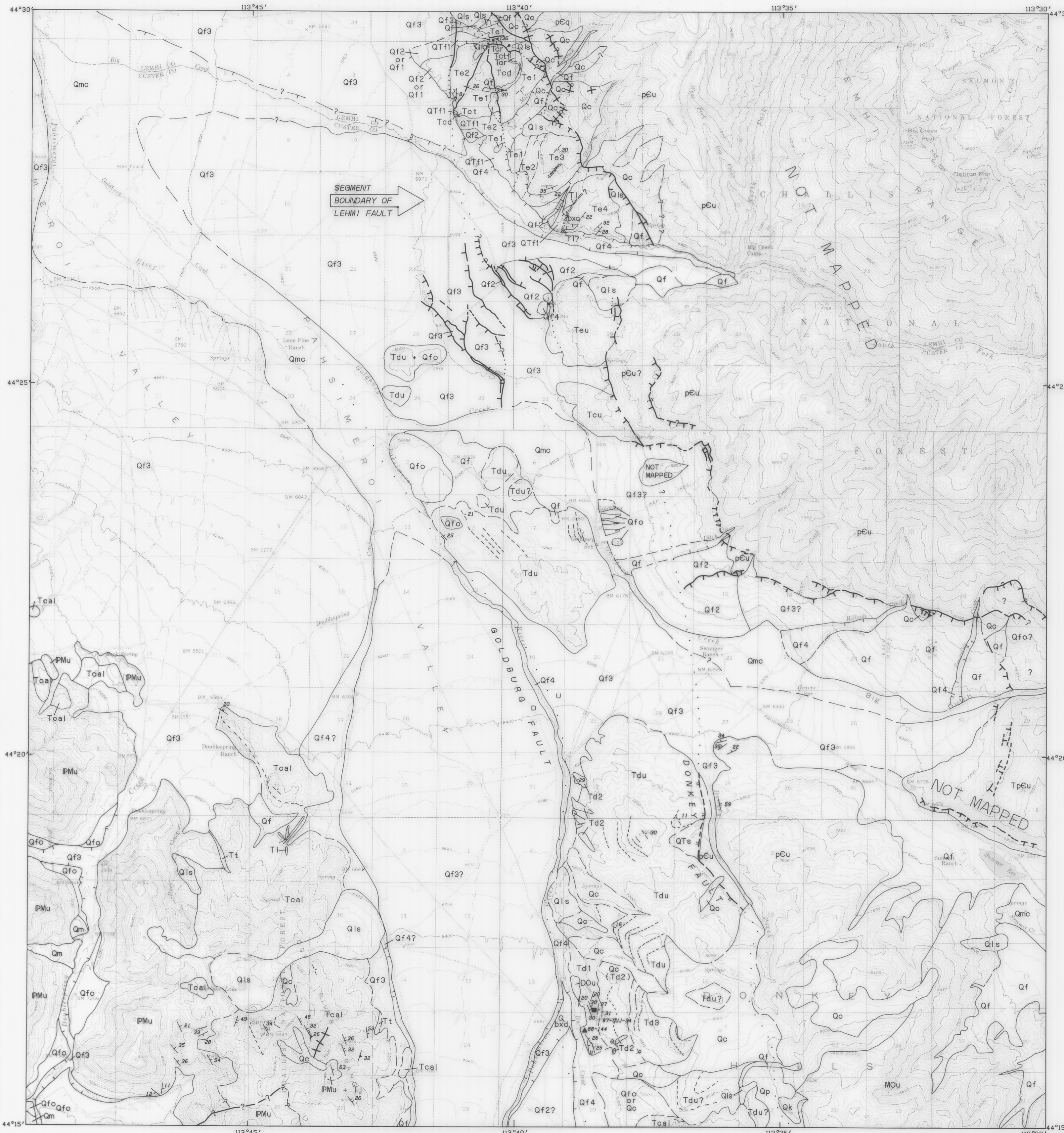


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GEOLOGIC MAP OF THE DONKEY HILLS AND PART OF THE DOUBLESRING 15-MINUTE QUADRANGLES, CUSTER AND LEMHI COUNTIES, IDAHO

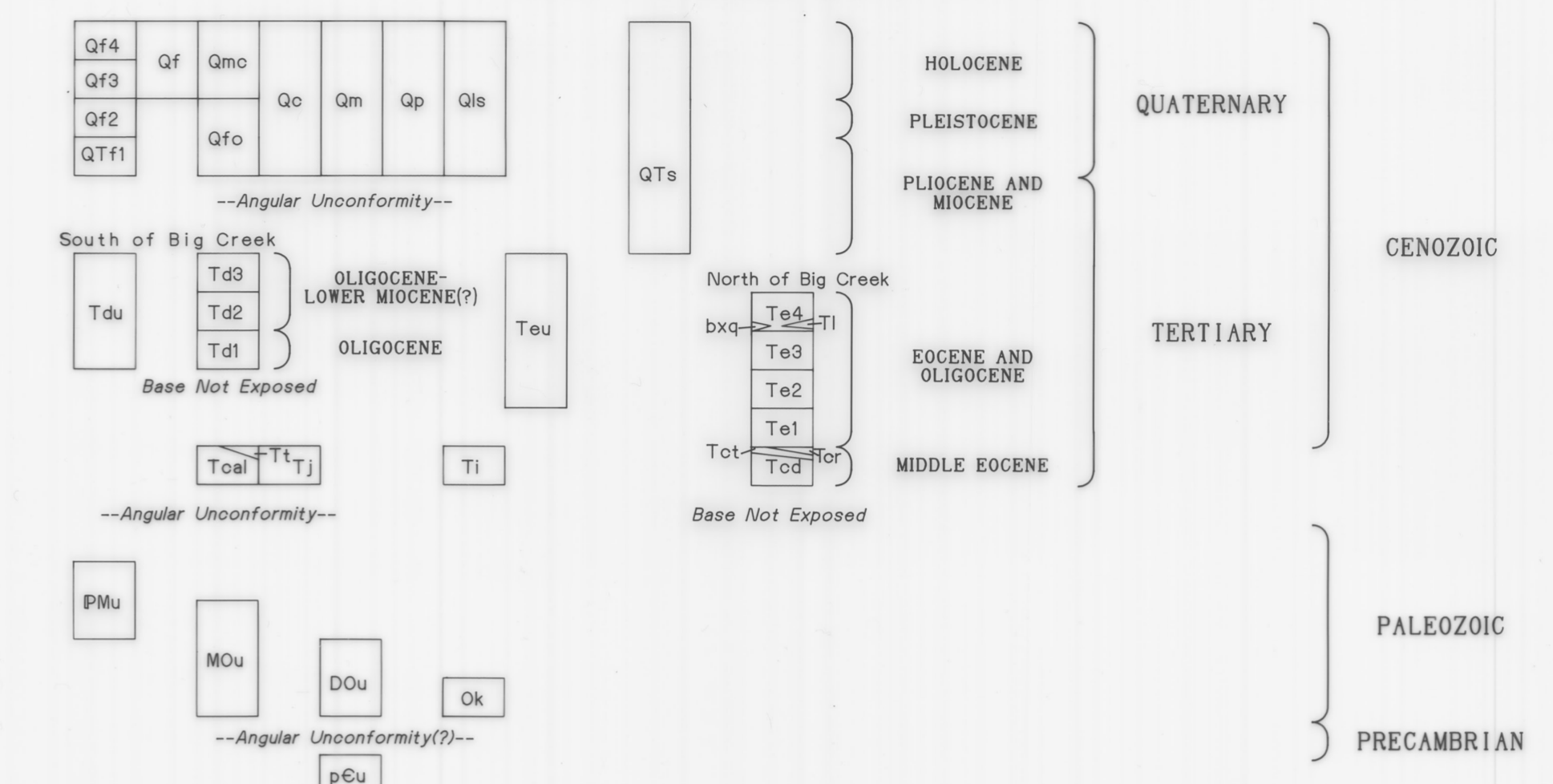
SUSANNE U. JANECKE

1992



U.S.G.S. 1:62,500 topographic base.
Topography from photogrammetric methods from aerial photographs.
Polyconic projection, 1927 North American datum 10,000-foot grid based on Idaho coordinate system, central zone.
SCALE 1:62,500
CONTOUR INTERVAL 80 FEET
3 KILOMETERS

CORRELATION OF MAP UNITS



MAP UNITS

- Qf** FAN DEPOSITS—Mostly Pinedale in age but locally may include some older and younger deposits; alluvium in mountain valleys grading into the fan deposits was included. See Baltzer (1990) additional detail on age and lithology.
- Qf4** HOLOCENE ALLUVIAL FAN DEPOSITS—See Baltzer (1990) and Scott (1982) for description of age and lithology.
- Qf3** LATEST PLEISTOCENE ALLUVIAL FAN DEPOSITS—(Pinedale age). See Baltzer (1990).
- Qfo** OLDER ALLUVIAL FAN DEPOSITS—Mostly Qf1 and Qf2 of Baltzer (1990), i.e., early Wisconsin and pre-Wisconsin. Main exposures are along Big Gulch and in the NW Goldberg Hills.
- Qf2** LATE PLEISTOCENE ALLUVIAL FAN DEPOSIT—(Bull Lake age). See Baltzer (1990).
- Qf1** PRE-LATE PLEISTOCENE ALLUVIAL FAN DEPOSITS—See Baltzer (1990).
- Qls** LANDSLIDE DEPOSITS
- Qc** COLLUVIAL DEPOSITS
- Qmc** DEPOSITS OF MODERN FLOOD PLAINS—(Holocene), comparable to amf unit of Scott (1982)
- Qm** GLACIAL DEPOSITS—Found in SW corner of map area
- Qte** FINE TO MEDIUM SAND—West of Donkey Creek
- Qe** EOCENE TO OLIGOCENE SEDIMENTARY ROCKS
- Teu** GRAVELS, CONGLOMERATES, AND TUFFS OF STINKING CREEK, UNDIFFERENTIATED—Probably Eocene to Oligocene age (Janecke and Snee, 1990); formerly part of Donkey Hills Fonglomerate of Ross (1947)
- bxq** QUARTZITE BRECCIA
- Te4** GRAVELS AND CONGLOMERATES OF STINKING CREEK, UNIT 4—Composed primarily of pebble- to boulder-sized clasts of white quartzite and lesser amounts of maroon quartzite and light brown dacite/andesite lava; orange to reddish hematite cement; are locally well-developed; minor amounts of raworked biotite tuffs are interbedded within the section locally
- Ti** BIOTITE-PLAGIOCLASE DACITIC LAVA FLOW—Interbedded with unit 4; up to several meters thick
- Te3** GRAVELS AND CONGLOMERATES OF STINKING CREEK, UNIT 3—Composed primarily of sand- to cobble-sized clasts of quartzite and dolomite; slopes underlain by Te3 are characterized by red-colored slopes of sediments
- Te2** GRAVELS, CONGLOMERATES, AND TUFFS OF STINKING CREEK, UNIT 2—Composed primarily of pebble- to cobble-sized clasts of quartzite, dolomite, and dacite/andesite; interstratified altered white tuffs; white soils developed on Te2 are diagnostic of this member
- Te1** GRAVELS AND CONGLOMERATES OF STINKING CREEK, UNIT 1—Composed exclusively of pebble- to boulder-sized clasts of dacite and andesite lava; chocolate brown soils are developed on this member
- SOUTH OF BIG CREEK**
- Tdu** DONKEY FANGLOMERATE, UNDIFFERENTIATED—Mostly quartzite pebble to boulder gravel and conglomerates, with intercalated tuffaceous sandstone and minor amounts of primary vitric tuffs and tephras; relationship to gravels and conglomerates of Stinking Creek is uncertain; all conglomerates north of Big Creek arbitrarily denoted as gravels and conglomerates of Stinking Creek, and all south of Big Creek as Donkey Fonglomerate
- Td3** DONKEY FANGLOMERATE, UNIT 3—Quartzite pebble to boulder gravel and conglomerate
- Td2** DONKEY FANGLOMERATE, UNIT 2—Tuffaceous sandstone, pebbly sandstone, and minor quartzite gravel or conglomerate beds
- bxd** DOLOMITE BRECCIA—sec. 19, T. 11 N., R. 24 E.
- Td1** DONKEY FANGLOMERATE MEMBER 1—Quartzite pebble to boulder conglomerate, biotite-bearing and vitric tuffs, breccia blocks, and andesite and carbonate pebble conglomerates; sample 88-144 is 30-32 Ma based on 40Ar/39Ar data (Janecke and Snee, 1990, unpub. data); base not exposed
- CHALLIS VOLCANIC GROUP**
- Tor** TUFF OF CHALLIS CREEK—(Hardyman, 1985); red weathering, welded, quartz sandstone-bearing ash-flow tuff; 45.5-46.5 Ma based on 40Ar/39Ar dates. (L.W. Snee and R. Hardyman, written communication; Janecke and Snee, 1990)

- Tot** BIOTITE TUFF—White to off-white weathering; locally well-sorted and crystal rich; exposed north of Big Creek; possibly correlative with the tuff of Pannal Gulch of McIntyre and Hobbs (1987) north of Big Creek; elsewhere denotes tuff
- Tod** DACITE LAVAS—Exposed north of Big Creek
- Tj** JASPEROID—Occurs only southeast of Spring Hill
- Tt** TUFF—White, poorly consolidated
- Tcal** ANDESITIC TO BASALTIC LAVA FLOWS—Includes auto-brecciated lava flows with minor intercalated volcanoclastic beds
- Ti** INTRUSIVE ROCKS
- PALEOZOIC ROCKS**
- PMu** PENNSYLVANIAN AND UPPER MISSISSIPPIAN CARBONATE ROCKS, UNDIVIDED—See Mapel and others (1965) for unit descriptions
- MOu** MISSISSIPPIAN THROUGH ORDOVICIAN ROCKS, UNDIVIDED—See Ross (1947) for unit descriptions
- DOu** BRECCIA—Clasts are Kinnikinnic quartzite and dolomite (Fishhavan Dolomite, Laketown Dolomite of Jefferson Dolomite) Possible Eocene or Oligocene landslide deposit
- OK** KINNIKINNIC QUARTZITE
- PRECAMBRIAN ROCKS**
- pCu** PRECAMBRIAN ROCKS, UNDIVIDED—See Ross (1947) for unit description

MAP SYMBOLS

- ? Contact, dashed where inferred, dotted where concealed, queried where uncertain
- ? Contact between inset alluvial fan deposits, bar on younger inset unit, queried where uncertain
- - - Trace of bedding, shown in poorly exposed Tertiary units to indicate general strike and dip of the deposit
- ? Normal fault, bar or D on downthrown side, dashed where inferred, dotted where concealed, queried where uncertain
- ? Low angle normal fault, tick on hanging wall, dashed where inferred, dotted where concealed, queried where uncertain
- Fault scarp, tick on downthrown side, dashed where inferred, dotted where concealed, queried where uncertain
- Photolineament, possible or probable fault or fault scarp, dashed where inferred, dotted where concealed, queried where uncertain
- Strike and dip of bedding
- Approximate strike
- Strike and dip of flow banding
- Strike and dip of lava flow
- Sample location and number

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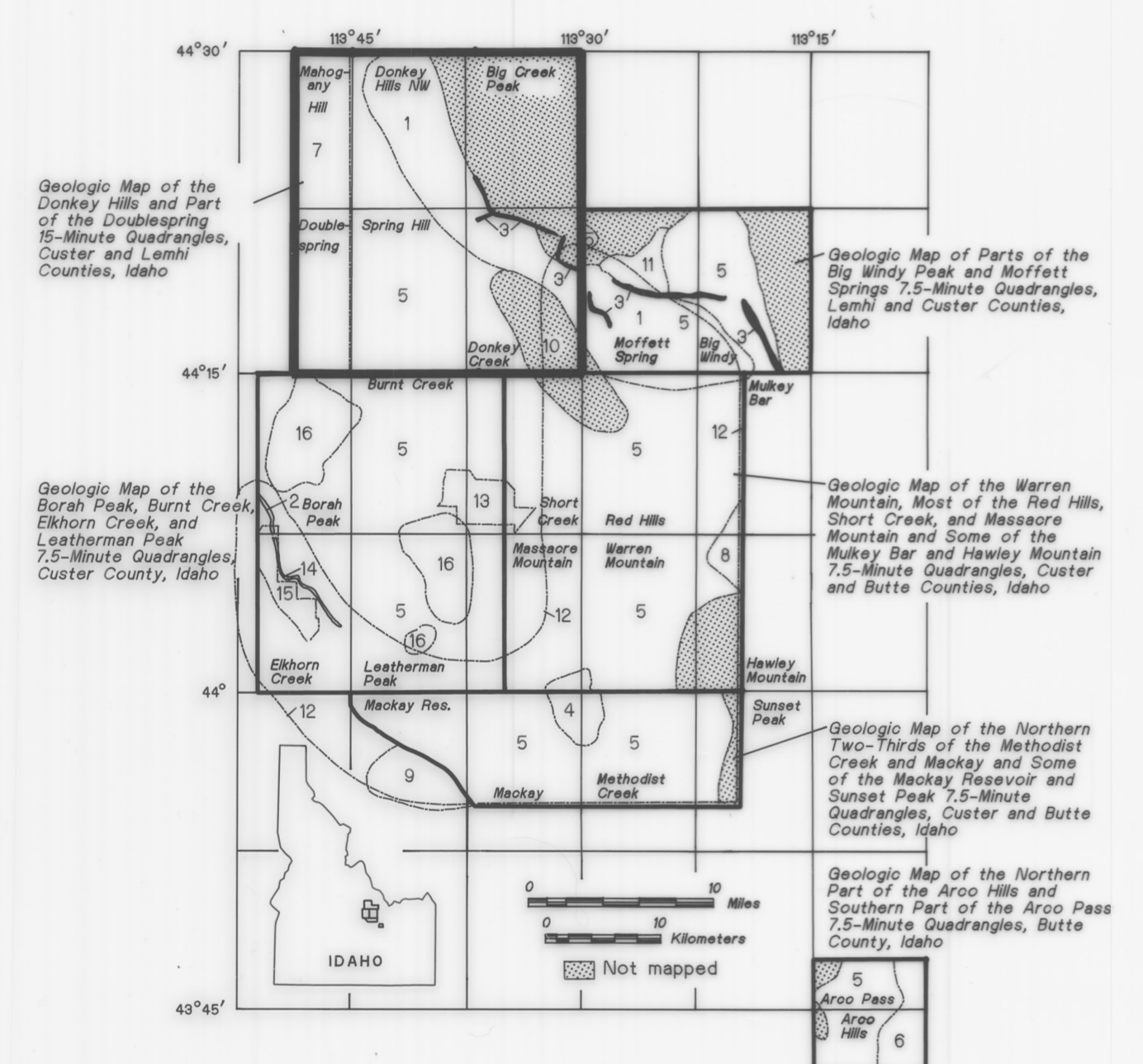
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Assisted by D. Holmes, E. Geiger, M. Barrett, J. Evans, J. Holloway, and R. Griffin
Cartography by Susan A. Wyman and Daryle R. Faircloth on a computer-aided cartographic system at the Idaho Geological Survey
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