Attempts to mine and market the coal locally were made at various times in the 1890's and early 1900's, but because of the poor quality none were very successful.

Diatomite

Diatomite occurs at several localities in Esmeralda County, including one on the north slope of the Palmetto Mountains, one about a mile west of Tonopah, one in the western part of the Monte Cristo Range, one in the Weepah Hills, and one about 20 miles west of Coaldale on the boundary between Esmeralda and Mineral Counties just south of U.S. Highway 6. Only the one near the Esmeralda-Mineral County line is shown on plate 2. All the deposits are of Miocene or Pliocene Age.

The deposit astride the Esmeralda-Mineral County line is the largest and the only one from which diatomite has been produced. It is operated by GREFCO (Great Lakes Carbon Corp.) and is one of the principal producers of diatomite in Nevada. The following paragraphs, kindly furnished by J. S. Horton, Chief Mine Engineer of the Corporation, to the Nevada Bureau of Mines and Geology, describe the deposit:

> "Great Lakes Carbon Corporation has been operating the Basalt diatomaceous earth quarries since 1944. The deposit straddles the Esmeralda-Mineral County line near Basalt Junction, Nevada. The property covers some 2,500 acres adjacent to U.S. Highway 6 and is in T. 2 N., R. 33 E., and T. 2 N., R. 34 E., Mount Diablo Base and Meridian.
>
> "The deposit is an isolated embayment of a large fresh-water lake bed of the Tertiary period. During the interval of diatomaceous deposition there was a minimum of contaminants introduced by interior drainage into this embayment.
>
> "Structurally the deposit forms a shallow basin in the western sector while the central and eastern zones are monoclinal. Stratigraphically the lacustrine sediments are composed of diatomite, argillaceous diatomite, calcareous diatomite, clay, sand and volcanic ash. This lacustrine section overlies basalt and andesite flows, and is itself overlain by basaltic flows.
>
> "Species of diatoms occurring in this deposit are fresh-water structure, Melosira predominating. More specifically the more abundant species are *Melosira granulata, Stephanodiscus aslraea,* and *Eunotia robusta.*"

Dimension Stone

Stone was quarried on a small scale in the late 1800's and early 1900's for local construction prior to the development of the western cement and brick industry. The Esmeralda County courthouse and one or two other buildings in Goldfield are built of welded tuff from the Spearhead Member of the Thirsty Canyon Tuff, but no dimension stone industry ever developed in the county.

Fluorspar

Three occurrences of fluorspar are known in Esmeralda County (Horton, 1961) although apparently no fluorspar has been produced. The Flora prospect is reported to be in sec. 28, T. 4 N., R. 36 E., in the northern part of the county. It was not located during the course of this study and is not shown on plate 2. Quartz veins apparently as much as 30 feet wide in granodiorite contain sulfides and in places considerable fluorite (Horton, 1961, p. 11).

The Amry prospect (Horton, 1961, and information in files of the Nevada Bureau of Mines and Geology), sometimes known as the Sorenson, is in sec. 4, T. 7 S., R. 39 E., but was not located during the present study and is not shown on plate 2. The country rock is granite containing a small pendant of calcareous rock (probably Wyman Formation) about 300–500 feet wide and 1,000 feet long. Fluorspar formed in a narrow steep fracture zone between garnetized rock and partly replaced limestone. Fractures strike N. 55 W., dip steeply, and show fluorspar for a strike length of 50 feet.

The Bullfrog-George prospect is in T. 7 S., R. 41 E., southwest of Gold Point but was not located during this study and is not shown on plate 2. Ball (1907, p. 194) states that the prospect is on the side of a domical granite hill and that the deposit is a quartz vein 4 to 9 feet thick traceable for about a quarter of a mile. The vein strikes N. 70° W. and is vertical. The quartz contains some sulfides, including MoS_2, and is in places intensely crushed. Purple fluorspar occurs in crevices in the quartz, and cubes of fluorspar one-fourth inch in diameter line vugs in the quartz.

Gems and Gem Materials

The Following gem materials are known to occur in the county: turquoise, variscite, agate, jasper, opalite, Apache tears, petrified wood, chalcedony, obsidian, and barite. Most of these materials are collected by hobbyists and weekend prospectors. Turquoise (Murphy, 1964; Morrissey, 1968) is the only gem material that has been produced by conventional mining enterprises.

According to Murphy (1964, p. 206; map p. 204) turquoise occurs with variscite in four main localities, as follows: (1) Candelaria-Sigmund group (not shown on pl. 2) in Candelaria Hills; (2) Los Angeles Gem Co. group (not shown on pl. 2) in Candelaria Hills; (3) Coaldale mining district northwest of Coaldale Junction; (4) Carr-Lovejoy group (not shown on pl. 2) in east-central Monte Cristo Range. Production from each of these areas is known to be less than $500,000.

Turquoise, without variscite, is known in four additional localities: (1) Crow Springs (Royston) mining district in extreme northeastern part of county; (2) Lone Mountain mining district in General Thomas Hills; (3) Klondyke mining district; (4) Goldfield mining district.

The Royal Blue mine (pl. 2) in the Crow Springs (Royston) district is, according to Murphy (1964, p. 206), one of the most important turquoise mines in Nevada. This mine is listed, apparently in error, as being in Nye County, Nev., by Morrissey (1968, p. 26). The mine had reportedly