**GEOLOGIC HISTORY**

**LOCATIONS:**

- Longonot (0.2 - 400 ka): trachyte stratovolcano and associated deposits. Materials exposed in this map are from the Kerichwa Valley Tuffs (Barajai Trachyte). The succession along the Kerichwa Valley is thought to be the same as along the Kedong Valley. The Kandizi Phonolite is thought to represent sediments that were altered during uplift and erosion of the rift valley floors.

**PLACETYPES:**

- **Kandizi Phonolite:** black to dark blue with blocky texture. Flow structures are well-preserved in the mapped area.

**HOLOCENE:**

- **Longonot (0.2 - 400 ka):** trachyte stratovolcano and associated deposits. Materials exposed in this map are from the Kerichwa Valley Tuffs (Barajai Trachyte). The succession along the Kerichwa Valley is thought to be the same as along the Kedong Valley. The Kandizi Phonolite is thought to represent sediments that were altered during uplift and erosion of the rift valley floors.

**PLIOCENE:**

- **Narok Agglomerate:** light brown agglomerate with numerous lithic clasts, including blocks of trachyte and Nairobi Trachyte. Ages are from the Kinangop Tuff, with which the Kerichwa tuffs have been correlated (Baker et al. 1988). The Kerichwa Valley Tuffs provide a minimum total thickness of 60m (Saggerson 1991).

**PLUVINATIONS:**

- **Limuru Trachyte (1.94 - 2.64 Ma):** contains characteristically clustered groups of K-feldspar phenocrysts, porphyritic texture, vesicular, and amygdaloidal in appearance. They were erupted as a series of continuous flows with inverse polarity, that overrode the escarpment in the area. At times, 600m is exposed in the area of escarpment (Baker et al. 1988).

**Kabete/Ruiru Dam Trachyte:** grey-green porphyritic trachyte that reaches 30m thick in boreholes. The trachyte is vesicular, but amygdules are rare. Can be distinguished from the Kapiti phonolites by the lack of large vesicles in the Kabete/Ruiru Dam trachyte.

**Kiambu Trachyte:** light grey trachyte with numerous feldspar phenocrysts. In some regions lava is highly eroded.

**Mt. Margaret:** welded and unwelded trachyte tuffs erupted from a small cone that rises 120m above the rift valley floor. The tuffs are likely Miocene in age (see Kandizi Phonolite).

**Mt. Margaret Tuffs:** trachytic tuffs that are sometimes welded, with materials deposited both subaerially and in subaqueous environments. The trachytic tuffs were related to cone building, and the airfall tuffs were produced by summit crater formation.

**BASEMENT SYSTEM:**

- **Nairobi Phonolite:** light grey to greenish grey phonolite, with occasional red and yellowish patches. Handaxes have also been reported from the area around the Gicheru diatomite beds. Elevated carbon dioxide soil gas and an active fumarole (89°C), are associated with Mt. Margaret. Silicified tuffite and diatomite are associated with the “Nairobi Stone”. Diatomite from the Munyu wa Gicheru lake deposits, 1.65-1.96 Ma (not shown, Trauth et al. 2002).

**Pleistocene:**

- **Ol Tepesi Basalts (1.4-1.65 Ma):** alkaline basalts with sparse plagioclase and olivine phenocrysts (Baker et al. 1988) based on element concentrations. Many lavas are noted by Saggerson (1991) to contain megascopic fragments of gneiss.

**Cross Section Legend**

- **Sediments:**
  - Lacustrine Sediments
  - Fireclay
  - Fresh lacustrine
  - Rhyolitic lava
  - Andesitic lava
  - Nephelinite
  - Eruptive debris
  - Pumice
  - Tuff
  - Alluvial fan

- **Metamorphic:**
  - Metamorphic
  - Metamorphosed

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- **Digital Map and Chart Series 0158055**

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