.3	98.0											
Recleaner Tailing	9.5	90.0											
Cleaner Tailing	44.2												
Tailing	7.6												
Slimes	12.3												

Remarks: No feldspar in +48-mesh or concentrate.
Few grains of quartz in +48-mesh and concentrate

University of Arizona
TUCSON

COLLEGE OF MINES
ARIZONA BUREAU OF MINES

August 16, 1946

Mr. Chas. H. Dunning
Director, Department of Mineral Resources
304 Homebuilders Bldg.
Phoenix, Arizona

Dear Mr. Dunning: Ore No. 1022 and 1023

The two samples of mica "ore" which you left at the Arizona Bureau of Mines have been checked for the type of feldspar and flotation tests made to recover the mica.

The two samples contain mainly albitic feldspars. The Weatherman sample shows more alteration of the feldspar than the Growler sample. The Weatherman material also contains insoluble calcium which is probably some form of a calcium silicate.

The ceramic industry is interested in potash feldspar and blended potash and soda feldspar. An analysis of two commercial blends of feldspar are as follows:

	SiO_2	A_2O_3	K_2O	Na_2O	RO	Fe_2O_3
Main Feldspar	69.5	16.2	9.0	3.0	0.4	0.07
N. Caroline feldspar	70.1	17.3	9.1	3.1	0.1	0.04

The above compositions reflect that commercial grades are mixtures of 55 to 65 per cent potash and 24 to 30 per cent soda feldspars with some free quartz. Because the feldspar is mainly albitic or soda feldspar no work was done to recover them by flotation.

The quartz separation was not tried as the specifications are high and must be of uniform chemical composition and sized. The permissible iron for No. 1 grade quartz must be below 0.025 per cent iron as Fe_2O_3. Other grades permit up to 0.50 per cent iron as Fe_2O_3. The SiO_2 content is about 99 per cent in the quartz sand.

Test work was carried on the concentration of mica on both samples.

Test 1 - Ore 1022 - Growler Flotation

A sample was stage ground to 10 per cent on 48-mesh. The +48 mesh material was 95 per cent plus mica. The minus 48-mesh material was treated by flotation without desliming. Tucson water was used in flotation. The froth was voluminous and did not give good results due to slimes and impure water.

Test 2 - Ore 1022 - Growler Flotation

A sample was stage ground to 20.2 per cent on 48-mesh. The plus 48-mesh was 95 per cent mica with some quartz and no feldspar. The minus 48-mesh material was treated by flotation after desliming. The reagents used are given in Table 2 and the results in Table 3. The mica concentrate amounted to 11.9 tons per 100 tons of heads and 95 per cent of the concentrate was mica by microscopic examination. There was some quartz as impurities but no feldspar. Combining the plus 48-mesh product and the flotation concentrate gave 32.1 tons of mica product per 100 tons of feed.

Test 3 - Ore 1022 Growler

A sample was stage ground to 6.2 per cent on 48-mesh. The minus 48-mesh material was treated by flotation after desliming. The reagents used are given in Table 4 and the results in Table 5. The concentrate amounted to 20.3 tons of 98 per cent mica per 100 tons of heads. Combining the plus 48-mesh mica and the mica concentrate gave 26.5 tons of 98.0 per cent mica per 100 tons of feed. There was some quartz in the combined products but no feldspar.

The plus 48-mesh mica and the flotation concentrates would have to be ground for trade use. The cost of grinding and screening (160 silk mesh) was about $25.00 per ton and the capacity is low per grinding unit. Wet grinding is usually done in chaser mills, resembling Chilian mills except that the wheels and the bottoms are of hardwood. Some grinding has been done in pebble mills. A sample of mica obtained in Tests 2 and 3 were ground for 2 hours in a pebble mill and the ground product gave the following screen analysis:

Mesh	Per Cent Weight
on 150	11.0
on 200	30.0
on 325	67.0
thru 325	33.0

Test 1 Ore 1023 - Weatherman Flotation

The sample was crushed by rolls set at 1/16 inch opening and repassed thru the rolls twice and screened on 8-mesh. The +8-mesh was clean and stained mica with a little quartz and amounted to 17.8 tons per 100 tons of heads. The under size of 8-mesh was stage ground in a ball mill, deslimed and treated by flotation. The reagents are given in Table 6 and the results in Table 7. The quartz and feldspar carried on thru into the concentrate. The concentrate amounted to 10.1 tons per 100 tons of roll feed but only approximately 85 per cent was mica. The mica has a reddish stain on it.

Test 2 Ore 1023 - Weatherman Heavy-Medium

A sample which had been crushed by a jaw crusher at 3/8 inch opening was tested in a heavy medium liquid to sink the mica and float the lighter quartz and feldspar. The mica books ranged from less than 2.62 specific gravity to greater than 2.8 specific gravity. The gravitys of quartz and feldspar are too close to that of mica to make a good separation.

Conclusions

1. The Growler sample produced a good grade mica by flotation.

2. Dry crushing and screening gave the best mica product on the Weatherman sample.

3. Feldspar in both samples is of the soda feldspar which is not demanded by the ceramic industry.

4. Heavy medium will not make a satisfactory separation on the Weatherman sample.

Yours very truly,

Geo. H. Roseveare

Geo. H. Roseveare
Metallurgist

UNIVERSITY OF ARIZONA

ARIZONA BUREAU OF MINES

ORE TESTING SERVICE

Ore No. 1023-Weatherman Test No. 1

Conditions and Reagents

Point of Addition	Conditions			Reagents Pounds Per Ton									
	Time Mins.	% Solids	pH	H_2SO_4	CD								
Roll crushed													
Screened													
Ball mill stage	10	50											
Ground	10 20												
Conditioner	5		5.0	1.0	0.25								
Rougher cell	6		4.8										
Cleaner cell	3		4.4	.2	0.02								
Recleaner	3		4.6	.1	0.02								

Remarks: Distilled water in flotation - CD Amine - ARMEEN - CD
Deslimed before flotation

Metallurgical Products

Product	Tons in 100 Tons Feed	Assays						% of Total					
		Mica	Feldspar		Quartz								
Heads	100.0												
Coarse Mica	17.8	95+	Nil		Small	amount							
Concentrate #1	10.1	85.0	Same		Same								
#2	6.2												
Tailing Recleaner	8.2												
Cleaner Tailing	14.1												
Rougher Tailing	25.5												
Slime	18.1												

Remarks: Concentrate too high in impurities by microscopic examination.
Some altered minerals of feldspar in head sample.

University of Arizona
Tucson

College of Mines
Arizona Bureau of Mines

August 16, 1946

Mr. Chas. H. Dunning
Director, Department of Mineral Resources
304 Homebuilders Bldg.
Phoenix, Arizona

Dear Mr. Dunning: Ore No. 1022 and 1023

The two samples of mica "ore" which you left at the Arizona Bureau of Mines have been checked for the type of feldspar and flotation tests made to recover the mica.

The two samples contain mainly albitic feldspars. The Weatherman sample shows more alteration of the feldspar than the Growler sample. The Weatherman material also contains insoluble calcium which is probably some form of a calcium silicate.

The ceramic industry is interested in potash feldspar and blended potash and soda feldspar. An analysis of two commercial blends of feldspar are as follows:

	SiO_2	A_2O_3	K_2O	Na_2O	RO	Fe_2O_3
Main Feldspar	69.5	16.2	9.0	3.0	0.4	0.07
N. Caroline feldspar	70.1	17.3	9.1	3.1	0.1	0.04

The above compositions reflect that commercial grades are mixtures of 55 to 65 percent potash and 24 to 30 percent soda feldspars with some free quartz. Because the feldspar is mainly albitic or soda feldspar no work was done to recover them by flotation.

The quartz separation was not tried as the specifications are high and must be of uniform chemical composition and sized. The permissible iron for No. 1 grade quartz must be below 0.025 percent iron as Fe_2O_3. Other grades permit up to 0.50 percent iron as Fe_2O_3. The SiO_2 content is about 99 percent in the quartz sand.

Test work was carried on the concentration of mica on both samples

Test 1 - Ore 1022 - Growler Flotation

A sample was stage ground to 10 per cent on 48-mesh. The +48 mesh material was 95 percent plus mica. The minus 48-mesh material was treated by flotation without desliming. Tucson water was used in flotation. The froth was voluminous and did not give good results due to slimes and impure water.

Test 2 - Ore 1022 - Growler Flotation

A sample was stage ground to 20.2 percent on 48-mesh. The plus 48-mesh was 95 percent mica with some quartz and no feldspar. The minus 48-mesh material was treated by flotation after desliming. The reagents used are given in Table 2 and the results in Table 3. The mica concentrate amounted to 11.9 tons per 100

tons of heads and 95 percent of the concentrate was mica by microscopic examination. There was some quartz as impurities but no feldspar. Combining the plus 48-mesh product and the flotation concentrate gave 32.1 tons of mica product per 100 tons of feed.

Test 3 - Ore 1022 Growler

A sample was stage ground to 6.2 percent on 48-mesh. The minus 48-mesh material was treated by flotation after desliming. The reagents used are given in Table 4 and the results in Table 5. The concentrate amounted to 20.3 tons of 98 percent mica per 100 tons of heads. Combining the plus 48-mesh mica and the mica concentrate gave 26.5 tons of 98.0 percent mica per 100 tons of feed. There was some quartz in the combined products but no feldspar.

The plus 48-mesh mica and the flotation concentrates would have to be ground for trade use. The cost of grinding and screening (160 silk mesh) was about $25.00 per ton and the capacity is low per grinding unit. Wet grinding is usually done in chaser mills, resembling Chilian mills except that the wheels and the bottoms are of hardwood. Some grinding has been done in pebble mills. A sample of mica obtained in Tests 2 and 3 were ground for 2 hours in a pebble mill and the ground product gave the following screen analysis:

Mesh	Per Cent Weight
on 150	11.0
on 200	30.0
on 325	67.0
thru 325	33.0

****

Ore No. 1022 Growler Test No. 1

Table 1

Point of Addition	Conditions Time Mins.	Conditions % Solids	Conditions pH	Reagents Pounds Per Ton H_2SO_4	Reagents Pounds Per Ton CD
Ball mill	10				
" "	10				
" "	15				
Conditioner	5		5.2	8.0	
Rougher	6				0.6
Cleaner	3		7.0		
Recleaner	3		6.6	1.1	
			2.1	2.2	

Remarks: Froth voluminous

CD - ARMEEN - CD

Tucson Top Water

Metallurgical Products

Remarks: Products not saved.

UNIVERSITY OF ARIZONA
ARIZONA BUREAU OF MINES
ORE TESTING SERVICE

Ore No. 1022-Growler Test No. 2

Conditions and Reagents

Table 2

Point of Addition	Conditions			Reagents Pounds Per Ton	
	Time Mins.	% Solids	pH	H_2SO_4	CD
Ball Mill	10	50			
Stage screened	10	50			
	10	50			
Conditioner	5		5.1	0.4	
Rougher cell	6		5.3		0.32
Cleaner cell	5		4.7	0.15	0.04
Recleaner cell	3		4.0	0.05	0.05

Remarks: Deslimed before conditioning - C.D. - Amine - ARMEEN - CD
Floated in Distilled Water

Metallurgical Products

Table 3

Product	Tons in 100 Tons Feed	Assays	% of Total
		Mica	
Heads	100.0		
+ 48-mesh	20.2	95.0	Estimated by examination under microscope
Recleaned concentrate	11.9	95.0	" " " " "
Recleaner tailing	2.8		
Cleaner tailing	11.0		
Tailing	41.7		
Slimes	12.4		

Remarks: No feldspars in concentrate and + 48-mesh mica.
Few grains of quartz in concentrate.

University of Arizona
Arizona Bureau of Mines
Ore Testing Service

Ore No. 1022 - Growler Test No. 3

Conditions and Reagents

Table 4

Point of Addition	Conditions Time Mins.	% Solids	pH	Reagents Pounds Per Ton H_2SO_4	HF	CD	
Ball Mill	10	40					Stage ground
	10	40					to 48-mesh
	20	40					
Conditioner	5		5.1	1.8		0.5	
Rougher cell	6						
Cleaner cell	4		4.4	.7	1.0	0.05	
Recleaner cell	3		4.6	.3		0.05	

Remarks: Deslimed before conditioning - CD - Amine - ARMEEN - CD

Floated with distilled water.

Metallurgical Products

Table 5

Product	Tons in 100 Tons Feed	Assays Mica	
Heads	100.0		
Mica + Mesh	6.2	98.0	Estimated by microscopic examination
Mica Concentrate	20.3	98.0	
Recleaner Tailing	9.5	90.0	
Cleaner Tailing	44.2		
Tailing	7.6		
Slimes	12.3		

Remarks: No feldspar in + 48-mesh or concentrate.
Few grains of quartz in +48-mesh and concentrate.

University of Arizona
Arizona Bureau of Mines
Ore Testing Service

Ore No. 1023 - Weatherman - Test No. 1

Conditions and Reagents

Point of Addition	Conditions: Time Mins.	Conditions: % Solids	Conditions: pH	Reagents Pounds Per Ton: H_2SO_4	Reagents Pounds Per Ton: CD
Roll crushed					
Screened					
Ball mill stage	10	50			
Ground	10				
	20				
Conditioner	5		5.0	1.0	0.25
Rougher cell	6		4.8		
Cleaner cell	3		4.4	.2	0.02
Recleaner	3		4.6	.1	0.02

Remarks: Distilled water in flotation - CD Amine - ARMEEN - CD
Deslimed before flotation

Metallurgical Products

Product	Tons in 100 Tons Feed	Assays: Mica	Assays: Feldspar	Assays: Quartz
Heads	100.0			
Coarse Mica	17.8	95+	Nil	Small amount
Concentrate #1	10.1	85.0	Same	same
#2	6.2			
Tailing Recleaner	8.2			
Cleaner Tailing	14.1			
Rougher Tailing	25.5			
Slime	18.1			

Remarks: Concentrate too high in impurities by microscopic examination.
Some altered minerals of feldspar in head sample.

Test 1 Ore 1023 - Weatherman Flotation

The sample was crushed by rolls set at 1/16 inch opening and repassed thru the rolls twice and screened on 8-mesh. The +8-mesh was clean and stained mica with a little quartz and amounted to 17.8 tons per 100 tons of heads. The under size of 8-mesh was stage ground in a ball mill, deslimed and treated by flotation. The reagents are given in Table 6 and the results in Table 7. The quartz and feldspar carried on thru into the concentrate. The concentrate amounted to 10.1 tons per 100 tons of roll feed but only approximately 85 percent was mica. The mica has a reddish stain on it.

Test 2 Ore 1023 - Weatherman Heavy-Medium

A sample which had been crushed by a jaw crusher at 3/8 inch opening was tested in a heavy medium liquid to sink the mica and float the lighter quartz and feldspar. The mica books ranged from less than 2.62 specific gravity to greater than 2.8 specific gravity. The gravities of quartz and feldspar are too close to that of mica to make a good separation.

Conclusions

1. The Growler sample produced a good grade mica by flotation.

2. Dry crushing and screening gave the best mice product on the Weatherman sample.

3. Feldspar in both samples is of the soda feldspar which is not demanded by the ceramic industry.

4. Heavy medium will not make a satisfactory separation on the Weatherman sample.

Yours very truly,

/s/ Geo. H. Roseveare

Geo. H. Roseveare
Metallurgist

University of Arizona
Tucson

College of Mines
Arizona Bureau of Mines

August 16, 1946

Mr. Chas. H. Dunning
Director, Department of Mineral Resources
304 Homebuilders Bldg.
Phoenix, Arizona

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The two samples contain mainly albitic feldspars. The Weatherman sample shows more alteration of the feldspar than the Growler sample. The Weatherman material also contains insoluble calcium which is probably some form of a calcium silicate.

The ceramic industry is interested in potash feldspar and blended potash and soda feldspar. An analysis of two commercial blends of feldspar are as follows:

	SiO_2	A_2O_3	K_2O	Na_2O	RO	Fe_2O_3
Main Feldspar	69.5	16.2	9.0	3.0	0.4	0.07
N. Caroline feldspar	70.1	17.3	9.1	3.1	0.1	0.04

The above compositions reflect that commercial grades are mixtures of 55 to 65 percent potash and 24 to 30 percent soda feldspars with some free quartz. Because the feldspar is mainly albitic or soda feldspar no work was done to recover them by flotation.

The quartz separation was not tried as the specifications are high and must be of uniform chemical composition and sized. The permissible iron for No. 1 grade quartz must be below 0.025 percent iron as Fe_2O_3. Other grades permit up to 0.50 percent iron as Fe_2O_3. The SiO_2 content is about 99 percent in the quartz sand.

Test work was carried on the concentration of mica on both samples

Test 1 - Ore 1022 - Growler Flotation

A sample was stage ground to 10 per cent on 48-mesh. The +48 mesh material was 95 percent plus mica. The minus 48-mesh material was treated by flotation without desliming. Tucson water was used in flotation. The froth was voluminous and did not give good results due to slimes and impure water.

Test 2 - Ore 1022 - Growler Flotation

A sample was stage ground to 20.2 percent on 48-mesh. The plus 48-mesh was 95 percent mica with some quartz and no feldspar. The minus 48-mesh material was treated by flotation after desliming. The reagents used are given in Table 2 and the results in Table 3. The mica concentrate amounted to 11.9 tons per 100

tons of heads and 95 percent of the concentrate was mica by microscopic examination. There was some quartz as impurities but no feldspar. Combining the plus 48-mesh product and the flotation concentrate gave 32.1 tons of mica product per 100 tons of feed.

Test 3 - Ore 1022 Growler

A sample was stage ground to 6.2 percent on 48-mesh. The minus 48-mesh material was treated by flotation after desliming. The reagents used are given in Table 4 and the results in Table 5. The concentrate amounted to 20.3 tons of 98 percent mica per 100 tons of heads. Combining the plus 48-mesh mica and the mica concentrate gave 26.5 tons of 98.0 percent mica per 100 tons of feed. There was some quartz in the combined products but no feldspar.

The plus 48-mesh mica and the flotation concentrates would have to be ground for trade use. The cost of grinding and screening (160 silk mesh) was about $25.00 per ton and the capacity is low per grinding unit. Wet grinding is usually done in chaser mills, resembling Chilian mills except that the wheels and the bottoms are of hardwood. Some grinding has been done in pebble mills. A sample of mica obtained in Tests 2 and 3 were ground for 2 hours in a pebble mill and the ground product gave the following screen analysis:

Mesh	Per Cent Weight
on 150	11.0
on 200	30.0
on 325	67.0
thru 325	33.0

****

Ore No. 1022 Growler Test No. 1

Table 1

Point of Addition	Conditions: Time Mins.	Conditions: % Solids	Conditions: pH	Reagents Pounds Per Ton: H_2SO_4	Reagents Pounds Per Ton: CD
Ball mill	10				
" "	10				
" "	15				
Conditioner	5		5.2	8.0	
Rougher	6				0.6
Cleaner	3		7.0		
Recleaner	3		6.6	1.1	
			2.1	2.2	

Remarks: Froth voluminous

CD - ARMEEN - CD

Tucson Top Water

Metallurgical Products

Remarks: Products not saved.

UNIVERSITY OF ARIZONA
ARIZONA BUREAU OF MINES
ORE TESTING SERVICE

Ore No. 1022-Growler Test No. 2

Conditions and Reagents

Table 2

Point of Addition	Conditions			Reagents Pounds Per Ton	
	Time Mins.	% Solids	pH	H_2SO_4	CD
Ball Mill	10	50			
Stage screened	10	50			
	10	50			
Conditioner	5		5.1	0.4	
Rougher cell	6		5.3		0.32
Cleaner cell	5		4.7	0.15	0.04
Recleaner cell	3		4.0	0.05	0.05

Remarks: Deslimed before conditioning - C.D. - Amine - ARMEEN - CD
Floated in Distilled Water

Metallurgical Products

Table 3

Product	Tons in 100 Tons Feed	Assays	% of Total
		Mica	
Heads	100.0		
+ 48-mesh	20.2	95.0	Estimated by examination under microscope
Recleaned concentrate	11.9	95.0	" " " " "
Recleaner tailing	2.8		
Cleaner tailing	11.0		
Tailing	41.7		
Slimes	12.4		

Remarks: No feldspars in concentrate and + 48-mesh mica.
Few grains of quartz in concentrate.

University of Arizona
Arizona Bureau of Mines
Ore Testing Service

Ore No. 1022 - Growler Test No. 3

Conditions and Reagents

Table 4

Point of Addition	Conditions Time Mins.	% Solids	pH	Reagents Pounds Per Ton H_2SO_4	HF	CD	
Ball Mill	10	40					Stage ground to 48-mesh
	10	40					
	20	40					
Conditioner	5		5.1	1.8		0.5	
Rougher cell	6						
Cleaner cell	4		4.4	.7	1.0	0.05	
Recleaner cell	3		4.6	.3		0.05	

Remarks: Deslimed before conditioning - CD - Amine - ARMEEN - CD

Floated with distilled water.

Metallurgical Products

Table 5

Product	Tons in 100 Tons Feed	Assays Mica	
Heads	100.0		
Mica + Mesh	6.2	98.0	Estimated by microscopic examination
Mica Concentrate	20.3	98.0	
Recleaner Tailing	9.5	90.0	
Cleaner Tailing	44.2		
Tailing	7.6		
Slimes	12.3		

Remarks: No feldspar in + 48-mesh or concentrate.
Few grains of quartz in +48-mesh and concentrate.

University of Arizona
Arizona Bureau of Mines
Ore Testing Service

Ore No. 1023 - Weatherman - Test No. 1

Conditions and Reagents

Point of Addition	Conditions: Time Mins.	Conditions: % Solids	Conditions: pH	Reagents Pounds Per Ton: H_2SO_4	Reagents Pounds Per Ton: CD
Roll crushed					
Screened					
Ball mill stage	10	50			
Ground	10				
	20				
Conditioner	5		5.0	1.0	0.25
Rougher cell	6		4.8		
Cleaner cell	3		4.4	.2	0.02
Recleaner	3		4.6	.1	0.02

Remarks: Distilled water in flotation - CD Amine - ARMEEN - CD
Deslimed before flotation

Metallurgical Products

Product	Tons in 100 Tons Feed	Assays: Mica	Assays: Feldspar	Assays: Quartz
Heads	100.0			
Coarse Mica	17.8	95+	Nil	Small amount
Concentrate #1	10.1	85.0	Same	same
#2	6.2			
Tailing Recleaner	8.2			
Cleaner Tailing	14.1			
Rougher Tailing	25.5			
Slime	18.1			

Remarks: Concentrate too high in impurities by microscopic examination.
Some altered minerals of feldspar in head sample.

Test 1 Ore 1023 - Weatherman Flotation

The sample was crushed by rolls set at 1/16 inch opening and repassed thru the rolls twice and screened on 8-mesh. The +8-mesh was clean and stained mica with a little quartz and amounted to 17.8 tons per 100 tons of heads. The under size of 8-mesh was stage ground in a ball mill, deslimed and treated by flotation. The reagents are given in Table 6 and the results in Table 7. The quartz and feldspar carried on thru into the concentrate. The concentrate amounted to 10.1 tons per 100 tons of roll feed but only approximately 85 percent was mica. The mica has a reddish stain on it.

Test 2 Ore 1023 - Weatherman Heavy-Medium

A sample which had been crushed by a jaw crusher at 3/8 inch opening was tested in a heavy medium liquid to sink the mica and float the lighter quartz and feldspar. The mica books ranged from less than 2.62 specific gravity to greater than 2.8 specific gravity. The gravities of quartz and feldspar are too close to that of mica to make a good separation.

Conclusions

1. The Growler sample produced a good grade mica by flotation.

2. Dry crushing and screening gave the best mice product on the Weatherman sample.

3. Feldspar in both samples is of the soda feldspar which is not demanded by the ceramic industry.

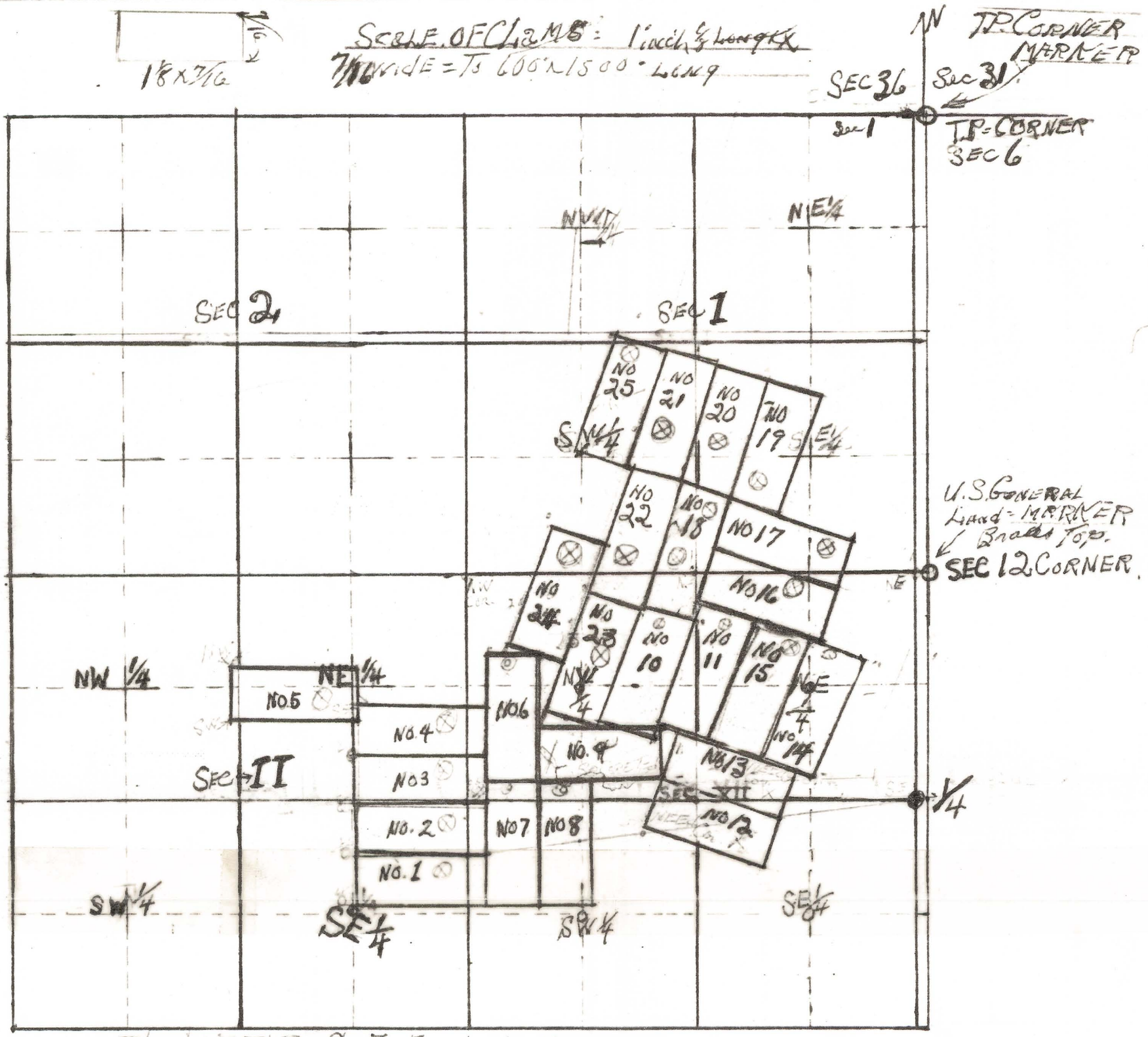
4. Heavy medium will not make a satisfactory separation on the Weatherman sample.

Yours very truly,

/s/ Geo. H. Roseveare

Geo. H. Roseveare
Metallurgist

T-13 S. R 7W



USE THE LETTER S.A. FOR MINE NAME
SAN-ANTONIO GROUP = 1 TO 25

SCALE IS 1320 FT PER INCH OR 4 INCHES PER MILE

SHEET NO. ..... OF .....
JOB NO. .....

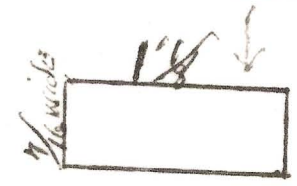
VALENTINA NO 1-2-3 on Sec 14

NO 1 = N.E¼ NO 2 S.E¼ = NO 3 = S.E¼ T.P 13 South Range 7 West Sec 14.

VALENTINA NO 1 = 2 = 3

CLAIMS SCALE = 1/8 X 7/16

IS THIS HERE



SHEET NO. ..... OF .....

JOB NO. VALENTINA No. 1-2-3.

SUBJECT Map of Sec

BY ..... DATE .....

CHKD. BY ..... DATE .....