with few lava flows. Domain 3 is characterized by a basal section of distal to proximal facies pyroclastic rocks with interbedded flows overlain by a

errors and the ages are very precise, the materials dated range from low-K whole rock basalts to mineral separates from high-K phases, and the

constrain the gravels as older than 13-14 Ma and indistinguishable in age from the Lower Volcanic assemblage (Golding-Luckow et al., 2005).

Plate 3: Explanation

PRE-TERTIARY ROCKS

Fine-grained granite to porphyritic rhyolite cropping out in the Sugarloaf volcanic center. Variably altered by hydrothermal alteration

andesitic/trachyandesitic porphyry:

Fine-grained sandstone to siltstone deposits interbedded locally with white volcanic ash and black basaltic

Tvl, Tvl2, Tvl3, Tvl4: lahar deposits:

Distinguished from debris flows by dominance of matrix over clasts.

Tvpu, Tvpu2, Tvpu3, Tvpu4: proximal facies pyroclastic rocks undivided:

RTR—informal name, see map). White, buff, and pink weathering rocks of unknown original composition, but clearly of volcanic

mites are always associated with thick clastic sequences) they are interpreted as metamorphosed Paleozoic limestones. However the size

Wingate Wash and along the base of the unit in one area south of Wingate Wash, but stratigraphic position of these

megabreccia (landslide deposits?) sheets, mudflows, and volcanic flows. Interbedded ash near the base of the unit

Light brown to gray pebble to cobble conglomerate interbedded with cobbly mudstone or cobbly

Unconsolidated to weakly caliche cemented alluvial gravels and fan gravels. Distin-

Wingate Wash may represent older Tertiary (Miocene) deposits.

Quaternary-Tertiary Deposits:

Generally flat lying to gently tilted deposits, typically resting with angular

Cross-stratified silt to fine sandstones, silty fine sandstone, and thin sandstone beds in an otherwise

Poorly sorted, commonly partially to entirely clast supported breccia with clasts and matrix developed

medium grained, automorphic, altered diorite. The diorite consists of approximately 60% plagioclase, >10% K-spar, and 40% mafics

Intensely hydrothermally altered volcanic rocks of the Crystal Hills and western radio tower range (or

Poorly to poorly sorted, poorly sorted to well sorted, commonly matrix supported breccia with clasts and

Pebble to boulder sized, clast supported monolithologic breccia comprised of rhyolite to

Large rhyodacite body forms a roughly circular outcrop trace and has flow-banded rhyolites along is margins. Although many flow-

discordant contacts suggesting the rocks may be older than adjacent intrusives. Exposure is poor, however, and it is possible these rocks

sandstone to cobbly siltstone and mudstone, locally interbedded with volcaniclastic and volcanogenic sediments.

Nonetheless, the units are probably age equivalents to the Lost Lake assemblage based on stratigraphic position.

GEOLOGIC FRAMEWORK

Plate Tectonics:

The structure in Domain 2 is dominated by two moderate slip, sinistral-oblique-normal faults that Golding-Luckow et al. (2005) informally referred

The fold-thrust systems along the fault presumably represent secondary contraction along this sinistral-oblique system

The structure in Domain 1 is dominated by a sinistral-normal fault approximately 8 km long that Golding-Luckow et al. (2005)     informally referred

The structure in Domain 1 is dominated by a sinistral-normal fault approximately 8 km long that Golding-Luckow et al. (2005)     informally referred

Domain 2: Central Wingate Wash and Southern Owlshead Mountains

Golding-Luckow et al. (2005) made a complete analysis of the structural framework and fault information in the central and southern portions of the mapped area. They also published a complete structural framework in the northern portion of the mapped area. Our structural framework is consistent with theirs, especially in the central and southern portions of the mapped area. The sediments in the central and southern portions of the mapped area are shown in Plate 3 as a color shade map. The faulting framework is consistent with that shown in the northern portion of the mapped area.

Domain 3: Northern Owlshead Mountains and Central Wingate Wash

We have interpreted the data in Plate 3 to represent a more complete picture of the structural framework of the northern Owlshead Mountains compared with the equivalent structural framework shown in the northern portion of the mapped area. We also interpret that the faulting framework in the northern and central portions of the mapped area is consistent with the framework shown in the northern portion of the mapped area. Our structural framework is consistent with Golding-Luckow et al. (2005) in the central and southern portions of the mapped area.

Domain 1: Southern Wingate Wash and Black Mountains

The structure in Domain 1 is dominated by a sinistral-normal fault approximately 8 km long that Golding-Luckow et al. (2005) informally referred

The structure in Domain 1 is dominated by a sinistral-normal fault approximately 8 km long that Golding-Luckow et al. (2005) informally referred
