Intelligence

Geological Interpretation Study for East Africa



## Providing Valuable Geo-Information to Exploration Companies

The East African Rift System is increasingly viewed as a hydrocarbon exploration hotspot with recent discoveries in the Albertine Rift and offshore Tanzania. Covering approximately 4.5 million square km, the EARS fully integrated geological study provides exploration companies with a consistent interpretation of the surface geology and the location of hydrocarbon seeps in the region. The final report integrates all datasets

to assess and highlight the hydrocarbon prospectivity in the region.



# Olobal Seeps (Current Coverage) Olobal Seeps (Current Coverage) East Africa Geology Study (Extension 2013) Global Seeps (New Updates 2013)

#### Summary

Airbus Defence and Space have completed a regional geological interpretation of the East Africa Rift System incorporating Eritrea, Djibouti, Somaliland, Ethiopia, Uganda, Kenya, Malawi, Rwanda, Burundi, Tanzania, Mozambique and Madagascar.

The EARS interpretation study is based on 15m Landsat 7 ETM+ imagery combined with a 90m SRTM elevation model, it includes:

- Interpretation of surface geological structure at 1:100 000 – 1:250 000 scale
- Identification of major lithostratigraphical units at 1:250 000 1:500 000 scale
- Capture of major drainage channels and water bodies
- Oil seep locations as points and vectors of slick outlines

The identified seeps are discussed in relation to the regional structurals etting and petroleum systems of the area. By combining the interpretation with the identified hydrocarbon seeps their geological context can be readily assessed. Surface evidence for several phases of rifting can be identified from the remote sensing data, with significant overprinting between events. The study also demonstrates that oil seeps redominately occur in the extensive lakes within the Western Branch of the Rift including Lake Albert, Edward and Tanganyika.



confidence natural oil seeps

### Deliverables

The final study deliverables consist of the digital data on DVD as an integrated ESRI ArcGIS project, containing the following data and interpretation:

- Structural and stratigraphic interpretation (supplied as ArcGIS Geodatabase)
- Global seeps (extract from the oil seeps database covering major rift lakes)
- Seismic events
- Mineral occurrences
- Major drainage channels and water bodies
- Names of important structural features
- 15m Landsat 7 ETM+ imagery in a 742 (RGB) band combination
- SRTM 90m DEM in shaded relief form
- 100m contours
- Radar imagery for key areas

Also included is a full written report with illustrations containing the results from the geological interpretation and seeps study which are discussed in relation to published maps, reports and papers. In addition 31 hardcopy map sheets are supplied at 1:500 000 scale. Airbus DS have extended their East Africa Geological Interpretation study to also include the following updates:

- Geological Interpretation covering Somalia and West Madagascar
- Offshore Global seeps; an additional 782 Radar scenes will be assessed for natural oil seepage and incorporated. Utilising offshore regional gravity, magnetics and bathymetry the seep analysis will be integrated with the interpretation of major offshore structural features, in the Madagascar Channel, Deep Water Tanzania and Seychelles, and our onshore geology to readily assess the geological context of the seeps.



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#### Airbus Defence and Space

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