CONTACT INFORMATION
Mining Records Curator
Arizona Geological Survey
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602-771-1601
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01/16/87

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: RED ROCK

ALTERNATE NAMES:
RED ROCK PATENT MS 1225
BELCHER PATENT MS 123

YAVAPAI COUNTY MILS NUMBER: 1083A

LOCATION: TOWNSHIP 12.5N RANGE 1 W SECTION 26 QUARTER NE
LATITUDE: N 34DEG 26MIN 50SEC LONGITUDE: W 112DEG 19MIN 35SEC
TOPO MAP NAME: POLAND JUNCTION - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:
GOLD
SILVER
COPPER
ZINC

BIBLIOGRAPHY:
USGS POLAND JUNCTION QUAD
BLM MINING DISTRICT SHEET 224
ADMMR INFORMATION
MINES REGISTER VOL XIX 1937 P 433
ADMMR RED ROCK FILE
LINDGREN, W. ORE DEPTS JEROME & BRADSHAW MTN
QUADS USGS BULL 782 1926 P 134

copy

BELCHER RED ROCK (file) YAVAPAI Co.

&

WIZARD WIZARD MINING Co. (file) YAVAPAI Co.

GOLD MINES

from: ALASKA APOLLO VIA JOHN BOGERT

copy

CAPITAL

BUSINESS AND INVESTMENT BROKERS

November 14, 1984

Mr. Stephen Kay
International Mine Services Limited
8 King Street East, Suite 1601
Toronto M5C 1B5, Canada

RE: Wizard & Belcher Gold Mines

Dear Mr. Kay,

Thank you for your interest. Pursuant to your request, I am forwarding to you information on two gold mines, the Wizard and the Belcher, located in the Big Bug Mining District, in the Bradshaw Mountains, Yavapai County, Arizona. (Plat enclosed)

The mines were acquired around the turn of the century by the present owner's grandfather. Several mining attempts were made since that time. Thus far, no one has been sufficiently resourceful or has had the ability to mine deep enough to reap the rich harvests below.

The enclosed engineering reports and letters obviously indicate a rich grade of ore, including gold and other metals, at levels deeper than those which have already been mined.

The extent of mining that has already been accomplished is indicated on the two enclosed maps; the Wizard with one main tunnel of 860 feet; the Belcher with drifts of 372 feet and 750 feet - and a verticle shaft of 800 feet. Also, in the Belcher is a 60 foot winze and an incline tunnel between the second and third levels.

Ample evidence exists in the reports of the high quality and quantity of ore. In the fifth paragraph on the first page of the Gibbs report, it stated that the vein varies from 6 ft. to 50 ft. in width with an average of 18 ft. Page No. 2, paragraph two, states the whole vein width will average over $20.00 per ton, which is one oz. gold (gold being @ $20.00 in 1923). Paragraph three indicates that it is reasonable to expect several million tons of good grade ore at 2,000 feet.

2180 Garnet Avenue • Suite 3E • San Diego, California 92109 • (619) 483-3500

The report of Homer Reynolds refers to the "vein about 40 to 60 feet in many places", and out croppings of more than 200 feet on page three; and 1.04 oz. gold on page four.

Although it is not dated, the report of George Demaine appears to be written about 1935, since there was a stock market slump that he refers to around 1890. Demaine states the existance of $64.00 per ton at the 300 foot level. Demaine's letter of April 26, 1946 cites gold per ton of 3.41 oz. in the 60 foot winze, indicated on the enclosed maps of the Belcher.

Palmer's report on the Wizard mine, last two paragraphs, describes three parallel veins on the property and "good ore" at the 800 foot level in the adjacent Annie mine. The accompanying map shows gold values at .5 to 3.5 ozs. in the 60 foot winze.

The Palmer report dated July 1, 1951 describes two 1500 foot veins in the Belcher. One is an average of 18 feet, the other averages four feet. Paragraph three, first page. In his next paragraph Palmer States the main vein on the Wizard to have an average width of two feet -- and "increasing in width in the workings below".

In the 1953 Syverson report, when gold was approximately $35.00 per oz., it is stated on page two that 400,000 tons of ore is a reasonable prediction for a No. 3 tunnel driven a distance of 585 feet.

Finally I have enclosed the engineering report from Andrew Zinke for your perusal.

The owner of the properties is desirous of selling the mineral rights and/or the real estate. The asking price for the mineral rights is one million dollars, based on a percentage of the amount received from the smelter as a royalty. An outright sale of the realty would command a price of $500,000.

Please be advised of the fact that the owner will not tie up the property for a small fee on a lengthy contingent basis by a potential purchaser, who wishes to hold until gold appreciates in price. In this case, an installment sale would be considered.

However, sufficient time would be allowed for diamond drilling to investigate the possibility of the purchase of the mineral rights before the removal of all contigencies. No diamond drilling has ever been done on the properties.

After studying the enclosed materials, if you are interested in considering a purchase, or if you have any questions, please contact me.

Sincerely,

Joe Greenberg

JG/kk

Merritt, Ralph - President
Red Rock Mining Company
Box ~~55~~ 93
Humboldt, Arizona

10-6-39

See RED ROCK - Re Field Engineers Report (Owner-Security Trust Co.)

KING, GRAHAM E. (SUPT.)

MINE - PROVIDENCE COPPER CO. - Originally RED ROCK - Big Bug Dist. Yavapai County.

CHESSMAN, D. G. PRES.

MINE - RED ROCK MINES - 3 miles west of Poland, Yavapai Co.-

Leased to David Schneidman

LESSEE

Providence Copper Co.

SCHNEIDMAN, David
Room 206
Guaranty Bldg.
Hollywood, Calif.

RED ROCK

"C" Loan ---FEReport

Mining Journal 6/30/42

The Red Rock mines three miles west

SURVEY OF OPERATING MINES May 25th I942.

By A. C. Nebeker

DEPT. MINERAL RESOURCES
RECEIVED
JUN 2 1942
PHOENIX, ARIZONA

RED ROCK MINES.

RED ROCK MINES.

D.G.CHESSMAN President
327 Fedral Building,
Los Angeles, Calif.

The Red Rock Mines consists of 5 mining claims, one of which is patented, and its location is 3 miles west of Poland, Yavapai County, Arizona.

This property is served by a good graded road which takes off from the Black Canyon Highway at Poland, 5 miles north of Mayer.

The property is being worked under a lease agreement by David Schneidman address Humboldt, Ariz.

The development work consists of a 250 ft shaft and drifts both north and south which follows a vein which is 4 feet wide. The vein has a dip of 70 degrees and can be followed for 7000 feet along the strike.
Value are in gold, silver, and copper, average assays claim to be Copper 3%, silver I.5 Ozs Gold .54 Ozs. Ores now mined are all sulphides.

The present operators have hot as yet made any shippments,. They have just got the mine cleaned up and are now taking out some ore. They expect to be shipping within the next ten days 25 tons per day. Ores will be shipped to the Clarkdale Smelter.

The equipment consists of a I00 H.P. Gasoline Enginee, 320 cu ft compressor, 25h.P. hoist. blacks mith shop, 5 H.P. mine blower and a small 7½ H.P. engine pumping plant.

Ore hauling and freight are very reasonable, the ore haul to Poland is$.50 per ton and R.R. to Clarkdale $I.25 per ton total $I.75

There are ten men employed, Mr W. L. Etchison Genl Mgr, and Supt.

They dont seem to have any problems bothering them at this time. They would like to get a 50 H.P. Diesel Engine.

A C Nebeker

RED ROCK YAVAPAI COUNTY

Providence Copper Co.
(Bedrock Mines)

This property inactive. 5-27-57
Mark Gemmill

Del Peterson stated that the Red Rock mine has a 4 ft. vein of "spar" in quartzite.
GW WR 8-2-71

NJN WR 1/7/83: Gerald D'Angelo, president of Primont Resources, P.O. Box 3064, Kamloops, B. C. V2C 5N3 visited. His company was going to look at the Belcher Claim in the Big Bug District and the Wizard Claim, Yavapai County. They would like to bring in some portable mill equipment and run old dump material from these and other properties in the area.

NJN WR 11/21/86: Jim Roy Weatherby (c) reported that Stan West (c) is currently drilling on the Belcher Mine (Red Rock - file) Big Bug Distrcit, Yavapai County.

COMPLETE AND MAIL T

Red Rock (A) Yavapai 8/15/88

STATE MINE INSPECTOR
1616 WEST ADAMS, SUITE 411
PHOENIX, ARIZONA 85007-2627

STATE MINE INSPECTOR

AUG 10 1988

FOR OFFICE USE ONLY
START-UP NUMBER 84348194
STATE NUMBER 10187600
MSHA NUMBER

New Hann

NOTICE TO ARIZONA STATE MINE INSPECTOR

In compliance with the Arizona Revised Statute Section 27-303, we are submitting this written notice to the Arizona State Mine Inspector of our intent to start ✓ stop ____ move ____ (Please check one) a mining operation.

If this is a move, please show last location: ____
If you have not operated a mine previously in Arizona, please check here: ✓ If you want the Education and Training Division to assist with your mine safety training, please check here: ____
If this operation will use Cyanide for leaching, please check here: ____

COMPANY NAME: HOLT BIG BUG MINING

DIVISION: —

MINE OR PLANT NAME: — TELEPHONE: 632-542

CHIEF OFFICER: LESTER M HOLT

COMPANY ADDRESS: PO BOX 65

CITY: HUMBOLDT STATE: AZ ZIP CODE: 86329

MINE OR PLANT LOCATION: (Include county and nearest town, as well as directions for locating property by vehicle: NE¼ OF S 26 T 12½ N R 1W - 9 MI WEST BY SW OF HUMBOLDT ARIZ COUNTY OF YAVAPIA

5 MI WEST ON POLLAND JUNCTON RD. OFF HWY 69, 4 MI ~~EAST~~ SOUTH OF HUMBOLDT

TYPE OF OPERATION: PLACER PRINCIPAL PRODUCT: GOLD

STARTING DATE: 8/17/88 CLOSING DATE: — DURATION: ____

PERSON COMPLETING NOTICE: Lester M Holt TITLE: OWNER

DATE NOTICE MAILED TO STATE MINE INSPECTOR: 8/9/88

FORM 101-106 REV. 01/88

* GENERAL REFERENCES

Red Rock File

REFERENCE 1 F1 < ABGMT CLIPPINGS FILE >

REFERENCE 2 F2 < USGM- ABGMT FILE DATA >

REFERENCE 3 F3 < USGS BULL 782, p. 134-135 >

REFERENCE 4 F4 < USGS GQ MAP GQ 997 >

F5 < USGS BULL 1336, GEOLOGIC MAPS >

U.S. CRIB-SITE FORM

RECORD IDENTIFICATION

RECORD NUMBER B10 <>

*RECORD TYPE B20 < X, 1, M >

DEPOSIT NUMBER B40 <>

REPORT DATE G1 < 8, 1, ✗, 1, 2 > (YR. MO.)

*INFORMATION SOURCE B30 < 1, 2 >

*FILE LINK IDENT. B50 < USGM- 004 025 >

REPORTER(SUPERVISOR) G2 < DEWITT, ED. H. > (last, first, middle initial) ( ) (last, first, middle initial)

REPORTER AFFILIATION G5 < USGS >

*SITE NAME A10 < BELCHER MINE >

SYNONYMS A11 < GREAT BELCHER, RED ROCK MINE >

LOCATION

MINING DISTRICT/AREA A30 < TICONDEROGA DISTRICT >

COUNTY A60 < YAVAPAI >

*STATE A50 < AZ >

*COUNTRY A40 < U.S. >

PHYSIOGRAPHIC PROV A63 < 1, 2, ✗ >

DRAINAGE AREA A62 < 1, 5, 0, 7, 0, 1, 0, 2, ✗ >

*LAND STATUS A64 < 0, 1, ✗, ✗, ( ) >

QUADRANGLE NAME A90 < POLAND JUNCTION (1, 9, 7, 5) >

*QUADRANGLE SCALE A100 < 2, 4, 0, 0, 0 >

SECOND QUAD NAME A92 < ( ) >

SECOND QUAD SCALE A91 <>

ELEVATION A107 < 5, 7, 8, 0, ✗, FT >

UTM

NORTHING A120 < 3, 8, 1, 2, 1, 7, 0 >

EASTING A130 < 3, 7, 7, 9, 2, 0 >

ZONE NUMBER A110 < 1, 2 >

*ACCURACY

ACCURATE ACC (circle)

ESTIMATED EST <>

GEODETIC

*LATITUDE A70 < - - N >

*LONGITUDE A80 < - - W >

CADASTRAL

*TOWNSHIP(S) A77 < 12.5 N ; ✗ ; ✗ ; ✗ >

*RANGE(S) A78 < 0, 0, 1 W ; ✗ ; ✗ ; ✗ >

*SECTION(S) A79 < 26 ; ✗ ; ✗ ; ✗ >

*SECTION FRACTION(S) A76 < NE OF NE >

*MERIDIAN(S) A81 < GILA AND SALT RIVER >

*POSITION FROM NEAREST PROMINENT LOCALITY A82 < 1.66 MILES SOUTH-SOUTHEAST OF MT. ELLIOTT; 3.3 MILES WEST OF POLAND JUNCTION >

*LOCATION COMMENTS A83 < UTM COORDINATES TO ADIT SYMBOL LOCATED 250 FT ABOVE ROAD (OLD RAILROAD GRADE). OTHER WORKINGS ARE TO THE SOUTHWEST AND NORTHEAST OF THE ADIT >

* ESSENTIAL INFORMATION
+ ESSENTIAL SOMETIMES OR HIGHLY RECOMMENDED

COMMODITY INFORMATION

*COMMODITIES PRESENT C10 < AU, AG, ZN >
*ORE MINERALS C30 < GOLD, CHALCOPYRITE, SPHALERITE
COMMODITY SUBTYPES C41 <
*GEN. ANALYTICAL DATA C43 <
COM. INFO. COMMENTS C50 <

* SIGNIFICANCE

PRODUCER			NON-PRODUCER		
MAJOR PRODUCTS	MAJOR	< AU, CU >	MAIN COMMODITIES PRESENT	C11	< >
MINOR PRODUCTS	MINOR	< AG >	MINOR COMMODITIES PRESENT	C12	< >
POTENTIAL PRODUCTS	POTEN	< ZN >			
OCCURRENCES	OCCUR	< >	OCCURRENCES	OCCUR	< >

*PRODUCTION

PRODUCER	NON-PRODUCER
PRODUCTION YES (circle) PRODUCTION SIZE SML MED LGE (circle one)	PRODUCTION UND NO (circle one)

*STATUS

EXPLORATION OR DEVELOPMENT

PRODUCER	NON-PRODUCER
STATUS AND ACTIVITY A20 < 4 >	STATUS AND ACTIVITY A20 < >

*DISCOVERER L20 <
*YEAR OF DISCOVERY L10 < > *NATURE OF DISCOVERY L30 < B > *YEAR OF FIRST PRODUCTION L40 < 1906 > *YEAR OF LAST PRODUCTION L45 < 1942
*PRESENT/LAST OWNER A12 <
*PRESENT/LAST OPERATOR A13 < HUMBOLDT MINING INC
EXPL./DEV.COMMENTS L110 < PRODUCTION DATA FOR BELCHER, GREAT BELCHER, AND RED ROCK MINES COMBINED. CLAIM GROUP INCLUDES 4 CLAIMS: BELCHER, RED ROCK, 2 OTHERS – ONE OF WHICH MAY BE MAMMOTH

DESCRIPTION OF DEPOSIT

*DEPOSIT TYPE(S) C40 < VEIN
DEPOSIT FORM/SHAPE M10 < TABULAR
*DEPTH TO TOP M20 < > *UNITS M21 < > *MAXIMUM LENGTH M40 < 3000 > *UNITS M41 < FT >
*DEPTH TO BOTTOM M30 < 800 > *UNITS M31 < FT > *MAXIMUM WIDTH M50 < 800 > *UNITS M51 < FT >
*DEPOSIT SIZE M15 < SMALL > M15 < MEDIUM > M15 < LARGE > (circle one) *MAXIMUM THICKNESS M60 < 4 > *UNITS M61 < FT >
*STRIKE M70 < N35E > *DIP M80 < STEEPLY SOUTHEAST >
*DIRECTION OF PLUNGE M100 < > *PLUNGE M90 < >
DEP. DESC. COMMENTS M110 <

DESCRIPTION OF WORKINGS

Workings are: SURFACE M120 UNDERGROUND M130 BOTH M140 (circle one)
*DEPTH BELOW SURFACE M160 < > *UNITS M161 < > *OVERALL LENGTH M190 < 1000 > *UNITS M191 < FT >
*LENGTH OF WORKINGS M170 < 4000 > *UNITS M171 < FT > *OVERALL WIDTH M200 < 10 > *UNITS M201 < FT >
*OVERALL AREA M210 < 10,000 > *UNITS M211 < SQ FT >
DESC. OF WORK. COM. M220 < MAIN TUNNEL 600 FT LONG. MAIN SHAFT 800 FT. DEEP. SHAFT ON BELCHER CLAIM IS 235 FT. DEEP

GEOLOGY

*AGE OF HOST ROCK(S) K1 < PROT., LCRET., U/PB ZIRCON GREATER THAN 1720 M.Y., K/AR APPROX 72-76 M.Y.
*HOST ROCK TYPE(S) K1A < META-ANDESITE BRECCIA, TUFF; GRANODIORITE, RHYOLITE
*AGE OF IGNEOUS ROCK(S) K2 < PROT., LCRET., AS LINE K1
*IGNEOUS ROCK TYPE(S) K2A < META-ANDESITE, TUFF; GRANODIORITE, RHYOLITE
*AGE OF MINERALIZATION K3 < ERET.-TERT.
*PERT. MINERALS (NOT ORE) K4 < QUARTZ, CALCITE
*ORE CONTROL/LOCUS K5 < FAULTING, SHEARING
*MAJ. REG. TRENDS/STRUCT. N5 < FOLIATION IN PRECAMBRIAN ROCKS TRENDS N25E
*TECTONIC SETTING N15 <
*SIGNIFICANT LOCAL STRUCT. N70 < VEINS PARALLEL FOLIATION FOR MOST PART
*SIGNIFICANT ALTERATION N75 < NONE
*PROCESS OF CONC./ENRICH. N80 < OXIDATION AND ENRICHMENT AT NEAR SURFACE
*FORMATION AGE N30 < PROT., AS LINE K1
*FORMATION NAME N30A < LOWER UNIT SPUD MOUNTAIN VOLCANICS
SECOND FM AGE N35 <
SECOND FM NAME N35A <
*IGNEOUS UNIT AGE N50 < PROT., AS LINE K1
*IGNEOUS UNIT NAME N50A < AS LINE N30A
SECOND IG. UNIT AGE N55 < LCRET., K/AR APPROX 72-76 M.Y.
SECOND IG. UNIT NAME N55A < BIG BUG PLUTON AND ASSOCIATED DIKES
GEOLOGY COMMENTS N85 < DEPOSIT IS VEIN WHICH CUTS PRECAMBRIAN METAVOLCANIC ROCKS AND IS LOCALIZED NEAR RHYOLITE DIKES

GENERAL COMMENTS

GENERAL COMMENTS GEN < DEPOSIT WAS MINED IN EARLY DAYS AS TYPICAL HIGH GRADE GOLD-QUARTZ VEIN. LATER PRODUCTION INVOLVED LOWER GRADE STOPING OF LARGE AREAS OF VEIN AND WALL ROCK

TABLE OF CONTENTS

1. Excerpts (4 pages) of reports from engineer, McConnell, to George Demaine and D.E. Daves, written on March 15, 1915.

2. Report of F. Gibbs, March 28, 1923.

3. Report of George Demaine, date unknown, probably written in 1935.

4. Report of Homer Reynolds, June 11, 1928.

5. Letter from George Demaine to Harry Palmer, engineer, April 26, 1946.

6. Report of Harry Palmer, engineer, written 1947 with accompanying map.

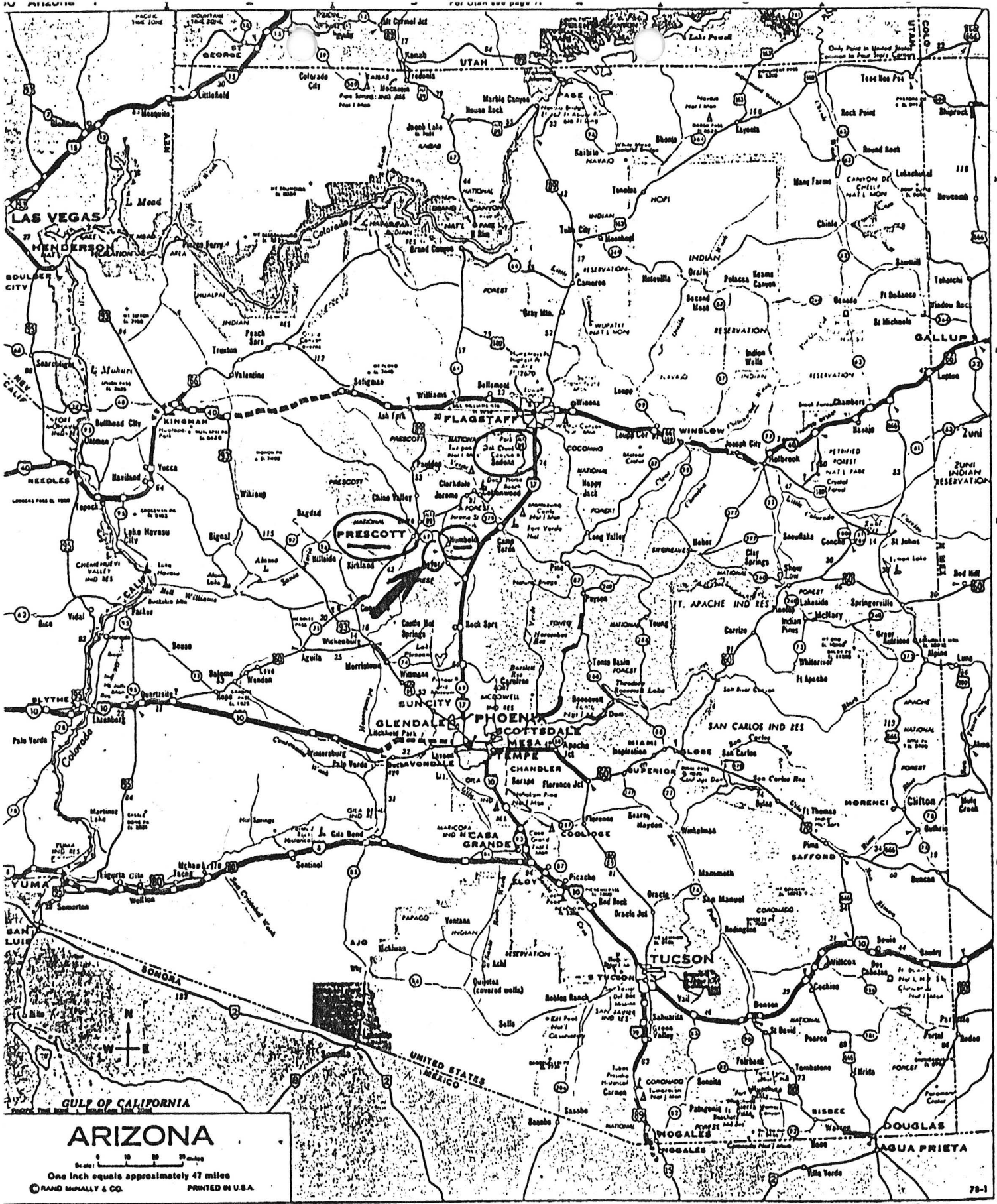
7. Report of Harry Palmer, engineer, July 1, 1951.

8. Report of A. Syverson, engineer, June 3, 1953.

9. Report of Andrew Zinkl, engineer, 1973.

The Northern Miner 5-23-85

(4)



ARIZONA

Population: 1,775,399 (1970 Census)
Area: 113,909 Sq. Miles
Capital: Phoenix

Cities and Towns

Apache Jct. E-4
Ash Fork C-3
Avondale E-3
Bagdad C-2
Bisbee G-5
Buckeye E-3
Camp Verde D-4
Casa Grande E-4
Chandler E-4
Chino Valley C-3
Clarkdale C-3
Clay Springs D-5
Clifton E-6
Colorado City A-2
Coolidge E-4
Cottonwood C-3
Douglas G-6
Duncan F-6
Ehrenberg E-1
Eloy F-4
Flagstaff C-4
Florence E-4
Ft. Defiance B-6
Ft. Thomas E-5
Fredonia A-3
Glendale E-3
Globe E-5
Grand Canyon B-3
Green Valley G-4
Gu Achi F-3
Happy Jack C-4
Hayden E-5
Heber D-5
Holbrook C-5
Huachuca City G-5
Humboldt D-3
Jerome C-3
Joseph City C-5
Kayenta A-5
Keams Canyon B-5
Kearny E-4
Kingman C-2
Lakeside D-5
Litchfield Park E-3
McNary D-5
Mayer D-3
Mesa E-4
Miami E-4
Mocassin A-3
Moenkopi B-4
Morenci E-6
Morristown D-3
Naco G-5
Nogales G-4
Nutrioso D-6
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Page A-4
Patagonia G-5
Payson D-4
Peach Springs B-2
Phoenix E-3
Picacho F-4
Pima E-6
Pinetop D-6
Polacca B-5
Prescott D-3
Quartzsite E-1
Safford E-6
St. David G-5
St. Johns D-6
Salome D-2
San Carlos E-5
Scottsdale E-3
Sedona C-4
Seligman C-3
Sells G-4
Show Low D-5
Snowflake D-5
Somerton F-1
S. Tucson F-4
Springerville D-6
Sun City E-3
Superior E-5
Tempe E-4
Tombstone G-5
Tuba City B-4
Tucson F-4
Wellton F-1
Whiteriver D-5
Willcox F-5
Williams C-3
Window Rock B-6
Winslow C-5
Yuma F-1

Mr. Geo. Demaine,
Humboldt, Ariz.

Mr. Walkaves,
Huron, Ariz.

Gentlemen-

I herewith hand you the following maps of the mining claims known as the Red Rock, Belcher, Mammoth, and Eugenie, namely; Railroad Map, Sketch Map of District, Map of Mining Claims, Map of Longitudinal Section in Plane of Deposit, Map of Level No. 1 Belcher, Map of Level No. 2 Belcher and Assay Sheet.

These maps are a part of this report which follows, and are essential to a clear understanding of the same.

LOCATION

The Red Rock, Belcher, Mammoth and Eugenie Mining Claims are located on the headwaters of Bigbug Creek, in Bigbug Mining District, Yavapai County, Arizona. In direct lines they are about 12 miles S.E. of Prescott, seven miles S.W. of Humboldt, and twenty five miles S.W. of Jerome and Clarkdale. They are on a branch line of the Santa Fe Railroad, which crosses both the Eugenie and Red Rock - Providence Station being on the Red Rock.

DISTRICT

Bigbug District extends from the Divide just east of Walker to Copper Mountains, and from Chaparral Gulch on the north to Turkey Creek on the south. It is about 18 miles in length north to south, and about 14 miles in breadth, from east to west. To the west of it lies the Mount Union District and to the south the Districts about Crown King. (see map of District

The principal rock of the District is a metamorphosed

rock is Yavapai schist. Within your [illegible]
conglomerat[illegible] Beginning on the west [illegible]de line of the Red
Rock about one hundred feet north of Bigbug Creek this band
of conglomerate may be traced across the Red Rock, the Bel-
cher, and the Mammoth to Eugenie Gulch, and its trend across
your property is shown by the line C D (Map of Claims). At
the points E, F, G and H on this line C D, it widens out into
lenses. It has resisted erosion to a greater extent than the
schist and at these points the croppings are very prominent.
The lense at F which is about 162' from east to west and 242'
from N. to S., forms what is known locally as the "Big Blowout"
on the Belcher. The lense at E in the railroad cut measures
44' across. The lense at H is by far the largest one and
forms a hill about 600' x 700' in width and length. The lense
at G is the smaller of the four lenses. These lenses are con-
nected by narrow bands as illustrated on Map of Level No. 2.
So far as I have been able to have assays made, I find all of this
conglomerate mineralized. An assay from the 44' exposed by
the side hill surface cut made by the railway across the Red
Rock shows gold and silver values of $2.20 with a trace of cop-
per. In level 2, the level and tool station at 36' in and 30'
below the surface are entirely within the conglomerate, and
assays one and two (see assay sheet) are from 19' across the
conglomerate. Crosscut No. 2, Level 2, is 33' in length.
The west 3' is in the hard, tough blue schist, and the east 32'
in the conglomerate. Assays 6, 7, 8 and 9 are from across
this 33'. The values are in "nodules", some coarse, but most-
ly fine, disseminated throughout the gangue. The best values
are found at No. 9 along the contact between the schist and the
conglomerate.

To the east of the conglomerate band and lenses lie the
schist except as indicated on the map of the claims.

On the Indiana it lies in schi[illegible], on the Red Rock in schist and conglomerate, on the Belcher in schist, conglomerate and quartz-diorite, on the Eugenie in conglomerate and quartz-diorite, on the ~~Eugenie~~ O.K. No. 2 in quartz-diorite, on the O.K. No. 1 in quartz-diorite and the augite-diorite dike. On the 400' of vacant ground and the Nemo claims it lies along the contact between quartz-diorite on the west and schist on the east.

To the west of this zone are several parallel fractures, the one having the most development work lies along the contact between the granite and schist. To the east are a number of single fissures paralleling each other with strike 45 degrees to 50 degrees N.E. and dip N.W. (see Map of Claims)

To the north and N.E. along Ticonderoga and Galena Gulches and on the opposite side of the quartz-diorite stock are the McCabe Extension, McCabe, Gladstone, Little Kicker, Rebel, Union Jack, Little Jessie, Galena, Dividend and Leland mines. Of these the McCabe and Gladstone have the most development work and have been large producers of gold.

Beginning at the Belcher and going around the quartz-diorite stock, back to the Belcher there is a complete circuit of claims all more or less developed, and all showing the best ore along contacts.

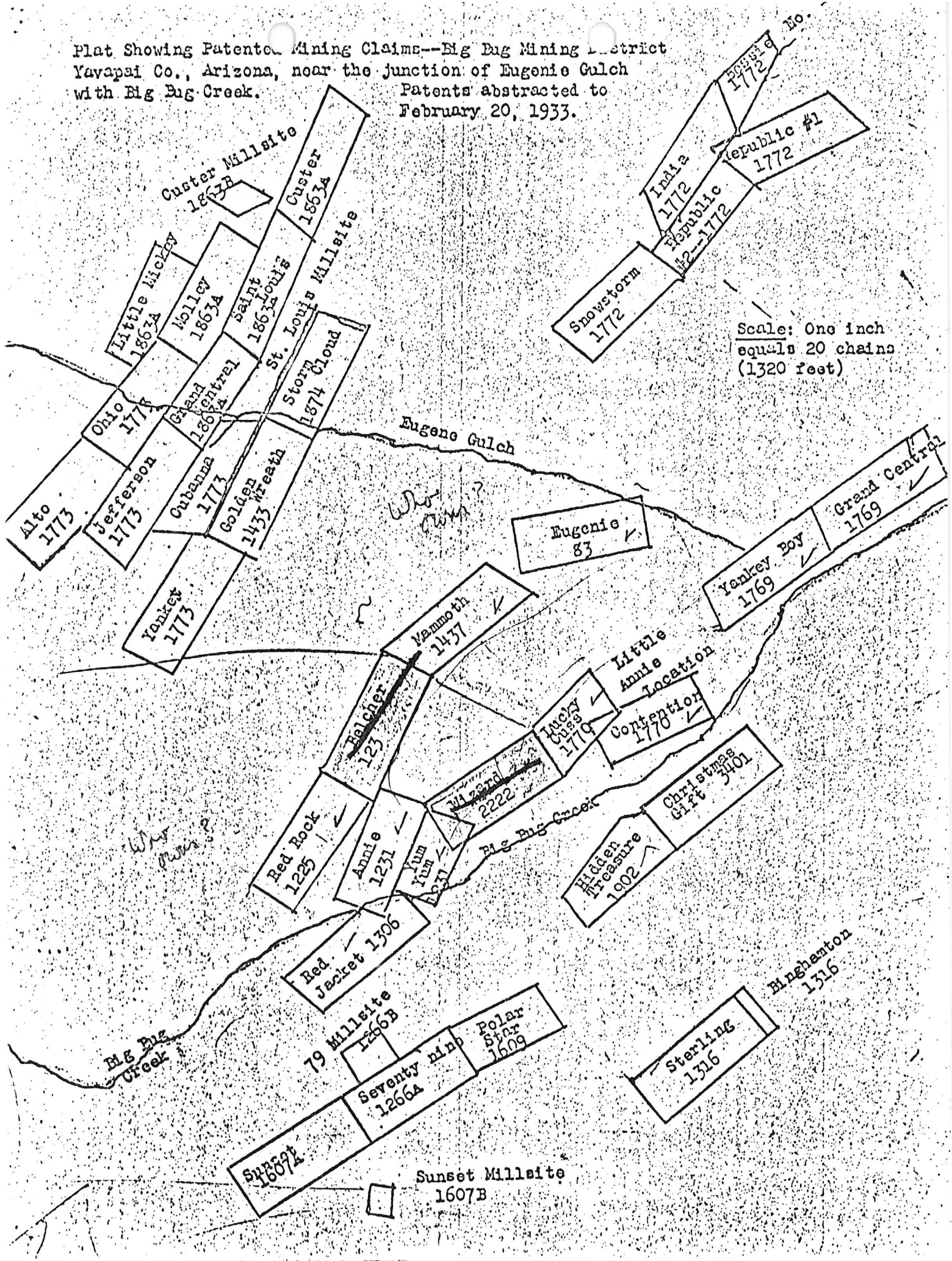
Map of Level No. 1 illustrates the occurrence of these fissures. The two developed by Level No. 1 lie entirely within the schist and near the contact between the schist and conglomerate. These two fissures will each average about 4' in width. The ore within the fissures lies in lenses. The ground between these two fissures in Level No. 1 is schist, in part, without values. The fissure developed by Level No. 2 runs from the Portal for about 32' in schist - there

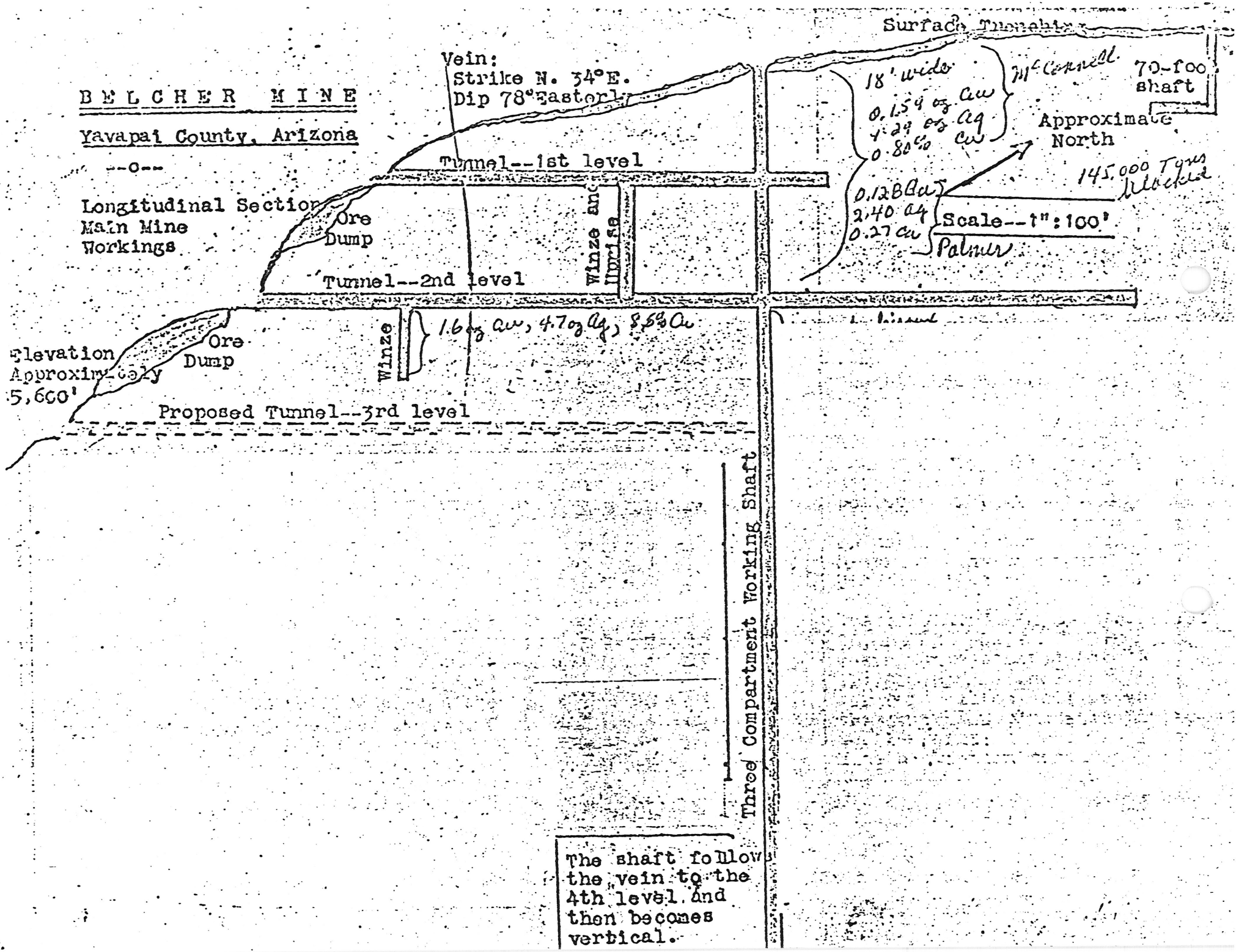
it cuts the contact between the schist and conglomerate and continues entirely within the conglomerate for about 327'. The ground between the fissures of Level No. 1 and that of Level No. 2 is developed by the Tool Station, Crosscut No. 2 and Crosscut No. 3, and the Belcher Shaft in Level No. 2. The fissure from the west end of Crosscut No. 3 to the Belcher Shaft is the same fissure as that in Level No. 1, while from the Portal of Level No. 2 to Crosscut No. 3 the fissure developed is distinct from those of Level No. 1. The ground between the fissures of Levels No. 1 and 2 is therefore that to the west of Level No. 2 at the Tool Station and Crosscuts Nos. 2 and 3, and to the east in the shaft. The distance of this ground from the surface is 30', 90', 132' and 168'. At the Tool Station the south side is in schist and the north side in conglomerate. At Crosscut No. 2 it is entirely in conglomerate and at Crosscut No. 3 and the shaft it is mixed.

The average value of this ground between the fissures is $6.00 The average value of the ore in the fissure of Level No. 2 is $9.45 with width of 5'. The fissure developed by Level No. 2 on the Belcher can be traced to a junction with the fissure developed on the Red Rock. This junction is just north of the Red Rock Mill and has not been developed. The Red Rock fissure cuts the Belcher ground to the east of the conglomerate lense, and shows in the railway cut at Providence Station (200' east of the 44' of conglomerate) - other fissures occur within this 200' and still others to the east up to and beyond the east side line, none of which are developed. The width of the Red Rock fissure is 5'.

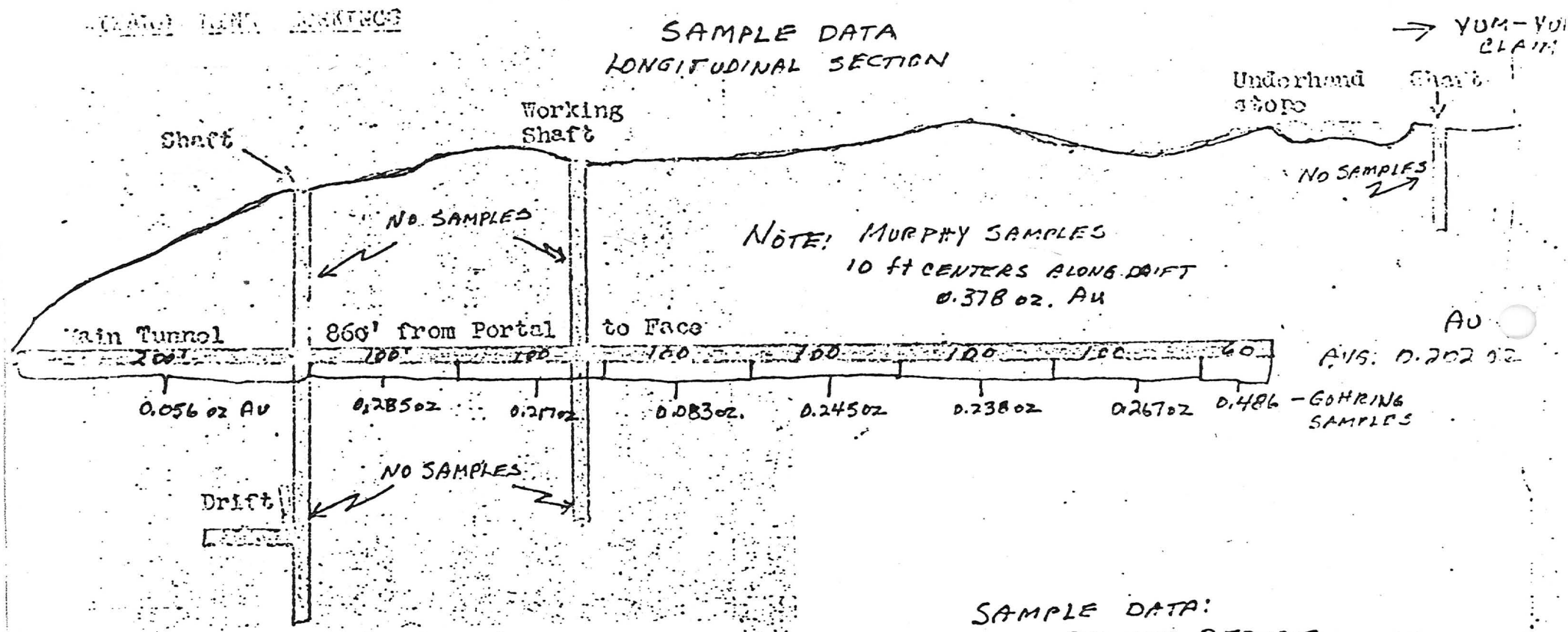
The shaft south of the railway track, and known as the Daves Shaft, is in a 5' fissure, Eighty feet east of the Daves Shaft is a four foot fissure developed by two cuts.

Plat Showing Patented Mining Claims--Big Bug Mining District
Yavapai Co., Arizona, near the junction of Eugenie Gulch
with Big Bug Creek.
Patents abstracted to
February 20, 1933.




BELCHER MINE
Yavapai County, Arizona
--o--
Longitudinal Section
Main Mine
Workings
Vein:
Strike N. 34°E.
Dip 78° Easterly
Surface Tunnel
Tunnel--1st level
Tunnel--2nd level
Winze and Upraise
Ore Dump
Winze
1.6 oz Au, 4.7 oz Ag, 8.5% Cu
Elevation Approximately 5,600'
Ore Dump
Proposed Tunnel--3rd level
Three Compartment Working Shaft
The shaft follows the vein to the 4th level and then becomes vertical.
18' wide
0.154 oz Au
4.24 oz Ag
0.80% Cu
McConnell
70-foot shaft
Approximate North
145,000 Tons blocked
0.128 Au
2.40 Ag
0.27 Cu
Scale--1":100'
Palmer

SAMPLE DATA
LONGITUDINAL SECTION



SAMPLE DATA:
FROM PALMER REPORT
SAMPLED ON TEN FOOT CENTER
ACROSS AVG. WIDTH - 2 feet

		Au
WM GOHRING	- 86 SAMPLES	0.202 oz.
MURPHY	- 86 SAMPLES	0.378 oz.
BOTH MEN	172 "	0.290 oz

GOHRING HIGH GRADE
SAMPLE #75 — 21.8 oz.
" #80 — 6.7 oz
MURPHY HIGH GRADE
SAMPLE #5 — 5.3 oz.

A.J.Z 11-30-73

SCALE - 1" = 100'

June 1953

COMMENTARIES ON THE BELCHER MINE
BIG BUG MINING DISTRICT
YAVAPAI COUNTY, ARIZONA

Analysis of the report on the Belcher Mine by Harry H. Palmer, E. M. and also a cursory inspection of accessible workings of the mine. I concur as to his description of the property, also recommendations as to future exploration. Summarizing his statements as to the merit of the mine, the opinion rendered appears to be ultra conservative.

Ted Schutz, who worked in the mine, said the ore-body is from 10 to 18 feet wide, the walls are firm. Hence, little timbering is required. Water and electric power can be obtained at a nominal cost. Housing for miners is of no immediate concern, as the employees may live at Humboldt or Mayer, which is only a short distance from the mine and accessible over a good county road throughout the year. Schutz is of the opinion that mill-operation by a former company, said to have been treating 300 tons a day from stopes and dumps. Low extraction, dissention among directors and perhaps financial difficulties forced a permanent cease of operation. However, Mr. Palmer states that arithmetical average assay, and analysis of 906 tons of concentrates (12.5 tons of high grade concentrates eliminated) is as follows:

Gold 0.65 oz.; Silver 1.14 oz.; Copper 1.53%;
Iron 40.5%; Alumina 2.3%; Silica 7.5%;
Sulphur 40.2%; Lime 0.2%.

Several car lot shipments of ore have been made from this mine to smelters, which have averaged as high and higher in gold, silver and copper values, than the foregoing concentrates.

In a 60 foot winze, situated at 150 feet from the portal of No.2 level, is a nice showing of copper pyrite, ore that is reported to average in gold 1.6 oz., silver 4.7 oz.per ton, and copper 8.5%. Numerous samples have been assayed which showed values of from 0.5 to 3.5 oz. gold and around 10oz. silver per ton, and copper upwards to 19.5%. This ore-zone has undoubtedly been enriched from the leaching of values from the upper levels. Parts of the vein has been eroded; the eroded part may be several times the depth of the oxidized zone.

The general character of the ores of this mine in the oxidized zones runs rather heavy in iron and copper pyrites. The ores are very free from minerals detrimental to smelting, and when shipped to smelters, the handling rates are much lower than for most ores of other mining districts. In fact, some smelters have offered a premium of 5 cents per unit for the iron and sulphur content.

Mr. Palmer estimated 145,000 tons of ore blocked out in the workings above the second level, which can be mined at low cost through present tunnels. There is also a potential tonnage of several hundred thousand tons of ore to be developed by tunnel and shaft exploration. By driving No.3 tunnel to the main shaft, a distance of 585 linear feet, the blocking out of some 400,000 additional tons is a reasonable prediction.

From the preceding, it is permissible to estimate a gross tonnage of 500,000 tons of mill ore and a percentage of shipping ore will no doubt be encountered in steping and exploration work.

Mr. Palmer's comment on the metalurgical problem is correct and the proper milling of these ores does not appear to be complex or difficult; and the percentage of extraction of values should be high if the mill is of proper design, and operated under the supervision of a competent superintendent.

Recommendation:

The accompanying assay map of the second level shows an average of $11.52 per ton against the old average of $6.06. The new values were obtained by re-calculating, using present metal prices. The recorded assay values are indicative of 3 shoots of mill ore and some sufficiently high for direct shipping to smelters.

It is my opinion that the proposed third level should be driven a distance of 285 linear feet, intersepting the 60 foot winze. A 40 feet raise to be driven and connection made. This will drain the winze, also eliminate hoisting. Ores extracted to go by gravity to the third level. Thence by mine car to a bin for shipping or stockpiled for milling. From assays shown on the map, I predict that some tonnages of shipping ore will be encountered in the

winze or its vicinity. Sampling in the winze done in the past appears to make an assured prediction. Whatever tonnages of shipping ores are obtained from this work will help to defray expenses, in driving the level. When the level is connected by raise to the bottom of the winze and favorable results obtained, the level should be extended 300 linear feet to the three compartment main shaft. A day's work with a bull-dozer will make a road to the proposed level site, also excavate an open cut for the starting point of the third level.

Respectfully submitted,

A. Syverson

A. Syverson, E. M.

Humboldt, June 3,1953

Box 93 Humboldt, Ariz.

No 3

Below this mill level tunnel there is still 450 feet of the Belcher shaft from which short cross cuts can be driven to the vein at each 100 feet interval and further large tonnage be developed by drifts on the vein at these points. The zone of secondary concentration should be reached by these cross cuts and drifts close to the 600 foot level, judging from the topography of the country and the experience of other mines in the district accordingly. For a comparatively small expenditure a large body of milling ore can be developed which can be mined miled and smelted at a low cost. In a ddition to this large body of mill ore it is only reasonable to expect to find at depth a body of secondary ore which wil be rich enough to be shipped directly to the smelter with out milling.

In order to eliminate practically all chance for loss or failure it would be well in the operation of the property to enstall a mining and milling plant having an initial capacity comensurate with the size of the ore body at present developed. This ore body warrants the instalation of a plant having a capacity of 60 tons per day. Plant should bbeso designed and instaled that its capacity can be doubled and thribbled by the addition of other units. While the ore now developed is being mined and miled the ore body should be further developed by the driving of the mill level tunnel, and the driving of the cross cuts on the 400,500. 600,700,and 800, levels in the Belcher Shaft, in this way development work can be kept well ahead of the mining and plans for the further,encrease production formulated with safety and precision.

Taking into account the physical conditions of the property ,location and present equipment it is estimated that it will require approximately twenty five thousand dollars to enstall a 60 ton plant and begin operations. Royalties on ore and concentrates produced should alone take care of the purchase payments, and only a part of the operation profit can be used in the execution of the development work mentioned above.

All things considered the operation of this property if properly managed is as safe a financial venture as can be found in the mining business. It has great future possibilites subject to intelligent work and has all the ear marks of being able to be developed into a big and good profitable mine and admirably located.

F,Gibbs,N.M.

Humbolt Arizona

Mar,22-23.

(8)

Brief Report of the

BELCHER-WIZARD MINING GROUP

Big Bug Mining District, Yavapai County, Arizona

-o-o-o-o-o-o

LOCATION: Seven miles southwesterly from Humboldt, Arizona, and reached over a good highway for about 4 miles and by a good mountain road for about 3 miles. Humboldt is on a branch line of the Santa Fe Railroad running from Prescott to Mayer, and is 19 miles easterly from Prescott over a first class highway. Poland Junction, between Humboldt and Mayer, on this branch line is only about 3 miles from the mine.

AREA: 104.5 acres of which 48.2 acres are patented and 56.6 acres are held by right of location and annual assessment work as required by U. S. Mining laws.

ORE BODIES: The Belcher claim contains two important ore veins that have had considerable development. One is exposed on the property for 1500 feet in length with an average width of 18 feet in the two upper tunnel levels which are run in the oxidized zone. The other vein is exposed on the property for 1500 feet in length with an average width of four feet.

The Wizard Claim contains one main vein which has had considerable development and is exposed on the property for 1500 feet in length. This vein shows an average width of two feet in the tunnel workings or present water level. It is reported to be increasing in width in the workings below the tunnel level.

GENERAL GEOLOGY: The Belcher-Wizard ore bodies are Pre-Cambrian fissure veins, and are undoubtedly of deepseated origin as is well proven by present development work on them and other deposits nearby. The country rocks are mainly made up of diorite, quartz diorite, granodiorite, granite, schist and dikes of rhyolite-porphyry. The Belcher vein occurs in places with a breccia for both hanging and foot walls in the second level workings, other places show schist for both walls, and still other workings show schist for a footwall and breccia for the hanging wall. Both the Belcher and Wizard fissures are continuous and extend beyond the limits of the mining claims.

Both the Belcher and Wizard veins have a general strike of northeasterly-southwesterly (N.34 degrees E.) and are of slight dip of from 5 to 10 degrees from the vertical. Both veins dip toward each other and may join at depth.

There are several parallel and intersecting veins or feeders to the main veins, and it is quite probably that they will come together at various depths and thus cause important ore enrichments and possibly larger ore widths.

The general geological conditions at this property are quite similar to those prevailing at the McCabe-Gladstone, Union, Little Jessie, Lelan-Dividend, Henrietta, and the now famous Iron King Mine. All of these mines are close by and all of them have been important producers of valuable ores. The Iron King is now one of the major mining operations of Arizona.

MINE DEVELOPMENT: For the Belcher claim there are approximately 2300 feet of shafts, tunnels, winzes, drifts, upraises and cross-cuts. The main shaft is sunk to a depth of 500 feet. It follows the vein to about the fourth level on a slight incline and then is sunk vertical to the 800-foot level. It is reported that a cross-cut has been run from the shaft to contact the vein at or near the 800-foot level.

The two main tunnels follow the vein in the oxidized and muchly leached ore zone. The upper tunnel is 372 feet in length, and the lower tunnel driven about 100 feet below the upper tunnel is 750 feet in length. The upper tunnel intersects the shaft at a point about 340 feet in from its portal, and the lower tunnel intersects the shaft at a point about 425 feet from its portal.

The vein outcrops have been trenched or stripped for about 1500 feet.

For the Wizard claim there are approximately 1540 feet of tunnel, shafts and drift workings with all workings in ore. The main tunnel is 860 feet in length. There are approximately 680 feet of shafts and drift. The main shaft is sunk to approximately 300 feet depth. The mine workings are full of water below the tunnel level, as is also the case in the Belcher workings below the second tunnel level.

ORE VALUES: All workings in the upper or oxidized and leached ore zone of the Belcher mine have been systematically and carefully sampled several times by competent mining engineers. From this data it is safe to estimate that this leached ore zone averages: from 0.128 to 0.159 oz. gold; from 1.29 to 2.4 ozs. silver per ton; and from 0.27% to 0.8% copper. This ore zone has produced some rather high grade ores at various times by leasers which was shipped to smelters.

During parts of 1936 and 1937 between 4500 and 5000 tons of the leached ores from the upper mine dump were milled in a plant that was installed on the Red Rock property, which adjoins the Belcher claim. This ore produced 918.5 tons of concentrate

which gave a net smelter return of $18,903.63 after all deductions metal price discounts, freight, smelting charges and metal losses. The milling plant was of poor design and not suited to these ores, and it is estimated that the recovery of ore values was only about 60%. My sampling of this ore dump showed an average of: 0.16 oz. gold; 0.96 oz. silver per ton and 0.6% copper.

In a 60-foot winze sunk from the second level drift tunnel is a nice showing of copper pyrite ore that is reported to average: 1.6 oz. gold; 4.7 ozs. silver per ton; 8.5% copper. Numerous samples have been assayed from this working which showed values of from 0.5 to 3.5 ozs. gold and around 10 ozs. silver per ton, and upwards of 19.5% copper. I cut a chipped sample from several large pieces of this ore which, on assay, gave the following results: gold, 2.24 ozs.; silver 4.4 ozs. per ton; copper 12.2%. It is reported that three car lots of this ore shipped to a smelter averaged some better than $60.00 per ton in gold, silver and copper. This ore has undoubtedly been enriched from the leaching of values from the upper vein levels. There is no record as to the ore values at the 800-foot level. However, the late Mr. Frank W. Giroux, who was an assayer and mining engineer of Mayer at the time the 800-foot shaft was sunk (and who made most of the assays for the property at that time), informed me that very high grade ore occurs at the 800-foot level. (Development work was discontinued soon after the 800-foot level was reached for the reason that the financier of the operations suffered heavy losses in Wall Street, New York, and could not continue his development of the property)

For the Wizard Mine the 860-foot main tunnel has been sampled systematically — samples being cut every 10 feet from portal to face — 86 samples in all. This sampling was done for the R F C by Messrs Gohring and Murphy. After eliminating all high grade samples (some of which assayed $234.50 to $763.00 in gold per ton) the Gohring samples showed an average of $7.75 in gold per ton, and the Murphy samples showed an average of $12.23 in gold per ton. The ore shows some silver and copper, but no assays were made for these metals.

There are three mine dumps near the portal of the tunnel. Dump No. 1 is waste rock. Dump No. 2 is second grade ore and averages a little more than $9.00 in gold per ton. Dump No. 3 is first grade ore which sampling indicates will average upwards of $28.00 in gold per ton. All ores of dumps No. 2 and No. 3 have been weighed as mined and are reported to contain about 7000 tons of ore. These ores came from the tunnel and the 300-foot shaft workings.

Note

ORE CHARACTER: The general character of the ores of both the Belcher and Wizard veins in the unoxidized zones runs rather heavy in sulphides. The Belcher unoxidized ores are iron and copper sulphides, and those of the Wizard are mostly iron sulphides. The ores are very free of any minerals detrimental to smelting, and when shipped to smelters the smelting rates

have in the past been much lower than for ores of most other districts. In fact some smelters have offered a premium of 5¢ per unit for the iron and sulphur content.

ORE IN STORE OR BLOCKED: For the Belcher, there are well over 45,000 tons of ore blocked in the workings above the second level which can be mined through present tunnels and drifts. Indications warrant the statement that proper development will reveal hundreds of thousands of tons of ore containing high grade values in gold, silver and copper. There are roughly about 6000 tons of low grade, leached, ores in the two dumps at the first and second level drift tunnels.

For the Wizard vein, there are approximately 20,000 tons of ore above the tunnel level. No estimate is given below this level for the reason that the workings are full of water and were not open for inspection at the times I have been onthe property. However, the vein is reported to be getting wider as depth is attained and gives promise of large tonnage and increased values with continued development.

METALLURGY: As will be noted, all ores of the oxidized and leached zones above the water level willrequire milling in order to be of commercial value, and under present conditions the margin of profit for these ores is questionable. However, the metallurgical problem for the proper milling of these ores does not appear to be complex or difficult, and the percentage of extraction of the values should be high if the mill is of proper design and operated under the supervision of a competent mill man. The grade of the concentrates produced will be subject, somewhat, as to what is best in order to secure the most economical freight and smelting rates.

MINING COSTS: On account of the large ore widths in the Belcher and the character of the veins, the mining costs should not be prohibitive even during the present inflated costs for labor and supplies.

WATER: There is ample water at or near the property for most any size desired, even up to several hundred tons of ore per day.

ELECTRICITY: Electrical power lines cross the property thereby guaranteeing electrical energy at nominal rates.

MINE TIMBERS: This mine requires very little timbering as the ground stands well. Whatever lumber and mine timbers are required can be landed at the property at the usual Coast prices, plus freight and transportation costs.

ELEVATION, CLIMATE: The elevation at this property is approximately 5600 feet above sea level. The climate is deal for all year around working conditions. The winters are mild and the summers are cool. The mountains are fairly welltimbered with pine, oak and chaparral.

RECOMMENDATIONS: A careful study of this mine fully warrants the opinion that the Third Level Drift Tunnel should be run to at least contact the main working shaft of the Belcher workings -- a distance of approximately 600 linear feet -- as shown on sketch. I recommend that this be the first development undertaken. Such a tunnel will, I believe, contact high grade ore within 100 feet from its portal. This tunnel will permanently dewater the mine workings to the third level, and it will develop and block the high grade sulphide ore exposed in the 60-foot winze. Fairly out samples in the winze show gross values of from $40.00 to $176.00 per ton in gold, silver and copper.

REMARKS: The undersigned first visited and made an examination of the Belcher mine in 1933 for a major mining company of the United States and Mexico. At that time there was no information regarding the ore values, or the character thereof, as later exposed in the winze sunk on the second level. All investigations at that time were confined to the ore showings in the two upper mine levels. While the property appeared attractive from a geological standpoint, the Company concluded that because of the rather low metal content in the ores of the upper levels an operation of the mine was not justified at prices then prevailing (gold $20.67 per oz; silver 35¢ per oz; copper about 7¢ per lb.). In 1933 the Wizard ground was not a part of the Belcher property; therefore no consideration was given it until I again visited the property in January, 1947.

CONCLUSION: The Belcher property cannot be correctly appraised by judging its value from the ores exposed and mined in the upper levels. These are muchly leached inasmuch as the present water level is just below the second drift tunnel. Below this point there has been a replacement of the gold, silver and copper values, and unless the reader understands and properly evaluates this condition he will fail to justly appraise the possibilities.

In many respects the general geology andmineral deposition at the Belcher is very similar to the now famous Iron King Mine nearby. For years the Iron King was examined and rejected by engineers who formed their opinions on the low grade ores of the upper levels. When, however, exploration was extended into the area below the leached zone a very profitable mining operation resulted, and values are continuing to increase with greater depth.

Under proper management, I believe the Belcher will equal or surpass the earning record of the Iron King.

Harry R. Palmer

Los Angeles
July [illegible] 1951

Los Angeles, California.
June 11th,
1928

Triangle Mining & Milling Company,
Los Angeles, California.

Homer Reynolds

Gentlemen:

During the past six weeks I have been actively engaged in careful examination of the group of claims which are classed as the Triangle Group, situate on Big Bug Creek, in the Big Bug Mining District, in the County of Yavapai, Arizona, situate about sixteen or seventeen miles in an easterly direction, airline, from Prescott, Arizona, while the distance by the road is something like thirty-five or forty miles, and lying about nine miles southwesterly from the town of Humboldt, Arizona, on a spur of the Santa Fe Railroad, which runs from Poland Junction to the Poland mine. This spur passes over the property and has a siding within, or about the center, of the claim, but however, not on the ground belonging to the Company at this time.

The mining claims consist of the Belcher, a patented claim, and the unpatented claims known as the Grand View, Pine View, Triangle No. 1, Triangle No. 2, and Triangle No. 5, and the Mill Site, all adjoining claims and in group.

There has been extensive work on the claim known as the Belcher, a number of years ago, consisting of the Belcher shaft which is in the neighborhood of 750 feet deep in the collar, or about 800 feet in depth in the highest point at apex of the hill on which the claim is located

There are two levels driven in, No. 1 and No. 2 levels, which connect by tunnel with the shaft, No. 1 being on about a 100 foot level and No. 2 on about 175 or 180 foot, and a raise connecting No. 2 with No. 1 about 100 feet from the shaft, towards the portal, and No. 2 extending beyond the shaft about 300 feet.

This, together with the work mentioned, and underhand stoping and open cut for a considerable distance on the vein - I will say about 500 feet - leaves exposed large quantities of ore. The shaft at the present time is caved. However, I, myself, have visited the property when much of the work was opened and saw the ore extending throughout the workings. There are other reports which can be handed you herewith, giving details of the ore and the size of the vein, etc.

The country is extremely highly mineralized, and there are three distinct mineral belts known as the "Zinc", a "Galena", and a "Gold-copper" belt, the copper predominating.

Of these claims just mentioned, the Belcher, the Grand View, Pine View and a portion of Triangle No. 1, lie wholly within the gold and copper belt; the remaining claims, and portions thereof, so far as can be ascertained, at this time, are within the zinc belt, although pan samples which have been taken have shown considerable free gold in horning, and there are some veins centralizing towards a point on some of the Triangle group, at a point near where the ground is covered with a heavy flow of lava, which of course, would render surface production impossible. Only deep development will locate the centralizing of the main veins which project on the surface, and which would centralize near this lava copping.

The ground of the Belcher, Grand View, and Pine View is easily

accessible to surface working and examination.

The mineral zone shows a continuous vein extending for many thousands of feet - in fact the zone can be traced for many miles, and a vein about 40 to 60 feet in many places continues across the entire length of the whole property and at a point near where the main shaft is sunk, there are out-croppings of ore across a distance of more than 200 feet in a number of places. We do not contend that this is all ore, but we do know that there are thirteen or fourteen feet of solid ore in places, and more or less lean ore through the vein-filling matter, or horses, between lenses, across the entire distance.

Also at a point some twelve or fifteen miles distant and out of the mountains in the valley, these veins apparently centralize again and there are surface outcroppings showing as high as 18% copper. This mineral zone extends through not only our district, but it continues on as far as up to Jerome, at least. Being very familiar with a number of copper districts in the United States, and especially with Butte, Montana, I am firmly inclined to believe that there are more pounds of copper in this property and vicinity, which, when it is located, could be mined and treated at a profit, than there is contained in the Butte, Montana, district. This is a big statement. However, I believe it to be a fact, the percentage running one-half of one percent to eighteen percent. There is a vast amount of iron, and sufficient lime, the iron being both the oxide and sulphide form, calcite and silicate, rendering this a good grade of ore under the old smelting process.

Sampling:

During the time that these workings were open and the property was sampled by several engineers, I examined it myself, and have some

to the determination that there is at least in the neighborhood of 2,000,000. dollars worth of good, commercial ore, blocked at least on two sides, and contained in the dump and in the open workings, giving an average of better than $10. a ton, with an expected profit of at least $4.00 a ton, under the then existing method of treatment. With new processes and new equipment it is now expected that a much greater profit will be made. The amount of ore which has been thrown on the dump in driving the work is of great value, and is already mined, and in this recent examination we find that in taking a car-load, dry weight - 35,525 pounds - of this ore from the upper level, Belcher No. 1 tunnel, which was shipped to the Southwest Metals Company, and it being a well known fact that in all shipments to this smelter that a good recovery was not made, yet the net return on which settlement was made, also a bonus of the lime content, on account of its excellent fluxing qualities, and a low charge for treatment, there was then received in addition, 1.04 oz. gold, which you will see to be in the neighborhood of $20.00 a ton; 4.07 oz. silicate - this would more than pay the mining charge and overhead; 10.58% copper. In further analysis, of the insoluble, 27.3%; iron, 29.7%; lime, 0.7%. There is shown a width of thirteen feet of this class of ore, which resembles that of the same lens in which the above amount states was shown.

There are many small strings and lenses entering or leaving the vein, which will run 20, 30, 40 and 50 dollars per ton, in gold, in the upper workings. This will be of great value in opening up the property on a large scale, and these gold values will enhance the returns of early shipment very materially.

At depth, it is not reasonable to expect so large an amount of gold will be encountered, while the silver value will be expected to

increase. Also the percentage of copper will increase. The bedding planes of this vein are very wide, and stand at an almost vertical position. The thickness would indicate that there is no doubt but that these measures and values will extend to a great depth. A large dump, No. 2, which is easily accessible as it is already mined, contains such ore as the following: Two carloads taken from the dump and reduced at the smelter yielded over seventeen dollars per ton, and many assays taken across the leaner appearing portions of the vein, gave an average of $14.00 a ton. This ore, sweetened up with the rich quality which has been before mentioned, places this property in the class of a mine ready for equipment. There is sufficient ore on the dumps and easily accessible to justify a plant of 150 ton daily capacity to begin immediate operation, and which will last for more than sufficient time to permit the further opening-up and development of the property.

I most heartily recommend at this time that this plant be constructed and put into operation along the most economical lines of modern treatment and equipment for the ores. There is a vast amount of timber suitable for mining purposes upon the surface of this ground. There is considerable water in the mine, and a stream flowing across the property, which flows the greater part of the year, never entirely drying up, which will furnish sufficient water for domestic and milling purposes, especially if the water is pumped back and used over again for the milling.

An electric power line runs within a distance of about two miles, from the main workings of the property, which would give adequate power for operation. As before stated, the railroad is on the property.

The ground is of such character that gravity can be taken advantage of for the milling and handling of the ores. It is recommended that an air compressor be installed on the property at once, which, of course, is only necessary for further development, and there is already sufficient ore mined and in sight to keep the plant running for a long time, while development can proceed with more leisure, if desired.

This is an ideal ore for flotation purposes. That is a well established fact and we are sure that a large profit could be made in treating the ore in this way, even though the smelter at Humboldt is being discontinued and dismantled, although our work with flotation and shipping the ore to either Hayden or El Paso, even with the present low prices, would mean a handsome profit. However, a process is now under contemplation in which we can see no reason, after having carefully examined the same, and taken tests of the trial plant, together with the records of a series of oxidizing tests, and find that the actual figures appear even lower than those of the actual process as given by the owners. Therefore, there seems to be no reason why this new process should not be a great success, and I fully believe that copper can be produced from low grade ore at a much lower rate than any other known. This process is a different assemblage of known processes which are separately used throughout reduction works and plants of this nature, successfully, many of them having been used for a number of years. At this time we can see no reason why a plant of this class could not be used to a most economical advantage. In fact, it is impossible to have a total loss on the property, which has the merit of this one, as just about all, if not all of the equipment which could be used in the new Ferric Sulphide Process would be used in the present day economical ore dressing plants of the up-to-date class, which, however,

do not give quite as economical reduction results as is claimed for this new process. If the new process gives the results, as expected by the owners, on a large scale as was given on a small scale, so much the better and greater the income will be from the ores of this property. There is at this time, in the lower tunnel of the Belcher, many carloads of iron muck containing a large percentage of copper, which has leached out and combined with sponge iron during the many years the workings have been standing open and idle. Perhaps this could be used to advantage in the new process. Also there is some oxide of iron in the ore mined, the greater part, however, being the sulphide. There is a vast territory about four miles distant from the mine and on the railroad at the mouth of Big Bug Canyon, completely covered with thick beds of oxide of iron. Perhaps this will be of value. Also, other old dumps of oxidized ore which might had reasonably.

We will further add that the formation in which this vein occurs and the other two or more veins as yet undeveloped on the property, are contained in the measures which belong to the same class as the bedding surrounding the best equipped mines at Jerome. The rocks are standing with edges nearly verticle, the beds of shistos, quartz site, rhyolite and syenite being so arranged as to form exceptionally tight and hard walls in which to contain the mineral solutions which have been deposited with the vein filler in the large shutes of good ore, which should extend to great depths. With these conditions existing, a good mine is reasonably assured.

We have not mentioned at this time, in particular, some of the prominent outcropping veins on the property, but from their general appearance of out-crop there is one extending for considerable distance

on the claim herein mentioned, and parallel with the Belcher vein, which also has an apparent width of from 40 to 60 feet. There are cross veins running from this one to the Belcher vein and extending from the Red Rock vein, which is near the south east corner of the Belcher, to the Anna vein where it enters the Triangle Group. These may be of importance, as the Red Rock mine has already produced a large quantity of valuable ore.

In fact, we will simply conclude by saying that this property really is a mine, and the necessary materials and elements with which to treat the ore are all at hand, so I recommend most highly that the property be at once equipped and put into operation.

(Signed) Homer I. Reynolds,

Mining Engineer.

Sacramento, California.

(6)

WIZARD GOLD MINES.
BELCHER PAT- CLAIM Report

Location

The property is located on the Big Bug Creek and in the Big Bug mining district Yavapai County Ariz,I would like and do say here that all conditions are just the same as in the Wizard Report are the same so re write it, Just turn to the wizard and you will find what referes to this mine

Title

is clear I have had it some 25 to 30 years,

Water and Adjoining Claims see surface map and Wizard report,

Metals

Gold Silver and a little Copper just about enough to pay for treatment and freight so it is a nice addition, to the Gold and Silver which is velvit,

Development and ore in sight,

The vein is stripped for the intire length of the claim, and on the No. end a shaft is down some 75 ft and some drifting done and some stoping which was all shipping ore as you can see there is no dump, there are several small openings on this end of claim that show the mineraligation to cover more that 75 ft, on this end of the ground it shows more faulting,, There is an 800 ft shaft on the vein at the colar the ore shows 15 ft wide and assay values of 16.00, some show 18 00 dollars, This shaft follows the ore for 300 ft and then is run streight for a working shaft But at the 300 it shows assays of some 60 dollars,Below the 300 I have always understod that no X cutting was done as some 40 to 50 years agothe big slump came and no more wall st,and work was discontinued, There are two levels down the hill refere to map, The two repersent a debth of 180 ft, So that is not much debth for a mine and this mine as produced over 500 000 dollars to date, at the 2 level It is only begining to make ore,some runs as high as 100 dollars per ton some 50 and some 30 and a large width of ore that will assay some 5.00 per ton when I say large I mean some 45ft wide, in X cut No 2, Now the last partys that had the mine stopped greatly, did no Development work of cours what they took out,I have no Records only the smelter settlements and they are minus a number They run it wide Hi and handsom and then some, They run the stock on Wall st up from 25¢ to 1.65 unloaded and got out so I had to recaim my property which I did, There is a block of ore from the portal to the Winze say some 15,000 tons of good Mill dert, and many dumps, in al say25 000 tons of mill dert, Now delow this level there is a winze some 60 ft from this I shipped 3 cars that ran 26.00 at the smelter, old prices so that is what has to be done run the 3rd level which at the prices to day will be at least 30 dollar mill ore, So I would not do much only lease or contract in level 2 as they have made an awfull mess, Just got lost, Now No 1 is good and the level can be continued as the face assays some 7.00 across the face of 5 ft, But The partys that had the mine just butche the mine to sell stock and that is one way to make money with out mining, When I show you these figures you will see what I mean, To Mine some 50 to 100 tons ore they had 33 to 35 men under ground, Had 1 drill and had to cart it from one level to the other, and the mining cost 2.65 per ton in stead of 50 ¢ to 100, The Milling cost was 175 per ton just 1.25 to much, They ran down in the tails 1.75 per ton instead of 35 ¢,(I had to take charge of the mill to show them the excess loss and them I shut them down) There is about some 1000 to 2000 tons of ore in the stppes that will run some 5 to 6 dollars, The No Level 1 can be run some 750 ft yet to the north end of the ground, so there is quite a large ore supply on hand with out figureing the 3 level which is a much Higher grade,,

The 3 rd Level should be run by all means to supply high grade ore and an addisinal large tonage, These partys tried to run 150 tons throu a 100 ton mill hence the results, The ore in the big shaft at the 300 runs to day some 64 dollars per ton How they heat me was that they bought an other claim and put the mill thereon and by that I lost all control of the ore taken from my property

The Belcher vien is a Parellal vien to the Wizard, about 1000 ft apart, There are 3 veins on the Belcher The Belcher Vien The Red Rock Vien and the Belcher anix vien which is a 3 to 4 foot vien and values of 6,00 per ton at 50 ft debth, The methods of sampling in all my work is by taking Mill heads, Shooting large samples then shoveling Cone and quartering and running over a Jones Sampler, I dont rely on hand sampling,

Signed Geo Demaine

(COPY)

April 26, 1946.

Mr. Harry R. Palmer, E. M.,
1452 West 48th Street,
Los Angeles 37, California.

My dear Palmer:

I am this day in receipt of your very welcome letter of the 24th, and contents carefully noted. I will answer your questions as follows:

Now as to the proposed 3rd level drift tunnel in the Belcher. As you know, by running this you will kill two or three birds with one shot. First, you will be in pay ore practically from the portal as is well proven in the 2nd level tunnel where there is ore running from $15.00 to $35.00 per ton in gold, silver and copper. While this ore is siliceous it has lots of iron with little or no aluminum silicate. So it is just the kind of ore the smelters want as it smelts nicely in their furnaces. Second, by continuing this tunnel on to the big shaft you will permanently dewater the mine workings to the third level--the present 60-foot winze and the big shaft at the 300-foot level. The ore showing in the big shaft is similar to what Mr. Ted Schutz found to be at the bottom of the winze which assays: gold, 3.41 ozs.; silver, 10.5 ozs., and copper, 19.5% per ton. So you can be very sure this proposed development will pay for itself many times over.

It should not cost over $10.00 per linear foot to run this proposed drift tunnel as you can easily drive four feet per shift. The ground is good and not what can be called heavy ground. It requires no timbering. Of course there will be some 15 to 20 feet of shovel open cut work before starting the tunnel, and your sketch shows the distance in to be under the x winze. You remember the ore "picture gallery" showing just beyond where the winze is sunk.

The electric power line is about 1/2 mile from the Belcher as the crows fly. You can call it a mile around the corners by road.

As to the Iron King Mine, I only know from hearsay. I know they have two 300-tons daily capacity mills in operation. There are some 26 standard cars of concentrates and ores shipped from here every week. But this includes about four cars from Mayer and Crown King, so that would leave 22 cars of concentrates per week for the Iron King. The Iron King is a system of ledges or veins all parallel and similar to the Belcher and Wizard vein system. The Iron King Mine has developed into another Jerome and no foolin'.

Wishing you good luck and best wishes,

Sincerely,

/s/ George Demaine.

Brief report on the
Wizard Mining Property:
Yavapai county, Arizona

This mining property is a part of the Belcher Mining Group (see sketch) and the same general conditions pertain to both mines.

There are several parallel and intersecting veins or feeders to the main veins of each property, and it is quite probable that they will come together at various depths and thus cause improtant ore enrichments and possibly larger ore widths.

Both the Belcher and Wizard veins have a general strike of north-easterly-Southwesterly and are of a slight dip of from five to ten degrees from verticle. Both veins dip toward each other.

The Belcher-Wizard ore bodies are precambrian fissure veins, and are undoubtedly of deep-seated origin as is well proven by present development work on them and other ore deposits nearby. The country rocks are mainly made up of diorite, quartz-diorite, granodiorite, granit, schist and dykes of rhyolite-pophry. The Belcher vein occurs in places with breccia for both hanging and footwalls in the second level workings, other places show schist for both walls, and still other workings show schist for a footwall and breccia for the hangingwall. Both Belcher and Wizard fissures are continuous and extend beyond the limits of the mining claims.

The general character of the ores of both the Belcher and Wizard are quite similar, and in the unoxidized zones they contain rather heavy percentages of iron pyrites and copper pyrites, although the Wizard ores show very little copper in present workings. Both ores are ideal for smelting and are always wanted by smelters.

The Wizard vein is a much narrower vein than the Belcher and in the main tunnel working shows an average width of appx. two feet for a distance of 860 feet in length.

ORE VALUES: The main Wizard tunnel has been carefully sampled by Messrs. W.B. Gohring and Arthur N. Murphy, mining engineers, for the RFC. Samples were out every ten feet apart for the total length of the tunnel making 86 samples in all. Following are the arithmetical averages for the Gohring samples with the elimination of samples nos. 75 & 80 which assayed 21.8 oz and 6.70 oz gold, respectively $763.00 and $234.50 per ton in Gold. (the ore carries some silver, but as this is mostly less than one oz per ton it is not considered) Gold figured @ $35.00 per oz.

An arithmetical average of the Murphy samples eliminating his #5 sample which ran 5.3 oz Au/ton ($185.50) shows 0.378 oz Au/ton value $12.23.

Neither Gohring nor Murphy did any sampling in the two shafts. The shafts are full of water below tunnel level. It is reported that the ore values increase below tunnel level.

There are three mine dumps near the portal of the tunnel. Dump #1 is waste rock. Dump #2 is second grade ore and averages little more than $9.00 on gold per ton. Dump #3 is first grade ore which sampling indicate will average upwards of around $28.00 in gold per ton. All ores of dumps nos. 2&3 have been weighed and are reported to contain 7000 tons of ore.

These ores came from the tunnel and the 300 foot shaft workings.

Vein strikes North 30 degrees East and dips only five to ten degrees from the vertical northwesterly.

There are three parallel veins on the Wizard claim, two of which have not been developed but they have good ore showings.

The Annie Mine which is probably an extension of the Wizard vein system is opened up to the 800 foot level and is still in good ore at this depth. This property is, ~~and has been, closed down for some time on the account of~~ litigation. At one time the property had a 20 stamp mill but on account of law suits the milling plant has been moved away.

Respectfully submitted:

a/ Harry R. Palmer
HARRY R. PALMER
consulting and mining engr. and
metalurgist

1452 West 48th Street
Los Angles, California

DESCRIPTION OF THE BELCHER MINE WITH NOTES ON THEIR ECOMOMIC POSSIBILITIES AND WITH RECOMMENDATIONS AS TO THEIR FUTURE EXPLOITATION.

DESCRIPTION of PROPERTY, Name Size and Location,

The group consists of the Belcher Mammouth Eugenie, Patented Mining Claims, also three other locations, as shown by the Map, of these the Belcher is the only one I could examine under ground, all claims are full size,

The propertys lie on the Big Bug Creek in the Big Bug Mining district Yavapai County Ariz, This district which is continuation of the Walker & MCabe districts and contains many Mines with fine production records, It is very well mineralized with Gols Silver & Copper Ores, The Poland branch of the Sa Fe railroad crosses the property, The loading siding for the property being with in a few hundred feet of the Belcher and runing throu the Eugenia, The Humboldt Smelter being only 7 miles, A more favorable location could hardly be asked for and the type of oreoccuring on the propery is very much desired at the Smelters for its Iron contents,

The Big Bug Creek flows at the end of the property and carries more water than would be required for Mining Milling & camp purposes the year round, The water could be pumped or taken from the Creek higher up by gravity

The auto road connects the property with the Black Canyon Highway Mayer & Humboldt, The elevation is appox 5500 ft & the climate is such that the working conditions are ideal the year round.

DEVELOPMENT

On the Belcher there is a shaft 2 compartment timbered with Oregon pine 800ft deep, This shaft is sunk throu the vein which dips at an angle of about 85 degrees some 550 ft being in the foot wall, this shaft is in good condition and open to the 200 ft level the balance being full of water(surface) At the 100 and 200 there are levels or tunnels driven in on the vein driven in from the hill side to the shaft as shown on maps, Below the 200 ft level there is no stations cut or cross cuts to the vein,

The Mommouth & Eugenie claims have shallow shafts and tunnels on the vein These 3 claims are joining and runing in a Northly deristion

ORE TONNAGE,

Ore tonnage in the Belcher at this time amounts to approximately or more than 50000 tons This is developed by the Tunnels driven in on the vein to the Belcher Shaft and cross cuting,

The upper tunnel on the Belcher is about 400 ft and the lower about 550 ft in ore (both) The vein varies from 6ft to 50ft in width with an average of 18 ft, The 50000 tons of ore developed by these tunnels should average at least $8 to 10 per ton,

There is also appox 10000 tons of dumps that will average some $4 per ton, the higer grade having been shipped, This ore is ready for the mill, while the 50000 of developed ore can be mined with out either hoisting or pumping machinery and dropped to the mill below, Its nature and occurrence are such that shrinkage-stope methods could be used and all mined for not over $1 per ton, By running a 3rd level and taping the winze and the shaft would be in ore all the way and should develope some 50000 tons more ore, which could also be mined by the same method, this also would un water the mine to that depth,

GEOLOGY

The Belcher vein is of the contact type lying between the Yavapai schist and the quartz diorite intrusion, It averages some 18 ft in width and in places 50ft and dips at an angle of 85 degrees. The ore is strongly pyritic and the values lie in Gold silver and Copper in the order named. At depth when the zone of Secondary concentration and in richment is reached the copper will probably exceed the gold values, The gangue consists of talc serpentine quartz and calcite on account ofpyritic nature it is an ore that is very much desired by the smelter also for milling by flotation proceess, and as a flux decreases th smelter charges very appreciably, The ore will have a concentration value of about 7 or 8 to One, Cross cuts run to the vein from the 800 ft level in the shaft may very possibly develope direct shipping ore, in the area of secondary concentration and inrichment, That there such Zones seems very probably judging from the signs of much leaching of the

F. Gibbs

copper in the upper part of the vein as disclosed by the tunnels, some of the gold values are in the iron pyrte while the balance occuri in the copper pyrites together with the silver, In the old days quiet a lot of surface ore was treated in arrastars and sluice boxes to rea so recover the free gold which occurs on the out crop. Throught the

vein there are stringers and streaks of high grade which wikk run up to a Hundred Dollars per ton in value however it would be hardly possible to mine these with out also mining the balance of the vein. There are many places where the whole vein width will average over twenty dollars per ton-This much has been shown by the amount of development work carried out to date. It is not at all impossible that more work at depth will disclose some very rich shoots or lenses in addition to the large bodies of mill ore however it is wiser to figure the mine as merely a milling proposition in order to avoid possible failure of plans and hopes, I am not taking in to consideration the large amount of Breccia which shows a value of some $4 to $5 per ton, there is almost an unlimited supply of thos grade of ore, In places it being over 50 feet in width from the two walls of contact.

Judging from the geologocal conditions and the history of the other producing mines in the District it it very reasonable that the values will continue to great depth, and that bekow the zone of ozidation and leaching there will be a rich and large body of secondary copper ore carrying good gold and silver values. It is also reasonable to expect that developwork to a depth of but two thousand feet will disclose several millions of tons of good grade ~~at it one~~ whose mining cost will be comparative low.

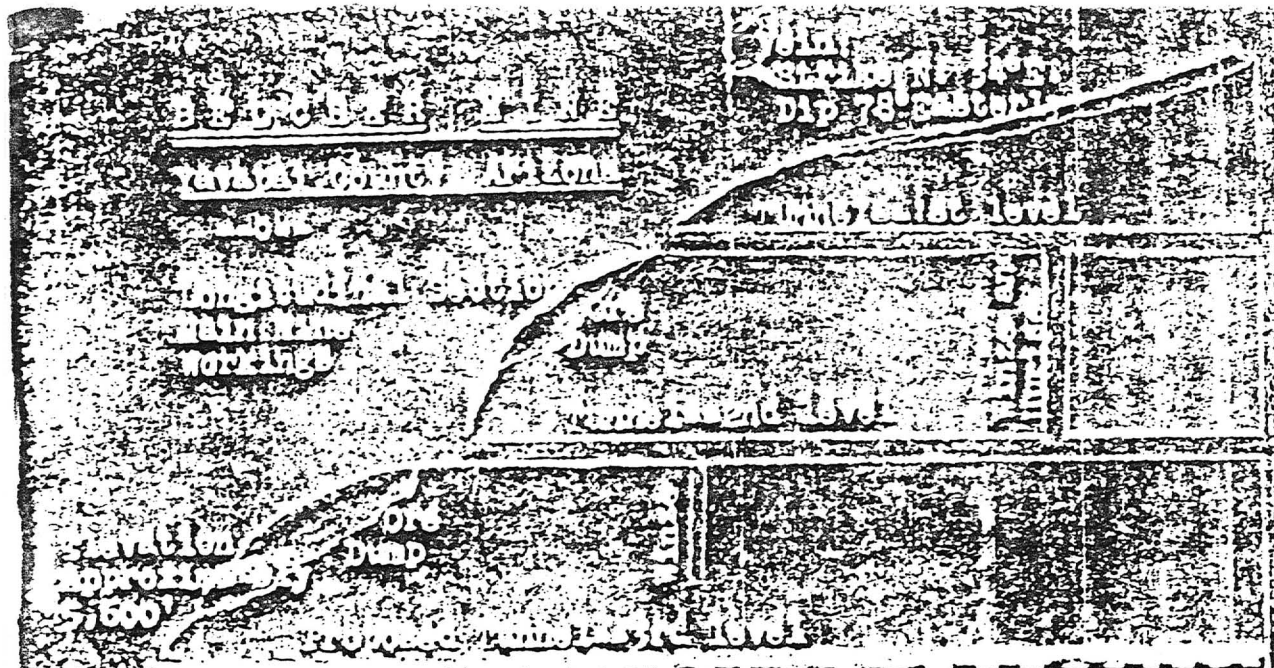
EQUIPMENT

At the Belcher shaft there a stem hoist in good condition and boiler in poor condition, compressor with its driving engine and a Worthington pump (station) with the exception of the compressor it would be better to sell this equipment and replace it with either oil or electric power, crude oil for either Diesel or Semi-Deisel engines can be layed down at the RR siding in car load lots at 6 cents per galon, electric power and could be obtained from the lines of the Arizona Power Company which pass within a short distance of the mine. The tunnels also are tracked and cars and buckets are at the mine.

FUTURE POSIBILITIES AND EXPLORATION

The future possibility of the property have been mentioned above in the discription of geological conditions. The property already has sufficient ore developed and in sight to warrent the expense of installing a suitable mill and starting mining operations in the tunnels. Here is a property with over 50.000 tons of developed ore having an approximate value of $8 to $10 per ton, this is conservative as I expect it to be some 20% above this figure. This is not including the large quantity of Breccia which carries from $4 to $5 per ton which can be placed at the mill head with an operating cost of $1 per ton, miling costs would be from 50 cts to $1 per ton, according to the mill capacity. Freight from the mine to the smelter is less than $2 per ton on mill concentrates. On account of the large amount of iron present and the fluxing qualities of the concentrates the charges on the mill product would be a flat rate of some $2 per ton. In concentrating at a ratio of 8 into 1 the smelting cost of ore mined would be about, including milling, $1.25 per ton. The operating cost per ton of raw ore mined including over head, would be about $3 per ton.

Third or mill level driven in on the Belcher vein would develope another 50,000 tons having at least as great or greater value as that already developed on No,2, together with the filling in contact with this Breccia making the tonnage considerably more. This ore on No,3 is partly developed by a winze 80 feet in depth below No,2 level. This tunel or third level would have to be driven 150 feet to conect with the winze in question, and 1,300 to reach the shaft, but would pay for its self from the ore extracted during the execution of the work; thus there is at least 100.000 tons of ore available for the mining of which no hoisting or pumping equipment will be required and on which there should be a profit at least of $5 for each ton mined and milled. Again I am not considering the Breccia



Practically the only ores milled from this mine were from the 1st level ore dump which were highly oxidized and of the lowest grade.

Several car lot shipments of ore have been made from this mine to smelters which have averaged higher in gold, silver and copper values than the concentrates produced from milling the dump ores.

In the [illegible] winze sunk from the 2nd level is a nice body of copper pyrite (Covellite, Bornite, Chalcopyrite) ore that assays show values of from 0.5 to 3.5 ozs. gold, 10.5 ozs. silver per ton, and upwards to 19.5% copper. This orebody can be mined easily and cheaply from a proposed 3rd level tunnel.

HARRY R. PALMER,
CONSULTING MINING ENGINEER AND
METALLURGIST
1757 West 48th Street
LOS ANGELES, CALIFORNIA

The shaft follows the vein to the 4th level and then becomes vertical.

Three compartment working shaft

The [illegible] orebodies are Pre-Cambrian quartz fissure veins [illegible] slight dip from the vertical, and are undoubtedly of deep-seated origin as is well proven by present development on them and other deposits nearby.

Up until 1931 the Big Bug Mining District, in which the Belcher Mine is situated, had a production record as follows: Copper, 70,000,000 lbs.; Lead, 4,630,000 lbs.; Gold, $6,563,000; Silver, $2,890,000; making an estimated total value of $21,920,000. Since that time several million dollars worth of these metals--plus a larger production of zinc from the Iron King Mine--have been produced.

Harry R. Palmer

GENERAL -

The program outlined on the following pages has the objective of exploring by drilling the veins of the Wizard and Belcher mines.

All the projections are based on the information contained in the Harry R. Palmer reports of February, 1947 and July of 1951. In addition two visits were made in September and November of 1973 by this author and the Magaro's.

The program is a three phase one which can be terminated at the end of any of these phases.

1. The first phase is directed towards opening up and sampling the present workings without any new development drilling or other work. The ore outlined by these drifts, shafts and winzes can now be considered ore that is blocked out.

If this ore, after sampling proves to be of an economical grade the second phase work is justified.

2. The second phase is to penetrate the vein in areas relatively close to the present workings, both at deeper levels and on extensions along the strike of the veins.

At this time the ore within close proximity of the workings is considered 'inferred' ore. The objective of phase 2 is to put this ore into the 'block' ore category by drilling.

If the drilling program as outlined on the following pages for both the Wizard and the Belcher proves successful the third phase of this program is then justified.

3. The third phase will be a drilling program to further extend the ore reserves both in depth and along the strike of the vein. This program will go beyond the end lines of the Wizard into the Yum-Yum claim, and also beyond the Belcher end lines into both the Red Rock and the Mammouth claims.

Again the objective will be to put ore now considered as 'possible' ore into the 'blocked out' and 'inferred' ore categories.

One additional phase must be added to this overall program and that will be the metallurgical work needed to determine the amenability of these two ores to a milling process.

It is probable that after a successful completion of phase 2 this work would be indicated as being required. At that time some 350,000 tons of ore should be 'blocked out' and another 350,000 would be 'inferred'

thereby justifying initial plans for a mill.

The metallurgical test work would entail a cost of some $15,000 to $25,000.

WIZARD MINE -

1. 'Blocked out' ore reserve - approximately 20,000 tons, value plus $20.00 per ton.

	TIME	COST
Open portal, cleanup the drift, sample on 25 ft. centers.	10 days	$ 3,000.00

2. Diamond drill to intersect area below 1st level and into 2nd level and area beyond 860' drift on 1st level - intercept vein with 3 drill holes - 750 feet of drill hole - target is to 'block out' another 30,000 or more tons of ore now considered 'inferred ore'.

	TIME	COST
Drill 750' @ $10.00 foot		$ 7,500.00
Engineering, geology, assays, etc.	1 month	2,500.00

3. Diamond drill to intersect area below 2nd level and into area at west end of Wizard claim and into Yum-Yum claim area - target is to 'block out' another 50,000 tons of ore now considered 'possible' ore.

	TIME	COST
Drill 4 holes, use 2 drills 1,600 feet @ $10.00 ft.	1 month	$16,000
Engineering, geology, assays, etc.		2,500
Total Direct Cost to drill out a total of 100,000 tons of ore		$31,500
Miscellaneous indirect costs, travel, telephone, etc.		3,500
TOTAL WIZARD COST		$35,000

BELCHER MINE -

1. Clean up all levels at Belcher Mine - pump out winze - sample total vein on 25 foot centers, remap and geology, assays, etc. Block out approximately 100,000 to 150,000 tons of plus $20.00/ton ore. (This assumes Palmer's figures on a width of 14' or more is correct.

	TIME	COST
Block out 100,000 tons or more	20 days	$ 7,000.00

2. Pump down deep shaft to 400 level where vein leaves shaft and mple vein $15,000.00

3. Diamond drill area between 2nd and 3rd level, and also area beyond 2nd and 3rd levels toward Mammouth claim - Also drill area on Red Rock claim below 3rd level of Belcher. Approximately 1100 feet of drill hole.

The objective here is to explore these areas to intercept the vein and 'block out' approximately 200,000 to 250,000 tons of ore now in the 'inferred' ore category. Use 2 drills.

	TIME	COST
Block out 200,000+ tons	20 days	$11,000
Site preparations		6,000
Engineering, geology, assays, etc.		3,000
		$20,000

4. Prepare site for drilling deeper on Belcher - below the 3rd level to 5th level (500 feet deep), 2 holes, and into the vein on the Mammouth claim (2 holes) and into the deeper vein area of the Red Rock, 2 holes, these holes will total about 3,000 feet of drilling. These deeper holes will have a cost of at least $12.50 per foot. Using 2 drills the time consumed will be at least 2 months.

The objective here is to attempt to 'block out' from 300,000 to 400,000 tons of ore, that is now considered as 'possible' ore.

	TIME	COST
Block out 300,000+ tons	2½ months	$37,500.00
Site preparations		5,000.00
Engineering, assays, etc.		7,500.00
TOTAL		$50,000.00
Total belcher program to 'block out' 600,000 tons of plus $20.00 ore		$ 90,000.00
Miscellaneous, travel, telephone, etc.		10,000.00
TOTAL BELCHER COST		$100,000.00

ESTIMATED TOTAL COSTS -

Wizard	$ 35,000.00
Belcher	100,000.00
TOTAL	$135,000.00

Andrew J. Zinkl
Registered Mining Engineer

WIZARD & BELCHER MINES PROJECT

SUMMARY:

The following pages outline a program in three general phases targeted at developing upwards of 600,000 tons of ore which will be in the $20.00 or more value range at today's prices.

The program can be stopped at the end of any of the three phases. In tabular listing are the objectives and approximate costs of these phases. Details are on the following pages.

	OBJECTIVE IN TONS OF ORE	COST	
PHASE 1			
Wizard	20,000 Tons	$3,000	
Belcher	100,000 Tons	7,000	
TOTAL	120,000 Tons		$ 10,000
PHASE 2			
Wizard	30,000 Tons	$10,000	
Belcher	200,000 Tons	35,000	
TOTAL	230,000 Tons		$ 45,000
Cum. Phase 1 & 2	350,000 Tons		$ 55,000
PHASE 3			
Wizard	50,000 Tons	$18,500	
Belcher	300,000 Tons	50,000	
TOTAL	350,000 Tons		$ 68,500
Cum. Phase 1, 2 & 3	700,000 Tons		$123,500
Miscellaneous Costs			11,500
TOTAL			$135,000
Metallurgical Work			25,000
TOTAL			$160,000

See Wizard longitudinal section for ore reserve and sample data.

Andrew J. Zinkl
Registered Mining Engineer
TEL No. (602) 445-5763

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine	Providence Copper Company	Date	January 28, 1943
District	Big Bug, Yavapai County	Engineer	A. C. Nebeker
Subject:	Change of Operator, and name.		

This property is the same as the Red Rock Mines, Mr. D. G. Chessman, President.

Mr. Dave Schneidman has taken over the property and formed a new company known as the Providence Copper Company, Mr. Schneidman is President.

Mr. Graham E. King is mine superintendent and has ten men working now.

This property has been idle for several months and the mine allowed to fill with water, but since Mr. King got started he has dewatered the mine to the 280 foot level and has cleaned out a great deal of old timber and muck.

He finds some ore carrying well in gold-silver and copper.

(Signed) A. C. NEBEKER

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

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(Signed) A. C. NEBEKER

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine RED ROCK

Date OCT 9th 1942.

District BIG BUG

Engineer A.C.NEBEKER

Subject: PRODUCTION POSSIBILITIES

A few months ago this property bid fair to be a producer of copper ore, but since that time there has been internal trouble developed within the company and it has folded up.

The mining plant is all for sale by the sheriff's sale on Oct 20th, I942.

A C Nebeker

DEPT. MINERAL RESOURCES
RECEIVED
OCT 10 1942
PHOENIX, ARIZONA

Bowtie

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Date 10-6-1939

Mine RED ROCK

Engineer

District Big Bug (Poland)

Location 10.2 miles by road from Mayer

Former name

Owner Security Trust Co.

Address Prescott, Ariz.

Operator Red Rock Mining Co.

Address Box 53, Humboldt, Arizona.

President Ralph Merritt

Gen. Mgr. James Shea

Mine Supt.

Mill Supt.

Principal Metals Gold

Men Employed 5

Production Rate

Mill: Type & Cap.

Power: Amt. & Type Gasoline engines

Operations: Present Unwater & examine

Operations Planned

Number Claims, Title, etc. 2. Patented.

Description: Topog. & Geog. Northern slope of narrow valley of Big Bug Creek.

Mine Workings: Amt. & Condition Shaft 250'; levels at 100' - 200' - 300'
2000' drifts on 100 level - 900' on 200 level
900' on 300 level - 90' winze.
Water at 100' level. Reported by J. Shea

(over)

Geology & Mineralization Amphibolite schist. Vein strikes N 35° E
Steep dip SE Quartz gangue - Pyrite, schalcrite, galena.
(Belcher vein parallels)

Ore: Positive & Probable, Ore Dumps, Tailings

Mine, Mill Equipment & Flow Sheet

Road Conditions, Route Good gravel road - former R. R. grade

Water Supply Big Bug Creek & Mine

Brief History Active in days of Poland R. R., about 1900-1906. At one time had a stamp mill.

Special Problems, Reports Filed

Remarks

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

Signed CARL G. BARTH, JR.

Use additional sheets if necessary. Separate sheets on each problem.

RED ROCK

Big Bug (Poland)

Reconstruction Finance Corporation
Preliminary Development Loan

August 17, 1942

Earl F. Hastings

Docket No. Phoenix 13
Date Application Received
Date of Field Examination Miscellaneous dates
Date of Report August 18, 1942

1. Name and address of applicant (correspondent):
David Schneidman, Room 206, Guaranty Building, Hollywood, California.

2. Character of project and estimated cost thereof:
Unwater and retimber caved areas in main workings for sampling and subsequent development. Estimated cost $5,450.

3. Location of property:
Big Bug Mining District about 3 miles west of Poland, Yavapai County, Arizona.

4. Applicant's interest in or ownership of property:
Applicant has a lease and is operating as an individual.

5. Loan requested:
$5,000.

6. Loan recommended:
None.

7. Comments:
(A) The property is well developed and the present operator has equipment on the premises for reopening the mine.

(B) While the vein is some 4 feet in width the "pay streak" varies from 16 to 30 inches in width. Mining the entire vein dilutes the values to a considerable extent.

(C) The copper content is relatively low and the overall copper production would fall below the operator's expectations. Values other than the copper are not of strategic importance and the combined value would be marginal.

(D) Approximately 3,500 tons have been removed by stoping according to the stoped area outlined on the map, although other stopes on the 200 foot level are referred to. A production of 20,000 tons is claimed, having a value of copper, .3%; gold, 0.54 ounces; and silver, 1.5 ounces. Surface workings must have accounted for a great deal of the balance of 16,500 tons as sulphide samples would not maintain this average value, but if a portion of the balance was produced from underground workings, then the zones above the 200 level marked "Developed ore" have already been depleted to some extent.

7. Comments (Contd.):
(E) Added to the docket are Field Engineer's Reports, Department of Mineral Resources, May 25 and August 14, 1942, in duplicate.

ARIZONA DEPARTMENT OF MINERAL RESOURCES

Earl F. Hastings, Assistant Director
and Projects Engineer

Reviewed and Approved by:

J. S. Coupal, Director

DEPT. MINERAL RESOURCES
RECEIVED
AUG 17 1942
PHOENIX ARIZONA

AUG I4th, I942.

MEMO.

RED ROCK MINE

To: Earl F. Hastings

From : A. C. Nebeker

Th e Red Rock Mine shows plenty of evidence that several thousands of tons of ore has been mined some time in the past.

The present dump, the Superintendent tells me, will assay in combined values $6.00 to $7.00, part of this dump shows signs of having been hauled away.

When I was at the property on July 2I. there was then in the bin 30 or 40 tons of ore which was mined during the month above the water level. This ore showed copper and zinc sulphides.

There are several properties close to the Red Rock which have also shipped out quit a tonnage of ore.

There was a Railroad which went up to Poland Tunnel serving this district as late as I932 but after the slump private trucks hauled the ores out to market.

I think the best indicator as to the value of the ores mined, is what the Smelter settlement sheet gives. The values in the veins are in and out, One can get a sample over a 4 foot cut which will go over $50.00 and then again $5.00

The veins are usually thick enough so they can be mined without knocking down alot of waste.

In I929 to I93I I had charge of the mining work at the Sheldon Mine which is a short distance to the west, and there we were mining ore from the II50 ft level when the"Crash" came, which is an indicator that ores may be found in depth in other mines in the same district.

A C Nebeker

3

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Date Oct. 6, 1939

Mine Red Rock

Engineer ~~Carl G. Bailey Jr.~~

District Big Bug (Potand)

Location 10.2 miles by road from Mayer

Former name ✓

Owner Security Trust Co.

Address Prescott, Ariz.

Operator Red Rock Mining Co

Address Box 53, Humboldt.

President Ralph Merritt

Gen. Mgr. James ~~John~~ Shea

Mine Supt.

Mill Supt.

Principal Metals Gold

Men Employed 5

Production Rate

Mill: Type & Cap.

Power: Amt. & Type Gasoline engines

Operations: Present

Unwater & examine

Operations Planned

Number Claims, Title, etc.

2 Patented

Description: Topog. & Geog. Northern slope of narrow valley of Big Bug Creek

Mine Workings: Amt. & Condition

Shaft 350'; levels at 100'- 200'- 300'
2000' drifts on 100 level - 900' on 200 level
900' on 300' level - 90' winze
Water at 100' level. - Reported by J. Shea

(over)

Geology & Mineralization

Amphibolite Schist — Vein strikes N 35° E steep dip S.E. Quartz gangue - Pyrite, sphalerite galena. (Belcher vein parallels)

Ore: Positive & Probable, Ore Dumps, Tailings

✓

Mine, Mill Equipment & Flow Sheet

Road Conditions, Route

Good gravel road. former R.R. grade.

Water Supply

Big Bug Creek & Mine

Brief History

Active in days of Poland R.R. about 1900 - 1906. At one time had a Stamp Mill.

Special Problems, Reports Filed

Remarks

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

Signed Carl G. Barsh Jr

Use additional sheets if necessary. Separate sheets on each problem.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

DEPT. MINERAL RESOURCES
RECEIVED
JAN 30 1943
PHOENIX, ARIZONA

Mine Providence Copper CO

Date Jan 28th, 1943.

District Big Bug, Yavapai Co.

Engineer A. C. Nebeker

Subject: Change of Operator, and name.

Thi s property is the same as the Red Rock Mines, Mr D. G. Chessman, President.

Mr Dave Schneidman has taken over the property and formed a new company known as the Providence Copper Co , Mr Schneidman is President.

Mr Graham E King is mine Superintendent and has ten men working now.

This property has been idle for several months and the mine allowed to fill with water, but since Mr King got started he has dewatered the mine to the 280 foot level and has cleaned out a great deal of old timber and muck.

He finds some ore carrying well in gold-silver and copper.

A C Nebeker

DEPARTMENT OF MINERAL RESOURCES

News Items

Date 10/5/39

Mine Red Rock

Location 2 miles west of

Owner Poland Junction

Address Humboldt

Ariz

Operating Co. Red Rock Mng Co

Address Box 93

Humboldt Ariz

Pres. Ralph Merritt

Genl. Mgr. James Shea

Mine Supt.

Mill Supt.

Principal Metals Gold - Silver

Men Employed 5

Production Rate

Mill, Type & Capacity

Power, Amt. & Type Gas Hoist

& Gas driven Pump

Signed Barth

(Over)

DEPARTMENT OF MINERAL RESOURCES

News Items

Date Dec 7, 1939

Mine Red Rock

Location Poland

Owner

Address

Operating Co. Red Rock Mine Inc

Address

Pres. Have unwatered to 125 ft level

Genl. Mgr. & now engaged

Mine Supt. in clearing

Mill Supt. 100 ft level

Principal Metals which was

Men Employed found partly

Production Rate caved.

Mill, Type & Capacity

Power, Amt. & Type

Signed Barth

(Over)

August 12, 1942

MEMORANDUM RED ROCK PROPERTY

TO: A. C. Nebeker

FROM: Earl F. Hastings

We note your report on the above property dated May 25, 1942 and also note that you visited this property on July 21.

David Schneidman has made application for a $5,000 preliminary development loan on this property which we are now reviewing.

If your first and subsequent examinations have developed additional information which would assist us in appraising this property, we would like to have it at the earliest possible time.

We would particularly like to know if there is substantiating evidence to the following claims made in the application:

> "The available information indicates that some 20,000 tons of ore carrying ½ oz. gold, 3 oz. silver and 4% copper was milled.
>
> "In 1930 the railroad was removed, the mill dismantled and the mill tailings shipped to the smelter. The tailings carried $7.00 per ton."

Red Rock Mines May 25, 1948

Big Bug Mining District A. C. Nebeker

General Information

The Red Rock Mines consists of 5 mining claims, one of which is patented, and its location is 3 miles west of Poland, Yavapai County, Arizona

This property is served by a good graded road which takes off from the Black Canyon Highway to Poland, 5 miles north of Mayer.

The property is being worked under a lease agreement by David Schneidman address Humboldt, Arizona

The development work consists of a 320 foot shaft and drifts both north and south which follows a vein which is 4 feet wide. The vein has a dip of 70 degrees and can be followed for 7000 feet along the strike.

Values are in gold, silver, and copper, average assays claim to be copper 5%, silver 1.5 ozs., gold .54 ozs. Ores now mined are all sulphides.

The present operators have not as yet made any shipments. They have just got the mine cleaned up and are not taking out some ore. They expect to be shipping within the next ten days 25 tons per day. Ores will be shipped to the Clarkdale Smelter.

The equipment consists of a 100 H.P. Gasoline Engine, 320 cu. ft. compressor, 25 H.P. hoist, blacksmith shop, 5 H.P. mine blower and a small 7½ H.P. engine pumping plant.

Ore hauling and freight are very reasonable, the ore haul to Poland is $ .50 per ton and R.R. to Clarkdale $1.25 per ton. Total $1.75

There are two men employed, Mr. W. L. Stehlson, General Manager, and Supt.

They Don't seem to have any problems bothering them at this time. They would like to get a 50 H.P. Diesel Engine.