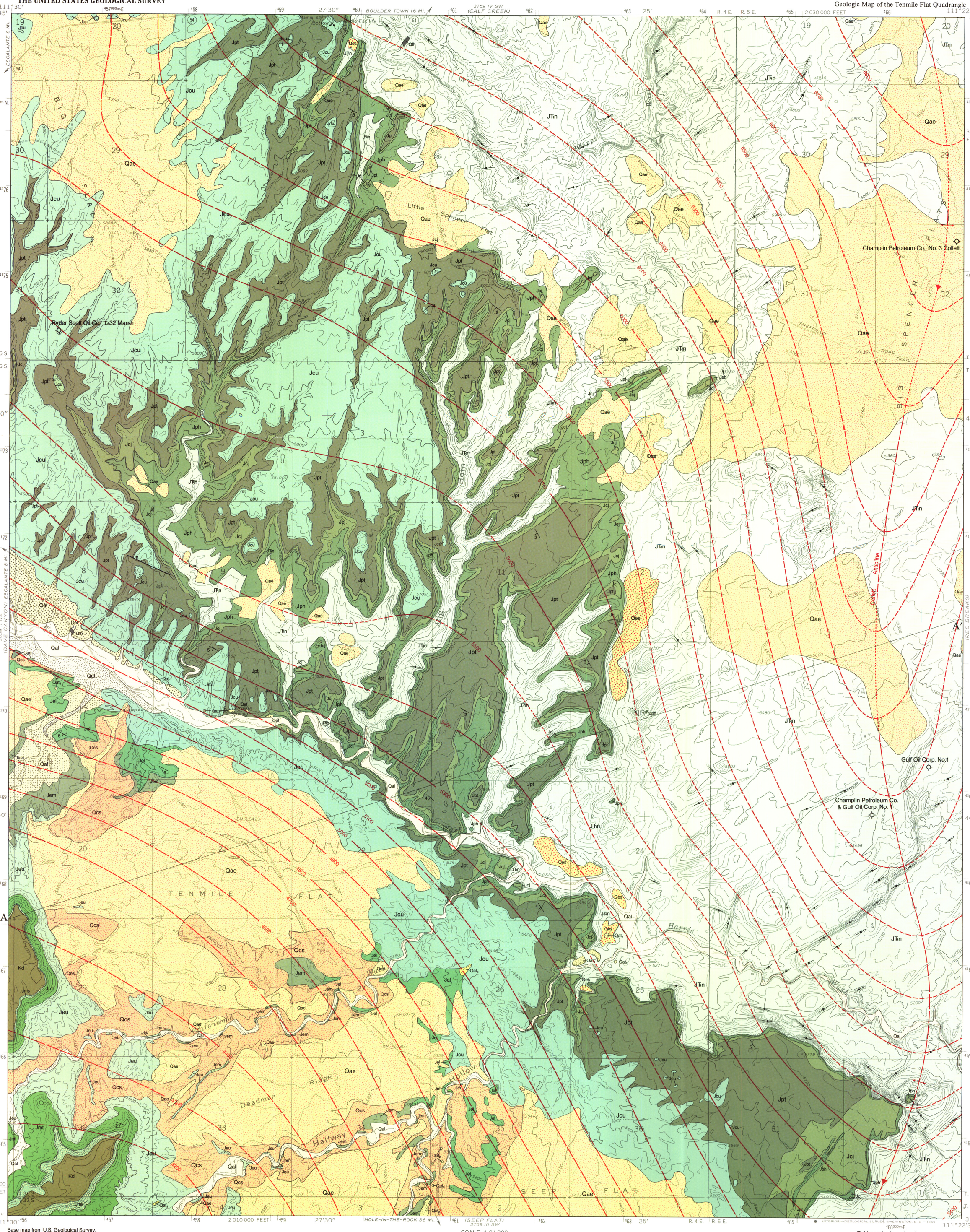
UTAH GEOLOGICAL AND MINERAL SURVEY
UTAH DEPARTMENT OF NATURAL RESOURCES
in cooperation with
THE UNITED STATES GEOLOGICAL SURVEY



GEOLOGIC MAP OF THE TENMILE FLAT QUADRANGLE, GARFIELD COUNTY, UTAH

by
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U.S. Geological Survey

1990

MAP SYMBOLS

CONTACT — Boundaries of surficial deposits approximately located.

FAULT — Dashed where inferred; dotted where concealed; bar and ball on downthrown side.

ANTICLINE — Showing trace of axial plane and plunge of axis; dashed where approximately located.

STRIKE AND DIP OF BEDS

8 Inclined

STRIKE OF VERTICAL AND NEAR-VERTICAL JOINTS

BORROW PIT

OIL WELL — Dry hole, showing name of well.

STRUCTURE CONTOURS — Drawn on top of Navajo Sandstone. Long dashed where control less accurate. Short dashed where datum above land surface. Contour interval 100 ft.

DESCRIPTION OF MAP UNITS

Qfh — Artificial fill — *Unsorted gravel, sand, and silt used as highway fill in gully crossings.*

Qes — Wind-blown sand — *Fine grains of quartz and minor silt.*

Qae — Sheetwash alluvium and eolium — *Silt, sand, and small rock fragments.*

Qcs — Colluvial sand — *Fine sand below cliffs of the lower member of the Entrada Sandstone.*

Qal — Floodplain alluvium — *Fine sand and silt with local admixtures of gravel.*

Qaf — Fan alluvium — *Fine sand, silt, and small rock fragments.*

Qat1 — Fine-grained terrace alluvium — *Silt and fine sand and rare small pebbles.*

Qat2 — Intermediate gravel terrace alluvium — *Gravel consisting chiefly of cobbles of sandstone, conglomerate, and quartzite resting on surfaces about 40 to 100 feet above stream level.*

Qat3 — High gravel terrace alluvium — *Gravel consisting chiefly of boulders of sandstone and conglomerate resting on surfaces about 150 to 200 feet above stream level.*

UNCONFORMITY

Kd — Dakota Formation — *Light-brown sandstone, carbonaceous shale and siltstone, and minor coal.*

UNCONFORMITY

Morrison Formation

Jms — Salt Wash Member — *Gray chert-pebble conglomerate, sandstone, and red or green mudstone.*

Jmt — Tidwell Member — *Light-yellowish-gray sandstone and red or green mudstone.*

UNCONFORMITY

Entrada Sandstone

Jeu — Upper member — *Light-gray to pale-orange, crossbedded, fine-grained sandstone.*

Jem — Middle member — *Reddish-brown, fine-grained silty sandstone, and red and gray sandy siltstone and mudstone.*

Jel — Lower member — *Reddish-brown, crossbedded, fine-grained sandstone and minor siltstone and mudstone.*

Jcu — Carmel Formation, upper member — *Reddish-brown shale, yellowish-brown fine-grained sandstone, micrograined limestone, and gypsum.*

Jpct (cross section only)

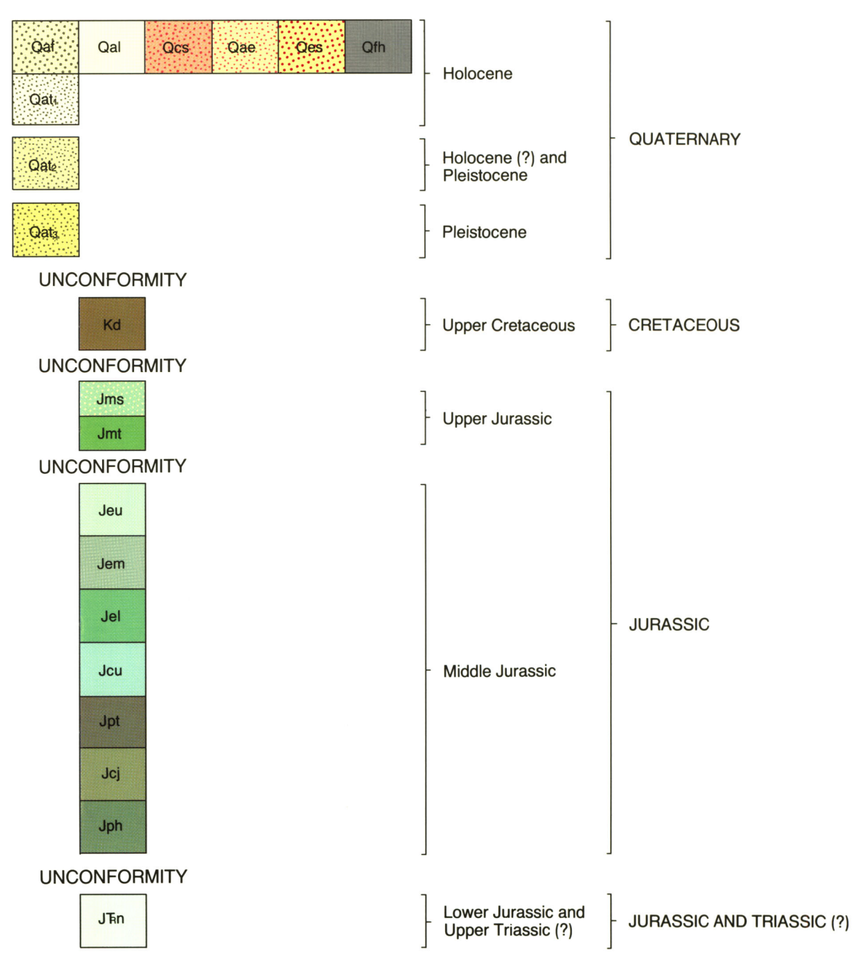
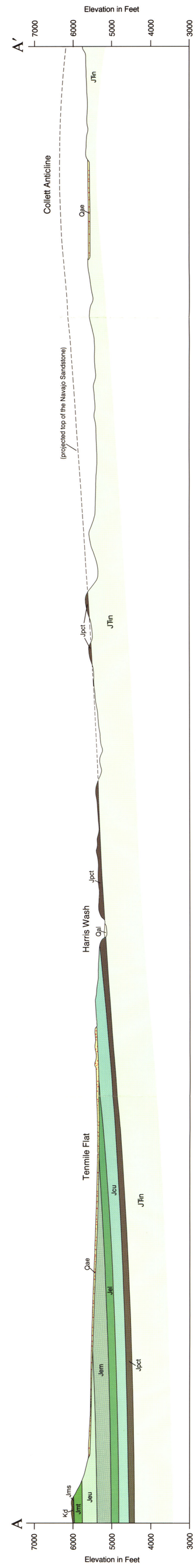
Jpt — Page Sandstone, Thousand Pockets Tongue — *Gray, fine- to medium-grained, crossbedded sandstone, and minor reddish-brown mudstone, commonly contorted.*

Jcj — Carmel Formation, Judd Hollow Tongue — *Reddish-brown siltstone and fine-grained sandstone.*

Jph — Page Sandstone, Harris Wash Tongue — *Light-grayish-orange, crossbedded, fine-grained sandstone; chert granules and small pebbles at base.*

UNCONFORMITY

JTRn — Navajo Sandstone — *Light-grayish-orange, crossbedded, fine-grained sandstone.*

FORMATION		SYMBOL	THICKNESS (feet)	
Alluvium, eolium, colluvium		Q	0-25	
Dakota Formation		Kd	100+	
Morrison Formation	Salt Wash member	Jms	200-260	30-120
	Tidwell member	Jmt		100-180
Entrada Sandstone	Upper member	Jeu	850-1000	300-400
	Middle member	Jem		310-420
	Lower member	Jel		150-240
Carmel Formation	Upper member	Jcu	220-400	
Page Sandstone	Thousand Pockets Tongue	Jpct (cross section) Jpt	110-170	30-80
Carmel Fm.	Judd Hollow Tng.	Jcj		15-40
Page Sandstone	Harris Wash Tongue	Jph		30-80
Navajo Sandstone		JTRn	700+	

CORRELATION OF MAP UNITS