Geologic Map of the Northern and Central Parts of the Idaho National Engineering and Environmental Laboratory, Eastern Idaho

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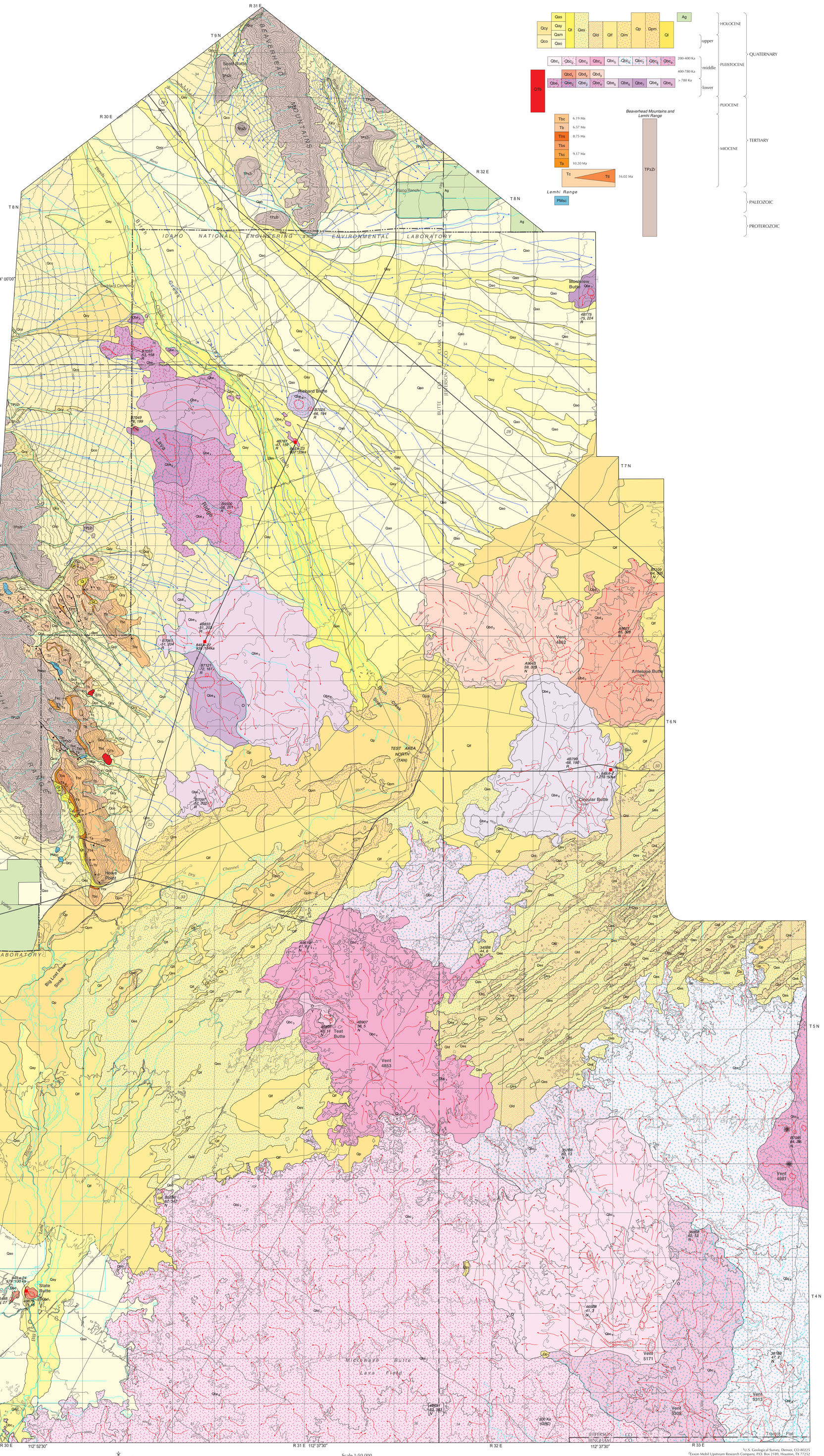
2003



CORRELATION OF MAP UNITS

Qcy, Qay, Qam, Qco, Qao	Qas, Qt, Qes, Qld, Qlf, Qlm, Qp, Qpm, Ql, Ag	HOLOCENE	QUATERNARY
	Qbc$_1$	upper PLEISTOCENE	
	Qbc$_2$ – Qbc$_9$	200-400 Ka; middle PLEISTOCENE	
	Qbd$_1$ – Qbd$_3$	400-780 Ka; middle PLEISTOCENE	
	Qbe$_1$ – Qbe$_9$	> 780 Ka; lower PLEISTOCENE	
QTb		PLIOCENE	TERTIARY
Tbc 6.19 Ma; Tb 6.57 Ma; Tlrs 8.75 Ma; Tbs; Tkc 9.17 Ma; Ta 10.20 Ma; Tc – Tsl 16.02 Ma		MIOCENE	TERTIARY
TPzZr			PALEOZOIC / PROTEROZOIC

MAP UNITS

Descriptions in accompanying booklet

QUATERNARY

Alluvial Deposits

- Qas — Modern stream channel deposits (Holocene)
- Qay — Young alluvial deposits (Holocene)
- Qam — Moderately old alluvial deposits (Holocene and upper Pleistocene)
- Qao — Very old alluvial deposits (upper Pleistocene)

Alluvial and Colluvial Deposits

- Qcy — Young alluvial and colluvial fan depostis (Holocene)
- Qco — Old alluvial and colluvial fan deposits (upper Pleistocene)
- Ql — Landslide deposits (Holocene and upper Pleistocene)
- Qt — Talus deposits (Holocene and upper Pleistocene)

Playa Deposits

- Qp — Playa-bottom deposits (Holocene and upper Pleistocene)
- Qpm — Playa-margin lunettes (Holocene and upper Pleistocene)

Lacustrine Deposits of Lake Terreton

- Qlf — Lake Terreton lake-floor deposits (Holocene and upper Pleistocene)
- Qlm — Lake Terreton margin deposits (Holocene and upper Pleistocene)

Eolian Deposits

- Qes, Qld — Eolian deposits including minor dunes and loess (Holocene and upper Pleistocene); Longitudinal dunes (Holocene and upper Pleistocene)

Agricultural Land

- Ag — Agricultural land (Holocene)

Basalt Lava Flows

Basalt lava flows of the southwestern area

- Qbc$_1$ — Basaltic lava flows of the Crater Butte lava field (middle Pleistocene)
- Qbd$_1$ — Basaltic lava flows of the State Butte lava field (middle Pleistocene)

Basalt lava flows of the north-central area

- Qbd$_2$ — Basaltic lava flows of the Antelope Butte lava field (middle Pleistocene)
- Qbd$_3$ — Basaltic lava flows of the Vent 4862 lava field (middle Pleistocene)
- Qbe$_7$ — Basaltic lava flows of the Montview Butte lava field (lower Pleistocene)
- Qbe$_8$ — Basaltic lava flows of the Circular Butte lava field (lower Pleistocene)

Basalt lava flows of the Lava Ridge area

- Qbd$_{1?}$ — Basaltic lava flows (lower Pleistocene)
- Qbe$_2$ — Basaltic lava flows and dikes (lower Pleistocene)
- Qbe$_3$ — Basaltic lava flows of the Richard Butte lava field (lower Pleistocene)
- Qbe$_4$ — Basaltic lava flows (lower Pleistocene)
- Qbe$_5$ — Basaltic lava flows (lower Pleistocene)
- Qbe$_6$ — Basaltic lava flows (lower Pleistocene)
- Qbe$_9$ — Basaltic lava flows (lower Pleistocene)
- QTb — Basaltic lava flow on east side of Howe Point ridge (Pleistocene and Pliocene?)

Basalt lava flows of the southeastern TAN area

- Qbc$_2$ — Basaltic lava flows of the Microwave Butte lava field (middle Pleistocene)
- Qbc$_3$ — Basaltic cinder deposits and lava flows of the Teat Butte lava field (middle Pleistocene)
- Qbc$_4$ — Basaltic lava flows of the Vent 4853 lava field (middle Pleistocene)
- Qbc$_5$ — Basaltic lava flows of the Vent 5171 lava field (middle Pleistocene)
- Qbc$_6$ — Basaltic lava flows of the Vent 5313 lava field (middle Pleistocene)
- Qbc$_7$ — Basaltic lava flows (middle Pleistocene)
- Qbc$_8$ — Basaltic lava flows of the Vent 5305 lava field (middle Pleistocene)
- Qbc$_9$ — Basaltic lava flows of the Vent 4981 lava field (middle Pleistocene)

PRE-QUATERNARY UNITS

- Tbc — Tuff of Blue Creek and underlying ash units (Miocene)
- Tb — Tuff of Blacktail Creek (Miocene)
- Tlrs — Tuff of Lost River Sinks (Miocene)
- Tbs — Unnamed basaltic lava flows (Miocene)
- Tkc — Tuff of Kyle Canyon (Miocene)
- Ta — Arbon Valley Tuff Member of Starlight Formation (Miocene)
- Tc — Unnamed conglomerate (Miocene)
- Tsl — Unnamed tuff and limestone (Miocene)

PALEOZOIC

- PMsc — Snaky Canyon Formation (Lower Permian to Upper Mississippian)

TERTIARY, PALEOZOIC, AND NEOPROTEROZOIC

- TPzZr — Pre-Quaternary rocks of the Lemhi Range and Beaverhead Mountains (Tertiary, lower Paleozoic, and Late Proterozoic)

SYMBOLS

- Contact: Dashed where approximately located; dotted where concealed.
- Faults: Dashed where approximately located; dotted where concealed.
- Normal fault: Ball and bar on downthrown block.
- Flow line: Linear flow features and lava tubes; arrow shows flow direction.
- Lava channel: Arrow shows direction of flow within lava channel.
  - Narrow: Channels <5m wide.
  - Wide: Channels >10 m wide.
- Lava pond: Shows location of levees surrounding lava pond; hachures point away from pond.
- Crater: Outline of crater rim on volcanic vent; hachures point toward central depression; hachures not shown for smaller craters. Dashed where approximately located.
- Dike: approximately 1 m wide; flanked by cinders.
- Small vent.
- Younger and older age designations for basalt lava flows where field relations along contact warrant such an interpretation.
- Strike and dip of beds.
- Strike and dip of foliation.
- Channel in alluvial deposits.
- Paleomagnetic sample location.
- K/Ar age date sample location.

INDEX TO PREVIOUS MAPPING

1. Mel A. Kuntz (1996-1998).
2. David W. Rodgers (1987) and Mary K. V. Hodges (1998).
3. Linda E. Mark (1997).

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This map was funded by grant DE-FG07-96ID13420 from the Department of Energy to the Idaho Water Resources Research Institute and the Idaho Universities Consortium.

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Map Version 8-20-2003.

Published and sold by the Idaho Geological Survey
University of Idaho, Moscow, Idaho 83844-3014