CANADA

DEPARTMENT OF MINES AND RESOURCES

MINES AND GEOLOGY BRANCH

BUREAU OF GEOLOGY AND TOPOGRAPHY

GEOLOGICAL SURVEY

LEGEND

PALAEOZOIC

PERMIAN OR CARBONIFEROUS, OR BOTH

SLIDE MOUNTAIN SERIES

4 — *Argillite, minor amounts of chert, limestone, grit and conglomerate*

PROTEROZOIC (LATE PRECAMBRIAN)

CARIBOO SERIES

3 — *PLEASANT VALLEY FORMATION: argillite, limestone, quartzite*

2 — *BARKERVILLE FORMATION: limestone, minor amounts of quartzite, schist and argillite*

1 — *RICHFIELD FORMATION: impure quartzite, quartz-sericite schist, argillite, limestone, conglomerate*
1d; *Lostway member; argillite*
1c; *Roundtop member; quartzite*
1b; *Bee member; argillite*
1a; *Hudson member; impure quartzite, schist, limestone*

Area of deep alluvium and glacial drift
Geological boundary (assumed)
Bedding (inclined; dip unknown; vertical)
Fault (defined, approximate)
Fossil locality
Anticlinal axis
Mine tunnel
Shaft

Road and buildings
Road not well travelled
Trail
Passable pack-train route
Post Office
Power transmission line along road
Intermittent stream
Ditch
Sand bar
Marsh
Contours (interval 100 feet)
Height in feet above Mean sea-level 2650'

Geology by A. H. Lang, 1936, and 1937.

Base-map prepared by the Topographical Survey, 1938, from map supplied by the British Columbia Department of Lands. Cartography by the Drafting and Reproducing Division, 1939.

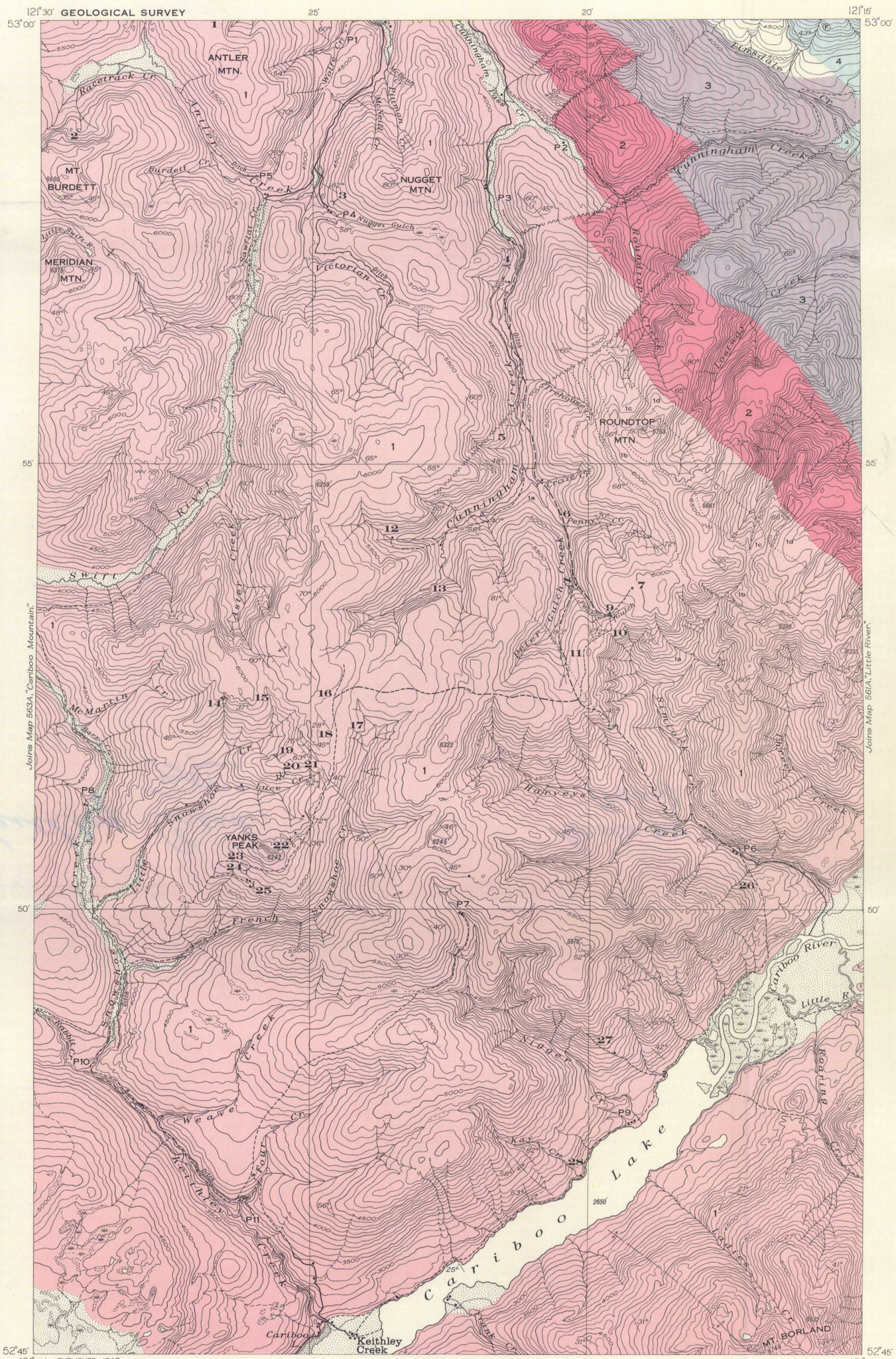
LODE PROPERTIES

1. *Antler Mountain (Armstrong group)*
2. *Mount Burdett*
3. *Bridger and Johnston*
4. *W. E. Thompson*
5. *Canadian group*
6. *Wendle claims-North showing*
7. *Wendle claims-Bralco group*
8. *Cariboo Hudson Gold Mines, Limited-Cunningham and Cutler groups*
9. *Cariboo Hudson Gold Mines, Limited-Hudson claim*
10. *Cariboo Hudson Gold Mines, Limited-Glen Echo claim*
11. *Sterling group*
12. *F. M. Wells*
13. *Cariboo Nordine claims*
14. *B. E. Taylor (Hebson group)*
15. *Gorrie group-Imperial claim*
16. *Gorrie group-Cornish ledges*
17. *Gorrie group-Plateau d'or claims*
18. *Gorrie group-Crystal claims*
19. *Pauline claims*
20. *Jane group*
21. *F. H. M. Codville*
22. *Saddle Mines, Limited*
23. *Cariboo Yankee Belle Mining Co., Limited-Talbot veins*
24. *Cariboo Yankee Belle Mining Co., Limited-Corban veins*
25. *Cariboo Yankee Belle Mining Co., Limited-Main adit*
26. *Sylvain and Langis*
27. *Sylvain claims*
28. *Gold Recoveries, Limited*

HYDRAULIC PROPERTIES

P1. *Wolfe creek*
P2. *Bear claim*
P3. *Trehouse*
P4. *Nugget gulch*
P5. *Antler creek*
P6. *Burrard Placers, Ltd.*
P7. *Baker and Peeling*
P8. *Hesbrouck*
P9. *Harvey Creek Mines, Ltd.*
P10. *Halen*
P11. *Placer Engineers, Ltd.*

SCALE, 1 INCH TO 200 MILES



PUBLISHED, 1940.

PHYSICAL FEATURES

The area is a semi-mountainous region in which elevations range from 2,650 to 6,763 feet. The present topography has been sculptured by stream and glacial erosion from an ancient erosion surface now represented by isolated, fairly flat-topped summits. A deep trench occupied by Cariboo lake and river, in the southeastern part of the area, forms the master drainage, which is tributary to Quesnel river; the northwestern corner of the area is drained northward by Antler creek to Bowron river. The central part of the area occupied by Snowshoe plateau, is a rolling upland averaging about 6,000 feet in elevation, from which many inter-valley ridges radiate. Rising above the general level of the plateau are peaks such as Yanks peak and Roundtop mountain, most of which are formed of hard, resistant quartzite. Many streams rise in steep-walled cirques formerly occupied by alpine glaciers. Most of the larger valleys were rendered U-shaped by valley glaciers and are floored by glacial drift and stream gravel, sand, and silt. The slopes and uplands are covered extensively by glacial drift and talus, bedrock being very poorly exposed except on the higher summits and in rock canyons.

Timber-line is about 6,200 feet above sea-level, therefore the uplands are comparatively easy to travel. The slopes and valleys are heavily wooded, chiefly with spruce and balsam and dense growths of buckbrush, alder, and willow. Travelling with horses is restricted to the trails and uplands.

The northern part of the area is reached by a road from Barkerville extending up Cunningham creek about a mile above the Trehouse hydraulic mine, a total distance of about 12 miles from Barkerville. From this point a tractor road leads to the Cariboo Hudson mine. A branch from the Barkerville road follows Antler creek to Sawmill Flat.

Keithley Creek village is reached by a road 62 miles long which leaves the Cariboo highway at the 158-mile house. A road extends from the village to the Placer Engineers camp. From this point a trail extends up Keithley and Snowshoe creeks to Yanks peak and Snowshoe plateau, and a team and narrow cart may be used as far as the Yankee Belle mine. Branch trails lead to the heads of Nigger and Little Snowshoe creeks. The trail shown following Barr creek, Swift river, and Sawflat creek is not in good repair. In summer, horses can be taken across Snowshoe plateau from Yanks peak to the Cariboo Hudson mine, thus establishing a link between the Barkerville and Keithley Creek routes. A trail along the north shore of Cariboo lake leads to Harveys creek. Cariboo lake and river are navigable by small boats. Boats and horses may be obtained at Keithley Creek.

GENERAL GEOLOGY

The area is underlain by altered sedimentary rocks striking northwest. Almost all of these belong to the Cariboo series, of Precambrian age. They are the continuation of formations underlying Barkerville area, but differ lithologically, the change being exemplified chiefly by a marked increase of limestone.

On and near the divide between Peter Gulch and Simlock creeks bedrock is sufficiently exposed to permit subdividing the upper part of the Richfield into four members. The lowest of these, the Hudson member is divisible into three parts: a basal part composed of impure quartzite, schist, and limestone; a central part composed of impure quartzite and schist, with little limestone; and an upper part containing much limestone interbedded with quartzite, schist and argillite. Each of the overlying members consists in the main of single rock types. Scattered exposures indicate that the four members probably extend, with some variations, from Antler creek to Cariboo river, but the boundaries can be mapped only between Cunningham and Simlock creeks.

Overlying the Richfield on the northeast flank of the anticlinorium is the Barkerville formation, and overlying the Barkerville is the Pleasant Valley formation.

The Slide Mountain series rests unconformably on the Pleasant Valley formation. The lowest beds of the series, consisting of fine-grained conglomerate and grit equivalent to the Guyet formation of Barkerville area, are exposed in Tinsdale creek near its mouth. The remaining exposures are principally argillites less altered than those of the Cariboo series, and a little limestone.

The rocks of the Cariboo series are intruded by sills and dykes of altered felsite and quartz porphyry, termed the Prosperine intrusives, which are older than the Slide Mountain series; and by dykes and small, irregular bodies of diabase, diorite, and gabbro which are probably Mesozoic. These intrusive bodies are small and are not shown on the map.

STRUCTURAL GEOLOGY

The major structure is the broad anticlinorium whose axis extends from Mt. Burdett to Mt. Borland. The strata are contorted further by small, open folds and drag folds.

The strata are displaced by numerous faults, the most prominent of which strike northeast. A fault north of Roundtop mountain displaces the Barkerville formation, and probably extends southwestward to Little Snowshoe creek, thus accounting for the offset of the anticlinal axis near the head of that creek; the disposition of the strata leaves little doubt regarding the existence of this fault, but its exact position cannot be determined from present exposures. Numerous faults of smaller displacement are widespread in the Richfield formation, and are divisible into three general groups: striking northeast; almost due north; and parallel to the strike of the strata.

ECONOMIC GEOLOGY

Gold placers and lodes are the only mineral deposits of commercial significance yet discovered in the area. Placer mining dates from 1860, and has resulted in a large production. Workable placers have been found only in and near certain creeks traversing the Richfield formation. Antler and Keithley creeks were very rich, and Cunningham, Harveys, Nigger, Little Snowshoe, French Snowshoe and Frank (Goose) creeks yielded substantially. A small production continues at present, chiefly from hydraulic mines at Cunningham and Nigger creeks. Large-scale hydraulic exploration has been carried out during the past few years at the Placer Engineers, Burrard Placers, and Antler Gold Mines properties and at Nugget gulch. Several smaller operations are conducted by drifting and by hydraulicking.

At the time of writing no lode gold has been produced in the area, except from test shipments, but several properties are being explored by surface and underground work.

The lodes are of two main types: quartz veins and sulphide replacements in limestone. Veins are by far the most numerous and most important of the present discoveries. Several of the most important veins discovered strike almost due north, generally occupying faults. Other veins strike northeast, east, and parallel to the strike of the strata. Many deposits are complex vein-systems composed of veins, stringers, or lenses either parallel to one another or striking in different directions. Some of the gold is free; most of it is associated with pyrite and, more rarely, with other sulphides, and is so finely divided that it is visible only microscopically. Most of the veins occur in schistose and fissile, impure quartzites.

The principal discoveries have been made in the middle part of the Hudson member and west of the crest of the anticlinorium near Yanks peak. The upper part of the Richfield formation, between Antler and Harveys creeks, may be considered as a southern part of a general belt that in the Barkerville area contains most of the gold deposits, but the members constituting the upper Richfield in Keithley Creek area are dissimilar to the members of the Barkerville Gold Belt. As the deposits near Yanks peak are near the axis of the anticlinorium, the continuation of that structure offers a theoretical guide for prospecting. The recognition of these two parts of the map-area where activity is greatest does not preclude the possibility of discoveries in other parts of the Richfield formation. Some veins occur in formations other than the Richfield, but they do not appear to be important.

MAP 562A

KEITHLEY CREEK

CARIBOO DISTRICT

BRITISH COLUMBIA

Scale, 1/63,360 or 1 Inch to 1 Mile

Miles 1 0 1 2 3

Approximate magnetic declination, 27° East.

562A