

0480 0083

Battle Mtn (147)
Item 91

PLUTONS

LA-1. COPPER CANYON STOCK

General location: East flank of Battle Mountain, with northernmost outcrops overlapping into Humboldt County.

Coordinates: lat 40°36' N., long 117°02' W.

Land classification: Private and public domain, with some patented mining claims.

Area: 6 km².

Accessibility: Major southern outcrops 4 km west of State Highway 8A, and northern outcrops 5 km southwest of Southern Pacific Railroad tracks.

Remoteness: Major southern outcrops 10 km southwest of Battle Mountain (population 1,856) and northern outcrops 12 km northwest of Battle Mountain.

Geologic setting: The pluton is composed of Jurassic to Tertiary granodiorite and quartz monzonite. The pluton intrudes the following: Cambrian Harmony Formation, composed of sandstone, shale, and minor limestone; Pennsylvanian-Permian Pumpernickel Formation, composed of chert, siltstone, and pyroclastics, and the Antler sequence, which includes limestones, sandstones, shales, and conglomerates of Pennsylvanian-Permian age. Tertiary ash-flow tuffs and basalt flows occur locally. Parts of the pluton have been dated as 38.2 ± 0.8 and 38.5 ± 0.8 m.y. (Silberman and McKee, 1971).

The younger Harmony Formation has been thrust over the older (Cambrian) Scott Canyon Formation near vicinity of granitic intrusive. North-northeast-trending high-angle normal faults are also present.

Hydrologic setting: The pluton is in the Humboldt River Basin ground-water system and drainage basin. The nearest discharge is 11 km northeast where water is used for irrigation, domestic, and public supply purposes.

Aeromagnetic expression: The main granitic rock exposure occurs on the northeastern flank of a high-amplitude positive anomaly, which presumably has a sub-surface source of similar rocks. The maximum areal extent of the buried source is about 15 km².

Mining activity: Copper and gold mining along eastern and southeastern flanks of Battle Mountain.

Selected references: Silberman and McKee, 1971; Theodore, Silberman, and Blake, 1973.