Ministry of Oil and Minerals Petroleum Exploration & Production Authority







- The South Ra's Mume Block (96) occupies an area of 21,896 km<sup>2</sup> in the Socotra Basin in the Gulf of Aden offshore
- The Socotran Platform is located at the eastern limit of the Gulf of Aden. Part of the platform is dominated by the Socotran Archipelago (Socotra, Darsah, Samhah and Abd al Kuri)
- The block has not been explored before.







- Triassic and Jurassic strata are preserved in easternmost parts of Socotra where they reach thicknesses in excess of 400m. The predominance of carbonate platform facies within much of the Triassic and Jurassic suggests that these successions were originally deposited over a large area.
- Most of the strata believed to be of Jurassic age has been classified as syn-rift on seismic reflection data profiles, and was deposited in a number of half grabens. The Cretaceous and Tertiary post-rift section however, was deposited across most of the Socotran Platform and can be seen to thicken on seismic lines from approximately 500m in the north, adjacent to, and on the islands, to in excess of 2700 m in the post-rift thermal sag depocentres evident in the centre and south of the platform.
- Two major sequences can be recognised in the Qishn Formation, and can be further subdivided into systems tracts. An Upper Qishn highstand systems tract has been identified on a north-south seismic line with coastlineparallel facies belts.
- Three major sequences can be recognised in the Fartaq Formation and one in the Sharwayn Formation.





## **PETROLEUM SYSTEM**

## SOURCE ROCKS

- The shales in Lower Cretaceous sequence contain more than 1% organic carbon and a fair to good active oil-source rating.
- Source rocks (in the surrounding blocks) were identified in the Jurassic and Triassic sections.
- The fair oil shows in the drilled well (Samhah#1A) confirm the presence of the good and mature source rock horizons in the Socotra Area.

## **RESERVOIR ROCKS**

- Reservoir quality penetrated in the Triassic Sudair.
- Naifa/Saar and Qishn carbonate reservoirs had good porosity.
- Qishn clastic reservoirs had good porosity.
- Good reservoirs were penetrated in Mukalla/Fartaq carbonate sequence.



