

MINERAL SURVEY No. 4216

ARIZONA

Land District

FIELD NOTES

OF THE SURVEY OF THE MINING CLAIM OF

PHELPS DODGE CORPORATION

KNOWN AS THE

NORMA lode

VERDE

Mining District,

Yavapai

County,

Arizona.

Section 22 Uns., Township 16 N., Range 2 E.

Surveyed under instructions dated July 18, 1938/9

By J. WILLIAM WAARA

~~XXX~~ Mineral Surveyor.

Claim located Dec. 6, 19 22

Survey commenced July 19, 1938

Survey completed Sept. 27, 19 39

Address of claimant Ellinwood & Ross, Attys. for claimant.
Title & Trust Bldg, Phoenix Arizona.

DATES OF AMENDED LOCATIONS

July 14, 1938

1/2

MINERAL SURVEY NO. 4216

Mineral Survey No. 4216 was made with a Lietz Light Mountain transit No. 9505 Model No.9 with horizontal limb 5 inches in diameter having double opposite verniers and full vertical circle 5 inches in diameter, having double opposite verniers, the horizontal verniers reading to thirty seconds of arc, and the vertical verniers reading to one minute of arc; the eye piece is fitted to receive a prismatic eye piece suitable for making direct observations upon the sun. This instrument is also equipped with a Saegmuller Solar attachment for making observations upon the sun. The instrument was in good condition at the time of the survey and all adjustments were in good order. Altitude observations of the sun for azimuth, and at noon on the meridian for latitude were made, the details of which observations are shown in the calculations sheets herewith submitted for examination. All azimuths in this record are referred to the true meridian thus determined, by the method of deflection angles and calculated courses. The lines were measured with a 1/8 inch steel tape 500 feet in length, graduated every foot, which was compared with a steel standard tape at the time of beginning the survey and found correct.

All lines and connections of this survey were run by direct methods. The magnetic variation observed at each corner of the survey gave a uniform value of $14^{\circ}-50'E$.

NORMA LCDE

Beginning at Cor. No.1 of the Norma lode; where I This corner fell on the slope of the south rim of the open pit where the operations of the company are centered, and at which point it was impracticable to set a permanent monument for a corner; from this corner, I established a witness corner $S.30^{\circ}-02'W. 43.80$ feet.

concrete footing about 18 inches deep with a cylindrical exposed top eight inches in diameter, fitted with quartz diorite rock in place 4x6x4 feet exposed and chiseled W C N 1 4216 with a cross(x) for exact corner point, whence; (from W C)

A diorite reef 10x6x6 feet high and chiseled on its westerly face BxR N 1 4216 brs. N.55°-27'E. 56.78 feet.

From true Corner point

The Northwest Corner Sec. 23 T. 16 N.R.2 E. of the Gila and Salt River Meridian brs. N. 39°-50'-37"E. 3956.7 feet.

No other bearings available.

Thence S.30°-02'W.
from true point for corner

33.0 Intersect edge of pit at 160 foot mine level.

43.80 Witness Corner to Cor. No.1 of this lode, heretofore described.

62.22 Witness Corner to Cor. No.2 of this lode hereafter described.

65.0 Witness Corner to SOUTH CENTER END, built a substantial mound of stone

Intersect lode line at

82.1 /SOUTH CENTER END, This point fell on a slope of the rim of the open pit where it was impracticable to build a monument, so a witness corner monument was constructed N.30°-02'E.17.1 feet.

98.0 COR. NO.2

On line 5-6 Wade Hampton lode Sur. No. 592.

This corner fell on the steep slope of the open pit where it was impossible to set a permanent concrete monument for a corner; from this corner I established a witness corner N.30°-02'E. 35.78 feet.

A diorite rock in place 15x20x15ft. exposed and chiseled W C N 2 4216 on its west side, with x for exact corner point, whence;(from W C)

A diorite boulder 6x3x2 feet exposed and chiseled BxR N 2 4216 brs.S.63°-23'W. 32.35 feet.

From true corner point;

Cor. No. 6 Wade Hampton lode Sur. No. 592 brs. S.28°-15'E. 18.0 feet.

Cor. No. 2 Chrome Northwestern No.1 lode Sur. No. 594 brs. S.18°-45'-50"W. 185.09 feet

Cor. No. 4 Safety Fraction lode Sur. No. 3472 brs. S.78°-52'-10"E. 547.08 feet.

Cor. No. 1 Captain lode Sur. No. 3646 brs. N.28°-15'W. 181.70 feet.

Thence N.31°-26'W.

50.0 Intersect edge of pit at 160 foot mine level.

186.02 Intersect line 1-2 Captain lode Sur. No. 3646, S.83°-04'-10"W. 11.09 feet from Cor. No. 1, situated on line 5-6

Wade Hampton lode Sur. No. 592 N.28°-15'W. 199.7 feet from Cor. No.6

462.90 Intersect line 2-3 Chrome Northwestern No.1 lode Sur. No. 594, N.17°-41'-40"W. 598.58 feet from Cor. No.2 ~~and 256.48 feet from its intersection with line 1-2 Captain lode Sur. No. 3646.~~

858.82 Intersect line 1-2 Captain lode Sur. No. 3879, N.83°-04'-10"E. 1.11 feet from Cor. No.2.

882.41 Intersect line 2-3 Captain lode Sur. No. 3879, N.28°-56'W, 23.16 feet from Cor. No.2.

904.0 Intersect edge of pit at 160 foot mine level.

932.65 COR. NO. 3.

Set a piece of drill steel about two feet deep into a drill hole sunk in diorite rock in place on north side of 160 foot mine level bench, and protruding about 20 inches, also chiseled N 3 4216 on diorite rock in place alongside drill hole with top of drill steel for exact corner point; whence;

Pt. for. Cor. No. 2 Captain Lode Sur. No. 1 3879 brs. S.30°-36'E. 73.47 feet.

No other bearings available.

Thence N.30°-02'E.

2.56 Intersect line 2-3 Captain lode Sur. No. 3879, N. 28°-56'W.

74.67 feet from Cor. No.2 ~~and 51.51 feet from its intersection with line 2-3 of this survey.~~

60.88 Intersect line 5-6 Wade Hampton lode Sur. No. 592, N.28°-15'W. 981.20 feet from Cor. No.6; 363.05 feet from its intersection with line 2-3 Chrome Northwestern No.1 lode Sur.No. 594; 124.32 feet from its intersection with line 1-2 Captain lode Sur. No. 3879.

65.0 Intersect lode line at NORTH CENTER END, built a substantial mound of stone.

73.45 Intersect line 1-2 Missing Link lode Sur. No. 1177, N.29°-33'-40"W. 278.26 feet from Cor. No.1; 136.38 feet from its intersection with line 1-2 Captain lode Sur. No. 3879.

81.9 Witness corner to Cor. No.4 of this lode hereafter described.

98.0 COR. NO.4.

This corner fell on the steep slope of the open pit where it was impracticable to set a permanent concrete monument for a corner; from this corner I established a witness corner S.30°-02'W. 16.1 feet.

Set a piece of drill steel about two feet deep into a drill hole sunk into diorite rock in place on north side of 160 foot mine level bench, and protruding about 30 inches, also chiseled W C N 4 4216 on diorite rock in place alongside of drill hole, with top of drill steel for exact corner point;whence; (from true corner point)

Cor. No. 1 Missing Link lode Sur. No. 1177 brs. S. 25°-23'-40"E. 291.45 feet.

No other bearings available.

Thence S. 31°-26'E.

25.0 Intersect edge of pit at 160 foot mine level.

159.88 Intersect line 1-2 Captain lode Sur. No. 3879, N.83°-04'-10"E. 95.73 feet from Cor. No.2; ~~9462 from its intersection with line 2-3 of this lode;~~ 43.40 feet from its intersection with line 5-6 Wade Hampton lode Sur. No. 592; 28.61 feet from its intersection with line 1-2 Missing Link lode Sur. No. 1177.

164.40 Intersect line 2-3 Chrome Northwestern No.1 lode Sur.No.

594, N.17°-41'-40"W. 961.08 feet from Cor.No.2; 222.13 feet from its intersection with line 5-6 Wade Hampton lode Sur. No. 592; 129.13 feet from Cor. No.1 Missing Link lode Sur. No. 1177.

304.09 Intersect line 4-1 Captain lode Sur. No. 3646, N.22°-41'-10"W. 499.74 feet from Cor. No.1; also intersect line 1-4 Missing Link lode Sur. No. 1177, N.83°-03' E. 33.82 feet from Cor. No.1

932.65 TO COR. No.1 and place of beginning!

LODE LINE

The presumed course of the vein of the location embraced in this survey, counted from the point of discovery, is as follows;

N.28°-51'W. 295.0 feet and S.28°-51'E. 662.0 feet.

AREA

NORMA LODE

	Acres
Total area - - - - -	1.842
Area in conflict with:	
Sur. No. 592, Wade Hampton lode,	.573
Sur. No. 594, Chrome Northwestern No.1 lode,	1.217
Sur. No. 594, Chrome Northwestern No.1 lode, exclusive of its conflict with Sur.No.592, Wade Hampton lode,	1.040
Sur. No. 1177 Missing Link lode,	.175
Sur. No. 1177 Missing Link lode, exclusive of its conflict with Sur.No.594, Chrome Northwestern No. 1 lode,	.126
Sur. No. 3646, Captain lode,	1.100
Sur. No. 3646, Captain lode, exclusive of its conflict with:	
Sur. No. 592, Wade Hampton lode,	.549
Sur. No. 594, Chrome Northwestern No.1 lode,	.627
Sur. No. 592, Wade Hampton lode, and Sur.No. 594, Chrome Northwestern No.1 lode,	.232
Sur. No. 1177 Missing Link lode,	.925
Sur. No. 1177 Missing Link and Sur. No.594, Chrome Northwestern No.1 lode,	.501
Sur. No. 3879, Captain lode,	.230
Sur. No. 3879, Captain lode, exclusive of its conflict with:	
Sur. No. 592, Wade Hampton lode,	.118
Sur. No. 1177 Missing Link lode,	.149
Sur. No. 3646, Captain lode,	.000
Sur. No. 3646, Captain lode, and Sur. No. 592, Wade Hampton lode,	.000
Sur. No. 3646, Captain lode and Sur. No. 1177, Missing Link lode,	.000

This survey is located in the northwest 1/4 Sec. 22 uns.

T.16 N.E.2 E of the Gila and Salt River meridian, in the Prescott National Forest, Yavapai County, State of Arizona.

The survey of the Norma lode is identical with the amended location as marked and witnessed upon the ground.

EXPENDITURE OF FIVE HUNDRED DOLLARS . . .

I hereby certify that the value of the labor and improvements made upon or for the benefit of the lode location embraced in this survey by the claimant or its grantors is not less than five hundred dollars, and that said improvements consist of;

No.1 The discovery cut of the Norma lode, the center of the face of which is on the lode line and bears N.28°-51'-00"W. 662.0 feet from the South Center End, cut 4x20x10 foot face hrs northerly.

Value \$100.00

No.2 Open pit excavation covering the net area of the Norma lode, being 0.069 acres, to a depth (from the 160 foot level to 600 foot level) of 440 feet, equivalent to practically 49000 cubic yards of open pit mine excavation

Value \$49000.00

OTHER IMPROVEMENTS

None.

OTHER CORNER DESCRIPTIONS

The corner of Sec414-15-22-23 T.16 N.R.2 E is a pipe with cap properly set and marked as called for in the field notes of the Public Land Survey. The 1/4^{Sec.} cor between Sec. 22-23 has been obliterated. This was unknown until ^{after the} corners of this survey were marked.

All corners of the conflicting claims have been destroyed in the open pit operations on the claimant's property, and it was necessary to determine the theoretical loci of such claims; this has been done as accurately as possible, using the claimants triangulation system records when conflicting records of approved mineral surveys made it seem advisable. Sur, 594, Chrome Northwestern No.1 lode.

The record of Survey No. 3473, Safety Fraction lode, shows Cor.No.6 of the Chrome Northwestern No.1 lode to be N.5°-44'W. 0.17 feet from Cor. No.4 said Safety Fraction lode. Cor.No.4 Safety Fraction lode is on the ground, and is a conical frustrum concrete monument, one foot exposed, fitted with pipe, cap, and reducer, with brass plate attached upon which are the markings of the corner. From this corner the locus of Cor. 6, Chrome Northwestern No.1, was determined.

From this locus for Cor.6 I accepted the record of the company's triangulation system S.83°-36'-39" W. 599.41 ft. for line 6-2 and for the course of line 2-3 adopted N.17°-41'-40"W as of record in Sur. No. 3879 and Sur. 3646.

Sur. 3646, Captain lode.

I accept the company's record of 1475.95 ft. for the length of line 2-3 Chrome Northwestern No.1 lode, and from point 1133.85 ft. from Cor.3, as recorded in Sur.3646, lay off 78.02 ft. N.83°-4'-10"E., also of record in Sur.No. 3646, to determine the locus of Cor.No.1 Captain lode, accepting the course S.83°-4'-10" W for line 1-2 and S.22°-41'-10"E. for line 4-1 Captain lode, both courses as of record in Sur. 3646.

SUR.592 Wade Hampton lode.

From the locus for Cor. No.1 Captain lode, Sur.3646, as above determined, I use the record as in Sur.3646 S.28°-15'E. 199.70 ft. for the locus of Cor. 6, and adopt for the course of line 5-6, S.28°-15'E., as of record in Sur.3646. SUR.1177, Missing Link lode.

On line 2-3 Chrome Northwestern No.1 lode as above determined, I accept point 644.0 ft. from Cor.3, as of record in Sur.3646, for the locus of Cor.1 and adopt the courses recorded in Sur. 3646 for lines 4-1 and 1-2. Sur. 3879, Captain lode.

I adopt the record for lines 1-2 and 2-3, basing the

locus for cor.1 on its relation to Sur. 3646 as of record.

The discrepancies found existing between the claim as marked by the location monuments and as described in the location notices are due to errors in the location notices.

REPORT

Owing to the distance from the nearest Notary Public and the expense and delay which would be involved, for my assistant to appear before one, I took the acknowledgment of my assistant in my capacity as a Mineral Surveyor.

Open Pit

All of the detail as shown on plat of this survey is within the open pit excavation area, above and below the 160 foot level heretofore mentioned. Enormous excavations have been made since Sur.No.3879 was executed. Cor. No.4 Safety Fraction lode Sur. No. 3473 is the only remaining corner of all recent or old surveys.

William Waara
Mineral Surveyor G.L.O.

FINAL OATHS FOR SURVEYS

LIST OF NAMES

A list of the names of the individuals employed by William Waara
 United States Mineral Surveyor, to assist in running, measuring, and marking the lines, corners, and
 boundaries described in the foregoing field notes of the survey of the mining claim of _____

Phelps Dodge Corporation
 known as the Norma lode
 and showing the respective capacities in which they acted.

Mark Mills, Chainman.
 _____, Chainman.
 _____, Axman.
 _____, Flagman.

FINAL OATHS OF ASSISTANTS

We, Mark Mills
 and _____, do solemnly swear that we assisted William
Waara, United States Mineral Surveyor, in marking the corners and surveying
 the boundaries of the mining claim of Phelps Dodge Corporation

 known as the Norma lode
 represented in the foregoing field notes as having been surveyed by said mineral surveyor and under his
 direction; and that said survey has been in all respects, to the best of our knowledge and belief, faithfully
 and correctly executed, and the corner and boundary monuments established according to law and the instruc-
 tions furnished by the Office Cadastral Engineer, at Phoenix Ariz.

Mark Mills, Chainman.
 _____, Chainman.
 _____, Axman.
 _____, Flagman.

Subscribed and sworn to by the above-named persons before me this 13th

day of July, 19 39

William Waara
 Mineral Surveyor
G.L.O.

FINAL OATH OF ~~ESS~~ MINERAL SURVEYOR

I, J. William Waara, ~~XXXX~~ Mineral Surveyor,
do solemnly swear that, in pursuance of instructions received from the Office Cadastral
Engineer, at Phoenix Arizona., dated July 18, 1938,
I have, in strict conformity to the laws of the United States, the official regulations
and instructions thereunder, and the instructions of said Office Cadastral Engineer,
faithfully and correctly executed the survey of the mining claim of _____
Phelps Dodge Corporation, known as the
_____ NORMA lode _____,
situate in Verde _____ Mining District,
Yavapai County, Arizona., in Section
22 unsur., Township No. 16 N., Range No. 2 E.
and designated as Survey No. 4216, as represented
in the foregoing field notes, which accurately show the boundaries of said mining claim
as distinctly marked by monuments on the ground, and described in the attached copy of
the location certificate, which was received by me from the Office Cadastral Engineer
with said instructions, and that all corners of said survey have been established and
perpetuated in strict accordance with the law, official regulations and instructions
thereunder; and I do further solemnly swear that the foregoing are the true and original
field notes of said survey and my report therein, and that the labor expended and im-
provements made upon said mining claim by claimant or its
grantors are as therein fully stated, and that the character, extent, location, and
itemized value thereof are specified therein with particularity and full detail, and
that no portion of said labor or improvements so credited to this claim has been in-
cluded in the estimate of expenditures upon any other claim. _____

J. William Waara
(~~XXXX~~ Mineral Surveyor) G.L.O.

Subscribed and sworn to by the said J. William Waara

~~XXXX~~ Mineral Surveyor, before me J. C. Bauer

_____ this 26th
day of Sept., 19 39

J. C. Bauer
Notary Public

My commission expires

1/10/41

OFFICE CADASTRAL ENGINEER'S FINAL CERTIFICATE ON FIELD NOTES

United States
Department of the Interior
GENERAL LAND OFFICE
PUBLIC SURVEY OFFICE

Phoenix, Arizona.

September 25, 1940

I, Office Cadastral Engineer, at Phoenix, Arizona

do hereby certify that the foregoing transcript of the Field Notes, return and approval of the survey of the mining claim of

Phelps Dodge Corporation

known as the NORMA lode

situate in Verde

Mining District Yavapai County Arizona

in Section 22, Unsur., Township No. 16 N., Range No. 2 E., and

designated as Survey No. 4216, has been correctly copied from the originals on file in

this office; that said Field Notes 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, or for the benefit of, each location embraced in said mining claim by claimant

or its grantors,

and that said improvements consist of 1 cut, value \$100, and about 49,000 cubic yards of open pit excavation, value \$49,000; total value \$49,100.

and that no portion of said labor or improvements has been included in the estimate of expenditures upon any other claim.

I further certify that the plat thereof, filed in the District Land Office at Phoenix, Arizona is correct and in conformity with the foregoing Field Notes.

Sherman C. Fiske

Office Cadastral Engineer.

CERTIFICATE OF APPROVAL OF FIELD NOTES AND SURVEY OF MINING CLAIM

UNITED STATES DEPARTMENT OF THE INTERIOR GENERAL LAND OFFICE PUBLIC SURVEY OFFICE

At Phoenix, Arizona,

September 25, 1940

I, Office Cadastral Engineer at Phoenix, Arizona,

do hereby certify that the foregoing and hereto attached Field Notes and Return of the Survey of the Mining Claim of

Phelps Dodge Corporation

, known as the

NORMA lode

situate in Verde mining district,

Yavapai County, Arizona

in Section 22, Unsur., Township No. 16 N., Range No. 2 E.

, designated as Survey No. 4216

executed by J. William Waara, Mineral

Surveyor, July 19, 1938 - Sept. 27, 1939, under my instructions dated

July 18, 1938, have been critically examined and the necessary

corrections and explanations made, and the said Field Notes and Return, and the Survey they describe,

are hereby approved. The certified copy of the location certificate filed by the applicant for survey is

on file in this office and a true copy of said certified copy of said location certificate is included and

made a part of the transcript of the field notes.

Sherman C. Fiske Office Cadastral Engineer.