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James Doyle Sell Mining Collection

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January 30, 1995

Mr. Peter G. Vikre
Reno Office

Music Mountain Mine
Submittal
Mohave County, AZ

I return the Music Mountain Mine submitted to you.

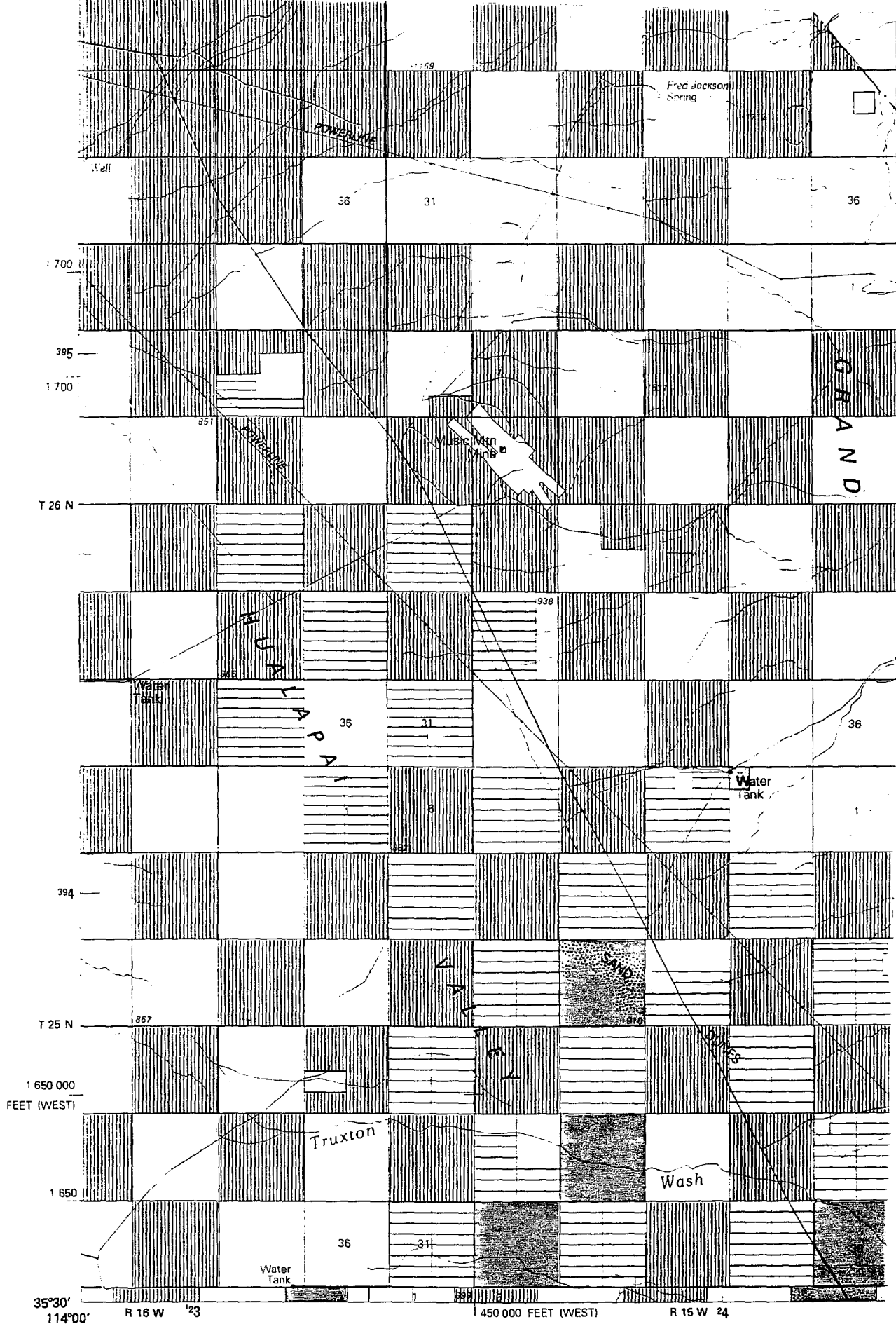
A full review of the available drilling data is in order. However, Asarco had optioned the Portland-Mizpah-Nevada-Arizona properties in the early 1930's and dewatered the workings. Sampling and inspection indicated that the ore lenses pinched both laterally and at depth and further work was not indicated at that time. Some reserves were available above the 125 level at that time and this may still be available and part of their new indicated resource.

There is little doubt that blind ore shoots might be found along strike; however, the previous work drifted along strike and failed to encounter much additional material sixty years ago.

Perhaps though, the recent drilling/assays may show a trend and should be reviewed.

JDS:mek
Att.


James D. Sell



(DAVIS DAM)

Edited and published by the Bureau of Land Management

Base map prepared by the U.S. Geological Survey

Compiled from USGS 1:24 000-scale topographic maps

Dated 1967-68. Planimetry revised from aerial photographs



January 24, 1995

TO: J.D. Sell
Tucson Office

Music Mountain Mine
Mohave County, Arizona

Are you familiar with this gold mine? Any interest based on information in the files or your own observations?

Yours truly,

A handwritten signature in black ink, appearing to read "Peter Vikre".

Peter G. Vikre

HORN SILVER MINES, INC.

SUITE 701 CLIFT BUILDING
10 WEST BROADWAY
SALT LAKE CITY, UTAH 84101

FAX
801-359-5235

TELEPHONE
801-322-5193

DR. PETER G. VIKRE
Manager, Western United States Division
Exploration Department
ASARCO Incorporated
510 East Plumb Lane
Reno, Nevada 89502

January 20, 1995

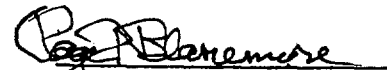
Dear Dr. Vikre:

Enclosed are two reports on the Horn Silver and Music Mountain Mines.

The latter property is a promising looking gold mine recently leased jointly by Horn Silver and myself and, of course, would become part of the property offered to your Company.

Also enclosed is a recent emission by Centurion Mines Company relative to their exploration in the Beaver Lake Mountains, Beaver County, Utah. Contrary to the statement therein, Horn Silver owns the core of this presumed porphyry copper deposit which is under lease to Centurion.

Sincerely,


Page P. Blakemore



Great Basin Exploration Division

January 24, 1995

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Mohave County, Arizona

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Peter G. Vikre

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Page P. Blakemore

PRELIMINARY REPORT

MUSIC MOUNTAIN MINE
MOHAVE COUNTY, ARIZONA

by Page P. Blakemore Sr.

PRELIMINARY REPORT
MUSIC MOUNTAIN MINE
MOHAVE COUNTY ARIZONA

ABSTRACT

The Music Mountain Mining District, discovered about 1879. was noted for its production of high grade gold ore from narrow fissures in preCambrian gneiss, schistose gneiss, granite, post preCambrian granite and diabase dikes.

Prior examination and sampling by third party geologists has resulted in reserve studies indicating about one million tons of ore available within 200 feet of the surface averaging a little less than one half ounce of gold per ton and a little over two ounces of silver. This reserve is calculated over about one third of the strike length of seven parallel fissures with no sampling having been conducted of intervening wall rock.

The intense shearing seen throughout the claim area, together with the exceptionally high grade of the fissure ore could result in the development of a very large body of bulk mineable, heap leachable ore.

LOCATION AND ACCESS

The Mineral Mountain claim group is located in sections 8,17 and 18, Township 26 North, Range 15 West, Mohave County, Arizona, approximately thirty miles by road east of Kingman, county seat of Mohave County.

Access is gained by traveling 17 miles easterly on U.S route 66 to Antares, a small station on the Santa Fe Pacific Railroad, thence northwards on the graveled Pierce Ferry road, thence one mile easterly on an unimproved desert road to the claims.

THE PROPERTY

The Music Mountain group of claims consists 17 patented and 3 unpatented contiguous claims.

SITUATION AND SURROUNDINGS

The claims lie on the east side of the Hualapai Valley in a group of low foothills constituting the western edge of the Music Mountains and the eastern margin of the Basin and Range Province. Sediments of the Colorado Plateau series cap the range.

The foothills are eroded remnants of the lower slopes of the Grand Wash Cliffs, dissected from the footwall escarpment of the Grand Wash Fault.

The slopes are relatively rugged and steep with elevations from 3200 to 3700 feet above sea level. Erosion has produced gullies, washes and valleys supplying detritus to deltas and bajadas on the main valley floor.

Little soil is present on the hillsides due to rapid weathering and transportation by flash floods.

The climate throughout Mohave county is arid with the exception of the Colorado valley.

There are no permanent streams in the vicinity of the subject claims. Water was encountered in the Mary Ellen shaft at about 200 feet below the collar. Due to primitive pumping arrangements in use no development has been attempted below this elevation.

Vegetation is sparse, consisting of sagebrush, greasewood, cactus and grass.

STRUCTURE

Rocks underlying the claim group are cut by at least seven well marked gold bearing fissures generally parallel to one another striking northwest and dipping northeast about 80 degrees. The veins appear to be part of an extensive shear zone. The vein system outcrops for most of its length, about 6000 feet. Unprospected shear zones could contain blind orebodies, particularly beneath what appears to be a diabase sill? outcropping above the fissure outcrops which may have served as an obstacle to ascending solutions and could have accounted for the extraordinary grade of the early ore mined.

The shear zone in which the veins occur does not appear to be dislocated by any major faults. A major normal fault is suspected by the writer at the southeast end of the claims, and it is possible that a similar parallel fault may exist on the northwest end forming the prominent outlier to the main range. If this can be confirmed and the displacement is not excessive the ore-bearing shear zones could continue into the areas northwest and southeast of the claim blocks and offer an unexplored area. Further if mapping indicates that the prominent diabase sill (?) which dips 25 degrees easterly caps the productive shear zone, it is possible that the width of the zone could be enlarged to the east.

More than 30,000 feet of fissures are indicated on the claim block of which about 12,000 feet have been partially developed or explored. The mineralization is believed to be deep seated. It has been developed in the area through a vertical range of four hundred feet. Mines in the Cerbat Range have extracted sulfide ore to depths of more than 1000 feet occurring in a nearly identical preCambrian granite-gneiss complex.

LITHOLOGY

The apparently older rock exposed in the vicinity of the claims appears to be early Proterozoic and composed of gneiss, migmatite and feldspar gneiss intruded locally with dikes and masses of leucogranite, diabase and narrow quartz-feldspar dikes. The gneiss contains schist inclusions and demonstrates distinct

schistosity striking northeast and cut by distinct sheeting trending northwest with a nearly vertical dip, corresponding to the location of the ore-bearing fissures and some of the diabase dikes.

Numerous dikes and masses of later intrusive rocks include granite, some of which resembles quartz monzonite, diabase, andesite, dacite and pegmatites. The relationships of various intrusives is very difficult to unravel and can only be attempted after small scale surface mapping. Identification of the rock types if required will necessitate preparation of thin sections of the fresher samples.

ALTERATION

The preCambrian gneiss is for the most part little altered except in the vicinity of the fissures. An alteration envelope surrounds the shear zones in both granite and diabase. Near surface diabase is altered to a tan clay but is frequently fresh and hard underground. Since both the diabase and quartz veins originally contained considerable pyrite it is suspected that the complete destruction of mafic minerals is due to acid solutions produced by near surface oxidation of sulfides. Gold in commercial amounts is present where the alteration is kaolinitic. The alteration haloes may add considerable width to the fissure zones, since past operators had no interest in ore containing less than an ounce of gold.

HISTORY

Comparatively little is known or recorded of the history of the district. It is best described in U.S.G.S Bulletin 397 written in 1909 by F. C. Schrader. All subsequent Arizona reports simply reiterate Schrader's data. A copy of the above publication is attached as Exhibit "A".

The district was discovered in 1879 during a difficult period for miners and prospectors many of whom were killed or forcibly ejected by the then fierce and determined native Americans.

Early ore produced was ground in arrastras and presumably amalgamated. In spite of the quite high grade the recovery was undoubtedly poor because of the fineness of the gold particles.

Other more modern mills were built but their treatment method are unknown to the writer since only the sites are present today. Tailings samples have been taken for analysis, the results of which are not available.

The Golden Serpent fissure produced shipments from the surface that contained from 15-20 ounces of gold per ton. A recent surface sample contained 15 ounces. (See Schrader pp. 143). Strangely there seems to have been little work done since, in this vicinity.

Scores of elongate pits and shallow shafts on the claims demonstrate early production of high grade ore. These workings are connected by elaborate burro trails constructed on stone embankments required because of the steep slopes. It is believed that local high grade lenses were discovered on the outcrop and the ore extracted to a depth of 10 to 20 feet. These excavations follow the strike of the outcrop of the various fissures and

average four or five feet in width. The discarded rock from these workings appears to be entirely derived from fissure material and is probably ore at present metal prices.

ORE RESERVES

No reserve estimates have been attempted by the writer. A table is attached including estimates by Canadian engineers who examined the claims in 1985. Hasty calculations from their data seems to indicate that the tonnages quoted are probably over optimistic considering that they sampled only narrow widths of fissure material on the surface and underground. A total of 467 samples were taken. An analysis of the sample results follows of those available to the writer:

NUMBER OF SAMPLES	RANGE OZ. GOLD
1	14.875
18	.50-15
15	.49-1.0
15	.20-.49
44	.10-.19
88	.02-.09*

*Average +.05

The silver content is widely variable in the above samples ranging from a high of 39 ounces per ton in .817 gold ore to about 1 ounce in average .10 gold ore. The overall ratio is apparently widely variable, at least in the oxidized ore.

It is suspected, by the writer, that the gold present in the ore is not electrum as the analysis would indicate but that the gold and the silver minerals occur separately, the latter liberated from oxidized lead minerals.

It is obvious that substantial reserves are present within, above and below the old workings as well as those occurring in veins developed only on the surface but unexplored at depth. The sulfide ores below the water table, although, are indicated to be of commercial grade by Schrader (\$18 at \$20 gold price) may not be amenable to simple cyanidation, and may not contain the higher grade ore shoots present in the oxidized portion of the fissure zones.

THE FISSURES

The ore bearing fissures are essentially sheeted shear zones. crushed and compressed, many of which were occupied by diabase dikes prior to mineralization. Diabase in some cases forms either or both walls and fragments are included in the zone itself which generally has a core of white to brown quartz, some of which is banded and crustiform. Much of the iron stained quartz exhibits vugs and cavities filled or stained with limonite and goethite and occasionally filled with oxidized lead minerals. Sulfide minerals, believed to be largely pyrite have, during oxidation stained the shear zones and the enclosing granite or gneiss. The walls exhibit smooth surfaces and the rocks are competent permitting open stoping. Seven fissures occur on the claims most of which have

had little study or exploration. (See attached sketch)

EXPLORATION

The property should be considered from two standpoints: 1) a high grade underground operation rendered simpler due to extensive shafts, drifts and crosscuts now accessible. Exploration and development could support a 250-500 ton per day operation treating ore grades of .15-.30 ounces per ton. 2) A bulk mineable, heap leach operation which could treat 50-100 thousand tons per day with .04 ounce heads. The topography is well suited to open pit operations. The average gold content of the granite gneiss penetrated by the orebearing fissures is not known but if it contains .01 ounces or better the zone of fissures could be bulk mined. The average grade of most of the Nevada and California producers achieving substantial profits is only .023.

Since most of the structures are nearly vertical, exploration holes should be drilled at approximately 45 degrees. The contained gold particles are quite fine which may make reverse circulation drilling results subject to speculation, but coring through the shattered fissures may lead to circulation and core loss. Previous operators report leaching of the gold contents of the fissures in the upper ten feet which may necessitate drilling the granite gneiss between the fissures with track drills.

METALLURGY

Recent cyanide leach tests by others have reportedly indicated gold recovery in excess of 80%. It is not known whether the tests were performed on mine run or crushed ore. There are no visible minerals in the ore examined by the writer which might be cyanicides. The silver content and relatively high grade of the ore may require precipitation with zinc dust rather than carbon.

SUMMARY AND CONCLUSIONS

The Music Mountain Claim group represents an attractive prospect for either a highgrade combination open pit-underground operation or a major bulk minable project with the ore to be heap leached.

Favorable factors include: 1) Most of the claims are patented 2) Presence of multiple fissures of high grade ore 3) Topography permitting a low stripping ratio 4) Absence of habitation or improvements for long distances 5) Improbability of recovery problems 6) Ease of access 7) Excellent climate 8) Local availability of labor 8) Proximity to railroad and a major highway 9) Reasonable lease terms.

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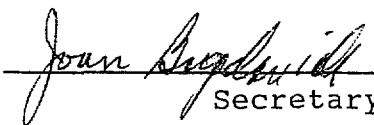
DR. PETER G. VIKRE
Manager, Western United States Division
Exploration Department
ASARCO Incorporated
510 East Plumb Lane
Reno, Nevada 89502

January 25, 1995

Sir:

The enclosed, which were omitted in the report sent to your office 1/20/95, are to be included with that report on the Music Mountain property.

Thank You,

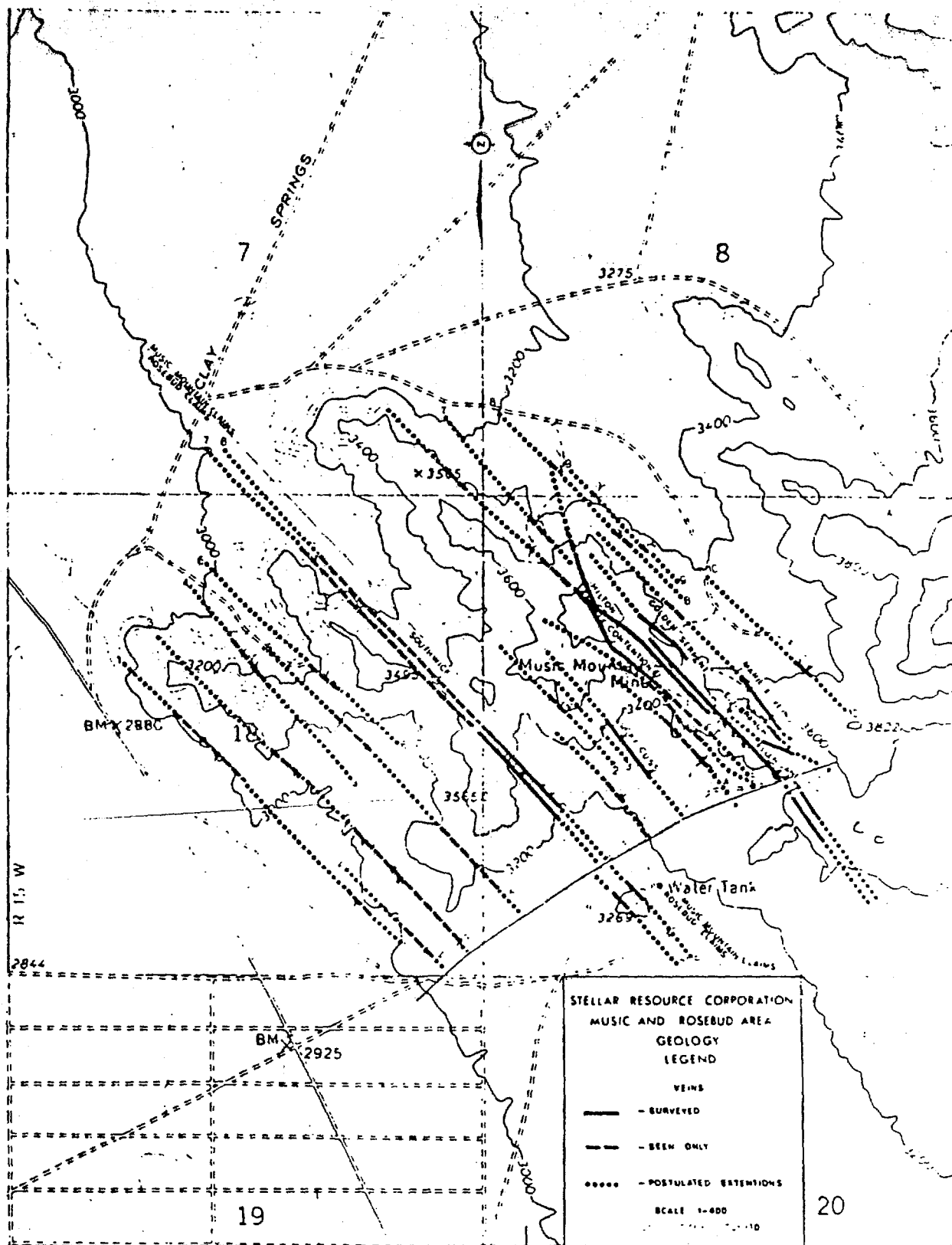

Secretary

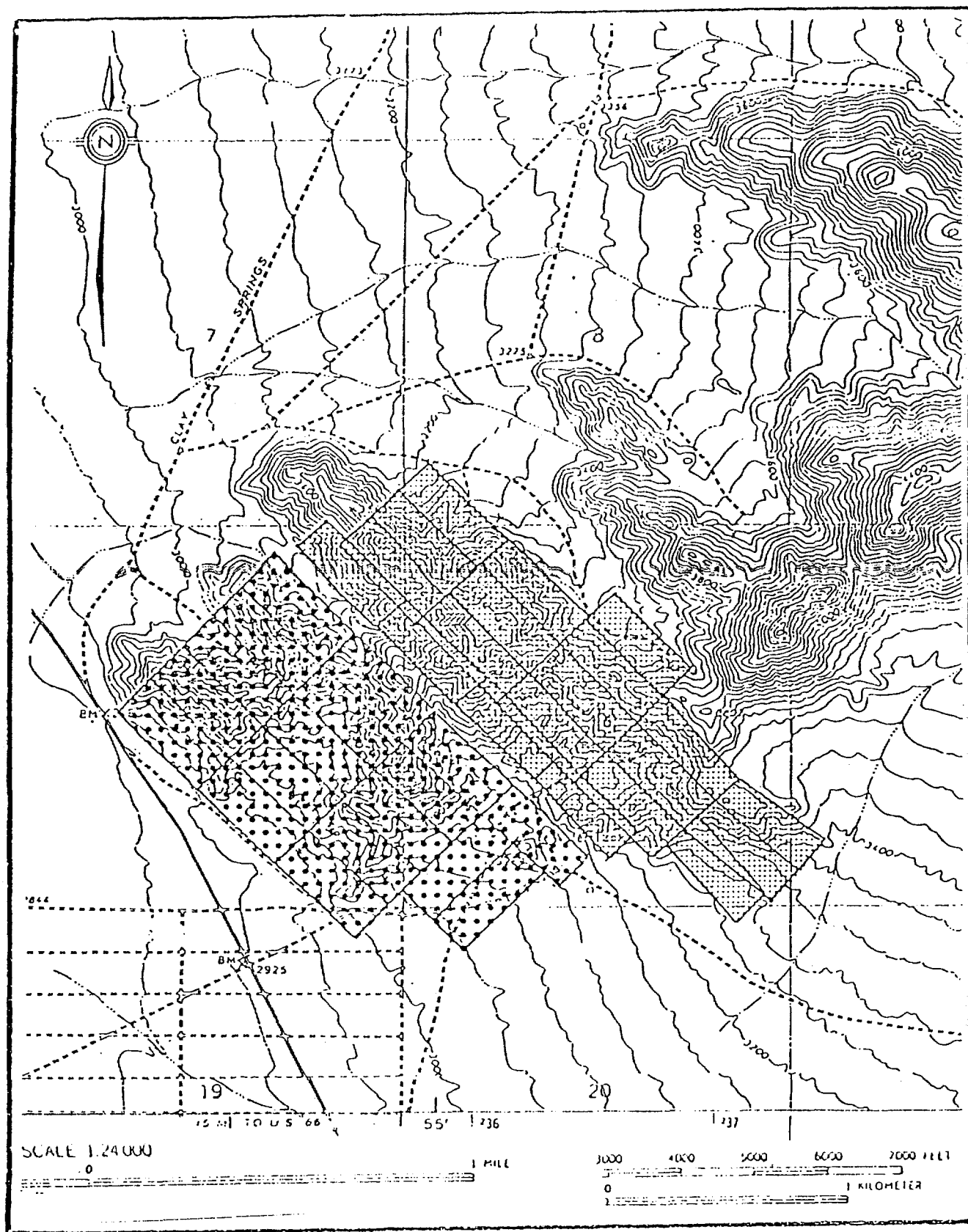
4 enclosures

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





Rosehud



Music Mountain

