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ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: LAWSON

ALTERNATE NAMES:

YAVAPAI COUNTY MILS NUMBER: 1037B

LOCATION: TOWNSHIP 12 N RANGE 1 E SECTION 8 QUARTER SE  
LATITUDE: N 34DEG 25MIN 59SEC LONGITUDE: W 112DEG 16MIN 12SEC  
TOPO MAP NAME: POLAND JUNCTION - 7.5 MIN

CURRENT STATUS: EXP PROSPECT

COMMODITY:

COPPER

GOLD

GOLD PLACER

BIBLIOGRAPHY:

USGS POLAND JUNCTION QUAD

ADMMR LAWSON MINE FILE

QILSON, E.D. GOLD PLACERS AND PLACERING AZBM

BULL 168 1978 P 50

NOTES ON GEOLOGY IN THE VICINITY OF THE LAWSON MINE.

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The Lawson Mine Shaft is located on a flat near the east bank of Big Bug Creek, about two miles north of Mayer, Yavapai County, Arizona and about a half mile north of the site of the Boggs Smelter.

Erosion, caused by the Big Bug running approximately at right angles to the strike of the formations, has exposed these, so that their sequence as sketched in Fig. I could be accurately determined.

Rocks found in place were schist, diorite and granite. Boulders of volcanic rock (malapai) were also noted but these on the higher mesas to the north and west.

The granite (or grano-diorite) is much weathered and decomposed and probably an outlying portion of the great Bradshaw Mountain batholyth.

The "diorite" is a very dark coarsely crystalline fresh looking rock, in my opinion misnamed but will for the purpose of this report be referred to by its local name.

The schist is a chlorite schist striking in a north-south direction and dipping at about 65° to the East. This is in contrast with the same schist in the Copper Mountain District five miles farther west where the strike is approximately the same but the dip is 65° to the west. The presence of a fold is suggested.

Generally speaking all the copper ore that has been mined in the district has come out of the schist. The same is true of gold, the bulk of the production coming from quartz veins enclosed in a schist country rock. The schist is therefore the rock most favorable to ore deposition in this district.

LAWSON MINE.  
AN EAST WEST GEOLOGICAL SECTION  
LOOKING NORTH.  
( not to any scale )

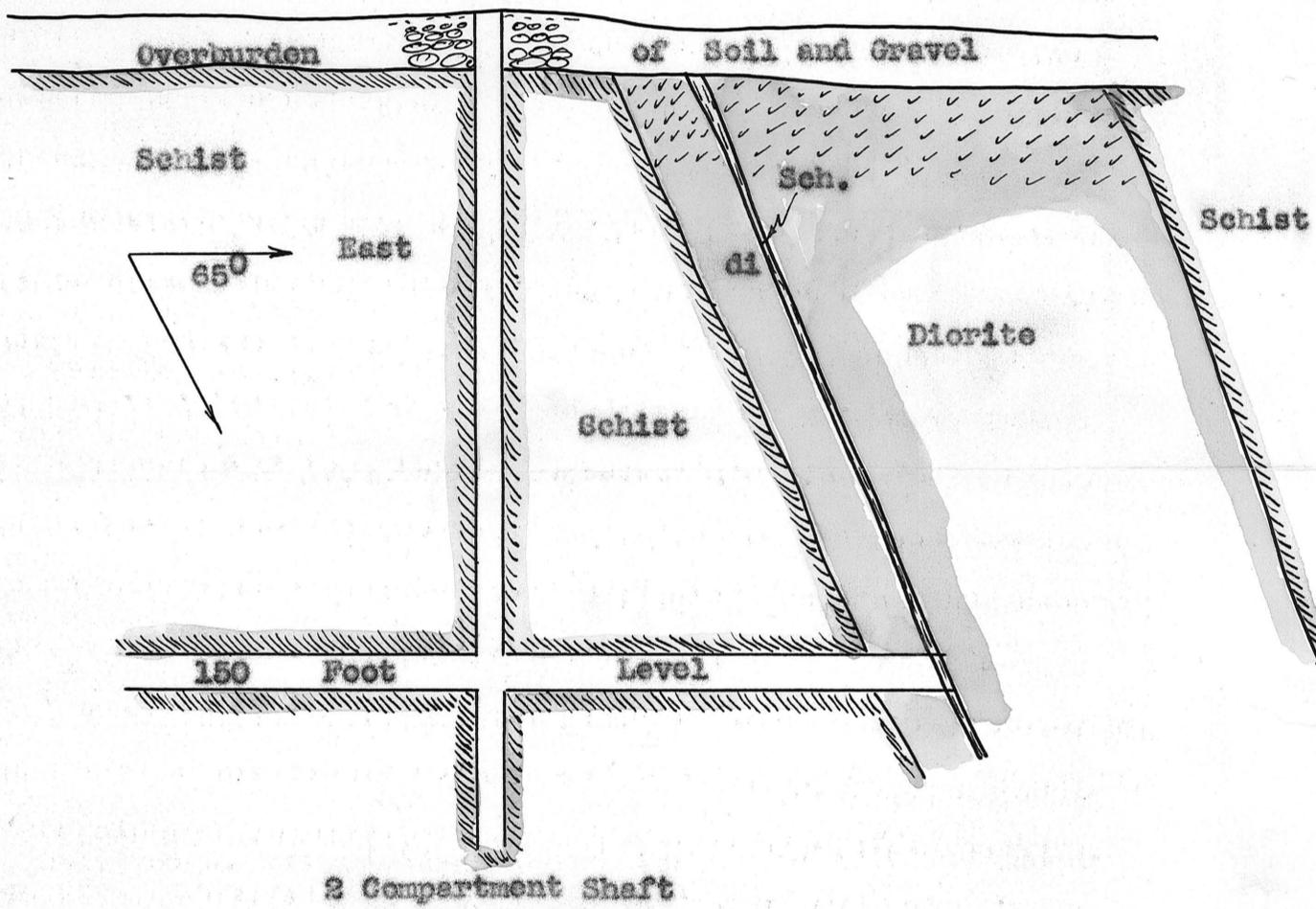


Fig I.

The Lawson shaft is sunk on a belt of schist the strike of which is remarkably constant. The Head Frame lines up fairly well with three mines which produced much ore and are still intermittently worked by leasers. Beginning at the south their order of location is: the Hackberry, Lawson, Iron Queen and the Boggs. The distance between the Hackberry and the Boggs is about three miles.

The occurrence of the ores in these properties have been studied and reported upon in Bulletin #782 issued in 1926 by the U.S. Geological Survey.

They are of very similar occurrence - a replacement of schist by pyrite and chalcopyrite.

The Hackberry mine is reported to be 900 feet deep; the Iron Queen 300 feet deep and the Boggs 500 feet deep.

Contrary to local opinion it is safe to assume that these mines were operated as long as they were profitable and it is a safe conclusion that the ores became very pyritic in the bottom workings. The Iron Queen always was low grade and though the Boggs still may have good ore in the bottom, the dump supplies evidence that at least the greater part of the original ore body turned to pyrite. In the case of each of these properties the ore body was indicated by an oxidized outcrop.

The Lawson shaft was sunk on a cropping of fresh schist with no indication of ore showing. On the 150 level cross-cutting exposed the formation for 210 feet north from the schist - diorite contact.(Fig I).

Along the strike of the schist and south from the shaft is a shallow prospect pit sunk on an oxidized cropping with a small showing of copper. Still farther south an oxidized cropping shows along the surface for several hundred feet.

A tunnel driven north into this gained moderate depth. The dump showed iron sulphide.

CONCLUSIONS AND RECOMMENDATIONS.

1. There is a belt at least three miles in length in which the Lawson mine is located which has been subject to igneous action and in which at least three profitable ore shoots were discovered.

The existance of other ore shoots, the oxidized croppings of which have been over looked, is possible.

The existance of "blind" lenses that do not outcrop is also possible but the chances of finding these by ordinary methods of prospecting is remote and search for them not recommended.

I would not recommend any further expenditure at your present workings but in view of your past investment I would suggest the following slight additional work:

- a. Thoroughly examine the surface along this schist belt and look not for high grade copper ore croppings but rather rusty looking schist containing stringers of silica and many iron oxide coated vugs that would indicate the former presence of sulphides. Sink on these. The zone of oxidation is not deep. Sulphide should appear within 100 feet.
- b. The shallow pit south of the creek warrants a little additional sinking. If it doesn't show a marked improvement as soon as you get ten feet below the surface I would not go any deeper.

  
Mining Engineer -  
Bank of Arizona Building  
Prescott, Arizona  
July 25, 1929