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PRINTED: 07-27-2012

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: TOLUACHI GROUP

ALTERNATE NAMES:
BONANZA TUNNEL

SANTA CRUZ COUNTY MILS NUMBER: 75A

LOCATION: TOWNSHIP 21 S RANGE 14 E SECTION 2 QUARTER E2
LATITUDE: N 31DEG 38MIN 10SEC LONGITUDE: W 110DEG 52MIN 26SEC
TOPO MAP NAME: MOUNT WRIGHTSON - 15 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:
COPPER
SILVER

BIBLIOGRAPHY:
ADMMR TOLUACHI GROUP FILE
BLM MINING DISTRICT SHEET 668

TOLUACHI MINE GROUP 9/84 SANTA CRUZ COUNTY
TYNDALL DISTRICT
T21S R14E Sec. 12

MILS Santa Cruz Index #231B

AKA: Jersey Gril Shaft, Merry Widow, Silver Sally, Morning Star Group (file), White Cloud

USGS Bull. 582, p. 206-207

usgs pp 748, p. 11-12

Patagonia 7.5 (included in file)

TOLUACHI GROUP SANTA CRUZ COUNTY

The new mill of Johnson and Green in lower three R Canyon is still under construction. It is supposed to be an electro magnetic, electro static separator with jaw and impactor. GWI QR 6-30-71

Mine visit. Green and Johnson Mill in 3R Canyon near Patagonia. GWI WR 9/27/71

Mine visit - Bonanza Mine, inactive. Rails are still in the tunnel, the compressor has been removed from near the tunnel mouth. GWI WR 11/18/76

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* GENERAL REFERENCES

REFERENCE 1 F1 < USBM - ABGMT PRODUCTION DATA FILE

REFERENCE 2 F2 < USBM FILE DATA - CLUSTER # 116, JERSEY GIRL

REFERENCE 3 F3 < ADMR FILE DATA - TOLUACHI GROUP FILE

REFERENCE 4 F4 < ABGMT CLIPPINGS FILE DATA, TOLUACHI MINE

A83< WANDERING JEW GROUP AND THE SAN RAMON MINE IN SECTION 12.>

C30< EMBOLITE, BROMYRITE, CHALCOPYRITE, CHALCOCITE, MALACHITE, AZURITE, CUPRITE, ARGENTITE, TENNANTITE, SPHALERITE.>

L110< GIRL, SILVER SALLY, AND MERRY WIDOW.>

M110< VEINS WITHIN A DISTANCE OF 3/4 OF A MILE WERE NOTED BY SCHRADER (1915); VEIN HAVE AN AVERAGE WIDTH OF 4 FEET AND ARE STAINED WITH IRON AND MANGANESE AND SHOW COPPER CARBONATES AT THE SURFACE IN SOME PLACES>

M220< 45-FOOT DRIFT AT THE BOTTOM; WORK ON THE TENNANTITE CLAIM CONSISTS OF A LOWER ADIT - 485 FT LONG, AND AN UPPER ADIT - 220 FT LONG AND 80 FT ABOVE THE BOTTOM ADIT.>

F5 < SCHRADER F.C., 1915, USGS BULL. 582, p. 206-207 >
F6< ABGMT FILES STANTON B. KEITH >
F7< DREWES, H., 1971, USGS MAP I-614 (1:48000)>
F8< DREWES, H., 1972, USGS PROFESSIONAL PAPER 748, p. 11-12 >

K1A< WITH RHYODACITE TUFF >
K5< SEDIMENTS INTERBEDDED WITH RHYODACITE TUFF, AND QUARTZ DIORITE >
N5< AND GRANITE PORPHYRY >
N70< CRUSHING OF SOME ORE STRUCTURES >
N75< IRON-STAINED SILICIFIED DIORITE >

mdt 231 B

T

U.S. CRIB-SITE FORM

RECORD IDENTIFICATION

*RECORD NUMBER B10 <>
*RECORD TYPE B20 <X,1,M>
DEPOSIT NUMBER B40 <>
*REPORT DATE G1 <82,04> (YR. MO.)
*INFORMATION SOURCE B30 <1,2>
*FILE LINK IDENT. B50 <USBM-004023 0242>

*REPORTER (SUPERVISOR) G2 < LARABA, PETER (last, first, middle initial) (CALDER, SUSAN (last, first, middle initial))>
*REPORTER AFFILIATION G5 < ABGMT >
*SITE NAME A10 < TOLUACHI MINE GROUP >
SYNONYMS A11 < JERSEY GIRL SHAFT, MERRY WIDOW, SILVER SALLY, MORNING STAR GROUP, WHITE CLOUD >

LOCATION

MINING DISTRICT/AREA A30 < SALERO DISTRICT >
COUNTY A60 < SANTA CRUZ >
*STATE A50 <AZ>
*COUNTRY A40 <U.S.>
PHYSIOGRAPHIC PROV A63 <1,2,>
DRAINAGE AREA A62 <1,5,0,5,0,3,0,1, LOWER COLORADO >
LAND STATUS A64 <0,1,, ,(1,9,7,9,)>
QUADRANGLE NAME A90 < PATAGONIA, ARIZ. (1,9,8,1,)>
*QUADRANGLE SCALE A100 <2,4,0,0,0>
SECOND QUAD NAME A92 < MT. WRIGHTSON (1,9,5,8,)>
SECOND QUAD SCALE A91 <6,2,5,0,0>
ELEVATION A107 < 5,2,0,0, FT.>

UTM

*NORTHING A120 <3,4,9,8,4,2,5,>
*EASTING A130 <5,1,2,6,2,5,>
*ZONE NUMBER A110 <+1,2>

*ACCURACY

ACCURATE (ACC) (circle)
ESTIMATED EST <>

GEODETIC

*LATITUDE A70 <31,-37,-21,N>
*LONGITUDE A80 <110,-52,-01,W>

CADASTRAL

*TOWNSHIP(S) A77 <021,S, , , >
*RANGE(S) A78 <014,E, , , >
*SECTION(S) A79 <12, 11, 2, >
*SECTION FRACTION(S) A76 < NW, 12; NE, 11; SE OF SE, 2 >
*MERIDIAN(S) A81 < GILA AND SALT RIVER >

*POSITION FROM NEAREST PROMINENT LOCALITY A82 < .4 MILES EAST OF THE ALTO CEMETERY >
*LOCATION COMMENTS A83 < THE MINE GROUP INCLUDES A SERIES OF SHAFTS AND ADITS ON THE WEST SIDE OF A SMALL HILL (ELV. 5600 FT), WEST OF THE CEMETERY AND BETWEEN THE

* ESSENTIAL INFORMATION
- ESSENTIAL SOMETIMES OR HIGHLY RECOMMENDED

COMMODITY INFORMATION

*COMMODITIES PRESENT C10 <PB, AG, CU, AU, SB, BR, AS, ZN, MN, ZR,>
*ORE MINERALS C30 <RHODOCHROSITE, RHODONITE, GALENA, PROUSTITE, TETRAHEDRITE, CERARGYRITE>
COMMODITY SUBTYPES C41 <>
*GEN. ANALYTICAL DATA C43 <1962 AVERAGED ORE VALUES - 2.55% CU, 77.3% SILICA, 1.62 OZ. AG, 5% PB>
COM. INFO. COMMENTS C50 <ARSENIC AS A BYPRODUCT>

SIGNIFICANCE

	PRODUCER	NON-PRODUCER
MAJOR PRODUCTS	MAJOR <PB, AG>	MAIN COMMODITIES PRESENT C11 <>
MINOR PRODUCTS	MINOR <CU, AU>	MINOR COMMODITIES PRESENT C12 <>
POTENTIAL PRODUCTS	POTEN <>	
OCCURRENCES	OCCUR <MN, SB, BR, CL, As, ϕ Zn, ϕ, ϕ, S>	OCCURRENCES OCCUR <>

*PRODUCTION

PRODUCER	NON-PRODUCER
PRODUCTION (YES) (circle) PRODUCTION SIZE (SML) MED LGE (circle one)	PRODUCTION UND NO (circle one)

EXPLORATION OR DEVELOPMENT

*STATUS

PRODUCER	NON-PRODUCER
STATUS AND ACTIVITY A20 <H>	STATUS AND ACTIVITY A20 <>

*DISCOVERER L20 <>
*YEAR OF DISCOVERY L10 <> *NATURE OF DISCOVERY L30 <B> *YEAR OF FIRST PRODUCTION L40 <> *YEAR OF LAST PRODUCTION L45 <1939>
*PRESENT/LAST OWNER A12 <JOSIAH BOND (PRIOR AND SUBSEQUENT TO 1915), THE BOND MINING TRUST (1962)>
*PRESENT/LAST OPERATOR A13 <JOSIAH BOND, BOND MINING TRUST (EARLY 1900's —)>
EXPL./DEV.COMMENTS L110 <TOTAL OF 30 CLAIMS - 3 PATENTED - 27 UNPATENTED; THE PATENTED CLAIMS ARE BONANZA, EMMA, AND DAYTON; THE THREE PRINCIPAL PROSPECTS ARE THE JERSEY

DESCRIPTION OF DEPOSIT

*DEPOSIT TYPE(S) C40 <VEIN / SHEAR ZONE>
DEPOSIT FORM/SHAPE M10 <TABULAR>
*DEPTH TO TOP M20 <> *UNITS M21 <> *MAXIMUM LENGTH M40 <> *UNITS M41 <>
*DEPTH TO BOTTOM M30 <> *UNITS M31 <> *MAXIMUM WIDTH M50 <15> *UNITS M51 <FT>
*DEPOSIT SIZE M15 (SMALL) M15 <MEDIUM> M15 <LARGE> (circle one) *MAXIMUM THICKNESS M60 <> *UNITS M61 <>
*STRIKE M70 <N60-85 W> *DIP M80 <70 TO 80 S>
*DIRECTION OF PLUNGE M100 <> *PLUNGE M90 <>
DEP. DESC. COMMENTS M110 <ALL CLAIMS ARE CUT BY A LARGE NUMBER OF SMALL FISSURE VEINS, WHICH TREND ABOUT EAST; THE PRINCIPAL STRIKE IS N85W; AS MANY AS 50 SMALL

DESCRIPTION OF WORKINGS

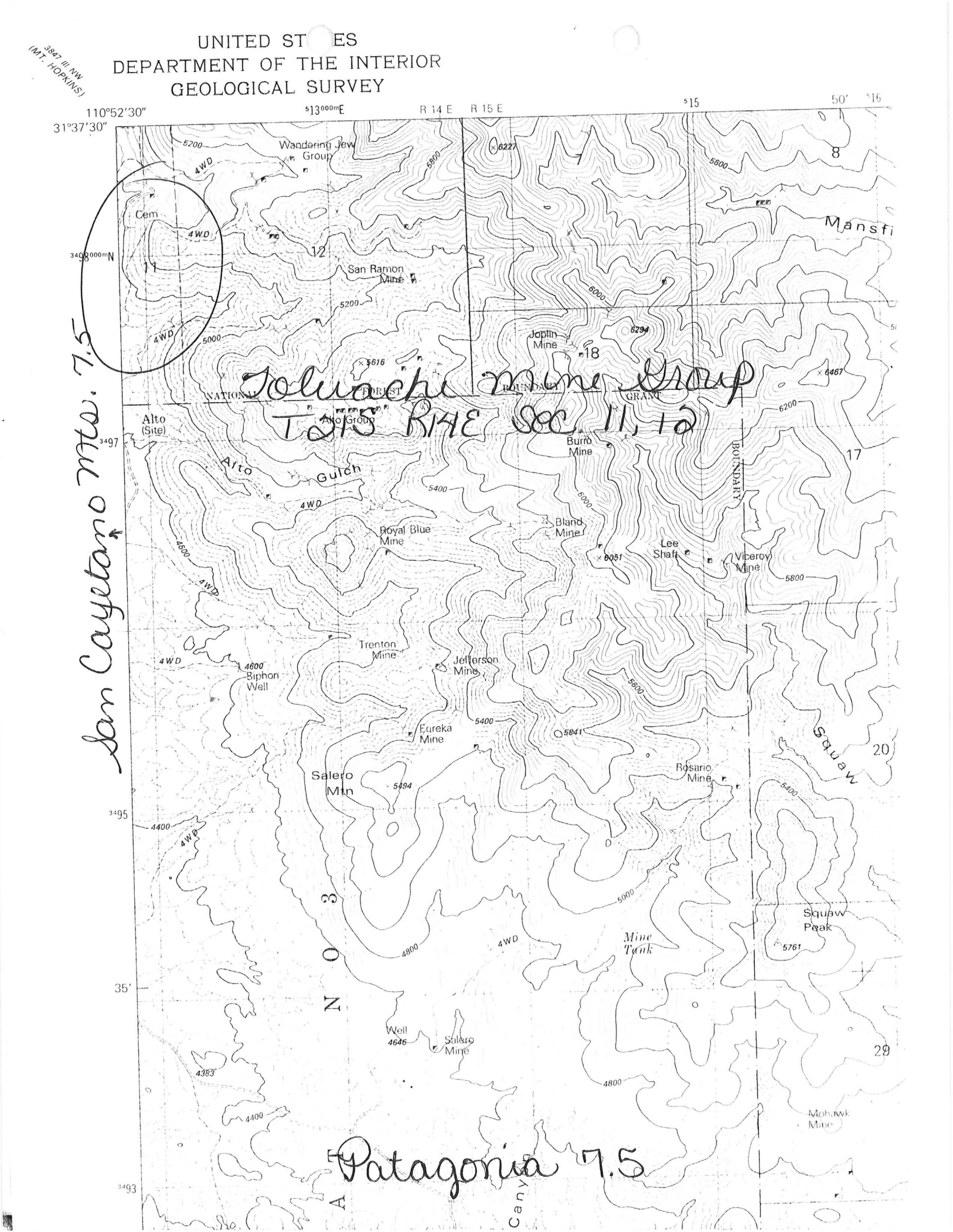
*Workings are: SURFACE M120 UNDERGROUND M130 BOTH M140 (circle one)
*DEPTH BELOW SURFACE M160 <280> *UNITS M161 <FT> *OVERALL LENGTH M190 <> *UNITS M191 <>
*LENGTH OF WORKINGS M170 <> *UNITS M171 <> *OVERALL WIDTH M200 <> *UNITS M201 <>
*OVERALL AREA M210 <> *UNITS M211 <>
DESC. OF WORK. COM. M220 <23 SHAFTS AND TUNNELS FROM 50 TO 250 FEET EACH; JERSEY GIRL SHAFT 115 FEET DEEP; THE SILVER SALLY PROSPECT IS OPENED BY A 280 FT SHAFT AND A 100 FT DRIFT ON THE 220-FOOT LEVEL; THE MERRY WIDOW-BADGER VEIN IS OPENED BY A 100-FOOT SHAFT WITH A

GEOLOGY

*AGE OF HOST ROCK(S) K1 <L.CRET.>
*HOST ROCK TYPE(S) K1A <ARKOSIC SANDSTONE, CONGLOMERATE, AND SEDIMENTARY BRECCIA INTERBEDDED>
*AGE OF IGNEOUS ROCK(S) K2 <L.CRET., 67 M.Y. BY K-AR DATING METHOD (DREWES, H, 1971)>
*IGNEOUS ROCK TYPE(S) K2A <MODERATELY COARSE-GRAINED QUARTZ DIORITE>
*AGE OF MINERALIZATION K3 <L.CRET.>
*PERT. MINERALS (NOT ORE) K4 <QUARTZ-CALCITE-SIDERITE GANGUE, TALC, SPHALERITE>
*ORE CONTROL/LOCUS K5 <E-W TRENDING, STEEPLY DIPPING QUARTZ FISSURE VEINS CUTTING ARKOSIC>
*MAJ. REG. TRENDS/STRUCT. N5 <QUARTZ VEINS ALONG CONTACT ZONES AND FAULT FISSURES CUTTING QUARTZ DIORITE>
*TECTONIC SETTING N15 <SALERO FAULT BLOCK>
*SIGNIFICANT LOCAL STRUCT. N70 <ORE CRUDELY BANDED WITH QUARTZ - POST-MINERALIZATION FAULTING CAUSED>
*SIGNIFICANT ALTERATION N75 <SERICITIZED MICA IN VEIN FILLING; CHLORITE IS ASSOCIATED WITH SERICITE>
*PROCESS OF CONC./ENRICH. N80 <SURFACE OXIDATION; SECONDARY ENRICHMENT>
*FORMATION AGE N30 <L.CRET.>
*FORMATION NAME N30A <SALERO FORMATION - ARKOSE MEMBER>
SECOND FM AGE N35 <>
SECOND FM NAME N35A <>
*IGNEOUS UNIT AGE N50 <L.CRET.>
*IGNEOUS UNIT NAME N50A <JOSEPHINE CANYON DIORITE>
SECOND IG. UNIT AGE N55 <>
SECOND IG. UNIT NAME N55A <>
GEOLOGY COMMENTS N85 <LAYERS OF TALC COAT FOOTWALL OF SEVERAL VEINS; NORTH WALL OF JERSEY GIRL VEIN CONTAINS MUCH WHITE MICA>

GENERAL COMMENTS

GENERAL COMMENTS GEN <>


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
3847 III NW
(MT. HOPKINS)
110°52'30"
31°37'30"
513000mE
R 14 E
R 15 E
515
50'
Wandering Jew Group
Cem
San Ramon Mine
Joplin Mine
Alto (Site)
Alto Group
Alto Gulch
Burro Mine
Royal Blue Mine
Bland Mine
Lee Shaft
Viceroy Mine
Trenton Mine
Jefferson Mine
Siphon Well
Eureka Mine
Salero Mtn
Rosario Mine
Squaw Peak
Mine Tank
Well
Salero Mine
Mohawk Mine
Mansfi
Squaw
Canyon
San Cayetano Mtn. 7.5
Soluachi Mine Group
T21S R14E Sec 11, 12
Patagonia 7.5

VBB

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

1. Information from: Visit & Info from Joe - Hourig building mill.

   Address:

2. ~~Mine~~ Mill: in 3r Canyon (Tbuachi Gr.) 3. No. of Claims - Patented

   Unpatented

4. Location:

5. Sec 34 Tp 22S Range 15E 6. Mining District Palmetto

7. Owner: K.C Johnson & Harold Green.

8. Address: ?

9. Operating Co.:

10. Address:

11. President: 12. Gen. Mgr.:

13. Principal Metals: 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:

18. Miscl. Notes: New Mill now have Jaw Crusher a new Stedman Disintegrator 44"-4 Row - 100 H.P. Conveyors elevator & ore bin. Also in crates were new Electro - Static & Magnetic Separators English Make. Shipped to Guy De Leo - 410 Franklin North New Ulm - Minn.

Date: 5-6-71

(Signature) (Field Engineer)

Mr. Frank Otero, Nogales, Arizona, reported that the mine was closed down last June. ALJ WR 9-7-63

Visited Toluachi Mine - 2 men working - operated by Winsor Ellefson, Patagonia - drilling in tunnel off of road level. GWI WR 3-11-67

Active Mine List Nov. 1967 - 2 men - Bonanza

Winsor Ellefson continued working in his Bonanza Tunnel. It was reported that the Forest Service wanted a building moved off an unpatented claim at the property. GWI QR 4-1968

Work is continuing at the Bonanza mine in Josephine Canyon - 2 men. GWI QR 6-1968

Active Mine List April 1968 - 2 men - Bonanza
Active Mine List Oct. 1968 - 2 men - "

Winsor Ellefson continued working in the Bonanza Tunnel in Josephine Canyon. GWI QR 12-1968

Active Mine List April 1969 - 2 men (Bonanza) - Winsor Ellefson, Box 10, Patagonia

Winsor Ellefson still developing at the Bonanza. Pay Dirt 7-28-69

Active Mine List Oct. 1969 - 2 men

It has been reported that operations at the Bonanza mine have ceased. GWI QR 2-27-70

Work at the Bonanza has ceased. GWI QR 4-1-70

Green & Johnson are working on their mill in lower 3R Canyon with Mr. Joe Kovrig doing most of the work. They have an option on the Bonanza Group in Josephine Canyon. The scheduled sequence of construction and operation have not been made available at the present time. GWI QR 4-1-71

A ONA DEPARTMENT OF MINER RESOURCES
Mineral Building, Fairgrounds
Phoenix, Arizona

1. Information from: JOE KORRIG

   Address:

2. Mine: 3. No. of Claims - Patented

   Unpatented

4. Location: LOWER 3R CANYON 1.5 MILES SOUTH OF HIGHWAY TURNOFF

5. Sec. 34 Tp. 22 S Range 15 E 6. Mining District PALMETTO

7. Owner: JOHSON & GREEN

8. Address: HAROLD GREEN OF TUCSON & K.C. JOHNSON of MINN

9. ~~Operating Co.~~: HAVE LEASE ON BONANZA IN JOSEPHINE CANYON

10. Address: FROM (BOND ESTATE)

11. President: 12. Gen. Mgr.:

13. Principal Metals: 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: Installing Dry Mill in 3R CANYON Bins are being installed a 7 TPH Jaw Crusher, a 35 TPH Disentegrator (Hammer Mill) a 3¼-4 TPH screen are in place

18. Miscl. Notes: A. Electromagnetic separator will be installed. This dry mill manufacture in England is similar to the one used in the recent mill installed by Ed Reiche at the Black Copper Queen in Holden Canyon

Date: 1-7-71

JW Dunn
(Signature) (Field Engineer)

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine: Toluachi Group — Date: Nov. 8, 1962

District: Tyndall District - Santa Cruz County — Engineer: Axel L. Johnson

Subject: Field Engineer's Report. Information from Frank Otero and personal visit.

References: Report of June 28, 1962 - USGS Bull. 582 p. 206

Location: See report of June 28, 1962

Number of Claims: See report of June 28, 1962

Owners: Bond Mining Trust, Box 10, Patagonia, Arizona. Winsor Ellefson, representative.

Lessee: Frank Otero, 229 Sonoita Ave., Nogales, Arizona. This is a straight lease with 10% royalty. Date of lease about Oct. 1. (Note: Lease previously held by Winsor Ellefson was evidently cancelled). New lease covers all except 2 claims.

Principal Minerals: Copper and silver with fairly high silica.

Present Mining Activity: Driving adit ahead, following the vein. 2 men working. This adit is on the Tennantite claim, same as worked by Winsor Ellefson.

Proposed Plans: Drive this adit ahead about 150 ft., and make a connection with an old vertical shaft to provide ventilation. Later on, the plans call for repairing and extending the lower adit, and putting up raises from same.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Toluachi Group Date June 28, 1962

District Tyndall Dist., Santa Cruz Co. Engineer Axel L. Johnson

Subject: Field Engineers Report. Information from Winsor Ellefson.

References U.S.G.S. Bul. #582-pages 206 and 207

Location Sec. 12-T21S-R14E. About 22 miles NW of Patagonia. From Patagonia, take Highway No. 82 for a distance of about 4 miles. Turn right (NW) and drive about 18 miles to the mine.

Number of Claims A total of 30 claims-3 patented-27 unpatented. The patented claims are "Bonanza" "Emma" and "Dayton". The work is now being done on the Tennantite unpatented claim, which adjoins the Bonanza patented claim.

Owners Bond Mining Trust, Box 10, Patagonia, Ariz.

Lessee Winsor Ellefson, Box 10, Patagonia, Ariz. This is a straight lease with 10% royalty.

Principal Minerals Copper and silver, with high silica.

Present Mining Activity Driving adit ahead following the vein. 2 men working part time.

Geology The country rock is diorite. The vein on the Tennantite claim, now being worked, is approximately 12 ft. wide, striking almost due E and W, and dipping about 75 degrees to the north. The vein is composed of quartz and iron-stained silicified diorite with a 6 inch layer of talc on the footwall and iron-lead carbonates on the hanging wall. The ore is a mixture of copper oxides and sulphides, principally chalcopyrite and malachite.

Ore Values Shipment to smelter averaged 2.55% copper, 1.62 oz. silver and 77.3% silica.

Milling Facilities None

Past History The claims were owned and operated for many years by Josiah Bond (prior and subsequent to 1915).

The Bond Mining Trust was later formed about the time of the death of Mr. Bond. One of the principal owners of the Bond Mining Trust is Catherine Bond Ellefson (Mrs. Winsor Ellefson).

Mine Workings Principal workings on the Tennantite claim, now being worked are:-

(1) Lower adit-485 ft. long, at the level of the canyon road. This adit is open for 180 ft. from the portal, the bottom being covered by mud and water. According to Mr. Ellefson, the adit shows very little mineralization in the accessible portion. Beyond 180 ft. there is a cave in, but Mr. Ellefson does not believe it is

Toluachi Group
Tyndall Dist., Santa Cruz Co.
Axel L. Johnson

caved in for any great distance, but can be repaired with not too much work.

(2) Upper adit-220 ft. long, 80 ft. above the bottom adit, and on the same vein. Portal of the top adit is about 230 ft. east of the portal of the bottom adit.

Review of Recent Operations Mr. Ellefson started work on the property in May 1961. Since then he has advanced the upper adit about 55 ft. following the ore vein. A shipment of ore of 35.74 tons was made on Nov. 13, 1961. This averaged 2.55% copper, 1.62 oz. silver, with 77.3% silica, 3.4% iron and 3.9% alumina. This netted only $142.73 to the lessee and $15.86 to the owner. Since the time of this shipment, Mr. Ellefson has continued to advance the adit and test the bottom of same with drill holes in the hopes of encountering better ore.

Proposed Plans Field engineer made the following recommendations regarding future operations of the property:-

(1) Put down a number of drill holes from the bottom of the upper adit to a depth of about 60 ft. and obtain samples of the ore.

(2) If these samples show up commercial ore, then repair the lower adit and put up raises from same.

(3) Build ore bin beyond the lower adit portal.

(4) Mine the ore by dropping it through raises, and into cars on the lower adit, and tramming it into the ore bin.

The lessee does not have sufficient funds for doing the recommended exploration and development work at the present time, but will try to obtain financial assistance.

Edwin A. Stone 6-8-38

Patagonia Region

Bond Group, Josiah Bond, owner.

This property was examined by Gregory in 1936, and by Fischer and Higdon in 1937. The writer went over the property with Fischer after their examination was complete.

The Bonanza vein is the best according to Gregory being superior in tonnage to others. It is a fine-grained quartz vein carrying a little Cu stain and cutting across tilted volcanics. The ledge is wide in places because of slight silicification of the volcanics but the actual quartz vein varies from pinch to widths of 5 feet; it is in splits in places. A sample of the best looking part of the quartz vein assayed as follows: Au-.01, Ag-[illegible], Cu-.72%; Au and Ag in oz/ton.

The Red Fox vein is fairly prominent and has a width of 3 to 4 feet. It could be safely turned down in the field for it is high temperature quartz specularite vein with some feldspar. It cuts across diorite of very fine grain. A sample assayed: Au-nil, Ag-0.2 oz/ton.

Field observations of probable low grade are checked by samples on both the above veins. The tonnage to be developed is not large. Other veins on property were small and obviously of little value according to Gregory and Fischer & Higdon.

Not worth further consideration.