CANADA

DEPARTMENT OF MINES

GEOLOGICAL SURVEY BRANCH

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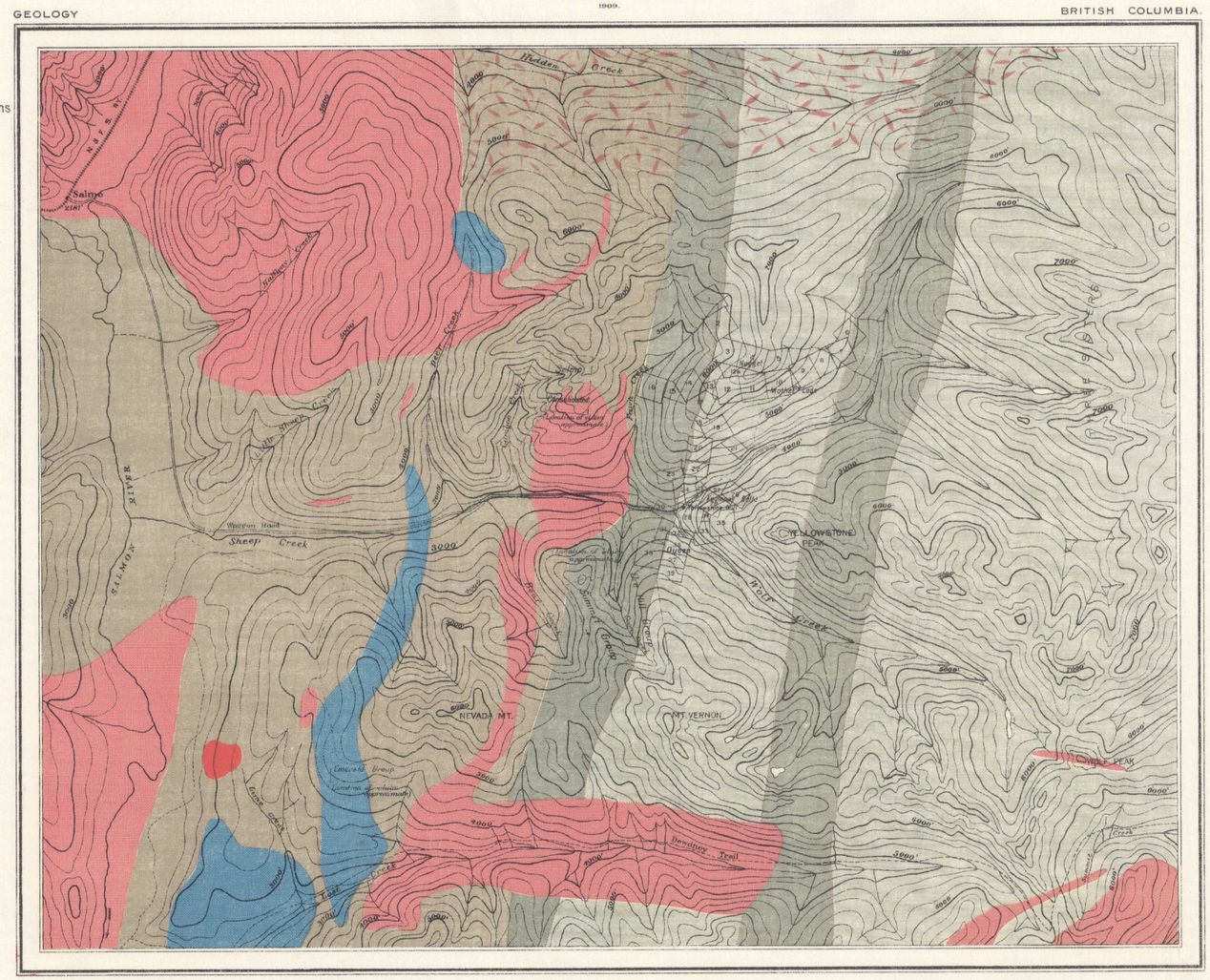
1909.

GEOLOGY — BRITISH COLUMBIA.



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Geology by R. A. Daly, *1906 and* O. E. LeRoy, *1909.*

No. 1068.

Legend

Sedimentary

Palaeozoic, probably Carboniferous
- *Pend. d'oreille limestone* — Pend d'oreille group
- *Pend. d'oreille schists.* — Pend d'oreille group

Cambrian
- *Lone Star schists.* — Summit series
- *Beehive, Ripple, Dewdney, Wolf and Monk formations.* — Summit series

Igneous

- *Biotite granite*
- *Zone of dikes and bosses of granite cutting sedimentaries*
- *(Salmon River) Monzonite*
- *Trails*
- 2181' *Heights in feet above sea-level.*

Index to Gold Claims

1. Black Stone
2. Blue Stone
3. Coyote
4. Nugget
5. Bonanza
6. Good Hope
7. Eldorado
8. Comstock
9. Virginia
10. Mother Lode
10a. Mother Lode Fr.
11. Independence
12. Golden West
12a. Lulu Fr.
13. Dominion
14. Joint
15. St. Eugene Fr.
16. Joint Fr.
17. Double Joint
18. Rodger
19. Clyde
20. Columbia
21. Rabbit
22. Navada
23. Edward D.
24. Sno Sic
25. Malwaaz
26. Rio Tinto
27. Rio Tinto Fr.
28. Yosemite
29. Yellowstone
30. Wolf
31. Pat
32. Burlington Fr.
33. Hide Away
34. Mat
35. Marie
36. Queen
37. Niagara
38. Bullion
39. Lewiston

Sketch Map of SHEEP CREEK MINING CAMP

WEST KOOTENAY, B.C.

Scale: 1 mile to 1 inch — 1:63360

Chains 0 20 40 1 2 3 4 5 Miles

Metres 1000 500 0 1 2 3 4 5 Kilometres

Sketch contours every 250 feet

Explanatory Notes

TOPOGRAPHY

This map was enlarged from the West Kootenay map-sheet which was published on a scale of four miles to the inch. Additional contours at intervals of 250 feet were interpolated between the original 500 foot contours. The present map is not to be used for accurate location of points, as it only indicates in a very general manner the character of the country, and is entirely an office compilation. The claims were added from a plan kindly furnished to the Geological Survey by Mr. F. C. Green, of Nelson, B.C.

GEOLOGY

GENERAL.—In the area covered by this map the sedimentary rocks are of Palaeozoic age, and admit of a two-fold division, based entirely on lithology and structure, since no fossils have been found. These two are the Pend d'Oreille group and the Summit series; the former presumably being, in great part, Carboniferous, and the latter, middle and lower Cambrian. Both appear to be quite conformable, and have a strong north and south trend, the beds being either vertical or with high dips generally to the east.

The eruptive rocks are referred to early Tertiary, and consist, in order of age, of granite, monzonite, and basic mica dikes.

CARBONIFEROUS.—Pend d'Oreille group.—This group consists of a limestone formation and a schist belt. The former is a light grey to white metabolized limestone, while the latter consists of interbedded quartz schists, dark quartz mica schists, phyllites, and to a less extent dark grey crystalline limestone. Some small areas of augite porphyrite belonging to the Rossland volcanic group have been included in this schist belt.

The Summit Series.—This series has been divided into the Lone Star, Beehive, Ripple, Dewdney, Wolf and Monk formations, based on lithological characteristics. They appear as two distinct basals living to the strata being repeated by a thrust plane which follows the west boundary of the eastern band of the Lone Star. West of this break the Lone Star, Beehive, Ripple, and Dewdney are represented, and to the east of it, in addition to the above, are the Wolf and Monk formations. Two colours have been used in mapping the series: one for the Lone Star, and one for the other formations which are composed essentially of highly siliceous sediments.

The Lone Star consists of phyllites, rusty weathering quartz mica schists, quartz chlorite schists, and finely banded crystalline limestone, the latter in part containing considerable tremolite.

The Beehive formation is composed of massive bedded quartzites, varying in colour from light grey to almost black, with interbedded schist, metargillite and a few bands of light grey crystalline limestone. The Ripple consists of massive white quartzites, and the Dewdney of dark grey quartzite, metargillite and two bands of coarse conglomerate. The Wolf formation is composed of highly indurated siliceous grit, fine conglomerate, and a little quartzite. The Monk consists of argillite schist and quartzite, with interbeds of conglomerate.

IGNEOUS.—The white to light grey biotite granite outcrops over considerable isolated areas, being parts of one great batholith. Dikes and bosses of granite are numerous along a portion of the northern edge of the sheet where they cut the sedimentaries forming a zone of mixed rocks, here characteristic of the border facies of the large granite intrusion north of Hidden Creek. Aplites and quartz porphyries occur more sparingly, as well as monzonite intrusions and basic mica dikes.

ECONOMIC.—The Sheep Creek district is essentially a gold camp, and the present productive mines lie in the Beehive formation, which runs across the map in two distinct bands, varying from one-half to a mile and a quarter in width, adjoining, and to the east of the Lone Star bands. The principal mines in operation are the Queen, Nugget, Mother Lode, Kootenay Belle, and Golden Belle. The veins, carrying in width from a few inches to 11 feet, occur in fissures in the quartzite and schist and cut the formations along courses varying from N. 45° E. to E. and W. The zone of oxidation reaches a greater depth than is usually found in British Columbia. The sulphides are pyrite, pyrrhotite, chalcopyrite, and galena in a quartz gangue of varying fine and texture. Cross stringers from the veins carry important values, and in cases considerable portions of the quartzite wall-rocks are stoped and milled. The shipping ore in car lots is stated to have run as high as $145 per ton, while the concentrating ranges from $10 to $25.

Free gold in calcite occurs in a vein in limestone on the Summit group, and auriferous galena has been found in small quartz filled fissures in the granite.

In the Pend d'Oreille schists the more favourable quartz ledges appear along the contact of a schist band and limestone. The lenticular quartz bodies in the schists proper lack continuity. The Emerald mine is the only producer of silver lead in the district. The ore body is a bedded one, occurring in the Pend d'Oreille limestone. The pay streak varies in width from a few inches to 7 feet, and it is stated that surface croppings have been traced for over three-quarters of a mile. The ore in car lots runs from 40 to 45 per cent. lead, and 7 ozs. of silver.

Tungsten, wolframite, scheelite, and the oxidized product, tungstite, were found as kidneys in the Kootenay Belle vein, one mass weighing about 30 lbs.

Molybdenite in quartz has been found in small quantities on Bear creek at the contact of granite and limestone.

The Pend d'Oreille marble affords a good grade of ornamental stone, and will no doubt be largely used when transportation facilities are sufficiently improved.

Sheep Creek
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