CONTACT INFORMATION
Mining Records Curator
Arizona Geological Survey
3550 N. Central Ave, 2nd floor
Phoenix, AZ, 85012
602-771-1601
http://www.azgs.az.gov
inquiries@azgs.az.gov

Arizona Testing Laboratories

817 West Madison · Phoenix, Arizona 85007 · Telephone 254-6181

For Ms. Mona Johnson
8211 North 1st Avenue
Phoenix, Arizona 85021

Date February 4, 1981

ASSAY CERTIFICATE

LAB NO.	IDENTIFICATION	OZ. PER TON		PERCENTAGES			
		GOLD	SILVER	COPPER			
9881-A	NG/A:						
	#1	0.05					
	#2	0.03					
	#3	0.50					
	#4	0.06					
	#5	3.9					
	#6	0.14					

NGA #1, East Adit 75 feet from portal, 12 inch quartz vein.

NGA #2, 4" quartz vein #1 adit, outside of portal.

NGA #3, 90 feet from portal #2 adit, quartz vein in roof, Copper and Hematite.

NGA #4, Left crosscut 90' from portal, #2 adit.

NGA #5, 10" quartz vein in adit #1 at portal.

NGA #6, Random sampling from tailings at adit #1.

Respectfully submitted,
ARIZONA TESTING LABORATORIES

Claude E. McLean, Jr.

Registered Assayer
Certificate No. 6258
Claude Eugene McLean, Jr.
Date Signed 2/4/81
Arizona, U.S.A.

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1

TELEPHONE: (604) 984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

TO : BEMA INDUSTRIES LIMITED

STE. 203 - 19945 56th AVENUE
LANGLEY, B.C.
V3A 3Y2

ATTN: G. MORDIA

CERT. # : A8312425-001-A
INVOICE # : I8312425
DATE : 12-AUG-83
P.O. # : 10407
83-05

Sample Description	Prep Code	Ag FA oz/T	Au FA oz/T
90814 1	207	0.14	0.092
90815 2	207	0.16	0.220
90816 3	207	0.08	0.036
90817 4	207	0.09	0.030
90818 5	207	0.08	0.020
90819 6	207	0.12	0.166
90820 7	207	0.28	0.478
90821 8	207	0.30	2.474
90822 9	207	0.21	0.092

Registered Assayer, Province of British Columbia

PHONE: 473-3073

CERTIFICATE OF ASSAY

FOUNTAINS ASSAY SERVICE

BOX 806
MIAMI, ARIZONA 85539

Mr. Landry

Feb. 4, 1981

Union Resources Corp.	% Copper	% Oxide Copper	Oz/Ton Gold	Oz/Ton Silver	% Lead	% Zinc	
Sample Golden Aster # 1			Trace	.04			
" " " " # 2			1.16	.16			
" " " " # 3			.24	.84			
" " " " # 4			.12	.62			
" " " " #5			.30	.18			
" " " " # 6			.04	Trace			
" " " " # 7			.24	"			
Sample Shaft P.O. 351			.005	.56			

2/4/81

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:

Oz. per Ton		Percent				
Au	Ag	Cu	SiO_2	Fe	CaO	Al_2O_3
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,

A. J. Kroha

AJK:sp

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

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

GEO-PROCESSING, INC.

Nicholas H. Carouso

Nicholas H. Carouso
President

August 22, 1984

TABLE OF CONTENTS

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

INTRODUCTION

A Very Low Frequency Electromagnetic Geophysical survey was conducted by Nicholas H. Carouso, President of Geo-Procesing, Inc., on the New Golden Aster unpatened 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 geology 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 coils built into the instrument. One coil 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 percentage of signal from the other coil (horizontal coil), after being shifted (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 horizontal coil is a measure of the quadrature vertical signal. In other words, the vertical real-component (Inphase reading) indicates the structure and the Quadrature indicates how conductive the structure is.

VLF EM GEOPHYSICAL INTERPRETATION

The plats of VLF EM geophysical 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, however it appears that the structure south of the Rattlesnake vein is possibly stronger and also

couples with Station NAA. This indicates that possibly an intersection of the northwesterly bearing structures by a northeasterly structure exists here. A drill hole near 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 geology and indicates a favorable target for a drilling program.

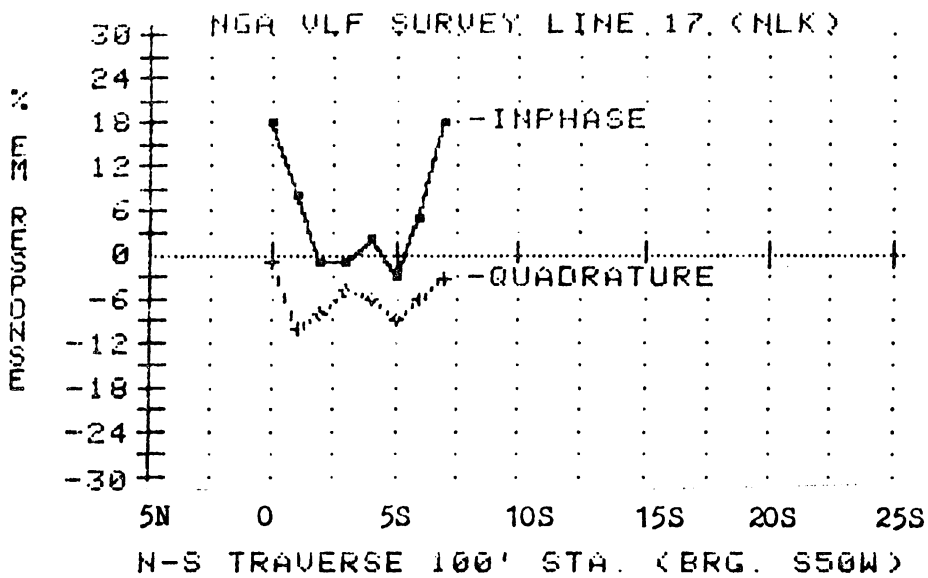
PROFESSIONAL QUALIFICATIONS

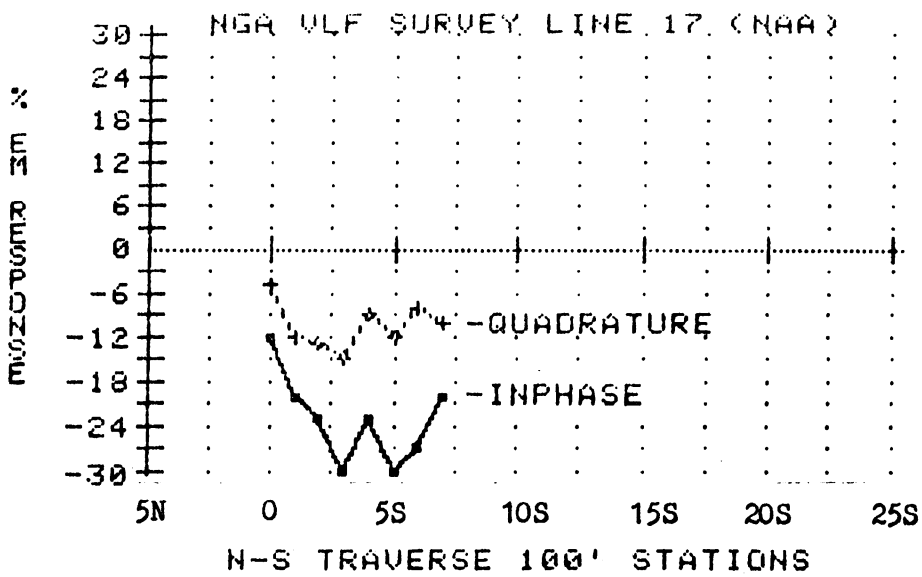
Nicholas H. Carouso, President, of Geo-Processing, Inc., an Arizona Corporation, which is a mining and metallurgical consulting firm, is qualified to supervise and conduct the above reported geophysical study as he holds a Master of Science Degree from the Department of Mineral Technology (Mining), College 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,

Nicholas H Carouso

Nicholas H. Carouso


NGA VLF SURVEY LINE 17 (NLK)
30
24
18
12
6
0
-6
-12
-18
-24
-30
% EM RESPONSE
-INPHASE
-QUADRATURE
5N
0
5S
10S
15S
20S
25S
N-S TRAVERSE 100' STA. (BRG. S50W)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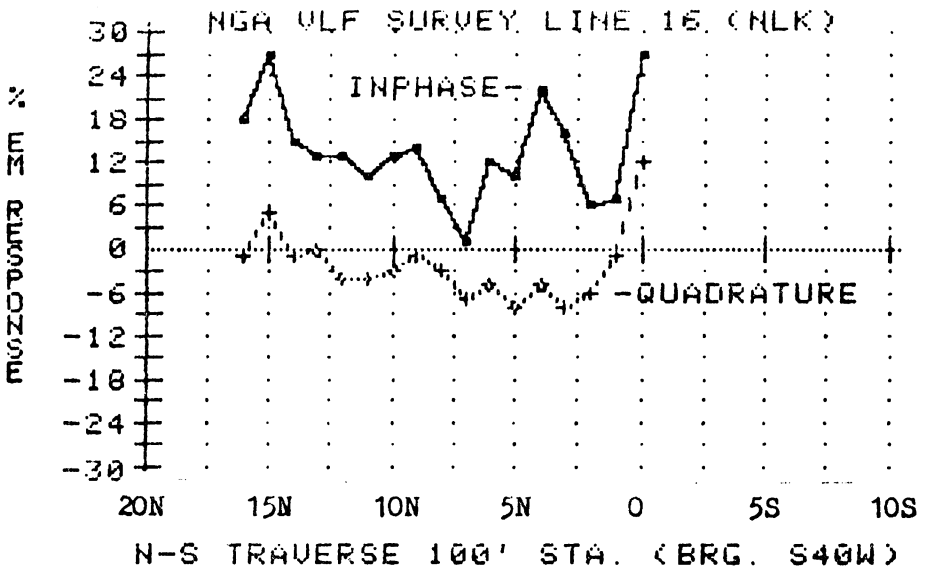
30
24
18
12
6
0
-6
-12
-18
-24
-30
% EMPOSER
-QUADRATURE
-INPHASE
5N
0
5S
10S
15S
20S
25S
N-S TRAVERSE 100' STATIONS


NGA VLF SURVEY LINE 16 (NLK)
INPHASE
QUADRATURE
% EM RESPONSE
30
24
18
12
6
0
-6
-12
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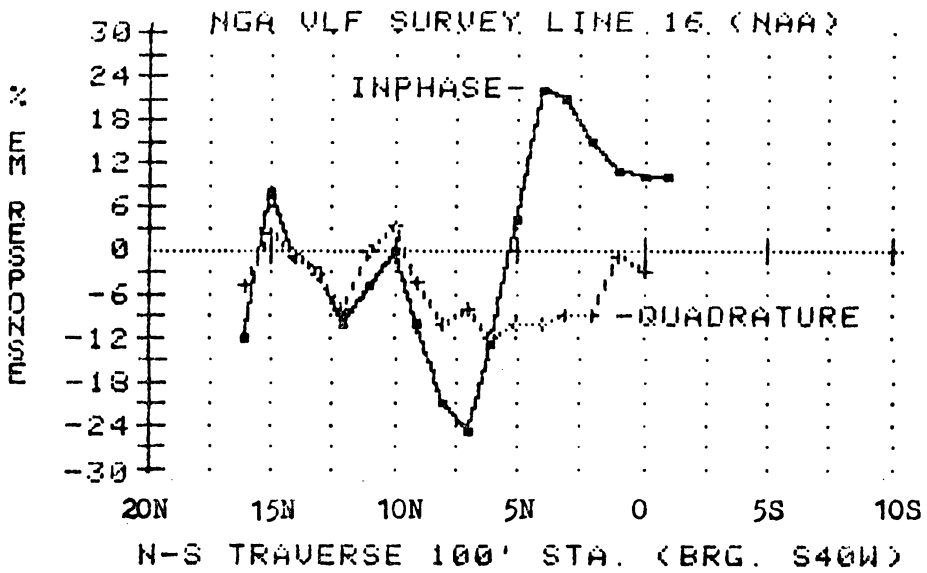
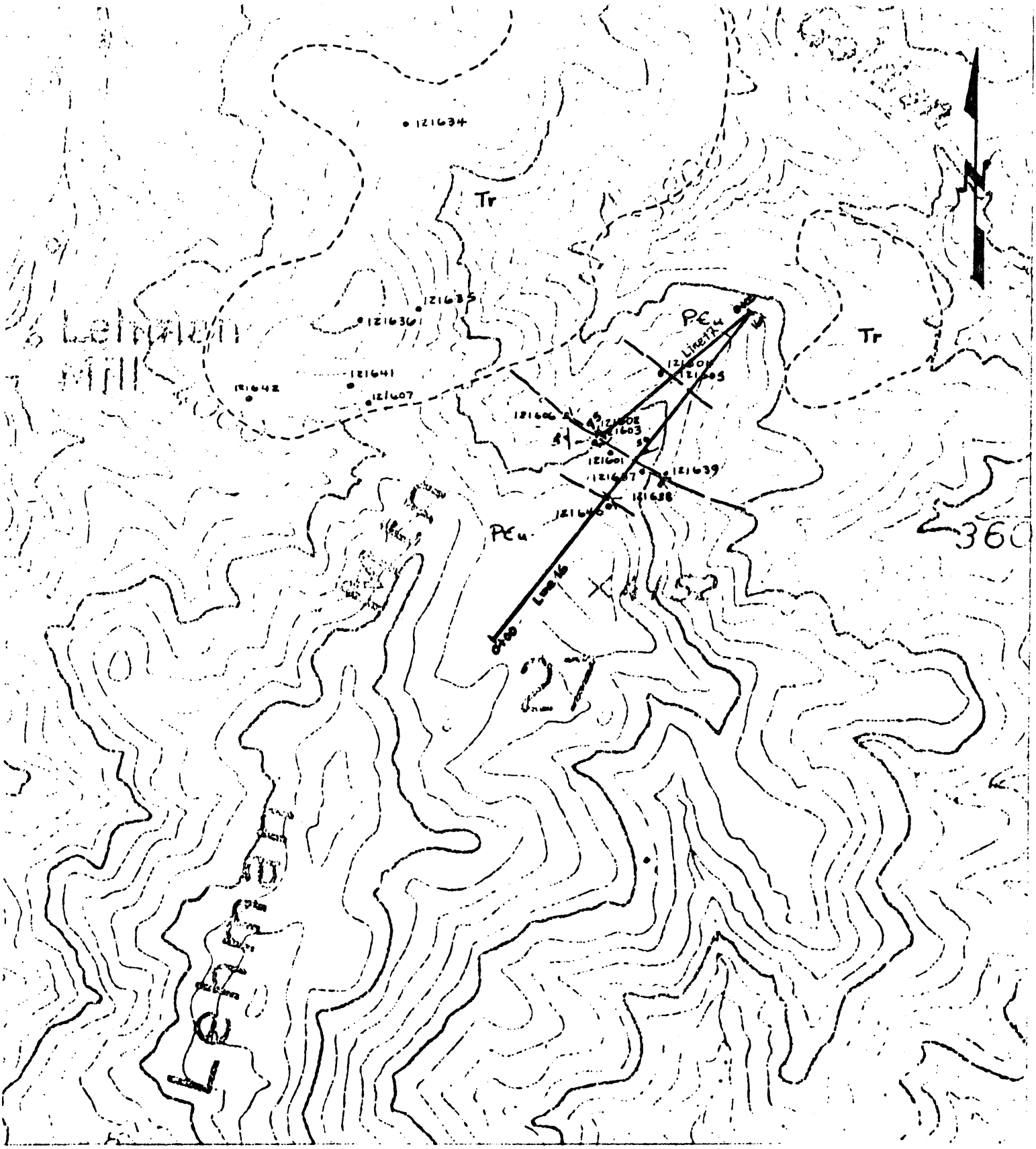
20N
15N
10N
5N
0
5S
10S
N-S TRAVERSE 100' STA. (BRG. S40W)


NGA VLF SURVEY LINE 16 (NAA)
INPHASE-
-QUADRATURE
MSNOTSMR MF %
30
24
18
12
6
0
-6
-12
-18
-24
-30
20N
15N
10N
5N
0
5S
10S
N-S TRAVERSE 100' STA. (BRG. S40W)

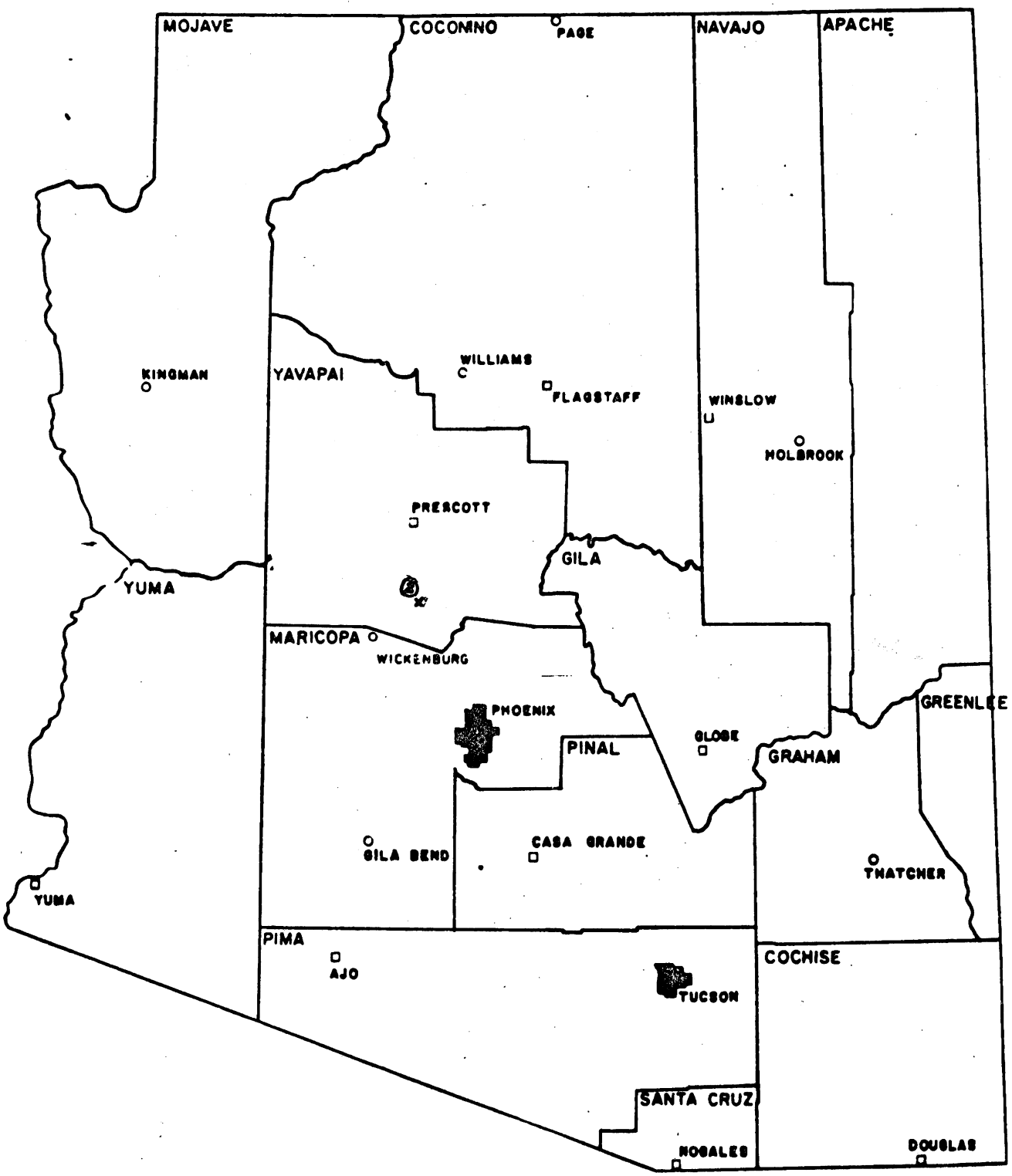


NEW GOLDEN ASTER MINING CLAIM GROUP AREA

Castle Creek Mining District,
Yavapai County, Arizona

VLF EM OVERLAY
Scale: 1" = 500' 8-22-84

ARIZONA



② NEW GOLDEN ASTER

SCALE IN MILES
0 10 20 50

FIGURE 1
LOCATION MAP-ARIZ.

SCALE	DATE 2-85	APPROVED	
H 1" = 40MI	DRAWN BY EHB		
V	CHECKED		

Kaaterskill Exploration *Geochemistry • Petrology • Structural Analysis*

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

TO: Rick Lawrence

DATE: April 15, 1986

FROM: Pat O'Hara

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 corrected yet. The main vein has a strike length between 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 veins. The vein material is made up of quartz ± tourmaline ± 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'Hara

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.

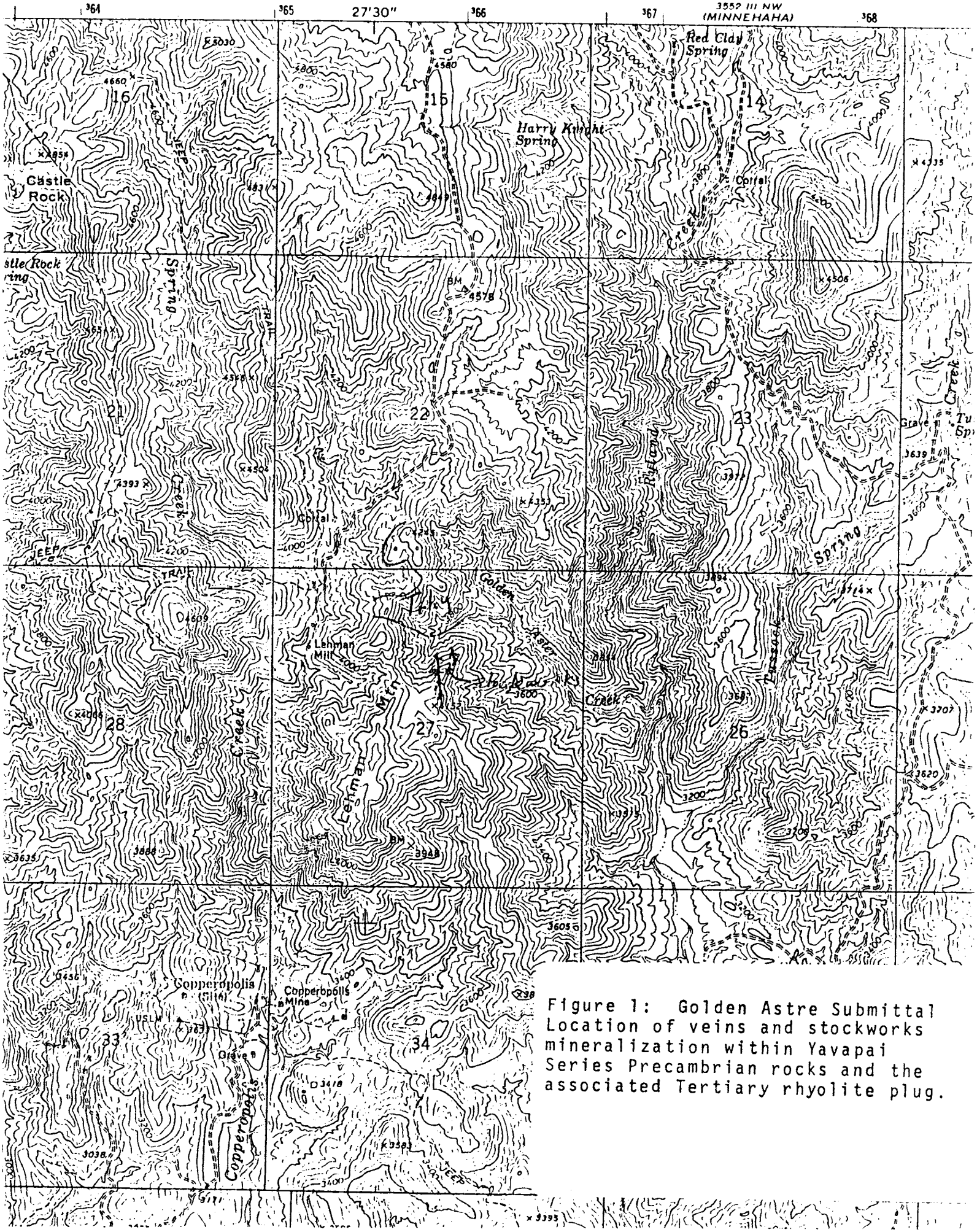


Figure 1: Golden Astre Submittal Location of veins and stockworks mineralization within Yavapai Series Precambrian rocks and the associated Tertiary rhyolite plug.

IRON KING ASSAY INC.

14-Apr-86

LAB JOB #: SFM00584

Client name: Santa Fe Mining Inc.

Billing address: 1054 Willow Creek Rd.
Prescott, AZ 86301

Phone number: 445-2987

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

INVOICE ATTACHED

ANALYTICAL REPORT

Client ID SFM00584	Lab ID	FA/AA Au ppm	AA 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

Client ID SFM00584	Lab ID	FA/AA Au ppm	AA 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

REGISTERED ASSAYER
CERTIFICATE NO.
14315
ROBERT G.
CROOK
Date Signed 4-14-86
ARIZONA, U.S.A.

14-Apr-86

Client ID SFM00584	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	11	42
A-056	12	72
A-057	13	50
A-058	14	70
A-059	15	56
A-060	16	40
A-061	17	52
A-062	18	200
A-063	19	235
A-064	20	120
A-065	21	32

REGISTERED ASSAYER
CERTIFICATE NO.
14315
ROBERT G.
CROOK
Date Signed 4-14-86
ARIZONA, U.S.A.

14-Apr-86

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

REGISTERED ASSAYER
CERTIFICATE No.
14315
ROBERT G.
CROOK
Date Signed 4-14-86
ARIZONA, U.S.A.

March 25, 1986

On a field evaluation at the Golden Astre Mine for Sante Fe Mining. A new road has been cut across the ridges from Section 15 through Section 22 to Section 27. The old road appers to veer to the west in Section 22. If the new road crosses several tertiary volcanic, probably felzic composition material and at the north is in pretetonic granodirite of the Crook's Canyon complex which is highly foiliated and nicous coming southward these rocks are interclated with mafic rocks and probably calcarious sediments which are now amfibiloids, probably of the Iron King formation and south, at the southern extent of the road near the mine, we are in the Cleator pelites. We are in the area of the flexure where the rocks change from trending north/northeast to almost due west. The volcanic rocks may or may not be in fault contact with the precambrian. The tertiary rocks may either be down faulted into the precambrian or are filling in local valleys that were present during the tertiary. It is not clear at this time. The east/west striking pegmatite in this area are quite visable. The form mostly within the pelite. The quartz vein that I am standing on, where the road

crosses the saddle just above the vein appears to probably have a more northerly strike. The pelite is variably silicified, small silica veinlets. This is a first approximation of the regional implications.

To the east lies the Crazy Basin quartz monzonite with the pegmatites still striking in the east/west direction. In between in Ryolan Creek there is the tertiary volcanics which appear to be an arm off the major tertiary volcanic field to the south which Mike Ward meant in the thesis at ASU. I have to get ahold of the thesis the next time I am in Phoenix to see what Mike has said about these rocks and to see if his mapping had come this far north and whether or not he has any information on the chemistry of these rocks and the spacial relationships between the precambrian and the tertiary.

The pegmatites are very turmoine bearing, well crystalized, turmoine is present. Usually associated with the more quartz rich sections of the pegmatite bodies. The local silicification and turmoinization 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 for very late stage fracturization of the Crazy Basin quartz monzonite type magnis.

The addit 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 the addit an unknown amount as the addit shows some caving at the entrance and within twenty-five feet of the entrance I did not go into it to check 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 turmoine and locally the turmoine and quartz form bands up to a half inch wide. I would assume at this point that it is quite possible that the silica and the boran making the turmoine has come out of the turmonized Cleator formation and or the pegmatites.

At the entrance to the addit, the Cleator formation rocks strike north forty east and dip fifty degrees to the west. There is local fractures cutting through the pelitic schist and alterations appears to have occurred both within the fractures and to have permeated into the schist. It appears to have recrystalized the muscovite, perhaps bleaching out the biotite and forming hemotitic veinlets and zones around veinlets up to about six inches across in the most hemotized locations. There appears to have been an original lineation within the pelitic schists which is till present. The _____ has a sixty degree rake to the west on the plain of the foiliation.

Lccally, at the boundary between the quartz vein material and the turmoinized schists the turmoine appears to be concentrated along this old lineation. This is from dump material. Some of the dump material contains massive intergroan quartz turmoine rock with limonite and earthy hemotite filling some fractures within it. It is unclear if the iron oxides are after pyrite or not. The presence of a rock that has the appearance or appears similar to the calcarious pogliclase phynocrystic dacites in the north

country in the Spud Mountain and Iron King volcanics is found its float in the streambed 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 and the Spud Mountain volcanics or alternatively that these rocks have become intercollated in this area or alternatively are infolded. It would probably be very difficult to work those relationships out since the tertiary stock of rhyolite appears to have cut off the precambrian section to the north/northeast 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 before we get into the rhyolite to see if there is any contact relationship up there between the Cleator pelite and either Iron King or Spud Mountain volcanics.

Dump material, pegmatite indicates that they are quartz feldspar turmoine muscovite, pegmatites and muscovite could either be late stage magnetic creating a paraluminous melt or just some digestion of Cleator pelite which would contain quite a bit of sericite.

Stockpile veined material at the upward addit looks very

similar to that of the lower addit. Very similar quartz, turmoine and the fairly intense iron oxide here apparently more than at the pyrite then down below. The vein material emplaces 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 even by hydrothermal solutions cause there is a weak hemotitic cement in locally and occasionally some silicified zones making up the breccia. Some highly reflective mineral, very fine grained with an apparent yellow tarnish. It 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, schist. It is cemented by silica. Could this possibly be the root zone of a hot spring system?

Just south of the road you come across some pegmatites that

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 a possity of turmoine. The turmoine seems to be associated with the east/west dikes of pegmatites.

The east/west trending of pegmatites also appear to be fatter, more discontinuous and much more shallowing dipping. The north/eastern 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 foiliation and layering within the Cleator pelite and is unclear yet as to whether or not they cross cut the more turmoine rich pegmatites.

Today is Wednesday, March 26, 1986 and we will be sampling the Golden Astre property for Sante Fe. The first sample is taken at the northern most addit on the dump and it is Sample A-045. It is a massive quartz turmoine limonite rock. The iron oxide may very well be at the pyrite. Sample A-046 was also collected from the dump. It is a sample of the quartz vein with turmoine but without limonite and Sample A-047 is a sample of dump material which is just quartz vein and no iron oxide or turmoine. These

three samples were taken to see if the prescious metals can be characterized in any specific type of mineralology 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 sericite schist. It appears to have been slightly affected by weak sericite recrystalization. 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 himotite and the himotite bled into the schist about up to two to three inches locally, probably by difusion. The sample was either highly weathered or recrystalized 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 addit on the vein just south of the road just above the switchback. Vein material contains massive quartz, quartz turmoine and quartz turmoine 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 recrystalized 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 it is the pelitic schist with local quartz himotite 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 sericite biocite pelitic rock which has been fractured and locally iron stained along the fracture. It looks like himotite plus or minus some

limonite. It is brecciated and this brecciation appears to be just a series of intense fractures. It does not appear that any combination of the fragments occurred and the pegmatite that lies above it may have acted as a seal to the fluids that were moving to the rock and perhaps this is a form of hydrocracking without any silicification.

Sample A-056 was higraded, quartz turmoine 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 recrystalized 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 just a highly weathered metapelite with a small two by three inch fracture filling of quartz and I sampled it including all the quartz, hopefully 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 turmoine veins and an average of about light to moderate iron staining and some intense hemotite along the fractures.

Sample A-060 was collected in the road from a quartz turmoine veinlet and the surrounding schist in a two by three foot panel is located ingrown next to the outcrop on the southwest side of the road and the pelitic rock was fairly fresh and I just collected it to see how much of it in fact the little veinlets have interassociation with the clean, unaltered pelite.

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

Sample A-062 is a channel sample about twenty feet in length averaging the stockworks apart of the vein in the average workings. It is highly fractured, many minor veinlets up to three

inches of hemotite and locally veinlets up to six inches across of the quartz turmoine 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 hemotite plus or minus turmoine 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 about seventy feet deep on an incline shaft back to the northwest. The vein seem to be thinning down, but the altered stockworks 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 or so. 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 was collected from a higrade sample of what is interpreted as a hydrofrac burchuence and silicification and hemotite alteration in the cement between previous silicified fragments and quartz be brecciated and the last sample, A-066 was collected in the road from the tertiary rhyolite which was locally lightly silicified and brecciated, showed flow banding and possibly flow brecciation. This is the rock type that Caruso apparently got gold and molley from.

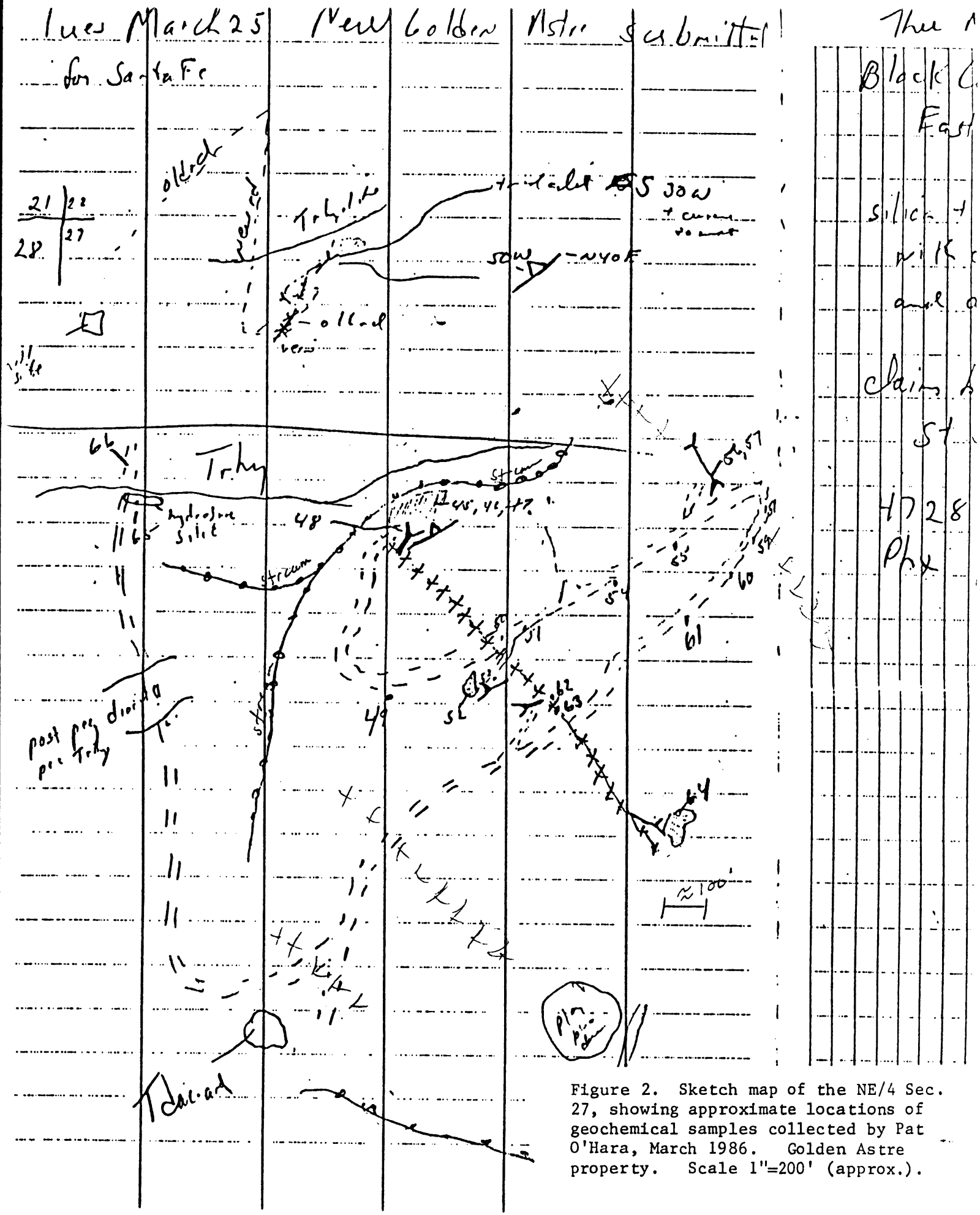


Figure 2. Sketch map of the NE/4 Sec. 27, showing approximate locations of geochemical samples collected by Pat O'Hara, March 1986. Golden Astre property. Scale 1"=200' (approx.).

MONITOR GEOCHEMICAL LABORATORY INC.

(702) 738-3236

744 South Fifth Street
P.O. Box 1901
Elko, Nevada 89801

F.M.C.
DENVER
DATE RECEIVED
AUG 24 1981

Certificate of Analysis

Inv. #5236

Client: F. M. C. Corporation
D. Krasowski

Date: August 19, 1981
Client Order No.:

Analytical Methods: Au - Fire Assay

CC:

SAMPLE #	Fire Au(oz/ton)
101-K-121601	.050
121602	.656
121603	.042
121604	.018
121605	.014
121606	.400
121607	.018
121608	13.500
121609	.010
121610	1.810

Joseph D. Koch
Manager

Greater than 1000 ppm reported as percent (Assay)
* Break in numerical sequence

3314 POLELINE

INTERMOUNTAIN ANALYTICAL SERVICES

(208) 237-3300

DENNIS POCATELLO, IDAHO 8320

CERTIFICATE OF ANALYSIS

Date Submitted: 8/17/81

Submitted By: FMC - Krasowsk.

General Description: Rock & drillcuttings

Results Needed By (Date): 40/01-K

F.M.C.
DENVER
DATE REC'D
SEP 1 1981

LAB NO.	SPECIFIC DESCRIPTION	OZ/T Au	OZ/T Ag		
	121631	1	1		
	1632	0.001			
	1633	0.001			
	1634	1			
	1635				
	1636	1	0.1		
✓	1637	0.054	1		
✓	1638	0.233			
✓	1639	0.075			
✓	1640	0.230			
	1641	-0.001			
	121642	-0.001	1		

INV# 1297

Certificate #: 81-09-0417

(Continued - Please Turn over)

(208) 237-3300

POCATELLO, IDAHO 83201

F.M.C.
DENVER
DATE REC'D.
AUG 3 1981

CERTIFICATE OF ANALYSIS

Date Submitted: 7/3/81

Submitted By: FMC - Krasowski

General Description: Rock & Soil

Results Needed By (Date):

40101-K

LAB NO.	SPECIFIC DESCRIPTION	OZ/T Au	OZ/T Ag	PPM As	PPM Sb

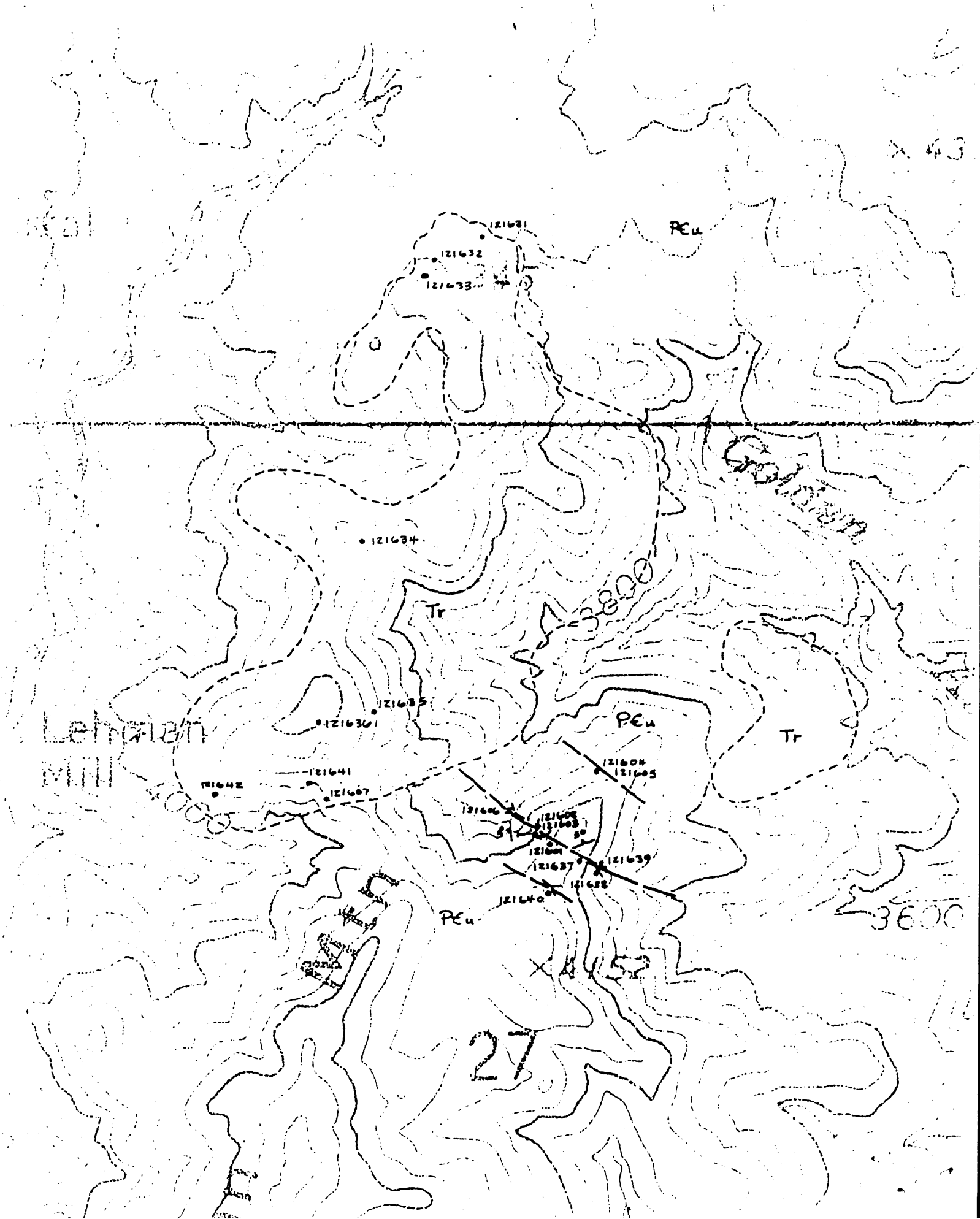
LAB NO.	SPECIFIC DESCRIPTION	OZ/T Au	OZ/T Ag	PPM As	PPM Sb	PPM Mo
	001773	Y	1	-14		
✓	121601	0.061	-0.1	-14	-5	3
✓	121602	0.780	0.2	-14	-5	7
✓	121603	0.023	-0.1	42	-5	8
✓	121604	0.017	-0.1	20	-5	4
✓	121605	0.020	0.2	30	10	5
✓	121606	0.342	0.4	42	-5	10
	121607	0.015	-0.1	-14	-5	-2
	121608	+3.00	0.7	70	-5	3
	121609	0.007	-0.1	17	-5	-2
	121610	2.21	1.0	250	20	4

Date Reported: 7/3/2

Analyst:

Certificate #:

(Continued - Please Turn Over)


121631
121632
121633
PEu
121634
Tr
3800
121635
121636
Lehman
Mtn
121641
121642
121667
PEu
Tr
121604
121605
121606
121603
121601
121637
121639
121638
121640
PEu
3600
27

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 ore 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	0.14
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.

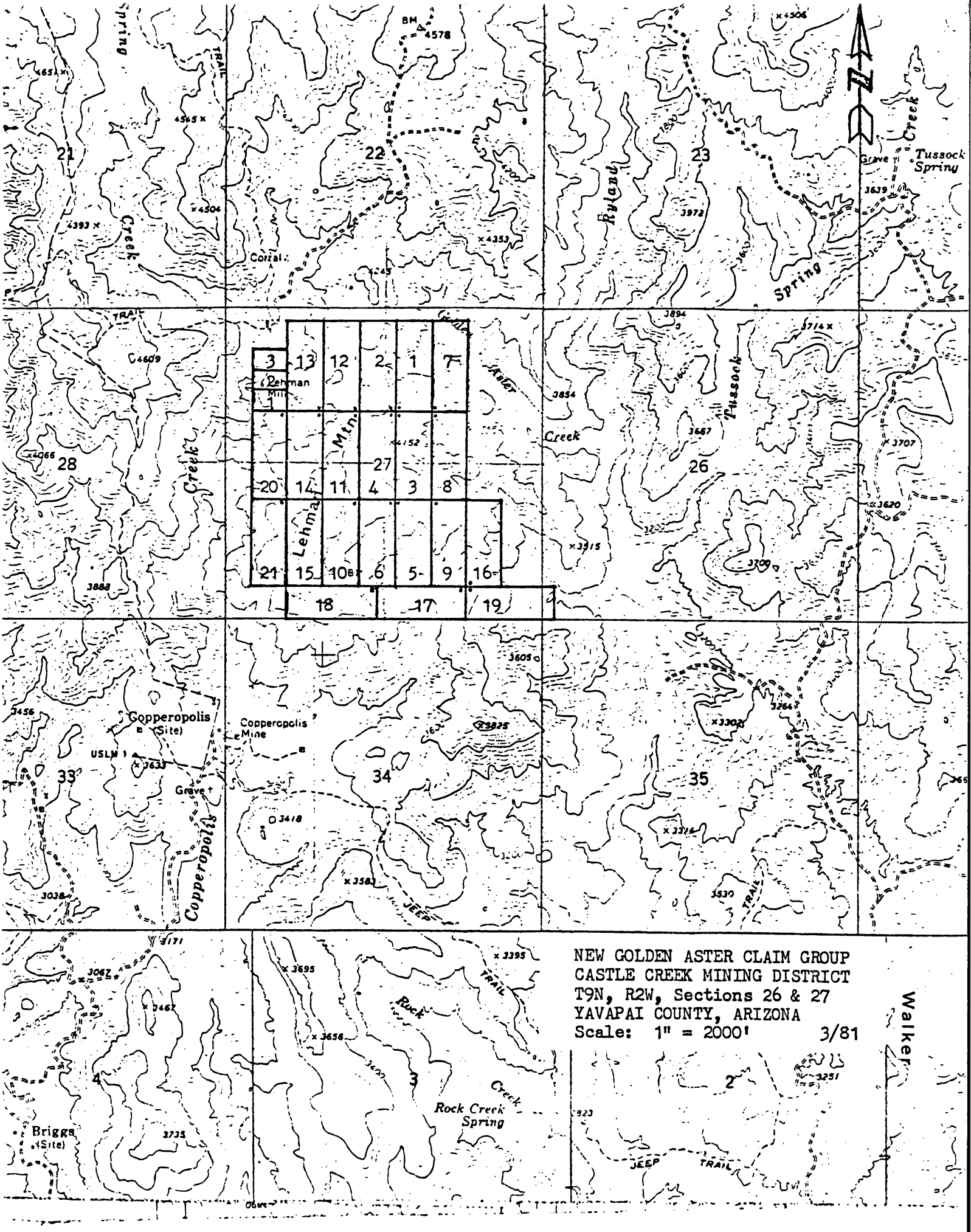
Water is available approximately 1500 feet to the west on the three (3) NEW GOLDEN ASTER MILL SITES, located on Spring Creek.

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


NEW GOLDEN ASTER CLAIM GROUP
CASTLE CREEK MINING DISTRICT
T9N, R2W, Sections 26 & 27
YAVAPAI COUNTY, ARIZONA
Scale: 1" = 2000'
3/81
Lehman Mtn.
Lehman Mill
Copperopolis (Site)
Copperopolis Mine
Copperopolis Creek
Rock Creek Spring
Tussock Spring
Ryland Spring
Briggs (Site)
Walker
Corral
Grave
TRAIL
JEEP TRAIL
N

PHONE: 473-3073

CERTIFICATE OF ASSAY

FOUNTAINS ASSAY SERVICE

BOX 806
MIAMI, ARIZONA 85539

Feb. 4, 1981

Mr. [illegible]

[illegible] Resources Corp.

	% Copper	% Oxide Copper	Oz/Ton Gold	Oz/Ton Silver	% Lead	% Zinc
One sample Golden Astor # 1			Trace	.04		
" " " " # 2			1.16	.16		
" " " " # 3			.24	.84		
" " " " # 4			.12	.62		
" " " " #5			.30	.18		
" " " " # 6			.04	Trace		
" " " " # 7			.24	"		
[illegible] Chart P.O. 351			.005	.56		

2/4/81

(COPY)

THE 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 covers 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 pegmatites 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.

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 Rattlesnake vein promises to be a producer of good grade ore; a 2 feet cut across the quartz giving 0.40 oz. gold; a 3 feet cut giving 0.24 oz. gold and a sample of 34 feet in length and 18 inches to 24 inches in width, giving 0.12 oz. gold.

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

	Per Ton Assays oz. gold	Recovered %
Heads	1.85	100.
Bullion from Amalgamation	0.7775	42.027
Concentrates		12.630
Cyanidation		38.557
	1.72445	93.214
Tails from cyanidation	0.135	6.587
Unaccounted for		.199

No. 2 adit has 170 feet of drifting, 30 ft. of crosscut no ore, 20 ft. crosscut into hanging 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 2 ft. streak of quartz 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 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. gold.

No. 4 adit was also started in the hanging wall west of the vein and had not yet advanced far enough to cut the vein.

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

No. 1 East adit is a 70 feet crosscut 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.

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 cut 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 a 40° slope 10 feet below collar gives for 6 feet an average of 0.93 oz. gold. At 20 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 1.42 oz. gold.

STRAIGHT CYANIDATION

Heads	1.85	
Tails	0.14	
Recovered		92.42%

Pulp 100 mesh:
Solution 5.3 lb NaCn
Cyanide consumption 1 lb. NaCn per ton
Lime consumption 7.7 lb CaO per ton
Leaching
Time 72 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.

No.	Mark	Gold Oz.
1.	E 2" adit foot wall at breast 22"	0.02
2.	" " " " in floor against N wall at 26' from portal 17"	5.80
3.	" " " 5 streaks qtz of 2 to 6" through 12' porphy, portal	0.06
4.	E #1 adit 6' cut S side at 18' from portal porphry	0.01
5.	" " " breast 70' from portal 6" to 12" streak across drift	1.25
6.	" " " at 40' from portal 18" cut both sides	0.05
7.	" " " pegmatite between two fault planes 5'	0.08
8.	Apex top work on N side 24" cut, end open cut above raise	1.88
9.	" " " " " 2 15" cuts porphry	0.06
10.	" " " 3' below collar winze 2 cuts 30" and 36"	0.72
11.	" " " 2" and 6 " streak quartz above #10	0.20
12.	" " " porphry above #11 20"	0.10
13.	No. 1, 20' down winze N end 19"	1.42
14.	No. 1, Raise to top works up 20' at bend 24"	1.32
15.	" " " 2' on top of (in hanging from) #14 porphry	0.08
16.	" " " 17" in hanging from # 15--qtz above porphry	0.36
17.	" " porphry at portal 42"	0.04
18.	" " bottom raise and breast adit 10'	0.14
19.	No. 2 adit 6" - 8" to 50' from portal	0.16
20.	No. 2 adit 2' cut qtz in back upper stk 50' to 60' portal	0.46
21.	" " " 2' " " under #20 and over #22	0.80
22.	" " " 18" " " " #21 from 50' to 60' from portal	0.48
23.	" " " 2' " " at portal	1.50
24.	" " " 28" cut qtz for 10' at between 62' and 72'	0.10
25.	" " " 30" " tourmaline at 73'	0.08
26.	" " " 20" cut much sulphide 82' to 88'	0.30
27.	" " " 1st left Xcut 6" to 12" qtz at 9' from drift	3.50
28.	" " " main drt from 100' to 115' 7.5' high	0.16
29.	No. 3 Adit, breast pegmatite gouge hanging wall stk 8"	0.24
30.	" " " " 2nd stk from hanging wall 21" wide	2.80
31.	" " " " 3rd " " " " 21" wide	1.80
32.	" " " ftwl. side at 40' from portal 5' from brst 36"	0.40
33.	" " " qtz. 4' from brst 41' from portal 18" cut	2.40
34.	" " " white porphry hgn wall of vein at 40' portal	0.40
35.	Kerrigan vein, upper exposure 3'.	0.24

36.	Kerrigan vein lower 2'	.40
37.	" " 24' adit 18" to 24" along vein	0.12
	No. 1, 30 tons dump	2.50
	No. 2, sample from ore pile	0.54
	No. 2, picked sample	7.60
	No. 1, sample 4" streak.	12.80

out

#1

auth. av = 0.846 oz/T.