

NBMG OFR 83-11
See also 83-12
for geochemical
results.

4250 0011

SEARCHLIGHT DISTRICT

(33)
Item 11

The Searchlight mining district is located in and around the town of Searchlight, along U.S. Highway 95, about 55 miles south of Las Vegas, Nevada. The district is mainly within T28 and 29N, R63 and 64E, and is bordered on the east by the Lake Mead National Recreation Area, on the south and west by the Piute Valley, and on the north by the latitude 35°30'. The main part of the district is situated in low hills and alluvium covered areas on the southwestern arm of the Opal Mountains. All parts of the district are accessible along paved or maintained dirt roads leading from the town of Searchlight. The Searchlight area appears to now be somewhat of a retirement-recreation area, and parts of the old mining area are now serving as residence sites.

Gold deposits were discovered around Searchlight in 1897, and the district was organized the next year. The district was most productive from 1903 to 1910 (Vandenburg, 1937), with only moderate and intermittent activity up to the present, mostly by lessees and private owners. Early mining was mainly for gold, occurring in the upper, oxidized portions of the ores. Latter production gave way to mainly silver as the high-grade oxidized ores were exhausted (Longwell, et al, 1965). The largest and most productive mines in the district, the Quartette and Duplex, are located within the town of Searchlight, but all of the surrounding area has been extensively prospected.

The Searchlight district has a recorded production, from 1902 to 1962, of about \$7,000,000, mainly in gold with some silver, copper, lead, and zinc.

The district is generally underlain by Tertiary igneous rocks which overlie Precambrian dioritic gneisses. The oldest Tertiary rocks are andesites. Both andesites and gneisses are intruded by sills and masses of andesite porphyry and later by a quartz monzonite pluton which subsequently altered the andesites to hornfels. Later fracturing of the hornfels, near the contact of the quartz

1-1-4

monzonite permitted the ascent of mineral enriched solutions and deposition of metalliferous quartz veins near the contact. At a later unknown time, andesite flows and tuffs (Patsy Mine Volcanics ?), exposed in the northwest part of the district were lain down and were followed by a period of erosion (Callaghan, 1939).

The brecciated country rock is cemented with hydrothermal quartz which differs from north to south. The southern veins are simple quartz veins with specular hematite associated with copper and gold is in excess of silver. Wulfenite is present in small amounts in oxidized ores from some mines in this part of the district. The veins originally carried considerable sulfides and little or no wall-rock alteration is associated with the veining. The northern veins contain quartz with lamellar calcite and the host rocks are adularized and silicified. Lead exceeds copper and silver exceeds gold; base metals are absent or scarce in adularia-quartz-calcite gangue (Callaghan, 1939; Shrivastava, Proctor, 1962). The veins form an en-echelon pattern along the western and southern margins of the quartz monzonite pluton, and generally, have a N40-65W strike and dip 20-80SW. (Callaghan, 1939). The sulfide ore have been, with a few exceptions, altered to silicates, carbonates, and sulfates, with cerussite the main lead mineral and hemimorphite the main zinc mineral. Visible gold occurs in the richer ores.

The regional variations of ores and wall rock alteration suggest a crude zonal distribution of ore deposits, which is not radial with respect to the distribution of quartz monzonite outcrops. There is no indication of zonation within the quartz monzonite pluton (Shrivastava, Proctor, 1962).

Within the past 5 years, the district has experienced a surge in interest resulting in extensive surface and subsurface exploration. Many of the older dumps have or are being treated for residual minerals. Activity at the time of examination was largely confined to independent and private owners of properties. Due west of the Duplex Mine, the area was being actively developed, e.g., leach

Searchlight district 3.

pads were being constructed, men and heavy equipment and a trailer park were on site. There was no indication of production, or where the ore would come from.

Selected References:

- Anonymous (1982) Eldorado Mountains G-E-M Resources area: Great Basin GEM joint Venture Technical Report GRA No. NV.37,
- Bingler, E.C. and Bonham, H. F. (1973) Reconnaissance geologic map of the McCullough Range and adjacent areas, Clark County, Nevada: NBMG Map 45.
- Callaghan, E. (1939) Geology of the Searchlight mining district, Clark County, Nevada: USGS Bulletin 906-E.
- Carpenter, J. A. (1929) Mineral resources of southern Nevada: NBMG Bulletin 2.
- Ferguson, H. G. (1929) The mining districts of Nevada: Econ. Geo. v. 24, p. 135.
- Hewett, D. F. et al (1936) Mineral resources of the region around Boulder Dam: USGS Bulletin 871.
- Hill, J. M. (1912) The mining districts of the western United States: USGS Bulletin 507.
- Koschman, A. H., and Bergdendahl, M. H. (1968) Principal gold-producing districts of the United States: USGS Professional Paper 610.
- Lincoln, F.C. (1923) Mining districts and mineral resources of Nevada: Nevada Publications Co.
- Longwell, C. R. (1963) Reconnaissance geology between Lake Mead and Davis Dam, Arizona-Nevada: USGS Professional Paper 374-E.
- Longwell, C. R., et al (1965) Geology and mineral deposits of Clark County, Nevada: NBMG Bulletin 62.
- Olson, J.C. and Hinrichs, E. N. (1960) Beryl-bearing pegmatites in the Ruby Mountains and other areas in Nevada and northwestern Arizona: USGS Bulletin 1082-E.
- Papke, K. G. (1973) Industrial mineral deposits of Nevada: NBMG Map 46.
- Ransome, F. L. (1907) Preliminary account of Goldfield, Bullfrog, and other mining districts in southern Nevada: USGS Bulletin 303.

- Schilling J. H. (1962) An inventory of molybdenum occurrences in Nevada: NBMG Report 2.
- Schilling J. H. (1968) Molybdenum resources of Nevada: NBMG OFR 79-3.
- Shrivastava, J. N. (1961) Certain trace element distribution in the Searchlight, Nevada quartz monzonite, Clark County, Nevada: M. S. Thesis, U of MO.
- Shrivastava, J. N. and Proctor, P. D. (1962) Trace-ement distribution in the Searchlight, Nevada quartz monzonite stock: Econ. Geo., v. 57, p. 1062.
- Stewart, J. H. and Carlson, J. E. (1976) Cenozoic rocks of Nevada: NBMG map 52.
- Vandenberg, W. O. (1937) Reconnaissance of mining districts in Clark County, Nevada: USBM IC 6964.
- Volborth, A. (1973) Geology of the granite complex of the Eldorado, Newberry, and Northern Dead Mountains, Clark County, Nevada: NBMG Bulletin 80.