

### CONTACT INFORMATION

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#### PRINTED: 06-20-2006

# 50FII - D RIGGS REPORT

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

#### PRIMARY NAME: BULLARD

ALTERNATE NAMES: LITTLE GIANT

#### YAVAPAI COUNTY MILS NUMBER: 109

LOCATION: TOWNSHIP 8 N RANGE 10 W SECTION 11 QUARTER N2 LATITUDE: N 34DEG 03MIN 57SEC LONGITUDE: W 113DEG 16MIN 23SEC TOPO MAP NAME: SMITH PEAK - 7.5 MIN

#### CURRENT STATUS: PAST PRODUCER

COMMODITY:

COPPER OXIDE COPPER SULFIDE SILVER GOLD SILICON CALCIUM CALCITE

#### **BIBLIOGRAPHY:**

MAPS - FLAT STORAGE, 2ND DRAWER ADMMR BULLARD MINE FILE & COLVO FILE ADMMR INDEPENDENCE FILE BLM MINING DISTRICT SHEET 341 USBM WAR MINERAL REPORT 1945 REPORT 453 CLAIMS ALSO IN SEC 1, 2, 3, 10 & 12 FOWLER, GEORGE M (EAGLE PITCHER) GEO FILE TOVOTE, W. 1918 "CUNNINGHAM PASS", GEO FILE AGSU OFR 92-1, MINERAL DEP. BULLARD MINERAL DIST. ..., 1992, SPENCER, J. AND REYNOLDS 5 oF11 - D

RIGES PERSORT

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A PRELIMINARY GEOLOGICAL INVESTIGATION ON MINING PROPERTIES OF MICHAEL C. SANSONE

March 13, 1984

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Bullard Peak Area

Maricopa County, Arizona

Transcribed from notes dictated by E. Thomas Riggs

N788 Signed

The following report was prepared by E. THOMAS RIGGS on March 13, 1984.

This information was dictated into a tape recorder while on-site at each of the locations.

The dictated information was later transcribed in the herein form.

The "target area" of this report covers parts of 8 claims which include approximately 70 acres. A map is attached which designates this subject "target area".

Results of 44 samples taken on the 152 claims are included, immediately following this report.

### REPORT BY THOMAS RIGGS OF FIELD SAMPLING TRIP, MARCH 13, 1984.

This is Tom Riggs. With me on this trip are Michael Sansone, Cadmus L. G. Goss (Professional Engineer), Angel Rea and David Rea.

We are starting at the Moore campsite, Site 27. We have just done a 10 assay sample program on the property. We are going to take the samples that have been generally mostly copper and copper sulfates in the area. There was a little bit of copper calcophyrite showing. But it was very little. It seemed like the miners got deep enough to get into the area where the oxidation hadn't eroded the phyrites away. The samples were tarped, takein on 7 foot intervals throughout the vein, well marked, well defined in the area. There is no doubt as to where the vein structure and country rock end. The host rock seems to . be volcanic, very broken. There is quite a bit of brecciation in the ore in certain areas. These 15 to 20 pound samples will be taken to be ground into quarter-inch minus through a chipmunk grinder and then split out. Two samples of these splits will be sent to a control lab and the remaining 8 samples will be run though our lab. The number 10 sample was taken from this area as a waste rock sample just to check the mine run of the glory hole roof. There seems to be about 6 to 12 inches of material left in the roof that may not have been of economic value to mine at that time, considering the costs and methods then available.

The vein goes in a north-northwesterly direction and dips back to the northeast at about 30 degrees. The glory hole area includes an area that is about 60 feet by 60 feet. There are two winzes that go down off of the glory hole. One winze is in a crosscut just to the northwest of the glory hole. The other winze is straight in the northeast corner of the glory hole. The winze in the northeast corner only goes down about 15 feet. It is filled with mud and water. The northwesterly winze goes down about 15 feet then it was drifted on a crosscut back into the northeast direction again. It seem like they were going to intersect the northeasterly winze and then block out the ore that way.

The veins in that area tend to be wider in structure, 38 to 40 inches, measured with a tape measure. The crosscut leaves the glory hole in country volcanic rock. It goes about 60 feet and intersects another vein. At that point there was a glory hole and another decline that was sunk in that vein. In that area there was a major fault that breaks the vein samples 4 and 5. One vein tends to lay back to the southwest and the other one goes back to the north-northwest. On the Northwesterly break there is a secondary winze that goes down and comes to the surface for a haulage road, and it goes down a distance of about 70 feet.

Also in this area we ran onto another decline that we labeled as 27B. It seems to be an extension of the northeasterly vein where the winze comes to the surface there. The decline comes to the surface. It lays in the same area, about 150 feet from Site 27. The vein direction tends to lay the same as in Site 27. The texture of the vein tends to be the same with the same brecciation of broken ore. There is a plug at the bottom so you can only go in about 40 feet. It is full of dirt.

#### Site 26.

We are now on the back side of the Bullard property in what is known as the Unity Group. We have taken 4 samples across a 200 foot face. All samples have been staked. The vein varies in width from 2 feet to 3 feet. There is one extensive dump on this site that is complised of about 250 tons of waste material, mostly volcanic dump. The dump material does assay and run on a leach for copper. There are also some high-grade samples of gold in the dump. In the decline at site 26 the depth of the decline is unknown. Judging from from the amount of muck taken out versus the amount of vein material left, I wouldsay that the decline is approximately 90 feet in length. The vein structure in site 26 is about 1400 to 1600 feet in length. There are various sites along it, mostly declines. We are going to sample all of these declines today.

The dip on the vein is approximately 35 degrees. The material has a large amount of silica in it. There are no pyrites found within the copper zone. One sample, earlier, did show a small amount of free gold. Previous samples across this vein have asayed as high as 3 ounces of gold, and as low as .02 ounces. Average of that last graded sample went 0.4 ounces across the face. The vein lays about 45 drgrees to the west and dips almost to the south.

#### Site 26.

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Site 24.

Site number 24 lies in the Unity Group, on the north side of Bullard Peak. This site appears to be a small prospect hole. We took a sample of it even though the vein width was only 3 to 4 inches wide. The prospect was maybe 5 feet deep.

The area is fully broken up. There is copper extruded out into the volcanic area. There has been tremendour pressurized area in this location. Anywhere there was a fissure, there has been a small amount of copper intrude into the area.

and an graph of milling

## Consultant, geology-exploratory drilling

#### Site 25

At site number 25, there is a considerable decline, with a dump of approximately 400 or more tons. I have picked some high grade samples from this dump in the past that have assayed 2 ounces of gold, however, these were high-grade samples.

Vein width tends to be approximately 3 to 4 feet. Tunnel width is about 8 feet and the height of the tunnel or the decline is about 5 feet.

Sample number 1 was taken from the mouth of the decline, at the dump area. It was taken across the vein, with the vein measuring about 36 to 40 inches. There are two distinct veins, one overlying the other. There is a large amount of chrysocolla, azurite, malachite, picot-copper in these samples.

We went down approximately 50 feet into the decline, which goes on down to a depth of maybe 95 to 100 feet where it caves. At 50 feet we encountered large amounts of pyrites. Number 2 sample was taken from this area.

Number 3 and number 3a samples were taken from the vein material on the surface approximately 50 feet east of the decline. The width of the vein at point was about 40 inches.

All samples were tarped and the fines were caught, except on one sample where the decline was too steep to be able to tarp.

The vein lays at about 45 degrees to the west and dips to the south at about 75 degrees. It tends to do down and then levels off then goes deeper again, a little steeper.

Site 23

The vein at this location tends to strike into the side of the mountain at about 75 to 80 degrees, and approximately 3 to 4 feet in width. There are actually 2 veins here. One is about 2 feet wide and lies about 8 feet from the other one, with volcanic material in between. Samples 1 through 3 (of 4 samples taken from this area) were taken from the first vein referred to here. Sample 4 was taken from the 2 foot wide vein.

We samples across the face, it being about 75 feet across, and we are at the far eastern end of the 1400 foot vein. The vein runs between site 23 and site 26 and is consistent throughout. Consistency is shown by bulldozer cuts at various locations along the vein.

The material is high in silica with a lot of quartzy looking material in it. We also have malachite, azurite and a little pacot-copper showing. There is quite a bit of pyrite showing. We have been about 30 feet into a dozer cut into the side of the mountain in a large excavation. Apparently this is why the pyrites are still showing; they haven't oxidized out.

Site 21

The vein at this location lays to the east and west, standing in a vertical position.

There has been a shaft here sunk to an approximate depth of 75 feet. The vein width appears to be about 12 feet, overall. It is a mixture of rhyolite, a little bit of manganese and a lot of copper. It is hard to tell where the values lie since there is no definite vein structure itself. It is intruded all throughout, like a brecciated type ore. There are pockets of iron and manganese in the rhyolite.

You can see coloration in the substructure for about 250 feet, lying in an east-west direction. It protrudes up the far hill.

There is an overlying cap in this whole area, so it is hard to tell where the veins lie.

We took a sample of a rhyolite base ore that lies just to the northwest of the main shoot. This sample may carry a low-grade gold deposit, and it is initially free of copper. There is a large amount of tonnage of this ore.

We are taking a sample across the deposit. The deposit is about 250 feet wide and probably 400 feet in length. It is kind of a rhyolite blow-out. If it carries a lowgrade deposit, then we can come back and estimate the tonages.

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Site 22

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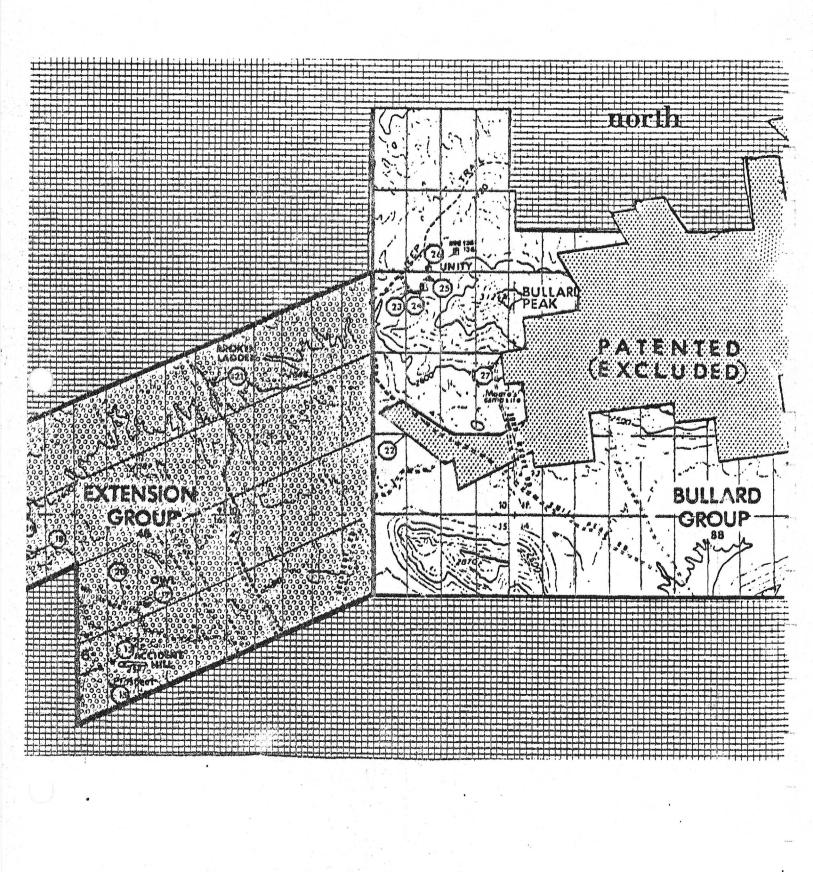
Site 22 is a decline that goes in about 125 feet where there is a rock fall. We have taken three samples, both of the vein material and the dump area. The two samples in the decline were taken at 1/3rd and 2/3rds of the way down.

The material has an iron cap overlay and an iron cap underlay. The copper lies in between. We sampled the iron separate from the copper to check and see where the best gold values were laying.

One sample was taken entirely across the vein. Another was taken from the dump.

The vein dips to the east, slightly southeast, and runs just about southwest. The vein dips down at about a 60 degree decline, pretty steep. The host rock is volcanic in this area.

There are 2 or 3 interesting shear zones in the area. There is a shear in the left-hand wall of the decline, and also a shear zone in the foot-wall.



Date Aoril 6, 1984

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# Date April 6, 1984

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Date Aoril 6, 1984

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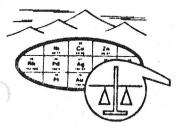
Date April 5, 1984

25-1       .083         25-2       .082         26-3       .116         25-4       .048         048       .048         048       .048         048       .048         048       .048         048       .048         048       .048         048       .048         048       .048         048       .048         048       .048         048       .048         048       .048         048       .048         048       .048         049       .048         049       .048         049       .048         049       .048         049       .048         049       .048         0410       .048         0410       .048         0410       .048         0410       .048         0410       .0114         0410       .0114         0410       .0114         0410       .0114         0410       .0114         04110       .0114         04110       .	26-1       .083         26-2       .082         26-3       .116         23-4       .048         OPE SAMPLE INFORMATION         Dete collected:	25-1       .083       .082         26-2       .082       .082         26-3       .116       .048         25-4       .048       .048         Date collected:       March 13, 1984       .048         Date collection:       Unity Group exploration site	LAU NO.	IDENTIFICATION	UZ. PI	LH TON	PERCENTAGES					
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SKYLINE LABS, INC. 1775 W. Sahuaro Dr. • P.O. Box 50106 Tucson, Arizona 85703 (602) 622-4836

REPORT OF ANALYSIS

JOB NO. URU 001 May 22, 1984 B-21-2 TO B-27-9 PAGE 1 OF 1

REALTY INVESTMENT COMPANY Attn: Mr. Michael C. Sansone P.O. Box 10402 Phoenix, Arizona 85064

Analysis of 8 Ore Samples

		ITEM	SAMPLE	NUMBER	FIRE Au (oz/t)	ASSAY Ag (oz/t)		
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		2	N=22=4		.100	. 38		
		3	8-23-2		.720	1.08		
		4	8-23-3		1.150	. 49		
	. '	5	8-25-3v		. 165	.12		
		6	B-26-3		.090	.21		
		7	8-27-6		,445	.64 .		
		8	8-27-9		. 600	.46		

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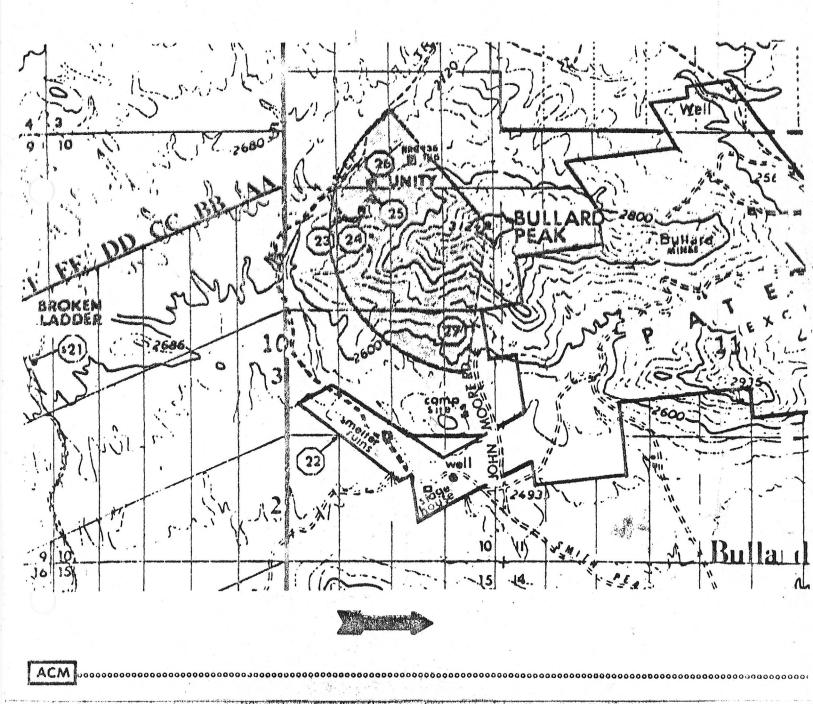
Charles E. Thompson Arizona Registered Assayer No. 9427

William L. Lehmbeck Arizona Registered Assayer No. 9425

James A. Martin Arizona Registered Assayer No. 11122



From the samples assayed and reported on the preceding pages, 8 of the splits were submitted to Skyline Labs, Inc., Tucson, Arizona for comparative analysis. Following is the Report of Analysis by Skyline Labs, Inc.



# "A GEOLOGICAL INVESTIGATION OF THE BULLARD MINE, AGUILA, ARIZONA" Jeffery W. Giese April, 1984

The following report by JEFFERY GIESE was made in April, 1984.

The "target areas" are those claims near Bullard Peak on the West and Southwest.

The report mentions the possibilites of bulk, low-grade porphyry gold deposits.

In light of such bulk processing, MICHAEL SANSONE has filed for 160 acres of land controlled by the BLM to be used as a millsite. The acreage would provide space for leach pads sufficient to do several thousand tons of ore per day.

### INTRODUCTION:

The

town of Aguila, Arizona, is located twenty five miles west of Wickenburg, Arizona, on US 60. The field area for this investigation is the Bullard Claims located eleven miles to the north-west of Aguila. The area is accessible by seven miles of county maintained road and four miles of road which is passable by two-wheel drive vehicle. Present road conditions are good. Vegetation is typical of the upper Sonoran Desert. Water does exist in the mine workings and local wells.

The area has been mined intermittently since the late 1800's. Early records are sparse to non-existent. In the 1940's, records indicate 5,500 tons of ore removed averaging 0.32 Jz/ton of gold, 0.24 oz/ton of silver and 2% copper. In the 1950's, ASARCO took 43 samples which averaged 0.25 oz Au/ton, 0.5 oz Ag/ton and 2.67% copper. The area has been mined as recently 1980. as There are 152 claims in the Bullard group of claims held by Michael C. Sansome. These claims surround a block of patented claims of record.

#### ABSTRACT

The Paleozoic stratigraphy of the Bullard area claims has been obscured by the shallow intrusion of a Laramide Andesite porphyry. In the Mid-Tertiary, the area was effected by the metamorphic core development in the Harcuvar Mountains with subsequent listric normal faults. The area also has mid to late Tertiary sediments and volcanics. The ore forming event(s) are post Andesite intrusion.

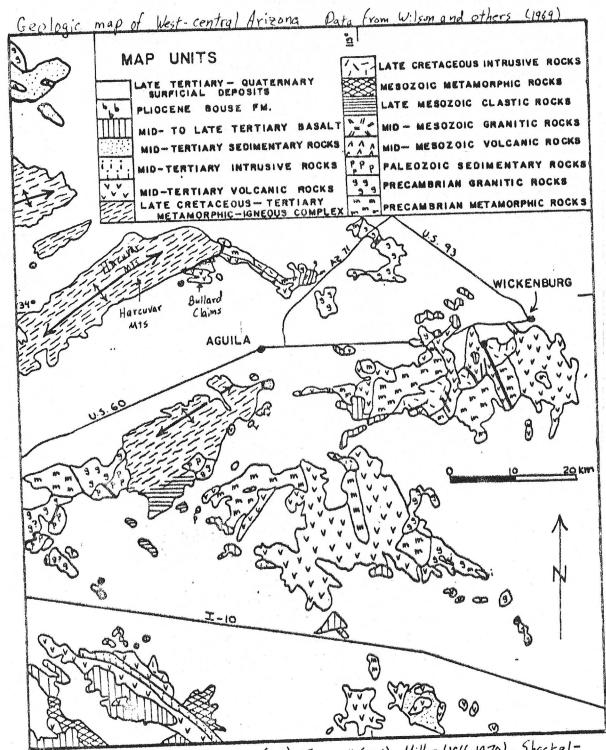
Mapping and sampling in the Bullard claims indicate six veins with an estimated total of 673,000 tons and value of 90, million dollars. The possibility of a bulk, low-grade porphyry gold deposit may be considered as drilling proceeds to prove vein targets. Geophysics should be the next step at the Bullard property but only after the acquisition of the patented property.

### **REGIONAL GEOLOGY:**

Bullard claims occupy hills of low to moderate relief The situated on the south-east flank of the Harcuvar Mountains. These mountains were formed twenty to thirty million years ago by a metamorphic/tectonic event. There are several of these "metamorphic core complexes" in the Basin and Range province of both Arizona and California; the Harcuvars seem to be typical of them. complexes appear as broad up-arches of Pre-Cambrian These basement. As the up-arching proceeds, the Pre-Cambrian develops sub-horizontal joints and foliations while the Phanerozoic rocks above the basement are typically faulted by low-angle, listric, normal faults. These faults result in highly deformed, near vertical dipping Phanerozoic strata on the flanks of the metamorphic core complex.

The Laramide orogeny has effected many areas of the Basin and Range. The area of the Bullard claims are now largely occupied by an intrusion of this age. These rocks intrude the Phanerozoic strata from 100 plus to 30 million years ago and subsequently rotated through 90 degrees by the listric faults. Mineralization in the area is post-intrusive. Mineralization is cut by late Tertiary faults.

Stephen J. Reynolds



modified using maps of Cigneenell; (1965), Jemmett (1966), Miller (1966, 1970), Shackelford (1975), Rehrig and Reynolds (in press), Rehrig and others (this volume), Marshak (1979), Arizona Public Service (1975), and regional and detailed mapping by S. Reynolds.

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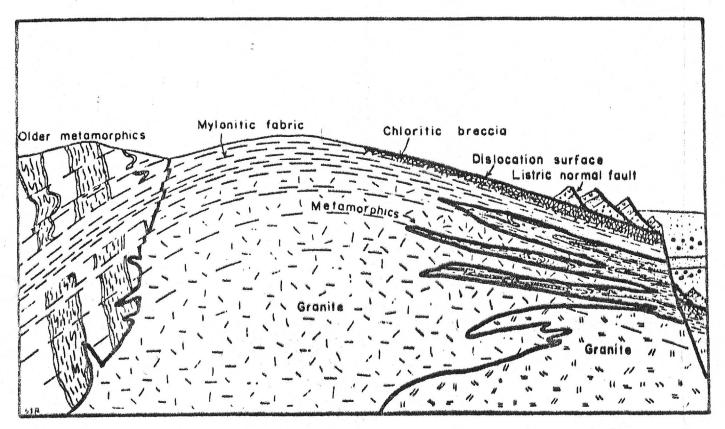
#### GEOLOGY OF THE BULLARD CLAIMS:

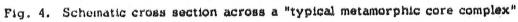
The story of the Bullard claims is basically one of Phanerozoic sedimentation and volcanism which are intruded by a Laramide porphyry. All of these rocks are faulted and locally overturned by listric faults as the metamorphic core complex develops to the north-west. Mineralization is post-porphyry but before some late-Tertiary faulting.

The Pre-Cambrian in the claim's area is now represented by the granites and gneisses in the metamorphic core complex of the Harcuvar Mountains. These rocks are separated from the rocks of the Bullard claims by a major east-north-east fault that is covered but probably listric and normal.

The sediments of the area are conglomerates, sandstones, shales and limestones of probable Paleozoic age. These rocks have been intruded by a Laramide Andesite Porphyry. Later deformation has resulted in the sediments generally striking east-west and dipping near vertical. Some sediments and volcanics are not involved in the intrusion and possessing different bedding attitudes are mapped as Tertiary in age. Stephen J. Reynolds

AGS Digest Volume XI





#### ECONOMIC GEOLOGY:

The mineralization in the Bullard claims occurs as veins in fault and shear zones. The possibility of a bulk, low-grade, disseminated gold porphyry warrants further investigation. The veins must be the present target, however, since a porphyry could not be considered porperly until a large amount of subsurface data has been obtained. This data may be generated as a byproduct of drilling for vein targets.

The age of mineralization is younger than the andesite porphyry and older than late-Tertiary faulting. The occurrence of good mineralization at the "Broken Ladder" hosted in the Pregneiss may indicate that veins will extend into base-Cambrian and could be younger than metamorphic core complex ment All other veins are hosted in the andesite development. Indirect evidence suggests that mineralization may porphyry. extend to greater than 900 feet; this distance is unusually large for this type of deposit, but believable. Another geologist working in the area suggests that, "samples indicate that lower in the section higher average values may exist." This, again, would be unusual for this type of deposit, but could make dev-In some cases, notably Red Hill and elopment attractive. possibly John Moore and Unity Group, veins are still only a few feet wide, but several, parallel veins occur in a shear zone 10's of feet thick.

Veins exposed to date generally strike north-west and dip

### ANDESITE PORPHYRY

From Cretaceous to mid-Tertiary, this Laramide pluton intruded into a shallow level of the crust. Its intrusion, as dikes and sills, disrupted and assimilated all previously existing strata. In a few outcrops the porphyry weathers to mimic an extrusive texture. Although some portions of the unit may have been extrusive volcanics, the larger majority of field relations indicate an intrusive origin for this rock.

The Andesite porphyry of this report is equivalent to the "Diabase" of the Delise (April, 1980) report. Although locally the rock may be diabasically textured, more generally the rock has a porphyritic texture. The Andesite porphyry is the host for at least one wall, and usually both walls, of all mineralized veins in the area, with the notable exception of the "Broken Ladder" mine.

A subject beyond the scope of both this paper and existing samples, but a subject that does deserve further investigation, is that the Andesite porphyry could be the host of a bulk, low-grade, disseminated gold porphyry-type deposit. The Andesite porphyry makes up the vast majority of the outcrops of the area and is under a thin alluvial cover in the Aguila Extension claim block. This rock may extend another 2 miles to the west and several miles to the north and east of the Bullard Claim area.

#### ROCK DESCRIPTIONS:

Andesite Porphyry to Porphyritic Diorite

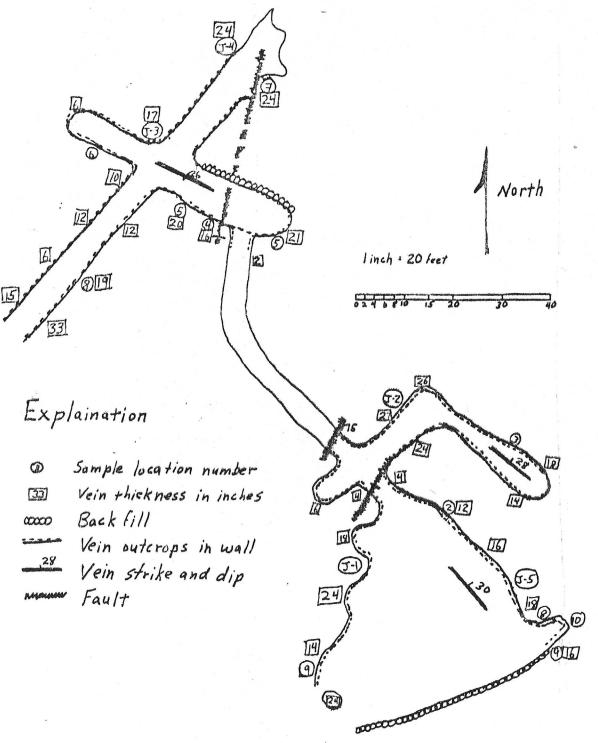
Rock weathers black, green and red; grey on fresh surface, usually high fractured; slope former. Plagioclase: 20-50% white to grey, euhedral, rarely corroded, flow oriented (?), porphyritic, argillic altered. Augite: less than 10% euhedral, black, chlorite altered. Aphanitic: 20-70% fine granular, grey. Accessory: Hornblende, magnetite and olivine. Secondary: Quartz and calcite.

#### Sedimentary

Clastics are usually red and cliff formers. Sandstone is rarely well rounded and sorted. Most commonly the rock is conglomerate. Pebbles to cobbles are usually granitic, rarely basaltic and occasionally lithic. Rare cut and fill. Shales are fissile to blocky, aphanitic. All rocks have suffered at least low grade metamorphosis.

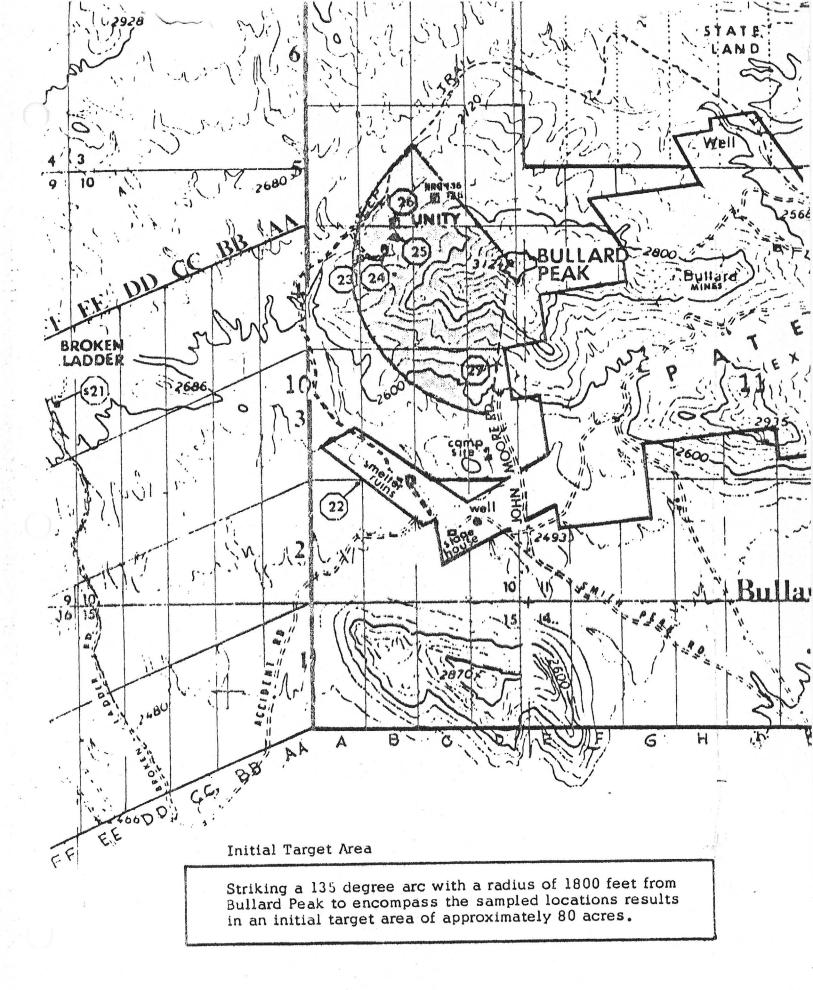
The freshest rock in the area are the limestones. Breciated in the hanging wall of the Bullard Mine, they appear very well preserved in the flats of the Extension Group of 48 claims. They are composed of 80% micrite with 20% chert nodules. Echinoderm spines have been replaced by silica and well preserved. Other fossils may be fusulinid and rugose coral could assign an upper Paleozoic age.

Plan Projection of the John Moore Mine



north-east but a few strike north-east and dip south-east. Cutting faults generally strike north. Mineralized veins occur as silicates, carbonates, oxides, and sulfides. The most prominent minerals are chrysocolla, malachite, azurite, cuprite, chalcopyrite, hematite and pyrite. The majority of the vein material is quartz and calcite gangue. Gold and silver occur as electrum and as native elements. The wall rock adjacent to veins have been bleached (sericite or argilic alteration) and occasionally chloritized.

Economic veins form in dilational portions of faults. Veins of considerable thickness can pinch to non-existent in a matter to tens of feet; veins can be displaced by later faulting. Subsurface drilling can pass through uneconomical portions of an otherwise rich vein; you really don't know what's there until it's dug up. However, by linear measurements and estimates, and through sampling establish average grades, we can generate estimates of tons and value.



The following Geological report was prepared for NRG Resources by KNOXIE DE LISE on patented claims which adjoin the 166 claims owned by MICHAEL SANSONE.

This report and test samples extend into the claims controlled by Sansone.

Plate One, at the end of the report, shows that the highest reported gold content was assayed from samples #135 and #136. These two samples came from Sansone claims.

A Start Start

1 . 1

## GEOLOGIC RECOMMENDATIONS:

The two veins west of John Moore have not been sampled; each has an audit which needs mapping and sampling. More samples could be taken between existing sample locations to get a better idea of the mineralization which is in outcrop and in the shallow, existing mine workings.

The most emphatic recommendation is a geophysic program. The method to use would probably be induced polarization. The first uses would be on the "Owl" and "22" to determine their strike length and depth. By these small scale surveys we may determine how effective this method is in the detection of ore at the property. It should prove successful and the next place for a survey would be on a larger scale in the areas south of the Unity Group and west of John Moore. If this is still giving good results, then a still larger scale survey should be undertaken in the Aguila Extension.

The better anomalies of the geophysical survey should be drilled into. Drilling may produce favorable results on the dip side of veins. The first intercepts of the veins should be approximately 200 feet below surface. Deeper holes will probably not be used unless favorable intercepts occur. It bears repeating that drilling can pass between the rich portions to show poor results on a good vein. The most enlightening program could well be a geophysical survey.

Jeffeny W. Siese

Jeffery W. Giese

Wickenburg, Arizona April 30, 1984

# JOHN MOORE VEIN

portion of this vein is on the patented property.

1500 x 600 x 2 = 1,800,000 cu.ft. 1,800,000/13 = 140,000 tons.

12 samples within this structure, processed in 3 laboratories, yielded an overall average of .411 oz/ton Au.

## JOHN WEST VEINS

To the west of John Moore I found two different veins with attractive widths.

JW 1	500 x 500 x 3	-	750,000 cu.ft.
	750,000/13	3	57,000 tons
JW 2	700 x 500 x 4	1	1,400,000 cu. ft.
	1,400,000/13		107,000 tons

One sampling from this area yielded .334 oz/ton Au.

# UNITY

This could prove to be the richest vein on the property.

 $2000 \times 600 \times 2 = 2,400\,000$  cu. ft. 2,400,000/13 = 185,000 tons

An average of 19 samples, processed in 3 laboratories yielded .498 oz/ton Au; .48 oz/ton Ag.; and 2.3% Cu.

These three groups lie within an arc of 135 degrees, having a radius of 1800 feet from Bullard Peak, and comprising approximately 80 acres. Collectively, this area should be designated as a "target area".

Average values of \$350/oz Au., \$10/oz Ag. and 66¢/lb. Cu. are used herein. This "target area", totalling 498,000 tons, would yield <u>\$96,491,940.00</u>.

# BROKEN LADDER

In the Aguila Extension claims is the Broken Ladder. This is a good looking vein with inclined shaft whose extension is under the Tertiary gravels. For this, we must estimate not only depth, but also length.

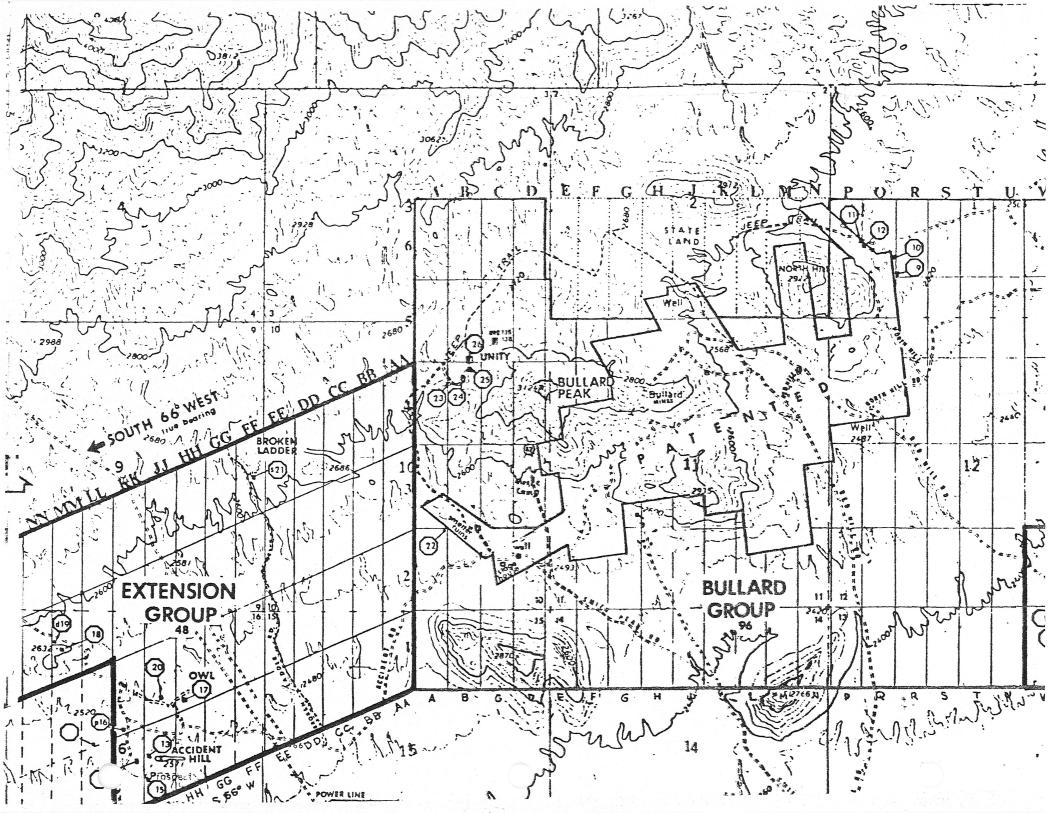
 $1000 \times 600 \times 2 = 1.200,000 \text{ cu.ft.}$ 1,200,000/13 = 92,000 tons

Four samples, processed in three laboratories, yielded .557 oz/ton Au. This yield, coupled with the district average of .23 oz/ton Ag and 2.3% Cu. and 92,000 tons would result in \$22,894,720.00.

The combined total of yields is:

Total Value	\$119,386,660.00
	ALLU 000 000 00
Broken Ladder	\$ 22,894,720.00
"Target Area"	\$ 96,491,940.00

The above sites on which these estimates have been made comprise only a small portion of the total number of known sites within the boundaries of the 152 lode claims owned by Sansone.



# "A GEOLOGIC INVESTIGATION OF THE BULLARD MINE, AGUILA, ARIZONA" Knoxie C. DeLise October, 1981

I, Knoxie C. DeLise, do hereby certify in the County of San Diego, California, that:

- This report was prepared for NRG Resources, Ltd., and that I have no interest in NRG Resources, Contract Mining Corporation or Brunyan Resources, Ltd. I also certify that I will not in the future receive any interest in these companies.
- This report is based on my personal examination of the Bullard Mine patented mineral claims.
- I hereby certify that I hold neither direct nor contingent interest in NRG Resources Ltd., Contract Mining Corp. or Brunyan Resources Ltd.
- I am a consulting geologist with a business address at 9043 Harmony Grove Road, Escondido, California 92025.
- 5. I am a graduate of the University of California, Berkeley, with advanced degrees in the geological sciences in 1955 and 1957.
- 6. I am a duly registered and licensed professional geologist and a member in good standing of the Society of Mining Engineers, the American Association of Petroleum Geologists, The Society of Economic Paleontologists and Mineralogists and other professional associations.

page 1 of 2

# PROFESSIONAL STATEMENT (continued)

- 7. I have practiced my profession for more than 20 years.
- Consent is hereby granted to NRG Resources Ltd., to reproduce all of this report with or without plates, figures or appendices.

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this	24	e.		day of _	Gë	toler	·,	1981
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page 2 of 2

# TABLE OF CONTENTS

# Page

1.	ABSTRACT	1
2.	INTRODUCTION	3
	A. Location	3
	B. Arca of Interest	3
	C. The Claims	5
3.	PAST WORK	5
4.	GENERAL GEOLOGY	6
	A. Introduction	6
	B. Lithology	7
	a. The Diabase	7
	b. The siliceous Sandstones	8
	c. The Meta-shales	9
	d. The Conglomerate	9
	C. Structure and Stratigraphy	10
5.	ECONOMIC GEOLOGY	18
	A. The Mineralized Zones	18
	B. Assays and Values	22
	C. Potential and Observed Ore Areas,	23
6.	DEFINITION OF MINERALIZED RESERVES	24
	A. Measured Mineralized Reserves	24
	B. Indicated Mineralized Reserves	25
	C. Inferred Mineralized Reserves	25

# TABLE OF CONTENTS

		Page
7.	RESERVES	- 25
	A. The Bullard Vein	- 25
	B. Area West of Stone Cabin	- 26
	C. Fault Area of Sulla Claim	- 26
	D. Fault Zone of International Claim	· 27
	E. The Bullard Extension	- 28
	F. Other Reserves	- 28
8.	RESERVE SUMMATION	29
9.	PROGRAM OF EXPLORATION	29
	A. Geophysics	29
	B. Drilling	30
10.	PROGRAM OF MINE DEVELOPMENT	· 32
11.	ORE TREATMENT	34
12.	MISCELLANEOUS	35
13.	REFERENCES	36
	PLATES	

# FIGURES

 $f_{1} <$ 

Figure	٨	(Location map)	4
Figure	1	(Paleogeographic Map; Cambrian to Mississippian)	11
Figure	2	(Paleogeographic Map; Pennsyl- vanian)	12
Figure	3	(Paleogeographic Map; Late Triassic)	14
Figure	4	(Paleogeographic Map; Late Jurassic)	15

# TABLE OF CONTENTS

# Page

J

Figure	5	(Paleogeographic Map;	
		Cretaceous)	16
Figure	6	(Paleogeographic Map;	
		Late Cretaccous/Early Tertiary) -	17
Figure	7	(Paleogeographic Map;	
		Middle Tertiary)	19
Figure	8	(Paleogeographic Map;	
		Late Tertiary)	20

#### ABSTRACT

The Bullard Mine consists of 26 lode claims in southwest Yavapai County, Arizona. The outcrop exposures are visible in the foothills adjacent to, and southeast of the Harcuvar Mountain Range.

Economic conditions have controlled mining at the Bullard since the late 1800's. Subsequently, such mining has been intermittent with probably 10,000 to 20,000 tons having been extracted up to 1970.

The area consists of Paleozoic clastic strata and limestones, possibly of Devonian or Mississippian age, intruded by thick diabase sills, all of which have been rotated to vertical. The diabase appears to be Late Cretaceous or Early Tertiary and is related to the Laramide orogeny. Mineralization is expressed as silicates, carbonates, oxides and phosphates of copper with small quantities of associated gold and silver, as well as sulphides. This mineralization appears in faults, shear zones, fissures and some bedding planes and pre-dates the major, Late Cretaceous orogenic movements. Bullard mineralization occurrence is seen as intrinsically related to the diabase intrusive. Tertiary faulting has subsequently superimposed a complex structrual pattern upon these beds.

Mineralized zone reserves are calculated as: 40,000 tons (measured), 72,693 tons (indicated) and 612,643 tons (inferred). Average assays show .22 oz/ton gold, 0.23 oz/ton silver and

-1-

about \$144.00 per ton gross (using \$450.00 per ounce gold, \$10.00 per ounce silver and \$.70 per pound copper.

The implied gross value of the mineralized zones is calculated on a total of 725,336 tons with the resulting figure being \$104,450,000.00.

Treatment procedures of Bullard potential ore are still being studied but early test results indicate crushing to minus 40 mesh with gravity separation to reach 95 to 97% recovery of all sulphides. This would be followed by acid copper leach processes.

# 2. INTRODUCTION

#### A. Location

The Bullard mining claims are situated in the Pierce Mining District of southwest Yavapai County, Arizona, 11 miles north of Aguila. The town of Aguila, with a population of around 1000, is on the Santa Fe Railroad, 25 miles west of Wickenburg and 80 miles west-northwest of Phoenix (see figure A).

All-year highways (U.S. 60 and Ariz. 71) reach Aguila with most services available there or in Wickenburg. Roads from Aguila to the claim area are good but can be impassible for a few days after seasonal rains. Adequate water is available for mining purposes from several wells on and near the property and in abandoned shafts.

B. Area of Interest

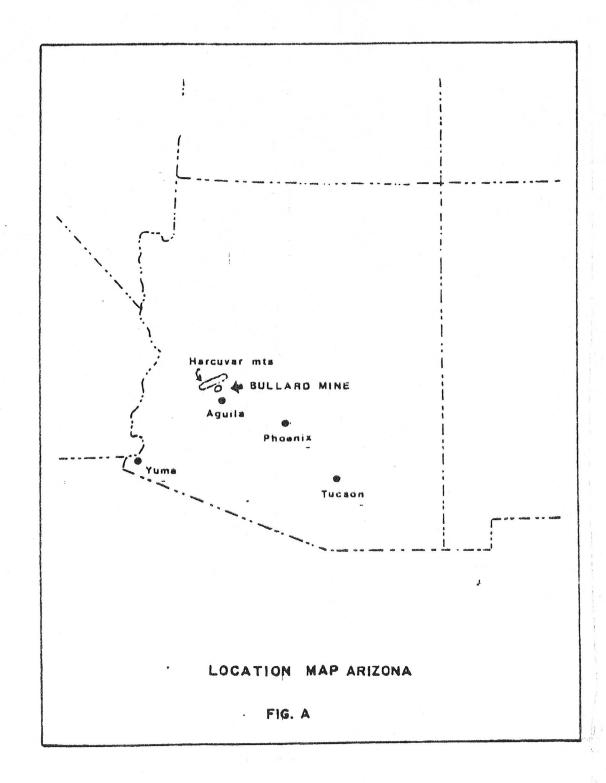
The Bullard Mine is at an altitude of about 3000 feet. There are 26 lode claims which occupy a total area of 537 acres (0.84 square miles or 2.17 square kilometers).

A reconnaissance geologic map was completed in January of 1981 overlaying the claim area in particular and although time limited the detail of mapping, contiguous surrounding features were also investigated and mapped. The total resultant map area covers 3.3 square miles or 8.5 square kilometers (see Plate 1,2).

C. The Claims

The claim boundaries are outlined on Plates 1 and 2 and are identified as follows:

-3-



-4-

CLAIMS

1.	North Extention	14.	Rattler
2.	Augustus	15.	Emily
3.	South Wing	16.	Steller
4.	Sulla	17.	North Star
5.	Chancellor	18.	Homestake
6.	Amazon	19.	Washington
7.	Newborn	20.	International
8.	Napoleon	21.	Sweep Stake
9.	Venice	22.	Avalanche
10.	Jay Bird	23.	Last Bean
11.	Nevada	24.	Democrat
12.	Producer	25.	Arizona
13.	Butte	26.	State

3. PAST WORK

The Bullard property has been optioned to various groups and individuals through the years and a complete chronology is beyond the scope of this report. However, the reader is referred to the appendix where some of the documents have been reproduced. At least one company, Powdered Metals Corporation (PMC), churn-drilled several holes on the claims from 1969 to 1970. Some of the holes are shown on plate 1. Unfortunately, the information and data from the PMC drilling is, so far, not available. Powdered Metals Corporation went into bankruptcy in 1973 or 1974.

-5-

The Bullard Mine has a long history of intermittent operation since the late 1800's. It is known that a smelter was built around 1887 and according to Durfee (report undated; p. 1) worked for a short period. The ruins of the smelter are visible today and are noted on the map (see plate 1,2). Durfee also mentions that the coke needed for this smelter was hauled by horse and wagon from the nearest railhead at Maricopa, 100 miles distant. The Bullard family patented the property in 1907.

Later operators and promoters of the Bullard property have reported copper concentrations at around two to three percent with small amounts of gold and silver. In 1950, ASARCO mapped and evaluated the main mineralized horizon, assaying 43 samples for an average concentration of 0.25 oz/ ton Au, 0.50 oz/ton Ag and 2.67% copper.

Shipping records are sparse but workings suggest that probably no more than 10 to 20 thousand tons were shipped before Contract Mining Corporation took over in November of 1979. CMC began mining the property in 1980 and has shipped some 4,000 tons to date. Development is now continuing with NRC Resources Ltd. of Canada and Contract Mining Corporation of Yuma, Arizona.

4. GENERAL GEOLOGY

# A. Introduction

The Bullard area is adjacent to the Harcuvar Mountains, the latter of which is a Late Cretaceous or Early Tertiary metamorphic-igneous complex (Reynolds, 1980). The Harcuvar Range is

-6-

about 35 miles long, trending northeast-southwest. The area of investigation in this report is an east-west trending series of vertical or near vertical sedimentary strata intercalated with thick sills of olivine diabase and possibly some extrusive volcanic beds.

The sedimentary strata are siliceous limestones, metashales and sandstones, probably Devonian or Mississippian in age. The limestones and sandstones are very well indurated, altered by low rank metamorphism and forming high ridges due to their resistance to erosion. Not all the high resistant ridges here are siliceous limestones or sandstones; some of these features are diabase.

Diabase commonly and frequently weathers to low profiles rather readily as seen in other areas such as the Globe--Miami district of central Arizona. Such weathering to subdued topography is seen in the Bullard area. Bullard Peak itself, the highest resistant diabase is probably the consequence of juxtapositioning by faulting or by variable mineralogy or both.

B. Lithology

a. The Diabase

Mapping in the area has revealed the pervasive relationship of a Late Cretaceous or Early Tertiary mafic olvine diabase intrusion as sills into a series of Paleozoic clastic sedimentary strata.

-7-

The diabase is gray to dark gray, often with a greenish hue. It ranges from very coarse grained to aphanitic. As is common in diabase texture, the plagioclase laths are as much as 20 milimeters in length. Poikilitic augite (and hornblende?) in spheroidal to very irregular masses up to several inches long occur as rounded inclusions and curious, unusual shapes (not unlike a coarse porphyritic texture). These often weather out intact and appear as spheroidal "kernels" and rounded, marble-like shapes. Similar diabase texture occurs near the Globe-Miami and Superior areas (Peterson, 1962).

Dark brown augite is abundant in the groundmass and is frequently poikilitically arranged with secondary quartz rim. Euhedral calcite is also noted as "poikiliths". It is not clear whether these calcite crystals are deuteric or metasomatic in origin. Their presence within the mineralized zones suggests that they are probably metasomatic in orgin. Poikilitic and trace olivine is also common as light, bottle green, divergent, acicular crystals, comprising up to 5% of the rock or more. Differentiation of olivine crystals is more concentrated in the lower portions or floors of the thicker sills in the Bullard area. This is a classic example of elutriation or magmatic differentiation of olivine in a theoleiitic diabase sill such as manifest in the Palisades of New York.

b. The Siliceous Sandstones

The sandstones are buff to reddish, thin-bedded to massive from 10 to 100 feet in thickness. These strata are fine to medium

-8-

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b. The Siliceous Sandstones

4 4

The sandstones are buff to reddish, thin-bedded to massive from 10 to 100 feet in thickness. These strata are fine to medium

-8-

grained, argillaceous, very siliceous, often calcareous, locally with stringers of pebble conglomerate and poorly sorted grits. They are very hard, dense and have been subjected to low to moderate metamorphosis and much secondary crystallization. Quartz and feldspar grains are often subrounded, angular to subangular in coarser grained beds.

c. The Meta-shales

The denser, aphanitic texture of the meta-shales are noted in what appears to be an easterly facies change of the coarser sediments found to the west. These meta-shales are often calcareous, very siliceous and have undergone considerable metasomatic change along with low-rank metamorphism. The shales are gray to dark gray, hard and are fissile to blocky. The rock becomes more abundant and more pronounced from west to east as well as higher in the sections, possibly indicating a deepening (facies) of the offshore basin and also a deepening of the basin with time.

These so-called meta-shales are so fine grained and aphanitic that it is impossible to know the mineralogy in the hand specimen. There certainly exists the possibility that some of the rock types referred to as meta-shales may be in fact, extrusive igneous or welded tuffs. Thin-section examination should identify these in a more positive way.

d. The Conglomerate

Conglomerates were noted in the eastern portion of the mapped area. In general they are gray to dark gray, calcareous, argill-

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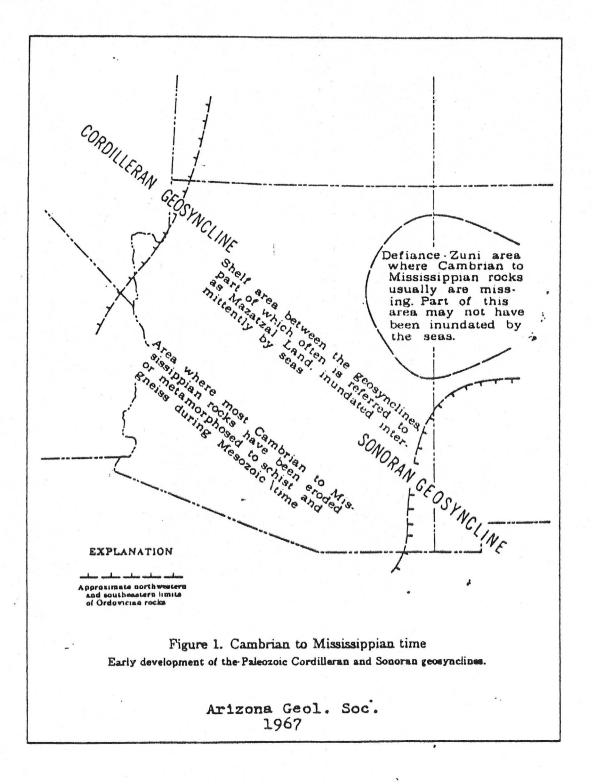
aceous to arenaceous, often siliceous with angular to subangular pebbles and cobbles to 6 inches. Some pebbly conglomeratic seams are noted in the more arenaceous members (sandstones). The beds are highly altered, fractured and faulted with calcareous seams throughout. The rock is so changed in many places that much of its original structure is lost. The angular to subangular inclusions are suggestive of a breccia. However, the beds are often wide and regular so that brecciation cannot be confirmed.

C. Structure and Stratigraphy

During the Paleozoic a very shallow basin of deposition existed in the Bullard Peak area. Sedimentation was intermittent and beds were probably deposited upon truncated Pre-Cambrian metamorphic strata which is common in adjacent areas and those of southwest and central Arizona. Sedimentation was interrupted from time to time in this shallow basin causing disconformities at several horizons. This phenomenon has not been investigated in the course of preparation of this report.

During Cambrian to Pennsylvanian time to the northwest of the State of Arizona, northward from southern Nevada, there existed the southeastern limits of the Cordilleran Geosyncline and in southeastern Arizona and southwestern New Mexico we note the northwestern limits of the Sonoran Geosyncline. The area between these two basins of deposition is referred to as Mazatzal Land which was a shelf inundated periodically by marine waters from Cambrian to Mississippian time (see figures 1, 2).

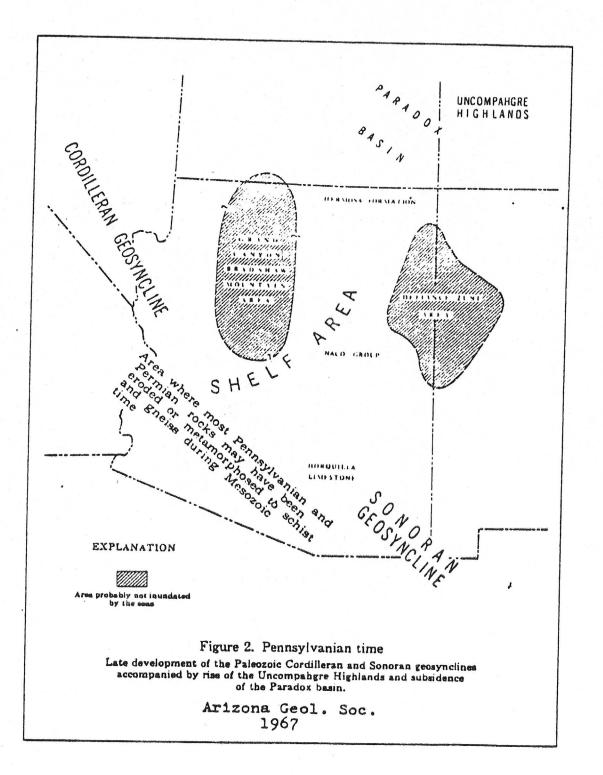
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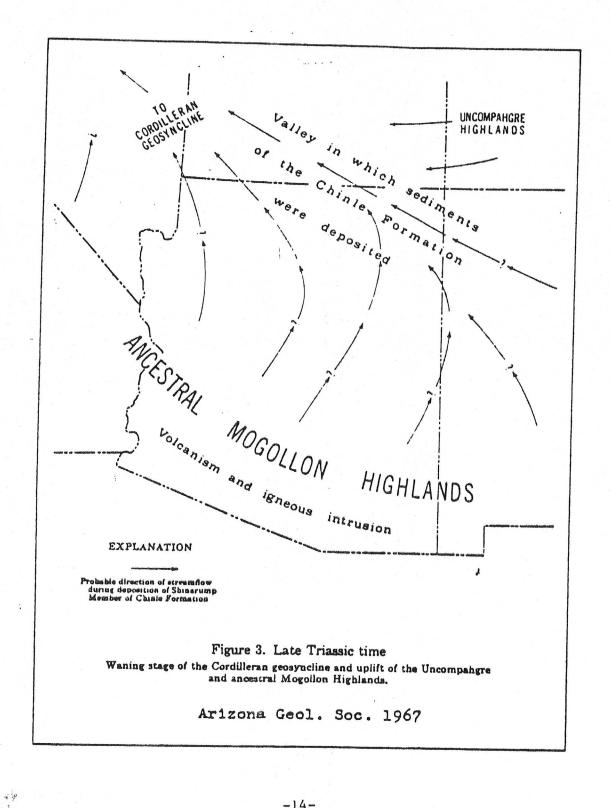
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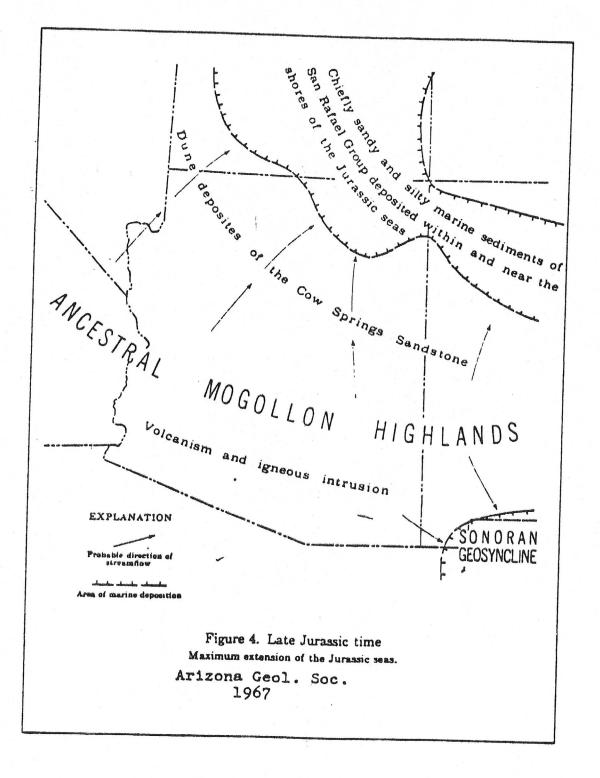
It is believed little tectonic activity occurred during the early Paleozoic in this area except for limited hiatus and subsequent disconformities due to broad upwarping. Regional uplift continued to affect the shallow seas during the Pennsylvanian period and ultimately caused complete regression. Instability continued into the Late Triassic with volcanism and igneous intrusions establishing the primordial Mogollon Highlands in southwest Arizona (see figures 3, 4). During this time, Pennsylvanian and Permian rocks, if they ever were deposited, may have been eroded or metamorphosed or both. The Larimide orogeny began to severely disturb existing Bullard Paleozoic strata in Late Cretaceous and/or Early Tertiary time (see figures 5, 6). So large a phenomenon, this major orogeny affected the entire western North American scene. Intense orogenic activity began with the relatively shallow emplacement of large quantities of mafic, diabase intrusives between strata. This interjection of igneous rock must have induced considerably normal faulting and shear zones across the still relatively flat-lying sedimentary beds of the Bullard section. It is very probable that mineralization at the Bullard Mine was coupled with this intrusion, as it is with porphyritic intrusive rocks noted at large Arizona Copper deposits elsewhere. Deuteric solutions must have played a role, as they and their potent vapors breeched the integrity of the sedimentary beds in shear zones, faults and other zones of weakness. It

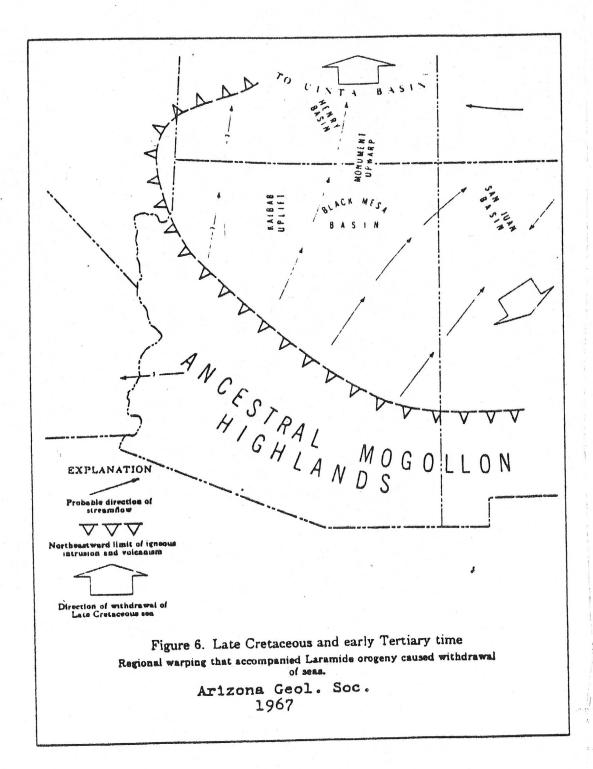
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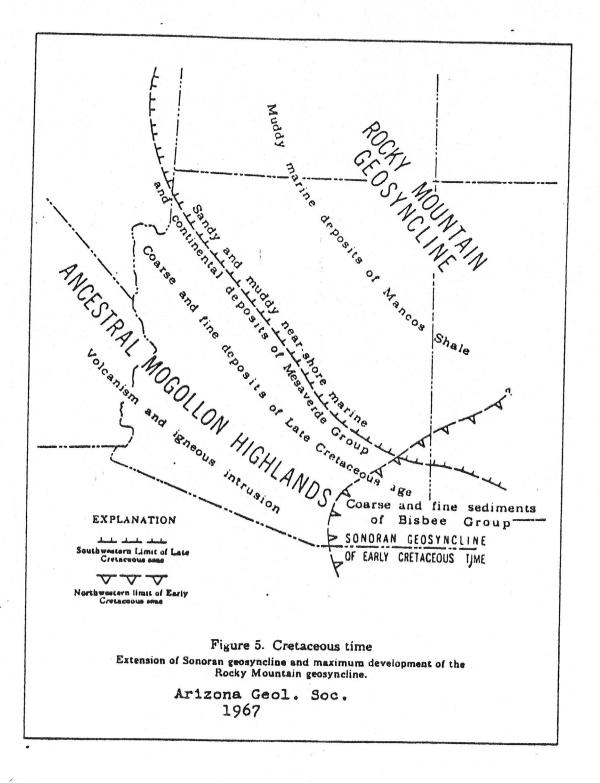


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is suspected that it is within this environment that deposition of hypogene copper, gold, silver sulphides and other mineral species and compounds occurred. The lowering of temperature and pressure in such an environment could have triggered the deposition and mineralization of such zones.

As the Laramide orogeny developed, the Bullard Peak Paleozoic strata, solidified diabase sills and mineralized zones and veins began their listric rotation to vertical from relatively lowdipping attitudes (see figure 6).

Volcanism and igneous intrusions continued throughout the Late Cretaceous and Early Tertiary but by middle Tertiary time the major uplift had already been completed and formation of the Basin and Range province had begun. (see figures 7, 8).

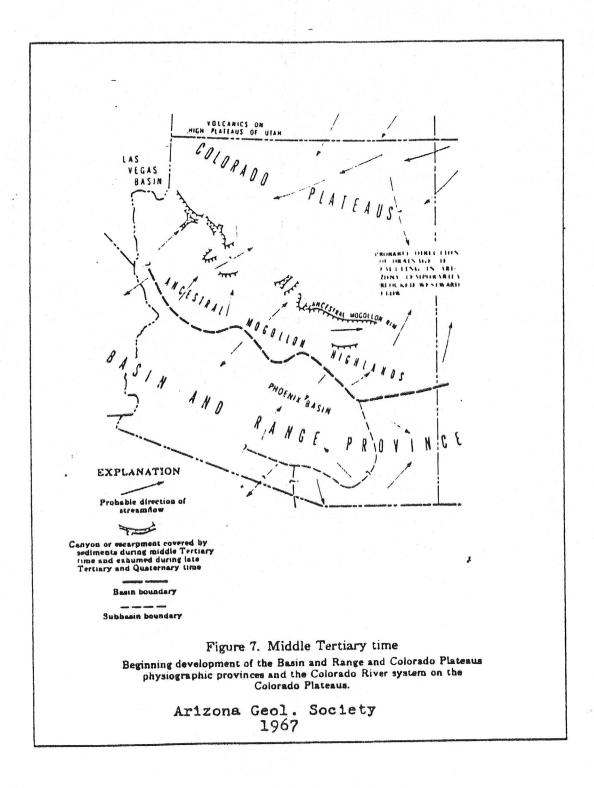
Teriary faulting then further dissected the steeply dipping sedimentary series with its contained diabase sills. Major offsets of mineralized fissure zones also occurred during the Tertiary. However, primary mineralization is neither found along nor within these Tertiary structural features.

5. ECONOMIC GEOLOGY

#### A. The Mineralized Zones

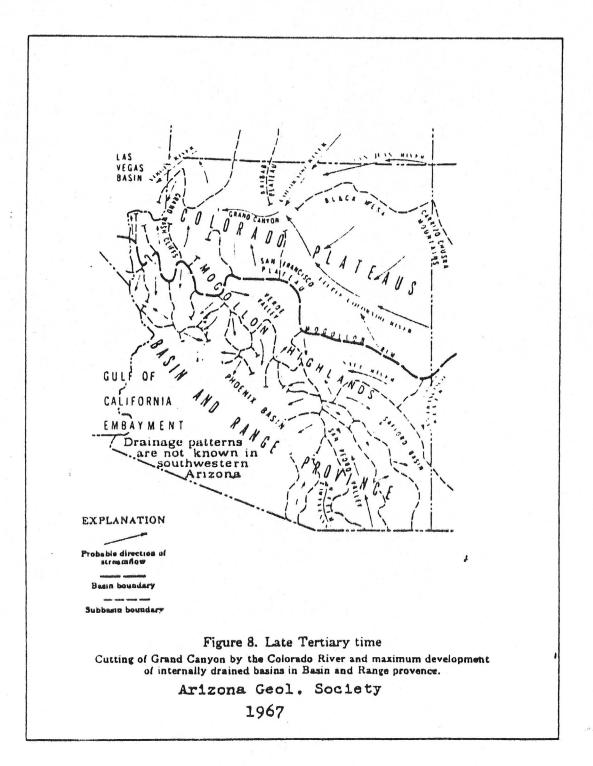
Mineralization in the Bullard area is confined mainly to faults, fissures and shear zones. There appears to be no primary mineralization of any consequence in structural features younger than Late

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Cretaceous or Early Tertiary. Later Tertiary faulting has been observed to have cut off mineral veins in several places. However, there may be secondary deposits or supergene enrichment as yet not located.

The mineralized zones are mainly silicates, carbonates, oxides and phosphates of copper with some sulphides and other metals. Small amounts of gold and silver are associated with the copper. Cold and silver are, in some samples, bonded as electrum or near electrum. Some free gold and silver are no doubt contained within these mineralized veins as well.

Chrysocolla, a silicate of copper,  $CuSiO_2$ ,  $2H_2O$ , is the predominent copper ore mineral with malachite, a carbonate of copper,  $Cu_2(OH)_2CO_3$ , and cuprite, an oxide of copper,  $Cu_2O$ , as secondary minerals. Also associated in gangue is crystalline and amorphous quartz (silica comprising about 73% of the ore), euhedral calcite, dioptase (H<sub>2</sub>CuSiO<sub>4</sub>), and hydrated copper sulphate. The zones of mineralization are also the locus of secondary oxidation minerals such as limonite, jarosite, possibly alunite, magnetite, siderite and barite.

Sulphides are present but not obvious in hand specimens and except for the surficial occurrence of the metallic oxide psilomelane (MnO), no other sulphides were noted. Petrographic examination of samples is continuing. A comprehensive paragenetic study of the Bullard area mineralization has not yet been completed,

-21-

so many petrographic and mineralogic questions will be answered as work continues.

# B. Assays and Values

A detailed sample map was made by ASARCO, presumably in 1950. This map covered the main Bullard vein and indicated the location of 43 samples. The computed average of these samples was given as 0.25 oz/ton Au, 0.50 oz/ton Ag and 2.67% copper. This relates to an estimated value for this ore body to be around \$150.00 per ton using values of \$450.00 per oz. for gold, \$10.00 per oz. for silver, and \$.70 oz. per pound for copper. This metalliferous zone has been mined at a profit in years past and recently by Contract Mining Corporation.

Five samples were analyzed from a mineralized vein workings west of Bullard Peak. This area is off the Bullard claims and thought to be stratigraphically lower in the section. Subsequently, these samples are important as they indicate that lower in the section higher average values may exist. These five samples assayed at; 0.56 oz/ton Au, 0.40 oz/ton Ag and 3.83% Cu.

International Claim: A mineralized zone occurs within the International Claim which assayed at 0.02 oz/ton Au, 0.10 oz/ton Ag and 2.58% Cu. This vein appears to have good potential because the mineralized area lies within a large shear zone. There is a deep shaft at this point but little is known at the present time as to its depth or the minerals removed from it. Some super-

West of Bullard Peak on Sansone Claims

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ficial shallow precussion drilling has been done on the International Claim but little else is known about it.

Last Bean and Democrat Claims: Just west of the stone cabin, five samples were taken from the prospect holes, mineralized zones and tops of the incline shafts. The results of these assays were: 0.11 oz/ton Au, 0.33 oz/ton Ag and 1.74% Cu.

<u>Sulla Claim</u>: A very substantial vein of mineralization exists on the Sulla claim in the northeast area of the map (see plate 2). Sampling there indicated an average of; 0.15 oz/ton Au, 0.10 oz/ton Ag and 1.59% Cu. It should be noted here that of the three samples taken from this vein, two of them gave an average of; 0.36 oz/ton Au, 0.25 oz/ton Ag and 2.0% Cu for an estimated \$192.00 per ton value. This zone appears to be stratigraphically lower in the section than the Bullard vein. This further indicates that values may be higher at points lower in the section.

The average computed values of all samples in the Bullard area taken in the course of mapping was as follows: 0.22 oz/ton Au, 0.23 oz/ton Ag and 2.3% Cu for a gross value per ton of around \$133.00.

C. Potential and Observed Ore Areas

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There are five potentially favorable areas for investigation and possible production. These are both observed and inferred. One through four have been observed, while number five is inferred. 1. The Bullard Vein proper (homestake, Sweepstake, and Washington claims.

-23-

- Area west of Stone Cabin (State, Last Bean, and Democrat claims.)
   The fault areas of the Sulla claim.
- 4. The fault zones of International and Producer claims.
- 5. Bullard Extension (all areas south of Bullard Ridge).

This list, with the exception of number 5, contains only those reserves with production history, surface expression, and/or favorable sampling. Based on geologic interpretation and observation to date, it is certain that there are still to be located other favorable zones in the subsurface.

#### 6. DEFINITION OF MINERALIZED RESERVES

The U. S. Bureau of Land Management and the U. S. Geological Survey in a recent estimate of mineral reserves have agreed upon and defined the following terms to signify relative dependability of information.

#### A. Measured Mineralized Reserves

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Measured reserve tonnage is computed from dimensions revealed in outcrop trenches, workings and drill holes for which the grade is computed from the results of detailed sampling. The sites for inspection, sampling and measurement are so closely spaced and the geologic character is so well defined that the size, shape and mineral content are well established.

The computed tonnage and grade are judged to be accurate within limits which are stated and no such limits are judged to differ

-24-

from the computed tonnage or grade by more than 20%.

#### B. Indicated Mineralized Reserves

These are reserves for which the tonnage and grade are computed from projections for a reasonable distance on geologic evidence. The sites available for inspection, measurement and sampling are too widely or otherwise inappropriately spaced to outline the mineralized zone completely or establish its grade throughout.

## C. Inferred Mineralized Reserves

Inferred reserves are quantitative estimates which are based largely on broad knowledge of the geologic character of the deposits and for which there are few if any samples or measurements. The estimates are based on an assured continuity or repetition for which there is geologic evidence. The evidence may include comparison with deposits of similar types. Bodies that are completely concealed may be included if there is specific geologic evidence of their presence. Estimates of inferred reserves should include a statement of the special limits within which the inferred reserves may lie.

#### 7. RESERVES

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#### A. The Bullard Vein (Measured 40,000 tons)

The Bullard vein covers an area of approximately 271,000 square feet. The vein averages 2.5 feet in thickness and is in a

fault zone dipping about 20 degrees to the south. The easterly edge of the bed is bound by what is believed to be a down-thrown normal fault. The south exposure of the vein is probably eroded for a short distance and possibly continues into the subsurface further south (see vertical section A'A" Plate 3).

There are about 678,000 cubic feet of mineralized reserves within the Bullard Vein, using a conservative average thickness of 2.5 feet. Computing this block at 13 cubic feet per ton, gives 52,000 tons of proven reserves, of which about 12,000 tons have already been mined. It is estimated, then, that 40,000 tons of proven mineralized reserves are still left in the Bullard Vein proper.

## B. Area west of Stone Cabin in the State, Last Bean, Washington and Democrat Claims. (Indicated 55,384 tons).

This area was sampled from prospect holes and old workings and measures about 1200 feet long by an estimated 400 feet in width with an average thickness of 1.5 feet. The calculations are:

1200 ft. X 400 ft. X 1.5 ft. = 720,000 cu. ft.  $\frac{720,000 \text{ cu ft.}}{13.0 \text{ cu ft.}} = 55,384 \text{ tons}$ 

#### C. Fault Areas of the Sulla Claim (Indicated 28,846 tons)

This area has at least two major faults which are mineralized. These faults trend north-south with the westerly one dipping east

-26-

at about 45 degrees and the easterly one dipping west at about 45 degrees (see plate 3, section B'B"). These mineralized fissures may be as deep as 400 feet with an intersection point of about 100 feet. This intersection point would be an ideal objective for the exploration of a concentrated ore body. The thickness of this mineralized zone is at least 2.5 feet and may be much more in the subsurface. With these parameters the calculations are:

600 ft. X 1200 ft. X 2.5 ft. = 300,000 cu. ft.

 $\frac{300,000 \text{ cu. ft.}}{13.0 \text{ cu. ft.}} = 23,077 \text{ tons (east fault)}$ 

600 ft. X 50 ft. X 2.5 ft. = 75,000 cu. ft.

 $\frac{75,000 \text{ cu. ft.}}{13.0 \text{ cu. ft.}} = 5,769 \text{ tons}$ 

5,769 + 23,077 = 28,846 tons total

D. The Fault Zone of the International Claim (Inferred 18,461

#### tons)

4.4

Potential reserves in this area can only be inferred because along the faulted zone only intermittent mineralized outcrops are visible. An old shaft was noted at sample localities 123, 123a, 123b and 123c but access was impossible and its dimensions are not known. Samples from this mineralized area were assayed at 0.02 oz/ton Au, 0.10 oz/ton Ag and 2.58% copper, these concentrations seem uneconomical. However, it is felt the high copper content in sample Number 126 (7.9%) for example, is indicative of potentially better values in the immediate area or with depth, the estimated

-27-

Dimensions are 600 ft. long by 200 feet in depth by 2 feet in thickness. Therefore:

600 ft. X 200 ft. X 2.0 ft. = 240,000 cu. ft. 240,00 cu. ft. = 18,461 tons 13.0 cu. ft.

#### E. The Bullard Extension (Inferred 553,800 tons)

The Bullard Extension is that fault zone as depicted in Plate 3 (section A'A"). The fault itself is suspected to exist but has not been confirmed in any way. Locals indicate that a well drilled near the stone cabin penetrated a thick zone of mineralization at 900 feet. There is absolutely no confirmation that such a hole was ever drilled or that even a shaft ever got to that depth. However, it is interesting that the Bullard mineralized zone, which is a fault, when projected to that area near stone cabin, intersects with the subsurface at about 800 to 900 feet. The inference is that if this fault is mineralized as suspected then considerable ore reserves may well be uncovered. Combination rotary and diamond drilling is being recommended for this area.

The demensions of this theorhetical ore body is as follows: 1800 ft. X 1600 ft. X 2.5 ft. = 7,200,000 cu. ft.

7,200,000 cu. ft. = 553,800 tons 13.0 cu. ft.

F. Other reserves

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If the concept of Late Cretaceous - Early Tertiary faulting is correct then there may be several zones of flat-lying faults

This sugges projection goes through Sansone claims



-28-

which may have been rotated from their original high-angle, normal position. These could be very mineralized and add greatly to the reserves.

8. RESERVE SUMMATION

Tons

a.	Bullard Vein	40,000 Measured Mineralized Res	erve
b.	West of stone cabin	55,384 Indicated Mineralized Re	serve
c.	Sulla Claim	28,846 Inferred Mineralized Res	erve
d.	International Claim	18,461 Inferred Mineralized Res	erve
e.	Bullard Extension	553,800 Inferred Mineralized Reso	erve
	Total	696,491 tons	

696,491 tons at \$144.00 per ton = \$102,450,000.00

9. PROGRAM OF EXPLORATION

#### A. Geophysics

The exploration program will consist of a ground electromagnetic survey. The most intense mineralization is expected to be relatively flat-lying with dips of around 20 degrees with associated smaller veins at higher angles, perhaps 45 degrees or more. The flat-lying veins can be expected to be bound on all sides by possible tertiary faulting which could create a note-worthy anomaly. A magnetic survey should be considered and may be very useful for detecting sub-surface structrual manifestations. Induced polarization methods may also be of use. Resistivity surveys should be avoided in the

Bullard Extension goes through Sansone claims

n Selection

Bullard area due to poor results experienced in this desert enviorment.

The exploration program will consist of a ground geophysical survey. A grid system over the Bullard Vein will be established with a base-line in a N45W direction.

Twenty-two grid lines, 4000 feet long will then be established perpendicular to the base-line on 200 foot spacings. A 200 foot station interval will be established and data collected on the 100 foot intervals to reduce geologic noise and detect near-surface conductors.

This geophysical survey would consist of 17 line miles at current costs of \$800.00 per line mile. This includes technicians, equipment and interpretation of the results. The purpose of this ground survey is to delineate the Bullard Vein in the southerly direction where past reports have indicated its locations. The geophysical results will be correlated with known geologic data to establish the continuity of the Bullard Vein within the grid system.

Total cost for this program is estimated at \$15,000.00.

B. Drilling

It is recommended that all anomalies outlined by the previously described geophysical surveys be physically investigated by drilling. The initial phase of this program could be completed by rotary drilling to reduce the cost per foot. If the results

-30-

are encouraging, a diamond drilling program could be undertaken to determine grades and any change in the tenor of the mineralzation. At the present time, numerous rotary drills are available in the area. Present quotes range from \$3.85 to \$8.55 per foot, depending on the total footage of the contract. At this time no estimate of footage is possible until geophysical data is created and interpreted to determine location and depth of the anomalies.

Specific areas are recommended for diamond drilling (see plates 1 and 2). These are described as follows:

#### Diamond core drilling is recommended as follows:

1. <u>DDH-1</u>: Vertical drill to prove Bullard vein on the downthrown block east of present exposures and on the south flank of Bullard Ridge. Drill DDH-1A, B, C, etc. as necessary if ore mineralized zones are encountered. The expected depth is 50 to 100 feet maximum.

2. <u>DDH-2</u>: Angle drill at 60 to 45 degrees west to penetrate the mineralized fault zones at depth (see B'B", plate 3). Probable depth is about 200 feet. Add DDH-2A, B, C, etc., as determined if ore is intersected. These cores will be on the Sulla Claim.

3. <u>DDH-3</u>: Angle drill 60 to 45 degrees toward the north near stone cabin in the Democrat, Last Bean or even State Claims. This is to intersect the possible fault plane depicted in section A'A" of plate 3. Estimated depth is 900 feet plus. Add DDH-3A, B, C, etc., as necessary if ore is intersected.

4. DDH-4: This coring should be done as a vertical hole in the Avalanche and Sweepstake Claims. Depth to the fault objective is estimated at 200 to 300 feet. Add DDH-4A, B, C, etc. as needed.

10. PROGRAM OF MINE DEVELOPMENT

Mining could commence immediately by initiating work on the 40,000 ton Bullard Vein proper. This mineralized vein has been mined in 1979 by CMC at a profit and it could be stockpiled until milling and beneficiation equipment is installed. Mining could also begin on the 28,000 tons which lie in the Sulla Claim. Only a small amount of road work may be necessary to begin work here.

In any event, the following mine development plan is recommended for the Bullard Mine:

1. The plan includes current costs of equipment and labor. Initiation of the plan could commence as soon as funding is available. Equipment and personnel are readily available in the area and no environmental problems are anticipated.

2. The Bullard Vein on the Washington Mineral Claim was mined at a 200 ton-per-day rate during 1980 by Contract Mining Corporation of Yuma, Arizona. All development work including portals, haulways and truck loading areas has been completed. A room and pillar system was utilized by Contract Mining Corporation during their operation and it is recommended that this system of mining be continued. Costs are estimated at:

-32-

Drilling\$	.90
Blasting	.64
Loading	.68
Hauling	.52
Roof bolting	.64
Air & Water Supply	.14
Ventilation	.36
Power	.22
Development	.42
Supervision	.65
Engineering	.39
Repair & Maintenance	.86
Assay & Laboratory	.60
Taxes & Depreciation	.75
Amortization	1.25
TOTAL MINING COST PER TON	9.02

3. Engineering, Supervision and labor is based on current salary and wages paid in Arizona. Namely, Professional Engineers at \$350.00 per day, Mine Supervisor at \$3500 per month, Miners at \$13.00 per hour and Laborers at \$9.50 per hour.

Equipment requirements are:

Air Compressor	\$20,000.00
Gen. Set	10,000.00
Air & Water Line	5,000.00

Air Drills with	Legs\$	6,000.00
30 hp Slusher &	Bucket	12,000.00
10 hp Slusher &	Bucket	10,000.00
Mining Supplies		25,000.00
TOTAL		88,000.00

A portable concentrating mill is available at this time for processing Bullard Vein material. Contract milling costs are quoted as \$20.00 per ton. This includes all labor, milling supplies and fuel. This does not include the transportation of the concentrate to the smelter in Hayden, Arizona, approximately 200 miles from the Bullard Mine in Aguila, Arizona.

I firmly recommend a minimum of \$300,000.00 be allocated for the initial phase of the Bullard Mine development.

11. ORE TREATMENT

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Initial studies of the mineralized zones of the Bullard Mine indicate the observed mineralization would respond to a gravity separation after crushing to minus 40 mesh. This treatment should recover 95-97% of all sulphides. The follow-up treatment would be an acid copper leach process. Contract Mining Corporation has, in fact, carried out tests of this type with positive results. I would suggest however, that beneficiation studies be continued as mining an development proceeds to enhance concentration in the

-34-

light of subsequent new data or should there be a large variation (unlikely) in the mineralized zones mined.

12. MISCELLANEOUS

A land survey should be done to firmly establish claim boundaries and markers for geophysical and other subsequent surveys.

San Diego, California October 20, 1981

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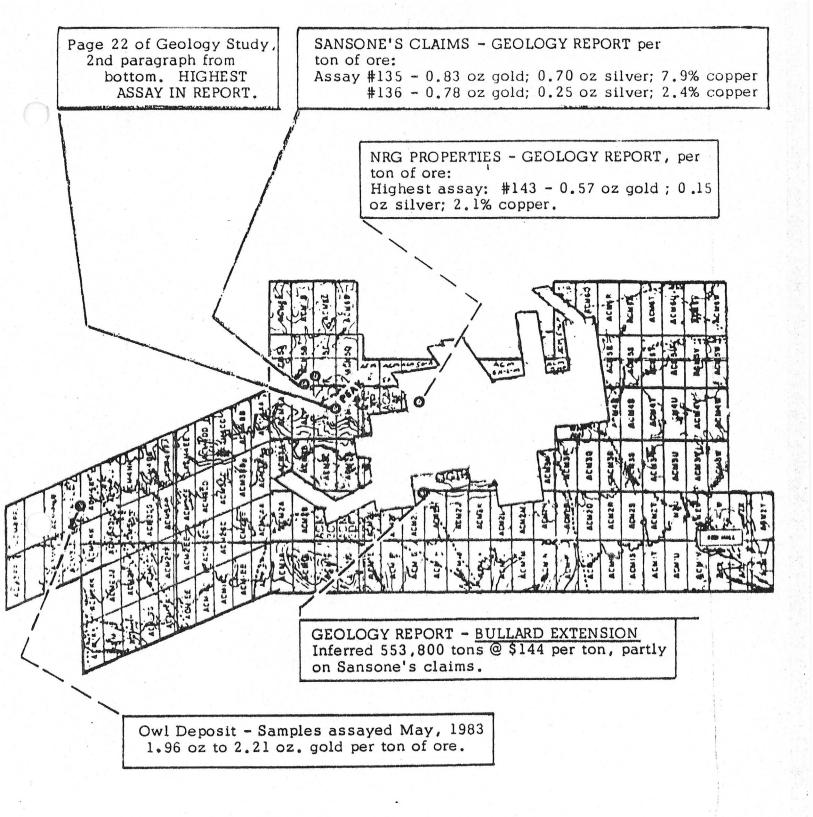
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NOTE: All reports and studies show very rich copper content, and in many cases, rich silver deposits. Much semi-precious gemetone deposit in the form of turquoise is available.

# ACM MILLING PLANT

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ACM- AGUILA MILLING PLANT, with facilities as follows:

15 acres, net usable. Zoned mill and ore processing plant, Maricopa County.

- \* Eight car railroad siding on the Santa Fe railroad with heavy duty drive-up ramp for loading railroad cars and/or trucks. This siding and loading ramp are provately owned by the property owner.
- \* 440 volt electric power with meter and service panel operating on site. Three phase.
- High pressure natural gas is metered with a high-pressure regulator on the premises.
- \* City water is distributed throughout the property and is metered by the Aguila Water Service, a franchised water company.
- \* Assay laboratory facility. Has gas furnace for test smelting.
- \* Office structure.

ACM JOOGL

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\* Storage buildings with concrete floors.

Equipment wash rack and shelter with concrete floor.

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ACM - AGUILA MILLING PLANT, continued.

- Heavy duty fencing entirely around the property.
- \* Operating dawn to dusk security lighting.
- \* Concrete leaching beds in place.

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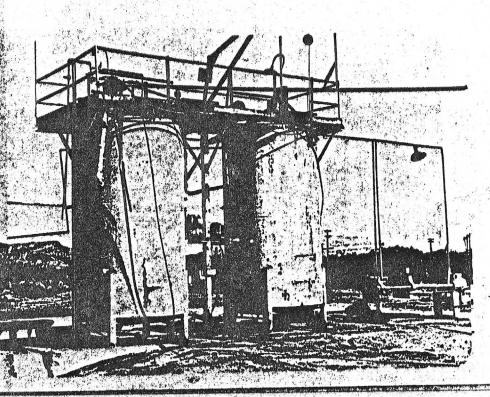
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- \* Paved driveway ramp off from U. S. Highway 60.
- \* 694 feet of frontage on U. S. Highway 60.
- \* Entire plant site is level with excellent terrain drainage.

- Living quarters for plant manager and engineer.
- \* In town with readily available labor force.
- \* Daily United Parcel delivery from Phoenix and Wickenburg.
- Airport facilities within  $1\frac{1}{2}$  miles.
- Post office, equipment and auto supply store, grocery store, motels and restaurants, etc.
- Large storage tanks capable of holding over 100,000 gallons in liquid storage.

## LEGAL USE PERMIT : MILLING, ORE PROCESSING & REFINING

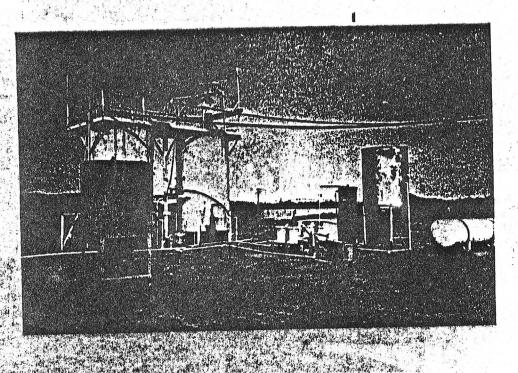


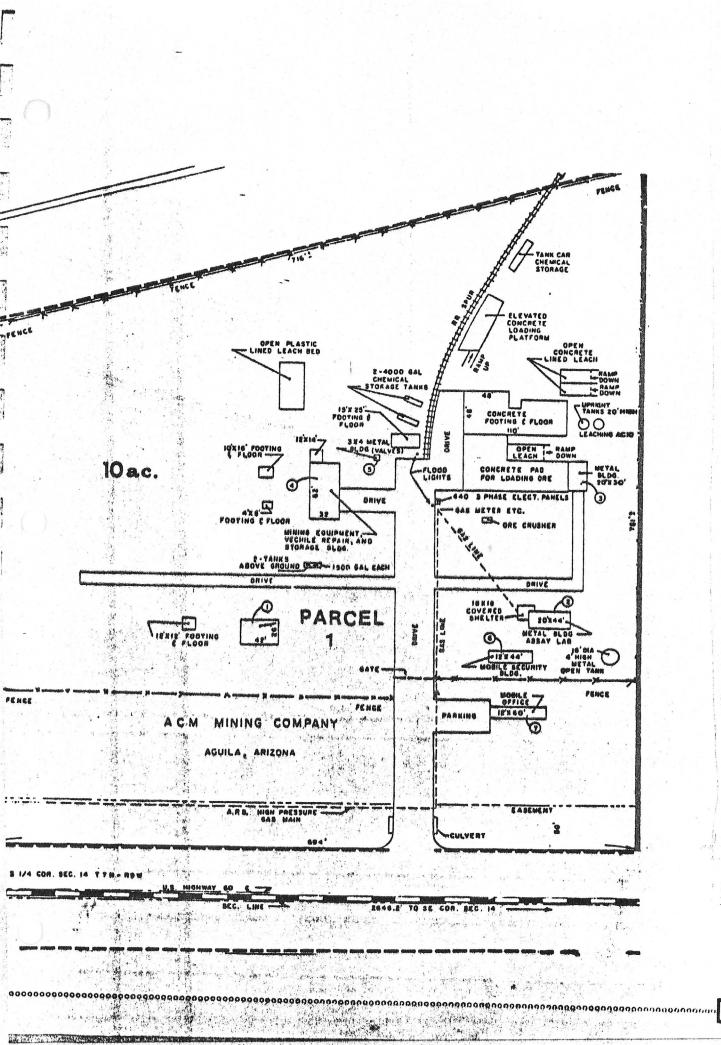
#### - ACM

ACM - AGUILA MILLING PLANT, continued.

- \* Heavy duty fencing entirely around the property.
- Operating dawn to dusk security lighting.
- \* Concrete leaching beds in place.
- Paved driveway ramp off from U. S. Highway 60.
- 694 feet of frontage on U. S. Highway 60.
- \* Entire plant site is level with excellent terrain drainage.
- Living quarters for plant manager and engineer.
- In town with readily available labor force.
- Daily United Parcel delivery from Phoenix and Wickenburg.
- Airport facilities within  $1\frac{1}{2}$  miles.

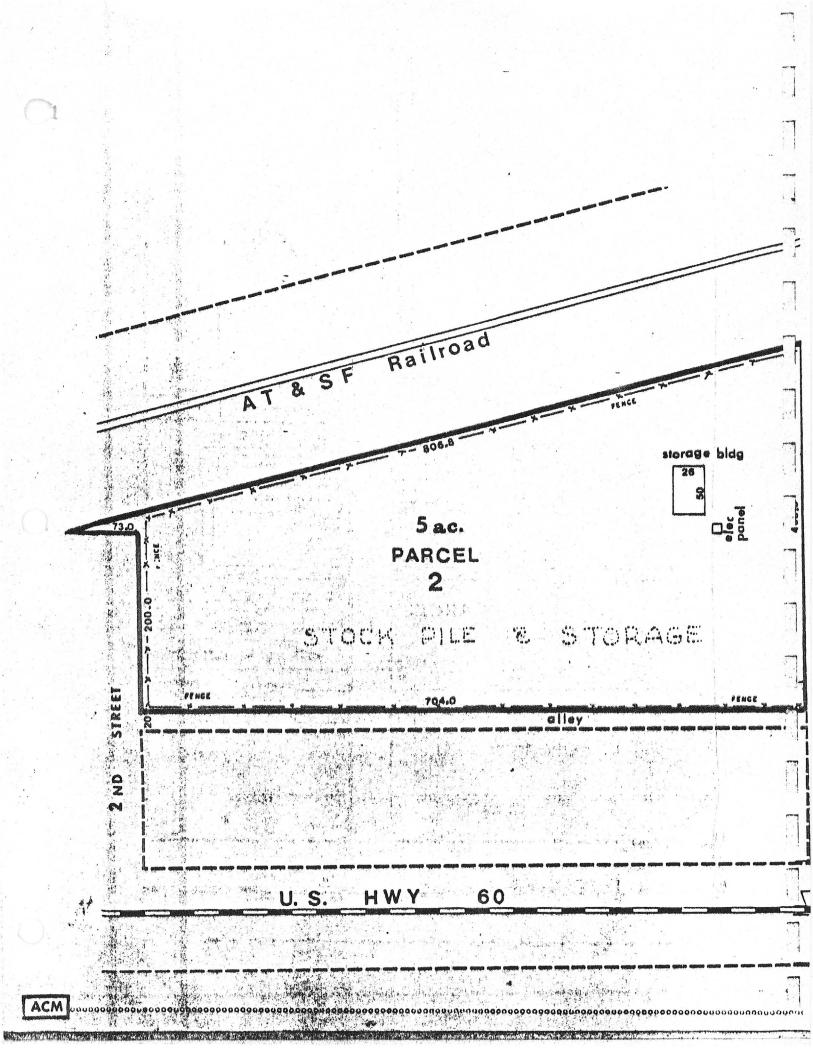
- Post office, equipment and auto supply store, grocery store, motels and restaurants, etc.
- Large storage tanks capable of holding over 100,000 gallons in liquid storage.





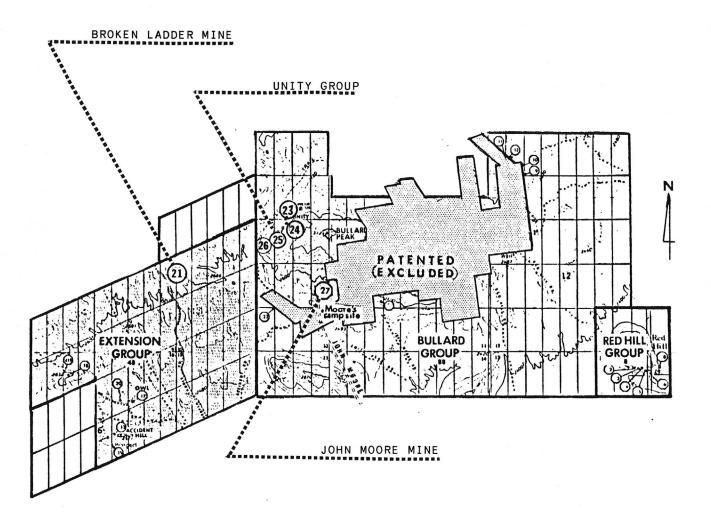
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SANSONE'S ACM 166 LODE MINING CLAIMS AND ACM MILLING

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BULLARD PEAK

## 166 CLAIMS

(± 3,000 Acres)

## AGUILA, ARIZONA

### GENERAL INFORMATION

The Bullard Peak properties presented herein consist of 166 lode BLM claims comprising approximately 3,000 acres in area.

In 1978, Michael Sansone located and filed these Bullard Peak claims which included his combining more than 20 mine sites that had not been independently operated since prior to 1950.

It is the overall combination of these properties along with the milling and ore processing facilities that Sansone has developed that add a special attraction to the prospects of these claims.

This presentation particularly covers a target area that has been investigated by several geological sources. These geological studies are included herein in detail, with assay reports.

Sansone understands that further studies and testing are expected prior to any commitment from a mining company. Sansone is willing to allow a major concern to do a preliminary exploratory examination of these properties on a no-charge basis for a reasonable period of time.

The target area has consistantly shown gold assays of over 1.00 oz/T in the select vein structure and an average of over 0.30 oz/T within a broader structure.

These 166 Sansone claims border 26 patented claims presently owned by NRG Resources, Ltd. A detailed engineered plat is contained in this presentation depicting the ownerships. NRG Resources, Ltd. has recently installed a mill and ore processing plant on their property and are expected to begin operations in the near future.

These Bullard Peak properties, owned by Sansone, will be entered and will appear in the "MineSearch Annual" published by Metals Economics Group, Boulder, Colorado. The publication will be coming out in August 1985.

ACM

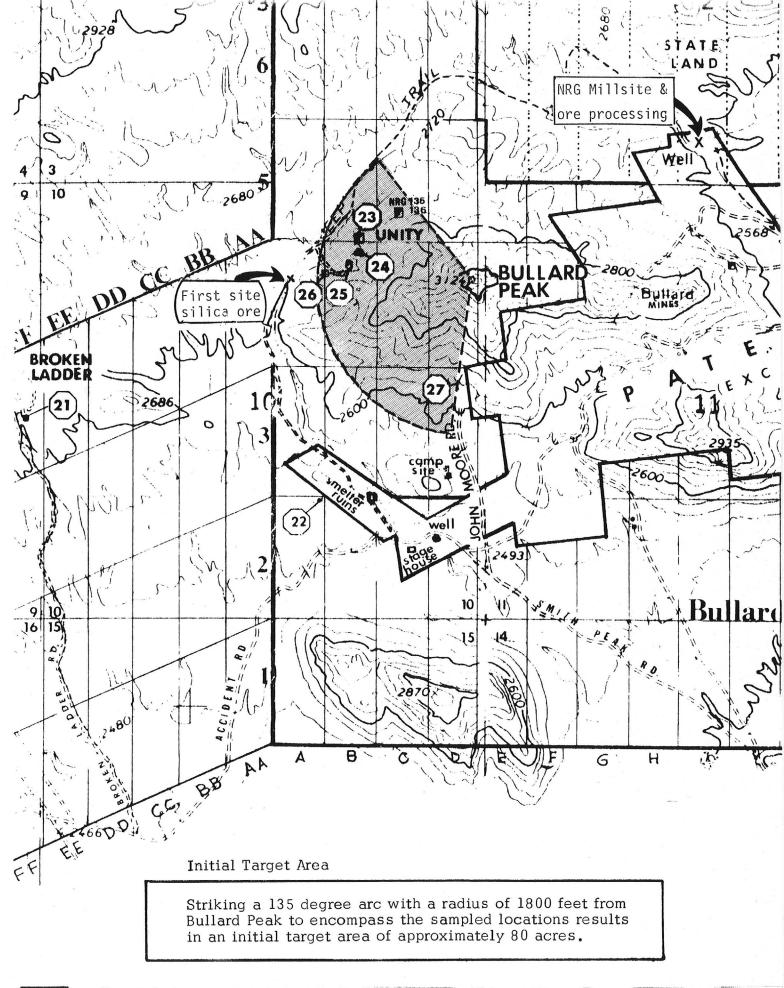


## INITIAL TARGET AREAS

Σ







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## SYNOPSIS OF SOME OF "FULL GEOLOGICAL DATA"

FULL GEOLOGICAL DATA AVAILABLE UPON REQUEST

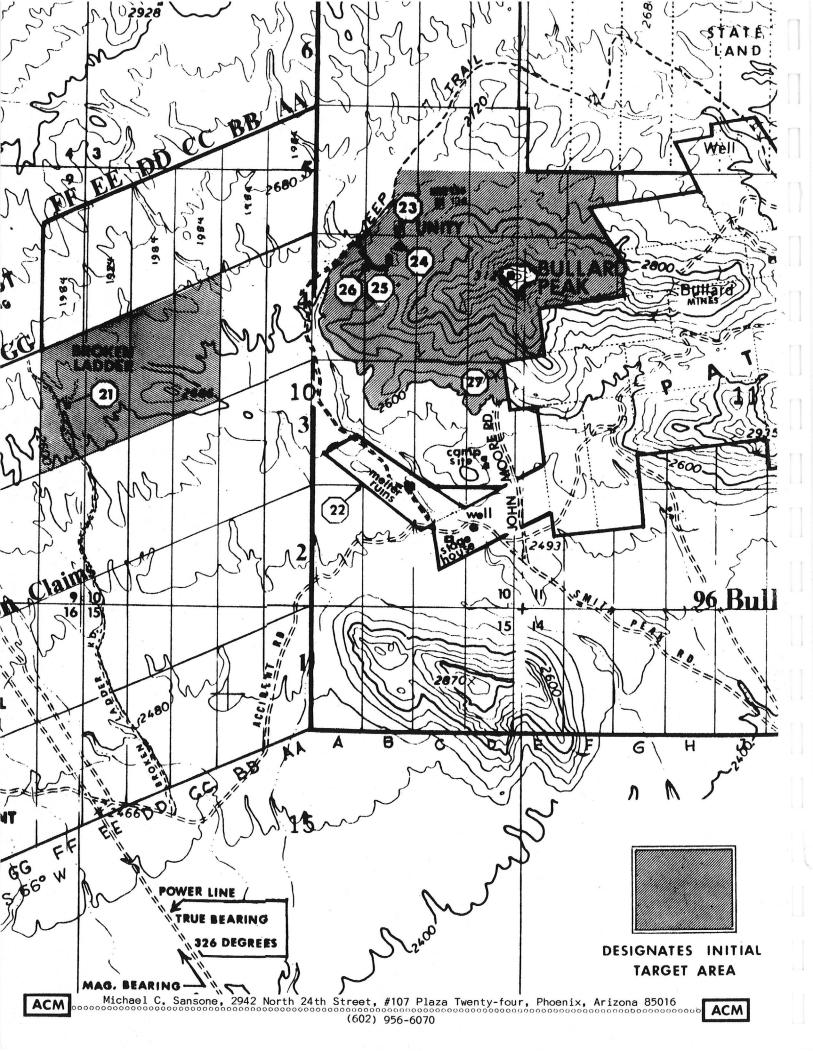
#### AVAILABLE ON REQUEST

<u>NOTE:</u> Geological reports on the Bullard Peak properties are available upon request. These reports include:

- a. E. THOMAS RIGGS of Unity Mining Company, made in 1984. This report primarily covers the target area which includes the Bullard Peak, itself.
- b. JEFFERY W. GIESE, April, 1984, completed a geological investigation with mapping and sampling in the Bullard Peak properties.
- c. KNOXIE C. DeLISE, Geologist, completed a geological investigation of the Bullard Mines in 1981. This report was prepared for NRG Resources, Ltd. However, the area covered in this report has included claim areas owned by Sansone. This extended area of the report reveals that the area within Sansone's claims resulted in the highest gold samples of the report for NRG and their adjoining patented claims. This is a 35 page certified report.
- d. E. W. DURFEE, E.M. prepared a report on the patented claims sometime between 1907 and 1920, together with plats showing results of assays from numerous areas of the patented mine workings.
- e. A.S.& R. CO. (now ASARCO) ordered and received a mineral survey of the patented claims about 1913.
- f. WILLIAM B. MAITLAND conducted a mineral survey of the patented claims in 1944 in connection with a loan application to the Reconstruction Finance Corporation.
- g. Other pertinent data and pictures are included with these geological reports.
- h. Extensive information about the millsites is available, also on request.

ACM

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## E. THOMAS RIGGS REPORT BULLARD PEAK PROPERTIES

The E. Thomas Riggs geological investigation covers an area near the Bullard Peak which has been determined to be the initial Target Area.

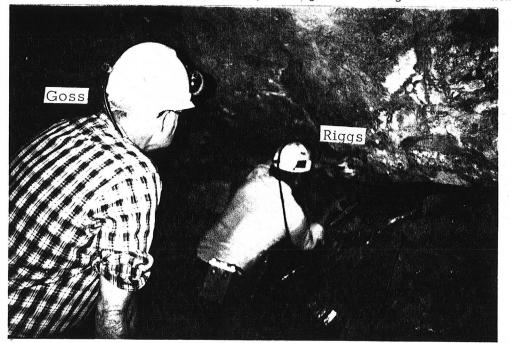
The Target Area is depicted on the plat shown

The specific mine sites are identified as: John Moore #27 & #27B; Unity #26, #25, #24, #23, and #22; and, the Broken Ladder mine #21.

With the report are results of samples that were sent to Unity's control laboratory with splits being verified by Skyline Labs, Inc. in Tucson, Arizona.

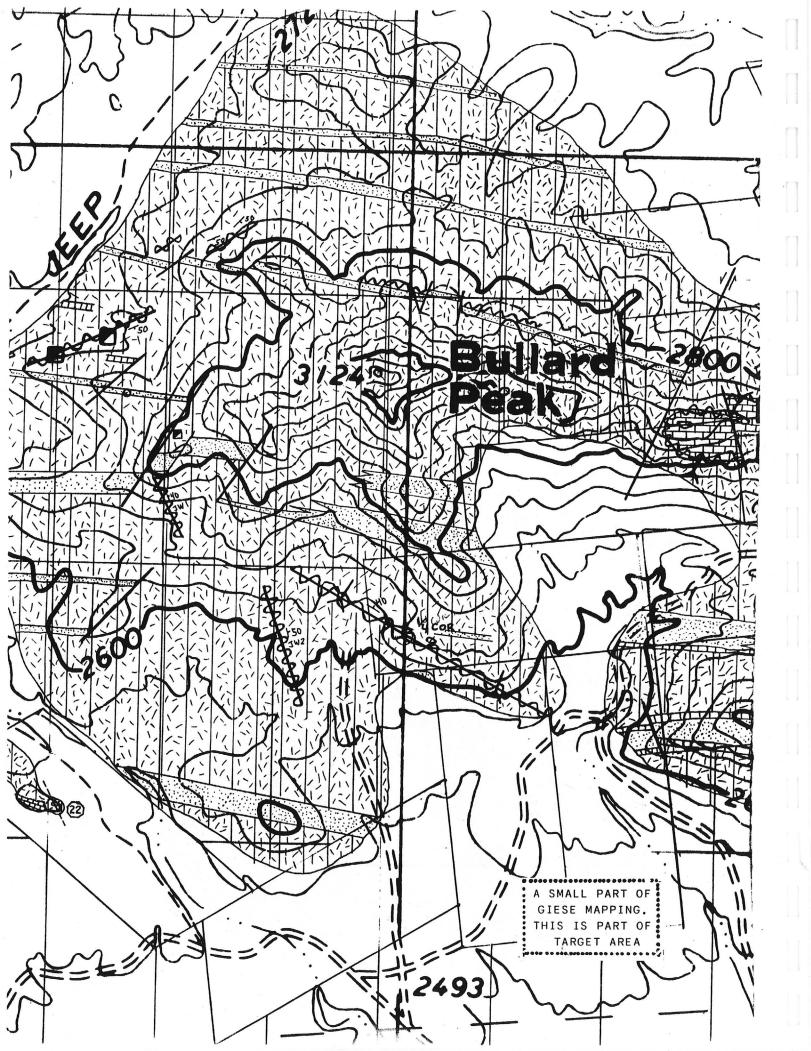
Average vein structure sampling was 0.25 to 1.73 oz Au/ton. (Au - Gold)

Earlier in 1981, Unity had leased this target area and did exploratory work for several months. This work has been an asset for determining the initial target area, as well as opening the area for inspection.



The full report is available upon requesting the Geological Data Package.

This photograph was taken by Sansone on March 13, 1984 while E. Thomas Riggs was collecting ore sampley under the supervision of Cadmus L.G. Goss, P.E.



## JEFIERY W. GIESE REPORT & MAPPING

This 17 page report covers the Bullard Peak properties owned by Sansone. It explains that in the 1940's records indicate 5,500 tons of ore removed averaging 0.32 oz/ton of gold, 0.24 oz/ton of silver and 2% copper. In the 1950's, ASARCO took 43 samples which averaged 0.25 oz Au/ton, 0.5 oz Ag/ton and 2.67% copper.

The report states the possibility of a bulk porphyry gold deposit may be considered as drilling proceeds to prove vein targets. It further states that geophysics should be the next step at the Bullard property.

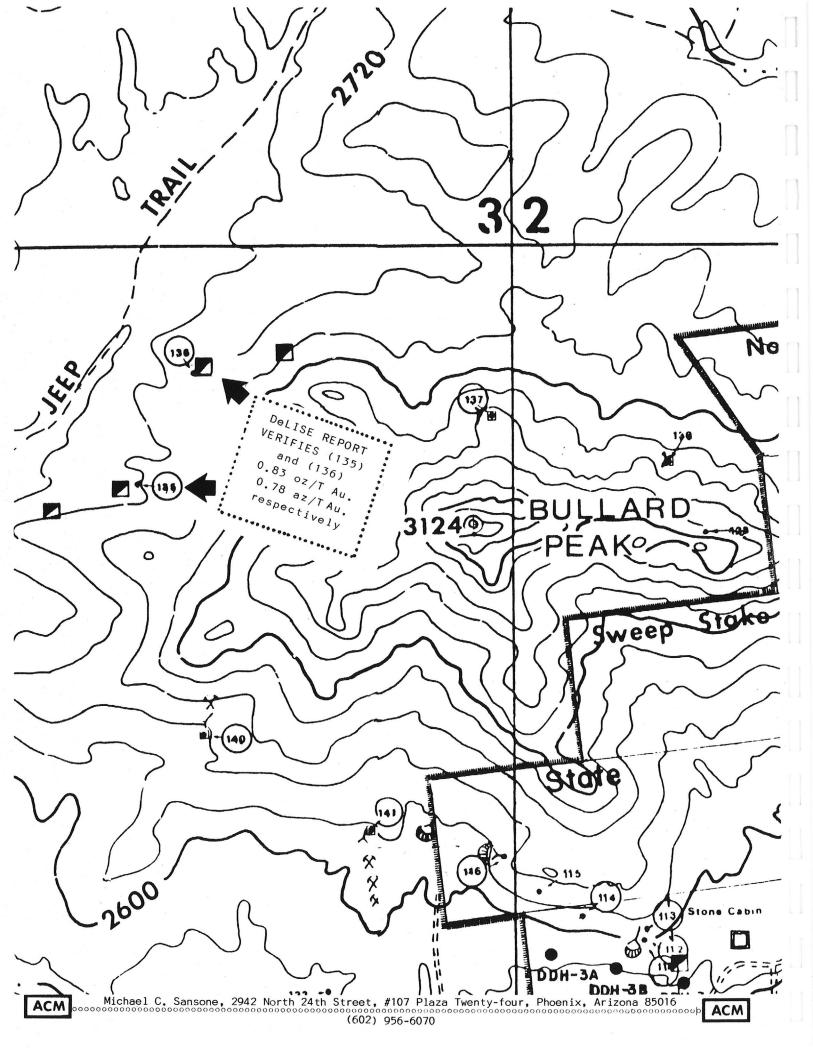
Giese's reports and valuations are based upon his average samplings within several areas, testing 0.334 oz/ton Au, 0.411 oz/ton Au and 0.498 oz/ton Au. These averages, applied to estimated tonnages of ore, totaled \$119,000,000 for the Target and Broken Ladder areas.

> A COMPLETE DETAILED REPORT WITH MAP IS AVAILABLE UPON REQUEST FOR "FULL GEOLOGICAL DATA"



Michael C. Sansone, 2942 North 24th Street, #107 Plaza Twenty-four, Phoenix, Arizona 85016 (602) 956-6070





## KNOXIE C. DeLISE 1981 GEOLOGICAL REPORT

Knoxie C. DeLise's 1981 report was made for NRG Resources, Ltd. to cover their 26 patented claims.

The report consists of 35 pages and 3 maps, the content of which extends into the Sansone Bullard Peak properties, and more particularly into the Sansone Target Area.

It should be noted that the sampling reported and mapping by Mr. DeLise shows that, from the 28 assays taken, the two highest valued assays were on the Sansone Bullard Peak properties. These were #135 at 0.83 oz Au, 0.70 oz Ag, and 2.40% copper; and #136 at 0.78 oz Au, 0.25 oz Ag, and 2.40% copper.

Ore treatment studies in the mineralized zones of the Bullard Peak area indicate the observed mineralization would respond to a gravity separation after crushng to a minus 40 mesh. This treatment should recover 95 - 97% of all sulphides. The follow-up treatment would be an acid copper leach process. Tests of this treatment were, in fact, carried out with positive results.

Knoxie C. DeLise is a certified geologist, registered in Arizona and California. His base of operations is San Diego, California.

A COMPLETE DETAILED REPORT WITH MAP IS AVAILABLE UPON REQUEST FOR "FULL GEOLOGICAL DATA"

237' 0 26-1.6-2.36 (30)16" = .10 - .2 - .30 129-18- 1.82 -.7- 8.25  ${\mathfrak G}$ Computed Average of Samples 6-49 int: (36 - au. 0.25 . ag. 0.50 pg; Cu. 2.67 %. 156 Analysis of Composite; Ins. 78.2; Sio. 73.0; Fo. 6.8; Cal. 0.6; Al. Os 4.6; S. tr. 135 \*\*\*\*\* A SMALL PART OF ASARCO MAPPING IN 1913 Avg.0.25 oz/T Au HOME GROUP. PIERCE MINING DIST. YAVAPAI CO. ARIZONA. ASSAY PLAN AND SECTION\_ SHOWING LOCATION, WIDTH AND VALUE OF SAMPLES. Seale : 1=40' A. S. & R. Co. Map. 1913.

#### ASARCO MAPPING 1913

A map of the Bullard Peak area was prepared by A.S. & R. CO. (ASARCO) in 1913. The computed average of samples 6 through 49, inclusive, gave:

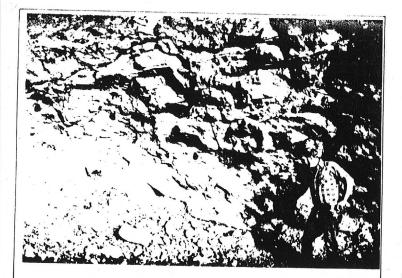
> 0.25 oz/T Au. 0.50 oz/T Ag. 2.67% Cu.

The area covered by A.S. & R. Co. (now ASARCO) is just east of the target areas herein mentioned as the most likely prospects.

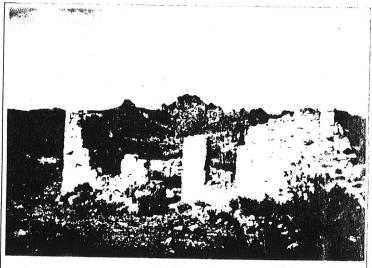
The complete mineral plat is included in the Geological Data Package.

The plat was copied from records of the Arizona Department of Mineral Resources, Arizona State Fairgrounds on McDowell Road at 19th Avenue, Phoenix, Arizona.

THE COMPLETE ASARCO GEOLOGICAL MAP IS AVAILABLE UPON REQUEST OF THE "FULL GEOLOGICAL DATA"



MAIN VEIN FROM UNITY MINING'S REMOVAL OF OVERBURDEN IN BULLARD PEAK TARGET AREA AT MINE SITE #23



HISTORIC RUINS OF STAGE COACH STOP ALONG SMITH PEAK ROAD ON THE WAY TO BULLARD PEAK TARGET AREA



LARGE AREA OF OVER-BURDEN REMOVED BY UNITY MINING IN 1982. THIS IS THE PRIME TARGET AREA AT MINE SITE #23.



SMITH PEAK ROAD IS A TYPICAL ROAD TO AND FROM BULLARD PEAK' TARGET AREA



AT MINE SITE #25, from left to right - Thomas Riggs (Geological Consultant), Felix Rea, (Helper), David Rea (Helper), Cadmus Goss (Certifying Engineer). COLLECTING SAMPLES FOR RIGGS REPORT



SURVEY CREW RE-SETTING BULLARD PEAK CLAIM CORNERS FROM MAY TO SEPTEMBER 1985

## HISTORY BULLARD PEAK AREA

Around the turn of the century, and periodically thereafter, up to and during World War II, mining was a major industry in the vicinity of Aguila, Arizona. Gold, silver and copper were principal elementary metals

After WWII, with metals and minerals at low market prices, along with the closing of nearby mills, the many small mines began to shut down. At that time, these metals had values less than one-fifteenth of the present day market values.

Recently, many mines have been inactive in the Aguila area because there are no facilities to custom mill and process the ores. The nearest custom ore milling and processing operations are now more than 100 miles from Aguila. Milling is done on a reservation basis.

Prior to the turn of the century, a former Confederate soldier named Bullard did extensive prospecting in the area north of Aguila. Bullard Peak is named for him. He was responsible for patenting many of the claims in the immediate vicinity of the peak. Bullard refused to make reasonable deals with people who wanted to develop the mines he had located. He would only make short-term leases with prospective miners. Bullard's terms made full scale development economically unfeasible, and thus, the claims were only worked intermittantly over the years.

The Bullard mine on the patented claims was described as a flat vein carrying copper, gold and silver. The mine outcropped in a low range of hills lying East of Bullard Peak. The grade of ore was judged to be continuous under and through the hill. Bullard died during the 1920's. Shortly before WWII, the mine was leased to good operators.

The files of the Arizona Department of Mineral Resources disclose a movement of nearly 5,500 tons of ore over a 29 month period from March 1939 to July 1941. During that period, 1,879 ounces of gold, 1,435 ounces



## GOOD ACCESS ROADS TO ALL CLAIMS



TYPICAL ROAD



of silver and nearly 119 tons of copper were milled from that quantity of ore. The milling and processing were done at the Hayden smelter, Hayden, Arizona, approximately 180 miles distant.

Sansone's Bullard Peak claims are situated in a low range of hills which are more or less isolated from the main mass of the Harcuvar Mountains which lie farther West. The hills rise abruptly from the general base level of the surrounding desert plains and are rather bold in outline, with sharp upstanding outcrops of rock. The general color is red to reddish black as against a rather white color predominating over the greater part of the desert wash.

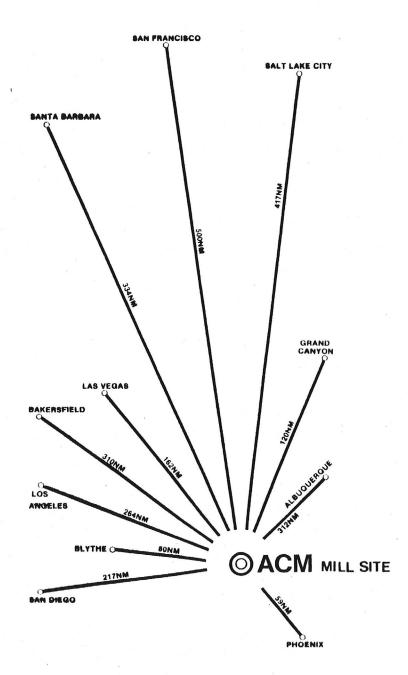
The main mountain range, which culminates in Bullard Peak, is geologically of great age, and consists of the eroded remains of a complex of Archean Schists with later Cambrian intrusives. The gravel in the various gulches which deploy from the main mountain range include fragments of granite, schists, hornblendeschist, gneiss, porphyry and some metamorphic rocks difficult to identify. The 166 Sansone claims, lying at 2,700 feet above sea level, surround Bullard Peak.

In 1981, Unity Mining Company entered into an exploratory lease/option on the Sansone claims. Unity removed a large amount of overburden and uncovered 2,800 feet of two parallel veins, located on four of the claims. There is evidence that these veins continue for an additional 3,000 feet in a Southwesterly direction. Several shafts and drifts intersecting these veins indicate recoverable ore ranging in depths from 20 feet to 80 feet below the surface.

Unity, at that time, however, was already heavily involved in resolving environmental problems with other properties it was investigating. As a result of these difficulties, Unity allowed the lease/option to expire.

The target area that Unity was working has continued to be the recommended target area of all subsequent geological investigations of Sansone's 166 claims.





AGUILA, ARIZONA



#### HOW IT BEGAN

Between 1968 and 1978, Michael Sansone was developing and subdividing land in and around Aguila, Arizona.

At the same time, John Moore and Gene Pyers were prospecting and mining the nearby Bullard Peak area on a minimal basis.

During that period of time, Sansone and these miners became acquainted.

In 1978, Sansone joined with Moore and Pyers by investing sufficient funds to acquire heavy equipment, exploration services, a milling plant, a testing laboratory and other facilities to develop and fully operate a mining and processing plant.

Actual work began in mid 1978.

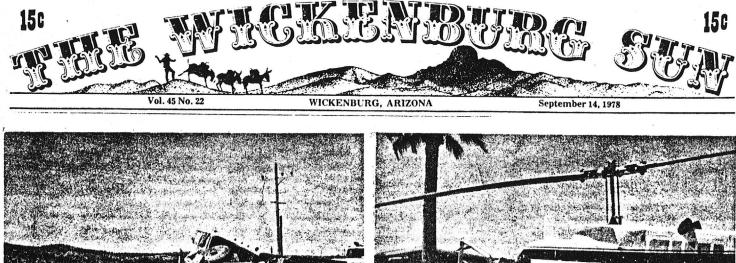
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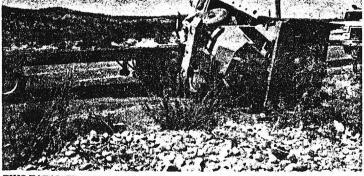
The partnership agreement between Sansone, Moore and Pyers provided that all of the claims would be filed in the name of Sansone.

#### WHO WAS TO DO THE WORK

The mining operation was organized and work began with John Moore acting as the working partner with Gene Pyers as his assistant. John Moore had the expertise and know-how: to locate and develop mine sites; to operate and repair the heavy equipment acquired; to coordinate and direct the activities of the workers; and, most of all, he had a vast knowledge of the formations of Bullard Peak and the immediate surrounding area. He had spent many years prospecting and testing these properties. He and Pyers lived on the site for several years immediately prior to becoming partners with Sansone.

## JOHN MOORE







THIS FATAL CRASH of two heavy trucks occurred Monday morning this week on U. S. 60 about a mile east of Wickenburg. Highway Patrolmen reported a dump truck, stopped along the road because of running out of fuel, was struck by a flatbed semi-trailer truck. Both vehicles were headed toward Wickenburg when the crash occurred. The driver of the dump truck suffered severe chest and head injuries and was declared dead at Wickenburg Community Hospital. At press time, the Highway Patrol was trying to verify identity of the driver who was killed.

AN AIRLIFT TO PHOENIX of a second truck driver injured in a crash Monday morning on the Phoenix highway was made by Dept. of Public Safety helicopter. The driver, John Bruce, 24, of Diamond Bar, Calif., suffered leg, arm and eye injuries when the truck he was driving crashed into a dump truck stalled along the road. He was taken to the Wickenburg Community Hospital, then transferred to Good Samaritan Hospital in Phoenix by the helicopter.

Monday September 9, 1978 John Moore was killed



Michael C. Sansone, 2942 North 24th Street, #107 Plaza Twenty-four, Phoenix, Arizona 85016

#### WHY IT WAS STOPPED

John Moore was killed, instantly, while delivering an ore truck to the Bullard Peak mine site.

Sansone decided not to continue actively in any mining operation. The decision was made, especially, because Sansone had no working knowledge for operating a mine or mill.

Moore was the key person for managing the operations and the business. Without Moore, and with no guidelines for hiring or taking on a new person, Sansone felt there was no alternative but to make a settlement and dissolve the partnership.

However, any recovery of Sansone's investment would have to come from the sale or lease of the claims and the 15 acre deeded processing plant in Aguila, Arizona.

Sansone has completed his real estate and airpark developments in the area. He has maintained the claims in good standing each year since 1978.

ACM

1978

PROPOSED OPEN-PIT MINING

SILICON ORE

IN EXCHANGE FOR CONTENT

OF PRECIOUS METALS

The following page explains the original plan to develop the Bullard Peak properties.

## PLAN IN 1978 - Ship Silicon Ore in Exchange for Precious Metals Content.

Shortly after the death of John Moore in September 1978, Sansone proposed to continue with the project started with Moore and Pyers.

This project was to mine ores containing high quantities of silicon and ship to ASARCO. There, ASARCO was to refine the ore, retain the silicon and return the valuable metals, i.e., gold and silver. The retention of the silicon was by way of payment for the refining.

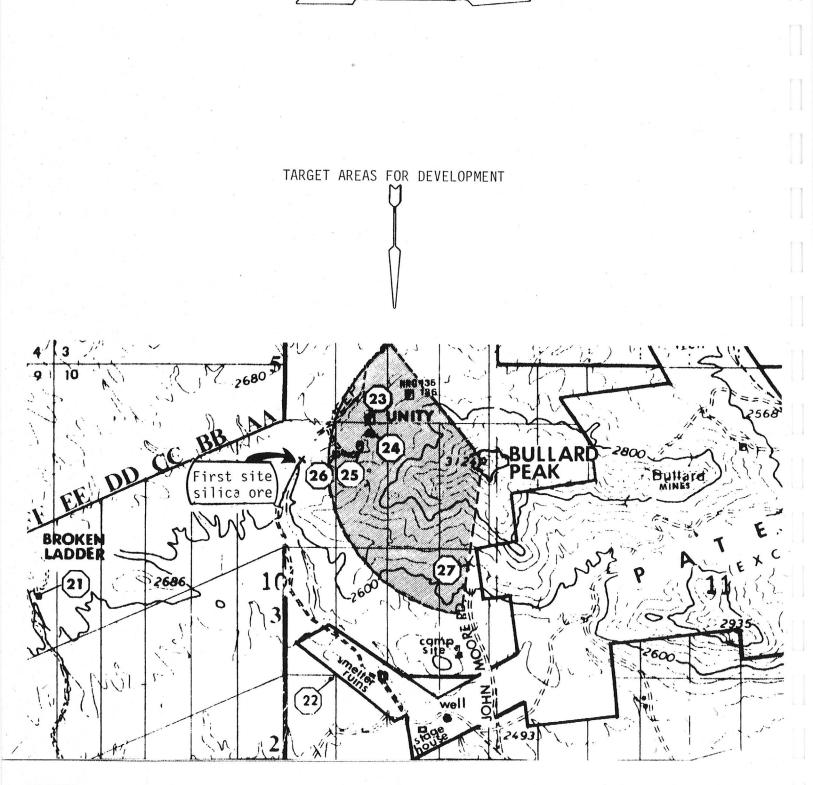
However, without Moore to direct all of the mining operations, Sansone determined that it would not be practical to continue with this process and the project was subsequently dropped.

In connection with the project, Sansone had acquired much heavy mining equipment to be used in the extraction and shipping of the ore. He also had arranged to lease a 15 acre industrial site in Aguila, having access to both rail and highway for shipping of the prepared ores.

Upon determination that it was not practical to continue with the mining venture, Sansone proceeded to dispose of much of the heavy equipment. He retained the 15 acre industrial site, which is presently leased to an organization which has placed a small mill on the property and has been processing ores from other locations.

In 1979, Sansone settled with, and compensated Pyers for his interest in the claims and Pyers moved on.





1978 - THE BEGINNING OF DEVELOMENT FOR SILICON ORE.

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ORE PROCESSING PLANT . 15 ACRES DEEDED . AGUILA, ARIZONA

AGUILA PROCESSING PLANT: Michael Sansone holds a long-term lease on 15 acres of land having the permitted use, by the Maricopa County Planning and Development Department, for the operation of an ore processing plant. These facilities contained within the plant are as follows:

- Level 15 acres.
- Entirely fenced; dusk to dawn lighting; entrance office, security quarters; and Sheriff's Department patrol.
- Two bedroom, modern mobile home.
- Large equipment repair shop; storage buildings, leach beds; 8 car railroad siding with loading platform docks; truck loading platform; 690 feet of highway frontage; and large storage tanks (over 170,000 gallons).
- City water; 440 volt, three phase power; high-pressure natural gas; and phone installation.
- Assay laboratory.
- In-town, with post office; fuel and repairs; school, recreation park with lighted tennis courts; motels, grocery stores; and many other conveniences.
- \* Readily available labor force non-union.
- \* The plant has a complete milling operation and testing laboratory in operation by KenPan Ltd., sublessee from Sansone.
- Low taxes.
- Waste landfill nearby.
- \* Fire Department and ambulance with six paramedics available. Hospital and doctors 22 miles, non-stop by State Highway,, in Wickenburg.

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None of the machinery and/or equipment depicted in the various pictures relating to the NOTE: Aguila Processing Plant is included in this offering.



ACM Michael C. Sansone, 2942 North 24th Street, #107 Plaza Twenty-four, Phoenix, Arizona 85016 (602) 956-6070

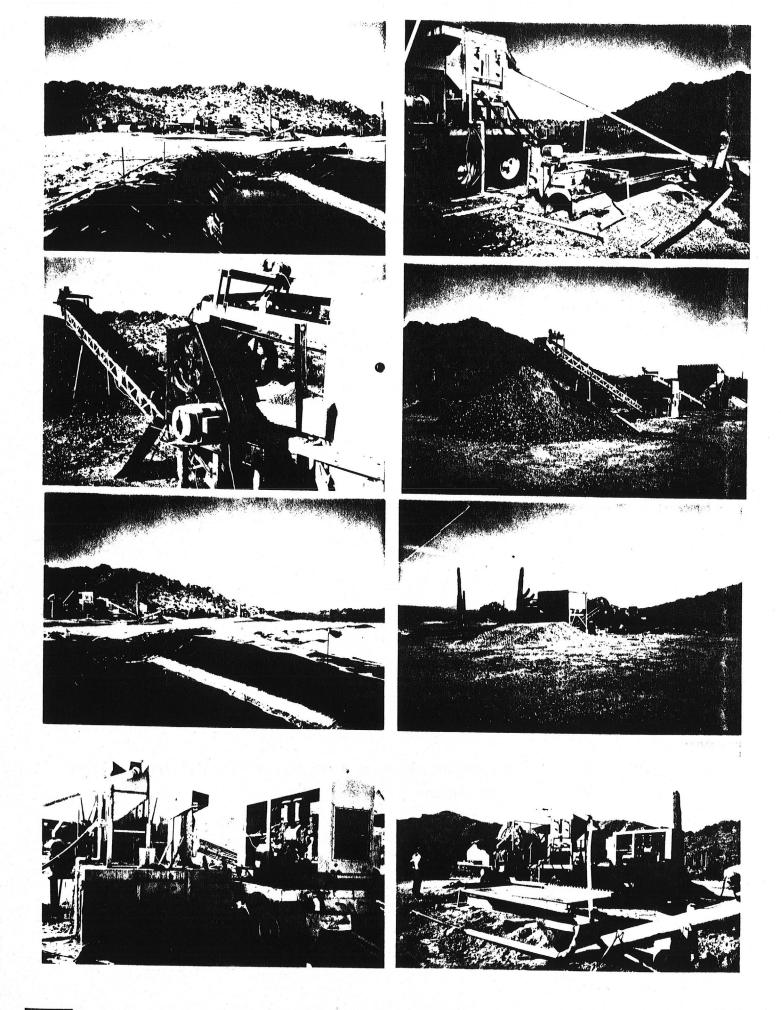
### PICTURES OF NRG MILL TAKEN SPRING OF 1985



End of NRG Mill







ACM

ACM

#### NRG RESOURCES, LTD.

NRG Resources, Ltd., a Canadian mining company, owns 60% of the patented claims which lie east of Bullard Peak. NRG has recently installed a processing mill at the location depicted on the accompaning map.



Pictures of the mill are shown on the following page.

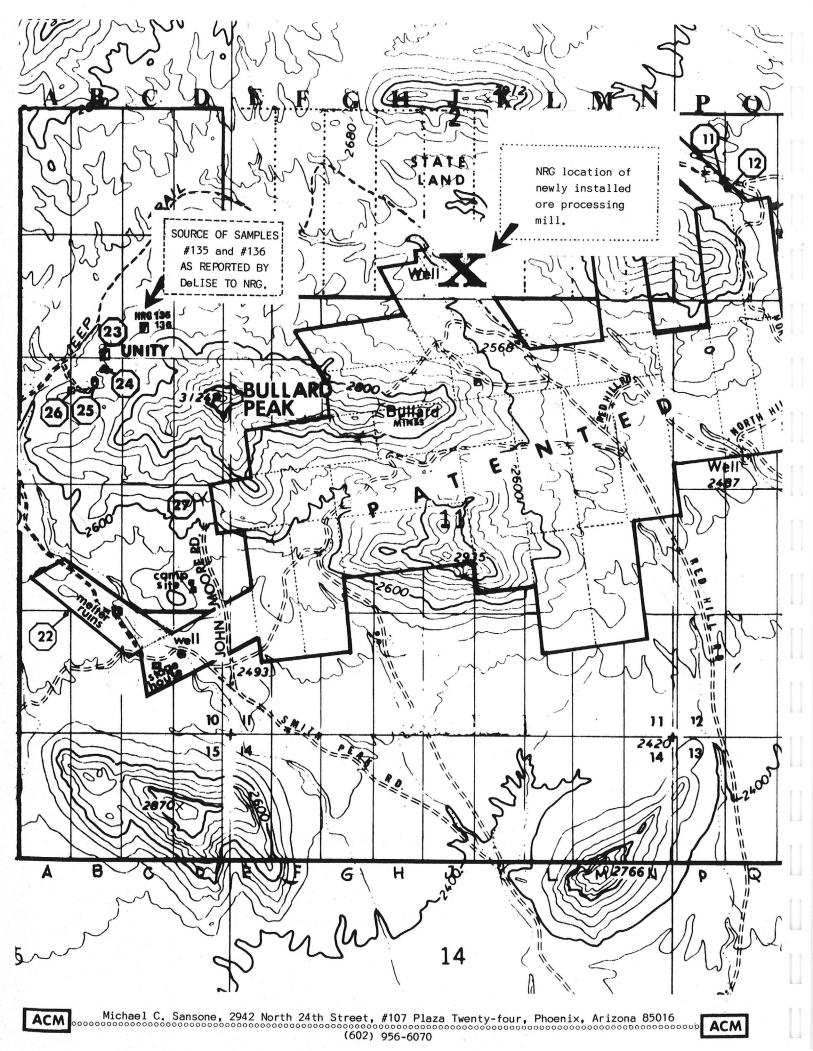
The stock of NRG is traded on the Vancouver, B.C. Exchange.

The DeLise Report, mentioned earlier in this presentation, was prepared for NRG Resources, Ltd.

Two samples reported by DeLise are shown on this map as #135 and #136, located northwest of Bullard Peak, on Sansone's property.

These two samples indicated the highest gold and copper contents of all of the assays reported by the DeLise report. DeLise is a registered geologist in California and Arizona.





Title to all of the 166 Lode Mining Claims will be certified as being currently in good standing by a recognized mineral title search organization, with title to the claims to be transferred through escrow with a recognized title insurance company.

The original number of Bullard Lode Claims held by	
Sansone was:	97
In 1983, Sansone filed additional claims known	
as the Extension Group, numbering	48
Also, in 1983, Sansone filed additional claims to fill	
in the North boundary of the patented claims	7
In 1984, Sansone filed additional claims to	
the Extension Group, numbering	14

Grand Total of Bullard Peak Claims 166

166 Claims as recorded in Yavapai County, Arizona, and filed in the office of the Bureau of Land Management, Phoenix, Arizona, in the name of Michael C. Sansone.

End of Claims Identification



The 166 Lode Claims listed below are of records of Bureau of Land Management Office, Phoenix, Arizona. These claims are located within Sections 1,3,9,10,11,12,13,14,15,16 in T8N,R10W and Sections 7 & 18 in T8N,R9W of G & SRB & M Yavapal County, Arizona, in the Pierce Mining District and recorded in the name of Michael C. Sansone of Phoenix, Arizona.

TYPE & NAME OF CLAIM	BLM SERIAL Yavapai County NUMBER BOOK PAGE			TYPE & NAME OF CLAIM		BLM SERIAL NUMBER	Yavapai Count BOOK PAC	
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	Claims filed 1984.		-				1	
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PERMIT TO BEGIN SILICON DEVELOPMENT WORK



END OF NARRATIVE ON PROPOSED SILICON DEVELOPMENT

BEGIN IDENTIFICATION OF CLAIMS

5





# State Mine Inspector

VERNE C. MCCUTCHAN PHOENIX, ARIZONA 85007

#### NOTICE TO STATE MINE INSPECTOR

In compliance with Arizona Revised Statute 27-303, we are hereby submitting this written notice to Mr. Verne C. McCutchan, State Mine Inspector, of our intent to start/stop a mining operation.

 COMPANY NAME
 dba
 ACM Mining

 MAILING ADDRESS
 One West Madison Ave, Phoenix, Arizona 85003 (602) 956-6070

 CHIEF OFFICER AT ABOVE ADDRESS
 Michael C Sansone

 PERSON SENDING THIS NOTICE
 Gene F Pyers

 TYPE OF OPERATION
 Open Pit Mining

 STARTING DATE
 1 October, 1978

 CLOSING DATE
 not applicable

 DURATION OF OPERATION
 unknown at this time

 NUMBER OF EMPLOYEES
 two to four

Give exact description of location of this operation (including

directions for locating by vehicle). North then West of Aguila 8½ mile as crow flie: West and adjoining the Bullard patents. Gene Pyers resides on said property to be mined. Property is situated in Yaapai County.

9-17-28 Michael C Sansone all C I finsing Gene F Pyers Any operation found operating without sending this notice will be Attn: Mr Roy Duniwin, Yavapai Mining Inspector charged with a misdemeanor. State Mine Inspector Mail to: 705 W. Wing, Capitol Bldg.

Phoenix, AZ 85007

# **Arizona Testing Laboratories**

817 West Madison · Phoenix, Arizona 85007

Telephone 254-6181

For

Mr. Mike Sansone One West Madison Phoenix, AZ. 85003 Date

•

October 10, 1978

#### **ASSAY CERTIFICATE**

LAB NO.	IDENTIFICATION	OZ. P	OZ. PER TON		PERCENTAGES				
		GOLD	SILVER	COPPER					
8109	ACM #6	0.40	0.15	0.34%					
			X						
						•			

Respectfully submitted,

ARIZONA TESTING LABORATORIES 6253 Cunt 111: MicLEAH. Claude E. McLean, Jr. Signed ARICONA

## **Arizona Testing Laboratories**

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

For: Mr. Mike Sansone One West Madison Phoenix, Arizona 85003

Date: Lab. No.: October 11, 1978 8109

**Received:** 

10-6-78 same

ACM #6 Marked:

Submitted by:

#### REPORT OF QUALITATIVE SPECTROGRAPHIC EXAMINATION

#### ELEMENT

Boron Silicon Aluminum Manganese Magnesium Lead Gallium Copper Iron Calcium Vanadium Sodium Titanium Silver Nickel Potassium Strontium

#### **APPROXIMATE PERCENT**

0.005 Major Constituent 7.0 0.07 2.0 0.4 0.004 0.05 5.0 2.0 0.006 2.0 0.1 0.0005 0.02 1.0 0.02

#### Respectfully submitted,

**ARIZONA TESTING LABORATORIES** 

Claude E. McLean, Jr.

# **Arizona Testing Laboratories**

817 West Madison · Phoenix, Arizona 85007 ·

Telephone 254-6181

For

Mr. Mike Sansone One West Madison Phoenix, AZ. 85003 Date

October 10, 1978

#### ASSAY CERTIFICATE

LAB NO.	IDENTIFICATION	OZ. PER TON		PERCENTAGES				
	IDENTIFICATION	GOLD	SILVER	COPPER				
8109	ACM #5	0.20	0.15	0.28%				
			÷					

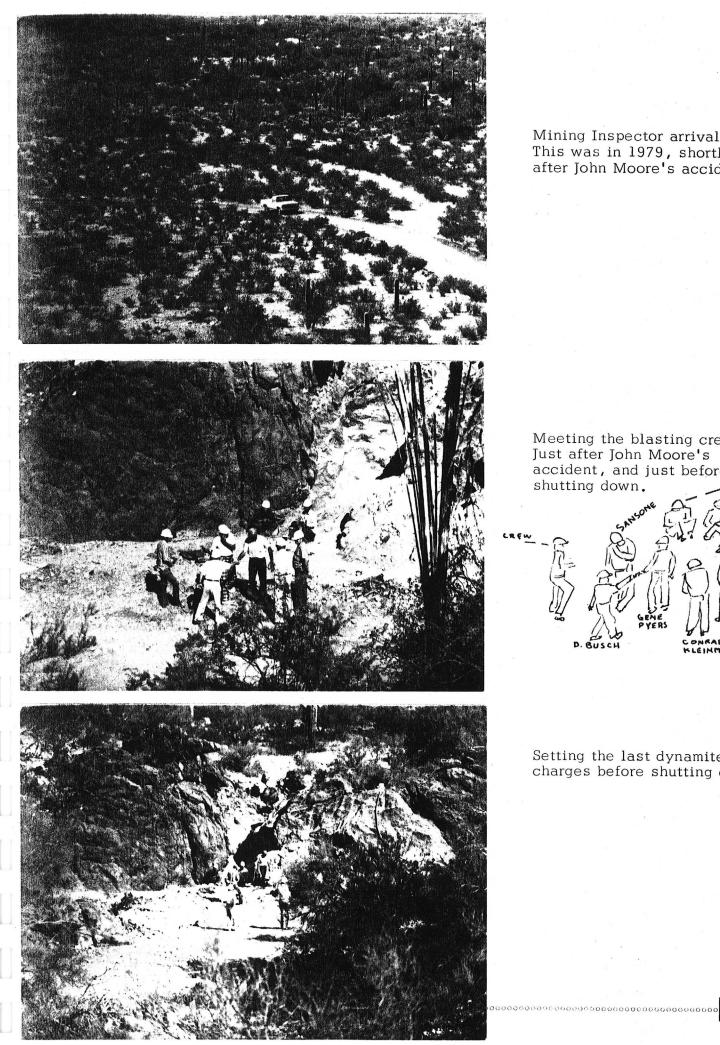
Respectfully submitted,

ARIZONA TESTING LABORATORIES IFICATE A 6258 1100 CHOT Mett Mi Claude E. McLean, Jr. 18120.5

The following three pages are copies of reports by Arizona Testing Laboratories of ore analyses of several samples taken from the Silicon target area which are depicted on the plat on the second preceding page.

Note that the major constitutent of the samples was Silicon, while, at the same time the samples carried 0.20 oz and 0.40 oz/T respectively of Gold and 0.15 oz/T Silver each sample.

Σ



Mining Inspector arrival This was in 1979, shortly after John Moore's accident.

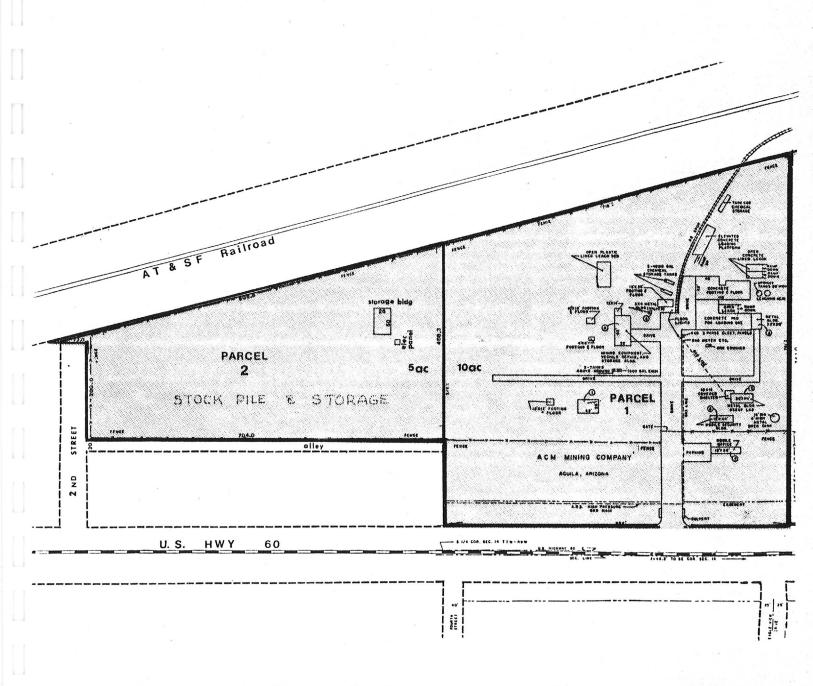


Setting the last dynamite charges before shutting down.

### 15 ACRES DEEDED

ORE PROCESSING PLANT

AGUILA, ARIZONA



ACM

Michael C. Sansone, 2942 North 24th Street, #107 Plaza Twenty-four, Phoenix, Arizona 85016 (602) 956-6070



MILLING EQUIPMENT PRESENTLY LOCATED ON 15 ACRE AGUILA PROCESSING PLANT

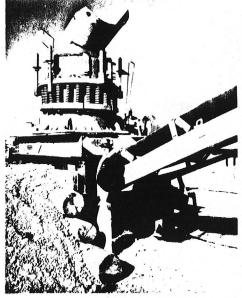
NOTE: This equipment is not owned by Sansone, and is NOT, therefore, included in this offering. The equipment is available for purchase upon inquiry of Sansone.

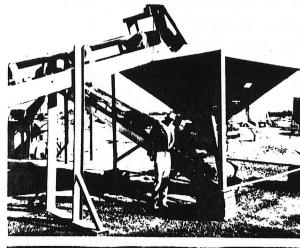




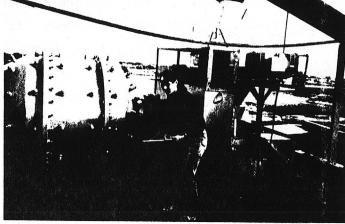


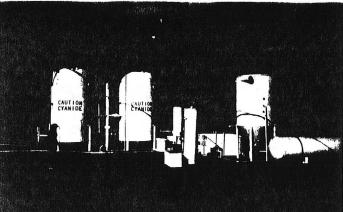


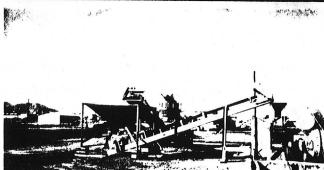


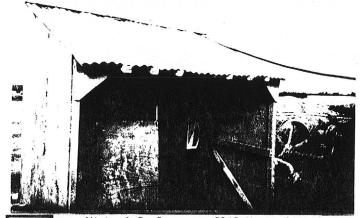




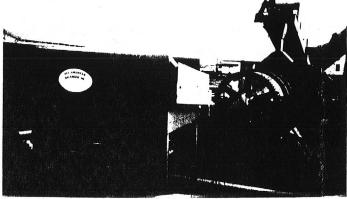








ACM



Michael C. Sansone, 2942 North 24th Street, #107 Plaza Twenty-four, Phoenix, Arizona 85016 (602) 956-6070 0.000



#### SUPPORTING FACILITIES

Office and living facilities are available with a sale, if considered advantageous to the buyer. The office is located immediately across the highway (U.S. Highway 60) from the 15 acre plant. It is at the East edge of the town of AGuila, and is situated on the corner, fronting 270 feet on the highway, and 247 feet depth along Eagle View Drive. The property is zoned commercial C-2 by Maricopa County (County seat in Phoenix, 80 miles to the Southeast). The office has a large storage building; and living quarters with city water, electric, natural gas and phone. It has a fenced area. The entire property has excellent sight-line from the highway.

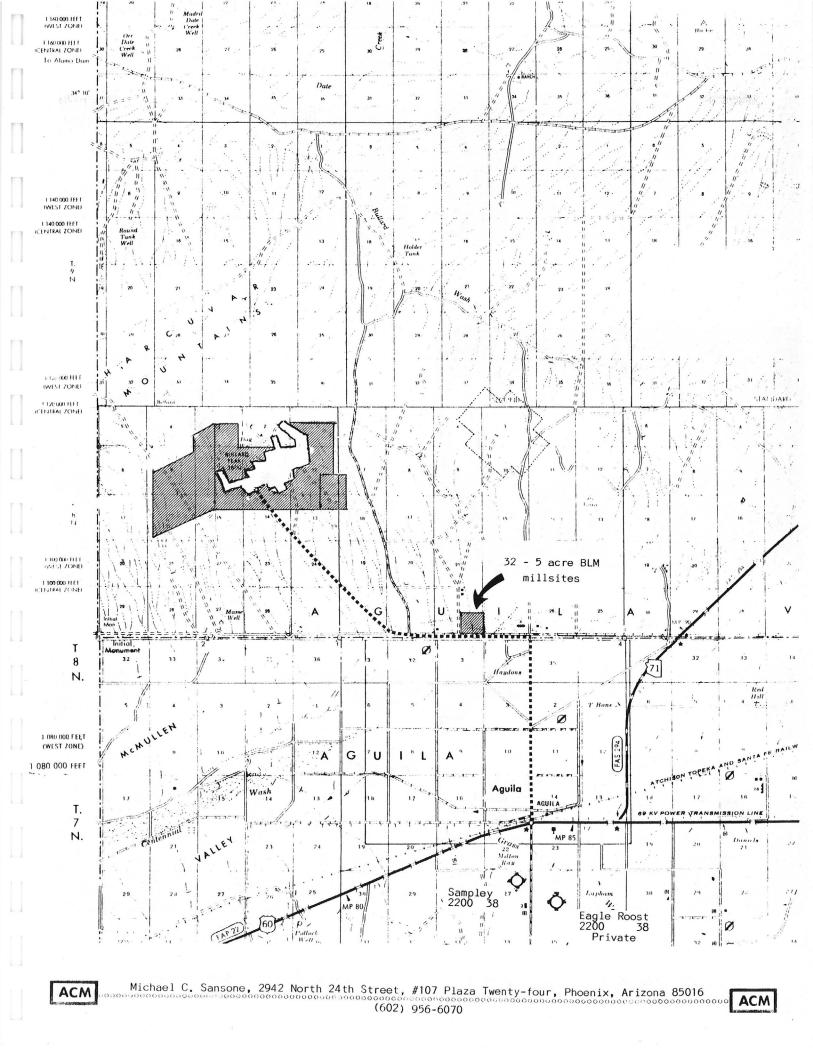
Sansone also owns a winter home in Aguila, located at the foot of the Harcuvar Mountains, overlooking the city. All utilities are in, underground.

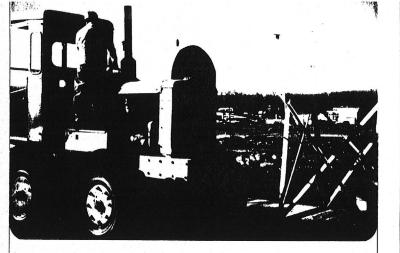
#### BACKUP MILLSITES

Sansone maintains 32 millsites of five acres each within 4 miles of the mining claims. These millsites have electric, high-pressure natural gas and phone service. A landing strip of 2,640 feet in length will soon be placed along-side of the millsite operation area.

Engineering surveys of these millsites are of record with the Yavapai County Recorder and the Bureau of Land Management. Access to these millsites is maintained by the highway departments of Maricopa County and Yavapai County.

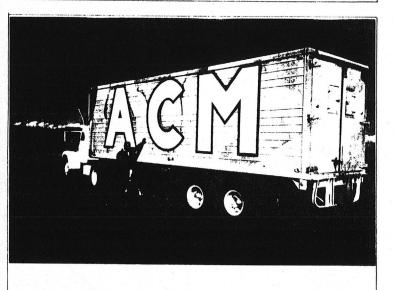
Travel time to the town of Aguila is less than 10 minutes on all-weather roads.





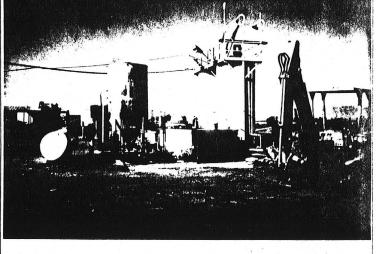
GRADER BLADE AND FUEL SERVICE TANKS

AGUILA ORE PROCESSING PLANT & EQUIPMENT



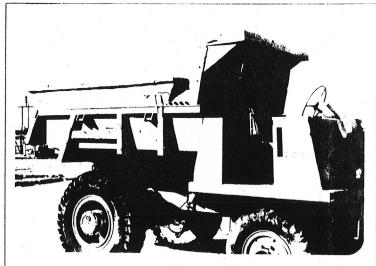
#### ON-SITE EQUIPMENT STORAGE FOR MINING

AGUILA ORE PROCESSING PLANT & EQUIPMENT

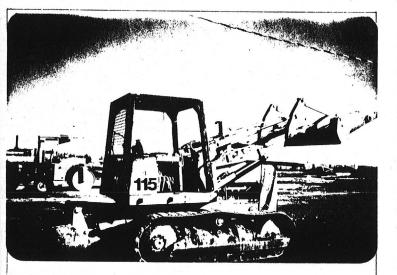


MIXING TANK AND BACK-HOE

AGUILA ORE PROCESSING PLANT & EQUIPMENT

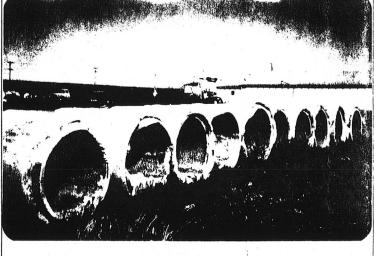


ONE OF TWO LEYLAND ORE TRUCKS PICTURE OF ORE TRUCK THAT JOHN MOORE WAS KILLED ON. AGUILA ORE PROCESSING PLANT & EQUIPMENT



CRAWLER LOADER & EXCAVATOR

AGUILA ORE PROCESSING PLANT & EQUIPMENT

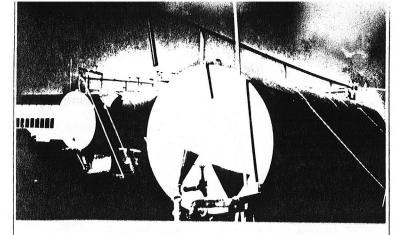


HEAVY DUTY CONCRETE CULVERTS FOR ACCESS ROAD CONSTRUCTION TO MINES

AGUILA ORE PROCESSING PLANT & EQUIPMENT

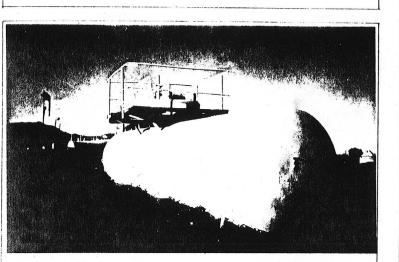
ACM

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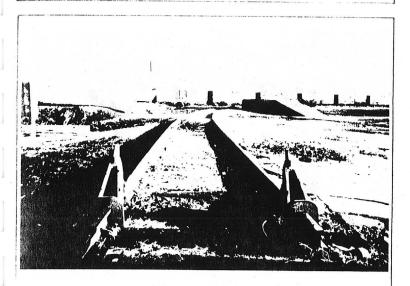
CHEMICAL STORAGE TANKS ALONGSIDE OF R.R. SIDING

AGUILA ORE PROCESSING PLANT & EQUIPMENT



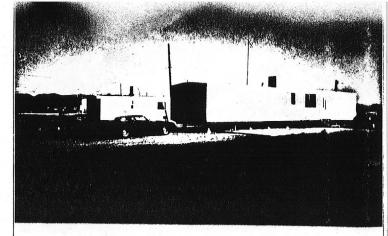
TANK CAR CHEMICAL OR WATER STORAGE

AGUILA ORE PROCESSING PLANT & EQUIPMENT



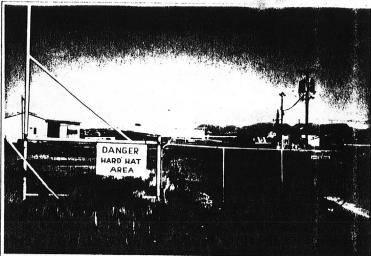
CAR R.R. SIDING, PART OF PLANT OWNERSHIP

AGUILA ORE PROCESSING PLANT & EQUIPMENT



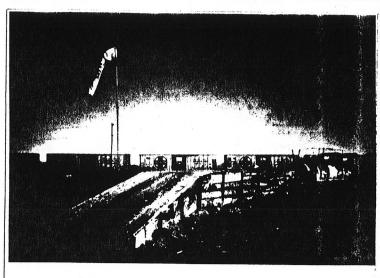
MOBILE HOME AND/OR OFFICE AT ENTRANCE TO PLANT

AGUILA ORE PROCESSING PLANT & EQUIPMENT



ENTRANCE GATE TO PLANT

AGUILA ORE PROCESSING PLANT & EQUIPMENT



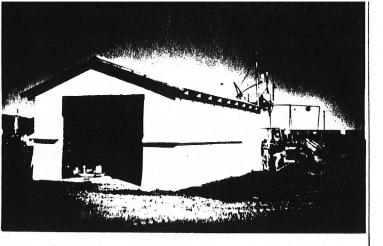
LOADING RAMP - PLATFORM FOR R.R. CARS AND/OR TRUCK DOCK

AGUILA ORE PROCESSING PLANT & EQUIPMENT



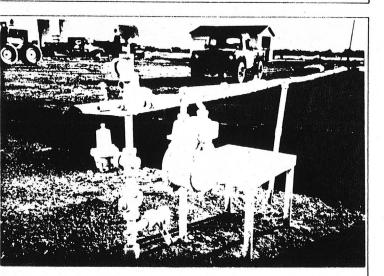
Michael C. Sansone, 2942 North 24th Street, #107 Plaza Twenty-four, Phoenix, Arizona 85016 (602) 956-6070





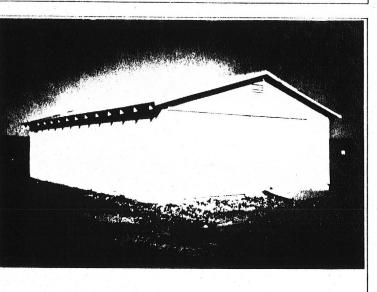
EQUIPMENT REPAIR SHOP OR WASH RACK

AGUILA ORE PROCESSING PLANT & EQUIPMENT



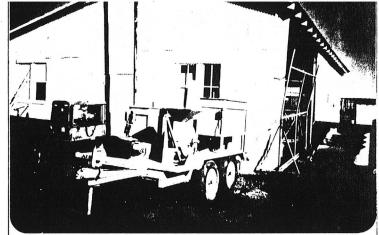
HIGH PRESSURE GAS REGULATOR

AGUILA ORE PROCESSING PLANT & EQUIPMENT



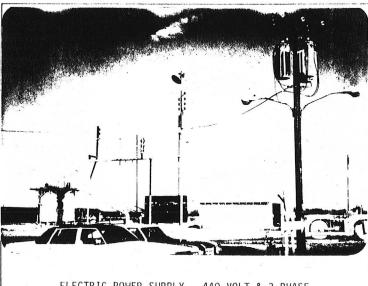
STORAGE BUILDING WITH HEAVY DUTY FLOORING

AGUILA ORE PROCESSING PLANT & EQUIPMENT

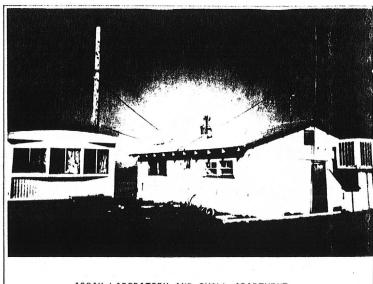


EQUIPMENT REPAIR SHOP AND PARTS STORAGE

AGUILA ORE PROCESSING PLANT & EQUIPMENT



ELECTRIC POWER SUPPLY - 440 VOLT & 3 PHASE DUSK TO DAWN LIGHTING AGUILA ORE PROCESSING PLANT & EQUIPMENT



ASSAY LABORATORY AND SMALL APARTMENT. USED AS WATCHMAN"S OFFICE

AGUILA ORE PROCESSING PLANT & EQUIPMENT



Michael C. Sansone, 2942 North 24th Street, #107 Plaza Twenty-four, Phoenix, Arizona 85016



#### REASON FOR SELLING OR LEASING

Michael C. Sansone has been successfully instrumental in the real estate development of several sections of land in the immediate area of Aguila, Arizona.

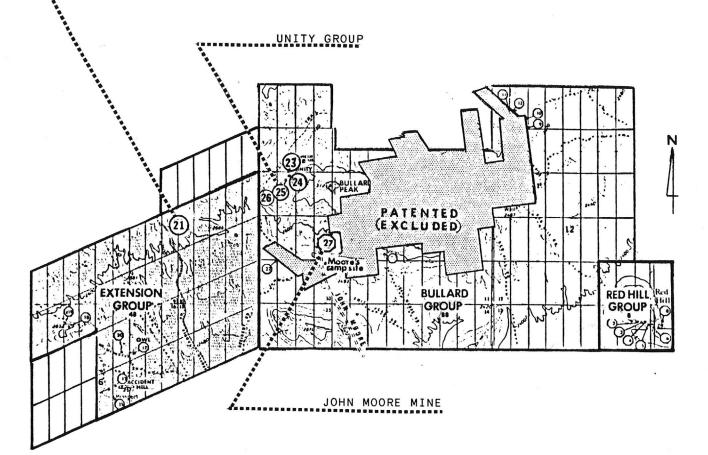
At 64 years of age, and very active as a pilot, he has a compelling desire to travel and spend time with his family and grandchildren.

Gold and silver mining, with complete processing requires a full-time, fullscale exploration, mining and processing operation. This would take a concentrated effort for several years. Sansone does not wish to spend such an amount of time for these purposes.

Sansone has no previous knowledge of mining and processing of ores.



BROKEN LADDER MINE



BULLARD PEAK

#### 166 CLAIMS

(± 3,000 Acres)

#### AGUILA, ARIZONA