
Play Concept of Offshore Salalah - Oman

Saleh Al-Anboori, Bader Al-Sariri, and Mohammed Al-Balushi. Exploration Department, Ministry of Oil & Gas (MOG), P.O.Box 551, Muscat, 113, Oman, phone: +968 24603789, fax: +968 24602541, s.alanboori@mog.gov.om

The area of interest is located offshore Salalah southern part of Block 52. It covers an area of more than 3000 Km² with bathymetry of less than 1000m. The area is covered by 2D seismic, gravity and magnetics.

Geologically, the area lies within a Tertiary Basin. The rifting of the Gulf of Aden is the key player in the formation of trapping styles in the area. Structural traps are represented by horsts, footwall highs and tilted fault blocks that were interpreted from seismic. In addition deeper thrust system of the Lower Palaeozoic section might form additional exploration target.

On the other hand, The Ashwaq Formation represented by Oligocene reefs from onshore Salalah Plain-1 well and the Tertiary and Upper Cretaceous turbidites from Salalah far offshore might form stratigraphic traps.

The Oligocene reefs are excellent reservoir with connected porosities up to 30%. Farther more, the Tertiary and Upper Cretaceous turbidites, and Jurassic clastics and carbonates are likely to have good reservoir quality.

Mudstone facies of Tertiary and Mesozoic ages are expected to be effective and better developed in the offshore compared to onshore (Salalah Plain-1). Upper Cretaceous Dhalqut Formation could be possible source rocks. In addition the deeper Huqf source rock facies might be present as indicated from offshore regional geology.

In summary, the play elements that are present in the offshore Salalah area in both shallow and deep stratigraphic sections may form multiple exploration targets. New seismic acquisition in deeper water areas away from the existing seismic coverage could open up new opportunities.
