

Baker

Sparta

Prostka, Harold J. GEOLOGY OF THE SPARTA QUADRANGLE, OREGON: Oregon, Dept. Geology & Mineral Industries, Map GMS 1, text 8 p. (printed on reverse side), scale 1:62,500, 1962, 18 refs.

Rocks of the Sparta quadrangle fall into two groups separated by a profound unconformity, the pre-Tertiary rocks and those of Tertiary and later age.

The pre-Tertiary rocks consist of Permian(?) chert and argillite intruded by a plutonic complex of gabbro and ultramafic rocks, quartz-diorite, and albite granite. These are unconformably overlain by a bedded sequence of upper Triassic sedimentary and volcanic rocks. The lower part of the upper Triassic sequence consists largely of altered lava flows and pyroclastic rocks which show marked facies changes. The upper part is dominantly limestone and fine-grained clastic sedimentary rocks. These strata are folded into a northwest-trending synclinalorium. Gabbroic dikes and quartz-diorite stocks of Jurassic-Cretaceous age cut these older rocks. In the northern part of the quadrangle isograds are mapped in the rocks lying within the contact-metamorphic aureole of the Cornucopia Stock.

Tertiary rocks include Miocene andesite and olivine basalt flows overlain with slight unconformity by tuffaceous lake sediments and welded tuff. These rocks are gently warped and are cut by northwest-trending normal faults.

Copper minerals in altered Triassic volcanic rocks, and gold-quartz veins associated with intrusives of both ages have been mined to some extent in this area, but there is no mining activity at present.

Sponta Ore

Quartz Handbook 257

Cecil Collins Quartz album report

Dixon and Greener Collins Sponta Ore
Quartz album report

Gen of Sponta Mine Sponta Ore
Quartz album report

Macey Mine Sponta Ore
Quartz Quins report

Later reports indicate that the lessees had
subject the property to Clayd Anderson and Kenneth
Greener with W.C. Fellows as directing engineer who
are milling 75 to 100 tons per week and had
shipped 143 oz gold bullion from ^{67 tons in} one weeks operation.
Ore values had doubled over previous operations.
The average value of the ore is said to be \$40 per
ton and a recovery of 92 percent is made.

New Deal Mine Sponta Ore
Quartz Dec 7015 page 34

Press reports state Oct 12-1938 state that the
mine had been sold to the Hi-Grade Mining Co
of Cosmopolis Oregon

SPARTA AREA

(Lower Powder River and Sparta Districts)

Geography:

The Sparta area extends on both sides of lower Powder River from Eagle Creek west to the range line between 43 and 44 E., and includes all the drainage into Powder River from the south, from the mouth to the above range line.

Geology:

This district is between Lower Eagle Creek and Powder River, and with the exception of its northern border is a granitic area surrounded by recent basalts. Doubtless it was once entirely covered by the Columbia River basalt since Sparta Butte, close to the town of Sparta, is an uneroded remnant of basalt. The Sparta region, no larger than 30 square miles, is a granitic stock which was intruded into the older greenstones and sediments. These older greenstones and sediments which covered this granitic stock at the time were eroded from its top. Afterwards when the great flows of Columbia River basalt spread over wide expanses in eastern Oregon they covered the Sparta region also, and erosion, with the exception of the northern border, has not fully uncovered all of the intrusion which had been uncovered previous to the first flow of this late basalt. The area has been mapped by Ross (38).

This intrusion is a light-colored rock of very coarse-grained texture, and consists chiefly of feldspar and quartz. The rock, in thin section, is seen to be composed chiefly of albite feldspar, which sometimes shows zonal growth with the central portion of the feldspar crystals more basic than the outer parts. This rock is a soda granite and the much larger quartz grains and the more basic portions of the feldspars suggest that it is a more acidic phase of the intrusion which elsewhere in eastern Oregon is almost altogether the more basic granodiorite. Besides the granite there are outcrops of porphyry in the vicinity.

In the granitic area adjacent to Sparta are found normal fissure veins formed by the deposition of quartz coming from the cooling mass below. The same type of vein is found cutting the greenstones, but the more distant they are from the intrusive the less extensive is their mineralization.

History:

Lidgren (01:736) states:

"A long, heavily timbered ridge follows the western side of Eagle Creek for a long distance toward Powder River. The Sparta mining district occupies the southern end of this ridge, where the rounded hills, here scantily forested, gently

slope toward the arid foothills of Powder River. The elevation of Sparta is 4,200 feet. The normal granite which forms the country rock is deeply decomposed and the gulches are filled with gravel. It was found at an early date that these gulches, draining in all directions from the central hill, were auriferous, but on account of lack of water little could be done until in 1873, the Sparta ditch was completed, with a capacity of 3,000 miner's inches and a length of 22 miles. This canal takes its water from the west fork of Eagle Creek and carries it down on the long ridge to Sparta. Great activity followed its completion, but in a few years the output rapidly diminished. According to the mint reports the placers produced \$35,000 in 1882, \$30,000 in 1889, \$3,100 in 1891, \$85,000 in 1892.

"The gulch placers of Sparta in most cases led up to well-defined quartz veins. Many of these were known in early days and gold was extracted by hand mortars, arrastras, and small mills. These operations were not continued, however, and the production from the veins gradually fell off; from \$60,000 for Union county in 1880, the output was reduced to \$7,300 in 1885, \$15,000 in 1886, and \$15,000 in 1887; but in 1889 there was a most remarkable change, the output in that year rising to \$576,000. Most of this, of course, came from the Sanger mine (Eagle District) and the Cornucopia (district), but a large proportion was contributed by the quartz mines of Sparta. For the four years (1889-1892) from which complete returns are available, the following productions are compiled:

Little Pittsburg	\$111,000
Windsor	72,000
Union Tunnel Company	91,000
Gold Ridge Company	124,000
Free Thinker	65,000
Arkansas Belle	83,000
Magpie	19,500
New Gem	59,000
Del Monte	27,500
Buffalo	25,000

"As the workings deepened the country rock became harder and the general conditions more unfavorable, so that of late years the production has again been declining, and in 1900 only one mine, the Gem, was worked on a larger scale. Though the veins are narrow they are rich, and it is more than probable that thorough prospecting will develop many good mines in the vicinity. The prevalent strike of the veins is north-south or northeast-south-west; the dip is to the east or southeast. The country rock is throughout a granite, in which the biotite is usually converted to chlorite. The ore is free-milling quartz, with some sulphurets." *Pg 91 - 14A*