



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: 01/31/2002

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: MARY COPPER AND GOLDEN NUGGET

ALTERNATE NAMES:
POOR BOY

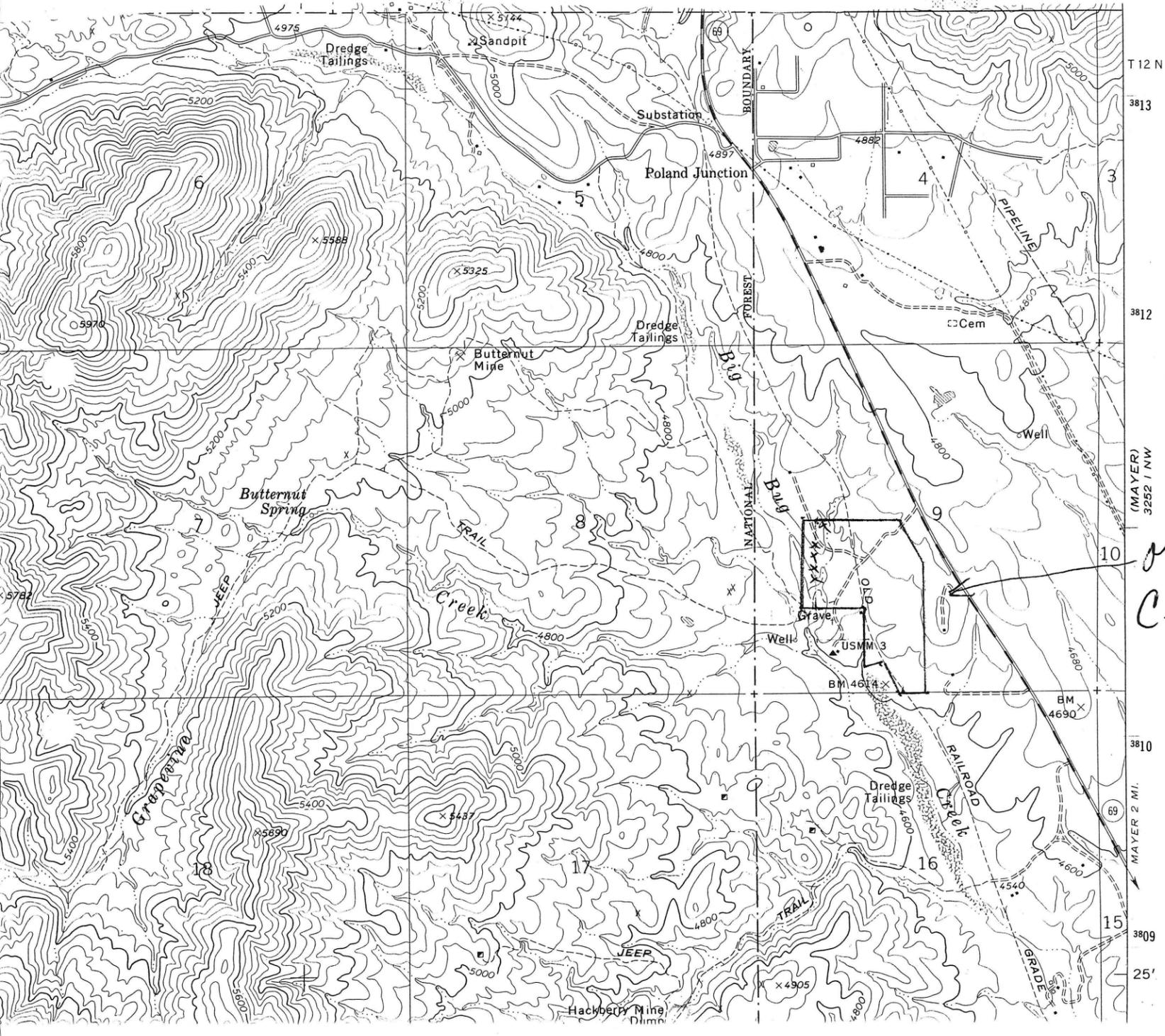
YAVAPAI COUNTY MILS NUMBER: 1037A

LOCATION: TOWNSHIP 12 N RANGE 1 E SECTION 8 QUARTER E2
LATITUDE: N 34DEG 26MIN 19SEC LONGITUDE: W 112DEG 16MIN 10SEC
TOPO MAP NAME: POLAND JUNCTION - 7.5 MIN

CURRENT STATUS: EXP PROSPECT

COMMODITY:
GOLD PLACER

BIBLIOGRAPHY:
USGS POLAND JUNCTION
ADMMR MARY COPPER & GOLDEN NUGGET FILE
WILSON, E.D. GOLD PLACERS AND PLACERING AZBM
BULL 168 1978 P 48
ADMMR TERRILL PLACER FILE
CLAIMS EXTEND INTO SEC. 9, 16 & 17



T 12 N
3813
3812
3810
3809
25'

(MAYER)
3252 / NW

MAYER 2 MI.

*our
Claim*

MARY COPPER AND GOLDEN NUGGET

YAVAPAI COUNTY

Metal Mining & Processing Nov. 1964 p. 39

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Mary Copper - Golden Nugget Placers Date July 22, 1964
District Big Bug District - Yavapai County Engineer E. G. Williams
Subject: Mine visit and information from Robert Coucher.

Location: Secs. 8, 9, 16, 17, T12N, R1E. 3 miles north of Mayer on Hwy. 89. Can
be seen about 3/4 miles west from Hwy.

Claims: 6 unpatented lode and 3 unpatented placer claims.

Mineral: Gold

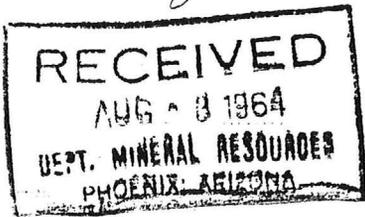
At the time of visit the mill was still under construction, 5 men working. Mining is to be done with a 3 yd. Buckley drag line. Then through a trommel, rejects over 5/8" then through 2 Bendarlari jigs and pumped to mill. Then through 2 - 48" Duplex jigs and 4 24" Duplex jigs and magnetic separator and 1 Wilfley table.

Operators: Big Bug Mining Associates, Robert C. Coucher, 209 Robinson Drive, Prescott.
Supt. and Mgr.

Owner: Terrell Family - last address - Mayer, Arizona.

Metal Mining & Processing, Nov. 1964, p. 39

R. 30 file.



DEPARTMENT OF MINERAL RESOURCES
State of Arizona
MINE OWNER'S REPORT

Date August 2, 1964

- 1. Mine: Mary Copper and Golden Nugget group
- 2. Location: Sec 8 & 9 Twp 12 N Range 1 E Nearest Town Mayer Distance 3 miles
Direction south Nearest R.R. Humboldt Distance 5 miles
Road Conditions Highway 69 passes within a short distance of the property and the remaining distances are serviced by improved gravel roads
- 3. Mining District and County: Big Bug Mining District, Yavapai County
- 4. Former Name of Mine: Same since filing

5. Owner: Terrel family
Address: unkown

6. Operator: Big Bug Mining Associates
Address: P. O. Box 2230 Prescott, Arizona 86301

7. Principal Minerals: Gold

8. Number of Claims: Lode 6 Patented Unpatented X
Placer 3 Patented Unpatented X

9. Type of Surrounding Terrain: low rolling foot hills of the Bradshaw Mountains, scattered outcroppings of PreCambrian schist are exposed through the younger alluvial deposits earlier channels of the regional drainage are stranded now on gentle terraces

10. Geology and Mineralization: Gold occurs distributed through the gravels deposited from the drainage of Big Bug and tributary creeks. The older gravels which seem to contain abundant schist do not contain commercial gold, while the younger and better sorted gravels do show commercial values. Big Bug Creek has changed channels numerous times as erosion has progressed, and as a result there are now older channel that are not to obvious stranded at higher elevations than the present gradient of Big Bug Creek. Most of the Gold in this particular part of the drainage is minus ten mesh, but a few small nuggets have been found. Very little of the gold is finer than 100 mesh. None shows significant staining or high impurities.

11. Dimension and Value of Ore Body: not yet determined

Please give as complete information as possible and attach copies of engineer's reports, shipment returns, maps, etc. if you wish to have them available in this Department's files for inspection by prospective lessors or buyers.

12. Ore "Blocked Out" or "In Sight":..... in excess of one million yards.....

Ore Probable:..... not determined.....

13. Mine Workings—Amount and Condition: Large yardages have been moved at earlier dates

No.	Feet	Condition
Shafts.....		
Raises.....		
Tunnels.....		
Crosscuts.....		
Stopes.....		

14. Water Supply: Dependent on runoff from local tributaries of Big Bug Creek and lesser supply from drilled wells on property.

15. Brief History: Good descriptions of this particular area are already available in the literature as Placer Deposits of Arizona etc.

16. Remarks: ~~The present operation of the property is only starting and the economics of the deposits are not as yet fully known~~

17. If Property for Sale, List Approximate Price and Terms:..... no.....

18. Signature:  (Robert G. Coucher, manager, and superintendent) for Big Bug Mining associates

COMMODITY INFORMATION

COMMODITIES PRESENT C10 < C.U. W.P.B. ... >
ORE MINERALS C90 < UNKNOWN >
COMMODITY SUBTYPES C41 < >
GEN. ANALYTICAL DATA C43 < >
COM. INFO. COMMENTS C60 < >

* SIGNIFICANCE

MAJOR PRODUCTS MAJOR < C.U. W.P.B. ... >
MINOR PRODUCTS MINOR < A.G. W.P.B. ... >
POTENTIAL PRODUCTS POTEN < >
OCCURRENCES OCCUR < >

* PRODUCTION

PRODUCTION (YES) (circle) PRODUCTION SIZE (SM) MED LGE (circle one)
PRODUCTION UNID NO (circle one)

* STATUS

EXPLORATION OR DEVELOPMENT

STATUS AND ACTIVITY A20 < 4 >
STATUS AND ACTIVITY A20 < >

DISCOVERER L20 < >
YEAR OF DISCOVERY L10 < > NATURE OF DISCOVERY L30 < B > YEAR OF FIRST PRODUCTION L40 < 1931 > YEAR OF LAST PRODUCTION L45 < 1937 >
PRESENT/LAST OWNER A12 < TERRELL FAMILY, MAVER, ARIZONA (1940's) >
PRESENT/LAST OPERATOR A13 < >
EXPL./DEV.COMMENTS L110 < >

DESCRIPTION OF DEPOSIT

DEPOSIT TYPE(S) C40 < MASSIVE SULFIDE (?) - VEIN (?) >
DEPOSIT FORM/SHAPE M10 < LENS >
DEPTH TO TOP M20 < > UNITS M21 < > MAXIMUM LENGTH M40 < > UNITS M41 < >
DEPTH TO BOTTOM M30 < > UNITS M31 < > MAXIMUM WIDTH M50 < > UNITS M51 < >
DEPOSIT SIZE M15 < (SMALL) M15 < MEDIUM > M15 < LARGE > (circle one) MAXIMUM THICKNESS M60 < > UNITS M61 < >
DIP M70 < >
DIRECTION OF PLUNGE M100 < > PLUNGE M90 < >
DEP. DESC. COMMENTS M110 < >

DESCRIPTION OF WORKINGS

Workings are: SURFACE M120 UNDERGROUND (M130) BOTH M140 (circle one)
DEPTH BELOW SURFACE M160 < > UNITS M161 < >
LENGTH OF WORKINGS M170 < > UNITS M171 < >
DESC. OF WORK. COM. M220 < >

GEOLOGY

* AGE OF HOST ROCK(S) K1 < P.R.O.T. ... >
* HOST ROCK TYPE(S) K1A < METAVOLCANITE, ANDESITE, TUFF >
* AGE OF IGNEOUS ROCK(S) K2 < P.R.O.T. ... >
* IGNEOUS ROCK TYPE(S) K2A < METAVOLCANITE, ANDESITE >
* AGE OF MINERALIZATION K3 < >
* PERT. MINERALS (NOT ORE) K4 < QUARTZ, AUREOLE >
* ORE CONTROL/LOCUS K6 < >
* MAJ. REG. TRENDS/STRUCT. N5 < >
* TECTONIC SETTING N15 < >
* SIGNIFICANT LOCAL STRUCT. N70 < >
* SIGNIFICANT ALTERATION N75 < >
* PROCESS OF CONC./ENRICH. N80 < >
* FORMATION AGE N30 < P.R.O.T. ... >
* FORMATION NAME N30A < IRON KING VOLCANICS >
* SECOND FM AGE N35 < >
* SECOND FM NAME N35A < >
* IGNEOUS UNIT AGE N80 < >
* IGNEOUS UNIT NAME N80A < >
* SECOND IG. UNIT AGE N85 < >
* SECOND IG. UNIT NAME N85A < >
* GEOLOGY COMMENTS N85 < UNKNOWN DEPOSIT TYPE - METAL RATIOS (ESPECIALLY HIGH GOLD) SUGGEST POSSIBLE TERTIARY AGE, BUT MAY BE PRECAMBRIAN MASSIVE SULFIDE. AT DEPOSIT SITE OUTCROP COVERED BY GRAVEL AND ALLUVIUM >

GENERAL COMMENTS

GENERAL COMMENTS GEN < >

Sample format for "Notice" information - submitted in compliance with
43 CFR 3809.1-3.

INSTRUCTION FOR OPERATORS: Please complete in as much detail as possible. Additional sheets can be used, if necessary. Complete information should be furnished to the District Manager of the Bureau of Land Management office having jurisdiction over the land in which your operations are (will be) located, at least 15 calendar days prior to commencing operations.

1. Name and mailing address of claimant and operator (if other than claimant):

Chark Hurlbert
13819 N. 36 DR
P.O. Box 85023

2. (When applicable) Name of mining claims(s) and serial numbers assigned when you recorded your claim with BLM:

AMC 313742-745

Poor Boy 1, 2, 3, 4

SW 1/4, Sec 9, T12N, R1E

3. Describe the activities proposed and approximate date of start up (including description and location of access to be constructed, type of equipment to be used). Use sufficient detail to be able to locate activities on the ground. A map may be used along with this description.

All work will be confined to the ditches and gullies located ^{on} the land and will not exceed 5 acres at any one time. A backhoe will be used to remove top soil, (over burden) which will be put back. It will not be necessary to construct any roads as there are numerous roads & trails already present. (Date of startup middle of June)

4. Will topsoil be saved, the land reshaped after disturbance, measures taken to control water runoff and erosion, toxic substances be properly disposed of, and will vegetation and wildlife habitat be rehabilitated?

As stated above, initial work will be confined to ditches, & gullies, any dirt removed will be returned to its original spot, 5 acres, or less will be worked at any one time

Check if:

Construction of access will involve cuts of three feet or more on the inside edge.

I hereby declare that I, or persons I have authorized to do so, will complete reclamation of all disturbed sites during the course of my operations to the standards described in 43 CFR 3809.1-3(b)(4) and that all reasonable measures will be taken to prevent unnecessary or undue degradation of the Federal lands during operations.


Signature of Plaintiff or Operator

5/27/91
Date

T/C

REPORT
of the
BIG BUG PLACER DEPOSIT
for
GIBBONS AND REED COMPANY

Gene-

1-684-2736

1

TABLE OF CONTENTS

<u>Item</u>	<u>Page</u>
SUMMARY	1
CONCLUSION	2
SCOPE OF REPORT	3
OWNERSHIP AND TITLES	3
LOCATION	3
CLIMATE, ETC.	3
FACILITIES	4
TAXES	5
GEOLOGY	6
MINERALOGY	6
GRAVEL	7
GOLD	7
OTHER MINERALS	8
TESTING PROCEDURE	8
PLANT DESIGN	10
POWER REQUIREMENTS	11
WATER	13
SAMPLING RESULTS	15
OPERATING COSTS	16
OPERATING PROFITS	17
PLANT INVESTMENT	18
CASH FLOW	18
OTHER FINANCIAL ASPECTS	18
ADDITIONAL FACTORS	18
ADJACENT CLAIMS	19
APPENDIX	
Refer to Footnotes	

Andrew J. Zinkl

REGISTERED MINING ENGINEER

1602 N. CAMPBELL ST.
PRESCOTT, ARIZONA 86301
PHONE 445-5763

REPORT
of the
BIG BUG PLACER DEPOSIT
for
GIBBONS AND PEED COMPANY

values
Revised 1/20/75
for #170 Au
#5 Ag

SUMMARY -

Testing of this deposit shows that exceptional values (\$1.58 per yard) of good gold (fineness of 920) exist within these gravels. A total somewhat in excess of one million (1,000,000) yards of this gravel is available for mining with a gross value of \$1,700,000.00.

Water can be developed sufficient to operate one eight-hour shift per day within the property by drilling a well and utilizing the stream flow in both Big Bug and Grasperino Creeks. A larger water supply is available but requires the installation of a five (5) miles of five (5") inch pipeline.

Other facilities of power, telephone, highways, railroad, suppliers, etc. are excellent.

The plant investment, exclusive of the excavating equipment will approximate \$65,000.00 and can be ready to operate in two months.

The total direct operating profit will be approximately one and one-quarter million dollars (\$1,250,000.00). On this total a royalty of ~~ten~~ ^{eight} percent must be deducted from the profit.

Other profit possibilities are suggested within the report, i.e., magnetic and nonmagnetic heavy sands, patented land, gravel, chips and sand; also additional gravel is available on adjacent properties.

RECOMMENDATION -

This deposit is very unusual in that the gravel values are exceptional. The operating cost is normal for this type of operation and the other facilities are excellent except for water which can be obtained from several sources.

It is my strong recommendation that this company undertake this project and start immediately. The immediate start is urged to take advantage of the early winter snows which are furnishing water to the drainage streams. This water should be stored now for use when the plant is ready to operate.

The operating rate should be determined by the company to coincide with their over-all profit and taxes picture.

Very truly yours,

Andrew J. Zinkl
Registered Mining Engineer

December 19, 1963

REPORT
on the
BIG BUG PLACER DEPOSIT
for
GIBBONS & REED

SCOPE OF REPORT -

This report covers the procedure and results of a sampling program conducted during November and December of 1963.

The area was surveyed to determine the volume of gravel as well as tested for the value per yard. The claims immediately adjacent to this property were examined.

The geology of the deposit was carefully investigated to determine the pattern and anomalies of deposition.

State and county taxes all considered herein, as well as climate, power, transportation, etc.

A tentative plant design and production rate are suggested in the body of this report. Finally the capital investment, cash flow, operating costs, depletion allowances and operating profit are all calculated herein.

GRAVEL SIZES

A sample of 1 cu. ft. of 'in place' material was excavated and weighed to determine the weight per cu. yd. of this gravel. The sample weight was 113 pounds. This converts to a bank run weight of 3050 pounds per yard.

<u>Size</u>	<u>Pounds</u>	<u>%</u>
+3" boulders	240	7.9
-3" + 1"	325	10.6
-1" + 3/8"	410	13.4
-3/8" + 8 mosh	210	6.9
-8 mesh	1865	61.2

On 3/8" Trommel screen 32% of material will be rejected, 68% will go over jigs.

OWNERSHIP AND TITLES -

This deposit is covered by nine unpatented mining claims. Six of these claims are lode claims held for nearly 30 years, and three are placer claims held for two years.

The claims have been filed and recorded by Richard Terrell of Mayer, Arizona and J. O. Baker of Prescott, Arizona. Labor affidavits have been recorded for the year 1963, so that all claims are presently in good legal standing.

Recordings at the Yavapai County Recorder's Office are as follows:

<u>Name</u>	<u>Type</u>	<u>Book of Mine</u>	<u>Page</u>
Mary Copper	Lode	132	490
Mary Copper Amended	Lode	136	358
Mary Copper Extension #1	Lode	136	359
Mary Copper Extension #2	Lode	136	360
Mary Copper Extension #3	Lode	136	361
Mary Copper Extension #4	Lode	136	362
Mary Copper Extension #5	Lode	136	363
Golden Nugget #1	Placer	Book 217, Official Records	578
Golden Nugget #2	Placer	Book 217, Official Records	589
Golden Nugget #3	Placer	Book 217, Official Records	579

Labor affidavits for the annual assessment work for the current year are filed and recorded in Book 300, Page 7, in the Yavapai County Recorder's Office, on September 3, 1963.

A partnership agreement exists between Terrell and Baker with a Herb Ernest and Sig Jacobsen on these claims. J. O. Baker is manager for this partnership and the present agreement with Gibbons and Reed includes these four men.

LOCATION¹ -

The claims cover an area approximately 3000 feet long by 1200 feet wide along the stream pattern of Big Bug Creek and extending into the bedrock schist formation to the west.

This area is in central Arizona, approximately four miles north of Mayer, Arizona, and 25 miles east of Prescott on State Highway 79. The area is one-quarter mile off this paved highway over dirt road to the stream bed.

CLIMATE, ETC.²-

The claims are at an elevation of 4500 feet in the foothill region east of the Bradshaw Mountain Range. Year around climate is ideal, with some cold winter nights and some hot summer days.

Mining operations are conducted around the clock all year long in this area. Weather seldom, if ever, will cause a shut-down of production.

The topography is not severe throughout this low drainage pattern, whereas to the west the Bradshaw Range climbs to elevations of over 8000 feet.

FACILITIES -

Electrical power is now available on these claims. The Arizona Public Service Company has a 440-volt line to a well pump on these claims; it also has 120-volt service to the Terrell residence.

Telephone service for this area is furnished by the Mountain States Telephone Company whose line parallels the highway within one-quarter mile of this land.

Domestic water is now available from a well on the property. Water for operation of a plant must

¹Portion of Highway Map.

²U.S.G.S. Topographic Map.

be developed; this problem is detailed elsewhere in the report.

The claims are readily accessible from Prescott, or Phoenix on State 79, a paved highway. Railroad facilities, the Santa Fe, are at Humboldt, Arizona, a distance of 7 miles north of this property.

TAXES -

Taxes in the State of Arizona are assessed by each county and are collected within that county. The property tax rate varies for each county and includes the local school tax rate. Buildings and other permanent installations are assessed at 35% of the building value and equipment is assessed at 25% of the value. An operating plant with \$20,000.00 in permanent structures and \$80,000.00 in equipment would be taxed at the Yavapai County rate of \$4.53 per \$100.00 of evaluation. In this example the buildings would be taxed at the rate of \$4.53 for \$7000.00 and \$4.53 for \$20,000 on the equipment. The total tax would be \$1225.00.

The ore deposit would be considered one of the assets of the purchaser and as such would be subject to taxation. Usually the company is permitted to operate for a year prior to determining the assessed value of the deposit. A value of something like \$10,000.00 would probably be assigned to this deposit and would be taxed on that basis after one year. This would mean an actual tax of approximately \$450.00 on the deposit. This is a rather arbitrary and indefinite situation which can, and should be decided with the County Assessor shortly after production starts.

Along this line it is well to minimize the tenor and size of the gravel which has been developed. Such evidence will assist the assessor in determining the assessable value of the deposit.

GEOLOGY³ -

The gravels of this deposit result from the erosion of the Big Bug drainage pattern which roughly cover 250 square miles.

This stream crosses several formations which represent several eons of local geology. The basal rock in pre-Cambrian Yavapai schist which in the Bradshaw Range and the adjacent foothills has been intruded by Tertiary granites and diorites. Covering portions of Big Bug mesa are basic ash and basalt flows.

The Tertiary intrusion mineralized the mountain range with veins of quartz carrying gold, silver, lead, zinc, copper, manganese and other metals. Several very productive mines are upstream in the Bradshaw Range. The Poland Mine, Red Rock Mine and others were good producers in the early 1900's. These properties were primarily gold producers in the oxide zone grading into lead-silver producers at deeper depths.

Some evidence of a pre-Tertiary gravel deposit which extends to Humboldt and beyond into the Agua Fria River valley exists; this deposit is very wide and carries some placer gold. Undoubtedly some of this gold now exists in the present deposit, as evidence of two different types of gold was noted in the testing.

At least three periods of deposition are noted in this deposit, all draining the same area. The lowest strata which has little or no gold was deposited on the schist bedrock and is composed of sediments made up of the various schist strata of the immediate area of Big Bug. This strata contains sericitic, rhyolitic, dioritic schist gravels along with clays resulting from the kaolinization of the schist itself. It is cemented tightly in some areas where no bedrock water reached it, but is soft and muddy in other portions of the deposit.

The second period of deposit which lies over this schist gravel strata is composed of a high percentage of ash, basalt, diorite and granite gravels, varying from sand to large, 15 inch, granite boulders; this strata was deposited in flood stage as evidenced

³Idealized cross-section.

by the lack of stratification and the distribution of all sizes of gravel through the strata.

The upper three feet of this strata has been tightly cemented and forms a false bedrock. Overlying this cemented strata is the third period of gravel. This gravel contains a higher portion of large gravel than the rest of the column. The basalt and ash are in minor amounts, but the granite and diorite boulders are very prevalent.

To the west a granite intrusive dike delimits the gravel. To the east, across Big Bug, a strong diorite schist formation forms the boundary.

Some faulting is apparent in the area of Dry Gulch and also Grapevine Creek.

MINERALOGY -

The gravels contain a very high grade of placer gold, of a fineness of approximately 920. In addition to the gold very minor amounts of pyrite chalcopryrite and chalcocite were observed in the pan. Magnetite, hematite and specularite are in abundance throughout this deposit.

Assays of the amounts and grade of these iron minerals are noted on the logs and are covered elsewhere in this report.

GRAVEL⁴ -

This gravel has been tested for hardness with very good results. On an L. A. rattle test the total breakdown of the chips was 20%. The Arizona Highway Department allows up to 40% on this test. The sand fraction has been tested and is very acceptable for both concrete and plaster.

⁴Gravel sieve analysis.

GOLD⁵ -

As mentioned above there are two separate types of gold in this gravel, probably having separate origins. The gold has a fineness of approximately 920, which is worth \$32.20 less mint cost, as raw, unprocessed gold. With the rare exception of a few nuggets all of the gold will pass through an 8" mesh screen.

This gold is very clean, lacking any sign of iron stain or vegetable stain. Because of its fineness the specific gravity is very high and makes it readily separated by gravity methods. This gold, even in the minute particles of less than 150 mesh, will separate in jig or on tables with little loss. A 95% gravity recovery can be anticipated in the circuit. It also amalgamates without difficulty.

OTHER MINERALS -

Gold is the only mineral, or metal, which will be recovered initially. The magnetite content of this gravel was 3.42 pounds per 100 pound gravel sample. Other heavy black sand consisting of specularite, hematite and traces of chalcopryrite and chalcocite weighed 0.51 pounds per 100 pounds of gravel.

On this basis a recovery of 104 pounds of magnetite and 15 pounds of nonmagnetic heavy sands can be recovered in the jigs per yard of gravel. The magnetic fraction contains minor amounts of elemental iron which probably originated in the basalt flow rock in the Bradshaw range. This iron contains a trace of nickel; the magnetic fraction assays over seventy (70%) percent iron.

The nonmagnetic fraction contains about one hundred dollars (\$100.00) in gold and silver per ton and about 15 pounds of copper per ton, according to assays of nonmagnetics in samples of holes #1, 4, 7, and 9.

Some consideration of separating these minerals must be given in designing the circuit, both as possible

⁵ Sieve analysis of raw gold.

sources of additional revenue and also to improving the gold recovery when these heavier minerals are removed.

TESTING PROCEDURE⁶ & ⁷ -

Testing equipment consisted of a 'Klam' hole digger which dug a hole 28" in diameter. The material excavated was trucked to the washing plant which consisted of an Ainsley bowl unit, with a double trommel screen; this unit was followed by a sluice box and a Macklin table, with a trommel screen. Large boulders were hand washed in a tub.

All samples were kept intact and were turned over to Gibbons and Reed.

A total of 34 yards were removed as samples from 8 holes and 4 channels in the exposed banks. The yardage from each hole or channel was washed and concentrated in the test plant separately.

Checks were made of the recovery through this circuit and these results showed the total recovery to be excellent by these simple gravity devices. The Ainsley Bowl recovered approximately 93% of the total; the sluice box retained about 2% and the Macklin table recovered the balance of 1% - perhaps 3% of the total was lost.

PLANT DESIGN -

Based on the gravel sieve tests in the Appendix a circuit which will handle 150 'in place' yards of gravel can be designed that will operate very efficiently.

A dragline, shovel or tractor with a conveying apron feeder can be used to feed the plant. The gravel should be fed over a 3" grizzly or wobble feeder that is equipped with a series of large high pressure sprays which use reclaimed water. The plus 3" boulders will be rejected and should be stacked out the side or back, past the screen. At this point the original 3050 pounds

⁶Photographs of Equipment.

⁷8 mm. Movie of Testing Equipment.

will be reduced to 2810 pounds which will pass into the trommel screen.

This screen will be equipped with a blinded section for washing action. It will have retainer rings and lifter bars to level out the flow of material and to increase washing action. The fine sand and gravel will pass through the 3/8" tapered holes in the trommel. The plus 5/8" gravel, boulders and pebbles will be rejected out to a stacked belt. This trommel will be equipped with high-pressure, high volume water sprays which will use reclaimed water. At this point 735 more pounds of gravel will be rejected, leaving some 2075 pounds to go to the rougher jigs.

The minus (-)3/8" sands will go to a bank of four 42" rougher jigs, either Reiber type or Yuba type. The light material will be rejected to a pump for disposal with the coarser gravels. The heavy sands containing the gold will come out the jig hutch for further processing.

The ratio of concentration at this point is variable as adjusted by the speed and fresh water into the jigs. A ratio of 20 to 1 will reduce the gold bearing gravels to a quantity of approximately 120 pounds. This amount would contain, in addition to the gold, the magnetic and nonmagnetic iron and other heavy minerals and metals.

The jig concentrate can then be passed through a wet magnetic separator to remove 100 or more pounds of magnetite, tramp iron and elemental iron. This product can be rejected to the pump for disposal or, if a market exists, it can be stockpiled. The remaining 20 pounds of nonmagnetic material with the gold will then go over a concentrate table or to a cleaner jig, possibly a 16" x 24" Denver Duplex for recovery of the coarser gold particles.

The fine gold, minus (-80) eighty mesh with the nonmagnetic heavy sand can then be passed into an amalgam barrel. The gold can be amalgamated for recovery of both it and mercury in a retort. The heavy sands can be rejected, or stockpiled if of sufficient value to stand shipping and smelting.

POWER REQUIREMENTS⁸ -

The electrical power source must be portable enough to be kept close to the operating plant. The washing and concentrating plant can be supplied from a D-17000 caterpillar diesel-generator which will produce 125 KVA. Power for the reclaimed water will be in a permanent position which can be another small diesel generator, or can be connected to the incoming source from the Arizona Public Service Co. office; machine shop and cleanup facilities can also be supplied from this commercial source.

Power requirements for the plant will be as follows:

<u>Unit</u>	<u>Horsepower Required</u>
Trommel Screen	30
4 - 42" Rougher Jigs	30
1 - Cleaner Jig or Table	5
Conveyor Units	15
Magnetic Separator	10
Rejects Pump	15
Miscellaneous Small Motors, etc.	<u>10</u>
Total	115 hp.

Power needed to supply the fresh water pump to produce sufficient pressure and volume to operate the jigs and tables can be set at a permanent position, that is, at the well or reservoir, and piped into these units. This power requirement will depend upon the source of water; approximately 40 hp. would be required to pump 300 gallons per minute from a 200 ft. well and have sufficient pressure to operate the jigs, etc.

The power schedule 2-232 in the Appendix is an excellent power rate for this area and is the regular

⁸Arizona Public Service Co. Schedule 2-232.

industrial rates used. Operating a 40 hp. pump motor will cost approximately \$500.00 per month.

WATER -

Several sources of water are available and all must be considered. Water is the key to the success of this venture. Grapevine Gulch is presently flowing approximately 60 gallons per minute; Big Bug Creek is flowing at least this amount. The flow at this time is somewhat early in the winter this year due to early snows in the Bradshaw Range to the west.

This flow will continue at this rate, or more, until late April at the earliest.

The water rights on the Big Bug Creek are somewhat hazy. The Mayer Water Company, utilizing a water gathering system, extracts approximately 30 gallons per minute from this source; the gathering facilities are on the Mary Copper claims. In my opinion these rights are not too strong and are without the State Water Commission's sanction, but a 15 or 20 year practice exists here and will carry weight for continuing usage.

The point in question here is whether we can extract water from Big Bug without opposition and whether our used water will drain into this gathering system and, if so, whether or not this used water will be potable.

Mr. Sears, the owner of this town water company, has suggested we supply the amount of 30 gpm. from a well, or other source, and he would not contest any extraction out of Big Bug Creek. This situation must be further investigated and compromised.

One geological possibility for a well exists within the claims. A well contractor has bid on drilling a 200 ft. well in the faulted area in Dry Gulch at the rate of \$10.00 per foot, with casing, for an 8" well. A 50 ft. well in this locality has been tested with a permanent yield of 30 gallons per minute. A deeper well could conceivably produce several hundred gallons per minute which, along with the present flow in Grapevine and Big Bug, would produce a total sufficient to operate.

Assuming an insufficient supply could not be developed from these three sources, an alternate arrangement for a positive source has been investigated.

The Iron King Mine, owned by Shattuck Denn Mining Corporation, is wasting at least 300 gallons per minute from their operation. They have been contacted and are agreeable to discussing the sale of this water to this project. This source of water would necessitate a large investment in 5 miles of 5" pipe line, plus pump and transformer installation.

An abandoned railroad grade exists from the Iron King tailings pond to the site on Big Bug Creek. Right-of-way or easements would be needed from the owners who are primarily the Federal Government and the State of Arizona.

My recommendation is to get the water from Grapevine, Big Bug and a 200 ft. well on the property. With the exception of May, June and part of July during a dry year a sufficient amount of water can be developed to operate at least one shift per day. The amount needed for this plant is 300 gallons per minute of fresh water. The total amount, including reclaimed water, is at least 800 gallons per minute.

Accumulation of water in the Grapevine reservoir (10,000,000 gallons) and in the reclamation pond below the washing plant will be sufficient storage to keep the operation going on a one-shift basis during exceptionally dry periods.

In the event Gibbons and Reed decide to put this project into operation the first work should be rehabilitation of the Grapevine ditch and reservoir and the building of a dam to impound the used water at the mouth of Dry Gulch; the well should be drilled at the site selected.

SAMPLING RESULTS⁹, 10 & 11

Five separate areas were tested in this sampling program: Area "A" containing the bulk of the yardage was sampled most thoroughly; the other areas were sampled less conclusively, but sufficiently to compare the results with Area "A" for interpretation.

The dug holes, channel cuts and drill holes were positioned to determine continuity of the gravels, depth of gravel with respect to geology and topography, uniformity of values and changes or alterations in the pattern of deposition.

Using round numbers the total deposit contains slightly over one million (1,000,000) yards of gravel having a gross 'in place' value of approximately one million seven hundred thousand dollars (\$1,700,000.00).

These figures are computed below:

Area "A"

400 yds. long x 160 yds. wide x 11 yds. deep
for a total of 700,000 cubic yards of gravel.

<u>Hole No.</u>	<u>Depth</u>	<u>Sample Yardage</u>	<u>Sample Milligrams</u>	<u>\$ Value Per cu. yd.</u>
2	5'	0.883	1,825.01	\$2.11
4	35'	8.001	10,339.08	1.50
6	35'	7.516	12,110.45	1.88
7	33'	6.505	10,336.63	1.62
Cut #11	14'6"	0.344	565.05	1.67
Totals		23.249	35,176.27	\$1.54

Area "B"

250 yds. long x 70 yds. wide x 8 yds. deep for
a total of 140,000 cubic yards of gravel.

8	30'	3.702	5,674.70	\$1.56
Cut #10	21'	0.433	305.61	0.76
Total		4.135	5,980.31	\$1.47

⁹Logs of cut and dug holes in Appendix.
¹⁰Assay Reports in Appendix.
¹¹Plan Map.

Area "C"

200 yds. long x 25 yds. wide x 3 yds. deep for a total of 15,000 cubic yards of gravel.

<u>Hole No.</u>	<u>Depth</u>	<u>Sample Yardage</u>	<u>Sample Milligrams</u>	<u>\$ Value Per cu. yd.</u>
9	9'	1.656	2,315.42	\$1.43

Area "D"

275 yds. long x 80 yds. wide x 9 yds. deep for a total of 200,000 cubic yards of gravel.

5	27'	4.711	3,279.78	\$0.71
Cut #12	17'	0.381	416.66	1.11
Total		5.092	3,696.44	\$0.74

Area "E"

This is the area of the Big Bug streambed on which the sample data is inconclusive; therefore this yardage is not calculated here. This area has the least yardage and the lowest grade based on Hole #1.

Area "A"	23.249	35,176.27	\$1.54
Area "B"	4.135	5,980.31	1.47
Area "C"	1.656	2,315.42	1.43
Area "D"	5.092	3,696.44	0.74
Total	34,132	47,168.44	\$1.41

	<u>Estimated Yards</u>	<u>\$ Value</u>	<u>Total \$ Value</u>
750,000	Area "A" 700,000	1.54	\$ 1,075,000.00
300,000	Area "B" 140,000	1.47	205,000.00
15,000	Area "C" 15,000	1.43	22,000.00
200,000	Area "D" 200,000	0.74	148,000.00
	Total 1,055,000	\$1.40	\$ 1,450,000.00

1,838,000.00
5,000,000

Allowing for an expansion factor of 13% between the 'in place' value and the truck value the actual value per yard is \$1.58 per cubic yard.

1,055,000 cubic yards of gravel at \$1.58 per yard is a gross 'in place' value of \$1,667,000.00 for the deposit.

OPERATING COSTS -

The operating crew will consist of three operating men per shift and one superintendent.

The three men will be: a dragline operator, a trommel-screen man and a concentrate operator. These men should be paid a minimum of \$3.00 per hour. The men should be able to maintain and repair all the equipment. The superintendent should have an engineering background to handle these details as well as to handle the operating problems.

Labor Cost Per Day

3 men @ \$24.00 ea.	\$72.00
1 superintendent @ \$1200.00 mo.	48.00
	<u>\$120.00</u>
Industrial Insurance, Social unemployment tax @ 10%	12.00
	<u>\$132.00</u>
Purchased Electric Power, est.	\$ 50.00
Diesel fuel, gas, oil, greases, etc.	50.00
Replacement parts, repairs, acetylene oxygen, belts and other supplies	30.00
Engineering and office supplies, mercury, etc.	15.00
Travel, pick-up or car	<u>10.00</u>
Direct Operating Cost per day	\$287.00

Indirect Costs

Corporate office, accounting, stenographic, etc.	<u>\$ 13.00</u>
Total Estimated Cost per day	\$300.00
@ 1000 cubic yds. per 8 hour shift	\$ 0.30 pr.yd.
Or--	
Excavating 1000 yds. per day	\$150.00
Concentrating 1000 yds. per day	\$100.00
Miscellaneous, office, engineer, indirect	<u>\$ 50.00</u>
Total estimate	\$300.00

OPERATING PROFITS -

These figures are related only to the direct operating profits based on the 'in place' value per yard and the above estimate of daily operating costs.

No consideration is given here to such items as depletion allowances of 15% for the gold, the write-off of the equipment nor the taxes, both property and corporate.

On the basis of 150 yds. per hour for an eight hour shift, allowing for start-up, clean-up and loss of operating time, a figure of 950 yards per day can be anticipated on a day to day basis.

Using a 95% recovery figure and \$158 per yard of gravel the gross recoverable value of the gold will be approximately \$1400.00 per day.

On the basis of a 40 hour week the daily operating profit should be \$1100.00 per eight-hour day. Overtime labor and home office expenses charged to this project will deduct from this profit figure. Not included in these operating profit figures is the 2% royalty which must be paid to the claim owners. 8

PLANT INVESTMENT -

No figure is placed upon the cost of the dragline which Gibbons and Reed can probably furnish from their equipment yard.

Cost of moving dragline to deposit	\$ 1,500.00
Cost of purchase trommel screen	4,000.00
Cost of 4-42" Yuba jigs	8,000.00
Cost of 1 - cleaner jig or table	1,000.00
Cost of 1 - 40 hp. return pump	2,000.00
Cost of 1 - 125 KVA - Cat generator	7,500.00
Cost of piping at plant	1,500.00
Cost of Stackers and Conveyors	5,000.00
Cost of 1 - 200 ft. well complete with pump and motor	5,000.00
Cost of pipeline from Reservoir in Grapevine to plant	2,000.00
Cost of rehabilitation of reservoir and ditch at Grapevine Gulch	2,000.00
Cost of rejects sand pump (SRL)	3,000.00
Cost of Amalgam barrel complete with motor, etc.	1,500.00
Cost of retort, etc.	1,000.00
Cost of office (housetrailer)	1,000.00
Cost of welding and cutting equipment	1,000.00
Cost of spare parts, replacement item, welding rod, oxygen, acetylene, other supplies	3,000.00
Oil tanks, grease guns, gasoline tanks, etc.	2,000.00
Transportation & freight costs of above operating plant	2,000.00
Pick-up or car	2,000.00
Office and engineering supplies	1,000.00
Construction and assembly cost, plus site preparation costs	<u>8,000.00</u>
	\$78,500.00
Contingencies	<u>6,500.00</u>
Total plant investment	\$85,000.00

To this figure can be added the cost of putting in 5 miles of 5" pipe line from the Iron King tailings dam if sufficient water is not developed on property, so that over-all a total of \$110,000 could be the total plant investment.

CASH FLOW -

The initial investment as outlined above will be spent over an 8 to 10 week period prior to start of operation. An initial advanced royalty payment is also due the property owners prior to start of this operation.

At a daily operating rate of 950 to 1000 yards with the usual first month's difficulties, a total of not more than 15,000 yds should be anticipated. At an operating profit of \$1.20 per yard this would result in a return of \$18,000.00 over and above initial expenses; thereafter a minimum monthly profit of \$30,000.00 can be expected. This will increase in accordance to the number of shifts which are worked, over and above 25 shifts per month. On a 3-shift 120 hour per week basis the operating profit per month could reach \$100,000.00.

OTHER FINANCIAL ASPECTS -

Such items as the depletion allowance of 15%, the taxes and the depreciation credits are not included in the above calculations.

The purchasers on a lease and option agreement are entitled to the metal depletion allowances. An accelerated write-off is permitted on this type of venture, wherein 200% of a straight-line depletion curve can be used, or 150% of the same curve on a used equipment investment.

ADDITIONAL FACTORS -

Not included here because of inconclusive data and lack of market detail are the added economic factors of the magnetic heavy sands and the nonmagnetic sands both of which could add considerably to the profit picture without appreciably increasing either the investment or the costs.

The land patent aspect of this deposit should be investigated. Current Bureau of Land Management regulations require sampling on a ten-acre parcel basis to prove the existence of economic values on each parcel. On this basis approximately 120 to 140 acres could be patented with a present real estate value of \$250.00 to \$300.00 per acre. The patent cost of the entire block of ground would be some \$6000.00 for surveys, legal fees, patent applications, etc. The present value of this ground as real estate would be from \$25,000.00 to \$40,000.00.

The final profit-making possibility is the sale of both the sand and gravel from this deposit. Near future highway construction can use this gravel and the gravel chips, as well as the sand, for concrete. This sand is also exceptionally good for plaster sand which is competitive to the present sources in Prescott.

ADJACENT CLAIMS -

Some virgin gravel remains on the claims both downstream and upstream from the claims considered here. No yardage estimate is made here of the gravels. The gold content of these additional gravels would be similar if not identical.

The claim owners of these adjacent claims should be contacted to obtain additional yardage for this operation.

Andrew J. Zinkl
Registered Mining Engineer

Dec. 19, 1963

NORTHERN ARIZONA TESTING LABORATORY

PHONE 774-4881 • 20 MILES PIKE • FLAGSTAFF, ARIZONA

For: Mr. Andrew J. Zinkl
1602 North Campbell
Prescott, Arizona

Date: December 10, 1963

Lab. No. 3172

Received 6/7/63

Marked: Big Bug Placer - 3/8" Chino

Report of Laboratory Tests

Chemical Analysis:

Sieve Size	% Retained (Cumul.)	% Passing (Cumul.)
6"		
4		
3		
2		
1 1/2		
1		
3/4		
1/2	0	100
3/8	5	95
1/4	37	63
#4	97	3
#8		
10	100	0
15		
30		
40		
50		
100		
200		

- Liquid Limit
- Plastic Limit
- Plasticity Index
- Soil Classification
- Bitumen Content
- Specific Gravity
- Moisture
- absorption
- Weight/Cu. Ft. Rodded
- Fineness Modulus
- Organic Impurities
- Abrasion (L.A.) % wear 100 rev.
- Soundness (Sodium Sulphate) 5 cycles
- (Magnesium Sulphate) 5 cycles
- Potential Reactivity
- Sc
- Rc
- Density by
- Maximum Density, Dry Wt./Cu.Ft.
- Optimum Moisture

Respectfully submitted,

NORTHERN ARIZONA TESTING LABORATORY

GOLD SCREEN ANALYSIS

by

Frank Leonard

<u>Mesh</u>	<u>% Retained</u>	<u>% Accumulated</u>
8 mesh	0	11.41
14 "	11.41	20.93
20 "	9.52	34.25
28 "	13.32	49.83
35 "	15.58	73.41
48 "	23.58	81.63
60 "	8.22	88.40
65 "	6.77	92.42
80 "	4.02	95.01
100 "	2.59	97.32
150 "	2.31	97.71
200 "	0.39	99.97
-200 "	2.26	

NO. 7

DATE

BY FINENESS TEST - 919

6601011

No. 7 cleanup 10551000

Hole Volume TRUCK Volume MGS by SAMPLE S VALUE 1000 FINE

No	Sample	run	S VALUE
1.018	1238.73		31.24
0.692	2287.21		3.37
0.978	963.25		1.06
0.755	1537.54		2.08
1.202	1494.18		11.27
0.428	1062.80		1.17
0.932	1772.82		1.84

MINI'S

CLAY

2 1/2' Consolidated large boulders some clay some gravel

2 1/2' less consolidated smaller gravel

13' less boulders more sand some clay some consolidated

11' same material - some

10 1/2' sandy to 22' large boulders more clay - some

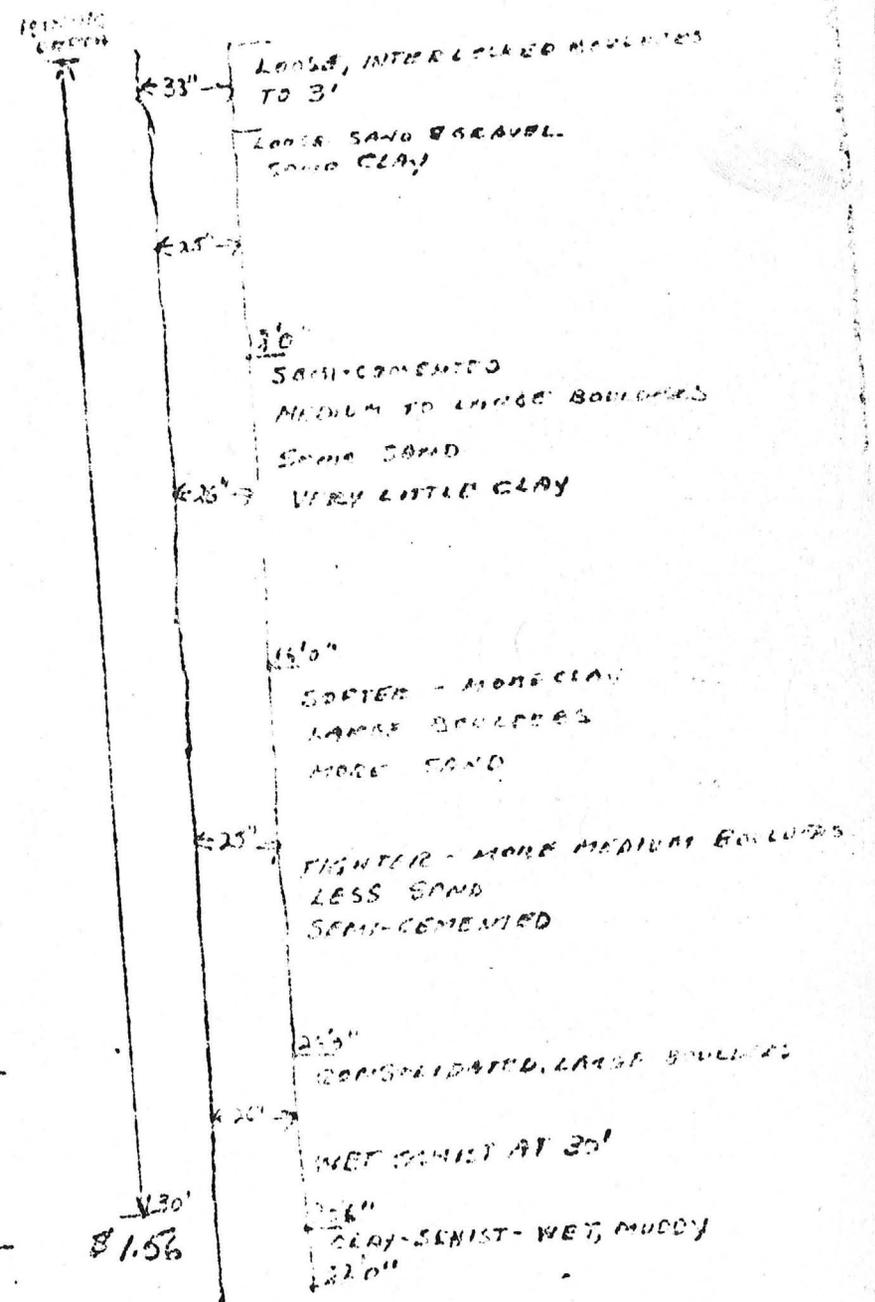
10 1/2' smaller boulders some schist less sand more clay - some

29' HARD CONSOLIDATED TO 30' decomposed schist some boulders some quartz rock

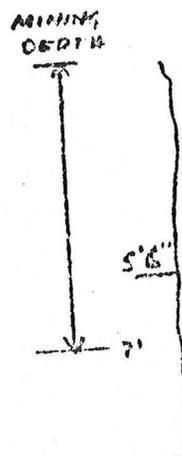
33' decomposed schist very little sand some small boulders

11.2

HOLE VOLUME	TRUCK VOLUME	MSS. BY SAMPLE	W. VAL. 1000 GMS
0928	1311.70	B1445	
0.946	2020.99	B218	
0.964	2016.35	B213	
0.264	325.66	B033	
0.388	13.67	B004	
4.090	5688.37	B142	
3.702	5674.70		



Hole VOLUME	TRUCK VOLUME	MGS by SAMPLE	2 VALUE 1000 FINE
	0.964	1032.20	81.09
	0.692	1283.22	81.89
	1.656	2315.42	81.43



GEOLOGY

SOIL
 LOOSE GRAVEL
 LARGE BOULDERS
 (REWORKED GRAVELS
 EAST SIDE OF CREEK)
 SEDIMENTARY SCHIST
 & GRAVEL - LOOSE

SAME

IN PLACE VOLUME 9 cu. ft.
MILLIGRAMS 305.61 mgs

TRUCK VOLUME 11.7 cu. ft.

EXPANSION FACTOR 18%

VALUE LOOSE ^B - 0.76

VALUE IN PLACE - 0.94

AT BANK
ADJACENT TO
DUG HOLE 58

2100

MILLIGRAMS - 565.05
IN PLACE 3 cu ft.
VOLUME
TRUCK 9.28 cu ft.
VOLUME
EXPANSION FACTOR 16%
VALUE LOOSE - 8 1.67
VALUE IN PLACE - 8 1.94

IN BANK
SOUTH EAST OF
HOLES #2 & 6
14'6"

MILLIGRAMS - 407
IN PLACE VOLUME - 4 cu. ft.
TRUCK VOLUME - 42 cu. ft.
LOOSE VALUE - 0.003
IN PLACE VALUE - 0.003

IN BANK EAST SIDE
BIG RIVER CREEK
ALL IN LOOSE SCHIST
SEDIMENTS
NORTH OF # 9 HOLE
SAME AS MATERIAL
FROM 7' TO 10' IN # 9

MILLIGRAMS 416.66 MRS
 IN PLACE VOLUME 9.0 cu ft.
 TRUCK VOLUME 10.3 cu ft.
 EXPANSION FACTOR 140%
 VALUE LOOSE - \$1.11
 VALUE IN PLACE - \$1.27

IN STEEP BANK
 WHERE OLD WORK STOPPED
 ON SOUTH BOUNDARY
 OF CLAIMS
 SOUTHEAST OF HOLE #5

17'0"

SHATTUCK DENN MINING CORPORATION
Iron King Branch

ASSAY OFFICE

HUMBOLDT ARIZONA

R. J. Jink

DATE *11-28-63*

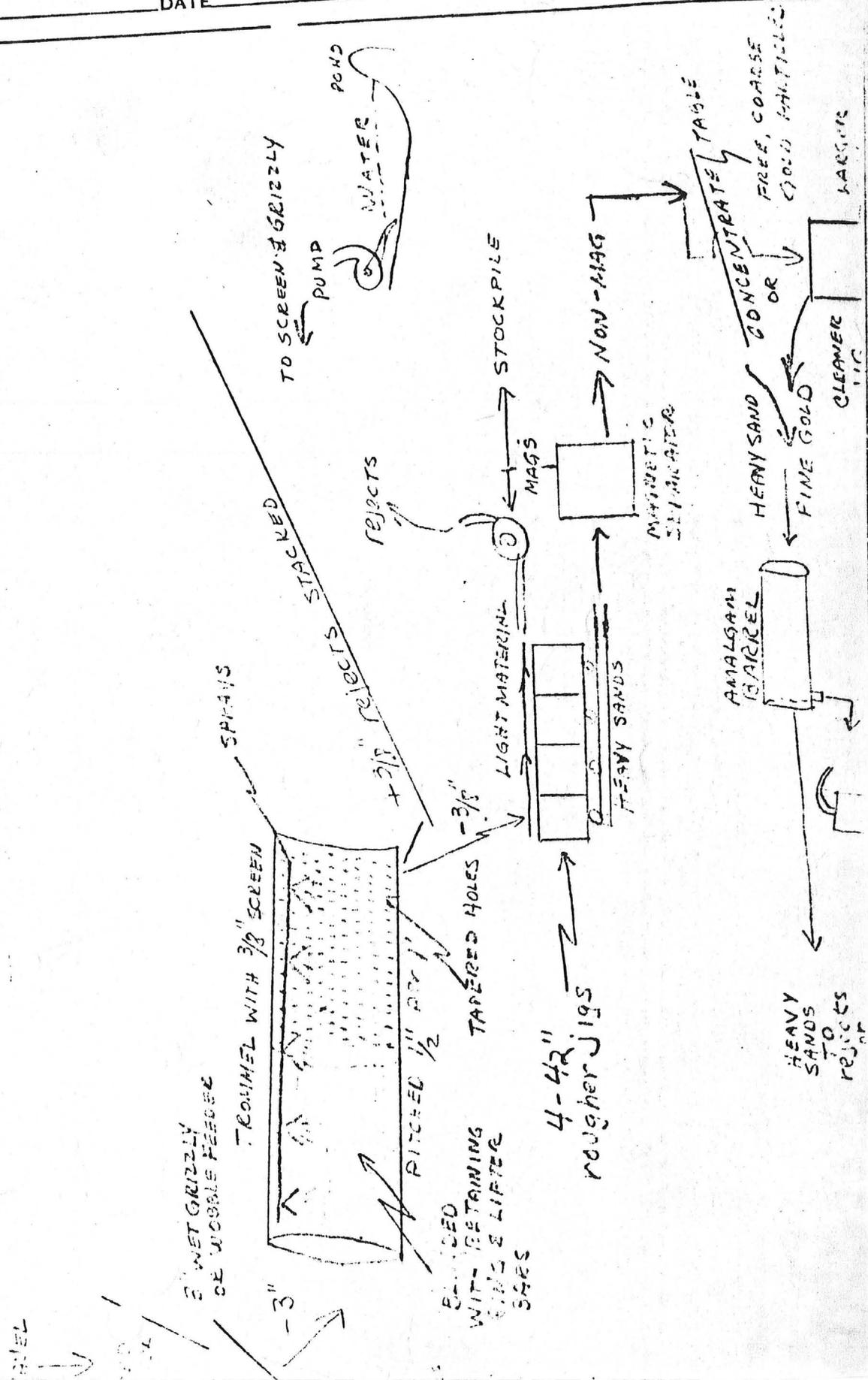
DESCRIPTION	Al	Ag	Fe	Pb	Zn	Cu
<i>46 - 29 1/2' - 35'</i>		<i>1815.80</i>				
<i>6 35' - 40 1/2'</i>		<i>308.11</i>				
<i>1 40 1/2' - 43 1/2'</i>		<i>291.42</i>				
<i>1 43 1/2' - 46 1/2'</i>		<i>90.37</i>				

Up to

11/28/63

ASSAYER _____

CIRCUIT FLOW DIAGRAM
(No SCALE)



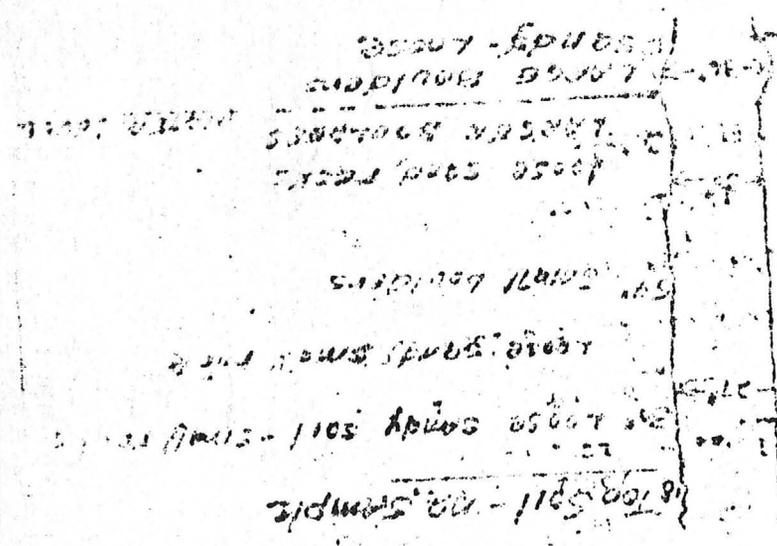
all samples contaminated

expansion factor - 16%

non-magnetic heavy sands tested for expansion factor - 16%
 non-magnetic heavy sands tested for expansion factor - 16%
 non-magnetic heavy sands tested for expansion factor - 16%

total magnetite tested for expansion factor - 16%

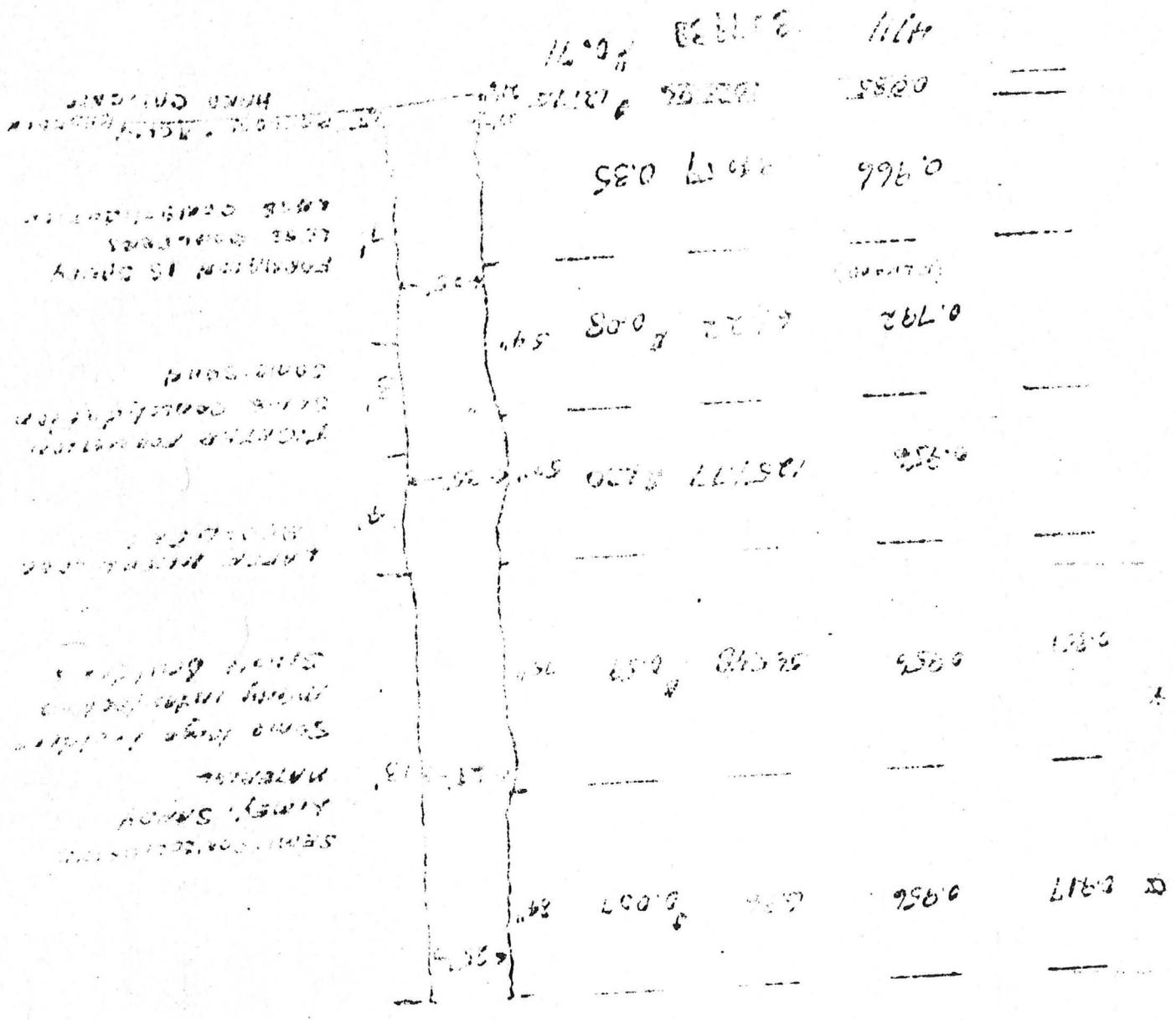
1.75% 2.91 1.75%



Soil Layer	Weight	Volume	Expansion Factor
Large boulders	383.33	1.06	
Small boulders	253.27	0.91	
Sandy soil - small	38.49	0.94	0.81
Top soil - sample			

1.75%

Handwritten notes at the top of the page, possibly including a date or reference number.



Handwritten notes on the left side of the diagram, including:

- SECTION 100
- SECTION 99
- SECTION 98
- SECTION 97
- SECTION 96
- SECTION 95
- SECTION 94
- SECTION 93
- SECTION 92
- SECTION 91
- SECTION 90
- SECTION 89
- SECTION 88
- SECTION 87
- SECTION 86
- SECTION 85
- SECTION 84
- SECTION 83
- SECTION 82
- SECTION 81
- SECTION 80
- SECTION 79
- SECTION 78
- SECTION 77
- SECTION 76
- SECTION 75
- SECTION 74
- SECTION 73
- SECTION 72
- SECTION 71
- SECTION 70
- SECTION 69
- SECTION 68
- SECTION 67
- SECTION 66
- SECTION 65
- SECTION 64
- SECTION 63
- SECTION 62
- SECTION 61
- SECTION 60
- SECTION 59
- SECTION 58
- SECTION 57
- SECTION 56
- SECTION 55
- SECTION 54
- SECTION 53
- SECTION 52
- SECTION 51
- SECTION 50
- SECTION 49
- SECTION 48
- SECTION 47
- SECTION 46
- SECTION 45
- SECTION 44
- SECTION 43
- SECTION 42
- SECTION 41
- SECTION 40
- SECTION 39
- SECTION 38
- SECTION 37
- SECTION 36
- SECTION 35
- SECTION 34
- SECTION 33
- SECTION 32
- SECTION 31
- SECTION 30
- SECTION 29
- SECTION 28
- SECTION 27
- SECTION 26
- SECTION 25
- SECTION 24
- SECTION 23
- SECTION 22
- SECTION 21
- SECTION 20
- SECTION 19
- SECTION 18
- SECTION 17
- SECTION 16
- SECTION 15
- SECTION 14
- SECTION 13
- SECTION 12
- SECTION 11
- SECTION 10
- SECTION 9
- SECTION 8
- SECTION 7
- SECTION 6
- SECTION 5
- SECTION 4
- SECTION 3
- SECTION 2
- SECTION 1

Handwritten notes at the bottom of the diagram, including:

- SECTION 100
- SECTION 99
- SECTION 98
- SECTION 97
- SECTION 96
- SECTION 95
- SECTION 94
- SECTION 93
- SECTION 92
- SECTION 91
- SECTION 90
- SECTION 89
- SECTION 88
- SECTION 87
- SECTION 86
- SECTION 85
- SECTION 84
- SECTION 83
- SECTION 82
- SECTION 81
- SECTION 80
- SECTION 79
- SECTION 78
- SECTION 77
- SECTION 76
- SECTION 75
- SECTION 74
- SECTION 73
- SECTION 72
- SECTION 71
- SECTION 70
- SECTION 69
- SECTION 68
- SECTION 67
- SECTION 66
- SECTION 65
- SECTION 64
- SECTION 63
- SECTION 62
- SECTION 61
- SECTION 60
- SECTION 59
- SECTION 58
- SECTION 57
- SECTION 56
- SECTION 55
- SECTION 54
- SECTION 53
- SECTION 52
- SECTION 51
- SECTION 50
- SECTION 49
- SECTION 48
- SECTION 47
- SECTION 46
- SECTION 45
- SECTION 44
- SECTION 43
- SECTION 42
- SECTION 41
- SECTION 40
- SECTION 39
- SECTION 38
- SECTION 37
- SECTION 36
- SECTION 35
- SECTION 34
- SECTION 33
- SECTION 32
- SECTION 31
- SECTION 30
- SECTION 29
- SECTION 28
- SECTION 27
- SECTION 26
- SECTION 25
- SECTION 24
- SECTION 23
- SECTION 22
- SECTION 21
- SECTION 20
- SECTION 19
- SECTION 18
- SECTION 17
- SECTION 16
- SECTION 15
- SECTION 14
- SECTION 13
- SECTION 12
- SECTION 11
- SECTION 10
- SECTION 9
- SECTION 8
- SECTION 7
- SECTION 6
- SECTION 5
- SECTION 4
- SECTION 3
- SECTION 2
- SECTION 1

43' 1/2
 40' 1/2
 35'
 29'
 26'
 22'
 20'
 17'
 15'
 12'
 11'
 7' 1/2
 5'

soft, decomposed
 green chloritic shales
 mud congl - schist
 large boulders
 more clay
 interbedded
 interbedded
 sandy, loose, sandy gravel
 some clay
 boulders, some clay
 sandy - most small
 boulders, some clay
 semi-consolidated
 large, medium & small
 boulders, very fine
 clay, very little sand
 hard & consolidated
 large, medium & small
 boulders, very fine
 clay, very little sand
 semi-consolidated large
 boulders, some sand
 some clay

0.975	2975	0.12
0.692	2975	0.12
0.916	3084	0.23
1.019	181583	0.182
0.983	16875	0.173
0.885	2012	0.22
0.910	10771	0.131
0.874	99195	0.14
0.820	28824	0.24
0.874	17745	0.23
0.965	4165	0.11

.0011

SHATTUCK DENN MINING CORPORATION
Iron King Branch

ASSAY OFFICE

DATE 11-14-63

HUMPHREYS, ARIZONA

Zimpl

DESCRIPTION

Au

Ag

Fe

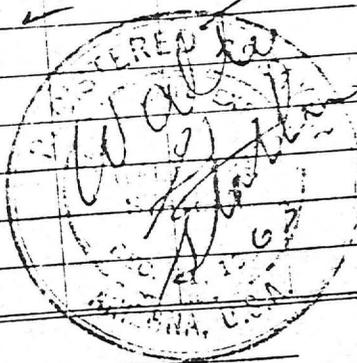
Pb

Zn

Cu

DESCRIPTION	Au	Ag	Fe	Pb	Zn	Cu
11/13/63 Amalgam #1 1 1/2 to 7' non mag.	38.44 mg	.07 "				
11/14 Amalgam Hdr #1 - 7'-10' non mag	253.37 mg	.055 "				
Amalgam non mag.	383.33	.20				
Magnetic (40.144 gms)	.025					

Charges \$ 10.50
10.00



ASSAYER

.000025 grams 1.10-