WYOMING STATE GEOLOGICAL SURVEY
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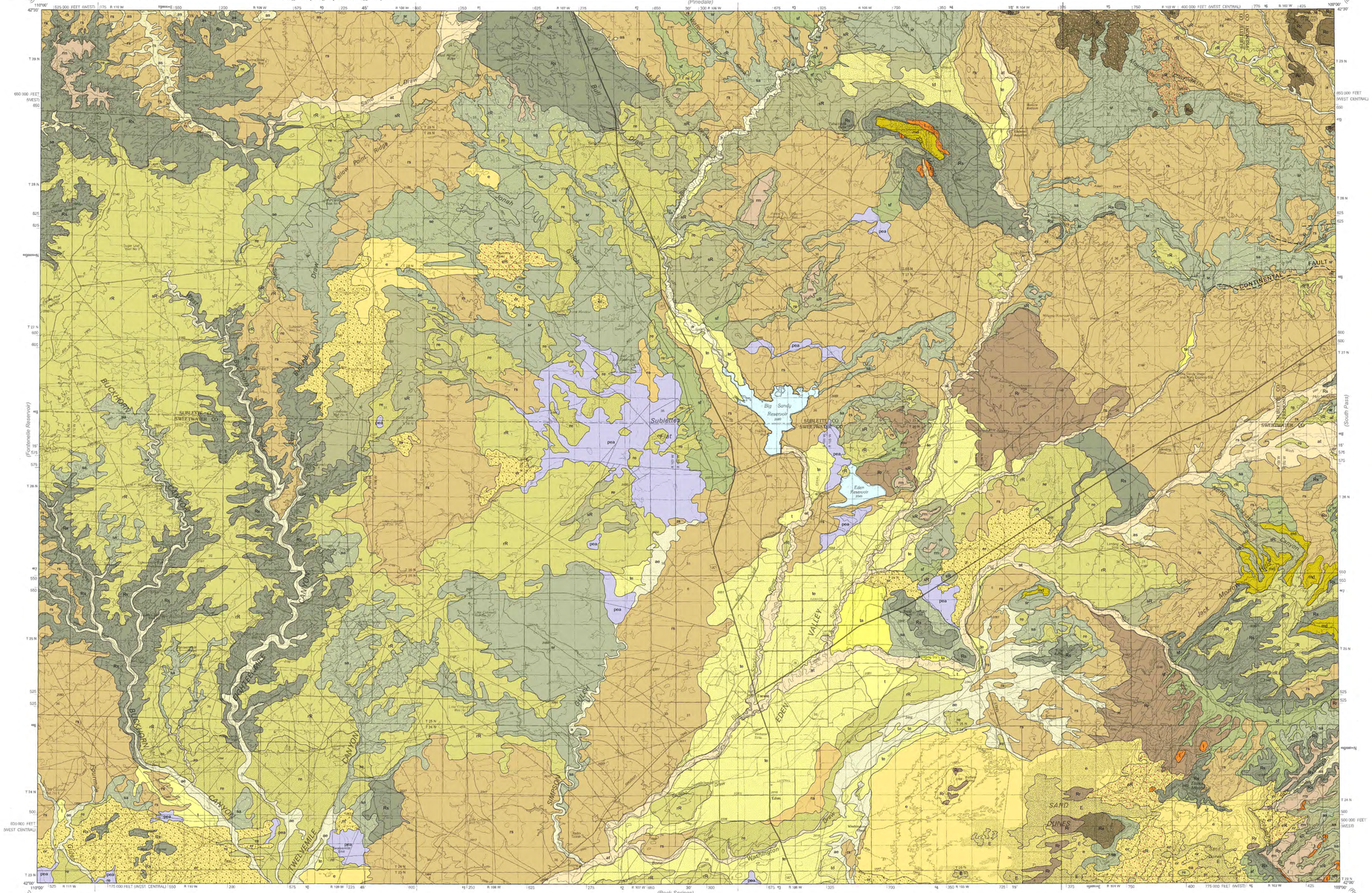
Geology - Interpreting the past - Providing for the future

USGS science for a changing world

Prepared in cooperation with the U.S. GEOLOGICAL SURVEY

MAP SERIES 84
Farson 1:100,000 - scale
Surficial Geologic Map



EXPLANATION

DESCRIPTION OF MAP UNITS

Alluvium—Unconsolidated detrital material deposited during comparatively recent geologic time by a stream or other body of running water, as a sorted or semisorted sediment in the bed of a stream or on its floodplain or delta, or as a cone or fan at the base of a mountain slope; stream and river deposits. Does not include subaqueous deposits in seas, estuaries, lakes, and ponds

- a — Alluvium
- ae — Alluvium and eolian deposits
- af — Alluvium and alluvial fan deposits
- as — Alluvium and slopewash with minor components of residuum and terrace deposits
- at — Alluvium and terrace deposits with minor components of slopewash and eolian deposits

Terrace deposits—Relict alluvial deposits on relatively flat, horizontal, or gently inclined surfaces which are bounded by a steeper ascending slope on one side and a steeper descending slope on the opposite side

- t — Terrace deposits
- ta — Terrace deposits with alluvium
- td — Dissected terrace deposits with minor components of alluvium and slopewash
- te — Terrace and eolian deposits

Eolian deposits—Wind-blown materials, including sand, silt, and clay that have been transported and deposited by the wind

- e — Eolian deposits, vegetated
- E — Eolian deposits, unvegetated
- ea — Eolian deposits and alluvium with minor components of residuum and slopewash
- e, qR — Eolian deposits and bedrock
- e, qr — Eolian deposits and residuum

Playa lake deposits—Materials deposited from broad, shallow sheets of water which quickly gather and evaporate, leaving mud flats or evaporite deposits (depending on chemical composition of the waters and degree of evaporation)

- pea — Playa deposits with eolian and alluvium deposits

Landslide deposits—Soil and rock material that has moved downslope, usually en masse, under gravitational influence; earth and rock which become loosened from a hillside and slides, flows, or falls down the slope

- l — Landslide deposits

Residuum—A residual deposit remaining in place after the decomposition of rocks. Residue is an accumulation of rock debris formed by weathering and remaining essentially in place after all but the least soluble constituents have been removed, usually forming a comparatively thin surface layer concealing the unweathered or partially altered rock below

- ra — Residuum with alluvium
- re — Residuum and eolian deposits with minor components of bedrock and slopewash
- rm — Residuum and mesa
- rR — Residuum and bedrock outcrops with minor components of slopewash and colluvium
- rs — Residuum and slopewash with minor components of colluvium and bedrock outcrops
- qR, r — Grus and bedrock outcrops with minor components of colluvium and slopewash

Bedrock outcrops

- Re — Bedrock and eolian deposits with minor components of slopewash and residuum
- Rc — Bedrock outcrops and colluvium with minor components of residuum and slopewash
- Rr — Bedrock outcrops and residuum with minor components of slopewash and colluvium
- Rs — Bedrock and slopewash with minor components of residuum and eolian deposits
- R, qr — Bedrock outcrops and grus

Slopewash and colluvium—Slopewash is soil and rock material that has moved down a slope by gravity assisted by running water. Colluvium is a loose, heterogeneous, and incoherent mass of soil material and/or rock fragments deposited by rainwash, sheetwash, or slow continuous downslope creep, usually at the foot of a cliff or on the surface of a slope, and there chiefly due to gravity

- sa — Slopewash and alluvium with minor components of bedrock outcrops, residuum, and colluvium
- se — Slopewash and eolian deposits with minor components of bedrock outcrops and residuum
- sf — Slopewash and alluvial fan deposits
- sR — Slopewash and bedrock outcrops with minor components of colluvium and residuum
- sr — Slopewash and residuum with minor components of bedrock outcrops and colluvium

Mesa—An isolated, nearly level landmass standing distinctly above the surrounding country, bounded by abrupt or steeply sloping erosion scarps on all sides, and capped by layers of resistant, nearly horizontal rock; a bedrock capped plateau or tableland

- md — Dissected mesa

Water

- Water body

Quaternary fault description

- **Continental fault**—The Continental fault is considered to be a late Cenozoic normal fault, likely a reactivation of an early Eocene tear fault, bordering the southern margin of the Wind River thrust fault. The fault extends roughly 90 km and strikes southeast-northwest. Dip along the fault is considered to be steep to the north, but an exact angle is not known. The recurrence interval is also unknown and the slip rate is believed to be less than 0.2 mm/yr. No historic earthquakes have been associated with this fault (Machette, 1999). The Continental fault is considered a Class B fault by the USGS, denoting potential, however unconfirmed Quaternary displacement. Locations approximate

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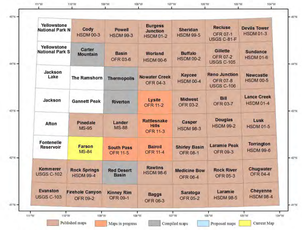
WYOMING QUADRANGLE LOCATION



KEY TO ABBREVIATIONS

U.S. Geological Survey maps: Coal Investigations Series (C). Wyoming State Geological Survey maps: Open File Report (OFR), Hazards Section Digital Map (HSDM), and unpublished STATEMAP project (SMP).

INDEX TO 1:100,000 - SCALE SURFICIAL GEOLOGIC MAPS OF WYOMING

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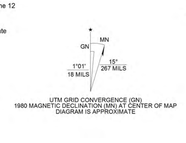
Base map from U.S. Geological Survey 1:100,000-scale metric topographic map of the Farson, Wyoming Quadrangle, 1980

Projection: Universal Transverse Mercator (UTM), zone 12
North American Datum of 1927 (NAD 27)
10,000-meter grid: UTM, zone 12
25,000-foot grid ticks: Wyoming State Plane Coordinate System, west central and west zones

National Geodetic Vertical Datum of 1929



UTM GRID CONVERGENCE (GN)
1980 MAGNETIC DECLINATION (MN) AT CENTER OF MAP
DIAGRAM IS APPROXIMATE

0 1 2 4 6 8 10 12 14 16 18 20 Kilometers
0 1 2 4 6 8 10 12 Miles

SCALE 1:100,000
Contour interval 20 meters

0 1,000 2,000 4,000 6,000 8,000 10,000 12,000 14,000 16,000 18,000 20,000 Meters
0 2,500 5,000 10,000 15,000 20,000 25,000 30,000 35,000 40,000 45,000 50,000 55,000 60,000 65,000 Feet

SURFICIAL GEOLOGIC MAP OF THE FARSON 30' X 60' QUADRANGLE, SWEETWATER, SUBLETTE AND FREMONT COUNTIES, WYOMING

by

Seth J. Wittke

2011

Digital cartography by Seth J. Wittke
Map layout by Robin W. Lyons
Map editing by Suzanne C. Luhr

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The views and conclusions contained in this report are those of the authors and should not be interpreted as necessarily representing the official policies, either expressed or implied, of the U.S. Government.

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