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DISTRICT	Beaway
DIST_NO	0540 60000 0407 6 pages
TITLE If not obvious	Walker River Reservation Folder 42 - Carson Sink Area, Nevada, Beaway District 7 PGS
COUNTY If different from written on document	Lyon
MULTI_DIST Y / N? Additional Dist_Nos:	
QUAD_NAME	
P_M_C_NAME (mine, claim & company names)	Copper King claim Quinn-Newman Group Eureka Mine Riovista Mine Hunchback Smith-Beiner Beaway Group
COMMODITY If not obvious	Silver gold copper iron molybdenum antimony manganese

Keep docs at about 250 pages if no oversized maps attached (for every 1 oversized page (>11x17) with text reduce the amount of pages by ~25)

SS DD Initials 11/9/07 Date

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Remarks From USGS open file report 47-17
District report
Geology
Hand written comments

Scanner: T.M 5/7/08

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CARSON SINK AREA, NEVADA

By

F. C. SCHRADER

Location: 6 mi West of Terrell

BENWAY DISTRICT (8)

Benway District

The present notes are based on a half day's examination made by the writer in August 1913, in which he was generously aided by lessees who were working at the mines.

Location and topography

The Benway district is 10 miles north of Shurz and 28 miles south of Fallon. The nearest available railroad stations, from which it is easy of access. It is 5 miles east-northeast of the old Ricvista or Reservation station on the Indian Reserve to which, however, there is no direct road. It is in the southeast corner of Lyon County, near the Mineral county line and is 6 miles west of Terrell. It is in the southern part of a 2-mile wide southwest lobe or ridge of the Desert Mountains at an elevation of about 5,200 feet and overlooks the broad Walker River Valley on the west, Fig. 3 (topo map),(which expresses the character of the topography).

The deposits are about all contained in a compact group of about 50 mining claims in a nearly square east-west area about 2 miles long by 1½ miles wide with the camp located in the western part of the area where also most of the development work is done. Most of the northwestern part of the area is occupied by the Smith-Baines Benway Group of 8 claims, which on the south is joined by a similar group, the Quinn-Newman group.

History and production

The district seems to be an old discovery. It probably is much older than Terrell. In 1913 the principal properties were said to be owned by Utah people and were being worked by only a few men. The production if any must have been small as no record of it seems to be available. In 1916 the company in sinking a new shaft to the depth of 330 feet was said to have found a 12-foot vein carrying considerable quantities of ore running $7 (0.33oz Au @ 2093/oz gold price) to the ton mostly in gold. Several of the veins are opened by shafts and tunnels to depths of about 100 feet and one, it is said, to the depth of 330 feet.

Geology

The country rock primarily is the limestone-shale-sandstone series of Jura-Triassic age similar to what it is at Copper Mountain in the Rand district. It is abundantly intruded by the mesozoic granitics which are mostly quartz monzonite or closely related types as granodiorite and diorite. The older rocks are also intruded or in part overlain by Tertiary volcanic andesite and rhyolite, especially on the northwest. The sedimentary rocks have been much disturbed, folded and faulted. In the western part of the area they dip southeast ?. Their dominant member is the limestone. It is a light-colored to bluish gray or banded dolomitic rock and contains much magnesium. In the vicinity of the intrusives, especially the monzonite, it is more or less silicated, or silicified and metamorphosed or partly crystallized and is traversed by seams and veinlets of calcite and quartz.

The dominant contact which is that between the limestone and the quartz monzonite lies in the northwestern part of the area. It trends northeasterly and dips southerly with mostly limestone on the northwest and quartz monzonite on the southeast. It extends from the Eureka ground in the northeastern part of the area west-southwestward across the Appeal to Reason and neighboring ground.

Quartz monzonite

The quartz monzonite is a gray or salt-pepper sub-medium grained massive rock with a reddish tinge, but in places contains much darker and more basic phases that stand close to diorite. It is perhaps the most important of the igneous rocks because the ore deposits seem to be genetically connected with it. It and the older rocks are cut by dikes of a light-gray or pale-pinkish finer-grained aplitic monzonite complementary to the quartz monzonite, which, in turn, together with the older rocks, are cut by dikes and in part are overlain especially on the northwest by flows of Tertiary volcanic rocks notably hornblende-biotite andesite porphyry and rhyolite.

Deposits

The deposits consist mainly of a series of 10 or more veins that strike nearly east-west (N. 75° E.) and dip steeply south, mostly in quartz monzonite and limestone with whose contact they are mostly associated but in the south border of the area a few of the veins dip northerly.

The veins or lodes range from 3 feet up to 20 feet or more in width. Most of them are said to have an extent of about a mile.

The vein filling is mostly crushed or sheared and altered rock, quartz and argillaceous gangue-like material much of it stained with iron and manganese oxides. The veins carry one or more of the following valuable metals: copper, silver and gold.

Minerals

There are but few contact metamorphic minerals. The following minerals were observed or reported in the present work:

The ore minerals are:

Argentite

Cerargyrite

Chalcopyrite

Gold

Hematite

Limonite

Malachite

Pyrite

Silver

Of these the principal primary ore minerals are the sulphides - argentite, chalcopyrite, and pyrite.

Other minerals present are:

Dolomite

Graphite

Molybdenite

Psilomelane

Pyrolusite

Stibnite

Tourmaline

Source of the deposits

The deposits are of hypogene origin and are genetically connected with the quartz monzonite. They are, therefore, of late Cretaceous or early Tertiary age. They were formed for the most part by heated magmatic solutions that circulated through the rocks soon after intrusion and consolidation of the quartz monzonite. They were originally deposited at considerable depth as the sulphides - argentite, chalcopyrite, and pyrite all these minerals perhaps being sparingly auriferous, and from them, on their being exposed to oxidation by erosion the oxidized or secondary minerals were derived and by process of leaching were concentrated at lower levels in places in sufficient quantity to form ore.

Mines and prospects

The following notes on a few of the deposits may help to convey a fair idea of the deposits as a whole.

Copper King prospect

The Copper King vein is said to have an east-west extent of more than a mile. Where opened by a 70-foot deep shaft on the Copper King claim of the Quinn-Newman group it lies in quartz monzonite. It is about 4 feet wide and dips 70° south. It is composed of mainly crushed quartz monzonite and quartz of which 1½ feet of the more siliceous malachite-stained part was said to carry about 10 percent copper and 30 ounces silver and $2, in gold to the ton. (~ 0.1 oz gold @ 20^{23}/oz gold price)

Near the vein the wall rock is very siliceous or hydrothermally altered and contains plates of secondary biotite 1/10 inch in diameter developed in both the wall rock and the quartz. Eight hundred feet to the east on the Hunchback ground the vein is marked by several old brown gossan-like croppings. An open cut on a small vein on the north border of the Copper King claim shows about a foot of rusty brown and greenish iron and copper-stained quartz.

Eureka mine

The Eureka mine is in the center of the north border of the area at an elevation of about 5,100 feet. The property contains two claims covering 3,000 feet of the Eureka lode, which, however, has a much greater extent. The lode or shear zone strikes N. 60° E. along the limestone-quartz monzonite contact and dips 80° southerly. As shown in small gulches crossing it, it is about 60 feet wide. It is opened mainly by the old shaft in limestone on the Eureka claim, the most easterly of the two claims. The shaft and workings show the vein to be about 6 feet wide and to be composed mainly of crushed and altered limestone and to be streaked or banded with iron and manganese-stained crushed rock gangue and clay all sufficiently soft to be easily excavated.

A 10-12 inch width of the vein is said to have averaged 50 per cent and 22 ounces of silver and $3.40 in gold to the ton. (0.16 oz gold @ 2093/oz gold price)

Riovista prospect

On the Riovista claim of the Quinn-Newman group, the Riovista vein, a copper-bearing quartz fissure vein in the quartz monzonite opened by an 80-foot adit tunnel to the depth of 50 feet, is said to carry workable ore averaging $6.00 to the ton, and at about 1,000 feet eastward on the molalla claim the vein contains considerable malachite in coarse bouldery iron-stained quartz-breccia. In some instances replacement bands of malachite 1/2 inch wide penetrate the altered quartz monzonite to depths of 20 or more inches.