



## **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](mailto:inquiries@azgs.az.gov)

The following file is part of the

Arizona Department of Mines and Mineral Resources Mining Collection

## **ACCESS STATEMENT**

These digitized collections are accessible for purposes of education and research. We have indicated what we know about copyright and rights of privacy, publicity, or trademark. Due to the nature of archival collections, we are not always able to identify this information. We are eager to hear from any rights owners, so that we may obtain accurate information. Upon request, we will remove material from public view while we address a rights issue.

## **CONSTRAINTS STATEMENT**

The Arizona Geological Survey does not claim to control all rights for all materials in its collection. These rights include, but are not limited to: copyright, privacy rights, and cultural protection rights. The User hereby assumes all responsibility for obtaining any rights to use the material in excess of "fair use."

The Survey makes no intellectual property claims to the products created by individual authors in the manuscript collections, except when the author deeded those rights to the Survey or when those authors were employed by the State of Arizona and created intellectual products as a function of their official duties. The Survey does maintain property rights to the physical and digital representations of the works.

## **QUALITY STATEMENT**

The Arizona Geological Survey is not responsible for the accuracy of the records, information, or opinions that may be contained in the files. The Survey collects, catalogs, and archives data on mineral properties regardless of its views of the veracity or accuracy of those data.

PRINTED: 07-27-2012

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: VOLCANO

ALTERNATE NAMES:

SANTA CRUZ COUNTY MILS NUMBER: 140C

LOCATION: TOWNSHIP 23 S RANGE 16 E SECTION 5 QUARTER W2  
LATITUDE: N 31DEG 28MIN 36SEC LONGITUDE: W 110DEG 44MIN 25SEC  
TOPO MAP NAME: LOCHIEL - 15 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:

COPPER OXIDE  
COPPER SULFIDE  
SILVER  
ZINC  
GOLD

BIBLIOGRAPHY:

KEITH, S.B., 1975, INDEX OF MINING PROP. IN  
SANTA CRUZ CO., AZBM BULL 191 P.  
LENON'S MAP OF SANTA CRUZ CO.  
AZBM CARD FILE SANTA CRUZ CO.  
ADMMR VOLCANO FILE

VOCANO

SANTA CRUZ COUNTY

MG WR 8/6/82: Discussed general mining interests with Mr. Dolan Campbell, Duncan, AZ, phone 359-2548. He said reports that he was operating the Volcano Mine in Santa Cruz County were erroneous. He was operating a Volcano mine in New Mexico.

---

REFERENCE PAGE - VOLCANO (Mine File)

SANTA CRUZ CO.

See: ABM Vu11. 191, Pg. 59, T23S, R16E, Sec. E. Cen. 6 Protracted.



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



Tucson, Arizona  
Nov. 29, 1961

MEMORANDUM

To: Frank P. Knight, Director

From: Axel L. Johnson, Field engineer

Re: Santa Cruz Copper Co.

Information received from D. M. Stranahan on Nov. 29, 1961

The Santa Cruz Copper Co. has been dissolved, and the company no longer exists.

*Volcanic Mine*

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA

FIELD ENGINEERS REPORT

Mine Volcano Mine

Date December 3, 1958

District Harshaw District - Santa Cruz Co.

Engineer Axel L. Johnson

Subject: Field Engineers Report. Information from D. M. Stranahan, Mgr.

Location: Unsurveyed. Approximately Sec. 6 -- T 23 S -- R 16 E. Drive south from Patagonia on the Patagonia-Washington Camp Road to a point 3/4 of a mile south of the road to Flux Mine. Drive 1 3/4 miles west on mine road with a steep road up the mountain.

Owners Santa Cruz Copper Company, 1211 E 9th St., Tucson, Arizona. D.M. Stranahan, Pres. The controlling interest of this company is owned by the Quebec Metallurgical Industries, Ottawa, Canada.

Principal Minerals Copper with some zinc and silver.

Present Mining Activities Diamond drilling under contract to Metler Brothers Drilling Company, 509 E. Pastime Road, Tucson, Arizona.

Geology and Mineralization Country rock is rhyolite agglomerate. Very little ore showings visible in the drillcores obtained to date.

Past History and Production Mine was operated in 1953 -- from an open cut starting on the surface and later through a vertical 8' x 12' shaft sunk to a depth of 50'. Total shipments during these operations amounted to 35 carloads averaging 7.90% copper, the ore being shipped to the A.S. & R smelter at El Paso. Following this, an adit was started on the hillside below the shaft to intersect the shaft at a depth of 120' below the collar. This adit was 550' long. From this adit 5 cross cuts were driven which totaled 350' in length, and also a 77' raise up to the vertical shaft. This exploration work from all indications failed to develop any additional ore reserves.

Old Mine Workings See report of February 4, 1954.

Present Operations Metler Brothers Drilling Company is diamond drilling with one diamond drill. The drilling was started about November 1st. Only one hole has been drilled, which is now down to a depth of 608' on the incline. The ultimate depth of the hole has not yet been determined. The hole is being drilled at a 43° slope to the NW in order to intersect the area under the old open cut and vertical shaft where the ore was mined during the previous operations in 1953. An NX core was used for the first 520', after which the BX core was used.

Proposed Plans: Mr. Stranahan states that the company will probably drill one more hole in the same area.

DEPARTMENT OF MINERAL RESOURCES  
STATE OF ARIZONA  
FIELD ENGINEERS REPORT

Mine Volcano Mine

Date July 15, 1955

District Harshaw District --- Santa Cruz Co.

Engineer Axel L. Johnson

Subject: Present Status. Information from D. M. Stranahan, Supt.

Location See my report of May 12, 1955.

Owners, Operators, Officers See my report of May 12, 1955.

Number of Claims 52 --- all unpatented.

Principal Minerals Copper ores

Number of Men Employed None.

Production Rate None.

Geology and Mine Workings See my report of Feb. 4, 1954.

Present Status Diamond drilling has been done for the past few months under contract. Diamond drilling on the property was done by the Mines Exploration and Development Co., 2000 S. Freeway, Leland C. Vought, President. 4 holes, ranging in depth from 190 ft. to 400 ft. were reported drilled, using EX, AX, and DX bits.

Drilling is now reported by Mr. Stranahan as temporarily suspended on account of unfavorable results.

DEPARTMENT OF MINERAL RESOURCES  
STATE OF ARIZONA  
FIELD ENGINEERS REPORT

Mine Volcano Mine Date May 12, 1955.  
District Harshaw District --- Santa Cruz Co. Engineer Axel L. Johnson  
Subject: Present Status. Information from D. M. Stranahan, Superintendent.

Location Unsurveyed. About Sec. 6 -- T 23 S -- R 16 E. Go south on the Patagonia-Washington Camp road to 3/4 miles south of the road to the Flux Mine. Go 1 3/4 miles west on good mine road, with steep grade up the mountain.

Owners Santa Cruz Copper Company. Quebec Metallurgical Industries, a subsidiary of Ventures Limited, Ontario, Canada owns the controlling interest of the Santa Cruz Copper Co.

Operators Santa Cruz Copper Co., Box 20, Patagonia, Arizona.

Officers The office of the ~~min~~ company is located in Patagonia, next door to Bob Lenon's engineering office. D. M. Stranahan is the engineering representative in charge of the operations of the ~~min~~ company. Associated with him is H. M. Kingsbury, Geologist. Address is Box 20, Patagonia, Arizona.

Number of Claims 52 claims ---- all unpatented.

Principal Minerals Copper ores.

Number of Men Employed None. Diamond drilling being done on contract.

Production Rate No production at present.

Topography Very rough mountain terrain.

Geology See report of Feb. 4, 1954.

Old Workings See report of Feb. 4, 1954.

New Workings See report of Feb. 4, 1954.

Present Workings Diamond drilling is now being done on the property. The work is done under contract, the Mines Exploration and Development Co., 2000 S. Freeway, Leland C. Mought, Pres. doing the work. One drill rig is working on the property at present----the first hole being drilled now.

SANTA CRUZ COPPER CO., (OWNER)  
Chicago, Ill. Box 20, Patagonia

6-4-53

MINE - VOLCANO MINE, Harshaw Dist., Santa Cruz Co.

LESSEES - Lee Farrell and Albert Olander, Patagonia, Ariz.  
SUB-LESSEE - Strong and Harris, Patagonia, Ariz.

Santa Cruz Copper Co. - Operating 5-12-55



DEPARTMENT OF MINERAL RESOURCES  
STATE OF ARIZONA  
FIELD ENGINEERS REPORT

Mine Volcano Mine

Date Feb. 4, 1954.

District Harshaw District ---Santa Cruz Co.

Engineer Axel L. Johnson

Subject: Mine Report. Personal Inspection & Information from Lee Farrell, operator.

Location Unsurveyed. About Sec. 6 -- T 23 S -- R 16 E. For directions see report of June 4, 1953.

Owners Santa Cruz Copper Co. Quebec Metallurgical Industries, a subsidiary of Ventures Limited, Ontario, Canada has now obtained the controlling interest in Santa Cruz Copper Co. Daniel M. Stranahan is the examining engineer and geologist for this company, and is reported as staying at the El Presidio Hotel in Tucson, Ariz. Ownership of the Santa Cruz Copper Co. is reported by Mr. Farrell as follows:

Quebec Metallurgical Industries -----65 %  
Lee Farrell ----Patagonia, Ariz.-----10 %  
J. W. Wingfield, Phoenix, Ariz. -----10 %  
George W. Snyder, Jr. -----10 %

Operators Lee Farrell and J. W. Wingfield (address above) is doing the exploration work and will do the mining on a contract basis. (terms not disclosed)

Number of Claims 52 claims ---all unpatented.

Principal Minerals Copper ore.

Number of Men Employed 18 men ----12 day shift, and 6 night shift.

Production Rate No ore production now. Company engaged in exploration and development.

Topography Very rough and rugged.

Geology Field engineer was not permitted to enter mine. Specimens from dump show low grade copper ore, with particles of chalcocite disseminated throughout a porphyry rock (probably monzonite porphyry). Lee Farrell reports that the ore body has been assayed and runs from 0.81 % to 8.00 % Copper, and that they have a wide vein and expect to find a large tonnage of ore. Mr. Farrell would not give out any further details. Two geologists from the A. S. & R. Co. were also there at the same time to look at the mine, and were also denied access to the workings. Upper part of the ore body through which a shaft was sunk (see report of June 4, 1953) was all copper carbonates.

Old Workings Old open cut near the present new shaft.  
Old adit 780 ft. long, with 300 ft. in crosscuts from same.

New Workings Vertical shaft 50 ft. deep, with a 21 ft. drift on the 40 ft. level of same.  
New adit 550 ft. long plus 5 cross cuts from same totaling 350 ft. more.  
Raise into vertical shaft ----77 ft. This work is on the 125 ft. level.  
New adit on the 375 ft. level ----now in 30 ft.

Present Operations (1) Retimbering ~~xx~~ and installing a manway in the vertical shaft.  
(2) Crosscutting from adit on the 125 ft. level.  
(3) Driving a new adit on the 375 ft. level. (now in 30 ft.)

Future Plans Mr. Lee Farrell states that the company expects to do rather extensive development and exploration on the property in order to develop adequate ore reserves.

DEPARTMENT OF MINERAL RESOURCES  
STATE OF ARIZONA  
FIELD ENGINEERS REPORT

Mine Volcano Mine

Date Feb. 4, 1954

District Harshaw District, Santa Cruz Co.

Engineer Axel L. Johnson

Subject: Mining Operations

The Volcano Mine (sometimes incorrectly called the Sunnyside) is located in the Harshaw District, a short distance south of the Trench Mill. The property is owned by the Santa Cruz Copper Co. The Quebec Metallurgical Industries, a subsidiary of Ventures Limited of Ontario, Canada is now reported as having obtained the controlling interest in the Santa Cruz Copper Co.

Lee Farrell of Patagonia and J. W. Wingfield of Phoenix still retain a minority interest in the property, and they are doing the exploration work and the development work on the property on a contract basis. It is expected that they will continue to do all the mining of the property on a contract basis.

Operators are now actively engaged in exploration and development work in order to develop ore reserves for future mine production, and, possibly also, mill operations. Since October, when the new development program was started, over 900 ft. of drifting and 77 ft. of raising has been done on the 125 ft. level, and a new adit has been started on the 375 ft. level. The operators work 2 shifts and employ 18 men in their operations. The 50 ft. vertical shaft is also being retimbered and repaired. No ore is being produced and shipped at present, all efforts being made to explore and develop the property as rapidly as possible.

Details of the amount and quality of the ore found in the exploration work done to date is being withheld by the operators, and the writer was not permitted to inspect the property. The operator, Mr. Farrell, states that they have found a wide ore vein, which assays from 0.81 % to 8.00 % Copper. Specimens on the ore dump showed copper ore of rather low grade, apparently milling grade ore.

Work was first started at the Volcano Mine last March at the site of an old open cut worked many years ago. A vertical 8' x 12' shaft was sunk to a depth of 50 ft, and 35 carloads of copper ore, averaging 7.90 % copper was stoped from the bottom of this shaft.

Warren, Ariz. 2-1-54  
R.O. Box 711

Mr. Frank J. Tuck,  
Ariz. Dept. Min. Res.  
Phoenix, Ariz.

Dear Mr. Tuck:

If you have  
any information about the Volcano  
or Volcano Mine in the Patagonia  
Mining Dist. I would appreciate it  
very much if you would send it  
to me.

With kindest personal  
regards, I am.

Sincerely yours  
Carl Prischka

Copies  
& Reports  
mailed  
2-2-54

DEPARTMENT OF MINERAL RESOURCES  
STATE OF ARIZONA  
FIELD ENGINEERS REPORT

Mine ✓ Volcano Mine

Date Oct. 8, 1953

District Harshaw District, Santa Cruz Co.

Engineer Axel L. Johnson

Subject: Mining Operations

The Volcano Mine (sometimes incorrectly called the Sunnyside) is located in the Harshaw District, a short distance ~~south~~ south of the Trench Mill. The property is owned by the ✓ Santa Cruz Copper Co. The main stockholders of this company are Lee ✓ Farrell of Patagonia, Arizona, and the United Minerals Corp. of Salt Lake City, ✓ Utah, George W. ✓ Snyder, Jr., Pres.

Negotiations are now said to be under way for the sale of the controlling interest of the Santa Cruz Copper Co. to a Canadian Mining Co.

Work was started at the Volcano Mine about March 1st at the site of an old open cut worked many years ago. A vertical 8' x 12' shaft was sunk to a depth of 50 ft. Then the shaft was turned to 63 deg. incline, following the ore formation, and ore was stoped from the inclined part of the shaft.

Total shipments to date from the Volcano Mine is said to be 35 carloads. The average of all shipments is reported as 7.90 % Copper, with the best shipment running 9.78 % Copper. Ore is shipped to the A. S. & R. smelter at El Paso, Texas.

On Oct. 6, an adit was started at some distance on the hillside below the shaft. This adit will ~~not~~ be driven towards the present shaft, and will be about 120 ft. below the elevation of the collar of the present shaft. About 250 ft. of drifting will be required to reach a point directly below the present shaft.

5 men are working in driving this adit. Mining operations from the shaft have been discontinued, pending completion of this adit. Mr. Lee ✓ Farrell is foreman in charge of the work.

DEPARTMENT OF MINERAL RESOURCES  
STATE OF ARIZONA  
FIELD ENGINEERS REPORT

Mine  Volcano Mine

Date June 4, 1953

District Harshaw District, Santa Cruz Co.

Engineer Axel L. Johnson

Subject: Mine Report --- Personal Inspection.

Location      Unsurveyed.      About Sec. 6 -- T 23 S -- R 16 E.  
Go south on Patagonia-Washington Camp road to 3/4 miles south of the road  
to the Flux Mine.      Go 1 3/4 miles west on good mine road, with steep grade up the mountain.

Owners       Santa Cruz Copper Co., Chicago, Illinois.

Lessees       Lee Farrell and Albert Olander, Patagonia, Ariz.

Sub\*Lessee       Strong and Harris, Patagonia, Ariz.

Principal Minerals       Copper

Number of Men Employed      10 men (5 on day shift and 5 on night shift)

Production Rate      7 carloads of ore shipped to A. S. & R. smelter at El Paso, Texas,  
since starting shaft sinking operations about 3 months ago.

Geology      Fissure vein from 5 to 8 ft. in width.      Strike N 63 deg. W, and dip approx.  
Vertical.      Country rock is granite porphyry.

Ore Values      Copper ores (copper carbonates) average from 7 to 9 % in Copper.      Contains  
no Gold and a trace of Silver.      No zinc and lead.

Ore in Sight and Probable      No ore reserves developed to date.

Marketing Facilities      Shipping ore to A. S.&.R. smelter at El Paso.

Present Operations      Sinking shaft, vertical 8' x 12', now down to a depth of 50 ft.  
Now turning shaft to 63 deg.incl. to north, <sup>west</sup> following strike of vein. Progress now is  
~~now~~ 5 ft. every 2 days (4 shifts).      On 40 ft. level, there is a drift 21 ft. long all in  
ore.      Work started about 3 months ago, and 7 carloads of ore has been shipped since that  
time from the shaft and drift.

Past History      None available.      There is an old open cut on the property near the  
present shaft, from which a few carloads of copper carbonate ore appears to have been  
mined.

Proposed Plans      Plan to continue shaft sinking, following the strike of the vein at an  
~~the~~ incline of 63 deg.to NW. in order to develop an ore body for future mining operations.

# DEPARTMENT OF MINERAL RESOURCES

## REPORT TO OPA ON ACTIVE MINING PROJECT

Date 12-16-44  
 Name of Mine Volcano  
 Owner or Operator W Crawford  
 Address Box 4, Patagonia  
 Mine Location Patagonia dist. near Trenchs mine

**Filing Information**

File System.....  
 File No.....  
 This chart to be used for gallons of gasoline required per month.

**PRESENT OPERATIONS:** (check X)

Production.....; Development ; Financing.....; Sale of mine.....;  
 Experimental (sampling).....; Owner's occasional trip.....;  
 Other (specify).....

**PRODUCTION: Past and Future.**

**Tons**

Approx. tons last 3 months .....  
 Approx. present rate per 3 months .....  
 Anticipated rate next 3 months .....  
 If in distant future check (X) here .....

**EQUIPMENT OPERATED:**

Type	Quantity or Horse Power	Miles or Hours Per Month	Gallons Required Per Month
Personal Cars	1940 Stude	600	40
Light or Service Trucks	.....	.....	.....
Ore Hauling Trucks	.....	.....	.....
Compressors	.....	.....	.....
Other Mine or Mill Eqpt.	.....	.....	.....

**PRODUCT PRODUCED OR CONTEMPLATED:** Name metals or minerals.

Copper

**REMARKS:**

Mr Crawford has taken a lease on the Hale property and intends to mine copper ore in view of present increasingly unattractive conditions of copper this mileage is recommended

**ARIZONA DEPARTMENT OF MINERAL RESOURCES**

By George A. Ballen

Munna World 12/1953

