

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

MINERAL SURVEY NO. 4407

ARIZONA Land District.

FIELD NOTES

Of The Survey Of The Mining Claim Of

ARIZONA MANGANESE CORPORATION

Known As The

Muroc No. 5, Muroc No. 6, Muroc No. 7, Maggie No. 27, Rudy No. 2, Rudy No. 3,
Rudy No. 5, Rudy No. 6, Rudy No. 7, Rudy No. 8, Rudy Fraction and Mesa No. 5
lode claims

OWENS Mining District,

Mohave County, Arizona

Section 31 Township 12 North Range 13 West
Section 6, Township 11 North, Range 13 West

Surveyed under order dated June 20 and Aug. 17, 1956

by J. WILLIAM WAARA
Mineral Surveyor.

Claim located see inside cover, 19

Survey commenced June 21, 1956

Survey completed October 10, 1956

Address of claimant Arizona Manganese Corporation
c/o Fred J. Elliott, Attorney
Security Bldg., Phoenix, Arizona

DATES OF AMENDED LOCATIONS

Name of Location	Date Located
Muroc No. 5	June 9, 1956
Muroc No. 6	August 11, 1956
Muroc No. 7	August 11, 1956
Maggie No. 27	June 6, 1956
Rudy No. 2	June 9, 1956
Rudy No. 3	August 11, 1956
Rudy No. 5	June 5, 1956
Rudy No. 6	June 6, 1956
Rudy No. 7	June 11, 1956
Rudy No. 8	June 11, 1956
Rudy Fraction	May 22, 1956
Mesa No. 5	November 17, 1933

SURVEY NO. 4407

1.

Comments

This survey was made with a Lietz light mountain transit No. 5403 with horizontal limb 5 ins. in diam., having two double opposite verniers, and full vertical-circle 5 ins. in diam., having two double opposite verniers; the horizontal limb verniers read to thirty seconds of arc, and the vertical circle verniers read to one minute of arc; the eyepiece is fitted to receive a clear and colored prismatic eyepiece suitable for making direct observations upon the sun. The instrument was in good condition at the time of the survey and all adjustments were in good order.

All azimuths in this record were determined by the method of deflection angles referred to the meridian determined by the following observation:

July 21, 1956, on the north end line of the Rudy No. 2 lode, near its center end in latitude $34^{\circ}20' N.$, and longitude $113^{\circ}39' W.$, I made a series of six altitude observations upon the sun for azimuth at approximately equal time intervals, three each with the telescope in direct and reversed positions, observing the opposite limbs of the sun, and reading the horizontal angle from a reference point about 600 feet westward, counterclockwise to the sun.

Mean time of observation, 105th meridian standard time = $10^h00^m A.M.$

Declination of the sun at mean time of observation = $20^{\circ}23'18'' N.$

Mean observed vertical angle to sun's center = $52^{\circ}51'05''$

Mean horizontal angle from reference point to sun's center = $168^{\circ}21'23''$

True bearing to reference point = $N.89^{\circ}57'00'' W.$

The lines were measured with a 500 foot steel tape, graduated every foot. This tape was compared with a 100 foot standard steel 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 declination observed at each corner of the survey gave a uniform value of $15^{\circ}00' E.$

The geographic position of the cor. of Ts. 11 and 12 N., Rs. 13 and 14 W., as derived from township plats is latitude $34^{\circ}19'54'' N.$, and longitude $113^{\circ}39'56'' W.$

MAGGIE NO. 27 LODE

Feet

At Cor. No. 1 of the Maggie No. 27 lode of this survey, identical with Cor. Nos. 1 and 4 of Sur. No. 4211 Maggie No. 27 and Maggie No. 26 lodes.

A volcanic stone 10 ins. exposed, set as original corner stone, with mound of stone alongside, chiseled M 26-4-4211, M 27-1-4407; from which

The $\frac{1}{4}$ sec. cor. of Secs. 30 and 31, T. 12 N., R. 13 W., bears S. $89^{\circ}51' E.$, 958.3 ft. dist.

No bearing trees or bearing objects available.

Thence S. $0^{\circ}09' W.$

1145.0

Gulch, drains southwesterly.

1300.0

Road, bears NE. and SW.

1500.0

Cor. No. 2, identical with Cor. No. 4 Mesa No. 5 and Cor. No. 3 Rudy No. 6 lodes, of this survey and located on line 1-2 Maggie No. 27 lode, and line 4-3 Maggie No. 26 lode of Sur. No. 4211.

SURVEY NO. 4407

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CHAINS Feet	
155.0	<p>Set an iron pipe, 30 ins. long, 1/2 in. diam., fitted with a floor flange, 18 ins. into the ground and surrounded by a mound of stone, with copper plate mkd. M 27-2, M 5-4, R 6-3-4407; from which</p> <p>Cor. Nos. 2, 3, and 4 of Sur. No. 4211 Maggie No. 27, Maggie No. 26, and Mesa No. 5 lodes, bears S. 0°09' W., 15.0 ft. dist.</p> <p>No bearing objects or bearing trees available.</p> <p>Thence N. 89°51' W.</p>
290.0	<p>Road, bears NE. and SW.</p>
300.0	<p>Gulch, drains southwesterly.</p>
600.0	<p>A mound of stone on lode line; the discovery point bears N. 0°09' E., 250.0 ft. dist.</p>
1500.0	<p>Cor. No. 3, identical with Cor. No. 2 Rudy No. 6 lode and Cor. No. 3 Rudy No. 5 lode, both of this survey, and located on line 3-4 Maggie No. 27 lode of Sur. No. 4211.</p> <p>Set an iron pipe, 30 ins. long, 1/2 in. diam., fitted with a floor flange, 18 ins. into the ground and surrounded by a mound of stone, with copper plate mkd. M 27-3, R 6-2, R 5-3-4407; from which</p> <p>Cor. No. 3, Sur. No. 4211 Maggie No. 27 lode, bears S. 0°09' W., 25.8 ft. dist.</p> <p>No other bearing objects or bearing trees available.</p> <p>Thence N. 0°09' E.</p>
300.0	<p>Cor. No. 4, identical with Cor. No. 4 Sur. No. 4211 Maggie No. 27 lode.</p>
600.0	<p>A volcanic stone 10 ins. exposed, set as original corner stone of Sur. No. 4211, with mound of stone alongside, chiseled M 27-4-4211-4407.</p> <p>No bearing objects or bearing trees available.</p> <p>Thence S. 89°51' E.</p>
300.0	<p>A mound of stone on lode line; the discovery point bears S. 0°09' W., 1250.0 ft. dist.</p>
600.0	<p>Cor. No. 1 and place of beginning.</p>
MESA NO. 5 LODE	
<p>Beginning at Cor. No. 1 of the Mesa No. 5 lode located on line 1-2 Maggie No. 26 lode, identical with line 3-4 Maggie No. 8 lode, both of Sur. No. 4211.</p>	
<p>It was impracticable to set a pipe corner at this point, so I established a witness cor. S. 0°08' W., 4.2 ft., a two inch pipe set in concrete and three ft. exposed, surrounded by a mound of stone, marked M 5-1, M 4-4, M 8-3, M 26-2-4211, also W C 4407 on cap of pipe.</p>	

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CHAINS Feet	
	<p>The $\frac{1}{4}$ sec. cor. of Secs. 30 and 31, bears N. $13^{\circ}35'$ E., 1542.3 ft. dist. (from true cor. point).</p>
	<p>No bearing trees or bearing objects available.</p>
	<p>Thence S. $0^{\circ}08'$ W. (from true cor. point)</p>
4.2	<p>Witness cor. to Cor. No. 1 of this lode, identical with Cor. Nos. 1, 2, 3, and 4, Sur. No. 4211 Mesa No. 5, Maggie No. 26, Maggie No. 8, and Mesa No. 4 lodes.</p>
1500.0	<p>Cor. No. 2, identical with Cor. No. 3 of the Muroc No. 6 lode of this survey and Cor. Nos. 3 and 4 Sur. No. 4211 Mesa No. 4 and Rudy lodes, and Cor. No. 2 Sur. No. 4211 Mesa No. 5 lode.</p>
	<p>A volcanic stone 10 ins. exposed, set as original cor. stone of Survey No. 4211 with mound of stone alongside, chiseled M 4-3, M 5-2, R-4-4211 and M 6-3-4407.</p>
	<p>No bearing objects or bearing trees available.</p>
	<p>Thence N. $89^{\circ}51'$ W.</p>
300.0	<p>A mound of stone on lode line; the discovery point bears N. $0^{\circ}08'$ E., 750.0 ft. dist.</p>
600.0	<p>Cor. No. 3, identical with Cor. No. 4 Rudy No. 6 lode of this survey and cor. Nos. 3, 3, and 2 of Sur. No. 4211 Mesa No. 5, Rudy, and Rudy No. 1 lodes.</p>
	<p>A volcanic stone 10 ins. exposed, set as original cor. stone of Sur. No. 4211 with mound of stone alongside, chiseled M 5-3, R-3, R 1-2-4211, R 6-4-4407.</p>
	<p>No bearing objects or bearing trees available.</p>
	<p>Thence N. $0^{\circ}08'$ E.</p>
1485.0	<p>Cor. Nos. 2, 3, and 4 of Sur. No. 4211 Maggie No. 27, Maggie No. 26, and Mesa No. 5 lodes, whence Cor. No. 2 Maggie No. 26 lode, and Cor. No. 1 Mesa No. 5 lode, bears N. $89^{\circ}09'$ E., 600.0 ft. dist.</p>
1500.0	<p>Cor. No. 4, identical with Cor. No. 3 Rudy No. 6 lode, and Cor. No. 2 Maggie No. 27 lode, both of this survey, and located on line 1-2 Maggie No. 27 lode, identical with line 3-4 Maggie No. 26 lode, both of Sur. No. 4211.</p>
	<p>Thence S. $89^{\circ}51'$ E.</p>
300.0	<p>A mound of stone on lode line; the discovery point bears S. $0^{\circ}08'$ W., 750.0 ft. dist.</p>
600.0	<p>Cor. No. 1 and place of beginning.</p>
<p>RUDY NO. 6 LODE</p>	
	<p>Beginning at Cor. No. 1 of the Rudy No. 6 lode, identical with Cor. No. 2 Muroc No. 5 lode, Cor. No. 4 Rudy No. 5 lode, both of this survey and Cor. No. 1, Sur. No. 4211 Rudy No. 1 lode.</p>

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SURVEY NO. 4407

4

07888 Feet	A two inch iron pipe set in concrete and three feet exposed, surrounded by a mound of stone, mkd. R 1-1-4211, M 5-2, R 5-4, R 6-1-4407; from which The west $\frac{1}{4}$ sec. cor. of Sec. 31, T. 12 N., R. 13 W., bears N. $70^{\circ}02'$ W., 1058.4 ft. dist. No bearing objects or bearing trees available. Thence N. $0^{\circ}08'$ E.
910.0	Road, bears NE. and SW.
1200.0	Gulch, course southwesterly.
1474.2	Cor. No. 3 Sur. No. 4211 Maggie No. 27 lode, whence Cor. No. 2 of same, bears N. $89^{\circ}09'$ E., 600.0 ft. dist.
1500.0	Cor. No. 2, identical with Cor. Nos. 3 of the Maggie No. 27 and Rudy No. 5 lodes of this survey. Thence S. $89^{\circ}51'$ E.
300.0	A mound of stone on lode line; the discovery point bears S. $0^{\circ}08'$ W., 80.0 ft. dist.
310.0	Gulch, course southwesterly.
445.0	Road, bears NE. and SW.
600.0	Cor. No. 3, identical with Cor. No. 2 Maggie No. 27 lode, and Cor. No. 4 Mesa No. 5 lode, both of this survey. Thence S. $0^{\circ}08'$ W.
15.0	Cor. Nos. 2, 3, and 4 of Sur. No. 4211 Maggie No. 27, Maggie No. 26, and Mesa No. 5 lodes.
1500.0	Cor. No. 4, identical with Cor. No. 3 Mesa No. 5 lode of this survey, and Cor. Nos. 3, 3, and 2 of Sur. No. 4211 Mesa No. 5, Rudy, and Rudy No. 1 lodes. Thence N. $89^{\circ}51'$ W.
300.0	A mound of stone on lode line; the discovery point bears N. $0^{\circ}08'$ E., 1420.0 ft. dist.
600.0	Cor. No. 1 and place of beginning.
	RUDY NO. 5 LODE
	Beginning at Cor. No. 1, identical with Cor. No. 1 Muroc No. 5 lode of this survey.
	Set an iron pipe, 30 ins. long, $\frac{1}{2}$ in. diam., fitted with a floor flange, 18 ins. into the ground and surrounded by a mound of stone, with copper plate mkd. R 5-1, M 5-1-4407; from which The west $\frac{1}{4}$ sec. cor. of Sec. 31, bears N. $47^{\circ}38'$ W.; 534.3 ft. dist. No bearing objects or bearing trees available. Thence N. $0^{\circ}08'$ E.

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1500.0	Cor. No. 2	
	Set an iron pipe, 30 ins. long, 1/2 in. diam., fitted with a floor flange, 18 ins. into the ground and surrounded by a mound of stone, with copper plate mkd. R 5-2-4407.	
	No bearing objects or bearing trees available.	
	Thence S. 89°51' E.	
300.0	A mound of stone on lode line; the discovery point bears S. 0°08' W., 1485.0 ft. dist.	
600.0	Cor. No. 3, identical with Cor. No. 3 Maggie No. 27 lode and Cor. No. 2 Rudy No. 6 lode of this survey.	
	Thence S. 0°08' W.	
25.8	Cor. No. 3 of Sur. No. 4211 Maggie No. 27 lode.	
300.0	Gulch, course southwesterly.	
590.0	Road, bears NE. and SSW.	
1500.0	Cor. No. 4, identical with Cor. No. 1 Rudy No. 6 lode, and Cor. No. 2 Muroc No. 5 lode of this survey, and Cor. No. 1 Sur. No. 4211 Rudy No. 1 lode.	
	Thence N. 89°51' W.	
20.0	Road, bears NW. and SE.	
275.0	Gulch, course southerly.	
300.0	A mound of stone on lode line; the discovery point bears N. 0°08' E., 15.0 ft. dist.	
600.0	Cor. No. 1 and place of beginning.	
MUROC NO. 5-LODE		
	Beginning at Cor. No. 1, identical with Cor. No. 1 Rudy No. 5 lode of this survey.	
	Thence S. 89°51' E.	
300.0	A mound of stone on lode line; the discovery point bears S. 0°13' W., 1365.0 ft. dist.	
325.0	Gulch, course southerly.	
580.0	Road, bears NW. and SE.	
600.0	Cor. No. 2, identical with Cor. No. 4 Rudy No. 5 lode; Cor. No. 1 Rudy No. 6 lode of this survey and Cor. No. 1 of Sur. No. 4211 Rudy No. 1 lode.	
	Thence S. 0°13' W.	
20.0	Road, bears NW. and SE.	

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Chains Feet	
1500.0	Cor. No. 3, identical with Cor. No. 4 Sur. No. 4211 Rudy No. 1 lode, located on line 1-2 Rudy No. 7 lode of this survey, A volcanic stone 10 ins. exposed, set as original corner stone of Sur. No. 4211, with mound of stone alongside, chiseled R 1-4-4211, M 5-3-4407. Thence N. 89°51' W.
20.0	Gulch, course southeasterly.
42.2	A mound of stone on lode line of the Rudy No. 7 lode of this survey.
300.0	A mound of stone on lode line; the discovery point bears N. 0°13' E., 135.0 ft. dist.
330.5	Cor. No. 1 of the Rudy No. 7 lode, identical with Cor. No. 2 of the Rudy No. 8 lode of this survey.
600.0	Cor. No. 4 on line 1-2 of the Rudy No. 8 lode of this survey. Set an iron pipe, 30 ins. long, 1/2 in. diam., fitted with a floor flange, 18 ins. into the ground and surrounded by a mound of stone, with copper plate mkd. M 5-4-4407. No bearing objects or bearing trees available. Thence N. 0°13' E.
1500.0	Cor. No. 1 and place of beginning.
	RUDY NO. 8 LODE
	Beginning at Cor. No. 1 of the Rudy No. 8 lode. Set an iron pipe, 30 ins. long, 1/2 in. diam., fitted with a floor flange, 18 ins. into the ground and surrounded by a mound of stone, with copper plate mkd. R 8-1-4407; from which The cor. of Ts. 11 and 12 N., R _s . 13 and 14 W., G. & S.R. Mer., bears S. 3°05' W., 792.8 ft. dist. No bearing objects or bearing trees available. Thence S. 89°51' E.
308.7	A mound of stone on lode line; the discovery point bears S. 15°15' E., 1386.2 ft. dist.
349.5	Cor. No. 4 Muroc No. 5 lode of this survey.
619.0	Cor. No. 2, identical with Cor. No. 1 Rudy No. 7 lode of this survey, located on line 3-4 Muroc No. 5 lode of this survey. Set an iron pipe, 30 ins. long, 1/2 in. diam., fitted with a floor flange, 18 ins. into the ground and surrounded by a mound of stone, with copper plate mkd. R 8-2, R 7-1-4407. No bearing objects or bearing trees available.

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Chains Feet	Thence S. 15°15' E.
1476.2	Cor. No. 3, identical with Cor. No. 4 Rudy No. 7 lode of this survey. Set an iron pipe, 30 ins. long, 1/2 in. diam., fitted with a floor flange, 18 ins. into the ground and surrounded by a mound of stone, with copper plate mkd. R 8-3, R 7-4-4407. No bearing objects or bearing trees available.
310.3	Thence N. 89°51' W. A mound of stone on lode line; the discovery point bears N. 15°15' W., 90 ft. dist.
395.0	Road, bears NNW. and SSE.
620.5	Cor. No. 4 Set an iron pipe, 30 ins. long, 1/2 in. diam., fitted with a floor flange, 18 ins. into the ground and surrounded by a mound of stone, with copper plate mkd. R 8-4-4407. No bearing objects or bearing trees available.
	Thence N. 15°12' W.
1476.0	Cor. No. 1 and place of beginning.
	RUDY NO. 7 LODE
	Beginning at Cor. No. 1 of the Rudy No. 7 lode, identical with Cor. No. 2 of the Rudy No. 8 lode of this survey; from which
	The cor. of Ts. 11 and 12 N., Rs. 13 and 14 W., bears S. 39° 58' W., 1030.0 ft. dist.
30.5	Thence S. 89°51' E. A mound of stone on lode line of the Muroc No. 5 lode of this survey.
287.3	A mound of stone on lode line; the discovery point bears S. 15°15' E., 1386.2 ft. dist.
310.5	Gulch, course southeasterly.
330.5	Cor. No. 3 Muroc No. 5 lode of this survey, identical with Cor. No. 4 Sur. No. 4211 Rudy No. 1 lode.
590.1	Cor. No. 2, identical with Cor. No. 3 Rudy No. 2 lode of this survey, located on line 3-4 Sur. No. 4211 Rudy No. 1 lode. Set an iron pipe, 30 ins. long, 1/2 in. diam., fitted with a floor flange, 18 ins. into the ground and surrounded by a mound of stone, with copper plate mkd. R 7-2, R 2-3-4407. No bearing objects or bearing trees available.
590.0	Thence S. 15°15' E. Gulch, course southeasterly.

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<p>810.0 Feet</p>	<p>Road, bears NE. and southerly.</p>
<p>1476.2</p>	<p>Cor. No. 3, identical with Cor. No. 2 Rudy No. 2 lode and Cor. No. 4 Rudy No. 3 lode, all of this survey. Set an iron pipe, 30 ins. long, 1/2 in. diam., fitted with a floor flange, 18 ins. into the ground and surrounded by a mound of stone, with copper plate mkd. R 7-3, R 2-2, R 3-4-4407. No bearing objects or bearing trees available.</p>
<p>275.0</p>	<p>Road, bears NE. and SW.</p>
<p>302.8</p>	<p>A mound of stone on lode line; the discovery point bears N. 15°15' W., 90.0 ft. dist.</p>
<p>590.0</p>	<p>Cor. No. 4, identical with Cor. No. 3 Rudy No. 8 lode of this survey.</p>
<p>1476.2</p>	<p>Cor. No. 1 and place of beginning. Thence N. 89°51' W.</p>
<p>RUDY NO. 2 LODE</p>	
<p>20.0</p>	<p>Beginning at Cor. No. 1 Rudy No. 2 lode, identical with Cor. No. 1 of the Rudy No. 3 lode of this survey.</p>
<p>39.8</p>	<p>The south 1/4 sec. cor. of Sec. 31, T. 12 N., R. 13 W., bears N. 23°41' E., 703.8 ft. dist.</p>
<p>71.1</p>	<p>No bearing objects or bearing trees available.</p>
<p>97.6</p>	<p>It was impracticable to set a pipe monument at this point due to steep slope and bed rock, so I established a witness corner N. 89°51' W., 39.8 ft. dist., from the true point, set an iron pipe, 30 ins. long, 1/2 in. diam., fitted with a floor flange, 18 ins. into the ground and surrounded by a mound of stone, with copper plate mkd. R 2-1, R 3-1, WC-4407.</p>
<p>310.0</p>	<p>No bearing objects or bearing trees available.</p>
<p>20.0</p>	<p>Thence N. 89°51' W. (from true corner point)</p>
<p>39.8</p>	<p>Gulch, course southerly.</p>
<p>71.1</p>	<p>Witness corner to Cor. No. 1, identical with witness Cor. No. 1 of the Rudy No. 3 lode of this survey.</p>
<p>97.6</p>	<p>Cor. No. 1 Rudy Fraction lode, on line 2-3 Muroc No. 7 lode of this survey.</p>
<p>310.0</p>	<p>A mound of stone on lode line of the Rudy Fraction lode of this survey.</p>
<p>310.0</p>	<p>Cor. No. 2 Rudy Fraction lode of this survey, identical with point on lode line; the discovery point bears N. 15°15' W., 1976.2 ft. dist.</p>

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Chains Feet	
620.0	Cor. No. 2, identical with Cor. No. 3 Rudy No. 7 lode and Cor. No. 4 Rudy No. 3 lode, both of this survey. Thence N. 15°15' W.
666.2	Road, bears NE. and S.
886.2	Gulch, course southeasterly.
1476.2	Cor. No. 3, identical with Cor. No. 2 Rudy No. 7 lode of this survey, and located on line 3-4 Sur. No. 4211 Rudy No. 1 lode. Thence S. 89°51' E.
190.0	Road, bears NNW and SSE.
310.0	A mound of stone on lode line; the discovery point bears S. 15°15' E., 500.0 ft. dist.
341.2	Cor. Nos. 3 and 2 of Sur. No. 4211, Rudy No. 1 and Rudy lodes.
590.0	Road, bears WNW. and ESE.
610.5	Witness Cor. No. 4, on line 1-2 Sur. No. 4211, Rudy lode. Set an iron pipe, 30 ins. long, 1/2 in. diam., fitted with a floor flange, 18 ins. into the ground and surrounded by a mound of stone, with copper plate mkd. R 2-4-WC-4407. No bearing trees or bearing objects available.
620.0	Cor. No. 4, identical with Cor. No. 3 Rudy Fraction lode of this survey, located on line 1-2 Sur. No. 4211 Rudy lode. This corner falls in a watercourse where it is impracticable to set a monument. Thence S. 15°15' E.
10.0	Road, bears WNW and S. of E.
1209.02	Intersect line 4-1 Rudy Fraction lode, and line 2-3 Muroc No. 7 lode, both of this survey.
1476.2	Cor. No. 1 and place of beginning.

RUDY FRACTION LODE

Beginning at Cor. No. 1 Rudy Fraction lode, located on line 2-3 Muroc No. 7 lode and line 1-2 Rudy No. 2 lode, and line 4-1 Rudy No. 3 lode, all of this survey.

Set an iron pipe, 30 ins. long, 1/2 in. diam., fitted with a floor flange, 18 ins. into the ground and surrounded by a mound of stone, with copper plate mkd. R F-1-4407; from which

The south $\frac{1}{4}$ sec. cor. of Sec. 31, T. 12 N., R. 13 W., bears N. 28°46' E., 735.0 ft. dist.

Thence N. 89°51' W.

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Chains Feet		Feet
26.5	A mound of stone on lode line; the discovery point bears N. 0°11' E., 1300.8 ft. dist.	0.050
238.9	Cor. No. 2 on line 1-2 Rudy No. 2 lode and line 4-1 Rudy No. 3 lode, both of this survey. Set an iron pipe, 30 ins. long, 1/2 in. diam., fitted with a floor flange, 18 ins. into the ground and surrounded by a mound of stone, with copper plate mkd. R.F-2-4407. No bearing objects or bearing trees available. Thence N. 3°09' W.	0.000
570.0	Gulch, course southeasterly.	0.000
1420.0	Road, bears WNW and ESE.	0.000
1425.2	Cor. No. 3, identical with Cor. No. 4 Rudy No. 2 lode of this survey, located on line 1-2 Sur. No. 4211 Rudy lode. (Not monumented). Thence S. 89°51' E.	0.000
9.5	Witness Cor. No. 3 located on line 1-2 Sur. No. 4211 Rudy lode. Set an iron pipe, 30 ins. long, 1/2 in. diam., fitted with a floor flange, 18 ins. into the ground and surrounded by a mound of stone, with copper plate mkd. R F-3-WC-4407. No bearing objects or bearing trees available.	0.000
295.2	A mound of stone on lode line; the discovery point bears S. 0°11' W., 122.0 ft. dist.	0.000
321.7	Cor. No. 4, identical with Cor. No. 2 Muroc No. 6 lode, Cor. No. 3 Muroc No. 7 lode, both of this survey, and Cor. No. 1 Sur. No. 4211 Rudy lode. A volcanic stone 10 ins. exposed, set as original corner stone of Sur. No. 4211 with mound of stone alongside, chiseled R-1-4211, R F-4, M 7-3, M 6-2-4407. No bearing objects or bearing trees available. Thence S. 0°11' W.	0.000
60.0	Road, bears N. of W. and ESE.	
1165.22	Intersect line 4-1 Rudy No. 2 lode of this survey.	
1248.0	Gulch, course southeasterly.	
1422.8	Cor. No. 1 and place of beginning.	
	MUROC NO. 7 LODE Beginning at Cor. No. 1 of the Muroc No. 7 lode. Set an iron pipe, 30 ins. long, 1/2 in. diam., fitted with a floor	

SURVEY NO. 4407

<p>Chains Feet</p>	<p>flange, 18 ins. into the ground and surrounded by a mound of stone, with copper plate mkd. M 7-1-4407; from which</p> <p>The south $\frac{1}{4}$ sec. cor. of Sec. 31, T. 12 N., R. 13 W., bears N. 18°47' W., 764.0 ft. dist.</p> <p>No bearing objects or bearing trees available.</p> <p>Thence N. 89°51' W.</p> <p>300.0 A mound of stone on the lode line; the discovery point bears N. 0°11' E., 600.0 ft. dist.</p> <p>507.56 Intersect line 1-2 Rudy No. 3 lode of this survey.</p> <p>515.0 Gulch, course southerly.</p> <p>600.0 Cor. No. 2.</p> <p>Set an iron pipe, 30 ins. long, 1/2 in. diam., fitted with a floor flange, 18 ins. into the ground and surrounded by a mound of stone, with copper plate mkd. M 7-2-4407.</p> <p>No bearing objects or bearing trees available.</p> <p>Thence N. 0°11' E.</p> <p>77.2 Cor. No. 1 Rudy Fraction lode, located on line 1-2 Rudy No. 2 lode, both of this survey.</p> <p>252.0 Gulch, course southeasterly.</p> <p>334.78 Intersect line 4-1 Rudy No. 2 lode of this survey.</p> <p>1440.0 Road, bears N. of W. and ESE.</p> <p>1500.0 Cor. No. 3, identical with Cor. No. 4 Rudy Fraction lode, Cor. No. 2 Muroc No. 6 lode, all of this survey, and Cor. No. 1 Sur. No. 4211 Rudy lode.</p> <p>Thence S. 89°51' E.</p> <p>300.0 A mound of stone on lode line; the discovery point bears S. 0°11' W., 900.0 ft. dist.</p> <p>600.0 Cor. No. 4, identical with Cor. No. 1 Muroc No. 6 lode, of this survey.</p> <p>Set an iron pipe, 30 ins. long, 1/2 in. diam., fitted with a floor flange, 18 ins. into the ground and surrounded by a mound of stone, with copper plate mkd. M 7-4, M 6-1-4407.</p> <p>No bearing objects or bearing trees available.</p> <p>Thence S. 0° 11' W.</p> <p>395.0 Road, bears NW. and SE.</p> <p>1500.0 Cor. No. 1 and place of beginning.</p>
<p>MUROC NO. 6 LODE</p>	
<p>Beginning at Cor. No. 1 Muroc No. 6 lode, identical with Cor. No. 4 Muroc No. 7 lode of this survey; from which</p>	

<p>Chain Feet</p>	<p>The south $\frac{1}{4}$ sec. cor. of Sec. 31, T. 12 N., R. 13 W., bears S. $17^{\circ}54'$ W., 816.2 ft. dist.</p>
	<p>Thence N. $89^{\circ}51'$ W.</p>
<p>300.0</p>	<p>A mound of stone on lode line; the discovery point bears N. $0^{\circ}13'$ E., 310.0 ft. dist.</p>
<p>600.0</p>	<p>Cor. No. 2, identical with Cor. No. 3 Muroc No. 7 lode, Cor. No. 4 Rudy Fraction lode, both of this survey, and Cor. No. 1, Sur. No. 4211 Rudy lode.</p>
	<p>Thence N. $0^{\circ}13'$ E.</p>
<p>1500.0</p>	<p>Cor. No. 3, identical with Cor. No. 2 Mesa No. 5 lode of this survey, and Cor. Nos. 2, 3, and 4 of Sur. No. 4211 Mesa No. 5, Mesa No. 4, and Rudy lodes.</p>
	<p>Thence S. $89^{\circ}51'$ E.</p>
<p>300.0</p>	<p>A mound of stone on lode line; the discovery point bears S. $0^{\circ}13'$ W., 1190.0 ft. dist.</p>
<p>600.0</p>	<p>Cor. No. 4, identical with Cor. Nos. 2 and 4 of Sur. No. 4211 Mesa No. 4 and Mesa No. 3 lodes.</p>
	<p>A volcanic stone 10 ins. exposed, set as original corner stone of Sur. No. 4211 with mound of stone alongside, chiseled M 6-4-4407, M 4-2, M 3-4-4211.</p>
	<p>No bearing objects or bearing trees available.</p>
	<p>Thence S. $0^{\circ}13'$ W.</p>
<p>1500.0</p>	<p>Cor. No. 1 and place of beginning.</p>
<p style="text-align: center;">RUDY NO. 3 LODE</p>	
	<p>Beginning at Cor. No. 1 Rudy No. 3 lode, identical with Cor. No. 1 Rudy No. 2 lode of this survey (not monumented).</p>
	<p>Thence S. $15^{\circ}15'$ E.</p>
<p>80.24</p>	<p>Intersect line 1-2 Muroc No. 7 lode of this survey.</p>
<p>1500.0</p>	<p>Cor. No. 2.</p>
	<p>Set an iron pipe, 30 ins. long, $\frac{1}{2}$ in. diam., fitted with a floor flange, 18 ins. into the ground and surrounded by a mound of stone, with copper plate mkd. R 3-2-4407.</p>
	<p>No bearing objects or bearing trees available.</p>
	<p>Thence N. $89^{\circ}51'$ W.</p>
<p>310.0</p>	<p>A mound of stone on lode line; the discovery point bears N. $15^{\circ}15'$ W., 800.0 ft. dist.</p>
<p>440.0</p>	<p>Gulch, course southerly.</p>
<p>620.0</p>	<p>Cor. No. 3.</p>

SURVEY NO. 4407

Chains Feet	Description
	Set an iron pipe, 30 ins. long, 1/2 in. diam., fitted with a floor flange, 18 ins. into the ground and surrounded by a mound of stone, with copper plate mkd. R 3-3-4407.
	No bearing objects or bearing trees available.
130.0	Thence N. 15°15' W. Gulch, course southeasterly.
1500.0	Cor. No. 4, identical with Cor. No. 3 Rudy No. 7 lode, and Cor. No. 2 Rudy No. 2 lode, both of this survey.
310.0	Thence S. 89°51' E. Cor. No. 2 Rudy Fraction lode of this survey, identical with point on lode line; the discovery point bears S. 15°15' E., 700.0 ft. dist.
522.4	A mound of stone on lode line Rudy Fraction lode of this survey.
548.9	Cor. No. 1 Rudy Fraction lode, on line 2-3 Muroc No. 7 lode, both of this survey.
580.2	Witness Cor. No. 1 of this lode, identical with witness Cor. No. 1 Rudy No. 2 lode of this survey.
600.0	Gulch, course southerly.
620.0	Cor. No. 1 and place of beginning.

AREAS

	Acres
Total area Maggie No. 27 lode	20.661
Area in conflict with:	
Sur. No. 4211 Maggie No. 27 lode	20.661
Total area Mesa No. 5 lode	20.661
Area in conflict with:	
Sur. No. 4211 Mesa No. 5 lode	20.527
Sur. No. 4211 Maggie No. 26 lode	0.132
Total area Rudy No. 6 lode	20.661
Area in conflict with:	
Sur. No. 4211 Maggie No. 27 lode	0.281
Total area Rudy No. 5 lode	20.661
Total area Muroc No. 5 lode	20.661
Total area Rudy No. 8 lode	20.250
Total area Rudy No. 7 lode	19.278
Total area Rudy No. 2 lode	20.257
Area in conflict with:	
Muroc No. 7 lode of this survey	0.210
Total area Rudy Fraction	9.155
Area in conflict with:	
Rudy No. 2 lode of this survey	4.853
Total area Muroc No. 7 lode	20.661
Area in conflict with:	
Rudy No. 3 lode of this survey	0.145
Total area Muroc No. 6 lode	20.661
Total area Rudy No. 3 lode	20.583

LOCATION

This survey is located in the NW¹/₄ and W¹/₂ of the NE¹/₄ Sec. 6, T. 11 N., R. 13 W., and NW¹/₄, SW¹/₄, and W¹/₂ of SE¹/₄ Sec. 31, T. 12 N., R. 13 W., of the Gila and Salt River Meridian, in the Owens Mining District, Mohave County, State of Arizona.

All lodes of this survey are identical with their respective locations as marked on the ground.

Claims

EXPENDITURES

The improvements and the value of the labor and improvements made upon or for the benefit of each of the lode locations embraced in said mining claim by the claimant or its grantors are as follows:

No. 1 The discovery cut of the Maggie No. 27 lode, the face of which being the discovery point, is on the lode line 250 feet from its intersection with line 2-3; cut 4x16x7 foot face containing shaft 4x6x3 feet deep, bears northerly. Value, \$150.00

No. 2 A cut, the face of which bears N. 52° W., 375 ft. from Cor. No. 2 Maggie No. 27 lode, 6x8x7.5 foot face, bears northerly. Value, \$100.00

To be accredited to this lode is an undivided 1/31 interest in the Common Improvement as reported in Sur. No. 4211. Value 1/31 interest \$585.80

No. 1 The discovery cut of the Mesa No. 5 lode, the face of which being the discovery point, is on the lode line 750 ft. from its intersection with line 4-1; cut 4x10x10 foot face, bears easterly. Value, \$150.00

No. 2 A cut, the face of which bears S. 12° 45' E., 150 ft. from Cor. No. 4 Mesa No. 5 lode, 3.5x9x7 foot face, bears easterly. Value, \$75.00

To be accredited to this lode is an undivided 1/31 interest in the Common Improvement as reported in Sur. No. 4211. Value 1/31 interest \$585.80

No. 1 The discovery cut and shaft of Rudy No. 6 lode, the face of cut being the discovery point, is on the lode line 80 ft. from its intersection with line 2-3; cut 4x14x8 foot face containing shaft 4x6x2 ft. deep. Value, \$150.00

No. 2 A cut, the face of which bears S. 28° 30' W., 955 ft. from Cor. No. 3 Rudy No. 6 lode, cut 4.5x9.3x7 foot face, bears easterly. Value, \$50.00

No. 1 The discovery cut of the Rudy No. 5 lode, the face of which being the discovery point is on the lode line 15.0 ft. from its intersection with line 1-4, cut 4x8x10 foot face, bears westerly into vertical bank. Value, \$150.00

No. 1 The discovery cut and shaft of Muroc No. 5 lode, the face of cut being the discovery point is on lode line 135 ft. from its intersection with line 3-4; cut 4x12x5 foot face, containing shaft 4x6x5 ft. deep, cut bears west. Value, \$150.00

No. 1 The discovery shaft of the Rudy No. 8 lode, the center of which being the discovery point is on the lode line 90 ft. from its intersection with line 3-4, shaft 4x6x8 ft. deep. Value, \$150.00

LOCATION

This survey is located in the NW 1/4 and W 1/2 of the NE 1/4 Sec. 11, T. 13 N., R. 13 W., and W 1/2 of Sec. 31, T. 13 N., R. 13 W., of the Gila and Salt River Meridian, in the Owens Mining District, Mohave County, State of Arizona. All lodes of this survey are identical with their respective locations as marked on the ground.

SURVEY NO. 4407

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SHAFTS	
No. 1	The discovery shaft of the Rudy No. 7 lode, the center of which being the discovery point is on the lode line 90 ft. from its intersection with line 3-4; shaft 4x6x8 ft. deep. Value, \$150.00
No. 1	The discovery cut and shaft, of the Rudy No. 2 lode, the center of shaft being the discovery point is on the lode line 500 ft. from its intersection with line 3-4; cut 8x20x8 ft. face, containing shaft 4x6x2.5 ft. deep. Value, \$150.00
No. 1	The discovery shaft of the Rudy Fraction lode, the center of shaft being the discovery point is on the lode line 122 ft. from its intersection with line 3-4; shaft 4x6x8 ft. deep. Value, \$150.00
No. 1	The discovery cut of the Muroc No. 7 lode, the face of cut being the discovery point is on the lode line 600 ft. from its intersection with line 1-2; cut 4x13x10 ft. face, bears south. Value, \$150.00
No. 2	A cut, the face of which bears N. 25°15' W., 650 ft. from Cor. No. 1 Muroc No. 7 lode, cut 4x10x8 foot face bears southerly. Value, \$100.00
No. 1	The discovery shaft of the Muroc No. 6 lode, the center of which being the discovery point, is on the lode line 310 ft. from its intersection with line 1-2; shaft 4x6x8 ft. deep. Value, \$150.00
No. 1	The discovery cut of the Rudy No. 3 lode, the face of cut being the discovery point is on the lode line 700 ft. from its intersection with line 4-1; cut 4x14x10 ft. face, bears northerly. Value, \$150.00
	<p>An interest in a Common Improvement, classified as such by the grouping of progressively constructed improvements upon the various lodes, will be established as set forth herein. For this report a "Common Improvement development area" is outlined, circumscribing the stripping and pit operations as now in progress, and described by metes and bounds to wit:</p> <p>Beginning at a point at the most northeasterly corner from which Cor. No. 1 Muroc No. 6 lode bears S. 44° E., 575 ft.; thence S. 2° W., 550 ft.; thence S. 33°30' W., 575 ft.; thence S. 88° W., 1475 ft.; thence N. 2° E., 1325 ft.; thence N. 49° E., 800 ft.; thence S. 57° E., 1400 ft. to the place of beginning.</p> <p>The stripping, blasting, and excavation is progressively changing the circumscribed area in breadth, depth and volume of materials moved while this survey is under execution. It is impossible to set forth the maze of surface workings as no specific dimensions are available, consequently I have resorted to a mass estimate of tonnage excavated and moved, basing my common improvement values thereon.</p> <p>Volume of materials moved 40,000 tons. Value, \$40,000.00 Value of 1/16 interest \$2,500.00</p> <p>These improvements are in the course of construction for the development of the 12 lodes of this survey and two lodes (patented) bounded by this survey, all of which are contiguous lode claims owned in common within the range of benefit of said improvement.</p>

CHAINS

CHAINS

The surface rises gradually toward the north from the most southerly location. The topography is barren rolling hills formed by heavy overburden and deep erosion over low level mineralized bedding planes. Due to the peculiar nature of the district's manganese ore deposits, normally in bedding planes, their development requires the progressive stripping of the overburden and adit pit openings to determine their position, nature, extend and mineral content.

The exploration eventually leads to the selection of a site for an OPEN pit operation. The progress of stripping of the surface overburden and pit excavations throughout the length of the property progressively developed the ore bodies on the respective lode claims and eventually determine mining methods necessary and locus of operations for extensive pit mining which is the only economical mining method now developed for manganese ore deposits such as found in this mining district and on this property.

Five hundred dollars or over has been expended in these improvements in such a manner as tends to the development of each lode of this survey subsequent to its location and to the time since which common ownership and contiguity have prevailed; therefore an undivided one sixteenth (1/16th) interest in its value is hereby credited to each of said lodges of this survey.

Except as above stated, no portion of ore interest in these improvements has been credited heretofore as patent expenditure to any lode claim.

OTHER IMPROVEMENTS

None.

OTHER CORNER DESCRIPTIONS AND SUPPLEMENTAL DATA

Section and quarter-section corners found in the execution of this survey are monumented with standard iron posts with brass caps properly marked as reported in the official records.

Corners of this survey are 1/2 inch galvanized iron pipe 30 inches long, threaded on one end. To the threaded end a galvanized iron floor flange 3 1/2 inches in diameter was attached. A 3 1/2 inch copper plate was attached to the floor flange by the use of bolts. The designation of the corners of the lodges were stamped on the copper plates. The corner assembly thus described was set into the ground 18 inches or as conditions of the formation permitted.

All disagreements existing between the calls of the location certificates and the lodges as surveyed are due to errors in the location certificates.

FIELD ASSISTANTS

Raymond W. White

Chairman

Value of 1/16 interest \$2,500.00
 Value of 10,000 tons 100,000.00

These improvements are in the course of construction for the development of the 12 lodges of this survey and two lodges patented by this survey, all of which are contiguous lode claims owned in common within the range of benefit of said improvement.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

CERTIFICATE OF SURVEYOR

October 15, 19 56

I, J. William Waara

Mineral Surveyor, hereby certify upon honor that in pursuance of an order received from the _____

Office Cadastral Engineer, at Phoenix, Arizona

dated June 20 and August 17, 1956, I have faithfully and correctly executed the survey of

the mining claim of The Arizona Manganese Corporation, known as the Muroc No. 5, Muroc No. 6, Muroc No. 7, Maggie No. 27, Rudy No. 2, Rudy No. 3, Rudy No. 5, Rudy No. 6, Rudy No. 7, known as the Rudy No. 8, Rudy Fraction and Mesa No. 5 lode claims
(Lode, placer, or mill site)

situate in Section 31, T. 12 N., R. 13 W., and Section 6

T. 11 N., R. 13 W., G. & S.R. Meridian, Arizona, and
(State)

designated as Survey No. 4407, which is represented in the foregoing field notes as having been executed by me and under my direction, and that said survey has been made in strict conformity with said order, the Manual of Instructions for the Survey of the Public Lands of the United States, and in the specific manner described in the foregoing field notes, and I do further certify that the labor expended and improvements made

upon or for the benefit of the lode location(s) embraced in the said mining claim by
(Lode or placer)

claimant(s) or its grantors are fully stated in my report therein, and that the character, extent, location, and itemized value thereof are specified therein with particularity and full detail, and that no portion of, or interest in, said labor and improvements so credited to this claim has been included in the estimate of expenditures upon any other claim.

Prescott, Arizona
(Place)

J. William Waara
(Mineral Surveyor)

CERTIFICATE OF APPROVAL

Survey Office

(Office)

Phoenix, Arizona

(Place)

March 10, 19 58

(Date)

The foregoing field notes of mineral survey No. 4407, in Sec. 31, T. 12 N., R. 13 W., and Sec. 6, T. 11 N., R. 13 W., G. & S.R. Meridian,

Arizona, executed by J. William Waara, Mineral Surveyor,
(State)

under order dated June 20 and August 17, 1956, having been critically examined and the necessary corrections made prior to their certification by the surveyor, the field notes and the survey therein described are hereby approved.

Everett H. Kimmell

Everett H. Kimmell
Office Cadastral Engineer
(Title)

CERTIFICATE OF TRANSCRIPT

I CERTIFY that the foregoing transcript of field notes of the above described mineral survey No. _____ is a true copy of the original field notes.

(Title)

