DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

MISCELLANEOUS FIELD STUDIES
MAP MF-755
GREASEWOOD GULCH QUAD., COLORADO

Base from U.S. Geological Survey, 1952

Geology mapped in 1960-1973

SCALE 1:24 000

1 MILE

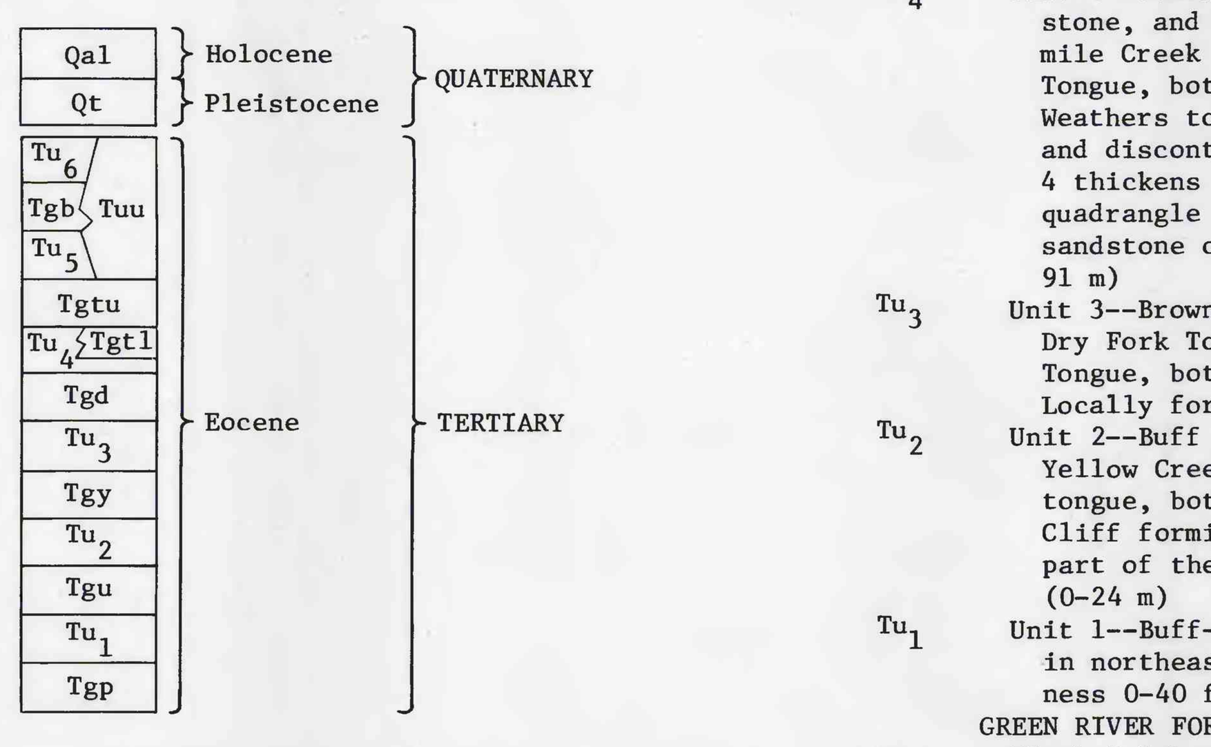
1 KILOMETRE

APPROXIMATE MEAN DECLINATION, 1952

CONTOUR INTERVAL 20 FEET
DATUM IS MEAN SEA LEVEL

QUADRANGLE LOCATION

CORRELATION OF MAP UNITS



DESCRIPTION OF MAP UNITS

Qal — ALLUVIUM (HOLOCENE)--Silt, sand, and gravel of flood plains and alluvial fans in the larger valleys. Flood-plain deposits are mostly gray, buff, and brown silt and sand. Alluvial fan deposits consist of angular boulders and pebbles of sandstone and marlstone mixed with silt and sand, and are derived from nearby hilly terrain. Thickness 0-50 ft (0-15 m)

Qt — TERRACE DEPOSIT (PLEISTOCENE)--Remnant of older stream deposit on terrace about 80 ft (24 m) above present level of Piceance Creek. Deposit contains numerous smoothly rounded pebbles and boulders of chert, limestone quartzite, arkose, and sandstone derived from Paleozoic and Mesozoic rocks east of Piceance Creek basin. Thickness 0-25 ft (0-8 m)

UINTA FORMATION (EOCENE)

Tu_6 — Unit 6--Buff- and brown-weathering sandstone and gray, greenish-gray, and tan-weathering siltstone overlying the Black Sulphur Tongue of the Green River Formation. The lower part of this unit contains some conglomeratic sandstone containing bone and tooth fragments of Titanotheres, Uintatheres, and Miacis, all of indeterminate age within the range from middle to late Eocene. Thickness 250 ft (76 m)

Tu_5 — Unit 5--Brown sandstone and buff and gray siltstone with a few thin lenticular gray marlstone beds underlying the Black Sulphur Tongue of the Green River Formation. Unit 5 thickens southward. Thickness 150-300 ft (46-91 m)

Tuu — Units 6 and 5, undivided--Combined in the northern three-quarters of the quadrangle where the Black Sulphur Tongue is not mapped. The area is outlined by a long dashed line

Tu_4 — Unit 4--Consists of lenticular sandstone, siltstone, and marlstone underlying the Thirteenmile Creek Tongue and overlying the Dry Fork Tongue, both of the Green River Formation. Weathers to buff and brown cliffs with local and discontinuous gray marlstone slopes. Unit 4 thickens in the west-central part of the quadrangle where it forms conspicuous brown sandstone cliffs. Thickness 80-300 ft (24-91 m)

Tu_3 — Unit 3--Brown and buff sandstone underlying the Dry Fork Tongue and overlying the Yellow Creek Tongue, both of the Green River Formation. Locally forms cliffs. Thickness 150 ft (46 m)

Tu_2 — Unit 2--Buff and brown sandstone underlying the Yellow Creek Tongue and overlying the unnamed tongue, both of the Green River Formation. Cliff forming. Exposed only in the northeast part of the quadrangle. Thickness 0-80 ft (0-24 m)

Tu_1 — Unit 1--Buff-weathering sandstone. Exposed only in northeast part of the quadrangle. Thickness 0-40 ft (0-12 m)

GREEN RIVER FORMATION (EOCENE)

Tgb — Black Sulphur Tongue--Light gray- and white-weathering calcareous silty marlstone. The unit locally contains a tan-weathering sandstone zone about 10 ft (3 m) thick near the middle. Grades laterally into tan-weathering siltstone to the north and northwest. Mapped only in the southern one-fourth of the quadrangle. Thickness 0-90 ft (0-27 m)

Thirteenmile Creek Tongue

Tgtu — Upper part--Light gray- to white-weathering marlstone forming conspicuous light slopes and benches. In the northern part of the quadrangle the unit locally contains thin ledges of porous algal-ostracodal impure limestone with some gastropods and pelecypods. In the southwestern part of the quadrangle 3-4 thin rich-oil-shale beds in the upper part of the unit are identifiable by lines of small shrubs on slope exposures. Thickness 30-100 ft (9-30 m)

Tgtl — Lower part--Alternating thin-bedded marlstone, sandstone, and porous limestone containing charophyte and ostracode casts. Unit forms buff and gray ledges and slopes. The porous limestone beds locally form extensive rimrock benches. The unit thins to nothing in a series of lenses southward within the quadrangle; thickens in the northeastern part of the quadrangle, and grades laterally into sandstone assigned to the Uinta Formation in the northwestern part of the quadrangle. Exposed only in the northern part of the quadrangle. Unit is probably a near-shore lacustrine deposit. Thickness 0-100 ft (0-30 m)

Tgd — Dry Fork Tongue--Light gray- to white-weathering marlstone exposed only in the northern part of the quadrangle. Thickness 20-60 ft (6-18 m)

Tgy — Yellow Creek Tongue--A thin gray-weathering marlstone exposed only in the northeastern part of the quadrangle. Thickness 30 ft (9 m)

Tgu — Unnamed tongue--Light gray-weathering marlstone containing a few thin oil-shale beds. Exposed only in northeast part of quadrangle. Forms slopes. Thickness 120 ft (36 m)

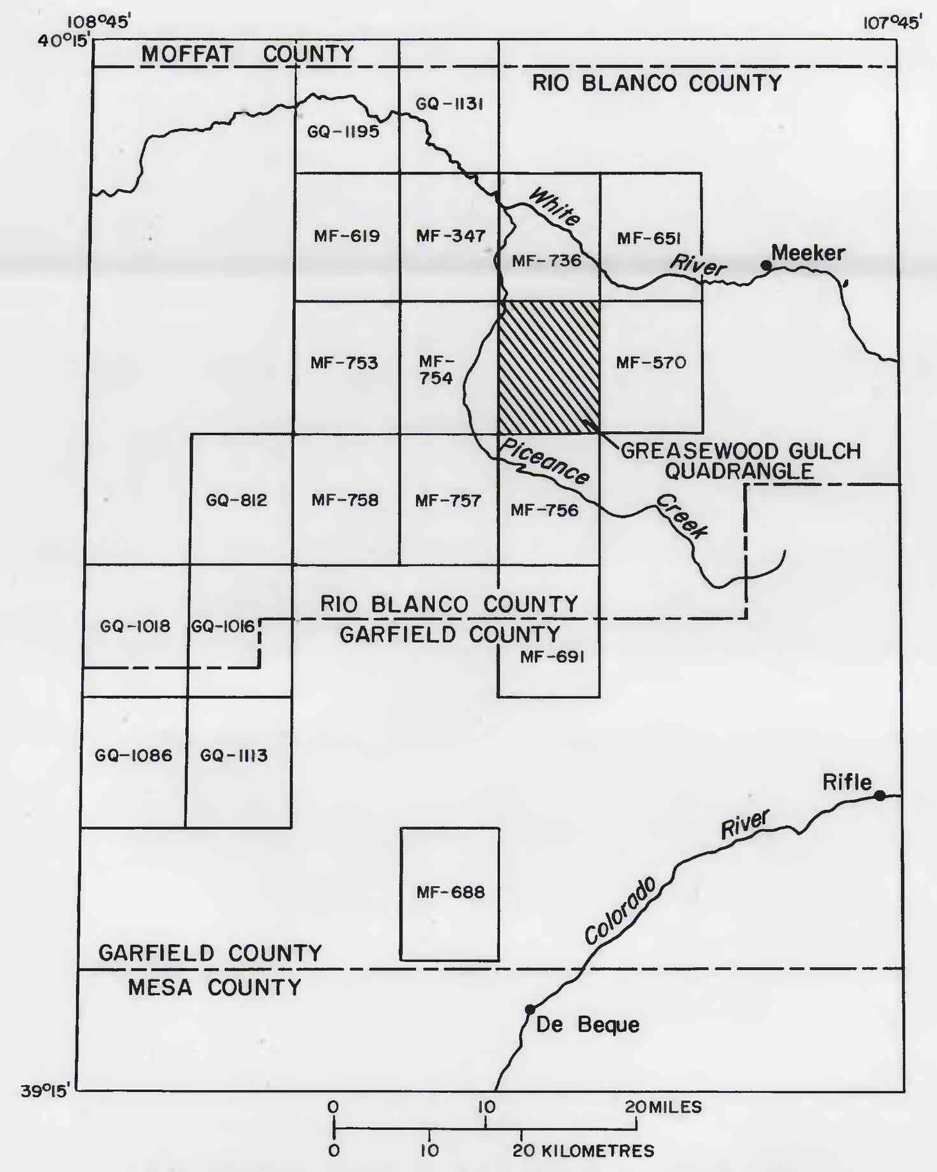
Tgp — Parachute Creek Member--Light gray ledge-forming unit of marlstone with numerous thin oil-shale beds and a few thin tuff layers. The upper 100 ft (31 m) is exposed in the northeast part of the quadrangle

CONTACT--Dashed where approximate

FAULT--Dashed where inferred. Dotted where concealed. U, upthrown side; D, downthrown side

5500 — STRUCTURE CONTOURS--Drawn on top of the Mahogany oil-shale zone of the Green River Formation. Contour interval 100 ft (30.5 m)

⊙6 DRILL HOLE--Number keyed to table



Index of recently published U.S. Geological Survey geologic maps in the Piceance Creek basin area.

LIST OF DRILL HOLES

No. on map	Location Sec.	T. S.	R. W.	Operator and name of well	Depth of hole feet	metres
1	2	1	96	Weber Oil Co. 1 Juhan*--------------------------	546	166.4
2	2	1	96	Humble Oil Co. 1 Opportunity--------------------	1,635	503.8
3	10	1	96	American Petrofina-Tintic Standard 1 Govt.-10---	2,991	911.7
4	31	1	96	General Petroleum Corp. 5-31-G------------------	3,000	914.4
5	2	1	97	Sinclair Oil and Gas Co. 1 Burke Ranch----------	2,450	746.8
6	2	2	96	General Petroleum Corp. Govt. 18-2--------------	3,277	998.8
7	3	3	96	General Petroleum Corp. 22-3-G------------------	3,313	1,009.8
8	5	3	96	General Petroleum Corp. 66-5-G------------------	3,100	944.9
9	6	3	96	General Petroleum Corp. 56-6-Govt.--------------	3,059	932.4
10	7	3	96	Mobil Oil Co. T-26-7G---------------------------	5,840	1,780.0
11	8	3	96	Mobil Oil Co. F-13-8G---------------------------	3,455	1,053.1
12	9	3	96	Magnolia Petroleum Co. 1 Maddox-----------------	2,958	901.6
13	9	3	96	Magnolia Petroleum Co. 1 Fordham----------------	2,615	797.1
14	9	3	96	General Petroleum Corp. water well--------------	Unknown.	
15	15	3	96	Magnolia Petroleum Co. 1 Gladys Titley----------	2,986	910.1
16	15	3	96	General Petroleum Corp. 84-15-G-----------------	12,018	3,663.1
17	16	3	96	Mobil Oil Co. 41-16-G---------------------------	3,600	1,097.3
18	17	3	96	Mobil Oil Co. 63-17-G---------------------------	6,357	1,937.6
19	18	3	96	Mobil Oil Co. T45-18-G--------------------------	5,700	1,737.4
20	1	2	97	Mobil Oil Co. F13-1-G---------------------------	3,100	944.9
21	2	2	97	General Petroleum Corp. 45-2-G------------------	3,240	987.6
22	11	2	97	Mobil Oil Co. 68-11-G---------------------------	7,251	2,210.1
23	12	2	97	Mobil Oil Co. T35-12-G--------------------------	6,853	2,088.8
24	13	2	97	Mobil Oil Co. 54-13-G---------------------------	12,750	3,886.2
25	14	2	97	Mobil Oil Co. T45-18-G--------------------------	5,725	1,745.0

*U.S. Geological Survey computer storage and retrieval program for oil-shale data, corehole identification number C-16.

PRELIMINARY GEOLOGIC MAP OF GREASEWOOD GULCH QUADRANGLE, RIO BLANCO COUNTY, COLORADO

By
D.C. Duncan

1976

For sale by U.S. Geological Survey, price 50 cents
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