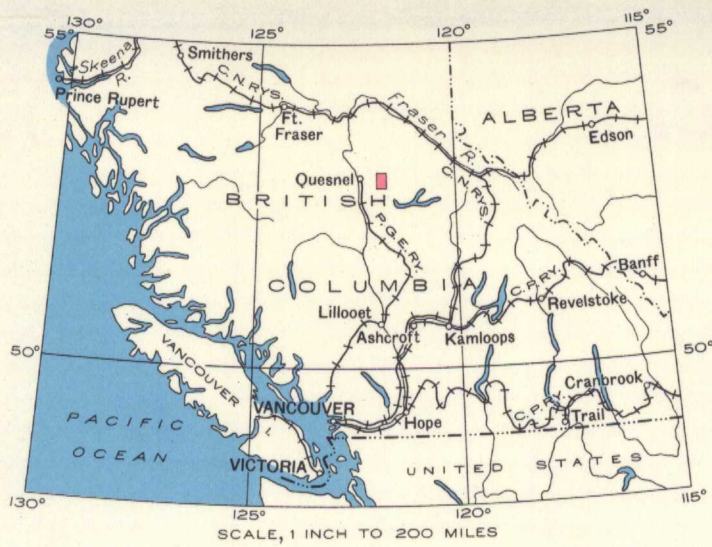


LEGEND

- JURASSIC (?)**
- 3** Amphibolite, other basic rocks
- 2** Shale, argillite, sandstone, basalt, flow-breccia, tuff
- 1** **CARIBOO SERIES**
RICHFIELD FORMATION (mainly):
quartzite, quartz-sericite schist,
argillite; numerous bodies of (3)
- Area of deep alluvium and glacial drift
Geological boundary (approximate, assumed)
Trail, and cabin
Passable pack-train route
Stream (position approximate)
Intermittent stream
Ditch
Dam
Marsh
Contours (interval 100 feet)
Contours (position approximate)

Geology by A.H. Lang, 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.



MAP 564 A
CHIAZ CREEK
CARIBOO DISTRICT
BRITISH COLUMBIA

Scale, 63366 or 1 Inch to 1 Mile
Miles

Approximate magnetic declination, 27° East.

DESCRIPTIVE NOTES

Open meadows occur along Reddish creek and at a few other localities, elsewhere the northern part of the area is fairly thickly wooded with spruce and some jack-pine and poplar. The southern part of the area is wooded with jack-pine and some spruce and poplar, the growth in places being sufficiently light to permit cattle grazing. The only ranch in the area is at Victoria creek near Sundberg lake.

In 1910 a rock-crib diversion dam 600 feet long and 35 feet high was built near the bend of Swift river and ditches with intervening siphons were built southwestward to the Quesnel Hydraulic mine on Birrell creek, south of the area. This system, which is now in disrepair, was designed to deliver 3,500 miner's inches of water a day. It has been estimated that 3,500 horsepower could be generated at the dam.

A wagon road was built from Birrell creek to the dam, with a branch to the mouth of Portio creek. This road is in disrepair but can be used as a pack-trail. It is joined at Portio creek by a trail from Stanley and at Chiaz lake by a trail from Quesnel Forks. A trail from Wingdam leads to the mouth of Atis creek. A trail from Coldspring House extends along the east side of Swift river to the canyon and one from Cottonwood follows Victoria creek and crosses to Chiaz lake.

GENERAL GEOLOGY

Bedrock is much mantled by overburden but sufficient exposures occur along certain summits and streams to indicate approximately the nature and distribution of the rocks.

The contact between the Cariboo series (1) and the Quesnel River group (2) is exposed in the bed of Fontaine creek and its position can be estimated fairly closely on Sovereign mountain (just north of the area), on the creek west of Mt. Campbell, and on Little Swift river; elsewhere the position of the contact is assumed. The rocks that immediately overlie the Cariboo series are black shale and argillite less-altered than the argillites of the Cariboo series. Similar shales outcrop sparingly to the west but are probably more abundant than their limited exposures would suggest, because the lavas with which they are interbedded, being more resistant, form most of the outcrops. Judging by the exposures, the sediments appear to increase to the northwest. In places the shales are indurated by adjacent lava flows. Beds of sandstone occur at the dam on Swift river and tuffs are exposed in the canyon of that river. Most of the exposures of the Quesnel River group are basaltic flows and breccias which are not sufficiently exposed to indicate the thickness of individual flows. These rocks correspond to the more basic phases of the "purplish brown volcanics" of Map 294A, Quesnel Forks sheet which adjoins the Chiaz Creek area on the south.

The rocks of the Cariboo series are intruded by bodies of basic composition (3), some of which are amphibolite but others are so altered that their original composition is doubtful. The largest bodies outcrop in the northeastern corner of the map-area but their boundaries are not exposed. These basic rocks are thought to be younger than the strata of the Quesnel River group but were nowhere observed in contact with them; certain outcrops of massive igneous rocks mapped with the Quesnel River group may, however, represent intrusive bodies and not flows.

The area is covered by glacial drift, the thickest deposits being lateral moraines on the slopes of the larger valleys and low hills of glacial drift in the southern part of the area. The drift on the summits and upper slopes is, at many localities, only a few feet thick. The larger valleys are floored with unknown thicknesses of silt, stream gravel, and glacial drift.

STRUCTURE

The rocks of the Cariboo series lie in the southwestern limb of a broad anticlinal structure whose axis lies to the east beyond the area. The strata of the Cariboo series have a prevailing strike of north 30 to 40 degrees west and generally dip steeply south-west, but the beds are distorted in places by minor folding. Bedding planes are commonly obscured by shearing, the rock cleavage being in general parallel to the bedding planes, but crossing the bedding in places.

The rocks of the Quesnel River group occupy a synclinal structure the details of which are obscure. The general strike of the Quesnel River group is slightly more westerly than that of the Cariboo series. The sediments of the Quesnel River group, being less-competent than the flows, are contorted by sheared and fractured as those of the Cariboo series, a fact that confirms the belief that the Cariboo series was folded before the deposition of the Mesozoic rocks.

ECONOMIC GEOLOGY

The area has not been an important producer of placer gold. In 1919 four shallow holes were drilled across Swift River valley near the confluence of the Little Swift river. Evidence of recent, small-scale work with rockers and long-toms was observed along Swift river, in and below the canyon. Below the canyon the river flows through a wide flat where a little fine, flaky gold can be panned near the surface. Some placer gold is stated to have been obtained recently from a tributary of Chiaz creek about one-half mile below the pipe-line. Recent drifting was seen at the south bank of Sovereign creek one-quarter mile below Atis creek.

The wide valley of Reddish creek may at one time have carried the waters of Swift river northward to Sovereign creek, therefore this valley, as well as the alluvial flats of the present Swift river, offer speculative fields for prospecting by drilling. Fontaine creek may at one time have emptied into Reddish creek at a point about two and a half miles above its present outlet.

No mineralized veins are known to have been discovered. A quartz vein up to 18 inches wide is exposed in the bed of Fontaine creek about four miles above its mouth. The region underlain by the Cariboo series is considered more favourable for lode prospecting than that underlain by the Quesnel River group.

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