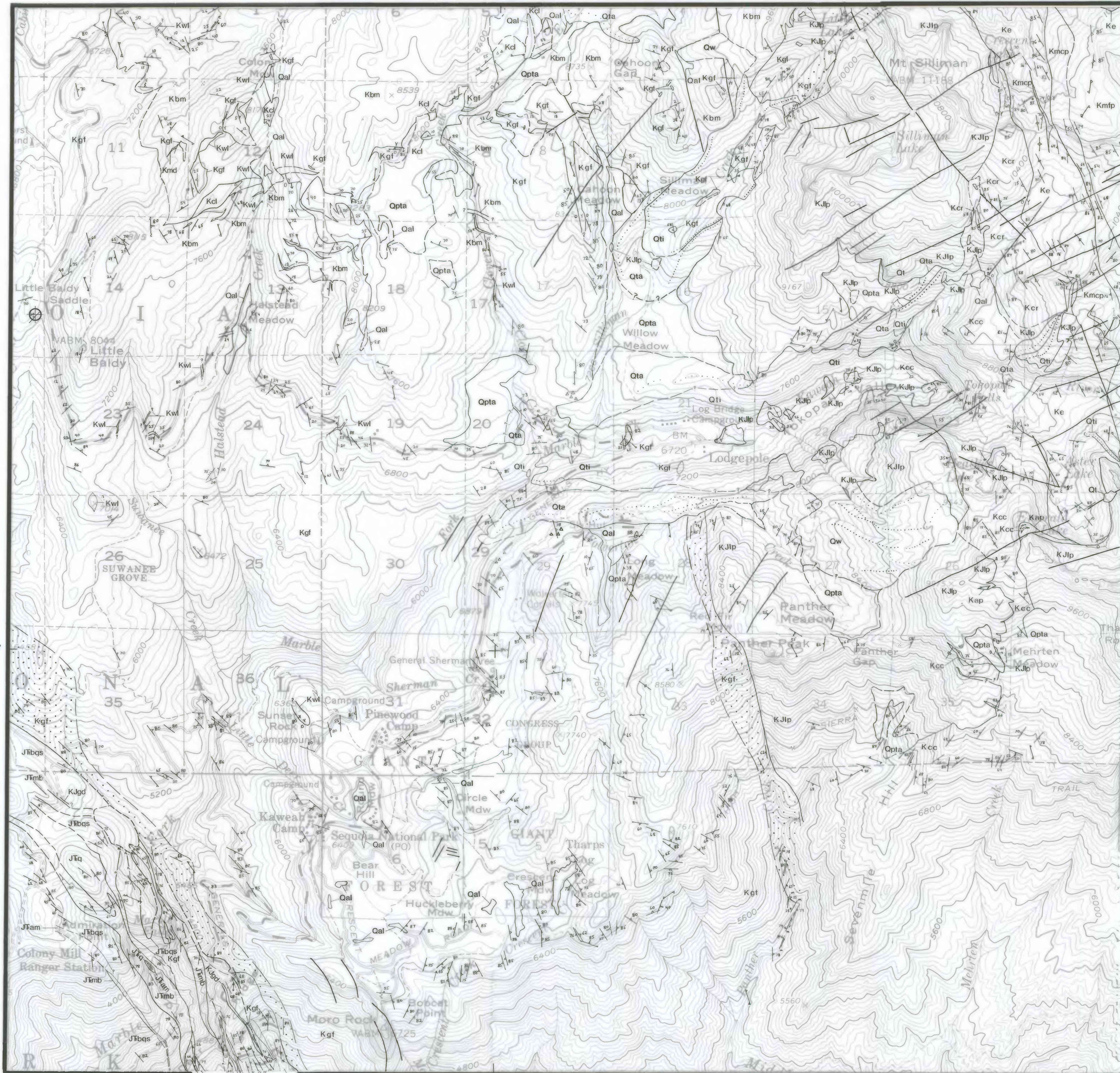


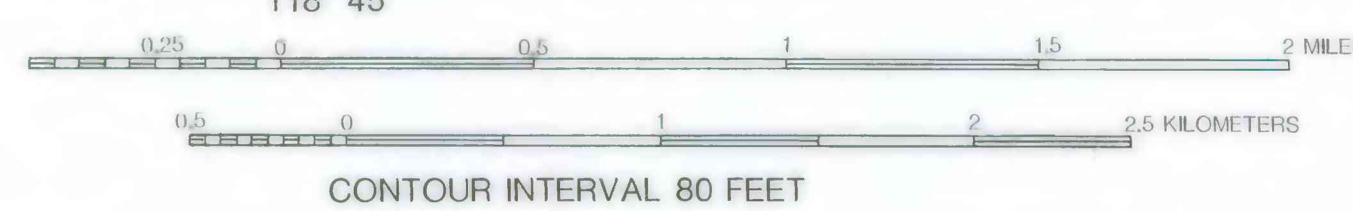
118° 45'

118° 45'



36° 35'

36° 35'

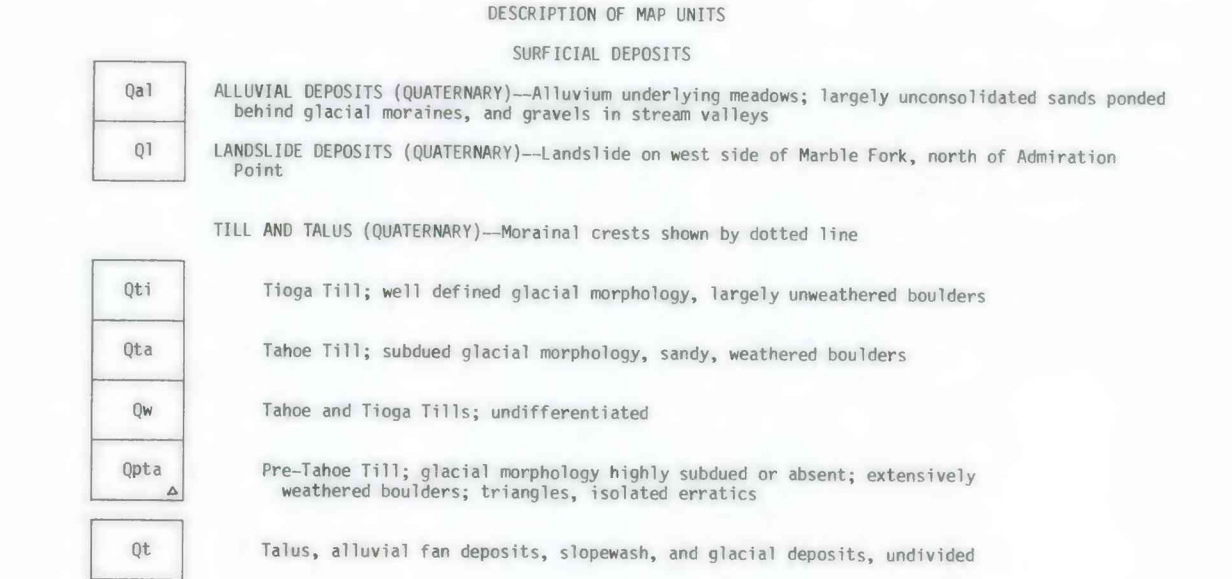
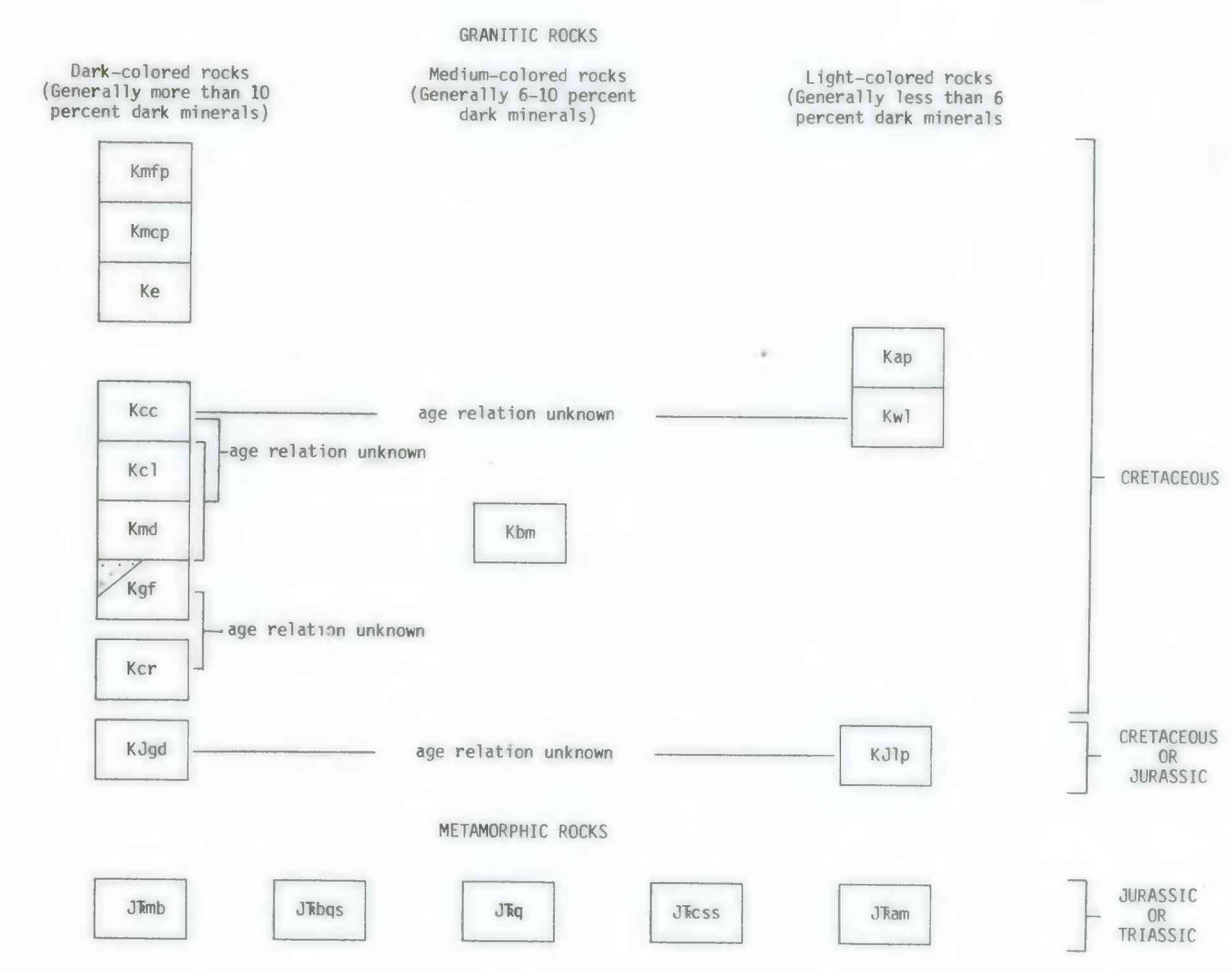
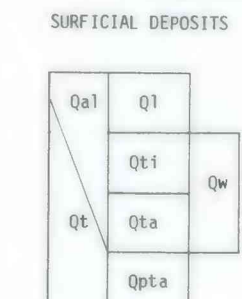


GEOLOGIC MAP OF GIANT FOREST AND LODGEPOLE AREA
SEQUOIA NATIONAL PARK, CALIFORNIA

Geology by T.W.Sisson, J.G.Moore, and C.Wahrhaftig, 1983

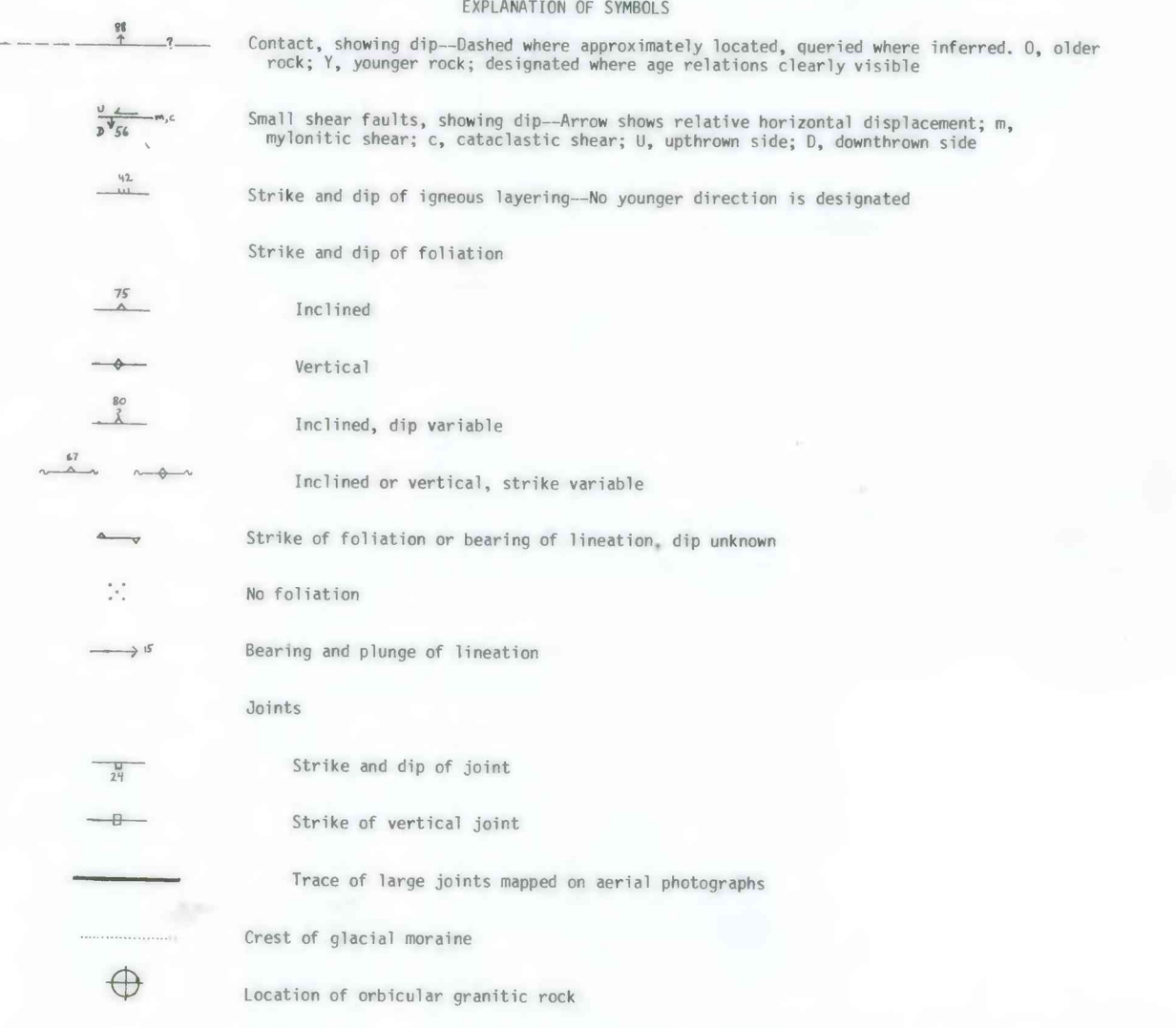
This map is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards and stratigraphic nomenclature

CORRELATION OF MAP UNITS



- GRANITIC ROCKS (Rock names from classification of Streckeisen, 1973)
- Kfp: PORPHYRITIC GRANODIORITE OF MITCHELL PEAK (CRETACEOUS)—Fine-grained, K-feldspar-hornblende-biotite-plagioclase porphyritic granodiorite with abundant mafic inclusions. U-Pb age 91 m.y. (Chen and Moore, 1982)
 - Kmp: COARSE, PORPHYRITIC GRANODIORITE OF MITCHELL PEAK (CRETACEOUS)—Coarse-grained, plagioclase-K-feldspar porphyritic granodiorite
 - Ke: HORNLENDE GRANODIORITE OF EMERALD LAKE (CRETACEOUS)—Medium-grained, equigranular, hornblende-rich granodiorite with abundant mafic inclusions; marginal to granodiorites of Mitchell Peak
 - Kcc: HORNLENDE GRANODIORITE OF CASTLE CREEK (CRETACEOUS)—Medium-grained, equigranular, hornblende-rich granodiorite. Contains wispy schlieren layering at higher elevations. U-Pb age 98 ± 2 m.y. (C. Busby-Spera, written comm., 1982), K-Ar age 91.1 (Evernden and Kistler, 1975; Steiner and Jager, 1977)
 - Kc1: PORPHYRITIC GRANODIORITE OF CLOVER CREEK (CRETACEOUS)—Fine-grained, K-feldspar-plagioclase porphyritic granodiorite. Locally with abundant mafic inclusions, and quartz xenocrysts rimmed with amphibole
 - Knd: SYPLUTONIC MAFIC DIORITE DIKES (CRETACEOUS)—Highly contorted and veined fine-grained diorite dikes within the granite of Big Meadows
 - Kgf: GRANODIORITE OF GIANT FOREST (CRETACEOUS)—Medium-grained, equigranular, hornblende-rich granodiorite with abundant mafic inclusions. Mafic inclusions are highly variable in size, shape, and texture. A higher colored, K-feldspar porphyritic marginal facies lies along the outer contacts and is designated by a stipple pattern. U-Pb age 97-102 m.y. (Chen and Moore, 1982)
 - Kcr: PORPHYRITIC GRANODIORITE SOUTH OF CRESCENT LAKE (CRETACEOUS)—Medium-grained, granodiorite with small (1-2 cm) plagioclase and K-feldspar phenocrysts and abundant mafic inclusions. Texturally similar to granodiorite of Clover Creek, but designated as a separate intrusion due to its position east of the granite of Lodgepole Campground
 - Kjpd: SHEARED AND VEINED GRANODIORITE AND GRANITE WITHIN THE MARBLE FORK METAMORPHIC FAN (CRETACEOUS OR JURASSIC)—Strongly foliated and quartz-veined granodiorite and granite dikes intruding into the Marble Fork metamorphic rocks. Some similar rocks lie within the large granodiorite of Giant Forest dike that splits the pendant.
- Medium-colored rocks
- Ksm: GRANITE OF BIG MEADOWS (CRETACEOUS)—Largely medium-grained, equigranular biotite granite, locally with small (1-2 cm) K-feldspar phenocrysts. U-Pb age 98 m.y. (Chen and Moore, 1982)
- Light-colored rocks
- Ksp: APLITE (CRETACEOUS)—Mappable bodies of aplite concentrated along the margins of the granodiorite of Castle Creek
 - Kwl: PORPHYRITIC GRANITE OF WEAVER LAKE (CRETACEOUS)—Very light-colored and fine-grained, K-feldspar porphyritic granite dikes and sills intrusive into the granodiorites of Giant Forest and Clover Creek, and the granite of Big Meadows. Includes equigranular plagioclase dikes at Colony Meadow, Sunset Rock, and pt. 7014. U-Pb age 97-99 m.y. (Chen and Moore, 1982)
 - Kjlp: GRANITE OF LODGEPOLE CAMPGROUND (CRETACEOUS OR JURASSIC)—Coarse-grained, light-colored granite with widely scattered large (1.5 m) porphyritic and small (1.5 cm) porphyritic and non-porphyritic mafic inclusions. U-Pb age 115 m.y. (Chen and Moore, 1982)

- METAMORPHIC ROCKS
- Jfmb: MARBLE (JURASSIC AND/OR TRIASSIC)—Coarsely crystalline grey and white marble with highly contorted calc-silicate nodules and stringers
 - Jfbs: BIOTITE-FELDSPAR-QUARTZ SCHIST (JURASSIC AND/OR TRIASSIC)—Reddish-brown weathering biotite-feldspar-quartz schist with thin (10 cm) layers of micaceous quartzite. Includes minor calc-silicate schist layers. Schist is increasingly coarse-grained and migmatitic to the southeast
 - Jfq: QUARTZITE (JURASSIC AND/OR TRIASSIC)—Fine- and medium-grained white, micaceous quartzite. Medium-bedded to massive
 - Jfcs: CALC-SILICATE SCHIST (JURASSIC AND/OR TRIASSIC)—Quartz-rich calc-silicate schist along Bear Ridge
 - Jfsm: AMPHIBOLITE (JURASSIC AND/OR TRIASSIC)—Massive and schistose amphibolite, biotite amphibolite, and mafic biotite schist. Probable volcanic and mixed volcanic-sedimentary protoliths



Note: Primary foliation in igneous rocks measured on elongate mineral grains and mafic inclusions; foliation in metamorphic rocks measured on mineral grains and mineral aggregates, schistosity, and cleavage.