



# EXPLANATION

- Recent**
- Qal** Unconsolidated alluvium and colluvium undifferentiated
- Pliocene**
- Ttk** **Tuff of Kilgore:** A large volume of rhyolitic welded ash flow tuff; forms gentle dip slope in southern area, also occurs in the northeast; locally over 500 ft. (152 m) thick; black to reddish-brown vitrophic base, up to 40 ft. (12 m) thick; main unit is dark reddish-brown to gray, strongly welded, generally eutaxitic and locally rheomorphic with strom lineation; composed of 1 to 7 percent phenocrysts of sanidine, plagioclase, and rare quartz in a glassy, locally devitrified matrix.
  - Tvt** **Vitric Tuff:** directly underlies the tuff of Kilgore, possibly directly related to it, 10 to 40 ft. (12 m) thick; black to light brown; non-welded; composed of glass shards, pumice, volcanic lithics, and rare broken sanidine, plagioclase and quartz.
  - Tsc** Rhyolite of Steel Creek lava flow-domes in northern part of map, dark gray to reddish-brown; flow foliated; composed of 1 to 5 percent sanidine, plagioclase, and rare quartz phenocrysts in an aphanitic groundmass.
- Mineralization -----
- Tar** **Aphyric rhyolite:** lava flow-domes in southwestern and extreme northeastern parts of map area, light purplish-gray to white; generally strongly flow banded.
  - Tup** **Upper pyroclastics:** located mainly on the north side of the aphyric rhyolite flow-domes, composed of sinter, matrix supported lapilli tuff and tuff breccia (explosion breccia), ash flow tuff, minor crumble breccia, and lithic breccia; lithic breccia composed of clast supported blocks and lapilli tuff, generally strongly to intensely silicified
  - Tqp** **Quartz porphyry rhyolite:** lava flow in the central and north-west part of map area, light gray, generally massive although locally flow foliated; composed of 2 to 10 percent coarse-grained quartz and feldspar phenocrysts in a micro-spherulitic groundmass; quartz crystals generally rounded with inclusions. Locally silicified and acted as a cap/aiguilode to mineralizing fluids.
  - Tor** **Opal Mountain Rhyolite:** age relative to quartz porphyry uncertain; lava flow in southwestern corner of map area; tan to light gray, 1-2 percent quartz and sanidine phenocrysts in an aphanitic groundmass.
  - Tbr** **Biotite rhyolite:** lava flow-domes throughout map area; reddish-brown to light pink, coarse flow foliation common; composed of up to 1 percent fine-grained biotite, 1 to 5 percent plagioclase and sanidine, and rare fine-grained quartz eyes in an aphanitic, locally pilotaxitic groundmass.
  - Tlt** **Undifferentiated tuffs;** a complex series of lithic-rich lapilli tuffs, crystal tuffs, ash, lithic breccias and pumice flows of local extent, related mainly to the biotite rhyolites; also related to quartz porphyry; lithics are composed of sediments and volcanics in all proportions.
  - Ka** **Aspen Formation:** sediments are found in the central part of the map area; a gray to greenish gray salt and pepper textured graywacke. Some variants are black siltstone and shale; generally indistinct bedding with local soft sediment deformation; graywacke contains very angular to sub-angular fragments of quartz, chert, limestone, minor dark brown to black volcanics and fine-grained sediments. Locally calcareous and locally carbonaceous.
- Geographic Symbols**
- X** Prospect Pit
  - 10** Strike & Dip
  - 75** Attitude of Foliation
  - Adit**
  - Maintained County Road**
  - Unimproved dirt road or Forest Road**
  - Creek flowing year round**
  - Intermittent Drainage**
  - Fault**
  - Buried Fault (Inferred)**
  - Topographic Contour Line (C.I.=200' in west 2/3 of the map area and 100' in east 1/3 of map area)**
  - Surveyed Elevation**
  - Section Line**
  - Projected Section Line**
  - Geologic Contact**
  - Boundary of Otis Claims**
  - Boundary of U.S.F.S. Land**
- Base:** U.S.G.S. Kilgore and Lookout Mountain 7.5' quadrangles.
- Geology:** modified from Christopher J. Benson, 1985, University of Idaho
- Cartography:** by John R. Carden 2/2012