Technical Report

Block 12
N. El Dikheila offshore
**Block 12**

**N. El Dikheila offshore**

### About The Block

**Location:** N. El Dikheila offshore block is a part of recent relinquished of NEMED concession previously operated by Shell. It is bounded from the north by Egypt's economic water border and located at a distance approximately 180 km to the north of the Mediterranean shore line.

**Total Area:** 7150 Km²

**Water Depth:** 2600 - 3000 m

**Seismic Surveys**

: 2D Seismic lines (approx. 4949 Km)

**Wells:** La 52-1 , -2 ST1 and Ld 51-1 ST1.

**Data review and Purchase form EGAS**

**Previous Concessionaire:** Shell

**Nearby Fields & Discoveries:** La 52, Ld 51 and Kg 45 gas discoveries
## Block- 12

### N. El Dikheila offshore

<table>
<thead>
<tr>
<th>No.</th>
<th>Latitude (North)</th>
<th>Longitude (East)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>33° 41’ 44.9”</td>
<td>30° 12’ 00”</td>
</tr>
<tr>
<td>2</td>
<td>33° 00’ 00”</td>
<td>30° 12’ 00”</td>
</tr>
<tr>
<td>3</td>
<td>33° 00’ 00”</td>
<td>29° 18’ 00”</td>
</tr>
<tr>
<td>4</td>
<td>33° 45’ 18.9”</td>
<td>29° 18’ 00”</td>
</tr>
<tr>
<td>5</td>
<td>33° 48’ 00”</td>
<td>29° 51’ 00”</td>
</tr>
<tr>
<td>6</td>
<td>33° 45’ 00”</td>
<td>30° 05’ 00”</td>
</tr>
</tbody>
</table>

[Diagram showing locations 1 to 6 with coordinates and labels such as Ld 51-1 St1 and La 52-1,2 St1.]
## Block 12
### N. El Dikheila offshore

### Wells:

<table>
<thead>
<tr>
<th>COMPANY</th>
<th>WELL</th>
<th>SPUD</th>
<th>COMPL</th>
<th>FTD</th>
<th>FM. @ TD</th>
<th>Lat. N.</th>
<th>Long. E.</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shell</td>
<td>Ld 51-1 ST1</td>
<td>17/2/2007</td>
<td>28/7/2007</td>
<td>4690 M</td>
<td>Abu Qir (Miocene)</td>
<td>33° 19' 35.12&quot; N</td>
<td>30° 05' 28.25&quot; E</td>
<td>Gas Discovery</td>
</tr>
<tr>
<td>Shell</td>
<td>La 52-2ST1</td>
<td>23/1/2007</td>
<td>8/6/2007</td>
<td>4123 M</td>
<td>Abu Qir (Miocene)</td>
<td>33° 03' 39.18&quot; N</td>
<td>30° 08' 14.23&quot; E</td>
<td>Gas Discovery</td>
</tr>
<tr>
<td>Shell</td>
<td>La52-1</td>
<td>24/12/2003</td>
<td>9/2/2004</td>
<td>4565M</td>
<td>Abu Qir (Miocene)</td>
<td>33° 03' 59.16&quot; N</td>
<td>30° 07' 13.58&quot; E</td>
<td>Gas Discovery</td>
</tr>
</tbody>
</table>
### SEISMIC DATA

#### A) "2D" SEISMIC DATA (Segy Standard Format)

<table>
<thead>
<tr>
<th>Survey Name</th>
<th>Digital 2D Data (Km)</th>
<th>No. of Seismic lines</th>
</tr>
</thead>
<tbody>
<tr>
<td>S99DW</td>
<td>568</td>
<td>8</td>
</tr>
<tr>
<td>S2001DW</td>
<td>1117</td>
<td>29</td>
</tr>
<tr>
<td>S2004DW</td>
<td>2508</td>
<td>48</td>
</tr>
<tr>
<td>TGS</td>
<td>583</td>
<td>13</td>
</tr>
<tr>
<td>VER</td>
<td>173</td>
<td>5</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>4949</strong></td>
<td><strong>103</strong></td>
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Block 12
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### PRICE LIST

<table>
<thead>
<tr>
<th>Block No.</th>
<th>Block Name</th>
<th>Area (Km²)</th>
<th>Principal Data Package</th>
<th>3D Surveys</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>2D Total Line Km</td>
<td>Drilled Wells</td>
</tr>
<tr>
<td>12</td>
<td>N. El Dikheila offshore</td>
<td>7150</td>
<td>4949</td>
<td>3</td>
</tr>
</tbody>
</table>

- Data Package for each block in digital format will be available at EGAS premises at prices as shown in the above table.

- Technical reports for all wells are available for purchase at: ($1100 for hard copy and $1200 for digital format per well)

- Final geological reports for all wells are available for purchase at: ($1500 for hard copy and $1700 for digital format per well)

- Data review will be available at EGAS premises using Geographix Software (Seisvision, Prizm & Geoatlas) at cost:

  10% of total price of the principal data package (2D and well logs) with a minimum of $2000/block

  10% of total price of request 3D seismic survey

- In case of data purchase after review, review fees will be deducted from the total purchase price
**Pliocene Play Concept:**
This play was successfully explored in the offset block located to the south of this block, where gas bearing sand in slope channel complex was discovered in Kg 45-1 well.

**Source:**
Basal Pliocene shale provides excellent source rock for the biogenic gas.

**Reservoir:**
The reservoir rocks are represented by turbidite channel sand with high porosity and permeability.

**Trapping:**
Structure / Stratigraphic traps provide the main trapping style.

**Sealing:**
The thick interbedded shales act as good sealing capacity for this play.

**Charging:**
Charging carried out through the interbedded and intraformational Shales which act as good source rocks for the biogenic gas.
**Messinian Play Concept:**

This play is represented by Messinian sand (Abu Madi channel) which deposited in deltaic/shallow marine environment just after the end of the Messinian salt crisis. This play was successfully drilled and explored as gas bearing sand in La52-1,2 and Ld51-1 wells drilled in this block.

The well La52-1 encountered Abu Madi reservoir channel at depth 3948 m trapped in four way dip closure. The petrophysical parameters of this reservoir indicates that the net pay thickness is 23m with average porosity 26% and average water saturation 42%. The estimated GIIP of this well is 1042 BCF and the recoverable reserve is 562 BCF.

The well Ld51-1 encountered Abu Madi reservoir channel at depth 4320 m trapped in four way dip closure. The petrophysical parameters of this reservoir indicates that the net pay thickness is 26 m with average porosity 26% and average water saturation 32%. The estimated GIIP of this well is 255 BCF and the recoverable reserve is 138 BCF which referred that this block is very promising for new Miocene discoveries and added reserves.
**Source:**
The terrestrial and marine deposits developed during Oligocene-Miocene time are considered the main source rocks.

**Reservoir:**
The reservoir sand was deposited in channel / Levee system which significantly encountered below and in between the Rosetta anhydrites as hydrocarbon bearing sand as in La52-1,2 and Ld 51-1 wells drilled in this block.

**Trapping:**
The traps are mainly structural traps with partial stratigraphic.

**Sealing:**
Rosetta anhydrite act as an efficient seal.

**Charging:**
Charging carried out from deep-seated normal faults possibly from Oligocene and Lower Miocene deposits.