

#### **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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PRINTED: 09/04/2002

#### ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: TIP TOP

**ALTERNATE NAMES:** 

GOLDEN WONDER MINES INC.

YAVAPAI COUNTY MILS NUMBER: 919

LOCATION: TOWNSHIP 8 N RANGE 1 E SECTION 10 QUARTER N2 LATITUDE: N 34DEG 03MIN 10SEC LONGITUDE: W 112DEG 14MIN 45SEC

TOPO MAP NAME: BLACK CANYON CITY - 7.5 MIN

**CURRENT STATUS: PAST PRODUCER** 

COMMODITY:

SILVER

TUNGSTEN

GOLD

**MANGANESE** 

**BERYLLIUM** 

#### **BIBLIOGRAPHY:**

USGS BLACK CANYON CITY QUAD
BLM MINING DISTRICT SHEET 2
YAVAPAI MAGAZINE MAY 1916 P 6-7 SHARLOT HALL
MUSEUM PRESCOTT, AZ
DALE, V.B. TUNGSTEN DEPTS IN GILA, YAVAPAI &
MOHAVE CTYS USBM IC 8078 1961 P 29
ADMMR TIP TOP MINES FILE
CLAIMS EXTEND INTO SEC. 10
WILSON, E.D. TUNGSTEN DEPTS OF AZ AZBM BULL
148 1941 P 23
LINDGREN, W. ORE DEPTS JEROME & BRADSHAW MTN
QUADS USGS BULL 782 1926 P 179
ADMMR TIP TOP MINE COLVO FILE

# ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

# INFORMATION FROM MINE CARDS IN MUSEUM

ARIZONA

YAVAPAI COUNTY

TIP TOP MINE

Gillette

MILS (1919)

ARIZONA
YAVAPAI CO.
NR. TIP TOP

mils # 919 1-AKA Tip Top (file) MM 220 Wolframite

MM-4327 Quicksilver Flask MM-1978 Assa Crucible

MM M 313

MM 4161 Wolframite /Quartz MM 4162 Wolframite '/Quartz

VAVAPAT

USGS Bull. 782, p. 3, 16, 22-25, 29, 30, 44, 45, 47, 49, 53, 180, 181

USGS PP 610, p. 50,

USGS Folio 126 - Bradshaw, p. 9, 10

⇒IC 8078, p. 29

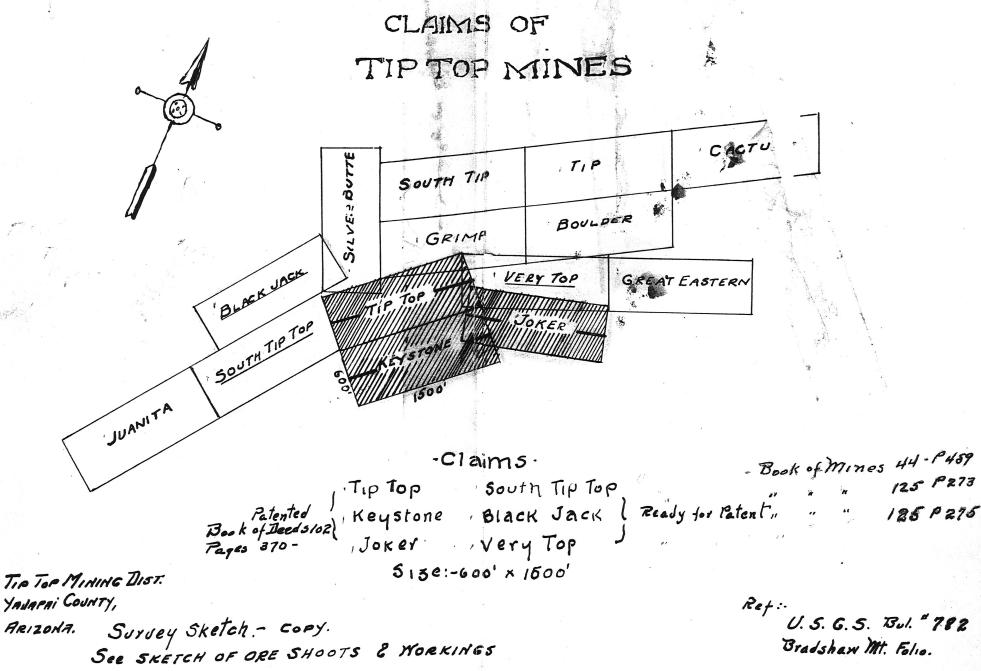
ABM Bull. 140, p. 102

Mining Journal, Vol 7, #17, p. 5, 6 - Veil, 1924 1924 (Ensight) Mining Journal, Vol. 20, #5, p. 3-5, guly 30, 1936 1936 (Coupal)

ABM # 129 p. 87

ABM # 148 p. 23

Ariz. Mng. Journal, July, 1918, p. 26



N. S. G. S. Bul. " 782 Bradshaw Mt. Folio.

ARIZONA.

# Mineral Assay Office, Inc.

# ASSAY CERTIFICATE

ASSAYERS & CHEMISTS

E. S. GATES, JR., PRES. P. O. BOX 275 MINA, NEVADA 89422 PHONE: 702-573-2236 Mr. W. B. Stubbs 4600 Baxter Place Las Vegas, Nevada

89107

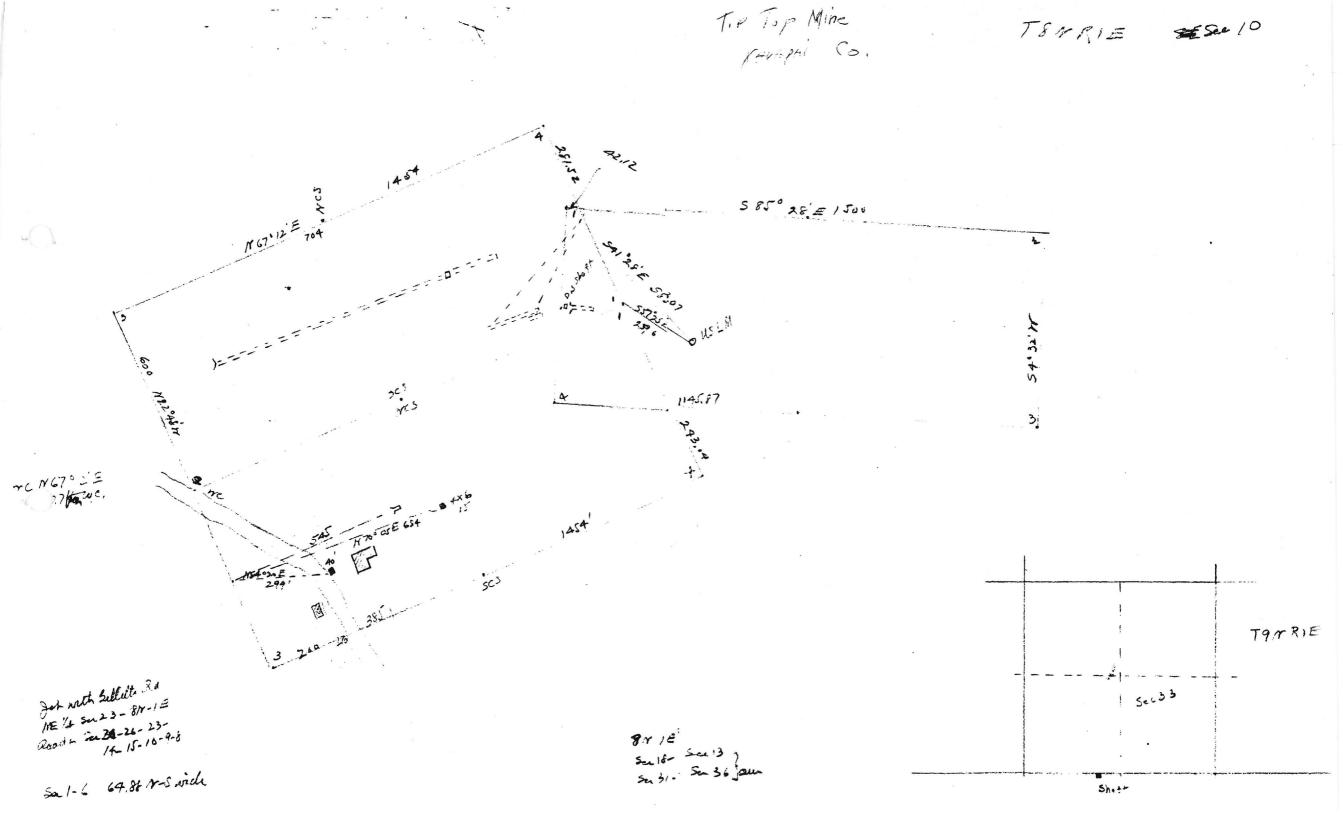
August 27 ,19 70

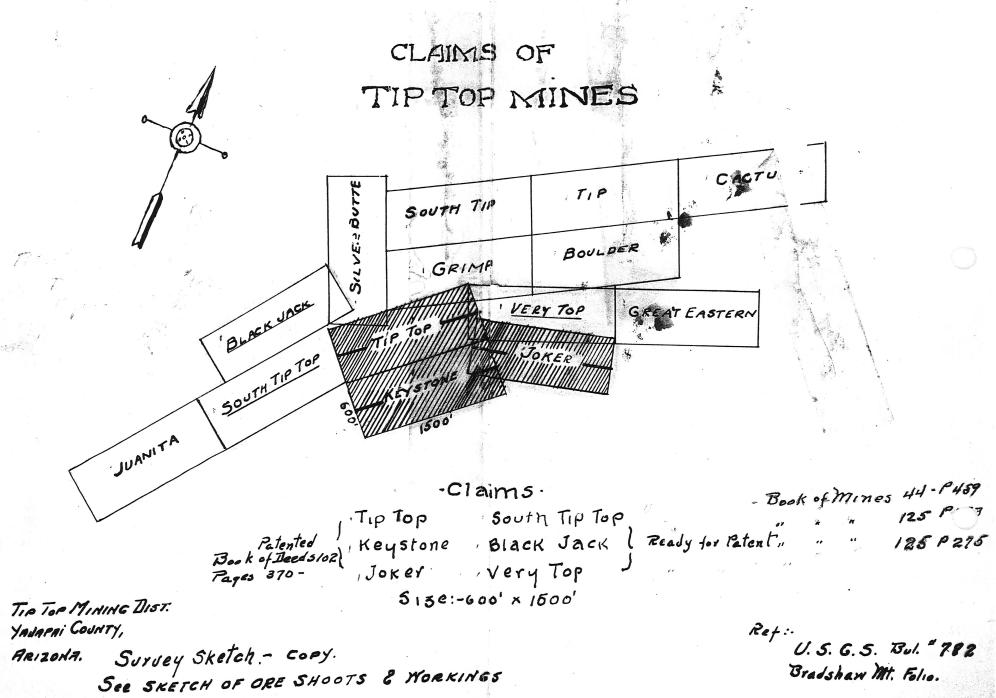
WE HEREBY SUBMIT THE RESULTS OF ASSAYS MADE ON THE FOLLOWING SAMPLES:

OFFICE No.	SAMPLE MARK	GOLD OZ, PER TON	SILVER OZ. PER TON	Copper Cu%	
		·	W 1		
33,088	<b>#1</b>	0.27	2.94	4.15	
33,089	#2	0.015	0.12		

By Assayer

Grace E. Johnson Box 675 Wickenburg





IA BAJADA EXPLORATION ENGINEERING & EQUIPMENT CORP. (an interest in Tip Top)

EGGERS, H. K., St. Louis Union Trust Co., St. Louis 2, Mo.

MINE: TIP TOP - Yavapai County - Tip Top District.

## ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

# INFORMATION FROM MINE CARDS IN MUSEUM

ARIZONA

YAVAPAI COUNTY

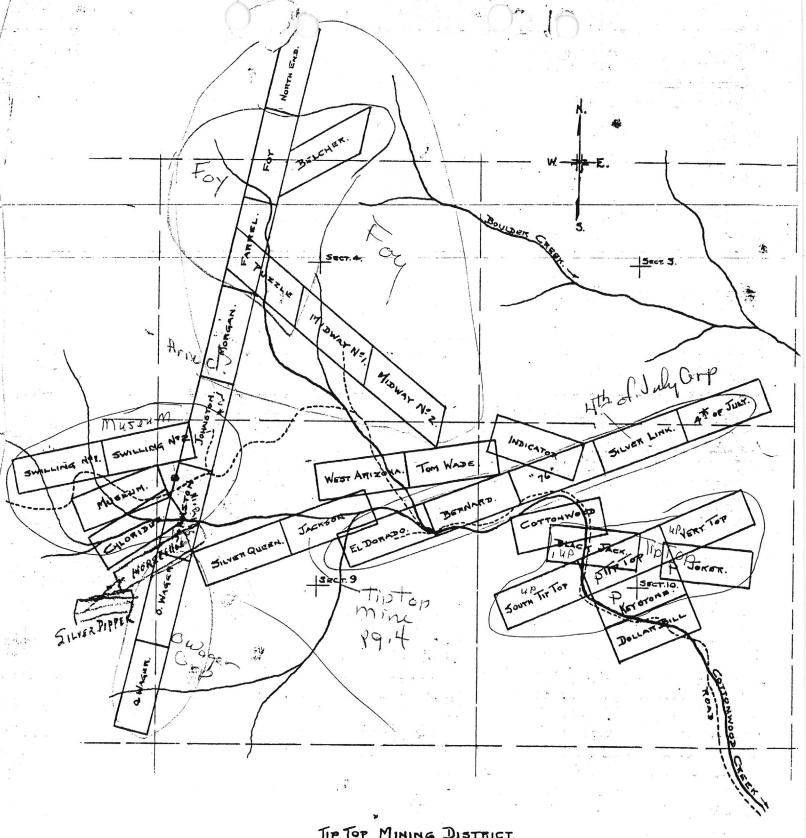
TIP TOP MINE

Gillette

MILSIE 919 1-AKA TIP TOP(JUD) MM 220 Wolframite

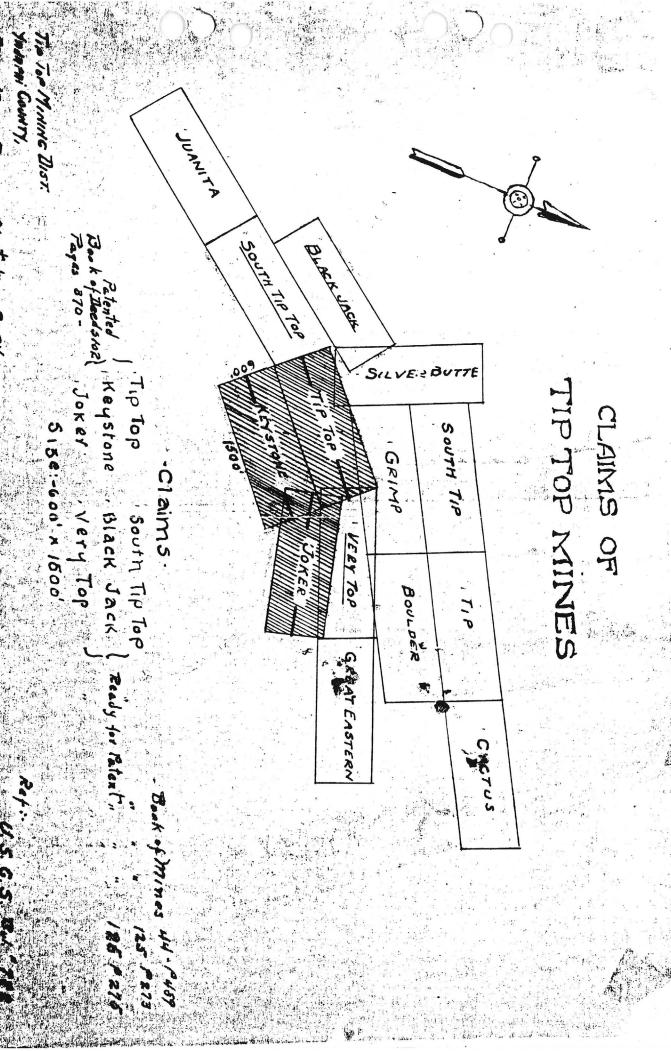
MM-4327 Quicksilver Flask MM-1978 Assa Crucible

MM M 313

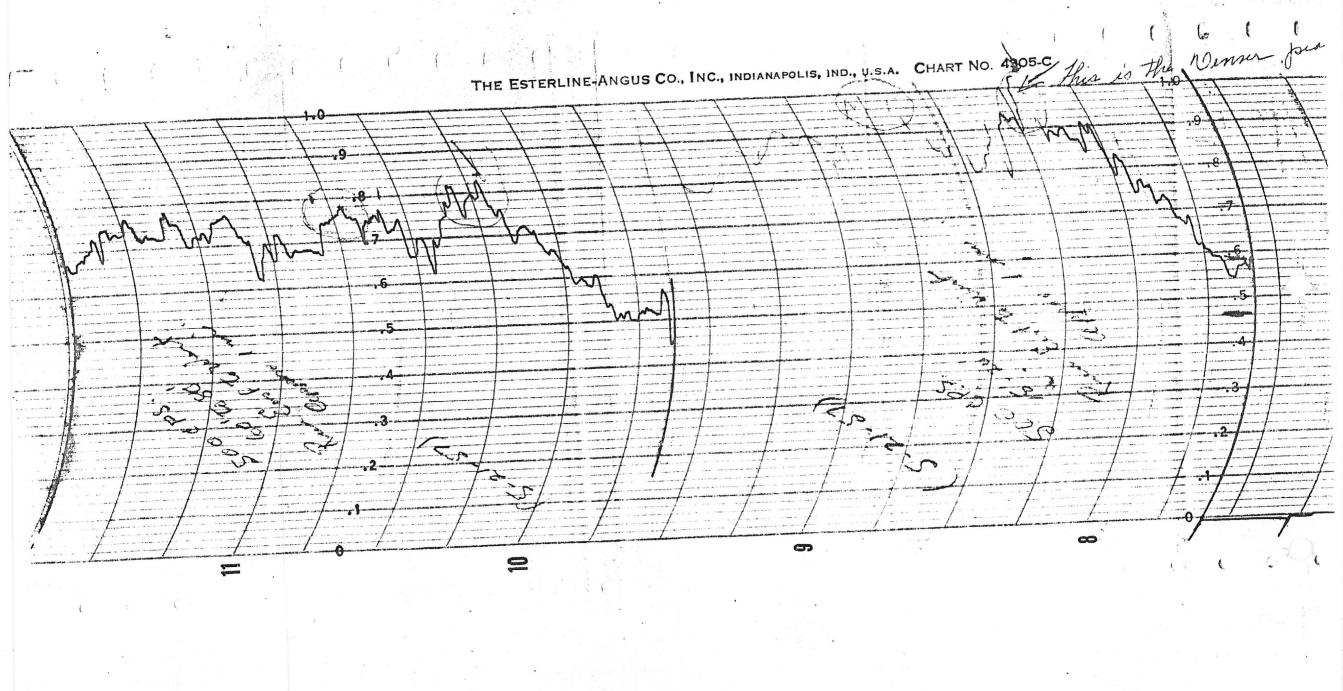


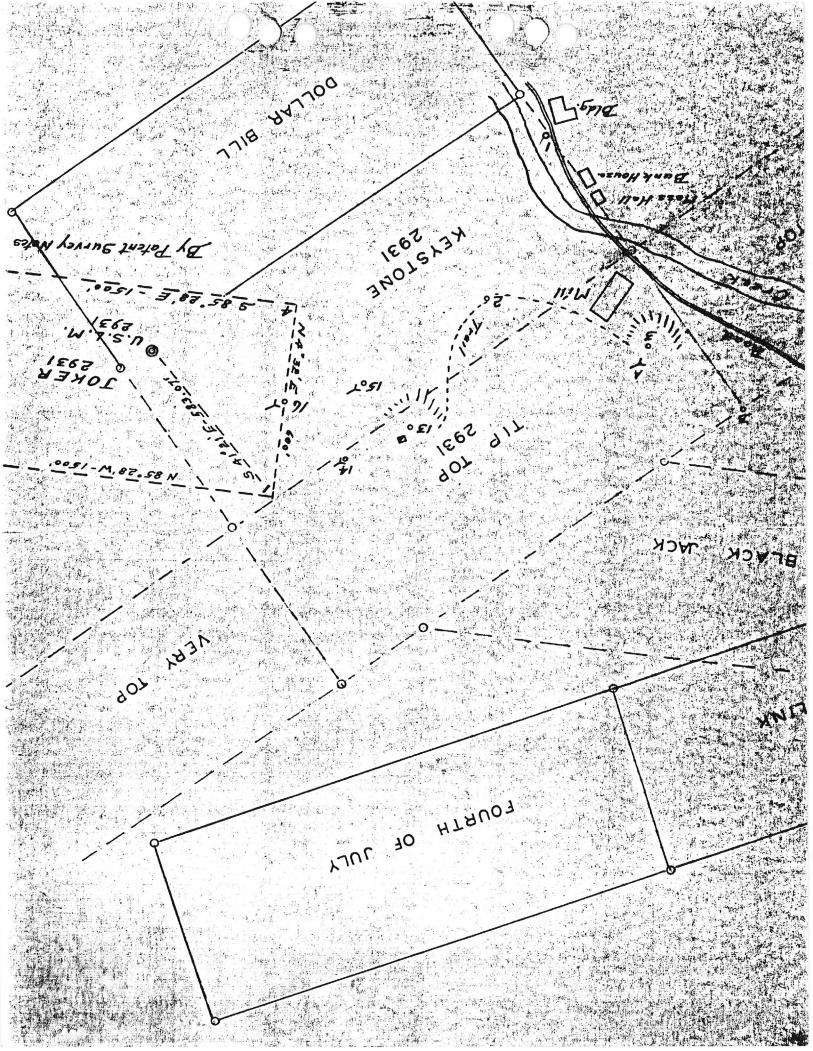
TIP TOP MINING DISTRICT.
YAVAPAI COUNTY.
ARIZONA.

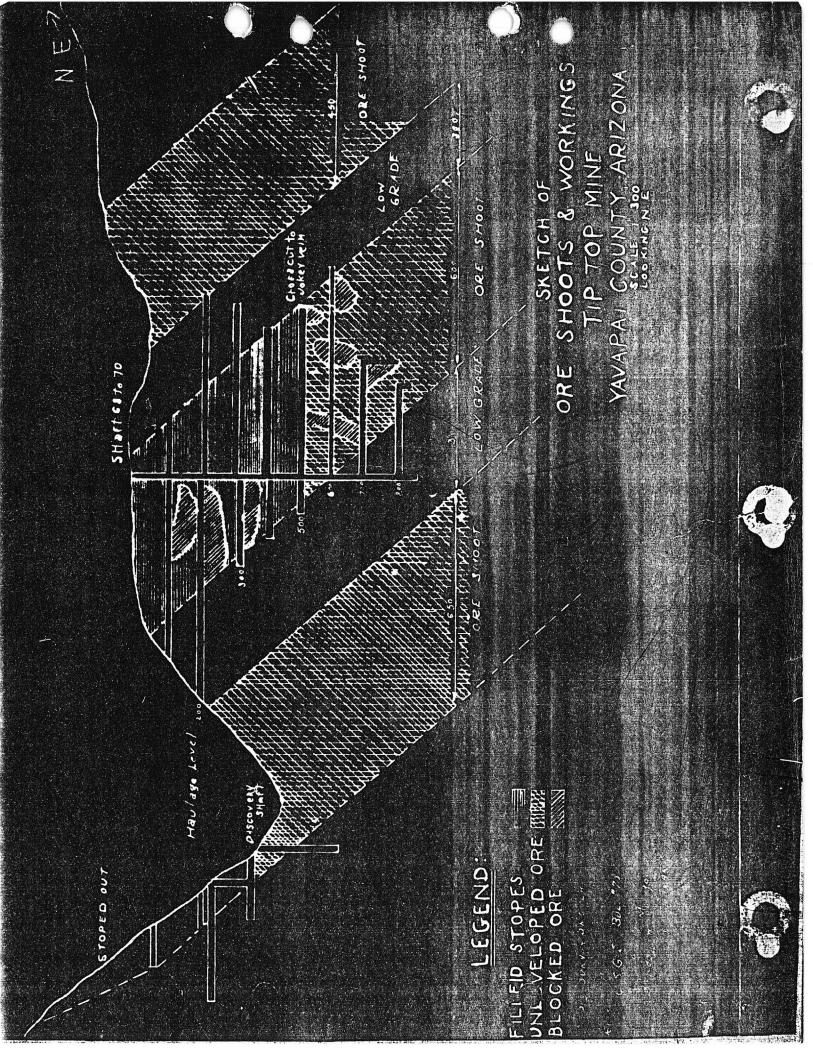
TOWNSHIP 8 N - RANGE | E.
SECTIONS 5, 4, 19 AND 10.
SCALE | 1 = 1600 FEET



refren of one shoots &







From: Keenan Murray
To: njn22r@hotmail.com

**Sent:** Monday, August 15, 2005 8:03 AM **Subject:** Fwd: Tip Top Mine property update

Hi Nyal, Here's the latest scope on the Tip Top Mine.

>>> "Paul Meyer" <<u>pmcleator@all2ez.net</u>> 8/14/2005 9:39 PM >>> 8-14-05

Hi Keenan --

Just want to give you an update on the Tip Top Mine property. I sent a copy of the letter I obtained from you together with the Yavapai County Assessor's information on the parcel (showing that the title had reverted back to Tip Top Mines, Inc.) to Mrs. Marianne Ambler in St. Louis, Mo. She is president of Tip Top Mines, Inc., an Arizona corporation. I also contacted her by phone.

It turns out that she just wants to be rid of the property with all its trouble, expense and clouded title. I was able to obtain a Quit Claim Deed from her (recorded in Yavapai County on 8-5-05), and I paid all the back taxes. My next step is to clear title to the property.

In regards to the cloud that exists as a result of the Quit Claim Deed from Tip Top Mines Inc. to the State of Arizona, I think the solution can be found in ARS 12-1103-C which states "If, after appropriate investigation, it appears to the attorney general that the state claims no right or title to the property adverse to plaintiff, he may file a disclaimer of right and title." Hopefully there is an attachment of the complete statute at the very bottom of this email.

Do you have any suggestions on how I should proceed to get a recordable Disclaimer from the State of Arizona?

I thought of contacting Rozanna Sedillo, the Manager in the Administrative Procedures & Information Section, ASLD. She wrote the letter to Yavapai County and could maybe explain the circumstances and the position of the ASLD to the Attorney Generals's office. Then maybe the Attorney General would issue a recordable Disclaimer of right and title to the property.

If you have ideas or suggestions as to whom I should refer this to, please let me know. Thanks.

Paul Meyer (602)266-5292 pmcleator@all2easy.net

# **Nyal Niemuth**

From:

"Keenan Murray" <KMurray@land.az.gov>

To:

<njn22r@hotmail.com>

Sent:

Tuesday, December 07, 2004 9:38 AM

Subject:

Tip Top

Hi Nyal,

Just a little note to let you know that we (ASLD) sent Yavapai County a letter refusing the Tip Top land in T8N; R1E; Section 10 (@60acres). I'm not sure what is going on with it right now though, I don't think we've received any kind of reply from Yavapai.

Cheers, Keenan TIP TOP MINE

#### YAVAPAI COUNTY

NJN WR 8/13/82: Andy Core with Santa Fe Mining, Albuquerque, N. M. visited to examine and discuss the Tip Top Mine, Yavapai County. He reported Santa Fe had acquired the property and is looking for another target on strike.

From the Bureau of Geology and Mineral Technology the following data on the Tip Top Mine, Yavapai County was received. Some (a little) production from the Foy, but none from the "76" is included in the following: The bulk of the production was during 1875-1890 for which only an estimate is available. Other years of production include 1919, 1936-1940 and 1942. Tungsten production is not included here. From a total production of 27,275 tons, 780 lb Cu., 10,375 lb Pb., 1,791,600 oz Ag. and 9,690 oz Au were recovered.

NJN WR 10/15/82: Frank Montonati, mining contractor reported that he is working for Santa Fe Mining at the Tip Top Mine, Yavapai County. The shaft will be pumped out, retimbered for access to the old wrokings so they can be mapped and sampled.

KAP WR 4/15/83: Fred Lorette reported Santa Fe Minerals has recollared the main shaft at the Tip Top MIne, Tip Top District, Yavapai County. A headframe, hoist and hoist house have been installed. The old workings are being cleaned out, retimbered, surveyed and sampled. The work is being done by M Company.

NJN WR 8/19/83: Bob Crook reported that Santa Fe Minerals currently has two active projects in Arizona. One is called Granite Mountain near Prescott and one is in the Kingman area. He also reported that the Tip Top, Yavapai County, was a disappointment to Santa Fe and that project is inactive or dead.

NJN WR 11/18/83: Robert Nakaoka, President Geo-Management Inc. P.O. Box 14414, 4005 Camino DeLaSierra, Albuquerque, New Mexico, 87111, Tel: 505-298-6341, is consulting for Sante Fe, visisted. He reported that Sante Fe's venture at the Tip Top, Tip Top District, Yavapai Co. was unsuccessful. Apparently, bad ground prevented rehabilitating the shaft deeper than about 350'. It also appeared that more mining, removal of pillars etc. had been done than the old underground maps showed.

TIPTOP MINE

YAWAPAI COUNTY Tip Top Dist.

May 27, 1957 - This property inactive Mark Gemmill

Production to 1890 \$2,200,000 silver, major metal, J. W. Still's figures (correspondence file)

Aleta Phillips had a conversation 7/12/79 with Howard R. Johnson, 1421 Luthy Circle N.E., Albuquerque, N.M. 87112. He stated he is the sole owner of the Tip Top Mine, Yav. Co. He also said he is the person to contact in regard to this mine. The claims of his are El Dorado Group (6), and the Tip Top (4) all unpatented. 7/19/79 a.p.

Ken Phillips had a conversation with a person in the office 6/29/79 and this person said that he supposedly was going to get permission to go on the Tip Top Mine, from Tip Top Mining Corp., St. Louis, Missouri, Richard J. Ambler, President, whom he stated is the owner. 7/.9/79 a.p.

RRB WR 8/15/80: Howard L. Johnson, 45 Woodside, Prescott, Arizona 86301, phone 778-4988, reported that he has (with Nuclear Corp of Albuquerque as a 50% partner) 26 claims in three groups in Sections 8, 9, and 10, T8N, RIE, Tip Top District, Yavapai County. They are the Tip Top Group (Tip Top North, Tip Top South, and others), the El Dorado Group (Arizona, Jackson, and others), and the Hogback Group (Hogback #1-5 and others). A drift and drill holes on the Arizona claim have indicated an average assay of 28 to 30 oz/ton of silver across a minable width for 1000 ft along the strike. A 10" vein averaging 120 oz/ ton of silver in galena has been traced for 400 ft, according to Mr. Johnson.

KAP WR 10/31/80: John D. (Jack) Gordon Jr., Box 69, Mayer, Arizona 86333, phone (602) 632-7521, reported that he is now a one-third partner in the venture of evaluation and start-up of the Tip Top Mine, Tip Top District, Yavapai County (not to be confused with Tip Top Mine in Blue Tank area, Blue Tank District, Yavapai County). Along with Chuck Barnes they are going to pump out the workings and sample. Further, they are looking at the possibility of building a 50 TPD cyanide mill.

#### Mine Visit

Mine: Tip Top District: Tip Top County: Yavapai Engineer: Ken A. Phillips Date: September 14, 1980

Commodities: Silver - Gold - Tungsten

ADMMR Mine File: Tip Top Mine, Tip Top District

Information source: Mine visit by author and H. Mason Coggin, Consulting Mining Engineer on above date.

U.S.G.S. Quadrangle Name: Black Canyon City, Arizona 7½'

Location: Secs 10 & 11, T8N, R1E. See attached maps.

Current Status, Activity and Observations:

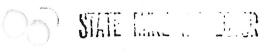
Road from Mica Mule to Boulder Creek and thence up Boulder Creek to the Tip Top Mine has been repaired and bladed. Roads on the Tip Top Mine to the old production shaft, production tunnel and the lower drift on the southwest side of Boulder Creek have been repaired. A new road has been cut to the toe of the dump below the production shaft in what might be inferred as preparation to mine the dump. The roads are well constructed.

The main inclined shaft is open and the collar is in fair condition. The shaft is on the vein which strikes N  $63^{\circ}E$  and dips about  $47^{\circ}N$  for at least the first 50-60 feet in depth.

The main haulage tunnel is open and the portal is in good condition. The lower drift (dumps on hill indicate three drifts on vein) on the southwest side of Boulder Creek is open and the portal is in fair condition.

MATT





JAN 23 1984

# Office of State Mine Inspector

705 West Wing, Capital Building Phoenix, Arizona 85007 602-255-5971

### NOTICE TO ARIZONA STATE MINE INSPECTOR

In compliance with Arizona Revised Statute Section 27-303, we are
submitting this written notice to the Arizona State Mine Inspector
(705 West Wing, Capitol Building, Phoenix, Arizona 85007) of our
intent to start/stop (please circle one) a mining operation.
COMPANY NAME Santa Fe Mining, Inc.
CHIEF OFFICER R. T. Zitting
COMPANY ADDRESS P.O. Box 3588, Albuquerque, NM 87190
COMPANY TELEPHONE NUMBER (505) 262-2211
MINE OR PLANT NAME Tip Top
MINE OR PLANT LOCATION (including county and nearest town, as well as directions for locating by vehicle)
Section 10, T8N, R1E/12 miles west from Table Mesa turn-
off of Interstate 17 just south of Black Canyon City.
TYPE OF OPERATION Exploration PRINCIPAL PRODUCT None
STARTING DATE CLOSING DATE February 1, 1984
DURATION OF OPERATION
PERSON SENDING THIS NOTICE F. J. Jenkins, Jr.
TITLE OF PERSON SENDING THIS NOTICE MgrNon Fuels Exploration
DATE NOTICE SENT TO STATE MINE INSPECTOR January 20, 1984
*A.R.S. Section 27-303 NOTIFICATION TO INSPECTOR OF BEGINNING OR SUSPENDING OPERATIONS: When mining operations are commenced in any mine or when operations therein are permanently suspended, the operator shall give written notice to the inspector at his office

prior to commencement or suspension of operations.

# PACIFIC SPECTROCHEMICAL LABORATORY, INC.

#### CHEMICAL AND SPECTROGRAPHIC ANALYSIS

RESEARCH

2558 Overland Avenue

Los Angeles, California 90064

April 28, 1971

Report of semiquantitative spectrographic analysis of samples submitted by

W. B. Stubbs 4600 Baxter Place Las Vegas, Nevada 89107

#1

Au.-Ag.-Cu.

ND <0.0002

ND (0.002

nil

28.% Si-16. Fe-A1-6.2 0.46 Mg-1.1 Ca-0.15 Titrace Pb-0.0053 Ga-0.075 Mn-V-0.0026 0.023 Cu-0.061 Co-Zrtrace Ni-0.039 Srtrace 0.0095 Cr-ND (0.002 Au#2

Uranium-

Uranium
Chemical Assay
0.97%

FACE TUNNEL

Respectfully submitted,

PACIFIC SPECTROCHEMICAL LABORATORY, INC.

Grace E. Johnson Box 675 Wickenburg, Arizona 85358

Ag-Pt-

O.E.-

# ARTMENT OF MINERAL RESOL

Mine TIP TOP MINE

Date

May 11, 1957

District TIP TOP DISTRICT, YAVAPAI COUNTY

Engineer

B. J. Squire

Subject: Report of Visit

Tip Top Mine is reached by going four miles north of New River on the Black Canyon Highway, then turn west 5 miles, across the Agua Fria River, thence north six miles to mine.

In the company of Albert MacKenzie and Earl Webster an inspection of the 200 level on the Tip Top Claim and the shaft on the Tip Top was made. Also some drifts on the South Tip'Top Claim and one drift on the Joker were visited. Most of the ground is in fair shape but extensive preliminary work would be required to open property to production. No equipment or rail is left and shaft timbers are bad. Only one old house is in usable shape.

The mine was a high grade Silver producer from narrow veins and short ore shoots. The veins also carry good tungsten values. Any future work would have to take into account the high cost of mining from narrow veins, and the extra mill cost for treating a complex ore.

There are several small and two fair sized dumps carrying, according to reports, up to 0.23% WO3 and 10 oz. Ag. They may include as much as 50,000 tons of material. Not enough dump remains to run a full scale mill, but would help to get the property started.

The Tip Top Mining Co. of St. Louis is out of existence, but taxes on the three patented claims are being paid by major Stockholders. Mr. Webster keeps up assessment work on the unpatented claims for the Stockholders in the Company.

to be trapped to the a .t of the tunnel.

After the above work is accomplished, and if the results are as enticipated, them the information and knowledge gained from that work would justify the immediate opening of the Tip Top Mine lower levels. You will note from the emclesed map that the seventh level drift only went in about one-half as far as the 500 level, and the Eighth Level only about 140 feet. Since the Tip Top are shoot was 624 feet long on the surface and about an emverage of two feet in width, the map would indicate a fault coming in on the Mortheast on the Seventh and Eighth levels. If the work done on the Mor east end of the Adit tunnel level proved the continuation of one on the Wor mast end of the Adit tunnel level proved the continuation of one on the World of same direction in which ore mas ensemntered on the 200 adit level, on the Seventh and Eighth Levels, the ore should be epened up on these levels the full 634 feet of the ore shoot. The best information I have is that on the Eighth Level, in the bottom, is about fourteen inches of red ruby silver ore for the distance they had ore, approximately for teem inches of red ruby silver ore for the distance they had ore, approximately and the geological conditions present would indicate extreme depth of the enrichment, and the fact ruby silver is in the bottom of the Eighth Level seems to prove this fact.

This property hasnt hardly been soratched even though it produced over \$4,000,000 prior to 1892. If this suggested small exploratory compaign sooms varranted, and is them carried out, and results are as expected, millions of dellars of production will be made available. The District is almost virgin. Dozens of veins would support workers profitably if milling facilities were made available.

Sestinate: to be about the right cost estimate for this exploration should not exceed \$5000 for eleaning out Discovery shaft on the south fir Top and drifting to the ore, even allowing for sees cross-cutting at the end of the drift if the ore is not empountared by straight drifting; \$5000.00 for drifting and cross-cutting at the Sortheast end of the Tip Top adit tunnel; and about \$5500.00 to cross-cut from the Tip Top adit tunnel to the Black Jack voin, or excent for cross-cutting from the Tip Top adit tunnel to the Black Jack voin, or a total emploration expenditure of approximately \$19,000.00. This \$19,000.00 a total employed for should cover cost of moving in the necessary equipment, cost of supplies, 'abor should expervisions. The work should take from sixty to minety days, two ships and supervisions. The work should take from sixty to minety days, two ships are day with work carried on simultaneously at the different locations. Ores the Cold workings, or further underground development, should repay the above expenditure many times over. Shipping grade ore could be encountered at each or all these outs, and wherever emocuntered, will open up a tomage of ore above the point of emocunters.

The map attached hereto arous very little stoping below the 500° level and was probably made around 1887, at the time the Company operations essend. From 1887 to 1884, the coming Company leased blocks of ground, and Mr. Theo. N. Tade, 1887 to 1884, the coming Company leased blocks of ground, and Mr. Theo. N. Tade, 1887 to 1884, the coming Company leased blocks of ground, and Mr. Theo. N. Tade, 1887 to 1884 from Phelps-Dodge, 1887 Morth Second Avance, Phoenix, Arizona, retired in 1948 from Phelps-Dodge, 1887 Morth Second Avance, Phoenix, Arizona, retired in 1948 from Phelps-Dodge, 1887 Mr. Lesses, when determine the state of the State

Also attached herete are expersts from earlier day reports, and copy of my interview notes with rade, and a Mr. John Missa, present resident of the aritema Piesseer's Hesse, at Presents, who was a surface ran for Lesses Gover in 1872.

This is a valuable proper to be the property has run up to thereands of countries per bear frageties appears user-out. I have seen pure change of valiranties, and the time their new will everywards and temperate with All the \$4,000,000 production was adopting grade ero, and so a time than it is reported transportation which the time time of a time time to be a last a time to the reported transportation which the time time of a time time of a time time.

The property of Tip Top Mines. Inc., situated in the Tip Top Mining District, Yavapai County, Arizona, being 43 miles North on the Black Canyon Road, and eleven miles West, in the Eastern part of the Bradshaw Mountains. The Mine, the District, and other properties in the District are almost forgotten as most of the work done there was accomplished more than sixty years ago.

The Tip Top Mine produced more than \$4,000,000 prior to 1892. All shipping grade silver ore. Tungsten appears frequently along with the silver.

A very well mineralized District. Would easily support a custom milling plant. Values mostly silver, but gold and tungsten also. All year climate, winter ideal working season.

The Tip Top Mine closed down in 1892 and no one has been below the 500 level since the close-down.

The Tip Top property comprises three patented and three unpatented claims.

Development work and Exploration will be necessary before any production plans should be formulated, and suggested exploratory work is set forth in the following paragraphs as a guide to your field engineers in checking the possibilities of the property.

On the early map of the Tip Top Mine workings, enclosed herewith, you will note indicated ore shoots both Southwest and Northeast of the ore shoot worked. Indicated ore shoots will probably verify the location of these ore shoots. I am of the opinion these ore shoots, while a continuation of the Tip Top vein, offset the opinion these ore shoots, while a continuation of the Tip Top vein, offset the opinion these ore shoots, while a continuation of the Tip Top vein, offset as faults occur along the vein, and the vein while running in the same general direction, steps forty to fifty feet East or West, as the case may be, on either side of these faulted zones.

I would suggest the advisshility of continuing the Tip Top Adit tunnel Northeast through the faulted zone and then cross-cutting both ways to determine the direction of the throw. This should open up the new unworked ore shoot to the Northeast.

On the Southwest unworked oreshoot, I would suggest cleaning out the discovery shaft there and them drifting Northeast to reach the ore shoot, if no ore is encountered, after the determined footage of drifting is accomplished, orcssoutting there also.

To the Northeast and adjoining the Tip Top claim is the Joker claim thru which the Joker yein runs. It is reported that the Joker produced \$350,000 in the early days from shallow workings. Very high grade silver ore, good tungsten but tungsten considered Black jack or sine in early days. By driving a cross-cut tungsten considered Black jack or sine in early days. By driving a cross-cut from the Tip Top Adit tunnel to the Joker wein, adistance of about 275 feet, you should intersect this Joker ore shoot at a point below the stoped cut workings, should intersect this Joker ore shoot at a point provided the cross cut is engineered to intersect the Joker vein at a point provided the cross cut is engineered to intersect the Joker ore shoot. This determined by taking into considered ion the rake of the Joker ore shoot. This determined by taking into considered ion the rake of the Joker ore shoot. This determined by taking into considered ion the rake of the Joker ore shoot when all supposedly was never completed and was driven only a short distance when all supposedly was never completed and was driven only a short distance when all operations ceased. It is doubtful if the crosscut from the 500 level of the operations ceased. It is doubtful if the crosscut from the ore shoot worked above.

A cross-cut to the West from the Tip Top adit tunnel will cut the Black Jack wein from which float running as high as 180 ounces of silver to the ton has been pickel up from the surface.

All the work suggested will be inexpensive as no hoisting will be required with the exception of the work on the Southwest indicated ore shoot on the Tip Top Vein. There should be sufficient stope space to fill in the waste from work done on the Tip Top tunnel level and very little of this waste would have

After the above work is accomplished, and if the results are as enticipated, then the information and knowledge gained from that work would justify the immediate opening of the Tip Top Mine lower levels. You will note from the enclosed map that the Seventh level drift only went in about one-half as far as the 500 level, and the Eighth Level only about 140 feet. Since the Tip Top ore shoot was 624 feet long on the surface and about an saverage of two feet in width, the map would indicate a fault coming in on the Northeast on the Seventh and Eighth levels. If the work done on the Northeast end of the Adit tunnel level proved the continuation of ore on the two hundred level, and gave the direction of the throw, then by cross-cutting the same direction in which ore was encountered on the 200 adit level, on the Seventh and Eighth Levels, the ore should be opened up on these levels the full 624 feet of the ore shoot. best information I have is that on the Eighth Level, in the bottom, is about fourteen inches of red ruby silver ore for the distance they had ore, approximately 140 feet in length according to the enclosed map. The character of the vein and the geological conditions present would indicate extreme depth of the enrichment, and the fact ruby silver is in the bottom of the Bighth Level seems to prove this fact.

This property hasn't hardly been scratched even though it produced over \$4,000,000 prior to 1892. If this suggested small exploratory campaign seems warranted, and is then carried out, and results are as expected, millions of dollars of production will be made available. The District is almost virgin. Bosons of veins would support workers profitably if milling facilities were made available.

Costs figured at \$20.00 per foot for drifting and cross-cutting which is estimated to be about the right cost estimate for this exploration should not exceed \$5000 for cleaning out Discovery shaft on the South Tip Top and drifting to the cre, even allowing for some cross-cutting at the end of the drift if the cre is not encountered by straight driftings \$5000.00 for drifting and cross-cutting at the Northeast end of the Tip Top adit bunnel; and about \$5500.00 to cross-cut from the Tip Top adit tunnel to the Joker, and a like amount for cross-cutting from the Tip Top adit tunnel to the Black Jack vein, or a total exploration expenditure of approximately \$19,000.00. This \$19,000.00 should cover cost of moving in the necessary equipment, cost of supplies, labor and supervision. The work should take from sixty to ninety days, two shifts per day with work carried on simultaneously at the different locations. Ores opened up from this work, even if not warranting rehabilitation of the Tip Top Mine Old workings, or further underground development, should repay the above expenditure many times over. Shipping grade ore could be encountered at each or all these cuts, and wherever encountered, will open up a tonnage of ore above the point of encounter.

The map attached hereto shows very little stoping below the 500° level and was probably made around 1887, at the time the Company operations ceased. From 1887 to 1892, the owning Company leased blocks of ground, and Mr. Theo. N. Wade, 4226 North Second Avenue, Phoenix, Arizona, retired in 1945 from Phelps-Dodge, Jerome, states he was tram boy on the Eighth Level for John Cover, Lessee, when the work stopped, and as he remembers all the ore above the Eighth Level had been stopped out.

Also attached hereto are excerpts from earlier day reports, and copy of my interview notes with rade, and a Mr. John Siess, present resident of the Arizona Pioneer's Home, at Prescott, who was a surface man for Lesses Gover in 1892.

This is a valuable property. Ore at the property has run up to thousands of conces per ten. Tungsten appears thru-cut. I have seen pure chunks of volframite, and the dump there now will average .25% tungstic acid. All the \$4,000,000 roduction was shipping grade ore, and at a time when it is reported transportation to were \$200.00 per ton both in and cut. It is worth of, at least, a week

"However, it is supposed that a very rich shoot of ore cropped to the surface where the shaft was sunk, and the object was to take out this rich ore without taking into consideration that there were in all probability other shoots just as rich as this one that would have been developed by levels run from a shaft at a more accessible point".

"The mine is not worked out, on the contrary not one twentieth part of the vein has been developed".

From report of Geo. W. Alsdorf, 1916, "On the Tip Top claim there are three parallel weins all of which have produced high grade oro. The hanging wall vein is 6° to 12° from the middle wein and has produced silver and tungsten years ago according to reports but has not been reopened due to a cave in inthe cross cut leading from the turnel on the middle vein. The foot well vein is about 20 feet from the middle wein and dips at 45 degrees to the Northwest while the middle vein also dips at 55 degrees to the Northwest. These two veins are said to intersect at the 350 level where the vein widens. Most of the development work has been done on the middle vein which consists of an 800° inclined shaft". The Joker claim has a strong showing on the surface where the vein has This voin which runs in the general direction of the not been steped. Tip Top vein can be developed very easily by extending a cross out already started from the so-called Tip Top vein".

From report of A. P. Mater, 1916. The mine has been stoped only above the 500' level on the footwall vein, but all through these stopes are low grade blocks of ground that were too low to work in the early days. By drawing some of the chutes above the two hundred level we have uncovered several of these low grade blocks, aggregating about 1000 tons of ore that will average 40 ounces of silver and .8% tungstic acid. The hanging wall wein was stoped to a depth of 150 feet which leaves a block of ground between the 150 lwal and the 350 level of 200 x 600 x 2. Three thousand pounds of ore taken from this vein as a sample gave According to the statement returns of 167 cunces of silver per ton. of the present foremen of the mine who was a shift boss when the property was first developed, and a Lessee under the St. Louis Yavapai Co., therear are low grade blocke of ground all the way from the 500' level to the surface of the same grade he uncovered above the 200 level. He also states that the tungsten accompanied the silver all thru the mine and that in places the tungsten vein practically replaces the silver vein. Thenever this happened the ore was left standing in place, or left in stopes, as it was thought in the early days that the tungsten was zinc. Some 12 or

are willing to substantiate the above statements,"

"As proof of the value of the mine below the 500° level we cite the production of Cover and Tyack from a lease on a block of ground between the fifth and sixth levels. In Ninety days these leasees produced 150 tons of ore that averaged 557.26 ounces of silver, which at present prices worth \$41, 152.50.

Also the statement of Mr. Waldemeyer, the foremen, who says that just

15 men whom we have interviewed, who worked in the mine in the early days

Also the statement of Mr. Waldemayer, the foremen, who says that just before work on the property was stopped they exposed a vein of fine ore two feet wide on the Eighth level".

Thile it may have been possible in 1911 or 1916 to find men who worked in the Tip Top prior to 1892, it is almost impossible now but I was fortunate in 1946, last year, in interviewing two, a Mr. John Siess, resident of the Pieneer's Home at Prescott, and Mr. Theo. N. Tade, 4226 North Second Avenue, Phoenix, Arisona.

Prom my notes I copy the following:

or ten day investigation by your most experienced and conservative Engineer. I will assist with any data I have, and will furnish a man familiar with the property and the district to accompany your representative in any investigation you care to make.

Offered preferably on long-term lease, no money down, 10% royalty rental on net smelter returns or mint returns on bullion or concentrates, and 15%, 20% and 25% royalty, on sliding scale, on net smelter returns on ore shipments; or on a ten-year lease and bond with down payment. If long-term lease is preferred, the suggested exploratory campaign will either have to be consummated as a condition of the lease, or a rather stiff guaranteed royalty will have to be paid, in lieu of such exploratory work.

Rather than return this presentation to me after it has served it's purpose, would appreciate your retaining it in your files for possible future reference, or turning same over to possible interested parties.

Thank you.

CLAUDE C. FINDLY, Vice-President, TIP TOP MINES, INC., P.O. Box "Q", Wickenburg, Arizona.

November, 1947.

NOTES ON TIP TOP MINE.

The property was discovered in 1875 by John Corning and Jack Moore who left Prescott headed for the then active gold placers on Humbug Creek. They stopped at Jack Swillings place Ranch at the junction of the Agua Fria and Black Canyon, the present site of Canyon) and took the old Idian Trail for Humbug which crosses the Boulder creek and over the pass near the present site of Tip Top.

They camped on Cottonwwood Creek near the present Tip Top camp as they had noted rich silver float on the hillside. The ledge was located about half way between the present shaft and the portal of the 200 foot adit level.

They took in two partners and the four of them took out about \$80.000 in silver during the first years work. The high grade ore was packed by mule to the highway (Black Canyon) and then by mule team to Ehrenburg where it was shipped down the Colorado, to the Gulf, and from their by ship to San Francisco.

The shipments attracted the attention of the Haggin, Head and Hurst interest, in San Francisco and they purchased the property for \$ 60.000 in cash.

It was worked by the Haggin interests from 1876 to 1884, the shaft was sunk to the 500 foot level. A mill was erected on the Agua Fria River at Gillette, It was a ten stamp, chlorination plant, producing silver bullion. The ore was packed by burros and mules to the divide about 22 miles from the mine to a large beceiving bin and from there by team and wagon to the mill.

It is estimated that abetween two and three million dollars in bullion was taken out by the Haggin interests.

Tu 1884 For some reason ( not known ) the mine and mill were shut down and the owners failed to do the annual assessment work. It was re-located by Dan Wright and Tony Beauchamp in 1885-86.

They also took in two partners and worked, chloriding, in the upper levels for about one year.

The property was sold to St. Louis interests for \$ 15,000 and a company organized called the St. Louis-Yavapai Mining Co. The four men who sold the property reserved a lease from the 200 foot adit at gulletted mind it to the Towne level to the surface and worked continuously from 1886 to 1893 when the price of silver dropped, then they quit. They took out about dismanted ₩ 85,000.

The St. Louis Company moved the Gillette Mill up to the Ti Mine and finished the road from the mine to the present crossing. They sunk the incline shaft to the 800 foot level and put in a 50 foot sump. They closed theer operations in the summer of 1888: the values in the sump and winze sunk from the 800 foot level having dropped to feeling 75 ounces silver per ton, which was considered too low grade. In them, feeling

The rake of the ore in the vein cut the shaft and passed North at the 800 \$\infty\$ level.

In the winze, sunk about 60 feet North of the shaft on the 800 'level was in from 15 to 18" of good ore straked with Ruby Silver. The leasers tried to get a lease on the lower workings, but could not come to terms with the owners and the mine was allowed to fill up w with water.

Elliott and Muter put in a Denver Reek Mill and Tables in 1917 and worked the stope fills and some of the pillars above the 200 foot level and sorted the dumps for Tungsten.

After 1893 the camp was practically deserted; no assessment work was done and the property was re-located by Frank and Ed Wagerin 1894-95.

It was lost to Frank L. Carlisle by a mortgage of \$ 10,000 in 1920.

Fine was unwatered in 1920 to the 400 foot level by J.S. Coupal.

The camp had a population of about 1,000 when in full operation and riwalled the camp of Tombstone and Wickenburg, which were the three most active camps at the time in the state.: from 1875 to 1886.

Many other properties were active at the time. The Silver Museum having a production of \$ 250,000 the Foy about \$ 150,000 and the El Dorado about \$ 100,000 with several other smaller producers.

The El Doardo Vein can be traced for about 20 miles: at the south end it carries considerable gold: in Tip Top, silver,: north of Tip Top, Antimony: and near Bumblebee, much farther North, again carries gold.

There are two vein systems in the district; one, Tip Top, ElDorado etc., striking SE and Nw and the other as the Ray Carbonate Queen an almost E and W strike. The Foy strikes N and S. The ore shoots seem to have all formed on junctions of the various vein systems.

Personal inter ew of John Siess, in Cigar Stor in Prescott, 1946, Sept. 5th.

Mr. John Siess states he was in lower levels of Tip Top in 1892 and helped remove the tools when the property shut down. Said one was mined out above the 600, 700, and 800 levels, and the orc shoot on the 800 level extended only as far North as the map shows, and then pinched down to a couple of inches which wasn't followed. Did say last Lessees sank a winze on the 800 at North End of drift in good ore and wanted a lease below the 800 but the Company would not give them a lease so they quit the property and that was the end of the work at Tip Top.

Siess is 60 years old, seemingly in perfect health, clear minded and bears an excellent reputation.

Interview with Mr. Theo. Wade, at his home, 4226 North Second Avenue, Phoenix, in presence of Mrs. Wade and Mrs. Findly.
Mr. Wade was pensioned from Phelps-Dodge, Jerome, in 1945, age 76. High class man, in good health, active, alert and clear minded.

Stated: Was a transmer on bottom level of Tip Top 1886, about 16 years old. Said mine stoped out above bottom drift. Bottom drift not long like ones above. 500 seemed especially long. Said ore at bottom drift about zerzes foot to 14" wide(indicated with hands) and was ruby silver, very rich. Said he thought shaft below 500 in very hard ground and would probably be in good shape except probably pretty well filled with muck by high graders throwing waste in it. Said they called rock where shaft was Syenite. Said picked up high grade float North of Tip Top shoot on same vein. Also said got 10 tons of 740 curse ore out of Arizona claim from shallow shaft. Said Tip Top always narrow, foot or see. Said Cover sand 100' and drifted and didnt hit ore and had to cross-cut back towards foot wall to hit ruby.

#### Comment:

Comparing Siess and Tade statements seems to writer Cover and Tyack probably did not sink another 100 feet but probably did put winze down from the 8th level. Both seem to agree the mine all stoped out above the 8th level but they probably mean all high grade. Both seem to agree high grade ruby in bottom.

I know wade is still available for interviewing. I dent know whether siess is available or not.

Nov. 147

Claude C. Findly





## RAYMOND G. OSBORNE LABORATORIES INC. LOS ANGELES, CALIF.

May 17, 1955

James D McClintock

McClintock F-43

55155\_

Report made for

Sample Indentification;

Laboratory Number;

RESULTS:

Thorium and rare earths U308

SPECTROSCOPIC ANALYSIS:

Element

Aluminum

Magnesium

Manganese

Strontium

Titanium

Bismuth

Chromium.

Molybdenum

Boron

Nicket

Silver

Vandium

Uranium

Antimony

Rare Earths

Sodium

Barium

Lead

Sisicon Calcium, Iron, Copper, Potassium 0%
.52%
VEIN-IN-PLACE
VEIN-IN-PLACE
LCOVERED

Approximate Quantity

Major Constituent Intermediate Constituents

Minor Constituents

1%

0.1%

0.1%

0.1%

o. 05%

0:05%

0.01%

0 01%

0 005%

0.005%

0.005%

0 001%

0.001%

0.001/0

0.001%

Present

Present

Trace

None Found

None Found

Arsenic
Grace E. Johnson
Box 675
Wickenburg, Arizona 85358

Respectfully submitted,

Raymond G. Osborne Lab. Inc.

25.50 Report to Mr. E. E. Thurles (DM) Date received May 26, 1955 疆 AEC No. 1110 Date to BOM 5/16/55 Vein material (?) contains pyrite, A1219 chrysocolla, fluordte, etc. (Stubbs) Desgrey Sample Nesternations % eU<sub>q</sub>O<sub>g</sub> (rediometric analysis) represents tot radioactivity from all elements.
% eU<sub>q</sub>O<sub>g</sub> (chemical analysis) represents actual uranium content. Chemical Laboratory Report इंद्र BUREAU OF MINES Salt Lake City, Utah ലിച്ചറു വിട്ടറു 1,17 1,4 1095 Date reported May 31, 1955 V18105051 No. 1692 HECEINED

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Signed Jelle & Other

AEC No. 1110 Date to BOM 5/16/55

BUREAU OF MINES Salt Lake City, Utah

No. 1692 F

Report to Mr. E. E. Thurlow (DM)

Date received May 26, 1955

Chemical Laboratory Report 1095

Date reported May 31, 1955

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Signed Sider & Octum



# STATE WATER COMMISSIONER

STATE HOUSE
PHOENIX, ARIZONA

JESSE C. WANSLEE COMMISSIONER

0ctober 17 1 9 3 9

Mr. J. S. Coupal, Director Department of Mineral Resources Capitol Building Phoenix, Arizona

Re: Application No. A-1515
Boulder Creek

√ Tip Top Mines, Inc.

Dear Mr. Coupal:

This is to notify you that the above designated application of Tip Top Mines, Inc., has been rejected on the records of this office for the following reason:

"Rejected October 16, 1939, for want of prosecution".

Sincerely yours,

JESSE C WANSLEE

STATE WATER COMMISSIONER.

JCW:f Enclosure App. No. A-1515



# STATE WATER COMMISSIONER STATE HOUSE PHOENIX, ARIZONA

JESSE C. WANSLEE COMMISSIONER

May 11, 1939

Mr. J. S. Coupal, Director Department of Mineral Resources Capitol Building Phoenix, Arizona

Re: App. A-1515
Boulder Creek
Tip Top Mines, Inc.

Dear Mr. Coupal:

In response to your request of May 10th, you are advised that the above captioned application was made in the name of the Tip Top Mines, Inc., and signed by you as the company's engineer. If Mr. McDonald officially represents the company and knows they are no longer interested in appropriating the water, his request for withdrawal will be sufficient. If the company abandoned the project while you were representing them your request for withdrawal will also be satisfactory.

// // h

Sincerely yours,

Jesse C. Wanslee

State Water Commissioner

JCW:LC

prosecution.

Jesse C. Wanslee

State Water Commissioner

# KECLIVED

JUN 2 1934 OFFICE OF

STATE WATER COMMISSIONER

# APPLICATION FOR A PERMIT

# To Appropriate the Public Waters of the State of Arizona

V m
I, Tip Top Mines, Inc., (Name of Applicant)
of Phoenix , County of Maricopa
State of Arizona, do hereby make application for a permit to appropriate following described public waters of the State of Arizona, subject to existing rights:
If the applicant is a corporation, give date and place of incorporation.
May 20, 1930 Phoenix, Arizona.
1. The source of proposed appropriation isBoulder creek
(Name of Stream)
tributary of Agua Fria River
2. The amount of water which the applicant intends to apply to beneficial use is
one quarter (1/4) of a Cubic feet per second.
3. The use to which the water is to be applied is Mining, Milling and Domestic us
domestic supplies, etc.)
4. The point of diversion is located about 1800 feet North of the North east corn (Give distance and bearing to section corner)
of Section 10, Township 8 North, Range 1 East,
(If unsurveyed )
It should be so stated and tied to some natural object)
being within the SW 1/4 of Sec. 3, Tp. 8 N (No. N. or S.)
(Give smallest legal subdivision) (No. N. or S.)
R. 1 E , G. and S. R. B. & M., in the County of Yavapai, Arizona.
5. The Pipe Line to be about One (1)
(Main ditch, canal or pipe line)
niles in length, terminating in the Center of Sec. 10, Tp. 8 N
R. 1 E G. and S. R. B. & M., the proposed location being shown throughout on
(No. E. or W.)  ccompanying map.
6. The name of the ditch, canal or other works isTip Top Pipe Line
t talent and the second
DESCRIPTION OF WORKS
Diversion Works—
AN EXPONENTIAL OF THE TOTAL PROPERTY OF THE
7. (a) Height of damfeet, length on topfeet, length
ottomfeet; material to be used and character of construction
(Loose rock, concre
masonry, rock and brush, timber crib, etc., wasteway over or around dam)
the section of the se
(b) Description of headgate(Timber, concrete, etc., number and size of openings)

	8. · (a			mensi	ons at	each	poin	t of c	canal	when	re mi	ateria	lly ch	bange	d in	size,	statii	ng
	es from																	
	; width							-										
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WINDOWS AT THE

MUNICIPAL SUPPLY	
11. To supply the city of	
(Name of) County, having a present population of,	and an
estimated population ofin 19	
(Answer questions 12, 13, 14, and 15 in all cases)	
12. Estimated cost of proposed works, \$1.600.00	
13. Construction work will begin on or beforeJune 1, 1935.	
14. Construction will be completed on or beforeJune 1, 1935.	
15. The water will be completely applied to the proposed use on or before. June 1,	19.35
Maps of the proposed ditch or other works, prepared in accordance with the rules of the Water Commissioner, accompany this application.  Tip Tor Mines, Inc.,  By  Contact  Grage  (Name of Applicant)  Hotel Adams, Phoenix, Ariz.  (Address)  Signed in the presence of us as witnesses:  (1) Margaret Murphy  (Name)  (Name)  (Name)  (Name)  (Name)  (Name)  (Address of witness)  Remarks: The Tip Top Mine is 800 feet deep and has been idle for many year.  The water now stands at the 200 foot level. We contemplate erecting a mill a during the unwatering of the mine to use the water so recovered for milling till dump ores and ores from the upper levels. When the mine is completely unwater we wish to use the water applied for under this application from Boulder Cree)	y.  iy, an  nd
STATE OF ARIZONA, County of Maricopa. ss.	25
This is to certify that I have examined the foregoing application, together with the accom-	thanv-
ing maps and data, and return the same for correction or completion, as follows:	·pully-
	*********
	***********
In order to retain its priority, this application must be returned to the State Water Con	,,,,,,,,,
sioner, with corrections, on or before	
WITNESS my hand this	y
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State Water Commissioner.

STATE OF ARIZONA, County of Maricopa. } ss.

VINCERN PREBLY

This is to certify that I have examined the foregoing application and do hereby grant the same,
subject to the following limitations and conditions: If for irrigation, this appropriation shall be
limited to one-eightieth of one cubic foot per second, or its equivalent, for each acre irrigated, and
shall be subject to such reasonable rotation system as may be ordered by the proper officer, under
direction of the Commissioner
V. M. D. C. D. C.
the majorand particular actions the some the entraction of the control of the con
The amount of water appropriated shall be limited to the amount which can be applied to bene-
ficial use and not to exceedcubic feet per second, or its equivalent in
case of rotation. The priority date of this permit is
Actual construction work shall begin on or before
thereafter be prosecuted with reasonable diligence and be completed on or before
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Complete application of the water to the proposed use shall be made on or before
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WITNISS my hand thisday of, 19
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State Water Commissioner.
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Application No. A-1515 Permit No.
PERMIT TO APPROPRIATE THE PUBLIC WATERS OF THE
STATE OF ARIZONA
Division No District No
This instrument was first received in the office of the State Water Commissioner at Phoenix,
Arizona, on the 2d day of June , 19 34, at
Returned to applicant for correction
Corrected application received
Approved.
Recorded in Book No. 9 of Permits.
The state of the s
State Water Commissioner.
County, baring a powert population of
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BOARD OF GOVERNORS: CHARLES F. WILLIS, PHOENIX CHAIRMAN DR. N. H. MORRISON, PHOENIX VICE-CHAIRMAN A. C. W. BOWEN, WINKELMAN SHELTON G. DOWELL, DOUGLAS J. HUBERT SMITH, KINGMAN

DE. RIMENT OF MINERAL RESOURCES STATE OF ARIZONA CAPITOL BUILDING PHOENIX, ARIZONA



April 24, 1939 J. S. COUPAL, PHOENIX DIRECTOR

W. J. GRAHAM, PHOENIX ASSISTANT TO THE DIRECTOR AND SECRETARY TO THE BOARD OF GOVERNORS

FIELD OFFICES AT GLOBE - KINGMAN PRESCOTT - TUCSON

REPLY TO

Mr. F. C. McDonald, 1817 West Adams Street, Phoenix, Arizona.

My dear Mac:

I am enclosing herewith a letter just received from the State Water Commissioner, and I am also enclosing a copy of my reply to him.

This application for water was made before we investigated the water in the pool on Boulder Creek. It would be impracticable to consider making use of the water from Boulder Creek, and I would suggest that the application be cancelled.

Yours very truly,

J. S. Coupal

Director

JSC-jrf encls.

Mr. Jesse C. Wanslee, Water Commissioner, Arizona State Water Commission, Capital Building, Phoenix, Arizona.

Dear Mr. Wanslee:

I have just received word from F. C. McDonald who is in charge of the work at the Tip Top and LaBajada properties.

I do not know in whose name the application for water was made. If it was in my name personally, you may consider it cancelled as I have been so authorised by F. C. McDonald to do. If it was it the name of the Tip Top Mines Company and you wish official cancellation, please advise me and I will take the matter up with the Secretary of the company in St. Louis.

Very truly yours,

J. S. Coupal Director

JSC:MH

April 24, 1939

Mr. F. C. McDonald, 1617 West Adams Street, Phoenix, Arizona,

My dear Mac:

I am enclosing herewith a letter just received from the State Water Commissioner, and I am also enclosing a copy of my reply to him.

This application for water was made before we investigated the water in the pool on Boulder Creek. It would be impracticable to consider making use of the water from Boulder Creek, and I would suggest that the application be cancelled.

Yours very truly,

J. S. Coupal Director

JSC-jrf. encls.

April 24, 1939

Mr. Jesse C. Wansley, State Water Commissioner, Phoenix, Arizons.

My dear Mr. Wanslee:

Replying to your letter of April 20, will say that I am no longer connected with the Tip Top Mines, Inc., and have forwarded your letter to F. C. McDonald, 1817 West Adams Street, Phoenix, Arizona, who is now in charge of the Tip Top work. I am sending a copy of this letter to him.

After investigating the water at Boulder crook, we found that it was impracticable to make use of this water so I believe that this application can be cancelled, but I do not wish to take any official action myself.

Yours very truly,

J. S. Coupal Director

JCC-jrr

COPY

Mining Engineer 35 West Portland Phoenix, Arizona

September 29, 1939

La Bajada Exploration
Engineering & Equipment Corp.
Messrs. Claude C. Findly and
F. C. Mac Donald
Phoenix, Arizona

Gentlemen:

On September 23rd, Mr. Ed Hussan (who has been mine foreman in charge of the work) and myself accompanied you two gentlemen to your mining properties in the Tip Top District, for the purpose of inspecting the work accomplished since operations were commenced about July 15th, and to revise, if necessary, the work program recommended to you on June 26th, which has been, in all essential details, followed up to the suspension of operations on September 16th.

For the more complete and better understanding of this report which I am now rendering, I will suggest that, before reading further, you refresh your memory by referring to my report of June 26th.

# GENERAL.

As I anticipated, it has not been possible to limit the expenditure of your available capital to the exact program outlined and adopted. It has been necessary to make unforseen payments upon prior indebtedness, and also to purchase a certain small amount of equipment not anticipated. Mainly, for these reasons, your company has not been able to carry through the program with the funds provided. However, the work accomplished has been done at a cost well within the original estimate, and were it not for the extraordinary outlays mentioned, and the extra work done at Jackson and El Dorado, for extra repairs and rehabilitation made to and in the power plant and mill, all of which were well founded and advisable to do, the finds on hand at the start of the program quite probably would have been sufficient to carry through the original restricted program.

It is not at all unusual, in fact it is the practice rather than exception in all mining operations to continually modify and elaborate upon any program laid out. The nature of the work is such that no procise, definite program can be carried out during the period of exploration and development. After a property is once into a profitable production, then it is possible to lay out and follow a more concise and regular program, but, as mentioned before, prior to that time, it is almost impossible to do. Likewise, and for similar reasons, all conservative mining concerns, when they decide upon an exploration and development program for a mining property, anticipate and provide for an expenditure of between 25 and 50 percent above the amount estimated as ample to carry through the original exploration and development program.

O First poges missing

Occasionally, or I might even @ay rarely, a mining venture is so fortunate as to encounter usually favorable features early in operation, and in such case the program may be consummated within the original estimate. In your specific case, we did not, nor did we expect to, encounter high grade ore at the commencement of operations. We do have, however, several very good showings, and I anticipate that we will, with a comparatively small amount of additional working capital, be able to put the properties into profitable production. The work done, the showings encountered, and the assay record of the incomplete sampling done up to the time of the suspension of work, certainly bear me out in this belief.

The rehabilitation of the "76" Mine has gone ahead as well as I anticipated, and, except for a few minor unforseen difficulties, all of which have been overcome, there is no cause for complaint as to the manner of doing and cost of what has been accomplished.

The power plant repairs and rehabilitation have cost more, and have taken a considerably longer time than expected, but those are well under way, and, when more capital is available, can be completed in good order. I wish to mention here that in repairing and rehabilitating the power plant, we have gambled to the extent of repairing parts which, had funds been available, would better have been replaced with new parts. This practice, however, is quite common in mining ventures, and, if realized and taken into consideration ,is considered good business until a property may be upon a selfsustaining basis.

The mill is, I might say, now in much better operating condition than when it s rehabilitation was started. However, like the power plant, there were some repairs made which could have been done in a more thorough and better manner if funds had been available. In particular, it would have been better to have installed a new crusher at this time, but under the circumstances I believe we are doing the proper thing in attempting to get by with the present crusher installation until the operation provides funds for a replacement with a more appropriate unit.

# STATUS OF PROGRAM RECOMMENDED.

Referring to my report of June 26th, page 5:

- 1) The skelton survey recommended has been done, and working maps from this survey have been used in the operation to date. Those maps are not complete in that the stopes above and below the "76" adit tunnel have not been surveyed and plotted, but have only been sketched in on the working maps. All sampling and assays have been spotted on these sketch maps, and are sufficiently accurate for working purposes. When operations are again started, I would recommend that two or three days' surveying be done to complete the maps, so that copies may be made and sent to the St. Louis office.
- The raise has been driven and timbered, some 75 feet which connects the 180 ft. inclined shaft to the surface; ample capacity, some 40 tons, ore pocket has been constructed above the level; the head frame is installed, but one or two days' work will be necessary to complete the waste dump facilities at the shaft collar. The Bernard hoist is at the shaft collar, and can be installed on a timber foundation within a day or two. In driving the raise, exceptionally loose ground was encountered during the last twenty feet. That condition required slower work and more timbering in order to avoid excessive caving. However, the whole job is very well done, and will give excellent service when utilized.

The adit tunnel has been reconditioned to the face; track, air and water lines installed, and the whole level well rehabilitated. In addition, the face was turned to the east, the vein encountered, and some twenty odd feet of drifting has been done on the vein. In that drifting, while no pay ore has been encountered, the vein shows strong, and the further driving ahead of the face should be an excellent exploration when circumstances will permit. Practically all the timbering, chutes and manways have been installed above the adit level, and stoping started in several places when work was suspended. In some of the places so prepared there are very good, though narrow, showings of ore upon which to start stoping. In one place in particular, there are excellent indications that good grade of ore will be encountered rather quickly when operations are resumed. 5) Nothing has been done toward the carrying out of this miner feature. The shaft has been reconditioned as recommended, and only lacks the small detail of installing new guides to complete the program. The material is on the ground, and that work can be done in a very few days. While reconditioning the shaft, it was deemed expedient to take off all the humps, and put the shaft in first class condition for all time. That was done. This feature has had to be held in abeyance until the raise could be driven, head-frame and hoist installed, and the shaft reconditioned. However, this item can be completed within two weeks when work is again under way. Like item 7, this feature is also in abeyance, but can be completed within the same two weeks estimated for that feature. 9) & 10) Both in abeyance for reasons discussed. 11) Already discussed. 12) & 13) In abeyance. 14) Completed. 15) Already discussed. Nearly completed; the concrete tank and cooling tower are built; the heat-transfer unit fabricated and ready for installation, 17) In abeyance; three wells have been cleaned out, and are in good condition. MINING PROPERTIES: ' "76" Mine. Fully discussed under preceding heading. El Dorado. Although no work was contemplated under the original June reopening program, it has since developed that a reliable leaser has made an attractive offer to reopen the El Dorado property. In view of this, it was deemed advisable to install a hoist and head-frame and to recondition the shaft. The hoist is set on a concrete foundation; the head-frame is framed and ready to raise and bolt together; timber for reconditioning the shaft, new guides, and a bucket for the shaft, are in order. - 3 -

Jackson Tunnel. The tunnel has been cleaned up, track laid, and the necessary timbering installed for a length of 270 feet to the cave-in. The cave is being spiled through, and does not now appear to be at all serious, but rather consists of slabs and sluffed material from the old stope above. Some good looking ore is showing up in the muck that is being taken out from the spiling operation. This ore indicates that further exploration in the Jackson tunnel will probably develop good ore for milling operations.

Bernard, Fourth of July, Joker and other properties. No work has been done at any of these workings.

# MINE EQUIPMENT.

All has been overhauled, and put in as good shape as possible. The air drills are none too good, and when circumstances permit should be replaced with new equipment.

# MINE SUPPLIES.

Practically all purchased have been used up before the suspension of work on July 16th, and when work is resumed, supplies of every nature must be purchased.

# MINE PERSONNEL.

A very competent mine foreman, Ed Hussen, and a fair crew of men were doing the work up to the shut-down. A new crew will have to be engaged when operations are started agains.

# MILL.

There is still a small amount of work to be done, all of which can be completed within one week.

# POWER PLANT.

Discussed above; the pulley has been changed, and it is hoped that the repairs made will give good service until further replacements are justified. About two weeks will be required to reassemble the Diesel engine and have it operating.

# MILL PERSONNEL.

All the crew were discharged on September 16th, and will have to be replaced.

# MILL OPERATION.

No change since comments of June 26th other than that a small amount of custom ore has been arranged for, and plans are now being made to provide the bulk of the tonnage with ore from the main Tip Top dump around the hill to the east from the mill. Those plans will be discussed under a separate heading below.

# BOARDING HOURE.

An excellent boarding house was in operation when work was suspended. It is recommended that arrangements be made with the same party to return when work is resumed. -4

# MINE DUMPS. While at the property on the 23rd, the writer investigated and gave careful consideration to the advisability of milling ore from either or both of the Tip Top dumps. Although the tunnel dump at the head of the mill is more accessible, that feature is out-weighed by the quite apparent better grade of the main Tip Top dump, and also by the much larger tonnage available in the latter dump. There is an old grade, or road-way, leading from the main Tip Top dump to the head of the mill which, with a very small amount of work, can be reconditioned readily for track installation. A line of levels should be run over the road bed so that the track may be installed on a uniform grade. That survey can be made in less than a day, and at the same time as the stope survey recommend to be made at the "76". 750' of 16 lb. track, together with fish plates, bolts, spikes and ties, three roller-bearing mine cars, a mule to pull them, wheel-barrows, 6" picks and shovels, shoveling sheets, timber for a 50-ton bin at the dump, and timber for an ore shoot at the head of the mill will have to be purchased in order to work the dump.

The outlay for the above purchases and installation is estimated at \$1,000.00. The installation will require approximately two weeks' time. The writer recommends that this installation be made as soon as it is decided to reopen the properties, as examination of the dumps, together with study of previous dump sampling indicates that am ample tonnage, at a very small cost figure, can be obtained from this source, not only to make up full mill tonnage with that which will be obtained from the "76" Mine, but also to provide further working capital and a good profit on the whole operation.

# CONCLUSION.

The writer has nothing to add to the last sentence of his report of June 26th, which states "The writer believes that if you will follow these suggestions and conduct all operations as economically and efficiently as possible you will be successful in your venture, and not only recoup your present investment but also realize a good profit."

Very truly yours,

(SIGNED) S. J. Clausen, Jr.

SJC:MA

CC: Orig. & 2 to: Mr. Findly 1 copy to Mr. MacDonald

## EXHIBIT B

# Technical Data.

# A. Reports

Attached hereto are reports of independent examinations of the following Mining and Mettallurgical Engineers:

(1) (2) (3) (4) (5) (6) (7) (8) (9)	G. W. Alsdorf H. E. Armitage E. M. Clarke J. S. Coupal J. S. Coupal E. M. Muter S. A. Shappell H. A. Sill Geo. A. Thayer	Phoenix, Ariz. Prescott, Ariz. Reno, Nevada New York City Phoenix, Ariz. Prescott, Ariz. Phoenix, Ariz. Los Angeles, Calif. Prescott, Ariz.	1916 1911 1918 1917 1934 1916 1935 1927
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U.S.G.S. Bulletin #782 - "Ore deposits of the Jerome and Bradshaw Mountains Quadrangles, Arizona" by Waldemar Leudgern - 1926, is expressly referred to for geology of the District and detailed description of the Tip Top Mine. (Out of print) Reference -- extract -- attached, p.p. 3,12,15,16, 22-25,28,30,31,32,41-44.

Added to the above - within -

Report of J. S. Coupal of 1935 Extract - Weed - "Mines Hand Book"

TREASURY DEPARTMENT -- RULING -- "NEWLY MINED SILVER"

OPINION OF TITLE of TIP TOP MINES INC.

TIPTOP DISTRICT - TIPTOP MINE

References: U.S.G.S. Folio 126 - Bradshaw pp 9,10

"Bull. 782 p.p. 180-181

Mining Journal., Vol. 7, No. 17, pp 5-6 1924 (Ensign)

"20, No. 5, pp 3-5 1936 (Coupal)

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,		14 (*		
<b>(1)</b>	G. W. Alsdorf	Phoenix, Ariz.	14. 8	1916
(2)	H. E. Armitage	Prescott, Ariz.		1911
(3)	E. M. Clarke	Reno, Nevada		1918
(3) (4)	J. S. Coupal	New York City	**	1917
(5)	J. S. Coupal	Phoenix, Ariz.		1934
(6)	E. M. Muter	Prescott, Ariz.	• *	1916
(7) (8)	S. A. Shappell	Phoenix, Ariz.		1935
	H. A. Sill	Los Angeles, Calil.		1927
(9)	Geo. A. Thayer	Prescott, Ariz.		1916

U.S.G.S. Bulletin #782 - "Ore deposits of the Jerome and Bradshaw Mountains Quadrangles, Arizona" by Waldemar Leudgern - 1926, is expressly referred to for geology of the District and detailed description of the Tip Top Mins. (Out of print) Reference - extract - attached. p.p. 3,12,15,16, 22-25, 28,30,31,32,41-44.

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"Vol.20, No. 5, pp 3-5 1936 (Coupal

CLAUDE C. FINDLY
Attorney & Counsellor
Liberty Central Trust Bldg.
St. Louis, Mo.

Mr. O. J. Cloughly, St. Louis Wholesale Drug Co., St. Louis, Mo.

My dear Mr. Cloughly:

In pursuance to your request this morning that I give you an outline of our immediate future operations at the Tip Top properties controlled by the Golden Wonder Mines, Inc., and my opinion as to the merit of the enterprise, I wish to state the following:

We have 40,000 tons of ore ready for milling on the dumps and in the stopes of the Tip Top mine above the 200' level that will net a profit under present methods of milling and handling. We have a probable tonnage of 60,000 tons of ore below the 200' level in the Tip Top mine, but I am unable personally to vouch for this tonnage as the mine was inaccessible below the 200' level at the time I examined same. In my opinion there is approximately that tonnage there ready for milling. I have arrived at this opinion from conversations with residents of the district and from information that I gleaned from sources which I believe are reliable.

We have on the Tip Top property three ore shoots in addition to the main ore shoot formerly worked that, in my opinion, will open up a considerable tonnage of milling grade ore. I cannot at this time estimate the tonnage or the value of this ore but do know that the Tip Top, an ore shoot that averaged about 30<sup>th</sup> in width, produced 4,000,000 ozs. of silver up to 1892 when operations ceased, and from a geographical standpoint, can see no reason why the three other ore shoots, in my opinion, should not produce a considerable tonnage of milling ore. This property is a nucleus of our operation but is no more attractive, from a future development standpoint, than the Yankee Maid Group, a gold property acquired by the Company since I took hold of the enterprise late last Spring.

For your information, I wish to state that I have entered into a contract for the purchase of a 300-ton electrically equipped flotation mill. As soon as funds are available I intend to immediately recommend the construction of a power line to bring electric power into our district at an estimated cost of \$16,000. given me by the Arizona Power Company.

I am indeed sorry that I cannot have the opportunity to meet with your associates and explain this enterprise in detail. For your personal information I wish to state, in some twenty years of practical experience in mine examination and metallurgical work, there have been only two properties that I personally would put my own money into or give my own time to without remuneration. One of these was the Montana Mine which Sill & Sill recommended to you and other St. Louis parties a year age last December and which has since proven a mine of great magnitude and which, in my opinion will become one of the largest producers of gold, silver, lead and zinc in the southwestern United States. The other properties are those controlled by the Golden Wonder Mines, Inc., and I am personally willing to risk my reputation on the success of the Golden Wonder Mines if properly financed and managed.

If there is any information that you desire of a technical nature I would suggest that you ask Mr. Findly to furnish you with a copy of my report made to him when I examined the mine last February.

With best wishes, I am

Yours very truly,

(Signed) Harley A. Sills.

HAS: EW

HARLEY A. SILL
Consulting Engineer
1011 South Figueroa Street
Los Angeles

July 29, 1937

Mr. Claude C. Findly St. Louis, Missouri.

My dear Claude:

As I told you in my telephone conversation yesterday, I have returned from the mine with a more favorable impression than ever of the properties. It is chafing to me to see properties as good as these lying idle for want of financing. With a power line and a mill we would make a wonderful showing in a short while. To substantiate my faith in the mines I found the old assay book at the mine, or rather I got it from Wager there and have brought it back to Los Angeles for the purpose of copying out the results that pertain to our own properties. I am enclosing a list of them as far as I have been able to copy them. These assays are all dated and start in 1887. Read them over and then tell me that there isn't good ore in the Tip Top District. I have had only the assays copied that were made on the claims we now have. I am not a stenographer and it would be a long job to copy them all and besides I promised to send the book back to Wager. It is the property of his uncle who was the assayer there. It is the most remarkable list of results that I have ever seen together in all of my thirty years of experience in this work. Claude I am writing this to you for your private information and I want to urge you to let nothing stand in your way in financing this project. Please return these assays to me as soon as you have read them for they are my only copy. Perhaps you had better have Esther make a copy of them for your files. You say that I am a pessimist Claude but I am not. I merely want to stick absolutely to facts at all times and where we are inviting others to join us in financing this project perhaps I have been too conservative. I am telling you for your own personal information that I am enthusiastic and know that I can make a great deal of money for all of us if we can get a power line and a mill. We will wait a long time before we ever get another opportunity like this. I was most favorably impressed with Karbe and wish that he could be with us, at least I would like to have a chance to show him what we have out there. If the people in St. Louis believed in us as thoroughly as we believe in this mine then there would be no difficulty in financing it.

I have speken to you a number of times about the persistence of the Foy vein. During my last trip to the mine I went over the extension of this vein some four miles from Ensign's present working and have located four claims for the company on a showing from four to six feet wide on the surface. I hamed the best of these claims for you in appreciation for your untiring efforts in helping to make this a success. These claims make a splendid showing and are a very valuable addition to our already splendid groups of properties. Your Father has been a wonderful help tous. He has a large circle of friends and an enviable reputation and his association with us lends prestige.

With best wishes, I am,

Yours very truly,

(Signed) Harley A. Sill

HARLEY A. SILL Consulting Engineer 1011 South Figueroa Street Los Angeles

July 29, 1937

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With best wishes, I am,

Yours very truly,

(Signed) Harley A. Sill

#### CONTINENTAL CASUALTY COMPANY

#### CHICAGO

Phoenix, Arizona May 27, 1936.

Mr. J. S. Coupal,
La Bajada E. E. and E. Corp.,
Tip Top Mine,
Black Canyon Stage,
Phoenix, Arizona

Dear Mr. Coupal:

I am pleaded to enclose a sketch of the property showing the various fire insurance rates.

The rates shown are annual rates but all risks except those to which the \$3.65 rate applies can be written for three years at twice the annual rate. As an example, the rate on #12 dwelling for one year is \$1.55 per hundred dollars of insurance and the rate for three years would be \$3.10.

If the assay furnace were removed from the mill the \$3.65 rate would be considerably lowered and the same reduction would be made in using pressure oil feed for the Diesel engines instead of gravity flow.

The Special agent who made the inspection advises there is considerable value in the equipment and we would suggest carrying at least eighty per-cent to value in fire protection.

If we can be of any further service to you in getting production, in force, please do not hesitate to call upon us.

Very truly yours,

Waite-Smith Insurance Agency

By: Marshall W. Waite (Signed)

MWW

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Very truly yours,

Waite-Smith Insurance Agency

By: Marshall W. Waite (Signed)

MWW

# S. J. CLAUSEN, JR.

# Mining Engineer

302 First National Bank Building, Phoenix, Arizona

June 26, 1939.

La Bajada Exploration, Engineering & Equipment Corporation; Messrs. 'Claude C. Findly and F. C. McDonald, Phoenix, Arizona.

#### Gentlemen:

Following are my observations and recommendations regarding the operation of your mining properties located in the Tip Top District which I visited last week. As requested, my examination was restricted to the study of operating conditions for the purpose of recommending an economical and feasible program for profitable production.

## GENERAL

My understanding of the financial situation of the LaBajada Corporation is that you now have some seven thousand dollars, after providing for payment of pressing outstanding obligations, with which to place your properties in profitable production. That sum is none too ample and, unless operations are conducted upon a very economical and efficient basis and unless you are fortunate in producing good ore as soon as operations are underway, I doubt whether that amount will be sufficient, I would suggest, if possible to do so, that arrangements now be made to have an additional few thousand dollars available for working capital if needed.

In general, your property is not in bad condition to put into operation. Sufficient exploration and development, for the time being, has been done in the "76" mine to be able, after a small amount of rehabilitation and preparatory work has been done, to start production. When production is upon a profitable basis, further exploration and development must, of course, be done to assure continued operation.

The mill and power plants have ample capacities to take care of immediate needs. Some repairs are necessary however before satisfactory results may be expected. Those will be discussed later in detail.

#### MINING PROPERTIES

"76" Mine: This property is developed by an adit tunnel level approximately 550 feet in length on the vein; on the 65 foot level below the tunnel, a 30 foot drift to the southwest and a 60 foot drift northeast; on the 120 foot level, a 130 foot drift to the southwest and a 240 foot drift northeast, with a raise up some 40 feet above the drift at a point about 155 feet northeast of the shaft; on the 180 foot level below the adit tunnel, a 65 foot drift to the southwest and a 150 foot drift to the northeast. There is a small sump below the 180 foot level at the bottom of the shaft.

Some stoping has been done above the adit tunnel. However, there appears to be considerable stoping ground left between the tunnel level and the surface and it is from that block that immediate production should be started.

Between the 120 foot level southwest and the adit tunnel practically all

La Bajada Corporation - 2 6/26/39

# MINING PROPERTIES

developed öre has been stoped. To the northeast however, there is a good block of ground, above the level, available for stoping between the shaft and the 40 foot raise. That block should be placed in production along with the block above the adit level.

Above the 180 foot level southwest of the shaft no stoping has been done. That area should be investigated further as financial and operating circumstances will permit. To the northeast of the shaft between the 180 and 120 foot levels, practically all developed ore has been mined. It was from that area that you have made your best production.

The 180 foot inclined shaft below the adit tunnel is not in bad condition, nor are the other workings which have been discussed. Up until the present, hoisting has been done with an air-driven hoist, now in bad mechanical condition, on the adit level. This practice should be discontinued as all air from present equipment is needed for drilling. A raise should be driven from the adit level to the surface, some 40 feet, and all hoisting should be done to that point with an internal combustion engine. The Bernard hoist is available for that use. Waste should be dumped on the surface by the hoistman. A portion of the raise should be timbered off to serve as an ore pocket, from where the ore hoisted would be trammed out of the tunnel to the present mine-ore bin, the shipping high-grade sorted out and the balance hauled to the mill for treatment.

The adit level should be cleaned out and track, air and water lines installed to the face. Necessary timber and chutes should be installed preparatory to stoping above the tunnel level.

The face of the tunnel has been swung into the hanging wall of the vein. As circumstances permit the face should be driven over to the vein, only a few feet, and further drifting carried on to the northeast.

the 180 foot shaft should be reconditioned, for bucket hoisting, to some 25 feet below the 120 foot level and a muck pocket made, on the northeast side of the shaft, below that level. It would be better to install rails and a skip in the shaft but, the financial condition of the company does not warrant that expense at present. A few hundred dollars spent in the shaft as now recommended willput it in sufficiently good condition for present needs. After the property is in profitable production the shaft can be reconditioned for skip hoisting.

The 120 foot level northeast should be reconditioned to beyond the 40 foot raise, some 155 feet from the shaft, and tract, air and water lines installed to that point. The raise should be driven to the adit level for ventilation, and for a second exit, to facilitate stoping of the ground between the level and the tunnel. Some timbering and chutes will have to be installed before starting stoping.

All stoping should be done by a selective method, such as first breaking down the weste, on the footwall side of the vein, into the stope; then stripping down the clean ore onto iron sheets. This method will give clean, efficient extraction with a minimum ore loss. An inspection of the old Tip Top mine showed some such method to have been used in that property when it was successfully operated many years ago. It is needless to say that stope widths should be restricted to only

La Bajada Corporation - 3 6/26/39.

sufficient room for mining in order to obviate unnecessary hoisting; likewise drill holes should be short and lightly loaded to prevent excessive breaking and loss of ore into the waste.

When the operation is paying, further exploration work should be done on the 180 foot level, both to the northeast and to the southwest. In the meantime the water should be held sufficiently low on the level so that it does not reach the timbers.

Apart from the above, the writer does not recommend any further work on the "76" until operations are on a profitable basis.

Bernard Property: No work is recommended to be done on this property for the present. The expense is not warranted. Pipe, skids and ladderway should be removed for use at the "76".

Eldorado: All work, apart from the necessary assessment work, should be held in abeyance pending profitable operation at the "76".

Fourth of July, Joker and Other Properties; None of these properties were visited as, with the limited resources available, it is unnecessary now to consider placing any of them in operation.

MINE EQUIPMENT The Foos engine, which is used to drive the horizontal air compressor, should be reconditioned. That compressor, as well as the portable compressor which can be used as a standby, should be checked over before they be needed. This can be done while the adit tunnel is being reconditioned. Likewise the Bernard hoist should be checked over when it is moved to the "76". The drill sharpener and drills should be gone over and necessary parts and accessories purchased.

MINE SUPPLIES Should be purchased in as large lots as are consistent with the work to be done; dinamite in tons lots, timber and lumber in truck loads; drill steel, tools and other supplies in proportion.

MINE PERSONNEL A competent mine foreman, experienced in the method of mining to be used, should be hired. At the start he could look after all the mine work on two shifts, upon which basis it is recommended that the mine be operated. A good hoistman on each shift can do the hoisting, steel sharpening and take care of the engine and compressor. Three drill crews on each shift are commended. One or two trammers will be needed, as will probably be one or two muckers, apart from the drill crews who ordinarily will do a large part of the mucking. Work should be carried on six shifts, of seven and one-half hours each, per week to comply with the wage-hour law and to avoid overtime pay.

MILL In general the mill is in good operating condition. The crushing equipment will do for the time being but, after the property is in profitable operation, some changes should be made in that department. Several minor repairs and changes can be made in the mill while the mine is getting into production.

POWER PLANT The Diesel engine should be thoroughly overhaukd and improvements made in the water cooling system. A few necessary repair parts should be carried in stock. The pulley should be changed in order that the engine and generator may run at their proper respective speeds.

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MILL PERSONNEL Both the mill superintendent and the diesel operator appear to be capable. No changes are recommended.

MILL OPERATION The mill should be operated primarily for treatment of ores from the company's properties. If that source of supply, due to the narrowness of the vein, is not sufficient to keep the mill in continuous operation for at least one shift per day, some 16 tons, then outside custom ores could be accepted to make up that tonnage. Or, if it be deemed advantageous to operate the mill two shifts per day, then custom ores could also be accepted to make up the balance. As the diesel engine is old and will require more than ordinary attention while operating, it is not recommended that the mill be run more than two shifts per day until other, or additional power be installed.

SUMMARY OF RECOMMENDATIONS The following suggestions are made in chronological order, however several of them should be carried on simultaneously:

- 1) Survey the "76" mine and have plan and elevation made on a scale of one inch to 20 feet. This is necessary in order to direct mine work efficiently. At the same time run a stadia line along the outcrop some 1000 feet to the northeast from the adit portal; tie in, with stadia, the Bernard, Eldorado, Joker, Fourth of July, old Tip Top and any other nearby workings in order to plan future exploration, development and operation.
- 2) Drive a raise above the adit level to connect the 180 foot inclined shaft to the surface. Install an ore-pocket in the raise above the adit level. Install headframe and waste dumping facilities at the shaft collar. Move the Bernard hoist to the shaft collar and install.
- 3) Recondition the adit tunnel to face and install track, air and water lines.
- 4) Put in necessary timbering, chutes and manways above the adit level and start stoping there.
- 5) Install grizzly, sorting platform and small shipping-ore bin at the mine-ore bin.
- 6) Recondition the 180 foot shaft, for bucket hoisting, down to 25 feet below the 120 foot level.
- 7) Install a muck pocket on the 120 foot level.
- 8) Recondition the northeast 120 foot level to beyond the 40 foot raise, some 155 from the shaft; install track, air and water lines.
- 9) Connect the 40 foot raise to the adit tunnel.
- 10) Put in necessary timbering, chutes and manways and start stoping between the 120 foot and adit tunnel levels.
- 11) Continue driving northeast on the vein in the adit tunnel.
- (2) Recondition 180 foot shaft to the bottom, -for either bucket or skip hoisting, depending upon the financial condition of the company.
- 13) Continue northeast and southwest drifts on the 180 level.

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- 14) Utilize the diesel operator and mill crew to condition the Foos engine, both compressors and Bernard hoist.
- 15) Recondition diesel engine, change pulley, make necessary minor changes and repairs in the mill.
- 16) Improve cooling water system.
- 17) Improve camp conditions by making bunkhouse comfortable and vermin proof.

# CONCLUSION

Your properties, especially the "76" which is sufficiently developed to study, appear to be very similar to the old Tip Top which was reported to have been quite successfully operated in the early days.

The only way to determine whether your properties can be placed in profitable operation is to proceed along the lines recommended above. The writer believes that, if you will follow these suggestions and conduct all operations as economically and efficiently as possible, you will be successful in your venture and not only recouperate your present investment but also realize a good profit.

Very truly yours,

(SIGNED) S. J. CLAUSEN, JR.