CONTACT INFORMATION
Mining Records Curator
Arizona Geological Survey
1520 West Adams St.
Phoenix, AZ 85007
602-771-1601
http://www.azgs.az.gov
inquiries@azgs.az.gov

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11/02/94

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: ALTERATION GROUP

ALTERNATE NAMES:
LUCKY SHOES
OLD JOE

YAVAPAI COUNTY MILS NUMBER: 1041B

LOCATION: TOWNSHIP 12 N RANGE 1 E SECTION 18 QUARTER NW
LATITUDE: N 34DEG 25MIN 42SEC LONGITUDE: W 112DEG 18MIN 06SEC
TOPO MAP NAME: POLAND JUNCTION - 7.5 MIN

CURRENT STATUS: EXP PROSPECT

COMMODITY:
COPPER
LEAD
ZINC

BIBLIOGRAPHY:
USGS POLAND JUNCTION QUAD
ADMMR ALTERATION GROUP FILE
CLAIMS EXTEND INTO SEC. 7-T12N-R1E &
SEC. 25 & 36 T-12.5N-R1W

ALTERATION GROUP

REFERENCES

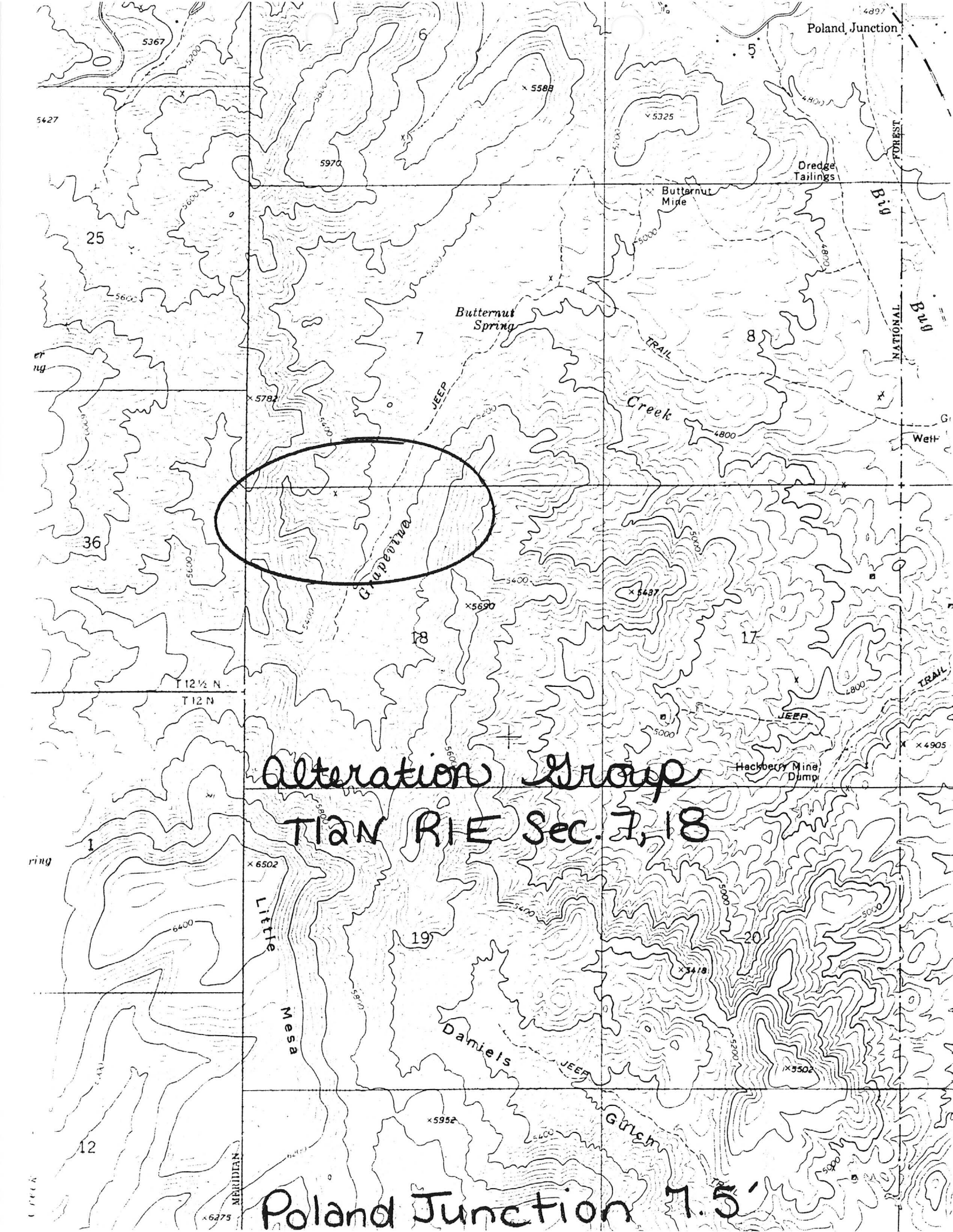
YAVAPAI COUNTY
BIG BUG DISTIRCT
T12N R1E Sec. 7, 18

Yavapai County MILS Index #1041B

AKA: Lucky Shoes, Old Joe

Poland Junction 7.5' Topo (included in file)

Many maps and other info. available on this property at the office of Shattuck Denn Mining Corp. at Humboldt.


Poland Junction
Dredge Tailings
Butternut Mine
Butternut Spring
TRAIL
JEEP
Creek
Big
NATIONAL
FOREST
Well
Grapevine
Hackberry Mine Dump
Little Mesa
Daniels
Gulch
T12½ N
T12 N
MERIDIAN
Alteration Group
T12N R1E Sec. 7, 18
Poland Junction 7.5'

Humboldt

July 14, 1964

MR. C. R. SUNDEEN
Humboldt

ALTERATION CLAIM GROUP

SUMMARY AND CONCLUSIONS

Work on the twelve Alteration claims, located approximately six miles southwest of the Iron King mine in Sections 7 and 18, T 12 N, R 1 E, and in Sections 25 and 36, T 12½ N, R 1 W, began in November, 1963, and was completed in June, 1964. During that period, after the discovery work and surveying were finished, the area was geologically mapped and a geophysical survey run. A number of geochemical samples were also taken. This work has failed to uncover any indication of the existence of economic mineralization within the general area. Since no encouragement has been noted, it is felt that any further work on this claim group is unjustified at this time.

GENERAL

Because C. A. Anderson of the U. S. Geological Survey mapped a patch of "alteration" within the Spud Mountain tuff unit, supposedly similar to that associated with the mineralization at the Iron King mine, at A. R. Still's suggestion the area was staked on November 15, 1963. The necessary access roads, discovery work, and surveying were subsequently completed. Some geochemical sampling was done at that time in an effort to determine what course of action should be followed; no anomalous zones were detected. The area was then geologically mapped. Upon completion of the mapping, it was decided that a Turam (electro-magnetic) survey would provide the best geophysical data (commensurate with reasonable cost) with which to determine the potential of the property. This necessitated the clearing of lines for the geophysical equipment and was accomplished by use of a tractor where the terrain permitted and by hired laborers for the rest. Moreau, Woodard and Company, Ltd., of Toronto, Canada, was brought in to run the geophysical survey. The results of this survey, completed during June, were essentially negative, the only exception to this being the location of one very questionable, weakly anomalous zone. This zone was ground checked and geochemically sampled (and subsequently resampled). No unusual geological features were found, and the geochemical results gave no encouragement.

Only traces of visible mineralization were observed in all the time spent working on and studying the property. In comparison to the rest of the district as a whole, the Alteration group is relatively devoid of past attempts to prospect the ground, indicating a relative lack of mineralization visible on surface. One shallow shaft was noted with minor sulphides in quartz scattered on the dump; this

quartz contained only traces of gold, silver, and copper. In addition to this shaft, several shallow pits were found that contained insignificant traces of copper mineralization. Even though a substantial amount of road and line work was done by tractor during this project, no additional mineralization was observed; if the area had any potential at all, one would expect to have found at least an occasional minor zone of mineralization.

GEOLOGY

The Alteration group of claims lies mainly within the Spud Mountain volcanic sequence (as does the Iron King mine) composed largely of tuffaceous andesitic and rhyolitic rocks. Along the eastern edge of the claim area, argillic-phyllitic units outcrop. Several narrow, Tertiary (?) rhyolite dikes, in most places concordant, have also been mapped.

It is evident that shearing of considerable intensity has occurred within the area, especially apparent in elongate, sericitized patches of rhyolitic rocks. These light-colored bands of sheared rhyolitic rocks are those zones mapped by the U.S.G.S. as being "altered". Unfortunately, the term "alteration" can be misleading. Although these particular units have been unquestionably "altered", it is a normal type of sericitic alteration which commonly accompanies the shearing of rhyolitic rocks. It is our opinion that alteration of this nature has no direct relationship to alteration associated with economic mineralization of the massive sulphide type. Sericitic alteration associated with shearing is common throughout the entire district.

As noted above, only traces of mineralization were encountered in the Alteration claim area, and nothing to indicate the existence of anything of economic significance.

A geological map is included with this report.

GEOCHEMICAL SAMPLING

During the course of the study, a number of samples were taken representing all of the observed occurrences of mineralized rock, possibly mineralized rock, and "alteration" on the property. The results were disappointing. For the purpose of comparison, samples were taken across the main Iron King shear zone south of the main workings. These, in general, gave significantly better results than those taken on the Alteration claims, especially when economic mineralization was approached.

GEOPHYSICS

As noted above, Moreau, Woodard Co., Ltd., of Toronto, Canada, was brought in to run a Turam electromagnetic survey on the claim area. This method has a depth penetration of approximately 400 feet (some authorities claim a greater depth). Although a greater depth penetration could have been obtained by the use of I. P., it was felt that a depth of 400 feet was sufficient to escape the effects of oxidation. The relative cost of the two made the use of Turam far more attractive, also.

Fifteen lines were laid out on 400 foot spacings perpendicular to the assumed strike of any buried conductor. These lines were approximately 2000 feet long. Readings were taken at 100 foot intervals along these lines.

The results of the Turam survey were almost completely negative. Only one weakly conductive zone was located in an area having no unusual geological merit. This zone was sampled and then resampled geochemically; the geochemical results failed to indicate the presence of any abnormally high mineralization.

A copy of the geophysical results is included with this report.

CONCLUSIONS

The geological, geochemical, and geophysical work done on the Alteration claim group has yielded negative results to date. The premise that the sheared, sericitic, rhyolitic ("altered") zones are related to economic mineralization is believed to be invalid. We believe that the immediate area of the Alteration claims is unfavorable and can find no reason to justify any further work or expense at this time. The claim group can be held by Shattuck Denn with no additional work until August, 1965. If our district study should in the future indicate that some feature present on the Alteration group has some significance, at present unknown to us, we can recommend additional work at any time between now and August, 1965, without having to reacquire the ground.

JAK:b

J. A. KNOX

cc: Mr. W. J. La Morte

STILL & STILL
CONSULTING MINING ENGINEERS & GEOLOGISTS
ROOM 24 - UNION BLOCK PRESCOTT, ARIZONA

J. W. STILL
ARTHUR R. STILL

TELEPHONE 445-0610
POST OFFICE BOX 1512

November 23,1963

Mr. D. M. Kentro, Ass't. Vice Pres.
Shattuck Denn Mining Corporation
Prescott, Arizona

Re: Zone of Hydrothermal Alteration 5.8 Miles Southwest of Iron King Mine

Dear Mr. Kentro:

The following brief letter report is to summarize for your file the above topic. This matter has been discussed with you verbally in greater detail. Attached are maps and geochemical data that will help illuminate the following text.

A series of hydrothermally altered lenses of Spud Mountain Tuff occur approximately 5.8 miles southwest of the I.K. No. 7 shaft. This alteration occurs over an aggregate length of about 5,000 ft. and over an aggregate width of about 1,000 ft. The alteration was initially discovered, and mapped, by Dr. Charles A. Anderson, Chief Geologist of the United States Geological Survey, while mapping the NE 1/4 of the Mount Union quadrangle. His map has not been published but it was recently placed on an open file status by the U.S.G.S.

Within the past few years a geological concept has been developed in Canada, Australia and Europe that relates massive sulphide deposits in Precambrian greenstones genetically to these host rocks. No attempt will be made here to discuss this concept in detail, but it has proven to have appreciable merit and quite a number of new massive sulphides have been developed due to this new insight into their nature of origin.

The belt of Spud Mountain Tuff, within which the Iron King orebodies occur, has been mapped for a length of 10 miles to the southwest of where it goes under alluvial cover by the U.S.G.S. Within this length, two zones of hydrothermally altered rocks occur - one being the Iron King zone and the other being that which is the subject of this memorandum - as shown on an attached Xerox copy of the U.S.G.S. geologic map. On this map the Spud Mountain Tuff (smt) unit is shown in light green, quartz sulphide veins are shown in red and the zones of hydrothermally altered rocks are shown in pink. The map is on a scale of 1"= 2,000'.

With your knowledge and consent, Messrs. Knox, Astudillo and I visited this only recently discovered zone of alteration on November 15th. We found the altered rocks to be quite strongly sericitized, silicified and carbonated. In general there is a striking similarity between these zones and the extreme south end

of the Iron King alteration zone. No evidence of gossan after massive sulphides was found although some of the quartz bands and stringers within the altered lenses do exhibit evidence of previously existing disseminated sulphides.

While on the property twelve lode location notices (named Alteration No. 1 through 12) were placed and seventeen samples were taken for geochemical analyses. The twelve lode claims are sufficient to cover the outcropping lenses of alteration but they do not leave much margin for safety, relative to rake, on the ends.

The results of this initial geochemical sampling are shown on an attached copy of the Rocky Mountain Geochemical Laboratories analytical report and also on an attached sketch map showing their locations of origin. Three samples were taken of supposedly "fresh" wall rock, 10 samples were taken of hydrothermally altered rock (but excluding from the sample megascopically visible quartz veins and bands), and 4 samples were taken of the quartz veins and bands (from within the altered zones) alone.

It is extremely difficult, if not impossible, for us to interpret the meaning of these geochemical values at this time since the number of samples are statistically few and we have nothing with which to compare them to use as a yardstick. We plan to not only take more samples on this altered zone but also to thoroughly sample the south end of the Iron King zone for purposes of comparison. In the interim, about all that can be said is that all of the values are of a low order, the "fresh" wall rock values seem anomalous, but the "quartz alone" samples would indicate more metals than the alteration zones without quartz.

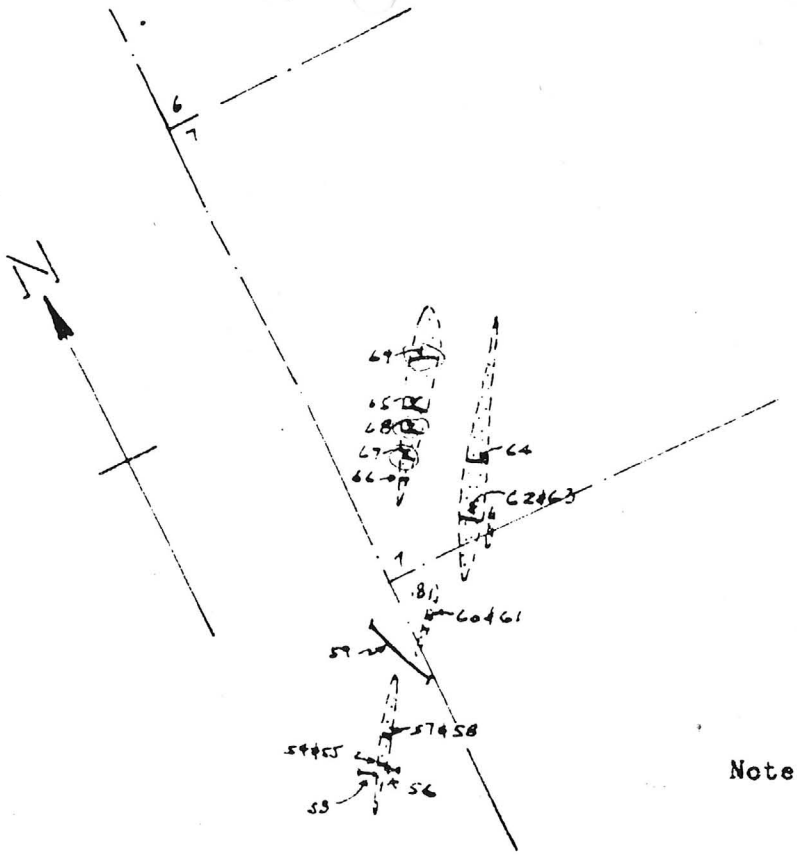
It is my recommendation that the twelve lode claims be validated so that we may have ample time to further evaluate the meaning, and merit, of this sizeable patch of alteration. The validation of these claims (i.e. bulldozer side hill cuts, surveying and monumenting) should not cost in excess of $ 2,000 and will hold the ground until September 1,1965.

In the meantime, the I.K. geological department will, as time permits, do geological mapping and further sampling on these claims as well as thoroughly sample the south end of the Iron King alteration zone.

Very truly yours,

Arthur R. Still

ARS/



SKETCH SHOWING LOCATION OF GEOCHEMICAL SAMPLES

Note: 59 = site of sample # 2159, etc.

Scale: 1" = 2,000'

Geochemical Data (ppm)

Note: ppm = parts per million; 1,000 ppm = 0.10%; 100ppm = 0.01%, etc.

Sample#	Copper	Zinc	Lead	Remarks
Rocks:				
2153	75	65	35	Hangingwall andesite, appears fresh (200')
2156	50	45	45	Footwall andesite - fresh (15
2159	115	75	15	Wide band across zone in creek largely fresh, some alteration
Altered Zones (w/o quartz bands):				
2154	40	30	45	Light tan to buff colored
2157	15	25	25	sericitized, silicified and
2160	35	45	15	carbonated altered smt.
2162	30	40	55	" "
2164	30	30	20	" "
2166	45	30	15	" "
2167	15	40	25	" "
2168	35	25	15	" "
2165	20	20	10	" "
2169	35	45	20	" "
Quartz bands & veinlets from altered zones alone:				
2155	25	125	75	
2158	20	20	80	
2161	105	65	35	
2163	15	40	105	

Trace Analysis

Geochemical Surveys

ROCKY MOUNTAIN GEOCHEMICAL LABORATORIES

233 North Marina Street

Phone: 445-4393

PRESCOTT, ARIZONA

ANALYTICAL REPORT

Date November 20, 1963

Client Mr. Arthur R. Still
112 West Gurley St.
Prescott, Arizona

Report on 18 Rock samples

Sample Data Sheet of (none) Submitted by A. Still Date 11-16-63

Analysis Copper, Zinc, Lead

Remarks Rejects and -80 mesh pulps returned 11-20-63

cc: encl
file

All values are reported in parts per million unless specified otherwise. A minus sign (-) is to be read "less than" and a plus sign (+) "greater than". Values in parenthesis are estimates. This analytical report is the confidential property of the above mentioned client and for the protection of the client and ourselves we reserve the right to forbid publication or reproduction of this report or any part thereof without written permission.

Field No.	Copper	Zinc	Lead
2152 (*)	30	45	55
2153	75	65	35
2154	40	30	45
2155	25	125	75
2156	50	45	45
2157	15	25	25
2158	20	20	80
2159	115	75	15
2160	35	45	15
2161	105	65	35
2162	30	40	55
2163	15	40	105
2164	30	30	20
2165	20	20	10
2166	45	30	15
2167	15	40	25
2168	35	25	15
2169	35	45	20

(*) Note by ARS - this sample was taken across (25' on each side) the mineralized zone at the "Lucky Shoes" lead prospect. The "Lucky Shoes" is shown on the USGS 2000 scale geologic map. A sample of hand cobbed ore (from the dump) at this site assayed 30% lead and 8 oz. silver - however, the indications are that this "ore" came from narrow stringers within the mine.

E A Johnson

E. A. Johnson