

**CALIFORNIA STATE MINING
BUREAU. SAN FRANCISCO,
DECEMBER, 1918. MINES AND
MINERAL RESOURCES OF
PLUMAS COUNTY**

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ERROL MAC BOYLE

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CALIFORNIA STATE MINING BUREAU

FERRY BUILDING, SAN FRANCISCO

FLETCHER HAMILTON

State Mineralogist

San Francisco

December, 1918

Mines and Mineral Resources

OF

PLUMAS COUNTY

By ERROL MAC BOYLE



CALIFORNIA STATE PRINTING OFFICE
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PLUMAS COUNTY.

MINING DISTRICTS.

BUTTE VALLEY MINING DISTRICT.

Including Sunnyside.

Gold is the only metalliferous product of importance in the Butte Valley district. It has been produced from rich placer diggings in gravels of both recent and ancient streams. Considerable gold is also being recovered from quartz veins, and prospects for the future are promising.

The settlement of Butte Valley (sometimes known as Butt Valley) is situated at an elevation of 4600', ten miles by stage from Crescent Mills on the Indian Valley Railway. It is about ten miles by trail west of Greenville, and about nine miles by stage road south of Prattville. Prattville is sixteen miles by stage northwest of Greenville, which is ten miles northwest of Keddie, a station on the main line of the Western Pacific Railroad. During the winter months heavy falls of snow and rain make transportation difficult. The roads are good during the summer.

Timber consists of pine, fir, spruce and tamarack. Water is plentiful, since the North Fork Feather River, Indian Creek, Yellow Creek, and several small streams flow through the district.

History of mining.

A few relatively small deposits of ancient auriferous gravel have been mined in this district. Deposits of auriferous gravel occur in the recent beds of the North Fork Feather River, Indian Creek and Rush Creek. This gravel was once rich in gold, and was extensively mined. At some localities it has been worked over a number of times, and mining still continues. Very little mining of gold quartz deposits has been done, although there are several prospects.

Topography.

Dyer Peak, elevation 7400', in the northeastern part, is the highest point in the district. South of the peak there is a gradual slope to a broad-topped ridge, elevation 6400', lying between North Fork Feather River and Indian Creek. This ridge has a steep, north-westerly face where bordered by the North Fork Feather River, and is deeply cut by Indian Creek, which flows westerly. Red Hill rises to an elevation of a little over 6000' between North Fork Feather River and Indian Creek. The west side of Dyer Peak slopes precipitously to Big Meadows, which is a broad, flat area, lying at an elevation of about 4300'. The streams in this area head in broad shallow valleys, but as they approach North Fork Feather River they

out deep cañons. This whole region drains into North Fork Feather River, which heads in Big Meadows. Indian Creek drains all of the southern portion of the district and Yellow and Chip creeks western portions.

Bibliography.

U. S. Geol. Survey, Folio No. 15, 1895, Lassen Peak. U. S. Geol. Survey Bull. No. 353, 1903, Geology of the Taylorsville Region, California, by J. S. Diller.

Geology.

In the northeastern portion of the district, on the slopes of Dyer Peak, diabase and porphyrite are exposed. They lie in contact on the north with basalt; on the west with the alluvium of Big Meadows, and on the south with quartz-porphry. The formations southeast of here all strike northwest, being overlain by basalt to the northwest in the regions of Prattville, Longville, Yellow Creek and Chip Creek. The formations in succession from northeast to southwest are peridotite, Arlington formation, diabase, Calaveras formation, diabase, Cedar formation, peridotite and Calaveras formation. The igneous rocks lie in narrow bands between the sedimentary formations.

The Grizzly formation is composed chiefly of slates; it is of Silurian age and is the oldest fossiliferous rock yet discovered in northern California. A small area occurs along the south contact of the quartz-porphry with the peridotite. The Arlington formation, supposed to be of Devonian age, is composed of gray sandstone, slate and conglomerate. The Calaveras formation, belonging to the Carboniferous period, consists of comparatively small lenticular masses of quartzite, slate and limestone, cut by occasional auriferous quartz veins and areas of gabbro and other intrusive rocks. The Cedar formation, of the Juratrias period, consists of metamorphosed slates and limestone, in which auriferous quartz veins have been found.

The diorite of this district usually contains plagioclase, hornblende, black mica and quartz, and belongs to the quartz-mica-diorite series. The sedimentary rocks in contact with diorite are greatly altered. Peridotite is an intrusive rock originally composed of olivine, and, in many cases, pyroxene. When pyroxene becomes the predominant mineral the rock is called pyroxenite. Since its intrusion the olivine and some of the associated minerals have been altered to serpentine. Diabase and porphyrite are the other intrusive rocks of the Juratrias period; they have been subjected to great pressure, accompanied by an alteration of their mineral constituents. Andesites, which are characterized by the predominance of pyroxene, are called pyroxene andesites; in like manner some of the rocks are called hornblende andesites. Generally the andesites are older than the rhyolites,

dacites and basalts. The rhyolites of this district are light-colored, usually lithoidal, and occasionally composed of perlitic glass. Basalt is the most common and widely distributed lava of the district, having escaped from many volcanic vents towards the end of the Neocene period; it flowed down the cañons cut in the older rocks, occasionally damming them up, and giving rise to fertile meadows.

The relation of land and sea in northern California and Oregon, was essentially the same throughout the Silurian, Devonian, Carboniferous and Juratrias periods; frequent oscillations of the land with reference to the sea level are recorded in the changes of sediments. These strata, originally deposited horizontal, have since been faulted and metamorphosed; the fractures have been filled with auriferous quartz veins. The deformation did not all occur at the same time; the first tilting took place before the oldest Triassic formation was deposited. The rocks were again folded during the Juratrias, at the close of which period the great deformation occurred which raised the whole of northern California above sea. In this district there were active volcanoes during the Carboniferous and Juratrias periods. Many of these older eruptions have been folded and displaced along with the sedimentary rocks. Later volcanic action occurred during Neocene time. To the younger flows of basalt this district is indebted for the development of its agricultural and grazing lands. Lava in many places dammed up the cañons, in which by gradual accumulation of gravel, sand, mud, infusorial earth and vegetable matter, beautiful meadows formed, as typified by Big Meadows, Humbug Valley and Butte Valley.

Mineral deposits.

By the disintegration of the auriferous slates of the Cedar and Calaveras formations gold has been furnished for placer mines in the Quaternary stream gravels of Indian Creek, Rush Creek, and the North Fork Feather River. The deposits in the region of Lot's diggings and Dutch Hill are typical occurrences of auriferous gravels of ancient streams. They have all been mined and the latter is said to have been rich. The gravel at Dutch Hill is about 1000' above the North Fork Feather River and at Lot's diggings near the latitude of the fortieth parallel, the gravel lies nearly 4000' above the level of the river where it cuts across the range. It is evident that there has been a great change in the drainage of the country since these gravels were deposited.

Lode mines and prospects in this district are limited to the auriferous slates, of which the Cedar formation and the Calaveras formation have been the most productive. Intermingled with the auriferous slates are eruptive rocks, and it has been found that the