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09/24/85

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: PORTLAND-MIZPAH

ALTERNATE NAMES:

ROSEBUD

MOHAVE COUNTY MILS NUMBER: 152A

LOCATION: TOWNSHIP 26 N RANGE 15 W SECTION 17 QTR. SW

LATITUDE: LONGITUDE:

TOPO MAP NAME: MUSIC MT NW - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:

GOLD-PRIMARY

SILVER-COPRODUCT

BIBLIOGRAPHY:

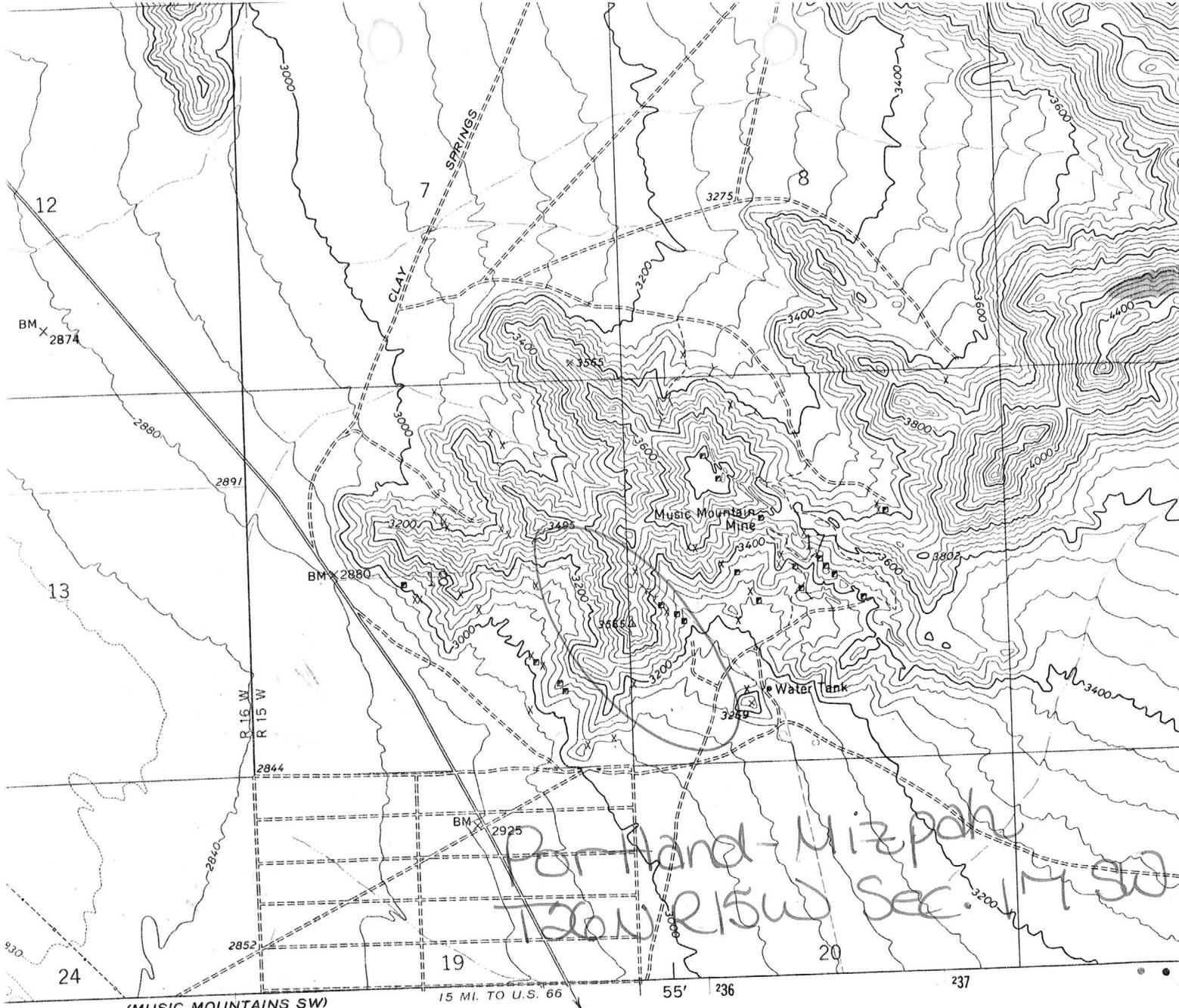
ADMMR PORTLAND ~~AND~~ MIZPAH MINING CO. FILE

ADDITIONAL WORKINGS IN SEC. 18

WILSON, E.D. "AZ LODE GOLD MINES" AZBM BULL

137, P. 109; 1967

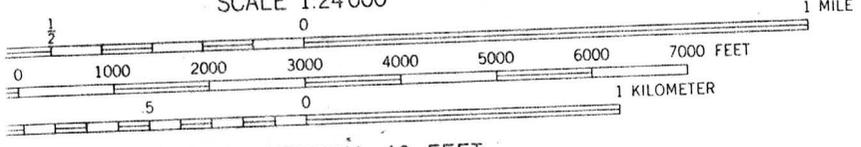
ADMMR MOHAVE CUSTOM MILL PROJECT- 1 CLAIM MAP



*Portland-Mizpah
T15S R15W SEC. 17 SW*

(MUSIC MOUNTAINS SW)
3255 III SW

SCALE 1:24 000



CONTOUR INTERVAL 40 FEET
 DOTTED LINES REPRESENT 10-FOOT CONTOURS
 DATUM IS MEAN SEA LEVEL



QUADRANGLE LOCATION

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
 GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR WASHINGTON, D. C. 20242
 DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

Music Mtn. NW 7.5' Qu

PORTLAND-MIZPAH MINING COMPANY

KAP WR 5/29/81 Part of this property is now owned by Northern Arizona Gold and Silver Mining & Milling Company according to a Hannover stock broker.

Telephone call to Ann Turney on 8/21/81: Received call from Mike Hanson who said he had a call from relatives in New Jersey asking him what he knew about the Northern Arizona Gold and Silver Mining and Milling Company. He said that First Jersey Securities Inc. of New York was really pushing this company's stock in the east and he was trying to find out something about them. Referred him to the Corporation Commission for information on whether or not they were registered in Arizona.

NJN WR 10/16/87: Don Lambert (card) visited and reported he will be able to supply us with a geological report done for Steller Resources (card) at the Music Mountain (file) and Portland Mitzpah (file) Mohave County.

large salaries and big staffs. They are hiring independent contractors to test and to mine. They are considering all of the various extrusion alternatives, including the construction of a 250 ton a day mill.

The company believes that at today's precious metal prices, all of their properties contain significant amounts of economically available ore. Any increases in the price of precious metals over the next few years could have a meaningful impact on the company's bottom line results.

SUPPLEMENTAL INFORMATION

Assay - quantitative analysis of the content of specific minerals in metal bearing material.

Custom Mill - a facility designed to treat metal bearing material from more than one mine, usually utilizing either flotation and/or gravity processes, which separates the valuable metal material from the host rock.

Dumps - rock that has been extracted from a mine considered to be uncommercial when mined which material was not previously subject to the milling process.

Feasibility Study - report prepared by an independent consulting firm specifically on the economic factors surrounding a mill, including the analysis of metal bearing materials, metallurgical problems, transportation, water usage and availability, power, contractors, equipment availability, construction costs and all other factors that could influence the construction, initial and long term operation of a milling facility near Kingman, Arizona.

Ferrous - relating to or containing iron.

Flotation - a method of wet concentration of ores in which the desired minerals are caused to float, associated with air bubbles, and the gangue or waste remains submerged.

Gangue - the waste material or nonvaluable-material in the metal bearing structure which is mined; veinstone or lode filling.

Heap Leaching - the process by which non-ferrous ore concentrate is obtained by piling mineralized rocks ("heaping") on pads and filtering dissolved chemicals through the rock so that the valuable mineralized material is recovered by causing it to go into solution with the chemical and later precipitating material out to form ore concentrates.

Lode Mining Claim - a rectangular area, staked or located by persons according to federal law, from which metallic minerals may be extracted by the locator or claimholder.

Mineralized Material/Metal Bearing Material - rock containing gold, silver, copper, lead and/or other metals. If such rock contains sufficient quantities of metals to have a commercial value, it is known as ore.

Non-Ferrous - metals other than iron and its alloys in steel.

Ore Concentrate - the valuable mineral ^{CONCENTRATED} ~~extracted~~ from the host rock which has been subjected to one or more metallurgical processes to cause the ores to separate from the worthless host rock.

Patented Claim - a lode or placer mining claim for which the federal government has granted the claimholder fee, title or ownership.

Tailings - waste materials that remain from earlier milling processings which usually had no commercial value at the time of milling.

Unpatented Claim - a lode or placer mining claim for which the federal government has not granted the claimholder fee, title or ownership, but the claimholder has the rights to extract metal bearing materials and to do all work necessary to mine.

In a custom mill operation, metal bearing material is initially reduced to small particles by crushing and grinding. The next step requires that the valuable metallic minerals be extracted from the gangue, ^{MINERALS} ~~or waste rock~~. This is done by either a flotation or gravity process. The company proposes to employ a flotation process in its custom mill. In this process, organic compounds, known as xanthates, are added to the crushed ~~metal~~ material. The material is agitated in a ball mill and subsequently aerated in conditioning tanks. During these steps, the reagents adhere to valuable metallic particles. When transferred to a conditioning tank for aeration, the freed metallic particles cling to bubbles caused by the aeration. The bubbles, with particles attached, rise to the top of the conditioning tank and are skimmed into the launders and saved. The waste or gangue material sinks to the bottom of the conditioning tank and is pumped into a tailings or storage pond. Several stages of recycling and cleaning of the resultant material follow before a concentrate suitable for shipment to a smelter is produced.

Heap leaching, compared to custom milling, is a less capital intensive process by which precious metals are recovered from mineralized material. Due to the relatively lower costs, the process is usually reserved for the less valuable dumps or tailings material.

Initially in a heap leach operation, dump or tailings material is heaped on an impervious pad and a sodium cyanide solution is distributed over the rock. As the cyanide percolates through the mineralized material, the solution dissolves most of the valuable metal material present in the rock. At the bottom of the heap, the solution containing the gold and silver is pumped through a zinc precipitator unit to remove the gold and silver values. The barren solution is discharged to a storage pond where chemicals and water are added before the solution is pumped back on to the heap. The zinc precipitate is smelted and a low grade gold or silver bar is produced. The entire process from piling of rock on the pads to obtaining the valuable concentrate takes approximately six to eight weeks.

ARIZONA DEPARTMENT OF MINERAL RESOURCES
MINERAL BUILDING, FAIRGROUNDS
PHOENIX, ARIZONA

July 10, 1958

To the Owner or Operator of the Arizona Mining Property named below:

Portland & Mizpah Mining Co. (Mohave County) Gold, silver
(Property) (ore)

We have an old listing of the above property which we would like to have brought up to date.

Please fill out the enclosed Mine Owner's Report form with as complete detail as possible and attach copies of reports, maps, assay returns, shipment returns or other data which you have not sent us before and which might interest a prospective buyer in looking at the property.

Frank P. Knight

FRANK P. KNIGHT,
Director.

Enc: Mine Owner's Report

MILWAUKEE
JUL 18
3:30 AM
1958
WIS.

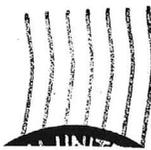
Milwaukee, Wisconsin

1130 N 22-St.

Portland & Mazpah Mining Co.

Mr. A. H. T. 10-2

PHOENIX, ARIZ.
JUL 10
7-PM
79 58



RECEIVED
JUL 22 1958
DEPT. MINERAL RESOURCES
PHOENIX, ARIZONA

W-23 Mohave 8-8

C-8 76

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

Date 9/24/46

1. Mine: Portland & Mizpah Mining Co.

2. Location: Sec. ^{W12 E12} 17, 18 Twp. 26 N Range 15 W Nearest Town Antares

Distance 17 Direction S Road Condition Fair

3. Mining District & County: Music Mt., Mohave

4. Former Name of Mine:

5. Owner: Portland & Mizpah Min. Co.

Address: 1130 N 22 St., Milwaukee

6. Operator: same

Address:

7. Principal Minerals: Au Ag

8. Number of Claims: 4 Lode Placer

Patented Unpatented

9. Type of Surrounding Terrain: Moderately Rough

W. foothills Grand Wash cliffs

10. Geology & Mineralization: Gneiss & Granite

Quartz

strike N 42° W Dip 80° SW

vein up to 20" wide

11. Dimension & Value of Ore Body:

4 cars (40 T) shipped '38 at \$35 to \$40 per ton

PORTLAND & MIZPAH MINING CO.

Au, Ag

Mohave 8 - 8 Sec. 17, 18, T 26 N, R 15 W

Portland & Mizpah Mining Co., 1130 N. 22 st., Milwaukee, Wis. '46

12. Ore "Blocked Out" or "In Sight":

.....

.....

.....

Ore Probable: *no estimate*

13. Mine Workings—Amount and Condition:

No.	Feet	Condition
Shafts..... 1	250	Poor
Raises.....	500	"
Tunnels.....	1085	Fair
Crosscuts.....	210	"
Stopes.....	390	

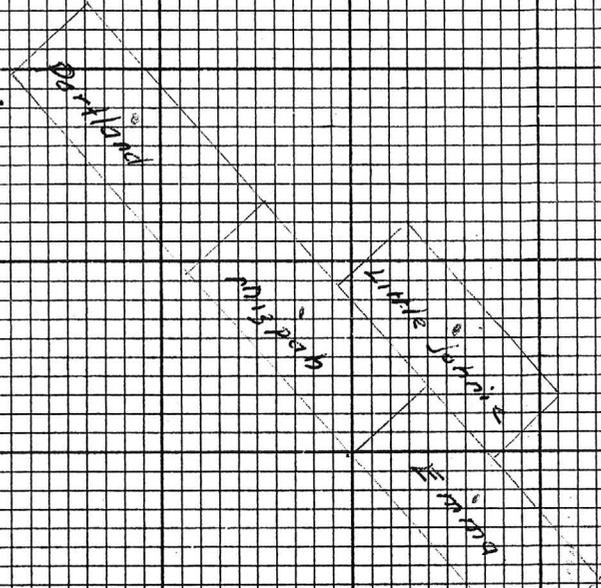
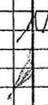
14. Water Supply: *water in shaft up to 100' level*

15. Brief History: *located 1908 some ore shipped*
mill on property in 1928
\$2160 mill building
\$3160 Mining Equip

16. Signature:

17. If Property for Sale, List Approximate Price and Terms:

18 17



Map

Scale
Date

18 17

Section

Scale
Date

TELEPHONE 20551--
Rugby 6-4953.

-ROUTE-
5441 Yarmouth Ave.

Rosebud Mine

LOUIS F. WALTER
ATTORNEY AND COUNSELOR AT LAW
El-Dorado Springs, Mo.
Encino, Calif.

October 20, 1950.

Mr. Charles H. Dunning, Director,
Arizona Dep't of Mineral Resources,
Phoenix, Arizona.

Dear Mr. Dunning:

The Peacock Consolidated Mining Company of which I am president recently acquired a 10 year Lease and Option to Buy the Rosebud Mine comprising the 'Portland', 'MizPah', 'Emma', and 'Little Johnny' lode mining claims in Music Mountain Mining District, Mohave County, Arizona.

The shaft on the Rosebud Mine is 400 feet down and there are about 2000 feet of drifts and raises. In 1929 and 1930, Mr. R. C. Jacobson, M.E. of Kingman (now deceased) estimated the ore fairly in sight to be worth \$510,000.00 down to the 250 ft. level. There are two veins of 18 to 24 inches width each at that level, and according to reports by workers, probably \$30,000.00 worth of gold and silver ore has been shipped to the El Paso Smelter from 1939 to 1943. The work was stopped due to War Regulations and no work has been done since then, except the assessment work last June. Since the report by Mr. Jacobson, the shaft has been extended to 400 feet. The two veins meet at 325 Ft. and from there downward the vein is from 48 to 56 inches wide, according to reports by Mr. Milo Stoney, a sub-lessee who worked in the lower levels. He also stated that the lead content had increased considerably and that the gold and silver values were fully as good as above. The average values according to the Jacobson reports are \$28.20, or about \$46.00 according to present values of gold and silver to which is to be added the lead values.

There is a flow of about 5000 gallons of water in 24 hours and the water is up to about 140 Ft. from the top of the shaft. A pump is needed, the shaft needs repairing. A hoist is there but it needs some parts and it would, no doubt, be best to buy a new or a good used one. Ore bucket and cable will do. Ore car, track, and ore loading bin are all right.

When I was there in June, Kingman mining men told me that the Music Mtn, District was the most promising in that section, as the values are exceptionally high. Mr. Jerry Haynes whom I employed to do the assessment work, estimates that \$3000.00 would enable us to get the property in shape to make car load shipments to El Paso by mining ore above the water level at 140 feet. We would, however, much prefer to install a pump and repair the shaft to mine ore from the lower levels at 325 feet and below.

We would like to apply for a loan from the Arizona Mining Fund.

Very sincerely yours, *Louis F. Walter*

REPORT ON
THE
ROSEBUD PROPERTY
MOHAVE COUNTY, ARIZONA

FOR

UNITED KINGDOM ENERGY INC.
808 - 409 Granville Street
Vancouver, B.C.

BY

J.P. ELWELL ENGINEERING LTD.
1026 - 510 West Hastings Street
Vancouver, B.C.

April 26th, 1983

KENNETH H. DARKE CONSULTANTS LIMITED

338 Spruce St., North
Timmins, Ontario
P4N 6N5

TELEPHONE (705) 264-1910
RESIDENCE 264-7403

January 10, 1983

The Management
UNITED KINGDOM ENERGY RESOURCES INC.
Suite 808 - 409 Granville Street
VANCOUVER, B.C. V6C 1T2

Gentlemen:

LONG LAKE GOLD PROPERTY

Consent to use Preliminary Exploration
Report dated January 10, 1983

This letter is your authority to use my Preliminary Exploration Report on the Long Lake Claim Group; Macklem Township, Ontario; Porcupine Mining Division; District of Cochrane dated January 10, 1983 for any corporate purpose you deem necessary including its inclusion in whole or in part in any Company prospectus.

Yours truly,



K.H. Darke, P.Eng.
Consulting Geological Engineer

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MAPS

LOCATION MAP OF ROSEBUD CLAIMS.....	follows p.	4
1" to 40' MINE PLAN.....	in pocket	

- 1 -
REPORT ON THE ROSEBUD PROPERTY,
MOHAVE COUNTY, ARIZONA

SUMMARY

The Rosebud Mine Property, consisting of five unpatented claims is situated in the Music Mountains in Mohave County, Arizona. The distance from Kingman, the nearest major town, is about 35 miles.

Rich gold and silver veins were discovered in the area in the 1880's and several small but rich mines were worked in the early 1900's. The Rosebud Mine is on the Southwick vein which strikes N.45° W, with a steep dip to the east. Underground workings completed by 1930, consist of a 260 foot shaft, levels at 100', 200' and 250' with a total of about 2300 feet of drifts, raises and cross-cuts, but very little ore appears have been stoped.

An estimate of ore in place and developed above the 100' level based on the mine plans and sampling by R.C. Jacobson in 1928, is 25,000 tons with an average grade of 0.63 oz/t Au after delution to stope width of 36" . Inferred reserves above the level on the same dilution bases are an additional 50,000 tons. Between the 100 and 250 level, blocked out reserves amount to about 16,500 tons with a grade of 0.61 oz/ton Au after dilution to a 36" stope width. Inferred reserves along strike and to depth could be much greater.

Gold and silver values are associated with sulphides, mainly pyrite, galena and chalcopryrite in a qyartz breccia. The sulphides have completely oxidized down to the 200 level, but sulphides occur below this horizon.

An exploration program is proposed for the property, Phase I, of which will consist of geological mapping and sampling

down to the 100 level to check the old assay plans. If favourable, Phase II would consist of diamond drilling along strike and to depth, with Phase III being a mine development program.

The estimated cost of Phase I is C. \$47,000, Phase II C. \$246,000, and Phase III, C. \$370,000.

INTRODUCTION

On April 8th and 9th, 1983, the writer examined the surface area and sampled the mineral showings on the main veins of the Rosebud Mine, located in the Music Mountain area of Mohave County, Arizona. The underground working could not be examined as the shaft manway was in poor condition, but data on these workings has been obtained from mine maps and previously written engineering reports which were made available, and which are acknowledged under "References".

This report was prepared for United Kingdom Energy Inc., 808 - 409 Granville Street, Vancouver, B.C.

LOCATION AND ACCESS

The Rosebud Mine is located in the foothills of the Music Mountains, east of Kingman, in Mohave County, Arizona, the precise location being Sections 11 and 18. Township 26, Range 15W, M.D.M.

Access from Kingman is by way of Highway 66 northeast for 17 miles, then north by the Pierce Ferry road for 15.5 miles, then east on a dirt road for 2.5 miles to the mine.

TOPOGRAPHY, CLIMATE, WATER, ETC.

The ground rises moderately steeply from the flat desert floor at elevation about 3000 feet, to about 3500 feet at the crest of the first mountain ridge on which the claims are located. Overburden is light, consisting of weathered granite rubble, and there are many bare rock exposures.

There is no running water in this area, but a few small

springs supply sufficient water for the cattle ranchers on the flats. Water is reported at depth however. U.S.G.S. Bulletin #397 mentions that the Ellen Jane Mine, about 3000 feet to the east of the Rosebud, encountered sufficient water in the shaft at 200 ft. depth for milling purposes, and it is reported that the Rosebud shaft has water below the 250 level.

The climate is typical of the Arizona desert, very hot summers and cool winters, and total precipitation of about 10 inches per year. Vegetation on the mountainside consists of several varieties of cactus.

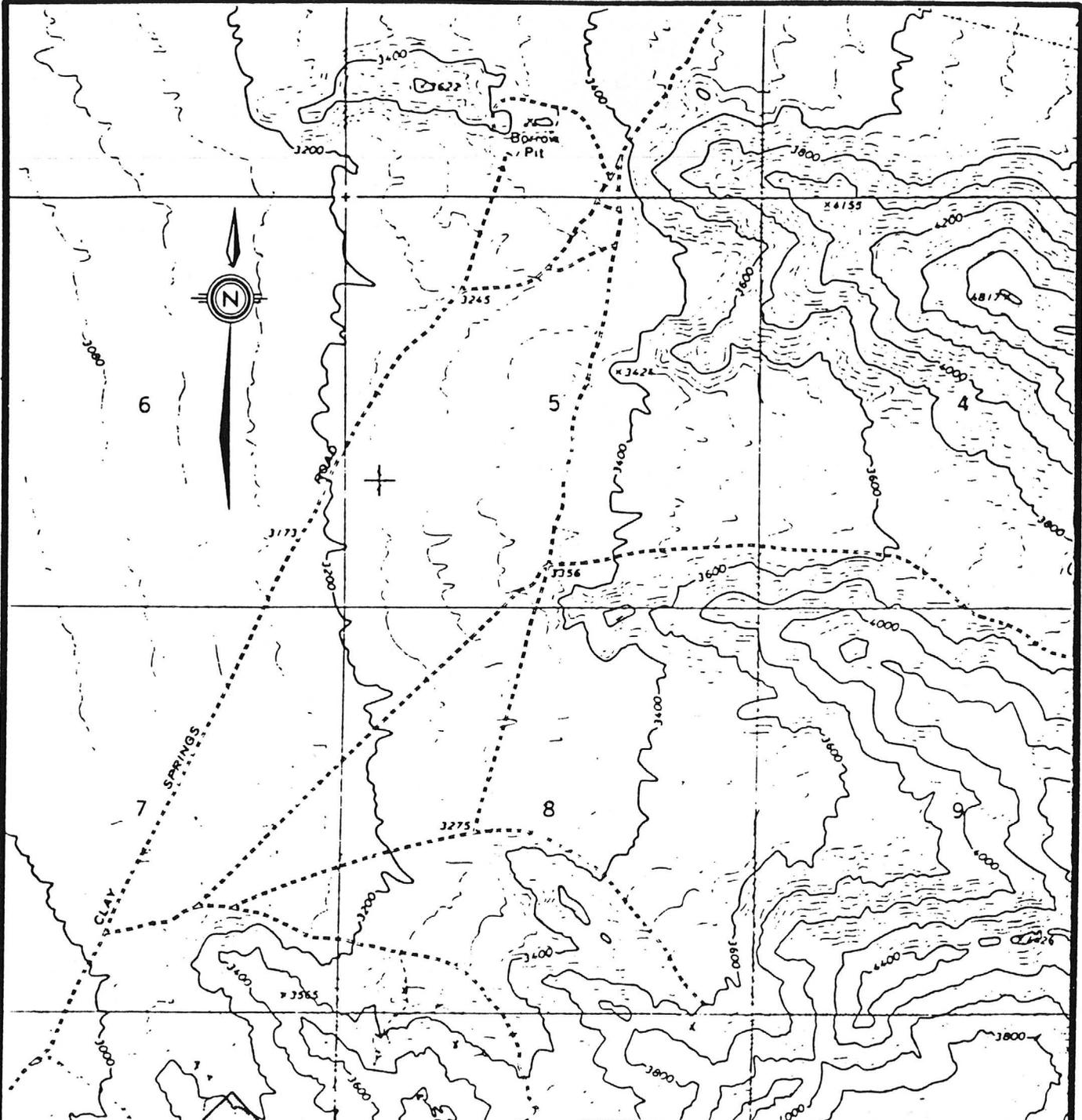
The nearest low voltage electric power appears to be near Highway 66 about 16 miles to the south, but a high voltage transmission line crosses about 2 miles to the south of the mine.

PROPERTY

According to documents on file at the County Recorder's Office, the property consists of 5 unpatented lode claims, the Rosebud #1 to #5 inclusive. CAMC No.s 75170 to 75174 inclusive. Assessment work is valid until August 31st, 1983. A location map, drawn from the Plat on file, accompanies this report.

EARLY HISTORY

As reported in U.S.G.S. Bulletin #397 by F.C. Schrader, (1) 1909, the Music Mountain gold veins were discovered in 1879 and by the 1890's there were several producing mines. The early production mostly came from the Ellen Jane vein system and some parallel structures which lie about 3000 feet east and parallel to the Southwick vein on which the



**UNITED KINGDOM
ENERGY INC.**

**LOCATION MAP
ROSEBUD MINE CLAIMS
MOHAVE COUNTY, ARIZONA
T. 26 N. , R. 15 W, Sections 17 & 18**

SCALE 1:24,000

0 1000 2000 3000 4000ft.

J.P. PELWELL ENGINEERING LTD. 4/83

NOTE: DRAWN FROM PLAT FILED IN MOHAVE Co. OFFICE
OF RECORDS 1979

BM 2925

Rosebud Mine is located. Production figures are very incomplete as much of the ore was produced by lessees in the early years, but some of the shipping ore was said to run from \$300 to \$400 per ton (15 to 20 oz/ton Au). In 1892 the Ellen Jane Mine produced 165 tons of \$32.00 (1.6 oz) ore and another lot of \$42.00 (2.1 oz) ore. Total production is estimated by Schrader to be in excess of \$20,000 (1000 oz. Au).

The Southwick vein had not been developed at the time of Schrader's report, but by 1928 the mine maps show extensive surface trenching over a strike length of over 1000 feet, and underground development consisted of a shaft to 260 feet and three levels at 100 feet, 200 feet and 250 feet with total underground development of about 2000 feet. Production is not known, but as far as can be determined, only a small amount of ore was mined from one block above the 100 level.

GENERAL AND ECONOMIC GEOLOGY

The country rock of the Music Mountain Mine area consists principally of Precambrian granite, gneiss, and schist which in places have been intruded by a younger biotite granite.

Cutting the intrusives are several steep dipping diabase dikes striking at N. 45°W with a width of 10 to 30 feet. Brecciated shear zones extend along both walls of the dike and contain quartz, silicified wall rock, and pyrite along with minor galena, chalcopryrite and bornite. Gold and silver values appear to be mainly associated with the sulphides which on the surface have been completely oxidized, permitting the gold to be recovered by a simple gravity concentration.

EXAMINATION OF THE PROPERTY

It was not possible to examine the underground workings, as the ladders in the shaft manway, which had not been used since the mid-1970's, were found to be in an unsafe condition, so the examination was confined to the surface cuts and prospect pits, using the map prepared by R.C. Jacobson, M.E. in 1928, a reproduction of which accompanies this report.

All the cuts and prospect adits noted on the map from the boundary of Rosebud #1 and #2, northwest to the boundary of Rosebud #2 and #5 were located and found to be correctly plotted, and covering both the east and west veins.

The veins dip at about 85° to the northeast and vary from 18" to about 30" in width. The east vein has the dike on the footwall with a granite hangingwall, and the west vein, which follows the west side of the dike, has a granite footwall and dike hangingwall, the dike itself being 10 to 20 feet in thickness.

The two raises from the 100 foot level were located. The first raise has been timbered and has been equipped with ladders (now unsafe), and at the top of the second raise there is evidence of some underhand stoping, the ore being dropped to the 100 level. From the crest of the hill at the north end of the Rosebud #2 claim, the ground drops off into a valley, and there was evidence of further prospect pits which would be covered by the Rosebud #5 claim.

The vein material itself consists of bands of comb quartz, silicified and brecciated wall rock, both granite and dike, the whole deeply stained dark brown to black by limonite and manganese. The oxide zone extends to some depth, but Allen (4) reports fresh sulphides, mainly pyrite and galena, are found in the 250 level.

One claim length or 1500 feet to the west of the main Rosebud structure, there is evidence of a parallel structure which has been explored by some prospects and is covered by the Rosebud #4 claim (see claim map). There is no report of mining or underground exploration on this structure, and it was not examined, but it should be included as a secondary target for future exploration.

SAMPLING

The extremely hard nature of the vein material, the deep weathering, and lack of proper tools, made it impractical to cut true, representative samples of the surface vein so on the recent examination, character grab samples only were taken of vein material from the various dumps. These were assayed by Chemex Labs Ltd., North Vancouver, with the results tabulated below:

<u>Sample #</u>	<u>oz Ag/ton</u>	<u>oz Au/ton</u>	<u>Location</u>
22907	0.32	0.058	main shaft dump
22908	0.38	0.020	main shaft dump
22909	1.34	0.036)	
22910	2.63	0.066)	grab samples, locations
22911	0.42	0.036)	posted on 1" to 40'
22912	1.72	0.100)	mine plan
22913	0.59	0.188)	
22914	3.60	0.100)	
22915	1.17	0.384)	

In 1973 A.R. Allen, P.Eng., took 3 samples from the underground workings which are quoted below:

<u>Width</u>	<u>Au oz/ton</u>	<u>Ag oz/ton</u>	<u>Location</u>
14"	0.48	2.27	100 level, 100'N of stoped section
10"	0.14	1.85	140 level, back, 5' from N face
10"	5.13	2.27	250 level N face

The grab samples from the prospect trench dumps ran much

lower in gold than samples taken by Jacobson from the same locations and posted on his 1928 plan. The probable reason for this is that the dump material has been subjected to intense weathering, including occasional heavy rain storms, for a least 60 years and much of the gold which was originally in place in the oxides has been leached out.

Sookochoff (5) quotes an assay of 0.192 oz/ton Au and 2.33 oz/ton Ag as being a representative sample of the 4000 ton main shaft dump. The average of the two samples taken by the writer was only 0.039 oz/ton Au and 0.35 oz/ton Ag. Mine dumps are very hard to sample accurately unless a number of large bulk samples are taken from different parts, crushed finely, mixed, and then quartered down to assay size, so an estimate of the true value of the potential gold and silver in this dump should be deferred until a proper bulk sampling program can be carried out.

EVALUATION OF THE PROPERTY

Surface examination of the property has confirmed the existence of a well defined structure consisting of two quartz breccia veins lying either side of the diabase dike which varies in width from 10 to 20 feet. The quartz veins are narrow, but carry high value in gold and silver, and although production records are lacking, there are reports that shipments of selectively mined ore in the early 1970's ran better than 3 oz/ton Au.

The extent of the underground workings are described in Allen's report of 1973, and are shown in plan and elevation in the 1" to 40' scale map prepared by R.C. Jacobson (5) in 1928 along with the results of his surface and underground sampling. The map accompanying this report is a reproduction of the original, with the gold values in dollars converted to oz/ton at \$20.00/oz.

As will be seen from the map, the underground workings cover a maximum of 500 feet of strike length on the 100 ft. level and about 400 feet on the 250 level with the total underground workings including cross-cuts, raises, etc., being around 2300 feet. On the surface, however, a series of trenches and short adits have traced the east and west veins over a distance of 1000 feet, with surface samples by Jacobson assaying in the 0.5 oz/ton Au range. Samples by the writer, taken from these surface pits and consisting of highly weathered dump material, were lower in gold but showed surprisingly high silver values.

Above the 100 level to the surface, Jacobson has blocked out reserves of approximately 15000 tons of ore over widths 6" to 30" with grades of from 0.5 to about 3 oz/ton Au. Diluting all the widths to 36", which is considered a practical mining width for this type of structure, results in a total reserve of 25000 tons with a weighted average grade of 0.63 oz/ton Au. An examination of the mine plan indicates that if the 100 level were advanced an additional 500 feet to the north, or to a point below the last exploration cuts, a block of ground would be developed which would be about 2 times the volume of the block developed above the 100 level by the existing workings. Assuming the widths and values to the north were consistent with the known part, one could infer an additional 50,000 tons of ore.

Less is known about the potential of the mine below the 100 level, as there is less development, but Jacobson's assays from the 250 level where sulphide mineralization is encountered, are as good or better than the 100 level. Jacobson has blocked out a total of about 5000 tons of ore with grades of better than 1 oz/ton Au over widths of 6" to 18'. Diluting to 36" and calculating the weighted average of this zone, results in about 16,500 tons with a grade of 0.61 oz/ton Au.

Beyond this limited development between the 100 and 250 levels, the ground is open both to the north and south, and to depth. Jacobson, in his 1930 report, recommended sinking the shaft to below the 400 level, and at least 600 feet of development on the 400 level.

In general, the conclusions reached by the writer after the examination of the property and a study of the available data were:

1/ The property offers very attractive possibilities for a small, but consistent gold-silver producer if the price range for these metals persists at its present level.

2/ The existing shaft is worthless as a production shaft, but could be easily rehabilitated for ventilation and as a manway to the lower levels.

3/ From the topography of the property, a cross-cut adit could be driven from the flats to the south to connect with the existing 100 foot level which could be developed into a main haulageway and extended to the north. The ore made accessible above this level would sustain the mine while a new production shaft was prepared to tap the lower levels.

4/ The exploration and development program would be phased, as outlined below.

RECOMMENDATIONS

Phase I

1. Geologically map the surface structures, and re-sample the old cuts and trenches. This will require some drilling and blasting to expose fresh vein surfaces. Mapping and sampling should include the parallel structure to the west on the Rosebud #4 claims.

2. If the ground is open, additional claims should be staked to the west of the Rosebud #s 1,2, and 5 to form a contiguous block to include some of the flat land to the south.
3. The manway of the shaft should be rehabilitated with new ladders and staging down to the 100 level to allow detail mapping and sampling of this level.
4. The shaft should be plumbed to its bottom to determine the depth of water standing in it. If water is found below the 250 level some pumping should be done to draw down the water and calculate the rate of inflow. Pumped water should be stored in a surface tank for future drilling purposes.
5. An accurate profile survey should be made from the 100 level to the surface and south onto the flats to determine the location of the start of the proposed 100 level main haulageway.

Phase II

If the results of the Phase I work are positive, i.e., indicating that the structures and assay values are similar to those shown on the old mine maps, then Phase II work would be justified.

1. From the surface, diamond drill the projection of the vein at intervals both to the north and south of the developed area. At least one deep hole should be drilled to a depth of 500 feet.
2. Repair the shaft manway to the 250 level, and map and sample the drifts.

3. If found favourable by surface exploration during Phase I, the west structure should also be probed by drill holes.

Phase III

If the results of the diamond drilling are favourable, then Phase III would be undertaken to develop the mine.

1. Drive a cross-cut adit from the flats to intersect the vein and drift on it to the north to make connection with the existing 100 level drift.
2. The 100 level drift should be continued over the east vein for at least 1000 feet to the north, with the west vein being probed at frequent intervals by short diamond drill holes.
3. Bulk samples of ore material should be submitted for metallurgical test work.

ESTIMATE OF COSTS

Phase I

1. Purchase of service truck and trailer for crew accommodation, lighting plant, etc	\$12,000
2. Mine supplies, timber, fuel etc.	3,000
3. Rehabilitation of shaft manway to 100 level - Labour	2,000
4. Geological mapping and sampling	1,500
5. Drilling and blasting of surface cuts	2,000
6. Re-sampling of 100 level	2,000
7 Survey of shaft and surface profile	1,500
8. Assaying	3,000
9. Travel, engineering, & administration	5,000
10. Staking of additional claims	1,000
11. Contingencies	<u>5,000</u>
Total	\$38,000*

Phase II

1. Diamond drilling - allow 5000 ft. @\$30/ft. all inclusive	\$150,000
2. Supervision, sampling & assaying	15,000
3. Rehabilitation of shaft manway to 250 level	3,000
4. Sampling and assaying of lower workings	2,000
5. Engineering, administration	6,000
6. Contingencies	<u>24,000</u>
Total	\$200,000 *

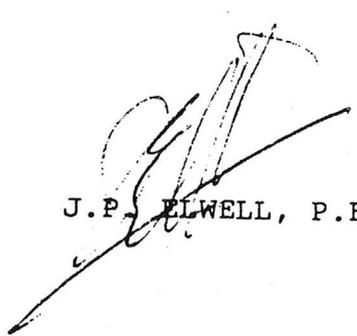
Phase III

1. Allow 1500 ft. of drifting and cross-cutting @\$150/ft. - labour and materials	\$225,000
2. Surface shop facilities	25,000
3. Metallurgical testing	101,000
4. Administration, etc.	10,000
5. Contingencies	<u>30,000</u>
Total	\$300,000*

* U.S. Dollars

<u>Recapitulation</u>	<u>\$ U.S.</u>	<u>\$ CAN</u>	(approx)
Phase I	38,000	47,000	
Phase II	200,000	246,000	
Phase III	300,000	270,000	

April 26th, 1983


J.P. ELWELL, P.Eng.

REFERENCES

- (1) USGS Bulletin # 397 - F. C. Schrader
- (2) Mine Plans - R.C. Jacobson - 1928
- (3) Kevin Resources Gold Holdings - Mohave County, Arizona -
G. L. Kirwin, P.Eng., July, 1973.
- (4) The Rosebud Property - Allen Geological Engineering Ltd.-
December 1973.
- (5) Report on a Proposed Leaching Program for the Rosebud
Property - L. Sookochoff, P.Eng., July 1976.

CERTIFICATE

I, James Paul Elwell, of 4744 Caulfield Drive, West Vancouver, B.C., do hereby certify that:

1. I am a Consulting Mining Engineer residing at 4744 Caulfield Drive, West Vancouver, B.C., and with an office at 1026 - 510 West Hastings Street, Vancouver, B.C. V6B 1L8.
2. I am a graduate in Mining Engineering from the University of Alberta in 1940, and am a Registered Professional Engineer in the Province of British Columbia.
3. I have no personal interest, directly or indirectly, in the properties examined or in United Kingdom Energy Inc. securities, nor do I expect to receive, directly or indirectly, any interest in such properties or securities.
4. The findings in the report are from data obtained from the reports and maps referred to and from a personal examination of the property April 8th and 9th, 1983.
5. In the area examined, I found the staking to be correctly done.
6. This Report may be reproduced in full in the Company's Prospectus or Statement of Material Facts.

DATED at VANCOUVER, B.C. this 26th day of April, 1983.


J.P. ELWELL, P.Eng.

PLACE COPY IN PORTLAND + MIZPAH (A) + MUSIC MTN (A)

MB 10/1/87

GEOLOGY AND MINERAL RESERVES OF THE ROSEBUD
AND
MUSIC MOUNTAIN CLAIMS
MOHAVE COUNTY, ARIZONA

prepared for
STELLAR RESOURCE CORP.

by

L.A. BAYROCK

BAYROCK SURFICIAL GEOLOGY
LIMITED

WEST VANCOUVER
BRITISH COLUMBIA

APRIL 1985

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ARIZONA DEPT. OF MINES & MINERAL RESOURCES
STATE OFFICE BUILDING
416 W. CONGRESS, ROOM 1611
TUCSON, ARIZONA 85701

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FIGURE 2: Rosebud and Music Mountain Claims

FIGURE 3: General Topography

MAP 1: Music Mountain and Rosebud Veins (in pocket)

TABLE 1: Rosebud Mineral Reserves

TABLE 2: Music Mountain Mineral Reserves

TABLE 3: Length of Veins

GEOLOGY AND MINERAL RESERVES
OF THE ROSEBUD AND
MUSIC MOUNTAIN CLAIMS
MOHAVE COUNTY, ARIZONA

INTRODUCTION

Property

The Rosebud and Music Mountain property is comprised of two groups of adjacent claims which cover the entire Music Mountain mining camp which at one time supported up to ten small producing mines.

The Music Mountain group is comprised of 17 patented claims and three unpatented remanent claims as of November, 1984. An additional four unpatented, remanent claims were staked between the Music Mountain and the Rosebud corridor to make the two properties contiguous. Staking is being conducted at the present time to the northwest and northeast of the Music Mountain claims, all unpatented claims, in order to cover possible mineralization occuring on the northwestward extension of the mountains and possible mineralization covered by bajadas gravels and sands.

The Rosebud claims group is adjacent to the southwest and is comprised of eighteen unpatented claims numbered 1 to 18. Additional staking is planned in order to cover possible mineralization extending to the northwest.

The Music Mountain claim group is leased by Stellar Resource Corporation from Mr. Leonard Neal, Kingman, Arizona, for a period of thirty years beginning as of October, 1984. - 20/4

The Rosebud claims group are 98% owned by Stellar Resource Corporation with a 2-1/2% N.S.R. payable. All the claims are in good standing.

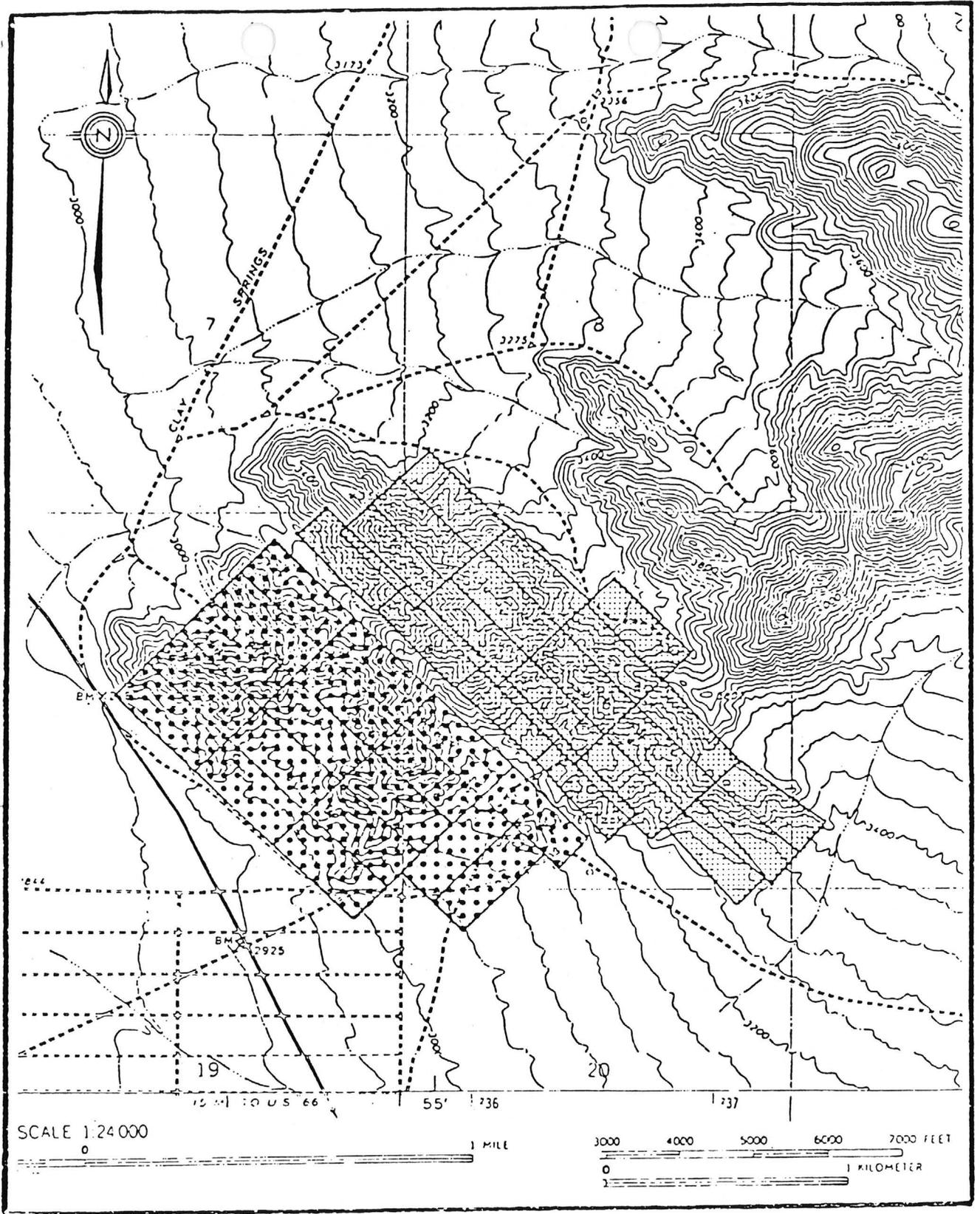
Location

The Music Mountain and Rosebud claims are located mainly in Sections 17 and 18, Township 26 N, and Range 15 W and extend into Sections 7, 8, 16, 19 and 20. Figure 1 shows the distribution of the Music Mountain and Rosebud claims as of November, 1984. Figure 2 shows the general location of the Music Mountain mining camp which is approximately 30 miles by road from the city of Kingman, Arizona.

Fieldwork

Fieldwork on the Rosebud claims was carried out from March 2 to March 9, 1984. L.A. Bayrock, Phd. P.Geol. inspected the underground workings, mapped the surface exposures of the Rosebud Mine dyke and sampled the surface exposures of Claims 1, 2 and 5. G. Ven Huizen, P.Eng. mapped and sampled the subsurface workings. A short inspection of the rest of the claims was conducted by L.A. Bayrock and G. Ven Huizen.

One hundred and thirty eight samples were collected from the surface and the subsurface in the period March 2 to March 9, 1984. These samples were assayed for gold and silver by Min-En Laboratories Ltd., North Vancouver, B.C. G. Ven Huizen sampled the underground workings of the mine from October 20 to



Rosehud



Music Mountain

Figure 1: Outline of claims owned and leased by Stellar Resources Inc.
T26N R15W Mohave County Arizona

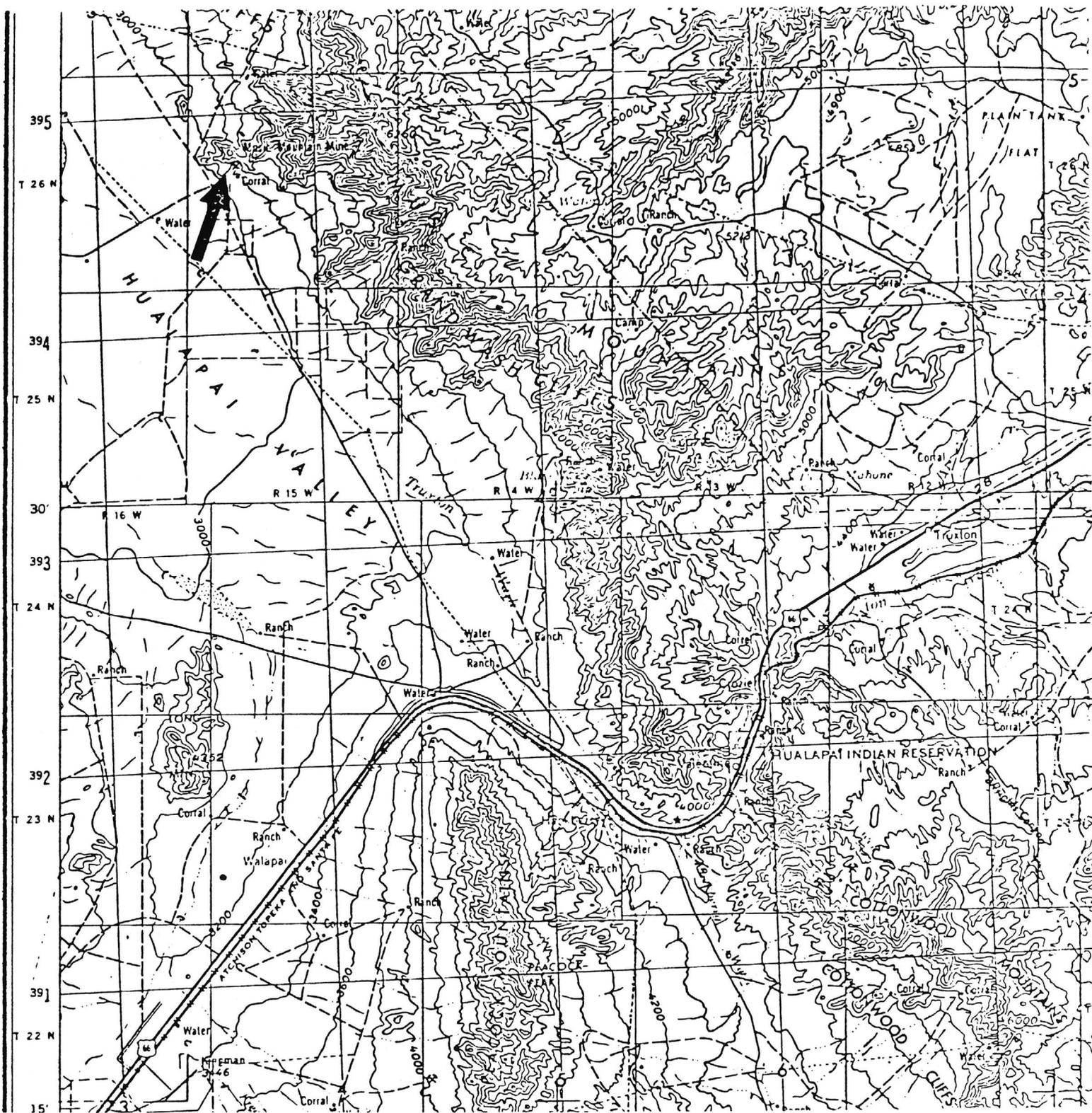


FIGURE 2: LOCATION OF MUSIC MOUNTAIN CLAIMS.
 Scale 1:250,000. A portion of U.S.G.S. map N1 12-1, Series V502.

21, 1983. The fifty samples collected were assayed gold by Oro Madre Assaying, P.O. Box 360, Sutter Creek, California.

The Phase I drilling project on Rosebud vein extension was completed on June 24, 1984. A total of eight holes have been drilled with a cumulative length of 1,553 feet. The shortest hole measured 106 feet and the longest, 301 feet. The drill cores were described and split core samples were taken for assays and sixty nine core samples were submitted to Min-En Laboratories Ltd., North Vancouver, B.C. for analyses for gold and silver.

Fieldwork on the Music Mountain claims was carried out from August 9 to August 20, by L.A. Bayrock, G. Ven Huizen, geologists; K.S. Wengryn and B. Starling, assistants. The purpose of the fieldwork was to examine the geology, sample mineralized outcrops, map and sample accessible underground workings, and determine in a preliminary manner ore grades and reserves of the property. A total of 467 samples were collected and these were analysed by Min-En Laboratories Ltd., North Vancouver, B.C. The assays were conducted for silver and gold exclusively.

All of the samples collected from the Rosebud and Music Mountain claims were channel samples or continuous chip samples across the whole width of the mineralized zone. Drill hole cores were split and one-half was sent for analysis. The remaining cores and splits are stored on the Rosebud property.

Previous Work

Music Mountain

The earliest and possibly the only report on Music Mountain was by F. Schrader (1909), Appendix A. He described the general geology of the area and states that gold was discovered in the area in 1879. Around the turn of the century,

10 mines were present in the surrounding two square miles and most of the mining was done until 1909. No other reports are available to the writer. The largest mine, as described by Schrader was the Ellen Jane mine. It has a shaft over 200 feet in length and two levels of workings. Most of the Mining was done between the 100 foot level and the surface and very high grade ore was recovered from the mine.

Sporadic work was carried out up to approximately 1942, at which time all mining ceased and Mr. L. Neal acquired the claims block. Although there were some parties interested in the property during the last 20 years, Stellar Resource Corporation is the first to seriously formulate mining plans and to acquire the property for exploration and mining.

Schrader (1909), asserted that the mining in Music Mountain more or less sporadic and extensive mining was carried out on the Ellen Jane mine but other veins received only minor activity. Our investigation in August, 1984 confirms the above. The exception being mining near the top of the mountain where some of the stopes are close to 200 feet high. Nevertheless, even at that location no mining was carried out below the main haulage drift where high grade ore is present. Furthermore, the Golden Serpent vein which averaged 15 to 20 oz. per ton, has hardly been touched according to our surveys.

In the past, exploration of the mineralized veins, which outcrop on the surface in the Music Mountain area, was performed by shallow trenching and occasionally by a shallow shaft. It has been found that in the adjacent Rosebud Mine that weathering has removed most of the gold from the surface outcrops to a depth of approximately 50 feet. It is evident that shallow trenching and even some of the shallow shafts, averaging 25 feet, could not have explored the mineralization of the veins effectively. Exploration by drifting by the old miners was ^{2 NO-} ~~very costly~~ and was not carried out to any large extent. In addition, even drifting was not successful as it was terminated whenever a "pinch-out" of a vein occurred, although surface exploration by us showed that the veins

continued for a great distance beyond the "pinch-outs". L.A. Bayrock wrote a report in November, 1984 on the Music Mountain property presenting Stellar Resource Corporation exploration of the property in August, 1984.

Rosebud Mine

R.C. Jacobson wrote a report covering the Rosebud mine operations from May, 1928 to January, 1930 in which he outlines the underground workings of the mine.

The next report is by G.L. Kirwan, dated July 5, 1973, and addressed to Kevin Resources Ltd. This report does not give any new data and apparently is based on Jacobson's writeup and map. Kirwan recommends drilling to establish ore reserves.

A.R. Allen wrote the next two reports dated December 24, 1973 but they are of a general nature and recommend drilling and mapping. No new sampling had been performed for these reports and the evaluation of the property in these reports is based entirely on Jacobson's assays.

The following two reports are by Al Sookochoff, P.Eng., the first dated July 5, 1976 is concerned with the idea of using heap leaching for the ore as sampled, assayed and reported by Jacobson. No new sampling or mapping had been performed. The same applies to Sookochoff's June 25, 1977 report.

Finally, the last report on the property is by J.P. Elwell, dated April 26, 1983. This report is basically a re-evaluation of Jacobson's report with additional mine grab samples, predominantly from surface exposures and dumps. No new mapping or exploration was conducted but the report recommends extensive mapping, sampling and drilling for evaluation of the property. In April of 1983, Gordon Keep produced a map of the surface showings of the Rosebud mine. The map is to a scale of 1:600 and is primarily a sketch map of a pace and compass

survey showing the locations of surface workings and identifying major geological units. L.A. Bayrock, 1984, wrote a report on the Rosebud property describing Stellar Resource Corporation performing in March of 1984

Access

The Music Mountain mining camp lies 34 air miles from Kingman, Arizona, in the N15 E direction. It may be reached from Kingman by Highway 66 for 17 miles, then northwards on the Pierce Ferry road for about 15.5 miles and then for about one mile towards the northeast on a track across the desert. Because of numerous arroyos crossing the track, a four-wheel drive vehicle is recommended.

Climate

The climate of the area is basically arid to semi-arid, being dry with clear skies with little or no precipitation for long periods. Vegetation is sparse being either cactus or dry land grass and sage. Precipitation is by thunderstorms resulting often in flash floods. The flash floods are responsible for large accumulations of alluvium in fans, and bajadas, and the production of numerous arroyos. The land is used primarily for ranching.

Topography

The hills on which the Music Mountain camp is located, constitute erosion remnants of the Plateau on which the Hualapai Indian Reservation is located and the Grand Wash cliffs form the upper edge of the Plateau. The hills surrounding the Rosebud Mine are remnants of the lower slopes of the cliffs (Figures 1).

The erosion of the hills is characterized by arid erosion cycle landforms but the erosion of the uplands is by the uniform slope recession and the weathering products of the uplands are carried away during storm runoffs. At the head of the gullies are alluvial fans which upon coalescing produce bajadas. Bajadas have thick accumulations of gravel and downslope they grade into playas and salinas. Unconnected erosion remnants, buttes or inselbergs, are often present and these are surrounded by bajadas. Aroyos extend from the heads of alluvial fans or bajadas to the playas, where occasionally immature deltas may be present.

The recession of the escarpments is only weakly to moderately dependent on lithology and competence of the rocks. Thus, rocks underlying alluvial fans or bajadas may be of identical composition of those of the lower reaches of escarpments, buttes or inselbergs.

The Rosebud mine is located on an erosion remnant of the Grand Wash Cliffs escarpment. The Music Mountain and the Rosebud Mines are on a dissected hill which is almost separated from the escarpment (Figure 2). The hill on which the Music Mountain mine is situated may be called a butte. The area on the flat lands immediately south of the shaft of the Rosebud mine and continuing northwards towards Music Mountain Mine is an extensive bajada. The thickness of gravel in this alluvial deposit may be over 100 feet. The small hill to the southeast of the mine shaft is an inselberg (Figure 3).

The weathering of the formations composing the escarpment is both physical and chemical. Slow disintegration of the rocks due to changes of temperature and accompanied by some chemical weathering produces a shallow regolith on the slopes. The regolith contains numerous large clasts up to boulder size. The accumulation of weathering products on the slopes is almost non-existent and are removed almost entirely by flash floods. The flash floods produce turbidity torrents which carry away even large boulders. Thus the slopes of the erosion remnants provide a nearly continuous outcropping of rocks.

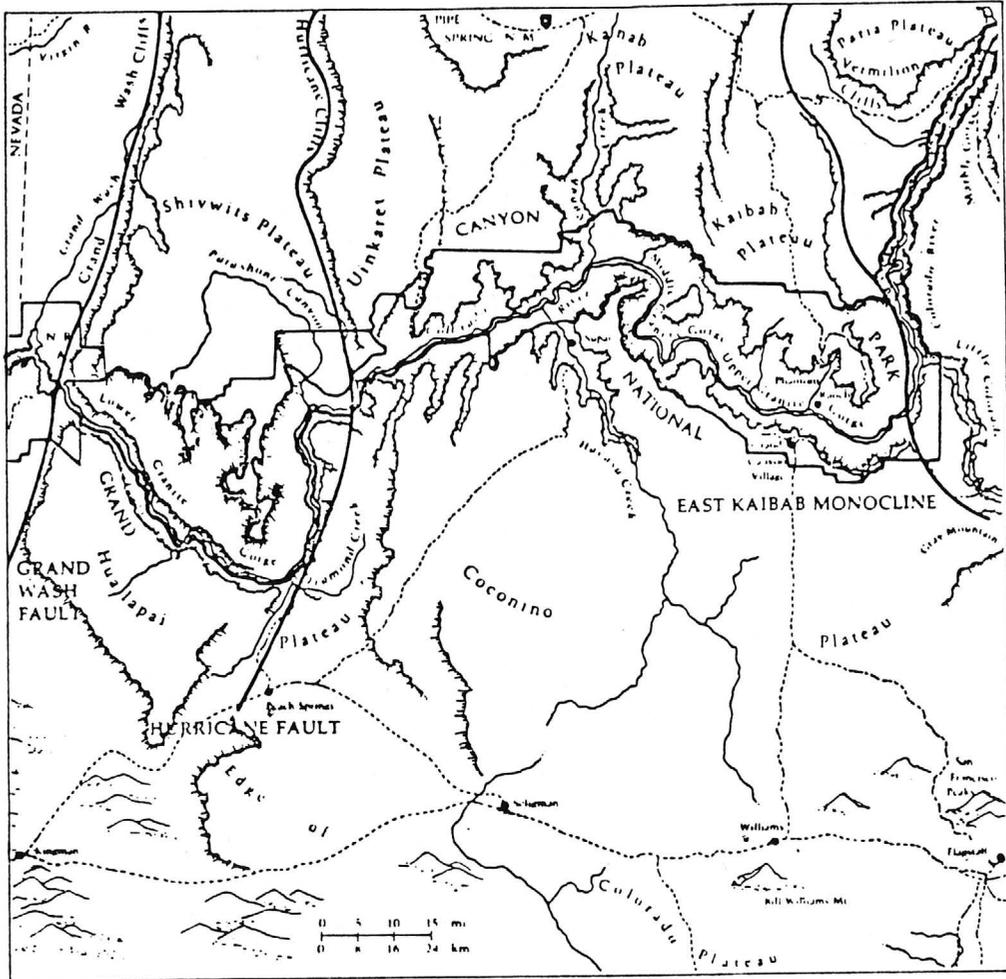


FIGURE 3: GENERAL TOPOGRAPHY OF THE AREA.

The weathering of sulfides, in contrast to other rocks, is extremely rapid. Everywhere on the surface only gossan indicates former presence of sulfide. The production of strong acids by the weathering of the sulfides, particularly sulfuric acid, effectively removed heavy metals at the surface as evidenced by the sample assays. Figure 4 shows the weathered mineralized shear zone of Trench C.

Water

Water is sparse in the area. The main shaft of the Rosebud mine is flooded below the 250 foot level. There is about 30 feet of water present at the bottom of the shaft. Clay incrustations on the walls at the 250 foot level of the mine indicate that the water level at one time was 8 to 10 feet higher than at present. The water present at the bottom of the shaft may be sufficient for drilling purposes in the mine.

Apparently water problems were encountered in the Ellen Jane mine (Music Mountain mine) at the 200 foot level, as reported by F.C. Schrader, 1909.

The groundwater table in the two above mining operations is present in the shear zones or fault zones and may be related to the regional groundwater table.

The relatively flat bajadas lying at the foot of the Rosebud mine and the Music Mountain mine may have a depth of over two hundred feet in places and could contain readily available water. The drilling for such water would have to be preceded by geophysical investigations. It is thought that there is probably sufficient groundwater present for a mill.

Energy

Electrical power could be obtained from transmission lines located 15 miles to the south, alternatively, generators could be used.

GEOLOGY

Regional Geology

The Music Mountain mining camp is located at the foot of the Grand Wash Cliffs which form the southwestern rim of the Hualapai Plateau. The Lower Granite Gorge of the Grand Canyon is located north of the Plateau (Figure 3). The district is thus located on the southwest margin of the Colorado Plateau. The succession of geological formations in the Music Mountain area is identical to that of the Lower Granite Gorge.

The rocks of the Music Mountain area belong to the Precambrian granites. The top of the Grand Wash Cliffs is formed by the Paleozoic succession of sandstones, shales and limestones which overlay the Precambrian igneous and metamorphic rocks and are separated from these by the Great Unconformity. The unconformity is present approximately a mile to the northwest of the Music Mountain property.

Local Geology

Local geology of the Music Mountain district, its mining history and mineralization has been described by Schrader (1909). Appendix A gives the reproductions of the pertinent pages of the report (pp.142 - 149).

Generally, the Precambrian granites and associated rocks have been intruded by steeply dipping dykes of diabase to granite composition. Intermediate acid dykes are porphyritic.

Of main importance are the diabase dykes which strike approximately northwest and dip steeply towards the southwest and are variable in thickness but are generally between three and six feet wide.

After the intrusion of the diabase dykes regional shearing and faulting crushed the dykes. The shearing was only subparallel to the dykes and occasionally the shear zones leave the dykes and continue in the granite.

Hydrothermal activity pervaded all of the shear zones producing significant alterations and mineralizations with sulfides, gold and silver. No visible gold or native silver has been observed as these metals occur as microscopic particles.

Hydrothermal activity may be divided roughly into two broad categories, being propylitic and kaolinitic alterations. Propylitic alteration is evident as a light greenish fine grained rock devoid of mafics. It occurs in the altered diabase and also in the granite. Kaolinitic alteration is expressed as a fine grained tan to which colored rock devoid of mafics and occurs also in the diabase and in the granite.

The propylitic alteration is assumed to be of mesothermal and the kaolinitic alteration of epithermal origin. Characteristically, high gold values are associated predominantly with the kaolinitic alteration. Also, there is a stratification of the different alteration processes. Propylite occurs below kaolinite in the veins, in some cases at the lower boundary of the epithermal alteration, the centers of the shear zones are altered to kaolinite with some propylite being present in the adjacent walls. Such a sequence indicates general cooling of the hydrothermal solutions with time.

Large kaolinitic alterations have been observed to coincide with significant gold mineralization in the diabase dykes. Mineralized shear zones in granite do not show any propylite and have only relatively narrow kaolinite zones.

The relatively porous structure of the shear zones permitted the deposition of quartz veins of variable widths. In the diabase dykes the quartz veins are surrounded by the kaolinitic zone which is brown to reddish in color. The reddish color is due to hydrothermal hematite. Such zones may have considerable width and may permeate the entire diabase. As gold is associated not only with the quartz veins but also with the kaolinite and hematite-kaolinite alterations, significantly wide ore zones are present.

The kaolinite and hematite zones surrounding the quartz veins in the granite shear zones are generally narrower, nevertheless, they compensate for the narrowness by the high grade of ore.

The Rosebud mine differs somewhat from all of the other veins in the mining camp, as the main structure of the mine is a cyanite porphyry dyke which runs almost the whole length of the Rosebud claims from the southeast to the northwest. The dyke varies in width from 10 to over 30 feet. On both sides of the dyke discontinuous bodies of diabase dykes are located and two persistent shear zones bound the porphyry dyke on each side and shear the diabase. At some locations, the shear zones are located in the adjacent granite or in the cyanite porphyry. The shear zones have been extensively altered by epithermal fluids and are mineralized almost continuously. The shear zones vary in width from less than a foot to over 16 feet and the wide portions of the shear zones are the locations of the ore shoots.

Map I shows the distribution of known and postulated mineralized veins (shear zones) on the Rosebud and Music Mountain properties. The veins are shown in three categories: surveyed, observed and postulated. The surveyed veins have

been mapped to a scale of 1 inch to 20 feet, (1:240). The 'observed veins' were seen up close or from a distance. The 'postulated veins' represent deduced extensions of the known veins. A total of over 70,000 feet of the three categories of veins are represented on Map I, of which only 12,000 feet have been mapped.

In detail, the veins are subparallel to each other and may even intersect under rare conditions. Branching was observed at some locations and feathering or horse tailing is present.

Mineralization

No visible native gold or silver has been observed nor reported in literature. According to the assays gold is associated both with quartz veins and kaolinized wall rocks and shear zones. Numerous samples containing high gold values had no quartz vein associated with them. On the other hand, the quartz veins in the granite (shear zones with quartz veins) have high gold values predominantly in the quartz.

Only low values of gold were found in the propylitic zones and the quartz veins in the propylitic zones also do not carry interesting gold or silver values. Nevertheless, in some places the quartz veins have large crystals of galena and sphalerite, besides pyrite. Such mineralization in the propylitic zone is believed to be of mesothermal origin and below the epithermal gold mineralization. The basis of mineralizations thus are delineated by the propylite but this being only for shear zones in the diabase or dacite.

The gold mineralization in the granite shear zones and the associated quartz veins apparently has a very large and as yet unknown vertical extent. No propylite has been seen in any location in the granite veins of a vertical extent of at least 400 feet. On the north slope of the Mountain very high gold

mineralization is present in the granite at least 200 feet below the top of the propylite zone in the adjacent diabase dyke.

The vertical mineralization in the diabase dykes is at least 200 feet as measured on top of the mountain of the claims block. Thus, we may assume that the vertical extent of the ore shoots in the diabase in the area should be at least 200 feet. The vertical extent of mineralization in the diabase on the Rosebud property has been determined to be at least 300 feet and it should follow that the vertical extent of the ore shoots on Music Mountain should have the same value discounting removal by erosion. The mineralization in the granite shear zones should be at least 400 feet. Schrader (1909) reported that some very high gold values were obtained from the Golden Serpent vein which averaged from \$300. to \$400. a ton, or 15 to 20 oz. per ton. Our survey has encountered a ten inch wide quartz vein in the granite with the highest value being 15 oz. per ton, and an average value of over 3 oz. per ton, for a tonnage of proven ore of 1,882 tons. The foregoing serves as an example of extremely high grade ore present in some of the veins under discussion. Generally, our results show that the granite shear zones have significantly higher gold values than the diabase zones.

The mineralized shear zone in the Rosebud mine as examined on levels 100, 200 and 250 feet are oxidized and limonite and goethite are present throughout. The occasional presence of unoxidized sulfide pods at the 250 foot level indicates that the primary unoxidized mineralization may be present only a short distance below.

The potential mineralization thus is of two types: oxide and sulfide. At and below the 250 foot level the two mineralization types may be mixed and at an unknown distance below, pure sulfide ore should be encountered.

Music Mountain Claims

A preliminary survey of the Music Mountain claims group was conducted between August 9 through 20th, 1984. The survey was aimed at a rapid appraisal of the property delineating some proven and probable ore and a postulation of potential in the area. Two parties were engaged in sampling and mapping. The first party was concerned primarily with detailed sampling and mapping of all of the accessible underground workings. Sampling was performed by channel sampling or continuous chip samples across mineralized zones at intervals of ten feet, the geology being mapped at the same time. All of the accessible stopes were mapped and sampled as well as the shafts by the use of a 200 foot long rope ladder. The results of the survey were plotted on maps to a scale of 1 inch to 20 feet showing the geology, mineralized zones, sample widths and assay results. A total of about 4,500 feet of underground workings were mapped and sampled.

The surface survey concentrated on following the surface outcrops of the shear zones and veins and the sampling of the mineralized portions of the outcrops and descriptions of the surface workings. The results of the survey are shown as vertical projections (topographic) of the veins and at the same time of a planametric map of the veins. The results were plotted on maps to a scale of 1 inch to 20 feet both vertically and horizontally. Assay results and the width of sampling was plotted on the map. Approximately 8,340 feet of veins and their outcrops were mapped. The sampling was aimed at ten foot spacing but in practice it was far from it. Often no samples could be taken for intervals of over 200 feet. The reason for the sparse sampling is a shallow colluvium cover over the outcrops, which hindered the sampling although individual veins could be traced.

Rosebud Claims

Survey of the Rosebud claims was limited only to the underground workings and the surface outcrops of the two veins for a length of approximately 1,200 feet, or from near the Rosebud mine headframe northwestwards to the top of the ridge.

Extensive surface and subsurface sampling was conducted in the period between the 2nd and 9th of March, 1984. All of the samples collected were of the continuous chip or channel type. Only a few others (grab samples) were collected and these were either from outside of the Rosebud Mine area or from quartz vein heaps. Each sample was collected across the shear zone and the width of the shear zone is given on the maps. All maps and cross sections are on file with Stellar Resource Corporation.

Samples collected during March, 1984, were assayed for gold and silver. G. Ven Huisen sampled the 250 foot level of the Rosebud Mine in October of 1983.

MINERAL RESERVES

The mineral reserves of the Rosebud and the Music Mountain claim blocks are calculated separately. Two types of mineral reserves will be shown, the indicated and the inferred reserves. All mineral reserves are calculated only for the oxide ore, sulfide ore may be extensive at depth on the two properties, but because it will require a modified flow sheet it is not presented here.

Indicated mineral reserves have been calculated on the basis of extensive sampling and encompass "proven" and "probable" mineral reserves as defined by Policy #2 (54-839) in the Canadian Securities Law Reports. Inferred reserves are geological extrapolation of the mineralization in the unsurveyed and unsampled extensions of the vein.

Eight separate veins are present in the Rosebud area and one prominent double vein, the Southwick veins, which extend from the northwest corner to nearly the northeast corner of the claims block.

Each of the Southwick veins is located on one side of a very long and uniform syanite pophyry dyke. The dyke is bounded on each side by discontinuous diabase dykes. Two shear zones follow each side of the pophyry dyke and cut the diabase or the surrounding granite. The shear zones are mineralized throughout and vary in width from less than one foot to over sixteen feet. The Rosebud mine is located near the southeastern extremity of the Southwick veins and has a lateral extent of the drifts of 800 feet. Detailed sampling and sections through the Rosebud mine are given in the report of April, 1984 entitled "Geology of the Rosebud Claims". The Southwick vein outcrops were mapped on the surface in detail for seven hundred feet beyond the second shaft of the mine, as also the surface expression of the veins was mapped from one hundred feet southeast of the first shaft to the second shaft. Thus a total of about 1,400 feet of the length of the double veins were mapped. The Southwick double veins extend another 4,400 feet to the northwest beyond the surveyed area and about 600 feet to the southeast beyond the limit of mapping. Thus the total length of the individual veins is about 12,800 feet.

The extensive sampling in the Rosebud mine shows 15,560 tons of indicated mineral reserves of a grade of .587 Au oz/ton and 1.89 Ag oz/ton. Inferred reserves for the extension of the Southwick veins are assumed to be .500 Au oz/ton and 1.50 Ag oz/ton. Keeping in mind that not all of the vein extensions may have economic mineralization, only 132,500 tons are postulated.

The grade for the remaining Rosebud veins are assumed to be similar to the average grade of the inferred reserves of the Music Mountain claim block. Table 1 gives the mineral reserve calculations for the Rosebud claim block.

TABLE I

TOTAL OXIDE MINERAL OF THE ROSEBUD CLAIM BLOCKS

VEIN	AU OZ/TON	AG OZ/TON	TONS	TOTAL AU	TOTAL AG	MINERAL CATEGORY
ROSEBUD MINE	.587	1.89	15,560	9,134	29,408	INDICATED
ROSEBUD VEINS (1 to 8)	.497	1.96	1,009,656	501,799	1,978,892	INFERRED
SOUTHWICK EXTENSION	.500	1.50	132,500	66,250	198,750	INFERRED
TOTAL	.587	1.89	15,560	9,149	29,408	INDICATED
TOTAL	.497	1.91	1,142,156	568,049	2,177,642	INFERRED

Music Mountain Claims

Music Mountain has a total of nineteen veins recognized at the present time, seven of which are named and the names are shown on Map 1. Most of the names have been extracted from literature.

Indicated mineral reserves of the surveyed portions of the following veins: Contention, Hilton, Luck Cuss, Golden Serpent, and a very small portion of Ellen Jane are given in detail in the Music Mountain report of November, 1984 and are 119,000 tons at .547 Au oz/ton and 2.96 Ag oz/ton. The inferred reserves for each named vein were calculated by extending the indicated reserves and grades to the extensions of the veins. Table 2 gives the indicated and inferred mineral reserves for the named veins, the grades and length of veins. Veins #1 and #12 were assigned the average of the surveyed veins and their extensions.

The Hilton vein received most mining and development. It has a branching drift at the two hundred foot level from which mining was carried out to the surface. The Hilton vein is intersected by the Contention vein. The north branch of the Contention vein was mined extensively from the two hundred foot level of the Hilton vein. No mining was carried out below the two hundred foot level. An adit on the south side of the mountain leads to the Hilton vein at the four hundred foot level. No mining was carried out from this level as most of it is located below the gold and silver mineralized zone of the vein. Nevertheless, high grade ore is present between the four hundred and two hundred foot levels. It is this extensive development of about 2,200 feet of drifts which permits ready access for mining of the ore of the Hilton vein. Over 80,000 tons of the ore in the Hilton vein may be mined with minimal expenditure on development.

The Contention vein intersects the Hilton vein (Map 1). Mining of the north branch of the Contention vein was carried out from the two hundred foot Hilton level to the surface. Only one half of the vein was mined. The rest of the vein could be mined using the developed two hundred foot Hilton level. At the

four hundred foot Hilton level only minimal mining of the Contention vein has taken place. Thus, the Contention vein between the four hundred foot and the two hundred foot Hilton levels is accessible for mining. The south branch of the Contention vein has not been mined at all. Sporadic samples at the surface indicate that high grade ore should be present in the south branch. The Contention vein also extends a considerable distance to the northwest where it is accessible from the north side of the mountain.

TABLE 2

MUSIC MOUNTAIN MINERAL RESERVES

VEIN	AU OZ/TON	AG OZ/TON	TONS	TOTAL AU	TOTAL AG	MINERAL CATEGORY
LUCKY CUSS	.314	.87	3,847	1,209	3,347	INDICATED
	.314	.87	30,400	9,546	26,448	INFERRED
CONTENTION	.511	3.17	41,693	21,305	132,167	INDICATED
	.500	3.00	40,000	20,000	120,000	INFERRED
ELLEN JANE BRANCH	.400	1.00	7,000	2,800	7,000	INFERRED
MARIE E.	.500	1.00	60,000	30,000	60,000	INFERRED
HILTON	.576	2.97	43,588	25,105	129,456	INDICATED
	.440	2.64	48,000	21,120	126,720	INFERRED
GOLDEN SERPENT	.727	3.23	12,470	9,066	40,278	INDICATED
	.500	2.00	60,000	30,000	120,000	INFERRED
ELLEN JANE	.124	2.08	3,619	449	7,528	INDICATED
	.500	2.00	75,000	37,500	150,000	INFERRED
VEINS #1 to #12	.494	2.42	400,000	197,600	968,000	INFERRED
TOTAL	.541	2.96	105,619	57,154	312,776	INDICATED
TOTAL	.483	2.19	720,400	348,566	1,578,208	INFERRED

Ellen Jane Vein

The Ellen Jane vein has been mined extensively from the one hundred foot level to the surface (Schrader, F.C. 1909). It has been mined for about four hundred feet to the northwest from the main shaft and approximately one hundred feet to the southeast. Examination of the workings at the surface indicate that no additional mining was carried out on the vein after Schrader's report (Appendix A). No significant mining has taken place on the rest of the Ellen Jane vein. Considerable reserves, over 75,000 tons, may still be present in the Ellen Jane vein.

Lucky Cuss Vein

The Lucky Cuss vein is located 1,000 feet southwest of the Ellen Jane vein. Three short shafts are situated along it, although only small scale mining has taken place in the past. Surface samples indicate good potential.

Marie E. Vein

The Marie E. vein has been developed by cuts in the drifts to a depth of one hundred and fifty feet (Schrader, 1909). At the present time the shaft has collapsed and no underground access is available. The vein has a postulated length of 3,100 feet. It has yielded high grade ore of 15 Au oz/ton. In spite of being relatively narrow, the high grade should be economical at the present time even with considerable dilution.

Golden Serpent Vein

The Golden Serpent vein is situated to the north and down hill from the Hilton vein. Although it is relatively narrow, average ten inches over one hundred feet, it is very rich. Our highest value showed close to 15 Au oz/ton and the average for the one hundred foot exposed length in the underground yielded an average of over 3 Au oz/ton. The continuation of the vein towards the northwest showed values of gold up to .496 Au oz/ton. The geological structure of the Golden Serpent vein is that of a typical bonanza. It is possible that a wide zone of the vein could be located with a grade running into many ounces per ton of gold.

Ellen Jane Branch

The Ellen Jane branch is a short vein situated 800 feet north of the Ellen Jane vein. It has no past development except for some trenching at the surface.

Veins #1 to #12

A total of twelve additional veins to those described above are present. The total length of the veins is 22,200 feet of which 1,300 have been surveyed, 3,800 feet observed and 17,100 feet postulated. Some of these veins have adits, drifts and shafts and some of them show considerable mining activity in the past. For example, vein #8 has a shaft of eight feet by eight feet and numerous large cement foundations and a waste pile around it. Vein #9 has two large adits. Vein #10 has a large shaft and numerous trenches. The inferred ore reserves for the numbered veins are taken to be the average of the described veins. The inferred tonnage, shown in Table 2, is estimated to be 400,000.

Length of Veins

The individual veins are shown on Map 1. Portions of some veins have been surveyed by compass and chain, and partly sampled, other portions have been observed on the ground or at a distance, and finally, extensions of the veins have been postulated. Table 3 gives the length of the veins for Music Mountain and the Rosebud divided into the three different categories. The grand total of all the veins as shown on Map 1 is 75,500 feet, of which only 12,500 feet have been surveyed, or 16 per cent of the total. It is thus necessary to survey all of the vein to plan future development.

TABLE 3

LENGTH OF VEINS IN FEET

<u>MUSIC MOUNTAIN</u>	SURVEYED	OBSERVED	POSTULATED	TOTAL
LUCKY CUSS	750	--	1,600	2,350
CONTENTION	1,500	400	700	2,600
ELLEN JANE BRANCH	450	--	700	1,150
MARIE E.	800	400	1,900	3,100
HILTON	2,100	700	1,800	4,600
ELLEN JANE	2,100	--	100	2,200
GOLDEN SERPENT	800	--	800	1,600
VEINS 1 to 12.	1,300	3,800	17,100	22,200
Total Music Mountain	9,700	5,300	24,700	39,700
 <u>ROSEBUD</u>				
SOUTHWICK	2,800	5,500	4,400	12,700
VEINS 1 to 8	--	7,700	15,400	23,100
Total Rosebud	2,800	13,200	19,800	35,800
GRAND TOTAL	12,500	18,500	44,500	75,500

DEVELOPMENT TARGETS

In the area of the Rosebud and Music Mountain claims, two main development targets stand out. These targets are the Hilton - Ellen Jane veins, the adjacent Golden Serpent and the intersecting Contention veins. The second development area is focused on the extension of the Southwick vein on the Rosebud property for the first 1,000 feet beyond the surveyed area. At that location, the veins balloon out up to sixteen feet in width over considerable length. At the surface a channel sample over a ten foot width of the vein, yielded a value over .25 Au oz/ton.

Indicated mineral reserves of the two properties are 135,000 tons. In the next phase of development, it is planned to enlarge the indicated reserves to over 300,000 tons, thus primarily drilling is recommended for the Golden Serpent, Ellen Jane, Hilton and Contention veins on the Music Mountain claim block, and on the Southwick extension on the Rosebud claim block.

DEPTH TO MINERALIZATION

At two locations on the Rosebud mine (Southwick vein) it has been noted that surface samples yielded rather low gold values, whereas ten to twenty feet below the surface the grade improved drastically. Similarly, at over ten locations on Music Mountain where the surface and the immediate underlying subsurface could be sampled, the surface samples, with only one exception, were considerably lower in gold as compared to the subsurface samples. It is thus apparent that surface weathering and leaching has depleted in gold the top ten feet of the mineralized veins and that surface sampling may be misleading as to the true value of the mineralization. This was found to be true not only in the veins contained in the diabase, but also for veins in the granite. The above observations necessitates drilling for the determination of grades of the mineralized zones.

CONCLUSIONS

The Rosebud and Music Mountain claim blocks cover the entire Music Mountain mining camp, which at one time supported numerous gold mines. Sporadic and uncoordinated mining in the past, without proper geological exploration resulted in only a very small portion of the gold bearing mineralization being mined.

Initial geological exploration programs carried out by Stellar Resource Corp. revealed 29 mineralized veins on both properties, of which only a small number have received attention in the past. The total length of surveyed, observed and postulated veins on the property is over 75,000 feet, of which only 12,500 have been surveyed and mapped by compass and chain. This represents 16 per cent of the total.

The property contains a swarm of epithermal veins striking northwest to southeast. The veins are shear zones which follow some of the diabase dykes or cut the country rock (granite). The veins vary in width from less than a foot to over 16 feet. In vertical extent, mineralization is present from near the surface to about 300 to 400 feet below the surface, depending on local topographic position. The mineralization is predominantly of sub microscopic gold and silver.

Quartz veins are present with the mineralization. In the diabase dykes most of the mineralization is encountered in the argillitic (kaolinitic) alteration zone. Propylitic alterations seem to be the base of the gold and silver mineralization. Most of the mineralization is oxidized. Sulfide ore is present at depth, but because it would require different treatment from the oxide ore, it has not been included in any of the mineral reserve calculations.

In the surveyed portion of 12,500 feet of the veins, indicated mineral reserves have been blocked out, totalling 121,000 tons of an average grade of .547 Au

oz/ton and 2.83 Ag oz/ton. Inferred mineral reserves total 1,862,566 tons of an average grade of .492 Au oz/ton and 2.02 Ag oz/ton. Certain veins, for example the Golden Serpent vein, may carry very rich mineralization of over 10 oz of gold per ton and 20 oz of silver per ton. This is in agreement with the high gold values mined at the turn of the century and reported in past literature (Schrader, 1909).

An extensive network of adits, shafts and drifts exist on the Music Mountain and to a lesser extent in the Rosebud mine. The 3,400 feet of development work on the Hilton vein could be rehabilitated at a low cost and a short time. This is of importance because at least 80,000 tons of indicated mineralization in the Hilton vein could be readily mined using the existing drifts.

The large tonnage of inferred mineralization shows that there is a potential for a medium to large scale mining operation. For this purpose, exploration and mining development programs should be initiated.

The most developed area is the portion of the Music Mountain encompassing the Hilton, Golden Serpent, Contention and Ellen Jane veins. Only minimal drilling will be required in this area to triple the indicated mineral reserves. The second area of interest is the extension of the Southwick veins to the northwest, where at the surface, mineralized shear zones are from 10 to 16 feet wide, with a high gold value at the weathered surface.

The rationale for Phase I exploration and development is to increase the indicated mineral reserves to at least 300,000 tons, and to map and explore the rest of the unsurveyed portions of the property.

The objective of the Second Phase of exploration should result in increasing the indicated mineral reserve to 600,000 tons, and prove 200,000 tons for mining purposes. The Third Phase of exploration should again encompass the development

of an additional 300,000 tons of indicated mineral reserves. At this time the feasibility study should be completed.

The Phase I exploration, because of existing and accessible mine workings, will necessitate only 4,800 feet of diamond drilling and should be completed in approximately a two month time span. The results of this investigation will be used for planning the next phases.

RECOMMENDATIONS

A rapid pace and compass survey of all the veins in the Music Mountain and Rosebud claim blocks should be carried out in order to define the locations and extensions of the observed veins. Further, additional new veins may be located. Some surface sampling in select areas should be carried out.

Drilling of the Music Mountain veins (Hilton, Ellen Jane, Golden Serpent and Contention) should be carried out in order to enlarge the indicated mineral reserves. This area is best suited for immediate mining development because of at least 3,400 feet of underground development already present.

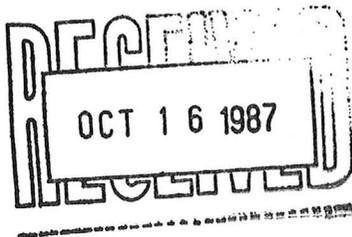
Drilling of the extension of the Southwick vein may yield considerable mineral reserves suitable for open pit mining. Consequently, the drilling of the extension should be done during the initial phases of the proposed development plan.

Portions of the 200 foot level Hilton development will have to be rehabilitated for underground drilling of the south branch of the Contention vein.

Rehabilitation of the existing roads will have to be undertaken in order to facilitate access to the drilling sites.

PHASE I BUDGET

1) Mapping		\$ 2,500.00
2) Drilling Music Mountain		
Surface	2,600 feet	80,080.00
Underground	940 feet	28,952.00
Drilling Rosebud		
Surface	1,200 feet	36,960.00
		<hr/>
	sub-total	\$ 145,992.00
3) Sample of Waste Dumps etc.		2,000.00
4) Rehabilitation of Drifts		1,000.00
5) Rehabilitation of Roads		7,000.00
6) Rosebud Road Building		14,000.00
7) Salaries, Subsistance, Air Fare		17,444.00
8) Gas, Car Repairs, Equipment		4,580.00
9) Sample Analyses		15,000.00
		<hr/>
	Total	\$ 207,516.00
	Contingency 10%	20,752.00
		<hr/>
	GRAND TOTAL	\$ 230,268.00
		<hr/> <hr/>



REFERENCES CITED

- Schrader, F.C. (1909): U.S.G.S. Bulletin #397
- Jacobson, R.C. (1928): Short Letter Report
- Jacobson, R.C. (1930): Short Letter Report
- Kirwin, G.L. (1973): Kevin Resources Ltd., Gold Holdings, Mohave County, Arizona
- Allen, A.R. (1973): The Rosebud Property, Report for Arican Holdings Ltd.
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- Sookochoff, L. (1976): Report on Proposed Leaching Program on the Rosebud Property, Report for Arican Holdings Ltd.
- Sookochoff, L. (1977): Geologic Report on Rosebud for Tricor Resources Ltd.
- Elwell, J.P. (1983): Report on the Rosebud Property
- Bayrock, L.A. (1984): Geology of the Rosebud Claims #1 to #10
- Bayrock, L.A. (1984): Geology and Mineral Reserves, Music Mountain claims

CERTIFICATE

I, L.A. Bayrock, of 1899 Queens Avenue, West Vancouver, British Columbia, certify that:

1. I am a registered member of the Association of Professional Engineers, Geologists and Geophysicists of Alberta.
2. I graduated from the University of Alberta majoring in geology in 1953, B.Sc., and 1954, M.Sc., and the University of Wisconsin in 1960, Ph.D.
3. I have practiced my profession continuously since graduation.
4. Neither I, nor any member of my family has any interest in Stellar Resource Inc., or Stellar Resource Corporation.
5. The information contained in this report is based on the examination of Rosebud and Music Mountain claims and the surrounding terrain and supplemented by a review of published and unpublished data.
6. This report may be used in full or in part by Stellar Resource Corporation in connection with a Prospectus or a Statement of Material Facts.

Dated at West Vancouver, in the Province of British Columbia, this 9th day of April, 1985.

L.A. Bayrock Ph.D., P.Geol.

PORTLAND-MIZPAH MINING COMPANY

KAP WR 5/29/81 Part of this property is now owned by Northern Arizona Gold and Silver Mining & Milling Company according to a Hannover stock broker.

Telephone call to Ann Turney on 8/21/81: Received call from Mike Hanson who said he had a call from relatives in New Jersey asking him what he knew about the Northern Arizona Gold and Silver Mining and Milling Company. He said that First Jersey Securities Inc. of New York was really pushing this company's stock in the east and he was trying to find out something about them. Referred him to the Corporation Commission for information on whether or not they were registered in Arizona.

NJN WR 10/16/87: Don Lambert (card) visited and reported he will be able to supply us with a geological report done for Steller Resources (card) at the Music Mountain (file) and Portland Mitzpah (file) Mohave County.

TELEPHONE 20551 -
Rugby 6-4953.

-ROUTE 1-
5441 Yarmouth Ave.

LOUIS F. WALTER
ATTORNEY AND COUNSELOR AT LAW
El-Dorado Springs, Mo.
Encino, Calif.

October 20, 1950.

Mr. Charles H. Dunning, Director,
Arizona Dep't of Mineral Resources,
Phoenix, Arizona.

Dear Mr. Dunning:

The Peacock Consolidated Mining Company of which I am president recently acquired a 10 year Lease and Option to Buy the Rosebud Mine comprising the 'Portland, 'MizPah, 'Emma, and 'Little Johnny lode mining claims in Music Mountain Mining District, Mohave County, Arizona.

The shaft on the Rosebud Mine is 400 feet down and there are about 2000 feet of drifts and raises. In 1929 and 1930, Mr. R. C. Jacobson, M.E. of Kingman (now deceased) estimated the ore fairly in sight to be worth \$510,000.00 down to the 250 ft. level. There are two veins of 18 to 24 inches width each at that level, and according to reports by workers, probably \$30,000.00 worth of gold and silver ore has been shipped to the El Paso Smelter from 1939 to 1943. The work was stopped due to War Regulations and no work has been done since then, except the assessment work last June. Since the report by Mr. Jacobson, the shaft has been extended to 400 feet. The two veins meet at 325 Ft. and from there downward the vein is from 48 to 56 inches wide, according to reports by Mr. Milo Stoney, a sub-lessee who worked in the lower levels. He also stated that the lead content had increased considerably and that the gold and silver values were fully as good as above. The average values according to the Jacobson reports are \$28.20, or about \$46.00 according to present values of gold and silver to which is to be added the lead values.

There is a flow of about 5000 gallons of water in 24 hours and the water is up to about 140 Ft. from the top of the shaft. A pump is needed, the shaft needs repairing. A hoist is there but it needs some parts and it would, no doubt, be best to buy a new or a good used one. Ore bucket and cable will do? Ore car, track, and ore loading bin are all right.

When I was there in June, Kingman mining men told me that the Music Mtn, District was the most promising in that section, as the values are exceptionally high. Mr. Jerry Haynes whom I employed to do the assessment work, estimates that \$3000.00 would enable us to get the property in shape to make car load shipments to El Paso by mining ore above the water level at 140 feet. We would, however, much prefer to install a pump and repair the shaft to mine ore from the lower levels at 325 feet and below.

We would like to apply for a loan from the Arizona Mining Fund.

Very sincerely yours,

Louis F. Walter

PHOENIX, ARIZ.
JUL 10
7-PM
79 58



WPA at HT 162

Portland & Mizpah Mining Co.

1130 N 22 St.

Milwaukee, Wisconsin

RECEIVED
JUL 28 1958
DEPT. MINERAL RESOURCES
PHOENIX, ARIZONA

MILWAUKEE
JUL 18
3³⁰ AM
1958
WIS.

ARIZONA DEPARTMENT OF MINERAL RESOURCES
MINERAL BUILDING, FAIRGROUNDS
PHOENIX, ARIZONA

July 10, 1958

To the Owner or Operator of the Arizona Mining Property named below:

Portland & Mizpah Mining Co. (Mohave County) Gold, silver
(Property) (ore)

We have an old listing of the above property which we would like to have brought up to date.

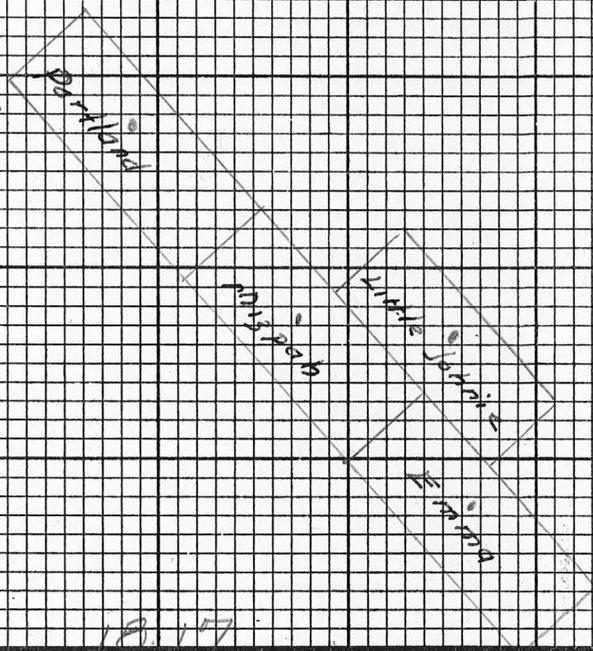
Please fill out the enclosed Mine Owner's Report form with as complete detail as possible and attach copies of reports, maps, assay returns, shipment returns or other data which you have not sent us before and which might interest a prospective buyer in looking at the property.

Frank P. Knight

FRANK P. KNIGHT,
Director.

Enc: Mine Owner's Report

18 117



18 117

Map

Scale
Date

Section

Scale
Date

MISCELLANEOUS

S
250

R
500

T
390
800
1400
2500
205
1085

X
270

S

W-23 Mohave 8-8

C-B 46

W.D. File
M2, 5, 10, 15,
Kingman Range

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

Date 9/24/46

1. Mine: Portland & Mizpah Mining Co.
2. Location: Sec. ^{W12 E12} 17, 18 Twp. 26 N Range 15 W Nearest Town Antares
Distance 17 Direction S Road Condition Fair
3. Mining District & County: Music Mt., Mohave
4. Former Name of Mine:
5. Owner: Portland & Mizpah Mn. Co.
Address: 1130 N. 22 St., Milwaukee
6. Operator: same
Address:
7. Principal Minerals: Au Ag
8. Number of Claims: 4 Lode Placer
Patented Unpatented
9. Type of Surrounding Terrain: Moderately Rough
W foothills Grand Wash duffs
10. Geology & Mineralization: Gneiss & Granite
Quartz
strike N42°W Dip 80° SW
vein up to 20" wide
11. Dimension & Value of Ore Body:
4 Cars (40T) shipped 38 av \$35 to \$40 per ton

PORTLAND & MIZPAH MINING CO.

Au, Ag

Mohave 8 - 8 Sec. 17, 18, T 26 N, R 15 W

Portland & Mizpah Mining Co., 1130 N. 22 st., Milwaukee, Wis. '46

12. Ore "Blocked Out" or "In Sight":

Ore Probable: *no estimate*

13. Mine Workings—Amount and Condition:

No.	Feet	Condition
Shafts..... 1	250	Poor
Raises.....	500	"
Tunnels.....	1085	Fair
Crosscuts.....	210	"
Stopes.....	390	

14. Water Supply: *water in shaft up to 100' level*

15. Brief History: *located 1908 some ore shipped*
mill on property in 1928
\$2160 mill building
\$3160 Mining Equip

16. Signature:

17. If Property for Sale, List Approximate Price and Terms:

large salaries and big staffs. They are hiring independent contractors to test and to mine. They are considering all of the various extrusion alternatives, including the construction of a 250 ton a day mill.

The company believes that at today's precious metal prices, all of their properties contain significant amounts of economically available ore. Any increases in the price of precious metals over the next few years could have a meaningful impact on the company's bottom line results.

SUPPLEMENTAL INFORMATION

Assay - quantitative analysis of the content of specific minerals in metal bearing material.

Custom Mill - a facility designed to treat metal bearing material from more than one mine, usually utilizing either flotation and/or gravity processes, which separates the valuable metal material from the host rock.

Dumps - rock that has been extracted from a mine considered to be uncommercial when mined which material was not previously subject to the milling process.

Feasibility Study - report prepared by an independent consulting firm specifically on the economic factors surrounding a mill, including the analysis of metal bearing materials, metallurgical problems, transportation, water usage and availability, power, contractors, equipment availability, construction costs and all other factors that could influence the construction, initial and long term operation of a milling facility near Kingman, Arizona.

Ferrous - relating to or containing iron.

Flotation - a method of wet concentration of ores in which the desired minerals are caused to float, associated with air bubbles, and the gangue or waste remains submerged.

Gangue - the waste material or nonvaluable-material in the metal bearing structure which is mined; veinstone or lode filling.

Heap Leaching - the process by which non-ferrous ore ~~con-~~
~~centrate~~ is obtained by piling mineralized rocks ("heaping") on pads and filtering dissolved chemicals through the rock so that the valuable mineralized material is recovered by causing it to go into solution with the chemical and later precipitating material out to form ore concentrates.

Lode Mining Claim - a rectangular area, staked or located by persons according to federal law, from which metallic minerals may be extracted by the locator or claimholder.

Mineralized Material/Metal Bearing Material - rock containing gold, silver, copper, lead and/or other metals. If such rock contains sufficient quantities of metals to have a commercial value, it is known as ore.

Non-Ferrous - metals other than iron and its alloys in steel.

Ore Concentrate - the valuable mineral ^{CONCENTRATED} ~~extracted~~ from the host rock which has been subjected to one or more metallurgical processes to cause the ores to separate from the worthless host rock.

Patented Claim - a lode or placer mining claim for which the federal government has granted the claimholder fee, title or ownership.

Tailings - waste materials that remain from earlier milling processings which usually had no commercial value at the time of milling.

Unpatented Claim - a lode or placer mining claim for which the federal government has not granted the claimholder fee, title or ownership, but the claimholder has the rights to extract metal bearing materials and to do all work necessary to mine.

In a custom mill operation, metal bearing material is initially reduced to small particles by crushing and grinding. The next step requires that the valuable metallic minerals be extracted from the gangue, ^{MINERALS} ~~or waste rock~~. This is done by either a flotation or gravity process. The company proposes to employ a flotation process in its custom mill. In this process, organic compounds, known as xanthates, are added to the crushed ~~metal~~ material. The material is agitated in a ball mill and subsequently aerated in conditioning tanks. During these steps, the reagents adhere to valuable metallic particles. When transferred to a conditioning tank for aeration, the freed metallic particles cling to bubbles caused by the aeration. The bubbles, with particles attached, rise to the top of the conditioning tank and are skimmed into the launders and saved. The waste or gangue material sinks to the bottom of the conditioning tank and is pumped into a tailings or storage pond. Several stages of recycling and cleaning of the resultant material follow before a concentrate suitable for shipment to a smelter is produced.

Heap leaching, compared to custom milling, is a less capital intensive process by which precious metals are recovered from mineralized material. Due to the relatively lower costs, the process is usually reserved for the less valuable dumps or tailings material.

Initially in a heap leach operation, dump or tailings material is heaped on an impervious pad and a sodium cyanide solution is distributed over the rock. As the cyanide percolates through the mineralized material, the solution dissolves most of the valuable metal present in the rock. At the bottom of the heap, the solution containing the gold and silver is pumped through a zinc precipitator unit to remove the gold and silver values. The barren solution is discharged to a storage pond where chemicals and water are added before the solution is pumped back on to the heap. The zinc precipitate is smelted and a low grade gold or silver bar is produced. The entire process from piling of rock on the pads to obtaining the valuable concentrate takes approximately six to eight weeks.