



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

The following file is part of the Cambior Exploration USA Inc. records

### **ACCESS STATEMENT**

These digitized collections are accessible for purposes of education and research. We have indicated what we know about copyright and rights of privacy, publicity, or trademark. Due to the nature of archival collections, we are not always able to identify this information. We are eager to hear from any rights owners, so that we may obtain accurate information. Upon request, we will remove material from public view while we address a rights issue.

### **CONSTRAINTS STATEMENT**

The Arizona Geological Survey does not claim to control all rights for all materials in its collection. These rights include, but are not limited to: copyright, privacy rights, and cultural protection rights. The User hereby assumes all responsibility for obtaining any rights to use the material in excess of "fair use."

The Survey makes no intellectual property claims to the products created by individual authors in the manuscript collections, except when the author deeded those rights to the Survey or when those authors were employed by the State of Arizona and created intellectual products as a function of their official duties. The Survey does maintain property rights to the physical and digital representations of the works.

### **QUALITY STATEMENT**

The Arizona Geological Survey is not responsible for the accuracy of the records, information, or opinions that may be contained in the files. The Survey collects, catalogs, and archives data on mineral properties regardless of its views of the veracity or accuracy of those data.

2-10-14

SCAN AU

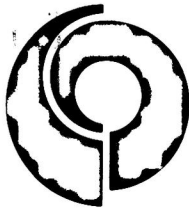
FOR RAY

HARRIS

**Ray Harris**  
Geologist

PO Box 43611  
Tucson, AZ 85733  
520-237-9329  
chooray@dakotacom.net  
AZ Reg. Geologist #45426





One of the NICOR  
basic energy companies

## NICOR MINERAL VENTURES

### MEMORANDUM

To: Gary Parkison  
From: N. L. Archbold  
Date: July 1, 1984  
Subject: SILVERFIELDS CLAIMS, MOJAVE COUNTY, ARIZONA

#### Summary

The Silverfields claims might provide a bulk-minable deposit of precious metals along the contact between a series of altered, brecciated shaly sedimentary rocks and overlying carbonate rocks. NICOR should contact the owners to obtain and evaluate the results of drilling, mapping, and sampling by Anschutz in August of 1983.

#### Location and Access

The group of claims lies along the north side of the Bill Williams River just north of the Johnson Ranch (Rankin Ranch) in Sections 5 and 6, T.10 N., R. 14 W. and in Section 32, T.11 N., R.14 W. The area of the claims is in the common corner between the Swansea, Castenada Hills, Alamo Dam, and Artillery Peak 15 minute topographic quadrangles.

The claims can be reached via gravel roads which extend about 30 miles north from Bouse to the Johnson (Rankin) Ranch. The topographic map shows an access road across the river at the ranch but this road and ford do not exist so I had to walk from the ranch. As I left the area the residents at the ranch returned and told me that Anschutz had built an access road a little to the west. I did not see it but it might still be passable.

#### Geology

I spent only two hours on the property when the temperature was about 110° so I did not accomplish much in the way of geology and sampling. Primarily, I examined outcrops and traversed parts of the western area of the claims.

The higher ridges are of deformed, fractured, crystalline limestone. The limestone overlies fractured, deformed shaly and carbonate sedimentary rocks. The rocks appear to have undergone cataclastic deformation and the limestone might be separated from the underlying shaly rocks by a low-angle fault.

PAGE 2 of 2

MEMO TO: Gary Parkison

DATE: July 1, 1984

SUBJECT: SILVERFIELDS CLAIMS, MOJAVE COUNTY, ARIZONA

I saw no jasperoids but the shales below the limestone show local sericitic alteration. Most prospects and the one drill hole I noted are just below the limestone. I did not see rocks that appeared to result from depositional activity by hot springs.

#### Recommendations

The geology I saw, and the results of some sampling that have been reported to us (0.11 to 3.62 oz gold per ton), suggest the possibility for a bulk-minable deposit of precious metals.

NICOR should attempt to review the results from sampling, drilling and geologic mapping by Anschutz.

NLA:ls

Memorandum

July 1, 1984

To: Gary Parkinson

From: W.L. Archbold

Subject: Silverfield claims, Mojave County, Arizona

### Summary

The Silverfield claims might provide a bulk-minable deposit of precious metals along the contact between a series of altered, brecciated shaly sedimentary rocks and ~~the~~ overlying carbonate rocks. NICOR should contact the owners to obtain and evaluate the results of drilling, mapping, and sampling by Anschutz in August of 1983.

### Location and Access

The group of claims lies along the north side of The Bill Williams River just north of the Johnson Ranch (Rankin Ranch) in sections 5 and 6, T. 10 N., R. 14 W. and in section 32, T. 11 N., R. 14 W. The area of the claims ~~lies~~ is in the common corner between the Swansea, Cartenzada Hills, Alamo Dam, and Artillery Peak 15 minute topographic quadrangles.

The claims can be reached via gravel roads which extend about 30 miles north from Bouse to the Johnson (Rankin) Ranch. The topographic map shows an access road across the river at the ranch but this road and ford do not exist so I had to walk from the ranch. As I left the area the residents at the ranch ~~then~~ returned and told me that Anschutz had built an access road a little to the west. I did not see it but it might still be passable.

## Geology

I spent only two hours on the property where the temperature was about  $110^{\circ}$  so I did not accomplish much in the way of geology and sampling. Primarily, I examined outcrops and traversed parts of the western area of the claims.

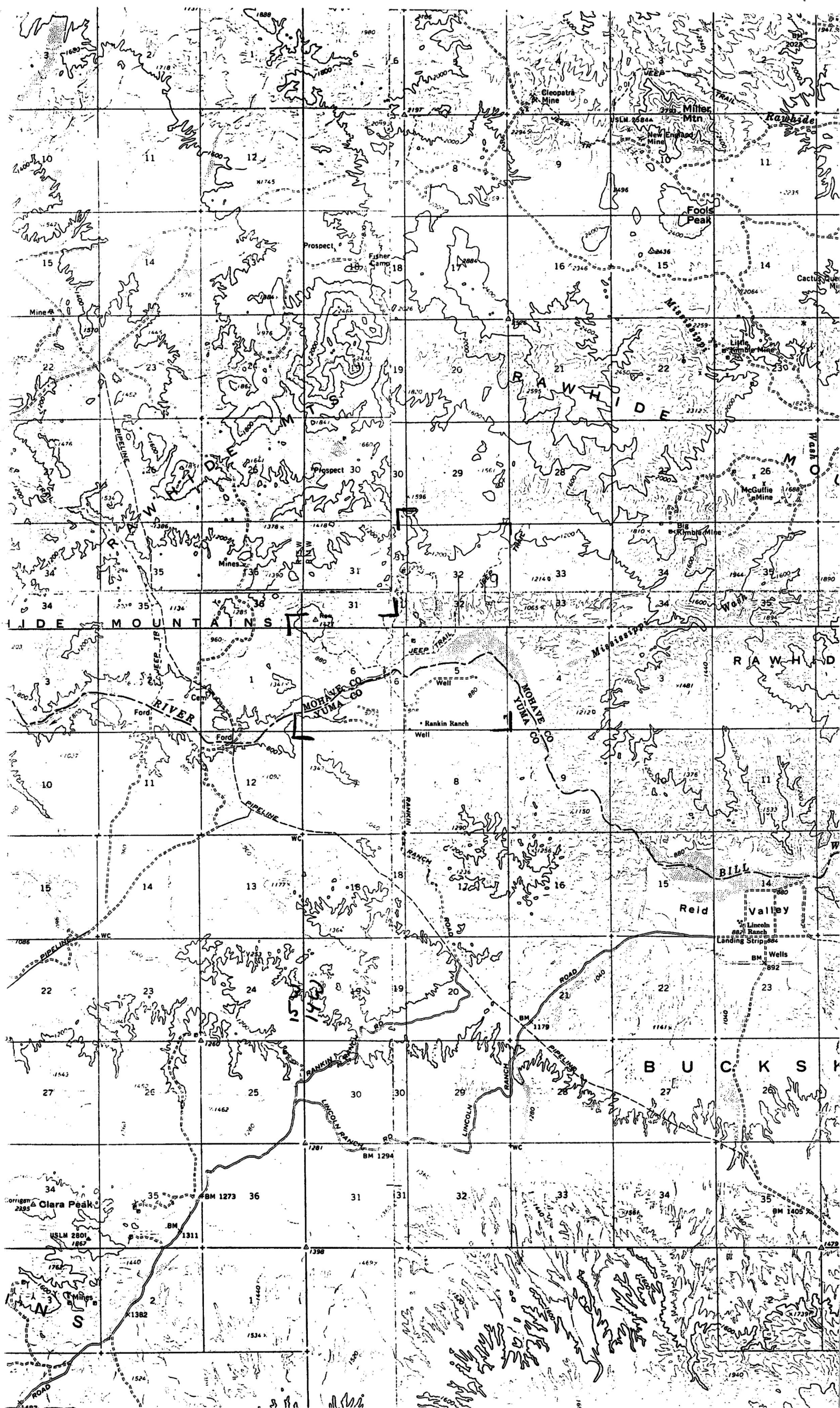
The higher ridges are ~~comprised~~ of deformed, fractured, crystalline limestone. The limestone overlies fractured, deformed shaly and carbonate sedimentary rocks. The rocks appear to have undergone cataclastic deformation and the limestone might be separated from the underlying shaly rocks ~~by~~ by a low-angle fault.

I saw no jasperoids but the shales below the limestone show local sericitic alteration. Most prospects and the one drill hole I noted are just below the limestone. I did not see rocks that appeared to result from depositional activity or hot springs.

## Recommendations

The geology I saw, and the results of some sampling that have been reported to us (0.11 to 3.62 oz gold per ton), suggest the possibility for a bulk-minable deposit of precious metals.

NICOR should attempt to review the results <sup>from</sup> ~~the~~ sampling, drilling and geologic mapping by Anschütz.





Memorandum

July 1, 1984

To: Gary Parkinson

From: N.L. Archbold

Subject: Silverfield claims, Mojave County, Arizona

### Summary

The Silverfield claims might provide a bulk-minable deposit of precious metals along the contact between a series of altered, brecciated shaly sedimentary rocks and ~~an~~ overlying carbonate rocks. NICOR should contact the owners to obtain and evaluate the results of drilling, mapping, and sampling by Anschutz in August of 1983.

### Location and Access

The group of claims lies along the north side of The Bill Williams River just north of the Johnson Ranch (Rankin Ranch) in sections 5 and 6, T. 10 N., R. 14 W. and in section 32, T. 11 N., R. 14 W. The area of the claims ~~lies~~ is in the common corner between the Swansea, Cartenzda Hills, Alamo Dam, and Artillery Peak 15 minute topographic quadrangles.

The claims can be reached via gravel roads which extend about 30 miles north from Bouse to the Johnson (Rankin) Ranch. The topographic map shows an access road across the river at the ranch but this road and ford do not exist so I had to walk from the ranch. As I left the area the residents at the ranch ~~told~~ returned and told me that Anschutz had built an access road a little to the west. I did not see it but it might still be passable.

## Geology

I spent only two hours on the property where the temperature was about  $110^{\circ}$  so I did not accomplish much in the way of geology and sampling. Primarily, I examined outcrops and traversed parts of the western area of the claims.

The higher ridges are ~~carbonate~~ of deformed, fractured, crystalline limestone. The limestone overlies fractured, deformed shaly and carbonate sedimentary rocks. The rocks appear to have undergone cataclastic deformation and the limestone might be separated from the underlying shaly rocks ~~by~~ by a low-angle fault.

I saw no jasperoids but the shales below the limestone show local sericitic alteration. Most prospects and the one drill hole I noted are just below the limestone. I did not see rocks that appeared to result from depositional activity by hot springs.

## Recommendations

The geology I saw, and the results of some sampling that have been reported to us (0.11 to 3.62 oz gold per ton), suggest the possibility for a bulk-minable deposit of precious metals.

NICOR should attempt to review the results ~~of~~ <sup>from</sup> sampling, drilling and geologic mapping by Anschutz.



(702) 323-6200

William

(Randy) Henkle  
geologist

- Silver fields claims -

- (leased to Anschutz - dropped recently)

- 50-60' - saw ore grade intercepts in holes

- Calcite - qtz, travertine mounds

geol. map, geodetic. simpling.

- 15-1.0 or 1.7 Au

or 100 Au

claim 15

.213

.111

.362

from surface

1.25

.23

.07

- Big Hill Area -

#15 Hill

T10N

R14W

Secs 516 - NW 1/4  
good sample

T11N

14W

good sample Sec. 32 ←

NE & NW of NE & SW

6	1
7	12
	... 13
31 32	37341516
5	54321

194  
2nd 147



Silverfield Prospect  
Mohave County, Arizona  
Summary Report



**SILVERFIELD PROSPECT  
MOHAVE COUNTY, ARIZONA  
SUMMARY REPORT**

**Bent E. Aaquist  
May, 1983**

- APPENDIX I Owners Mine Report, Dept. of Mineral Resources, State of Arizona, 1940, North Star Claims.
- APPENDIX II Field Engineers Report, Department of Mineral Resources, State of Arizona, 1943, Silver Field Claims.
- APPENDIX III J.P. Kellogg Work, 1968.
- APPENDIX IV Silverfield Prospect Examination, Norman Eastmoore, Jr., June 16, 1981.
- APPENDIX V Analytical Results, 1982 Sampling, D.L. Lewis.
- APPENDIX VI Field Notes, Samples of Appendix V, D.L. Lewis.
- APPENDIX VII Analytical Results, Amselco Sampling, December, 1982.
- APPENDIX VIII Analytical Results and Field Note, B.E. Aaquist, March and April, 1983.

# FOLDED MAPS

1. Sample Locations and Assays, Silverfield and Big Jack Mining Claim Groups.
2. Silverfield, Sample Location Map, Mohave County, Arizona; 1" = 500'.
3. Silverfield Geology, Mohave County, Arizona; 1" = 500'.
4. Silverfield #15 Hill Geology; 1" = 100'.
5. Claim Map, Silverfield Prospect; 1" = 1,000'.

## **I. SUMMARY**

Gold occurs in quartz in hot-spring sinter deposits in the Silverfield area. The sinter deposits do not appear to have economic concentrations of gold, but there is potential for economic concentrations in an altered zone underneath the sinter.

A drill program and trenching is recommended to test this potential.

## **II. INTRODUCTION**

### **A. Location and Access**

The Silverfield area is in the southern most part of the Rawhide Mountains in west central Arizona (see figure 1). The prospect is covered by 129 lode claims. The claims are in all or parts of the following: Sections 5 and 6, of T10N, R15W and sections 25 and 36, T11N, R15W, west of the Gila and Salt River meridian and north of the Gila and Salt River Base Line, State of Arizona.

Access is via gravel road from Highway 62, Boise, Arizona. From Boise take the Swansea Road north for 12 miles, and then 18 miles on the Johnson Ranch Road. Trails and washes on the property can be travelled with a four-wheel drive vehicle.

### **B. Climate and Topography**

The Silverfield area is in the northwest part of the Sonoran Desert. The summers are very hot and the winters are cool with occasional freezing at night. Recorded extreme temperatures are 16 degree fahrenheit and 127 degree fahrenheit. Average precipitation is 9 inches.

Relief in the area ranges from 840 feet to 1,477 feet a.s.l. Hillsides are moderate to steep.

### **C. Land Status**

Anschutz Mining Corporation is leasing 34 claims from General Minerals of America, Silverfield 1 through 28 and Big Jack 1 through 6. In addition, Anschutz Mining Corporation has staked 95 claims, Kiss 1 through 95. The location of the claims are shown on the land map in pocket.

## **III. WORK ON PROPERTY**

### **A. 1930'S - 1940'S**

Some small scale mining was done mostly in the SE $\frac{1}{4}$  of Section 31 where 600 tons of ore was removed which averaged 14.4 oz. Ag/ton. Details of this work is in Appendix I and II.

### **B. J.P. Kellogg**

In 1968, John Kellogg did some reconnaissance mapping of the area and collected a series of samples. Assay results are shown on folded map #1 and in Appendix III.

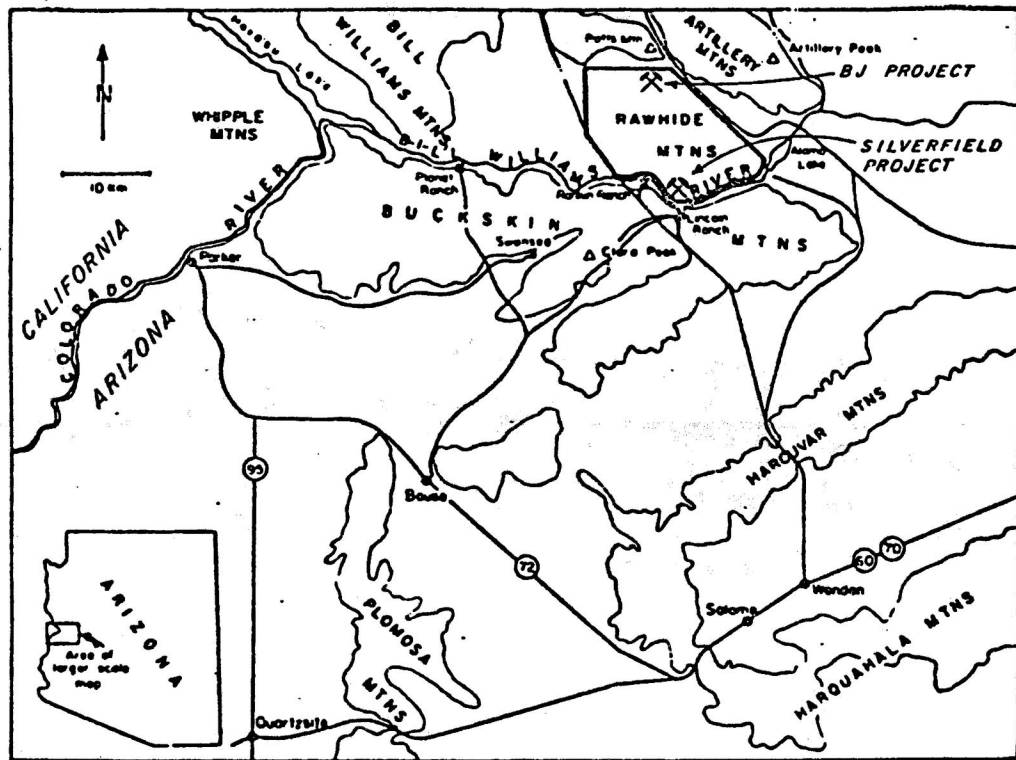


Figure 1.

The Silverfield project is located at the south end of the Rawhide Mountains, just north of the Bill Williams River. The Bill Williams River is the south boundary of Mohave County, and the north boundary of Yuma County.

### C. Recent Work

In June of 1981, Norman Eastmoore spent three days evaluating the area. His report is in Appendix IV. Based on his report, Anschutz Mining Corporation optioned the property and D. Lewis was hired to fully evaluate the property. The result of D. Lewis' work is in Appendix V and VI.

In December of 1982, Amselco, from Phoenix, Arizona, undertook extensive sampling of most of the best mineralized areas. Thier analytical results are in Appendix VII, their sample locations are shown on the sample location map in the back pocket.

After a few visits to the property between November, 1982 and February, 1983, it was recognized that D. Lewis' geologic mapping was oversimplified with local misinterpretations. Therefore, a decision was made to remap the area. The remapping was completed at the end of April, 1983. Two geologic maps were made and are in pockets in back, field notes and analytical results are in Appendix VIII.

## IV. SILVERFIELD GEOLOGY

### A. Lithology

The oldest rocks in the Silverfield area is a mylonitic gneiss consisting mostly of quartz and feldspar. The gneiss is overlain by Tertiary deposits of hot-spring origin, basalt flows and red hematitic sandstones and conglomerates of the Chapin Wash formation. Field relationships indicate simultaneous deposition of the different Tertiary rocks over a period of time.

The gneiss is commonly green, fine grained, and locally it is well stratified, see stop 24, Appendix VIII. Shackelford, 1976, gives a detailed description of the texture and mineralogy. I cannot add any more to this detail. There are local areas where the gneiss has been silicified, see 1"=500' geology map. Where the silicification is intense, the rock looks similar to zones of quartz in the overlying hot-spring sinter piles. The contact with the overlying rock units is commonly a smooth planar surface. One exception to this observation is at the top of the hill in the NE $\frac{1}{4}$  of NW $\frac{1}{4}$  Section 32, the gneiss is intensely silicified and appears to grade into hot-spring sinter.

The hot-spring sinter deposits are complex, they range in composition from pure limestone to pure quartz. The limestone is gray and fine crystalline, the quartz is white and massive. When quartz and limestone occur together, the quartz stands out in relief above the limestone. The quartz occur in limestone locally as laminae, see stop 10 notes, but in most areas it occurs as irregular nodules 1 to 2 inches across and in some areas it occurs as irregular pods, stops 28 and 29. The sinter deposits in the N $\frac{1}{2}$  Sec. 6 and the SW $\frac{1}{4}$  Sec. 31 have formed domal deposits, see sinter domes 1"=500' geology. These domes commonly have alternating layers of quartz and limestone, each a couple of feet thick. Some individual quartz layers have been broken out on the geology map.

Another rock unit thought to be associated with the hot-springs sinter deposits is the phyllite. The phyllite varies locally in color but they have the



appearance of being altered sandstone or siltstone units, see notes for stops 19, 25, 33 and 34. Bedding is evident by different colored phyllitic units, see notes stop 34 and Silverfield #15 Hill Geology Map. The phyllite in which the Silverfield #15 gold showing occurs appears to be an altered phase of Chapin Wash sandstone and conglomerate, because it grades into Chapin Wash sandstone down hill, and up hill there are pebbles and cobbles on the weathered phyllite similar to clasts in Chapin Wash conglomerate.

Caliche cementing fragments of sinter is the most recent deposit. Gray fragments of quartz and limestone sinter, locally up to two feet across, see notes stop 16, occur in a light gray caliche. At Silverfield #15, this caliche overlies sinter, phyllite and Chapin Wash sediments. The caliche deposits were observed only in areas of known faults, and I interpret them to be a very late stage, local, cool, hot-spring deposit.

Basalt flows occur in a couple of areas. They are thin flows with vesicular tops. The basalt weathers dark gray to black and at a distance the outcrops look similar to some sinter deposits. The largest are of basalt is in the E½, NE¼ Sec. 6. Small flows occur in the E½, SE¼ Sec. 31 and NW¼, SW¼ Sec. 32, see notes stop 6 and 9. Thin basalt flows occur in the Chapin Wash sediments N½, NW¼ Sec. 5, see notes stop 1. A dike of diabase material has intruded the phyllite in the center of NW¼ Sec. 6, see notes stop 20.

The Chapin Wash sediments are terrigenous deposits of sandstone and conglomerate. The deposits weather reddish brown because of very fine hematite. The most common clast type in the conglomerate is granite, but clasts of other local rocks such as volcanics, sinter as well as clasts of sandstone and conglomerate similar to the enclosing host, see notes stop 31. For additional data on the Chapin Wash, see Shackelford, 1976.

## B. Structure

Faults are the most dominant structural feature. Two fault trends are evident: NW-SE and NE-SW, see geology map. The faults are steeply dipping and movement ranges from a few feet to an undetermined amount. Most faults from linear structures that are evident in the field, in SW¼ Sec. 32 faults are evident by abrupt termination of some outcrops and by offsets in the hill of Chapin Wash material. Offsets in the Chapin Wash sediments is commonly along a series of closely spaced joint surfaces with minor offset along each joint. Minor faults within the sinter units is evident by slickensided joint surfaces, see geology map of Silverfield #15 Hill. A couple of the major NW-SE trending faults are more evident on airphotos than in the field.

Faulting has structurally prepared the ground in some areas for mineralizing solutions, see notes stops 36-38.

There is no conclusive evidence for a dislocation surface, Shackelford, 1976, between the mylonite gneiss and the rest of the rock units in this immediate area. In some areas, such as the north side of Silverfield #15 Hill there is a smooth, slick surface between the gneiss and sinter. In other areas, the contact between gneiss and sinter is gradational through a zone of silicification. If movement along a dislocation surface has taken place in this immediate area, it is minor and predates the vertical faulting because the vertical faults displace all horizontal surfaces.



### C. Mineralization

Gold and silver mineralization occurs in a number of areas on the property, see Silverfield Geology map. In the past, silver ore was mined from the sinter deposits in the N½, SE¼, Sec. 31. Six hundred tons of ore grading 14.4 oz Ag/ton were shipped, see Appendix I and II. The presence of high grade gold values was recognized by J. Kellogg in 1968, see Appendix III and his folded map. N. Eastmoore, Appendix IV, confirmed the presence of high grade gold on the Silverfield #15 claim.

Gold is associated with quartz in the sinter deposits. However, significant gold values occur only in highly fractured quartz with hematite. Very high grade gold values occur only in spongy looking quartz found at Silverfield #15 and near stop #22 in the NW¼, NW¼, Sec. 6, see sample #800. Copper is associated with some of the mineralized areas, note Cu occurrences on the Silverfield Geology Map.

The mineralization appears to have been introduced at a later stage in the formation of the sinter deposits. On the west end of Silverfield #15 Hill and in the old silver workings, the mineralizing solutions appear to have ascended along joints or fractures within the sinter. On the west end of Silverfield #15 Hill, the mineralization was confined to open space filling between joints, see notes stops 36-38. In the old silver workings, the mineralizing solutions altered much of the sinter between many joints. The sinter appears brecciated and recemented two or three times, the mineralization is in a silica phase of sinter.

At Silverfield #15, the mineralizing solutions penetrated a series of Chapin Wash beds and completely altered the sediments to phyllite. Gold bearing quartz was deposited as lenses in cavities in the altered sediment. Another area of intense hot-spring alteration of Chapin Wash sediment, but with no gold was noted at stop 17, see notes. Areas of minor alteration occur in the W½, SW¼, SW¼ Sec. 32, see geology map. The sediment have strong hematite stain as well as barite and calcite crystals.

The mineralization in the NW¼, Sec. 6 is associated with hematite stained quartz that occurs in zones of intense shearing.

### V. CONCLUSION AND RECOMMENDATIONS

There are a number of areas that have gold mineralization on the Silverfield property. The mineralization was introduced at a late stage into the sinter in structurally prepared ground. The model for the formation of the sinter is similar to the one described by Spence et al, 1980, see attached Fig. 2.

Based on the sampling to date, their sinter pile does not have significant ore grade mineralization, but economic mineralization may exist in an alteration pipe immediately below the sinter. The mineralization in the sinter may be reflecting underlying mineralization.

It is recommended that a series of holes be drilled through the sinter on Silverfield #15 Hill and also on the sinter hill with the gold showings in the NW corner of Section 6.

Tranching is recommended on the old silver trenches in the N½, SE¼ Sec. 31. The trench should extend through the sinter into the basement to see if an alteration pipe exists in this area. Trenching could be done with dynamite and a bulldozer.

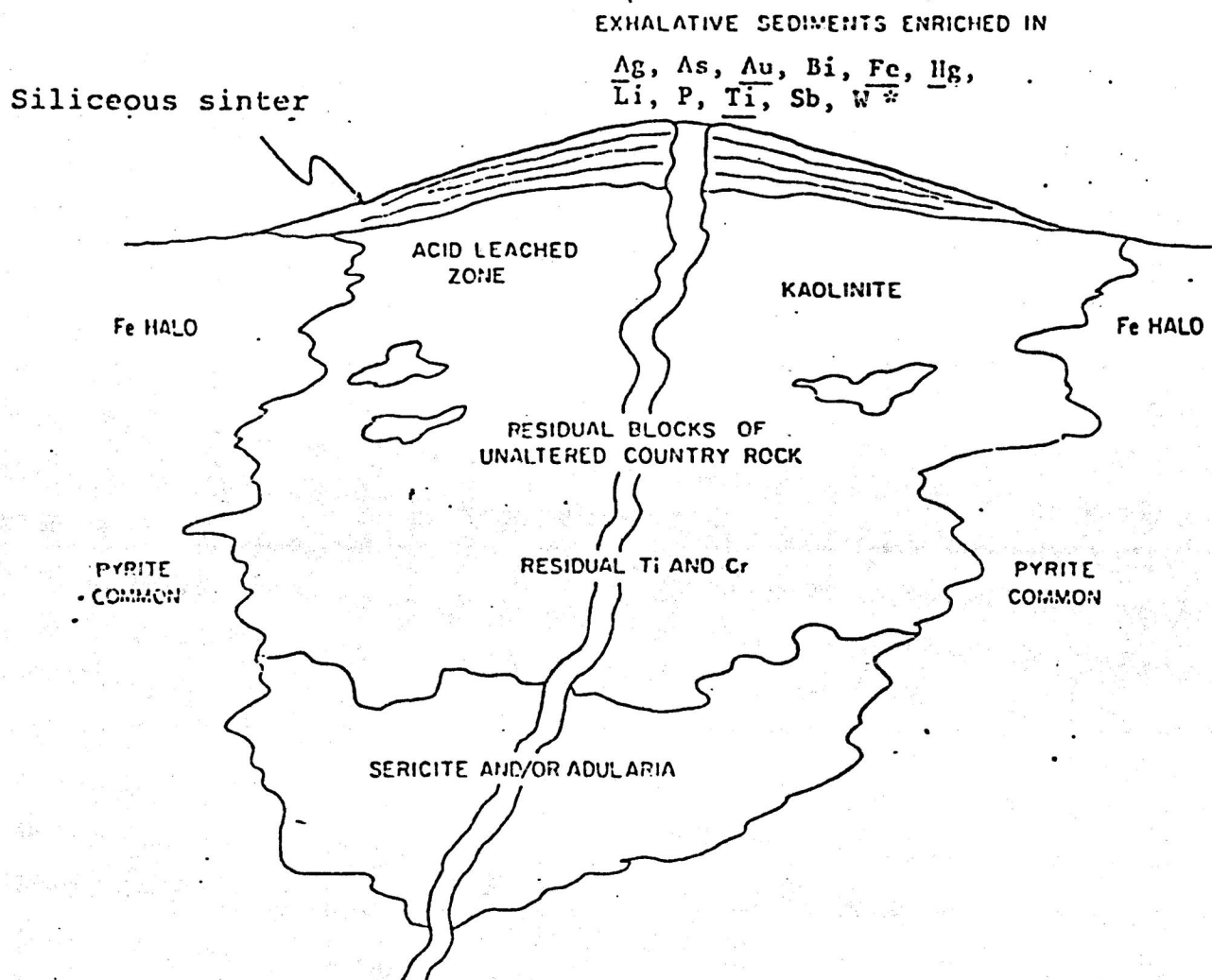


Fig. 2 - Alteration model of a typical hot-spring system, after Spence et al, 1980. The acid leached zone at Silverfield may be the bleached and silica zones in the gneiss in the NE $\frac{1}{4}$  Sec. 1, see geology map.

\* The underlined metals are present at Silverfield, also present is barite and manganese, see Appendix V.

## REFERENCES

Eimon, P., 1981. Exploration for Epithermal Gold and Silver Deposits: The Epithermal Model. Paper presented at the First International Symposium on Small Mine Economics & Expansion Taxco, Mexico, May 17-21, 1981.

Keefer, W. R., 1976. The Geologic Story of Yellowstone National Park. U.S.G.S. Bull. 1347, reprinted by Yellowstone Library and Museum Association, 92 p.

Shackelford, T. J., 1976. Structural Geology of the Rawhide Mountains, Mohave County, Arizona. Ph.D. thesis, U. of Southern California, 175 p.

\_\_\_\_\_, 1980. Tertiary Tectonic Denudation of a Mesozoic-early Tertiary (?) Gneiss Complex, Rawhide Mountains, Western Arizona. Geology, V. 8, p. 190-104.

Spence, W. H., Worthington, J. E. Jones, E. M., and Keff, I. T., 1980. Origin of the Gold Mineralization at the Haile Mine, Lancaster County, South Carolina. Mining Engineering, p. 70-74.

APPENDIX I

Owners Mine Report

Dept. of Mineral Resources

State of Arizona

1940

North Star Claims

DEPARTMENT OF MINERAL RESOURCES  
STATE OF ARIZONA  
OWNERS MINE REPORT

MM-17

Date August 6, 1940

- North Star, North Star #1,  
1. Mine North Star #2, North Star #4
2. Mining District & County Owens Mining District  
Mohave County
3. Former name Silver Triangle, and same as listed  
under item #1.
4. Location 30 miles NE of Bouse, Arizona.  
About 4 miles NE of Swansea Mines.
5. Owner V. C. Marks
6. Address (Owner) 449 East D Avenue,  
Glendale, Arizona
7. Operator James Becker
8. Address (Operator) General Delivery  
Bouse, Arizona
9. President
10. Gen. Mgr.
11. Mine Supt.
12. Mill Supt.
13. Principal Metals Free Gold, silver, bromides &  
silver sulphides, copper.
14. Men Employed 3 off and on. Average 15  
shafts a month per man past 2 months.
15. Production Rate Work so far has been only ex-  
ploration. Production rate undetermined
16. Mill: Type & Cap.
17. Power: Amt. & Type
18. Operations: Present Intermittently, road building, open cut work and tunneling. Exposing  
extent of veins and exploration work to uncover high grade gold bearing veins.
19. Operations Planned Nothing other than stated under item #18.
20. Number Claims, Title, etc. 4 Claims. Unpatented.
21. Description: Topography & Geography Approximately 1/2 mile north of Williams River. Rugged.  
Between Rawhide Mts. and Williams River. Highest workings about 500 ft. above river.  
-----  
/ North Star claim showing gold bearing ledge, approx, 50 ft.  
/ wide, cut thru with open cut exposing ledge showing high ton-  
/ nage available, general assay of all material shows value of  
/ \$4.83, and selected ore shows value of nearly two ounces (Gold)
22. Mine Workings: Amt. & Condition North Star claim #2 has 40 ft tunnel about 33 degree incline,  
last ore sold 2,744 net dry tons run Gold: 0.77 ozs value \$24.79, silver: 1.00 ozs value  
.70. Value per ton \$25.49. Original owner chlorided from this tunnel 4 tons of gold ore 1  
winter that run \$117.00 per ton. North Star claims #1 and 4 has silver ledge approx. 1,00  
ft long and ranging from 10 to 25 ft wide. The main workings are: about a 25 ft tunnel  
about a 50 ft cut. Veins here and there along the entire length. Values run in all ore  
from \$2.72 to \$111.11 (highest assay value, gold 0.04 ozs. \$1.32, silver 125.10 ozs \$101.

23. **Geology & Mineralization** General geology, schist, lime and conglomerate. Surface on silver only thing worked so far, tends to run pocketedly. Has several indications of running to depth. Believe types of deposits indicate sedimentary. Ore values run in quartz. Veins adjacent to workings show native silver.
24. **Ore: Positive & Probable, Ore Dumps, Tailings** No ore blocked out. Appears with development that very large tonnage would be encountered. Approximately 200 tons of ore on dump. Former assays run from 26 to 54 ozs in silver. Latest assay shows, general run, 0.03 ozs gold, \$0.96. 17.80 ozs silver \$12.46, total \$13.42 per ton, 0.50% copper.
- 24-A **Vein Width, Length, Value, etc.** 1,000 ft. ledge of silver shows veins running down approx. 5 inches wide and veins running lengthwise from 5 inches to 10 inches. 40 ft. tunnel shows vein running across entire face of from 1-1/2 inch to 5 inches, with indication of widening with depth. Just passes thru vein 2-1/2 ft wide with this width showing on sides. General assay of entire face shows 0.10 ozs gold \$3.22 0.50 ozs silver \$0.35, total \$3.57 per ton. (This assay taken from top and bottom of vein.)
25. **Mine, Mill Equipment & Flow Sheet**  
 Mine equipment consists of hand equipment only. No milling equipment.
26. **Road Conditions, Route** Graded road to river. Can be negotiated by new, low-clearance cars if very short detours taken in two or three places, account of high centers. Road across river graveled and brushed, all cars can make it. Roads have been built to all operating portions of property. Have been operating 8 ton International dual wheeled truck to base of operations. Roads can be negotiated practically the year around.
27. **Water Supply** The Williams River furnishes an abundance of water. Just a few feet to water. This river is practically dry all summer. River can be negotiated practically the year around. Only unusually heavy rainfall or cloudbursts makes it unnegotiable for short periods. If justifiable, with about 3 miles of road work a northern outlet can be had in Yucca and Kingman.
28. **Brief History** (SEE ATTACHED SUPPLEMENTAL SHEET)
29. **Special Problems, Reports Filed** No special problems. No Engineers' filed. Mr. Elgin B. Holt, Field Engineer, Western District, (Mohave and Yuma Counties), Box 288, Kingman, Arizona, has promised to inspect the property some time in the early Fall.
30. **Remarks** Believe with an outlay of from \$5,000 to \$10,000, spent advantageously for development and exploration work, aside from mill consideration, this property can be developed into a very rich and high tonnage shipping property. Mill consideration, as property now stands, could be developed for immediate operation with good tonnage and value with much less money than quoted above.
31. **If property for sale: Price, terms and address to negotiate.** This property is now open for inspection. The intention is for prospective buyers and leasers to thoroughly inspect the property, then take assays, and satisfy themselves as to productivity and value of property. A very reasonable price for sale or lease can be negotiated between owner and prospective buyers or leasers on very reasonable terms. Address to negotiate: 449 East D Avenue, Glendale, Ari
32. **Signed**.....V. C. Marks.....  
 No additional pertinent information. Anyone interested must
33. **Use additional sheets if necessary.** satisfy themselves with the property and negotiate further with



APPENDIX II

Field Engineers Report

Dept. of Mineral Resources

State of Arizona

1943

Silver Field Claims



DEPARTMENT OF MINERAL RESOURCES  
STATE OF ARIZONA  
FIELD ENGINEERS REPORT

Mine SILVER FIELD

Date May 14, 1943

District Owens, Mohave Co., Arizona

Engineer Elgin B. Holt

Subject: R E P O R T

OWNER: Mildred Mining Company (a copartnership), owned by Sidney B. Moeur, et al, 611 Title and Trust Bldg., Phoenix, Arizona. J. C. Townsend, Superintendent, Bouse, Arizona.

METALS: Copper and silver.

LOCATION & AREA: This property, consisting of 30 unpatented mining claims, is located on the north side of the Williams River, in the Owens Mining District, Mohave County, Arizona. The property is reached from Bouse, a station on the Santa Fe Railroad, by following a fairly good desert road in a northerly direction 30 miles to the Williams River, over which there is no bridge; but the river here may be crossed during low water season by cars or trucks. On the north side of river is Mildred Camp, consisting of two dwelling houses. From this camp a graded road one mile in length reaches a part of property.

EXAMINATION: On April 10, 1943, I visited Silver Field in company with Mr. J. C. Townsend and Charles McQuillen, the latter having been employed to assist in sampling. We spent two days on property, looking it over and taking a few pilot samples. As a matter of fact, however, in order to do the property justice an engineer should spend at least a month at this mine in order to gather samples and other data on which to base even a preliminary report. And, broadly, a great deal of money would have to be spent in carrying out well-directed exploratory work in order to determine, once and for all, the importance of this property. Nevertheless, I will go on record here and now by saying: Silver Field has all the earmarks of a large low grade copper-silver mine. Also, the ore is desired as fluxing material by the smelters, due to its high silica content. Again, there is now a good chance that an additional premium may be obtained for copper, from our Government, on highly silicious copper ores, and this may amount to at least another 5 cents per pound for copper, in the case of Silver Field.

GEOLOGY - ORE DEPOSITS: Within the confines of this property the basal rock formation consists of several eroded hills composed of pre-Cambrian gneiss. These hills are capped by alternating beds of quartzite and silicified limestone strata to a thickness of from 20 to 40 feet. Large areas of the quartzite strata and a part of the limestone strata were originally transformed into low grade ore by means of percolating thermal solutions carrying copper and silver values. In other words, the ores of this property occur as high replacement deposits mainly in quartzite, but partly in silicified limestone. There is no overburden, so the ore may be mined by quarrying.

GOLD VEIN: On the contact between the basal gneiss and the overlying copper-silver ore deposits, mentioned, is a gold-bearing vein about 4 feet wide, opened by an inclined shaft to a depth of 60 feet. During 1940-41, James Pecker and L. Marks shipped two small lots of ore from this shaft to the Wickenburg Ore Market, the results of which were as follows:

<u>Date</u>	<u>Lot No.</u>	<u>Pounds</u>	<u>Au-oz.</u>	<u>Az-ozs.</u>	<u>Gross Value</u>
7/9/40	266	1296	1.10	1.00	\$35.42
6/24/41	237	4888	0.77	1.00	25.49
-----					
*50 tons reject on dump			0.15	1.00	5.95

\*Per sampling by E. R. Holt.

NOTE: The importance of this gold-bearing vein will not be discussed in this report, due to the obvious fact that gold mines are not now being worked. Again, the Silver Field property is essentially a copper-silver mine and not a gold mine.

DIMENSIONS OF MINERALIZED AREAS - MINE WORKINGS: The two main mineralized areas, examined by me and on which exploratory work has been done, are the NORTH STAR HILL and the BIG HILL, both of which have been explored to some extent by a number of cuts and test pits. The approximate dimensions of these two areas are as follows:

The copper-silver bearing deposit of the North Star Hill measures roughly 600 feet long by 150 feet wide by 20 feet deep, equaling 1,800,000 cubic feet, which, divided by 12, contains 150,000 tons of low grade ore, the assay value of which has only partially been determined, as will be discussed later in this report.

The copper-silver bearing deposit of the Big Hill is about 1200 feet long by 600 feet wide by 30 feet thick, equaling 21,600,000 cubic feet, which, divided by 12 contains around 1,800,000 tons of low grade ore, the assay value of which has only partially been determined.

Hence, the total low grade "ore" tonnage of the said two deposits approximates 1,950,000 tons.

In addition, there are a number of other mineralized areas within property, on which very little development work has been done, and these are not taken into account in estimating the potential ore tonnage of property.

PRODUCTION RECORD: During 1941 and a part of 1942, Silver Field was operated by the Mildred Mining Company, under the supervision of J. C. Townsend. Ore shipped during this period to the Clarkdale, Superior and Hayden smelters amounted to 15 car loads, averaging about 40 tons each, with the following assay values:

<u>Au-oz</u>	<u>Az-oz</u>	<u>Cu-%</u>	<u>Silica-%</u>	<u>Al-%</u>	<u>S-%</u>	<u>Fe-%</u>	<u>CaO-%</u>
0.02	14.0	1.0	67.0	2.8	1.0	2.7	9.0

The above car lots of ore were selectively mined from the North Star Hill deposit; reject material amounting to around 3 tons for each ton of ore produced.

ASSAYS: During my examination of this property, I took 8 pilot samples, as follows: Samples Nos. 1, 2, 3, 6 & 7 from reject material, which were assayed by the Arizona Assay Office, Phoenix, Arizona; and samples Nos. 4, 5 & 8, from small lots of sorted ores at mine, which were analyzed by the American Smelting & Refining Company, Hayden, Arizona. The assay results of the said sampling are set forth in the following table, to-wit:

No.	Description	Oz. Au	Ton Ag	Per Cent: Cu	SiO2	Fe	CaO	Al2O3
1.	200 tons reject, Peach Cutz. Cut, N. Star Hill --	Tr.	7.20	0.40	-	-	-	-
2.	470 tons reject, Long Chute Cut, N. Star Hill --	Tr.	4.00	0.29	-	-	-	-
3.	140 tons reject, East Cut, N. Star Hill -----	Tr.	10.50	0.40	-	-	-	-
6.	350 tons reject, West Cut, Big Hill -----	0.01	19.70(?)	0.71	-	-	-	-
7.	50 tons reject, Gold Shaft ----	0.15	1.00	-	-	-	-	-
4.	7 tons sorted ore, Cut on top of Big Hill ---	0.02	5.96	2.10	55.4	2.1	16.3	1.0
5.	100 tons sorted ore, West Cut, Big Hill -----	0.02	14.78	2.40	66.7	1.8	9.5	2.2
8.	10 tons sorted ore, Long Chute, N. St. Hill ---	0.01	21.18	3.50	75.8	1.6	5.1	1.2

REMARKS: The said sorted ore samples Nos. 4, 5 & 8 were shipped by me for analysis by the Hayden smelter with a view to determining whether or not an operating profit might be made by shipping low grade copper-silver ores from this property, inasmuch as such ores are desired as fluxing material by the copper smelters of Arizona, due to the high silica content therein. Also at the time these samples were shipped, I wrote a letter to Mr. Brent N. Rickard, Manager of the Ore Purchasing Department, of the American Smelting & Refining Co., Tucson, Arizona, requesting him to quote smelting and freight rates on Silver Field ores, using as a basis results of the assays of the three samples referred to.

Complying with my request, under date of April 24, 1943, Mr. Rickard wrote a letter to owners of property as per the following copy thereof:

COMMENTS: Referring to the above letter, and using Sample No. 5, which gave medium results, as a basis for calculating possible profits, car lots of such ore would net owners at Bouse, including Metals Reserve premium on copper, \$9.39 per ton, and if owners should be able to get an additional premium of 5 cents per pound on copper, that would add \$2.33 in the way of profit to the above item, making net profit at Bouse 11.72 per ton of ore marketed to Hayden. Per Mr. Townsend, the cost of trucking ore from Silver Field to Bouse should not exceed \$2.00 per ton, and the cost of selectively mining a ton of shipping ore at property should not exceed \$3.00 per ton, as a rank guess. Under this line of reasoning, the net profit that might be derived from shipping ore of a grade represented by Sample No. 5, would approximate \$6.72 per ton.

Also, it will be noted that Rickard stated: "It is probable that for regular shipments the treatment rate could be improved by about \$1.00 per ton". Again, there is a matter of silica credit, that Rickard did not go into, and which should amount to about 45 cents per ton on this type of ore.

The above figures are very rough indeed, but they may give some idea to interested parties as to what might be expected in the way of shipping silicious ores from this property.

SELECTIVE MINING: The writer believes that this property would lend itself to selective mining operations by employing the following methods:

Mining should be carried on by means of opening pits in the mineralized areas, and such work has already been started. These pits should be deepened to bed rock and extended on all sides by use of wagon drills. Each hole should be sampled in 4 foot sections by the use of the "vacuum dust process", whereby even samples from succeeding points in the drill holes may be obtained. All samples should be assayed before any given hole is blasted. And then, "pay holes" should be shot separately from the holes which have negligible values. Also, holes that show little or no values, should be blasted or not depending on whether it is necessary to remove waste material in order to extract ores adjacent to the poor holes. In the event large bodies of waste should be encountered, such bodies should be allowed to stand, and not broken by any means. It is my candid opinion and belief that by employing the above methods, at least 500,000 tons of ore could be mined at the Silver Field property, carrying sufficient values in copper and silver, so that a considerable profit should be made above all operating costs.

It must be understood, however, that this is merely a preliminary report, - a report based on inadequate data, to say the least. Unquestionably, the property more than warrants a careful examination by anyone looking for a highly silicious copper mine, with a view to shipping fluxing ores either to Hayden or to Clarkdale, as both smelters at these points are in need of silicious fluxing ores in considerable quantity.

/s/ Elgin B. Holt

Elgin B. Holt  
Field Engineer

APPENDIX III  
J.P. Kellogg Work

1968



# J. P. Kellogg Work

1968

BY JPK DATE 6/68  
CHKD. BY DATE

SUBJECT SILVERFIELD COLD CLAIM  
Owens Mining District, Mohave  
County, Arizona

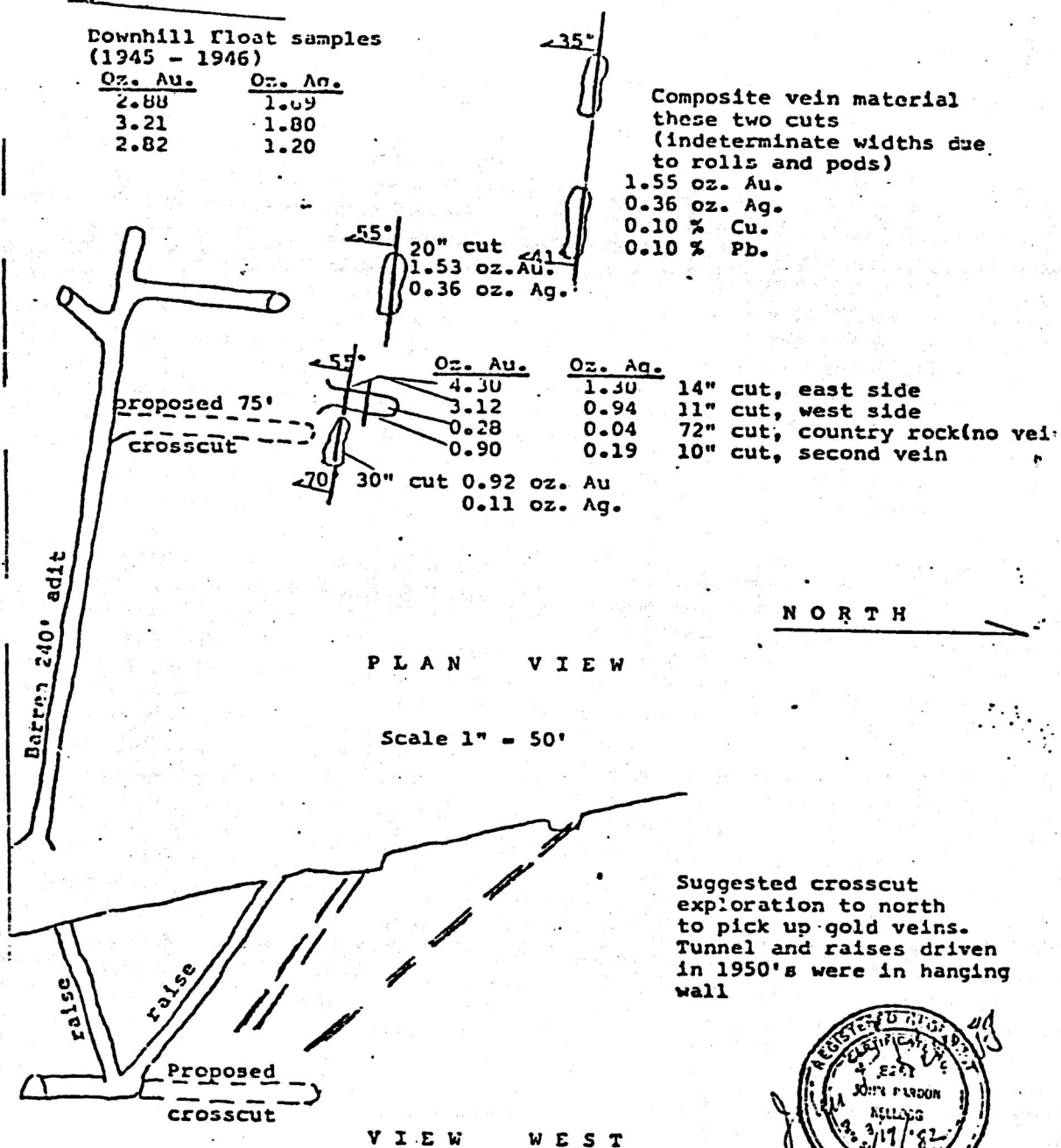
SHEET NO. OF  
JOB NO.

Downhill float samples  
(1945 - 1946)

Oz. Au.	Oz. Ag.
2.88	1.09
3.21	1.80
2.82	1.20

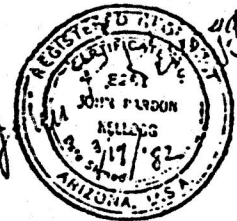
Composite vein material  
these two cuts  
(indeterminate widths due  
to rolls and pods)

1.55 oz. Au.  
0.36 oz. Ag.  
0.10 % Cu.  
0.10 % Pb.



NORTH

PLAN VIEW



APPENDIX IV

Silverfield Prospect Examination

Norman Eastmoore, Jr.

June 16, 1981

IV

ANSCHUTZ MINING CORPORATION

SILVERFIELD PROSPECT EXAMINATION  
MOHAVE COUNTY, ARIZONA

PROSPECT EXAMINATION REPORT

TO: L.R. Reimer, Exploration Mgr.

Report Date: June 16, 1981  
Examination Dates: June 2,3,&4, 1981

Reported by: Norman Eastmoore, Jr.  
Consulting Geologist

---

INTRODUCTION. In response to Lou Reimers request the writer spent June 2, 3 and 4 on a field examination of the Silverfield prospect submittal, located in sec. 31 and 32, T11N, R14W; and sec. 5 and 6, T10N, R14W, Mohave County, Arizona.

The field time was spent on the Silverfield Claim #15, where visible free gold mineralization was found to occur in a series of shallow cuts, as indicated by the higrade gold assay results on John Kellogg's claim map of this property. A series of samples was taken in the mineralized area and forwarded to Auschutz Denver office. A copy of the sample list is attached to this report along with a sketch map and cross-section of the area sampled. Time did not permit examination of other mineralization reported to be present on this property.

Conclusions and Recommendations. On the basis of the gold mineralization observed in the short field examination of this prospect I conclude that this property deserves a more thorough evaluation. It is therefor recommended that a detailed surface prospecting, mapping and sampling program be conducted over the mineralized shear zone crossing Claim #15 and its extensions.

Furthermore, a careful scrutiny and mapping of the underground working should be undertaken to determine the nature and extent of any possible depth extension of the gold mineralization observed on the surface. The fact that mineable ore apparently was not recognized in the underground workings below the surface mineralization, raises the question of ore continuity in depth, which requires resolution.

It is also recommended that other areas of mineralization as indicated by the assay data on John Kellogg's claim map, be included in any further study of this property. A proper evaluation will also include parts of the surrounding area and in particular any mineral trend projections revealed during the course of the study.



**ACCESS.** By using 4-wheel drive and coming in from the El Paso Natural Gas Pipeline to the west, the writer was able to reach the S 1/4 corner of sec. 36, T11N, R15W, near the southwest corner of the Silverfield Claim group. (See topo maps of the area in Jim Hendricksons possession). By a two and one-half mile hike northeasterly across the claim group I was able to reach the examination area on Claim #15.

However, I was later informed that better access is afforded by crossing the Bill Williams River at the Rankin Ranch crossing which puts one immediately on the south side of the Silverfield claims. This route is feasible only when water is not being released upstream from Alamo Dam.

When the Rankin Ranch crossing is inundated the next best route recommended is the one coming in from the north via Wickieup, Potts Mountain, Fisher Camp, and thence three miles on to the south over primitive jeep roads to the property.

**GEOLOGY.** The geology of the Rawhide Mountains is complex and its interpretation has engendered much controversy. I will therefor record only a few comments on the general geologic setting and then proceed to discuss my own observations of conditions on the Silverfield prospect itself.

The southwest portion of the Rawhide Mountains, in which the Silverfield claims lie, represent a broad anticlinal high exposing rocks of pre-Cambrian age along its central axis, with younger rocks occurring on the flanks of this fold. On the southern flank of this anticline in the vicinity of the Silverfield prospect, some of the later rocks present consist of Paleozoic limestones, such as the Brown Limestone (my own designation), shown on the accompanying sketch maps of the Claim #15 sample area.

Even more recent formations are the Tertiary age iron and manganese-bearing sandstones and shales which outcrop on the southern part of the Silverfield prospect. These formations represent the sedimentary equivalent of the Artillery Peak formation at the east end of the Rawhide Mountains.

This oversimplified picture has been profoundly modified by a complex tectonic history, involving both block faulting and large scale, regional overthrusting, which is postulated to have affected the west central portion of Arizona and an adjacent area westward in California.

The effects of both tensional faulting and overthrusting are evident on the Silverfield prospect. The large shear zone, with which the gold metallization is associated on Claim #15, is very possibly a major dislocation feature related to overthrusting, although where exposed on these claims it is dipping rather steeply (about 45°S) for a normal thrust plane. As such it may represent the terminal portion of a more conventional flat-lying thrust surface elsewhere.

As for tensional type faulting, the deeply etched drainage pattern, with a distinct north-northwesterly trend suggest a well developed directional fault control for this physiographic feature.

Other complexities include volcanic effects such as flows and intrusive bodies observed in the area. Only a thorough mapping and study program will develop any degree of real understanding of the geology on this property.

Now, a few observations regarding the local geologic features in the mineralized area sampled on Claim #15. (Refer to the sketch map and cross-section with this report).

1. Strong favorability for shear zone ore control-i.e., the occurrence of gold quartz veins within the large shear zone structure. This relationship emphasizes the importance of more exploration on the extensions of this shear zone and other similar features which may be revealed by more study.
2. Pervasive alteration effects associated with this mineralization.
  - a) Indications of hot spring activity localized on the surface area of the mineralization, such as calcareous sinter and staining, resulting in a bleached tan discoloration anomaly over the surface of the mineralized area.
  - b) Prevalent silicification of all the surface rocks over this area as represented by abundant chert and cherty jasperoid present in the float debris derived from the mineralized outcrop area. The distribution of the cherty float indicates that the zone of silicification may extend another 150-200 feet west of the sample area, enhancing the potential for extension of mineralization in that direction.
  - c) Propylitic (?) alteration. This type of alteration frequently occurs associated with epithermal type precious metal deposits in volcanic rocks. It is characterized by the development of pyrite, epidote, carbonates, minor sericite mica and abundant chlorite (which imparts a dull green color to the altered rock mass). This alteration mineral suite matches well the observed mineral suite in the alteration zone present in the sample area of Claim #15.

At Claim #15 the original rock type in the altered shear zone is questionable as alteration has effectively obliterated its original megascopic characteristics. None-the-less the observed alteration effects and mineralogic associations present suggest some variation of epithermal propylitic type alteration.

SUMMARY. In conclusion, many of the geologic features described above as associated with the gold mineralization present, suggest an epithermal vein type classification for this deposit. Epithermal type precious metal deposits are more frequently directly associated with late phase volcanic activity in identifiable volcanic host rocks. Although a volcanic host rock association may be inferred for the mineralization on Claim #15, as yet, it is not positively established.

However, the former activity of thermal fluids is well substantiated; i.e., the indicated hot spring features, the alteration effects, and not least the metallization, itself, so that a relationship to a nearby subsurface fluid vent source is logically inferred. Experience has demonstrated that the geometry of the thermal fluid "plumbing system" will control the localization of ore bodies deposited in such a system.

Although most of the exploration suggestions and ideas discussed have been directed at the mineralization examined on Claim #15, nevertheless, they can be applied with equal effectiveness to other similar occurrences, whether they be found on the Silverfield claims or in the surrounding area.

Respectfully submitted,

*Norman Eastmoore Jr.*

Norman Eastmoore, Jr.

NE:rlf

Enclosures

## NOTE:

AREA OF SKETCH IS SOUTH SLOPING HILLSIDE COVERED WITH ROCK DEBRIS. ALL TRENCHES EXPOSE A STRONG E-W SHEAR ZONE AT LEAST 50' WIDE, OF INTENSELY ALTERED ROCK (POSS. PYROPHYLLITE?). THIS ZONE CONTAINS SEVERAL QTE VEINS, LYING SUBPARALLEL WITH THE SHEAR ATTITUDE. SOME OF THESE VEINS SHOW VISIBLE AU MINERALIZATION. SHEAR ZONE DIPS 45° S, & MAY BE OFFSET ALONG THE NORTHELY TRENCHING CONTACT WITH THE BROWN LS. SHOWN IN THE UPPER PART OF THE SKETCH.

SHALLOW  
TRENCHES  
ON STRIKE  
EXPOSE  
SHEARED  
& ALT. ZONE

FOUND QTE FLOAT  
W/VIS. FREE AU  
SAMPLE #8

BROWN LS.

SHALLOW  
TRENCH  
ON QTE VEIN  
7' 4" WIDE

N 85° E

DUMP SAMPLES #5, 6 & 7

RAISE  
HOLES  
FROM  
ADIT LEVEL  
BELOW

## NOTE:

ADIT LEVEL ESTIMATED TO BE ABOUT 75' BELOW THE FLOOR LEVEL OF THE 50' LONG CUT. LINE SHOWN BETWEEN RAISE HOLE & PORTAL IS A SURFACE SIGHT LINE - LOCATION OF T<sup>h</sup> UNDERGROUND WORKINGS NOT SHOWN

220' TO ADIT PORTAL

SKETCH MAP -  
CENTRAL PART OF  
CLAIM #15

SILVERFIELD PROSPECT

SCALE: 1" = 50' DATE: 6/4/81

BY: NEE, JR.

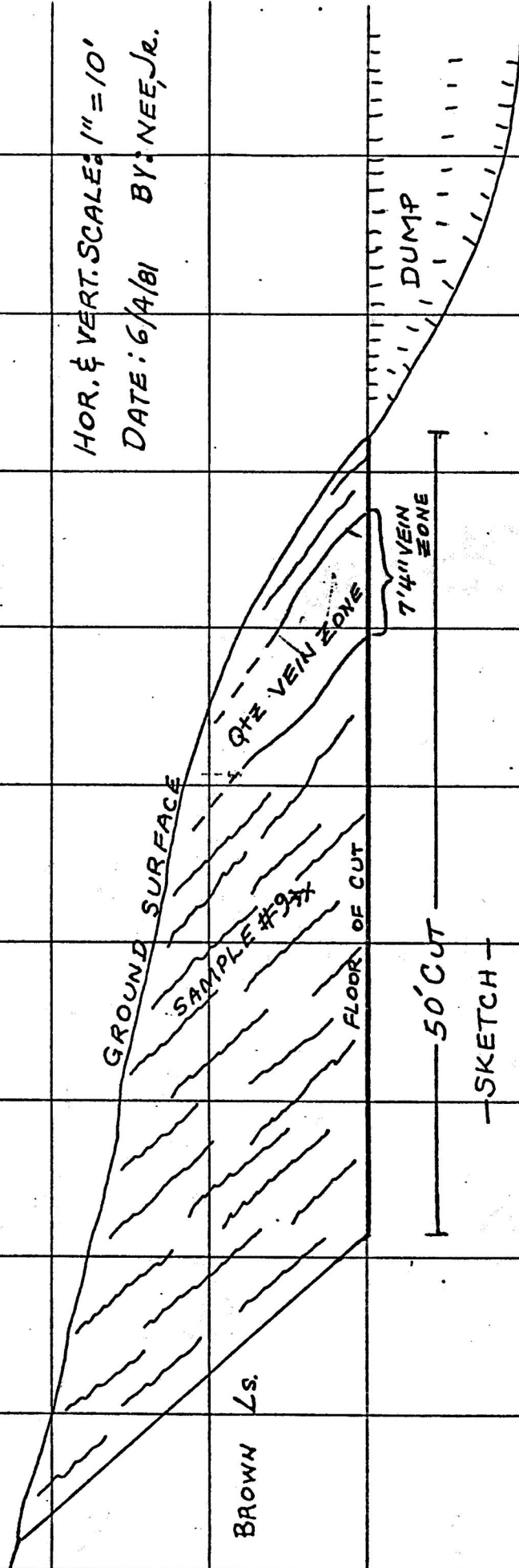


X-SECTION SKETCH  
50' CUT  
CENTRAL PART OF

CLAIM #15

SILVERFIELD PROSPECT

HOR. & VERT. SCALE: 1" = 10'  
DATE: 6/4/81 BY: NEE, Jr.



N-S X-SECTION ALONG EAST WALL OF CUT, CENTRAL PART CLAIM #15 EXPOSES INTENSELY SHEARED ZONE OF BRECCIATED ALTERED ROCK FOR ITS COMPLETE LENGTH SOUTH OF THE LS. CONTACT. AT LEAST 3 MORE Qtz VEIN ZONES, NOT SHOWN, LYING SUBPARALLEL WITH THE SHEAR ATTITUDE ARE PRESENT IN THIS CUT WALL. A MINERALIZATION WAS OBSERVED ON BOTH SIDES OF THE 7 1/4" WIDE VEIN SHOWN. CHANNEL SAMPLE #1 WAS TAKEN FROM THE FOOTWALL SIDE OF THIS VEIN & CHANNEL SAMPLES #2 & 3 FROM THE HANGING WALL SIDE, NEAR THE FLOOR LEVEL.

# SKYLINE LABS, INC.

SPECIALISTS IN EXPLORATION GEOCHEMISTRY

12090 WEST 50TH PLACE • WHEAT RIDGE, COLORADO 80033 • TEL.: (303) 424-7718

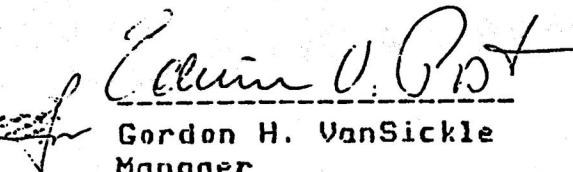
## REPORT OF ANALYSIS

PART I  
JOB NO. DCH 097  
November 12, 1981

Anschutz Minerals Corporation  
Attn: David L. Lewis  
2400 Anaconda Tower  
555 17th Street  
Denver, Colorado 80202

### Analysis of 10 Rock Samples

ITEM	SAMPLE NO.	FIRE ASSAY					
		Au (oz/T)	Ag (oz/T)	Au (ppm)	Ag (ppm)	Cu (ppm)	Hg (ppm)
1	AgF 01	1.410	.38	65.00	11.0	175.	.92
2	AgF 02	.490	.04	32.00	3.1	20.	.07
3	AgF 03	.025	<.01	1.40	.8	25.	.06
4	AgF 04	2.610	1.17	130.00	34.0	210.	1.70
5	AgF 05	.220	<.01	11.00	.9	50.	.15
6	AgF 06	3.240	.98	150.00	28.0	175.	.50
7	AgF 07	3.110	.58	130.00	15.0	210.	.14
8	AgF 08	5.270	1.54	260.00	40.0	3200.	.52
9	RAW 11	1.740	.22	160.00	10.0	<5.	.09
10	AgF 15	.006	<.01	.27	1.1	15.	.10

  
Gordon H. VanSickle  
Manager

cc: Lou Reimer

NOV 17 1981

ANNUAL MEETING CO-ORDINATOR

## N.E. EASTMOORE SAMPLE DESCRIPTIONS

Sample list of samples forwarded to Anschutz Denver office on 6/5/81, from Silverfield prospect in the Southwest end of the Rawhide Mountains, Mohave County, in Arizona.

<u>Sample No.</u>	<u>Description</u>
1	8" chan. across qtz. streak with dense hema in the footwall portion of a 7'4" wide qtzose vein. This vein exposed in east wall of a 50' cut, and sample location is 18' in from the ground surfaced at the start of the cut.
2	14" chan. across qtz. streak, 56" stratigraphically above Sample 1 above, (the 56" interval was not sampled this trip), and it is probable that the two large qtz. spec, with vis. free Au included with this sample shipment came from this part of the vein zone.
3	10" chan. across the upper qtz. streak lying stratigraphically immediately above Sample #2 above.
Note: Samples #2 and #3 together represent the hanging wall portion of the 7'4" wide qtzose vein, of which Sample #1 is the footwall portion.	
4	Random pcs. from the 8" vein streak (Sample #1) above. These pcs. included for visual characterization of this portion of the vein zone. Dense hema in qtz.-- one of the typical associations with visible free Au observed in this vein zone.
5	Composite dump sample from dump at mouth of 50' long cut across the mineralized altered vein zone. Grabs form 14 grid spots over the dump, estimated to contain 25-30 tons of material. Grabs are mostly fine material, and will thus only give a rough indication of the Au content of the dump.

## Sample List Continued

Sample No.Description

6

Specimens showing visible free Au collected from the east side (same at right side on Sample tag) of the dump described for Sample 5 above. These specimens are part of the coarser fraction of dump material, and were selected for characteristics of the gold mineralization and are not typical of the major portion of the coarser dump material, qtz./with dense hema.

7

Specimens showing visible free Au, collected from the west side of same dump described in Sample #6 above and the same conditions for the selection of these specimens applies to this sample also, qtz. with dense hem.

8

Natural float specimens found on the surface about 40'-50' west of the dump at the 50' cut. Show visible free Au in dense hema with Fe stained qtz. May indicate extension of Au mineralization to this location in this subsurface.

9

Typical specimen of the altered matrix material, occurring as alternating lenses or bands of variable width between the crushed quartzose lenses across the 30'-35' of exposed mineralization in the 50' cut. Included for characterization study of gangue.

10

Fe sample. Grab of lime stained ss--mostly fines. This was the only attempt to sample the iron mineralization present. As such it is intended to give some rough value of iron content in a very large ss formation exceeding 100 ft. thick which crosses the Silverfield claim.

11

Two large qtz. vien specimens--originally both part of a larger specimen--broken to expose an unweathered surface for visual inspection. Examine the fine grained clean boxwork (some hema, staining and crusts) and drusy with a hand lense to see the bright clean yellow-gold particles coating surface of qtz. crystals and partly embedded in clean qtz. and hema matrix.



APPENDIX V  
Analytical Results  
1982 Sampling  
D.L. Lewis



☐ 4115 Silver Avenue SE  
Albuquerque NM 87108  
Telephone: (505) 266 9106

## Report of Analysis - Precious/Base Metals

**TO**

Anschutz Mining Corp.  
2400 Anaconda Tower  
555 - 17th Street  
Denver, CO 80202

ATTN: D. Lewis

Client No.	Log No.	Client P.O. No.	Date Collected	Date Received	Date Reported
1130	2724			12/1/81	12/4/81
Sample I.D.	Gold Troy oz/ton	Silver Troy oz/ton	Copper %	Lead %	Zinc %
A-1	0.0149				
A-2	0.0067				
A-3	0.0096				
A-4	0.040				
A-5	0.0015				
A-6	0.0009				
A-7	0.0047				
A-8	0.0006				
A-9	< 0.0006				
A-10	< 0.0006				
A-11	0.0015				
A-12	1.58				
A-13	0.0058				
A-14	0.0009				
A-15	< 0.0006				
A-16	< 0.0006				
A-17	0.0018				
A-18	< 0.0006				
Samples #A-4 & #A-12 were rerun in quadruplicate.					

Approved by

Approved by James M. Grouse



January 13, 1982

Anschutz Mining Corp.  
2400 Anaconda Tower  
555 - 17th Street  
Denver, CO 80202

Client#: 1130  
Log#: 2741

ATTN: D. Lewis

	+80		+100		+115		+200		-200	
	PPM	%	PPM	%	PPM	%	PPM	%	PPM	%
A-19	0	0	0	0	0	0	0.17	3.5	0.06	96.5
A-20	0.05	18.9	0.072	3.8	0.345	1.2	0.067	8.9	0.05	67.2
A-21	0.080	6.9	0.060	6.6	0.017	8.9	0.02	21.8	0.04	55.9
A-22	0.556	0.9	0.500	0.8	0.395	0.8	0.04	14.5	0.05	83.0
A-23	0.536	0.6	0.370	0.6	0.182	1.1	0.14	20.5	0.16	77.2
A-24	0.300	2.2	0.225	4.9	0.08	25.4	0.105	2.0	0.08	65.5
A-25	0.100	2.4	0.067	3.7	0.04	15.9	0.04	20.9	0.05	57.1
A-26	0.118	1.7	0.100	1.3	0.200	2.2	0.04	21.0	0.01	73.8
A-27	0.160	5.5	0.300	3.4	0.180	5.5	0.15	21.2	0.60	64.4
A-28	0.950	2.9	1.00	1.8	0.857	3.5	1.51	20.2	2.04	71.5
A-29	0.413	8.4	1.13	10.1	0.85	11.5	5.28	23.2	6.17	46.7
A-30	0.300	1.3	0.377	0.6	0.261	1.6	0.24	16.2	0.82	80.4
A-31	0.100	3.0	0.300	1.3	0.200	2.4	0.14	20.0	0.75	73.3
A-32	0.069	3.0	0.050	2.3	0.088	8.2	1.05	23.5	0.93	63.0
A-33	0.611	9.5	1.214	7.2	0.943	7.6	1.86	16.7	2.13	59.0
A-34	0.02	5.2	0.017	6.1	0.01	14.2	0.01	29.3	0.07	45.2
A-35	0.033	3.8	0.01	1.8	0.01	1.6	0.09	12.5	0.31	80.2
A-36	0.01	3.2	0.01	3.0	0.03	11.5	0.04	24.6	0.26	57.6
A-37	0.01	8.0	0.031	6.6	0.08	10.4	0.16	21.6	0.81	53.4
A-38	0.139	7.3	0.129	7.0	0.106	9.5	0.22	22.0	0.66	54.1
A-39	0.38	17.6	0.56	10.8	0.54	12.5	0.75	15.3	3.06	43.8
A-40	0.07	24.1	0.104	7.8	0.09	11.3	0.10	10.7	0.54	46.1

*John M. Grover*  
John M. Grover, M.Sc.  
Laboratory Director



# EDA

## Anschutz Mining Corp con't.

	+80		+100		+115		+200		-200	
	PPM	%	PPM	%	PPM	%	PPM	%	PPM	%
A-41	0.226	1.8	0.183	1.1	0.132	0.8	0.126	9.5	0.53	86.8
A-42	1.151	1.4	2.444	0.5	1.93	3.2	2.26	17.0	4.50	77.8
A-43	0.22	5.8	0.430	1.9	0.267	3.8	0.29	20.2	0.800	68.3
A-44	20.55	4.4	12.89	2.1	10.120	7.6	8.70	20.5	11.80	65.5
A-45	0.389	8.3	0.599	4.9	0.420	7.7	0.543	17.9	1.43	61.2
A-46	0.170	9.5	0.171	1.2	0.22	14.7	0.233	16.8	0.36	57.9
A-47	0.303	9.3	0.631	6.2	0.575	8.4	0.75	19.9	2.19	56.1
A-48	0.124	2.5	0.347	1.5	0.353	1.7	0.83	15.2	0.33	79.1
A-49	0.329	5.2	0.234	1.3	134.3	3.2	0.59	18.2	0.90	72.1
A-50	0.433	5.8	0.221	1.4	0.536	7.6	1.21	19.7	1.06	65.5
A-51	0.114	6.2	0.256	3.5	0.256	6.3	0.20	19.5	0.34	64.4
A-52	0.346	7.3	0.465	0.9	0.65	14.4	1.13	17.3	0.88	60.1
A-	0.200	0.5	0.159	0.7	0.400	0.3	0.11	14.4	0.66	84.1
A-54	1.071	0.3	0.131	0.8	0.01	0.7	0.01	12.3	0.07	85.9
A-55	1.408	2.1	2.262	0.9	7.394	1.4	7.1	24.0	13.05	71.6
A-56	27.307	1.7	0.526	0.4	2.343	3.2	5.59	23.8	11.20	70.9
A-57	0.291	1.7	0.00	0.4	1.356	2.4	0.71	31.2	4.25	64.2
A-58	0.00	2.6	0.00	1.3	0.012	8.6	0.01	30.3	0.20	57.3
A-59	0.00	3.1	0.00	3.7	0.00	8.6	0.01	29.4	0.10	55.1

*Joan M. Grover*  
 Joan M. Grover, M.Sc.  
 Laboratory Director



Anschutz Mining Corp. con't.

	<u>Total troy oz/ton</u>	<u>Total PPM</u>		<u>Total troy oz/ton</u>	<u>Total PPM</u>
A-19	0.0019	0.636	A-46	0.0087	0.2981
A-20	0.0016	0.0559	A-47	0.0436	1.493
A-21	0.0011	0.0378	A-48	0.0117	0.4015
A-22	0.0017	0.0595	A-49	0.1482	5.074
A-23	0.0047	0.1597	A-50	0.0292	1.002
A-24	0.0027	0.0924	A-51	0.0085	0.2901
A-25	0.0014	0.0481	A-52	0.0247	0.8474
A-26	0.0007	0.0235	A-53	0.0168	0.5742
A-27	0.0131	0.4471	A-54	0.0019	0.0657
A-28	✓ 0.0537	1.839	A-55	0.3271	11.20
A-29	0.1271	4.353	A-56	0.2865	9.812
A-30	0.0207	0.7085	A-57	0.0872	2.988
A-31	0.0172	0.5895	A-58	0.0035	0.1187
A-32	0.0246	0.8431	A-59	0.0017	0.0580
A-33	0.0521	1.784			
A-34	0.0011	0.0381			
A-35	0.0076	0.2615			
A-36	0.0048	0.1637			
A-37	0.0140	0.4783			
A-38	0.0127	0.4347			
A-39	0.0482	1.650			
A-40	0.0086	0.2948			
A-41	0.0140	0.4791			
A-42	0.1161	3.975			
A-43	0.0186	0.6361			
A-44	0.3345	11.46			
A-45	0.0311	1.066			

*John M. Grover*  
 J. M. Grover, M.Sc.  
 Laboratory Director



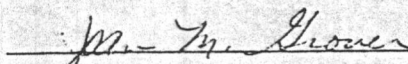
January 13, 1982

Anschutz Mining Corp.  
2400 Anaconda Tower  
555 - 17th Street  
Denver, CO 80202

Client#: 1130  
Log#: 2742

ATTN: D. Lewis


	+80		+100		+115		+200		-200	
	PPM	%	PPM	%	PPM	%	PPM	%	PPM	%
A-60	0.00	9.3	0.04	11.9	0.05	11.7	0.04	16.8	0.04	50.3
A-61	0.121	2.5	0.267	0.8	0.088	3.5	0.04	23.0	0.07	70.2
A-62	0.160	1.9	0.200	0.5	0.095	4.3	0.04	22.7	0.04	70.6
A-63	0.833	0.2	0.769	0.1	0.00	0.3	0.020	4.1	0.03	95.1
A-64	0.029	3.6	0.092	2.3	0.055	7.8	0.05	21.9	0.00	64.4
A-65	0.00	3.3	0.00	3.3	0.013	8.1	0.03	25.0	0.03	60.3
A-66	0.588	0.4	0.208	0.5	0.185	1.1	0.02	14.0	0.03	84.0
A-67	0.071	7.2	0.048	8.5	0.030	10.4	0.04	21.0	0.04	52.9
A-68	0.047	6.5	0.040	7.6	0.050	12.4	0.04	16.1	0.06	57.5
A-69	10.00	0.1	13.33	0.1	4.00	0.2	0.03	1.5	0.03	98.3

  
Joan M. Gover, M.Sc.  
Laboratory Director

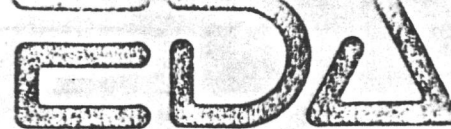


Anschutz Mining Corp. con't.

	<u>Total troy oz/ton</u>	<u>Total PPM</u>
A-60	0.0011	0.0375
A-61	0.0019	0.0666
A-62	0.0013	0.0454
A-63	0.0009	0.0318
A-64	0.0005	0.0184
A-65	0.0008	0.0266
A-66	0.0010	0.0334
A-67	0.0012	0.0419
A-68	0.0016	0.0532
A-69	0.0018	0.0613

  
Joan M. Grover, M.Sc.  
Laboratory Director





## Report of Analysis - Precious/Base Metals

To

Anschutz Mining Corp.  
2400 Anaconda Tower  
555 - 17th Street  
Denver, CO 80202

ATTN: D. Lewis

Client No.	Log No.	Client P.O. No.	Date Collected	Date Received	Date Reported
1130	2772			1/26/82	2/12/82

Sample I.D.	Gold Troy oz/ton ✓	Silver Troy oz/ton ✓	Copper %	Lead %	Zinc %
A-75	0.0029	0.540	0.75		
A-76	0.0009	0.117	0.002		
A-77	0.0012	0.110	0.002		
A-78	0.0009	0.088			
A-79	0.0009	0.029			
A-80	0.0015	0.073			
A-81	< 0.0009	0.044			
A-82	< 0.0009	0.037			
A-83	0.0158	0.051			
A-84	0.0093	0.058			
A-85	0.0055	0.066			
A-86	0.0102	0.044			
A-87	0.0029	0.088			
A-88	0.0152	0.044			
A-89	0.0241	0.058			
A-90	0.0108	0.073			
1501	0.0196	0.058			
1502	0.0085	0.073			
1503	0.0073	0.058			
1504	0.0045	0.088			
1505	0.0032	0.139			
1506	0.0164	0.131			
1507	< 0.0009	0.095			
1508	0.0091	0.095			
1509	0.0009	0.073			

Approved by





## Report of Analysis - Precious/Base Metals

To

Anschutz Mining con't.

Client No.	Log No.	Client P.O. No.	Date Collected	Date Received	Date Reported
1130	2772			1/26/82	2/12/82

Sample I.D.	Gold Troy oz/ton ✓	Silver Troy oz/ton ✓	Copper %	Lead %	Zinc %
↓ 1510	< 0.0009	0.073			
1511	< 0.0009	0.095			
1512	0.0015	0.066			
↓ 1513	< 0.0009	0.110			
↓ 1514	0.0012	0.073			
1515	0.0015	0.102			
1516	0.0012	0.095			
1517	< 0.0009	0.102			
1518	0.0029	0.088			
1519	0.0020	0.080			
1520	< 0.0009	0.073			
1521	0.0085	0.124			
1522	0.0026	0.051			
↓ 1523	0.0015	0.058			
1524	0.0010	0.051			
1525	0.0026	0.044			
1526	0.0015	0.058			
1527	0.0026	0.066			
1528	0.0018	0.022			
↓ 1529	0.0020	0.044			
1530	0.0018	0.022			
1531	0.0047	0.037			
1532	0.0084	0.088			
1533	0.2421	0.117			

Approved by



U  
L. A. Instruments Inc.  
☒ 5151 Ward Road  
Wheat Ridge CO 80033  
Telephone: (303) 422 9112

☐ 4115 Silver Avenue SE  
Albuquerque NM 87108  
Telephone: (505) 266 9106

CE  
?

## Report of Analysis

TO

Anschutz Mining Corp.  
2400 Anaconda Tower  
555 - 17th Street  
Denver, CO 80202

ATTN: Dave Lewis

Client No.	Log. No.	Client P.O. NO.	Date Collected	Date Received	Date Reported
1130	2786			2/10/82	2/22/82

Sample I.D.	Au troy oz/ton	Ag troy oz/ton			
1534	0.213	0.044			
1535	1.11	0.277			
1536	3.62	0.088			
1537	7.01	0.102			
1538	0.0134	0.102			
1539	0.0453	0.029			
1540	0.0038	0.037			
1541	0.0053	0.015			
1542	0.0012	0.015			
1543	0.0038	0.022			
1544	0.0012	0.015			
1545	< 0.0009	0.029			
1546	0.0012	0.015			
1547	0.0012	0.110			
1548	0.0169	0.080			
1549	< 0.0009	0.088			
1550	< 0.0009	< 0.015			
1551	< 0.0009	0.110			
1552	0.0012	0.022			
1553	0.0009	0.117			
1554	< 0.0009	0.234			
1555	0.173	0.088			
1556	0.0009	0.292			

Approved by

*Jim T. Hume*



3<sup>rd</sup> Ward Road  
Fheat Ridge CO 80033  
Telephone: (303) 422 9112

☐ 4115 Silver Avenue SE  
Albuquerque NM 87108  
Telephone: (505) 266 9106



## Report of Analysis - Precious/Base Metals

TO

Anschutz Mining  
2400 Anaconda Tower  
555 - 17th Street  
Denver, CO 80202

ATTN: D. Lewis

Client No.	Log No.	Client P.O. No.	Date Collected	Date Received	Date Reported
1130	2824			3/1/82	3/24/82

Sample I.D.	Gold Troy oz/ton	Silver Troy oz/ton ✓	Copper %	Lead %	Zinc %
1556	0.0044	0.007			
1557	0.0015	0.015			
1558	0.0020	0.015			
1559	0.0012	0.022			
1560	0.0035	0.022			
1561	0.1986	0.161			
1562	0.0047	0.051			
1563	0.0018	0.037			
1564	0.0012	0.037			
1565	0.0009	0.037			
1566	0.0009	0.015			
1567	0.0009	0.029			
1568	0.0012	0.037			
1569	0.0020	0.073			
1570	0.0146	0.073			
1571	1.253	0.015			
1572	0.0464	0.015			
1573	0.2336	0.015			
1574	0.0082	0.007			
1575	0.0120	< 0.007			
1576	0.0161	< 0.007			
1577	0.0137	0.007			
1578	0.0134	0.672			
1579	0.0091	0.584			
1580	0.0014	< 0.007			

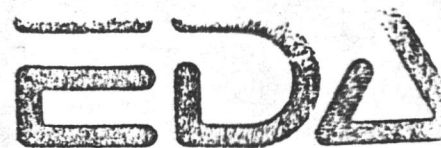
Approved by

*Don M. Gomez*



Anschutz Mining Inc.  
151 Ward Road  
Wheat Ridge CO 80033  
Telephone (303) 422 9112

☐ 4115 Silver Avenue SE  
Albuquerque NM 87108  
Telephone (505) 266 9106



## Report of Analysis - Precious/Base Metals

To  
Anschutz Mining con't.

Client No.	Log No.	Client P.O. No.	Date Collected	Date Received	Date Reported
1130	2824			3/1/82	3/24/82

Sample I.D.	Gold Troy oz/ton	Silver Troy oz/ton	Copper %	Lead %	Zinc %
1581	0.0014	0.029			
1582	0.0006	0.007			
1583	0.0026	< 0.007			
1584	0.0018	< 0.007			
1585	0.0006	0.051			
1586	0.0012	0.037			
1587	0.0018	0.007			
1588	0.0015	0.110			
1589	0.0015	0.029			
1590	0.0023	< 0.007			
1591	0.0006	0.102			
1592	0.0015	< 0.007			
1593	0.0009	0.015			
1594	0.0006	< 0.007			
1595	< 0.0006	< 0.007			
1596	0.0009	0.066			
1597	0.0015	0.037			
1598	0.0020	< 0.007			
1599	0.0009	0.007			
1600	0.0012	0.037			
1601	0.0006	0.007			
1602	0.0006	0.044			
1603	0.0006	< 0.007			
1604	0.0009	< 0.007			
1605	0.0006	0.066			

Approved by Mr. Y. Hines





### Report of Analysis - Precious/Base Metals

**TO**

Anschutz Mining con't.

[illegible]

Approved by

Ann Th. Groves



## Report of Analysis - Precious/Base Metals

**TO**

Anschutz Mining  
2400 Anaconda Tower  
555 - 17th Street  
Denver, CO 80202

ATTN: Bent Aaquist

Client No.	Log No.	Client P.O. No.	Date Collected	Date Received	Date Reported
1130	2890			3/26/82	4/14/82

[illegible]

Approved by John E. Brown



☒ 5151 Ward Road  
Wheat Ridge CO 80033  
Telephone (303) 422 9112

☐ 4115 Silver Avenue SE  
Albuquerque NM 87108  
Telephone (505) 266 9106



## Report of Analysis

To

Anschutz Mining Corp.  
2400 Anaconda Tower  
555 - 17th Street  
Denver, CO 80202

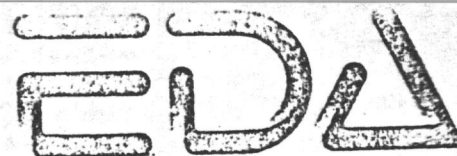
ATTN: D. Lewis

Client No.	Log No.	Client P.O. NO.	Date Collected	Date Received	Date Reported
1130	2772			1/26/82	2/12/82

Sample I.D.		Fe (0.05)	Mg (0.02)	Ca (0.05)	Ti (0.002)	Mn (ppm (10))	Ag (ppm (0.5))	As (ppm (200))
A-75	1	2	0.1	10	0.07	G(5000)	30	L
A-76	2	1.5	1	7	0.15	5000	5	N
A-77	3	1	0.15	3	0.07	5000	15	N
A-78	4	1	0.15	3	0.07	3000	7	N
		Au (ppm (10))	B (ppm (10))	Ba (ppm (20))	Be (ppm (1))	Bi (ppm (10))	Cd (ppm (20))	Co (ppm (5))
	1	N	30	5000	L	10	N	7
	2	N	70	500	2	N	N	7
	3	N	20	700	L	N	N	5
	4	N	20	700	L	N	N	7
		Cr (ppm (10))	Cu (ppm (5))	La (ppm (20))	Mo (ppm (5))	Nb (ppm (20))	Ni (ppm (5))	Pb (ppm (10))
	1	50	10000	N	20	N	15	5000
	2	20	20	20	N	L	15	L
	3	20	15	N	N	N	15	L
	4	15	10	N	N	L	15	N
		Sb (ppm (100))	Sc (ppm (5))	Sn (ppm (10))	Sr (ppm (100))	V (ppm (10))	W (ppm (50))	Y (ppm (10))
	1	N	L	N	200	200	N	10
	2	N	5	N	150	50	N	15
	3	N	L	N	N	30	N	L
	4	N	L	N	N	50	N	L
		Zn (ppm (200))	Zr (ppm (10))	Th (ppm (100))	Al (0.1)	Si (0.1)	Na (0.02)	K (0.02)
	1	G(10000)	70	N	1	50	0.1	1
	2	N	100	N	7	50	0.1	1
	3	N	50	N	3	70	0.05	1
	4	N	100	N	2	70	0.05	1

Results are in the series 1, 1.5, 2, 3, 5, 7, 10, etc. Lower limits of determination are in parenthesis.  
G = Greater than value shown. N = Not detected at limit of detection, or at value shown.  
L = Detected but below limit of determination, or below value shown.





## Report of Analysis

TO

Anschutz Mining con't

Client No.	Log No.	Client P.O. No.	Date Collected	Date Received	Date Reported
1130	2772			1/26/82	2/12/82

Sample I.D.	Fe (0.05)	Mg (0.02)	Ca (0.05)	Ti (0.002)	Mn (10)	Ag (0.5)	As (200)
A-79	2	0.05	0.3	0.02	1500	1	N
A-80	3	0.3	7	0.2	2000	0.5	N
A-81	3	0.5	2	0.2	1500	L	N
A-82	5	0.5	1.5	0.2	1500	L	N
	Au (10)	B (10)	Ba (20)	Be (1)	Bi (10)	Cd (20)	Co (5)
1	N	10	700	3	N	N	15
2	N	70	500	1	N	N	10
3	N	50	1000	1	N	N	10
4	N	L	2000	1	N	N	30
	Cr (10)	Cu (5)	La (20)	Mo (5)	Nb (20)	Ni (5)	Pb (10)
1	20	20	N	100	20	15	20
2	30	50	30	N	N	20	20
3	10	150	30	N	L	20	300
4	15	200	20	20	L	20	100
	Sb (100)	Sc (5)	Sn (10)	Sr (100)	V (10)	W (50)	Y (10)
1	N	5	N	300	10	N	30
2	N	7	N	150	70	N	20
3	N	10	N	200	100	N	30
4	N	5	N	500	30	N	30
	Zn (200)	Zr (10)	Th (100)	Al (1)	Si (1)	Na (0.02)	K (0.02)
1	N	100	N	15	50	5	1.5
2	N	100	N	5	50	0.2	1
3	N	150	N	10	50	1.5	0.7
4	N	200	N	15	50	3	1

Results are in the series 1, 1.5, 2, 3, 5, 7, 10, etc. Lower limits of determination are in parenthesis.  
 G = Greater than value shown. N = Not detected at limit of detection, or at value shown.  
 L = Detected but below limit of determination, or below value shown.





## Report of Analysis

To

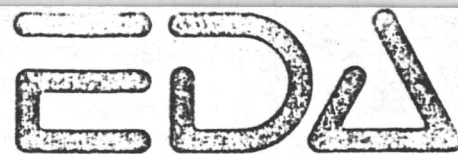
Anschutz Mining con't.

Client No.	Log No.	Client P.O. No.	Date Collected	Date Received	Date Reported
1130	2772			1/26/82	2/12/82

Sample I.D.		Fe % (0.05)	Mg % (0.02)	Ca (0.05)	Ti (0.002)	Mn ppm (10)	Ag ppm (0.5)	As ppm (200)
A-85	1	3	0.5	0.5	0.2	1500	5	N
A-87	2	1	0.2	10	0.07	G(5000)	N	N
A-90	3	2	0.15	3	0.07	2000	3	N
1502	4	5	1	7	0.2	3000	2	N
		Au ppm (10)	B ppm (10)	Ba ppm (20)	Be ppm (1)	Bi ppm (10)	Cd ppm (20)	Co ppm (5)
	1	N	50	500	1.5	N	N	70
	2	N	20	1500	1	N	N	10
	3	N	30	300	L	N	N	70
	4	N	100	1000	1.5	N	N	70
		Cr ppm (10)	Cu ppm (5)	La ppm (20)	Mo ppm (5)	Nb ppm (20)	Ni ppm (5)	Pb ppm (10)
	1	20	300	20	70	L	50	100
	2	20	150	20	30	N	15	500
	3	30	150	N	30	L	20	70
	4	150	700	30	20	L	30	150
		Sb ppm (100)	Sc ppm (5)	Sn ppm (10)	Sr ppm (100)	V ppm (10)	W ppm (50)	Y ppm (10)
	1	N	7	N	200	100	N	15
	2	N	L	N	200	70	N	30
	3	N	L	N	N	50	N	10
	4	N	10	N	200	150	N	30
		Zn ppm (200)	Zr ppm (10)	Th ppm (100)	Al (0.1)	Si (0.1)	Na (0.02)	K (0.02)
	1	N	150	N	5	50	0.07	0.5
	2	N	50	N	1	30	0.05	1
	3	N	70	N	1	70	0.07	1
	4	N	100	N	5	30	0.3	1

Results are in the series 1, 1.5, 2, 3, 5, 7, 10, etc. Lower limits of determination are in parenthesis.  
G = Greater than value shown. N = Not detected at limit of detection, or at value shown.  
L = Detected but below limit of determination, or below value shown.





## Report of Analysis

To

Anschutz Mining Corp.  
2400 Anaconda Tower  
555 - 17th Street  
Denver, CO 80202

ATTN: D. Lewis

Client No.	Log No.	Client P.O. No.	Date Collected	Date Received	Date Reported
1130	2772			1/26/82	2/12/82

Sample I.D.		Fe (0.05)	Mg (0.02)	Ca (0.05)	Ti (0.002)	Mn (0.01)	Ag (0.5)	As (200)
1504	1	2	0.7	10	0.15	5000	1.5	N
1506	2	3	0.2	10	0.03	G(5000)	N	N
1509	3	G(20)	0.7	0.7	0.15	500	1	N
1511	4	20	1	7	0.2	2000	N	N
		Au (10)	B (10)	Ba (20)	Be (1)	Bi (10)	Cd (20)	Co (5)
	1	N	50	300	1	N	N	20
	2	N	10	200	L	N	N	10
	3	N	N	500	1	N	N	70
	4	N	N	1000	L	N	N	70
		Cr (10)	Cu (5)	La (20)	Mo (5)	Nb (20)	Ni (5)	Pb (10)
	1	30	300	20	20	N	20	100
	2	50	1000	L	20	N	20	20
	3	300	5000	30	N	N	70	10
	4	200	5000	20	N	N	70	20
		Sb (100)	Sc (5)	Sn (10)	Sr (100)	V (10)	W (50)	Y (10)
	1	N	5	N	200	70	N	30
	2	N	N	N	200	50	L	20
	3	N	50	N	N	300	N	20
	4	N	30	N	N	200	N	30
		Zn (200)	Zr (10)	Th (100)	Al (0.1)	Si (0.1)	Na (0.02)	K (0.02)
	1	N	100	N	3	30	0.1	1
	2	N	50	N	1	30	0.05	1
	3	N	N	L	2	20	0.05	1
	4	N	70	L	3	20	0.05	1.5

Results are in the series 1, 1.5, 2, 3, 5, 7, 10, etc. Lower limits of determination are in parenthesis.  
G = Greater than value shown. N = Not detected at limit of detection, or at value shown.  
L = Detected but below limit of determination, or below value shown.