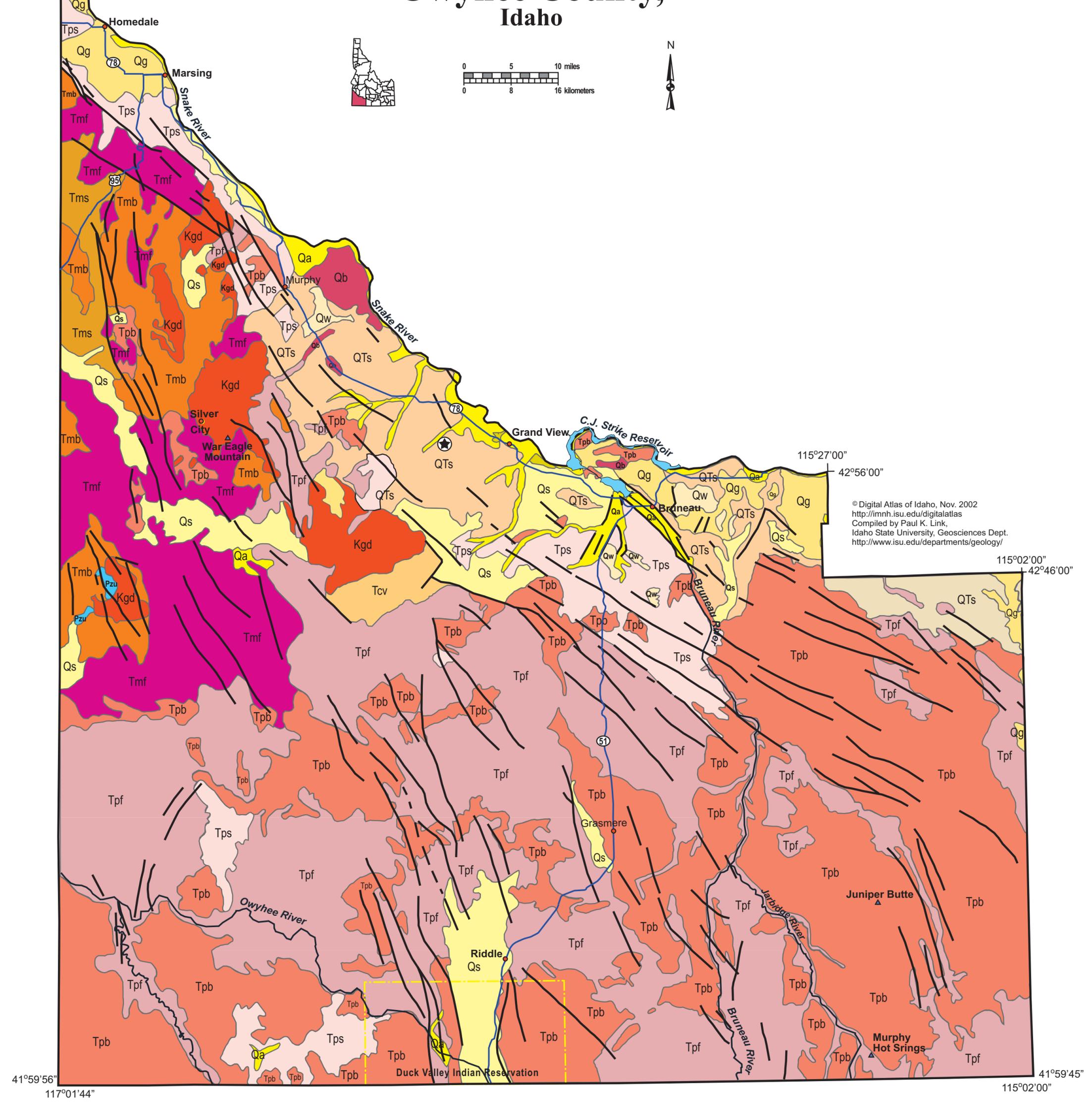
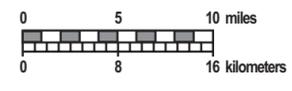


Owyhee County, Idaho

117°01'33"
43°41'00"



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Compiled by Paul K. Link,
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<http://www.isu.edu/departments/geology/>

41°59'56"
117°01'44"

115°02'00"
42°46'00"

Owyhee County

Owyhee County covers a huge area in southwest Idaho, south of the Snake River. It contains the wilderness of the Owyhee Plateau and the narrow canyons of the Bruneau and Jarbidge rivers. In the northwest it contains Cretaceous granodiorite near Silver City, an outlier of the Idaho batholith, that intrudes Paleozoic sedimentary rocks. Silver City was site of a mining boom in the middle 19th century.

The bulk of the county is underlain by voluminous rhyolite lava flows and ignimbrites erupted from the Bruneau-Jarbidge eruptive center around 16 million years ago. These high temperature, high volume rhyolite eruptions are unique in the world. They were produced by the Snake River Plain hotspot, as it sat under southwest Idaho in middle Miocene time. Pliocene basalt covers the rhyolite in much of the eastern and southern parts of the plateau.

The margins of the Owyhee Plateau expose Miocene lake and fluvial sediments, and basalt flows, deposited in Lake Idaho and its margins. Along the Snake River are Quaternary fluvial sediments and basalt lava flows.

The entire county is laced with northwest striking faults, mainly normal faults, dipping north, toward the western Snake River Plain graben.

P.K. Link, 10/02

Description of Geologic Units for Owyhee County, Idaho

- Qa** Quaternary alluvial deposits
- Qg** Quaternary gravels; forming terraces above modern stream levels, mainly mapped on western Snake River Plain. Unit generally represents detrital glacio-fluvial systems.
- Qs** Quaternary surficial cover, including colluvium, fluvial, alluvial fan, lake, and windblown deposits. Included fluvial cover on Snake River Plain, (Snake River Group).
- Qw** Quaternary windblown deposits; sand dunes and loess.
- Qbf** Bonneville Flood gravels, including boulder and gravel bars north and west of Red Rock Pass through Marsh Valley and along Snake River west of Pocatello to Hells Canyon. Town of Lewiston is underlain by Bonneville gravels.
- Qb** Pleistocene basalt lava, 2 million to 12,000 years old, flows have some vegetation and surface weathering.
- QTS** Pleistocene and Pliocene stream and lake deposits; sand, gravel and mud; Lake Idaho sediments; Glenns Ferry Formation; Idaho Group.
- Tps** Pliocene and Upper Miocene stream and lake deposits (Salt Lake Formation, Starlight Formation, Idaho Group).
- Tpf** Pliocene and Upper Miocene felsic volcanic rocks, rhyolite flows, tuffs, ignimbrites. (in Owyhee County and Mt. Bennett Hills, this should be Tmf).
- Tpb** Pliocene and Upper Miocene basalt (includes parts of Starlight Formation and Salt Lake Formation) (in Owyhee County and Mt. Bennett Hills, this should be Tmb).
- Tcv** Eocene Challis Volcanic Group, volcanics and volcaniclastics; Older andesitic lavas, intermediate age dacite lava and tuff and younger rhyolite flows and tuffs; 51 to 44 Ma. (Includes Potato Hill and Kamiah volcanics of northern Idaho).
- Tmb** Miocene basalt (basalt of Weiser and basalt of Cuddy Mtn.) (split with Tpb is at 5 Ma) (includes rocks shown as Tpb (Bond, 1978) in Owyhee County and Mt. Bennett Hills).
- Tcr** Miocene basalt (Columbia River Basalt Group); flood basalt, extensively exposed in western Idaho; fed by fissures, many of which are near the Idaho-Oregon border. Flowed eastward up valleys cut into the Idaho mountains.
- Tov** Oligocene volcanics; Potlatch volcanics, basalt and trachytic pyroclastic rocks [alkali-rich basalts] and Salmon Falls Creek volcanics [andesites].

Tmf

Miocene felsic volcanic rocks, rhyolite lava, ignimbrite, fallout tuff (Idavada volcanics), includes rocks designated as Tmf (Bond, 1968) in Owyhee County and Mt. Bennett Hills.

Kgd

Cretaceous granitic rocks of the 2 mica suite. Idaho batholith and related plutons; granite and granodiorite that contains both muscovite and biotite. Sodium (Na) rich. Intruded between 80 and 65 Ma.

Pzu

Upper Paleozoic sedimentary rocks.

Symbols

	Geologic unit contacts with unit designation.		Overturned anticline: trace of axial plane.
	Normal fault: certain; dashed where approximately located; dotted where concealed.		Overturned syncline: trace of axial plane.
	Thrust fault: certain; dashed where approximately located; dotted where concealed.		Location of ISU Rockwalk rock from each county.
	Detachment fault: certain; dashed where approximately located; dotted where concealed.		Cities
	Anticline: trace of axial plane: large arrow indicates direction of plunge.		Feature location
	Syncline: trace of axial plane: large arrow indicates direction of plunge.	Roads	
			Interstate Route
			U.S. Route
			State route