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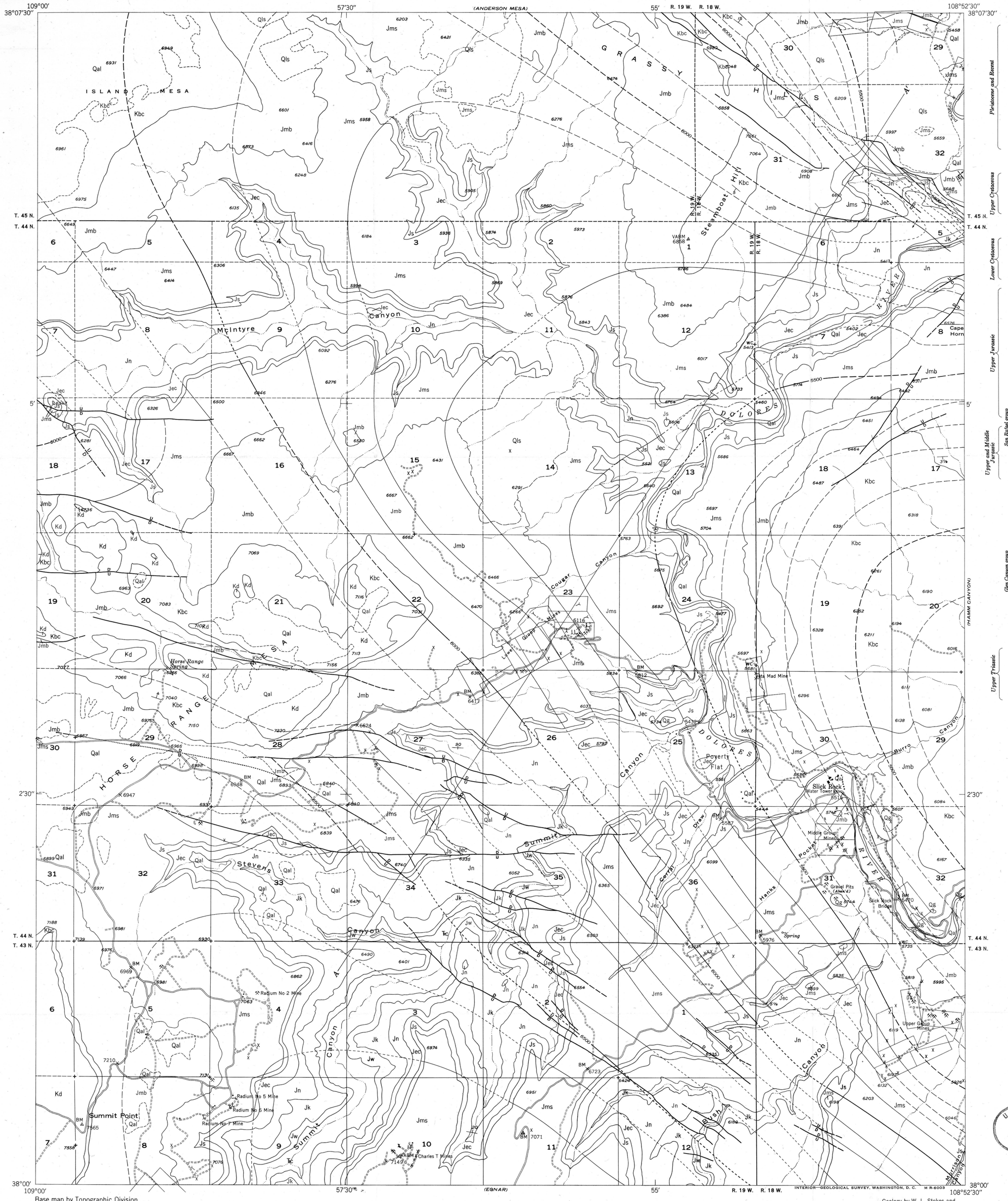
DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY
W. E. WRATHER, DIRECTOR

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

MINERAL INVESTIGATIONS
FIELD STUDIES MAP MF 29



EXPLANATION

Qal — **Alluvium**
Light-red wind-deposited sand and silt on benches and mesa tops, reworked in part by water; Recent valley fill and stream deposits.

Qg — **Terrace gravel**

Qls — **Landslide deposits**

Pleistocene and Recent — QUATERNARY

UNCONFORMITY

Kd — **Dakota sandstone**
Yellowish, lenticular sandstone and conglomerate with interbedded carbonaceous shale and impure coal.

Upper Cretaceous

UNCONFORMITY

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

Lower Cretaceous — CRETACEOUS

Jmb / Jms — **Morrison formation**
Variegated shale and mudstone; white, gray, rusty-red, and buff sandstone; rusty-red conglomerate; local thin limestone beds. At the top the Brushy Basin shale member, Jmb, consisting largely of bentonitic shale but including some sandstone and conglomerate lenses; and at the base the Salt Wash sandstone member, Jms, with more numerous and thicker sandstone beds.

Js — **Summerville formation**
Thin-bedded red, gray, green, and brown sandy shale and mudstone.

Jec — **Entrada sandstone and Carmel formation undivided**
Orange, buff, and white, fine-grained, massive and cross-bedded Entrada sandstone at the top. Red sandstone and mudstone of the Carmel formation at the base.

Upper Jurassic; Upper and Middle Jurassic; San Rafael group — JURASSIC

UNCONFORMITY

Jn — **Navajo sandstone**
Buff and gray crossbedded, fine-grained sandstone.

Jk — **Kayenta formation**
Irregularly bedded, red, buff, gray, and lavender shale, siltstone, and fine- to coarse-grained sandstone.

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

Glen Canyon group — JURASSIC(?)

Trc — **Chinle formation**
Red to orange-red siltstone, with interbedded lenses of red sandstone, shale, and limestone-pebble and clay-pellet conglomerate. Lenses of quartz-pebble conglomerate and grit at base.

Upper Triassic — TRIASSIC

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.*

Anticline

Syncline

Strike and dip of beds

6000 — **Structure contour**
Drawn on top of Entrada sandstone; dashed where approximately located; short dashes indicate projection above surface. Contour interval 100 feet. Datum is mean sea level.

Adit

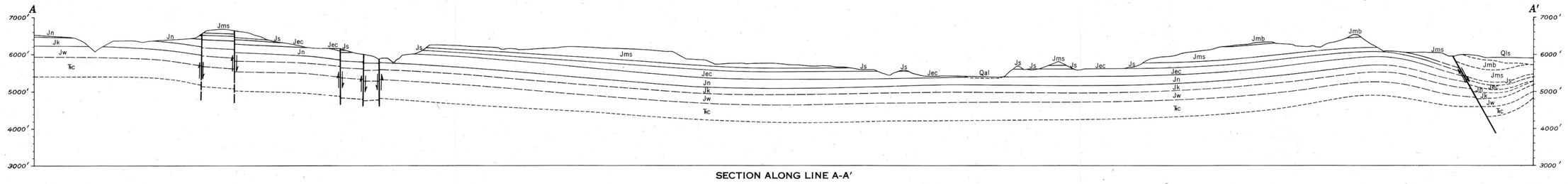
Prospect

Mine

Outline of patented claim
Located only approximately.

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

Geology by W. L. Stokes and
D. A. Phoenix, 1945; revised by
F. W. Cater, Jr., 1949.



SECTION ALONG LINE A-A′

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PRELIMINARY GEOLOGIC MAP
OF THE
HORSE RANGE MESA QUADRANGLE, COLORADO

By
Fred W. Cater, Jr.

Scale 1:24000
1 ½ 0 1 Mile

1954

APPROXIMATE MEAN DECLINATION, 1954
15° TRUE NORTH MAGNETIC NORTH

MINERAL INVESTIGATIONS
FIELD STUDIES MAP MF 29

Colorado (Horse Range Mesa quad.). Geol. 1:24,000. 1954.
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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 25 cents

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