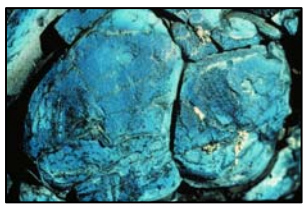
Description of Map Units

Volcanic units in the vicinity of the visitor center, Craters of the Moon lava field; Units arranged by age; youngest unit is located at the top left and become progressively older down to the right

GEOLOGIC UNITS

Blue Dragon Flow (2,076±45) and related deposits

Qfa2 — **Pahoehoe basalt-hawaiite flow**
Dominantly tube-fed flows characterized by dark and light blue glassy, vesiculated surfaces. The flow is comprised of two lobes that moved from fissure-controlled vents at the Spatter Cones (Qca2) and the southern part of Big Craters cinder cone (Qca5).



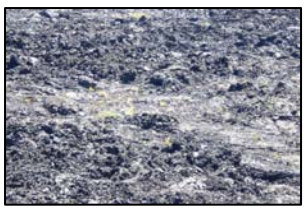
Qfa2s — **Slab-lava flow**
Slabby pahoehoe flows from degassed, highly viscous lava which encountered rough and/or steep topography; sourced through rootless vents.

Qca2 — **Spatter Cones**
Agglutinated spatter and cinders formed around central vents at the southern end of Big Craters cinder cone (Qca5). Southern end of fissure system marked by spatter ramparts and pit craters.

Qfa4p — **North Crater pahoehoe basalt-hawaiite flow (nd, ~2,400)**
Surface-fed flow with blue glassy crust and highly vesiculated. Flow contains xenoliths of gneissic, rhyolitic, and pumaceous rocks.

Big Craters Flow (2,400±300) and related deposits

Qfa5p / **Qfa5s** — **Pahoehoe hawaiite flow and slab-lava flow**
Surface-fed flows originating from vents near the northern margin of Big Craters cinder cone (Qca5) consisting of two flows: Big Craters Northeast and Big Craters Southwest (Murtaugh 1961). Characterized by elongated vesicles (spiny pahoehoe) and glassy surface. Slab-lavas formed when flow encountered rough and/or steep topography.



Qca5 / **Qaa5** — **Big Craters cinder cone and ash deposits**
Complex consists of minimum nine nested craters suggesting a complex history. Fissure on northern flank sourced Big Craters flows (Qfa5s and Qfa5p). Non-eruptive fissures on western flank are parallel to, but offset from main eruptive fissures. Accumulations of ash on the east flank of Big Craters and the west flank of Inferno Cone (Qc) are less than 1m thick.

Highway Flow and related deposits (nd)

Qfa8b — **Block-a'a trachyandesite flow**
Surface-fed flow from vent area between Grassy and Sunset cinder cones (Qce1 and Qcg1, respectfully). Flow fronts are as high as 15m and 2-10m of flow are exposed at the South Highway cinder cone (Qc) fault scarp (see New Interpretation section).

Qfa8p — **Pahoehoe trachyandesite flow**
Surface-fed glassy flow found in the campground area. Unit consists of slab lava locally.

Qfa8r — **Rafted Blocks**
Source is most likely North Crater cinder cone (Qca4) and South Highway cinder cone (see New Interpretation section).

Highway Flow and related deposits continued

Qca8 — **Cinder Mounds**
Irregular-shaped mounds less than 8m high and 100m in diameter. Origin is unknown but may be related to eruptions associated with North Crater cinder cone (Qca4) or South Highway cinder cone (see New Interpretation section).

Qca4 / **Qaa4** — **North Crater Cinder Cone and ash deposits**
North side of cone cut by normal faults which created slumped blocks. North wall of crater is breached as a result of collapse and rafting by more viscous lavas. Cone was source for North Crater flow (Qfa4p) and believd to have collapsed in association with the eruption of the Highway Flow (Qfa8) and other high-silica lavas. Cone is about 130m high and 1000m in diameter. Ash and lapilli accumulated on the eastern flank of North Crater cinder cone and on Paisley Cone (Qc) are less than 1m thick.

Silent Cone Flow (nd) and related deposits

Qfd1r — **Rafted Blocks**
Broken wall blocks sourced from the northwestern part of Silent Cone cinder cone (Qcd1). Blocks close to the cinder cone are surrounded by Big Craters flow (Qfa5p and Qfa5s) and Blue Dragon flow (Qfa2).

Qcd1 — **Silent Cone cinder cone**
Complex consists of three nested craters and is open to the northwest from collapse and faulting. Cone is about 150m high and 1500m wide.

Grassy Cone Flow (7,360±60) and related deposits

Qfe1p — **Pahoehoe basalt flow**
Surface- and tube-fed flow which was highly inflated. Flow is dominated by inflation pits and pressure ridges.

Qce1 / **Qae1** — **Grassy Cone cinder cone and ash deposit**
Cone consists of five nested craters and is source area for Grassy Cone flows (Qfe1p). Cone is about 110m high and 1500m in diameter. Well-bedded ash and lapili lie on the Grassy Cone flow (Qfe1p) and up to 1m thick near the cone.

Sunset Cone Flow (12,010±150) and related deposits

Qfg1p — **Pahoehoe basalt-hawaiite flow**
Surface- and possible tube-fed flows from vents near the Sunset Cone cinder cone (Qcg1). Local unmapped patches of a'a exist where the flow moved over steeper slopes.

Qcg1 / **Qag1** — **Sunset Cone cinder cone and ash deposit**
Cone is a complex of eight nested craters which indicate a complicated eruptive history. Cone is 140m high and 1500m in diameter. Well-bedded ash and lapilli on east flank of Sunset Cone (Qcg1) up to 2m thick are mapped.

Qc — **Cinder cones (Holocene and latest Pleistocene)**
Cinder cones having no known associated lava flows; absolute ages of cones are undetermined. In this map, this unit includes Paisley, Inferno, and South Highway cones, along with unnamed cones in the northern part of the Monument.

Qca — **Colluvium and alluvium (Holocene and Pleistocene)**
Colluvium at base of steep slopes

MAP SYMBOLS

Paved Road
Unpaved Road
Contour Line
Hiking Trail
Flow Direction

Contact – Dashed where approximated
Scarp – Gravity fault; hachures point to area of lower elevation
Crater – Rim at volcanic vent; hachures point to area of lower elevation
Eruptive and Non-eruptive Fissures
Lava Channel

Pit Crater – Typically circular depressions formed by collapse; hachures point to area of lower elevation
1 **Geologic Point of Interest**
P **Parking area**
229 **Mile Marker**

For information concerning references and methodology, refer to the New Interpretation section.