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

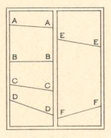
ECONOMIC GEOLOGY SHEET 1

CALIFORNIA
MOTHER LODE DISTRICT

LEGEND
(continued)

- 80° Dip and strike of bedded rocks
- Vertical dip and strike of stratified rocks
- 65° Dip and strike of schistosity or cleavage
- Vertical dip and strike of schistosity or cleavage
- Quartz veins outcropping prominently on the surface
- Gold quartz mines
- P Shallow placer mines in auriferous gravels
- H Hydraulic mines in auriferous gravels
- D Drift mines in auriferous gravels
- Quarries of limestone, serpentine, and building stone
- Gold prospects, including pocket mines

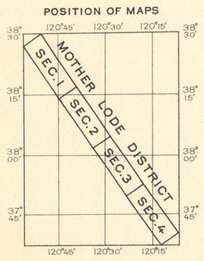
Sections



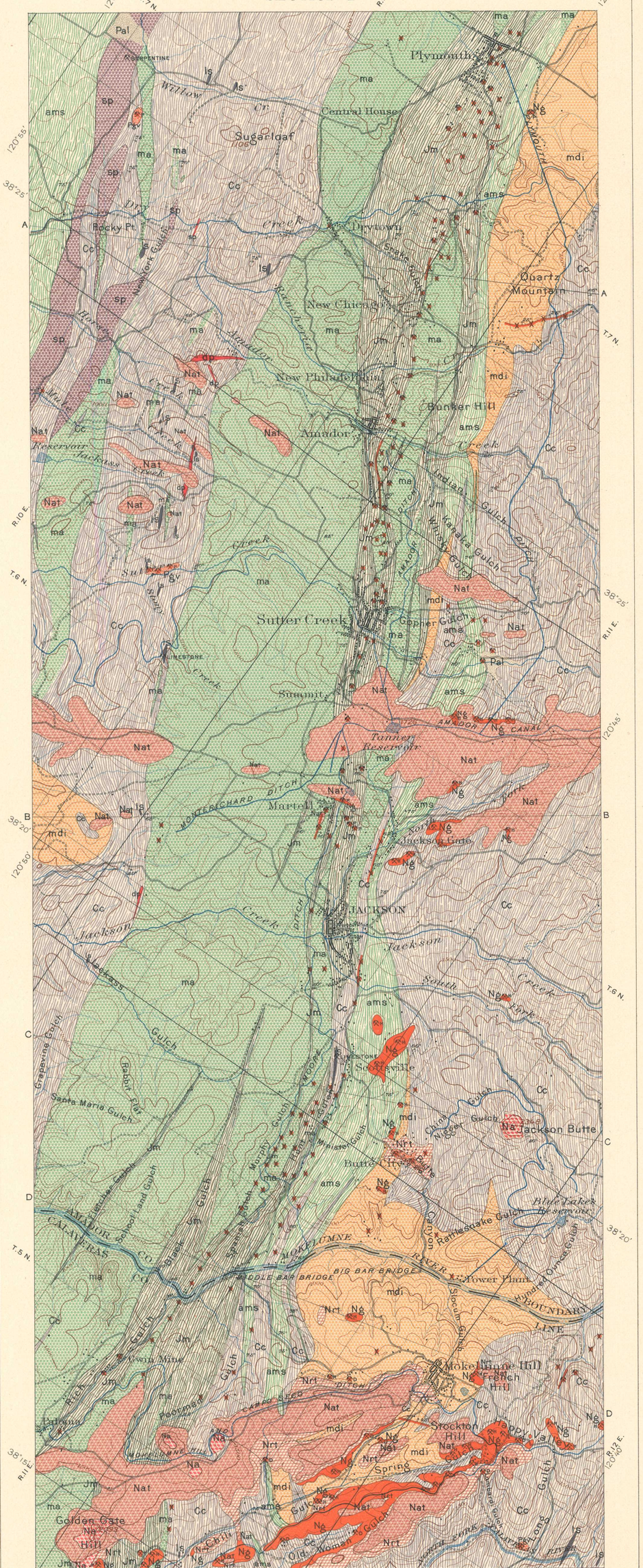
Known productive formations

- Auriferous river gravels
- Limestone (suitable for making lime)

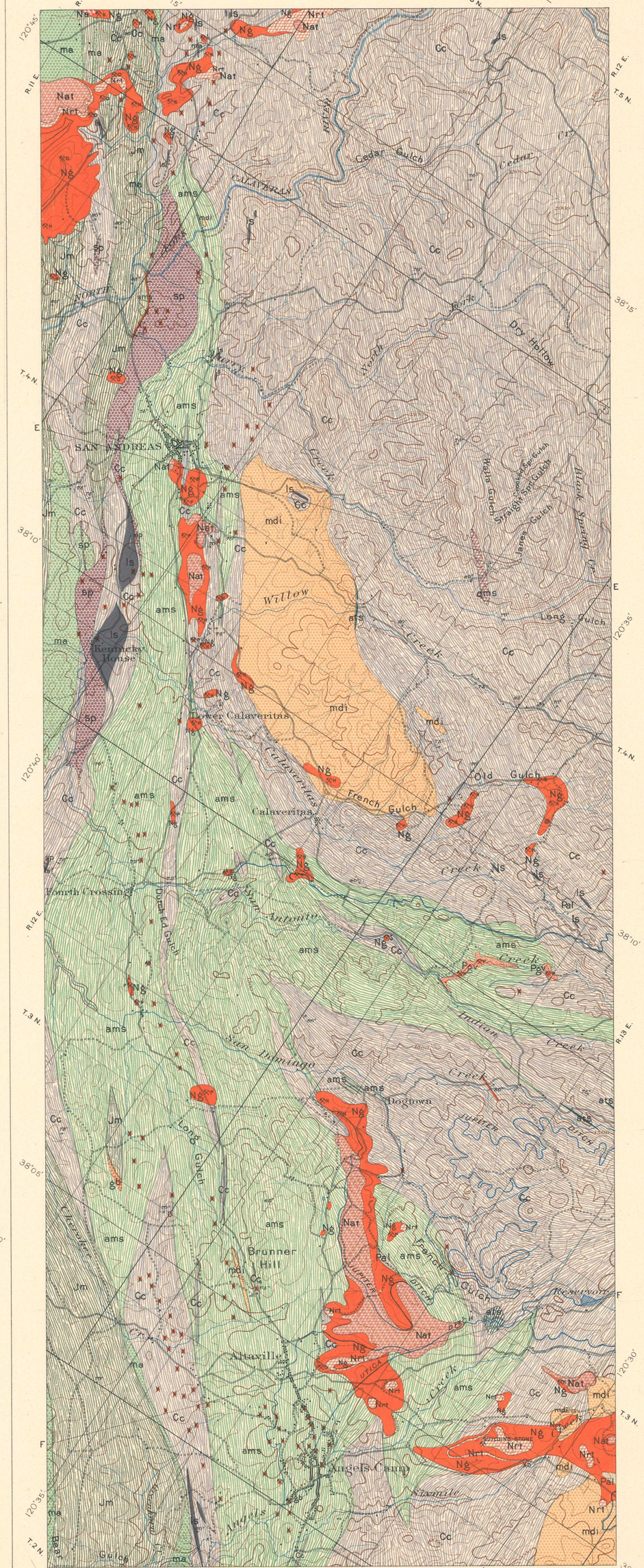
POSITION OF MAPS



SECTION 1



SECTION 2



LEGEND

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

PLEISTOCENE

- Pal — Alluvium *(bordering streams and filling small valleys)*
- Pgv — River gravels *(usually auriferous)*

SEDIMENTARY ROCKS
(Areas of Sedimentary rocks are shown by patterns of parallel lines. Wavy-line patterns show general direction of schistose cleavage.)

NEOCENE

- Ng — Auriferous river gravels

JURATRIAS

- Jm — Mariposa formation *(clay slate, sandstone, and conglomerate)*

CARBONIFEROUS

- Cc — Calaveras formation *(slate mica-schists, chiefly biotite-schist, quartzite, conglomerate, clay slate, chert, and limestone)*
- Is — Limestone *(lenses and irregular masses within the Calaveras formation)*

IGNEOUS ROCKS
(Areas of Igneous rocks are shown by patterns of triangles and rhombs. Wavy-line patterns show general direction of schistose cleavage.)

NEOCENE

- Na — Andesite *(thick lava flows)*
- Nat — Andesite tuff, breccia, and conglomerate *(roughly stratified)*
- Nrt — Rhyolite tuff *(sometimes interstratified with gravel)*

JURATRIAS OR EARLY CRETACEOUS

- Small dikes of various rocks *(serpentine, sp, diorite-porphyry, dp, diorite, di, gabbro, gb, and altered rocks)*
- mdi — Meta-diorite *(altered diorites, largely quartz-diorites)*
- gb — Gabbro *(intrusive masses and dikes, usually associated with serpentine)*
- sp — Serpentine *(derived from peridotite and related basic intrusive rocks)*

CARBONIFEROUS OR JURATRIAS

- ma — Meta-andesite *(altered andesitic breccias, tuffs, and massive lavas with some altered basalt and diabase)*
- ams — Amphibolite-schist *(derived from andesitic tuff and breccia, diorite, and other igneous rocks)*
- ats — Amphibolite-talc-schist
- qms — Quartz-muscovite-schist

SUPERJACENT SERIES — BED-ROCK COMPLEX

Legend is continued on the left margin.

R.U. Goode, Geographer in charge.
Topography by A.B. Searle.
Surveyed in 1897.

Scale $\frac{1}{63360}$

1 ½ 0 1 2 3 4 Miles

1 ½ 0 1 2 3 4 5 Kilometers

Contour interval 100 feet.
Datum is mean sea level.
Edition of Mar. 1900.

George F. Becker, Geologist in charge.
Geology by F. L. Ransome.
Surveyed in 1898.