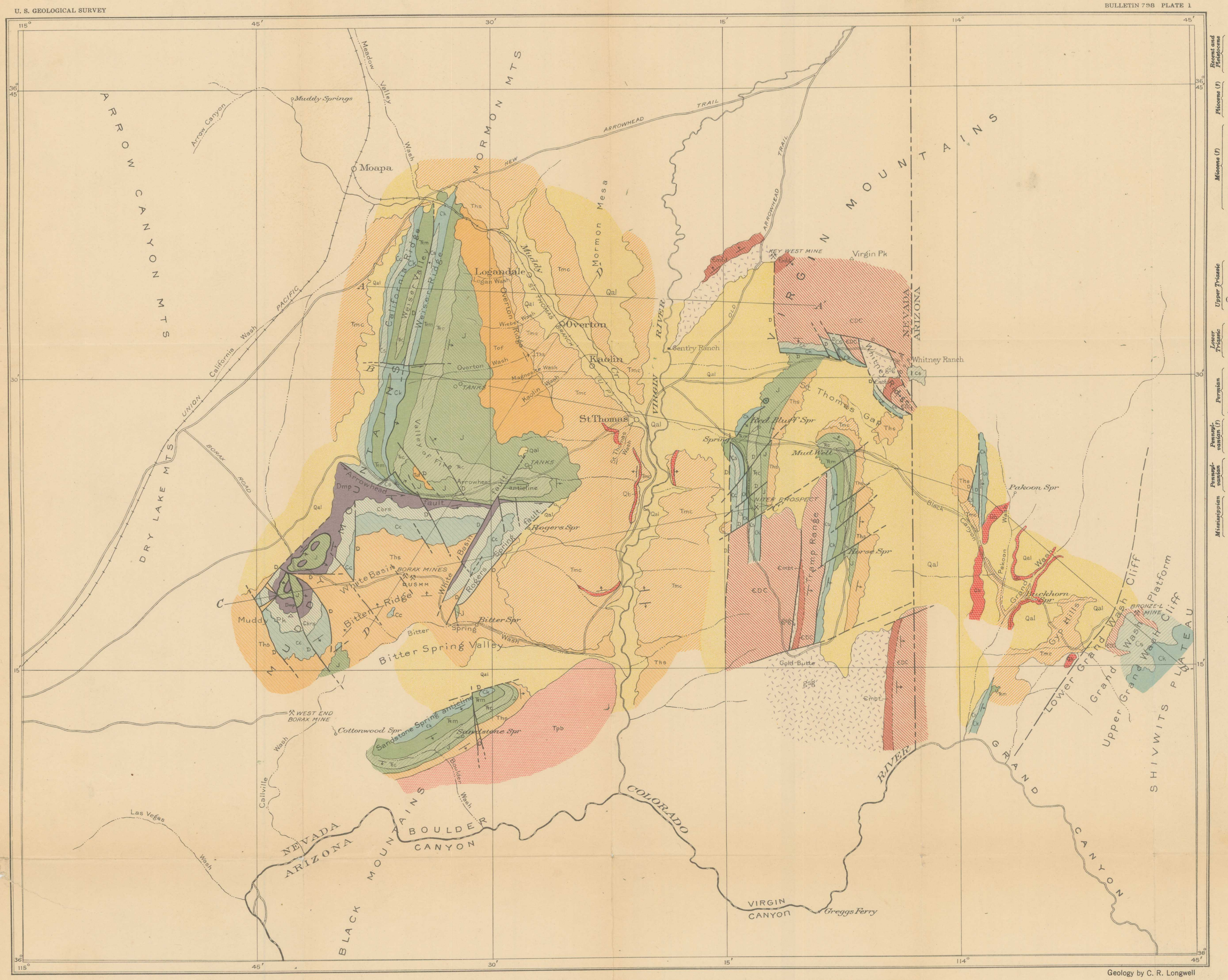


EXPLANATION

SEDIMENTARY ROCKS

QUATERNARY

- Recent and Pleistocene — **Qal** — Alluvial deposits

UNCONFORMITY

TERTIARY

- Pliocene (?) — **Tmc** — Muddy Creek formation

UNCONFORMITY

- Miocene (?) — **Ths** — Horse Spring formation (*Including Overton fanglomerate in some places*)
- **Tof** — Overton fanglomerate

GREAT UNCONFORMITY

JURASSIC (?)

- **J** — Cross-bedded sandstone

TRIASSIC

- Upper Triassic — **Ŧc** — Chinle formation (*Underlain by Shinarump conglomerate, probably Upper Triassic*)

UNCONFORMITY

- Lower Triassic — **Ŧm** — Moenkopi formation

UNCONFORMITY

CARBONIFEROUS

- Permian — **Ck** — Kaibab limestone (*With some Coconino sandstone at base in Grand Wash and Grand Wash cliffs*)
- Pennsylvanian (?) — **Cs** — Supai formation
- Pennsylvanian — **Cc** — Callville limestone
- Mississippian — **Cbrs** — Bluepoint and Rogers Spring limestones

UNCONFORMITY

DEVONIAN AND POSSIBLY OLDER

- **Dmp** — Muddy Peak limestone

CAMBRIAN

- **Ꞓmbt** — Muav (?) limestone, Bright Angel (?) shale, and Tapeats (?) sandstone.

CAMBRIAN (?) AND YOUNGER

- **ꞒDC** — Paleozoic undifferentiated

METAMORPHIC ROCKS

PRE-CAMBRIAN

- **gsg** — Gneiss, schist, and granite

IGNEOUS ROCKS

QUATERNARY AND PLIOCENE

- **Qb** — Basaltic flows

PLIOCENE (?)

- **Tpb** — Porphyry and basalt extrusive and intrusive

Faults

D Downthrown side of normal fault

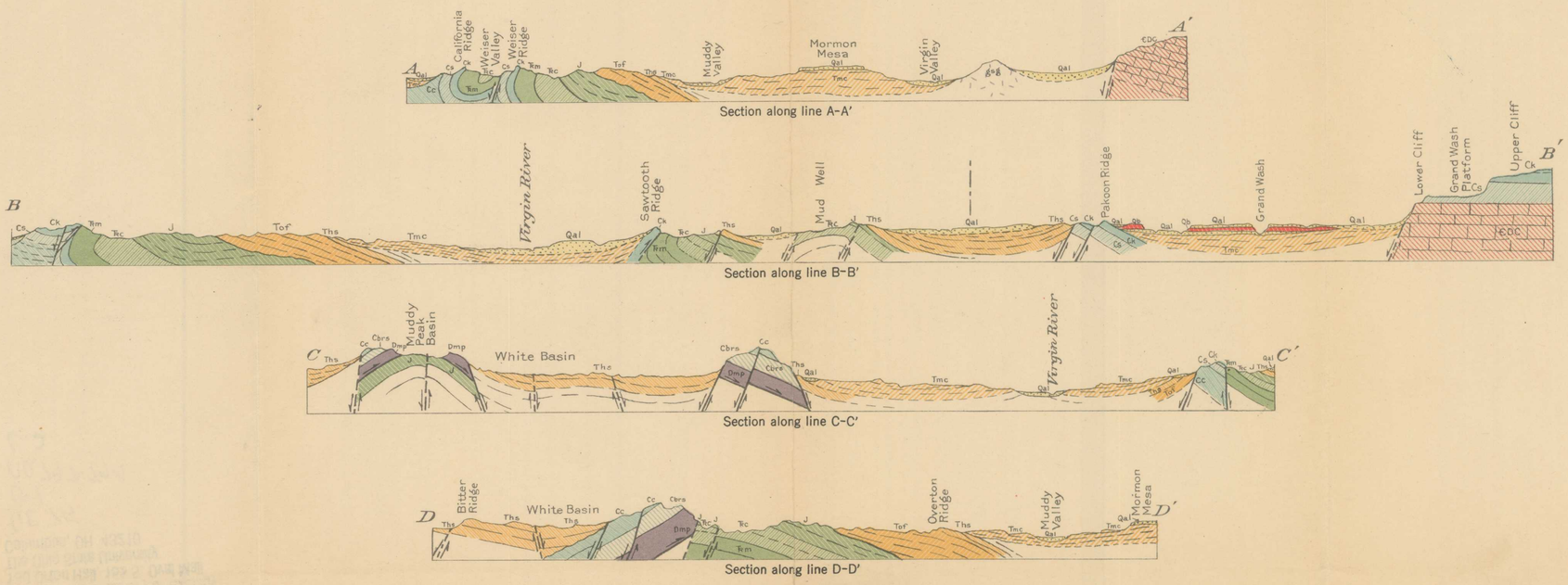
→ Direction of horizontal displacement of thrust fault

Strike and dip of rocks

Mine

Geology by C. R. Longwell

GEOLOGIC MAP AND SECTIONS OF MUDDY MOUNTAINS, ST. THOMAS GAP, AND PART OF THE GRAND WASH CLIFFS



Section along line A-A′

Section along line B-B′

Section along line C-C′

Section along line D-D′

Vertical scale exaggerated 2½ times in sections