

ELLIOTT CREEK RIDGE TALC DEPOSITS

Location: On the ridge between Squaw Creek and Elliott Creek in sections 10 and 11, T. 41 S., R. 3 W., in southern Jackson County about 1 mile from the California State Line and between about 4,200 and nearly 5,000 ft elevation.

History & Development: Talc schist and blocky carvable soapstone have been known to occur at this locality for many years. Early-day prospectors and hikers carved their initials in blocks of talc exposed along the ridge trail. Although not documented, verbal reports have been given of persons using the soapstone for making fireplace and wood stove flues. Claims were located by a group of men from Seattle in December, 1959 (unpublished department file report 1959) but very little development and production took place at that time. New claims were located on the deposits starting in 1974 by John Pugh (Statite of Southern Oregon) and production of carvable soapstone followed from several shallow cuts distributed along the ridge. Total production to the end of 1986 has been about 900 tons of trimmed and irregular-shaped large soapstone blocks.

The soapstone has been mined from about 10 shallow cuts situated along the ridge (see maps). The deposit was described by Peterson & Ramp (1978).

Geologic setting: Talc occurs as partial to complete replacement of several small lenticular bodies of metaserpentinite surrounded by highly contorted graphitic quartz-muscovite schists of Condrey Mountain. The schists of Condrey Mountain are mapped as an up-arched portion of the lower plate unit of a major thrust which underlie regionally metamorphosed Permo-Triassic rocks of the Applegate Group and ultramafic to granitic igneous rocks of the upper plate (Hotz, 1967 and 1971). The Upper Jurassic Galice Formation has been suggested as a possible protolith of the schists of Condrey Mountain.

The talc-bearing metaserpentinite appears to occur predominantly on and near the ridge crest as lenticular bodies which are infolded with the graphitic quartz muscovite schist. This appears to be a structural feature associated with the thrust and the ultramafic stringers and lenses are believed to represent erosional remnants of the upper plate.

Talc Deposits: Numerous small lenses of talc occur for about $1\frac{1}{2}$ miles along Elliott Creek Ridge from the saddle near Summit Lake west to Carlton Point. Metaserpentinite with talc was seen down the south slope to as low as 3,870 ft (altimeter). On the north slope numerous float boulders of soapstone have been found in the large landslide deposit north of Summit Lake and extending down to Squaw Creek. This massive slide appears to have caused Squaw Lakes to form by damming of Squaw Creek lenticular talc deposits as much as 30 feet wide and more than 100 feet long have been exposed in shallow cuts. Many of the larger outcropping talc-bearing deposits are only partly altered to talc and the remainder is a resistant antigorite, chlorite, talc metaserpentinite that usually stands in bold relief (see Figure _____). Sometimes the "hard shell" like foliated metaserpentinite appears to form a cap for the talc. The talc also occurs in tabular seams along fractures as though formed by hydrothermal processes.

Mineralogy of the talc rock is somewhat variable with areas of talc with abundant disseminated ankerite ($2\text{CaCO}_3 \cdot \text{MgCO}_3 \cdot \text{FeCO}_3$) in medium to coarse rhombohedral crystals as large as 1 inch across. Where devoid of

carbonate some tremolite and or anthophyllite may be present; although these fibrous minerals appear to be in large part replaced by talc.

Chlorite is also present both mixed with the talc and as separate relatively pure massive lenticular bodies as much as 4 ft thick and 12 ft long.