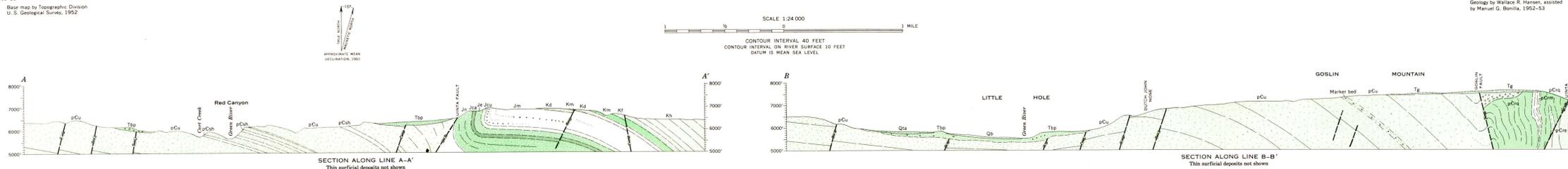


**EXPLANATION**

<b>Recent</b>	<b>Qta</b> Alluvial fans, active Terracial deposits of sand, silt, gravel, and fine sand. Size of material largely on source formation, topography, and distance from apex of fan.	<b>Qtd</b> Flood plain deposits Mostly silt and fine sand but also loess and heavy sand and silt. Size of material largely on source formation, topography, and distance from apex of fan.	<b>Qia</b> Dunes, inactive Fine to medium sand.	<b>La</b> Landslide Unstratified heterogeneous mixture of angular rock fragments derived from bedrock and soil matrix.
<b>Quaternary</b>	<b>Qtr</b> Tributary valley alluvium Mostly silt and fine sand but includes stringers and lenses of gravel.	<b>Qst</b> Dunes, inactive Loess stabilized. Chiefly fine sand but locally silt and sand.	<b>Tu</b> Talus Unstratified wedge veneer of angular rock fragments. In places cemented loosely with calcareous carbonate.	<b>Ua</b> Chalk formation Chiefly vertically bedded to wavy siltstone, fine-grained sandstone, and shale and calcareous mixture of pebbles, concretionary sandstone, and nodular limestone. A light gray to pinkish-brown calcareous cross-bedded conglomerate basal sandstone.
<b>Pleistocene</b>	<b>Qpl</b> Alluvial fans, dissected Similar in composition and structure to active alluvial fans.	<b>Qpl</b> Dunes, inactive Loess stabilized. Chiefly fine sand but locally silt and sand.	<b>Bg</b> Beach gravels Capping straths and pediment remnants. Fairly sorted gravel and sand containing abundant cobbles and occasional boulders. Derived chiefly from Glen Mountain group but include stones from most formations in area. Chert and chert fragments locally. In places loosely cemented with calcareous carbonate. Q <sub>pl</sub> is absent.	<b>Uc</b> Morgan formation Siltstone of fossiliferous limestone sought in Elysian fault zone.
<b>Miocene(?)</b>	<b>Uc</b> Browns Park formation Loosely cemented, fine to very coarse conglomerate interbedded with siltstone and sandstone. Contains abundant coarse quartz pebbles and quartz-cobble conglomerate. Includes conglomeratic matrix and thin beds of sandstone, shale, and argillite. pCu, in shades of red, green, and brown, discontinuously exposed, mapped separately in part and generalized.	<b>Uc</b> Gravels of undetermined age Boulders poorly sorted coarse gravel. Contains many pebbles, cobbles, and boulders of chert and limestone derived from Carboniferous formations and many pebbles and cobbles of quartzite derived from Glen Mountain group and Red Creek quartzite.	<b>Uc</b> Fort Union formation Dark gray to pale yellowish-gray compact silt, friable tectonic sandstone, and pebbly conglomerate.	<b>Uc</b> Uita Mountain group Chiefly red, medium- to coarse-grained siliceous sandstone and quartzite, pCu. Contains abundant coarse quartz pebbles and quartz-cobble conglomerate. Includes conglomeratic matrix and thin beds of sandstone, shale, and argillite. pCu, in shades of red, green, and brown, discontinuously exposed, mapped separately in part and generalized.
<b>Paleocene</b>	<b>Uc</b> Eriason formation Chiefly light gray to white medium- to coarse-grained sandstone containing abundant black chert grains; numerous brown to black shaly sandstone, a few thin seams of flaky gray shale.	<b>Uc</b> Rock Springs formation Light gray to pale gray-orange medium- to fine-grained cross-bedded sandstone interbedded with brown pinkish carbonaceous shale and sand.	<b>Uc</b> Blair formation Light gray to pale grayish-orange to pink massive fine-grained cross-bedded sandstone interbedded with dark-gray calcareous marine shale. Some sandstone beds contain an outcrop with dark brown desert varnish. Interfingers with Hilliard shale.	<b>Uc</b> Hilliard shale Chiefly drab-gray calcareous marine shale. Numerous beds and lenses of light-brown to gray fine-grained commonly ripple-marked sandstone. A few thin beds and nodules of dense blue limestone.
<b>Older Pleistocene</b>	<b>Uc</b> Frontier formation An upper ridge-forming unit of light-brown to light-gray fine-grained locally ripple-marked sandstone resting on a lower unit of red light-brown to light-gray shale.	<b>Uc</b> Murray shale Dark-gray friable siliceous shale; weathers silvery gray. Massive beds of blocky porcellanite; thin seams of bentonite.	<b>Uc</b> Dakota(?) formation Upper unit: Light-gray medium- to coarse-grained cross-bedded blocky to shaly sandstone; locally conglomeratic. Middle unit: Dark-gray variegated clay shale and thin beds of friable fine-grained sandstone. Lower unit: Similar to upper unit but generally of a darker shade and more conglomeratic.	<b>Uc</b> Morrison formation Mostly variegated red and gray compact silt; numerous beds and lenses of poorly sorted sandstone; considerable porous chert-cobble conglomerate.
<b>CRETACEOUS</b>	<b>Uc</b> Curtis formation Upper unit: Light-gray dense blocky to shaly glauconitic siltstone and glauconitic sandstone. Lower unit: Greenish-gray thin-bedded friable glauconitic siltstone and sandstone and lenses of concretionary limestone.	<b>Uc</b> Bataine sandstone Cream-colored cross-bedded fine-grained sandstone, locally pink or red, especially toward base; occasional coarse-grained limestone.	<b>Uc</b> Carmel formation Upper unit: Variegated green and red compact silt and shale and interbedded gypsum. Lower unit: Gray blocky to thin-bedded calcareous sandstone and limestone interbedded in lower part with gray to greenish-gray shale.	<b>Uc</b> Carbonate rock Medium to coarse-grained gray to pink carbonate rock. Chiefly calcite; contains subordinate tremolite, chlorite, and apatite.
<b>QUATERNARY</b>	<b>Uc</b> Navajo sandstone Very light-gray to cream-colored very thickly bedded highly cross-bedded uniformly fine-grained sandstone. Brownish on weathered surface.	<b>Uc</b> Chalk formation Chiefly vertically bedded to wavy siltstone, fine-grained sandstone, and shale and calcareous mixture of pebbles, concretionary sandstone, and nodular limestone. A light gray to pinkish-brown calcareous cross-bedded conglomerate basal sandstone.	<b>Uc</b> Morgan formation Siltstone of fossiliferous limestone sought in Elysian fault zone.	<b>Uc</b> Uita Mountain group Chiefly red, medium- to coarse-grained siliceous sandstone and quartzite, pCu. Contains abundant coarse quartz pebbles and quartz-cobble conglomerate. Includes conglomeratic matrix and thin beds of sandstone, shale, and argillite. pCu, in shades of red, green, and brown, discontinuously exposed, mapped separately in part and generalized.
<b>TRASSIC</b>	<b>Uc</b> Chalk formation Chiefly vertically bedded to wavy siltstone, fine-grained sandstone, and shale and calcareous mixture of pebbles, concretionary sandstone, and nodular limestone. A light gray to pinkish-brown calcareous cross-bedded conglomerate basal sandstone.	<b>Uc</b> Morgan formation Siltstone of fossiliferous limestone sought in Elysian fault zone.	<b>Uc</b> Uita Mountain group Chiefly red, medium- to coarse-grained siliceous sandstone and quartzite, pCu. Contains abundant coarse quartz pebbles and quartz-cobble conglomerate. Includes conglomeratic matrix and thin beds of sandstone, shale, and argillite. pCu, in shades of red, green, and brown, discontinuously exposed, mapped separately in part and generalized.	<b>Uc</b> Carbonate rock Medium to coarse-grained gray to pink carbonate rock. Chiefly calcite; contains subordinate tremolite, chlorite, and apatite.
<b>MISSISSIPPIAN-PENNSYLVANIAN</b>	<b>Uc</b> Carbonate rock Medium to coarse-grained gray to pink carbonate rock. Chiefly calcite; contains subordinate tremolite, chlorite, and apatite.	<b>Uc</b> Epidiorite Metamorphosed dioritic rock intrusive into Red Creek quartzite. Consists chiefly of hornblende and massive feldspar. Contains minor quartz, magnetite, sphalerite, apatite, and hematite.	<b>Uc</b> Amphibolite Dark-gray to almost black fine- to medium-grained amphibolite composed predominantly of hornblende but containing considerable epidiorite or andesite and minor quartz, magnetite, apatite, and titanite. Includes minor granitic orthogneiss rocks. Many small amphibolite bodies not mapped.	<b>Uc</b> Red Creek quartzite pCu, in shades of red, green, and brown, discontinuously exposed, mapped separately in part and generalized.
<b>PRECAMBRIAN</b>	<b>Uc</b> Precambrian rocks Trends of bedding, foliation, or schistosity in older Precambrian rocks.	<b>Uc</b> Abandoned line project		

**STRUCTURAL FEATURES**

- Contact: Dashed where approximately located; dotted where concealed.
- Fault: Dashed where approximately located; dotted where concealed; curved where doubtful. Pattern indicates side fault zone. U, upthrown side; D, downthrown side.
- Anticline: Showing approximate trace of axial plane and direction of plunge of axis; dotted where concealed.
- Syncline: Showing approximate trace of axial plane and direction of plunge of axis; dotted where concealed.
- Strike and dip of beds: Generalized attitude where degree of dip is not shown.
- Strike and dip of overturned beds.
- Strike and dip of beds where top of beds is doubtful.
- Strike of vertical beds.
- Strike and dip of beds and plunge of lineation.
- Strike and dip of foliation or schistosity.
- Strike and dip of vertical foliation or schistosity.
- Bearing and plunge of lineation.
- Strike and dip of foliation or schistosity and plunge of lineation.
- Strike of vertical schistosity showing plunge of lineation.
- Trends of bedding in Uita Mountain group. Dotted where concealed. No contour interval implied.
- Trends of bedding, foliation, or schistosity in older Precambrian rocks.
- Abandoned line project.



**GEOLOGIC MAP OF THE DUTCH JOHN MOUNTAIN AND GOSLIN MOUNTAIN QUADRANGLES, UTAH-WYOMING**  
By Wallace R. Hansen  
1961