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04/03/87

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: GOLDEN ASTER

ALTERNATE NAMES:

LEHMAN PROPERTY

YAVAPAI COUNTY MILS NUMBER: 891

LOCATION: TOWNSHIP 9 N RANGE 2 W SECTION 27 QUARTER NE LATITUDE: N 34DEG 05MIN 41SEC LONGITUDE: W 112DEG 27MIN 17SEC TOPO MAP NAME: COPPEROPOLIS - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:

GOLD

**BIBLIOGRAPHY:** 

USGS COPPEROPOLIS QUAD ADMMR GOLDEN ASTER MINE FILE WILSON, E.D. ETAL. AZ LODE GOLD MINES AZBM BULL 137 1967 P 62

#### GOLDEN ASTER MINES

#### REFERENCES

ABM Bul. 137 p. 62

USGSBul. 782, p. 187 (Champie & Lehman Gold Mine)

Cyminide Process - Its Practical Application and Economical Results by Dr. A. Scheidel, E. M. California State Mining Bureau, Bul. No. 5, 1894

P. 87 - (e) Arizona.--No information can be obtained in reference to the process in this Territory, where a company has been organized for its introduction, with the exception of that obtained from the Champies Mine, Yavapai County, where the results were unsatisfactory apparently on account of faulty technical manipulation.



# ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES <u>VERBAL INFORMATION SUMMARY</u>

- 1. Mine file: GOLDEN ASTER
- 2. Mine name if different from above:
- 3. County: Yavapai
- Information from: Mona Johnson (c) Company:

Address: 8211 N. 1st Ave.

Phoenix, AZ 85021

Phone: 943-1952

5. Summary of information received, comments, etc.:

Ms. Johnson donated a copy of a report done for Bugatti Development Inc. while Don Jenkins of Sun River Gold, leasee, had Bugatti interested in the property. The report recommended a trenching and geophysical program but lack of funds following the fall 87 stock crash kept them from following through on the recommendations.

VIS9.MJ2

## ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

#### VERBAL INFORMATION SUMMARY

1. Information from: Mona Johnson

2. Address: 8211 N. 1st Ave., Phoenix, AZ 85021

3. Phone: 943-1952

4. Mine or property name: New Golden Aster Project

5. ADMMR Mine file: Golden Aster

6. County: Yavapai

7. MILS number: 891

8. Operational Status:

9. Summary of information received, comments, etc.:

Mona Johnson provided a copy of assay results and a sample map on her property prepared by Gold River Exploration. Also included is a map and results of an electromagnetic traverse project.

Date: July 18,1990

Ken A. Phillips

#### GOLDEN ASTER MINES

#### YAVAPAI

Ben Mathis said he has leased the Golden Aster, K & K claims and Whipsaw Mine. FTJ WR 12/12/73

NJN WR 1/3/86: Mona Johnson visited and reported that she and her busband John (c) 8211 N. 1st Ave., Phx., Az. 85021, phone H 943-1952 and W 272-3331 are now sole owners of the Golden Aster (f) and would like to sell it and will consider any resonable cash offer. She brought in additonal reports and sample data for the file.

NYN WR 8/8/86: Mona Johnson (c) brought in a report for the Golden Aster Mines (file) Yavapai County and some minerals from the property. She reported that they have the property for sale.

GOLDEN ASTER

## Searchlight Resources Inc.

218-744 West Hastings Street, Vancouver, British Columbia, Canada, V6C 1A5 Phone: (604) 684-2361

#### PRELIMINARY REPORT

on the

### NEW GOLDEN ASTER PROPERTY

Castle Creek Mining District

Yavapai County

Arizona, U.S.A.

Latitude: 34°06'45"N

Longitude: 112°27'30"W

Section 26 & 27, T9N, R2W, G & S.R.M.

for

BUGATTI DEVELOPMENTS INC. 1300-409 Granville Street Vancouver, British Columbia Canada V6C 1T2

by

Lief Christenson, M.Sc. and Hamish Macfarlane, M.Sc. 8 February, 1988

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#### SUMMARY

The Bugatti Developments Inc., New Golden Aster Property, is located in Yavapai County, Arizona, approximately 50 miles NNE of Phoenix. Road access is via U.S. Highway 89, leading northwest from Phoenix to Kirkland Junction, thence east and south for approximately 30 miles over dirt roads. The property consists of 21 unpatented load mining claims and three mill sites together, covering approximately 464 acres, located within the Castle Creek Mining District.

The claims cover a portion of the contact between a Precambrian schist and granitic intrusive. Along this contact the Golden Aster mine is located which consists of an area of small workings developed early in this century. The history of the mine is poorly recorded, and there is no evidence of any development on the property since the early 1930's.

In the area of the mine, parallel branching quartz veins, stringers, and altered wall rock were sampled and assayed for gold and silver. Very encouraging gold assays were returned: a 19.5 foot continuous chip over one vein system and the associated wall rock returned 0.089 oz/t gold (weighted average of three samples). Several hundred feet to the north along this same vein a 30.75 foot continuous chip returned 0.028 oz/t gold (weighted average of five samples). Other vein systems are inferred to occur in the immediate vicinity, and, if tonnage and grade can be proven, the area could be developed by open-pit mining.

To assess the potential of this property, a \$45,000. (U.S.) work programme is proposed. This programme will entail the upgrading of the access roads, trenching of the mineralized structures, reconnaissance style geological mapping and sampling, and an induced polarization - resistivity survey.

#### INTRODUCTION

At the request of Raymond Rich, President, of Bugatti Developments Inc., a property examination of the New Golden Aster property was undertaken on January 16, 1988. The work was conducted by the authors, accompanied by Mr. Rich and Mr. Don Jenkins, the property lessee.

This report summarizes the results of the property investigation, compiles the history of the Golden Aster property, and recommends further work programmes.

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#### LOCATION AND ACCESS

The New Golden Aster property is situated in Yavapai County, Arizona, approximately 50 miles NNE of Phoenix (Figure 1). Access to the property is via U.S. Highway 89, leading northwest from Phoenix to Kirkland Junction, a road distance of approximately 88 miles. From Kirkland Junction, the Wagoner-Crown King road leads easterly for 26 miles to an unimproved gravel road which heads south for approximately 4.5 miles to the site of the Golden Aster Mine. The claims are located in Sections 26 and 27, Township 9 North, Range 2 West, G and S.R.M., on the U.S.G.S. Copperopolis quadrangle map (Figure 2). The latitude is approximately 34°06'45"N, and longitude is approximately 112°27'30"W.

#### PHYSIOGRAPHY AND VEGETATION

This portion of Yavapai County is dominated by a series of north and northwest-trending fault-block mountain ranges and valleys. The claims are situated on the southwest flank of the Bradshaw Mountains, the largest range in the region. The topography of the claims is moderate to steep; elevations range from 4280 feet in the southwestern claims area, to about 3580 feet in the northeastern portion. Lehman Mountain trends northerly through the central claims area; Copperopolis Creek lies just off the claims to the east; Golden Aster Creek transects the northeastern corner of the claims. Both these creeks are normally dry.

As described by Wilson, et al (1967), the lower portions of Yavapai County receive from 10 to 13 inches of rain per year. Higher elevations receive more rain and considerable winter snow; Crown King, at an elevation of 6000 feet, receives an average of 32.42 inches of precipitation per year.

The area of the claims is characterized by desert vegetation, mostly scrub brushes and minor cactii. The vegetation is not dense, and most areas are easily traversed by foot.

Water is available from a well approximately 2000 feet northwest of the Golden Aster Mine, within the three New Golden Aster mill sites located on Spring Creek.



PROPERTY

The New Golden Aster Property consists of twenty-one unpatented lode mining claims and three mill sites, covering approximately 464 acres (Figure 2). The claims are believed to be owned by Mona Johnson and husband John who reside at 8211 N. 1st Avenue, Phoenix, Arizona, 85021. Don Jenkins of Gold River Exploration Co., Box 4106, Prescott, Arizona 86302, has leased the property. The claims are recorded in the official records of Yavapai County, Arizona, as follows (data provided by Don Jenkins):

Claim Nama	Date of	County	Dess(a)			
	Location	BOOK	Page(s)	BLM Serial #		
New Golden Aster #1	Jan.5/80	1273	412-413	94507		
New Golden Aster #2	Jan 5/80	1273	414-415	94508		
New Golden Aster #3	Jan.5/80	1273	516-417	94509		
New Golden Aster #4	Jan 5/80	1348	418-419	94510		
New Golden Aster #5	Dec. 16/80	1348	146-147	119345		
New Golden Aster #6	Dec. 16/80	1348	148-149	119346		
New Golden Aster #7	Dec. 16/80	1348	150-151	119347		
New Golden Aster #8	Dec. 16/80	1348	152-153	119348		
New Golden Aster #9	Dec.16/80	1348	154-155	119349		
New Golden Aster #10	Dec.16/80	1348	156-157	119350		
New Golden Aster #11	Dec.16/80	1348	158-159	119351		
New Golden Aster #12	Dec.16/80	1348	160-161	119352		
New Golden Aster #13	Mar.17/81	1369	596-597	126959		
New Golden Aster #14	Mar.17/81	1369	598-599	126960		
New Golden Aster #15	Mar.29/81	1372	87-88	126961		
New Golden Aster #16	Mar.11/81	1367	137-138	125989		
New Golden Aster #17	Mar.11/81	1367	139-140	125990		
New Golden Aster #18	Mar.11/81	1367	141-142	125991		
New Golden Aster #19	Mar.11/81	1367	143-144	125992		
New Golden Aster #20	Mar.22/81	1369	600-601	126962		
New Golden Aster #21	Mar.29/81	1372	89-90	126963		
New Golden Aster Mill Sites						
No 1	Mar 22 /81	1360	602 603	126056		
No 2	Mar 22/81	1360	604-605	120950		
No 3	Mar 22/81	1360	606-607			
	11111.22/01	1507	000-007			
Corrected Mill Site Locations						
No.2	Mar.22/81	1372	91-92	126957		
No.3	Mar.22.81	1372	93-94	126958		

The claim posts were not visited during this examination.

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#### HISTORY

The earliest history of the Castle Creek mining district is poorly recorded. Bulletin 137 of the Arizona Bureau of Geology and Mineral Technology states that an early owner of the claims was Gus Lehman, and that the claims were subsequently acquired by E.C. Champie. A 5.stamp mill was located on Spring Creek, and a small, unrecorded production was made (Wilson et al, 1967).

A report obtained from the Arizona Department of Mineral Resources in Phoenix, dated June 1, 1926, and written by Jonathan Gordon, describes the testing of a 50 ton lot of ore from the Golden Aster mine. Mr. Gordon stated the ore assayed 87.24% silica, 0.3% aluminia, 6.8% iron, 1.8 oz/ton gold and 0.55 oz/ton silver. Gold recover was 92%, based on cyanidation under these conditions:

Pulp: 100 mesh Solution: 5.3 lb NaCN Cyanide Consumption: 1lb NaCN per ton Lime Consumption: 7.7 lb Calcium Oxide per ton Leaching time: 72 hours

Gorton (1926) described the presence of two veins on the property, the Rattlesnake and the Kerrigan, both of which contained ore grade gold values. The 50 ton ore sample was evidently obtained from the Rattlesnake vein.

In 1984 the claims were owned by Nicholas H. Carouso, who that year quitclaimed the property to the present owners.

Made available to us were sample locality maps and assay results from property investigations by Santa Fe Mining, and Gold River Exploration Co. A 1984 report by Carouso (then present owner) describes the property and the results of a VLF-EM survey. Carouso stated that the four-mile access road to the mine was completed in April, 1984.

#### REGIONAL GEOLOGY

This portion of Yavapai County is composed primarily of metamorphic and igneous rock (Figure 3). The precambrian Yavapai Schist recognized as the oldest unity in the region, consists pf metamorphosed sedimentary and igneous rocks which have been deformed into generally Northeastward-trending belts. The schist is cut by various intrusives, and complexly faulted. The claims are located close to the boundary of the schist and a large body of granite (Figure 3). A literature search at the Arizona State University in Tempe did not uncover any detailed mapping in this area, and it appears that formal names, ages, or sub-divisions have not been assigned to the rocks in the area.



#### PROPERTY GEOLOGY AND MINERALIZATION

The limited amount of time spent on the property during this examination prevented a detailed analysis of the property geology. The following description is based on our observations plus what we could confirm of previous property descriptions.

The area of the Golden Aster mine appears to be underlain by the argillaceous Yavapai Schists. The schist contains granite inclusions and is intruded by numerous pegmatite dykes and lesser diorite and biotite-lamprophyre dykes.

To the north and west of the Golden Aster mine a large body of flow-banded rhyolite caps the ridge through which the road passes. The relationship of the rhyolite to the surrounding rocks was not established Carouso (1984) conjectured the rhyolite was the mineralizing source for the property.

The New Golden Aster deposits have been described as closely spaced, parallel, northwesterly-striking vein systems with a 25 to 30 degree westerly dip (Carouso, 1984). Three such veins have been previously described in the vicinity of the Golden Aster mine - the Rattlesnake, Kerrigan, and the vein termed here "Vein No. 3" (Figure 4). During this examination the Rattlesnake was the only vein sampled in detail. One sample was taken from the poorly exposed Kerrigan vein. Time did not allow an examination of Vein No. 3.

The veins consist of glassy coarse-grained quartz with hematite, minor tourmaline, and numerous inclusions of wall rock. Free gold has been reported. The veins are primarily hosted by schist and they parallel schistosity; pegmatite dykes are commonly associated with the deposits.

Four adits have been driven into the Rattlesnake vein. Inconsistent numbering of the adits by the authors of previous reports has led to a great deal of confusion. The adits have now been numbered as per Figure 4.

The Rattlesnake vein was sampled in the area of the stope-to-surface and along exposures within adits 1 and 3. At the stope-to-surface a 38 inch, glassy quartz vein is found, but in the adits the vein was traced mainly by the presence of numerous shears with iron staining and quartz stringers. Sample widths and results are shown in figures 4 and 5; sample descriptions are given in Appendix I. A summary description of the Rattlesnake vein gold assays is as follows:

<u>Adit 1:</u> Five samples collected over a combined total width of 369 inches (30.75 feet) gave a weighted average of 0.028 oz/t. A 100 inch sample in the centre of this zone assayed 0.049 oz/t. The tunnel has collapsed to the west and the zone is open-ended in that direction



Adit 3: One sample over 70 inches (5.8 feet) assayed 0.324 oz/t. A 4 inch vein further down the tunnel assayed 0.423 oz/t.

<u>Stope-to-Surface</u> Three samples over a combined total width of 234 inches (19.5 feet) gave a weighted average of 0.089 oz/t.

The Kerrigan vein was covered by rubble and not adequately exposed anywhere along its length; one sample of a knob of glassy quartz 28" wide assayed 0.011 oz/t. Gold.

A 72 inch chip across an exposure of rhyolite northwest of the Rattlesnake vein assayed 0.005 Gold, indicating minor, but significant, gold enrichment.

The overall gold:silver ratio of these samples is 1:2. Generally, silver values increase as gold values increase



#### CONCLUSIONS AND RECOMMENDATIONS

This brief property examination has indicated that a significant potential for economic grade gold mineralization exist on the new Golden Aster property. A 19.5 foot continuous chip sample over the Rattlesnake vein returned 0.089 oz/t Gold (weighted average of three samples). A 30.75 foot continuous chip sample several hundred feet to the north returned 0.028 oz/t Gold (weighted average of five samples).

The length and width of this vein has not been established. The presence of other veins in close proximity to the Rattlesnake is strongly inferred, and a sample collected from a large body of rhyolite NW of the Rattlesnake showed gold enrichment. It is hypothesized that the area of quartz veining may be amenable to open pit mining, and that other targets may exist in the are of the rhyolite outcrop. Thus, further work is strongly recommended.

To initiate an assessment of the property's mineral potential, a \$45,000. (U.S.) work programme is recommended to accomplish these broad objectives; upgrading the existing access road; trenching across favourable structures, and reconnaissance mapping and sampling. A more detailed breakdown of the proposed programme is as follows:

1. The Wagoner-Crown King road is, for the most part, a suitable access route and needs only minor grading. The 4.5 mile Golden Aster mine road needs to be widened in some areas and several culverts need to be placed.

2. Three trenches are proposed that will expose the quartz veins and rhyolite for bulk sampling. The first will be constructed along the ridge in the area of the Golden Aster mine; the other two will be constructed to the North and South of the ridge for the purpose of extending the known strike length of the vein systems. The northern trench will start in the area of the rhyolite outcrop and run diagonally across the rhyolite-schist-granite(?) contract. This will expose the contact for sampling and help determine the relationship of these units.

3. The adits and workings of the Golden Aster mine should be mapped in detail and tied in to one another.

4. A combined induced polarization-resistivity dipole-dipole survey should be conducted to help define and extend the quartz veining. Five lines running perpendicular to the vein(s) are envisioned.

Reconnaissance - style mapping and sampling of the claims will attempt to develop other potential targets. The are to the north, northeast, and south of the property is unclaimed and should be examined. To assist in the mapping, a detailed topographic map should be constructed from aerial photography.

Depending on the results of this programme, a subsequent programme of further trenching, mapping, and diamond drilling would be considered.

#### PROPOSED BUDGET

The following is a budget designed to carry out the programme described in this report. All costs are U.S. dollars.

Trenching and Road Building	510,000.00
Geophysical Survey	8,000.00
Salaries	10,000.00
Room and Board	2,000.00
Transportation	2,000.00
Aerial Photography - Topographic Map	4,500.00
Assays	1,500.00
Supplies and Communications	1,000.00
Supervision and Report	2,500.00
Contingencies	
Total	\$45,000.00

Lief Christensen

Hamish Macfarlane

(604) 684-2361 Searchlight Resources Inc. (604) 684-2361 218-744 West Hastings Street, Vancouver, B.C., Canada, V6C 1A5

#### CERTIFICATE OF QUALIFICATIONS

I, Leif Christenson, do hereby certify that:

1. I am a consulting geologist working for Searchlight Resources Inc. with offices at 218 - 744 West Hastings Street, Vancouver, British Columbia.

2. I received a Bachelor of Science in Geology in 1982 from Western Washington University.

3. Since graduating I have been involved in mineral exploration programmes in Alaska, British Columbia, Washington, Idaho, Nevada, California and Arizona.

4. I received the degree of Master of Science in 1986 from Western Washington University.

5. This report is based on field examinations made by myself and Hamish Macfarlane during the month of January 1988.

6. I have not received, nor do I expect to receive, any interest, directly, or indirectly, or contingent, in the securities or properties of Baggatti Developments.

Lichitan

Leif Christenson, M.Sc. February 1, 1988

## DRAFT

## CERTIFICATE OF QUALIFICATIONS

I, H.S. Macfarlane, do hereby certify that:

1. I am a consulting geologist resident in Vancouver, British Columbia.

2. I am a graduate in geology of the University of London, (B.Sc. Honours, 1976), and of the University of Leicester, (M.Sc., 1981).

3. I am a Member of the Institution of Mining and Metallurgy, London, a Registered Chartered Engineer of the Engineering Council, London, and a Fellow of the Geological Association of Canada.

4. I have practised my profession as a geologist in Africa and the Cordillera of North America continuously since 1976.

5. The information in the attached report is based on an examination of the New Golden Aster property carried out by myself and Leif Christenson in January 1988.

6. I have no interest, direct or indirect, in the property herein described, nor do I expect to receive any such interest.

H. S. Macfarlane, M.Sc., F.G February 1, 1988



DRAFT

#### **BIBLIOGRAPHY**

ANON: Geologic Map of Yavapai County, Arizona, 1958, Arizona Bureau of Mines, University of Arizona, Tucson, Arizona.

Carouso, Nicholas H., 1984: New Golden Aster Mine, Preliminary Report; private report.

Gordon, Jonathan, 1926: The Golden Aster Mines; private report.

Wilson, E.D., Cunningham, J.B. and Butler, G.M., 1967: Arizona Lode Gold Mines and Gold Mining, Arizona Bureau of Geology and Mineral Technology, Geological Survey Branch, Bull. 137, 254pp.

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### APPENDIX I

#### **ROCK SAMPLE DESCRIPTIONS**

GA01:5 ft chip across vein of vitreous, glossy, coarse-grained quartz with abundant Ironstains, minor tourmaline and bleached wall rock inclusions.

GA02-88: 3ft grab along strike of 4 inch wide vein of coarse-grained glassy Quartz with massive black hematite and minor tourmaline; heavily Iron-stained, minor Copper-stain.

GA03-88: 10 inch chip across shear. Fine-grained rotten, crumbly rock heavily Ironstained.

GA04-88: 4 ft. chip across rock similar to #3; less Iron-staining, more Manganese-stain.

GA05-88: 100 inch chip across rock similar to #4; contains 10 inch wide kaolonite-rich shear zone.

GA06-88: 101 inch chip similar to #5; rock very crumbly and clay-altered, heavily ironstained.

GA07-88: 110 inch chip similar to #6; tunnel ends in large kaolonite-rich shear zone.

GA08-88: 28 inch chip across vein of coarse-grained, glassy quartz with minor tourmaline; heavily iron-stained.

GA09-88: 128 inch vertical chip across hanging wall of Rattlesnake vein in open stope to surface. Sample of bleached schist with glassy quartz veins 2" -6" wide parallel to vein.

GA10-88: 68 inch vertical chip above #9; very minor quartz veining, minor sericite.

GA11-88: 38 inch chip across Rattlesnake vein in open stope. Glassy, coarse-grained quartz with vuggy, iron-stained pockets; abundant massive hematite, minor tourmaline, heavily iron-stained.G

GA12-88: 6 foot random grab across fine-grained, buff-white rhyolite. Contains chertlike lenses and pods. Rhyolite flow-banded and contorted.



## **GOLD RIVER EXPLORATION CO.**

,

New Golden Aster Project: Dec 17, 1987

#### \*\* INITIAL SAMPLE DATA \*\*

Sample #	opt Au	Remarks
NGA-1	.08	chip across portal face,47'
NGA-2	•22	27' chip channel, part of zone
NGA-3	1.71	vein in upper adit
NGA-4	.40	across exposed zone, adit x-cut
NGA-5	.11	portion of zone, 10', glory hole
NGA-6	.10	glory hole, 12 portion of zone
NGA-7	2.38	select hi-grade from dump
NGA-8	7.24	6" hi-grade portion of vein
NGA -9	.03	part of shear zone exposed at adit entrance and above, 25feet
NGA-10	.15	shear zone exposed above south adit, 15 feet
NGA-11	•25	hanging wall portion of shear zone exposed in open cut, 10
NGA-12	.07	footwall portion of shear zone exposed at open cut and decline app. 8 feet

ł



NEW GOLDEN ASTER MINE Sample Plan

for

Gold River Resources

(Sketch Map, 1" - 200')







1

EM results shows the "stockwork" zone to Parollel the main NE-SW Fault

> The broad gentle NW slope of the profiles shows the dip of stockwork and is confirmed by surface expassive

The "stockwork" on shear zone appears to weaken to the Northeast, but remains strong to the Southwest near the adjacent phyolite plugs

The results indicate the presence of mineralization over GML area of at least 500' by 40', with the zone identified for drilling.

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\* ESSENTIAL INFORMATION + ESSENTIAL SOMETIMES OR HIGHLY RECOMMENDED

•( )

COMMODITIES PRESENT C ORE MINERALS C COMMODITY SUBTYPES C GEN. ANALYTICAL DATA C COMPLETED. COMMENTS C	10 ( <u>C.II., KAG., KA</u> , <u>K</u>	<pre></pre>
- SIGNIFICANCE		
AJOR PRODUCTS M MINOR PRODUCTS M POTENTIAL PRODUCTS F	PRODUCER WINOR < [A, U, , , , , , , , , , , , , , , , , ,	
OCCURRENCES O	>CCUR\/	OCCURRENCES OCCUR
	*PRODUCER	TION NON-PRODUCER
PRODUCTION (circle	PRODUCTION SIZE MI MED LGE (circle one)	PRODUCTION UND NO (circle one)
- STATUS	EXPLORATION OR PRODUCER	DEVELOPMENT NON-PRODUCER
DISCOVERER	120 CHS LEHMAN	
PRESENT/LAST OWNER	110 NATURE OF DISCOVERY LO (1936) YEAR OF	FIRST PRODUCTION LAD (1929) YEAR OF LAST PRODUCTION LAS (1936)
PRESENT/LAST OPERATOR	A13 (GOLDEN ASTER MINING CO. (1936)	>
EXPL./DEV.COMMENTS	110 IN 1936 THE GOLDEN ASTER MINING C	O. WAS OWNED BY THE CHAMPLE BROTHERS, IN
1938, RECOR	DS SHOW OWNER AS MRS. E. CHAMPIE.	13 LLAINS PRESENT
	DESCRIPTION	
•	DESCRIPTION	OF DEFOSIT
DEPOSIT TYPE(S)		/
DEPTH TO TOP	M20<> *UNITS M21<>	MAXIMUM LENGTH M40 (1, 400 ) UNITS M41 (FT )
DEPTH TO BOTTOM	M30 ( 100 ) UNITS M31 ( ET )	MAXIMUM WIDTH M50< 100 > "UNITS M51<>
DEPOSIT SIZE	M15 (MAL) M15 (MEDIUM) M15 (LARGE) (circle one)	MAXIMUM THICKNESS M60 ( 6_) UNITS M61 (FT)
STRIKE	MTOS	> DIP MBO<>
DIRECTION OF PLUNGE	MIDO	PLUNGE M90 ()
DEP. DESC. COMMENTS	MINO THREE HARDLEL VEINS LIDSE ID	
	DESCRIPTION C	DF WORKINGS
Workings are: SURFACE	M120 UNDERGROUND M130 BOTH M140 (circle one)	OVERALL LENGTH M190
DEPTH BELOW SURFACE	M160 ( DO ) UNITS M161 ( FT )	OVERALL WIDTH M200
LENGTH OF WORKINGS	MITO I OTTO VINITS MITI (FI	OVERALL AREA M210 ( / UNITS M211 ( /
DESC. OF WORK. COM.	M270 (1.000 CEET OF CENTRE ELS AND WHITE	
		>
з <sup>с</sup>		
	GEO	LOGY
AGE OF HOST ROCK(S)	KICHEROTT, TERT, K. UNDATED, PROBABLY IT	750 MILLION YEARS OR OLDER; KNDATED, PROBABLY MID-TERTIALY
* AGE OF IGNEOUS POOK	SI MOCPER DT. TERT & AS INFE SI	W TE: RHYOLITE
IGNEOUS ROOK TYPE(S)	KZA GRANITE; RHYOLITE, ANDERITE TO RHY DUIT	E FLOWS
* AGE OF MINERALIZATION	N KS(P.A.L.E.O MIP. , W. UNDATED, PRO BABLY	MIDLENE
PERT. MINERALS (NOT OR	E KAC BUARTZ, LIMONITE TOUR MAL	ING
ORE CONTROL/LOCUS	KS FAULTING SHEARING	
MAJ. REG. TRENDS/STRUC	CT. NSC TOLIATION IN PRECAMBRIAN SCHIST TRENDS N	ZOE TO NSOE, TERTIARY VOLLANICS DIA NE, STRIKE NW
SIGNIFICANT LOCAL STRU	ICTINTO VEINS PARMILE LOW ANGLE (LESS THE	50 NELOPE NIPLEINER WHEN TOTAL
SIGNIFICANT ALTERATION	NTS MINOR FE-STAINING	SUBLEED BIT) FALLS WHICH THEND UW
PROCESS OF CONC./ENRIC	CH.NBOK OXIDATION AT NEAR-SURFACE	>
FORMATION AGE	NOC.P. R. O.T	1750 MILLION YEARS AND OLDER
FORMATION NAME	NODAL UNHAMED PRECAMBRIAN SCHIST	
SECOND FM AGE		
IGNEOUS UNIT AGE	NSO(P.R. C.T	
IGNEOUS UNIT NAME	NSDAS GRANITE	
SECOND IG. UNIT AGE	NSSKELLE, C M. I.D., K. UNDATED. FROBABLY	NID- TERTIARY
SECOND IG. UNIT NAME	NSSAC HEYOLITE DIKES, KUNAMED	
LOGY COMMENTS	NEST DEPOSIT IS BRAKTE VEIN LOCALIZED MON	6 LOW-ANGLE FAULT WHICH PROBABLY DUPLINES TERTIARY
	THE PARTY STOLL HEL INDERLY	1 100 E 74 E

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#### GENERAL COMMENTS

GENERAL COMMENTS GEN ( USGS BULL 7820.183 GIVES THE AGE OF THE VEINS AS PRE-CAN BRIAN. DIORITE DIKES STRIKE EAST- WEST AND DIP SOUTH

## **ASARCO**

#### Southwestern Ore Purchasing Department

A.J. Kroha Manager J.N. Lambe Assistant Manager

September 3, 1981

Mr. Nick Caruso Geo-Processing Inc.

Dear Nick:

Our Hayden Plant has assayed the sample from the Golden Aster Mine, Crown King area, near Prescott and reports the following results:

0z.	per Ton	Percent					
Au	Ag	Cu	SiO2	Fe	Ca0	l	A1203
		Belleville .	did de contra a parte		×		
0.48	0.04	0.03	86.0	3.0	0.2		1.6

If this grade can be sustained, the product appears acceptable for siliceous flux at Asarco's Hayden, Arizona, plant.

Yours very truly,

e de la construction de la construcción de la construcción de la construcción de la construcción de la construc A. J. Kroha

AJK:sp

ASARCO Incorporated P. O. Box 5747 Tucson, Az 85703 1150 North 7th Avenue (602) 792-3010

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### NEW GOLDEN ASTER MINE

### PRELIMINARY REPORT

### INTRODUCTION

THE NEW GOLDEN ASTER mine, consists of twenty-one (21) unpatented lode mining claims and three (3) mill sites, situated in the Castle Creek Mining District, Township 9 North, Range 2 West, Sections 26 & 27, G&SRM, Yavapai County, Arizona.

The mine is at an altitude of approximately 4000 feet on a ridge about 1 1/8 miles north of Copperopolis, and is accessible by road from the Wagoner and Crown King road. The road, approximately 4 miles in length, from the Wagoner road to the mine was completed in April 1982 at the expense of the owners.

In the early days, some one was treated in a 5-stamp mill on Spring Creek, a short distance west of the mine. The three New Golden Aster Mill Sites cover the old mill sites area.

The property has the potential of being worked as an open pit type operation, at least for several benches.

#### HISTORICAL INFORMATION

A report obtained from the Arizona Department of Mineral Resources, Phoenix, Arizona, written by Mr. Jonathan Gordon, dated June 1, 1926, described the testing of a 50 ton lot of ore, an analysis of this lot assayed 87.25% silica, 0.3% alumina, 6.8% iron, 1.85 oz/ton gold and 0.55 oz/ton silver, and which gave results as follows:

	oz/ton gold
Heads	1.85
Tails	Ø.14

Recovery 92%

TESTING CONDITIONS

Pulp: 100 mesh Solution: 5.3 lb NaCN Cyanide consumption: 1 lb, NaCN/ton Lime consumption: 7.7 lb CaO per ton Leaching time: 72 hours

By amalgamation and cyanidation a recovery of 93% was obtained. However, recent laboratory testing with the newly developed Ammonium Thiosulfate process, indicates that the ore from the New Golden Aster mine, can be processed with comparable recoveries and in a fraction of the time (less than 2 hours) that the cyanide process requires, and with the added benefit of a non-toxic reagent system.

The same report also states that the original Golden Aster (Lehman) claim group consisted of 15 unpatented lode claims, and that two prominent veins were evident, the Rattlesnake, which was actively worked, and the Kerrigan. The Rattlesnake vein was traceable for 1400 feet along the strike with a width of from 18 inches to 6 feet. The Kerrigan vein 600 feet west of the Rattlesnake was traceable along the strike for 1500 feet, with widths of from 18 inches to 4 feet. Mr. Gordon, also mentioned that numerous quartz outcrops were found on the claims, all of them showing values in gold.

This same report records 41 assorted samples, underground and dump, which give an unweighted average of 1.92 oz/ton gold, and even deleting two high grade samples, one a hand-picked 'sample assaying 7.60 oz/ton gold, and a 4" streak sample assaying 12.80 oz/ton gold, the unweighted average is 1.50 oz/ton gold.

In 1926, development consisted of 600 feet of drifts with 75 feet of approaches and 50 feet of winzes. Subsequent development work increased this to approximately 1000 feet of underground workings.

It should be mentioned that in the old report, it was stated that the No. 3 adit, which is caved at present, was started in the hanging wall to the west of the vein, but cuts the vein at 30 feet from the portal, showing an aggregate width of 6.5 feet with an average value of 1.894 oz/ton gold. This will be confirmed as soon as the portal of No. 3 adit is cleared and safe for inspection and sampling.

The report also states that there is sufficient water within 1500 feet of the workings to supply mill and camp.

### SAMPLING AND ASSAY RESULTS

Preliminary sampling in the accessible workings was conducted by the owners and also by unbiased interested parties, to obtain judgement samples and to confirm historical data, gave an unweighted average of 0.565 oz/ton gold for 12 samples taken underground on the Rattlesnake vein system. The range of values were from .03 to 3.9 oz/ton gold. Recent sampling, during the access road building in April of this year, in the rattlesnake vein system and adjacent areas, gave an unweighted average of 0.35 oz/ton gold for 26 samples.

Two major veins were mentioned in the Gordon report, however, there is evidence that a third parallel vein exists southwest of the Rattlesnake vein. Also the Kerrigan vein appears to be northeast of the Rattlesnake vein system.

During the surveying of the claim group, it was noted that on the southern slope of Lehman Mt. an early day prospect cut was examined and sampled. The quartz from this cut gave assay values of 0.26 oz/ton gold, and 1.6 oz/ton silver, with some copper mineralization. The cut was near the southern end of claim No. 10. Also, approximately 3000 feet south of the main NEW GOLDEN ASTER mine proper, near the southern portion of claim No. 9, there is a narrow vein, 4-6 inches wide which strikes east and west, of argentiferous galena ore that gives assay values of 4.6, 21.0 and 27.0 oz/ton silver. This structure appears to have the potential of greater widths and depth.

An extensive sampling program is currently underway to evaluate all potential mineralized zones on the property. The new road to the mine, completed in April 1982 allows the use of drills and other excavation equipment in the sampling program.

### GEOLOGY

The prevailing rock is Yavapai schist, with some inclusions of granite and numerous dikes of pegmatite. The deposit consists of closely spaced, parallel, branching veins that strike northwesterly, and dip approximately 25 to 30 degrees west, which range from a few inches to several feet in width. They appear to occupy the dilated interfaces of the foliation of the schist, and were most likely mineralized by the major vein systems. Their filling is massive glassy quartz with limonite and a little tourmaline. From the historical data, it appears that the gold is free milling.

To the west, north and east, there are extensive intrusives (?) and flows of rhyolite. A large rhyolite plug (?) to the west and in contact with the Yavapai schist, gave an assay of 0.012 oz/ton gold and 14 PPM molybdenum. It is possible that rhyolite plug was the mineralizing source for the NEW GOLDEN ASTER vein systems.

### SUMMARY

The NEW GOLDEN ASTER mine, offers the potential of being a moderate sized gold and silver producer. The topography favors an open pit type of operation, at least for several benches. The deposit crops out near the top of the ridge and dips to the west with a slightly steeper dip than the slope of the ridge.

A preliminary Very Low Frequency, Electromagnetic Geophysical survey was conducted on a portion of the claim No. 1, and indicated an interesting conductive structural high. A detailed survey is contemplated for the near future to assist in developing a drilling, or excavation program.

Water is available approximately 1500 feet to the west on the three (3) NEW GOLDEN ASTER MILL SITES, located on Spring Creek.

A road to the mine is now completed and gives ready access to the property.

It is premature, at this time, to estimate ore reserves. However, in order to convey an order of magnitude to the potential ore reserves, an attempt will be made. Assuming that the Rattlesnake vein which appears to be about 1500 feet long, has an economically minable width of 40 feet and a depth of 200 feet, this would give 1,000,000 tons of potential ore, based on 12 cubic feet per ton density. Again, assuming a grade of 0.25 oz/ton gold, a gold recovery of 90%, and a spot price for gold at \$450 per ounce, we would have a gross dollar potential of \$101,250,000. This is not considering the other vein systems, and the numerous gold-bearing quartz outcrops. Also, the depth of 200 feet is probably conservative.

If the assumptions are correct, the property certainly appears to have an excellent chance of being an economically feasible producer of gold.

Nicholas H. Carouso

## **IRON KING ASSAY IN**

SFM00584 LAB JOB #: No. Samples: Santa Fe Mining Inc. Client name: Date Received: 1054 Willow Creek Rd. Submitted by: Billing address: Prescott, AZ 86301 445-2987 Phone number:

INVOICE ATTACHED

Apr-8

22

2-27-86 Pat O'Hara

### ANALYTICAL REPORT

Client SFM00584	ID	Lab	ID	FA/AA A Au ppm	A Ag ppm	Mo ppm	Cu ppm	Р <b>b</b> ррт	
KA-SF-6									
A-045			1	2.00	<.2	10	118	18	
A-046			2	3.35	<.2	3	257	33	
A-047	,		3	7.20	0.2	15	57 ,	20	
A-048		i.	4	0.25	0.2	12	126	59	
A-049			5	<.01	<.2	10	37	42	
A-050			6	0.03	<.2	10	22	37	
A-051			7	0.43	<.2	12	43	62	
A-052			8	1.62	8.6	16	400	1080	
A-053			9	0.52	0.8	18	67	63	
A-054			10	0.28	0.2	12	110	39	
A-055			11	0.01	<.2	6	29	26	
A-056	×		12	1.10	0.6	8	70	192	
A-057			13	0.23	0.2	8	32	42	
A-058			14	<.01	<.2	8	13	10	
A-059			15	0.33	0.2	8	39	54	
A-060		, ÷	16	0.14	<.2	5	22	13	

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Client ID SFM00584	Lab ID	FA/AA AA Au ppm	Ag ppm	Mo ppm	Cu ppm	Pb ppm	
A-061	17	0.04	<.2	10	23	16	
A-062	18	3.15	3.8	18	247	429	
A-063	19	2.70	1.8	16	307	181	
A-064	20	6.10	1.0	15	187	64	
A-065	21	0.04	<.2	8	17	78	
A-066	22	0.01	<.2	7	16	40	



Client I SFM00584	D Lab ID		Zn ppm
KA-SF-6			
A-045		1	32
A-046		2	42
A-047		3	27
A-048		4	122
A-049		5	95
A-050		6	53
A-051		7	172
A-052		8	650
A-053		9	143
A-054		10	127
A-055	s	11	42
A-056		12	72
A-057		13	50
A-058		14	70
A-059		15	56
A-060		16	40
A-061	<u>.</u>	17	52
A-062		18	200
A-063		19	235
A-064		20	120
4-065		21	32



14-Apr-8(

Client ID SFM00584	Lab ID	Zn
		ppm
A-066		
	22	66



14-Apr-8

144 54

### E GOLDEN ASTER MINES

The Golden Aster Mines are situated on the Southwest flank of the Bradshaw Mountains, in the Castle Creek Mining District, Yavapai County, Arizona, nine miles north of Castle Hot Springs, and twelve miles southerly from Wagoner. From railway at Kirkland to Wagoner twenty-five miles, thence twelve miles to the mines.

Altitude is about 3,600 feet above sea.

The group comprises 15 mining claims and . sovers 300 acres, more or less.

The mines lie on a spur or outlier from the main range; gulches have been carved out to a depth of 600 feet, with hillslopes of up to 35°;

The country rock is Yavapai schist and is much intruded by pegmatite dikes and diorites. The permittees strike northwest and southeast and dip to the southwest. The diorite dikes seem to strike EW and dip south. The dip of the pegmatites is about 40°. Many faults are noted and as they are of the overthrust type raise the ore on the dip.

AL:

The ore which is a pegmatite quartz occurs at or near the center of the larger dikes. It is a highly crystalline glasslike quartz, with some bunches of oxidized iron material and some pyrite. Analysis of a sample from the 50 tons showed 87.25% silica, 3% alumina, 6.8% iron, 1.85 oz. gold, 0.55 oz. silver.

I am of the opinion that a development of 100 feet vertically under Nos. 2 and 3 adits will show a greater reserve of ore with as good and probably better values than the above given.

It is also to be expected that other shoots of ore will be found on further development along the strike of the vein.

The Kerrigan vein about 500 feet east of the Rattlesnske vein promises to be a producer of good grade ore; a 3 feet cut across the quartz giving 0.40 oz. gold; a 3 feet cut giving 0.24voz. gold and a sample of 34 feet in length and 18, inches to 24 inches in width, giving 0.13 oz. gold.

A series of tests male on samples out from a 50 ton lot, gave results as follows:

	Per Ton As	says
OZ.	gold Hecover	100.
Eullion from Amalgamation	0.7775	42.027
Concentrates	, i i i i i i i i i i i i i i i i i i i	38,557
	1.72445	93,214
Tails from evanidation	0.135	6.587
Unaccounted for		.199

N 2 adit has 170 feet of drifting P .ft. of cross I no ore, 20 ft. crosscut into hat ing no ore, and a 15 ft. crosscut to the east into the footwall showing a streak 6 inches on south side and 12 inches on north side of crosscut that gives an average of 3.5 oz.gold.

At the portal a 3 ft. streak of quertz on the east side gives 1.5 oz, gold At 44 to 53 feet in adit 55 inches gives

an average of 0.554 oz. gold. This ore turns and goes down vertically in center of working.

No. 3 adit was also started in the hanging wall to the west of the vein, but outs the vein at 30 feet from the portal, showing an aggregate width of 6.5 feet with an average value of 1.894 oz. gold.

No. 4 aditries also started in the hanging wall west of the vein and had not yet advanced for enough to out the vein.

No. 2 East alit is a 60 feet drift which shows 17 inches of quartz in bottom of 5. 80 oz. gold.

No. 1 Fast adit is a 70 feet prospect which cuts the vein at the breast showing 6 to 12 inches of ore for 7 feet in length across the breast of 1.25 oz. gold.

A list of assays with description is hereto attached, showing locus, size and value.

I find an aggregate of 5,500 tons of ore with an average value of \$20.00 per ton in gold in the Rattlesnake vein. Another 5,000 tons of ore with a value of \$15,00 per ton.

The Rattlesnake vein is traceable for 1,400 feet along the strike with a width of from 18 inches to 6 feet. The Kerrigan vein 600 feet west from the Rattlesnake is traceable along the strike for 1,500 feet, with width of from 18 inches to 4 feet. This vein has little development, a 24 feet adit being the principal work.

The claims cover 4,500 feet in length along the direction of the strike of the veins. Many other quartz outcrops are found on the claims, alloof them showing values in gold.

4.

42

.17

ALLT ME

8 W

11%

FH .

1 1. N. A.

Development consists of 600 feet of drifts with 75 feet of approaches and 50 feet of winzes.

The apex workings have been mined as a out to a depth of 10 feet on 3 to 5 feet of ore, 50 tons of ore giving a yield of 1.85 oz. gold. A winze from Apex to No. 1 adit 40 feet on 2 40° slope 10 feet below collar gives for 6 feet an average of 0.93 oz. gold. At 30 feet an average of 3 cuts gives 1.3 oz. gold.

No. 1 Adit has 35 feet as drift with 18 ... inches of quartz giving 0.14 oz. gold. A 20 feet winze 10 feet SW of portal of ... adit shows 19 inches of quartz of 1.43 oz. gold.

#### STRAIGHT CYANIDATION

Heads Tails

No.

1,85 0.14

93.43%

Recovered Pulp 100 mesh: Solution 5.3 1b NaCn Cyanids consumption 1 1b. NaCn per ton Lime consumption 7.7 1b CaO per ton Legohing Time 73 hours

By amalgamation and cyanidation a recovery of 93% can be effected.

There is sufficient water within 1,500 feet of the workings to supply the mill and camp.

> JONATHAN GORDON June 1st, 1926.

### Mark

Gold Oz.

ŗ: .

1. E 2" adit foot wall at breast 22" 0.02 2. . . " in floor against N wall at 36' from portal 17" 5.80 11 11 3. = 5 streaks qtz of 3 to 6" through 13' Borphy, 0.06 portal 0.01 4. E #1 sdit 6' cut S side et 18' from portal porphry breast 70' from portal 6" to 12" streak across 5. drift 1.25 at 40' from portal 18" cut both sides 0.05 6. 1 11 7. -= pegmatite between two fault planes 5" 0.08 Apex top work on N side 24" out, end open out above raisel.88 " " " " " 2 15" outs porphry 0.06 8. 0.08 9. 3' below coller winze 2 outs 30" and 36" 0.72 11 n 10. 2" and 6 " streak quartz abovs #10 0.20 -= ..... 11. . 17 porphry above #11 20\* 0.10 12. No. 1, 20' down winze N end 19" 1.42 13. No. 1, Raise to top works up 20<sup>t</sup> at bend 24<sup>th</sup> 1.32 the second top of (in hanging from) #14 porphry 0.08 the second porphry 0.36 the second 14. 15. 18. 0.04 porphry at portal 42" 17. w bottom raise and breast adit 10'
No. 3 adit 6" - 8" to 50' from portal 0.14 18. 0.16 19. No. 3 adit 3' out gtz in back upper stk 50' to 60' portal 20. 0.46 under #20 and over #22 #21 from 50' to 60' from 0,80 21 21. N . 18" 23. portal 0.48 1,50 . . 23. 1 11 -21 at portal 38" out qtz for 10' at between 62' and 73' 0.10 = -N 34. 0.08 30" " tourmaline at 73' . -. 25. 20" out much sulphide 82' to 88' 0.30 . N W 26. lst left Xcut 6" to 12" qtz at 9' from drift 3.50 main dft from 100' to 115' 7.5' high 0.18 N . 27. . N 38. Adit, breast pegmatite gouge hanging wall stk 8" " 2nd stk from hanging wall 31" wide 0.34 2. 3 No. SS. 2.80 3C. 11 R 31" wide . 1.80 . 3rd " 31. ftwl. side at 40' from portal 5' from brat 11 38. 10 36 0.40 qtz. 4' from brst 41' from portal 18" out 3.40 33. 55 white porphry hgn wall of vein at 40' .... 34. 0.40 portal 0.24

35. Kerrigan vein, upper exposure 3'. 36. Kerrigan vein lower 2' 37. " " 34' adit 18" to 24" along vein 0.13No. 1, 30 tons dump No. 3, semple from ore pile 0.54No. 1, sample 4" streak. 7.60No. 1, sample 4" streak. 12.80Auth. An = 0.846

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VERY LOW FREQUENCY ELECTROMAGNETIC SURVEY THE NEW GOLDEN ASTER MINING CLAIM GROUP CASTLE CREEK MINING DISTRICT YAVAPAI COUNTY, ARIZONA

GED-PROCESSING, INC.

icholast. Carouso

Nicholas H. Carouso President

August 22, 1984

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APPENDIX	

PLAT WITH VLF EM OVERLAY

PLATS OF VLF EM SURVEY LINES

### VERY LOW FREQUENCY ELECTROMAGNETIC SURVEY THE NEW GOLDEN ASTER MINING DIAIM GROUP CASTLE CREEK MINING DISTRICT YAVADAI COUNTY. PRIZONA

### INTRODUCTION

A Very Low Frequency Electromagnesic Geophysical survey was conducted by Nicholas H. Carouso. President of Geo-Procesing, Inc., on the New Golden Aster undatened lode mining claim group on August 22, 1984, as an ongoing economic evaluation study and also as partial fulfillment of the annual assessment work required by law.

Two lines were run which correlated well with the known peology and indicated conductive structural highs which should be tested by drilling.

VERY LOW FREQUENCY ELECTROMAGNETIC SURVEY

### PRINCIPLE OF OPERATION

The U.S. Navy VLF-transmitting stations operating for communications with submarines at sea, have a vertical antenna system. The antenna current is thus vertical, creating a concentric horizontal magnetic field around them. When these magnetic fields meet conductive bodies in the ground, there will be secondary fields radiating from these bodies. The instrument used for this type of survey, the EM-16, is simply a sensitive receiver covering the frequency bands of the VLF-transmitting stations with Means of measuring the vertical field components. The receiver has two inputs, with two receiving colls built into the instrument. One coll has normally vertical axis and the other is horizontal.

The signal from one of the coils (vertical axis) is first minimized by tilting the instrument. The tilt-angle is calibrated in percentage of electromagnetic response. The remaining signal in this coil is finally balanced out by a measured concentage of signal from the other coil (horizontal coil), after being snifted (electronically) by 90 degrees. This coil is normally parallel to the primary horizontal field, the mechanical tilt-angle is an accurate measure of the vertical real-component, and the compensation Pi/2-signal from the norizontal coil is a measure of the ouadrature vertical signal. In other words, the vertical real-component (Inchase reading) indicates the structure and the Quadrature indicates how conductive the structure is.

VLF EM GEOPHYSICAL INTERPRETATION

The plats of VLF EM peophysical survey lines and a plat with overlay of the survey lines are included in the APPENDIX of this report.

LINE 16, indicated that the known mineralized structures which outcrop and have a bearing of approximately North 60 deg. West are conductive highs as they couple well with Station NLK. Acceven it sopeans that the structure south of the Rattlesnake verm is possibly stronger and also

Pape 2

couples with Station NAA. This indicates that possibly an intersection of the northwesterly bearing structures by a northeasterly structure exists here. A drill hole hear Station 5N would be an interesting venture as it is near the proposed intersection.

LINE 17, confirms that on the main New Golden Aster ridge, the mineralized structures have mainly a northwesterly bearing.

### CONCLUSIONS

This current Very Low Frequency Electromagnetic Geophysical survey correlates well with the peology and indicates a favorable target for a drilling program. PROFESSIONAL QUALIFICATIONS

Nicholas H. Carouso. President. of Geo-Processing, an Arizona Corporation, Which is a mining and Iric. . metallurgical consulting firm, is qualified to supervise and conduct the above reported geophysical study as he holds a Master of Science Degree from the Department of Mineral Technology (Mining), College of Engineering, University of California, Berkeley, California; he attended The Mackay School of Mines, University of Nevada, Reno, in graduate studies; and also was enrolled in graduate studies at the College of Mines, Department of Mining and Geological Engineering, University of Arizona, Tucson, Arizona, in a PhD program in Geological Engineering. He has over 35 years years of mining experience conducting numerous economic mining evaluations in the western U.S. and Alaska, and is a member of the American Institute of Mining and Metallurgical Engineers.

This report was prepared by,

chalas + Carouso

Nicholas H. Carouso









ME CEMMEDZWW



NEW GOLDEN ASTER MINING CLAIM GROUP AREA

Castle Creek Mining District, Yavapai County, Arizona

VLF EM OVERLAY Scale: 1" = 500'

8-22-84



Hecorded Utilicial Hecords of Yavapai THE FR **新田市市** 

sann

at the request of ... PATSY C. JENNEY, County Recorder Deputy

RUSH

QUITCLAIM DEED

For the consideration of Ten Dollars, and other valuable considerations, I,

NICHOLAS H. CAROUSO 1111 E. Limberlost Dr., #51 Tueson, AZ 85719 Mailing address: P.O. Box 1791, Prescott, Az 86302 RECEIVED B.L.M. AZ STATE OFFICE

hereby quitclaim to,

NOV 2 3 1984

INDEXED

MICROFILMI

JOHN P. JOHNSON and MORONI L. JOHNSON 8211 N. First Avenue Phoenix, AZ 85021

7:45 A.M. PHOENIX, ARIZONA

all right, title, or interest in the unpatented lode mining claims known as the:

NEW GOLDEN ASTER MINING CLAIMS AND MILL SITES

The New Golden Aster unpatented lode mining claims are situated in Sections 26 and 27, Township 9N, Range 2W, G&SRM, Castle Creek Mining District, Yavapai County, Arizona, and are recorded in the Official Records of Yavapai County, Arizona, as follows:

CLAI	M	DATE LOC.	DATE REC.	BOOK	PAGE	BLM	SERIAL	DOC. No.	e.
No.	1	1/5/80	1/18/80	1273	412-413	AMC	94507	2118	
No.	2	1/5/80	1/18/80	1273	414-415	AMC	94508	2119	
No.	E	1/5/80	1/18/80	1273	416-417	AMC	94509	2120	
No.	4	1/5/80	1/18/80	1273	418-419	AMC	94510	2121	
No.	5	12/16/80	12/29/80	1348	146-147	AMC	119345	41213	
Nc.	6	12/16/80	12/29/80	1348	148-149	AMC	119346	41214	
No.	7	12/16/80	12/29/80	1348	150-151	AMC	119347	41215	
Nc.	8	12/16/80	12/29/80	1348	152-153	AMC	119348	41216	
No.	9	12/16/80	12/29/80	1348	154-155	AMC	119349	41217	
No.	10	12/16/80	12/29/80	1348	156-157	AMC	119350	41218	• •
No.	11	12/16/80	12/29/80	1348	158-159	AMC	119351	41219	
				Page 1	of 2	Brook	C 1678 PA	6570.	

No.	12	12/16/80	12/29/80	1348	160-161	AMC	119352	41220
No.	13	3/17/81	3/24/81	1369	596-597	AMC	126959	10492
Nc.	14	3/17/81	3/24/81	1369	598-599	AMC	126960	10493
No.	15	3/29/81	4/3/81	1372	87-88	АМС	126961	11751
Nc.	16	3/11/81	3/16/81	1367	137-138	AMC	125989	9270
No.	17	3/11/81	3/16/81	1367	139-140	AMC	125990	9271
Nc.	18	3/11/81	3/16/81	1367	141-142	AMC	125991	9272
No.	19	3/11/81	3/16/81	1367	143-144	AMC	125992	9273
Nc.	20	3/22/81	3/24/81	1369	600-601	AMC	126962	10494
No.	21	3/29/81	4/3/81	1372	89-90	AMC	126963	11752
			NEW GOL	DEN AS	TER MILL SI	TES		
No.	1	3/22/81	3/24/81	1369	602-603	AMC	126956	10495

No.	2	3/22/81	4/3/81	1372	91-92	AMC	126957	11753
No.	3	3/22/81	4/3/81	1372	93-94	АМС	126958	11754

Dated this day of November, 1984.

Carouso

NICHOLAS H. CAROUSO

1

STATE OF ARIZONA ) ) ss. County of yavapai)

This instrument was acknowledged before me this day of November, 1984,

Notary Public My commission will expire: My Commission Expires Aug. 31, 1985

SEAL

Page 2 of 2

BDD- 1678 PAGE 571

RECEIVED B.L.M. AZ STATE OFFICE

NOV 2 3 1984

7:45 A.M. Phoenix, Arizona

### **NEW GOLDEN ASTER FIELD NOTES**

### March 25, 1986 (edited December 4, 1997)

This is a field evaluation at the Golden Aster Mine for Santa Fe Mining. A new road has been cut across the ridges from Section 15 through Section 22 to Section 27. The old road appears to veer to the west in Section 22. The new road crosses several Tertiary volcanic rocks, probably of felsic composition. In the north pre-tectonic granodiorite of the Crook's Canyon(?) complex crops out which is highly foliated. Southward these rocks are intercalated with mafic rocks and probably calcareous sediments which are now amphibolites, probably of the Iron King Formation. Further south, at the southern extent of the road near the mine, Cleator Pelite (informal name) crops out. This is in the area of the flexure where the rocks change trend from north-northeast to almost due west. The volcanic rocks may or may not be in fault contact with the Proterozoic metamorphic rocks. The Tertiary rocks may either be down faulted into the Proterozoic rocks or are filling in local valleys that were present during the Tertiary. The east-west striking pegmatites in this area are quite visible. The form mostly within the pelite. The quartz vein located where the road crosses the saddle just above the mineralized vein appears to have a more northerly strike. The pelite is variably silicified with small silica veinlets. This is a preliminary approximation of the regional geology.

To the east lies the Crazy Basin Quartz Monzonite with the pegmatites still striking in the east-west direction. In between in Ryland Creek there are Tertiary volcanics which appear to be an extension of the major Tertiary volcanic field to the south which Mike Ward mapped in his masters thesis at ASU. I have to get the thesis the next time I am in Tempe to determine what Mike has recorded about these rocks, to see if his mapping had extended this far north and whether or not he has any information on the chemistry of these rocks and the relationships between the Proterozoic and the Tertiary units.

The pegmatites are tourmaline-bearing and well crystallized, usually associated with the more quartz rich sections of the pegmatite bodies. The local silicification and tourmalinization of the Cleator pelite appears to be related to these pegmatites. It is currently thought that these pegmatites are related to Crazy Basin Quartz Monzonite.

The adit that is located at the end of the old road down at the creek at the north end of the property, just south of the contact with the Tertiary rhyolites trends south thirty west, into the hill and then curves westward about fifty feet inside for an unknown distance. As the adit shows some caving at the entrance and within twenty-five feet of the entrance, I did not enter it for safety reasons.

Walking down the road, there was a float of the vein material. I did not see anything that would indicate the trace of the vein came through or cropped out on the road itself. The quartz vein material on the dump appears to be made up predominantly of quartz and tourmaline and locally the tourmaline and quartz form bands up to one-half inch wide. I would assume at this point that it is quite possible that the silica and the boron making the tourmaline-quartz veins has come out of the tourmalinized Cleator Formation and or the pegmatites.

At the entrance to the adit, the Cleator Formation rocks strike north forty east and dip fifty degrees to the west. There are local fractures cutting through the pelitic schist and alteration appears to have occurred both within the fractures and to have permeated into the schist. It appears to have recrystallized the muscovite, perhaps bleaching out the biotite and forming hematitic veinlets and zones around veinlets up to about six inches across in the most hematized locations. There appears to have been an original lineation within the pelitic schists which is still present. The lineation has a sixty degree rake to the west on the plane of the foliation.

Locally, at the boundary between the quartz vein material and the tourmalinized schists, the tourmaline appears to be concentrated along this old lineation. This is from dump material. Some of the dump material contains massive intergrown quartz tourmaline rock with limonite and earthy hematite filling some fractures within it. It is unclear if the iron oxides are after pyrite. A rock that appears similar to the calcareous plagioclase phenocrystic dacites in the Spud Mountain and Iron King Volcanics is found as float in the stream bed just to the west of the mine and it is possible that this area is contact between the Cleator pelite and the Iron King Volcanics or the Spud Mountain Volcanics or alternatively that these rocks have become intercalated in this area or alternatively are in-folded. It would probably be very difficult to work those relationships out since the Tertiary stock of rhyolite appears to have cut off the Proterozoic section to the northnortheast and we are just about on the contact where it runs east-west. So, I will check the dark looking rocks up on the hillside where the road crosses them to see if there is any contact relationship between the Cleator pelite and either Iron King or Spud Mountain volcanics.

Dump material (pegmatite) indicates that they are quartz-feldspar-tourmaline-muscovite pegmatites. Muscovite could either be late stage magnetic mineral indicating a peraluminous melt or just some digestion of Cleator pelite which would contain quite a bit of sericite.

Stockpile veined material at the upper adit looks very similar to that of the lower adit. Very similar quartz, tourmaline and the fairly intense iron oxide here apparently more than at the pyritic rocks down below. The vein material at places where it contacts the schist appears to have permeated the schist and caused fractures and fracture filling within the schist.

The rhyolite plus exposed to the north and west of the workings appears to have been brecciated, perhaps by hydrothermal solutions because there is a weak hematitic cement locally and occasionally some silicified zones making up the breccia. Some highly reflective mineral, that is very fine grained with an apparent yellow tarnish appears to be locally present in these rocks. At the southeastern boundary of this Tertiary plug, which might be the root zone of a flow dome complex, a ground up brecciated and silicified rock crops out which appears to contain fragments of pegmatite and schist. It is cemented by silica. Could this possibly be the root zone of a hot spring system?

Just south of the road pegmatites have a more northerly strike (about north thirty east as opposed to north seventy east). These pegmatites appear to be more quartz-rich and to have less tourmaline. The tourmaline seems to be associated with the east-west pegmatite dikes. The east-west trending pegmatites also appear to be wider, more discontinuous and much more shallow dipping. The northeastern striking pegmatites appear for the most part to be fairly thin with local bulges, but are much more continuous and would appear to cross cut the foliation and layering within the Cleator pelite and is unclear yet as to whether or not they cross cut the more tourmaline rich pegmatites.

Today is Wednesday, March 26, 1986 and I will be sampling the Golden Aster property for Sante Fe. The first sample is taken at the northern most adit on the dump and it is Sample A-045. It is a massive quartz-tourmaline-limonite rock. The iron oxide may be after pyrite. Sample A-046 was also collected from the dump. It is a sample of the quartz vein with tourmaline but without limonite and Sample A-047 is a sample of dump material which is just quartz vein and no iron oxide or tourmaline. These three samples were taken to see if the precious metals can be characterized in any specific type of mineralogy within the vein.

Sample A-049 was collected above the first switchback in the road just above the curb. It is a weakly altered or highly weathered metapelite, quartz-biotite-muscovite schist. It appears to have been slightly affected by weak sericite recrystallization. It is sampled to determine how far out possible mineralization solutions have spread from the vein. It is about one hundred feet or so west of the vein.

Sample A-050 was a mixture of pegmatite and somewhat bleached and iron stained pelitic rock as an average sample.

Sample A-051 was an average sample over three by four feet of a fractured pelitic schist in which the fractures were filled with hematite and the hematite bled into the schist about up to two to three inches locally, probably by diffusion. The sample was either highly weathered or recrystallized as it was extremely sandy and fell apart quite readily.

Sample A-052 was collected as an average dump sample on the dump from the intermediate level adit on the vein just south of the road just above the switchback. Vein material contains massive quartz, quartz-tourmaline and quartz-tourmaline-iron oxide.

Sample A-053 was collected just above the stock pile on the north side of the open face. It is a three by five foot average sample of the slightly recrystallized and deeply weathered or slightly altered metapelite. Some light pervasive iron oxide staining was present in general and some light to moderate iron oxide staining fractures.

Sample A-054 was collected about two hundred feet east of the main vein and is located in the pelitic schist with local quartz hematite veinlets. It is an average panel sample, two by eight feet, mainly to see if these veinlets may be contributing anything to an open pit potential to this prospect.

Sample A-055 was collected on the road about fifty feet west of the turnoff to the trench. It is a quartz-muscovite-biotite pelitic rock which has been fractured with local iron stain along the fractures. Hematite plus or minus some limonite makes up the iron oxides. The rock is brecciated and this brecciation appears to be just a series of intense fractures. Pegmatite that lies above the fracture zone may have acted as a seal to the fluids that were moving through the rock and perhaps this is a form of hydrofracturing without any silicification.

Sample A-056 was high-graded (select sample). Quartz-tournaline veinlets up to about an inch to two inches wide which are found in the trench on the east side of the property with the somewhat recrystallized and/or weathered metapelite.

Sample A-057 is an average three feet by three feet of the pelitic rock exposed in the trench associated with this previously mentioned vein material.

Sample A-058 was collected just around the turn on the east south-east side of the slope of the hill. Along the road is a highly weathered metapelite with a small two by three inch fracture filling of quartz and I sampled it including all the quartz, to see if the rocks surrounding the veins contain any mineralization.

Sample A-059 was collected on the road about a quarter of the way up the hill to the saddle, right below a pegmatite that crops out on the hillside above the road. It is a metapelite with minor quartz-tourmaline veins and an average of light to moderate iron staining and some intense hematite along the fractures.

Sample A-060 was collected in the road from a quartz-tourmaline veinlet and the surrounding schist in a two by three foot panel is located on the southwest side of the road where the pelitic rock is fairly fresh. I collected it to determine how the little veinlets relate with the clean, unaltered pelite (I am not sure what I meant here).

Sample A-061 was collected from an outcrop on the north side of the road just below the very steep hill and it is an outcrop of the pelite which has a stockwork of several quartz tournaline veins. It is an average sample collected over a three by six foot area.

Sample A-062 is a chip channel sample about twenty feet in length averaging the stockwork part of the vein in the average workings. It is highly fractured, many minor veinlets up to three inches of hematite and locally veinlets up to six inches across of the quartz-tourmaline and vein material. The fractured, broken, altered rock includes both the schist and the pegmatite.

Sample A-063 was collected in the upward workings right where the useable road ends. The entire sample is from a quartz-hematite plus or minus tourmaline vein. It is a panel, six feet by two feet and it is an average sample.

Sample A-064 was collected about two hundred feet south of the road along the trend of the main vein. There is a working there that extends about at least seventy feet deep on an inclined shaft back to the northwest. The vein seems to be thinning down, but the altered stockwork associated with the vein seems to be just as intense as at the working next to the road. This would extend the length of the system about another two hundred feet. It was an average dump sample of all different alteration veined and fractured filled material that I could see on the inside of the workings. I did not go into the workings because of safety factors.

The last two samples were collected along the road. The first A-065 is a select sample of what is interpreted as a hydrofractured and silicified rock with hematite alteration in the cement between previous silicified fragments and quartz breccia. A-066 was collected in the road from the Tertiary rhyolite which is locally lightly silicified and brecciated, containing flow banding and possibly flow brecciation. This is the rock type from which Carouso apparently analyzed gold and molybdenum(?).

BY PAT O'HARA, PRESCOTT, AZ

# **Kaaterskill Exploration**

Geochemistry • Petrology • Structural Analysis

691 ROBINSON DRIVE • PRESCOTT, ARIZONA 86301 • 602/778-5321

TO: Rick Lawrence, Fred Jenkins

DATE: May 4, 1986

FROM: Pat O'Hara

SUBJECT: Monthly Report (April, 1986)

### GOLDEN ASTRE SUBMITTAL (Figure 1)

This property contained eight out of twenty two samples with greater than 1.0 ppm gold concentrations. The (arithmetic) average value of gold concentrations is 1.34 ppm. This data indicates that ore grade mineralization is present and that tonnage considerations are the major problem left to consider.

Two veins are present with the main western vein at least eleven hundred feet long. A second vein (Rattlesnake vein) is present and is of unknown length. The area between the two veins is locally injected with a silica stockworks system which is anomalous in gold in outcrops. If mineralization extends to depth a combined open pit/underground operation may be feasible.

If this property can be acquired for a reasonable price initial drilling should indicate whether vein mineralization and the extent of the stockworks is present at depth.

other targets may be present on the property and may be evaluated after acquisition.

### 691 ROBINSON DRIVE • PRESCOTT, ARIZONA 86301 • 602/778-5321

TO: Rick Lawrence

FROM: Pat O'Hara

DATE: April 15, 1986

SUBJECT: Golden Astre Submittal (preliminary Report)

### Dear Rick:

Enclosed is the basic data collected during the two day visit to the Golden Astre property. The field notes are directly transcribed and phonetic spellings have not been The main vein has a strike length between corrected yet. 1000' and 1400'. The vein system is more or less a silicified-plus-silica stockworks which occurs with variable intensity over a 600' width between two more definitive The vein material is made up of quartz ± tourmaline veins. t limonite (after pyrite?) and is probably derived from remobilization of the pegmatite and pelitic host rock. Dump samples of vein material all run above 1 ppm Au, as do the main veins in outcrop. The stockworks-bearing samples contained greater than 0.1 ppm Au. The only two samples which were below detection were pelitic rocks outside the vein system.

The potential for an openpit operation on the rock between the two veins, and for an underground operation along at least the main vein, requires that acquisition proceedings should start immediately.

With the data at hand, the mineralized system seems small, assuming minimum mining width for an underground operation. However, if the system blossoms out and stopes can be mined at depth, the tonnage may be greater than the first approximation indicates. Only more work and drilling will answer the question of size.

Other types of mineralization may be present on the property, as per our discussion.

Sincerely,

Pat O'Bara





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IRON KING ASSAY INC

LAB JOB #: SFM00584 Client name: Santa Fe Mining Inc. N Billing address: 1054 Willow Creek Rd. S Prescott, AZ 86301

No. Samples:	22
Date Received:	2-27-86
Submitted by:	Pat O'Hara

Apr-86

Phone number: 445-2987

### INVOICE ATTACHED

### ANALYTICAL REPORT

Client ID SFM00584	Lab ID	FA/AA A Au ppm	A Ag ppm	Mo ppm	Cu ppm	Pb ppm	
KA-SF-6							
A-045	. 1	2.00	<.2	10	118	18	
A-046	2	3.35	<.2	3	257	33	
A-047	3	7.20	0.2	15	57	20	
A-048	4	0.25	0.2	12	126	59	
A-049	. 5	<.01	<.2	10	37	42	
A-050	6	0.03	<.2	10	22	37	
A-051	7	0,43	<.2	12	43	62	
A-052	8	1.62	8.6	16	400	1080	
A-053	9	0.52	0.8	18	67	63	
A-054	10	0.28	0.2	12	110	39	
A-055	11	0.01	<.2	6	29	26	
A-056	12	1.10	0.6	8	70	192	
A-057	13	0.23	0.2	8	32	42	
A-058	14	<.01	<.2	8	13	10	
A-059	15	0.33	0.2	8	39	54	
A-060	16	0.14	<.2	5	22	13	

P.O. Box 56 • Humboldt, Arizona 86329 • Phone (602) 632-7410
14-Apr-86

Client SFM00584	ID	Lab	ID	FA/AA Au ppm	AA Ag ppm	Mo ppm	Cu ppm	РЬ ppm	
A-061			17	0.04	<.2	10	23	16	
A-062			18	3.15	3.8	18	247	429	
A-063			19	2.70	1.8	16	307	181	
A-064			20	6.10	1.0	15	187	64	
A-065			21	0.04	<.2	8	17	78	
A-066			22	0.01	<.2	7	16	40	

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SFM	Client 00584	ID	Lab	ID			Zn ppm
KA-S	SF-6					-	
A-04	45				1		32
A-04	46				2		42
A-04	47				3		27
A-04	48				4		122
A-04	49				5		95
A-0.	50				6		53
A-05	51				7		172
A-05	52				8		650
A-05	53				9		143
A-05	54		÷		10		127
A-05	55	-			11		42
A-05	56				12		72
A-05	57				13		50
A-05	58				14		70
A-05	59				15		56
A-00	50				16		40
A-06	ó1				17		52
A-06	52				18		200
A-00	63				19		235
A-00	54				20		120
A-06	55				21		32



14-Apr-86

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Client ID SFM00584	Lab ID	Zn
		ррт
A-066		
	22	66

ONA

14-Apr-86