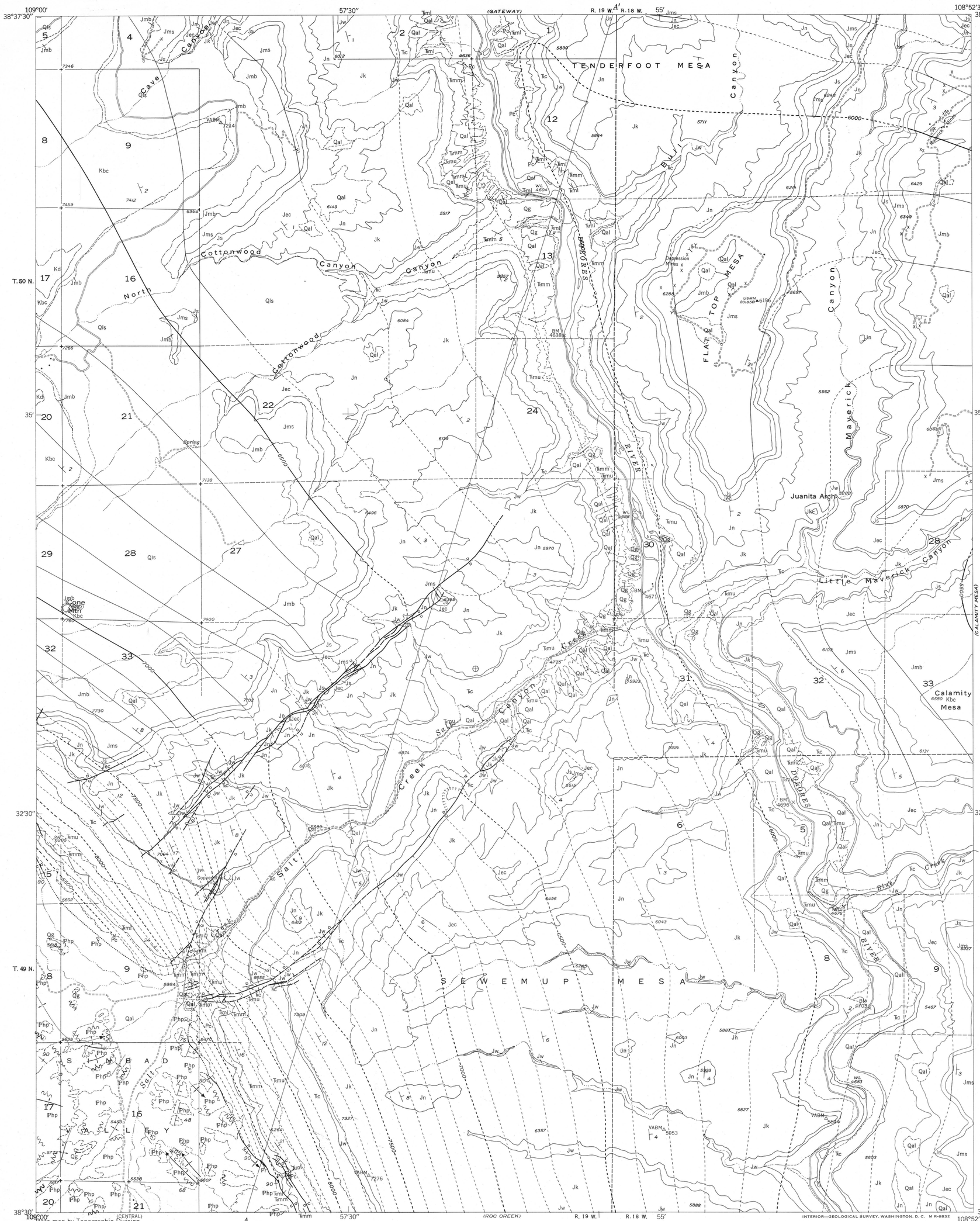
DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY
W. E. WRATHER, DIRECTOR

PREPARED IN COOPERATION WITH THE
U. S. ATOMIC ENERGY COMMISSION
COLORADO GEOLOGICAL SURVEY BOARD
AND COLORADO METAL MINING FUND BOARD

MINERAL INVESTIGATIONS
FIELD STUDIES MAP MF 28



Base map by Topographic Division
U. S. Geological Survey, 1950

Geology by E. M. Shoemaker, F. W. Cater, Jr., and E. J. McKay, 1949.

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D. C. M R-6832

EXPLANATION

QUATERNARY

Pleistocene and Recent

Qal — Alluvium
Light-red wind-deposited sand and silt on benches and mesa tops; Recent valley fill and stream deposits.

Qg — Terrace gravels

Qls — Landslide deposits

UNCONFORMITY

CRETACEOUS

Lower and Upper Cretaceous

Kd — Dakota sandstone
Red and brown thin-bedded conglomeratic sandstone and minor amounts of carbonaceous shale.

Lower Cretaceous

Kbc — Burro Canyon formation
White, gray, and red sandstone and conglomerate with interbedded green and purplish shale.

JURASSIC

Upper Jurassic

Jmb / Jms — Morrison formation
Variegated shale and white and gray sandstone and conglomerate (Jmb); white and buff sandstone with minor amounts of mudstone (Jms).

San Rafael group

Js — Summerville formation
Predominantly red and brown thin-bedded mudstone; thin beds of chert and limestone.

Middle and Upper Jurassic

Jec — Entrada sandstone and Carmel formation undivided
Orange, buff, and white fine-grained sandstone at the top; red sandstone and mudstone at the base.

UNCONFORMITY

JURASSIC(?)

Glen Canyon group

Jn — Navajo sandstone
Gray to buff crossbedded fine-grained quartz sandstone.

Jk — Kayenta formation
Red, buff, gray, and lavender shale, siltstone, and fine- to coarse-grained sandstone.

Jw — Wingate sandstone
Fine-grained reddish-brown sandstone, thick-bedded, massive, and crossbedded.

TRIASSIC

Upper Triassic

Trc — Chinle formation
Bright red and red-brown mudstone, siltstone, sandstone, and pebble conglomerate.

UNCONFORMITY

Lower Triassic

Trmu / Trmm / Trml — Moenkopi formation
Sandy mudstone (Trmu); conglomerate and conglomeratic sandstone (Trmm); and fine-grained sandstone and shale (Trml).

PERMIAN(?)

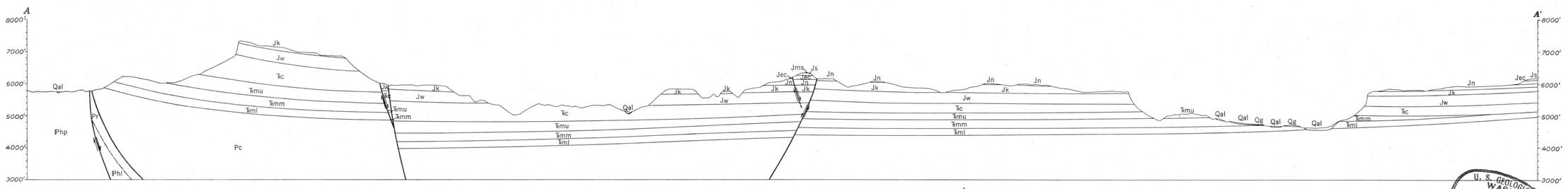
Pc — Cutler formation
Maroon and purple conglomerate and arkose and red-brown sandy mudstone.

Pr — Rico formation
Red arkose, red-brown mudstone, and gray limestone.

PENNSYLVANIAN

Php / Phl — Hermosa formation
Largely salt and gypsum (Php); limestone and thin beds of shale, [not exposed in quadrangle] (Phl)

- Contact — *Dashed where approximately located.*
- Indefinite contact — *Includes inferred contacts and indefinite boundaries of surficial deposits.*
- Fault — *Dashed where approximately located; dotted where concealed. U, upthrown side; D, downthrown side.*
- Strike and dip of beds
- Strike of vertical beds
- Horizontal beds
- Generalized strike and dip of crumpled beds
- Generalized strike of crumpled beds showing direction of dip
- Anticline — *Showing trace of axial plane and bearing and plunge of axis. Dashed where approximately located.*
- Concealed anticline
- Syncline — *Showing trace of axial plane and bearing and plunge of axis. Dashed where approximately located.*
- Concealed syncline
- Structure contour — *Drawn on top of Entrada sandstone. Short dashes indicate projection above surface. Contour interval 100 feet. Datum is mean sea level.*
- Structure depression contour



SECTION ALONG LINE A-A'

PRELIMINARY GEOLOGIC MAP
OF THE
JUANITA ARCH QUADRANGLE, COLORADO
By
E. M. Shoemaker

Scale 1:24000
1 ½ 0 1 Mile

1955

APPROXIMATE MEAN DECLINATION, 1955
15° TRUE NORTH / MAGNETIC NORTH

MINERAL INVESTIGATIONS
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Since the preparation of this map the age designation of the Glen Canyon group has been changed in U. S. Geological Survey usage to Triassic and Jurassic; the age designation of the Wingate sandstone has been changed to Triassic; and the age designation of the Navajo sandstone has been changed to Jurassic.

For sale by U. S. Geological Survey, price 50 cents