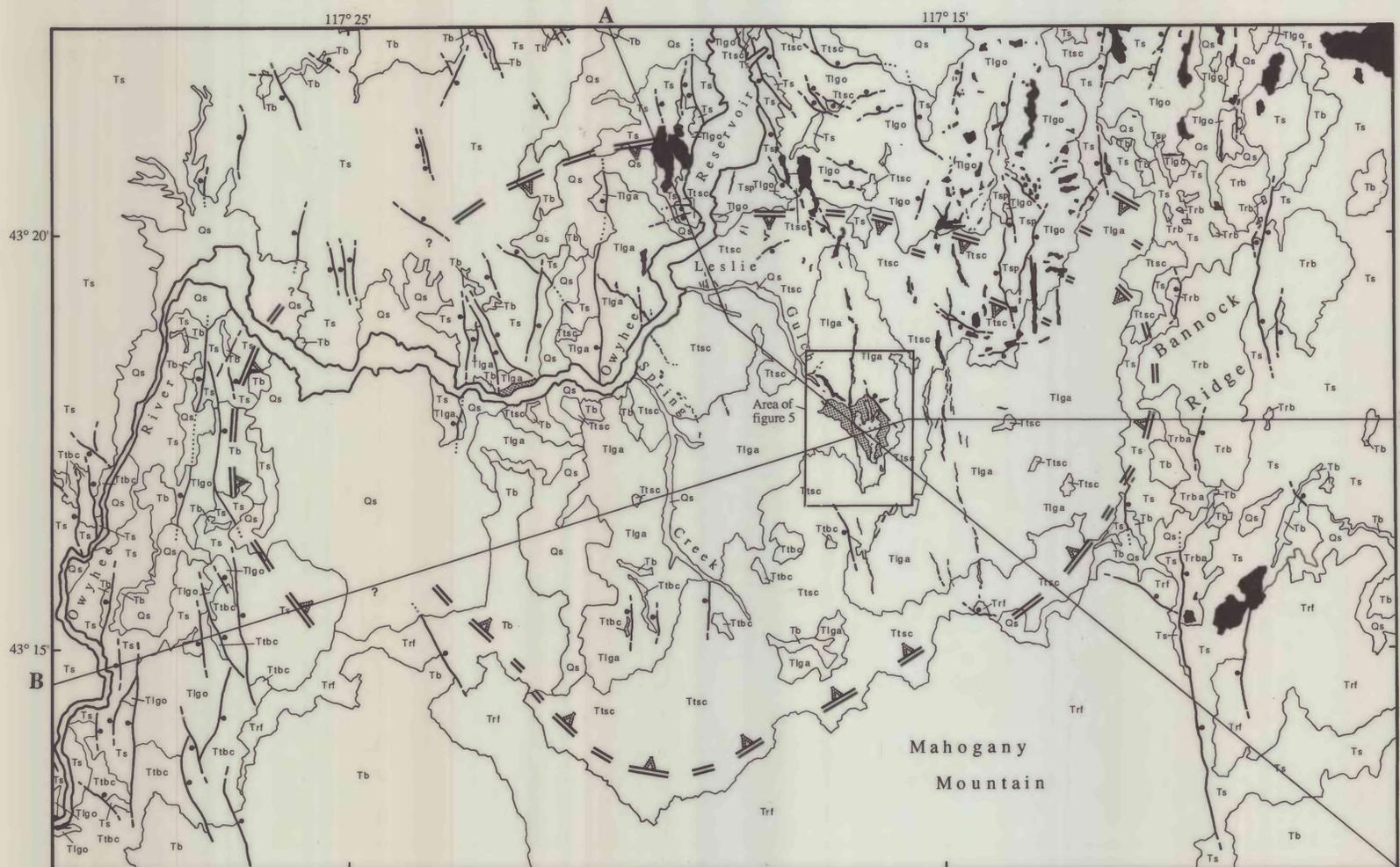


EXPLANATION
DESCRIPTION OF MAP UNITS



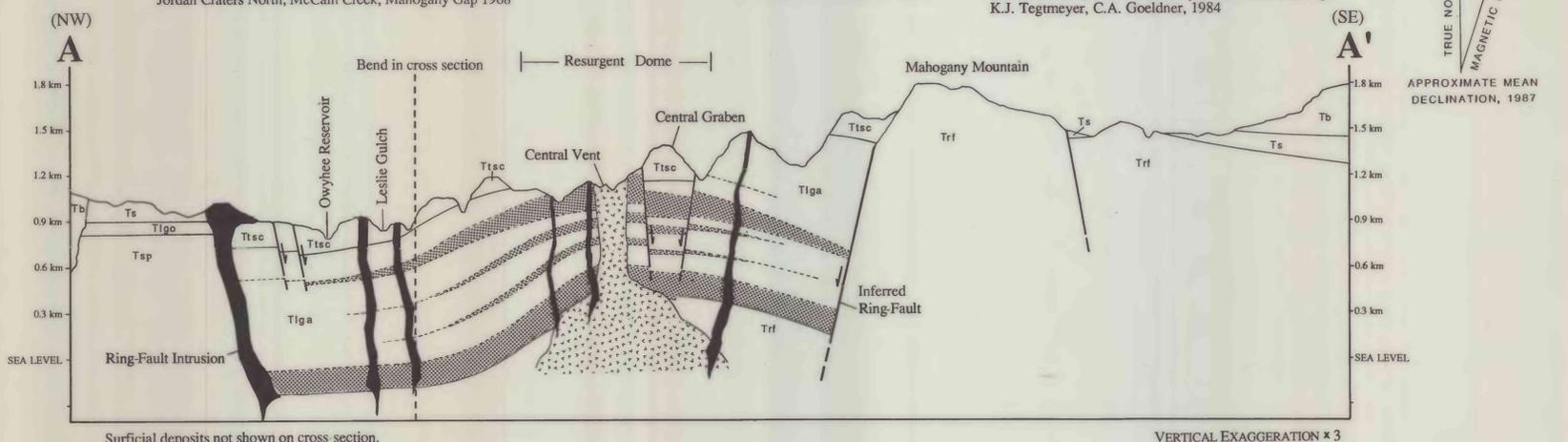
- Qs** Surficial deposits (Quaternary)--Includes alluvium, colluvium, and landslide deposits
- Ts** Sedimentary rocks (Pliocene and Miocene)--Intercalated arkosic sandstone, volcanoclastic siltstone, tuffaceous mudstone, gravel and conglomerate
- Tb** Basalt and andesite flows and intrusions (Miocene)--Dense aphyric to porphyritic dark-olive-green tholeiitic basalt flows, sills, and dikes. Moderate-brown to dusky-brown massive porphyritic andesite flows and sills, dikes, and plugs
- Trf** Rhyolite dikes, plugs, domes, and flows (Miocene)--Dark-greyish-red to brownish-grey rhyolite and porphyritic rhyolite. Unit locally includes welded ash and lapilli tuffs, and black porphyritic vitrophyre. Potassium-argon ages of sanidine from a dike and a plug that intrude the northern margin of the Mahogany Mountain caldera indicate 14.0 ± 0.4 Ma and 14.9 ± 0.4 Ma, respectively
- Trb** Rhyolite domes and flows of Bannock Ridge (Miocene)--Rhyolite of Bannock Ridge consists of domes, associated flows and flow breccias. Unit is greyish-red to pale-brown; aphyric to slightly porphyritic. Basal part of the rhyolite of Bannock Ridge exhibits 20 to 40 m thick, discontinuous layers of black vitrophyre. Flank and distal parts are composed of homogeneous flow breccias. Middle and upper parts of the rhyolite sequence are commonly fold and flow foliated.
- Trba** Rhyolite air-fall tuff of Bannock Ridge (Miocene)--Light-green to tan-brown ash and lapilli air-fall tuffs, 20 to 40 m thick. Unit locally underlies rhyolite (flows and vitrophyre) of Bannock Ridge
- Ttbc** Tuff of Birch Creek (Miocene)--Nonwelded to welded, light-greyish-purple to greyish-brown rhyolite ash-flow tuff. Ash-flow tuff thickens westward across southern part of Mahogany Mountain caldera and is over 140 m thick along the Owyhee River, 7 km southwest of the caldera
- Ttsc** Tuff of Spring Creek (Miocene)--Nonwelded to partly welded, pale-greenish-yellow to light-green, metaluminous rhyolite ash-flow tuff. Individual ash flows range from 3 to 20 m thick. Unit is typically 20 to 50 m thick but exceeds 300 m where it fills most part of the Mahogany Mountain caldera
- Trfi** Rhyolite vent intrusion (Miocene)--Rhyolite vent intrusions consist predominantly of matrix supported auto breccia crosscut by dikes and plugs of flow and fold foliated rhyolite. Color and texture of rhyolite varies considerably throughout the vent complex due to devitrification, leaching, and clay alteration. Potassium-argon age on sanidine from unaltered part of brecciated rhyolite is 14.9 ± 0.4 Ma
- Tlga** Leslie Gulch Ash-Flow Tuff (Miocene)
Airfall Facies--Nonwelded to welded, greyish-yellow, peralkaline rhyolite air-fall tuff. Unit contains several thin, less than 10 m, interbedded ash-flow tuffs. Minimum thickness of air-fall facies is 200 m. Unit was deposited within and adjacent to the Mahogany Mountain caldera
- Trfo** Intracaldera Facies--Nonwelded to welded, pale-yellow to greyish yellow, peralkaline rhyolite ash-flow tuff. Unit has minimum thickness of 150, and contains several interbedded air-fall and surge deposits. Intracaldera facies is geographically restricted to the Mahogany Mountain caldera
- Tlgo** Outflow Facies--Welded greyish-yellow to greenish-brown, peralkaline, high-silica rhyolite ash-flow tuff. Tuff formed as a single cooling unit that has minimum thickness of 85m; exceeds 350 m where it filled depressions. Green to white, fine-grained, welded air-fall tuff at base of unit. Air-fall tuffs of unit Tlgo are locally mapped within upper part of outflow facies unit. Eruption of the tuff resulted in formation of the Mahogany Mountain caldera (Rytuba and others, 1985). Unit was deposited outside of the caldera. Potassium-argon age on sanidine from basal part of ash-flow tuff is 15.5 ± 0.5 Ma
- Tsp** Pre-caldera sedimentary rocks (Miocene)--Intercalated arkosic sandstone, tuffaceous siltstone, and mudstone. Colors range from tan to light-brown to yellowish-grey. Unit is correlative with the Sucker Creek Formation of Kittleman and others (1965)
- Trf** Rhyolite flows of Mahogany Mountain (Miocene)--Multiple flows composed of pale-purple-gray to reddish-gray porphyritic rhyolite. Unit locally contains well-developed flow bands and parting foliation. Rhyolite flows form resistant ridges and cliffs of Mahogany Mountain

Based from U.S. Geological Survey, 1:24,000
Diamond Butte, Rooster Comb, Bannock Ridge, 1967;
Jordan Craters North, McCain Creek, Mahogany Gap 1968

SCALE 4 km

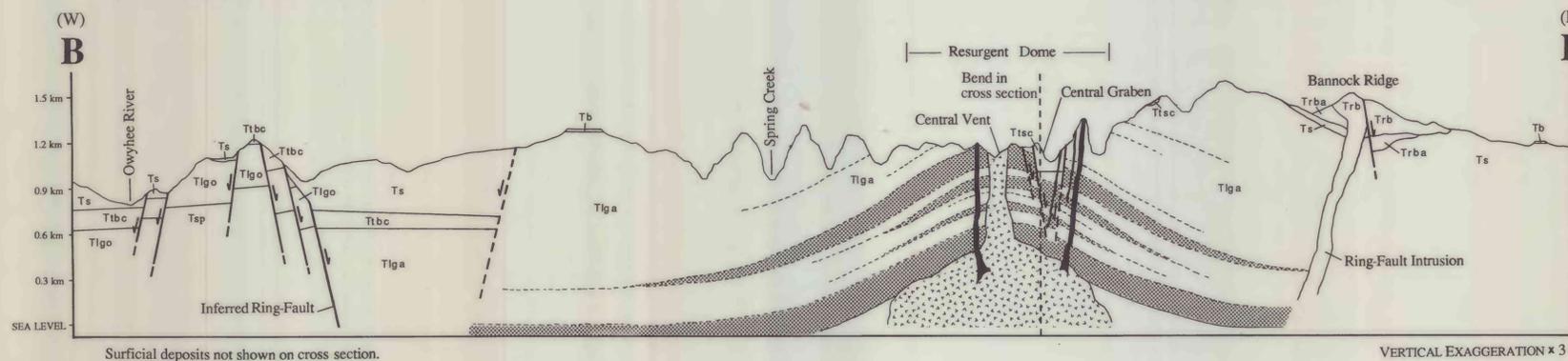
Geology mapped by D.B. Vander Meulen, T.L. Vercoutere,
and S.A. Minor, 1984-85; J.J. Rytuba, M.J. Grubensky,
K.J. Tegtmeier, C.A. Goeldner, 1984

TRUE NORTH
MAGNETIC NORTH
APPROXIMATE MEAN DECLINATION, 1987



Surficial deposits not shown on cross section.

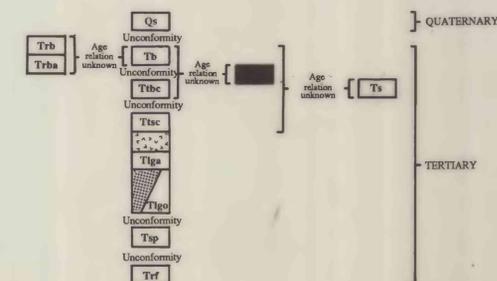
VERTICAL EXAGGERATION x 3



Surficial deposits not shown on cross section.

VERTICAL EXAGGERATION x 3

CORRELATION OF MAP UNITS



GEOLOGIC MAP OF THE MAHOGANY MOUNTAIN CALDERA

By
Dean B. Vander Meulen

1989

This map is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards and stratigraphic nomenclature. Any use of trade names is for descriptive purposes only and does not imply endorsement by the U.S. Geological Survey.