



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

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Arizona Department of Mines and Mineral Resources Mining Collection

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05/13/87

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: SALERO MINE

ALTERNATE NAMES:

DARWIN
CONSTITUTION

SANTA CRUZ COUNTY MILS NUMBER: 86A

LOCATION: TOWNSHIP 21 S RANGE 14 E SECTION 24 QUARTER NE
LATITUDE: N 31DEG 34MIN 50SEC LONGITUDE: W 110DEG 51MIN 30SEC
TOPO MAP NAME: MT WRIGHTSON - 15 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:

LEAD
SILVER
COPPER
ZINC
GOLD

BIBLIOGRAPHY:

KEITH, S.B., 1975, INDEX OF MINING PROP. IN
SANTA CRUZ CO. AZBM BULL 191 P. 87
AZBM CARD INDEX SANTA CRUZ CO.
SCHRADER, F.C., USGS BULL. 582, P.22, 194-199
ADMMR SALERO MINE FILE
USGS BULL. 582, P. 194-197, 199 & 22
USGS PP 748, P. 11-12 ? PP746

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

1. Information from: Mine visit and Mr. Robert Lenon (c)
Address: _____
2. Mine: SALERO 3. No. of Claims - Patented _____
(Santa Cruz Co.) Unpatented _____
4. Location: In southwestern foothills of the southern Santa Rita Mountains (Patagonia
NE 1/4 25 Tp 21S Range 14E 7 1/2 Quad)
5. Sec 25 Tp 21S Range 14E 6. Mining District Tyndall
7. Owner: Surface rights: Dwight G. Hudson
8. Address: 5319 S. Royal View Dr., Scottsdale, AZ Phone: 840-0553
9. ~~Owner:~~ Operating Co.: Mineral rights: Albert Walraven
10. Address: 2023 Lucas, Dallas, TX 75226
11. President: _____ 12. Gen. Mgr.: _____
13. Principal Metals: Lead & silver 14. No. Employed: _____
15. Mill, Type & Capacity: _____
16. Present Operations: (a) Down ☒ (b) Assessment work ☐ (c) Exploration ☐
(d) Production ☐ (e) Rate _____ tpd.
17. New Work Planned: There is no activity at the Salero.
18. Misc. Notes: There are two main shafts on the property. The old, west shaft
coincides with a well located on the Patagonia 7 1/2 Quad. This shaft is roughly
400 feet northwest of the east, Darwin shaft. The west shaft has a concrete
collar; there is a large, old oil tanker nearby. A large quartz vein crops
out at the shaft.
- The Darwin shaft is surrounded by a large dump. The shaft is covered by
deteriorating wood boards.
- The "townsite" of Salero appears to be occupied. There are four adobe
buildings with corrugated iron roofs and one stone building. Mrs. Wes (Virginia
Rutherford) Jones may still live here. Abundant drill core is strewn in the
road near the adobe buildings.

Date: November 8, 1984

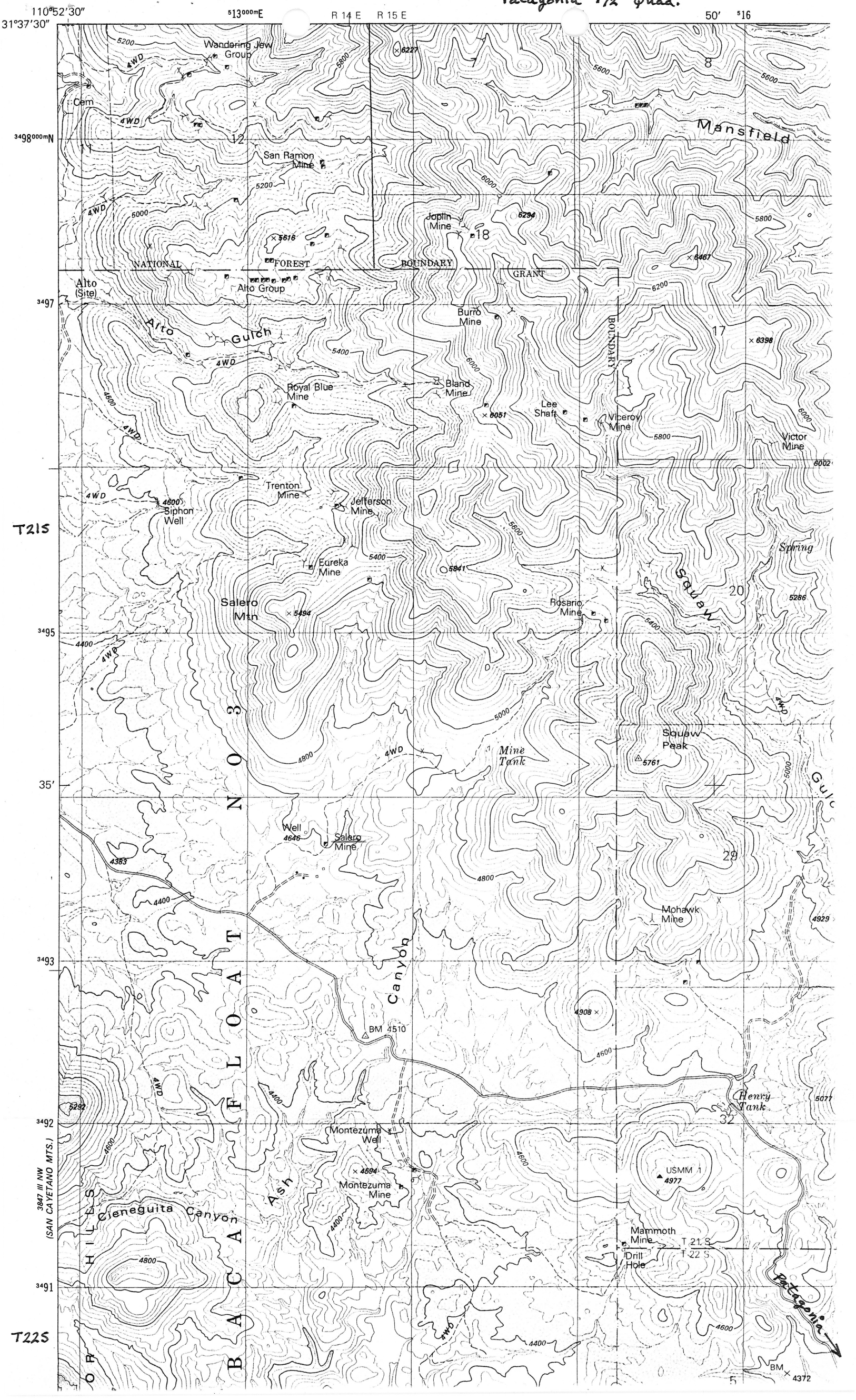
(Signature)

(Field Engineer)

DEPT. MINERAL RESOURCES
PHOENIX, ARIZONA

MAR 04 1985

RECEIVED



SALERO MINE

SANTA CRUZ COUNTY
TYNDALL DISTRICT
T21S R14E Sec. 24-25

USGS Bull. 582 p. 199, 22

AEC 172-489 p. 38

Baca Float (~~file~~)

Mines in Josephine Canyon - Arizona Daily Star -
Santa Cruz County file

Mining Statistics West of the Rocky Mountains,
by R.W. Raymond, 1874, p. 390. C.F. Willis library

Arizona Mining Journal, June 1918, p. 43

Patagonia 7.5 (included in file)

USGS Bull. 582, p. 194-197

ABM Bull. 191, p. 877

History of Mining in Arizona, ABM p. 314-315

USGS PP 748, p. 11-12

*

Old Salero mine leased by Bob Kreg and Doug Robinette. GWI WR 7-3-65

Salero International Mining & Milling Co., of California, is reportedly restoring the historic Salero Mining camp, located between Patagonia and Tubac. First built in 1895, the camp has been idle for years.

Salero has bought the mineral rights covering 8,656 acres. The area has been worked in the past on both low and high grade copper, silver, lead and zinc.

The property and workings date back to Jesuit missionary padres who first saw silver possibilities in the 17th century. E&MJ Vol 166 No. 8 August 1965 p. 132

The Salero International Mining & Milling Co. of California has purchased 8,656 acres of mineral rights in the Salero mining camp located between Patagonia and Tubac.

The camp first developed in 1895, has been idle for nearly 50 years. It has been a high-grade copper, silver and lead-zinc producer and was worked for low-grade ores during the first World War.

The company plans to employ 150 men in underground mining operations when restoration of the property is completed late this year. E&MJ September 1965 p. 169

Visited the Salero mine - no one in camp - no mining activity could be seen. GWI WR 3-11-67

Discovery Process Inc., 1 N. LaSalle, Chicago, have a dry mill under construction at the Salero Mine. It has been reported that they plan to mill the dumps. - Also Box 1043, Nogales 85621. GWI QR 4-1-70

Discovery Process of Chicago have built a dry mill at Salero, but it has been reported that they may change it to a wet process. GWI QR 6-30-70

It has been reported that Discovery Processes of Chicago changed their Dry Mill at Salero to a wet mill operation. GWI QR 10-1-70

KAP WR 5/22/81: Production information was obtained for the Salero mine in Santa Cruz County. It is apparently the same as the Spargle Mine. The property was reportedly operated by Discovery Process in 1970 and 1971. In 1970, the mine produced 40 tons of ore, from which was recovered a total of 7100 pounds of lead, 200 pounds of copper, and 208 ounces of silver. In 1971, 120 tons of ore was produced, from which was recovered a total of 800 pounds of lead, 1500 pounds of copper, and 57 ounces of silver.

SALERO MINE

SANTA CRUZ COUNTY

Mine visit - Talked to Mr. Jones at Salero Mine. GWI WR 5-10-71

Mine visit. Salero mine (Jack Rutherford) still shut down. GWI WR 3/27/72

Mine visit at Salero mine, mine and mill equipment from the last promotion are still in place otherwise no apparent activity. GI WR 3-29-74

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3 - copy

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine ✓ Baca Float
(Mineral Segregation of Baca Float)
District Wrightson District, Santa Cruz Co.

Date Feb. 4, 1954

Engineer Axel L. Johnson

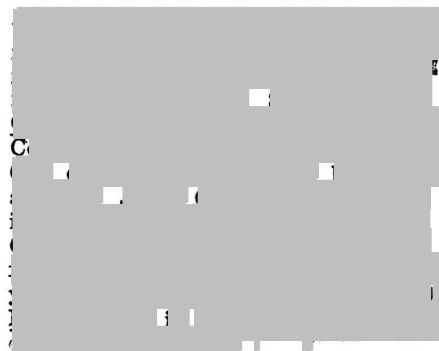
Subject: Mining Operations

The Mineral Segregation of the Baca Float is located about 12⁺¹⁶ miles north-west of Patagonia, and consists of 3 separate tracts totalling 8,656 acres. The owner is ✓ Mrs. Jane Bouldin of Dallas, Texas, and the Lessee is the ✓ Salero Metals Corporation, J. W. Crotty, President, Box 167, Patagonia, Arizona.

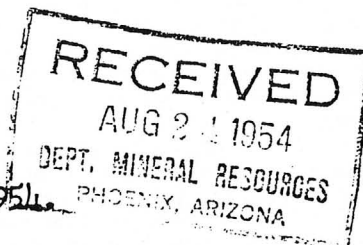
Mr. Crotty reports that he has given a sub-lease of 1,1⁴⁵ acres, composed of two tracts of 545 and 600 acres respectively, to the ✓ M. M. Sundt Construction Co., 440 S. Park Ave., Tucson, Ariz., who expects to start extensive mining operations.

The new operators are reported as having started work on the property, being engaged in cleaning out an old shaft and an old adit on the property, and getting ready to construct a new road about a mile long into the property,

The minerals found ✓ on this property are mainly copper, with some silver and gold, and some lead. The ores on the southern tract of 600 acres is reported to be highly silicious, and can be used as high silica flux.



DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT



Mine Baca Float

(Mineral Segregation of Baca Float)

District Wrightson District ---- Santa Cruz Co.

Date Aug. 20, 1954

Engineer Axel L. Johnson

Subject: Field Engineers Report. Information from William E. Naumann, Engineer, Sundt Constr. Co.

Location About 16 miles West-Northwest of Patagonia, Arizona.

Acreage Involved 1145 acres -- in 2 tracts of 545 and 600 acres respectively. (See Below)

Owner Mrs. Jane Bouldin, Dallas, Texas.

Lessee J. W. Crotty, Patagonia, Ariz.

Sub-Lessee M. M. Sundt Construction Co., 440 S. Park Ave., Tucson, Ariz., --- Operators.
William E. Naumann, Engineer.

Principal Metals Copper, with some lead and silver.

Number of Men Employed None. Operations suspended.

Description of Area Sub-leased (1) 1st Tract consists of 545 acres north of the Jefferson Mine (does not include the Jefferson Mine). Tract includes the Double Eagle, Alice Blue, Bland, and Royal Blue mines. Minerals are copper, lead and silver ores.

(2) 2nd Tract consists of 600 acres about 2 miles south of the Jefferson Mine. Tract includes the extension of the Salero and Aztec veins. It contains high silica flux ores with low copper, ~~low~~ silver and gold values. Silica 85 %.

Operations to Date (1) On 1st Tract. Since work on the property was started about Feb. 1, the company has (a) Built a road into the property, repairing the old road for some distance, and building about 1100 ft. of new road.

(b) Cleaned out and repaired the old shaft on the Double Eagle, which was originally 23 ft. deep.

(c) Extended said Double Eagle shaft to a depth of 80 ft., and drove a drift on the 80 ft. level north for a distance of 44 ft. to provide a place from which to put down some diamond drill holes. 2 cars of ore were taken out, in doing this work, and shipped to the smelter --- 1 car of 39 tons netting \$54.30 per ton, and 1 car of 28 tons netting \$54.17 per ton. Mr. Naumann reports that the ore was pockety, and petered out with depth.

(d) Diamond drilling was conducted from the drift on the 80 ft. level. 8 diamond drill holes were put down, each to a depth of 100 and 101 ft. They were drilled so as to intersect the vein. Only one drill hole showed any ore, that one showed up 11 inches of chalcopryite ore of \$7.50 per ton ore values. The remaining drill holes showed the vein to be not mineralized at that point.

(e) All further work on the Double Eagle was suspended.

(f) Lease still retained. Future plans indefinite. May do some exploration work on the Bland Mine later on.

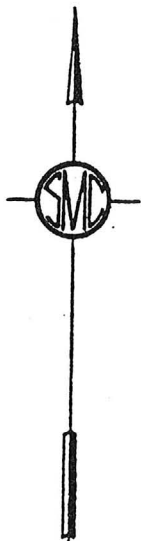
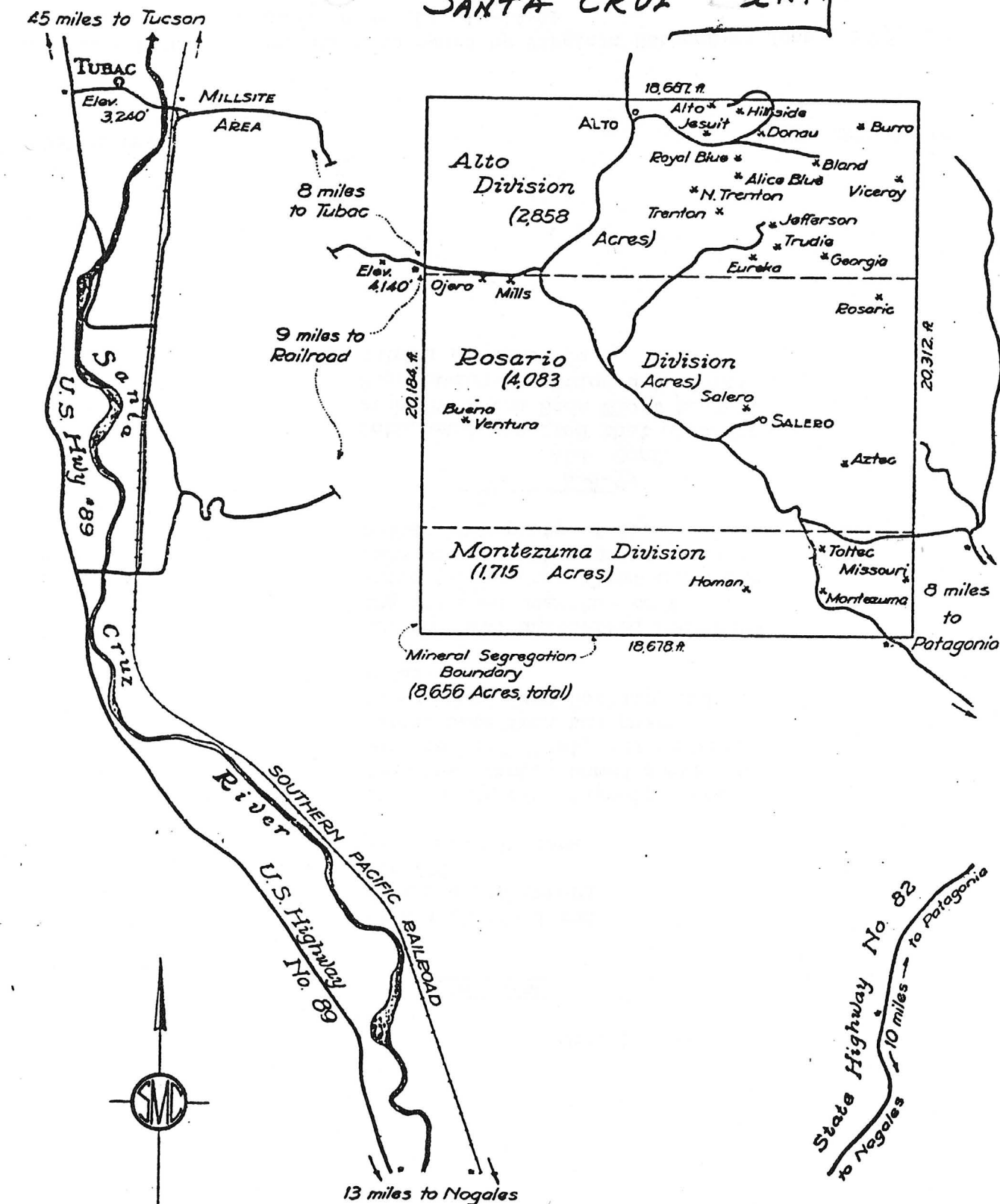
(2) On 2nd Tract Samples taken of the high silica flux ores showed ore values of only about 65 cents at the surface and near to it. Shallow surface drill holes showed no material increase in the ore values with additional depth.

Phelps Dodge Corp. engineers, who inspected the property refused to accept this ore as satisfactory flux ore, as they can obtain better flux ores from their own properties near Bisbee, Ariz. Sundt Construction Co. still retains a Sub-lease, pending future plans for further exploration of the property.

Miscell No publicity wanted.

F-2: BACA FLOAT FILE SANTA CRUZ CNTY

3-COPY 5



0 1/2 1 2
SCALE OF MILES

SALERO METALS CORPORATION'S
Subdivision of the
MINERAL SEGREGATION
in the
Tyndall Mining District
SANTA CRUZ COUNTY, ARIZONA
Robt. Lenon, B.S.E.M.
PATAGONIA, ARIZONA

Oct. 8, 1958

NEWS ITEM

✓ Jack Rutherford and
✓ Virginia Rutherford
Box 725
Patagonia, Arizona

Robt. Lenon of Patagonia reports that the persons named above now own the Baca Float, having been deeded same from the previous owner, Mrs. Jané Bouldin, Dallas, Texas.

Mr. and Mrs. Rutherford are looking for some operator to take a lease on the Baca Float and would like to lease the entire tract rather than parts of it.

4-8-59

ALJ Conf.

Robt. Lenon reported that he understood that the Baca Float Mineral Segregation is optioned to Duval Sulphur & Potash Co.

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3-copys

BACA FLOAT MINES

SANTA CRUZ COUNTY

The Baca Float Mineral Segregation is owned by Virginia Rutherford Jones, 5435 Russell Ave., Apt. 5, Hollywood, California. Memo ALJ 11-14-61

BACA FLOAT MINES

3-copies
SANTA CRUZ

According to BLM in Phoenix, all minerals except gold and silver are owned by the surface owners of confirmed private land grants (which includes Spanish and/or Mexico grants). The gold and silver may be leased on application to BLM only to the owner of the surface. This information may be found in 43 code of Federal Regulations 3561.
VBD WR 9/17/75

MG WR 3/1/85: The Mineral Segregation, 8,656 acres, of the Baca Float No. 3 in Santa Cruz Co is severed into two parts: Surface estate: Dwight G. Hudson (DDS)
5319 S. Royal View Dr.
Scottsdale, Az.
Phone: 840-05553

Mineral estate (parcel 112-43-009)
Albert Walraven
2023 Lucas
Dallas, Texas 75226

Mr. Walraven bought the mineral rights on Nov. 17, 1982, from Mrs. Wes (Virginia Rutherford) Jones. She may still live at the Salero "town-site." Apparently her mailing address, however, is 4322 N. 66th Ave., Phoenix, Az. 85603.

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STATE OF ARIZONA
DEPARTMENT OF MINERAL RESOURCES
MINERAL BUILDING, FAIRGROUNDS
PHOENIX 7, ARIZONA



Tucson, Arizona
May 20, 1965

MEMORANDUM

To: Frank P. Knight, Director
From: Axel L. Johnson, Field Engineer
Reg: Baca Float Mineral Segregation --- Change of Ownership

According to reports by Robert Lenon, Patagonia, et. al.:

Mr. & Mrs. Wesley Jones, Patagonia, Arizona (living in Salero) has sold the Baca Float Mineral Segregation to R. R. Hansen, et. al., a group of California investors or promoters. Baca Float Mineral Segregation is a rectangle, about 3.5 miles x 4 miles in the NE corner of Baca Float, and includes the following mines --- Salero, Jefferson, Alto, Bland, Viceroy, Trenton, Montezuma, Royal Blue, Eureka, and about 8 other less prominent ones. Mr. Lenon reports that purchasers plan to build a mill to treat the ore, which they plan to mine on the property.

The Arizona Land, Title & Trust Co., Nogales, Ariz. expected to handle the deal. Papers on the transaction were scheduled to be signed on May 5 and placed in trust with this company. However, up to the morning of May 6, no papers had been signed, according to reports received at the Trust Co. office. Mr. Haythornewhite, Nogales was reported to be the attorney for one of the parties.

Art Robinson, Patagonia reported that he had shown the purchasers some of the ore deposits on the Baca Float Mineral Segregation prior to agreement of the purchase, and stated that he expects to have charge of the mining operation. He also stated that the construction of a mill is planned to mill the ore, as most of the ore is milling grade.

3-copies

Mr. George

July 14, 1945

Mr. Oswin C. Rowbotham
2006 Columbia Road, N.W.
Washington 9, D. C.

Dear Mr. Rowbotham:

We have your inquiry in regard to the
mineral situation in the vicinity of Baca Float
No. 3.

There are no further publications in
that regard that we know of, but no doubt our
field engineer, Mr. George Ballam of Tucson, has
much personal knowledge.

Mr. Ballam will be in the office the
week of July 22 and we will have him write you
further at that time.

Yours very truly,

Chas. H. Dunning
Director

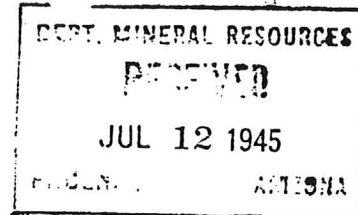
CHD:LP

NEW ADDRESS
2006 COLUMBIA ROAD, N.W.
WASHINGTON 9, D.C.
HOBART 4704

OSWIN C. ROWBOTHAM

923 MUNSEY BUILDING
WASHINGTON, D. C.

PHONE DISTRICT 2757-8



July 10th 1945.

Hon C.H. Dunning.
Director
Department of Mineral Resources of Arizona
304 Home Builders Building.
Phoenix. Arizona.


Dear Mr Dunning:-

I am writing you at the suggestion of Mr William C. Broadgate with whom I had a conference yesterday afternoon regarding certain mining properties of Clients of mine located in the Tyndall Mining District of Santa Cruz County, Arizona and comprising the largest single holding in that area, namely the Baca Float No 3 and which properties my Clients hold under option and lease. I have been engaged to arrange the necessary finance for expansion and further development of the properties in question and for additional equipment and while I have a more less complete data, the same is somewhat old. If, therefore, you could supply me with any recent maps etc of this district with any other supporting data, I would greatly appreciate your efforts in so doing.

I might state in passing that the property in question was made the subject matter of Bulletin 582 issued in 1915 by the U.S.G.S. by Frank C Schrader with contributions by James M. Hill but I thought that possibly more recent information would be available.

*
Thanking you in anticipation for anything you may do in aiding me in the matter,

Sincerely,


Oswin C Rowbotham.

CCR/j

BACA FLOAT MINE

REFERENCES

SANTA CRUZ COUNTY
TYNDALL DIST.
T23S R14E Sec. 18 NW

Santa Cruz County MILS Index #90C

AKA: Reagan Mine Group

Index of Mining Properties in Santa Cruz County

Lenon's Map of Santa Cruz

USBM Field Notes W1

USGS 430, p. 164-166

* Royal Blue Mine & Double Eagle Mine (file)

* Salero Mine (file)

* Bland Mine (file)

RI 5650 p. 119 (1960)

Nogales, AZ 15' Topo (included in file)

2012/11/18/05



NEW ADDRESS
2006 COLUMBIA ROAD, N.W.
WASHINGTON 9, D.C.
HOBART 4704

OSWIN C. ROWBOTHAM

923 MUNSEY BUILDING
WASHINGTON, D. C.

PHONE DISTRICT 2757-8

3-copies

July 17th 1945.

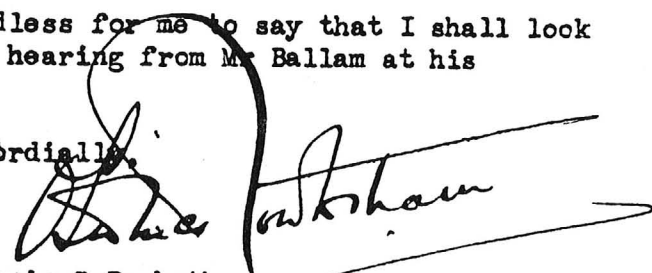
Dr Chas. H. Dunning.
Director
Department of Mineral Resources.
304 Home Builders Building.
Phoenix, Arizona.

Dear Dr Dunning;

Thank you for your letter of the 14th inst
regarding the mineral situation in the vicinity of Baca Float No.3.

It is needless for me to say that I shall look
forward with great pleasure in hearing from Mr Ballam at his
convenience.

Cordially,



Oswin C Rowbotham.

OCR/j

*

2-copies

July 24, 1945.

G. A. Ballan.

Mr. O. C. Rowbotham,
923 Munsey Bldg.
Washington, D. C.

Dear Sir:

Owing to my absence from the office on field work during the past few days, your inquiry relative to Baca Float Mines has just come to my attention.

I have examined some of the mines in this area, and in some cases have been successful in locating old reports on the properties. As you know, there are numerous mines in the Baca Float area, and I shall be glad to aid you in obtaining information on specific properties.

There is every reason to believe there are some good potential producers of lead, silver, and zinc ore included in the group. Very little emphasis has been placed on zinc heretofore, since it was not separated in the past, and in fact was a liability on account of smelter penalties. However, with a good post-war outlook for zinc, it must be considered in the future development of these mines.

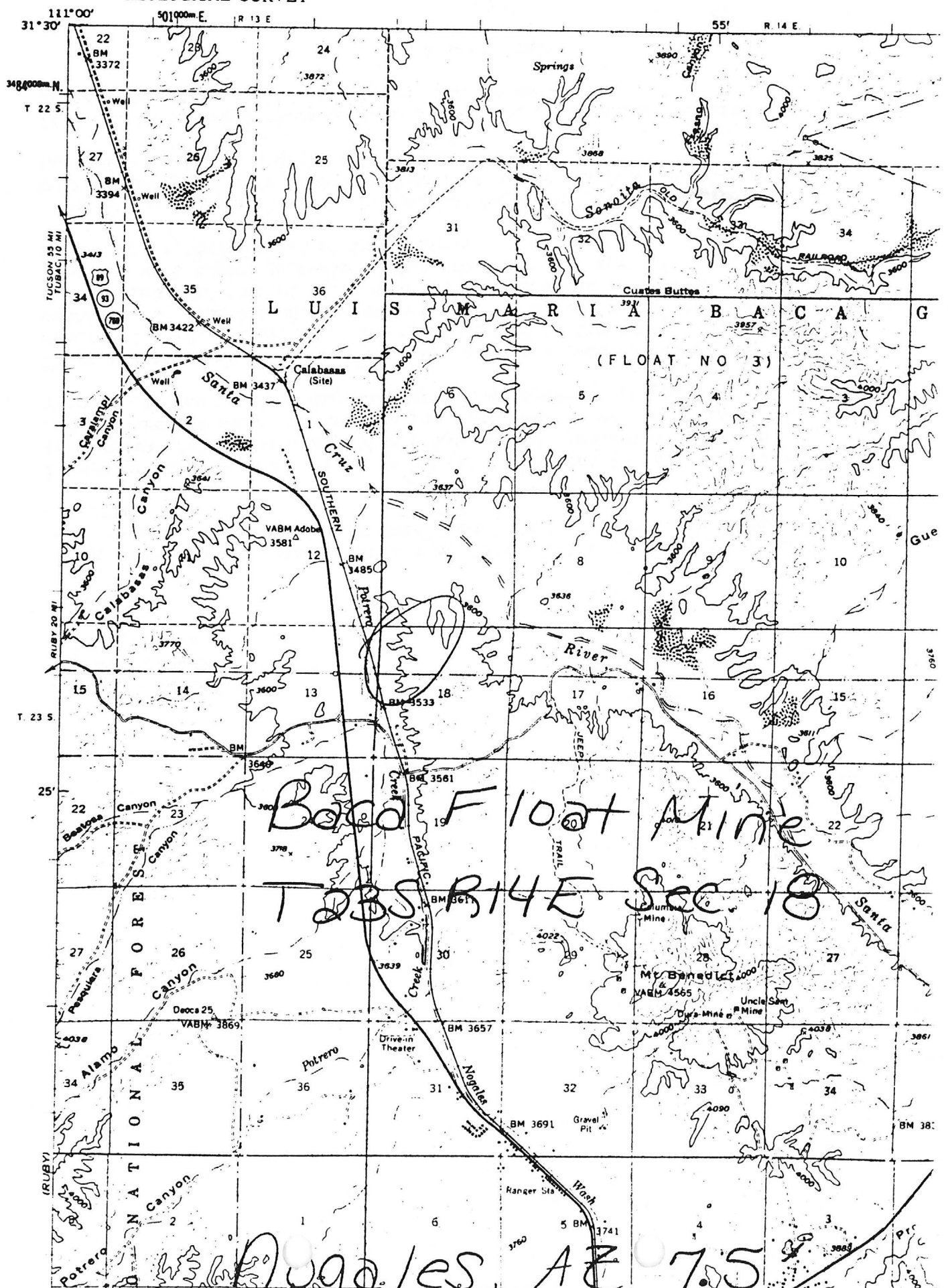
I believe a group such as the Bland, Eureka, Trenton, and Salero could be readily prepared to produce sufficient ore for a 100-ton selective flotation mill in the district.

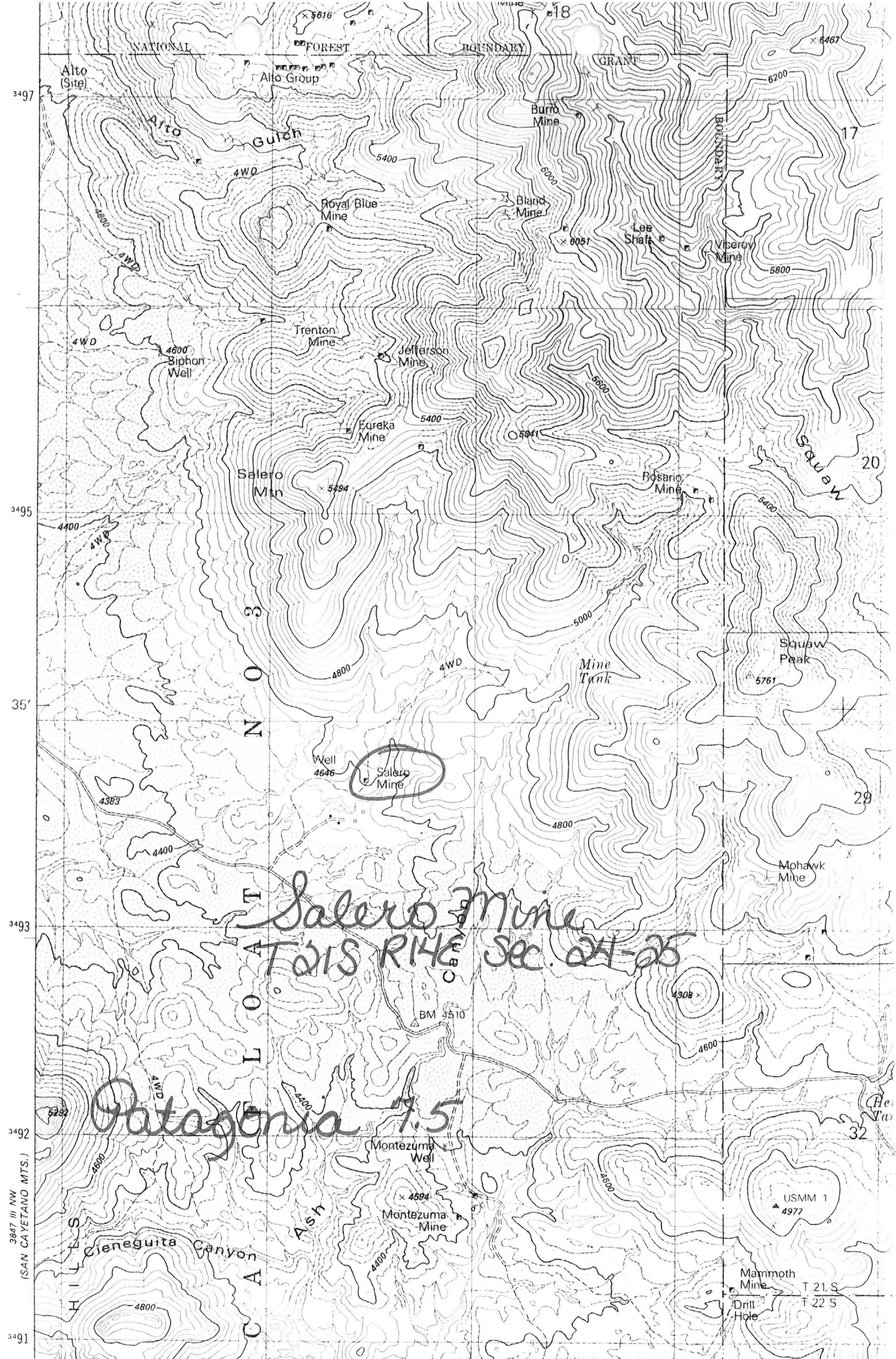
If I can be of any service in your search for information relative to these properties, don't hesitate to call on me.

Yours very truly,

G. A. Ballan.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY





Republic Feb. 1962

ARIZONA

Emg. 8/1965

86-30-65 Republic

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

1. Information from: FRANK RANDALL (SUPT.)
Address: 47 WESTERN AVE, NOGALES
2. Mine: SALERO 3. No. of Claims - Patented 15 ^{Approx} ~~10~~ ^{SECTIONS} MINERAL SEGREGATION
Unpatented _____
4. Location: MT WRIGHTSON QUAD.
5. Sec _____ Tp 21 S Range 14 E 6. Mining District WRIGHTSON
7. Owner: VIRGINA JONES
8. Address: _____
9. Operating Co.: DISCOVERY PROCESSES INC
ALSO Box 1043 NOGALES 85621
10. Address: 1, NORTH LA SALLE, CHICAGO ILL
11. President: ROBERT O. BOYLE 12. Gen. Mgr.: SAL FARRE
13. Principal Metals: Ag, Cu, Pb. 14. No. Employed: 10
15. Mill, Type & Capacity: WORKING ON MILL
16. Present Operations: (a) Down ☐ (b) Assessment work ☐ (c) Exploration ☐ DEVELOPMENT
(d) Production ☐ (e) Rate _____ tpd.
17. New Work Planned: Have driven 200' X-CUT into Jefferson vein & are now
drifting on same
18. Misc. Notes: _____
Did make 1-10 Ton shipment to ASARCO in El Paso
- *

Date: 1-7-71

[Signature]
(Signature)

(Field Engineer)

SANTA RITA SILVER MINING COMPANY.

SANTA RITA SILVER MINING CO.

The SANTA RITA SILVER MINING COMPANY is a Company organized under the General Laws of the State of Ohio for the incorporation and regulation of manufacturing and other companies. Its object is to open and work silver mines in the neighborhood of Tubac, Arizona. The mines now held by the Company are situated in the Santa Rita Mountains, the principal peak of which is cut by numerous veins of rich silver ore. These can be traced over its surface by the outcrop of the vein, and were opened in many places by the Spaniards previous to the Apache War. The Salero vein, on which the greatest amount of work has been done, contains three old shafts of former times. The principal one has been re-opened to the depth of eighty feet, and is found to be a regular vein of Fahlerz silver ore. Two other veins to the east of the Salero were worked by the Spaniards and three shafts were opened to the north-west, making in all eight shafts worked in former times. In an adjoining peak is a vein of rich galena ore containing silver.

The Santa Rita Mountains, in which these mines are situated, border in a north and south direction the valley of the Santa Cruz river. The summits of the mountains are covered with pine, and the valleys are filled with cottonwood, walnut, and oak. The slopes of the mountains and the valleys of the streams are covered with grass, which affords excellent pasturage. The soil in the immediate vicinity of the streams is capable of the highest cultivation, and produces all the fruits known to a southern climate—grapes, wheat, corn and cotton. Its climate is declared by Ward, Wilson, Gray and others, to be as "attractive as its mineral riches." Its pure mountain air is bracing and salubrious.

VALUE OF SILVER MINES.

So little is known in our country of the value and produce of the silver mines of Mexico, that it is difficult for the mind to conceive the enormous results which have been accomplished in this field of labor. The Mining Records of Mexico, however, which were made by the Government officials for purposes of taxation, which, under Spanish rule, amounted to one-fifth the proceeds of the mines, show results rather under than over the actual produce. According to these Records, Humboldt estimated the whole produce of the Mexican Mines from the conquest up to 1803, at \$1,767,952,000.

Among numerous instances of individual profit from working mines, the historian, Ward, states that Zambrano paid, as his tax of one-fifth the proceeds of his mine, \$11,000,000. The mine of Arevalo, in 1811, yielded in seven weeks, \$200,000 from one level called El Divino Pastor. The Biscaina vein, which in 1726 had produced \$4,341,600 and was subsequently abandoned on account of water, was re-opened in 1762, and in twelve succeeding years produced \$6,000,000. The mines discovered by the Indian brothers Arauco, in the district of Morelos, in 1826, produced in two months \$270,000. In 1825, the owner of the mines of Nuestra Señora de Guadalupe refused \$1,000,000 for the privilege of working it three years.

The mine of Arevalo at Chico, is stated to have produced from 1804 to 1824, \$250,000 per annum. The mines at Real de Arriba produced weekly twelve bars, or \$13,000. The Santa Rita mines at Zimapan, upon the years 1791, 1792 and 1793, left a profit of \$100,000.

At the time of the great Bonanza of the Fagoaga family, the mine of El Pavellon, in Sombrerete, 26 deg. north latitude, alone produced eleven millions of dollars in eight months.

The mine of Santa Eulalia, near the town of Chihuahua, from 1705 to 1737, produced \$55,959,750, or an average of \$1,748,742 per annum. From 1737 to 1791, it yielded over \$44,000,000. Making a total of over ONE HUNDRED MILLIONS OF DOLLARS in 86 years.

The enormous profit of the mines mentioned above, are well authenticated facts, taken from government records of taxation. They were accomplished with the rudest imple-

ments, and without skill, enterprise or capital. The average yield of the ores, according to Ward, did not exceed 2½ ounces to the cwt. of ore. The miners drained their works by carrying water in rawhide sacks up ladders of notched logs. The ores were raised in the same tedious and laborious manner; and the crushing and smelting performed with the exercise of as little skill and enterprise. And yet these mines have yielded the most enormous fortunes that have ever been acquired in the history of the world.

The inference may be clearly drawn that, with American enterprise and skill to direct the native labor which can be cheaply procured on the spot, the above enormous gains could be greatly increased. Many of the gold mines of California, are now yielding sums which rival the most extravagant of the above statements.

ESTIMATE OF THE PRODUCE OF THE SALERO MINE.

In the present condition of the Salero Mine, it is of course impossible to give an exact estimate of its annual produce. We know that it contains rich ores in the greatest abundance. Col. Poston, in his report on this mine to the Sonora Exploring and Mining Company, says, "The ores in this one peak can not be exhausted by the labor of a thousand hands in a hundred years; and it is the almost universal experience of miners, that ores of silver increase in value the greater distance you go from the surface. If this be so, the interior of this peak must be almost a formation of silver, and in time to come, will no doubt be found to be honeycomb through and through, in following the ramifications of these different veins of ore. The immediate vicinity of the mines affords water in several different streams, wood in scattered clumps of small live oak, and grass and pasturage sufficient for thousands of cattle and sheep!"

The following is an extract from a letter of Lieut. Mowry, on the subject of the Santa Rita Mines:

WASHINGTON CITY, Feb. 18, 1858.

MY DEAR SIR:

The ores of the Santa Rita Mountains and of the Cerro Colorado, are probably the richest of the whole mining region of Arizona, in silver.

They occur as Sulphurets of Copper and Silver, galena ores, native silver, and very rich ores of silver, containing a percentage of gold. I have, in my possession, a specimen of ore, which is, without doubt, a very rich sulphuret of silver and copper in a quartz lead. This specimen is from Cerro Colorado. The Sonori mine is of the same general character of those of Santa Rita; and in the gulch below the mouth of the mine, the Indians have, for a long period, obtained pieces of gold and silver fused together by volcanic action, weighing several dollars.

From specimens taken at random from the Sopori, I have cut native silver with a penknife as easily as you can cut it out of a Mexican dollar.

Mr. E. Brevoort, Postmaster at Aguas Calientes, informs me that in the mountains in rear of Aguas Calientes, the silver region is richer than any that has yet been opened.

The possession of the Apache Indians, thus far, has prevented any thing beyond hasty prospecting. The traditions of the country tell of mines in the Santa Rita, from which the Jesuits took pure silver in masses—cutting it from the vein with chisels—and we know that large pieces of native silver have been found in "placers" within the last few years. Col. Emory confirms this in his Report.

My own impression is, that the discoveries thus far—wonderful as they are—are only the prelude to much greater ones, when capital and organized labor shall begin to develop our Territory as its resources demand. It should be mentioned that the veins both of silver and copper of Arizona run much nearer the surface than in the mines of Mexico farther south; and that the cost of mining is thereby much reduced.

Very truly yours,
SYLVESTER MOWRY.

WM. WRIGHTSON, Esq., Cincinnati, O.

The following estimate of the produce of the Salero Mine, may be given as the nearest that can be made at the present time. It is based upon data carefully obtained from the results of mining in California and Mexico. In California, a single miner will raise a ton of gold bearing quartz per day. It costs to raise, crush, and extract this, from \$10 to \$12 per ton. The cost in Mexico nowhere exceeds this. But in order to make a safe estimate, let us assume that a

single miner will raise but 300 lbs., or, in mining parlance, a *carga* of ore per day, and that the cost of raising and smelting the ore is \$50 per ton, and we shall have the following result for a force of fifty workmen:

50 men at 300 lbs. per man per day..... 15,000 lbs.
Value at 6 to 12 marcs. (\$51 to \$162.)
per Carga (300 lbs.)..... \$2,550 to \$5,100
Cost of mining and smelting at \$50 per ton, 350 to 350

Net profit per day..... \$2,260 to \$4,750
Net profit per year of 300 days..... \$660,000 to 1,425,000
Probable annual dividend..... 66 per cent. to 142 per cent.

Enormous as such dividends as the above would seem, there is ample evidence that such have been made in many mining operations. The reports of twenty-six English copper mining companies, show them to have paid 1,056 per cent. on the capital invested in them, and to be paying at the present time an average annual dividend of 134 per cent. for each of them. Many of the Mexican mines mentioned above, would have yielded much larger dividends on a capital of a million of dollars, than those here estimated. And yet a comparison of the value of the ores shows largely in favor of the ores of the mines of Arizona. Both Humboldt and Ward, and all the modern explorers agree in testifying that the veins of silver ore grow richer as you approach the north and also appear nearer the surface, thus reducing the cost of extraction. Many of the Mexican mines have already reached a depth of 800 to 1500 feet, and yet pay enormous profits on their tedious and expensive mode of operating them. The Santa Rita mines will mostly pay at the very surface.

CONDITION OF THE WORK.

The Salero Mine, on which the Company propose to expend their principal labor, had been worked by the old Mexicans to a greater extent than most of the mines in its neighborhood, on account of the superior quality of its ores. The smallness of the pile of rubbish at its mouth, however, induced the engineers to believe that the mine could not be very deep. The washings of the mountain for nearly a century of time had nearly filled it, and they commenced the work of clearing it out in the expectation of reaching the bottom of the shaft within fifty feet. At the depth of eighty feet, the work was interrupted by water, and it was rendered necessary to await the arrival of the pumps. The smallness of the pile of rubbish and the depth already attained, clearly indicate that the ores were rich enough to bear transportation, and that the material taken from the mine was mainly transported to the smelting furnaces. The company have sent forward the machinery necessary to continue the operations on the main shaft of this mine, and in the meanwhile design to commence an adit by which the ores can be brought out in an easier manner than by the shaft. Work will also be commenced on the galena veins, and the ores of these veins will be reduced by the common Mexican method of smelting.

A meeting of the stockholders of the company was held in Cincinnati on July 12, and the following persons were elected directors of the company for the ensuing year:

MAJ. S. P. HEINTZELMAN.
THOS. H. C. ALLEN.
THOS. WRIGHTSON.
DR. GEO. MENDENHALL.
JAMES APPLEGATE.
TRUMAN HILLIER.
WILLIAM WRIGHTSON.

The following resolution was passed:

Resolved, That after filling present contracts the balance of the stock of the company be reserved; but that the Executive Committee may have the privilege of selling one thousand shares at fifty per cent. at their option.

The company confidently expect, within the coming six months, to have their smelting works erected and in operation.

W. WRIGHTSON, Sec'y,
167 Walnut street, Cincinnati, O.

Office of the Santa Rita Silver Mining Co.,

Cincinnati, Ohio, April 15th, 1853.

DEAR SIR,

Your attention is respectfully invited to the following Circular of the SANTA RITA SILVER MINING COMPANY. The business of mining the precious metals is but just beginning to receive that attention from the enterprising and intelligent of our citizens that its importance demands. It is but a few years since the treasures of California were lying idle and unproductive, and yet, within the short period that this state has been open to the enterprise of our people, *Four Hundred Millions of treasure have been produced from its mines.* California is now no fabled myth, but an actual, really existent El Dorado, that has tinged with golden hues the fortunes of our country. The fortunes that have been made in California—both in the products of its mines and the rising value of its property—equal the highest visions that the most sanguine minds could anticipate.

The object of this Circular is now to invite your attention to another important region—the Silver State of Arizona. This is situated between California and Mexico, and analogy alone would induce the belief that it is rich in the precious metals. But analogy is not the only evidence that can be offered. Authentic reports by scientific gentlemen to the various department of the Government—the Reports of the Engineers engaged in the Pacific Railroad Surveys—and the testimony of all the scientific and military gentlemen who have ever passed through this country, show that it is rich in the ores of Silver, Copper, Lead and Mercury, and that it abounds in rich veins of Gold-bearing Quartz. The valleys of its streams are lined with timber:—the ash, the live oak, the walnut, the cottonwood, pine and mezquite furnish abundant material for the use of the miner. And its bottom lands will afford ample field for agriculture and pasturage. With these advantages, then, for agriculture and mining, and a climate healthful and agreeable, it cannot be denied that Arizona possesses attractions that will soon create a development as rapid and substantial as that which has astonished the world in the golden shores of California.

The mining of Arizona will however be of a different class from that of California. The Gold placers of California furnished an ample reward for the enterprise of individuals, and were worked mainly by isolated labor. While the Silver veins of Arizona must be opened and worked by associated capital, in regular shafts and galleries, and with the erection of suitable works for the reduction of the ores. This is the province of incorporated companies, and must, in the main, be carried on by them. The success which has attended the efforts of the Sonora Exploring and Mining Company has led to the formation of the SANTA RITA SILVER MINING COMPANY, to the possessions and prospects of which, as set forth in the following circular, your attention is invited. It is the opinion of those interested in it, that the stock now offered at 20 per cent. will within one year be rendered marketable at prices much above par by the payment of large cash dividends out of actual earnings. Its operations partake more of the nature of a well settled business than of a speculation. The character of the ores of its mines, their richness in silver, and the best methods of working them are well established and produce known results. It therefore remains only to put these results together and an estimate can be formed with considerable accuracy of the probable success of the operations of the company. The estimates as given in the annexed circular will doubtless appear large, but they are no larger than we see daily realized at the present time from similar enterprises, and not so large as well authenticated history and government records show have been obtained from poorer mines in other parts of this continent. The estimates are therefore believed deserving the confidence of the intelligent and candid reader.

The SANTA RITA SILVER MINING COMPANY will commence its operations under the general laws of the State of Ohio. Its office for the payment of dividends, the election of officers, &c., will be in Cincinnati. Its head quarters at the mines will be located at Tubac, or at the old mission of Tumacacori, as shall be found most convenient for the purposes of the company.

A working party, consisting of geologists and mineralogists, smelters and mechanics of every description will leave Cincinnati at as early a day as practicable, and proceed directly to the seat of operations. Furnaces will be erected capable of smelting three to five tons of ore per day. It is confidently believed from the experience of the past, that within six months after the departure of the working party the company will be turning out silver from its furnaces.

Any further information as to route, &c., may be obtained by addressing

W. WRIGHTSON, Sec'y.

167 Walnut Street, Cincinnati, Ohio.

SANTA RITA SILVER MINING COMPANY.

Under the above title it is proposed to organize a joint stock company with a capital of one million dollars, divided into shares of One Hundred Dollars each, to work the Salero and other mines in the Santa Rita Mountains near Tubac, in the Gadsden Purchase, or, as it is now known, the proposed Territory of Arizona. The mines proposed to be worked by this company, comprise twenty distinct veins of silver ore, which here occurs in the shape of a sulphuret of silver, mixed with the sulphuret of copper, antimony, and other metals, in regular veins imbedded in a gangue of quartz rock, and also in veins of silver-bearing lead ores. All these ores are easily worked in the vein, and can be reduced to the metallic state by the simple process of smelting.

Arizona is at the present time the most interesting of the Territories of the United States. Unlike Oregon, Minnesota, Kansas and Nebraska, which have never, till recently, been inhabited by civilized men, Arizona was actually inhabited by the Spanish. Its valleys were once cultivated by the hand of industry, and its mines were worked by civilized men. This fact is sufficiently attested by the ruins of its buildings, and the records of its history. Some very interesting notices of the early history and development of this country will be found in the Third Volume of the Report on the Pacific Railroad Surveys, as recently published by the United States Government, in Ward's Mexico, in 1827, and in Wilson's Mexico—Its Peasants and its Priests; and in the Reports of Lt. Michler, Major Emory and others to the United States Government. It contains some of the finest mission buildings erected by the Spanish Jesuits in this country. It was subsequently desolated by one of the fiercest Indian wars ever carried on, on this continent. The Spanish conquerors had enslaved the Indians, and compelled them to work the mines. Galled by slavery and thirsting for revenge, the Apaches seized the first favorable opportunity which was offered by the withdrawal of the troops, rose in rebellion, murdered their task masters, and reduced this then civilized region to its former wilderness state. Its towns were deserted, its mines abandoned, and its fields and highways overgrown with weeds. Such was its condition when it came into the possession of our government by the Gadsden Purchase.

The following extract from the Report of Col. Chas. D. Poston, Agent of the Sonora Exploring and Mining Co., under date of January 31, 1857, will give a fair idea of the condition of the country at that period:

"It may not be amiss, in these desultory remarks, to note the improvement in Tubac and the adjacent country since our arrival. When we forced our wagons here, over the undergrowth on the highway, in September last, (1856) no human being was present to greet our coming, and desolation overshadowed the scene. It was like entering the lost city of Pompeii. The atmosphere was loaded with the malaria of a rank vegetation, the undergrowth in the bottom served as a lurking place for the deadly Apache, and the ravens in the old church window croaked a surly welcome.

"Now, the highroads are alive with trains and people. Commerce, agriculture, and mining are resuming their wonted prosperity under the enterprise, intelligence and industry of our people. The former citizens of Tubac have returned to the occupation of their houses, set to work vigorously on their milpas, and are loud in their praises of American liberty and freedom.

"At our municipal election on Christmas, fifty-five votes were polled and our excellent member Ward elected Alcalde. The number of souls in or near Tubac, numbers over one hundred and fifty, and every week adds a number of families to this increasing population."

The circumstances which desolated this region no longer exist. American enterprise is beginning to re-develop this Territory, and it may be added, in the language of the Jesuit Missionary, who explored this region in 1687:

"A scientific exploration of Sonora, with reference to mineralogy, along with the introduction of families, will lead to a discovery of gold and silver, so marvelous that the result will be such as has never yet been seen in the world."

The predictions of this hardy and dauntless missionary were verified in the rapid settlement of this country, and the opening of hundreds of mines of the precious metals

between that period and 1757. It is on record that the Salazar family took out of one Placer, in a very short time, *three millions of dollars*. It is also a matter of history that:

"All these settlements and missions were founded in fertile valleys, and by streams and springs, which produced luxuriant crops of wheat, corn and beans, and in many parts grapes and other foreign fruits were cultivated."

The hardy and enterprising population now teeming into Arizona will soon rebuild its ruined towns, and make its abundant mines again the means of enriching the world by their product of the precious metals. In this state of things it needs no prophet's voice to foretell that the companies earliest on the ground, with ample means, will secure fortunes which those later at the scene of operation will fail to obtain.

SANTA RITA MINES.

The Santa Rita Silver Mining Co., propose to commence operations on the old and famous Salero Mine, which took its name from the following incident in its early history:

"When the Bishop of Tumacacori, a mission three miles south of Tubac, came to take charge of this diocese, he complained much of the hardships he had to undergo in this northern province, compared with the luscious fare and rich viands of his former residence at the south, and one day at table, said he had not even a salt-cellar to hold his salt. One of his zealous parishioners said, 'Wait until next Sunday and I will bring you one.' He immediately took to the mountains, and fashioned a rude salero from the silver mine in the Santa Rita Mountains, which in due time graced the Bishop's table, and gave its name to the mine."

The "Salero" is a regular vein of the sulphuret of silver and copper, two and a half feet wide at the surface, and outcrops for a distance of one and a half miles in a north and south direction. The old shaft has been cleaned out to the depth of eighty feet by the engineers of the Sonora Exploring and Mining Company. It is held by indisputable titles derived from this Company. The other veins in the same mountains partake of the same general character of ores, and are parallel to the Salero. They yielded, during Spanish rule from six to twelve marks (\$51 to \$102) to the carga (300 lbs.) of ore.

The Santa Rita Mountains, in which these mines are situated, border in a north and south direction the valley of the Santa Cruz river. The summits of the mountains are covered with pine, and the valleys are filled with cottonwood, walnut and oak. The slopes of the mountains and the valleys of the streams are covered with grass, which affords excellent pasturage. The soil in the immediate vicinity of the streams is capable of the highest cultivation, and produces all the fruits known to a southern clime—grapes, wheat, corn and cotton. Its climate is declared by Ward, Wilson, Gray and others, to be as "*attractive*" as its mineral riches." Its pure mountain air is bracing and salubrious.

VALUE OF SILVER MINES.

So little is known in our country of the value and produce of the silver mines of Mexico, that it is difficult for the mind to conceive the enormous results which have been accomplished in this field of labor. The Mining Records of Mexico, however, which were made by the Government officials for purposes of taxation, which, under Spanish rule, amounted to one-fifth the proceeds of the mines, show results rather under than over the actual produce. According to these Records, Humboldt estimated the whole produce of the Mexican Mines from the conquest up to 1803, at \$1,767,952,000.

Among numerous instances of individual profit from working mines, the historian, Ward, states that Zambrano paid, as his tax of one-fifth the proceeds of his mine, \$11,000,000. The mine of Arevalo, in 1811, yielded in seven weeks, \$200,000 from one level called El Divino Pastor. The Biscaina vein, which in 1726 had produced \$4,341,600 and was subsequently abandoned on account of water, was

re-opened in 1702, and in twelve succeeding years produced \$6,000,000. The mines discovered by the Indian brothers Arauco, in the district of Morelos, in 1626, produced in two months \$270,000. In 1825, the owner of the mines of Nuestrra Sonora de Guadalupe refused \$1,000,000 for the privilege of working it *three years*.

The mine of Arevalo at Chico, is stated to have produced from 1804 to 1824, \$250,000 per annum. The mines at Real de Arriba, in the district of Temascaltepec, produced weekly twelve bars, or \$13,000. The Santa Rita mines at Zimapan, upon the years 1791, 1792 and 1793 left a profit of \$100,000.

The mine of Santa Eulalia, near the town of Chihuahua, from 1705 to 1737, produced \$55,959,750, or an average of \$1,748,742 per annum. From 1737 to 1791, it yielded over \$44,000,000. Making a total of over one hundred millions of dollars in 86 years.

Col. Chas. D. Poston, Agent of the Sonora Exploring and Mining Company, in his report of January, 1858, estimates the produce of the Heintzelman Mine, belonging to that Company, at one million dollars for the coming year, basing his calculations upon actual results, already obtained, with a force of fifty men.

The enormous profit of the mines mentioned above, are well authenticated facts, taken from government records of taxation. They were accomplished with the rudest implements, and without skill, enterprise or capital. The average yield of the ores, according to Ward, did not exceed 2½ ounces to the cwt. of ore. The miners drained their works by carrying water in rawhide sacks up ladders of notched logs. The ores were raised in the same tedious and laborious manner; and the crushing and smelting performed with the exercise of as little skill and enterprise. And yet these mines have yielded the most enormous fortunes that have ever been acquired in the history of the world.

The inference may be clearly drawn, that with American enterprise and skill to direct the native labor which can be cheaply procured on the spot, the above enormous gains could be greatly increased. Many of the gold mines of California, are now yielding sums which rival the most extravagant of the above statements.

Lt. Mowry, the delegate elect to Congress, from the proposed territory of Arizona, estimates the future annual produce of the mines of Sonora, at *one hundred million dollars*, a sum equal to double the present produce of California.

ESTIMATE OF THE PRODUCE OF THE SALERO MINE.

In the present condition of the Salero Mine, it is of course impossible to give an exact estimate of its annual produce. We know that it contains rich ores in the greatest abundance. Col. Poston, in his report on this mine to the Sonora Exploring and Mining Company, says, "The ores in this one peak cannot be exhausted by the labor of a thousand hands in a hundred years; and it is the almost universal experience of miners, that ores of silver increase in value the greater distance you go from the surface. If this be so, the interior of this peak must be almost a formation of silver, and in time to come, will no doubt be honey-combed through and through, in following the ramifications of these different veins of ore. The immediate vicinity of the mines affords water in several different streams, wood in scattered clumps of small live oak, and grass and pasturage sufficient for thousands of cattle and sheep!"

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WASHINGTON CITY, Feb. 18, 1858.

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They occur as Sulphures of Copper and Silver, galena ores, native silver, and very rich ores of silver, containing

a per centage of gold. I have, in my possess. . . specimen of ore which is, without doubt, a very rich sulphuret of silver and copper in a quartz lead. This specimen is from Cerro Colorado. The Sopori mine is of the same general character of those of Santa Rita, and in the gulch below the mouth of the mine, the Indians have, for a long period, obtained pieces of gold and silver fused together by volcanic action, weighing several dollars.

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Very truly Yours,

SYLVESTER MOWRY.

WM. WRIGHTSON, Esq., Cincinnati, O.

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single miner will raise but 300 lbs., or in mining produce a carga of ore per day, and that the cost of raising and smelting the ore is \$50 per ton, and we shall have the following result, for a force of fifty workmen.

PRODUCE OF 50 MEN.

50 men at 300 lbs. per man per day.....15,000 lbs.
Value at 6 to 12 marcs, (\$51 to \$102.)
per Carga, (300 lbs.).....\$2,550 to \$5,100
Cost of mining and smelting at \$50 per ton. 350 to 350
Net profit per day.....\$2,200 to \$4,750
Net profit per year of 300 days.....\$660,000 to \$1,425,000
Probable annual dividend.....68 per cent. to 142 per cent.

Enormous as such dividends as the above would seem, there is ample evidence that such have been made in many mining operations. The reports of 26 English copper Mining companies, show them to have paid 1,056 per cent. on the capital invested in them, and to be paying at the present time an average annual dividend of 134 per cent. for each of them. Many of the Mexican mines mentioned above, would have yielded much larger dividends on a capital of a million of dollars, than those here estimated. And yet a comparison of the value of the ores shows largely in favor of the ores of the mines of Arizona. Both Humboldt and Ward, and all the modern explorers agree in testifying that the veins of silver ore grow richer as you approach the north and also appear nearer the surface, thus reducing the cost of extraction. Many of the Mexican mines have already reached a depth of 800 to 1200 feet, and yet pay enormous profits on their tedious and expensive mode of operating them. The Santa Rita mines will mostly pay at the very surface.

PROSPECTS OF THE COMPANY.

The capital stock of the Santa Rita Silver Mining Company, is proposed to be put at one million dollars, to be divided into ten thousand shares of one hundred dollars each. One half of this stock is to be given for the ownership of the mines and the work already done. The balance of the stock is to be sold at an assessment of twenty per cent. which will furnish abundant means for the erection of smelting and crushing works and machinery for the active and energetic prosecution of the work, and extension of interest. It is proposed to send to these mines a colony of good mechanics and reliable men, to direct the operations of the company. With ample means, it is confidently believed, that the works can be erected and smelting actually begun within six months from the sailing of the expedition from New York, and that the operation of the second six months will pay a handsome dividend on the full face of the stock.

The ores of this region have been assayed by Prof. John Torrey, of the United States Assay Office in New York; Prof. J. D. Booth, of the United States Mint in Philadelphia; Prof. Louis A. Garnett, of United States Branch Mint in San Francisco; Prof. Joseph M. Locke, of Cincinnati; Messrs. E. & D. Kinsey, of Cincinnati; Prof. W. P. Blake, of the Smithsonian Institute, Washington, D. C.; Messrs. Wass, Uznay & Warwick, Practical Smelters and Metallurgists, San Francisco, California.

Proposals are now invited for 5,000 shares of stock, at 20 per cent. The form of subscription is annexed. Those desiring to take an interest in this matter, should promptly sign the subscription and send it to the office of the company.

W. WRIGHTSON, Sec'y.

No. 167 Walnut Street, Cincinnati, O.



SANTA RITA SILVER MINING COMPANY.

Proposal for

Shares of Capital Stock.

To the Secretary of the Santa Rita Silver Mining Co.,

I hereby propose to take..... Shares of One Hundred Dollars each, of the Capital Stock of the Santa Rita Silver Mining Company, and to pay for the same an assessment of twenty per cent., being \$20 per Share in full payment of the same, on demand of the Secretary of the Company.

.....Name.

.....Post Office.

.....State.

Dated.....185

SILVER ORES OF ARIZONA.

Extract from a Report to the Mechanics' Institute of Ohio, Cin., Oct., 1857.

BY PROF. W. W. DAWSON.

The following is the report of the Committee on Minerals and Mining Apparatus, on a case of specimens of the Silver ores of Arizona, exhibited by Wrightson & Co., at the late Annual Fair of the Ohio Mechanics' Institute, held in Cincinnati during the months of September and October, 1857:

No. 458. Specimens of silver, copper and lead ores, contributed from its mines in Arizona, Donna Anna county, by the Sonora Exploring and Mining Company. Although this case was not presented in time for competition or award, yet, from the variety and richness of the ores, the high promise which the mines of this recently acquired territory give, and especially the fact that it is exclusively a Cincinnati enterprise, it deserves more than a mere passing notice; and as mining is now occupying the attention of our people to a considerable extent, we propose in this connection to furnish the reader with a brief account of some of the districts in which silver ores are found, some statistics illustrating the value of these ores, and the fact that it is a legitimate field for an American enterprise.

The possessions of the Sonora Exploring and Mining Company constitute a portion of the "Gadsden Purchase." The headquarters of the company are at the old mining town of Tubac, thirty-two degrees N. Lat., and on the line of the Pacific Railroad. Most of the silver mines now in active operation on this continent are far south of this locality; but it will be seen by reference to authentic works, that the richness of the ores increase toward the north, and if the assays of a number of gentlemen of character may be relied on, the ores in the Gadsden Purchase give a larger per cent. of silver than any heretofore discovered in North or South America. Ward, in his work on Mexico, published in 1827, says: "The metals seem to increase in richness as you approach the north; inasmuch that in the Real, or District of Jesus Maria, in that great branch of the Sierra Madre which separates the States of Durango and Chihuahua from those of Sonora and Sinaloa, to the north and west, the ores of the mine of Santa Juliana (which does not exceed seventy yards in depth) appear, by a certified report from the Diputación de Minería, now before me, to average seven and eight marcs of silver per carga of 300 lbs., which is the average produce of ten cargass of good ore in Guanajuato; while ores of the best quality yield as much as from four to ten marcs per araba, of 25 lbs., or forty marcs per carga." Vol. 11, p. 227. From this it would seem, that the Gadsden Purchase promises to be one of our richest acquisitions, and one in which American labor may reap rich rewards.

The Sonora Company, as appears by their report, in 1856 sent out an engineer and geologist, who succeeded in purchasing 20,000 acres of land, upon which are some EIGHTY VEINS OF SILVER, and some THIRTY OLD MINES. These

mines have not been worked since the celebrated "Mexican Apache War."

Baron Humboldt states, that up to 1803, \$1,767,952,000 had been raised from the mines of Mexico. When it is remembered that this immense yield was gained with the crudest implements, without skill, without machinery, the only way often of draining the mines was, by having the water carried, by natives, up notched logs, hundreds of feet, it will be at once apparent what may be accomplished should American energy and enterprise be applied in a field of such richness.

The following varieties of silver ore were presented:

- No. 1. Sulphuret of Silver.
- " 2. Antimoniated Sulphuret of Silver.
- " 3. Chloride of Silver.
- " 4. Argentiferous Galena—Sulphuret of Lead.

The analysis of but one of the ores of silver, the sulphuret, was shown the committee. The assay of different gentlemen of character is herewith presented:

Assay by	Grains per lb.	Value per lb.	Val. per ton of 2,000 lbs.
Prof. Booth	247.80	\$0.67	\$1,342.00
" " "	87.64	0.23	475.00
" Prof. Torrey	51.99	0.16	322.94
" Prof. Locke	79.10	0.21	428.46
" E. Kinsey	239.40	0.61	1,226.60
" " "	525.00	1.42	2,843.60
Mining Engineers at Tubac	345.33	0.93	1,870.40
" " "	520.00	1.40	2,816.60
Total, 8 assays	2,096.26	\$5.69	\$11,395.60
Average	262.03	0.71	1,424.45

[The following assays have been received since the report was made:

Assay by	Silver per lb.	Value per lb.	Value of 2000 lbs.
L. A. Garnett U. S. Br'ch. Mint San Francisco	3.52 oz.	\$4.31	\$8624.00
R. G. Killally do	2.5 oz.	3.25	6500.00
Dr. Teelaw for Wess Uzay & Warwick, San Francisco	1200 grs.	3.44	6885.71
Prof. W. W. Mather, Columbus, Ohio	1443 grs.	3.75	7517.70

Lead ores, of which No. 4 is a specimen, are found in large quantities in Sonora. These ores may be of very great

value as fluxes in the smelting of silver. Some of them have been analyzed, and yield silver as follows:

	Gains per lb. av.	Value per lb. av.	Value per ton of 2,000 lbs.
Longorenia Mine	18-11-48	\$0.04-93-100	\$98.60
Amarillo Mine	10-94-100	0.02-98-100	59.60
Arenia Mine	14-58-100	0.03-95-100	79.00
Average		\$0.03-95-190	\$79.06
Average of above silver ore			1,424.45

Average yield, per ton, of silver ore and flux..\$1,563.51

In addition to the above, a portion of these silver ores contain also, according to Prof. Torrey, of the United States Mint, thirty-three per cent. of copper—a per cent. which would render the working of them for copper, alone, a profitable business.

Many of the veins of silver, in the territory now belonging to the United States, can be worked by drifts, instead of shafts. This will render mining much less expensive, as the draining will be cheapened and very greatly facilitated. Shafts, in some of the Mexican mines, have been sunk to the depth of from 1,000 to 2,000 feet, and although the ore and water are carried up on the backs of natives, yet the immense fortunes of Mexico have been thus accumulated.

A comparison between the ores of Sonora, those from the mines of Southern Mexico, and the quartz mining of California, results largely in favor of the former. The statistics for the Mexican mines are gathered from the works of Ward and Humboldt; those for quartz mining are taken from the Steamer Bulletin, San Francisco, of August 5th, 1857, being an average of twenty-four lots of quartz, taken from "leads" near Grass Valley, Nevada county.

Average of Mexican Silver Mines, per ton	\$65.00
" " California Quartz Mines	68.57
" " Silver, per ton, in Lead Mines of Sonora Exploring and Mining Co.	79.96
" " Silver, per ton, in Silver Mines of Sonora Exploring and Mining Co.	1,424.45

It is estimated that one laborer can produce, at the Heintzelman mine, in one week, 300 lbs; fifty laborers, in fifty weeks, 750,000 lbs; which according to some of the assayers, would yield more than a HALF MILLION DOLLARS worth of pure metal. This estimate may seem almost fabulous, but when we reflect upon the millions which have been realized by the Mexicans, and this too from inferior ores, and with the most rude and inefficient manner of smelting, the estimate, if the assays are reliable, can not be regarded as extravagant.