



CONTACT INFORMATION  
Mining Records Curator  
Arizona Geological Survey  
416 W. Congress St., Suite 100  
Tucson, Arizona 85701  
602-771-1601  
<http://www.azgs.az.gov>  
[inquiries@azgs.az.gov](mailto:inquiries@azgs.az.gov)

The following file is part of the A. F. Budge Mining Ltd. 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.

Rich Hill Upton  
#2

Need - systematic  
sampling program  
Backhoe, drill?  
low grade seismic?  
Samples to Humphrey's?  
Eng.

10 samples  
1000 ft depth  
1000 ft depth  
1000 ft depth



**RALPH L. REYNOLDS**

Licensed California Mineral, Oil & Gas Broker  
MOG 0-655383-8

Licensed California Mining Engineering Contractor  
No. 365551-A

April 3, 1984

Carol O'Brien  
DMEA  
Suite F  
4203 North Brown Avenue  
Scottsdale, Arizona 85252

Dear Carol,

I have included a writeup on the Rich Hill Upton #2 Property for your investigation. The spread sheet was made up for a private investor who was unable to raise the necessary funds. The spread sheet budget can be changed to reflect the leased versus purchased rolling stock etc., as tax considerations dictate.

A budget for testing the property has not been included because we feel it would be presumptuous to tell a consultant how to do the job. There is adequate contingency funding in the budget to cover a moderate testing program without changing the total amount required.

Approximately 4 inches of documentation is available on the Upton #2 Placer and will be available to you on your visit to the site. The information includes legal, water permits, several mining studies from the 1920's and 30's, data on recovery equipment, current activities of surrounding companies, etc.

Hope to meet you on site soon.

Sincerely,



No reclamation  
or environment  
or discharge data  
or permits  
mentioned

RLR/llr

Maybe

**RALPH L. REYNOLDS**

Licensed California Mineral, Oil & Gas Broker  
MOG 0-655383-8

Licensed California Mining Engineering Contractor  
No. 365551-A

UPTON #2 PLACER

As a Mining Contractor-Broker, I have the opportunity to investigate numerous properties but I am rarely moved to lease one myself. The Upton #2 Placer, located near Wickenburg, Arizona, appears to be one of the very few bonanza properties that I have encountered. Initial site investigation of over 200 pannings from randomly selected areas indicated a heavy concentration of gold. Recent testing by Weaver Mining Company has verified my tests by running <sup>?</sup> a 27 yard test that recovered values of 0.6 oz. gold per yd.<sup>3</sup> head ore taken from surface to approximately 15 ft. in depth. This test was made downstream on an extension of the Upton #2 alluvial fan.

Originally we did not look at the schist bedrock as an open pit possibility, but recently, the Tracon Mining Company has set up an open pit heap leach operation on an upstream extension of the Upton #2 schist bedrock. They are mining a 200 ft. wide area and are reporting a grade of more than 0.5 oz. per ton gold. Pat <sup>?</sup> Breslin, the property owners representative, will assist in verification of the grade during an on site inspection of the property.

The property is currently surrounded by other mining operations in the process of testing and development and production. Fortunately, we were one of the first Lessees in the area and I believe that we have the richest property since it is located directly under the sources of enrichment at the head of the fan.

Several new developments include:

1. acquisition of water rights to withdraw 100 acre feet of seasonable drainage water. *32.5 mm golds*  
*From where?*

2. acquisition by the property owners of rights to use an 1,100 foot deep well.
3. determination that an additional 100 acre feet of water can be obtained from surface drainage.
4. successful testing of surrounding properties by other mining companies.

It may be noted that there is a variation between the management compensation figures given in the proposed Operations Agreement and on the Spread Sheet. This is subject to negotiation as to time involved, personal availability and structure necessary to satisfy investor requirement.

The Spread Sheet figures are also subject to change as to lease versus purchase of equipment to best protect the investor's tax position.

Additional verification materials will be supplied upon visit to site.

THE UPTON #2 PLACER EXPLORATION PROJECT

BY

"REYNDOLE"

DOYLE MADOLE  
3118 W. AVE. L  
LANCASTER, CA. 93534  
805-943-4404

602-684-3444

RALPH L. REYNOLDS  
CALIFORNIA MINERAL OIL & GAS BROKER  
MOG O-655383-E  
CALIFORNIA MINE ENGINEERING CONTRACTOR  
No. 365551-A  
105 BARDE CT.  
GRASS VALLEY, CA. 95945  
916-272-4024

SUMMATION OF UPTON #2 PLACER EXPLORATION PROJECT

The operation is expected to process 90,720 cubic yards of material per month after a 6 month organization, fabrication and setup period. It is anticipated that the placer will average 0.05 ounces of gold per cubic yard, recoverable by a sophisticated system, producing over 3,900 net ounces of gold per month. Net profits should average approximately \$1,450,000 per month.

*rec. 0.043 oz/yd<sup>3</sup>*

The Upton #2 Property is very unusual in that it has been enriched with gold from four separate sources that converge on the property. The placer deposit is relatively shallow allowing quick access to the lower richer material near bedrock. All of the material, from surface to bedrock, appears to carry commercial values, allowing a low cost, open pit method of mining.

Adequate water is available for washing and concentration from a combination of drainage retention and from a nearby shaft, although the Lease requires well water to be developed on site if possible.

An investment of approximately \$1,250,000 should return approximately 23,500 ounces of gold per year to the Joint Venture Partner after initial setup of the project. This gold could be retained and taxes would not be due until the gold was sold, or if the gold were sold at a price of \$400 per ounce, it would produce approximately \$8,970,000 annually. This profit could be partly offset taxwise by a 15% depletion allowance and by depreciation of the plant, rolling stock and other equipment.

*lease?*

Direct cost of operations, including Royalty payments, are anticipated to be under \$4.00 per cubic yard, and the placer is anticipated to average \$20.00 per cubic yard. Estimated volume of placer material to be worked is 3,484,800 cubic yards. The life of the Project should extend more than three years.

*maybe*

*prod. estimate exceeds total dist. production (62,400 oz)  
by 25%*

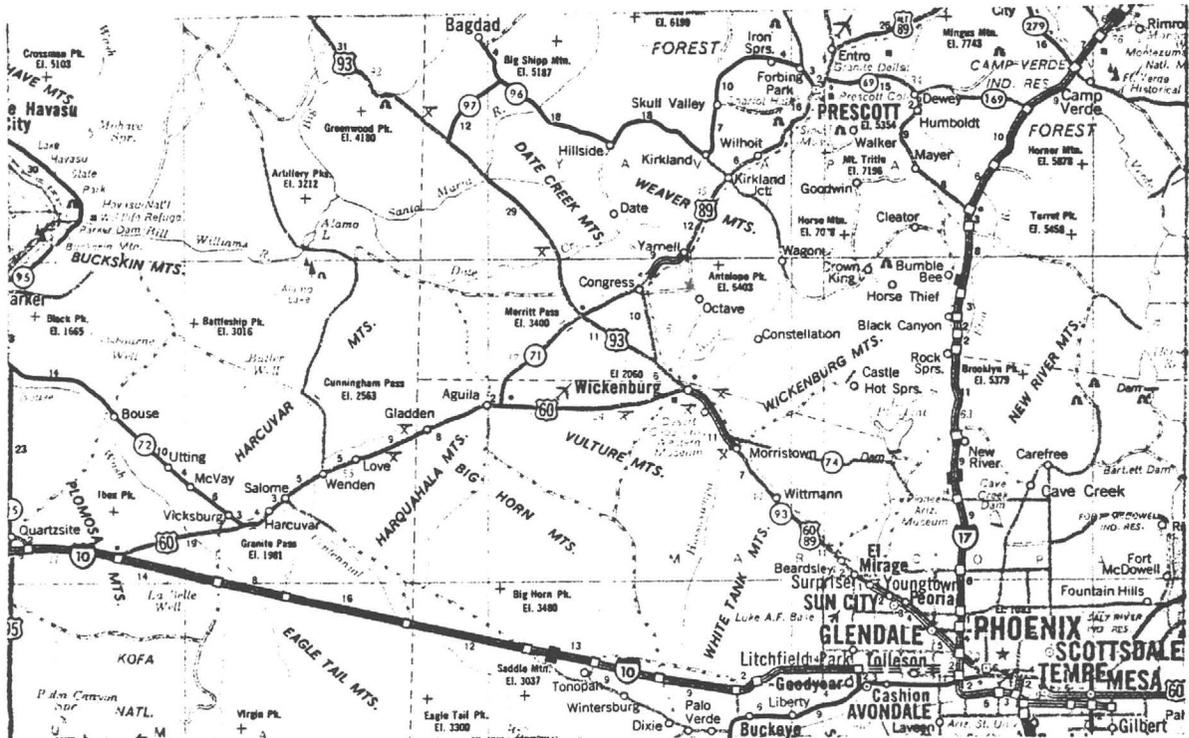
PROPERTY LOCATION AND ACCESS

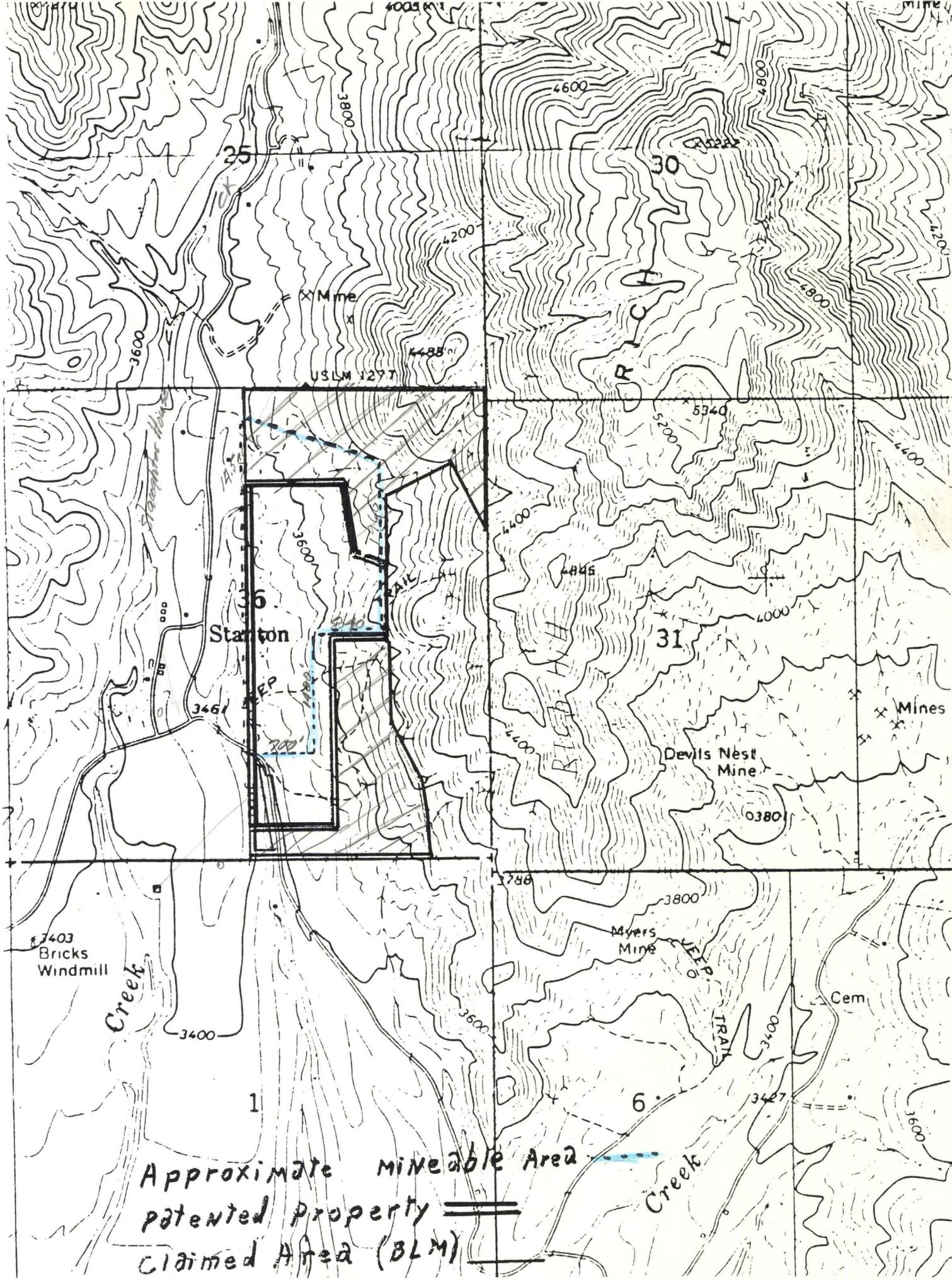
The property consists of approximately 120 acres and is located in Section 36, Range 9N, Township 5W., Gila and Salt River Base and Meridian, The Weaver Mining District, Yavapai County, Arizona.

The property is 13 miles North of Wickenburg and 70 miles N.W. of Phoenix. Wickenburg is said to be the Dude Ranch Capitol of the United States because of its mild, sunny winters, making it an ideal winter vacation area.

The closest commercial airport is located in Phoenix and the Wickenburg airport can handle private aircraft up to Lear Jets.

Access to the property from Wickenburg is by Hwy. U.S. 89 and by a county maintained improved surface road that cuts through a portion of the property. Telephone lines are available on the property and domestic electrical power is also available on site.





Approximate mineable Area ---  
 patented Property       
 Claimed Area (BLM) **▬**

± 1360' to inch

## INTRODUCTION

R.M. Merrill, a Consulting Engineer, wrote a report on the Rich Hill area placers that stated, "Data from a score of early reports range from .30¢ to \$1.50 per cubic yard, (gold at \$20.62)."

Gold, now valued at approximately \$400 per troy ounce, is 20 times more valuable in terms of today's paper dollars. Currently, Merrill's reported values average between \$6.00 to \$30.00 per cubic yard of gravels. Merrill's report covered an area downhill from the Rich Hill Project offered in this proposal, and would logically be a lower grade property than ours. For example, a recent test indicated values of over \$100.00 in gold per cubic yard from a sample taken 21 ft. below the surface.

Rich Hill was the site of the first major gold strike in Arizona. The basin on the top of Rich Hill is known as the "Potato Patch" because of the many potato sized nuggets recovered from the hill. It is said that Major Peeples picked up \$7,000 worth of gold before breakfast, or about 350 ounces from the Potato Patch, in 1893.

The property offered in this proposal is roughly shaped as a rectangle and is located below the old Potato Patch along the base of Rich Hill. Recently, a structural geologist mentioned the probability that a significant portion of the Potato Patch could be trapped in a dip on the upper portion of the property.

Gold is deposited in rocks by nature, usually in white quartz veins, called hard rock or Lode gold. As the rock erodes, the gold is broken free from the rock. Since the rock is lighter, it washes away by erosion, leaving a gold concentrate. Erosion can take place on a steep mountainside, or in a river bed, leaving a concentration of heavy minerals. This concentrate is called "Placer". Other valuable minerals, such as tungsten, can also be concentrated in placers.

The sources of gold for the Rich Hill Placer Property are listed in probable order of importance.

1. Slaughterhouse Creek - A dry, very old river channel that has concentrated eroded material for a very long period of time. This is the area that produced the \$97.00 per cubic yard sample at \$350.00 per ounce gold.

2. Rich Hill <sup>Co-</sup>Alluvium - (decomposed rock eroding down hill)  
The hill itself has assayed .01 ounces per ton gold and contains several gold bearing quartz veins. This material produced the \$12 sample material mentioned in the text. There is reason to believe that this material could be very rich.
3. Schist - A layered rock, laced with ribbon quartz veins. The schist material has assayed .07 ounces per ton gold, and up to three ounces per ton gold in the very narrow quartz veins. This material feeds into Slaughterhouse Creek, and forms part of the bedrock on the property. The formation can be traced several miles upstream.
4. The Potato Patch - Erosion from this area primarily feeds onto the property. Many of the large nuggets could remain on the upper portion of the property. This gold is the remnant of an ancient river bed that formerly flowed over what is now the top of the mountain.

Because of the multiple sources of gold enrichments and the close proximity to these sources, this property appears to be the richest placer I have ever encountered.

Testing to date has consisted of checking historic records, hand concentration of the placer by panning, surface observation, and testing to a moderate depth with a backhoe and concentration with a vibrating sluice. To date our on site test work has been very encouraging.

#### WATER

The property was never mined in volume due to a lack of surface water. Strong interest in mining the property was expressed in the 1930's, and reports show that sufficient water could have been developed. These reports are included in the inclosed Rich Hill Booklet. The mining plans were probably interrupted by WWII. Recently, the United States Geological Survey drilled geothermal test holes that strongly indicate a large aquafier under the area. The property Lessors have recently been informed that a permit to pump 100 acre feet of water from Antelope Creek will probably be granted for the Upton #2 Property. Studies of topographic maps and aerial photos indicate that another approximately 100 acre feet of water can be captured from surface drainage from Rich Hill. The Lessors have also agreed to pump water from an existing mine shaft on their nearby property if required on site wells are not successful. The shaft is 170 ft. deep in gravel and has over 90 ft. of steady water table.

*100 acft = ± 32.5 mm gals yr?*

LIFE OF PROJECT

It is estimated that the auriferous (gold bearing) gravels will average 30ft. or more in depth over 72 or more acres. This would provide enough material for a minimum of three years of operation. The actual depth is unknown, although it has been checked to 21 ft. without contacting bedrock. Some areas could contain 50 ft. of gravels. The volume of auriferous gravels is estimated to be greater than 3,484,800 cubic yards.

*by whom?*  
*± 5,250,000*

NOTES, OBSERVATIONS AND TESTS OF PROPERTY BY OPERATOR

Rich Hill is granite in nature, and has a light gray color. The hill rock contains quartz crystals within the granite, and has closely spaced spots within the granite and quartz. When crushed and panned, the Rich Hill rock will produce a concentrate of black sands. The black sand concentrate appears identical in nature to black sand concentrates from the alluvial placer material taken at the base of Rich Hill.

Three mineralized quartz veins dip approximately 50 degrees into Rich Hill and have been developed by a 700 ft. adit (tunnel) that is currently caved in at the 300 ft. mark. Chip samples were taken along the accessible 300 ft. portion of the wall rock, and were fire assayed. The assay results showed .01 to .03 oz. gold per ton. The quartz veins, averaging approximately 18 inches in width, were sampled further up the hill from the old workings, and fire assay showed up to .6 oz. gold per ton.

The placer material, at the foot of Rich Hill, is deposited in an alluvial fan. The alluvium and channel gravels should be at least 30 ft. deep on the subject property, and runs over 170 ft. deep, measured in an old mine shaft to bedrock on an adjoining property.

We have assayed black sand concentrates from the property by fire assay and have received results of .5 ounces per ton gold, with a trace of silver. The operator of adjacent property is said to have had assay results of \$500 per yard at \$300 gold. Assay results showing such high values could occur from this property in several ways. Such high value black sands assays could be representative of the values contained in the deeper material. The bottom thin layer of concentrates from the bedrock could have been sampled, or the concentrate could have been fire assayed without first removing the free gold by amalgamation with mercury, giving a false high reading. One large gold nugget in a sample can give a false high value that is not representative of the gravels average grade. From extensive panning of the alluvium, tests made in the 1920's and our own experience, we expect values of approximately \$20 per yard average at \$350 per ounce gold price.

*by whom?*  
The tails were panned, producing 2 pounds of fine concentrate that appeared to be substantially lighter than those produced by the concentrator, but midway through the test preceding our test, the uncured paint started coming out with the tails, unsealing the crevices in the lower 2/3 of the concentrator, and possibly coating the gold with an oil type substance. The results of hand concentrating the tails from the spiral concentrator indicated a loss of .048¢ per cubic yard. It is expected? that some values will be lost into a small gap between the spirals and the wall of the concentrator until the gap has been packed by fine material which should take one to two days of operation. New units should not be used for testing.

*How much? who?*  
Some medium and fine gold was observed in the three pounds of concentrate prior to shipment that visably indicated high values. The poor assay results were at odds with our own observation so a second testing trip was made.

In the second test run, the rejects were not washed and the screened material was concentrated by a vibrating sluice box. The free gold was separated from the black sands by a D.A.M. recovery unit. The resulting free gold was weighed on a scale capable of measuring 1/4800 troy ounce. The results were a value of \$12.00 per yard for the near surface one cubic yard alluvium, and \$97.00 per cubic yard from a .7 cubic foot sample taken from a 21 ft. depth, with gold valued at \$350 per ounce. One smaller nugget constituted the majority of the values in the .7 cubic foot sample. These results are consistant with observed values panned from the property over the last six months.

More fines were observed at 20 ft. than at 10 ft. depth. More fines would restrict the capacity of the concentration plant, but higher values should be expected to compensate for the reduced volume. The material is somewhat sandy in nature, so we are expecting a 20% earth swell percentage.

Several methods of further evaluating the auriferous placers were considered. Drilling tends to concentrate the values in pockets formed by the drill when used in this type of material, and will not always give accurate results. I believe that drilling should be primarily used to find the depth of the bedrock, and secondly, to give an indication of values encountered at depth. Backhoes are also frequently used to sample properties on a grid. Our experience indicated that a 580C Case backhoe is not able to scrape its way beyond 21 ft. in depth. The lower material is very tightly packed and may require a Cat 225 excavator. *? what type?*

We feel that the best method of testing would be to use a Bulldozer and Loader to make a cross cut on the property, loading it into a test plant capable of cleaning the larger boulders near bedrock.

UPTON #2 PLACER EXPLORATION PROJECT

SPREAD SHEET EXPLANATION

ACQUISITION

ACQUISITION COSTS CONSIST OF REIMBURSEMENT OF LEASE PAYMENTS MADE BY REYNOLDS - MADOLE TO THE UPTON #2 PROPERTY OWNERS AS OF 6/10/83. THE JOINT VENTURE PARTNER WILL THEN BE RESPONSIBLE FOR CONTINUING PAYMENT OF THE LEASE PAYMENTS AS DUE.

*± 2,500  
How much?*

INSURANCE

A GENERAL COVERAGE LIABILITY POLICY WILL HAVE A LIMIT OF \$1,000,000. EQUIPMENT AND VEHICLES ARE UNDER A BROAD COVERAGE POLICY WITH COSTS ESTIMATED AT 2% OF THE VALUE OF THE MATERIAL AND EQUIPMENT COVERED. WORKMAN'S COMPENSATION INSURANCE PAYMENTS ARE INCLUDED IN THE SALARY ESTIMATES SO ONLY THE CALIFORNIA AND ARIZONA DEPOSITS ARE INCLUDED.

VEHICLES

BOTH VEHICLES ARE TO BE GMC 3/4 TON, 4 WHEEL DRIVE PICKUPS. THEY ARE TO HAVE DIESEL ENGINES BECAUSE FUEL CAN BE OBTAINED ON SITE AT A SUBSTANTIAL SAVINGS, INCLUDING POTENTIAL AVOIDANCE OF HIGHWAY TAXES FOR OFF HIGHWAY USE. BOTH VEHICLES WILL BE EQUIPPED WITH WINCHES TO PERFORM ON SITE WORK.

*Tab!*

ACCOUNTING

A LOCAL INDEPENDENT C.P.A. WILL BE EMPLOYED TO SET UP BOOKS AND RECORDS AND TO AUDIT THE BOOKS AND RECORDS ON AN ONGOING BASIS. THE C.P.A. WILL ALSO BE RESPONSIBLE FOR ISSUING A MONTHLY STATEMENT AS REQUIRED BY THE JOINT VENTURE PARTNER.

## PRELIMINARY WORK

**SURVEYS AND MAPS** - THE PROPERTY MUST BE ACCURATELY MAPPED TO SHOW ELEVATIONS PROVIDING NECESSARY ENGINEERING DATA.

**GEOPHYSICS** - A VERY LOW FREQUENCY ELECTROMAGNETIC SURVEY SHOULD BE MADE ON A GRID PATTERN TO ESTABLISH THE BEST POTENTIAL WATER WELL SITES AND TO POTENTIALLY INDICATE AREAS OF BLACK SAND ENRICHMENT. THE GRID MEASUREMENTS MUST BE MAPPED AND INTERPRETED BY A QUALIFIED OPERATOR AND/OR EXPLORATION GEOLOGIST. *B.S.!*

**DRILL TO BEDROCK** - FIVE HOLES SHOULD BE DRILLED TO BEDROCK TO ESTABLISH THE ELEVATION OF THE BEDROCK AND THIS INFORMATION SHOULD BE TIED INTO THE SURFACE MAPPING TO INDICATE THE POTENTIAL VOLUME OF ALLUVIUM ON THE PROPERTY.

**DRILL AND CASE 2 WATER WELLS** - THIS IS REQUIRED UNDER THE TERMS OF THE LEASE AND IS NECESSARY TO DEVELOP NEEDED REPLACEMENT WATER. *cont.?*

**COMPLETE WATER WELLS** - THESE ESTIMATES INCLUDE TWO GRUNDFOG STAINLESS STEEL 50 HP WATER PUMPS FOR THE WELLS. ALSO INCLUDED IS AN ADDITIONAL 300 FT. OF PIPE AND WIRE PER WELL.

## CONCENTRATION PLANT (REFER TO FLOW SHEET EXHIBIT A)

1. **GRIZZLEY, HOPPER, FEEDER** - THE GRIZZLEY WILL MEASURE 27 FT. LONG BY 10 FT. WIDE AND WILL BE A WALKING BEAM TYPE TO BE ABLE TO HANDLE THE EXPECTED BOULDERS. IT WILL PASS ALL 6 INCH MINUS MATERIAL INTO UNDERLYING SEPARATE DRY AND WET HOPPERS. THE MATERIAL WILL THEN BE CONVEYED BY A CONVEYOR BELT AND BY A SAND PUMP INTO THE SCRUBBER. THIS SECTION WILL BE MOUNTED ON WHEELS. *Alleged 54% + 3/4"*
2. **SCRUBBER** - THIS SECTION CONSISTS OF A 6 FT. BY 30 FT. SCRUBBER WITH LIFTERS THAT WILL PROVIDE AN AUTOGENOUS GRINDING ACTION NECESSARY TO BREAK UP CLAYS AND TO ASSIST IN PARTLY GRINDING THE BLACK SANDS. ALL 3/4 PLUS MATERIAL WILL BE SEPARATED BY A VIBRATING SCREEN AND THEN REMOVED BY A STACKER BELT DESCRIBED BELOW. THE 3/4 MINUS MATERIAL WILL MOVE TO THE CONCENTRATION SECTION. THE SCRUBBER CAPACITY IS ESTIMATED TO BE 180 YDS<sup>3</sup>/HR. ALSO INCLUDED *Magnetic?*

*all this equip  
relatively odd-ball*

IN THIS SECTION IS A PROPORTIONER TO METER OUT CHEMICALS SUCH AS SURFACTANTS, DISPERSANTS AND FLOCULANTS AS NEEDED. THIS SECTION WILL BE MOUNTED ON A 40 FT. TRAILER AND ALSO INCLUDES A NUGGET TRAP FOR 3/4 PLUS NUGGETS. *dreamers*

- 3. RADIAL STACKER BELT - MIRRAF BELTS HAVE A UNIQUE FEATURE ON THE SUPPORT WHEELS THAT ALLOW FOR A RAPID SET UP WHEN MOVED.
- 4. CONCENTRATION - THE  $\frac{1}{2}$  INCH MINUS FRACTION WILL FIRST BE CONCENTRATED BY A BANK OF TEN RINGER HELICAL SCREW CONCENTRATORS THAT PROVED TO BE VERY EFFECTIVE IN OUR TESTS OF UPTON #2 MATERIAL. THESE CONCENTRATIONS WILL PRODUCE A COARSE BLACK SAND AND FREE GOLD PRODUCT. THIS PRODUCT WILL BE FURTHER SCREENED TO A  $\frac{1}{4}$  MINUS AND RETAINED IN BLACK SAND HOPPERS. THE MUCH SMALLER AMOUNT OF  $\frac{1}{4}$  PLUS MATERIAL WILL BE SEPARATELY CONTAINED IN A LOCKED NUGGET CONTAINER.

*what happens to the  $-\frac{3}{4} + \frac{1}{2}$ ?*

ALL OF THE MATERIAL REJECTED BY THE RINGER CONCENTRATOR WILL BE FURTHER PROCESSED BY A SECONDARY CENTRIFUGAL KNELSON 30 INCH CONCENTRATOR RATED AT 25 TONS PER HOUR WITH A  $\frac{1}{4}$  MINUS FEED.

ALL OF THE MATERIAL REJECTED BY THE KNELSON CONCENTRATOR WILL BE FURTHER PROCESSED BY AN INEXPENSIVE TWO STAGE FLUMESLUICE. THIS SECTION SHOULD BE CONSIDERED AS A BACK UP SYSTEM THAT SHOULD RECOVER VALUES LOST BY MECHANICAL FAILURE ELSEWHERE IN THE SYSTEM. THE CONCENTRATION SYSTEM IS ALSO TO BE MOUNTED ON A 40 FT. TRAILER.

CONCENTRATION SYSTEM BREAKDOWN

SAND PUMP.....	\$ 12,831.
DISTRIBUTION BOX.....	500.
RINGER HELICAL SCREW CONCENTRATOR 10 UNITS.....	67,500.
VIBRATING SCREEN FEEDER.....	1,000.
VIBRATING SCREEN.....	2,000.
KNELSON 30 INCH CONCENTRATOR.....	21,450.
FLUME SLUICE 32 FT.....	600.
TRAILER AND STRUCTURAL STEEL.....	4,000.
CONCENTRATE (BLACK SAND) CONTAINER (6)	6,000.
TOTAL	<u>\$115,881.</u>

5. RESERVOIR - A 750,000 GALLON POND WILL BE LINED WITH PLASTIC TO PREVENT LOSS AND THE WATER WILL BE RETURNED TO THE SYSTEM BY A 10 HP PUMP.
6. GENERATOR - THIS IS A CATERPILLER 200 KW GENERATOR THAT IS LEASED SO THAT IT COULD BE RETURNED AT MINIMAL COST IF MORE POWER IS REQUIRED.

PLANT MAINTENANCE -- THESE ARE ESTIMATED MONTHLY COSTS TO MAINTAIN EQUIPMENT IN PEAK CONDITION.

### RECOVERY AND LABORATORY EQUIPMENT

EQUIPMENT AND SUPPLIES - THIS EQUIPMENT IS TO BE HOUSED IN AN 8 FT. BY 40 FT. SEA CONTAINER DESCRIBED BELOW. THE EQUIPMENT IS NECESSARY TO SEPARATE THE FREE GOLD FROM THE BLACK SANDS AND TO MAINTAIN THE EFFECIENCY OF THE PLANT.

### RECOVERY AND LABORATORY EQUIPMENT BREAKDOWN

FLYING DUTCHMAN VIBRATING SLUICE.....	\$ 500.
KNELSON 6 INCH LABORATORY SEPARATOR 1,500LBS./HR....	5,265.
VIBRATING SCREEN FEEDERS (2).....	2,000.
GOLD HARVEST BLACK SANDS PARTING TABLE (20-).....	2,000.
GOLD GENIE WHEEL (2).....	1,000.
SIEVES (12).....	960.
SIEVES WET AND DRY VIBRATOR.....	1,200.
SCALES (LABORATORY).....	1,000.
SCALES (PLATFORM CERTIFIED 10,000 LBS.).....	2,000.
PULP SCALE (DENSITY MEASUREMENTS).....	1,500.
MICROSCOPE MINERAL WITH OPTICAL SIZING GUIDE.....	750.
ULTRA VIOLET LAMP.....	150.?
METAL DETECTOR.....	800.
STEEL BARRELS (55 GALLON X 50 BARRELS).....	1,000.
BUCKETS (5 GALLON X 30 BUCKETS).....	100.
MISCELLANEOUS LABORATORY SUPPLIES.....	2,000.
TOTAL	<u>\$22,225.</u>

OUTSIDE LABORATORY WORK

PROCESS TESTING - THIS WORK IS NECESSARY TO VERIFY THE EFFECIENCY OF THE PLANTYAND TO GAIN KNOWLEDGE OF THE BEST WAY TO RECOVER ALL OF THE ECONOMIC VALUES CONTAINED IN THE BLACK SANDS.

FIRE AND FIRST AID EQUIPMENT

THIS EQUIPMENT IS REQUIRED BY STATE AND FEDERAL LAW.

ROLLING STOCK

BULLDOZER - THE FIAT ALLICE<sup>5</sup> DOZER IS A 1979 MODEL 31 THAT IS SLIGHTLY LARGER THAN A D-9 CATERPILLAR. IT IS REPORTED TO BE IN GOOD CONDITION WITH 5,200 TOTAL HOURS. THE ENGINE WAS REPLACED 1,000 HOURS AGO AND THE UNDERCARRIAGE IS SAID TO BE 70%.

*Contracted*

DOZER COST BREAKDOWN

DOZER.....	\$45,000.
MULTISHANK RIPPER.....	10,000.
FREIGHT FOB <u>MISSOURI</u> BY RAIL.....	1,400. ?
FREIGHT LOCAL.....	300.
SERVICE, RECONDITION AND INSTALL	
AIRCONDITIONING...	5,000.
	<u>\$61,700.</u>

LOADER - THIS IS A 1979 INTERNATIONAL ARTICULATED MODEL 560 WITH 7 YD<sup>3</sup> AND 9 YD<sup>3</sup> BUCKETS. IT HAS 18,000 TOTAL HOURS BUT HAS BEEN VERY WELL MAINTAINED. IT HAS L-5 ROCK TIRES AND A SOUND SUPPRESSANT AIR CONDITIONED CAB. THE PRICE INCLUDES DELIVERY TO SITE.

STATIONARY EQUIPMENT

GENERATOR - THIS IS A 100 KW CATERPILLER GENERATOR AND WILL BE USED TO PROVIDE POWER FOR THE WATER WELL PUMPS. THIS IS ALSO ON LEASE IN ORDER TO FACILITATE REPAIRS OR REPLACEMENT WITH A MORE SUITABLE GENERATOR IF NEEDED.

*200 or 100 ?*

## STRUCTURES

SEA CONTAINER - THESE STRUCTURES ARE 8'x8'x40' AND PROVIDE THE LEAST EXPENSIVE SECURE SHELTER AVAILABLE. THE CONTAINER WILL BE INSULATED AND CUSTOM FABRICATED FOR USE AS A SHOP-STORE ROOM FACILITY, A RECOVERY-LABORATORY BUILDING, AND AS A CHANGE-LUNCH ROOM FOR THE CREW.

TRAILER OFFICE - THE TRAILER IS IN NEAR NEW CONDITION AND HAS A COMPARABLE VALUE OF APPROXIMATELY \$9,000. IT IS DIVIDED INTO FOUR SECTIONS AND MEASURES 10'x40'. THE OFFICES USED WOULD BE DIVIDED INTO BOOKKEEPING, RECEPTION, FOREMANS OFFICE, DRAFTING AND ENGINEERING, AND MANAGER'S OFFICE.

TRAILER REYNDOLE - ON SITE MANAGEMENT IS NECESSARY DURING START UP. THIS TRAILER WILL ALLOW REYNDOLE TO BE AVAILABLE INITIALLY AS NEEDED ON A 24 HOUR BASIS. THIS WILL ALSO PROVIDE ON SITE SECURITY FOR THE EQUIPMENT DURING THE START UP.

## SANITATION

SEPTIC TANK AND PLUMBING - THIS IS REQUIRED BY STATE AND FEDERAL LAW AND HELPS KEEP THE FLYS AWAY.

## MAINTENANCE

SERVICE TRUCK - A 1 TON CHEVROLET 1974 TRUCK WITH AN ARC WELDER AND LOCKABLE SERVICE BODY IS AVAILABLE AT A REASONABLE PRICE. IT WOULD BE USED BY THE MECHANIC TO PERFORM ON SITE SERVICE OF EQUIPMENT.

TOOLS AND EQUIPMENT - TOOLS AND EQUIPMENT AND INVENTORY WILL BE SECURED IN THE SHOP SEA CONTAINER AND IN THE SERVICE TRUCK.

### TOOLS AND EQUIPMENT BREAKDOWN

ACETYLENE TORCH.....	\$ 450.
HIGH PRESSURE WASHER.....	3,000.
AIR COMPRESSOR.....	500.
AIR TOOLS 3/8 TO 1 INCH.....	800.
HAND TOOLS (USED).....	2,000.
HAND TOOLS (ELECTRIC).....	500.
HYDRAULIC JACKS.....	550.
BENCH GRINDER.....	150.
VISE, PIPE AND BENCH (2).....	350.
PIPE TOOLS, CUTTERS, THREADERS, REAMERS, ETC.....	850.

---

TOTAL \$9,150.

INVENTORY BREAKDOWN

FASTENERS.....\$1,000.  
STRUCTURAL STEEL ASSORTMENT.....1,000.  
PIPE AND HOSE..... 500.  
ELECTRICAL..... 500.  
MISCELLANEOUS.....1,000.

TOTAL \$4,000.

PETROLEUM PRODUCTS

DIESEL FUEL @ \$1.00 BULK PURCHASING. LUBRICANTS,  
FLUIDS AND FILTERS - THESE ARE NECESSARY TO MAINTAIN  
THE EQUIPMENT.

ELECTRIC POWER

*Why generators?*

DOMESTIC CONNECTION  
UTILITY BILL

COMMUNICATION

TELEPHONE INSTALLATION  
TELEPHONE CHARGES MONTHLY  
C.B. RADIO SSB, SINGLE SIDE BAND CITIZENS BAND RADIOS  
HAVE MORE POWER AND CAN PENETRATE RADIO NOISE BETTER  
THAN NON SIDE BANDED UNITS. THE OFFICE WILL HAVE A BASE  
STATION AND MOBILE UNITS WILL BE PLACED IN THE THREE  
TRUCKS ON SITE.

*needed?*

OFFICE EQUIPMENT AND SUPPLIES

EQUIPMENT AND SUPPLIES BREAKDOWN

FURNISHINGS.....\$1,800.  
TYPEWRITER IBM SELECTRIC II RECONDITIONED..... 700.  
COPIER CANON NP 125..... 3,000.  
FILING CABINET LOCKING AND FIRE RESISTANT..... 400.  
DRAFTING TABLE AND SUPPLIES..... 300.  
PHONE ANSWERING MACHINE..... 200.  
TIME CLOCK..... 250.  
MISCELLANEOUS..... 600.

*Lease  
or  
rent*

TOTAL \$7,250.

## FUEL TANKS

FUEL TANK 500 GALLON STEEL  
FUEL TANK 10,000 GALLON STEEL  
FUEL PUMP ELECTRIC

## SECURITY DEVICES

SECURITY METAL DETECTOR - THIS DEVICE IS SIMILAR TO THOSE USED FOR PASSENGERS AT AIRPORTS. IT SHOULD BE INSTALLED IN THE LUNCH-CHANGE SEA CONTAINER TO PREVENT THEFT OF PRODUCT.

FIREARMS - FREE GOLD IN BULK PROVIDES A STRONG TEMPTATION TO MANY INDIVIDUALS. THE FOREMAN AND GUARD SHOULD BE PROVIDED WITH THE MEANS TO PROTECT THEMSELVES IF NECESSARY. MOST EMPLOYEES WOULD BE FAMILIAR WITH THE USE OF FIREARMS PRIOR TO EMPLOYMENT.

## CONSULTANTS

METALLURGISTS-GEOLOGISTS - A CONSULTANT MAY BE NECESSARY TO ASSIST IN SOLVING UNFORSEEN PROBLEMS AND TO ASSURE THE JOINT VENTURE PARTNERS THAT THE RECOVERY UNIT IS WORKING EFFECTIVELY.

## MANAGEMENT

(SEE MANAGEMENT AGREEMENT PROPOSAL "EXHIBIT B"

REYNOLDS - MR. REYNOLDS WILL BE AVAILABLE AS TIME ALLOWS AND AS NEEDED.

MADOLE - WILL INITIALLY LIVE ON SITE IN ORDER TO BE AVAILABLE AS NEEDED.

EXPENSES - THE CATEGORY INCLUDES PICKUP FUEL, MOTEL, MEALS WHILE ON THE ROAD AND OTHER RELATED EXPENSES.

HOME OFFICE - THESE EXPENSES ARE CHARGED TO HELP COVER THE GRASS VALLEY OFFICE TIME DEVOTED TO THE UPTON #2 PLACER PROJECT.

## LABOR

ALL WAGES ARE ESTIMATED USING A 25% LOAD FACTOR TO COVER MANDATORY EMPLOYER CONTRIBUTION AND EXPENSES.

CONTINGENCY FUND

A GENERAL RULE OF THUMB IN THE MINING INDUSTRY IS TO USE A 25% CONTINGENCY FACTOR IN ESTIMATING COSTS. THE FUND WILL COVER ALL COSTS INCLUDING DAY CREW LABOR TO THE END OF THE SECOND MONTHS OPERATION.

CUMULATIVE TOTAL

THIS IS A CUMULATIVE STATEMENT OF MONTHLY COSTS.

RECOVERABLE GOLD IN OUNCES AT <sup>0.025</sup>0.25 OZ./YARD<sup>3</sup>

PRUDENCE SUGGESTS USE OF A RECOVERABLE GRADE MUCH LOWER THAN ANTICIPATED AND A LOWER GOLD PRICE OF \$300 PER OUNCE WHEN EVALUATING A PLACER DEPOSIT. THE PLANT HAS THE CAPABILITY OF PROCESSING 180 YDS.<sup>3</sup> PER HOUR OF BANK RUN MATERIAL. EACH SHIFT IS EXPECTED TO WORK 7 EFFECTIVE HOURS SO THAT THREE SHIFTS WILL WORK 21 EFFECTIVE HOURS PER DAY, 5 DAYS PER WEEK, 50 WEEKS PER YEAR OR:

180	YDS <sup>3</sup>	PER HOUR	
x 21	HRS.	PER DAY	
<u>3,780</u>	YDS <sup>3</sup>	PER DAY	
x 24	DAYS	PER MONTH	
<u>90,720</u>	YDS	PER MONTH	at 4/yd <sup>3</sup> = 388,800/mo
x .025	OZ.	GOLD RECOVERED/YD.	
<u>2,268</u>	OZ.	GOLD RECOVERED PER MONTH	
- 272	ROYALTY PAID IN KIND (12%)		
<u>1,996</u>	OUNCES GOLD RETAINED BY COMPANY		
x \$ 300	PRICE OF GOLD		

\$598,800 VALUE OF GOLD RECOVERED PER MONTH

RECOVERABLE GOLD IN OUNCES AT 0.05 OUNCES/YARD<sup>3</sup>

WE FEEL THAT THIS IS A REALISTIC ESTIMATE OF RECOVERABLE VALUES FROM TESTS MADE ON THE SITE. THIS ESTIMATE ALSO USES A MORE REALISTIC GOLD PRICE OF \$400 PER OUNCE. THERE IS SOME INDICATION THAT ACTUAL RECOVERED VALUES COULD WELL BE IN EXCESS OF THIS ESTIMATE.

## DISCONTINUANCE OF PROJECT

IF PROFITS ARE NOT PRODUCED BY THE END OF THE SECOND MONTHS PRODUCTION, THE PROJECT SHOULD BE HALTED AND REEVALUATED.

IN CASE OF ABANDONMENT, THE JOINT VENTURE PARTNERS WOULD RETAIN TITLE OF ALL PURCHASED EQUIPMENT AND MATERIALS REMAINING ON SITE. SOME COSTS COULD BE RECOVERED SINCE THE VALUE OF THE ROLLING STOCK AND THE PROCESSING PLANT SHOULD BE WELL IN EXCESS OF COSTS OF ACQUISITION.

OPERATIONS AGREEMENT BETWEEN INVESTOR AND OPERATOR  
FOR THE RICH HILL PLACER PROJECT

Ralph L. Reynolds and Doyle L. Madole agree to form a Corporation for the purpose of operating the Rich Hill Placer Project, this Corporation hereinafter shall be called "Operator".

No. 1  
The Operator shall have full management authority to spend such funds as are agreed to by the Investor and the Operator, and shall have full authority to operate the property in a minerlike manner.

The Operator shall be responsible for:

1. Testing the placers to determine minable values.
2. Organization and setup of a production facility to recover mineral values from the property.
3. Continuing Operation of the mining project.
4. Documentation of funds expended on the Rich Hill Placer Project.
5. Accurate records of employment of workers.
6. Accurate records of all values recovered from the mining operation.
7. Reasonably accurate records showing the amount of placer material worked.

The above records are to be turned over to an independent Certifiend Public Accountant, Investor designated, who shall be responsible for issuing payroll checks, and who shall also keep all necessary records of the Operations for the benefit of the Lessee and the Property Owner. The aforementioned C.P.A. is to be located in the Wickenburg, Arizona area.

The Operator will also be responsible for keeping reasonable maintenance and inventory records pertaining to the Placer Project.

All of the above records shall be available to the Investor and the Operator during normal business hours. A monthly statement shall be sent to the Investor, Operator and Property Owners.

## COMPLIANCE WITH LAWS AND REGULATIONS

? The Operator shall be responsible to insure that the Operation reasonably complies with all Local, State, and Federal Laws and Regulations regarding the operation of a placer mine.

## SECURITY

like hell!  
The Operator believes that the Investor and the Property Owner should provide their own security in order to avoid any suspicion of high grading. Operator will take all reasonable measures to assist a Security Program and reserves the right to take such security precautions as are deemed necessary.

## TRANSPORTATION OF MINERALS

The Operator shall be responsible for the transportation of valuable minerals to a designated depository, only after all interested parties agree on the values recovered.

## COMPENSATION OF OPERATOR

The Operator shall receive 25% of all product or monies derived from the mining project. Then, after the Investor has received an amount equal to their invested monies, the Operator shall share all further profits on a 50-50 basis. The Operator's share will be paid only from that portion of monies and product remaining after cost of operation and royalties have been subtracted. The Operator shall receive a base compensation of \$6,000 per month and reasonable expenses will be reimbursed.

## TERMINATION OF THE OPERATOR

This Operations Agreement can be terminated immediately only by:

- What's Proof?
1. Proof of gross negligence in operation of the Placer Project by the Operator.
  2. Proof of gross incompetence in operation of the Placer Project by the Operator.
  3. Proof of diversion of monies from the Placer Operation by the Operator.
  4. Proof of high grading (theft of product) by Mr. Madole or Mr. Reynolds, or proof that they benefited from other parties high grading.

#### TERM OF OPERATION AGREEMENT

This agreement shall remain in force for a period of 20 (twenty) years, or a lesser time if the Placers are worked out, or do not prove profitable to mine at the end of the testing period. If Operations are suspended by an act of God, or war, the base salary shall also cease during the period that Operations are suspended.

#### RESPONSIBILITY OF INVESTOR

The Investor agrees to provide all funds necessary to test and to operate the Rich Hill Placer Project.

The Investor also agrees to provide his own security, and make keys to security devices available when needed by Operator for cleanout, repairs, and or maintenance.

#### PAYMENT

All parties agree to accept their share of free gold recovered in kind.

#### DEMISE

This Agreement shall be binding on the heirs of all parties to this agreement. The Operator's heirs shall be able to hire and fire a manager that they deem competent to manage said mining operation.

201

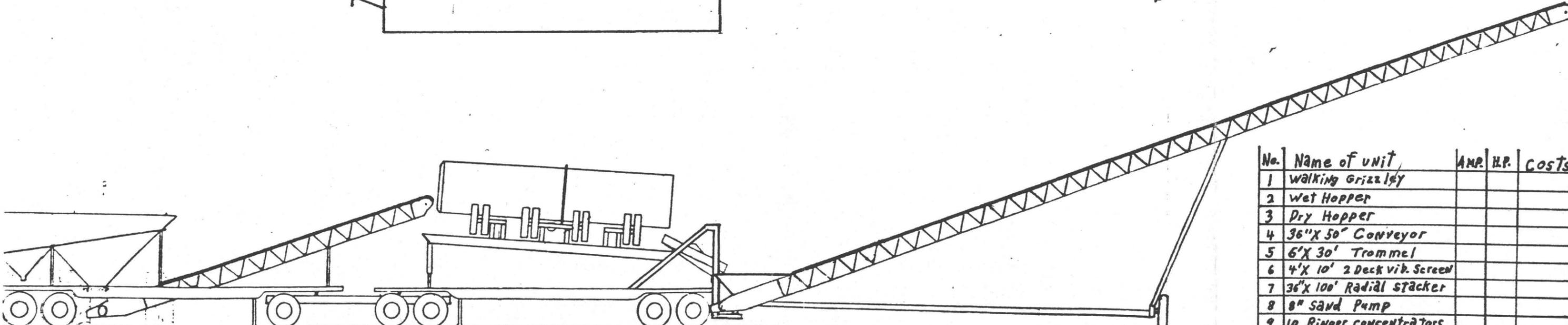
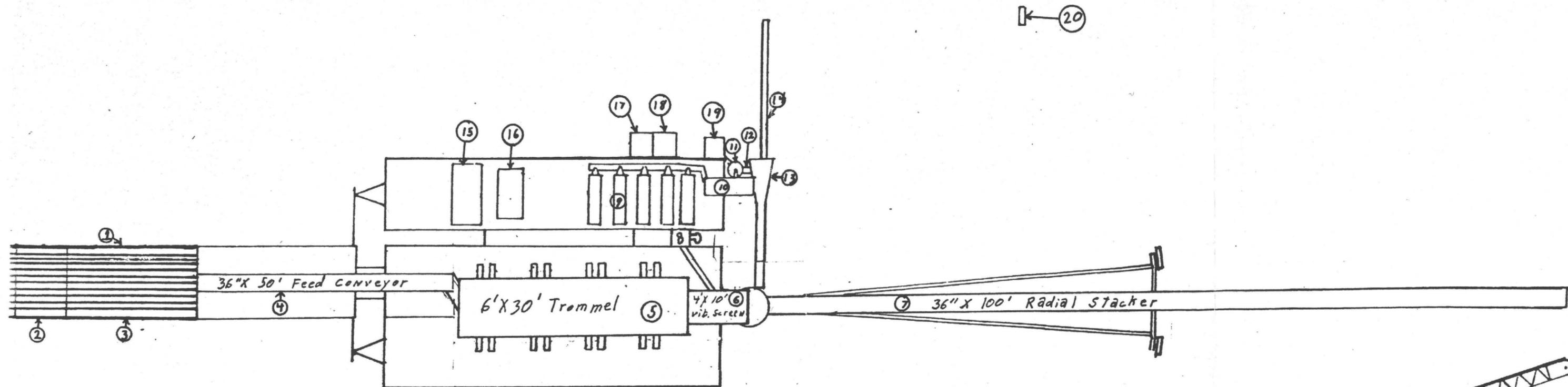
## INVESTOR SECURITY PROGRAM

The Investor may feel more secure by employing his own security agent on site. The security personnel could be housed in a travel trailer, similar to the one rented for testing. Competent honest guards can be located by contacting Police Organizations and requesting a retired Peace Officer. Such retired officers can frequently be employed for \$5 to \$6 per hour if living quarters are furnished, or about \$1,500 per month salary plus \$200 to \$300 per month rent plus transportation for a trailer. The Investor or his agent shall have the right to inspect and or sample all areas of the property, so long as such activity does not interfere with mining procedures.

## OPERATOR QUALIFICATIONS

Mr. Madole has managed his own tungsten mine and mill, worked as Site Superintendent under Mr. Reynolds supervision, for Multiple Mining Ltd. of Calgarie, was employed as Underground Superintendent by Troy Gold Industries, supervising over 40 underground miners, supervised and worked on several exploration projects, has been employed to refurbish several mills, and has been employed as a welder and heavy equipment mechanic.

Mr. Reynolds is a Licensed General Engineering Contractor, which is the license necessary for mining in Calif., and is one of the few Mineral, Oil and Gas (Mining) Brokers in Calif. Mr. Reynolds was employed as a Director and Project Director by Multiple Mining Development Ltd., in charge of the companies Calif. property exploration program.



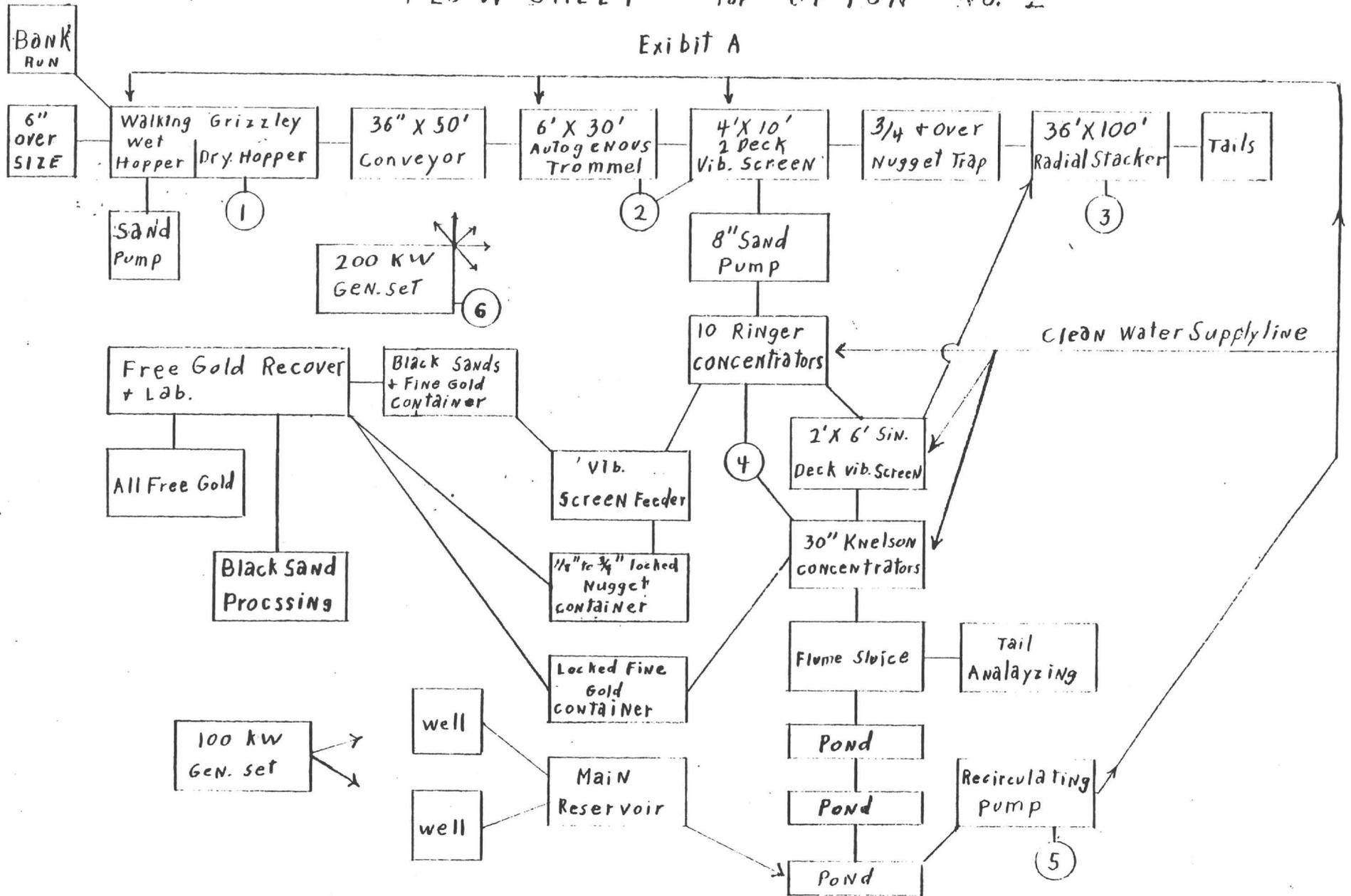
No.	Name of unit	AMP.	H.P.	Costs
1	walking Grizzly			
2	Wet Hopper			
3	Dry Hopper			
4	36" X 50' Conveyor			
5	6' X 30' Trommel			
6	4' X 10' 2 Deck vib. Screen			
7	36" X 100' Radial stacker			
8	8" Sand Pump			
9	10 Ringer concentrators			
10	2' X 6' vib. S.R. Screen			
11	30" Knelson CONCENT.			
12	Short sluice			
13	sand screw			
14	Flume to Settling Pond			
15	Diesel Tank			
16	200 KW Gen. Set			
17	Black sand + Fine gold cont.			
18	1/8 to 3/4 Nugget cont.			
19	Fine gold cont.			
20	Recirculating Pump			

PROPOSED PORTABLE GRAVEL WASHING PLANT

by Doyle Madole

# FLOW SHEET for UPTON NO. 2

Exhibit A





# TROY GOLD INDUSTRIES LTD.

BLAZING STAR MINE • P.O. BOX 69 • WEST POINT, CA 95255 • 209/ 293-4231

## REPORT OF ASSAY

*Rich Hill*

Submitted by **Exploration Dept.**

Date **3/18/82**

Sample of **Misc.**

P.O. No.

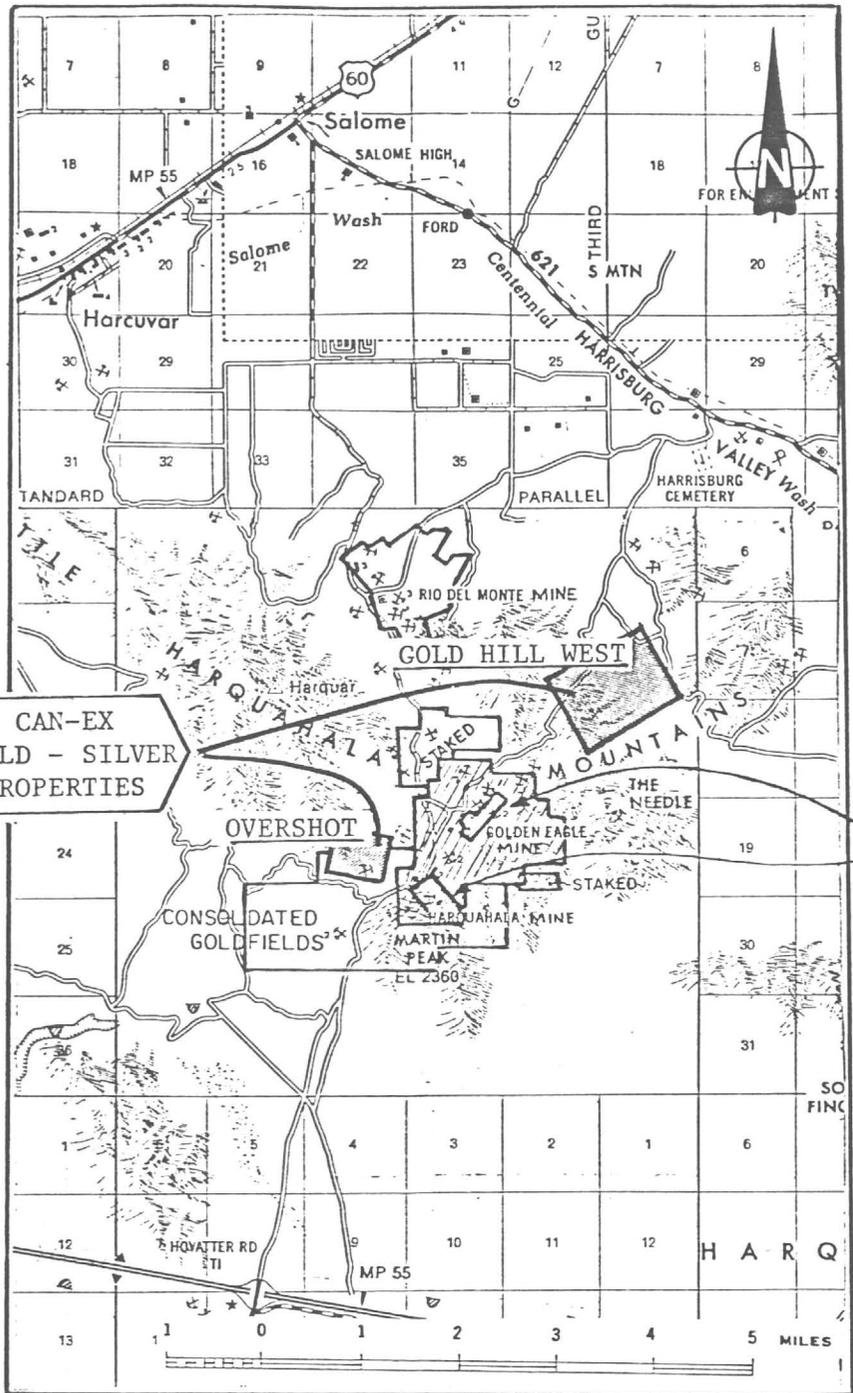
Lab. No.

SAMPLE MARK	GOLD, PER TON OF 2,000 LBS.		SILVER, PER TON OF 2,000 LBS.		%	%	
	TROY OUNCES	VALUE	TROY OUNCES	VALUE			
330	.01		tr				Back hoe Hole Base of Mt.
332	.56		tr				Black Sands
333	.01		tr				Suf. Rock
S 335	3.37		1.37				High - 12
R 336	.01		tr				Brown Rock on floor Back hoe hol
R 362	.02		tr				Dump 1/4 Screening
S 414	.07		.01				High 12 - Sh.
415	.30		.15				Mamie V. R. Rib Below 1st level
416	.46		.19				R.H Mamie V.
417	.04		tr				Mamie V. 30' down on RT. Rib
418	.75		.05				Mamie Shaft Grab Sam.
419	tr		tr				30 ft. from End of Drift RT. Rib
R 420	.01		tr				End of H.P. 335 ft. (Cave in)
R - 111							
F - 111							
S - 111							
V - 111							

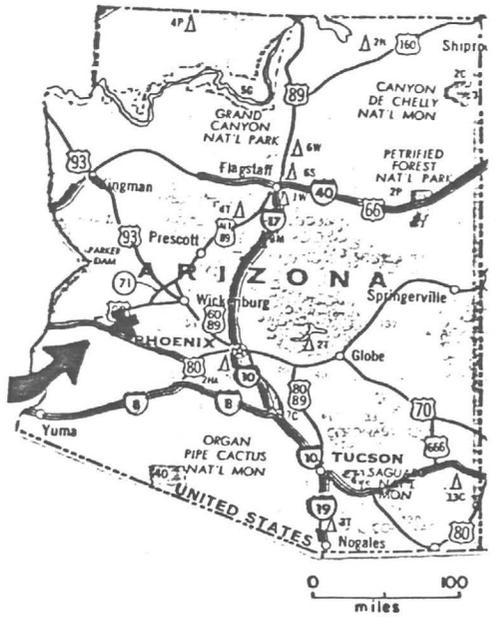
TROY GOLD INDUSTRIES LTD.

By *SA*

Assayer



**CAN-EX  
GOLD - SILVER  
PROPERTIES**



Total Recorded and  
Estimated Production  
200,000 oz. GOLD  
100,000 oz. SILVER



WEST-CENTRAL ARIZONA GOLD PROJECT

**OVERSHOT and GOLD HILL WEST Properties**



CAN-EX RESOURCES LTD.  
BOX 12542, OCEANIC PLAZA  
2580 - 1066 W. HASTINGS ST.  
VANCOUVER, B.C. V6E 3X2  
TEL: (604) 682-2269

NEWS RELEASE  
No. 1

AUGUST 24, 1983 REPORT IN GEORGE CROSS NEWSLETTER NO. 163(1983)

CAN-EX RESOURCES LTD.

EXPLORATION AND ASSESSMENT WORK UNDERWAY IN PREPARATION FOR FULL FALL PROGRAM

Two of the gold properties held by Can-Ex Resources Ltd. in Arizona are the: Overshot and the Gold Hill West, which are located about five miles south of Salome, La Paz county, about 80 miles west northwest of Phoenix. The company has recently started a preliminary exploration program, including assessment work, in preparation for an extensive program in the Fall.

The Harquahala mine which lies adjacent to the Overshot property has estimated production of 200,000 oz. gold plus 180,000 oz. silver. This ore was extracted from structures related to two northerly striking vein faults which dip toward each other. The area between the veins is complexly faulted. This created a low grade stockwork gold deposit. The Overshot property shows similar geologic structures.

The Overshot property has demonstrated that the rock is amenable to heap leaching through small tonnage tests by the previous owner. The exploration of the property is planned to test for the larger tonnage heap leach material as well as for quartz veins carrying high grade gold values. Mapping and sampling of the old showings is the first step of the program.

The Gold Hill West property is on the same geological trend as the Harquahala and holds the same dual gold potential. Detail mapping of a limestone formation and related geology is planned prior to selection of drill targets.

Can-Ex Resources Ltd. recently completed a prospectus offering of 600,000 shares at \$1.00 with the shares listed on the Vancouver Stock Exchange August 17, 1983, symbol CXZ.

Can-Ex has programs underway on its other properties. (See map overleaf.)

August 24, 1983  
Silverado Mines Ltd.

G.L. Anselmo, B.A.  
President





CAN-EX RESOURCES LTD.  
BOX 12542, OCEANIC PLAZA  
2580 - 1066 W. HASTINGS ST.  
VANCOUVER, B.C. V6E 3X2  
TEL: (604) 682-2269

NEWS RELEASE  
No. 2

AUGUST 31, 1983 REPORT IN GEORGE CROSS NEWSLETTER NO. 168(1983)

CAN-EX RESOURCES LTD.

ARIZONA GOLD SEARCH PROGRAM PLANNED

Assessment work and preliminary exploration are underway on the Pump mine and the Gold Crown mine properties of Can-Ex Resources Ltd. located 11 miles south of Aguila, Maricopa county, 60 miles north west of Phoenix, Arizona.

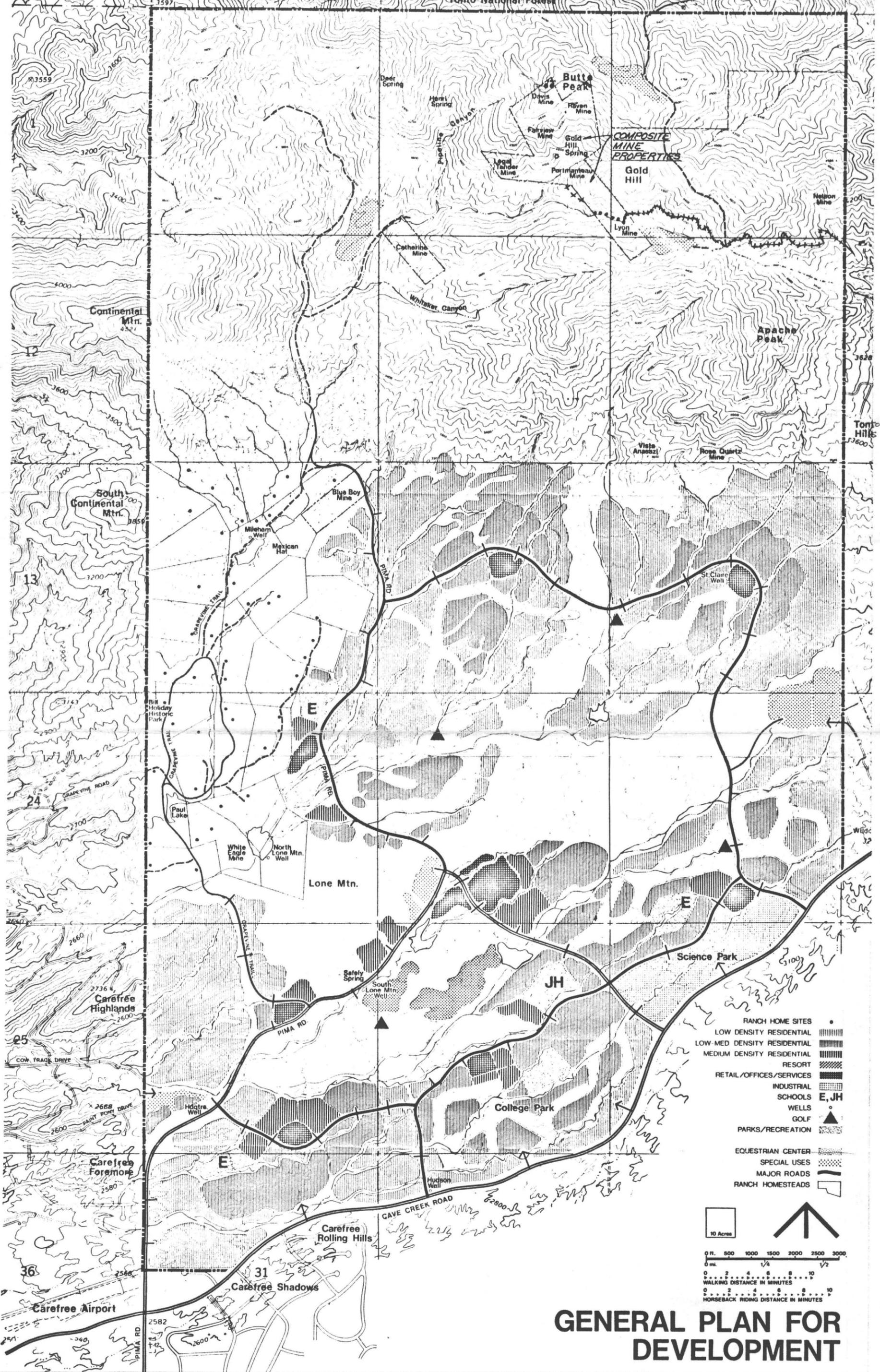
In U.S. Bureau of Mines reports, the shaft on the Pump mine is reported to have a decline depth of 320 feet on the dip of the vein. The vein has a length of 4,000 feet on surface which has been established by a number of shafts and open cuts. At present the main shaft is accessible to a depth of 160 feet. The Mines Bureau report states, "The ore in the upper levels has been oxidized to a considerable extent;..... The ore in the lower levels is oxidized very little and the gold is associated almost entirely with sulphides of iron, copper, lead and zinc." Can-Ex work has located no sulphide ore down to 160 feet or on the dumps which indicates that there is probably ore in place below the 160 foot level. The circular also states, "During January 1937 stoping was started on the deeper levels where the ore consists almost entirely of gold bearing sulphides. Recovery dropped so low that it was considered advisable to stop operating...." These records show a good exploration target below the area of stoping. Mill heads were about 0.35 oz.gold per ton with the 50 ton per day capacity mill operating for a five month period.

The Gold Crown property is a few thousand feet southwest of the Pump mine on the same regional trend. There are several shafts and pits on the claims one of which is reported to have yielded some very high grade gold ore. A wash which cuts across the vein was placer mined. (See property location map overleaf.)

The most significant mine in the area of the Pump and Gold Crown is the Vulture mine, about 12 miles east. It produced over 300,000 oz. of gold. The El Tigre mine, a couple of miles to the southwest of the Gold Crown, also had some production. These mines are all on a major regional trend.

September 1, 1983  
Can-Ex Resources Ltd.

G.L. Anselmo, B.A.  
President



**RANCH HOME SITES** •

**LOW DENSITY RESIDENTIAL** [diagonal lines]

**LOW-MED DENSITY RESIDENTIAL** [horizontal lines]

**MEDIUM DENSITY RESIDENTIAL** [vertical lines]

**RESORT** [cross-hatch]

**RETAIL/OFFICES/SERVICES** [stippled]

**INDUSTRIAL** [grid]

**SCHOOLS** E, JH

**WELLS** ○

**GOLF** ▲

**PARKS/RECREATION** [wavy lines]

**EQUESTRIAN CENTER** [dotted]

**SPECIAL USES** [checkered]

**MAJOR ROADS** [thick line]

**RANCH HOMESTEADS** [outline]

10 Acres

0 ft. 500 1000 1500 2000 2500 3000

0 1/4 1/2

0 2 4 6 8 10

WALKING DISTANCE IN MINUTES

0 2 4 6 8 10

HORSEBACK RIDING DISTANCE IN MINUTES

# GENERAL PLAN FOR DEVELOPMENT

# CAREFREE RANCH

EVUIDIT 'R'

3021 East Whitton Avenue  
Phoenix 16, Arizona - AM 6-2780  
November 22nd, 1963

Mr. Leo L. Farrington,  
Phoenix, Arizona.

Dear Mr. Farrington:

This is a brief resume re the geology and ore potential of your GOLD DUST property, situated about five miles North of Carefree, Cave Creek mining district, Maricopa County, Arizona. The commercial metals indicated for near future production are Gold and Silver. I have no financial interest in your property - nor your "proposition" in any way.

The geology of Butte Peak, on the Western slope of which your Gold Dust claims are located, bears significant resemblance to the geology of Butte, Montana - where mines are producing thousands of tons of ore per day, with recorded production of billions of dollars worth of metals. Starting in a small way mine production has steadily been increased at Butte - which for half a century has been the mainstay of employment, tax revenues, and the well-being of the people and economy of Montana - and many other places.

At Butte, Montana, the geology is mainly a series of granitic intrusives, with numerous younger dikes, etc., all shattered, fissured, and mineralized. From miles-deep sources a series of ore bearing solutions ascended the fissured and shattered rock and formed ore deposits of various types, depositing their metallic contents in vertically ranged zones, according to temperatures and pressures, influenced by rock composition and earlier mineralizations. Present day mining is at depths of over 5,000 feet, no one knows how deep the ore will persist or what may be mined in the future. Surface mineralization was not prominent, veins were narrow, containing gold-silver ores; greater depth proved that entire rock masses over widths of hundreds of feet had been mineralized into profitable ore. In important respects this geology of Butte, Montana, is similar to the geology of Butte Peak, Arizona, where, with directly proportionate development, similar types of ore - and volume of ore - awaits.

Butte Peak - including your GOLD DUST property - has a large number of veins with complex strike, and ore showings "all over the place", the ores being low-temperature zone, gold-silver ores. A Main Ore Zone of Butte Peak was operated from 1884 to 1898 by men who lacked modern mining equipment and knowledge. Operating under great difficulties these early day operators sank four shafts (now caved) along this ore zone within a length of 500 feet, and mining men who know the labor and costs of shaft sinking realize that the old-timers must have mined very rich ore from which the gold was easily recovered, and profited greatly - to enable them to operate for years and perform this relatively great amount of work. Dumps are minimal - everything mined was sent to "recovery". As proved by stopes, this Main Ore Zone is wide, the old timers worked only the richer portions of this zone. With modern equipment and technology the entire width of this wide zone of ore can be worked underground at great profit per-ton of ore. What MAY be produced from this main ore zone is beyond conjecture -- but it certainly is wide and rich.

Your GOLD DUST tunnel is 300 feet long, it follows a branch vein that strikes at right angles to the Main ore zone of Butte Peak; it is started at a strategic low point that can enable the entire mountain with its very numerous veins and ores to be profitably exploited for years to come. At 100 feet from the portal there is a minor ore shoot, starting at a cross fracture which apparently influenced the flow of ascending ore bearing solutions; a winze was sunk on this ore, and beyond it a raise went in ore to the surface. Some of this ore was rich, showing native gold and high assays. Ore remains that can be produced -- but, as "backs" here are small, by comparison with what should be THE PRINCIPAL OBJECTIVE - this ore shoot is unimportant. The GOLD DUST tunnel should be continued another 500 to 700 feet to enter the Main Ore Zone, reaching same at depth of hundreds of feet under the collars of the four shafts above mentioned. While being driven your tunnel will cross intersecting veins, at each intersection enlargements and enrichments of ore are normally found. To enter this main ore zone is but a few months work, when entered, by ore proved overhead, all "speculation" can be removed and the property be in the million-dollar category. The potential worth of this objective makes the expense of reaching it trifling by comparison.

In brief, you have a good, worth while property. Properly handled it is destined to become one of the profitable mines of Arizona. In proportion as this is understood it is a challenge to men of vision and mining experience.

Very truly yours,

C. W. Gabrielson

## S U M M A R Y

### GEOLOGY and GENESIS OF ORES OF THE "BUTTE PEAK" AREA Maricopa County, Arizona

During the "Early" Pre Cambrian the region was covered by a several miles thickness of marine sedimentaries, the lower layers of which (at 40,000 feet or more) were metamorphosed into schistose strata. Isostatic flow is then indicated by a batholithic intrusion, the upper portion of which cooled off at great depth as coarsely crystalline pegmatitic granite. As we now know it, this "Early" Era probably covered 80% of earth history in connection with rock formation and Geologic TIME.

During succeeding Paleozoic and Mesozoic Eras there were repeated periods of submergence and deposition of sediments, with intervals of igneous intrusion, uplift, faulting, and erosion. Toward the close of the Cretaceous the region was invaded on a major scale by a batholith, with extensive uplift and faulting. The area now known as "Butte Peak" was a high point (centralizing convection currents) of this magma invasion, which cooled and crystallized at a depth of thousands of feet below the then surface. Crystallization involved contraction with great loss of volume, and this, coupled to sagging of the still uncooled magma at depth, induced crustal stresses which shattered the upper cooled-off portion of the granite and fractured the overlying schists. Emanating from the still uncooled magma at depth, mineralizing solutions ascended the fractured and shattered rocks, forming ore deposits in zones, vertically ranged according to changing temperatures and pressures.

For practically the entire Tertiary the region was exposed to erosion. This removed all rock formations subsequent to, and down to, the basal schistose strata, exposing the granite of Butte Peak with its series of low-temperature veins and gold-silver ores. During the Tertiary there was a resurgence of the underlying batholith on a major scale, with intrusions of rhyolitic, andesitic, and basaltic phases of this magma. In the vicinity of Butte Peak all extrusive flows of these rock formation have been eroded away, leaving intrusive phases exposed nearby as large dikes, etc. During the Tertiary repeated ascensions of mineralizing solutions are indicated in the complexly shattered rocks of Butte Peak. This ore-forming period was of long duration.

The mineralizing solutions ascended fissures and shattered areas in the rocks, and the ores formed by earlier deposition acted as precipitants, screening out (by deposition) a large percentage of the metallic contents of the later ascending solutions. Originally deposited as sulphides, the veins and ores as now exposed in Butte Peak are largely oxidation products, with depth primary sulphides will be the normal type, temperatures controlling the minerals. With each future attainment of depth into zones of higher temperatures there should normally be an increase in the volume of ore as well as a change of type - as at Butte, Montana, and other well known and richly productive mining areas.

The isostatic flow, above mentioned, from which originated by differentiation all the igneous rocks of the region, is understood to have uplifted rock formations which once were ten miles (or more) below sea level, to where they are today, a mile or more above sea level. Erosion has thus removed rock formations that totaled much more than ten miles in vertical thickness. The TIME required for THIS CYCLE of rock formation and erosion is measurable in terms of billions of years, compared with which the total duration of mankind on earth is but a fleeting moment of geologic time. There may have been previous such cycles, we do not know.

The writer has actively engaged in Mining throughout the Southwest since 1912, and during this time visited countless mines and mining areas. However, until this year he had never visited Butte Peak, never heard it spoken of, nor read anything about it in the voluminous literature on Arizona mines. Apparently this area is as unknown to Arizona mining men as though it were in remote parts of Siberia or Cape Horn. To the writer this area has a tremendous ore potential, indeed, another such camp as Butte, Montana seems a possibility.

The gold-silver ores of Butte Peak are valuable and important, but far more important are the evidence of vast ore bodies at greater depth. The operators of the years prior to 1900 definitely demonstrated, and investigation will prove, that the only requirement today is to use modern technology and management to bring a productive mining area into being. Vision is required - the vision due to specialized experience.

PROMET SERVICES, INC.  
METALLURGICAL TESTING & PROCESSING  
GEOLOGICAL EVALUATIONS

TECHNICAL OPERATORS  
OF  
WORLD WIDE REFINERIES

4202 East University  
Phoenix, Arizona 85034  
(602) 268-3484

12-31-81

Mr. William Brawner  
Gold Hill Mining Co.  
807 E. Lemarche  
Phoenix, AZ 85022

Dear Mr. Brawner:

Over the past six months we have been systematically re-examining the development potential of the Gold Hill property northeast of Cave Creek including geological reconnaissance and evaluation and preliminary sampling of ore exposed in the old workings and at outcrops.

The favorable preliminary geological evaluation prepared by our associate Marion E. (Mike) Price, dated November 6, 1981 has been sent on to you. Therein Mike confirmed my earlier judgment that this property does indeed have unusual potential for development together with very fortuitous circumstances of convenient location, access, clean old workings which reduce problems in studying the long range potential of the property.

In further endorsement of the excellent prospects of this property which make it a good target for detailed study and evaluation I submit the following background information and results of sampling done to date.

As you are already aware, I had investigated this property extensively some 17-18 years ago at my own expense, and had decided to return to serious reconsideration at some date when precious metals prices and economic situation would justify. So, when you contacted me earlier this year regarding its development I was happy to move this project back into active consideration. I do indeed feel that it is now timely to proceed with it in a systematic step-by-step manner.

Enclosed herewith are some copies of old documents from my file where you will observe that we obtained an option to purchase the property from the M.D. Brown estate through the trust department of the Valley National Bank in 1965. I had been contacted in 1963 by a Mr. Leo Farrington who then owned seven (7) claims called "Gold Dust" (1 through 7). Copies of some hand sketches of the layout of those claims relative to the patented claims you now have under lease are included. Farrington had requested a geological opinion of an elderly geologist named C.W. Gabrielson, now deceased. Copies of the brief 2 page report submitted by Gabrielson are also enclosed. Farrington had been unsuccessful in attempts to lease the patented claims because of his personal circumstances and reputation. I later obtained an option on Farrington's Gold Dust claims prior to obtaining the option on the patented land.

PROMET SERVICES, INC.  
METALLURGICAL TESTING & PROCESSING  
GEOLOGICAL EVALUATIONS

TECHNICAL OPERATORS  
OF  
WORLD WIDE REFINERIES

4202 East University  
Phoenix, Arizona 85034  
(602) 268-3484

All this will show that my present interest and favorable opinion regarding this Gold Hill project is not based on a quick short term evaluation since you contacted me. In those days I did not have my own lab and had to have assay work done by others which limited the extent of my sampling. In the intervening years I have developed metallurgical know-how very pertinent to economic exploitation of this type deposit.

You will note in Gabrielson's report (1963) a very strong opinion that the vein and ore deposit could run to significant depths, alluding to 5,000 foot depths in a similar structure. Although we prefer to be more restrained and conservative in our opinion until more detailed work is done, Mike and I both feel that a good target for development exists here.

At that period in 1963-1967 I was in contact with Mrs. Nelson (widowed) at the Nelson mine where she lived near one good spring now on the Carefree Ranch land. A hand sketch map she made for me relative to other mines her husband had been interested in in that area is also enclosed. The potentiality of extending activities eventually to this broader target is quite real. For example, Farrington was one of the earlier operators of the "Rackensack" mine just northeast of Gold Hill.

Sampling of the old workings carried out in the past few months has been summarized in an accompanying table, with an average gold content of 0.27 troy ounce per ton. I feel that the Set III samples as a group are low compared to my previous tests and expect that group to average over 1/3 ounce on repeat analysis. Not included in the table are some samples of quartz outcrops and remnants of old "ore" piles which show values in the vicinity of one troy ounce per ton. These values are conservative and assays were done by chemical extraction procedures comparable to eventual recovery procedures. In detailed sampling as recommended in Mike's report we will include comparison assays using both atomic absorption and fire assay. Samples I had done by fire assay 18 years ago averaged closer to 0.4 troy ounces per ton. Unfortunately I did not save interpretable tables and locations of that early sample work, expecting to do more detailed sampling while developing an access tunnel, etc.

Although Mike Price has completed the sketches of the underground mapping, etc., as late as Sunday evening (December 27th) he had not yet received the printed copies he has ordered. For your convenience in following the estimates on proven ore reserves and probable reserves, I have included a hand sketch (vertical profile) of the existing old workings. When the maps are available I expect to begin plotting in the assay values to assist in interpretation.

Calculating from the mapping, Mike Price reports that about 30,000 tons of proven ore exists. Using 0.27 troy ounce/ton and a current price of \$400.00

PROMET SERVICES, INC.  
METALLURGICAL TESTING & PROCESSING  
GEOLOGICAL EVALUATIONS

TECHNICAL OPERATORS  
OF  
WORLD WIDE REFINERIES

4202 East University  
Phoenix, Arizona 85034  
(602) 268-3484

per troy ounce this ore has a value of:

$$30,000 \text{ tons} \times 0.27 \frac{\text{ounce}}{\text{ton}} \times \$400/\text{ounce} = \$3,240,000$$

Estimates of "Probable" and "Possible" ore reserves lying below the existing old works provide targets of, respectively:

$$\text{PROBABLE ORE: } 150,000 \text{ tons} \times 0.27 \frac{\text{ounce}}{\text{ton}} \times \$400/\text{ounce} = \$16,200,000$$

$$\text{POSSIBLE ORE: } 200,000 \text{ tons} \times 0.27 \frac{\text{ounce}}{\text{ton}} \times \$400/\text{ounce} = \$21,600,000$$

Conservatively considering only "Proven" and "Probable" ore, a \$20,000,000 potential is very realistic. This certainly justifies proceeding step-by-step with the necessary details Mike has outlined and budgeted as Phase II in his report. In conversation with Mike he points out that there are two other items that should be included in this phase:

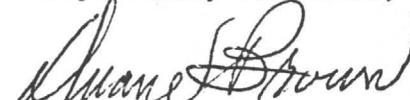
- 1) Repair, replace ladders in old works as necessary;
- 2) Check with local smelters, such as Inspiration Copper as to shipping records for the Nicholson Mining Co. production. The ore would have been highly desirable to them as flux, and was probably shipped locally.

Rejects from sample assay work have now been combined into a composite for laboratory recovery tests. On establishing a flow sheet for this, we will need to handle larger quantities. We will keep you posted on recovery efficiencies as we get some results.

So far as we can estimate by engineering rule-of-thumb, original estimates that a total capitalization of \$1.5 to \$2.5 million will still be required to establish a cost efficient operation. More precise evaluation of capital needs and economic projections would be Phase III of the program Mike laid out.

I continue to be enthused about this project and hope this interim report will assist you in arranging financial assistance necessary to accelerate our program.

Respectfully submitted,

  
Duane Brown, Ph.D  
President, Metallurgist

SUMMARY OF GOLD-HILL SAMPLES

SET I -PORTMENTEAU TUNNEL  
(All at same level)

<u>Sample No.</u>	<u>Location</u>	<u>Au Content</u>
1	End of Track	0.37 Troy ounce/Ton
2	Caved-In Pile 150' North	0.31 "
3	Vein at last Ore Chute	0.53 "
4	At ladder 50' from No. 3	0.62 "
5	Cross Cut of Vein 190' from "Y"	0.72 "
6	Vein Material include above Gold Dust Tunnel	0.44 "

SET II -LYON TUNNEL  
(All at same level, 80' above Portmenteau level)

7	At Stopes (Caved Material)	0.35 Troy ounce/Ton
8	At Stopes (Ven Rock In Place)	0.42 "
9	Rock, East Side Near Stopes	0.42 "
10	Overhead In Place Near Stopes	0.34 "
11	Caved-In Pile 30' from No. 18	0.27 "
12	100' Into Stoped Area Below Portmenteau	0.41 "

AVERAGE

---

0.40

---

M E M O

TO: Carole O'Brien, A.F. Budge, R.R. Short  
FROM: Don White  
DATE: November 18, 1988  
SUBJECT: Rackensack Gold property north of Cave Creek, AZ.

Carole was presented a submittal known as the Rackensack gold property and asked me to evaluate it on behalf of Budge. I studied the data presented by the current lessee and spent most of Nov. 15th inspecting the property.

The Rackensack unpatented claims on Forest Service land are now leased by Robert Coblio of Phoenix from Bill Bass of Cave Creek. The key portion of the property is in the S $\frac{1}{2}$  SW $\frac{1}{4}$  Sec 33 T7N R5E (Humboldt Mtn. 7 $\frac{1}{2}$ ' Quad). It is about nine miles NE of Cave Creek and two miles W of the county graded road. The final two miles along Rackensack Creek is a rough Forest Service road, the final mile of which is steep, rocky, narrow, and probably not passable for any normal truck-mounted drill rig.

The nature of the gold occurrence is just as represented by Mr. Coblio. It is quartz-vein hosted within a granitic country rock. The veins are steeply dipping, 60° to 85° to the NNE. The several subparallel veins vary from one inch to 3 feet in thickness. They carry fresh pyrite euhedra, some galena, and trace chalcopyrite. Gold occurs very erratically in the native state as coarse grains. Thus it is very difficult to sample representatively. However, the abundance of other's data allows some educated guesses at overall gold grade.

Mr. Coblio's estimate of about 0.25 oz/t overall gold grade is probably pretty good. That is the average of small (1-10 ton pockets) running tens of ounces per ton and much larger volumes of vein with nil to 0.2 oz/t Au. Silver grades are negligible.

The veins are nearly pure quartz which yield satisfactory silica smelter flux. Even if diluted up to 50% by wall rock, the silica content is supposedly still over 75%, probably because the granitic wall rock has been silicified in proximity to the vein. With excess dilution, however, or inclusion of too much clay-rich gouge which occurs sporadically along the hanging wall side of the vein, the alumina content could exceed the smelter's specifications. There is no significant iron problem nor any lime.

An approximation of what is available is about 600 feet of strike length by 100 feet in width (dip dimension) and say 1 foot thick. This is the portion of any given vein lying above the elevation of the lowest practical adit level. That would yield only about 4,000 tons of vein rock. Even a 2 $\frac{1}{2}$ -foot thick vein mined 5 ft. wide would yield only 20,000 tons at proportionately diluted grade (say 0.12 oz/t). Clearly this is not worth considering with one proviso.

That is that the pockets of high grade may have specimen value far in excess of their bullion value. The problem with them is that they can't be drill tested, may or may not occur at all, and would be difficult to segregate. In fact they also represent a security problem with all but the most trusted miners.

Carole O'Brien, A.F. Budge, R.R. Short  
November 18, 1988  
Page Two

The opportunity for a lower grade but much larger tonnage deposit has already been tested by Bob North of Phelps Dodge in June of this year. Mr. Coblio relates that Bob North took 20+ samples of the country rock near and far from the fertile veins. His results were all exceedingly low, indicating that the gold is truly confined to the veins.

In view of the smallness and capriciousness of this gold occurrence, its difficulty of access and testing, and lack of other potential, I can not recommend Budge's involvement.

DW:sk

# ARC LABORATORIES

Division of Applied Research Consultants Inc.

917 W. HATCHER ROAD

PHOENIX, ARIZONA

WINDSOR 3-3573

FOR: Mr. W. H. Charbonneau  
1814 N. Laurel  
Phoenix, Arizona

DATE January 23, 1956

LAB No. 1418

## RESULTS

Sample: White crude kaolin fairly well consolidated.

### Laboratory tests:

#### Chemical analysis

54.48% Silica  $\text{SiO}_2$

41.60% Alumina  $\text{Al}_2\text{O}_3$

#### Water immersion

In the raw state no slaking was observed over a period of ten days. This would indicate no Bentonite or Montmorillonite was present. A cube was formed from the pulverized material, dried, and then immersed in water. It disintegrated immediately.

#### Plasticity

The water of plasticity was very low; 15cc per 100 ga of sample. Plasticity poor.

#### Shrinkage

Drying shrinkage  $1/16''$  in  $15/16''$

Firing shrinkage ( $2300^\circ\text{F}$ )  $1/16''$  in  $15/16''$

Total shrinkage from fabricated to fired condition was

$2/16''$  in  $15/16''$  (Average over 5  $3/16''$  is somewhat high)

#### Firing

Maximum firing temperature was  $2300^\circ\text{F}$

A sample of the pulverized material was formed into a small cone and a flat disk. The surface of the disk was marked with a scribe and shrinkage measurements were

made between marks. After firing the material was very friable indicating that the material could stand a higher firing temperature. The cone formed of this material did not melt when the Standard Cone # 7 melted (2300° F)

Firing at 2300° F

Strength poor

Color very white

Sample showed no spalling or pop-outs.

Miscellaneous tests

Crude shows no effervescence when hydrochloric acid was used.

Microscopic examination showed practically no particles of free silica.

The material was easily pulverized to a 200 mesh product on a Braun laboratory pulverizer.

Recommendations:

The sample appears to be a very fine grade of a nonplastic kaolin or china clay. These kaolins are residual white-burning clays consisting of hydrous aluminum silicates and generally possessing little or no plasticity. They are used in the manufacture of porcelain, china, whiteware, pottery, tile and in paper manufacture. The fact that this material burns to a very white color should make it valuable on the present market.

Most consumers of clay use their own particular tests to evaluate clay samples. It is our recommendation that samples of this material be submitted to the following firms:

A. P. Green Co.  
Mexico, Mo.

International Minerals & Chemical Co.  
Industrial Minerals Div.  
2807 So. Fairfax Blvd.  
Los Angeles, California

Gladding-McBean & Co.  
1348 E. Camelback Rd.  
Phoenix, Arizona (Request address of San Francisco Office)

J. M. Huber Co.  
100 Park Ave.  
New York 17, N. Y.

Respectfully submitted,

ARC Laboratories

  
George G. Olson

# APPLIED RESEARCH & TECHNOLOGY, INC.

P. O. BOX 1646  
ANNAPOLIS, MARYLAND 21404

PHONE: 263-2964

June 19, 1968

## KAOLIN ANALYSIS

Kaolin is a hydrous silicate of aluminum. In nature it occurs as a mixture of clay with sand, limestone, and oxide of iron. This mixture is produced by the erosion of rocks containing feldspar minerals. The purest variety is used for the production of chinaware, and as a papermaking material. Plastic varieties are used for the production of pipe clays, fireproof clays, and potter's clays. This variety shrinks in drying and subsequently in burning without losing its form as a whole, and becomes extremely hard. Certain varieties, known as fusser's earth, are very absorbent of oils and of dyes.

Kaolin with only minor amounts of impurities such as iron, lime, magnesia, free silica, and the alkalis is known under the name of china clay.

Pure Kaolin,  $\text{Al}_2\text{O}_3 \cdot 2\text{SiO}_2 \cdot 2\text{H}_2\text{O}$  or  $\text{H}_4\text{Al}_2\text{Si}_2\text{O}_9$  consists of 46.30%  $\text{SiO}_2$ , 39.80%  $\text{Al}_2\text{O}_3$  and 13.90%  $\text{H}_2\text{O}$ .

Pure Kaolin is rare with a low content of impurities, such as iron or alkalis, it is acceptable to the trade as Kaolin or china clay. Kaolin is used in the ceramic industry, portland cement and the paper industry. The oil industry uses various types of ordinary clay in rotary drilling mud. The rubber industry uses clay in the compounding of certain types of rubber. Among the minor uses are as a filler or extender in paints, linoleum and oil clothes.

Many clays with a wide range of composition, texture and color have sufficient resistance to the action of high temperatures to be classed as fire clays. A clay is considered a fire clay if its fusing point exceeds  $2700^\circ\text{F}$ .

Other important applications, especially of pure Kaolin, include the production of transistor housings, relay bases, connectors to be used in RF-Communication systems, headers, feed throughs and varactor and diode packages. The foreign market for these products seems to be very promising.

The Kaolin sample; from the Morrilstown, Arizona area; which was delivered to us by Mr. W. H. Charboneau has the following characteristics.

The flame of a propane torch did not effect the surface appearance of the sample physically or in color. A polished surface showed under the Metallograph, in dark field illumination, the characteristics of colloid glass shims.

The sample seems to be very pure. Only a few red colored spots, probably caused by iron, and dark bowl shaped particles, having a diameter of about 10-15 microns could be detected. Since the darker particles are surrounded by red colored Kaolin, it must be concluded that these particles also contain iron.

Under the microscope small nuggets of pure gold were detected. The total amount of gold is estimated below .1% in weight ratio. Other impurities which were detected are iron, compounds having a brown yellow and black color, red, blue and green crystals, probably  $Al_2O_3$  and titanium compounds and small quartz crystals. The total amounts of impurities is considered not to exceed 1%.

#### LABORATORY TEST RESULTS:

(Semiquantitive, Spectrum analysis and X-Rays)

Si O <sub>2</sub>	>	10% up to 50%
Al <sub>2</sub> O <sub>3</sub>	>	10% up to 50%
Mg O	<	1%
Ca O	<	.1%
Ti	<	.1%
Fe <sub>2</sub> O <sub>3</sub>	<	.1%
Au	<	.1%
Cr O <sub>2</sub>	«	.1%
Na <sub>2</sub> O	«	.1%

#### Estimated Analysis:

Quartz about 50% to 55%

Kaolinite about 45% to 50%