CONTACT INFORMATION
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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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Arizona Department of Mines and Mineral Resources Mining Collection

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PRINTED: 12/17/2002

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: CALVILLO

ALTERNATE NAMES:
SRK
BONANZA
CONSOLIDATED RED POPLAR
COYOTE COPPER CLAIMS

PIMA COUNTY MILS NUMBER: 406

LOCATION: TOWNSHIP 16 S RANGE 8 E SECTION 26 QUARTER SE
LATITUDE: N 32DEG 00MIN 15SEC LONGITUDE: W 113DEG 04MIN 24SEC
TOPO MAP NAME: KITT PEAK - 7.5 MIN

CURRENT STATUS: UNKNOWN

COMMODITY:
COPPER SULFIDE

BIBLIOGRAPHY:
ADMMR CALVILLO FILE
ADMMR "U" FILE CU 40

08/14/86

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

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COMMODITY:
COPPER

BIBLIOGRAPHY:
ADMMR CALVILLO FILE
AZBM FILE DATA

CALVILLO MINE

PIMA COUNTY
Coyote District
T16S R8E Secs. 22, 23, 26, 27

AKA: Bonanza Mine, SRK mine, Coyote Copper Claims, Guaranty

MILS Pima Index # 406 (Unknown)
114 (Bonanza) No printout

Mining Congress Journal Nov. 1967, p.7

Production Possibilities of the Marginal Copper Mines in Arizona, 1941, p. 56

Pan Tak: 7.5 quadrangle map (included in file)

04/17/86

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

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CURRENT STATUS: UNKNOWN

COMMODITY:
COPPER-RECOVERABLE
BIBLIOGRAPHY:
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AZBM FILE DATA

04/17/86

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

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ALTERNATE NAMES:
SRK
BONANZA
CONSOLIDATED RED POPLAR
COYOTE COPPER CLAIMS

PIMA COUNTY MILS NUMBER: 406

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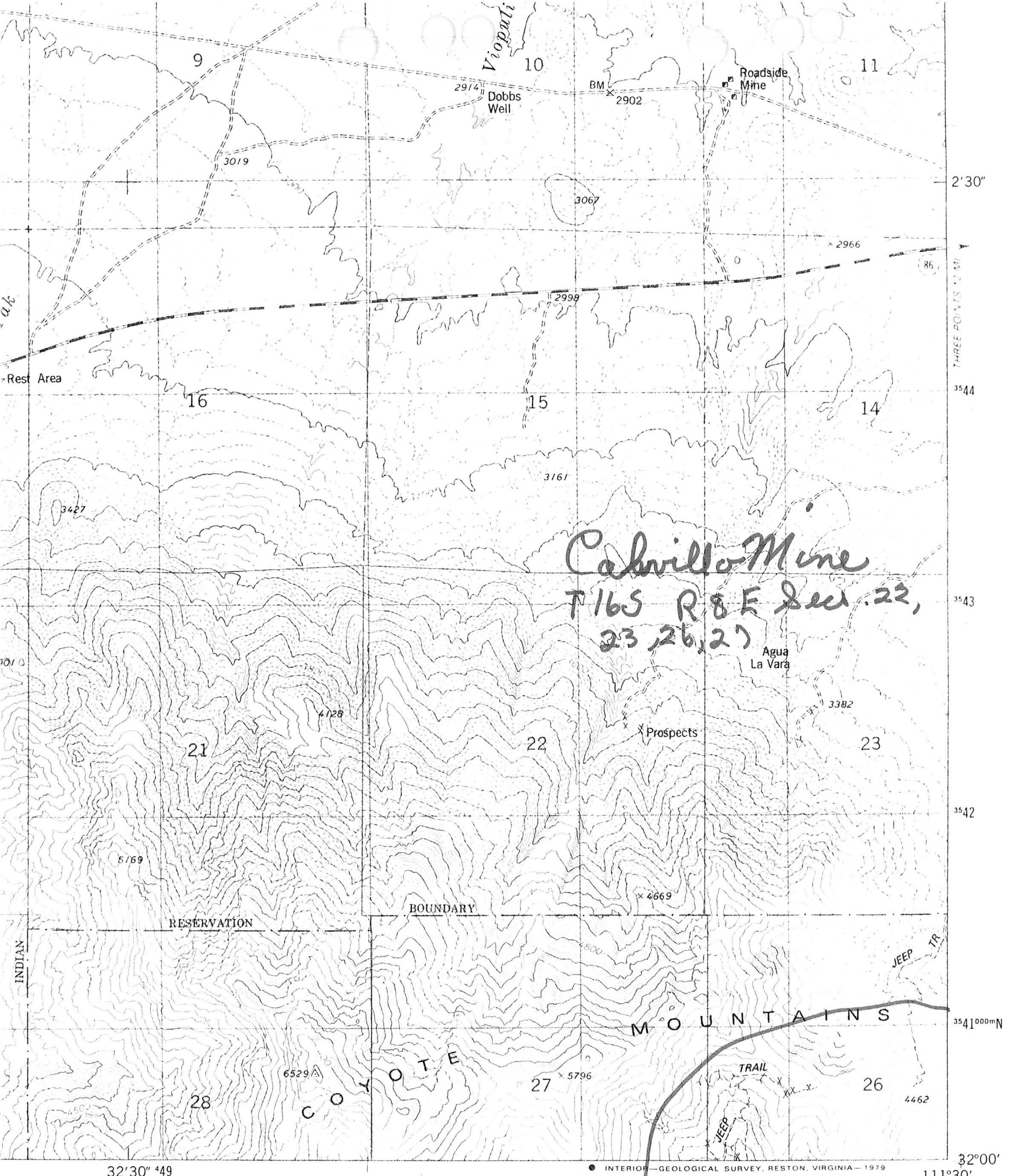
BIBLIOGRAPHY:
ADMMR CALVILLO FILE
AZBM FILE DATA

TABLE OF CONTENTS - Calvillo Mine



ROAD CLASSIFICATION

Primary highway, hard surface	Light-duty road, hard or improved surface
Secondary highway, hard surface	Unimproved road

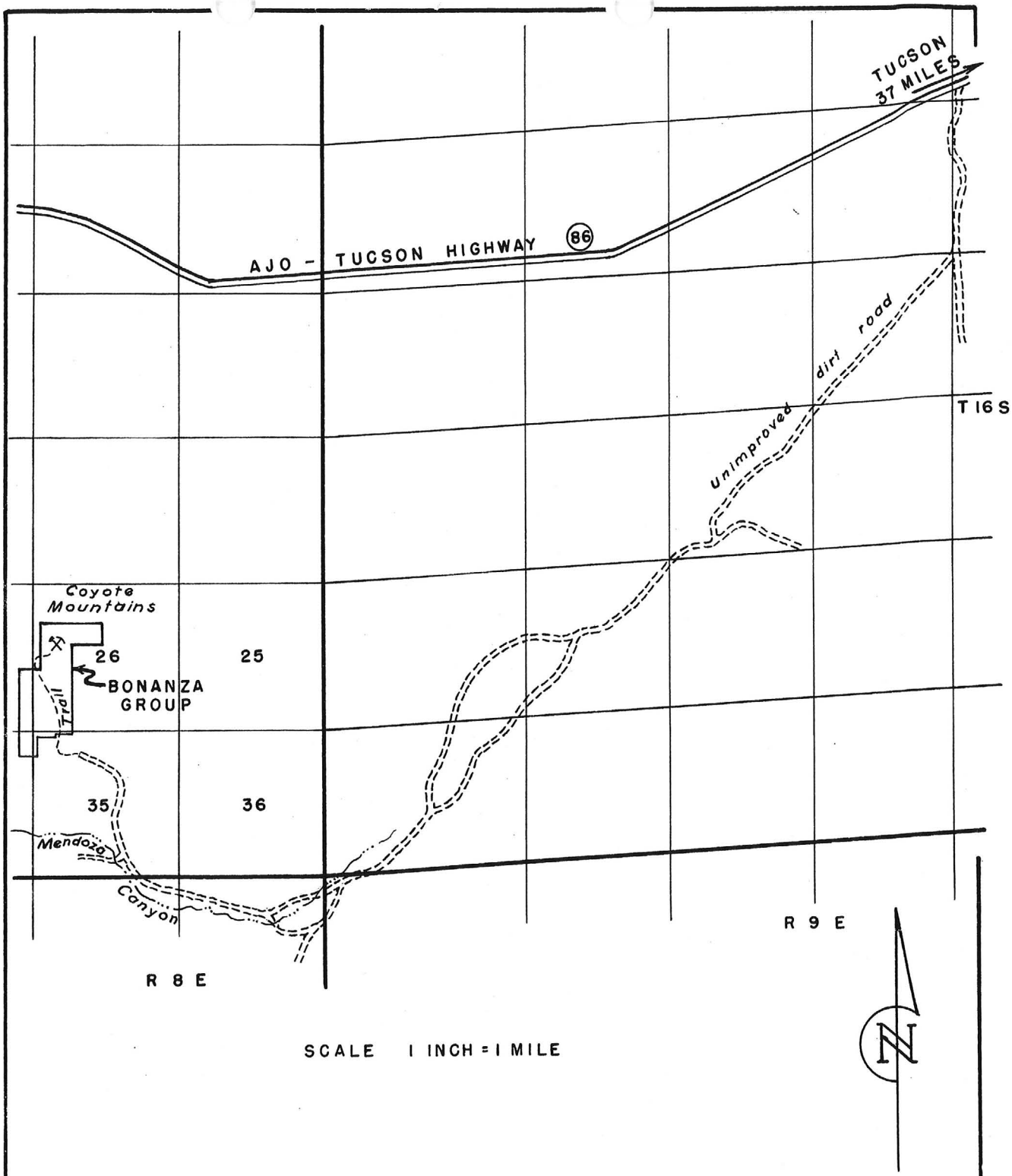
Interstate Route U. S. Route State Route

QUADRANGLE LOCATION

6

PAN TAK, ARIZ.

SE/4 SAN VICENTE 15' QUADRANGLE



SCALE 1 INCH = 1 MILE

FIGURE 1, - LOCATION MAP, BONANZA COPPER CLAIMS

PIMA COUNTY, ARIZONA

CALVILLO MINE PIMA COUNTY

9/8/60: Mr. Frank Rubens called office inquiring about Bonanza Mine (Calvillo Mine-file) and visited office. Ph: AL8-2693. Mr. Lane talked to Mr. Rubens.

GWI WR 2/18/67: Mr. G. Burkhardt called to report that Consolidated Red Poplar Minerals of Canada had jumped his claims. (Old Calvillo Mine in Coyote Mts.)

GWI WR 11/2/67: Consolidated Red Poplar Minerals Lts., Sam Taylor, Sec'y-Treas. Statuatory Agent: Frank Co. Brophy, Jr., 500 Title & Trust Building, Phoenix,

---

GWI note 12/18/67: Heard that Homestake pulled out of the Consolidated Red Poplar deal because of doubtful land situation.

ARIZONA DEPARTMENT OF MINE RESOURCES
Mineral Building, Fairgrounds
Phoenix, Arizona

1. Information from: Randolph Jenks
   Address: 2146 - E 4th Tucson
2. Mine: Calvillo's
3. No. of Claims - Patented none.
   Unpatented ~~36~~ - Probably do 50
4. Location: Coyote
   22-23-26-27
5. Sec ____ Tp 16S Range 8E
6. Mining District ____
7. Owner: Red Poplar Minerals.
8. Address: ____
9. Operating Co.: ____
10. Address: ____
11. President: ____
12. Gen. Mgr.: ____
13. Principal Metals: ____
14. No. Employed: ____
15. Mill, Type & Capacity: ____
16. Present Operations: (a) Down ☒ (b) Assessment work ☐ (c) Exploration ☐
    (d) Production ☐ (e) Rate ____ tpd.
17. New Work Planned: ____
18. Miscl. Notes: According to Mr. Jenks who owns ranch over the mine - there is no activity & has been none since Homestake pulled out.

Date: 1-26-68

Lew Irwin
(Signature) (Field Engineer)

27

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES
Mineral Building, Fairgrounds
Phoenix, Arizona

1. Information from: G. A. Russell of G. A. Russell & Associates, Consultants.
   Address: Suite 204, Pioneer Bank Building, Scottsdale Road, Acottsdale 85251
   Telephone- 947-9643
2. Mine: Calvillo's
3. No. of Claims - Patented non
   Unpatented 36
4. Location: Coyote Mts. Pima County- Just East of Kitt Peak.
5. Sec 22-23-26-27 Tp 16S Range 8E
6. Mining District Coyote
7. Owner: (North American Metals, Phoenix)
8. Address:
9. Operating Co.: Consolidated Red Popular Minerals Ltd.
10. Address: Room 1303 King Street West Toronto Canada
11. President: F. V. Regan
12. Gen. Mgr.:
13. Principal Metals: Copper
14. No. Employed: 2
15. Mill, Type & Capacity: none
16. Present Operations: (a) Down ☐ (b) Assessment work ☐ (c) Exploration ☒
    (d) Production ☐ (e) Rate _____ tpd.
17. New Work Planned: More drilling
18. Miscl. Notes:

Date: 1-13-69

G W Dunn
(Signature)

(Field Engineer)

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES
Mineral Building, Fairgrounds
Phoenix, Arizona

1. Information from: Visit to property

   Address:

2. Mine: Calvillo's 3. No. of Claims - Patented

   Unpatented

4. Location: Mendoza Canyon in the Coyote Mts. Pima County.

5. Sec 26-27 Tp 16S Range 8E 6. Mining District Coyote

7. Owner: Consolidated Minerals of Arizona (Consolidated Red Popular Minerals of Toronto Canada.

8. Address:

9. Operating Co.: Homestake Mining Co.

10. Address: Spanish Trail Motel, 305 Benson Hi-way

11. President: 12. Gen. Mgr.:

13. Principal Metals: 14. No. Employed:

15. Mill, Type & Capacity:

16. Present Operations: (a) Down ☐ (b) Assessment work ☐ (c) Exploration ☐
    (d) Production ☐ (e) Rate tpd.

17. New Work Planned: See report in the file from "The Financial Record" 9-9-67

18. Miscl. Notes:
    See previous reports: No one around not activity. Since CMA bulldozed drill sites and drilled some drill holes. Engineer accompanied on this trip of 10-25-67 by Stanton Keith of the ABM

Date: 10-26-67

(Signature) (Field Engineer)

25

STATE OF ARIZONA
DEPARTMENT OF MINERAL RESOURCES
MINERAL BUILDING, FAIRGROUNDS
PHOENIX, ARIZONA 85007

December 9, 1966

COPY

Mr. Andrew Beusch
4806 W. Ridge Road
Erie, Pennsylvania 16506

Dear Mr. Beusch:

We are strongly of the opinion that the mining property mentioned in your letter of November 29th as located in the Coyote Mountain Area, is the Calvillo mine, formerly called the Bonanza. Anyway, we can find no other likely possibility for the area, which is more nearly west than south of Tucson.

Herewith are copies of our field engineer's report of November 23, 1953, and of two sides of a file card of the U. S. Bureau of Mines which we were allowed to copy.

We have other file material, including copies of two engineers' reports on the property, one of which lists 28 shipments from May 11, 1915 to December 4, 1916, totalling 888 tons with arithmetical averages of 9.6 percent copper and 1.4 ounces silver. In order to get photocopies of these reports, it would be necessary for you to arrange with Ace Photo Service, 124 W. McDowell Road, Phoenix or Arizona Blue Print Co., 333 N. 3rd Avenue, Phoenix to pick up, photocopy, and return the pages to us.

Copy of this letter is going to our field engineer at Tucson, who may have some more up-to-date information on the property in which Consolidated Red Poplar Minerals Ltd. is interested.

Very truly yours,

FRANK P. KNIGHT,
Director.

FK:p
Encs.
cc: GWI

24

spec

Erie Pa Nov.) 1966

Chamber of Commerce
Tucson Aris.

Gentlemen ;

I am interested in finding out if the " Consolidated Red Poplar Minerals" , a canadian mining company has acquired a mining property in the " Coyote Montain area. This area is located about 40 Miles southwest of Tucson. I have been informed that this is quite a large copper mining area.

I would very much appreciate it if you could tell me what you know this matter.
about

Thank you very much for a promt reply

Andrew Beusch

Andrew Beusch

4806 W. Ridge Road

Erie Pa 16506

23

Intra-Company Correspondence

SHATTUCK DENN MINING CORPORATION

and

SUBSIDIARIES

Cabrillo Mine.

Humboldt Office

Date August 15, 1966

TO: C. R. Sundeen

FROM: J. Olaf Sund

SUBJECT: COYOTE COPPER PROPERTY
% Emanuel Lester of
EMANUEL LESTER OIL & GAS CO.
ENID, OKLAHOMA

TYPE: Copper

TERMS REQUESTED: Discussed between Lester and New York Office.

LOCATION:

This property is located some 38 miles west of Tucson on the Ajo road and thence some 3 miles south by gravel road. Specifically the location is in Sections 27, 26, 35 and 34, Township 16 South and Range 8 West.

REFERENCES:

"Geologic and Tectonic Features of the Coyote Mountains, Arizona." Ohio Journal of Science, January 1956, by J. G. Wargo & W. L. Kurtz, pp: 10-17.

Numerous promotional type reports by:

1.	Martin Fishback	1923
2.	Carpenter & Botsford	1926
3.	W. M. Snow	1928
4.	G. A. Russell	1966
5.	Donald E. Cole	1966

The writer was accompanied around the property by Messrs G. A. Russell and O.H. "Red" Smith.

GEOLOGY:

The claims are distinguished by a rugged terrain that is part of the Coyote Mountain Range. Relative relief is some 2000 feet.

The above mountains are formed from part of a batholithic granite intrusive that is classed as a Laramide type. This granite is a massive, coarse-grained whitish type with numerous randomly oriented pegmatitic dikes.

An elongated roof pendant, some 2000 feet by 300 feet is enclosed in the above granite. This unit is entirely a precambrian meta-sedimentary type that is comprised of quartzite and marble (limestone) with interbeds of iron formation. The quartzite and limestone units are typical medium-grained white and buff colored sedimentary rocks. The iron formation is a biotite-magnetite-quartz unit that is generally fine to medium-grained and perfectly interbedded as thin layers up to 2 feet. Fragments of chert and jasper are common near to outcrops of the iron formation. The iron formations

are unquestionably of sedimentary origin.

The general contact between the granite and sedimentary rocks is approximately north and south. The bedding in the sedimentary rocks is north and south with a variable west dip of 40 to 50 degrees. Prominent joint sets cross all rock types that are nearly north and south and dip steeply east as well as nearly vertical.

MINERALIZATION:

Minor amounts of copper are associated with the sedimentary iron formation from which secondary deposition or enrichment has occured where structurally feasible. Such structures are local breccia zones formed at the intersection of joints with the iron formation itself.

Very early mining was concentrated on these brecciated parts in the iron formations. This work consisted of at least a dozen short tunnels and pits, some with internal winzes etc.

Very limited stoping and actual mining was completed. Check samples from these dumps and workings assayed as follows:

Sample No.	Description	Au	Ag	Cu
12731	Quartzite with Cu--1st tunnel	.02	0.5	1.88
12732	I.F. with Cu--dump #1	Tr	Tr	0.64
12733	Quartzite with Cu--dump #1	.01	Tr	0.90
12734	Quartzite with Cu--dump #4	Tr	Tr	0.76
12735	Quartzite with Cu--portal #4	Tr	Tr	2.18
12736	Limestone with Cu--dump #3	.01	Tr	0.86
12737	I.F. with Cu--dump #3	.03	Tr	6.52

The samples collected represent selected specimens from very localized mineralized parts.

SUMMARY:

Very limited copper minerals were probably of a sedimentary origin and were laid down with the iron formation. These precambrian sedimentary rocks were engulfed in a Laramide granitic intrusion. Subsequent erosion concentrated whatever copper was available in localized parts.

PROPOSAL TO COMPANY:

The present owners suggested that erosion of these mountains carried considerable copper away and deposited it in the adjacent valley. The sediments being softer are naturally stripped out thus forming a natural gorge. The alluvial fan at the foot of this gorge is supposedly copper rich.

CONCLUSIONS:

There is no copper in underground diggings to warrant an exploration expenditure.

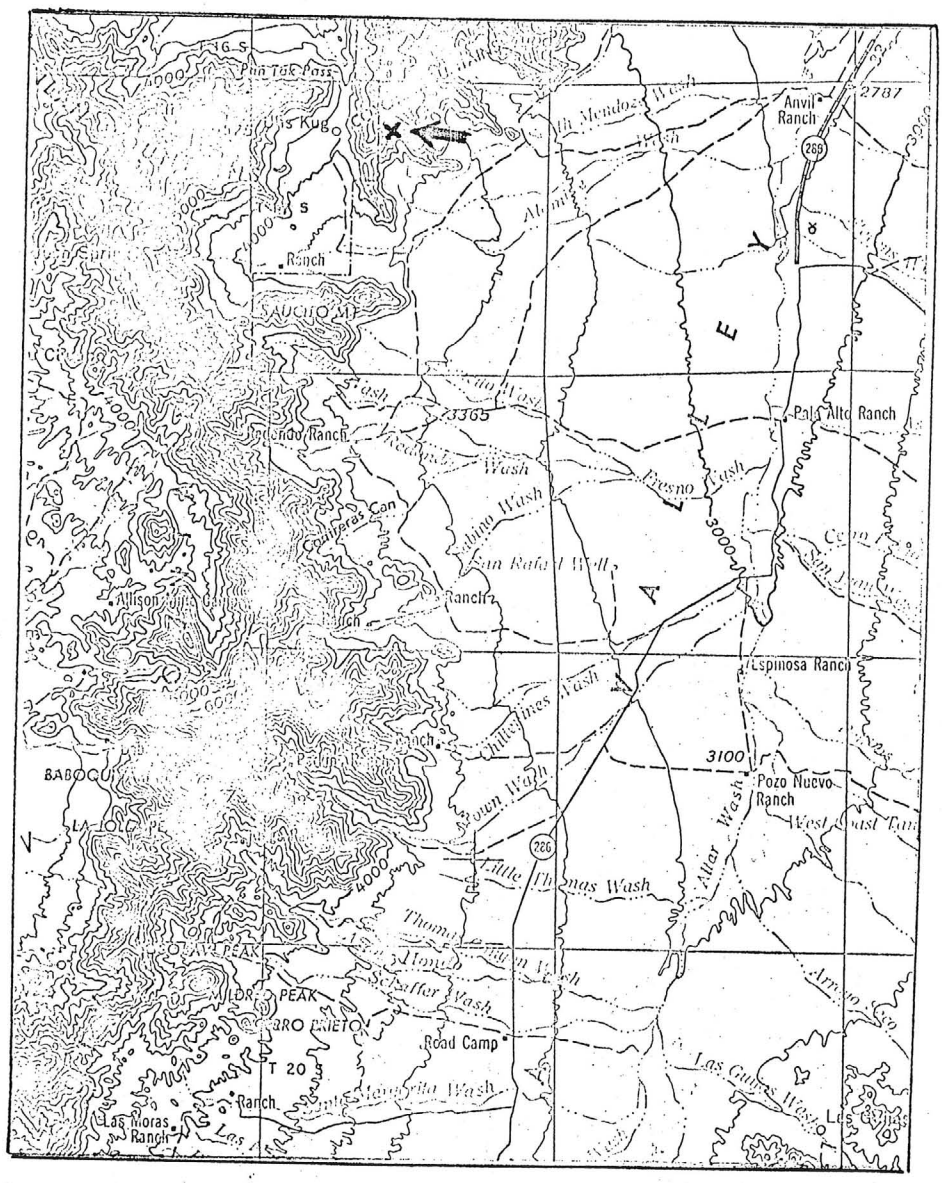
The old dumps are too small to consider as possible sources of shipping ore.

The alluvial copper proposal is absurd.

Nothing should be done with this property.

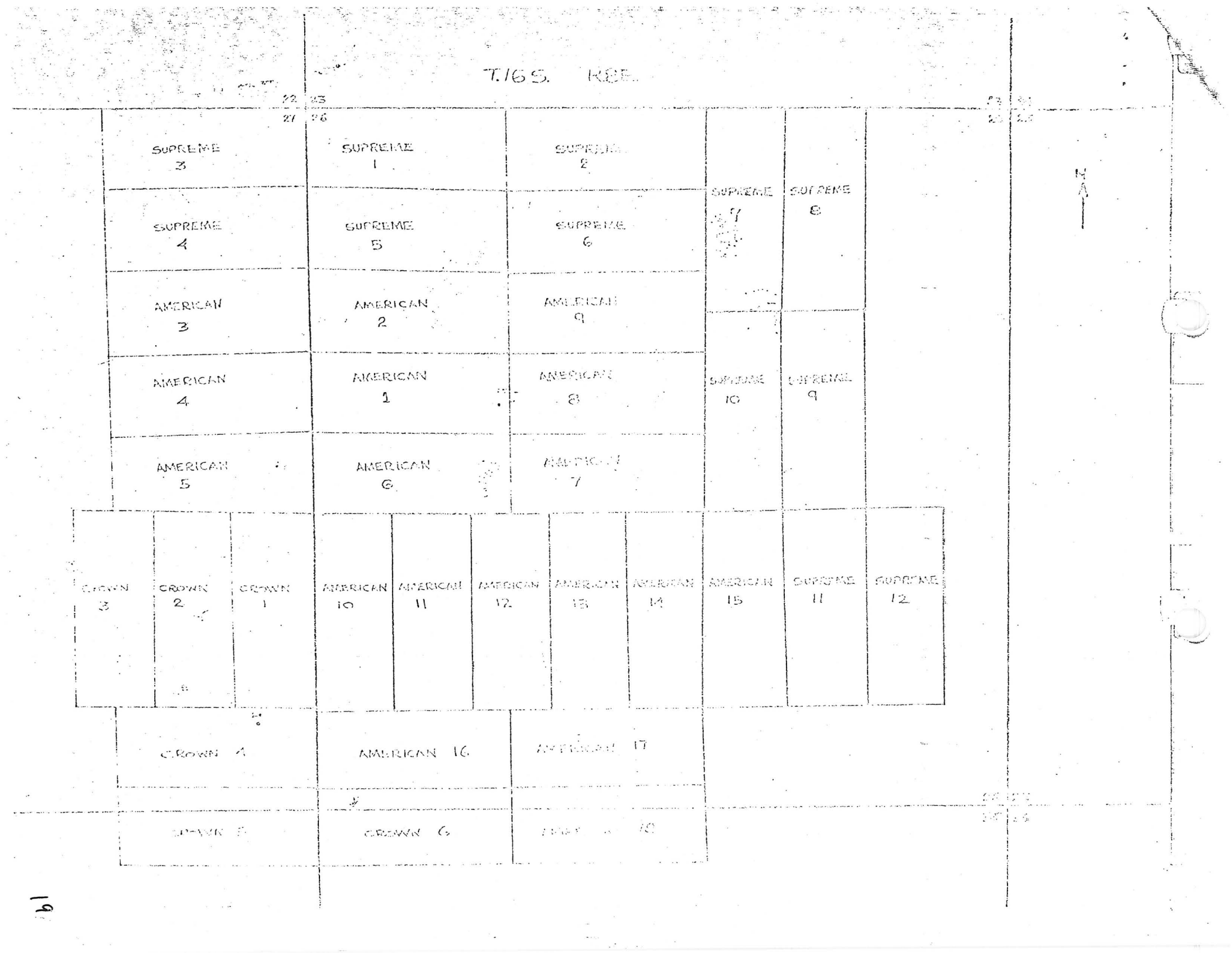
JOS/db

R 8 E R 9 E



LOCATION OF COYOTTE COPPER CLAIMS

Scale 1 : 250,000


T. 16 S. R. 8 E.
SUPREME 3
SUPREME 1
SUPREME 2
SUPREME 4
SUPREME 5
SUPREME 6
SUPREME 7
SUPREME 8
AMERICAN 3
AMERICAN 2
AMERICAN 9
AMERICAN 4
AMERICAN 1
AMERICAN 8
SUPREME 10
SUPREME 9
AMERICAN 5
AMERICAN 6
AMERICAN 7
CROWN 3
CROWN 2
CROWN 1
AMERICAN 10
AMERICAN 11
AMERICAN 12
AMERICAN 13
AMERICAN 14
AMERICAN 15
SUPREME 11
SUPREME 12
CROWN 4
AMERICAN 16
AMERICAN 17
CROWN 5
CROWN 6

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA

FIELD ENGINEERS REPORT

Mine CALVILLO'S Mine

Date December 23, 1966

District Coyote- Pima County
Sections 22,23,26,&27 T16S, R8E.

Engineer G. W. Irvin

Subject: Visit to the property Thursday December 22, by the Field Engineer.

All information from Mr. G. A. Russell Suite 204, Pioneer Bank Building 553 North Scottsdale Road, Scottsdale, Arizona 85251

References See previous report.

Present Owners Not given.(Called North American Metals, Phoenix)

Present Operators Consolidated Red Popular Minerals Ltd. Rm. 1303 King Street West Toronto, Canada. (Pres. F. V. Regan)

Claims 36 unpatented. Large land map shows area as Federal.

Present Operations Have built roads to mine, and to various drill sites. A 50,000' DD program is planned
Two men are employed. Most of the work is on contract.
A Sykes Drilling Co. from Utah is doing the drilling.

Mr. G. A. Russell is in charge of this and other operations as a consultant.

Mr. Raymond Miller is now foreman.

Plans The drilling of a fault zone that parallels the valley. The old Cavillo mine is on the upper zone.

A few thousand tons of Copper Silver ore has been produced from Cavillo's mine.

18

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Calvillo Mine (Bonanza) Date Nov. 23, 1953

District Coyote District---Pima Co. Engineer Axel L. Johnson

Subject: Field Engineers Report

Location 40 miles west of Tucson, in Coyote Mts.---off the Indian Reservation. Go out from Tucson on the Sells Highway for 32 miles. Turn left (south), and go 8 miles on mine road.

Number of Claims 16 claims --- unpatented.

Owners Guarantee Mines Co., a corporation. Stock held by Jacome's Department Store, Y. Calvillo, Ben C. Parker, O. T. Richey (now deceased), and Tom K. Richey (now deceased).
Note:- Arthur Jacobs informs me that there are also two other claimants of the property--- (1) A party that located the property this past year---a young Mr. Calvillo, presumably the son of Y. Calvillo, locating the property in his own name.
-- (2) A party who claims to have located the property 2 or 3 years ago, the name of the party not being recalled.

Officers Alex Jacome, Jacome's Department Store, Tucson, Ariz.

Operators Mine not in operation

Principal Minerals Copper with Gold and Silver.

Geology See previous report, Mine Owners Report, under date of June 3, 1941.

Marketing and Milling Facilites No milling facilities. Past shipments reported to have been made to the A. S. & R. smelter at El Paso, Texas.

Mine Workings See previous report, Mine OwnersReport, under date of June 3, 1941.

Past History

(1) Considerable production reported in First World War, about the years 1914 and 1915 by Julian Johnson, lessee of the property. The statement in the Mine Owner's Report of June 3, 1941 regarding shipments of 5000 tons to smelters averaging 10 % copper, no doubt, is somewhat exaggerated; and also the statement regarding thousands of tons of 7 % copper ore lying on the dumps is extremely questionable. Arthur Jacobs, who has been familiar with the property for a long time, and has visited same quite recently, believes that these old shipments averaged about 7 % copper, and has not seen any appreciable quantity of 7 % copper ore lying around on the dumps of the property.

(2) The property is reported to have been leased or sold to a Dr. G. R. Patton, Rte. #1, Tucson, Ariz. on July 15, 1943, who reportedly applied for access roads on same. No information available regarding any mining operations conducted by Dr. Patton, or any ore shipments made.

(3) A lease with option to buy was made on Sept. 29, 1950 between Guarantee Mines Co., a corporation, vendor and Anderson F. Kerr, Alfonse Schramm, and Santiago Enrique De Rivera, doing business as the S. K. R. Mines, 921 Anita St., Tucson. vendee. The lease was for 3 years, specifying 25 % royalty on net smelter returns, with option to purchase property at $100,000.

Reports regarding some ore shipments during the past 3 years by S. K. R. Mines

17

Mine Calvillo Mine Date Nov. 23, 1953

District Coyote Dist. --- Pima Co. Engineer Axel L. Johnson

Subject: Field Engineers Report (continued)

can not be verified as to the amount, or where shipped. About a year and a half ago, Anderson Kerr, appearing at one of our Tucson ASMOA meetings, made the statement that he had shipped a carload of ore from the Calvillo Mine, and that the smelter returns that he received on same were not at all fair. He particularly stressed the fact that he did not receive any pay for any tungsten, although the ore contained some tungsten values.

We were under the impression that the shipment was made to the A. S. &. R. Co. smelter at El Paso, but the A. S. &. R. office in Tucson can find no records of any ore shipments by the S. R. K. Mines to them. They did, however, have a copy of the S. K. R. lease of the Calvillo Mine, which would indicate that they must have had business dealings with S. K. R. Mines.

Lease of the S. K. R. Mines is reported to have been cancelled about a year and a half ago, and Anderson F. Kerr is reported to have left Tucson.

Remarks

I would suggest that any person or persons, who may be interested in the Calvillo Mine address Alex Jacome, Jacome Department Store, Tucson, Ariz.

According to Arthur Jacobs, Alex Jacome is in possession of information and records in regard to all past ore shipments and smelter returns from the Calvillo Mine.

Axel L Johnson
Engr.

16

CALVILLO MINE

Y. Calvillo
c/o Jacome Dept. Store
Tucson, Arizona

5/23 - 1st
5/28 - 2nd
complete

7/15/43 Sold to Dr. G. R. Patton
Rt. 1 Tucson
Tom Richey, Atty - Agent
Southern Arizona Bank Bldg
Tucson

Applied for access road. Grazing Serv.
Applied for zero quota & allowance on Cu

NAME OF MINE: CALVILLO (BONANZA)

COUNTY: PIMA S
DISTRICT:
METALS: CU

OPERATOR AND ADDRESS: MINE STATUS

DATE:		DATE:	
5/1/44	Dr. G. R. Patton c/o Tom Richey, Southern Arizona Bank Building, Tucson	5/1/44	Developing
		9/44	Idle
10/43	Access road denied		

GUARANTEE MINES.COMPANY, (OWNER) May - 1941

MINE : Calvillo Mine - Coyote District, Pima County.
40 Mi. W of Tucson, in Coyote Mts.
16 unpatented claims

Sold to Dr. G. R. Patton, Rt. 1, Tucson 7-15-43

MG-63

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA

OWNERS MINE REPORT

Date June 28, 1940

1. Mine Guaranty
2. Mining District & County Coyote - Pima County
3. Former name Bonanza
4. Location
5. Owner Guaranty Mines Co.
6. Address (Owner) Room 808 Sonora Bank Bldg Tucson
7. Operator
8. Address (Operator)
9. President
10. Gen. Mgr.
11. Mine Supt.
12. Mill Supt.
13. Principal Metals Copper, silver, gold
14. Men Employed
15. Production Rate
16. Mill: Type & Cap.
17. Power: Amt. & Type
18. Operations: Present More than 200 carloads of ore have been shipped from this property. Up to 5% copper thrown over dumps. Copper ore up to 17% has been shipped. Ore is ideal for smelting. Content on returns being about as follows: Cu. 10%, Iron 25.0, Lime 7 to 11%, Ag 1.57%, Au. 80% &
19. Operations Planned
20. Number Claims, Title, etc. Large tonnage available. Fifteen-locations.
21. Description: Topography & Geography Have Engineers reports etc.
22. Mine Workings: Amt. & Condition Tunnel - 220' Good
Incline-drift-Winze, 100'
Many shafts and workings
Approx. 1200' feet of development work.

(over)

K4

23. Geology & Mineralization engineer's reports

24. Ore: Positive & Probable, Ore Dumps, Tailings

24-A Vein Width, Length, Value, etc.

25. Mine, Mill Equipment & Flow Sheet

26. Road Conditions, Route

27. Water Supply

28. Brief History

29. Special Problems, Reports Filed

30. Remarks

31. If property for sale: Price, terms and address to negotiate. Property open to lease, option or purchase.
Price $75,000.00 - three years to pay.
Payments 1-2-3 years.

32. Signed /sd/ Tom K. Richey
P.O. Box 2630, Tucson, Arizona. (Room 208, Southern

33. Use additional sheets if necessary

CO-4

C04

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA

OWNERS MINE REPORT

Tucson, Arizona
Date June 28, 1940

Mine GUARANTY

District Coyote Pima County — Location

Former name Bonanza

Owner Guaranty Mines Co. — Address

Operator - — Address

President — Gen. Mgr.

Mine Supt. — Mill Supt.

Principal Metals Copper, Silver, Gold — Men Employed

Production Rate — Mill: Type & Cap.

Power: Amt. & Type

Operations: Present More than 200 car;carloads of ore have been shipped from this property---up to 5% copper thrown over dumps---Copper ore up to 17% has been shipped----ore is ideal for smelting---content on returns being about as follows:- cu. 10%--Iron 25.0-- Lime 7 to 11% Ag. 1.57. -- Au. 80¢

Operations Planned

Number Claims, Title, etc.
Fifteen--Locations

Large tonnage available.

Description: Topog. & Geog.
Have Engineers Reptors Etc.

Mine Workings: Amt. & Condition

Tunnel- 220' Good
Incline-drift-Winze, 100'
Many shafts & Workings
Approx. 1200' feet of development work.

Geology & Mineralization Engineer's reports

Ore: Positive & Probable, Ore Dumps, Tailings

Mine, Mill Equipment & Flow Sheet

Road Conditions, Route

Water Supply

Camp water now available

Brief History

Special Problems, Reports Filed

Remarks

If property for sale: Price, terms and address to negotiate.

Property open to lease, option or purchase.

Price $75,000.00--three years to pay--Payments 1-2-3 Years,

Signed Tom K Richey

P.O. Box 2630,

Room 208
So. Ariz. Bank. Bldg.

Arizona Department of Mineral Resources, Capitol Building, Phoenix, Arizona

QUESTIONNAIRE

Relating to survey of potential copper production from Arizona small and marginal mines for national defense purposes;

Name of mining property....Calvillo Mine.....

Location...40 miles west of Tucson in the Coyote Mountains.....

Ownership.....Guaranty Mines Co., P. O. Box 2630, Tucson, Arizona....

Name of Manager.....Y. Calvillo.....

Post Office address.....P. O. Box 2630, Tucson, Arizona.....

Copper production (pounds) during each of the past five years:

1936 ## About 5000 Tons of 1937 10% ore between 1915 1938 - 1931.....

1939..... 1940.....

1941 rate of copper production based upon first four months.....

How much copper could this property produce annually

on a 14 cent price? 1000 T. ore per month - if equipped.

on a 16 cent price? .....

on an 18 cent price?.....

on a 20 cent price? .....

What price copper is necessary for this property? .....14¢.....cents per pound?

What plant facilities would be required and how much is the estimated cost in the event a 14 cent price could be assured? ..Compressor, jack-hammers, cars, track, tramway (or about 1½ mi. of road) - Estimated cost to put in full production - $25,000.00 - This is a tunnel property.

a 16 cent price could be assured? .....

.....

18 cent price? .....

.....

20 cent price? .....

.....

For what length of time would assurance of price and sale of full production be necessary? ..1½ years.....

How long would it take, after financing has been provided for, before production on the above basis could be reached? Less than 6 months.....

Does your organization have the facilities for raising the necessary capital to increase production to the amount stated? ...No.....

If not, do you believe that your company would be amenable and agreeable to government financing? ..Yes.....

Do you believe that you could finance the capital investment yourself on some such basis as a guarantee of sale of output at a fixed price and for a definite period, with damages to cover unamortized portion of capital investment in the event the government failed to take the output for the agreed upon time - or some similar arrangement? ...No.....

Please let us have your comments on the probability or possibility of your organization participating in such a program for national defense purposes.....
..This company will participate to the fullest extent in any program..
for national defense, but lacks capital to enable it to be effective
in any way.....
.....

What would be your ideas on financing and carrying out such a plan as is indicated by these questions? ....If we can be furnished the capital for equipment..
..we'll furnish the copper.....
.....
.....
.....

Kindly list names and addresses of other potential copper producers in Arizona whose operations should be included within this survey Do not know of any other idle
..property with the potentialities of the Calvillo Mine.....
We control 16 claims in this group.....
.....
.....
.....

ARIZONA DEPARTMENT OF MINERAL RESOURCES
Capitol Building, Phoenix, Arizona

Name of property. CALVILLO MINE. (Bonanza.)

Location and accessibility of property.
40 miles West of Tucson, Pima County, Arizona - 32 miles of Highway - 8 miles good road from Highway to Camp.
Coyote Mountains - Off the Indian Reservation.

History of ownership.
By original locations - some transfers to present owners - all 16 claims under ownership or control by GUARANTY MINES CO., a corporation, - General Manager, Y. Calvillo, P. O. Box 2630, Tucson, Arizona.

Production history.
About 5000 Tons of 10% copper ore shipped to smelters. 1915 to 1931.

Thousands of Tons of copper ore up to 7% lying on the dumps which we were unable to ship.

Shipments averaged 10% copper.

General geology (brief)

From report of Martin Fishback, 12/18/1923. "From the preceding pages it will be perceived that the mineral occurs in this property: 1st. In fault-fissures. 2nd. as contact metamorphic deposits, and, 3rd. As replacements in limestone. All closely related and formed by the same general agencies; also that the ore showing is exceptionally good considering the limited development."
From report of Miles M. Carpenter, corroborated by C. W. Botsford, 11/17/1926. "I repeat that I consider the Bonanza copper mine an exceptional copper prospect and believe it has the essentials for a paying undertaking. Respectfully submitted, Miles M. Carpenter, E. M. - I can fully corroborate this report. Yours truly, C. W. Botsford."
From report of W. M. Snow, Mining Engineer, 10/8/1928. " It is my belief that sufficient ore will be made available to guarantee the payment of the initial development cost on the property with chances greatly in favor of making a mine the sale value of which will be several million dollars."

Ore occurrence.

From Carpenter-Botsford report: "There are two types of ore occurence, a contact deposit containing oxidized copper ore developed in the old Azure workings and a replacement in the bedding planes of the limestone exposed in the main tunnel on the Bonanza claim. Etc."
See also extract from Fishback report on Page 1 hereof.

Ore reserve (quantities and values).

See extract from Snow report on Page 1 hereof.
From Fishback report 12/18/1923. " About 1000 feet South at a lower elevation, there are other outcrops of Copper-Silver-Gold ore, occurin altered limestone but in close proximity to another transverse fault With the exception of a few shallow pits and cuts no development has been done. Selected samples from this outcrop gave assay returns of 40% Copper, 17 Ozs. Silver and $8.50 Gold per Ton. There are several other surface showings of ore on this mineralized zone which have never been touched with a pick."

Accessory metals of value.

Small quantities of Gold, Silver and (by lamp) Scheelite.

Development work done.

On Azure: 50' incline, 50' winze, 50' shaft on fault and 100' drifts.
Bonanza: 220' tunnel and 100' tunnel.
Approximately 1500' on all of the 16 claims.

Plants (with capacity) already on property.

None.

Possible production if equipped- 1000 Tons of ore per month - 8 to 10% copper content. (This to make more definite our report of May 27, 1941, turned in to your office.)

Date Tucson, Arizona, May 29, 1941. Signed V. Calvillo
V. Calvillo

Tucson, Arizona
Oct. 8, 1928.

Mr. In glis W. Uppercu
New York City, N. Y.

I submit herewith reconnaisance report on the Bonanza Copper Mine.

INTRODUCTION:

This report is baded on a careful study of reports previously made on the property, checked by two days field work in company with Dr. Sarles, whose intimate knowledge of this district and general knowledge of geology was used.

There are twenty-two lode mining claims, and two mill sites comprising an area of 450 acres in the full group.

LOCATION:

The property is situated in the Coyote Mountains, which is the northern extention of the Baboquivari Range. The southern end of the group is reached by good road, eleven miles in length, leading off the Tucson-Ajo Highway. The north end is reached by a two mile branch from this highway. The approximate distance from Tucson is 38 miles and can be made in an auto in one and one-half hours.

DEVELOPEMENT:

About 1,200 feet of developement has been accomplished on the property, which has proven the following:

1st. The surface garnet-lime showings make good copper orebodies a few feet underground.

2nd. The east-west fault zone with massive fracturing are responsible for the mineralization.

3rd. The limestone in many places is replaced by copper ore, forming large bedding plane deposits.

4th. The intrusives were sufficientlt shattered to form mineral bearing lodes.

5th. At numerous points where granite is in evidence on the su surface, ore-bearing limestone lies at a shallow depth below the granite, proving the granite to be an overburden.

GEOLOGY:

The formation of the district consists of a pre-Cambrian complex composed principally of schist, granite, and diorite overlain by Paleozoic sediments. These have been intruded by acid and basic rocks, and the whole series have been capped by Tertiary eruptives which form the principal part of the present topography.

10

In various places in the district considerable bodies of igneous rocks have been intruded into the overlying formations forming this mountain range. Such is tha nature of the Babaquivari Range, the most of which is a coarse porphyritic grey granite intruded and cut in all directions by pegmatitic plugs and dikes.

In its upward movement, the granite bodies picked up a large area of Paleozoic limestone together with some basal quartzite and carried it up into the overlying formations, where with the assistance of erosion, it is now exposed at the surface. The more fluid materials from the magma broke through into the outer already cool surface, forming dikes and stocks, which also in many places cut the limestone and formed sills along the bedding planes of the limestone and stratified rocks.

Fissures generally perpendicular to the limestone bedding planes were the conduits which brough up the mineralizing solutions from below. In some instances, the fissures were first invaded by dikes which, upon cooling left many zones of weakness which served as the channels for the ascending ore-bearing solutions and formed large lenses of lime silicates, mostly garnets, and sulphide copper ores. The sheared and brecciated zones the dikes were themselves converted into lodes. This was observed in one of the feldspathic dikes cut by a tunnel. In several sections examined, the quartzite appears low in the series.

I It is difficult to determine the exact dimensions of the limestone uplift. It being softer than the enclosing granite, erodes away faster thus allowing the larger masses of granite to accumulate on the surface, which masses become difficult to distinguish from the intruded masses now in place. The limestone extends in its strike direction for more than a mile and is, at least, 350 feet in thickness, and a depth of 1,000 feet was observed from the bottom of the canyon to the top of the hill.

Distributed throughout this zone of limestone are many outcrops of garnet, one of which was found to be 100 feet wide and several hundred feet long. In the more solid masses, copper could be seen in the form of bornite in sufficient quanities to bring some of it up to commercial grade.

The more soluable copper has been leached out of the surface outcrops, leaving the resistant garnet and gossan, which is throughout the entire district an infallible guide to the copper ore bodies which were re-precipitated a short distance below the surface, and help form the large masses of copper ores that are being mined throughout the district.

In other parts of this contact metamorphic area there have been exposed large deposits of the magnetic iron oxide, magnatite, with chalcopyrite in several places, and these have provided shipments of copper ore. The magnatite has replaced the limestone for the entire thickness of the beds.

CONCLUSIONS:

From the foregoing it is evident that the limestone beds may be considered the ore bearing zone within which large masses of

REPORT

on

COYOTE MOUNTAIN GROUP OF MINES.

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INTRODUCTION:

This property is of a type that requires close and careful study to fully realize its merits, owing to the complex geologic conditions existing. Several days were consumed in diligent examination and the essential afcts were worked out. But the contour of the country is rough and the structural geology is so complex that one might spend several weeks in assiduous study of the outcrops and yet overlook interesting features.. Moreover, the rpoperty is not developed, but is one to be developed. With one important exception, the limited amount of underground work performed to date does not render much assistance in solving the geologic problems.

Pre-Cambrian limestone, altered and garnetized, granite, granite, porphyries, quartz-porphyries, and diabase are the principal rocks present. These in combination with extensive metamorphism, fault movements, shearing, crushing, and brecciation have been responsible for mineralization on a large scale, forming ore bodies carrying copper, gold, and silver. Some fifty carloads of profitable ore have been shipped to the smelters, taken from outcrops from which ore might be shipped now. It is one of the object of this report to show how these orebodies can be developed under a comprehensive and economical plan.

GEOLOGY:

This property is situated in the Coyote Mountains Mining District, Pima County, Arizona, about 40 miles southwest of Tucson, from which city it is one hour drive to the branch road, and another 20 minutes by good dirt road to the camp. The elevation of the campsite at the foot of the mountain is 3700 feet above sea level, and the principal mine openings are 1200 feet higher. There are 28 lode mining mining claims in the group, comprising an area of 450 acres.

DEVELOPEMENT:

On the property, there is an approximate total of 1,000 feet of workings, consisting of opern cuts, short tunnels, and inclines on the various mineral outcrops. But at no point has a depth of 100 feet below the surface been reached, with the possible exception of a 25 foot winze sunk at the face of an incline tunnel.

This winze was recently sunk, and taken from a developement

and geologic viewpoint, it is the most important piece of work yet preformed on the entire group. A short cross-cut driven from the bottom of this winze, penetrated a large fracture zone having an east-west strike and slight southward dip. Heavy movement along this fault in indicated by the grooving and slickensides on the walls. This fault fissure is fully four (4) feet wide and is fill of copper carbonate, oxides, and brecciated vein material where exposed. Only a few feet has been done in this fissure, yet from its scanty developement work a shipment of 13 tons of ore was removed , yielding smelter returns of 17 % copper, and some silver and gold values.

ORE SHIPMENTS:

Notwithstanding its limited developement, this property has an exceptional shipping record. The following is an incomplete list of ore shipments taken from the smelter liquidation sheets, and represents about one half of the total amount of shipments. The ore shipped was taken out by following the surface outcrops along the limestone and granite, or the limestone and granite porphyry contacts. The relation of these outcrops to the large fault fissures will be discusses later.

SMELTER LIQUADATIONS:

Date	Weight	Copper %	Silver ozs.	Iron	*Lime
1915					
5/11	38,630	7.80	1.25		
8/4	57,620	9.28	1.43		
9/8	46,320	8.80	1.25		
10/8	70.880	9.24	1.36		
15	55.700	11.14	1.63		
19	64,320	13.96	2.06		
26	62,780	10.70	1.71		
11/3	66,960	9.52	1.56		
4	71,660	11.44	1.77		
18	59,680	10.24	1.53		
23	70, 260	11.56	1.73		
12/2	67,720	11.10	1.72		
6	57,620	11.19	2.27		
2-7-16	87,400	11.80	1.86	27.2 %	7.4 %
2/14	70,540	11.76	2.00	25.0	2.5
17	68,540	11.45	- --	24.4	6.3
25	58,620	10.48	- --	24.4	7.0
3/1	72,880	10.34	2.03	23.3	8.1
11	88,440	10.26	1.83	24.9	7.6
21	52,800	9.94	1.57	24.9	7.6
4/19	58,320	6.61	1.23	22.0	11.8
19	59,620	6.73	1.23	22.1	11.7
9/28	67,880	7.10	1.11	18.7	11.8
10/17	78,620	7.48	1.32	21.0	10.7

1563.81 239.9 V 35.45

10/26	58,940	4.75	- --	29.3	14.0
11/7	56,380	9.43	1.46	20.8	7.4
23	47,220	5.96	1.10	19.9	11.0
12/4	59,380	7.53	1.18	16.4	12.2

GEOLOGY:

The Coyote Mountains are one of the independent uplifts rising out of the desert floor of in southwestern Arizona. The original sedimentary rocks were probably pre-Cambrian limestone resting on quartzite. Immense masses of intrusive granite and allied porphyries have so tilted, metamorphosed, and enveloped the sedimentary formations that strict classification is difficult.

The tilted edges of the sedimentary bedding planes have a general strike of N. 20 W. and a westerly dip of 47 degrees. The thickness of the limestone is from 500 to 800 feet. Following the folding and the tilting of the limestone there are other intrusions of the granite porphyry and quartz-porphyry resulting in a system of transverse east-west dikes and fault planes.

There is yet another system of basic dikes with a north-south strike which are probably diabase. These dike are undoubtedly later than the other formations. Owing to the large mass of loose boulders covering the theoretical points of intersection, there is no visible evidence to prove this opinion. Theree of these basic dikes were observed which were from 4 to 10 feet wide and 200 to 300 feet apart.

Large sills and irregular shaped masses of granite and quartz-porphyry have been welded into the limestome in several places, and also occur as capping covering sectiohs of the limestone measures, which have been silicified and altered beyond regognation and in many places converted entirely to beds of garnet. And what was once argillaceous limestone now appears as contact metamorphic material.

It is evident that immense volumes of hot water carrying the mineral in solution were released during the volcanic activity, and long afterward. It is also evident that the precipitation and deposition of the copper minerals were the natural results of this igeneous activity and the reaction of the magmatic fluids with the limestone and sedimentary rocks. The east-west fault zone with its frature system and brecciation has served as the main channel for the distribution and deposition of these metals and minerals. The ores were deposited in the fracture zones, as contact deposits, and as replacements in the limestone and the silicified areas, which are mostly in porphyry. It is from the limestone beds that most of the ore has been shipped to date.

The fault zone previously described under the head of developement is the only one in the east-west system that is exposed underground, and therefore is the principal one to be considered at this time. This fault cuts the limestone at nearly right angle to the strike of the upturned beds. Along the strike of this fault zone there are exposed five distinct outcrops of copper and iron ores in the limestone within a distance of 800 feet. These outcrops are from four to eight feet thick. Until the existence of this fault zone

was determined, it was difficult to account for the location and the attitude of these ore bodies. This heavily mineralized fault zone leaves no doubt as to the source of these copper and iron outcrops.

About 1,000 feet south and at a lower elevation, there are other outcrops of copper-silver-gold ores occuring in altered limestone in close proximity to another transverse fault. With the exception of a few shallow pits and cuts no developement work has been done in this area. Selected samples from the dumps on this outcrop gave assays of 40% copper, 17.0 ounces os silver, and $8.50 in gold per ton. And there are several other surface showings in this mineralized zone that have never been touched with a pick.

It has been shown that the limited depth attained in the present developement has exposed good ore bodies, and that no endeavor has been made to explore any of the deposits to any great depth, or in zones where enrichment would be expected. However, the showings are exceptionally good considering the limited amount of developement and exploration.

The ore bodies exposed are yet in the oxidized zone and consist of carbonates, oxides, and silicates of copper carrying some silver and gold with a high percentage of iron oxides. Chalcocite, and other secondary sulphides appear occasionally in the deeper working and indicate that there a zone of secondary enrichment is to be expected somewhere below. Some chalcopyrite and bornite are found in the massive beds of iron oxide, magnatite.

The permanent water level will undoubtedly vary from one fault block to another, and gradually rising with the contours of the higher elevations. The numerous springs in the lower canyons indicate large reservoirs of water confined in the faulted sections.

The property has my unreserved recommendation.

(s) Martin Fishback. M. E.

Tucson, Arizona
April 3, 1926.

PRELIMINARY REPORT ON THE

BONANZA COPPER MINE.

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This property is situated in the Coyote Mountains, a spur on the northeast end of the Baboquivari Range. The camp is about 38 miles from Tucson, Arizna, reached from a road leading off the Tucson-Ajo Highway.

No Governemnt maps exit showing the principal rock relations of the area and very little is known of the geology. There is nothing visible from the outside of the Coyote Mountains to indicate an ore deposit such as the Bonanza copper property.

The property occupies the center of a horseshoe basin some 800 feet wide by 2,000 feet long opening to the south. The rim is composed of connecting ridges of massive coarse grained granite with facies of gneiss and schist. The basal floor is limestone tilted, broken, and cut by intrusives. The principal intrusives are dikes and irregular shaped masses of coarse-grained acid porphyries. The trend of these porphyry bodies is northerly, and dikes of diabase smaller but tracable for considerable distances, have the same direction. Another structural faeture of importance is a series of fault fissures east-west in direction which, at places, at least, are ore bearing.

There are two types of ore occurances. A contact deposit containing oxide copper developed in the Azure workings, and replacements in the bedding planes of the limestone exposed in the main tunnel of the Bonanza claim. The former is a showy outcrop of copper carbonates and silicates in a typical limestone-porphyry contact. The

latter outcrop is marked by a heavy developement of garnet and a lessor amount of gossan, and no showing of copper minerals. However, a few feet below the surface, chalcopyrite was encoutered which continued practically the entire length of 100 foot tunnel, widening in places to 10 feet or more.

During the past summer 115 tons of ore were mined from this tunnel and shipped thru the Tucson Chamber of Commerce Mines with an average of Gold, 0.03 ozs.; Silver 1.80 ozs.; and Copper, 13.24%. This ore was extracted in course of performing the annual assessment work, and repres ents about 70 foot of developementwork.

Complete records of shipments from this property are not available, but the partial records and the statements of men familiar with the history of the property indicate a production of 2,000 tons of ore averaging 10% copper, and 1.5 ozs. silver.

No real exploration has been done on any of the ore bodies. The property was never equipped with a hoist or drilling equipment. The shipping ore was "gouged" out wherever it was found, and ore running less than 7% copper was left on the dump. Fully 2,000 tons of 2nd. grade ore were discarded.

I recommend systematic developement because this property has exceptionally strong indications of copper ore bodies. The rock relations found here have made mines elsewhere. Mineralization is strong with developement of high grade ore which persist in all the important workings. Rock formations are on a large scale which, in connection with other features, makes probable a mine of magnitude.

I am not prepared to outline a complete plan of developement, but more work on the Bonanza tunnel should be done, driving forward toward richer and larger bodies to be expected at greater depths.

The mineral zone discussed in the preceeding pages, lies in a pear shape, the lower section representing the stem, surrounded on three sides by steep mountains. The area under consideration is approximately 800 feet wide by 2,000 feet long. It must not be understood that these are the limits of the mineralized zone. On the contrary, the property extends about a mile on over the north of the Coyote Mountains wherethere are other undeveloped ore outcrops. However, the area described herein is considered the principal one, and the only one dealt with in this report.

The scheme of developement is by adit, or tunnel. At a point some 2,000 feet south of the ore-bearing fault-fissure previously described, there is a feasable location to establish the portal of this tunnel. By driving on a course N. 20° W. the tunnel would penetrate through the heart of the limestone measures, intersecting at nearly right angles the east-west fault-fissures, and beyond doubt, contact deposits of good ore. The ore outcrop last mentioned showed assay values of 40% copper, 17 ozs. silver, and $8.50 in gold, and it should be encountered in depth along this line.

At about a distance of 2,000 feet from this portal, the large ore-bearing fault-fissure should be reached at a vertical depth of 700 feet below the surface, and 600 feet below the deepest workings. At this depth primary sulphides will be encountered. Then by driving either east or west from this inersection along the fault-fissure still greater depths will be gained. As the entire course of tgis tunnel is through the mineralized zone, ore bodies will be encountered from time to time , and it may be reasonably expected that a large portion of such ores will be of shipping grade and will go a long way toward paying the cost of this developement.

CONCLUSION:

From the preceding pages it will be perceived that the minerals occur in this property 1st, in fault fissures; 2nd. as contact metamorphic deposits; 3rd. as metasomatic replacement deposits in the limestone beds; 4th. as breccia lodes of considerable width.

By confining the work to the contacts and mineralized structures, there would be but little question that the ores produced would defray a considerable part of the developement cost and expense. Bonanza is an exceptional copper ppospect with every indication of a profitable one.

Respectfully submitted,

(signed) Miles M. Carpenter, E. M.

Tucson Arizona

Nov 17, 1926.

I cah fully corroborate this report.

(signed) C. W. Botsford.

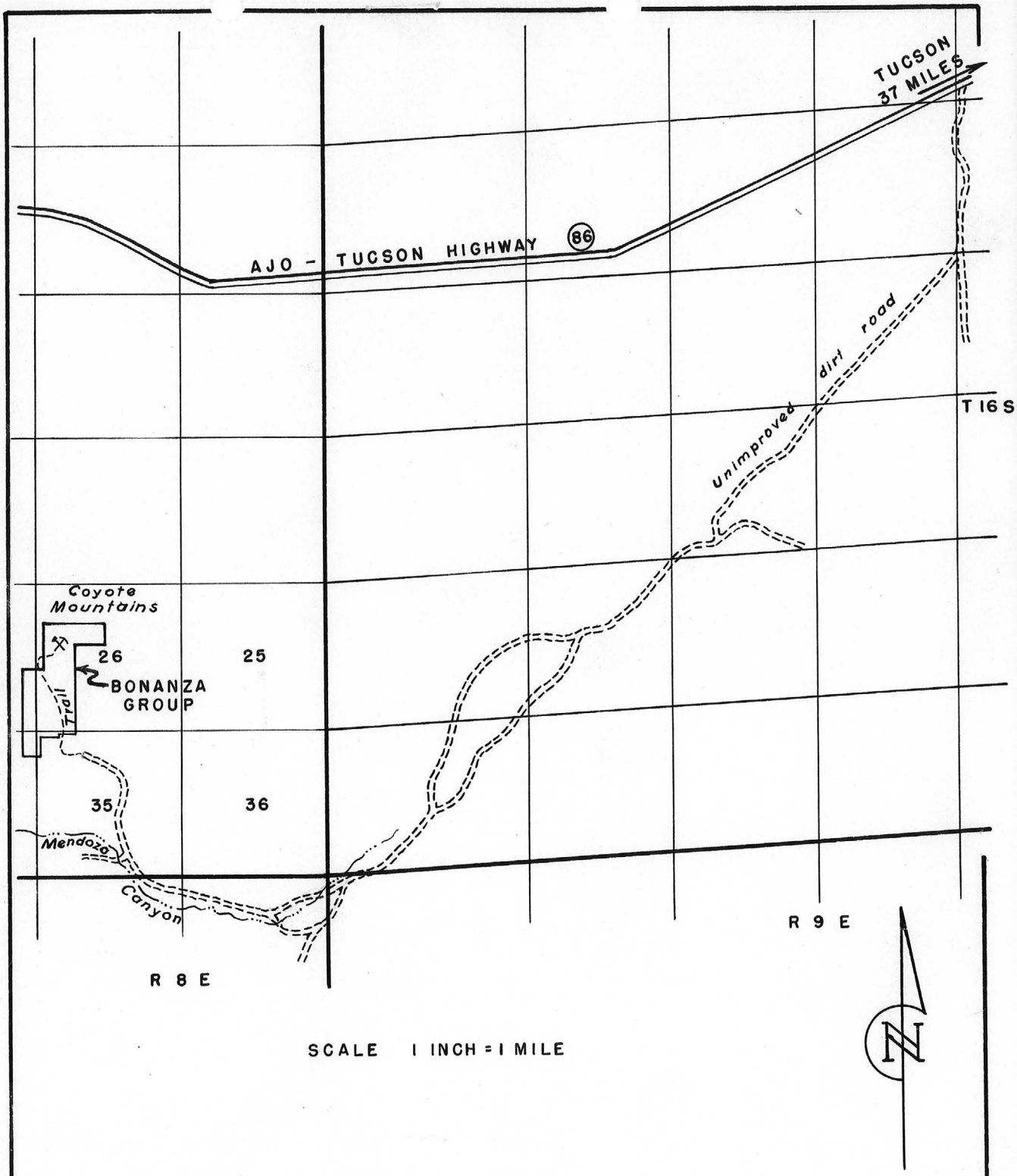

FIGURE 1, - LOCATION MAP, BONANZA COPPER CLAIMS

PIMA COUNTY, ARIZONA