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Item 2

FISH CREEK-GIBELLINI DISTRICTS

The Fish Creek mining district is located in the southeast corner of Eureka County, in the southern half of the Mahogany Hills and on the west facing slope of the Fish Creek Range in T18N,R52E. This report also includes the Gibellini mining area in T16N,R52E. Access to the district is from good dirt roads, south from U.S. Highway 50; southwest, 35 miles from Eureka; and east from Nevada Highway 20.

There has been little recorded history on early mining in the district. In the 1880's James Butler, who 30 years later discovered the Tonopah silver deposits, and Angelo Belli located the Angelo Belli Claims on the west facing slope of the Mahogany Hills. Butler later acquired patents on the North and South Antelope, which the county subsequently took from his heirs in the 1930's to be sold for taxes. The Gibellini manganese-nickel deposits were located in 1942 by L. P. Gibellini. A small shipment of 31.6% manganese ore was shipped in 1953, however, there has been no recorded production since. In 1959-60, fluorite was discovered by Maynard and Lester Bisoni on the northwest side of the Fish Creek Range around McCullough Butte, and later discoveries were made on the east flanks of Ditto Peak. The McCullough Butte area is interesting geologically, in that fluorite occurs with some beryl and scheelite in the Ordovician Hansen Creek Formation. The mineralized rock is overlain by a thrust sheet of Eureka quartzite. Small bodies of rhyolitic intrusive rocks have been mapped at two areas within the Hansen Creek. The intrusions are sericitized, and have silicated the surrounding rocks. There has been extensive trenching and drilling at the Bisoni-McCullough Butte property by various mining companies up to the present, but mineable fluorite ore has yet to be produced. The reserves are estimated to be many million at 10% CaF_2 (Papke, 1979). The sporadic production of the district has resulted in less than $1700 in gold, silver, and lead ores in 1938 and 1955 (Vandenberg, 1938, Roberts, et al., 1967). The district was experiencing an ongoing surge of surface and subsurface exploration during our field examinations. J. Tingley + P. Smith (1982) Mineral Inventory of Eureka-Shoshone Resource Area: NBMG OFR ~~82-10~~ 83-3 and 83-4

The Mahogany Hills and Fish Creek Range are two of several structural blocks of approximately 30,000 feet of Cambrian to Ordovician, calcareous sediments broken by post-Jurassic movement and separated by fault zones of large displacement (Hague, 1892). The sediments generally strike north and dip east at a low angle, with steep dips near faults. Within the Fish Creek block, the rocks show evidence of local thrusting with the thrust blocks broadly folded and cut with high angle faults. Small erosional remnants of the Ordovician Vinini Formation outcrop in the middle of the district in thrust contact with the autochthonous rocks. A Late Mesozoic-Early Tertiary granodiorite porphyry intrudes the thinly bedded, shaley, carbonaceous Ordovician Pogonip Formation at Wood Cone Peak. Locally throughout the district, the sediments are overlain by Tertiary rhyolite tuffs, agglomerates, and flows. The variety of minerals located in the district indicate the different deposition environments. Sulfides (auriferous pyrite, argentiferous galena, sphalerite) occur in hydrothermal quartz veins cutting the carbonaceous sediments and cementing shear zones. The manganese-nickel deposits appear as replacement in limestone, associated with fault zones. The vanadium minerals appear in bituminous phosphatic marine shales with secondary minerals in the oxidized zones (Hausen, 1962). Low grade fluorite, along with beryl and some scheelite, occurs in thrust zones.

The Gibellini (Niganz, Black Iron) manganese-nickel depsoits are located in a Devonian limestone which strikes northwest and dips 20-35° southwest. The ore body occurs on the footwall of a northwest striking fault; the ore minerals consisting of wad, pyrolusite, and dense nodules of psilomelane. The day the deposit was inspected it was being drilled by Host Ventures of Canada.

South of the Gibellini are the Bisoni-McKay vanadium deposits, located in highly contorted and sheared Devonian bituminous phosphatic marine shales. The shales are interlayered with bedded cherts, calcareous shales and limestone, implying that this is a lithologic transitional sequence between east and west

rocks. Secondary vanadium has been found locally in the oxidized zones (Hausen, 1962).

The patented Antelope Mine, south of Mahogany Hills, is underlain by north trending, steeply dipping, thinly bedded, shaley limestone that is locally disturbed by minor folds. The North and South Antelope each follow fissures in the limestone that range from one to five feet wide and carry oxidized pyrite and galena. The degree of mineralization is greater at the North Antelope workings. The Antelope produced minor amounts of lead, silver, and zinc. Two days following our inspection, drilling crews arrived at the North Antelope Mine.

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U.S.B.M. (Millett) MILS Files.

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