

UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

PRELIMINARY GEOLOGIC MAP OF THE TWO OCEAN LAKE QUADRANGLE,

TETON COUNTY, WYOMING

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Open-file report

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This report is preliminary and has not been edited or reviewed for conformity with U.S. Geological Survey standards or nomenclature.

DESCRIPTION OF MAP UNITS

Qal

ALLUVIUM (HOLOCENE)--Stream-laid deposits of gravel, sand, silt, and clay in valley bottoms

Qc

COLLUVIUM (HOLOCENE)--Slope wash of silt- to boulder-sized fragments derived from underlying and adjacent formations

Qf

ALLUVIAL-FAN DEPOSITS (HOLOCENE)--Water-laid gravel, sand, silt, and clay spread from mouths of ravines; shows linear sorting along distributaries; finer grained debris becomes progressively more abundant toward downstream margin of fan

Qlsy	Qls
Qlso	

LANDSLIDE DEBRIS (HOLOCENE)--Chaotically mixed boulders and finer grained rock debris emplaced by mass movement
 Qlsy, younger slide debris, in places still actively moving
 Qlso, older slide debris, generally stabilized and overgrown with vegetation

Qsb

SLUMP BLOCKS (HOLOCENE)--Masses of Harebell Formation, some as much as one-half mile in diameter, relatively coherent, moved only a few tens or hundreds of feet downslope

Qs

SWAMP DEPOSITS (HOLOCENE)--Clay, silt, and fine sand, dark-gray and brown; rich in vegetal debris

Qt

TALUS (HOLOCENE)--Locally derived coarse angular rock fragments that accumulated on steep slopes and at the base of cliffs

Qog

OUTWASH GRAVEL (HOLOCENE AND PLEISTOCENE)--Gravel deposited in front of melting glaciers or along flood plains of major streams; composed chiefly of quartzite roundstones

Qtg

TERRACE GRAVEL (HOLOCENE AND PLEISTOCENE)--Gravel of quartzite roundstones; deposited by melt-water streams draining headwaters of East Fork of Pilgrim Creek

Qjlm

MORAINAL DEBRIS OF JACKSON LAKE (PLEISTOCENE)--
Till that is part of the Jackson Lake moraine
or that accumulated at the same time nearby;
composed largely of locally derived rock
fragments

Qbrm

MORAINAL DEBRIS OF BURNED RIDGE (PLEISTOCENE)--
Till that is believed to be contemporaneous
with the Burned Ridge moraine that was
deposited across Jackson Hole 8 miles to the
south; only slightly older than the Jackson
Lake moraine

Qg

UNDIFFERENTIATED GLACIAL DEBRIS (PLEISTOCENE)--
Morainal debris deposited by southward-moving
ice from area of Yellowstone National Park;
most is older and has more subdued topography
than the Jackson Lake moraine; probably much
is contemporaneous with Burned Ridge moraines

Qg3

GLACIAL DEBRIS OF THIRD MAJOR GLACIATION
(PLEISTOCENE)--Morainal debris with subdued
surface topography; capped by loess and soil
in many places; older than Burned Ridge
morainal deposits

Qg2

GLACIAL DEBRIS OF SECOND MAJOR GLACIATION
(PLEISTOCENE)--Very old formless glacial
deposits; preserved only at higher elevations
or under younger glacial debris

Qhc

HUCKLEBERRY RIDGE TUFF (PLEISTOCENE)
Member C--Brown welded rhyolitic ash flows
characterized by abundant small glassy quartz
phenocrysts; has conspicuous layering. Thick-
ness about 300 feet

Qhb

Member B--Light-brown to gray welded rhyolitic
ash flows with abundant large quartz pheno-
crysts; near top has two layers of crystal-
lized pumice, the upper light gray, the
lower dark gray to brown. Thickness about
100 feet

Qha

Member A--Brown welded rhyolitic ash flows;
black vitrophyric welded tuff at base; above
this the rock has 40-50 percent phenocrysts
which decrease in abundance upward; wide-
spread less densely welded zone at top. Major
unconformity at base. Thickness about 150
feet

Tb

TUFF OF BOONE CREEK (PLIOCENE?)--Pale-lavender crystal-poor slabby hard rhyolitic welded tuff; black vitrophyric welded tuff at base. Major unconformity at base. Thickness 300 feet or more

Tte

TEEWINOT FORMATION (PLIOCENE)--Tuff, claystone, and marlstone, chalky white, soft; beds of pumicite as much as 60 feet thick; nonmarine. Major unconformity at base. Thickness 500 feet or more

Tc Tcb

COLTER FORMATION (MIOCENE) AND BASALT (MIOCENE?)
Tc, Colter Formation--Light-gray to green and brown water-laid mafic tuff and volcanic conglomerate. Thickness about 7,000 feet
Tcb, Basalt--Black, red, and green, looks like rock fragments in Colter Formation and is probably related, some could be older and some younger than main part of Colter

Twr

WHITE RIVER FORMATION (OLIGOCENE)--Tuff and plastic claystone and siltstone, chalky white to pale-green; nonmarine. Major unconformities at top and base. Thickness 100 feet or more

TKp

TKps

PINYON CONGLOMERATE (PALEOCENE AND UPPERMOST CRETACEOUS)

TKp, boulder conglomerate, brown, composed of highly rounded quartzite fragments in rusty sandstone matrix; locally contains sparse small gold flakes. Thickness about 1,000 feet

TKps, nonconglomeratic facies of gray sandstone and dark-gray to black siltstone and claystone containing Paleocene pollen; nonmarine. Thickness at least 200 feet

Kh

HAREBELL FORMATION (UPPER CRETACEOUS)--Conglomerate, sandstone, and claystone. Conglomerate is brown, composed of highly rounded quartzite pebbles, cobbles, and boulders; sandstone is brown, gray, and dull green, silty, hard, somewhat tuffaceous; claystone is gray, dark green, black, and mustard yellow, silty, tuffaceous; marine or brackish water in part. Major unconformities at top and base. Thickness 5,000 feet or more

Kme

MEETEETSE FORMATION (UPPER CRETACEOUS)--Sandstone, chalky white to rusty brown, white and yellow tuff and bentonite, plastic carbonaceous black shale, and quartzite pebble conglomerates containing small sparse gold flakes; largely or entirely nonmarine. Open circles indicate conglomerate beds. Thickness 500 feet or more

Kmv

MESAVERDE FORMATION (UPPER CRETACEOUS)--Sandstone, gray to rusty brown, massive to thick-bedded, and dark-gray carbonaceous shale and siltstone; sparse thin coal beds; largely nonmarine. Thickness 800 feet or more

Ks	Ksb
Kb	

LENTICULAR SANDSTONE AND SHALE SEQUENCE AND BACON RIDGE SANDSTONE (UPPER CRETACEOUS)

Ks, lenticular sandstone and shale sequence-- Sandstone, gray and brown, fine-grained, interbedded with light- and dark-gray shale and siltstone; largely nonmarine; contains thin coal beds. Thickness more than 2,000 feet

Kb, Bacon Ridge Sandstone--Sandstone, tan to gray, thick-bedded, fine-grained except for quartzite pebble zone near base; interbedded with gray and black shale; several coal and bentonite beds in lower part; abundant marine fossils. Thickness about 1,000 feet

Terrace sequence in outwash gravel (Qog) and terrace gravel (Qtg)--Dots mark outer boundary of surface where it can be distinguished; T-3 is youngest; T-7a is oldest; still younger terraces T-1 and T-2 are present in adjacent quadrangles.

T-3--Ranges from 15 to 50 feet above adjacent major drainages.

T-4--20 to 50 feet above T-3; is outwash from adjacent Jackson Lake moraines.

T-4--190 feet above T-3 southwest of Pilgrim Creek (no T-4 recognizable here).

T-6--50-80 feet above T-5.

T-7--120 feet above T-6.

T-7a--15 feet above T-7.

- CONTACT
- FAULT--Dashed where approximately located; dotted where concealed. U, upthrown side; D, downthrown side
- ⊕———— ANTICLINE--Showing crestline. Dashed where approximately located
- | | |
|--|------------------------|
| <u> 42</u>
 | STRIKE AND DIP OF BEDS |
| | Inclined |
| ⊕ | Horizontal |