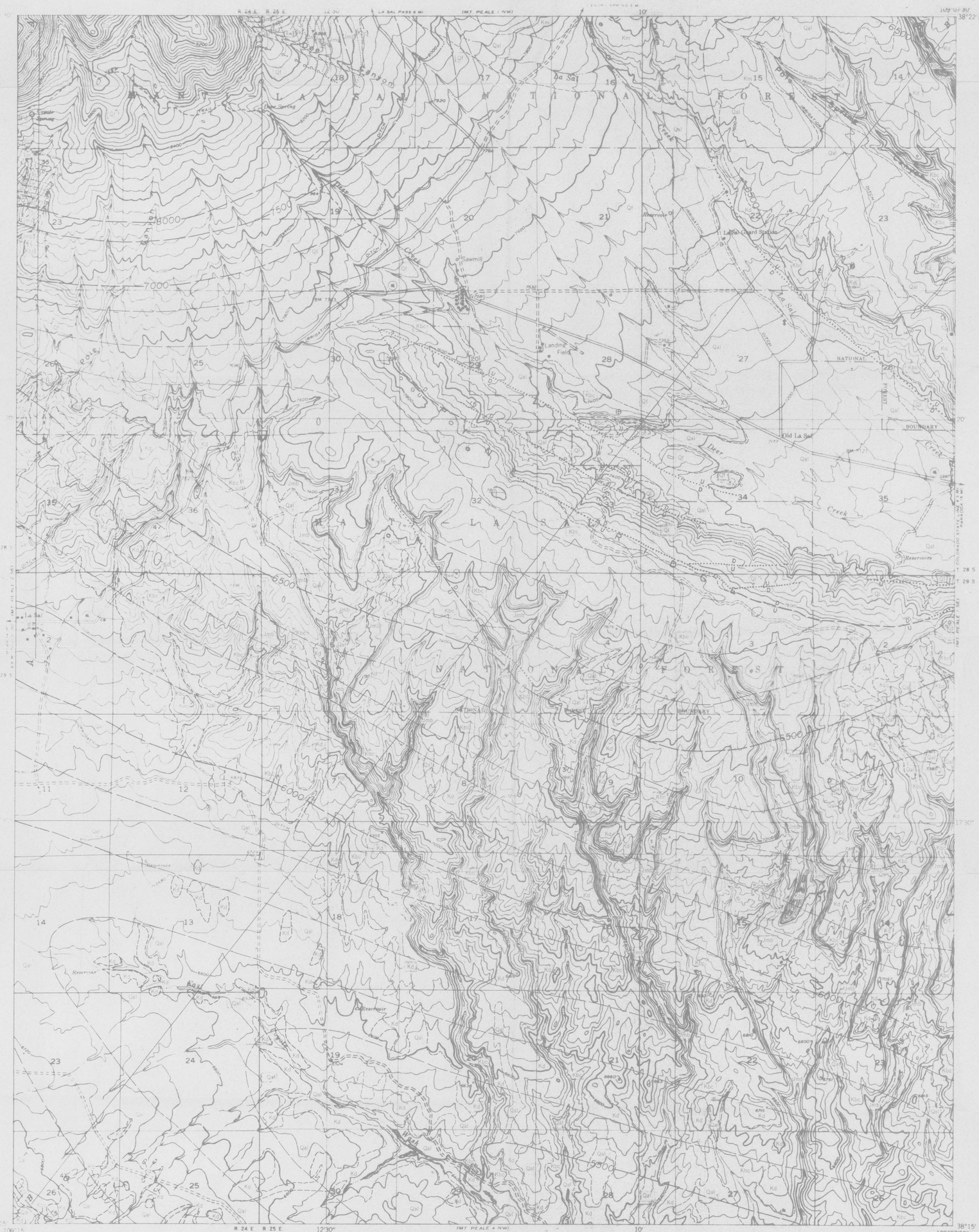
DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

TRACE ELEMENTS
MEMORANDUM REPORT 977

THIS MAP CONCERNS WORK DONE BY THE U.S. GEOLOGICAL SURVEY ON BEHALF OF THE DIVISION OF RAW MATERIALS OF THE U.S. ATOMIC ENERGY COMMISSION.



Mapped by the Geological Survey 1954

Topography by multiplex methods from aerial photographs taken 1953

Dashed land lines indicate approximate locations

Symbols and other detail herein

TRUE NORTH
MAGNETIC NORTH
15°
APPROXIMATE MEAN DECLINATION, 1954

SCALE 1:24000

1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

CONTOUR INTERVAL 40 FEET
DATUM IS MEAN SEA LEVEL

ROAD CLASSIFICATION
Improved — Unimproved

Geology by W.D. Carter and J.L. Gualtieri, assisted by J.C. Warman and W.R. Barton, 1955.

PRELIMINARY GEOLOGIC MAP OF THE MT. PEALE 1 SW QUADRANGLE, SAN JUAN COUNTY, UTAH

EXPLANATION

SEDIMENTARY ROCKS

QUATERNARY — Pleistocene and Recent

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.

Qf — Fanglomerate

Coarse detritus and boulders on the flanks of the La Sal Mountains where underlying stratigraphy and structure are concealed.

Ql — Landslide deposits

UNCONFORMITY

CRETACEOUS — Upper Cretaceous

Km — Mancos shale

Dark-gray soft, fissile shale and siltstone.

Kd — Dakota sandstone

Yellowish lenticular sandstone and conglomerate with interbedded carbonaceous shale and impure coal.

UNCONFORMITY

Lower Cretaceous

Kbc — Burro Canyon formation

White, gray, light orange-brown sandstone and conglomerate with interbedded green and purplish shale; overlain by light-green mudstone, siltstone, and shale with interbedded chert, impure limestone, and thin-bedded quartzite.

JURASSIC — Upper Jurassic

Jmb / Jms — Morrison formation

Variegated shale and mudstone; white, gray, rusty-red, and buff sandstone; local thin limestone beds. Jmb, Brushy Basin shale member, consisting largely of bentonitic shale, but including some sandstone and conglomerate lenses. Jms, Salt Wash sandstone member, 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 undifferentiated

Orange, buff, and white, fine-grained, massive and crossbedded Entrada sandstone at the top. Red sandstone and mudstone of the Carmel formation at the base.

UNCONFORMITY

JURASSIC AND JURASSIC(?) — Glen Canyon Group

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.

TRIASSIC — Upper Triassic

Ŧw — Wingate sandstone

Fine-grained reddish-brown cliff-forming sandstone, thick-bedded, massive, and crossbedded.

Ŧc — 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.

UNCONFORMITY

Lower and Middle(?) Triassic

Ŧm — Moenkopi formation

Thin regularly bedded red to gray siltstone with thin beds of ripple-marked sandstone.

UNCONFORMITY

PERMIAN

Pc — Cutler formation

Maroon, red, mottled light-red, and purple conglomerate, arkose, and arkosic sandstone. Thin beds of sandy mudstone. Interbedded reddish and gray marine limestone at the base.

PENNSYLVANIAN AND PERMIAN(?)

IPr — Rico formation

Red, purple, and pink sandstones, and conglomeratic arkosic sandstones with thin beds of light-yellow-brown, gray, and green limestone. Springs issuing from Rico are commonly salty. No salt observed. Formation exposed in contact with igneous rock of South Mountain.

PENNSYLVANIAN

IPh — Hermosa formation (shown in section only)

Salt and gypsum overlain by arkose, red sandstone and limestone. Not exposed in mapped area. Shown in section A-A' as probably underlying igneous laccolith of South Mountain.

IGNEOUS ROCKS

TERTIARY

Tp — Diorite porphyry; laccoliths

After Hunt, C. B., in preparation, Structural and igneous geology, La Sal Mountains, Utah: U. S. Geol. Survey Prof. Paper.

Contact

Dashed where approximately located. Dotted where concealed.

U D
Fault

Dashed where approximately located; dotted where concealed; U, upthrown side; D, downthrown side.

45
Strike and dip of beds

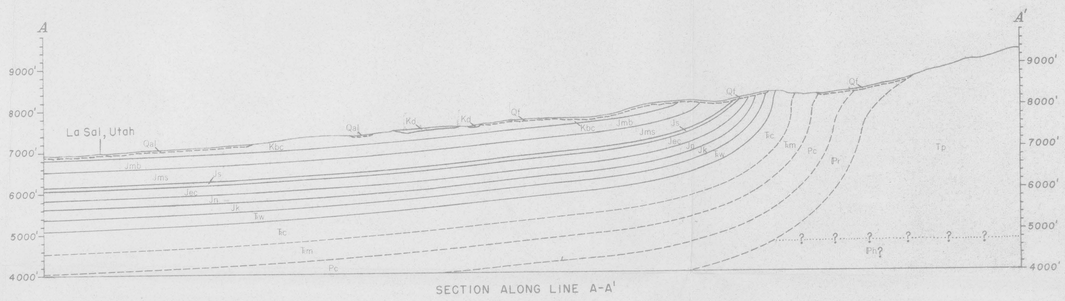
Horizontal beds

6000
Structure contours

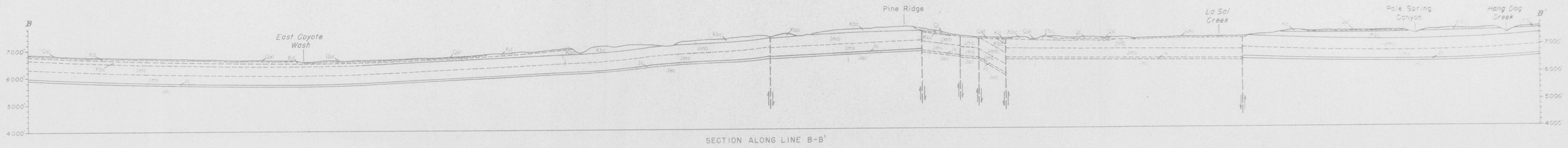
Drawn on the top of the Entrada sandstone (at places projected from the base of the Burro Canyon formation; average vertical separation 800 feet). Dashed where approximately located; short dashes indicate projection above surface. Contour interval 100 feet below 7500-foot contour and 500 feet above. Datum is mean sea level. Contours deleted in collapsed areas.

Adit

Gravel prospect



SECTION ALONG LINE A-A'



SECTION ALONG LINE B-B'