See also 83-4 for geochemical results.

(149)

Item 3

0580 0003

BIRCH CREEK DISTRICT

The Birch Creek district is located on the eastern slope of the Toiyabe Range about 10 miles southeast of Austin in Townships 17 and 18 North, 44 East, Lander County. The district includes the former Big Smoky and Smoky Valley districts. Discovery of silver here dates back to 1863 when Charles C. Breyfogle and others found silver ores near the mouth of Birch Creek. The district was organized as the Smoky Valley district, and two small town, Clinton and Geneva sprang into existance. A 20-stamp mill was constructed near the mouth of Birch Creek Canyon in 1866, but it operated for only a short time, and by 1867, the camp was deserted. There was a short period of activity between 1910 and 1912, again in 1916-1919, and minor production is reported from several old mines during the 1940's and 1950's. Tungsten was discovered about 1942, uranium in 1955, and small production resulted from both. Beryl was found in the area in 1960, but the deposits proved too small for development. Total production of all mines in the district for the period 1863 to 1967 is estimated at less than $100,000 (Stager, 1977). Major commodities produced have been gold, silver, lead, tungsten and uranium with minor copper. Molybdenum is reported present in the district.

The southern part of the Toiyabe Range near the Birch Creek district consists primarily of sedimentary rocks of Lower Paleozoic age (Stewart and McKee, 1977). These rocks are exposed in three primary thrust sheets which have brought together rocks of contrasting types. The lowermost major plate consists predominantly of Lower Cambrian quartzite, shale and limestone. The middle plate consists of Cambrian and Ordovician limestone and phyllite and the uppermost Ordivician plate consists predominantly of chert and argillite that has been transported into the area along the Roberts thrust fault. Jurassic granitic rocks are exposed in the northern part of the district and probably underlie most of the district. Sedimentary rocks along and near the contact with these granitic rocks are folded and metamorphosed. Major ore deposits consist of silver bearing quartz veins in and

J. Tingley + P. Smith (1982) Mineral Inventory of Eureka-Shoeshone Resource Area: NBMG OFR ~~82-10~~. 83-3

near the granitic rocks, tungsten-bearing layers in the metasedimentary rocks along the granitic contact, and a uranium deposit in metasedimentary rocks near the granitic contact (Stager, 1977). Pegmatite bodies in the metamorphics near the granite also are reported to contain both scheelite and small pockets and disseminations of beryl.

Workings throughout the district consist of numerous adits, trenches, shafts, small pits and benches with activity concentrated in the Cahill/Smoky Valley mine areas and to a lesser extent in the Lynch Creek/T-bone mine areas.

In the late 1970's, Birch Creek, along with that portion of the Reese River district over the crest of the Toiyabe Range immediately to the west of Birch Creek, was the site of a large-scale uranium exploration project. Several exploration holes were drilled, but the results of the program are unknown. At the time of examination (1981) there was no mining activity in the district although there was a concentration of exploration activity centered in the Cahill Mine area and to a lesser extent to the immediate north of this area. No drill rigs were observed and it is thought that work, at least at that time of visitation, was confined to surficial mapping (with some underground mapping at the Cahill Mine) and geochemical sampling.

Selected References:

Garside, L. J., 1973, Radioactive mineral occurrences in Nevada: NBMG Bull. 81, 121 p., 1 pl.

Stewart, J. H., and McKee, E. H., 1977, Geology and mineral deposits of Lander County, Nevada. NBMG Bull. 88, 106 p., 3 pl.