



CONTACT INFORMATION

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

The following file is part of the

Arizona Department of Mines and Mineral Resources Mining Collection

ACCESS STATEMENT

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

CONSTRAINTS STATEMENT

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

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

QUALITY STATEMENT

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

PRINTED: 03/05/2003

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: GOLDEN BELT

ALTERNATE NAMES:
GOLDEN TURKEY EXTENTION

YAVAPAI COUNTY MILS NUMBER: 1194E

LOCATION: TOWNSHIP 11 N RANGE 1 E SECTION 25 QUARTER NE
LATITUDE: N 34DEG 16MIN 20SEC LONGITUDE: W 112DEG 12MIN 12SEC
TOPO MAP NAME: CLEATOR - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:
GOLD
SILVER
LEAD
IRON FERRIC OXIDE

BIBLIOGRAPHY:
WILSON, E.D. AZ LODGE GOLD MINES AZBM BULL 137
1967 P 52
ADMMR GOLDEN TURKEY FILE
ADMMR GOLDEN BELT FILE
GUITERAS, J.R. GOLD MINING AND MILLING IN THE
BLACK CANYON AREA USBM IC 6905 1936 P 6-14
LUNDIN, R.J. ET AL, BASE & PRECIOUS METAL MNZ
BLCK CNYN DIST, AZ (ADMMR GEOLOGY FILE)
ADMMR GOLDEN BELT-GOLDEN TURKEY COLVO FILE

GOLDEN TURKEY MINE

7 Lode Claims

The Golden Turkey Mine consists of 7 unpatented Lode Claims. A drilling program is required to develop the evident ore reserves on this property.

MINE DUMP

150,000 Tons
\$20.00 per ton

MILL TAILING DUMP

250,000 Tons
\$25.00 per ton

GOLDEN BELT MINE

3 Lode Claims

The Golden Belt Mine consists of 3 unpatented Lode Claims. A drilling program is required to develop the evident ore reserves on this property.

FROM REPORT IN
BLACK CANYON PALER FILE
(NEZONA)

MINE DUMP

75,000 Tons
\$20.00 per ton

MILL TAILING DUMP

125,000 Tons
\$30.00 per ton

MEYERS PROPERTY

The Meyers Property consists of 9 unpatented Lode Claims. Geological indications are in evidence to support the theory that this property is the source of mineralization in the Golden Belt and Golden Turkey Mines. A drilling program on this property should develop large reserves of high-grade ore. Surface samples have assayed \$65.73 per ton.

FROM NEZONA REPORT
IN BLACK CANYON PUEBLO
FILE

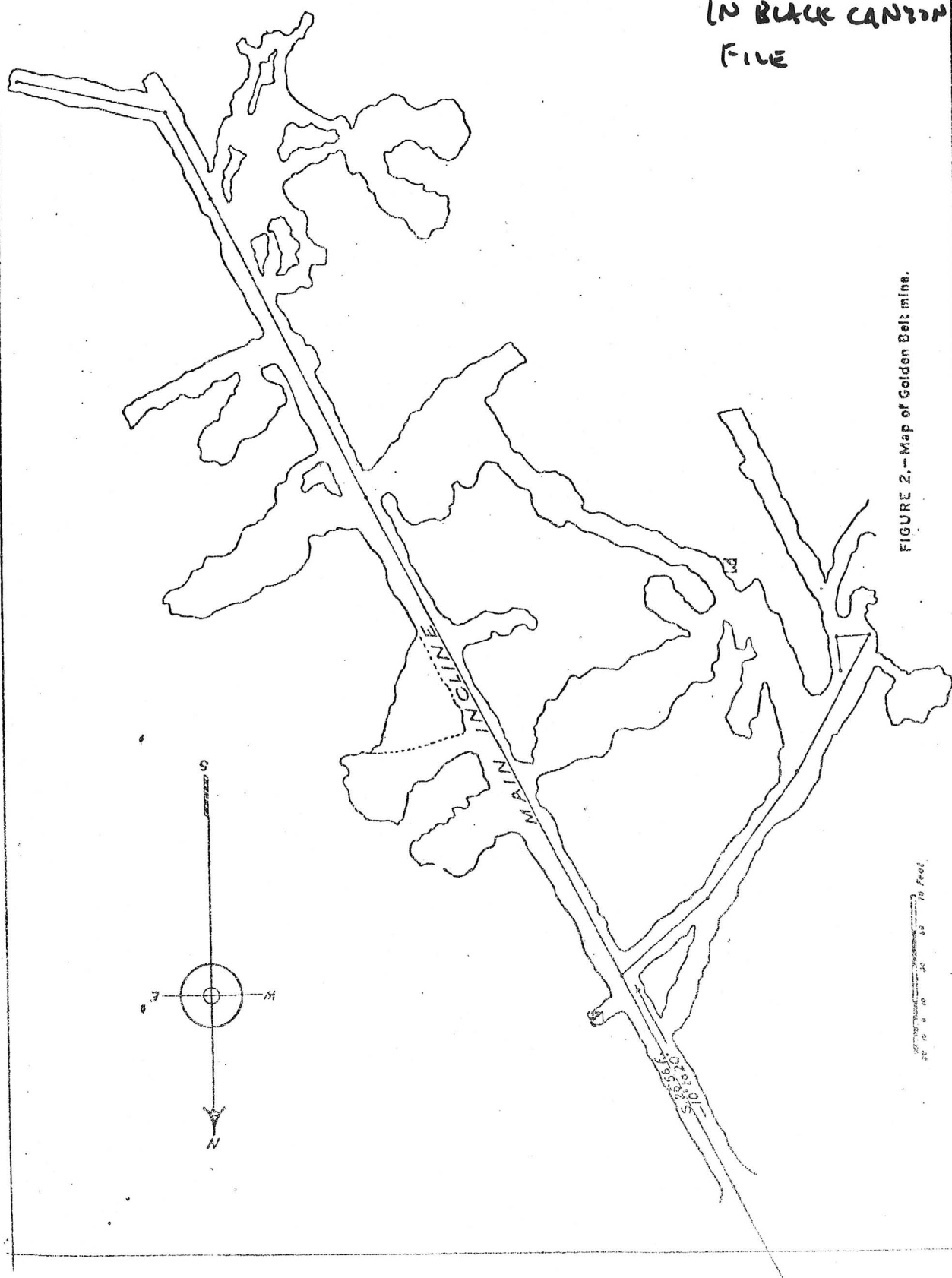


FIGURE 2.- Map of Golden Belt mine.

GOLDEN BELT MINE

YAVAPAI COUNTY

Golden Belt Mine & Mill (file)

ABM Bull. 137 p. 52

IC 6735

USBM Mineral Resources for 1931
Part I p. 410

IC 6905 p. 6

USGS Bulletin # 1345 P. 34

Pay Dirt 12/68

Pay Dirt 2/1969

Golden Turkey Mine
Golden Belt Mine (F)

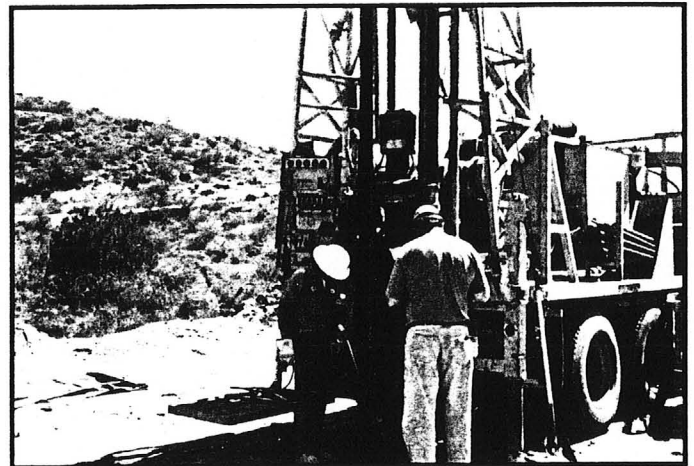
Forest Environment

Bureau of Mines Works on Watershed Assessment

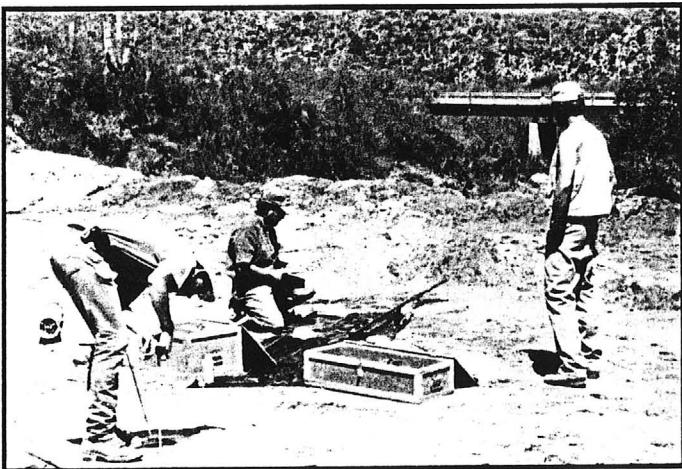
by Karen Hawley

In 1994, a memorandum of understanding was signed between the PNF and the U.S. Department of Interior, Bureau of Mines - Spokane office. The purpose of this memorandum was to perform a watershed analysis based on mine site characterization of inactive and abandoned mines in the Lower Turkey Creek watershed.

The Bureau of Mines initially requested to do a comparison watershed study in a Southwest environment to determine the validity of methodology used with a similar study recently completed in the wetter Northwest. Various watersheds in the Southwest were looked at and this project was initiated on the Bradshaw Ranger District.



Monitoring well being drilled at the Golden Belt Mine, April 1995.



Personnel from the Bureau of Mines - Spokane office and the Bradshaw Ranger District sampling the Golden Belt Mine, April 1995.

The watershed assessment will include a characterization of each mine site found within the watershed using a mine site inventory, water quality sampling, soil sampling and benthic sampling. This will be a 2-year study with the bulk of the work already having been completed in 1995. A series of water quality and benthic samples have been taken at 24 sites within the watershed.

In April 1995, three monitoring wells were drilled at the Golden Belt and Golden Turkey mine sites for the collection of water quality samples within the mine spoils found at these two sites. At the same time, extensive geophysical surveys and mine site surveys were completed by personnel of the Bureau of Mines - Spokane Office and the PNF. The final watershed report will be completed during 1995.

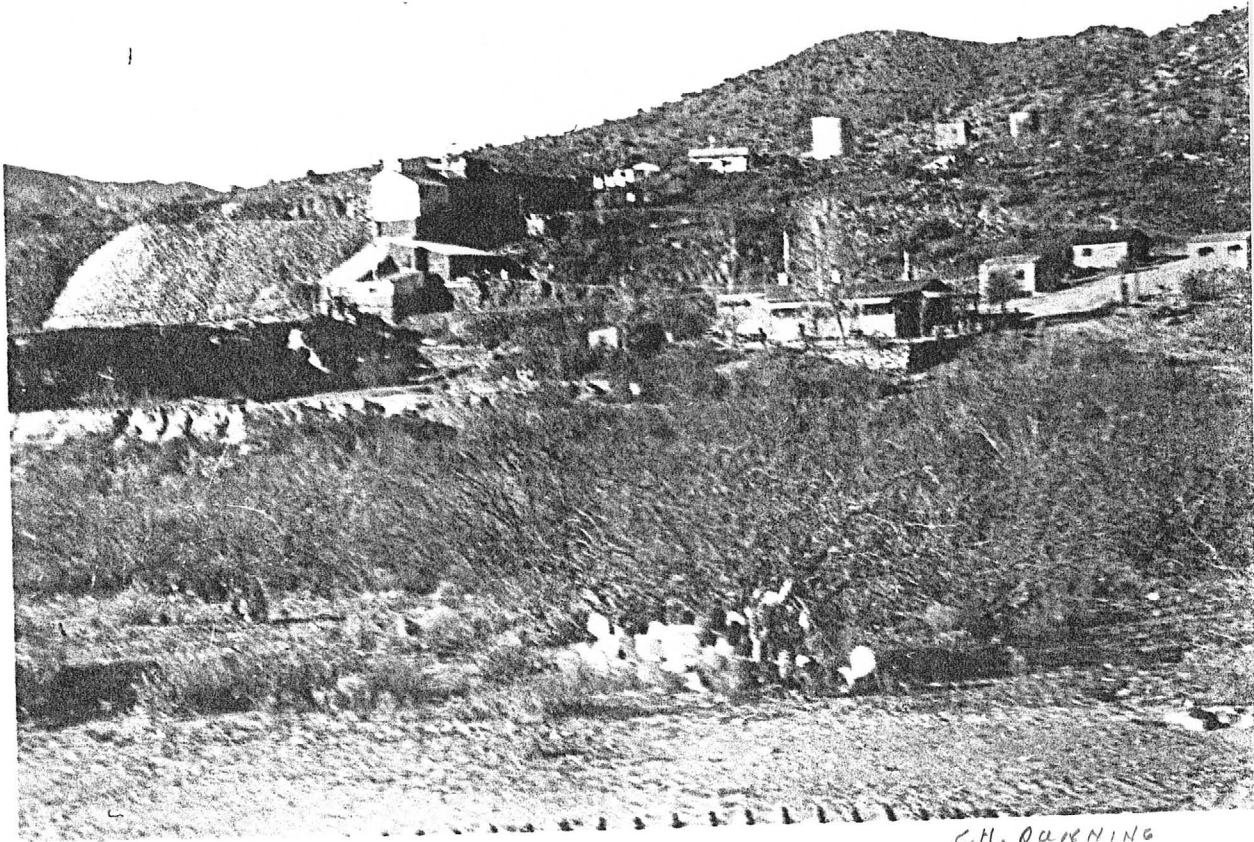


A-61-2

Golden Belt Mill

8/80

By K.A.P.



CH. DUNNING

A-61-1

GOLDEN BELT MILL C-1950 (GOLDEN TURKEY EXT.)

Golden Bell

1-196

THUNDERBIRD MILLING COMPANY, Inc.

P.O. BOX 254 • MAYER, ARIZONA 86333

2720 DES PLAINES AVENUE • SUITE 21 • DES PLAINES, ILLINOIS 60018

PHONE : Area 602-632-7789



President; 'Dane Macomber
Director 505 North Lakes hore Drive
 Suite 1818
 Chicago, Illinois 60611

Vice President; 'James W. Hines *send dope assays etc on Blue Bell*
Director Box 113
 Mayer, Arizona 86333

Secretary: 'Davis Keeler
Director 2720 Des Plaines Avenue
 Suite 21
 Des Plaines, Illinois 60018

Manager: 'Henry Jarvis
 Box 113
 Mayer, Arizona 86333

'Copper Dome Property leased from Clifford Morris and Robert DeVore of Mayer, Ariz.

Information for Arizona Department of Mines and Mineral Resources Mine Files

VERBAL INFORMATION SUMMARY

File Name	<u>Golden Belt</u>
AZMILS Primary Name	<u>Golden Belt</u>
AZMILS County and AZMILS No.	<u>Yavapai 1194D</u>

SOURCE: Paul Krzych, Dynamac Corporation
ABOUT: Golden Turkey Mine, Golden Belt Mine, and French Lily Mine
DATE: August 20, 1999
PHONE: 301-417-6121

INFORMATION

Paul Krzych, Dynamac Corporation, Maryland requested information on the Golden Turkey Mine, Gold Belt Mine, and French Lily Mines in Yavapai County. He is a consultant hired by the Forest Service to investigate potential sources of pollution. He explained he was given these three properties by the Forest Service to evaluate.

Date Printed: 01/15/98

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

INFORMATION SUMMARY

Information from: **Bev Everson**

Company: Bradshaw Rngr Dist, Prescott N'tl Forest

Address: 2230 East Highway 69
City, State ZIP: Prescott, Arizona 86301
Phone: 520-445-7253

MINE: Golden Belt Mill

ADMMR Mine File: Golden Belt
County: Yavapai
AzMILS Number: 1194E

SUMMARY

Bev Everson, Bradshaw Ranger District of the Prescott National Forest reported on the status of the Plan of Operations on the Golden Belt Mill [Yavapai AZMILS #1194E] Golden Belt file.

A plan was approved in the Spring of 1996 for Jerry Nobel to remove and transport mill tailings from the property over a year ago. A small reclamation bond was set at \$3,000. the bond was never established, work was never started and the Forest Service is in the process of closing the operating plan. At some time during the last year Jerry Nobel apparently notified the Forest Service that a Tom Stubbist would be making the bond.

Ms. Everson did not know of anyone named Derrick to be involved in the property.

Ken A. Phillips, Chief Engineer

Date: January 12, 1998

United States
Department of
Agriculture

Forest
Service

Bradshaw
Ranger District

2230 East Highway 69
Prescott, AZ 86301

GOLDEN TURKEY MINE (F) YAVAPAI
GOLDEN BELT (F) YAVAPAI

2
K

Reply To: 2810

Date: March 19, 1996

Dear Concerned Citizen:


The Bradshaw Ranger District has received a Plan of Operation for removal of mine tailings and waste rock at the Golden Belt Mine near Cleator. The legal description for the proposal is Section 25, Township 11 North, Range 1 East.

The proposal calls for removing 40,000 tons of material over a five year period. Removal of the materials will be accomplished by using a 2 1/2 yard wheeled loader. The materials will be placed in a dump truck and hauled off of the Prescott National Forest for processing. Approximately five days a month will be utilized for material removal. A bermed and insloped area will be created to contain any runoff and prevent it from entering Turkey Creek. Reclamation at the site will include revegetation and recontouring any of the disturbed areas. The operation will be bonded to ensure reclamation.

Minimizing impacts on vegetation and wildlife have been identified as concerns, as well as protecting water quality. A cultural resource inventory and a biological evaluation have already been completed. Heavy metals have been identified in the mine tailings and the Arizona Department of Environmental Quality and the United States Environmental Protection Act Region IX Branch Chief are being consulted.

If you have any additional concerns or comments, please provide them to me by April 5, 1996. A copy of the proposal is available for review at this office. If you have questions, feel free to contact Doug Vandergon at (602) 445-7253.

Sincerely,



for JOHN W. HOLT
District Ranger

Caring for the Land and Serving People

GOLDEN BELT MINE AND MILL

Cleator USGS 7.5' Quad. Map

Map Scale: 1:24,000

Project Area 

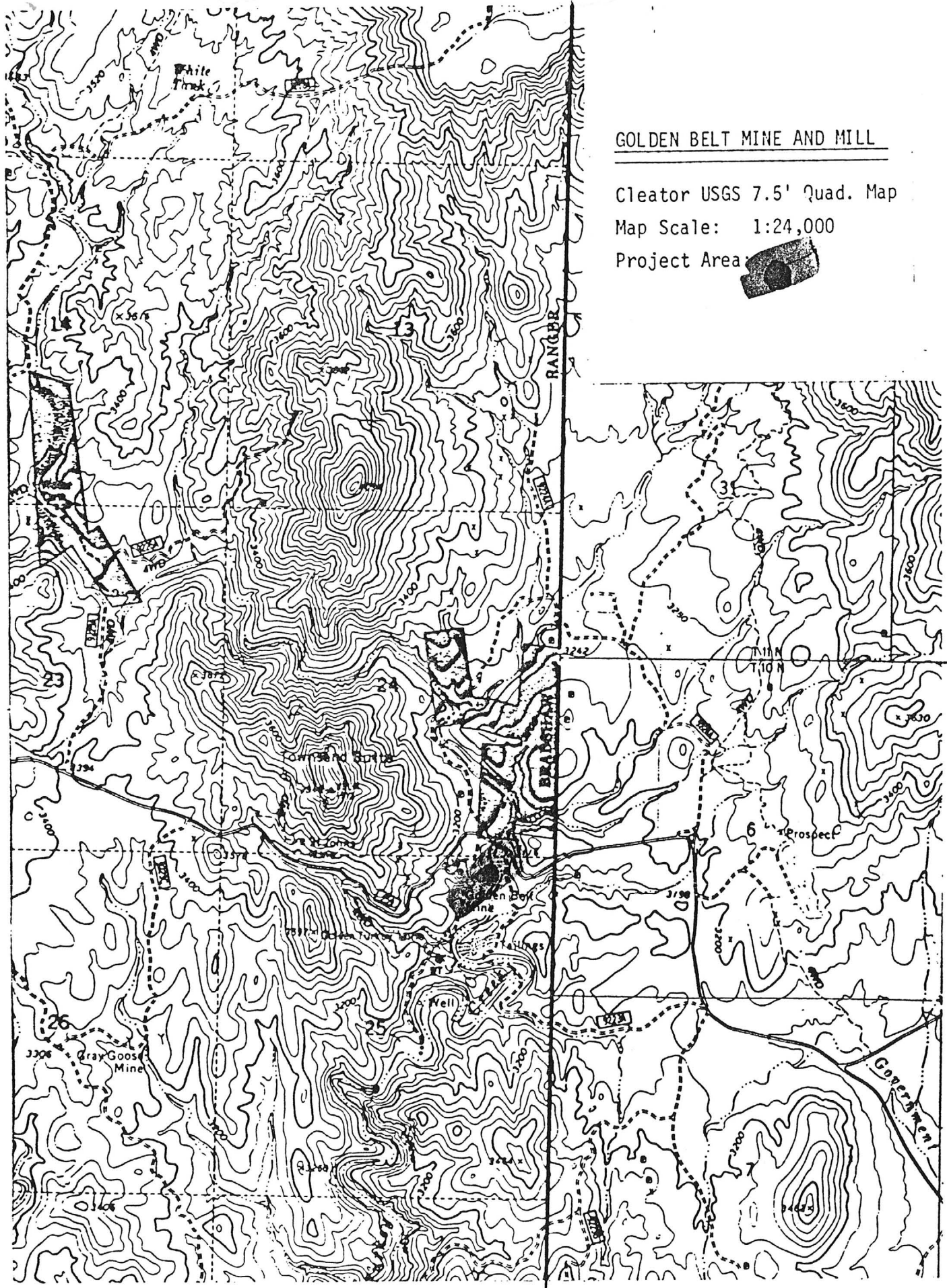
T
11
N

T
11
N

T
10
N

R 1 E

R 2 E




VIS6.20

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

VERBAL INFORMATION SUMMARY

1. Information from: **Ken W. Hammes**
Company: **Sedona Corporation & Hammes Engineering**
Address: **P.O. Box 551**
Sedona, AZ 86336
2. Phone: **602-228-5686**
3. Mine: **Golden Belt**
4. ADMMR Mine File: **Golden Belt**
5. County: **Yavapai** MILS Number: **1194**
6. Summary of information received, comments, etc.:

Mr. Hammes reported Commodore-Sedona Limited is no longer involved with the Golden Belt Mine. He is the individual to contact regarding the mine.

Date: 1-31-92 Engineer: Ken A. Phillips 

GOLDEN BELT MINE AND MILL

YAVAPAI COUNTY

NJN WR 11/6/81: Sedona Resources Inc., a Canadian Company has the Golden Belt Mill and Turkey Creek, Yavapai County and also have some of Tom Cleator's property under lease. Ken ~~Memmes~~ *Hammes* in Sedona is the resident representative of Sedona Resources Inc.

KAP WR 9/21/84: A report was received that a Canadian firm known as Commodore Mining & Resources is trying to put the Golden Belt Mill into operation. Further, it is believed that the Golden Belt Mill is no longer part of, related to, or in common ownership with the Golden Belt Mine. Additionally the Golden Belt Mill is no longer associated with the Gladiator Mine. The mill is located on the west bank of Turkey Creek just south of the Cleator - Crown King road.

KAP WR 1/3/85: A visit was made to the Golden Belt Mine (file) mill on Turkey Creek in Yavapai County. The mill, which is idle but relatively intact was toured and a list of the major equipment components was made. A caretaker, Mr. Ray A. Gamble, HC34, Box 5125, Mayer, Arizona 86333, phone 632-7185 lives at the mill. He reported the current owner is Commodore-Sedona Corp, Statutory agent: John F. Goodson, 2700 Arizona Bank Building, 101 N. First Avenue, Phoenix, Arizona 85003. A separate report has been written.

KAP WR 12/13/85: The watchman at the Golden Belt Mill on Turkey Creek (where the Crown King Road crosses the creek), Yavapai County reported the mill is owned by Commodore Sedona Corporation, % John F. Goodson, 2700 Arizona Bank Building, Phoenix, Arizona. Commodore Arizona was incorporated 2/14/85.

Visited the Golden Belt mill - idle. FTJ WR 9-22-67

Visited Golden Belt - Los Angeles crowd repairing mill and will take custom ore and mill tailings. FTJ WR 5-24-68

Thunderbird Milling Co. are at the Golden Belt and are active on other properties in the vicinity. Principal officers, etc. could not be learned. Three men were in the mill cleaning up and overhauling some equipment. FTJ WR 9-20-68

Visited Thunderbird Mill (Golden Belt). President - Dane Macomber. They were building leach vats for Cu ore to come from Rainey mine, 2 miles north of Cordes, expect to treat 100 tons/wk. Henry Jarvis, assayer. 5 employed. FTJ WR 11-22-68

Visited Golden Belt mill south of Cleator which is now Thunderbird Milling Co. Inc, Box 113, Mayer, Arizona 86333. They have leased the Copper Dome property owned by Clifford Morris and Robert Devore of Mayer. Henry Jarvis is Manager. FTJ WR 1-24-69

Visited Golden Belt mill and talked with Henry Jarvis, evidently an assayer, and associate of J. Earl Kinnebrew who is a former employee of Dorr-Oliver and has set up a tank in which old tailings are mixed and stirred with heavy media and a heavy mineral concentrate drawn off at the bottom. The concentrate runs \$18-50 per ton, mostly in gold. Jarvis is optimistic about the success of the operation. FPK WR 6-4-69

Visited the Golden Belt mill - Jarvis was in Prescott - no other men around. Plant idle. FTJ WR 7-18-69

To Golden Belt mill - interview with Mrs. Jarvis (Mr. Jarvis is manager) General Mining and Milling Co. headed by a Mr. McIntosh at New York, has taken over the mill and were exploring Tom Cleator's Silver Cord mine. FTJ WR 9-19-69

Stopped at the Golden Belt mill on Turkey Creek but no one was around
GW WR 5-25-73

KP/WR 10/25/79 - Al Guthier, Formerly of B.A.A.R. 4 Mica is living at the Golden Belt Mill on Turkey Creek in Yavapai Co.

KAP WR 4/3/80: John Warsing reported that Gilbert Smith of Scottsdale owns the GOLDEN BELT MINE on Turkey Creek, Yavapai County. John Warsing is evaluating the mill for possible lease-purchase.

Surprise claims - Active Oct. 1961

Visited the Golden Belt Mill and talked with Jim Broyles. He reported that his brother Dexter was working with 3 men at the Surprise property above the DeSoto erecting a headframe and repairing the collar of a 50' shaft. TPL WR 12-2-61

Golden Belt Mill and Surprise Claim active Feb. 1962 - 4 men working. James Broyles, Supt., Lewis Development Co., 6006 W. Indianola, Phoenix. Operator.

Jim Broyles - 3107 W. Alvarado Rd., Phoenix - visit to office re old Morgan mine also the Lewis Development Co. oper. near Cleator which he quit as supt. around the turn of the year.

Visited the Golden Belt Mill of Lewis Development Co. They have rigged up to start sinking the Surprise shaft but were idle at the time of visit. Logan Culp is in charge. He recently replaced the Broyles Brothers. TPL WR 5-26-62

Golden Belt Mill in process of rehabilitation by Dexter Broyles, L. E. Weisman, F. Collins and T. R. Cleator. The group are incorporating and intend to ship oxide ore from DeSoto mine to Hayden and mill ore (silver, lead & zinc) from the Silver Cord, and later sulphide ore from DeSoto. The 5 x 5 Denver ball mill and float cells have capacity of about 50 tpd. FTJ WR 9-24-65

Visited Tom Cleator - Golden Belt Mine & Mill - mail address Bumble Bee. The mill expected to be in operation in early December. Will mill DeSoto copper ore at a rate of 50 tpd. FTJ WR 11-19-65

Visited Golden Belt mine - plant shut down after milling a small stockpile. No one at the mill. Road to the DeSoto was blocked and all hands were trying to get a dozer to the job. Roads practically impassable. FTJ WR 1-21-66

Visited Golden Belt Mill, Larry Weisman, supt. of mill. Mill running 2 shifts @45 tpd, but was shut down due to "out of ore" from DeSoto. 4 men employed. FTJ WR 3-18-66

Visited Golden Belt mill. Work at the DeSoto and Golden Belt has ceased. Dexter Broyles has sold his interest and the remaining group are trying to refinance. FTJ WR 5-20-66

Visited Golden Belt - mill shut down and no activity. FTJ WR 7-22-66

Visited Dexter Broyles and Larry Weisman at the Golden Belt mill. They are no longer connected with the Golden Belt or the DeSoto mine. FTJ WR 11-18-66

Visited Golden Belt Mill - no one at the mill. FTJ WR 1-20-67

GOLDEN BELT MINE

YAVAPAI COUNTY

Memo

September 26, 1961
Travis P. Lane

Visited the Golden Belt Mill (idle). A caretaker was present and the two Broyles Brothers and another man were doing road work on the mountain. They are extending the recently improved DeSoto road to connect with their Surprise claims above the DeSoto ground. They expect to develop the Surprise showings.

Visited the Golden Belt Mill near Mayer, Arizona. This has been taken over by Lewis Development Co., James Broyles, Mgr., 3107 W. Alvarado Road, Phoenix. 4 men are employed rehabilitating the mill. They intend to develop the Surprise (5 Metals) claims adjoining the west boundary of the De Soto mine; also they expect to handle dump and custom ores. TPL WR 1-28-61 & Mining World 4-1961

I was told that Lewis Mining and Development Co. had started up the Golden Belt Mill two days before on ore hauled down from the Surprise claims (above the DeSoto). TPL WR 3-18-61

A visit from Jim Broyles, 507 N. 19th St., Phoenix, Apt. 131, Mgr. Lewis Development Co. (Surprise mine, Golden Belt Mill) re properties in the Cleator area. TPL WR 4-1-61

Visited Golden Belt mill near Cleator. Lewis Development Co. had the mill in operation running some DeSoto dump material. TPL WR 4-15-61

Visited the Golden Belt mill. The plant was idle. Dexter Broyles was present. He said the company was unable to obtain economical ores to treat on a custom basis, and plans soon to begin development of its Surprise claims above the De Soto mine. TPL WR 5-27-61

Visited the Golden Belt Mill. The Broyles brothers were present, also the newly appointed resident manager, Benjamin Marks. The company name has been changed to Lewis Development Co. of Arizona, 6006 W. Indianola St., Phoenix. Partnership principals are John D. Lewis, Henry P. Onrich and Benjamin Marks. The local address is Star Route, Bumble Bee, Arizona. Jim Broyles is supt. Three men are employed but no work was in progress at the time of visit. They plan to develop their Surprise claims above the DeSoto mine and are waiting upon the DeSoto's road building program. The latter has delivered a large dozer to Cleator. The Lewis people hope to arrange with the road contractor to extend the DeSoto road to the Surprise claim. TPL WR 7-15-61

MM K125

WV 1 200 100 sq. ft.

G-18

13.0 x 7.0 x 8.0 *Gravel*

MINE SPECIMEN FOR DEPARTMENT OF LIBRARY AND ARCHIVES

(Do not write in this space)

(Wrap each specimen separately, or place it in a substantial bag, by itself, with a number attached, identical with the number on this card.)

Ore _____

Cabinet _____

No. _____

Specimen No. 16, collected by Carl G. Barth, Jr. Field Engineer

Name of ore Gold Ore

Operator Golden Turkey Mining Co.

Minerals contained Galena, Sphalerite, Pyrite, Gold, Silver.

Mine active or inactive Active

If inactive, when operated _____

Gangue Quartz

Specimen presented by _____

Depth at which taken 600

Date January 1940

Approximate mineral content (in terms of average per ton) _____

Notes (Any general information regarding the history of the property.) _____

Mill Heads \$ 10.00

Opened 1932 by Golden Belt Mining Co.

Name of mine or claim _____

now called Golden Turkey Extension.

Group Golden Belt

District Black Canon

Location (distance and direction by highway from what town) 50 m.s. Prescott

Owner of property Same

If more space is desired for notes, use other side.

R E P O R T
ON
THE GOLDEN BELT GROUP OF MINES
Turkey Creek Mining District
Yavapai County, Arizona

By W H Jenkins

See 6 TION RZE

LOCATION AND TRANSPORTATION

The GOLDEN BELT group is located on the east slope of the Bradshaw Mountains in the Turkey Creek and Black Canon Mining Districts, Yavapai County, Arizona. The mine is two and one quarter miles from Turkey Creek Station (Post Office is Turkey) on the Bradshaw the Bradshaw Mountain branch of the Santa Fe Railroad. This branch runs from Prescott to the Crown King, De Soto, Blue Bell and other mines in the district, also passing thru Humboldt, where there is a smelter.

There is a good hard wagon or auto road from Turkey directly to the property. The character of the country, thru which the road passes, is such that loads can be hauled at all times and in any kind of weather. There is also a good road from the "Black Canyon, Prescott to Phoenix Highway", to the mine, distance about two miles.

The GOLDEN BELT GROUP proper, includes five claims known as the "GOLDEN BELT", "WILLIE 'FRACTION", "GOLD 'STANDARD", "MARS", and "MARIE", together with four adjoining claims.

This group was located in 1873 and the property has been worked almost continuously ever since and has been a producer on a small scale during the entire time. The original locations have never lapsed, and so are recorded amongst the first locations in the district. There are no title complications of any kind as a few inconsequential technicalities as to spelling and improper description have now been legally straightened out in the county records. Also, being the prior locations on these veins and owning the apex of the veins, under the "Apex decisions" of the courts, owners of this property have the right to follow the veins outside the side lines of the claims, if it should ever become necessary or advisable.

The mine was originally located by Geo Zika, but for more than twenty years has been worked by M Theising. Most of the ore mined has been treated by arrastres, but a few years ago, Mr Theising had a small two stamp (Tremain Steam Stamps) mill built and as this mill was not suitable for the treatment of the ores, it did not pay out and the title to the property passed to the people who built the mill. The capacity of the mill was less than eight tons per day of twenty-four hours and with its small capacity, high cost of operation and incomplete apparatus it was not successful and the greater part of the values went off in the tailings; about a thousand tons of tailings were hauled away and treated in a cyanide plant, then located a few miles away and I am informed by one of the men who worked the tailings that they made a very satisfactory recovery. This statement is, apparently, not at all exaggerated as at the present time, there is a small tailings dump of about a hundred tons, at the mine and my sampling and assays show that these tailings now run 7.36 oz in silver and 0.33 oz gold; a total value of about \$14.00 per ton.

In addition to the previously mentioned claims, Mr Theising still retained title to the following claims: "THE 'TURKEY", "TOWNSHIP", "LOS 'ANGELES" and "GOLDEN 'CLIFF". These claims show the same veins and the same formations that are developed on the other claims. There is a considerable mining activity in this district and there are quite a number of mines and milling plants in operation.

WATER AND FUEL

These mines are located directly on the banks of Turkey Creek and there is running water eight or nine months out of every year. During times when there is no surface flow, there is plenty of seepage water or underground flow sufficient for all purposes. There are now two wells which give an ample supply and the lift will only be about eighty feet to the top of mill building. There is running water at all times, a short distance up the creek and a few hundred yards down the creek from the mine.

There is sufficient wood in the vicinity for domestic use, but no fuel for power purposes, and in this section, the most economical and efficient power is generated from gas or oil engines of various types.

There is no timber suitable for mine purposes and necessary mine timbers would have to be shipped in, but in a "blanket vein", such as this is, the only timbers needed (outside of mine haulage ways) are straight posts or stulls, with head boards, and not many of these as the roof or country rock is hard and stands well.

EQUIPMENT

There is a good Fairbanks-Morse gasoline hoist (recently installed) with ore-cars, track, etc. Supply of mine steel (drills), picks, shovels, hammers and other mine tools, Blacksmith and sharpening outfit, etc.

The old mill building on the property is in good shape and could be used to good advantage. It contains two Tremain steam stamps boiler and small steam engine. This machinery would have to be scrapped and could doubtless be sold for a small sum above the cost of taking it out of the building.

ORE AND FORMATIONS

The general formation is "Yavapai Schist", with porphyry quartzite and diorite dikes cutting thru it, and in places, sheets or flows of diorite overlying the schist.

The "GOLDEN BELT" vein is, so far as present developments show, a comparatively flat or blanket vein, which lies approximately parallel to and near the surface of most of the "GOLDEN BELT" group. It is my opinion that there are, at least, two veins, one underlying the other; and it is very possible, and I think, probable, that there are other veins underlying the veins as shown by present workings.

In tunnel No 1, on the "GOLDEN BELT" claim, the vein appears to be dipping towards the south at an angle of about twenty-five degrees, and it is possible that the vein will become more or less vertical and become a "fissure" instead of a blanket vein. Further development at this point will be necessary to prove what the vein will do, but as the development can all be done on good ore, the work should more than pay its own way.

The vein matter, wherever opened up, appears to be a shattered porphyretic rock with small seams of hematite and other oxidized minerals running thru it in all directions. These small seams are entirely oxidized and carry most of the values and are from knife-blade thickness to a quarter of an inch or more in size. There are also unshattered quartz streaks, usually on the hanging and foot-walls, and varying from one inch to as much as two feet in thickness but generally not more than five or six inches wide. These so-called high grade streaks or quartz streaks carry sulphides of iron and lead, tho in places, the sulphides are wholly or partially oxidized.

Running northerly and southerly thru the "TOWNSEND", "GOLD STANDARD," and "GOLDEN CLIFF" claims and just west of the end lines of the "GOLDEN BELT" and "WILLIE PRACTION", there is a large porphyry

dike of a different character, known locally as "birds-eye" porphyry. This dike shows iron sulphides and carries small values. It is the theory of the former owners of the property that the vein "goes down" alongside this dike and this theory has been favorably considered by engineers who have examined the property. It is possible that this is the true theory of the vein and on the west side of the dike, to the south, on the "TOWNSHIP" claim, the formation is dipping toward the dike and there is a vein several feet thick, with a foot or so of good ore, that is dipping into the dike from the opposite direction than the dip of the "GOLDEN BELT" vein which is on the east side of the dike; however, on the north end of the claims, the "GOLDEN BELT" porphyry or vein matter shows on both sides of the dike.

After doing considerable development work on these claims and becoming familiar with the surrounding country, I have formed the opinion that the veins do not go down, for I have traced and found either the same vein or other flat veins in almost every direction and for long distances from this group.

In any case, there is a large tonnage of a very good grade of ore in sight and with very great future possibilities for large and extensive ore bodies to be opened by further development work.

DEVELOPMENT

Until recently, there has been no systematic development work done on this property. For almost forty years, the mine has been worked by "chloriders" who have followed the high grade streaks and mined the ore that was most easily accessible and suitable for treatment in arrastres. In mining this ore several hundred feet of tunnels and drifts have been driven and in doing this work, a large tonnage of very good mill ore has been exposed. Also, many open cuts, shafts and other work has been done and all this work has been done on ore. It was only recently known or recognized that the large porphyretic vein was in reality the ore and in many places the foot-wall of the main vein was not reached and it was not possible for engineers making examinations of the property to see nor sample nor know the full width of the ore bodies.

Two of the old tunnels are nearly two hundred feet long and several others are nearly that length with drifts, etc. The open cuts also show mill ore in large quantities and all of a good grade that will pay a good profit in a modern reduction plant.

I have recently done considerable work on this property, systematizing the development work to some extent and opening up the vein to its full thickness in many of the old workings, equipping the property with a gasoline hoisting engine, starting a new working shaft or slope on the ore. This slope is all in ore and is so located that the mine cars can be run directly to mill bins without rehandling. This slope is now about one hundred and sixty feet in length and is about ready to connect up with some of the old workings.

The ore bodies have been carefully and accurately sampled wherever exposed. In all cases, large and fair average sample cuts were taken.

The assay map, accompanying this report, shows accurate surveys and measurements of the various workings and where each sample was taken, together with the size of the ore body and the values of the ore.

My assays show an average value of twelve dollars and sixty cents per ton, which I believe to be a fair average of the ore, but, as a factor of safety, I have omitted in my estimates, all assays taken from the so-called high grade streaks and after eliminating these assays the average value is 0.325 oz. in gold and 1.45 oz. in silver per ton, equal to \$8.09 per ton.

From my measurements, I have estimated that there are about twentyfive thousand tons of ore now opened up and I estimate that about one hundred thousand tons of probable ore underlies about twenty-five acres of the property that adjoins the mill-site. This estimate has been confirmed by others who have made examinations.

There are many advantages in mining in a flat vein, such as this is, and some disadvantages. The mine is perfectly dry, so no water to pump or handle, and partly on account of being dry, the ground stands better and takes less timbering. The country rock is hard and makes a good roof and the only timbering necessary will be a few straight posts or stulls; no timber to be framed nor expensive labor to frame and set it, no waste rock to be mined and handled to make room for timber. The only framed timber needed will possibly be a few sets in the main working stopes. Good ventilation, a matter of great importance, can be easily and cheaply secured, wherever needed, by driving a hole thru roof to surface. The great disadvantage is that all ore has to be shoveled instead of being handled partly by gravity, thru chutes, as in vertical veins.

As stated, the formation is hard and stands well, and all the old workings are in very fair shape; most of the work has been done many years with scarcely a stick of timber.

The porphyry vein matter is soft and easily and cheaply mined. From our actual work on the mine, I estimate that the ore can be mined and put in the mill for less than two dollars per ton.

I have made numerous and extensive tests on the ore from the "GOLDEN BELT GROUP" and with very satisfactory results.

The original tests made by me on these ores were made along the line of fine grinding and subsequent treatment of the slimes by either filter press methods or continuous counter current decantation, but upon further observation and tests, it was found that nearly all the values in the ore were carried in the seams of oxidized mineral and that these values could be liberated from the ore and recovered by coarse crushing and cyanide leaching followed by amalgamation.

This plan of treatment not only makes a very large reduction in the first cost of the milling plant, by eliminating a great deal of expensive machinery, much of which is patented by companies who get very high prices; but the treatment plan as adopted makes a very large saving in the cost of treatment per ton and cost of handling the ore.

Tests were made on ores ranging in size from run of mine to ore ground to minus 150 mesh.

A great many tests were made but I will include in this report details of only those tests upon which I base my ultimate conclusions.

My conclusion is that the best and most economical results can be obtained by crushing the ore to one-quarter inch mesh and leaching with a weak cyanide solution running one pound or less to cyanide to ton of solution; then, after cyanide treatment, grinding the ore to about twenty mesh, followed by amalgamation.

The gold in the ore is in such physical condition that it does not amalgamate readily until after cyanide treatment. The cyanide has a cleaning action that causes the residue of gold to easily amalgamate.

The ore, crushed to one-quarter inch mesh, gives a very good leaching product as at that size the slimes in the ore do not interfere with the leaching and by giving a six-day treatment to the ore very good results were obtained.

Tests on sample obtained by mixing residue from numerous large assay samples from different parts of the mine:

HEADS

Silver 1.15 oz; Gold, 0.29 oz; value, \$7.05 per ton.

TAILS AFTER CYANIDING

Silver, 0.40 oz; Gold, 0.03 oz; Value, \$1.04 per ton.

TAILS AFTER AMALGAMATING

Silver, 0.14 oz; Gold, 0.01 oz; value, 0.35 per ton,

showing an extraction by cyanide alone of over 89% of the gold and and over 65% of the silver.

Total extraction by cyaniding and amalgamation was 96% of the gold and 89% of the silver.

This test was fully confirmed by other tests and by tests made on ore crushed to only one-half inch size, which gave results nearly as good.

MUSH TEST ON ORE CRUSHED TO ONE-QUARTER INCH:

On quarter-inch screen,	5.6%	of ore
thru " " "	94.4%	" "
on 20-mesh " "	44.2%	" "
thru " " " "	50.2%	" "
on 60-mesh " "	25.1%	" "
thru " " " "	25.1%	" "
on 80-mesh " "	2.5%	" "
thru " " " "	22.6%	" "

It will be observed that by crushing the ore to only one-quarter inch that over fifty per cent of the product will pass twenty mesh screen and that more than twenty-two percent will pass an eighty mesh screen. To this fact, I attribute the good results obtained, for, as previously stated, most of the values are in the fine seams and in crushing the ore, it breaks along the lines of fracture, thus exposing the fines to the action of the cyanide solution. There is just enough coarse ore to give a good leaching product.

The grinding of the ore for amalgamation, after cyanide treatment, can be done at a very small cost as more than fifty percent of the ore is already down to twenty mesh, which size gives good results on amalgamating the residue of the gold after the clearing action of the cyanide solution.

AFTER CYANIDING, THE ORE WAS GROUND DOWN TO TWENTY MESH:

MESH TEST:

thru 20 mesh screen,	100%	of ore
On 60 " " "	49.6%	" "
thru " " " "	51.4%	" "
on 80 mesh screen	3.7%	" "
thru " " " "	47.7%	" "

Cost of treatment will be about as follows:

Mining, per ton-----	\$ 2.00
Milling, cost per ton:	
Incidentals, including freight, etc	.15
Labor, ten men, four on one shift, three	
on other shifts, seven men at \$6.00, three,	
at \$5.50-----	.385
POWER-----	.295
Cyanide, one pound, including chemical	
mechanical loss-----	.24
Zinc-----	.125
Lime (8 lbs per ton of ore) at \$15.00	
per ton-----	.05

Other chemicals, including assaying and quicksilver	.08	
Repairs and replacements	.05	
Superintendence	.085	
Interest on investment in mill	.035	
Clean-up expense, inc. melting and flumes--and-mar-		
keting of bullion, etc	.085	1.50
Total mining and milling cost per ton		<u>\$3.50</u>

It is my belief that both mining and milling costs can be reduced from these figures after the plant is fully broken in. For instance, I have talked with representatives of machinery companies who will sell an engine (hot-head type) and guarantee that power costs, under our local conditions, will not exceed one and three-quarter cents per kilowatt hour. I have allowed a power consumption of thirty horse power for twenty-four hours per day, which is more than should be used.

I think it would be advisable to use the Merrill precipitation apparatus and process (patented). This will eliminate many zinc box and treatment troubles and with it, a very weak cyanide solution can be used with a consequent saving of cyanide.

I have allowed, in my estimate, \$5.00 per shift for most of the labor, and under present conditions, labor costs will be much less.

Separate working tests were made on the sulphide ores, coming from the high grade streaks and the, when figured by percentage, the extractions were considerably less than on the general run of ore, the gross extraction in dollars and cents was much more than on the porphyretic ore on which a very high percentage can be extracted.

These sulphide ores will be largely mixed with the other ore as mined and the general effect will be to very materially sweeten-up the gross and net returns.

If it should prove to be desirable a considerable quantity of the high-grade ore can be sorted out in the mining and handling with little or no extra cost. This sorted ore could then be shipped to smelter and possibly this may prove advisable and will be fully determined by working tests. In many parts of the mine, the high-grade quartz streaks can be mined separately if it should prove more profitable. Also when ore can be treated at the mine, it very frequently makes considerable difference in the smelter rates and allowances.

In view of the present conditions, it is rather difficult to make an exact estimate of the cost of a reduction plant for the treatment of these ores, but it is a fact that the cost of a leaching and amalgamation plant such as is considered in this report, will not be more than one-third the cost of an all-slime plant.

Naturally, the cost of a plant will depend on the size and tonnage desired to treat and as the tendency of cost figures on mine supplies and machinery is very downward, therefore, any cost figures are subject to revision and probably revision downward.

Detailed plans and estimates accompany this report and it must be noted that the plans call for a mill especially and specifically designed according to the tests of which the details are herein given.

The building at present on the ground is in fair condition and could be used to good advantage and there are also some supplies and material on hand that could be used.

If it is considered advisable, it is possible to purchase quite a good deal of second-hand machinery and material in this part of Arizona. It, of course, necessary to be assured that any machinery purchased is in good condition and running order and that prices are right.

W.H.J.

I now know of quite a good deal of machinery and material that is suitable for the contemplated plant for the treatment of this ore, that is comparatively close to the mine and on which a very large saving could be made in freight alone as well as on first cost.

CONCLUSION

I am convinced from personal observation and many months of work on the "GOLDEN BELT" property and from many assays made by myself as well as reports and assays made by other engineers that the ores from the "GOLDEN BELT" Group will average not less than twelve dollars per ton and that excluding all high grade assays that the ores will average not less than eight dollars per ton. I am also convinced that working results fully as good as shown by tests made and work done can be had from the mine.

I consider the property proven up and also that the mine has great future possibilities in addition to the ore already opened up.

Respectfully submitted,

(Sig) W. H. Jenkins.

W.H.J.