

GEOLOGIC MAP OF THE FERNAN LAKE QUADRANGLE, KOOTENAI COUNTY, IDAHO

James L. Browne
2000

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Base map USGS digital raster graphic.

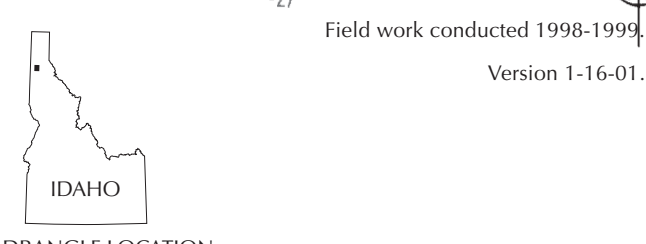
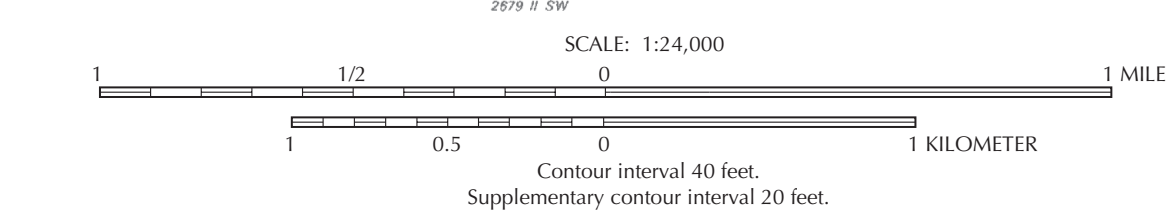
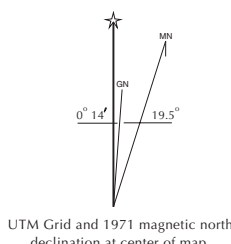
Control by USGS and NOS/NOAA.

Topography by photogrammetric methods from aerial photographs taken 1975. Field checked 1976. Map edited 1981.

Projection and 10,000-foot grid ticks: Idaho coordinate system, west zone (transverse Mercator).

1927 North American datum.

National geodetic vertical datum of 1929.



Field work conducted 1998-1999
Version 1-16-01.

Description of Map Units

Geologic Period	Map Unit Symbol	Description
Quaternary	Qal	Recent alluvium - clay, silt, sand, and gravel in stream valleys
	Qgf	Sand, gravel, cobbles, and boulders transported by outburst floods from glacial Lake Missoula
Tertiary	Tcr	Columbia River basalt - tholeiitic basalt flows and accompanying pillow basalt and palagonite tuff
	Tog	Old gravel - tan to orangish colored silt, sand, gravel and cobbles. Gravel and cobbles are sub-angular to subrounded, both resting on and interbedded with Columbia River basalt flows. Grades westward into Latah Formation in places. Probably derived mainly from highlands to the east.
	Tl	Latah Formation - clay, silt, and sand interbedded with Columbia River basalt flows. Grades eastward into old gravel (Tog) in places. Probably derived mainly from highlands to the west.
Tertiary or Cretaceous	Ti	Dikes and other small intrusive bodies, ranging in composition from rhyolitic to granitic to diabasic and lamprophyric. Very fine to fine and medium grained, depending mainly on thickness of intrusion. Abundant in places near major fault zones.
	Tmg	Stocks and other irregular bodies of granodioritic to quartz monzonitic composition.
pre-Cambrian Middle Proterozoic	pcr	Revett Formation - thin- to thick-bedded gray to white and some greenish quartzite with thin- to medium-bedded siltite and thin-bedded greenish argillite in places. Quartzite is generally more vitreous, blockier and less susceptible to weathering than underlying Burke Formation. Argillite increases toward formation's top, which is placed at the last medium- to thick-bedded white quartzite layers.
	pcb	Burke Formation - thin- to thick-bedded gray to greenish, subvitreous siltite with abundant argillite and siltite-argillite, especially in the lower one third. Contains numerous layers of quartzite, which in a few thin beds resembles vitreous Revett quartzite, in the upper third to half of formation. The top of the Burke is placed at the bottom of thick beds of vitreous white quartzite.
	pcp	Prichard Formation - laminated to thin- and medium-bedded gray to dark gray and black argillite with light to dark gray siltite. Quartzite beds common in the lower to middle portions of the formation. Upper Prichard consists of laminated to thin-bedded gray to black argillite and gray to dark gray siltite, with siltite layers becoming medium- to thick-bedded and containing quartzite in upper several hundred feet. Rusty weathering, shaley in places. Upper contact placed at last dark gray to black argillite beds.
	pci	Dark green, medium- to coarse-grained intrusions, predominately hornblende (hornblende) in most exposures, with lesser to minor feldspar and quartz, grading into quartz diorite. Most common as sills into Prichard Formation.

Symbols

- - - -	Contact, approximately located
.....	Contact, concealed
- - - -	Fault, approximately located
- - - -	Fault, concealed
⊕	Anticline
⊖	Syncline
⊙	Strike and dip of beds inclined vertical horizontal
○	Area of abundant outcrop and/or roadcut exposure
x	Individual outcrop, roadcut exposure or diagnostic rubble
20	Plunge of minor fold