DEPARTMENT OF NATURAL RESOURCES
COLORADO GEOLOGICAL SURVEY
JOHN W. ROLD, DIRECTOR

COLORADO GEOLOGICAL SURVEY
MAP SERIES 3

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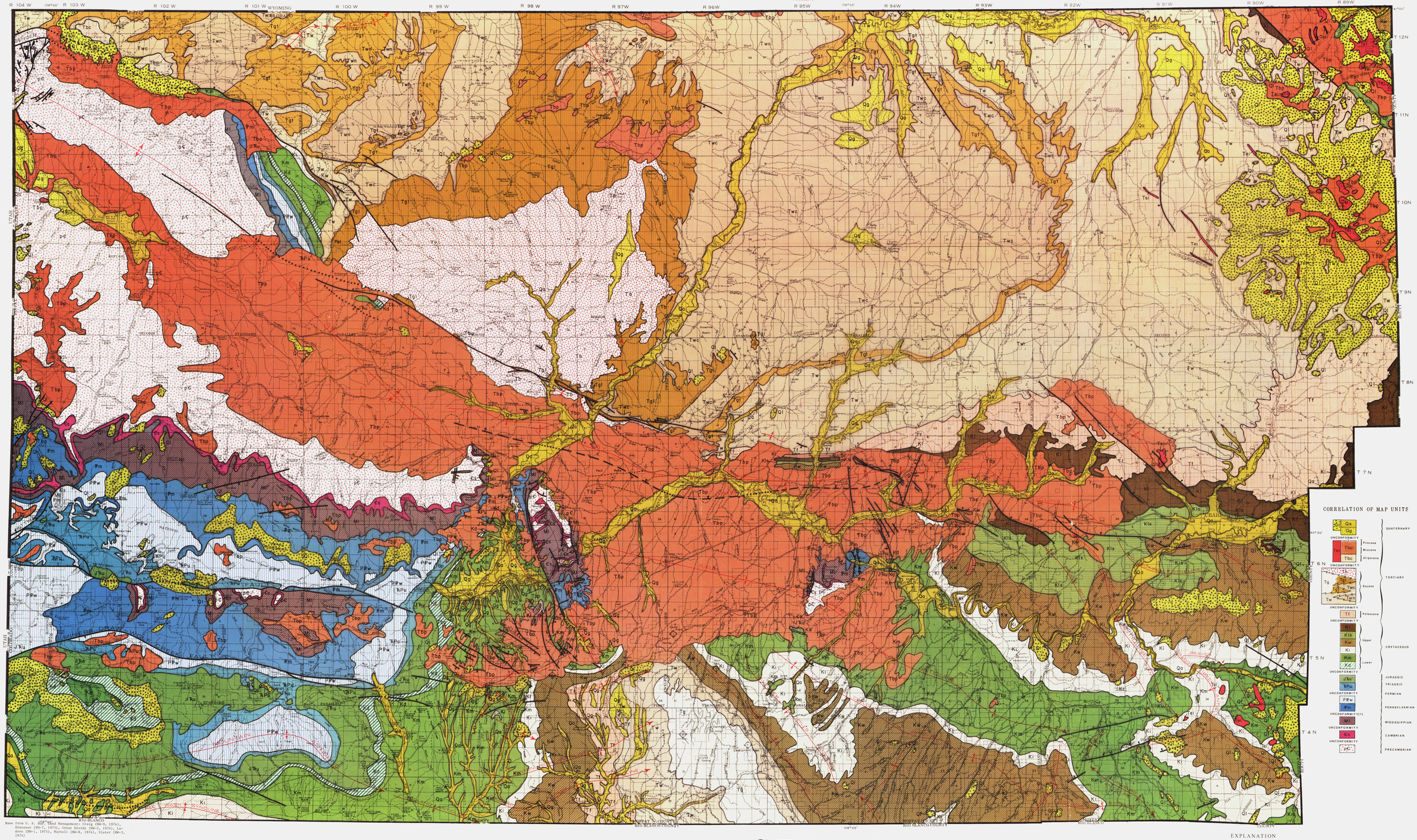

GEOLOGY OF MOFFAT COUNTY COLORADO

BY

ALLAN E. MILLER

1977

CORRELATION OF MAP UNITS

QUADRANGLE INDEX AND SOURCES OF GEOLOGIC INFORMATION
(numbers refer to accompanying list of authors)

Principal Sources of Geologic Data

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13. Hancock, E. T., 1925, Geology and coal resources of the Axial and Monument Butte quadrangles, Moffat County, Colorado: U. S. Geol. Survey Bull. 757, 134 p.
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16. McKay, E. J., 1974, Geologic map of the Lone Mountain quadrangle, Moffat County, Colorado: U. S. Geol. Survey Geol. Quad. Map GQ-1144.
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* covers area west of 108°
** covers area east of 108°
† countywide reference (number not shown on index map)

EXPLANATION

Qa ALLUVIUM (QUATERNARY)
Stream valley silt, sand, and gravel.

Qg LANDSLIDE DEPOSITS (QUATERNARY)
Surficial rock and soil debris.

Qg UNCONSOLIDATED SURFICIAL DEPOSITS (QUATERNARY)

Tgi IGNEOUS ROCKS (PLIOCENE, MIOCENE, OLIGOCENE)
Intermediate to basaltic intrusives and basalt flows.

Tbp BROWNS PARK FORMATION (MIOCENE)
Sandstone, conglomerate, tuffaceous sandstone and siltstone.

Tbc BISHOP CONGLOMERATE (OLIGOCENE(?))

Tf BRIDGER FORMATION (EOCENE)
Sandstone, claystone, and conglomerate.

Tg GREEN RIVER FORMATION (EOCENE)
Variegated claystone, mudstone, and sandstone. Undivided in southern Moffat Co.

Tgl Laney Shale Member of Green River Formation
Claystone, oil shale, and sandstone.

Tgt Tipton Tongue of Green River Formation
Claystone, siltstone, sandstone, and oil shale. Includes Luman Tongue of Green River Formation.

WASATCH FORMATION (EOCENE)

Twc Cathedral Bluffs Tongue
Variegated claystone, mudstone, and sandstone.

Tw Main body
Mudstone, sandstone and conglomerate. Twn-Niland Tongue, mudstone and sandstone.

Wn FORT UNION FORMATION (PALEOCENE)
Shale, sandstone, and coal.

Ki LANCE FORMATION (UPPER CRETACEOUS)
Mostly shale, with some sandstone and coal beds.

Kls LEWIS SHALE (UPPER CRETACEOUS)

Kw WILLIAMS FORK FORMATION OF MESAVERDE GROUP (UPPER CRETACEOUS)
Interbedded sandstone, shale, and numerous coal beds.

Ki ILES FORMATION OF MESAVERDE GROUP (UPPER CRETACEOUS)
Sandstone and shale with coal in upper part. Trout Creek Sandstone Member at top.

Km MANCOS SHALE (UPPER AND LOWER CRETACEOUS)
Primarily marine shale. In eastern Moffat Co. includes Frontier Sandstone Member, Mowry Shale Member, and calcareous shale equivalent to Niobrara Formation. In western Moffat Co. includes Sego Sandstone, Buck Tongue, and Castlegate Sandstone.

Kd DAKOTA SANDSTONE (LOWER CRETACEOUS)
Sandstone, minor shale and conglomerate. Exposed only in western Moffat Co. and includes Frontier and Mowry Members of Mancos Shale.

JRu JURASSIC AND TRIASSIC ROCKS
Morrison Formation (Upper Jurassic), shale, mudstone, and sandstone. Curtis Formation (Upper Jurassic), sandstone, shale, and limestone. Entrada Sandstone (Upper Jurassic). Carmel Formation (Lower Jurassic), siltstone, shale, and minor limestone. Glen Canyon Sandstone (Lower Jurassic and Upper Triassic.

TRu TRIASSIC AND PERMIAN ROCKS
Chinle Formation (Upper Triassic), mudstone, siltstone, and sandstone. Moenkopi Formation (Lower Triassic), shale and mudstone, Park City Formation (Permian), shale, mudstone, and sandstone.

PPw WEBER SANDSTONE (PERMIAN AND PENNSYLVANIAN)

Pm MORGAN FORMATION (PENNSYLVANIAN)
Limestone, shale, and sandstone.

Mi LEADVILLE LIMESTONE (MISSISSIPPIAN)
Also correlate to Madison Limestone.

Ꞓs SAWATCH QUARTZITE (CAMBRIAN)
Also known as Lodore Formation.

pC PRECAMBRIAN BASEMENT COMPLEX
Uinta Mountain Group, sandstone, siltstone, and conglomerate. Red Creek Quartzite, quartzite, amphibolite, and schist.

High-angle fault, dashed where inferred, dotted where concealed. Bar and ball on downthrown side.

Thrust fault. Barbs on upper plate.

ANTICLINE — SYNCLINE — Axis of anticline, name and direction of plunge.

HART SYNCLINE — Axis of syncline, name and direction of plunge.

GRAND HOGBACK — MONOCLINE — Axis and name of monocline.

MILES
2 1 0 1 2 3 4
KILOMETERS
2 1 0 1 2 3 4
SCALE
1:126,720

Drafting by: R.H.Gast