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04/29/91

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: SHEA

ALTERNATE NAMES:

YAVAPAI COUNTY MILS NUMBER: 591B

LOCATION: TOWNSHIP 15 N RANGE 2.5E SECTION 12 QUARTER NW
LATITUDE: N 34DEG 41MIN 51SEC LONGITUDE: W 112DEG 05MIN 40SEC
TOPO MAP NAME: COTTONWOOD - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:

SILVER
COPPER
GOLD

BIBLIOGRAPHY:

USGS COTTONWOOD QUAD
LINDGREN, W. ORE DEPTS JEROME & BRADSHAW MTN QUADS USGS BULL 782 1926 P 92
ANDERSON, C.A. & S.C. CREASY GEOL. & ORE DEPT JEROME AREA USGS PP 308 1958 P 152
ADMMR SHEA COPPER CO. PROPERTY FILE
AZ MINING JOURNAL JAN. 15 1922 P 19, JUN. 1919 P 82

SHEA COPPER COMPANY

YAVAPAI

Verde District

AKA Copper Chief-Equator

T15N R2½E, Sec. 12

See: USGS Bulletin 782 pages 92-93
USGS Professional Paper 308 page 152 (Shea Mine)
ABM Bulletin 145, pages 55 & 56
Arizona Mining Journal, December 1, 1922, page 46
" " " January 15, 1922, page 19
Master Thesis, Rogers, Thornwall, 1979, Unpublished Copper Chief Mine (NAU)
"U" File

## COMMODITY INFORMATION

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

## * SIGNIFICANCE

| PRODUCER | | | NON-PRODUCER | | |
|---|---|---|---|---|---|
| MAJOR PRODUCTS | MAJOR | < AU, > | MAIN COMMODITIES PRESENT | C11 | < > |
| MINOR PRODUCTS | MINOR | < AG, PB, CU, > | 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) |

## EXPLORATION OR DEVELOPMENT

*STATUS

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

*DISCOVERER L20 <
*YEAR OF DISCOVERY L10 < > *NATURE OF DISCOVERY L30 < 8 > *YEAR OF FIRST PRODUCTION L40 < 1901 > *YEAR OF LAST PRODUCTION L45 < 1948
*PRESENT/LAST OWNER A12 < COPPER CHIEF MINING CO.
*PRESENT/LAST OPERATOR A13 < HAYDEN LEASING CO.
EXPL./DEV.COMMENTS L110 <

## DESCRIPTION OF DEPOSIT

*DEPOSIT TYPE(S) C40 < MASSIVE SULFIDE
DEPOSIT FORM/SHAPE M10 < ELONGATED LENS
*DEPTH TO TOP M20 < > *UNITS M21 < > MAXIMUM LENGTH M40 < 800 > *UNITS M41 < FT
DEPTH TO BOTTOM M30 < 350 > *UNITS M31 < FT > MAXIMUM WIDTH M50 < 290 > *UNITS M51 < FT
*DEPOSIT SIZE M15 < SMALL > M15 < MEDIUM > M15 < LARGE > (circle one) MAXIMUM THICKNESS M60 < 30 > *UNITS M61 < FT
*STRIKE M70 < N 80 E > *DIP M80 < NORTHERLY 50 TO 60; LOCALLY VERTICAL >
*DIRECTION OF PLUNGE M100 < > *PLUNGE M90 < EAST >
DEP. DESC. COMMENTS M110 < PROTEROZOIC GRANODIORITE PORPHYRY DIKES CUT THE MASSIVE SULFIDE OREBODY. OXIDIZED ORE WAS RICH IN AU AND AG. PROTORE MASSIVE SULFIDE WAS LOW GRADE >

## DESCRIPTION OF WORKINGS

*Workings are: SURFACE M120 UNDERGROUND (M130) BOTH M140 (circle one) *OVERALL LENGTH M190 < 1150 > *UNITS M191 < FT
*DEPTH BELOW SURFACE M160 < 350 > *UNITS M161 < FT > *OVERALL WIDTH M200 < 120 > *UNITS M201 < FT
*LENGTH OF WORKINGS M170 < 3500 > *UNITS M171 < FT > *OVERALL AREA M210 < 138,000 > *UNITS M211 < SQ FT
DESC. OF WORK. COM. M220 < COPPER CHIEF ADIT IS 350 FT DEEP; ADITS ON COPPER CHIEF AND EQUATOR PORTIONS OF PROPERTY ARE 1125 AND 680 FT LONG, RESPECTIVELY.

## GEOLOGY

*AGE OF HOST ROCK(S) K1 < P, R, O, T, U/PB ZIRCON EQUAL TO 1820 MILLION YEARS
*HOST ROCK TYPE(S) K1A < METARHYOLITE, METABASALT
*AGE OF IGNEOUS ROCK(S) K2 < P, R, O, T, U/PB ZIRCON EQUAL TO 1820 MILLION YEARS
*IGNEOUS ROCK TYPE(S) K2A < RHYOLITE, TUFF, BASALT
*AGE OF MINERALIZATION K3 < P, R, O, T, AS LINE K1
*PERT. MINERALS (NOT ORE) K4 < QUARTZ, PYRITE, CHLORITE, SERICITE
*ORE CONTROL/LOCUS K5 < STRATIGRAPHY, IGNEOUS ACTIVITY
*MAJ. REG. TRENDS/STRUCT. N5 < FOLIATION IN METAVOLCANIC ROCKS TRENDS N 10 W TO N 40 W
*TECTONIC SETTING N15 <
*SIGNIFICANT LOCAL STRUCT. N70 < MASSIVE SULFIDE LENSES ELONGATE PARALLEL TO BEDDING IN METAVOLCANIC ROCKS
*SIGNIFICANT ALTERATION N75 < CHLORITIZATION, SERICITIZATION
*PROCESS OF CONC./ENRICH. N80 < OXIDATION AT NEAR SURFACE; TO DEPTHS OF 230 FT.
*FORMATION AGE N30 < P, R, O, T, U/PB ZIRCON GREATER THAN 1760 MILLION YEARS; POSSIBLY 1820 MILLION YEARS
*FORMATION NAME N30A < DECEPTION RHYOLITE, CLEOPATRA QUARTZ PORPHYRY MEMBER
*SECOND FM AGE N35 < P, R, O, T, U/PB ZIRCON GREATER THAN 1820 MILLION YEARS
*SECOND FM NAME N35A <
*IGNEOUS UNIT AGE N50 <
*IGNEOUS UNIT NAME N50A <
*SECOND IG. UNIT AGE N55 <
*SECOND IG. UNIT NAME N55A <
GEOLOGY COMMENTS N85 < DEPOSIT IS MASSIVE SULFIDE LENS IN METARHYOLITE OR NEAR CONTACT OF METARHYOLITE AND METABASALT OR CONTACT OF METARHYOLITE AND METASEDIMENTARY UNITS

## GENERAL COMMENTS

GENERAL COMMENTS GEN < ONE OF FEW MASSIVE SULFIDE DEPOSITS WITH APPRECIABLE LEAD MINERALIZATION AT JEROME

## * GENERAL REFERENCES

Shea Copper Co Prop. f. 6

REFERENCE 1 F1 < USGS BULL 782 p917 ...2

REFERENCE 2 F2 < USGS PP 308 p. 149-151 pg 91-92

REFERENCE 3 F3 < ABM BULL 145 p. 55-56

REFERENCE 4 F4 < ROGERS, THORNWELL, 1979, unpublished M.S. Thesis - COPPER CHIEF MINE, NORTH. AZ. UNIV.

F5 < USBM- ABGMT FILE DATA >

# U.S. CRIB-SITE FORM

## RECORD IDENTIFICATION

*RECORD NUMBER B10 <>

*RECORD TYPE B20 <X,1M>

DEPOSIT NUMBER B40 <>

*REPORT DATE G1 <8,1,0> (YR. MO.)

*INFORMATION SOURCE B30 <1,2>

*FILE LINK IDENT. B50 <USBM004025 0568>

*REPORTER(SUPERVISOR) G2 < LARABA PETER (last, first, middle initial) (DEWITT, ED (last, first, middle initial) >

*REPORTER AFFILIATION G5 < ABGMT >

*SITE NAME A10 < COPPER CHIEF MINE >

SYNONYMS A11 < IRONKING-EQUATOR; COPPER CHIEF - IRON KING - EQUATOR >

## LOCATION

*MINING DISTRICT/AREA A30 < VERDE DISTRICT >

COUNTY A60 < YAVAPAI >

*STATE A50 <A,Z>

*COUNTRY A40 <U,S>

*PHYSIOGRAPHIC PROV A63 <1,2>

*DRAINAGE AREA A62 <1,5,0,6,0,2,0,2>

*LAND STATUS A64 <0,0,( )>

*QUADRANGLE NAME A90 < COTTONWOOD (1,9,7,3,) >

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

SECOND QUAD NAME A92 < ( ) >

SECOND QUAD SCALE A91 <>

*ELEVATION A107 <6,0,0,0,FT>

### UTM

*NORTHING A120 <3,8,4,0,6,9,0>

*EASTING A130 <3,9,8,1,5>

*ZONE NUMBER A110 <+,1,2>

### *ACCURACY

ACCURATE (ACC) (circle)

ESTIMATED EST <>

### GEODETIC

*LATITUDE A70 < - - N >

*LONGITUDE A80 < - - W >

### CADASTRAL

*TOWNSHIP(S) A77 <0,1,5,N>

*RANGE(S) A78 <0,0,2,E>

*SECTION(S) A79 <1>

*SECTION FRACTION(S) A76 < SW >

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

*POSITION FROM NEAREST PROMINENT LOCALITY A82 < 3.1 MILES SE OF JEROME, ARIZONA >

LOCATION COMMENTS A83 < COPPER CHIEF PROPERTY IS WEST HALF OF OREBODY; IRON KING - EQUATOR IS EAST HALF >

* ESSENTIAL INFORMATION

+ ESSENTIAL SOMETIMES OR HIGHLY RECOMMENDED

An Allotment of Only 50,000 Shares of the Treasury Stock of

# THE GRAND ISLAND MINING COMPANY

Located in Verde Mining District, Jerome, Arizona. In close proximity to the famous Copper Chief Mine,

IS NOW OFFERED THROUGH US

# AT 75c PER SHARE

Subscriptions must be in my hands before November 1st.

This is one of the older Verde mining district properties, on which intermittent work has been done for 20 years. It is one of the best looking properties and has one of the best showings in the district.

# Examined and Favorably Reported by W. E. Defty, Mining Engineer.

## You must act quickly if you want some of this stock.

The general geological characteristics of the Grand Island property are very similar to that of the **COPPER CHIEF.** The trend of the ore bodies in the Copper Chief are toward and into the Grand Island.

The first 250 feet of the Copper Chief from the grass roots is principally gold. At this depth the oxidized ores occur, and at about 350 feet the sulphide ores are being developed. All of these ores carry high gold values, the sulphides ranging from $50 to $100 per ton **GOLD, COPPER** and **SILVER.**

The **GRAND ISLAND** has similar outcrops which cover a large area. These outcrops average about $6.00 per ton gold. They show a large vein from 5 to 12 feet in width, dipping into the mountains.

There is a **SMALL PLANT ON THE PROPERTY READY TO PUT INTO OPERATION FOR IMMEDIATE DEVELOPMENT.** So this property will verge into a scene of activity and development **PUSHED** as **RAPIDLY** as **POSSIBLE.** All conditions are exceptionally favorable for economical operations and productions.

The people who direct the affairs of the Company are numbered among the best and most successful business and mining men in the district. It will be in the heart of activity as it is **NEAR** the **GREEN MONSTER** and the **EQUATOR** or **IRON KING,** belonging to the **UNITED VERDE,** and joins the **COPPER CHIEF.**

**THIS IS ALMOST A READY-MADE PROPERTY, WITH CONSIDERABLE ORES, PROVEN, ALL READY TO AND WILL BEGIN DEVELOPMENT IMMEDIATELY.**

## All proceedings passed upon by the Arizona Corporation Commission and permit issued for Sale of Stock.

**OFFICERS AND DIRECTORS**

**PRESIDENT,** Hon. Robert E. Morrison, Prescott.
**VICE PRESIDENT,** Paul Smyley, Jerome.
**SECRETARY,** Ed. Rucker, Jerome.
**TREASURER,** D. J. Shea, Jerome.
**DIRECTOR,** W. W. Elliott, Prescott.

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SHEA COPPER COMPANY

AKA Copper Chief-Equator

YAVAPAI COUNTY

VERDE MINING DISTRICT

T15N, R2.5E Sec. 12

DO NOT REPRODUCE

Production to 1923 $902,000. Silver - major metal (J. W. Still's figures)

KAP WR 7/15/77 The Allen Springs Road was traveled from Jerome to Mingus Mt., a trip of 26 miles which took 5½ hours of continuous driving. There has been no sign of recent activity at the Iron King or Copper Chief mines in Sec. 1 & 12, T15N, R2E. Some effort appears to have been made to smooth out and seed the dumps of the Copper Chief Mine.

---

KAP WR 1/14/83 A visit was made to the Copper Chief Mine in Section 12, T15N, R2½E. Recent work consists of road repairs and cutting drill pads. A plastic lined pond has been constructed at the portal of one of the adits, apparently to collect water for drilling. Sulfide material on the dump is indicitive of a massive sulfide deposit in "greenstone schist" - meta andesite - dacite or basalt. The portal has caved, but is still making water.

---

DAVE

M.COMPANY
ENGINEERING
MINING
CONSTRUCTION

FRANK J. MONTONATI
MINING ENGINEER
Box 662
1036 Reese Street
Silverton, Colorado
81433
303-387-5734

MCO
611 MILLER VALLEY RD.
PINE PLAZA, SUITE 14
PRESCOTT, AZ 86301

START

SHEA COPPER CO. FILE
BOTTLIN VERDE DIST.

STATE MINE INSPECTOR

JAN 30 1984

Mr. J. R. Matt
acting Chief Deputy Mine Inspector

Dear Mr. Matt.

T15N R2E

I plan to activate the lower Iron King addit for the purpose of cleaning out the portal area so that personell may enter the workings for the purpose of geological mapping.

T15N R2E

I will also clear the Copper King crosscut for the same purpose.

Both of the above workings are located on the extention of the airport road at Cottonwood AZ, and the work preformed will be by my company MCO; for Phelps Dodge corp., Western Exploration Division, Chuck Arnold as Phelps Dodge representative.

This work will commence on Monday, Jan 30, 1984.

Sincerely
Frank Montonati

Cu - Au - Ag -

# SHEA COPPER COMPANY

JEROME, ARIZONA

Report on the property of the Shea Copper Company.

I. Location.

The property of the Shea Copper Company, consisting of four patented claims, namely, the Mary Ellen, Clark, Midgen and East Gold Reef, is situated in the Verde Mining District, Yavapai County, Arizona, eleven miles south of the Atcheson, Topeka and Santa Fe Railroad at Clarkdale, Arizona. The property lies among the steep foot hills on the eastern slope of the Black Hills Range, at an altitude of approximately 5300 to 5800 feet above sea level. The smelter town of Clarkdale, and the mining town of Jerome fourteen miles distant by wagon road, are bases of supplies for mining operations in the vicinity. Adjoining the claims of the Shea Copper Company on the north is the property of the Hayden Development Company now producing copper, gold, and silver ores.

2. Timber and Water.

All timber, which consisted of scattered cedar shrubs, has been destroyed on the Shea Copper Company's property. Abundant timber for domestic purposes is to be had in the neighboring mountains. A mountain stream, with its source in the hills above the company's claims, run throu h the property along the north side line of the Midgen claim and would furnish ample water for mining purposes.

# SHEA COPPER COMPANY

JEROME, ARIZONA

3. Geology.

Rocks. The formationds found on the property of the Shea Copper Company are typical of the Verde Mining District. The Company's claims lie in the same belt of Algonkian quartz schists and diorite which, in the neighboring Copper Chief mine of the Hayden Development Company, and also near Jerome, contains the rich copper, gold, silver ore-bodies of the district. In general, the ore deposits in the Verde Mining District have been found at or near to the contact of the intrusive diorite of Algonkian age and Algonkian schists.

Field relationships and the included rounded quartz grains and pebbles have proved the Algonkian schist to be a metamorphic sedimentary rock. The schist of today with its quartz grains, pebbles, and dense gray texture is an old sediment, transformed into a schist by dynamic forces and is the oldest rock of the region, the basement for all other formations. In other parts of the Verde Mining Districtthe quartz schist covers large areas and grades at times into feldspar schist, the rockbeing termed feldspar schist when the opaque white feldspar grains predominate over the number of quartz grains. Both the quartz and the feldspar schists are propably the result of metamorphism of similiar old sedimentary rocks, variations in the composition of the sediments having governed the formation of quartz or feldspar schists.

# SHEA COPPER COMPANY

JEROME, ARIZONA

Fine grained diorite of Algonkian age has intruded the quartz and feldspar schists in the form of small batholiths ,sills and dikes.On the property of the Shea Copper Company the diorite outcrop covers three-fourths of the surface.Small dykes of diorite are to be seen traversing the schist.A number of schist blocks several hundred feet long and approximately I00 feet wide have been carried up in the intrusive diorite and remain today as isolated remnants in the diorite.At,or near the contact of these schists and diorite is found the greater amount of faulting and mineralization in the region.

Faults.

Five zones of north-east south-west faulting cross the Shea Copper Company 's property,having a strike of approximately 50 degrees East and a dip to the north of 65 degrees.The displacement by the faults appears to have been slight,movement of the walls being taken up in broad shear zones running paralell to the faulting.Mineralization occurs along all fault zones,and is expressed chiefly by croppings of quartz and hematite.

Out crops and Veins.

Vein outcrops on the property may be referred to two different types:First,prominant quartz and iron oxide croppings usually indicating flat veins of quartz and pyrite sometimes continuous and again of short duration;

SECOND:,iron oxides and minor amounts of quartz in faults and shear zones representing an entirely different condition of mineralization from the flat quartz veins.Altho the second type of vein appears to be later than the first, there does not seem to have been serious interruption to to the continuity of the quartz vein outcrops and little trouble need be anticipated in following the underground development.

A strong quartz vein outcrop,from two to five feet widecrosses the Mary Ellen and Midgen Claims.This outcrop,as shown on the geologic map,can be traced on the surface for a distance of 1500 feet.Altho exact data cannot be given on account of the accumulation of surface debris, it seems most probable that this outcrop represents one continuous vein,the dip of the ledge varying from 25 degrees to the east to 25 degrees to the south.Several shallow inclines have been sunk on this vein,disclosing the same width and condition of quartz and iron oxides as is to be seen on the surface.While,it may be said that this vein is strong and persoists on the surface,there is every reason to beleive that the character of the vein will not change with depth and ore bodies within it will be limited in extent and occurrence.

# SHEA COPPER COMPANY

JEROME, ARIZONA

The second class of outcrop the shear zone with associated iron oxides and quartz, has a number of examples on the property. These zones are all to be found on the East Gold Reef claim, patticularily along the south end line. In the shear zone nearest to the southwest corner of the East Gold Reef Claim minor amounts of quartz, iron oxides, malachite, azurite, and chalcocite are found. Intermittent bunches of quartz are found in the shear zone next east, and further east, another zone of shearing is marked in places with stringers of hematite and leache d capping stained with iron oxides.

Continuity of quartz outcrops and leached material stained with iron oxides is seldom seen in the shear zones at the surface. Most commonly the zone is indicated by a highly fractured and pulverized condition of the diorite and quartz schist.

Future development in the Verde Mining District will, to a large extent, centre around shear zones in diorite near the contacts of diorite and quartz schist. Evidences of mineralization in these shear zones are strong in places on the property and the discovery of ore bodies in the Shea Copper Company's ground will depend on the intelligent prospecting of these zones of movement and crushing.

The Grand Island Vein.

South of the Clark and Midgen Claims lies the property of the Grand Island Mining Company. Several shafts have been sunk on this property and drifts run in an endeavor to develop a flat quartz vein apexing in the Grand Island ground. Altho this vein if uninterrupted, the strike would cross the Clark Claim it has not been followed to the property of the Shea Copper Company. A diorite dyke passing to the west of the south west corner of the East Gold Reef Claim, has effectually destroyed the continuity of the Grand Island Vein, and it cannot be expected to show in the development of the Shea Copper Company's ground.

On the southern slopes of the hills that occupy the south western portion of the East Gold Reef Claim, croppings of small quartz stringers are common. These outcrops have a general northwesterly direction and a northerly and northwesterly direction and a northerly dip and appear to be related to the class of flat dipping quarz veins described heretofore. As no indications of precious metals are to be found in these veinlets and as they are of limited extent and indefinite in size and strike, they are not worthy of investigation and can be overlooked in plans for the development of the property.

# SHEA COPPER COMPANY

JEROME, ARIZONA

The Copper Chief Ore Body.

North of the claims of the Shea Copper Company lies the property of the Hayden Development Company known as the Copper Chief Mine.Large bodies of copper,gold,silver ore have been worked in the Copper Chief Mine,and in the Iron King Mine adjoining it.The Copper Chirf Mine is activelly mining ore bodies within several hundred feet of the Shea Copper Company ground.Reference to the geologic map will show a contact of diorite and quartz schist crossing the eastern half of the Mary Ellen and Clark claims.It is along this contact and below it to the north of the company's property that the Copper Chief ore deposits have been found. While,no surface indications of ore are present along the contact on the Shea Copper Company ground it is a possibility that ore bodies occur below the surface on this contact and do not appear on the surface.It is ,therefore deemed wise to sink a line of diamond or churn drill holes about I00 feet apart along a line paralell to the contact or Upper Contact as marked on the geologic map.These holes should be started in the quartz schist about 250 feet west of the contact as marked on the geologic map,and would probably not have to be drilled to a depth of more than 600 feet before entering diorite and proving the existance or absence of ore bodies.

# SHEA COPPER COMPANY

JEROME, ARIZONA

The flat quartz vein outcropping near the east end line of the Mary Ellen Claim and running paralell to the end line, also appears in the Copper Chief ground to the north. Development of the Copper Chief Mine has proved this vein to be as barren 800 feet on its dip below the surface as at its outcrop. Development of this quartz vein should therefore be limited to the richest portions of the vein where definite ore shoots are indicated. It is probable that, altho this quartz vein will have long barren stretches there will be found shoots of profitable ore by intelligent development.

The East Gold Reef Fault Vein.

Following the common side line of the Midgen and East Gold Reef claims for a distance of 500 feet west of the common easrt claim corner, is a strong mineralized fault vein dipping 45 degrees to the south. Indications of mineralization consisting of iron oxides and quartz are found in this vein in greater abundance than at any other point on the Company's property and the outcrop gives more promise of ore bodies below than the surface exposures on other parts of the property.

Scheme of Development.

With the foregoing outline of veins and mineralized zones on the property of the Shea Copper Company's ground it is apparent that the region of most active movement and ore deposition was in the area embraced by the East Gold Reef Claim and the southern portion of the Midgen claim.

# SHEA COPPER COMPANY

JEROME, ARIZONA

There are therefore four main considerations in developing the company's ground;

I. The exploration of the mineralized north-east shear zones on the East Gold Reef Claim, showing on the geologic map.

2. The determination of the presence of ore bodies in the mineralized fault vein outcropping along the common side line of the Eaet Gold Reef Claim and Midgen claim.

3. The search for possible ore bodies in the flat quartz vein outcropping in the Midgen and Mary Ellen claims.

4. The prospecting by diamond or churn drills of the Upper Contact in the Mary Ellen and Clark claims.

Prospecting for ore in the property of the Shea Copper Company should be conducted at a depth of not less than 600 feet below the lowest elevation on the property. If ore deposits are to be found in the faulted and sheared zones, they will lie at a depth that will require shaft sinking and extensive crosscutting in the lower levels of the mine.

It would therefore be the best policy, to sink a shaft, at a point where with depth, the minimum amount of cross cutting would be necessary to intersect and explore the three fissure systems in the eastern half of the property.

# SHEA COPPER COMPANY

JEROME, ARIZONA

Conclusions.

The ore deposits of the Verde Mining District have been found to lie at or near to the contact of quartz schist and intrusive diorite.,both of Algonkian age.The ore deposits as a rule lie in shear zones in the diorite near the contact.At the Copper Chief and Iron King mines joining the Shea Copper Company on the north,large copper,gold,silver ore bodies have been developed along the contact of diorite and quartz schist.

The property of the Shea Copper Company contains several contacts of diorite and quartz schist and also shear zones similiar to those governing ore depositions in the neighboring mines.While,the presence of large ore bodies cannot be assured in the Shea Copper Company ground the indicationds on the surface of the property are favorable for the discovery of ore with deep and intelligent prospecting of the veins.

Respectfully submitted,

(Signed) C.P.Thompson.

June 8th, 1921

## SHEA MINE.

**Location:**

The Shea Mine is located about five miles south from Jerome but in order to get there it is necessary to go to Clakdale and take the old Copper Chief road. The last mile can scarcely be made in a car.

The property comprises five or six claims most of which are patented.

**Development:**

There is a shaft about 600 feet deep on the property, a long tunnel somewhat above the six hundred level and considerably drifting.

The makeup of the property does not indicate that there is much likelihood of its developing into a large mine. The formation is in veins, and the ore occurs in comparitively small lenses in the veins. When they do get the ore it is usually a very excellent grade of shipping ore and the mine would probably pay if worked conservatively and the capitalization kept down.

The mine has been closed down for some time until recently, when they got some more money and resumed operations. The have recently struck some further small bodies of high grade ore in the shaft, but they are the same type as formerally and there is no change in the general situation.

Will send further information in about another month.

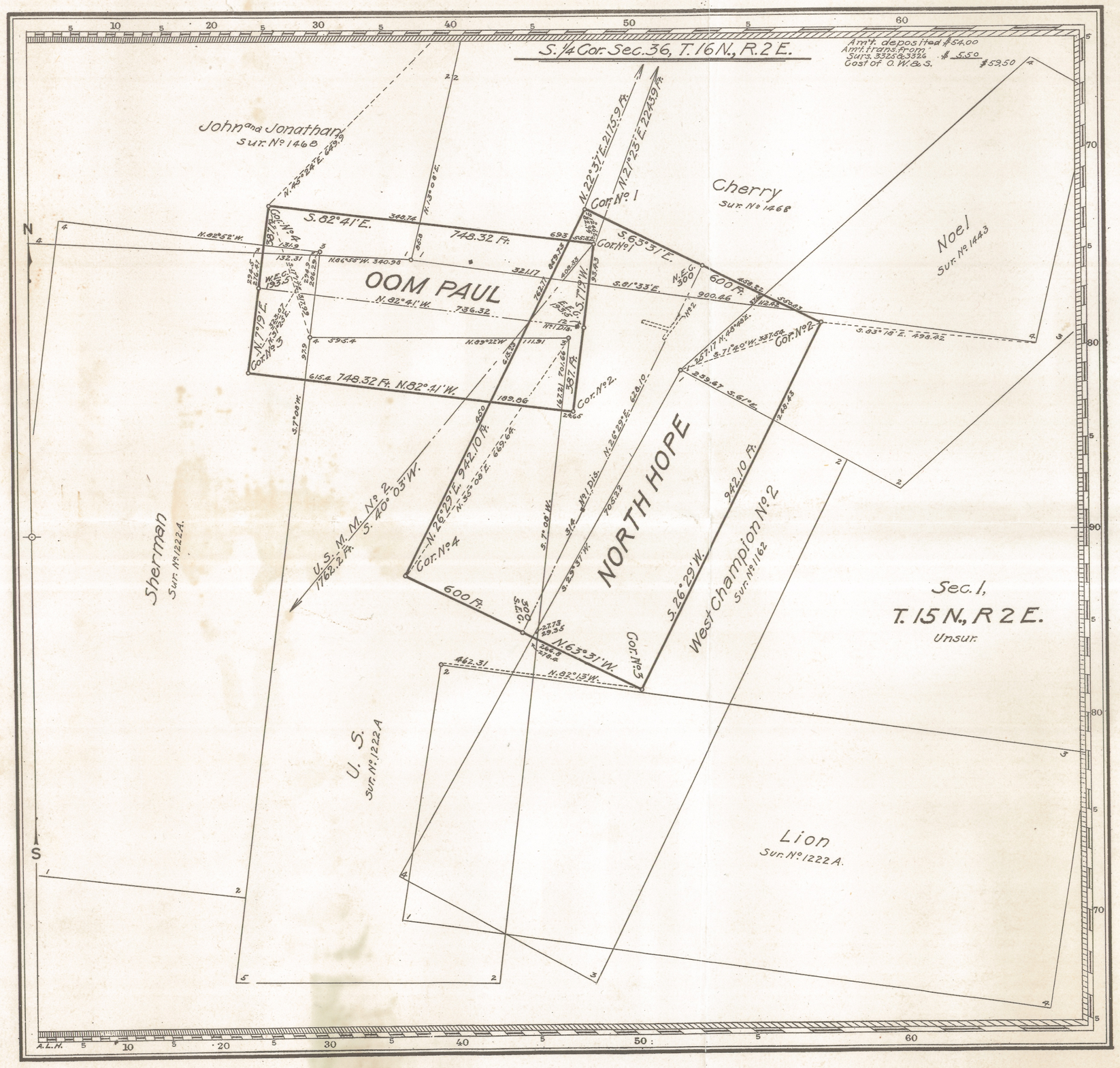
Very Respectfully,

MAP SHOWING PROPERTY OF

# SHEA COPPER COMPANY

VERDE MINING DISTRICT~YAVAPAI CO.~ ARIZ.

(4-675)




Claims Located: Am'd North Hope July 5, 1916.
" Oom Paul " 11, "

Mineral Survey No. 3327

Lot No. _____

Arizona Land District.

# PLAT

OF THE CLAIM OF

The Copper Chief Mining Company

KNOWN AS THE

**NORTH HOPE and OOM PAUL LODES**

IN Verde MINING DISTRICT,
Yavapai COUNTY, Arizona.

Containing an Area of _____ Acres.

Scale of 200 Feet to the inch.

Variation 15° E.

SURVEYED July 15-20, 1916, BY
E. A. Byler
U. S. ~~Deputy~~ Mineral Surveyor,

The Original Field Notes of the Survey of the Mining Claim of The Copper Chief Mining Company known as the North Hope and Oom Paul lodes.

from which this plat has been made under my direction, have been examined and approved, and are on file in this Office; and I hereby certify that they furnish such an accurate description of said Mining Claim as will, if incorporated into a patent, serve fully to identify the premises, and that such reference is made therein to natural objects or permanent monuments as will perpetuate and fix the locus thereof.

I further certify that Five Hundred Dollars worth of labor has been expended or improvements made upon, said Mining Claims or for each of by claimant _____ or its grantors and that said improvements consist of 2 Shafts, 1 tunnel and 1 drift, total value $1480.

that the location of said improvements is correctly shown upon this plat, and that no portion of said labor or improvements has been included in the estimate of expenditures upon any other claim.

And I further certify that this is a correct plat of said Mining Claim made in conformity with said original field notes of the survey thereof, and the same is hereby approved.

U.S. Surveyor General's Office.
Phoenix, Arizona,
April 24, 1917.

Thos. R. Frost
U.S. Surveyor General for
Arizona.