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(177) #4  
Item 2VIGO DISTRICT

## LOCATION

The Vigo district covers a large and rather indefinite area beginning north of Lime Mountain on the southern edge of the Clover Mountains and extending to the southern edge of the Tule Springs Hills. Part of the area was formerly known as the Bull Valley mining district (Smith, 1931) and the southern area, the southern tip of the Tule Springs Hills, is sometimes identified as the Tule Springs district. Most of the properties in the district are north of Lime Mountain but a few gypsum properties are scattered about in the area south of the Tule Springs Hills.

## HISTORY

Very little is known about the mining activity in this area, and not much mining has actually taken place. According to Smith, 1931, L. Leavitt and E. and J. Walker of Bunkerville had locations on the manganese deposit here in 1926. In 1926, the group is reported to have mined 2 or 3 carloads of ore (either manganese or iron) which they shipped to the Columbia Steel Works at Los Angeles. This property could not be definitely located in the field during our examination, but it is possible that it could be in the area of Sec. 9 (?), T8S, R70E. Evidence of recent claim staking, geophysical work, and drilling were seen in this area when we were there in the spring of 1984.

## GEOLOGIC SETTING

Rocks cropping out in the Vigo district consist of Paleozoic and Triassic sedimentary formations overlapped to the north by volcanics related to the large Caliente caldron complex. At Lime Mountain and in the Tule Springs Hills, Cambrian to Mississippian limestone and dolomite are overthrust on Triassic rocks of the Kiabab, Toroweap, Moenkopi, and Chinle Formations. The Paleozoic formations are in the Tule Springs thrust plate, which is thought to represent the northern extension of the Muddy Mountains thrust plate in Clark County (Tschanz and Pampeyan, 1970). The volcanic rocks in the northern part of the district consist of intermediate lavas and tuffs of Miocene and Oligocene age (Ekren, et al, 1977).

## ORE DEPOSITS

The prospects examined in the Vigo district consisted of manganese-rich gossans and jasperoid bodies associated with steep fault zones or with fault breccia related to the Paleozoic-Triassic thrust contact. One building stone quarry was noted, and gypsum deposits in the Toroweap Formation occur to the south of the Tule Springs Hills.

The manganese prospects referred to by Smith, 1931, may be the iron-manganese gossans seen in prospects in Sec. 9 (?), T8S, R70E. To the north of the manganese prospects, prospects near Cedar Wash in the southern Clover Mountains

(T7S, R70 & 71E) explore altered breccia zones in lavas and tuffs of the Caliente caldron complex.

#### GEOCHEMICAL RELATIONSHIPS

Samples taken from the manganese prospects north of Lime Mountain were not particularly high in manganese, although they did report high iron contents. Barium values in the district ranged from low to moderate, although one sample from the largest "manganese" prospect reported high barium. Samples from the volcanic area on the north edge of the district reported low silver values and one sample, No. 787, reported anomalous lead, molybdenum, and copper. The iron-manganese gossans samples at the manganese prospects also reported values in cobalt and nickel. The values for these elements are not high, but they are above the values normally seen in other areas.



SELECTED REFERENCES

Ekren, E. B., Orkild, P. P., Sargent, K. A., and Dixon, G. L., 1977, Geologic Map of Tertiary Rocks, Lincoln County, Nevada: USGS Map I-1041.

Smith, A. M., 1931, Inspection Trip Memo, NBMG File 177, item 1.

Tschanz, C. M., and Pampeyan, E. H., 1970, Geology and Mineral Deposits of Lincoln County, Nevada: NBMG Bull. 73.