GEOLOGICAL MAP OF THE STATE OF CALIFORNIA

ISSUED BY

STATE MINING BUREAU

COMPILED UNDER THE DIRECTION OF

FLETCHER HAMILTON, STATE MINERALOGIST.

GEOLOGY BY JAMES PERRIN SMITH.

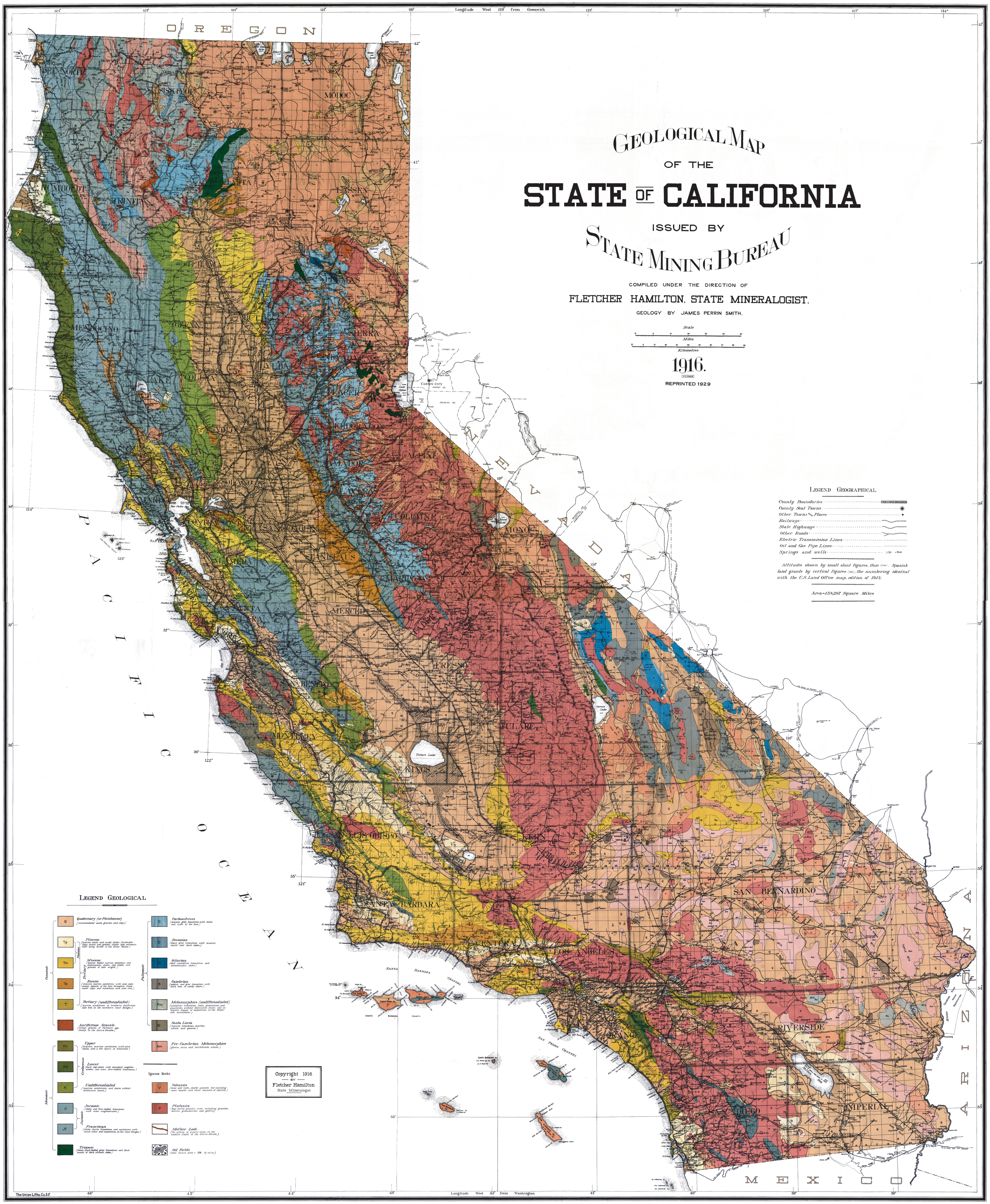
Scale

Miles

Kilometres

1916.

REPRINTED 1929



LEGEND GEOGRAPHICAL

- County Boundaries
- County Seat Towns
- Other Towns & Places
- Railways
- State Highways
- Other Roads
- Electric Transmission Lines
- Oil and Gas Pipe Lines
- Springs and wells

Altitudes shown by small slant figures, thus (6743). Spanish land grants by vertical figures (365), the numbering identical with the U.S. Land Office map, edition of 1913.

Area=158,297 Square Miles

LEGEND GEOLOGICAL

Cenozoic

- Q — Quaternary (or Pleistocene) (unconsolidated sands, gravels, and clays)
- Tertiary
  - Pliocene (Tp) (marine sands and sandy shales; freshwater clays, sands and gravels, shallow lake sediments; tuffs along border of the Great Valley)
  - Miocene (Tm) (heavily bedded marine sandstones and diatomaceous shales; clay shales and gravels of lake origin.)
  - Eocene (Te) (massive marine sandstones with some shale; swamp deposits of the Ione formation, freshwater clays and sandstones with some coal.)
  - Tertiary (undifferentiated) (T) (marine sandstones of southern California; lake beds in the northern Coast Ranges.)
- Auriferous Gravels (stream gravels of Tertiary age, shallow in the Sierra Nevada.)

Mesozoic

- Cretaceous
  - Upper (Kc) (massive, marine sandstones, with some shales, and a few layers of limestone.)
  - Lower (Kk) (dark clay-shales with abundant conglomerates, and some thin-bedded limestones.)
  - Undifferentiated (K) (marine sandstones and shales without distinctive fossils.)
- Jurassic (J) (shales and thin-bedded limestones with some conglomerates.)
- Jurassic (Jf) — Franciscan (shales, cherts, limestones and sandstones, with much schist and serpentine, in the Coast Ranges.)
- Triassic (massive, thick-bedded grey limestones, and thick masses of dark, siliceous slates.)

Paleozoic

- Carboniferous (C) (massive grey limestones with shales and tuffs at the base.)
- Devonian (D) (heavy grey limestones with massive cherts and dark slates.)
- Silurian (S) (dark crystalline limestones, and metamorphic slates.)
- Cambrian (Є) (reddish and grey limestones, with thick beds of sandy shales.)
- Metamorphics (undifferentiated) (Pm) (crystalline limestones, slates, greenstones, and quartzites without diabasic fossils; also serpentine masses of serpentine in the Klamath mountains.)
- Santa Lucia (Sl) (massive limestones, marbles, schists and gneisses.)

- Pre-Cambrian Metamorphics (Am) (gneiss, mica and hornblende schists.)

Igneous Rocks

- Volcanics (V) (lavas and tuffs, chiefly andesites, but including some basalts and small amounts of rhyolite.)
- Plutonics (P) (deep-seated granitic rocks, including granites, diorites, granodiorites and gabbros.)
- Mother Lode (the system of quartz veins on the western flank of the Sierra Nevada.)
- Oil Fields (total known area = 126 Sq. miles)

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Fletcher Hamilton
State Mineralogist

The Union Litho. Co. S.F.