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JACKSON MOUNTAINS DISTRICT

LOCATION

The Jackson Mountains are a prominent range near the center of Humboldt County. They extend some 45 miles north from the south boundary of the county. The Jackson Mountains district is an area in the northern part of the range. The center of the district is roughly the Trout Creek-Jackson Creek divide. From the saddle that the road passes through a radius of five miles in all directions will cover the district.

HISTORY

Prior to the start-up of mining operations at the DeLong iron mine in 1952 very little is known about mining activity within the district. Lincoln mentions that small amounts of argentiferous copper ores and lead ores have been shipped from the district but he gave no indication of when this happened. His information probably came from "Mineral Resources of the United States", as he listed three yearly volumes in his bibliography, 1912, 1918 and 1920. Based on the dates of these volumes the writer has assumed that some activity was in progress in 1912, possibly a few years before 1912. It also seems likely that there was some activity during the depression years of the 1930's. Many people, particularly in the west, prospected for precious metals during this period. There are four sets of old workings in the area and while it can't be stated for certain, it is thought that all pre-date World War II.

Mining began at the DeLong iron mine in 1952 and continued for the next 10 to 15 years. By the end of 1960, 664,403 long tons of iron ore had been mined. Three other iron mines are also found in the district. They are the Redbird Mine, Humboldt Mine and the Jackson prospect (originally the Iron King Prospect). All of these properties have had some production but not near as much as the DeLong Mine. Total iron ore production for the district approaches, or maybe even exceeds, one million long tons.

GEOLOGIC SETTING

The district is underlain principally by a thick series of andesitic to basaltic flows, flow-breccias, agglomerates, tuffs, and locally, graywacke and volcanic-debris sandstone which Willden has called the Happy Creek volcanic series. These rocks are thought to be Permian in age, possibly Late Pennsylvanian. Overlying this unit, but of small areal extent, is the King Lear Formation. According to Willden it covers an area that starts northwest of Parrot Peak and runs south approximately 4 or 5 miles. It is generally about a half mile in width. Age is thought to be Late Cretaceous. This Formation is composed of about equal amounts of dark-green and greenish-brown pebble to boulder conglomerate and green to greenish-gray dense finely crystalline limestone. On the west edge of the district and lying south of Jackson Creek is a unit of undivided, and unnamed, volcanic and sedimentary rocks. They cover an area of about two square miles. They are thought to be Permian-Triassic in age. This unit overlies the Happy Creek Group with a gradational contact. The rocks of

this unit have all been metamorphosed but consisted originally of a lower part of interbedded graywacke, basic volcanic rocks, silty cherty shale, pebble conglomerate, and some silty and siliceous limestone, grading upward into a section of which is predominantly shale with thin chert, limestone, and dolomitic beds. North of Jackson Creek and in the northwest portion of the district is a Cretaceous-Tertiary age granodiorite intrusive. It covers about 6 square miles, intrudes the Happy Creek Group, and at least for a portion of its contact with the Happy Creek Group has created a skarn zone.

The most prominent tectonic feature in the district is the Deer Creek thrust fault. It is fairly continuously exposed from the north side of Deer Creek Peak to just south of the divide between Jackson Creek and Trout Creek. At the south end it is offset by several east-west trending, high-angle faults.

ORE DEPOSITS

Dollar wise as well as volume wise the iron deposits are the most prevalent economic commodity of the district. There may have been over one million long tons of iron ore produced exceeding a value of seven million dollars. Of much lesser importance are the argentiferous copper deposits of which, at the most, only a few tens of thousands of dollars worth of ore was mined.

There are four iron mines in the district—all of which have produced some ore. By far the largest is the DeLong Mine (Iron King). Of the over one million tons produced from the district the DeLong Mine can be credited with somewhere around 700,000 tons of production. Following would be the Redbird, Black Jack (Humboldt Mine) and Jackson prospect. The predominant ore mineral in the district is magnetite but there are also minor amounts of hematite. At the DeLong Mine the ore occurs as replacement deposits in greenstone adjacent to a north-trending fault system, and adjacent to or near diorite, to which they are thought to be related. The rest of the deposits occur in essentially the same manner as the DeLong Mine ores. Sample 2433 was collected at the DeLong Mine.

The copper occurrences are associated with a contact metamorphic zone and mineralization is either in hornfels or in quartz veins. The Harrison Grove Mine is typical of these occurrences. The mineralization here is associated with quartz "veins" and a hornfelsic unit, which in part looks like a basic intrusive rock. There is considerable medium to fine-grained granodiorite in the creek bed. The granodiorite is shot through with epidote and pink feldspar veinlets as well as being disseminated throughout the rock. The black minerals are altered to chlorite. Mineralization consists of copper oxides of malachite, azurite and chrysocolla. Sulphides observed consisted of pyrite and chalcopryrite. Sample 2430 was collected at the Harrison Grove Mine; sample 2431 was collected from an unnamed copper prospect down the creek from the Harrison Grove Mine; and sample 2432 was collected at the Christiorsson Canyon prospect.

SELECTED REFERENCES

- Lincoln, F. C. (1923) Mining districts and mineral resources of Nevada:
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