

Form 3400-11
(September 1967)
(formerly 4-683)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FIELD NOTES

Mineral Survey number	4687
State	Arizona
Land District	Arizona

Of the Survey of the Mining Claim of *(name and address of Claimant)*

Burney Mines, Inc.
P. O. Box 364
Oracle, Arizona 85623

Known as the *(name of group, if any)*

CONSISTING OF LOCATIONS NAMED AND LOCATED AS FOLLOWS

NAME OF LOCATION	DATE	
	LOCATED	AMENDED
Copper Giant	3/15/48	4/30/71
Binder	1/28/48	4/30/71
Iron Cap	1/20/49	4/30/71
Iron Cap Extension	1/20/49	4/30/71
Amphitheater	12/18/46	4/30/71
Amphitheater No. 1	12/18/46	4/30/71
Amphitheater No. 2	12/18/46	4/30/71
Amphitheater No. 3	12/27/46	4/30/71

Mining district		County	
Old Hat		Pinal	
Section 22, 23 & 26 (Uns.)	Township 10 S.	Range 15 E.	Meridian G&SRM
Survey commenced 3/10/71	Survey completed 6/1/71	Survey under order dated 3/9/71 & 5/27/71 (Amended)	
		Name of Mineral Surveyor Harvey W. Smith	

FEET

This survey was made with a Wild double center transit, Model TIA, No. 62550, having a horizontal circle of 3.1 ins. and a vertical circle of 2.8 ins. The optical micrometer reads direct to 20 seconds' accuracy and estimation to 5 seconds. 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 horizontal-angles-right referred to the meridian established by direct observation on the sun. At 9:55 a.m. on April 8, 1971, at Cor. No. 3 of the Iron Cap lode, latitude 32° 32' 46" N., longitude 110° 46' 17" W., turning from a reference point about 500 ft. southwesterly, clockwise to the sun in a south-easterly direction.

True bearing of reference point: S. 24° 28' 35" W.

The lines were measured with a Lufkin steel tape, 300 ft. in length, graduated every foot for 299 ft. and the remaining foot graduated to tenths and hundredths. One additional foot at the zero end is also graduated in tenths and hundredths. The tape was compared to a standard and found to be 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 14° East.

SURVEY NO. 4687

Iron Cap Extension LODE

At Cor. No. 1, Iron Cap Extension lode, identical with Cor. No. 2 Iron Cap lode and Cor. No. 3 Binder lode, both of this survey.

Set an iron post, 3/4 in. diam., 24 ins. long, in a concrete and rock base, 12 ins. in the ground, with a brass cap firmly secured to the iron post, mkd. M.S. 4687 I.C.E. 1 I.C.2 B.3X; from which

The 1/4 cor. of secs. 15 and 22, T.10 S., R. 15 E., G&SRM, bears N. 46° 07' 34" W., 6,320.92 ft. dist.; an iron post, 1 in. diam., 12 ins. above ground, firmly set, mkd. and witnessed as described in the official record.

A cairn sets adjacent to the iron post.

Thence S. 64° 33' 30" E.

1491.31

Cor. No. 2

FEET		
	<p>Set an iron post, 3/4 in. diam., 24 ins. long, in a concrete and rock base, 12 ins. in the ground, with a brass cap firmly secured to the iron post, mkd. M.S. 4687 I.C.E. 2X; from which</p> <p>A cairn sets adjacent to the iron post.</p> <p>Thence S. 24° 28' 35" W.</p>	
299.75	<p>Lode line; discovery pt. bears N. 64° 33' 30" W., 741.31 ft. dist.</p>	
599.50	<p>Cor. No. 3, identical with Cor. No. 2 Sur. No. 4661 Old Soldine No. 1 lode.</p> <p>Fd. an iron post, 3/4 in. diam., 12 ins. above ground, firmly set, mkd. and witnessed as described in the official record to which I add mks. M.S. 4687 I.C.E. 3; from which</p> <p>A cairn sets adjacent to the iron post.</p> <p>Thence N. 64° 33' 30" W.</p>	
1491.31	<p>Cor. No. 4, identical with Cor. No. 3 Iron Cap lode of this survey, Cor. No. 1 Sur. No. 4661 Old Soldine No. 1 lode and Cor. No. 2 Sur. No. 4661 Old Soldine lode.</p> <p>Fd. an iron post, 3/4 in. diam., 12 ins. above ground, firmly set, mkd. and witnessed as described in the official record to which I add mks. M.S. 4687 I.C.E. 4 I.C. 3; from which</p> <p>A cairn sets adjacent to the iron post.</p> <p>Thence N. 24° 28' 35" E.</p>	
299.75	<p>Lode line; discovery pt. bears S. 64° 33' 30" E., 750 ft. dist.</p>	
599.50	<p>Cor. No. 1, and place of beginning.</p>	
	<p style="text-align: center;">Iron Cap LODE</p> <p>At Cor. No. 1, Iron Cap lode, identical with Cor. No. 4 Binder lode of this survey.</p> <p>Set an iron post, 3/4 in. diam., 24 ins. long, in a concrete and rock base, 12 ins. in the ground, with a brass cap firmly secured to the iron post, mkd. M.S. 4687 I.C. 1 B. 4X; from which T. 10 S., R. 15 E., The 1/4 cor. of secs. 15 and 22 bears N. 35° 49' 21" W., 5,234.73 ft. dist., previously described.</p>	

FEET		
	<p>A cairn sets adjacent to the iron post.</p> <p>Thence S. 84° 46' 50" E.</p>	
240.	Left bank Canada del Oro creek, 35 ft. wide, course N. 2° W.	
1350.	Unimproved road bears N. 10° E. and S. 17° W.	
1499.0	Cor. No. 2, identical with Cor. No. 1, Iron Cap Extension lode and Cor. No. 3, Binder lode, both of this survey.	
	Thence S. 24° 28' 35" W.	
299.75	Lode line; discovery pt. bears N. 84° 46' 50" W., 749 ft. dist.	
599.50	Cor. No. 3, identical with Cor. No. 4, Iron Cap Extension lode of this survey, Cor. No. 2 Sur. No. 4661 Old Soldine lode and Cor. No. 1 Sur. No. 4661 Old Soldine No. 1 lode.	
	Thence N. 84° 46' 50" W.	
200.17	Unimproved road bears N. 55° E. and S. 45° W.	
220.	Right bank Canada del Oro creek, 35 ft. wide, course N. 25° E.	
1395.17	Cor. No. 1 Sur. No. 4661 Old Soldine lode.	
1499.0	Cor. No. 4	
	<p>Set an iron post, 3/4 in. diam., 24 ins. long, in a concrete and rock base, 12 ins. in the ground, with a brass cap firmly secured to the iron post, mkd. M.S. 4687 I.C. 4X; from which</p> <p>A cairn sets adjacent to the iron post.</p> <p>Thence N. 24° 28' 35" E.</p>	
299.75	Lode line; discovery pt. bears S. 84° 46' 50" E., 750 ft. dist.	
599.50	Cor. No. 1, and place of beginning.	
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Binder LODE		
<p>At Cor. No. 1, Binder lode, identical with Cor. No. 4, Amphitheater No. 3 lode of this survey.</p> <p>Set an iron post, 3/4 in. diam., 24 ins. long, in a concrete and rock base, 12 ins. in the ground, with a brass cap firmly secured to the iron post, mkd. M.S. 4687 B. 1 A 3 4X; from which</p>		

FEET		
	<p style="text-align: right;">T. 10 S., R. 15 E.,</p> <p>The 1/4 cor. of secs. 15 and 22 bears N. 41° 50' 34" W., 4,965.08 ft. dist.; previously described.</p> <p>A cairn sets adjacent to the iron post.</p> <p style="text-align: center;">Thence S. 84° 46' 50" E.</p>	
330.	Left bank, Canada del Oro creek, 35 ft. wide, course North.	
1240.	Unimproved road bears N. 33° E. and S. 33° W.	
1499.0	Cor. No. 2, identical with Cor. No. 3, Amphitheater No. 3 lode of this survey.	
	<p>Set an iron post, 3/4 in. diam., 24 ins. long, in a concrete and rock base, 12 ins. in the ground, with a brass cap firmly secured to the iron post, mkd. M.S. 4687 B.2 A 3 3X; from which</p> <p>A cairn sets adjacent to the iron post.</p> <p style="text-align: center;">Thence S. 24° 28' 35" W.</p>	
299.75	Lode line; discovery pt. bears N. 84° 46' 50" W., 749 ft. dist.	
599.50	Cor. No. 3, identical with Cor. No. 1, Iron Cap Extension lode and Cor. No. 2, Iron Cap lode, both of this survey.	
	Thence N. 84° 46' 50" W.	
149.	Unimproved road bears N. 10° E. and S. 17° W.	
1224.	Right bank Canada del Oro creek, 35 ft. wide, course N. 2° W.	
1499.0	Cor. No. 4, identical with Cor. No. 1, Iron Cap lode of this survey.	
	Thence N. 24° 28' 35" E.	
299.75	Lode line; discovery pt. bears S. 84° 46' 50" E., 750 ft. dist.	
599.50	Cor. No. 1, and place of beginning.	
Amphitheater No. 3 LODE		
	At. Cor. No. 1, Amphitheater No. 3 lode, identical with Cor. No. 4, Amphitheater No. 2 lode of this survey.	

FEET		
	<p>Set an iron post, 3/4 in. diam., 24 ins. long, in a concrete and rock base, 12 ins. in the ground, with a brass cap firmly secured to the iron post, mkd. M.S. 4687 A 3 1 A 2 4X; from which <div style="text-align: right;">T. 10 S., R. 15 E.,</div> The 1/4 cor. of secs. 15 and 22/bears N. 48° 28' 17" W., 4,756.09 ft. dist.; previously described.</p> <p>A cairn sets adjacent to the iron post.</p> <p>Thence S. 84° 46' 50" E.</p>	
1300.	Unimproved road bears N. 27° E. and S. 27° W.	
1499.0	<p>Cor. No. 2, identical with Cor. No. 3, Amphitheater No. 2 lode of this survey.</p> <p>Set an iron post, 3/4 in. diam., 24 ins. long, in a concrete and rock base, 12 ins. in the ground, with a brass cap firmly secured to the iron post, mkd. M.S. 4687 A 3 2 A 2 3X; from which</p> <p>A cairn sets adjacent to the iron post.</p> <p>Thence S. 24° 28' 35" W.</p>	
299.75	Lode line; discovery pt. bears N. 84° 46' 50" W., 300 ft. dist.	
599.50	<p>Cor. No. 3, identical with Cor. No. 2, Binder lode of this survey.</p> <p>Thence N. 84° 46' 50" W.</p>	
259.	Unimproved road bears N. 33° E. and S. 33° W.	
1134.	Right bank Canada del Oro creek, 35 feet wide, course North.	
1499.0	<p>Cor. No. 4, identical with Cor. No. 1, Binder lode of this survey.</p> <p>Thence N. 24° 28' 35" E.</p>	
190.	Left bank Canada del Oro creek, 30 ft. wide, course N. 70° W.	
299.75	Lode line; discovery pt. bears S. 84° 46' 50" E., 1,199 ft. dist.	
599.50	Cor. No. 1, and place of beginning.	

FEET	
	Amphitheater No. 2 LODE
	At Cor. No. 1, Amphitheater No. 2 lode, identical with Cor. No. 4, Copper Giant lode and on line 2-3, Amphitheater No. 1 lode, both of this survey.
	Set an iron post, 3/4 in. diam., 24 ins. long, in a concrete and rock base, 12 ins. in the ground, with a brass cap firmly secured to the iron post, mkd. M.S. 4687 A 2 1 C.G. 4X; from which T. 10 S., R. 15 E. The 1/4 cor. of secs. 15 and 22 bears N. 55° 36' 19" W., 4,616.0 ft. dist.; previously described.
	A cairn sets adjacent to the iron post.
	Thence S. 84° 46' 50" E.
675.	Unimproved road bears North and South.
1310.	Unimproved road bears N. 3° W. and S. 3° E.
1499.0	Cor. No. 2, identical with Cor. No. 3, Copper Giant lode of this survey.
	Set an iron post, 3/4 in. diam., 24 ins. long, in a concrete and rock base, 12 ins. in the ground, with a brass cap firmly secured to the iron post, mkd. M.S. 4687 A 2 2 C.G. 3X; from which
	A cairn sets adjacent to the iron post.
	Thence S. 24° 28' 35" W.
299.75	Lode line; discovery pt. bears N. 84° 46' 50" W., 1,099 ft. dist.
599.50	Cor. No. 3, identical with Cor. No. 2, Amphitheater No. 3 lode of this survey.
	Thence N. 84° 46' 50" W.
199.	Unimproved road bears N. 27° E. and S. 27° W.
1499.0	Cor. No. 4, identical with Cor. No. 1, Amphitheater No. 3 lode of this survey.
	Thence N. 24° 28' 35" E.
299.75	Lode line; discovery pt. bears S. 84° 46' 50" E., 400 ft. dist.
303.46	Cor. No. 3, Amphitheater No. 1 lode of this survey.
599.50	Cor. No. 1, and place of beginning.

FEET	
	Copper Giant LODE
	At Cor. No. 1, Copper Giant lode, on line 2-3, Amphitheater lode of this survey.
	This point falls in the center of an unimproved road where a permanent monument would be obliterated. From this true point
	T. 10 S., R. 15 E.,
	The 1/4 cor. of secs. 15 and 22 bears N. 63° 03' 33" W., 4,551.20 ft. dist.; previously described.
	A witness cor. bears N. 24° 28' 35" E., 10.0 ft. dist., at which pt. 1
	Set an iron post, 3/4 in. diam., 24 ins. long, in a concrete and rock base, 12 ins. in the ground, with a brass cap firmly secured to the iron post, mkd. M.S. 4687 C.G. 1 W.C.X; from which
	A cairn sets adjacent to the iron post.
	Thence S. 84° 46' 50" E.
1060.	Unimproved road bears N. 38° W. and S. 38° E.
1499.0	Cor. No. 2
	Set an iron post, 3/4 in. diam., 24 ins. long, in a concrete and rock base, 12 ins. in the ground, with a brass cap firmly secured to the iron post, mkd. M.S. 4687 C.G. 2X; from which
	A cairn sets adjacent to the iron post.
	Thence S. 24° 28' 35" W.
299.75	Lode line; discovery pt. bears N. 84° 46' 50" W., 749 ft. dist.
599.50	Cor. No. 3, identical with Cor. No. 2, Amphitheater No. 2 lode of this survey.
	Thence N. 84° 46' 50" W.
189.	Unimproved road bears N. 3° W. and S. 3° E.
824.	Unimproved road bears North and South.
1499.0	Cor. No. 4, identical with Cor. No. 1, Amphitheater No. 2 lode and on line 2-3, Amphitheater No. 1 lode, both of this survey.
	Thence N. 24° 28' 35" E.
299.75	Lode line; discovery pt. bears S. 84° 46' 50" E., 750 ft. dist.

FEET	
303.46	Cor. No. 2, Amphitheater No. 1 lode, identical with Cor. No. 3, Amphitheater lode, both of this survey.
599.50	Cor. No. 1, and place of beginning.
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Amphitheater No. 1 LODE	
At Cor. No. 1, Amphitheater No. 1 lode, identical with Cor. No. 4, Amphitheater lode of this survey.	
Set an iron post, 3/4 in. diam., 24 ins. long, in a concrete and rock base, 12 ins. in the ground, with a brass cap firmly secured to the iron post, mkd. M.S. 4687 A 1 1 A 4X; from which	
T. 10 S., R. 15 E., The 1/4 cor. of secs. 15 and 22/bears N. 46° 14' 46" W., 3,371.28 ft. dist.; previously described.	
A cairn sets adjacent to the iron post.	
Thence East.	
215.	Unimproved road bears N. 54° E. and S. 54° W. Creek,
270.	Right bank Canada del Oro / 35 ft. wide, course S. 60° W.
405.	Unimproved road bears N. 30° W. and South.
920.	Unimproved road bears N. 20° W. and S. 20° E.
935.	Unimproved road bears N. 25° E. and S. 25° W.
1499.50	Cor. No. 2, identical with Cor. No. 3, Amphitheater lode and on line 4-1, Copper Giant lode, both of this survey.
Set an iron post, 3/4 in. diam., 24 ins. long, in a concrete and rock base, 12 ins. in the ground, with a brass cap firmly secured to the iron post, mkd. M.S. 4687 A 1 2 A 3X; from which	
A cairn sets adjacent to the iron post.	
Thence S. 24° 28' 35" W.	
299.75	Lode line; discovery pt. bears West, 200 ft. dist.
303.46	Cor. No. 4, Copper Giant lode, identical with Cor. No. 1, Amphitheater No. 2 lode, both of this survey.
599.50	Cor. No. 3, on line 4-1, Amphitheater No. 2 lode of this survey.

FEET		
	<p>Set an iron post, 3/4 in. diam., 24 ins. long, in a concrete and rock base, 12 ins. in the ground, with a brass cap firmly secured to the iron post, mkd. M.S. 4687 A 1 3X; from which</p> <p>A cairn sets adjacent to the iron post.</p> <p>Thence West.</p>	
485.	<p>Creek, Right bank Canada del Oro / 40 ft. wide, course N. 10° E.</p>	
1499.50	<p>Cor. No. 4</p> <p>Set an iron post, 3/4 in. diam., 24 ins. long, in a concrete and rock base, 12 ins. in the ground, with a brass cap firmly secured to the iron post, mkd. M.S. 4687 A 1 4X; from which</p> <p>A cairn sets adjacent to the iron post.</p> <p>Thence N. 24° 28' 35" E.</p>	
299.75	<p>Lode line; discovery pt. bears East, 1,299.50 ft. dist.</p>	
485.	<p>Creek, Left bank Canada del Oro / 30 ft. wide, course N. 70° W.</p>	
585.	<p>Unimproved road bears N. 70° W. and S. 70° E.</p>	
599.50	<p>Cor. No. 1, and place of beginning.</p>	
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Amphitheater LODE		
<p>At Cor. No. 1, Amphitheater lode.</p> <p>Set an iron post, 3/4 in. diam., 24 ins. long, in a concrete and rock base, 12 ins. in the ground, with a brass cap firmly secured to the iron post, mkd. M.S. 4687 A 1X; from which</p> <p style="text-align: right;">T. 10 S., R. 15 E.,</p> <p>The 1/4 cor. of secs. 15 and 22 bears N. 56° 21' 25" W., 3,223.42 ft. dist.; previously described.</p> <p>A cairn sets adjacent to the iron post.</p> <p>Thence East.</p>		
185.	<p>Unimproved road bears N. 35° W. and S. 35° E.</p>	
1499.50	<p>Cor. No. 2</p>	

FEET	
	<p>Set an iron post, 3/4 in. diam., 24 ins. long, in a concrete and rock base, 12 ins. in the ground, with a brass cap firmly secured to the iron post, mkd. M.S. 4687 A 2X; from which</p> <p style="padding-left: 40px;">A cairn sets adjacent to the iron post.</p> <p style="padding-left: 80px;">Thence S. 24° 28' 35" W.</p>
293.46	Witness cor. for Cor. No. 1, Copper Giant lode of this survey.
299.75	Lode line; discovery pt. bears West, 1,299.50 ft. dist.
303.46	True point for Cor. No. 1, Copper Giant lode of this survey and unimproved road bears N. 51° W. and S. 50° E.
599.50	Cor. No. 3, identical with Cor. No. 2, Amphitheater No. 1 lode and on line 4-1, Copper Giant lode, both of this survey.
	Thence West.
564.50	Unimproved road bears N. 25° E. and S. 25° W.
579.50	Unimproved road bears N. 20° W. and S. 20° E.
1094.50	Unimproved road bears N. 30° W. and South.
1125.	Right bank Canada del Oro creek, 35 ft. wide, course N. 80° W.
1284.50	Unimproved road bears N. 54° E. and S. 54° W.
1499.50	Cor. No. 4, identical with Cor. No. 1, Amphitheater No. 1 lode of this survey.
	Thence N. 24° 28' 35" E.
299.75	Lode line; discovery pt. bears East, 200 ft. dist.
599.50	Cor. No. 1, and place of beginning.
<hr/> SURVEY NO. 4687 <hr/>	
Areas	
	<u>Acres</u>
Total area Iron Cap lode	19.476
Total area Iron Cap Extension lode	20.521
Total area Binder lode	19.476
Total area Copper Giant lode	19.476
Total area Amphitheater lode	18.782
Total area Amphitheater No. 1 lode	18.782
Total area Amphitheater No. 2 lode	19.476
Total area Amphitheater No. 3 lode	19.476

FEET	LOCATION
	<p>This survey is located in the NE 1/4, SE 1/4, Sec. 22, NW 1/4, NE 1/4, SW 1/4, SE 1/4, Sec. 23 and NW 1/4, NE 1/4, Sec. 26 (all unsurveyed), T. 10 S., R. 15 E., G&SRM.</p> <p>The survey of the Iron Cap, Iron Cap Extension, Binder, Copper Giant, Amphitheater and Amphitheater Nos. 1-3 lodes is identical with the respective location or amended location as marked on the ground.</p>
	<p>EXPENDITURES</p> <p>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:</p>
No. 1	<p style="text-align: center;">Cap</p> <p>The discovery pt. of the Iron/ lode is on the lode line, 750 ft. from a pt. on line 4-1, 299.75 ft. from Cor. No. 4.</p> <p style="text-align: right;">Value: None</p>
No. 2	<p>An adit, the portal of which bears S. 53° E., 445 ft. from Cor. No. 1, Iron Cap lode; 4 x 7 ft. in size, running N. 45° E., 30 ft.</p> <p style="text-align: right;">Value: \$600.00</p>
No. 1	<p>The discovery pt. of the Iron Cap Extension lode is on the lode line, 750 ft. from a pt. on line 4-1, 299.75 ft. from Cor. No. 4.</p> <p style="text-align: right;">Value: None</p>
No. 1	<p>The discovery pt. of the Binder lode is on the lode line, 750 ft. from a pt. on line 4-1, 299.75 ft. from Cor. No. 4.</p> <p style="text-align: right;">Value: None</p>
No. 1	<p>The discovery pt. of the Amphitheater No. 3 lode is on the lode line, 300 ft. from a pt. on line 2-3, 299.75 ft. from Cor. No. 2.</p> <p style="text-align: right;">Value: None</p>
No. 1	<p>The discovery pt. of the Amphitheater No. 2 lode is on the lode line, 400 ft. from a pt. on line 4-1, 299.75 ft. from Cor. No. 4.</p> <p style="text-align: right;">Value: None</p>
No. 2	<p>A cut, the NW. corner of which bears S. 75° 30' E., 265 ft. from Cor. No. 1, Amphitheater No. 2 lode; 5 x 10 ft. in size, 6 ft. deep, runs S. 25° E.</p> <p style="text-align: right;">Value: \$150.00</p>

FEET	
No. 3	<p>A pit, the NW. cor. of which bears S. 74° 30' E., 280 ft. from Cor. No. 1, Amphitheater No. 2 lode; 6 x 6 ft. in size, 5 ft. deep.</p> <p style="text-align: right;">Value: \$100.00</p>
No. 4	<p>A pit, the center of which bears S. 80° E., 290 ft. from Cor. No. 1, Amphitheater No. 2 lode; 8 ft. diam., 4 ft. deep.</p> <p style="text-align: right;">Value: \$100.00</p>
No. 5	<p>An adit, the portal of which bears S. 84° 30' E., 300 ft. from Cor. No. 1, Amphitheater No. 2 lode; 5 x 6 ft. in size, running S. 10° E., 10 ft.</p> <p style="text-align: right;">Value: \$200.00</p>
No. 6	<p>A cut, the NW. cor. of which bears S. 29° E., 265 ft. from Cor. No. 1, Amphitheater No. 2 lode; 10 x 20 ft. in size, 3 ft. deep, runs South.</p> <p style="text-align: right;">Value: \$300.00</p>
No. 7	<p>A cut, the NW. cor. of which bears S. 20° E., 220 ft. from Cor. No. 1, Amphitheater No. 2 lode; 8 x 20 ft. in size, 4 ft. deep, runs S. 10° W.</p> <p style="text-align: right;">Value: \$300.00</p>
No. 8	<p>An adit, the portal of which bears N. 37° 30' E., 360 ft. from Cor. No. 4, Amphitheater No. 2 lode; 4 x 5 ft. in size, running North, 20 ft.</p> <p style="text-align: right;">Value: \$400.00</p>
No. 9	<p>An adit, the portal of which bears S. 72° 30' W., 375 ft. from Cor. No. 2, Amphitheater No. 2 lode; 4 x 6 ft. in size, running N. 25° W., 30 ft.</p> <p style="text-align: right;">Value: \$600.00</p>
No. 1	<p>The discovery pt. of the Copper Giant lode is on the lode line, 750 ft. from a pt. on line 4-1, 299.75 ft. from Cor. No. 4.</p> <p style="text-align: right;">Value: None</p>
No. 2	<p>An adit, the portal of which bears N. 80° E., 50 ft. from Cor. No. 4, Copper Giant lode; 4 x 5 ft. in size, running S. 20° E., 10 ft.</p> <p style="text-align: right;">Value: \$200.00</p>
No. 3	<p>An adit, the portal of which bears N. 80° E., 20 ft. from Cor. No. 4, Copper Giant lode; 4 x 6 ft. in size, running S. 20° E., 15 ft.</p> <p style="text-align: right;">Value: \$300.00</p>
No. 1	<p>The discovery pt. of the Amphitheater No. 1 lode is on the lode line, 200 ft. from a pt. on line 2-3, 299.75 ft. from Cor. No. 2.</p> <p style="text-align: right;">Value: None</p>

FEET	
No. 2	<p>A cut, the west end of which bears East, 430 ft. from Cor. No. 1, Amphitheater No. 1 lode; 15 ft. wide, 6 ft. deep, running S. 80° E., 40 ft. Value: \$1,500.00</p>
No. 3	<p>An adit, the portal of which bears S. 88° E., 485 ft. from Cor. No. 1, Amphitheater No. 1 lode; 5 x 6 ft. in size, running S. 80° E., 100+ ft. Value: \$2,000.00</p>
No. 1	<p>The discovery pt. of the Amphitheater lode is on the lode line, 200 ft. from a pt. on line 4-1, 299.75 ft. from Cor. No. 4. Value: None</p>
No. 2	<p>An inclined adit, the portal of which bears East, 160 ft. from Cor. No. 4, Amphitheater lode; 8 x 12 ft. in size, inclined at -15° and running N. 30° W., 45+ ft. Value: \$2,500.00</p>
No. 3	<p>A cut, the NE. cor. of which bears S. 65° W., 285 ft. from Cor. No. 2, Amphitheater lode; 4 x 7 ft. in size, 2 1/2 ft. deep, runs S. 40° W. Value: \$50.00</p>
No. 4	<p>A cut, the NE. cor. of which bears S. 64° 30' W., 315 ft. from Cor. No. 2, Amphitheater lode; 6 x 20 ft. in size, 6 ft. deep, runs S. 45° W. Value: \$350.00</p>
No. 5	<p>An adit, the portal of which bears S. 59° W., 330 ft. from Cor. No. 2, Amphitheater lode; 4 x 5 ft. in size, running N. 35° E., 6 ft. Value: \$100.00</p>
No. 6	<p>A cut, the NE. cor. of which bears S. 56° W., 310 ft. from Cor. No. 2, Amphitheater lode; 5 x 10 ft. in size, 5 ft. deep, runs S. 45° W. Value: \$125.00</p>
No. 7	<p>A shaft, the NE. cor. of which bears S. 75° W., 315 ft. from Cor. No. 2, Amphitheater lode; 6 x 6 ft. in size, 100+ ft. deep. Value: \$5,000.00</p> <p>An interest in a common improvement described as follows:</p> <p>A timbered shaft, the SW. cor. of which bears N. 89° E., 200 ft. from Cor. No. 4, Amphitheater lode; 6 x 6 ft. in size, 100+ ft. deep. Value of shaft: \$10,000.00 Value of one-half interest: \$ 5,000.00</p> <p>This shaft was put down for the development of the ore bodies on the Amphitheater and Amphitheater No. 1 lodes which are contiguous lode claims owned in</p>

FEET

common within the range of benefit of said shaft.

As the vein structure apparently crosses from the Amphitheater to the Amphitheater No. 1 lode in the vicinity of the shaft, it is the logical method to develop the vein.

Five hundred dollars or over has been expended in this improvement in such a manner as tends to the development of the above stated lodes subsequent to its location and to the time since which common ownership and contiguity have prevailed; therefore, an undivided one-half interest in its value is hereby credited to the Amphitheater and Amphitheater No. 1 lodes.

No portion of or interest in this improvement has been credited heretofore as patent expenditure to any lode claim.

An interest in a common improvement described as follows:

An unimproved road traversing on all but the Iron Cap Extension lode but providing access to all of the lodes of this survey for their development.

Value of road: \$4,000.00
Value of one-eighth interest: \$ 500.00

This improvement is constantly being maintained to provide access for the development of the eight lodes of this survey, which are all contiguous lode claims owned in common within the range of benefit of said road.

The surface of the terrain is extremely rough; consequently, the most practical and economical access is provided by this road.

Five hundred dollars or over has been expended on this improvement 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-eighth interest in its value is hereby credited to each of the lodes of this survey.

No portion of or interest in this improvement has been credited heretofore as patent expenditure to any lode claim.

OTHER IMPROVEMENTS

None.

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OTHER CORNER DESCRIPTIONS
AND SUPPLEMENTAL DATA

Sur. No. 4661 Old Soldine Lode: Cor. No. 1 is an iron post, 3/4 in. diam., 12 ins. above ground, firmly set, mkd. and witnessed as described in the official record. Cor. No. 2 described above. Line 1-2 was found to be correct as approved. Lines 4-1 and 2-3 shown as approved.

Sur. No. 4661 Old Soldine No. 1 Lode: Cors. Nos. 1 & 2 described above. Line 1-2 was found to be S. 64°33'30" E., 1491.31 ft., instead of S. 64°33'50" E., 1491.31 ft., as approved. Lines 4-1 and 2-3 shown as approved.

FIELD ASSISTANTS

Name

Capacity

N. T. Allison

Instrument man

D. K. Smith

Chainman

H. Wayne Smith

Axeman

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The first part of the paper is devoted to a discussion of the
 general principles of the theory of the structure of the
 crystal lattice. It is shown that the structure of the
 lattice is determined by the balance of the forces
 acting on the atoms. The forces are of two kinds: the
 attractive forces between the atoms and the repulsive
 forces between the atoms. The attractive forces are
 of the van der Waals type and the repulsive forces
 are of the Coulomb type. The balance of the forces
 determines the equilibrium distance between the atoms
 and the equilibrium volume of the crystal.

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