



CORRELATION OF MAP UNITS

Qalc	Qal	Qes	Qass	Qe	Qsl	Holocene	QUATERNARY	
Qga	Qgmf							
Qla	Qoa	Qop				Pleistocene	QUATERNARY	
Qob								
UNCONFORMITY							Miocene	TERTIARY
Tb	Tbi							
UNCONFORMITY							Miocene or Oligocene(?)	TERTIARY
Tsr								
UNCONFORMITY							Eocene	TERTIARY
Tu	Tep	Tga	Tgs					

DESCRIPTION OF MAP UNITS

[Detailed descriptions of the surficial deposits of the North Mamm Peak quadrangle are included in a report on the Quaternary geology of Grand and Battlement Mesas, Colorado, by Yeend (1969)]

Qalc Alluvium of the Colorado River (Holocene)--Mud, silt, sand, and gravel along present-day lowest flood plain of Colorado River. Gravel consists of more than 50 percent crystalline rocks derived from a distant easterly source.

Qal Alluvial valley fill, fan, and terrace deposits (Holocene)--Mud, silt, sand, and gravel. Valley fill along Beaver and Porcupine Creeks and fan at mouth of Porcupine Creek consist mostly of locally derived, poorly sorted basalt and sedimentary rock detritus. Terrace gravels along Colorado River consist of locally derived detritus and well-sorted and well-sorted crystalline rocks derived from a nonlocal easterly source.

Qes Earthflow and soil creep deposits (Holocene)--Poorly sorted boulder, cobble, and pebble gravel in a matrix of greenish-gray sandy silt. Contains some basalt boulders derived from older till, landslide and colluvial deposits, and angular fragments of sandstone, siltstone, and claystone derived from the Wasatch and Green River Formations. Restricted to areas underlain by claystone units in the Wasatch Formation.

Qass Alluvial and silt and silt deposit (Holocene)--Yellowish-brown silt and sand, and reddish-brown silt and gray clay; generally well sorted. Composed mostly of quartz derived from nearby sedimentary rocks. Locally occupies depressions and young valleys. Only one small outcrop in northeastern part of quadrangle.

Qe Talus deposits (Holocene)--Boulders and cobbles of basalt, commonly 1-4 ft (0.3-1.2 m) in diameter, some as much as 20 ft (6 m) across; angular; lichen covered. Limited to base of basalt cliff that forms top of North Mamm Peak in southwestern part of quadrangle.

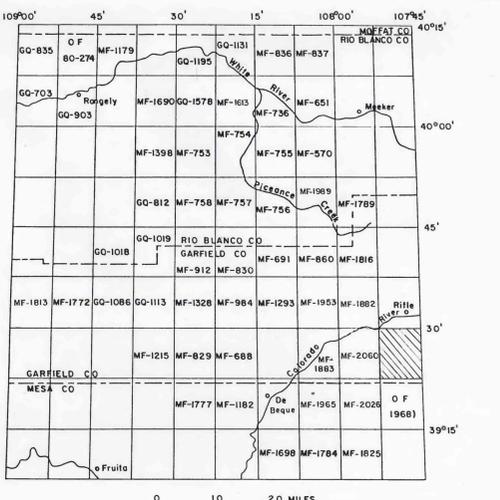
Qsl Slump blocks and solifluction deposits (Holocene and Pleistocene)--Basalt blocks and boulders, and unconsolidated material moved downslope by gravity. Slump blocks form ridges of basalt rubble mantling much of Battlement Mesa. Unbroken blocks are as much as 1 mi (1.6 km) long. Most deposits are of Pleistocene age but some movement continues to present time.

Qga Grand Mesa Formation (Pleistocene--Probably of Pinedale(?) glaciation) Alluvial gravel deposits--Silt, sand, and gravel. Pebble, cobble, and boulder gravel includes both locally derived sedimentary rocks and basalt. Reddish-brown windblown sand and silt locally mantles terrace surfaces and fills the valley of West Mesa Creek.

Table 1--Drill-hole data, North Mamm Peak quadrangle, Colorado

(All drill holes are gas exploration wells except for C-183, which is an oil-shale corehole)

Drill-hole No. (on map)	Section	Company and name	Total depth Feet	Meters
T. 6 S., R. 93 W.				
1	30	Carter & Carter, 1 Verma D. Mead	4,849	1,478
2	30	Carter & Carter, 1 Juhon Fed.	6,920	2,109
T. 6 S., R. 94 W.				
3	26	Southern Union Gas Co., 1 Juhon	6,345	1,955
4	34	Austral Oil Co., 24-94 Juhon	1,565	477
5	27	Carter & Carter, 1 Easton	4,452	1,357
6	34	Austral Oil Co., 34-94 Juhon	1,750	533
T. 7 S., R. 93 W.				
7	34	Carter & Carter, 1 A. C. Hunter	7,060	2,152
8	34	Carter & Carter, 2 A. C. Hunter	1,565	477
9	34	Carter & Carter, 1 Langstaff	3,351	1,021
10	35	Southern Union Gas Co., 1 Juhon Federal	8,939	2,725
11	35	Austral Oil Co., 35-94 Federal	1,576	480
12	35	Austral Oil Co., 2 Juhon	1,608	490
T. 7 S., R. 94 W.				
13	9	Chevron Oil Co., 1 Afill Skoeborg	8,741	2,664
T. 7 S., R. 94 W.				
14	1	Carter & Carter, 1 Juhon	7,050	2,149
C-183	36	Pure Oil Co., 1 Battlement Mesa	826	252



Contact--Approximately located where obscured by soil cover or vegetation

Gas well--Number keyed to table 1

Dry hole--Oil and gas test. Number keyed to table 1

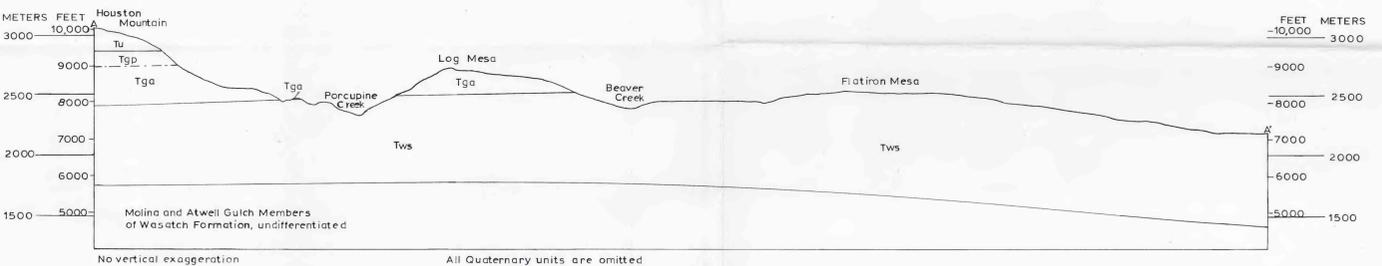
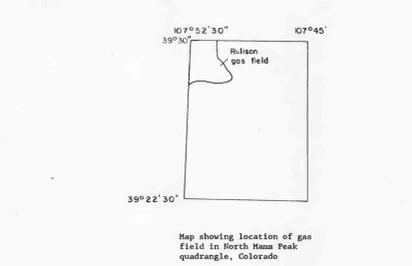
C-183 Oil-shale corehole--Number keyed to table 1

Structure contour--Drawn on top of Wasatch Formation. Dashed where removed by erosion. Contour interval 100 ft (30.5 m)

REFERENCES CITED

Johnson, R. C., Granica, M. P., and Deussenberger, N. C., 1979, Cross section B-B' of Upper Cretaceous and lower Tertiary rocks, southern Piceance Creek basin, Colorado. U.S. Geological Survey Miscellaneous Field Studies Map MF-1130-B, 2 sheets.

Yeend, V. E., 1969, Quaternary geology of the Grand and Battlement Mesas area, Colorado. U.S. Geological Survey Professional Paper 617, 50 p.



Base from U.S. Geological Survey, 1960
Photorevised 1982

SCALE 1:24,000

CONTOUR INTERVAL 40 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

Surficial geology modified from mapping by V. E. Yeend, 1963-65; bedrock geology mapped by J. R. Donnell, 1963

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GEOLOGIC MAP OF THE NORTH MAMM PEAK QUADRANGLE, GARFIELD COUNTY, COLORADO
By
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1989