EXPLANATION
(Long Creek Quadrangle)

**Recent**
- Qa
  - Alluvium

**Pleistocene**
- Qt
  - Landslide

Letter symbol below line indicates formation principally involved

**Terrace deposits**
- Gravels, sands, and clays in northern part of Fox basin

**UNCONFORMITY**

**Tm**
- Mascall Formation
  - Mostly waterlaid ash and tuff of ash-flow origin, with thin beds of small-pebble gravel, but includes some boulder gravels along south edge of Fox basin. Lower beds interfinger with upper flows of Picture Gorge Basalt

**Tp**
- Picture Gorge Basalt
  - Medium to dark gray basalt flows commonly containing a little olivine

**Ti**
- Hornblende dacite
  - Plug north of East Fork of Beech Creek

**UNCONFORMITY**

**Tjd**
- John Day Formation
  - Weathered waterlaid ash exposed in road cuts at northwest corner of quadrangle

**UNCONFORMITY**

**Tcl**
- Clarno Formation
  - Volcanic flows and breccias ranging in composition from basalt to rhyolite

**UNCONFORMITY**

**E**
- Paleozoic rocks
  - Black shale, greenstone, and gabbro exposed only in open cuts at Black Butte mine

**Contact**
- Dashed where approximately located

**Fault**
- Dashed where approximately located, dotted where concealed. Bar and ball on downthrown side

**P**
- Lineament from aerial photographs
  - Indicating fault or fracture zone

**Plunging syncline**
- Showing trough line of fold

**Strike and dip of beds or lava flows**
- Horizontal beds or lava flows

U.S. Geological Survey
OPEN FILE MAP
This map is preliminary and has not been edited or reviewed for conformity with Geological Survey standards or nomenclature standards.