

**Data Organizer:**

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Year: 2013

Area: Southern Kenya Rift

Scale: Variable (1:135,000 if PDFs are printed 36x24 inches)

Resolution: Variable

**Projection**

Geographic (Lat/Long)

Parameters: Datum WGS84,

Planar Units: Arc Degrees

Units: Meters

**Description:** Quarter degree geologic maps for the Southern Kenya Rift.

**Keywords:** Kenya, Rift, Geologic Map

**Map image files:** PDF

**GIS files:** Zip folder (DMCH016-shp.zip) of Southern Kenya Rift shapefiles

Zip folder (DMCH016-GE.zip) contains Google Earth kmz/kml files for the rift volcanics

**Note:** Each shapefile includes data for the 6 maps covering the area between Suswa-Nairobi, south to the Tanzania border. Other than "Guth-Kenya-Volcanics", which provides data for the entire Kenya Rift, the included files are being released as Version 1. Any future map shapefiles will be inclusive of this version and will be released as Version 2, Versions 3, etc... For example, "Guth-faults-v1" only includes faults for the Suswa, Nairobi, Magadi, Kajiado, South Magadi, and Bisil regions. A future shapefile release may be named "Guth-faults-v2", which would extend the fault shapefile to other areas.

## **File Descriptions**

Guth-Kenya-volcanics: Digitized volcanic units associated with the Kenya Rift. Description of main fields in the attribute table are as follows. The “-sediments” and “-metamorphics” files provide digitized geology of the Southern Kenya Rift from 1° South to 2.5 ° South (Suswa, Nairobi, Magadi, Kajiado, South Magadi, Bisil).

<b>Heading</b>	<b>Description</b>
Perimeter	generated by Global Mapper
Symbol	Symbology used in this study to distinguish lithologic units
Original_S	Original unit symbology from source maps
Eon	Used to specify the relative geologic age of the unit. Naming is based on the 2010 International Commission of Stratigraphy time divisions.
Era	
Period	
Epoch	
Stage	
Age_Min	youngest given age for unit in literature
Age_Max	oldest given age for unit in literature
Age_Units	Describes the units used for Age_Min or Age_Max. Different age scales were used to enhance readability of the data. A.D.: standard calendar year representation, used for very recent units ka: Kilo-annum, thousands of years Ma: Mega-annum, millions of years
Age_Type	Designates the method used to determine the absolute age assigned for Age_Min or Age_Max if know. est: estimated, often based on stratigraphic relationships C-14: radiocarbon isotope dating K-Ar: Potassium-Argon radioisotope method Ar-Ar: Argon-Argon method U/Th: Uranium-Thorium ratio Pmag: based on paleomagnetic results
Sources	References used for age, lithology or original map sources. References are given as Author-year. Full references can be found in MapRefs.pdf
Lithology	rock type/description of the mapped unit
Notes	pertinent notes regarding mapped unit
Subname	Same as “Symbol” in most cases. Used to create grouping hierarchies, where related units shared the same GM_Type but were distinguished using Subname.

Heading	Description
Map	original name of Kenya/Tanzania Geological Survey map that covers location the unit is mapped in. Note that unit may not appear on the original map named here. See "Sources" for full list of references.
Unit_Above	unit stratigraphically above mapped unit
Unit_Below	unit stratigraphically below mapped unit
Polarity	magnetic polarity, if known
m_thick	thickness of unit given in literature
est_thick	estimated thickness from SRTM DEM
GM_Type	Formation name. Used in ArcMap in conjunction with the "Subname" attribute for assigning unique symbology to each formation.
Name	
Vxcount	number of vertices in a polygon
Enclosed_A	generated by Global Mapper
Island_Are	generated by Global Mapper

### Supplementary Files

Faults-large-v1: (lines) the rift boundary faults, or those significant escarpments (100m or more). Directionality of the line indicates sense of movement (lines begin in the south if the EAST side of the fault has been down-dropped; lines begin in the north if the WEST side of the fault has been down-dropped).

Faults-v1: (lines) fault scarps/traces. Directionality of the line indicates sense of movement (lines begin in the south if the EAST side of the fault has been down-dropped; lines begin in the north if the WEST side of the fault has been down-dropped).

Lakes-swamps-v1 (polygons): Modern lakes and swamps. Note that some lakes are ephemeral, and swamps will likely change in area based on season and year.

Population-points-v1: (points) Classified into Cities, Towns and Villages. Many names for the smaller towns and villages from Google Earth.

Cities: population >500,000

Towns: population between 250 and 500,000

Village: population < 250

Rail-v1: (lines) Railroad lines

Rivers-v1: (lines) Major and ephemeral rivers/streams. Flow status is not distinguished, and as these were traced by hand, this layer should not be considered comprehensive.

Roads-v1: (lines): Divided into Major, Minor and Tracks. Major roads include main highways, minor roads are paved, and tracks are unpaved, but can be seen in Landsat data. Note that the “tracks” may be hard to follow in the field, and may required vehicles with high clearance.

Salt-ponds: (polygons) ponds used for the concentration and evaporation of brines by the Magadi Soda company. Easily seen in the Landsat data, but not being natural, they were not included with the geologic or lake features.

### **Arc-package Description**

Each map presented as a PDF was created in ArcMap 10. Arc-packages have been provided for each mapped region.

### **MapRefs**

To save space in the attribute table, citations were used rather than full references. The full publication information can be found in the “DMC016\_MapRefs.pdf” supplementary file.