U.S. GEOLOGICAL SURVEY
CHARLES D. WALCOTT, DIRECTOR

ECONOMIC GEOLOGY SHEET

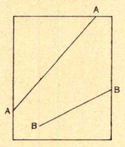
CALIFORNIA
SONORA QUADRANGLE

LEGEND
(continued)

BED-ROCK SERIES — EARLIER THAN THE LATE CRETACEOUS, CHICO FORMATION

- Dikes of various rocks *(soda-syenite, sy; diorite, di; granite, gr; quartz-porphyry, qp; and undetermined rocks)*
- hpy — Hornblende-pyroxene-rock
- di — Diorite
- sy — Soda-syenite *(and other related rocks rich in soda; contains gold in some places)*
- grd — Granodiorite and granite
- sp — Serpentine *(derived from peridotite and pyroxenite)*
- db — Diabase
- gb — Gabbro
- pt — Porphyrite *(augite-porphyrite with some quartz-porphyrite)*
- hpt — Hornblende-porphyrite
- am — Amphibolite *(schistose and massive, derived from porphyrite and other igneous rocks)*

Sections



- Dip and strike of stratified rocks
- Vertical dip and strike of stratified rocks
- Dip and strike of schistosity
- Vertical dip and strike of schistosity
- Gold quartz veins
- Gold quartz mines
- PL Placer mines in auriferous gravels
- Gold prospects, including pocket mines
- Other prospects
- Quarries

Known productive formations

- Auriferous gravels
- Limestone

LEGEND

SURFICIAL ROCKS

(Areas of Surficial rocks are shown by patterns of dots and circles.)

PLEISTOCENE
- Pal — Alluvium
- Pgv — Shore and river gravels *(in part auriferous)*

SEDIMENTARY ROCKS

(Areas of Sedimentary rocks are shown by patterns of parallel lines. Metamorphism is indicated by short dashes combined with the parallel lines.)

SUPERJACENT SERIES

NEOCENE
- Nas — Andesitic gravel and sandstone *(with some tuff)*
- Ni — Ione formation *(sandstone used for building, clay, conglomerate, and rhyolite-tuff)*
- Ng — Auriferous river gravels

EOCENE
- Et — Tejon formation *(sandstone and conglomerate, used for building)*

BED-ROCK SERIES

JURATRIAS
- Jm — Mariposa formation *(clay-slates and sandstone; contains rich gold quartz veins)*
- Jms — Mariposa formation *(mica- and andalusite-schists, contact-metamorphic rocks)*

JURATRIAS?
- ch — Cherty beds *(enclosed in the porphyrite rocks)*

CARBONIFEROUS
- Cc — Calaveras formation *(argillite, limestone, quartzite, and mica-schist; contains gold quartz veins)*
- ls — Limestone lenses *(in Mariposa and Calaveras formations)*

IGNEOUS ROCKS

(Areas of Igneous rocks are shown by patterns of triangles and rhombs.)

SUPERJACENT SERIES

NEOCENE
- Nb — Basalt
- Nat — Andesitic tuffs and breccias

Legend is continued on the left margin.

A. H. Thompson, Geographer.
E. M. Douglas, Topographer in charge.
Triangulation by H. E. C. Feusier.
Topography by R. H. Chapman.
Surveyed in 1891.

Scale 125 000

1 ½ 0 1 2 3 4 5 Miles

1 ½ 0 1 2 3 4 5 Kilometers.

Contour interval 100 feet.

Datum is mean sea level.

Edition of July 1897.

Turner
Ransome
Turner

Geology by H. W. Turner.
Assisted by F. L. Ransome.
Surveyed in 1895.