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REPORT,

SNOWFLAKE, PERU AND EMMA, LOSE MINING CLAIMS,

RED MOUNTAIN MINING DISTRICT,

GURAY COUNTY, COLORADO.

1920.

John H. Marks

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JOHN H. MARKS  
HYDRAULIC, MINING & CIVIL  
ENGINEER

*John H. Marks*  
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504 EMPIRE BLDG.  
PHONE MAIN 2470

DENVER, COLO.

REPORT,  
SNOWFLAKE, PERU AND EMMA, LODE MINING CLAIMS,  
RED MOUNTAIN MINING DISTRICT,  
GURAY COUNTY, COLORADO.  
1920.

This property consists of the Snowflake and Peru lode mining claims, containing 18.93 acres patented and the Emma lode containing about 15 acres unpatented, a total of approximately 34 acres. It is 1500 feet westerly from the old town of Red Mountain and the working shaft is but 100 feet from the main line of the Silverton and Northern Railroad, which runs from Silverton to Trenton. From the Snowflake mine the distance by railway to Silverton is 12 miles and by auto road the distance is 12 miles to Guray. This highway is used the year round, being the U.S. mail route from Silverton to Guray.

While but a small amount of work has been done, the increasing value of the ore with depth indicates that the conditions at this property are similar to a number of mines in the vicinity, that have produced some millions of dollars and geological indications are that, when developed, the Snowflake group of claims may show values equalling any of the nearby mines.

The big mines in this district were found in what are locally known as "blow-outs" or vertical chimneys, principally containing ores rich in silver and copper.

The working shaft on the Snowflake group is in the middle of one of these blow-outs and the limited amount of development work, all of which is in ore, has demonstrated its prospective value. This working shaft

is located on the Snowflake lode, and aside from the tunneling and other work done to secure patent forms the principal mining improvement on the property. In sinking this shaft the values have uniformly increased with depth. The description of this shaft and the ore it has produced is as follows;

Shaft is vertical, 2 compartment,  $4\frac{1}{2}$  x 9 ft., 115 ft. deep; located in middle of circular chimney or blow-out which is about 40 ft. in diameter at the surface and which evidently widens with depth.

From first level, which is at a depth of 50 ft. below collar of shaft, there are 2 drifts, one running south 35 ft. and one running west 25 ft. These drifts did not cut through casing of ore chimney.

From second level, which is at a depth of 80 ft. below collar of shaft, there are 2 drifts, one running north 40 ft. and one running west 35 ft. These drifts did not cut through casing of ore chimney. (See vertical sections of shaft and plan of shaft in blow-out, together with plans of levels herein).

In sinking the Snowflake shaft there were some 75 tons of ore shipped, of which no record is known.

From the first level, 50 ft. in depth, 40 tons of ore was shipped containing 3 ounces silver and 7 per cent copper. This ore occurred in small stringers and in boulder form.

From second level, 80 ft. in depth, 100 tons of ore was shipped. 90 tons of this ore contained 11 ounces silver and 9 per cent copper, while 10 tons of sorted ore contained 16 ounces silver and 15 per cent copper. This ore occurred in small stringers and in boulder form.

Assays of ore from bottom of shaft showed 18 ounces silver and 18 per cent copper. By comparison it is seen that ore values have more than doubled in the 65 ft. from first level to bottom of shaft.

A promising <sup>prospect</sup> has been found in a winze on the Emma lode. This winze is at face of a 100 ft. tunnel (see map). It is about 20 ft. deep, sunk on a 6 inch stringer of ore said to be widening as it goes down, dip and strike would cut Snowflake shaft blow-out at depth of about 200 ft. Some ore was shipped from winze running approximately 10 ounces silver and 10 per cent copper.

All ore shipped from this property was sent to American Smelting and Refining Company's smelter at Durango, Colorado.

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Quoting from a report by Mr. C. T. Singleton, M. E. who holds lease and bond on this property;

"At a depth of 110 feet the shaft was sunk through the silicified casing, and about 5 ft. into perphyry or vein filling, which at this depth of 115 ft. shows that the perphyry has been replaced by the minerals, and in the east end of the shaft at this point, there is now solid ore and there is every indication (judging from what I have seen and known to occur in 8 other blow-outs or chimneys of the Red Mountain Mining District, which are exactly of the same character and formations as the Snowflake chimney) that the present bottom of the shaft is on top of a large solid body of ore in chimney form."

"I have mentioned above, having examined 8 other blow-outs in this district, \* \* \* \* \* there not being a single one failing to produce and pay dividends. They are the Pay Master, Silver Bell, Guston, Robinson, Yankee Girl, National Belle, Congress and St. Paul mines, all of the Red Mountain Mining District and their ore bodies being in chimney form."

With reference to the working shaft on the Snowflake lode, Mr. Singleton says,

"It is my opinion that with sinking this shaft 100 ft. deeper that the values will be at least doubled from the present values, and that the ore chimney will have made a solid body of ore within the casing. Careful examination of the ore from the surface to the bottom of the shaft shows a secondary enrichment, and it can be expected that this ore will merge into a very rich bornite and stromeyerite as was the fact proven in the Yankee Girl, Robinson and Guston mines of this district having blow-outs or chimneys of the same character as the Snowflake."

" Equipment on the Snowflake mine.  
Shaft House 24 x 70 ft. covering shaft.  
Double cylinder hoist, friction drive, 4 ft. drum.  
50 H.P. return tubular boiler.  
400 ft. 3/4 inch cable.  
1 bucket, 800 lbs capacity.  
1 mine car. "

Total value of equipment work and improvements on the mine estimated at \$10,000.

Additional equipment needed to begin work,  
"Air compressor, about 150 cubic ft. capacity.  
1-30 H.P. Steam engine to drive compressor.  
2 Jackhammers, complete, with steel.  
1 Sinking pump complete, double action, 2 inch discharge (at present depth shaft makes about 10 gallons of water per minute)."

Steam power has heretofore been used for mining. Electric power is now available, the Western Colorado Power Company having a line passing within 300 ft. of the Snowflake working shaft.

350 ft. of side track would connect the Snowflake shaft house with the main line of the Silverton and Northern railway.

Estimated there is 20000 ft. of spruce timber on the property, sufficient for several years mining operations.

The Snowflake mine is at an altitude of about 10000 feet above sea level. It is free from snowslides.

*John H. Marks*

Maps, sections and plans included in this report are,  
Copy of approved plat of patent survey of Snowflake and Peru  
ledes, abstracted from records of U.S. Surveyor General's office in Denver,  
Colorado.

A map from portion of a connected sheet in office of U.S. Surveyor General in Denver, showing relative position of Snowflake and Peru ledes with nearby mines; also note location of town of Red Mountain, railroad, highway &c.

Sections and plans of working shaft on Snowflake mine, showing conditions as described by Mr. Singleton. From these descriptions it appears that the ore is increasing in volume and value as depth is attained. Note that greatest values in Yankee Girl were found at a depth of 400 to 500 feet.

The prominent mines of the Red Mountain District are described in a complete manner by the U.S. Geological Survey in Bulletin No. 182, entitled "A REPORT ON THE ECONOMIC GEOLOGY OF THE SILVERTON QUADRANGLE, COLORADO." See pages 103-113 and 214-251.

On page 105 is shown a map of the Red Mountain District, showing the relative position of the big nearby mines. Detailed technical descriptions of the ores are given, pages 103 to 113. Pages 214 to 251 give a history of the "ORE DEPOSITS OF THE RED MOUNTAIN REGION".

A few brief abstracts are given below;

#### YANKEE GIRL MINE.

Discovered 1861 and worked until about 1896. Principal ores were gold, silver, lead and copper. "Several carloads of ore from the Yankee Girl carried from 1500 to 3000 ounces of silver per ton, and one lot of about 6 tons contained 5300 ounces of silver per ton. Such ores carried 30 to 33 per cent copper."

The ore appears to have reached its maximum value at from 400 to 500 feet in depth, gradually declining in value thereafter and when work was stopped the shaft was about 1050 feet deep.

"The product of the Yankee Girl is roughly estimated at about \$3,000,000.

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GUSTON MINE.

Located just north of Yankee Girl mine.

Discovered in 1882 and worked until 1897.

From 1888 to 1895, 8 years inclusive, the record shows totals

as follows:

"Ore raised, 69,127 tons  
Average sale value per ton, \$91.81  
Average cost of mining per ton, \$23.43  
Amount of dividends paid, \$1,148,579.40."

"The total output since 1888 has considerably exceeded \$2,500,000.,  
of which nearly half was distributed as dividends."

"In all 14 levels had been worked and a depth of nearly 1300  
feet attained."

The Yankee Girl and Guston were the greatest producers in the  
Red Mountain District, though a number of other mines are credited with  
large production in Bulletin #182.

The information upon which this information is based and from which  
it was compiled are the authorities therein mentioned. Mr. Singleton has sent  
samples of ore from bottom of Snowflake working shaft. These samples can be  
seen at my office.

Mr. Singleton is at present Superintendent for Mr. W. Z. Kinney, General  
Manager of the Gold King Extension Mines Co. at Gladstone, near Silverton.

Respectfully submitted,

Denver, Colorado.

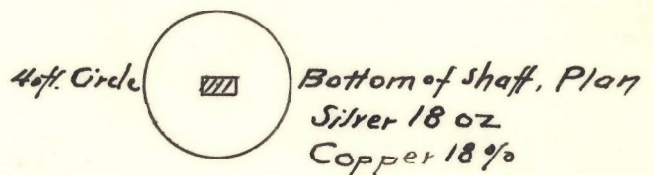
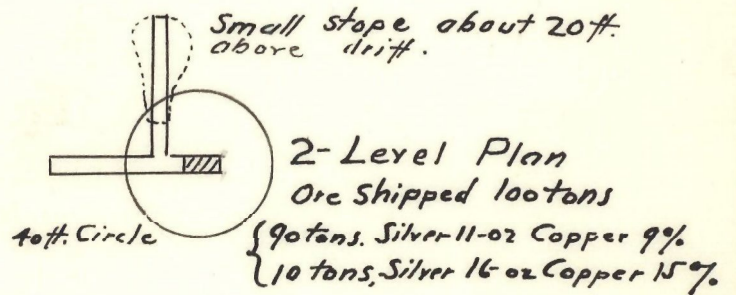
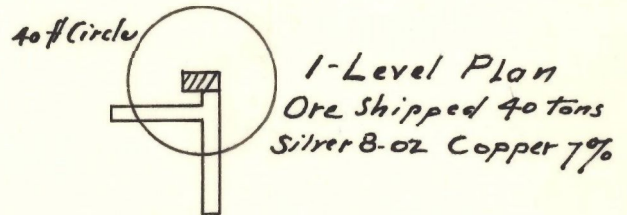
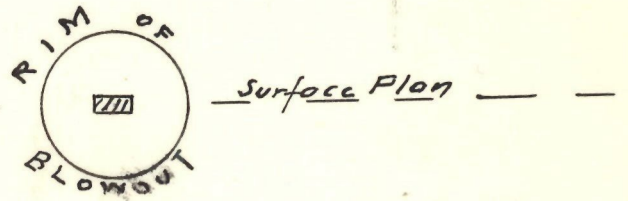
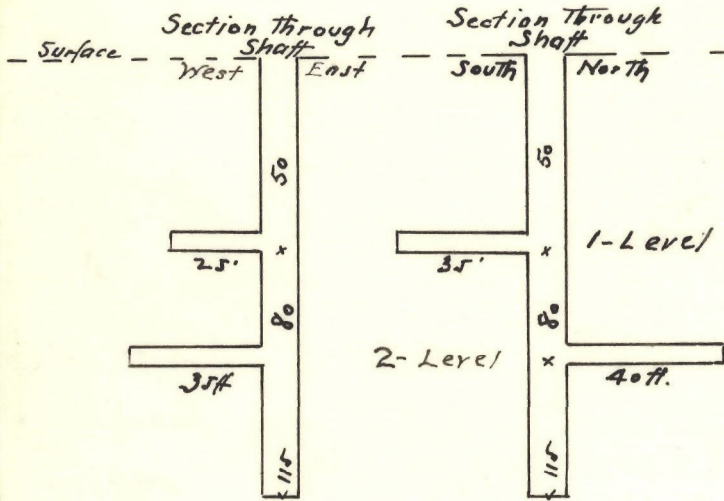
June 7/1920.

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**THE SNOWFLAKE MINE.**  
 Sections and Plans.  
 From description and sketches by C.T. Singleton.

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Shaft in Chimney 40ft. diameter.



NOTE. That ore body widens - drifts cut outside of 40ft. Circle at 1st and 2nd levels. Values increasing with depth.

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Scale 1 inch = 50 feet.

M. 6-5-20

Sur No 4507 Made by Geo. Mills Feb 4-1887

Area 18.93 acres

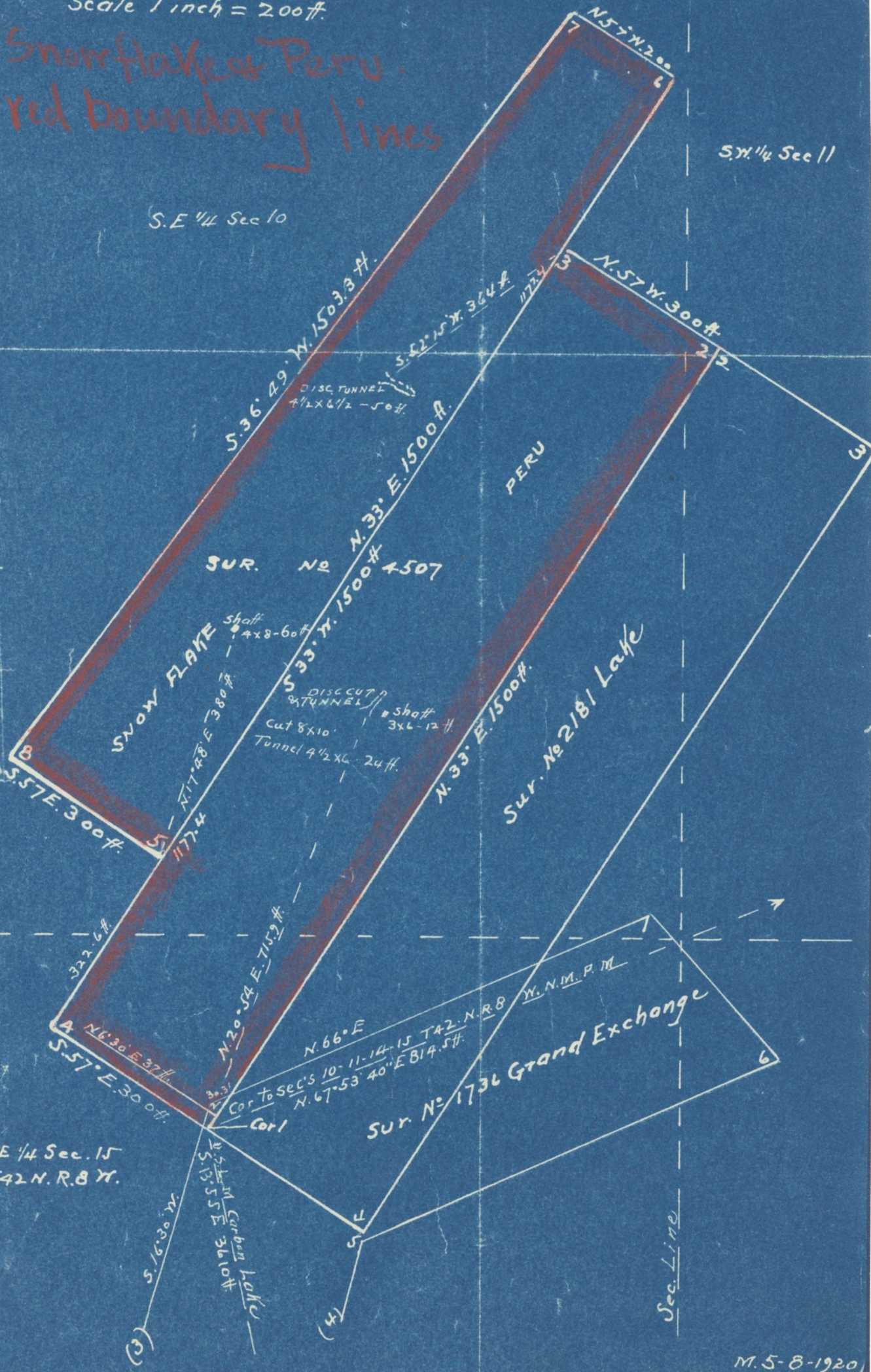
claimant John P. Olson et al

Scale 1 inch = 200ft.

Snowflake at Peru.  
red boundary lines

S.W. 1/4 Sec 11

S.E. 1/4 Sec 10



SUR. No 4507

SNOW FLAKE

SUR. No 2181 Lake

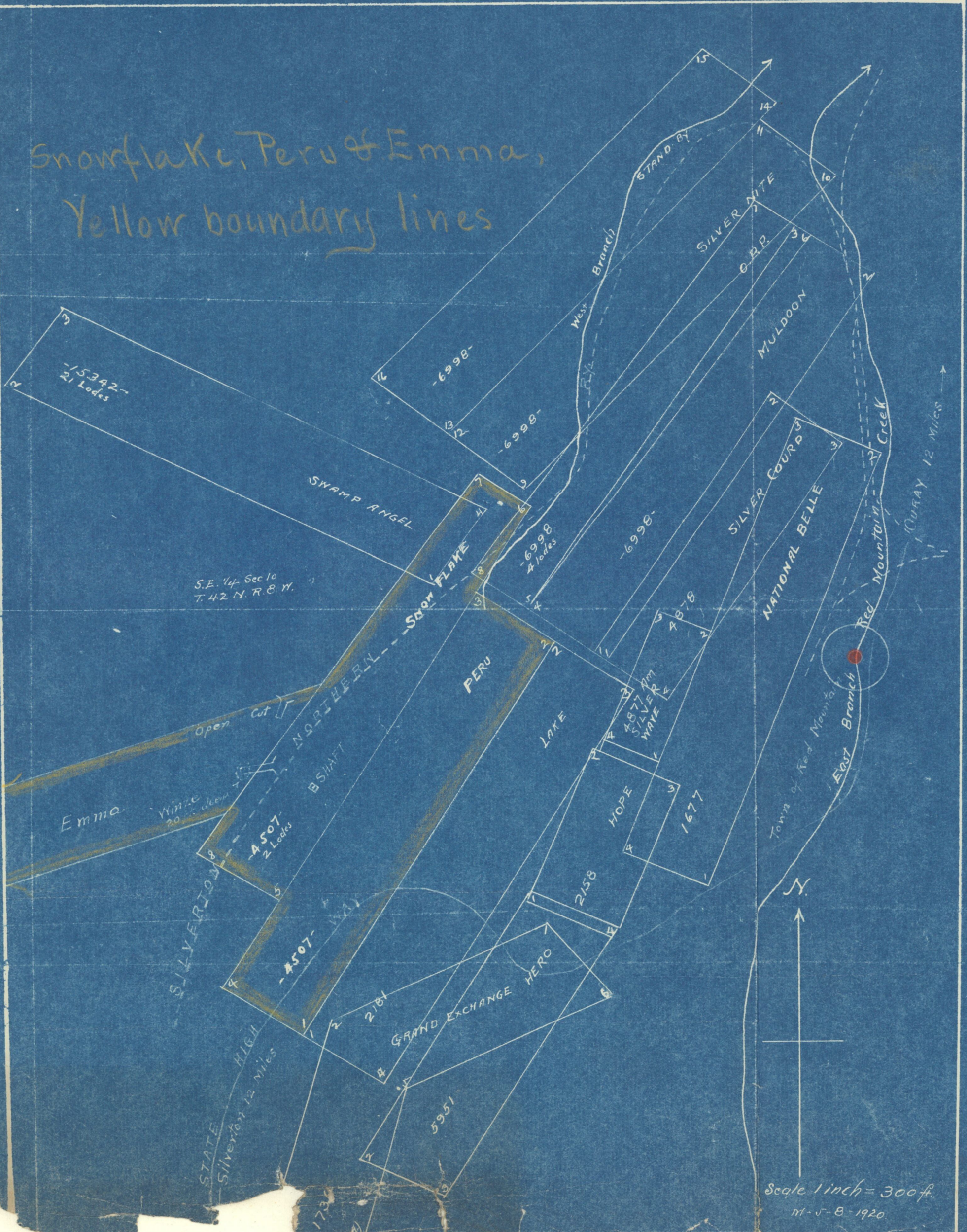
SUR. No 1736 Grand Exchange

N.E. 1/4 Sec. 15  
T. 42 N. R. 8 W.

M. 5-8-1920



Snowflake, Peru & Emma,  
Yellow boundary lines



S.E. 1/4 Sec 10  
T. 42 N. R. 8 W.

Emma.

Winze  
20' deep

Open Cut

BSHAFT

GRAND EXCHANGE HERO

HOPE

4877 PM  
SILVER WAVE

Town of Red Mountain  
East Branch

Scale 1 inch = 300 ft  
11-5-8-1920