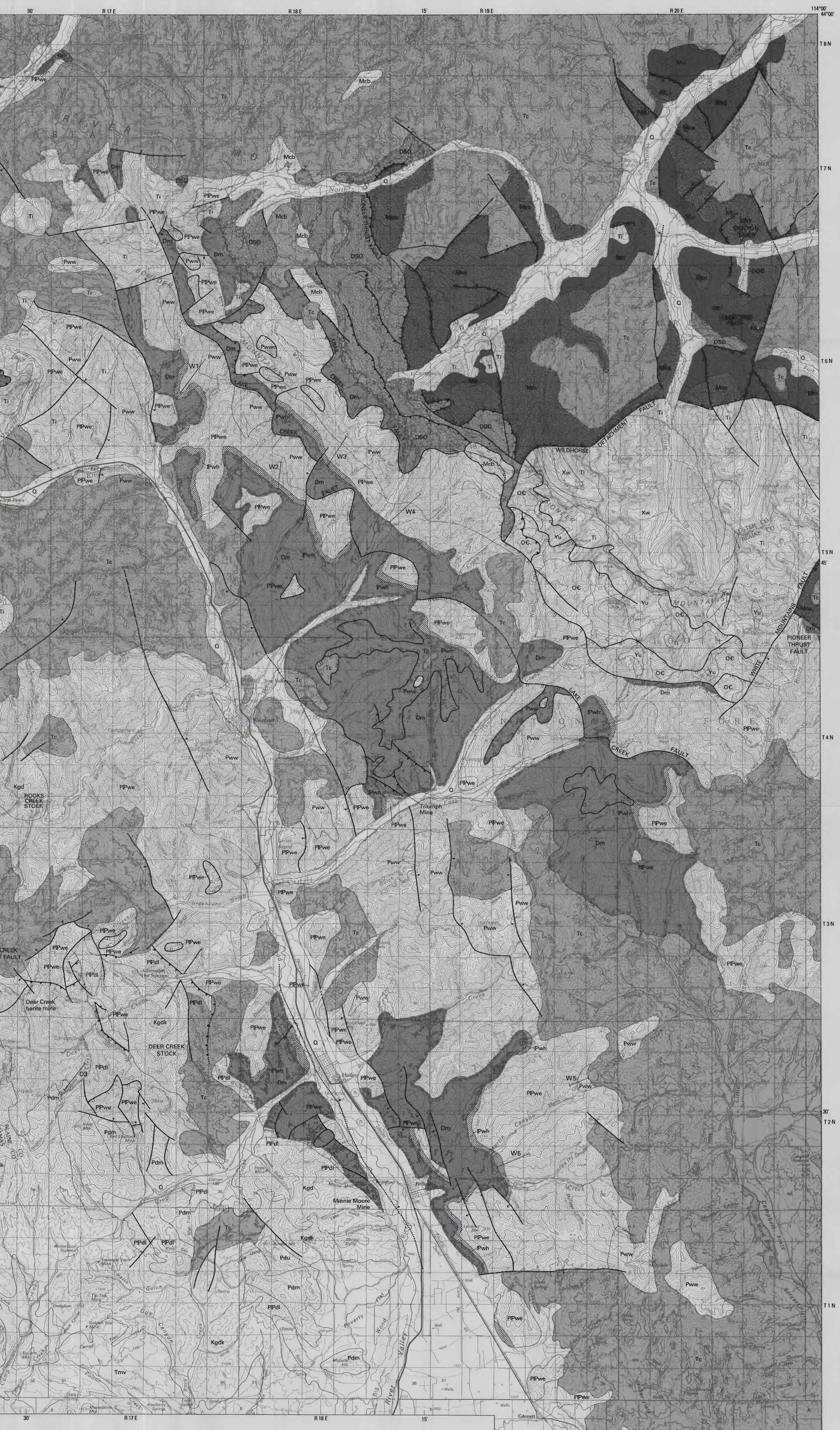

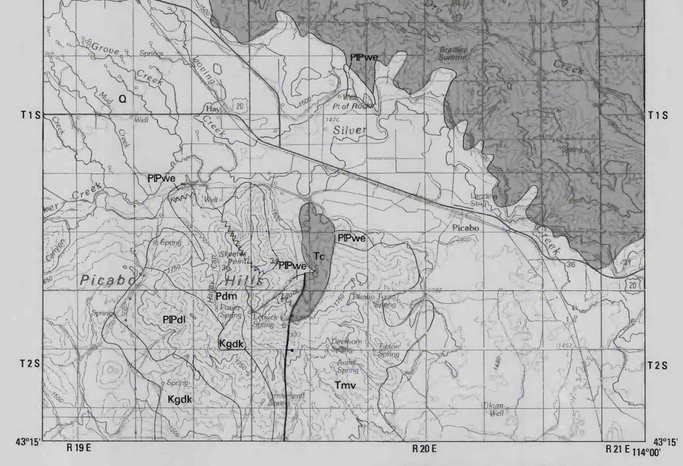

Modified from Worl and others (1991), Mahoney and others, (1991), and Link (unpublished mapping).

Base from U.S. Geological Survey, Fairfield, and Sun Valley,

SCALE 1:100 000

5 0 5 MILES

5 0 5 10 KILOMETERS

CONTOUR INTERVAL 40 AND 50 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

APPROXIMATE MEAN DECLINATION, 1995

LOCATION MAP

CORRELATION OF MAP UNITS

Unit	Epoch	Period
Q		QUATERNARY
Unconformity		
Tmv	Miocene	TERTIARY
Unconformity		
Tc, Ti	Eocene	TERTIARY
Unconformity		
Kgd, Kgdk		CRETACEOUS
Intrusive contact		
West of Pioneer Thrust Fault: Pg4, Pg3, Pdu, Pww, Pdm, IPPg2, IPPwe, IPPdl, IPg1, IPwh	Lower Permian; Upper and Middle Pennsylvanian; Middle Pennsylvanian	PERMIAN; PENNSYLVANIAN
Unconformity		
Mcb, Mcu, Mcl	Lower Mississippian	MISSISSIPPIAN
Unconformity		
Pzsr, Dm, DSO, DO€		DEVONIAN; SILURIAN AND ORDOVICIAN
Fault contact		
O€		ORDOVICIAN AND CAMBRIAN
Unconformity		
Yu		MIDDLE PROTEROZOIC
Unconformity		
Xw		EARLY PROTEROZOIC

DESCRIPTION OF MAP UNITS

- Q — **Unconsolidated sedimentary deposits (Quaternary units)**

TERTIARY IGNEOUS ROCKS

- Tmv — **Volcanic rocks (Miocene)**
- Tc — **Challis Volcanic Group (Eocene)**
- Ti — **Intrusive rocks (Eocene)**—Including granite, rhyolite porphyry, dacite porphyry, and granodiorite

CRETACEOUS IDAHO BATHOLITH

- Kgd — **Biotite granodiorite**
- Kgdk — **Hornblende-biotite granodiorite**—Includes leucocratic granite border phase

PALEOZOIC SEDIMENTARY ROCKS

Sun Valley Group (Lower Permian, Upper and Middle Pennsylvanian)

- Pg4 — **Grand Prize Formation, member 4 (Lower Permian)**
- Pg3 — **Grand Prize Formation, member 3 (Lower Permian)**
- IPPg2 — **Grand Prize Formation, member 2 (Lower Permian to Middle Pennsylvanian)**
- IPg1 — **Grand Prize Formation, member 2 (Middle Pennsylvanian)**
- Pdu — **Dollarhide Formation, upper member (Lower Permian)**
- Pdm — **Dollarhide Formation, middle member (Lower Permian)**
- IPPdl — **Dollarhide Formation, lower member (Lower Permian to Middle Pennsylvanian)**
- Pww — **Wood River Formation, Wilson Creek Member (Lower Permian)**
- IPPwe — **Wood River Formation, Eagle Creek Member (Lower Permian to Middle Pennsylvanian)**
- IPwh — **Wood River Formation, Hailey Member (Middle Pennsylvanian)**
- Mcb — **Copper Basin Formation, undifferentiated (Lower Mississippian)**—Includes rocks west of the Pioneer thrust fault
- Mcu — **Copper Basin Formation, upper part (Lower Mississippian)**—Includes the Scorpion Mountain Formation of Paull and others (1972) and rocks equivalent to the Green Lake Limestone Member
- Mcl — **Copper Basin Formation, lower part (Lower Mississippian)**—Includes the Little Copper Member and Drummond Mine Limestone Member of Paull and others (1972) and Dover (1981)
- Dm — **Milligen Formation (Upper and Lower Devonian)**
- DSO — **Devonian, Silurian and Ordovician argillaceous rocks, undifferentiated**—Includes the Trail Creek and Phi Kappa Formations and unnamed rocks
- DO€ — **Devonian, Ordovician, and Cambrian calcareous rocks and quartzite**—Exposed in the Wildhorse and Dry Canyon inliers
- Pzsr — **Salmon River assemblage (Devonian and Cambrian?)**

PIONEER MOUNTAINS METAMORPHIC CORE COMPLEX

- O€ — **Ordovician and Cambrian rocks, undifferentiated**—Exposed only below the Pioneer thrust fault and Wildhorse detachment fault in the core of the Pioneer Mountains
- Yu — **Quartzite, calc-silicate rocks, and schist (Middle Proterozoic)**
- Xw — **Gneiss complex of Wildhorse Creek (Early Proterozoic)**

Contact—Dashed where approximately located

Sheared unconformity—Double-ended arrow on side with younger rocks, no sense of movement implied

Line of facies change indicating gradational boundary between formations

Thrust fault—Sawteeth on upper plate. Dashed where approximately located, dotted where concealed, queried where uncertain

Low-angle fault, possibly reactivated thrust fault—Sawteeth on upper plate. Locally places younger rocks over older, arrows show direction of known strike-slip displacement; dashed where approximately located, dotted where concealed, queried where uncertain

Low-angle oblique-normal fault—Hachured on downthrown side. Arrows show known strike-slip displacement; dashed where approximately located, dotted where concealed, queried where uncertain

High-angle normal fault—Bar and ball on downthrown side. Dashed where approximately located, dotted where concealed, queried where uncertain

Measured section in Sun Valley Group—See text table 3

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GEOLOGIC MAP OF OUTCROP AREAS OF SEDIMENTARY UNITS IN THE EASTERN PART OF THE HAILEY 1° × 2° QUADRANGLE AND PART OF THE SOUTHERN PART OF THE CHALLIS 1° × 2° QUADRANGLE, SOUTH–CENTRAL IDAHO

By
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1995