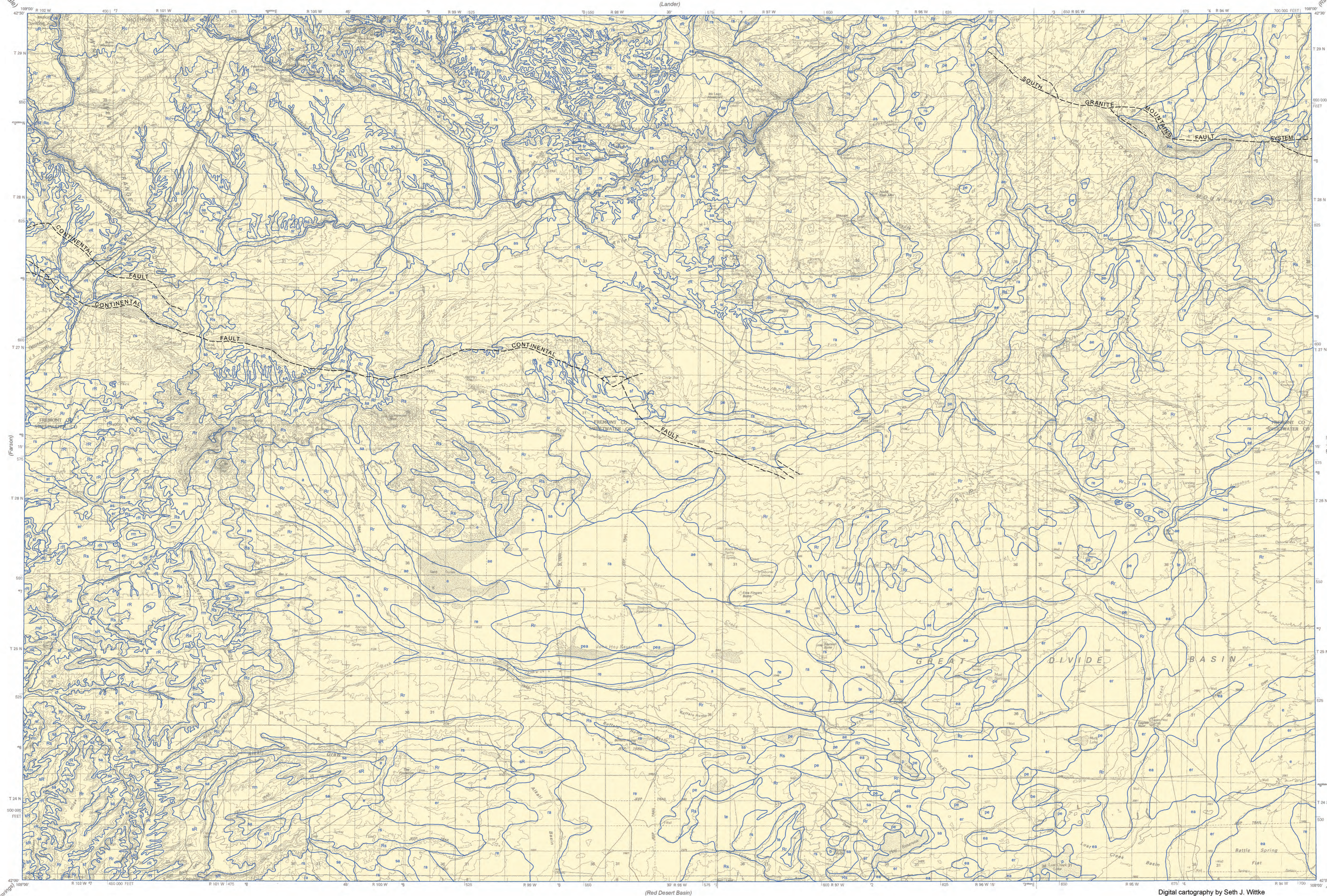


Geology - Interpreting the past - Providing for the future



- ### 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 semi-sorted 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
 - aa Alluvium and slopewash with minor components of residuum and terrace deposits
 - at Alluvium and terrace deposits
- Terrace deposits**—Tilted 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
 - T Structural terrace
 - te Terrace and eolian deposits
- Bench deposits**—A long narrow, comparatively level area bounded by steeper slopes above and below
- b Bench deposit
 - bd Dissected bench deposit
 - be Bench deposit with eolian deposits
- Eolian deposits**—Wind-blown materials, including sand, silt, and clay that have been transported and deposited by the wind
- e Eolian deposits
 - ee Eolian deposits and alluvium
 - ef Eolian deposits and bedrock outcrops
 - er 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)
- p Playa deposits
 - pe Playa deposits with eolian deposits
 - pa Playa deposits with eolian and alluvium 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 with eolian deposits
 - rm Residuum and mesa
 - rp Residuum and playa deposits
 - rr Residuum and bedrock outcrops with minor components of slopewash and colluvium
 - rs Residuum and slopewash with minor components of colluvium and bedrock outcrops
 - ua Grass and alluvium
 - ur Grass and bedrock outcrop
- Bedrock outcrops**—Bedrock outcrops are areas where the underlying bedrock is exposed and unaltered (usually lithified) at the surface.
- Ru Bedrock outcrops and grass
 - Rr Bedrock outcrops and residuum with minor components of slopewash and colluvium
 - Rc Bedrock outcrops and colluvium with minor components of residuum and slopewash
 - Rs Bedrock outcrops and slopewash
- Slopewash and colluvium**—Slopewash is soil and rock material that has moved down a slope by gravity assisted by running water. Colluvium is 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 by gravity
- sa Slopewash and alluvium with minor components of bedrock outcrops, residuum, and colluvium
 - sf Slopewash and alluvial fan deposits
 - sr Slopewash and bedrock outcrops with minor components of colluvium and residuum
 - ss 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
 - me Mesa with eolian deposits
- Water**
- H2O Water body
- Quaternary Faults**
- 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-northeast. 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 but unconfirmed Quaternary displacement. Locations approximate
 - South Granite Mountains fault system, Crooks Mountain section—The Crooks Mountain section of the South Granite Mountains fault system is a Pleistocene-Quaternary normal fault on the northern flank of Crooks Mountain. The fault section extends approximately 34 km along a N73° W strike. Dip along the fault is steep but unmeasured. The recurrence interval is 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 Crooks Mountain section of the South Granite Mountains fault system is considered a Class B fault by the USGS, denoting potential but unconfirmed Quaternary displacement. Locations approximate

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Base map from U.S. Geological Survey 1:100,000-scale metric topographic map of the South Pass, Wyoming Quadrangle, 1984

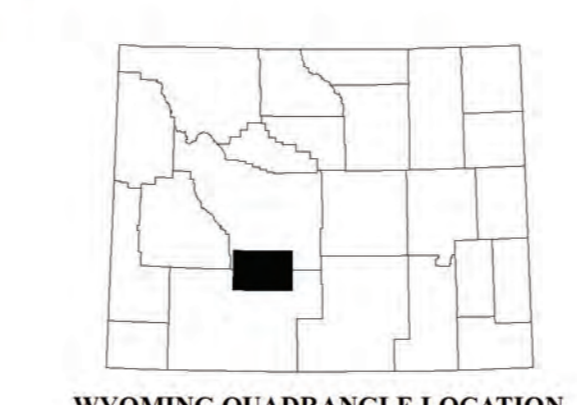
Projection: Universal Transverse Mercator (UTM), zone 12
North American Datum of 1927 (NAD 27)
10,000-meter grid ticks: UTM, zone 12
25,000-foot grid ticks: Wyoming State Plane Coordinate System, west and west central zones

National Geodetic Vertical Datum of 1929



PRELIMINARY SURFICIAL GEOLOGIC MAP OF THE SOUTH PASS 30' x 60' QUADRANGLE, SWEETWATER, AND FREMONT COUNTIES, WYOMING

compiled and mapped by
Seth J. Wittke
2011



Digital cartography by Seth J. Wittke
Map layout by Thomas E. Ver Ploeg
Map editing by Suzanne C. Lühr

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Yellowstone National Park HSDM 00-3	Curlew HSDM 00-3	Basin HSDM 00-6	Wardwell HSDM 00-6	Buttle HSDM 00-2
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Jackson HSDM 00-3	Gannett Peak HSDM 00-3	Riverton HSDM 00-3	Lyle HSDM 00-3	Moose HSDM 00-3
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