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The Battle Creek tungsten mine, owned by H. M. Bowring, is on the east side of the Ruby Range south of Battle Creek, in sec. 1, T. 30 N., R. 68 E. Scheelite, accompanied by a little quartz and pyrite, is found in 2 small lenses of chlorite schist surrounded by granite and pegmatite. One of the lenses is vertical and strikes N. 70° E.; it is 100 feet long, and has a maximum width of 10 feet,

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an average width of 3 feet. The other lens, in 1942 exposed in a cut 10 feet long, dips 30° N. and consists of 2 layers of chlorite schist 1 foot and 4 feet wide separated by a 5-foot band of pegmatite. An output of about 900 units of WO_3 was made during 1943-45 from ore that averaged 1.5 percent of WO_3 .

Fawn Creek - Ruby Valley Dist.

The Fawn Creek prospect on the east side of the Ruby Range is south of Meyers Creek, the first creek south of Battle Creek, and is on a continuation of the road past the Battle Creek tungsten mine. When the property was examined in 1944, no work was in progress, and the adit, reported to be 40 feet long, was caved. Material on the dump was chlorite schist with fine-grained scheelite, and was estimated to contain 0.5 percent of WO_3 . The ore is similar to that at the Battle Creek mine, which is only 1,200 to 1,500 feet distant.

Reno, Nevada
September 24, 1942

Memorandum on Bowring Scheelite Property, Battle Creek,
Elko County, Nevada

Abstract

The Bowring Scheelite Property is on the ridge south of Battle Creek on the eastern slope of the Ruby Range, 8 miles by dirt road northwest of Ruby P. O., Elko County, Nevada. Two small lenses of chlorite schist mineralized with scheelite are surrounded by granite. Each lens may contain about 1000 tons of 1.5% WO₃ ore, a total of 5000 units. It is not likely that larger ore bodies will be discovered.

Introduction

On August 31 I visited the Battle Creek Scheelite Property of N. M. Bowring, Ely, Nevada. The claims are at elevations between 7200' and 7500' along the east front of the Ruby Range, Elko County, Nevada, barely within the South border of the Halleck Topographic Sheet. They cover part of the north side of the divide between Battle Creek and an unnamed creek to the south. The property is reached by a three mile dirt road along Battle Creek. This road turns west from the Ruby Valley road about 5 miles of Ruby P. O.

At the time of my visit there was no one working on the property. I had previously seen Mr. Bowring in Ely and learned a little of the history and plans for future development. The claims were located in August, 1941 by Bowring and O. D. Welch. They were subsequently leased to John A. McDonald. During this time considerable trenching was done to expose bedrock

which is covered by 1'-10' of overburden over much of the property. This lease has now expired and Mr. Bowring plans to put a small crusher and table on the property and mill a few tons of ore daily. About 60 tons of 1-2% ore is now stockpiled on the property. Sufficient water is available in Battle Creek, only 2000' from the workings. The working season is probably limited to eight months by weather conditions.

Geology

The claims are underlain by quartzite and quartz-sericite schist that has been intruded by muscovite and biotite granite, in part foliated, and pegmatite. This is probably the area west of the Smith Ranch mapped as Eureka (?) by Hill (1). Bedrock is very poorly exposed but the relation between quartzite and granite in some of the trenches indicated that lit-par-lit injection was common. Two small lenses of chlorite schist that contain scheelite and a denser, more siliceous, barren lens are partially exposed. These lenses, surrounded by granite and pegmatite on the surface, are probably xenoliths that pinch out at relatively shallow depths.

Ore Deposits and Reserves

Two lenses of scheelite ore have been found. The scheelite is almost entirely confined to a soft, medium grained, green chlorite schist that also contains a little quartz and pyrite. A few scheelite crystals or pockets of crystals occur here and there in the granite adjacent to the contact.

(1). Hill, J. M., U. S. G. S. Bull. 648, pl. III, opp. p. 54, 1916. The names of some of the Creeks and Properties have been changed since Hill's report was prepared. For example, Hankins Ranch is now Ruby Valley P. O., Ruby Valley is now Ruby P. O. and the Short Property on Hill's map is probably the Battle Creek Mine on the Halleck Topographic Sheet.

At the surface the pyrite has been oxidized and much of the schist has been stained brown. A denser, more quartzose lens has also been exposed by trenching but it contains no scheelite.

Main Ore Body.— The main ore body (near the west edge of the enclosed geologic sketch map) is a vertical lens of chlorite schist enclosed by granite and pegmatite. It strikes about N70E, gradually pinching out to the east and terminating as feather edges in granite to the west. These suggest pit-par-lit injection parallel to the foliation. Scheelite crystals that average about one eighth of an inch on a side are disseminated in the schist. The lens is about 100' long and has a maximum width of 10' and averages about 5'. It is developed by a surface cut to a depth of 15' in the central part. About 40 tons of 1-1.5% ore have been mined and stockpiled. At the bottom of the deepest part of the cut the lens is narrower than at the surface but this may be only a local pinch. This lens contains about 25 tons of 1-1.5% ore per foot of depth. It is not likely to continue to a depth much greater than 50' (1250 tons).

East Ore Body.— The east ore body is exposed in a cut 1200' east of the main ore body. It consists of two parallel lenses of mineralized chlorite schist overlain by granite and separated by a 5' band of pegmatite. The lenses dip about 30N. The upper lens is exposed for a length of 10' and averages 1' thick. It continues below the floor of the cut but pinches out in the granite upward so that it is not exposed at the surface. The lower lens has been opened to a depth of 4' and has not yet bottomed. Exposed faces in the cut and 20 tons of stockpiled ore are estimated to average 1.5-2.0% WO_3 . The lens has not been opened up enough to permit any reliable estimate of tonnage to be made, but a size comparable to the main ore body is probable.

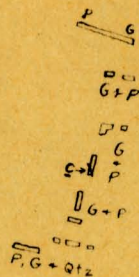
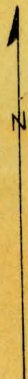
Summary of Reserves

1000-2000 tons of ore averaging about 1.5% WO₃ have been partially blocked out. This ore can easily be mined from two surface cuts or shallow shafts. Other small ore bodies may be found by extensive trenching. The likelihood that a large ore body may be discovered is remote.

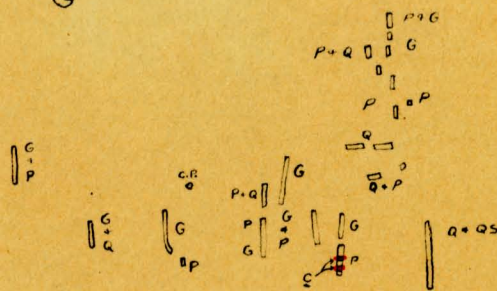
Respectfully submitted,


M. R. Klepper

Nolan (5)
Lemmon
Lasky
Allen
File



P & G



M. R. KLEPPER U. S. GEOLOGICAL SURVEY SEPT. 1942

1" = 200'

- Q - Quartzite
- QS - Sericitic quartzite +
Quartz-sericite schist
- C - Chlorite schist. Mostly
scheelite ore
- L - Calc-silicate contact rock
- G - Muscovite granite, in part
foliated
- P - Pegmatite

== Trench or pit

Open cut

■ Loading platform

--- Road

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

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September 24, 1942

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Elko County, Nevada
M. R. Klepper
Assistant Geologist

Abstract

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Introduction

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M. R. Klepper

Nolan (3)
Lemmon
Lasky
Allen
File

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GEOLOGIC SKETCH MAP
BOWRING SCHEELITE PROPERTY
BATTLE CREEK HALLECK QUADRANGLE
ELKO COUNTY NEVADA

M. R. KLEPPER

U. S. GEOLOGICAL SURVEY

SEPT. 1942

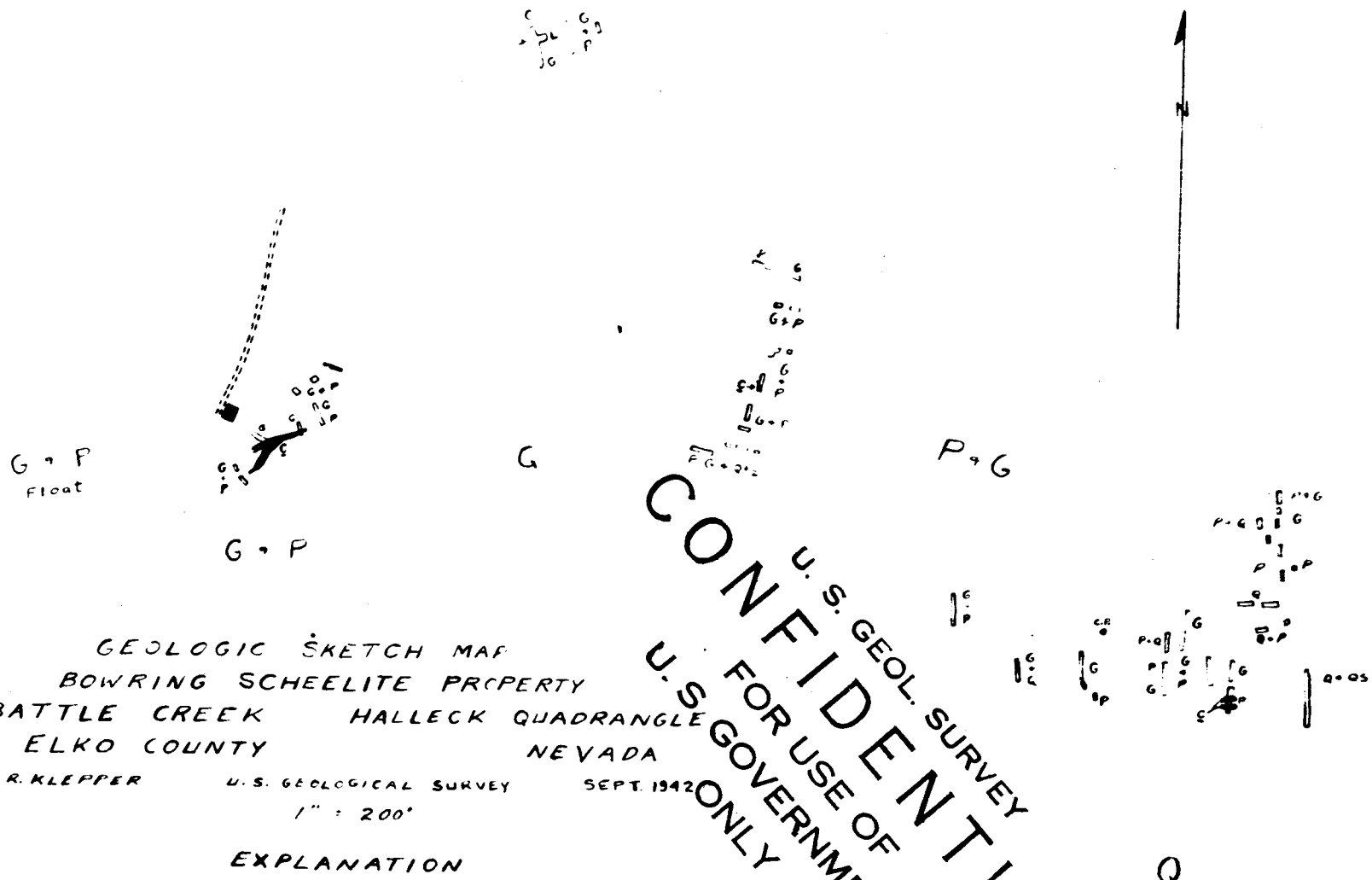
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