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NAM Inc

12/4/68

From John N. FAICK
Mine Exploration Co
Tucson Arizona

LEAD-SILVER DEPOSITS ON THE ELLSWORTH PROPERTY 3130 East Grant Rd
ASH SPRING DISTRICT, COCHISE COUNTY, ARIZONA

A Preliminary Report

by

John N. Faick, Ph.D.
Registered Geologist

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LEAD-SILVER DEPOSITS ON THE ELLSWORTH PROPERTY
ASH SPRING DISTRICT, COCHISE COUNTY, ARIZONA

A Preliminary Report

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John N. Faiek, Ph.D.
Registered Geologist

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LEAD-SILVER DEPOSITS ON THE ELLSWORTH PROPERTY
ASH SPRING DISTRICT, COCHISE COUNTY, ARIZONA

A Preliminary Report

by

John N. Faick, Ph.D.

Registered Geologist

INTRODUCTION

Located a few miles east of Douglas, Cochise County, Arizona, is a three-square-mile area in which small, sporadic, rich, lead-silver deposits have been prospected from time to time during the last 12 or 15 years by Earle and Leoma Ellsworth of Douglas, Arizona. I visited this area October 10, and again on October 25, 26 and 27, 1968. As a result of these visits to the area I am convinced that the lead and silver deposits are sufficiently abundant to present an attractive exploration target for companies interested in possible future production of lead and silver ore. Many of the small deposits are closely spaced and the intervening zones seem to be sufficiently well mineralized so that some parts of the area should be considered as large, low-grade, disseminated lead deposits. In two or three places these lead-rich zones may be suitable for open pit mining on a moderate scale. The deposits should be explored and evaluated to determine whether mining of the deposits is economically feasible.

LOCATION, ACCESSIBILITY, TOPOGRAPHY, POWER AND WATER

The area where the lead-silver deposits have been found lies in sections 15, 16, and 17 in T. 24 S., R. 29 E., from about seven to ten miles east of Douglas, Arizona. The south side of these three sections adjoins the Mexican border and a Cochise County road passes approximately along the north side of the mineralized area. This road, which is an extension of East 15th Street in Douglas, provides easy access to the property.

The area in which the deposits are found is generally referred to as the Ash Spring district but is sometimes referred to as the Douglas district. As shown on figure 1 it is an area of low mountains with moderate topography; having a maximum difference of elevation of about 750 feet. Most of the property is readily accessible over several jeep trails.

Douglas, with a population of about 12,000, is the site of a Phelps-Dodge smelter which treats the copper ores from the Bisbee Mines. It is also an important railroad shipping point and the heart of a thriving farming and ranching area. It would be the principal source of labor and supplies for any work done in the Ash Spring district.

The nearest source of power is at Douglas. A small dependable supply of water is said to be available in a mine shaft on section 15 but large supplies probably would have to be obtained from the San Bernardino Valley toward the east or the Douglas area west of the lead-silver deposits.

OWNERSHIP OF THE PROPERTY

The lead-silver deposits occur on both Federal and State land and the mineral rights are controlled by Earle and Leona Ellsworth who at one time operated a cattle ranch in the area and who have prospected it for several years. The Ellsworths have unpatented lode claims on the Public Domain and mineral leases on claims on the Arizona State land. Some of the Ellsworth claims are shown on figure 2; others have not been mapped. Ellsworth's title to the land and the mineral resources seems to be in good shape; however, it is still under investigation.

HISTORY

A brief history of early exploration in the Ash Spring district is recorded by the Copper Handbook for the years 1909, 1910-1911, and 1918. It was reported that extensive lands were being explored for copper in 1907, and in 1908 the Grand Arizona Copper Company was incorporated to develop the land. At that time the company reportedly had 36 unpatented claims covering an area of about 700 acres near the foot of Nigger Head Butte. The property was developed by about 1000 feet of workings which included three shafts respectively 40, 70 and 325 feet deep; and a 42-foot and 65-foot crosscut tunnel and a 115-foot drift tunnel. Apparently these workings are on section 15, where a General Land Office survey plat (dated 1914) shows a mine shaft designated as Arizona Copper Company. In 1908 the property was fully equipped with a 72-HP steam power plant, hoists, machinery and seven buildings but the entire property was sold for debt in 1912.

By 1908 the mine had explored a contact deposit (Copper Handbook, Vol. X, p. 878) averaging about eight feet wide between limestone and porphyry. This was a sulfide ore deposit containing a small percentage of copper and zinc and up to 46 percent lead and 28 ounces of silver per ton with small values in gold. The ore is said to have contained some chalcopyrite and bornite. Some pyrite was found on the waste dump in October 1968.

It is rumored locally that the mine had produced about \$75,000 worth of silver just before operation ceased and that the reason for closing the mine was that an excessive flow of water was encountered by the workings. The shaft was used as a source of water for Ellsworth's cattle for several years.

There are several other shafts and prospect pits on the property but the history of them is unknown. Some of them, including the old underground workings of the Grand Arizona Copper Company, are situated near the eastern margin and possibly outside of the lead-bearing zone which I think has the best possibility of becoming productive.

In 1957 the Mineral Reserve Co., reported to be a Nevada Corporation, became interested in the property and made an intensive investigation of it. Apparently this company sampled the lead deposit extensively and made a mill test on about 10 tons of ore taken from

seven deposits on three or four different claims. Most of the records of this investigation have been lost. The Mineral Reserve Company is reported to have discontinued its work on the Ellsworth property in order to concentrate all of its efforts on a gold mine in Mexico.

PRODUCTION

It is rumored that the Grand Arizona Copper Company produced silver ore worth about \$75,000 in the early 1900's. In June 1957 the Minerals Reserve Company produced about 10 tons of lead ore for a mill test in Douglas but the records are incomplete. Shipments of ore for the mill test are shown below.

<u>Source by claims</u>	<u>Date of shipment</u>	<u>Weight in pounds</u>
Panther 8	6-14-57	3,065
Unidentified	6-19-57	3,500
Unidentified	6-19-57	3,250
Border King 8	6-20-57	2,890
Border King 8	6-20-57	2,775
Border King 8	6-20-57	2,950
Border King 8	6-25-57	2,145
	Total	20,575

Ore from the unidentified sources was obtained from the Penny 8(?), Penny 9(?), or Border King 8 claims but the exact source is no longer known. All of this ore was mixed, sampled and assayed but the assay record is not available. The ore was valued at \$110 per ton and was paid for at this rate by Winter and Wolf of New York.

GENERAL GEOLOGY

The Ash Spring district, as shown by a reconnaissance geological map by Cooper (1960), is underlain by stratified rocks of the Bisbee group of Cretaceous age and by intrusive igneous rocks which may be as young as Tertiary. The stratified rocks in the area are dominantly thin-bedded limestone with which are associated some shale and relatively thin discontinuous beds of quartzite. The thickness of these strata in the Ash Spring district is not known but elsewhere in southeastern Arizona the formation attains a thickness of at least 4000 feet. These strata, on the Ellsworth property, generally have a north-northwesterly strike and a southwesterly dip but locally they are considerably deformed by faults and folds.

The igneous intrusive rocks are relatively fine-grained porphyritic sills, dikes and small stock-like masses of andesite and monzonite. These formed irregular masses that intruded into the Bisbee formation with sharp contacts but with little or no alteration along the contacts. Small bodies of these intrusives are widely scattered throughout the area but the principal bodies were shown in the reconnaissance map of Cooper, from which the attached geologic map, figure 3, was compiled.

ALTERATION AND MINERALIZATION

Alteration of both the igneous and sedimentary rock was relatively mild. Some of the igneous rocks are essentially unaltered but some zones show the effects of alteration to clay and locally to sericite. The weathered outcrops are brownish or reddish, thus suggesting the presence of iron pyrite in the intrusive masses.

Locally the limestones have been slightly bleached and re-crystallized but for the most part they seem to be unaltered. Most of the fine-grained elastic beds or shales have been indurated to form a flint-like mass or "hornstone" which was probably metamorphosed by heat from the igneous intrusions rather than by the process of mineralization.

The ore minerals seem to be confined entirely to the limestone strata although the distribution is not well known. Most of the ore seems to occur in widely scattered elongate lenses and pods that occur in faulted and folded limestone strata. Some of the deposits are vein-like and appear to be concentrated along minor fractures and faults, other deposits are localized on bedding planes in the limestone strata. Some deposits are in the limestone near the igneous intrusions but no lead ore has been found in the intrusive bodies. Some nuggets of galena (lead sulfide) have been found in a couple of shallow gulches where galena concentrated after weathering of the outcrops.

In a two-page private report, prepared July 23, 1960 by Dr. Spencer R. Titley, Professor of Geology, University of Arizona, he reported the wide-spread distribution of the lead on the Ellsworth property and noted that it seemed to be most abundant in close proximity to the igneous intrusions. Mr. Ellsworth advised me that Dr. Titley examined the SW $\frac{1}{4}$ of section 15 and the S $\frac{1}{2}$ of section 16, but he apparently did not see the numerous exposures of lead ore in the north central part of section 16 where lead seems to be most abundant. A copy of Dr. Titley's report is attached herewith as Appendix "A".

An important reason why we know so little about the distribution and relative abundance of the lead-silver ore is because the weathered outcrops of the ore look very similar to the weathered limestone host rock and it is difficult to recognize the ore. The best method to detect it is by a simple geochemical test.

The ore minerals are galena (lead sulfide) and cerussite (lead carbonate). Here and there are small spectacular occurrences of copper sulfides and carbonates but copper seems to be so scarce that it probably would not have any commercial value. The only metals sufficiently abundant to be valuable are lead and silver which are always in close association as shown by assays of the ore. It is reported that one large nugget of native silver was found on the property in recent years. The ore contains only traces of gold and less than one percent zinc.

The ore minerals are associated with relatively abundant barite, quartz and minor amounts of calcite. Limonite associated with some of the ore suggests the former presence of siderite, an iron carbonate. There is a slight possibility that barite might be sufficiently abundant in this deposit to be recovered as a by-product from the production of lead.

SAMPLES AND GRADE OF ORE

Many assays of samples of the ore from the Ellsworth property have been made but assays of only 47 samples are available. Table I - Pg 6 gives a list of the available assays with the sample locality given by claim; they cannot be located precisely without an accurate survey. Obviously the samples represent choice, select ore material found during prospecting activities and do not represent the grade of ore that might be mined from the deposit.

The arithmetic average of the 42 silver assays and 38 lead assays shown on Table I is 5.30 ounces of silver per ton of ore and 15.0 percent lead. The indicated average metal ratio is one ounce of silver for each 2.83 percent of lead but the range is from 1.8 to 9.0 percent lead for each ounce of silver. An interesting variation of the metal ratio is indicated by comparison of average assays of samples from different localities as shown by Table II.

Table II Average grade of samples and metal ratios showing percent lead for each ounce of silver.

Locality by claim	No. of assays averaged	Oz. Silver per ton	Percent Lead	Ratio Oz. Ag/T : Percent lead
Panther 7	3	4.62	8.1	1 : 1.8
Panther 8	4	15.55	32.8	1 : 2.1
Border Queen 3	2	3.80	8.0	1 : 2.1
Red Rock 4A	1	0.60	1.5	1 : 2.5
Border Queen 1	3	7.02	20.2	1 : 2.9
Panther 9	3	8.37	27.3	1 : 3.3
Border Queen 2	3	4.84	16.7	1 : 3.5
Border King 21	3	3.03	11.9	1 : 3.9
Panther 1	2	3.20	18.5	1 : 5.8
Border King 5	4	2.43	25.3	1 : 6.2
Border King 6	1	0.80	5.6	1 : 7.0
Panther 4	2	1.20	10.8	1 : 9.0

The above metal ratios suggest a zonal relationship of lead and silver with a central zone having a relatively high proportion of silver which is surrounded by a zone having a relatively high proportion of lead.

TABLE I - Assays of Samples from Ellsworth Property, Ash Spring District, Arizona

Assay date	Assay Office	Collected by	Silver Oz./T	Copper Percent	Lead Percent	Description and Location
8/24/55	Phelps-Dodge	Collett	0.10			Hand Sample, Red Rock 3.
12/30/55	Hawley	Ellsworth	0.30	2.07		Near monument, on Saddle, Panther 8
11/ 2/56	Hawley	"	9.40	0.44	26.3	Panther 9; near Jeep park.
"	Hawley	"	2.50	0.26	9.7	Border King 5; on hill above prospect.
"	"	"		3.4		Border King 6; near old silver mine.
1/17/57	"	"	6.70		23.9	Panther 9.
2/15/57	"	"	Tr.		0.4	Unidentified.
2/21/57	"	"	9.10			Border Queen 2; in arroyo.
6/24/57	"	"	1.50		20.9	Border King 5.
6/24/57	"	"	1.40		9.4	Panther 4.
6/26/57	"	Minerals Reserve	3.70		10.7	Panther 1.
"	"	"	0.90	0.28	7.3	Panther 7.
7/ 3/57	"	"	3.20		10.9	Panther 7.
						Float sample collected over large area by McFaren.
9/20/57	Nevada Mineral Lab.	Ellsworth	1.00		12.3	Panther 4.
10/10/57	Hawley	"	4.60		21.1	Border Queen 1.
11/ 5/57	"	"	1.60		7.0	Border King 5.
11/15/57	"	"	11.00		39.9	Border Queen 2.
1/10/58	"	"	4.90		27.3	Panther 8.
3/ 5/58	"	"	9.00		31.9	Panther 9.
3/24/58	"	"	5.50		29.8	Panther 8. Small old prospect below big cut. In "blue vein."
8/19/58	"	"	2.70		26.3	Panther 1. In barite. E. side Ferri Kat hill, halfway down slope.
11/26/58	"	"	39.60		55.6	Panther 8. On NW side of hill.
11/12/59	"	"	31.80			Panther 8.
			Silver			

Assay Date	Assay Office	Collected by	Silver Oz./T.	Copper Percent	Lead Percent	Description and Location
1/ 5/61	Hawley	Ellsworth	6.16		12.5	Border Queen 1. Out of arroyo.
7/ 4/61	Rochin	Ellsworth	8.40		17.5	Border King 1-3. On saddle.
8/19/61	"	"	10.30		26.9	Border Queen 1.
8/ 3/62	"	"	2.90			Panther 1.
6/11/64	"	"	0.60		1.5	Red Rock 4A.
6/11/64	"	"	3.00		3.8	Border Queen 2.
"	"	"	3.20		7.6	Red Rock 5.
"	"	"	12.80		3.0	Panther 31.
"	"	"	2.20		12.3	Border King 21.
"	"	"	5.30		5.6	Border King 23.
"	"	"	4.00		6.9	Border Queen 3.
"	"	"	12.20		18.6	Panther 8.
2/ 9/65	"	"	0.40		3.0	Border Queen 5.
"	"	"	1.00		6.3	Panther 40.
"	"	"	0.80	0.08	5.6	Border King 6.
"	"	"	9.80	0.71	7.5	Red Fox 1.
7/28/65	"	"	1.60		17.7	Border King 21.
5/17/65	"	"	3.60		9.1	Border Queen 3.
8/12/65	"	"	1.04			Border Queen 3.
"	"	"	4.12		23.5	Border King 5.
"	"	"	0.52		6.3	Border Queen 2.
9/26/65	"	"	9.76		6.2	Panther 7.

Average of 42 assays 5.30 oz. Ag.

Average of 38 assays 15.0% Pb.

This apparent zoning, as shown on figure 4, may have considerable economic significance in the future but at present it is of uncertain validity because it is based on insufficient data.

POSSIBLE METHODS OF TREATING ORE

Mineralogy of the ore is very simple and it seems probable that the metals could be recovered from the ore by simple methods. Probably a heavy media process could be used for preliminary treatment to recover a concentrate to be up-graded by flotation to yield a high-grade lead-silver concentrate for direct shipment to the El Paso smelter. This would be a relatively low-cost method of treatment because most of the waste rock would be eliminated by heavy media and only a relatively small volume of material would be subjected to higher-cost processes of fine grinding and flotation.

ORE RESERVES AND FUTURE DISCOVERIES

The mineralized zone on the Ellsworth property is relatively large and the small bodies of lead-silver ore with minor amounts of copper are widely distributed over section 16, the east one-half of section 17 and the west one-half of section 15 in T. 24 S., R. 29 E. At least three of these small bodies may contain enough lead and silver to be minable during periods of high metal prices. However, the greatest future for the property lies in the possibility of finding relatively large zones that are sufficiently well mineralized to be mined by medium size open-pit mining operations. There appears to be three zones that are especially favorable and warrant further investigation to determine if they are sufficiently well mineralized to form large, low-grade, disseminated-type ore bodies. These zones are on or near the Border King 5, Panther 1 and 4, and Panther 8 and 9 claims shown on figure 2.

SUGGESTED EXPLORATION

The Ellsworth property has been extensively prospected by shallow pits and cuts which proved the area to be extensively mineralized; however, little of the work was systematically done and the property was never drilled. It now remains for carefully engineered, intensive exploration methods to prove if any of the mineralized zones are large enough and rich enough in lead and silver to make a commercial mine.

Exploration work that should be done in the near future consists of the following:

(1) Verification and/or validation of all property rights in the area of interest and possible acquisition of adjoining property.

(2) Geological mapping to determine the distribution of the stratified rocks and the intrusive igneous rocks, and the faults and folds that may have been important factors in localizing the lead-silver ore.

CLAIMS

- BQ Border Queen
- BK Border King
- RF Red Fox
- BH Black Hawk
- RR Red Rock
- P Panther

Scale 1" = 1000'

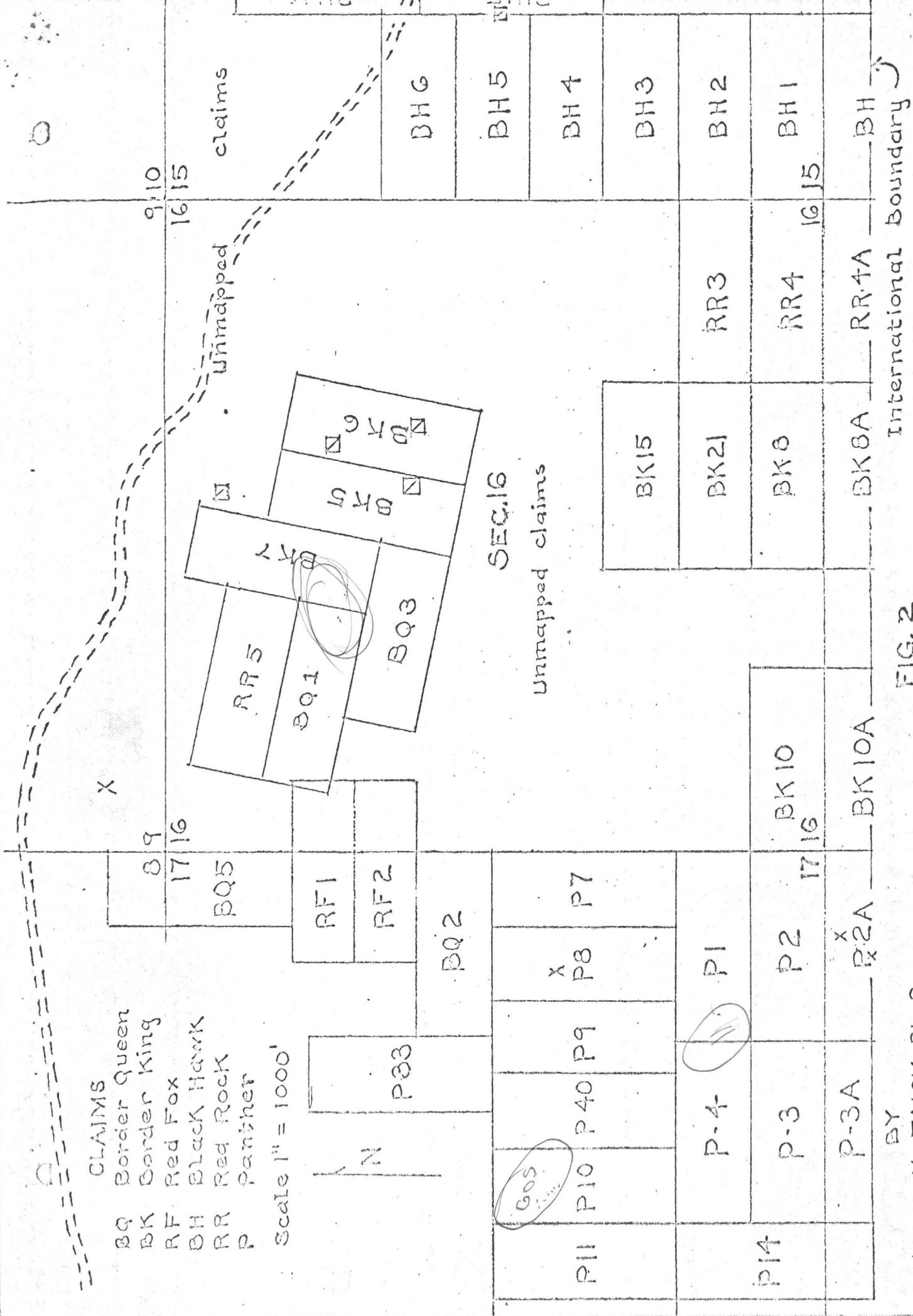


FIG. 2

BY JOHN N. FAICK, PH.D.
 MINING GEOLOGIST
 NOV. 5, 1968

CLAIM MAP OF SOME OF ELLSWORTH CLAIMS
 Subject to revision

(3) Geochemical surveys should be made to show the zones of most intense mineralization.

(4) Steps 1, 2 and 3 should be followed by test pitting, trenching and drilling of wagon or hammer drill holes and by extensive sampling to determine the tonnage and grade of the most favorable zones. The hammer drill holes should be supplemented by diamond drill holes but none of the holes need be very deep because the immediate objective is to prove the existence of shallow ore suitable for open pit mining.

RECOMMENDATION

Because of the widespread occurrence of good quality lead-silver ore on the Ellsworth property it is highly recommended that this property be thoroughly investigated in an effort to find large ore bodies suitable for large scale mining by open pit methods.

Respectfully submitted,

John N. Faick
John N. Faick Ph.D.
Mining Geologist

Tucson, Arizona
November 5, 1968



FIG. 3
 GEOLOGIC SKETCH MAP
 Drawn from map by J.R. Cooper
 Scale 1"=1000'
 PREPARED FOR
 MINE EXPLORATION Co., INC.
 BY
 JOHN N. FAICK, Ph.D.
 MINING GEOLOGIST
 NOV. 5, 1968
 Subject to revision

Tkp = Monzonite - andesite
 porphyry intrusives
 kbp = Bisbee group

Grand Arizona
 Mining Co.

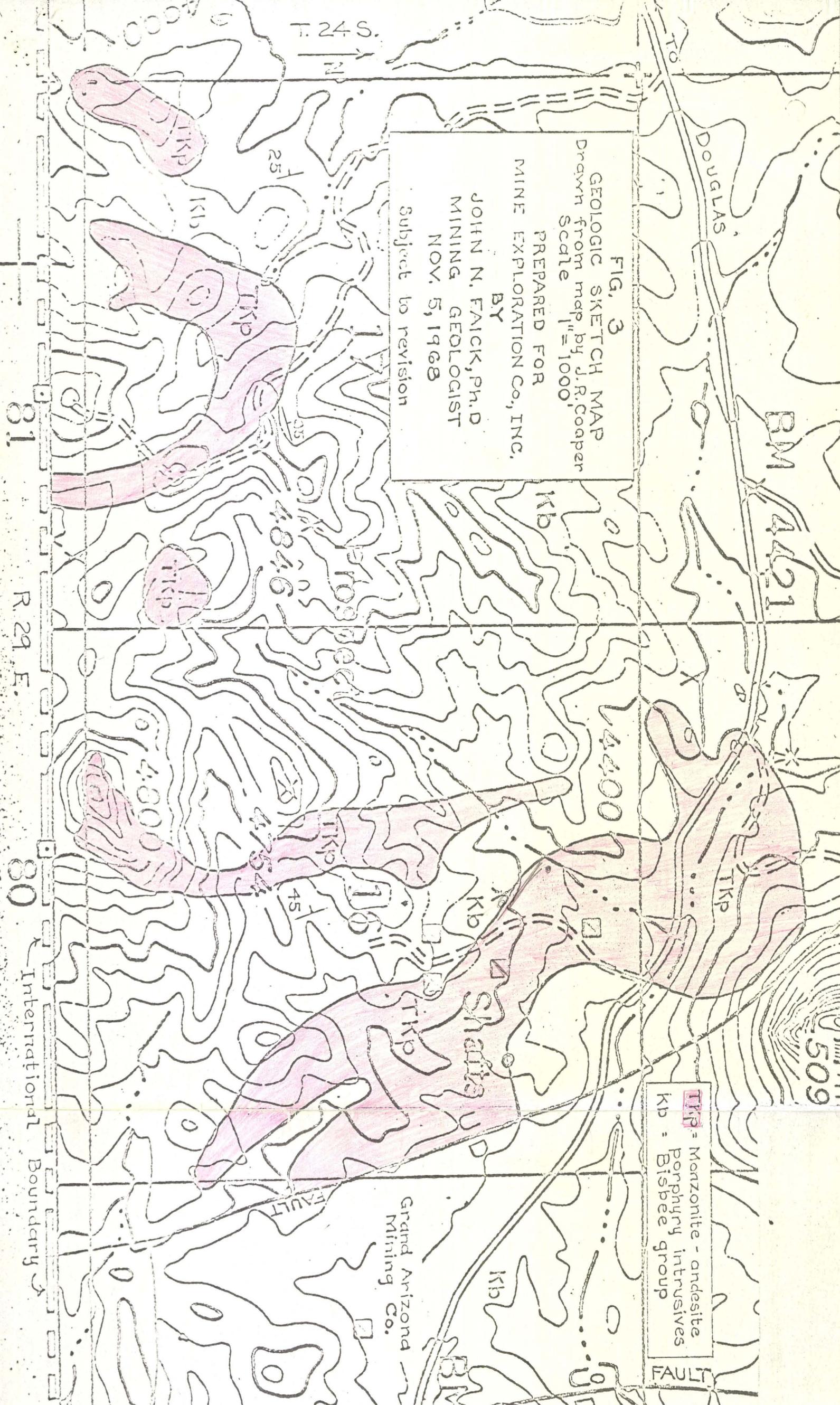


FIGURE 1
TOPOGRAPHIC MAP
PART OF
ASH SPRING
DISTRICT
Scale 1" = 1000'
J.N.F.
11-5-68

81

R. 29 E.

80

International Boundary

DOUGLAS

BM 4421

4400

4846

4754

4000

Shafits

509

T. 24 S.

Grand Arizona
Mining Co.

TURNEY, IRVIN & ASSOCIATES

P. O. BOX 595
SAHUARITA, ARIZONA

July 28, 1960

Mr. L. E. Broadhurst
2057 E. Rancho Drive
Phoenix, Arizona

Appendix "A"

Re: Ellsworth Mining Property,
Cochise County, Arizona

Dear Mr. Broadhurst

At Mr. Earl Ellsworth's request of July 26 and your verification of this date, this letter will outline the results of and opinions gained during my visit to Mr. Ellsworth's Ash Creek property. This visit, made on June 25, 1960, was of one day's duration and was a reconnaissance of the ground. No samples for assay were taken nor was any verification of property status made.

Mr. Ellsworth's claims cover over two square miles of federal and state land adjoining the International Boundary in Cochise County, lying principally in but not restricted to, sections 16 and 17 of T.24S., R.29E. They are some 10 miles due east of Douglas. The topography is hilly with relief of around 500 feet. Climate and vegetation are typical of the Sonoran Desert. Jeep roads, in fair condition at the time of the examination, provide access to the claims. The road from Douglas is two lane and graded.

Two principal rock groups are present. Oldest of these are the limestones and clastic sediments of the Bisbee Group (Cretaceous). These older rocks have been intruded by fine-grained, thick porphyry dikes or sills ranging in composition from monzonite to andesite. Contacts between the two rock groups are sharp and stand out upon inspection by their color contrast. The exposures of these igneous rocks are irregular in plan and indicate highly variable strikes. Megascopic alteration of the igneous rocks is not intense but one has weathered to a seal-brown color, suggestive of oxidized pyrite. No pyrite was observed. Only slight and localized alteration of the sediments at the igneous contact has taken place. This appears to be mostly baking with some sparse development of epidote.

Principal mineralization in the area is galena and its oxidized products and there are minor, although locally impressive, amounts of primary and secondary copper minerals. It is my understanding that some silver has been mined from the district, and if such is the case, there is the added possibility of presence of this metal in the Ellsworth claims.

It is difficult to assess the amount of lead mineralization present since the various lead minerals are widely spread in the area. There does not seem to be a single definitive mineralized zone but rather a mineralized area consisting of a number of prospected and developed shows. In general the lead mineralization occurs in faulted and fractured limestone and appears to increase in abundance in the rocks closer to igneous contacts. The small amount of copper mineralization is fracture associated and erratically distributed.

TURNEY, IRVIN & ASSOCIATES

Mr. L.E. Broadhurst

Phoenix, Arizona

July 28, 1960 ----- 2

Most of the mineral shows have been developed by shallow cuts and pits and several by more extensive work such as deep cuts and a shaft. The one shaft seen at the time of examination was inaccessible. This shaft, near a contact between dike and limestone appeared to be about 100 feet deep and had a moderate sized dump. Material on the dump indicates that some lead and minor copper may have been present in the workings.

None of the work done so far on the claims has blocked out any positive tonnage of ore but, instead, has opened the many shows of mineralization. In its present state, the property is only a semi-developed prospect but in my opinion a very attractive prospect upon which further exploratory and development work is well justified. This opinion is based upon the following factors:

1. The almost ubiquitous presence of lead mineralization in sedimentary rocks of the area. There are, of course, unmineralized zones in the sediments but nevertheless the widespread distribution of even the small shows is encouraging. The large hill near the center of the area appears to be intensely mineralized although, at first glance, the mineralization (cerussite and anglesite) is not apparent.

2. An attractive and encouraging relation of igneous rocks to mineralization. Whether or not this relation will be of importance in the subsurface is difficult to tell but the close relations at the surface between dike and mineralization indicate that a favorable outlook could be taken on testing this relationship at depth.

3. Strong similarity of surface indications (alteration and fracturing) of this property with similar producing lead properties in other parts of southern Arizona.

4. Amenability of the mineralization here to relatively inexpensive concentrating methods.

Presence of primary copper minerals is interesting and deserves further consideration and testing. It is not possible now to evaluate shows of this metal but further development and exploration should give some answer.

In closing, I would like to restate that I believe this property to be an extremely promising prospect for further exploratory and development work and has sufficient potential to make a modest amount of such work well justified.

Respectfully submitted

Spencer R. Titley

Spencer R. Titley

cc: Mr. Earl Ellsworth ✓
File



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Copper Handbook, 1910-1911, vol. X, p. 878; Grand Arizona Copper Co.
Also see vol. IX, 1909, and vol. XIII, 1918.

Titley, S. R., 1960, Ellsworth mining property, Cochise County, Arizona. A private report.

Mr. E. Grover Heinrichs

2.

December 13, 1968

I will advise Dr. Faick regarding the Ellsworth Property, and will be in touch with you as soon as practicable regarding the Dixie Mine.

Regards!

Sincerely,

Q & Shaw

QAS/ms

P.S. Please return the copy of Dr. Faick's report at your convenience for our files.

QAS
QAS

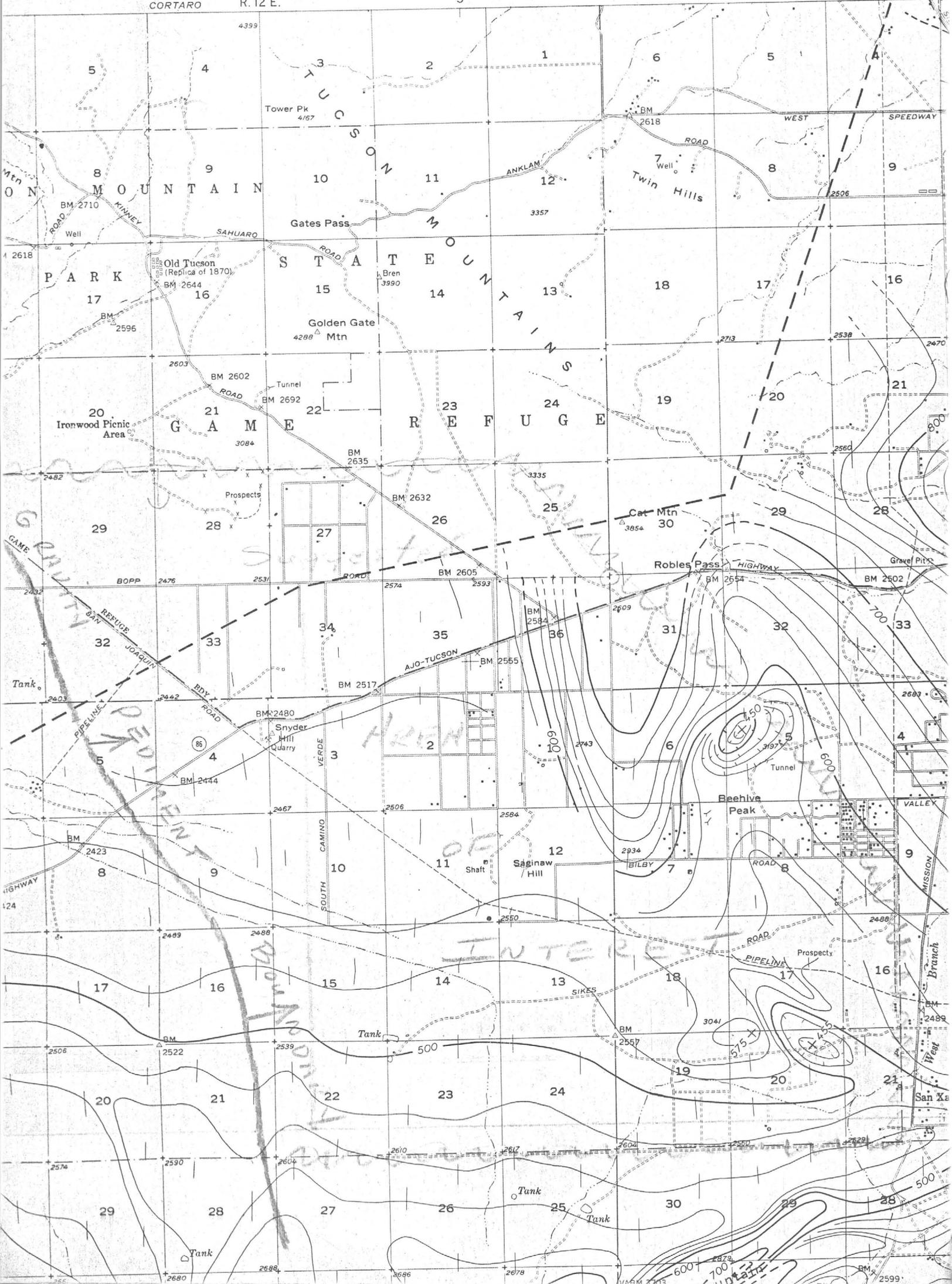
North American Min
HEINF
P. C

GEOPHYSICAL INVESTIG
MAP GP- 426

CORTARO R. 12 E.

5'

R. 13 E.



Handwritten annotations:
- 'SAGINAW HILL' (written vertically)
- 'INTEREST' (written horizontally across the lower middle)
- 'AREA OF INTEREST' (written diagonally across the lower right)

ATTACH TO REPORT BY JOHN FAICK

PRELIMINARY RECONNAISSANCE EXAMINATION

HEINRICH'S GEOEXPLORATION CO.



Phone: (Area 602) 623-0578

(Cable: GEOEX)

BOX 5671 • TUCSON, ARIZONA 85703

Date: 28 February 1969

By: Cooley, Donald B.

Name of Property: Ellsworth

State: Arizona

County: Cochise

Location: 7.1 miles E. Douglas- out on
15th St.-Sec. 16&17, T245, R29E

District: Ash Spring

Date of this Report: 29 February 1969

By: Cooley, Donald B.

Map & Aerial Photo Ref.: College Peaks 15' Quad.- 1956 photo's available- U.S.G.S.

Extent of Property: 2 Sections ± - part Federal part state

Ownership (Name & Address):

Leased or Optioned to (Name & Address):

Earle & Leoma Ellsworth on 15th St. Douglas, Ariz.

Facilities:

(a) Accessibilities (Roads, Trails,
Good - to & on Property etc.):(f) Water: @ mine shaft 1/2 mile East for
drilling

(b) Air Fields: - in Douglas

(g) Labor: Douglas

(c) Power: Douglas

(h) Climate: Typical

(d) Telephone: No

(i) Supply Source: Douglas

(e) Housing: No

(j) Miscellaneous:

Type of Deposit: (Describe briefly under following headings; Structure, Lithology,
Mineralogy, Stratigraphic conditions, Physiographic conditions,
Reserves, Possible Extensions, Geology, Geophysics & Drilling):Galena (usually oxidized @ surface) in limestones of Bisbee Group, Possibly bedding
plane control, some prob. disseminated also. Appears to be related to Andesite
porphyry intrusions. Minor to no pyrite. Very interesting capping & gossan con-
ditions, some areas strongly Fe stained. Ag in GalenaMine Workings: (Brief description of methods used, map to be attached if available).
Mostly very small pits, some deeper cuts & a few shafts - maybe 50' deep - only
surface scratching: Those where Pb found are being flagged by Ellsworths.Production Data: (Past, present and possible future)
See report by FaickSampling and Analysis: (By whom--Results)
See report by Faick

Mining Equipment on Property: None

Mill Equipment on Property: None

Misc. Equipment on Property: None

Camp Facilities: Open

Ore Reserve Estimates: ?
Moderate size

Recommendations and Conclusions: An interesting property that is ripe for exploration, time to move out of prospector stage.

1. Survey claims in for good map
2. Map prospect pits & sample
3. Photo's 1" = 200' or 1" = 500' for plotting base
4. Reconnaissance Geology
5. Reconnaissance Geochemistry
6. Analyze above results & decide if additional Geology, Geochemistry or or Geophysics is advisable to pick drill targets. Probably should plan on I.P. & SP. to test anyway because of the Galena.

Probably the mineralization is going to be very spotty & irregularly spaced within the zone of mineralization. The area is mineralized but how much and how continuous it is, is unknown. How to properly sample this is going to be a problem.

References: (Bibliography, Maps, Former Workers or Engineers)

Cont. below↓

↓

Estimated cost of \$7500.00 to carry out recommendations 2 thru 6. It is thought item 1 unnecessary until the project is brought along somewhat.

HEINRICHS GEOEXPLORATION CO.



Phone: (Area 602) 623-0578

(Cable: GEOEX)

BOX 5671 • TUCSON, ARIZONA 85703

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Mill Equipment on Property: None

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ATTACH TO REPORT BY JOHN FAICK

PRELIMINARY RECONNAISSANCE EXAMINATION

HEINRICH'S GEOEXPLORATION CO.



Phone: (Area 602) 623-0578

(Cable: GEOEX)

BOX 5671 • TUCSON, ARIZONA 85703

Date: 28 February 1969

By: Cooley, Donald B.

Name of Property: Ellsworth

State: Arizona

County: Cochise

Location: 7.1 miles E. Douglas- out on
15th St.-Sec. 16&17, T245, R29E

District: Ash Spring

Date of this Report: 29 February 1969

By: Cooley, Donald B.

Map & Aerial Photo Ref.: College Peaks 15' Quad.- 1956 photo's available- U.S.G.S.

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(h) Climate: Typical

(d) Telephone: No

(i) Supply Source: Douglas

(e) Housing: No

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Type of Deposit: (Describe briefly under following headings; Structure, Lithology,
Mineralogy, Stratigraphic conditions, Physiographic conditions,
Reserves, Possible Extensions, Geology, Geophysics & Drilling):Galena (usually oxidized @ surface) in limestones of Bisbee Group, Possibly bedding
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See report by FaickSampling and Analysis: (By whom--Results)
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Misc. Equipment on Property: None

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Cont. below↓

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HEINRICHS GEOEXPLORATION CO.



Phone: (Area 602) 623-0578

(Cable: GEOEX)

BOX 5671 • TUCSON, ARIZONA 85703

December 10, 1968

Mr. Quincy A. Shaw, President
North American Mines, Inc.
60 State Street
Boston, Mass. 02109

Re: Ellsworth Property, Ash
Spring District, Cochise
County, Arizona

Job #319

Dear Mr. Shaw,

We have studied the report and have the following recommendation for your consideration.

Though the chances of this area being potentially economic are remote because it has been looked at by many through the years, we none the less still feel this may well be a sleeper and worth following up in a preliminary reconnaissance fashion as outlined below and especially if reasonable terms can be arranged with the owners.

Reasons for our recommendations to you are the encouraging report of Dr. Titley and Dr. Faick. An expenditure of one to two thousand to verify their work is warranted. Both men are competent and experienced geologists. If their reports had been discouraging or presented opposing views, then perhaps further work should not be considered.

At this stage, it is uncertain whether or not geophysics, if any, might be worthwhile. Undoubtedly magnetics and possibly eventually I. P. and resistivity would be helpful to effectively plan and execute sampling and/or drilling with maximum discovery assurance. Ideally, geology, geophysics and geochem all should be done, but not unless prior results are sufficiently encouraging.

Mr. Quincy A. Shaw
North American Mines, Inc. -2-

December 10, 1968

However, preliminary geochemical surveying and reconnaissance geologic mapping aided by good aerial photos are primarily essential now. During the course of executing such work, applicability of geophysics should be considered, which may or may not be indicated prior to a preliminary program of systematic sampling. Actually, we would endeavor to gain some representative preliminary systematic sample data from the geochemical reconnaissance.

Absolutely imperative and prior to everything else, is a reasonable title and option. Have these been affected and if not, may we assist in this? This is our quiet season, and everything we can do right away could receive our best attention.

Sincerely,

HEINRICHS GEOEXPLORATION COMPANY

E. Grover Heinrichs
Vice President

EGH/rc

P. S. Incidentally, we have been unable to contact Dr. Faick by phone but we will keep trying so as to have benefit of his personal ideas.

December 17, 1968

Mr. Quincy A. Shaw, President
North American Mines, Inc.
60 State Street
Boston, Mass. 02109

Dear Mr. Shaw,

In response to your letter December 13, 1968, I have the following comments:

1. Ellsworth Property, Ash Spring District, Cochise County, Arizona.

A. Phelps Dodge because of the proximity knows the property very well.

B. We have no direct and indirect information on any geophysical, or geochemical work having been done.

C. We think because of the enthusiastic interest of Faick and Titley that some work should be done, perhaps geochemical work in the amount of one to two thousand dollars is justified. The geochemical work would in effect integrate the whole mineralized area from one small deposit to the next.

D. The title is likely no more complex than the usual title problem involved in unpatented mining claims of today. Though this would require some investigation of the owners and court house records as well as a ground check.

Enclosed is the report on the Ellsworth Property by J.W.N. Faick which you asked be returned.

2. Dixie Mine, Maricopa County, Arizona.

We will await your okay before proceeding on the field feasibility study of I. P. to indicate ore. To be determined by our geologist.

3. General Considerations in reply to your letter of November 18, 1968.

A. We suggest that our geologist investigate any worthwhile prospect that may come to your attention and submit a written report to you upon receiving your prior authorization to proceed. For this we would charge our standard daily rate of \$150.00 plus expenses. If the prospect were our own idea we would retain a 3% carried interest and would proceed on a budgetary basis with your prior approval. If the prospect came to us through you we would have no financial involvement and would operate on a strictly fee basis.

B. I suggest we negotiate terms of options, supervise drilling etc., conduct mapping etc. subject to your constant approval and on a fee basis. We can conduct the leg work for legal negotiations, court house investigations, etc., and then submit it to Vic Verity for his final approval.

We can perhaps operate on a reduced fee rate basis on a long term contract and increase our carried interest. Any comments you may have will be appreciated.

In the meantime as we have no agreement we are submitting our statement for the time involved in the Ellsworth report.

Very truly yours,

HEINRICHS GEOEXPLORATION COMPANY

E. Grover Heinrichs
Vice President

EGH/rc