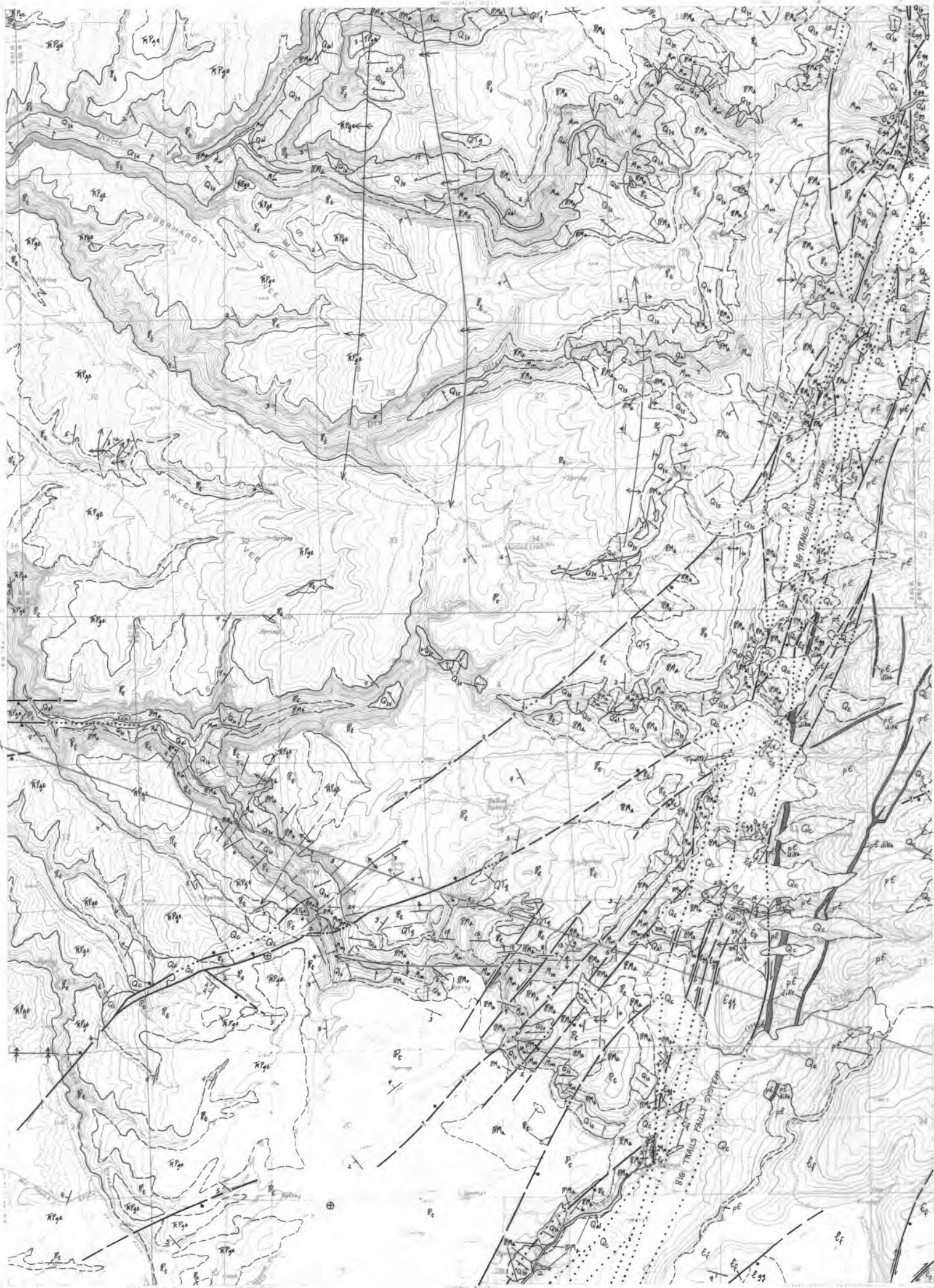


PREPARED IN COOPERATION WITH THE U.S. GEOLOGICAL SURVEY



EXPLANATION	
QUATERNARY	<p>Qa1 Alluvium Unconsolidated deposits of alluvium along stream valleys at or near present stream levels.</p> <p>Qc Colluvium Unconsolidated masses of rock fragments and soil material deposited on relatively steep slopes with thickest accumulations occurring at the bases of slopes. Most conspicuous and common constituents are cobbles, boulders, and large slabs of Flathead Sandstone. Located adjacent to and covering portions of the Big Trails fault system.</p> <p>Qls Landslide deposits Blocks of bedrock or loose slope debris; arrows point in the inferred direction of movement.</p> <p>Qtg High-level gravel deposits Mostly unconsolidated gravel representing remnants of probable Tertiary high-level, post-uplift bench or pediment deposits. Gravels are well rounded, including igneous and metamorphic rocks along with various Paleozoic sedimentary rocks.</p>
TERTIARY	<p>Tpw(?) Petrified wood Possible Tertiary (?) petrified wood occurrence on or adjacent to the Big Trails Fault System, 1 1/2 miles east of Tallon Spring.</p>
PERMIAN AND TRIASSIC	<p>RPe Goose Egg Formation Mudstone, siltstone, gypsum, and carbonate rocks. Mudstone and siltstone—reddish brown, laminated to thin-bedded, crumbly on weathered surfaces. Gypsum (mostly in upper half)—white, massive to banded. Carbonate rocks—chiefly dolomite, gray to pale orange, laminated to thin-bedded, algal laminations common. "Nowood Member" occurs locally at base, composed of dolomite with subordinate sandstone, light gray to pale orange, abundant chert nodules, or a conglomerate with angular clasts of chert and carbonates. Total thickness varies from 250 to 350 feet.</p>
PENNSYLVANIAN	<p>Pt Tenseep Sandstone Sandstone and dolomite. Sandstone—mostly fine grained, very light gray to yellowish gray, medium- to large-scale crossbeds, some planar and rippled beds, mostly friable but some hard well-cemented zones, especially in the middle and lower portion. Dolomite—gray, yellowish orange, and pinkish gray, thin bedded to massive, occurring mostly in the lower portion. Thickness ranges from 350 to 400 feet.</p>
PENNSYLVANIAN AND MISSISSIPPIAN	<p>PMa Amaden Formation Includes three members (not mapped separately): Ranchester Limestone—(uppermost member) dolomite, gray to grayish orange, with thin interbeds of very dark red and olive gray shale and mudstone. This member is quite thin in this area. Horseshoe Shale—mudstone and shale, moderate red to reddish orange; includes thin beds of gray, finely crystalline limestone. Darwin Sandstone—(lowermost member) sandstone, fine to medium-grained, light gray to reddish brown, cross-bedded to planar bedded, variable thickness and locally absent. Total formation thickness from 200 to 250 feet.</p>
MISSISSIPPIAN	<p>Mm Madison Limestone Limestone and dolomite, gray to yellowish gray, thin bedded to thick bedded, fossiliferous in most intervals, chert nodules and lenses common in some zones. Dolomitic limestone at base and karst surface developed on top. Thickness from 250 to 400 feet.</p>
ORDOVICIAN	<p>Ob Bighorn Dolomite Dolomite with basal sandstone. Dolomite—calcareous in part; gray to light olive gray, light red to pink mottling locally; very hard, medium bedded to massive, characteristically pitted on weathered surface, mottled on unweathered surface. Sandstone, comprising lower 15 to 30 feet—quartzitic, fine- to coarse grained; very light gray with maroon spots, dusky red or moderate yellowish brown, friable to well cemented. Total thickness varies from 30 feet in the south to 150 feet in the north.</p>
CAMBRIAN	<p>Egg Gallatin Limestone and Gros Ventre Formations undivided Uppermost unit contains resistant grayish red limestone and thin beds of flat-pebble conglomerate underlain by olive green to yellowish brown, glauconitic shale and siltstone. The middle unit includes light gray limestone, silty and glauconitic, interbedded with soft grayish green shale and beds of flat-pebble conglomerate. The basal unit consists of yellowish brown to reddish brown, friable, medium- to coarse-grained glauconitic sandstone. The two formations are not distinguishable in this area. Landslides are common in this unit. Total thickness ranges from 500 to 600 feet.</p>
PRECAMBRIAN	<p>Ef Flathead Sandstone Tan, brown, and reddish gray quartz sandstone; medium- to coarse-grained and crossbedded to planar bedded. Thin interbeds of green, maroon, and tan siltstone, mainly in the upper portion; arkosic conglomerate in lower part. Thickness is 300 to 400 feet.</p> <p>pE Precambrian Granitic rock of possible metamorphic origin and equivalent to a quartz monzonite in igneous terminology. Quartz diorite, diorite, and amphibolite dikes are common; some of the larger dikes are noted on the map.</p>
<p>Formation contact Dashed where approximately located.</p> <p>Fault Dashed where approximately located and dotted where concealed. Bar and ball on downthrown block. Arrows denote strike-slip motion on some of the larger faults within the Big Trails fault system.</p> <p>Anticline Trace of axial plane and direction of plunge defined by field dip measurements and by photo interpretation. Dashed where approximately located. Short arrow denotes steeper dipping limb of asymmetrical anticline.</p> <p>Monocline Trace of axial plane and direction of plunge as determined by field-measured dips and air photo interpretation, dashed where approximately located. Short arrow denotes steeper dipping limb.</p> <p>Strike and dip of beds, showing angle of dip (⊕) = horizontal beds</p>	

Topographic base by U. S. Geological Survey

PRELIMINARY GEOLOGIC MAP OF THE TALLON SPRING QUADRANGLE, WASHAKIE AND JOHNSON COUNTIES, WYOMING

By
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1989

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