

Base from U.S. Geological Survey Hailey, 1970, and
Idaho Falls, 1982
Universal Transverse Mercator Projection

SCALE 1:250,000
5 0 5 10 15 MILES
5 0 5 10 15 KILOMETERS
CONTOUR INTERVAL 200 FEET
WITH SUPPLEMENTARY CONTOURS AT 100 FOOT INTERVALS
NATIONAL GEODESIC VERTICAL DATUM OF 1989
1986 MAGNETIC DECLINATION FROM THE NORTH VARIES FROM 15° EASTERLY FOR
THE CENTER OF THE WEST EDGE TO 10° EASTERLY FOR THE CENTER OF THE EAST EDGE

- DESCRIPTION OF MAP UNITS**
- Quaternary terrane**—Sedimentary and volcanic deposits, undivided
- Tertiary volcanic rock terranes**
- Miocene and Pliocene volcanic rocks**—All Miocene and Pliocene volcanic and sedimentary rocks including rocks of the Magic Mountain eruptive center, the Barbary Basalt and coveal rocks, the Idavada Volcanics, the tuff of Cannonball Mountain, and the Payette Formation
- Eocene rocks**—Eocene extrusive volcanic rocks, volcanoclastic sedimentary rocks, and smaller hypabyssal bodies of the Challis Volcanic Group
- Tertiary intrusive rock terranes**
- Rhyolite**—Pink to light-gray granite in the Sawtooth, Trinity, and Soldier batholiths and many smaller plutons
- Granite**—Pink to light-gray granite in the Sawtooth, Trinity, and Soldier batholiths and many smaller plutons
- Diorite complex**—Diorite, granodiorite, dacite porphyry, latite, quartz monzonite, and hornblende gabbro in the border areas of major batholiths and many smaller plutons

- CRETACEOUS INTRUSIVE ROCK TERRANES**
- Granite**—Granite and leucogranite
- Granodiorite**—Major phases of the Idaho batholith
- Tonalite**—Potassium-rich granodiorite and quartz diorite, mainly in the southwestern border areas of the Idaho batholith
- PALEOZOIC SEDIMENTARY ROCK TERRANES**
- Black shale**—Divided into two types, based on the relative proportions of dark carbonaceous shale, slate, argillite, and impure carbonate rocks and chert and calcareous chert rocks
- Argillaceous and arenaceous rocks**—Includes the Eagle Creek and Halley Members of the Wood River Formation and equivalent parts of the Dollarhide and Grand Prize Formations
- Primarily argillaceous rocks**—Includes the Wilson Creek Member of the Wood River Formation and equivalent parts of the Dollarhide and Grand Prize Formations, the Milligan Formation, unnamed Devonian and Silurian rocks, and the Trail Creek and Phi Kappa Formations
- Flysch**—Mainly carbonate and sandstone turbidite. Includes the McGowan Creek and Copper Basin Formations
- Drummond Mine Member of the Copper Basin Formation**—Shown separately because of its importance in control of mineralization

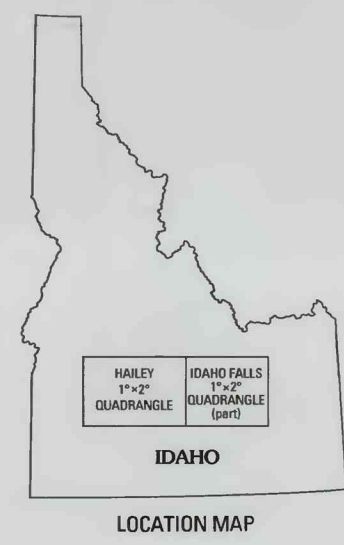
- Carbonate rocks**—Divided into two types, based on the relative proportions of limestone, dolomite, silty limestone, quartzite, sandstone, siltstone, and mudstone
- Primarily carbonate rocks**—Includes the Snake Canyon, Bluebird Mountain, Arco Hills, and Saturday Mountain Formations and the Elia Marble
- Carbonate rocks**—Includes the White Knob Limestone, the Surret Canyon, South Creek, Scott Peak, Middle Canyon, and Jefferson Formations, and the Laketown and Fish Haven Dolostones
- Quartzite and other rocks**—Includes the Clayton Mine Quartzite and the Wilbert Formation. The Wilbert Formation is included with sedimentary rock terranes although its age is considered Early Cambrian and Late Proterozoic (?)
- Quartzite**—Includes the Kinnikinnick Quartzite and the Summerhouse Formation
- PROTEROZOIC OR PALEOZOIC ROOF PENDANTS**
- Metamorphic rock inclusions within Idaho batholith**
- MIDDLE PROTEROZOIC METAMORPHIC ROCK TERRANE**
- High-grade metamorphic rocks and felsic intrusive rocks in the Pioneer gneiss dome**

- Contact**—Approximately located
- Gradational contact representing facies change**
- High-angle normal fault**—Dashed where approximately located, dotted where concealed; ball and bar on downthrown side
- Low-angle normal fault**—Dashed where approximately located, dotted where concealed; ball and bar on upper plate
- Thrust fault**—Dashed where approximately located, dotted where concealed; sawtooth on upper plate
- Younger-over-older fault**—Dashed where approximately located, dotted where concealed; open teeth on upper plate. Fault is probably a Mesozoic thrust fault that was later reactivated as a low-angle normal fault
- Strike-slip fault**—Showing relative motion. Dashed where approximately located, dotted where concealed

REFERENCES

Worl, R.G., Kilgus, T.H., Bennett, E.H., Link, P.K., Lewis, R.S., Mitchell, V.E., Johnson, K.M., and Snyder, L.D., 1991, Geologic map of the Hailey 1° x 2° quadrangle, Idaho: U.S. Geological Survey Open-File Report 91-340, scale 1:250,000.

Worl, R.G., Wilson, A.B., Smith, C.L., Kleinkopf, M.D., and Sykes, R.C., 1989, Mineral resource potential and geology of the Challis National Forest, Idaho: U.S. Geological Survey Bulletin 1873, 101 p.



MAP SHOWING GEOLOGIC TERRANES OF THE HAILEY 1° x 2° QUADRANGLE AND THE WESTERN PART OF THE IDAHO FALLS 1° x 2° QUADRANGLE, SOUTH-CENTRAL IDAHO

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