



EXPLANATION

Alluvium Stratified sand, silt, and gravel deposits; includes coarse unsorted flood deposits in Alvey Wash

Alluvium and colluvium Sand, silt, and clay deposited by slope wash from the

Straight Cliffs and mixed with alluvium

Alluvium and eolian deposits Mostly silt and sand reworked by wind and running water. Found mostly on rolling surfaces between tributaries of

Unstratified slope wash made up of clay, silt, sand, and gravel

Landslide deposits

Wahweap Formation Mostly olive-gray claystone and mudstone alternating with

Sandstone beds are very lenticular and have concretionary appearance near base. Sandstone beds increase in number and are a dark-yellowish-gray 500 feet above base. Only the lower 720 feet of the 1,000-foot-thick formation is

Commonly blocks of sandstone from the Straight Cliffs Sandstone that have moved down steep slopes and lie on

beds of grayish-orange medium-grained sandstone.

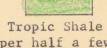
Alvey Wash

the Tropic Shale

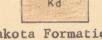
exposed

Straight Cliffs Sandstone

Grayish-orange, tan, and light-gray fine- to medium-grained sandstone that forms massive cliffs, interbedded with gray shale, carbonaceous shale, siltstone, and coal. Some of the more persistent sandstones nearly to top of formation are marine and are interbedded with generally nonmarine beds. The base of a marine sandstone, about 400 feet above base, is designated bed A on map. The two main coal zones are 1,170 and 770 feet, respectively, above base. Total thickness about 1,550 feet



Olive-gray shale; in upper half a few thin grayish-orange fine-grained beds of sandstone that become more prominent in upper 100 feet; some thin beds of bentonite and limestone concretions near base. Total thickness about 800



Dakota Formation

Grayish-orange sandstone interbedded with light-olive-gray shale in upper half; coal beds may be present in about middle of formation; brownish-black carbonaceous claystone, shale, and siltstone and some beds of grayish-orange sandstone in lower part; at some places conglomerate occurs at base. Total thickness about 140 feet

UNCONFORMITY

Morrison Formation Mostly massive light-gray fine-grained sandstone; some interbedded greenish-gray and reddish-brown shale; upper part is conglomeratic sandstone. Total thickness varies because of unconformity with overlying Dakota; about 80 to 130 feet thick



Summerville Formation

Mottled dark-reddish-brown and grayish-olive claystone and siltstone; a thin lenticular yellowish-gray limestone 16 feet from top; one yellowish-gray sandstone bed near middle. Total thickness about 40 to 60 feet



Entrada Sandstone

Light-gray to very pale orange fine-grained massive sandstone in upper 300 feet; interbedded reddish-brown sandstone and gray shale in middle 300 feet; reddish-brown silty sandstone (not exposed) in about basal 300 feet. Total thickness about 900 feet



Carmel Formation and Navajo Sandstone

Jc, Carmel Formation; light-brown siltstone in upper 100 feet; in middle, mottled reddish-brown to greenish-gray siltstone unit, 300 feet thick, that contains much gypsum; thin-bedded crinkly yellowish-gray limestone in lower 120 feet. Total thickness 520 feet

Jnu, unnamed unit in Navajo Sandstone; yellowish-gray finegrained massive crossbedded sandstone, cliff-forming, includes a parting of pale-reddish-brown calcareous siltstone 10 feet thick. Total thickness 56 feet

Jcu, unnamed unit of Carmel Formation; pale-reddish-brown calcareous siltstone that contains some interbeds of limestone and shale; ripple marks conspicuous in thin beds near top. Total thickness about 40 feet Jn, Navajo Sandstone; grayish-orange medium- to fine-grained

sandstone; large-scale festoon crossbedding; cliff-forming and calcareous. Only upper 100 to 200 feet of Jurassic age exposed. Thickness in subsurface which includes beds of Triassic(?) age about 1,500 feet



Dashed where inferred; number refers to coal section shown on sheet 2

Clinker of burned coal bed

Contact Approximately located

Anticline Showing troughline; approximately located

Strike and dip of beds



- Tenneco Oil Co. "A" 1 Govt. Dry hole

Apparent dip

M(200) R290 no. 68-33 9 sheet 1062

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