1230 0008 Copper Kettle

See Also:

(4)

Unpublished report on the

CARSON SINK AREA, NEVADA

By

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The ore is mostly fair-grade iron ore running about 60 percent iron and 2 percent copper, and it contains a little gold. It is magnetic and is composed mainly of magnetite and hematite. An inclined drill hole sunk from the bottom of the canyon and calculated to intersect the lode at the depth of 250 feet attained the depth of only 160 feet it is said because of the brecciated character of the rock. At this depth, however, the drill had penetrated a mineralized zone which is much oxidized.

Another hole sunk in the north side of the Canyon attained a depth of 145 feet whence the last drill core showed pyrite containing copper minerals from which the management inferred that it had probably reached the top of the sulphide zone. The greater part of this hole is in yellowish garnet which is probably a contact metamorphic deposit.

C. K. Copper Kettle district

The district is in Copper Kettle Canyon or Grimes Canyon and vicinity in the west slope of the Stillwater Range. It adjoins White Cloud District on the north and extends to the north edge of the map, figure 3. It was discovered about 1908. It contains several prospects, some of which are promising for copper and others for iron.

Copper deposits

The copper deposits are several miles up the canyon. They occur near the contact of diorite porphyry intruded into limestone.

In 1917 several carloads of about 30 percent copper ore were shipped from shallow workings on a large group of claims owned by Welsh & Green. The ore was oxidized and contained copper oxides and chalcocite. 11/

11/ Lincoln, Francis C., op. cit., p. 2.

Iron deposits

The iron deposits in the Copper Kettle district occur in the lower west front or foothills of the Stillwater Range at an elevation of about 4,700 feet. They occur in two groups, a south group and a north group.

South group

The south group of the iron deposits extends from a point about a mile south of the mouth of Copper Kettle Canyon, interruptedly southward for the distance of about 2 miles, and is separated from the canyon on the east by a prominent ridge from 1 to 3 miles wide (fig. 3).

The deposits are owned by the Buena Vista Iron Milling Co. They were not visited by the writer. Data for the present statement have been kindly supplied by John T. Reid, Manager for the Company.

The iron lode or zone of mineralization occurs along the contact of intrusive diorite porphyry that formed the footwall and Triassic quartzite that forms the hanging wall. It dips about 60° westward toward Carson Sink Valley. It varies from 4 feet up to 50 feet in width and averages about 6 feet. In most places it is well defined, owing, however to the eroded state of the quartzite and the heavy cover of valley fill abutting the lode, the contact of the lode with the hanging wall quartzite is rarely exposed.

At several points along its course the lode has been prospected by shallow shafts, one of which is 50 feet deep. The ore is composed mainly of magnetite and hematite. Tests made indicate it to be of good grade.

The croppings and openings show considerable ore in sight from which the Company estimates a large tonnage in reserve.

North group

The north group of the iron deposits occurs 2 miles north of the mouth of Copper Kettle Canyon in the western slope. A low ridge which here separates the southern drainage of Buena Vista Valley on the east from Carson Sink Valley on the west. It is near the north edge of the map and the Pershing County line, figure 3, and is easy of access. It corresponds to group No. 3, or Iron Mountain Group of the Buena Vista Co. Iron deposits. It is owned mostly by John T. Reid. The deposits are covered by several groups of 16 or more claims. They have an east-west extent of nearly 2 miles and a width of about a mile, and they outcrop through a vertical range of about 300 feet, figure 3. Part of a principal mass or lode, the Iron Mountain lode forms a knob-like hill several hundred feet in diameter, that stands 80 feet above the base of its outcrop.

History and production

Assessment work was done on the property in 1898 and about 1911 considerable additional surface development was done from which a test shipment was made of 50 tons of ore, mined at the base of the Iron Mountain hill and 100 tons was placed on the dump. The average of 3 analyses made of samples from the main mass of this deposit yielded the following:

	Average percent
Iron	66.87
Phosphorous	.011
Silica	2.24
Manganese	.071
Sulphur	.668

Geology

The deposits seem to be genetically connected with intrusive diorite and greenstone especially on the footwall side. At Iron Mountain hill and vicinity they in general have a crudely bedded structure that dips about 30° southwestward toward Carson Sink Valley. Here the footwall rock for at least 200 feet back from the lode is speckled augite-bearing diorite much of which is highly metamorphosed and the resultant silicate minerals are traversed by veinlets of magnetite which are later than the minerals. Some of the hornblende and iron ore seem to be alteration products from the augite. Owing to the mantle of lakebeds and valley fill, no footwall rock near the deposits was observed in the present work.

Deposits

The ore is chiefly medium-grained massive magnetite and hematite. It, in general, contains as gangue minerals a little apatite and serpentine or hornblende, chlorite or epidote, calcite and quartz, and in places, titanite. A specimen (510[2]) from the Iron Mountain lode is composed of 80 percent or more of massive magnetite partially altered to hematite. The gangue minerals are chiefly apatite and calcite which, in general are closely associated.

In places, however, the magnetite is well crystallized as shown by a polished section (of spec. 510[15]) which is a nearly black medium- to fine-grained crystalline mass of magnetite with no other metallic mineral present and only a small quantity of calcite as gangue. Each grain of magnetite shows remarkable multiple lamellae or striations on the octahedral faces.

The deposits of this group contain a large tonnage of ore in sight and with reasonable extent in depth they should contain probably a million tons of ore.

Other deposits

Beyond the edge of the present map, on the Lovelock quadrangle, in the western part of Buena Vista Valley, at respectively 4 and 8 miles north from the deposits last described and similar to it occur two other groups of iron deposits of which the most northerly is known as the Iron Bluff mine, and has made a small production.

Cottonwood Canyon district

Cottonwood Canyon district is about 5 miles east of the northeast corner of the present map, figure 3, near Table Mountain in the east slope of the Stillwater Range, just northwest of Boyer's ranch which has long been a landmark in this part of the country. It contains nickel and cobalt veins a few miles south of which are extensive copper deposits. It was visited by Ransome 12/ in 1908.

12/ Ransome, F. L., op. cit.