EGAS

Ministry of Petroleum

Technical Report

Block 4
N. Marakia offshore

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About The Block

Location : North Marakia offshore is located in the central part of the Mediterranean sea, approximately at 85 km to the north of Alexandria city. The block is bounded from the west and south by WMDW concession.

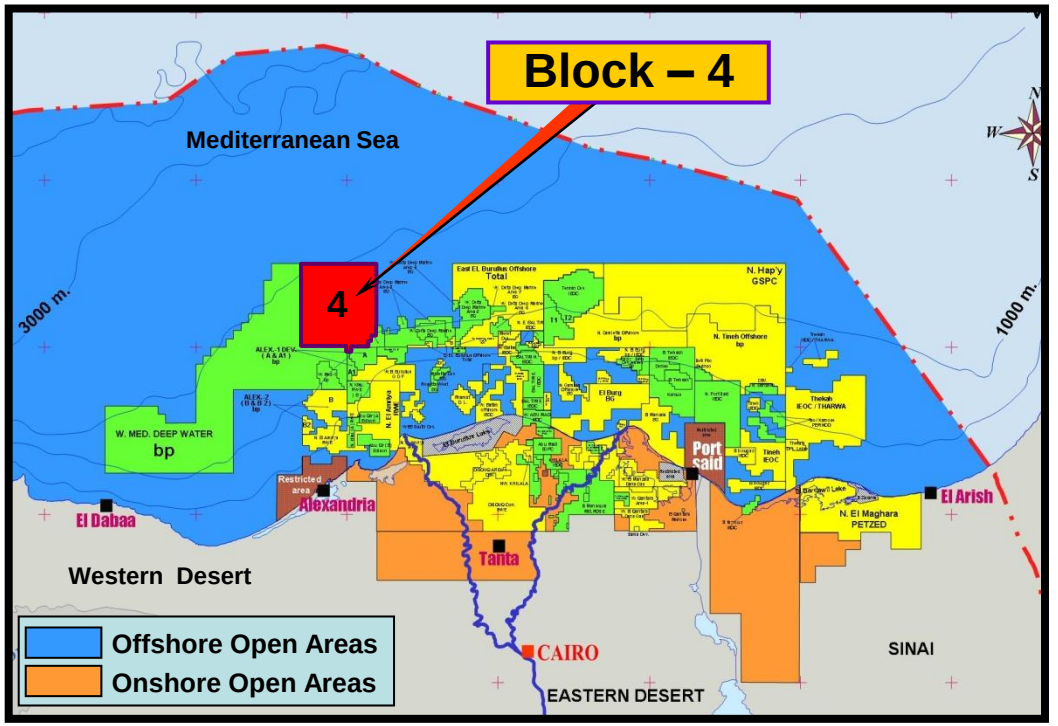
Total Area Approx. : 2600 Km^2

Water Depth: 900 m –2000 m.

Seismic Surveys

: 2D Seismic lines (approx. 3114 Km)

: 3D seismic survey (approx. 895 Km^2)



Wells: No wells were drilled in the block, however several wells has been discovered in the vicinity of the block.

Data review and Purchase form EGAS

Previous Concessionaire : BG.

Nearby Fields & Discoveries: Alex 1 & 2 development leases (El Fayoum, Taurus , Libra, NAB-3,4 and Raven…..etc.),.

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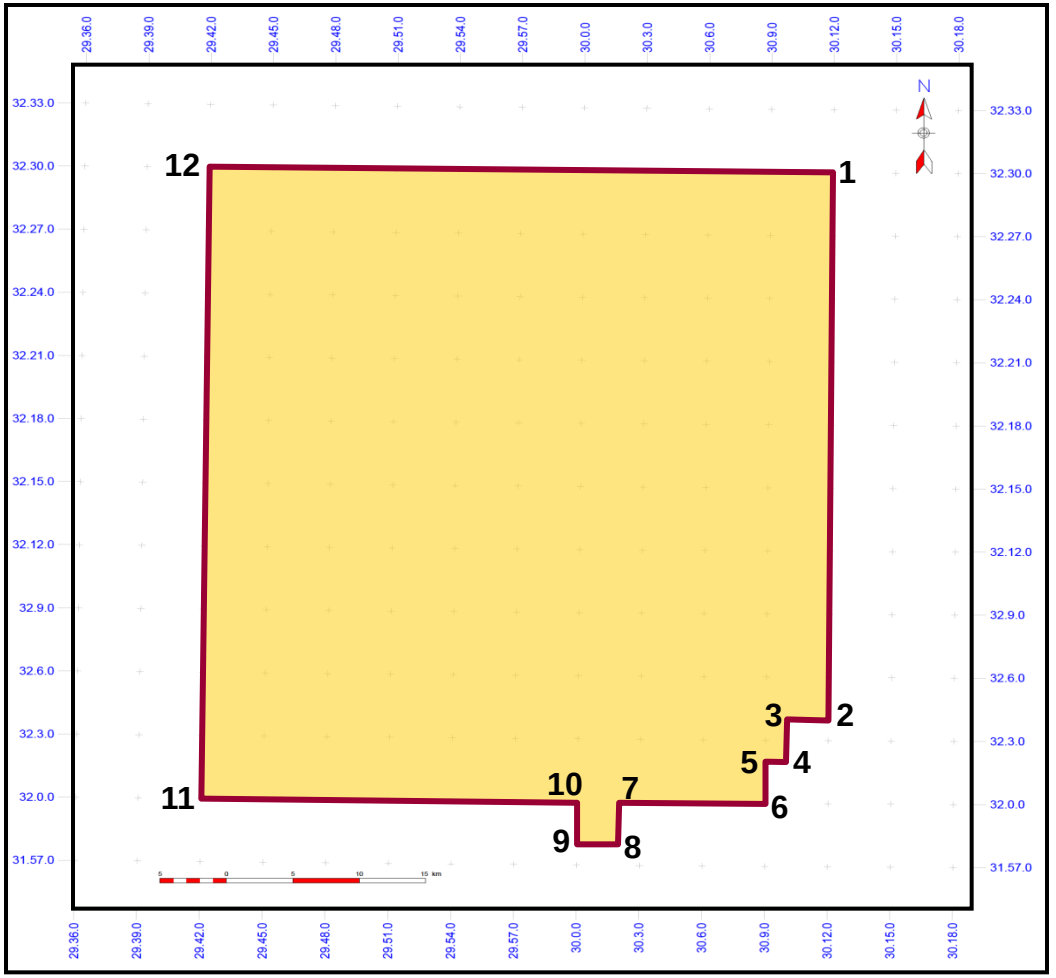
Block- 4						
N. Marakia offshore						
No.	Latitude (North)			Longitude (East)		
1	32°	30’	00”	30°	12’	00”
2	32°	04’	00”	30°	12’	00’
3	32°	04’	00”	30°	10’	00”
4	32°	02’	00”	30°	10’	00”
5	32°	02	00”	30°	09	00”
6	32°	00	00”	30°	09	00”
7	32°	00’	00”	30°	02’	00”
8	31°	58’	00”	30°	02’	00”
9	31°	58’	00”	30°	00’	00”
10	32°	00’	00”	30°	00’	00”
11	32°	00’	00”	29°	42’	00”
12	32°	30’	00”	29°	42’	00”



Block 4
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SEISMIC DATA

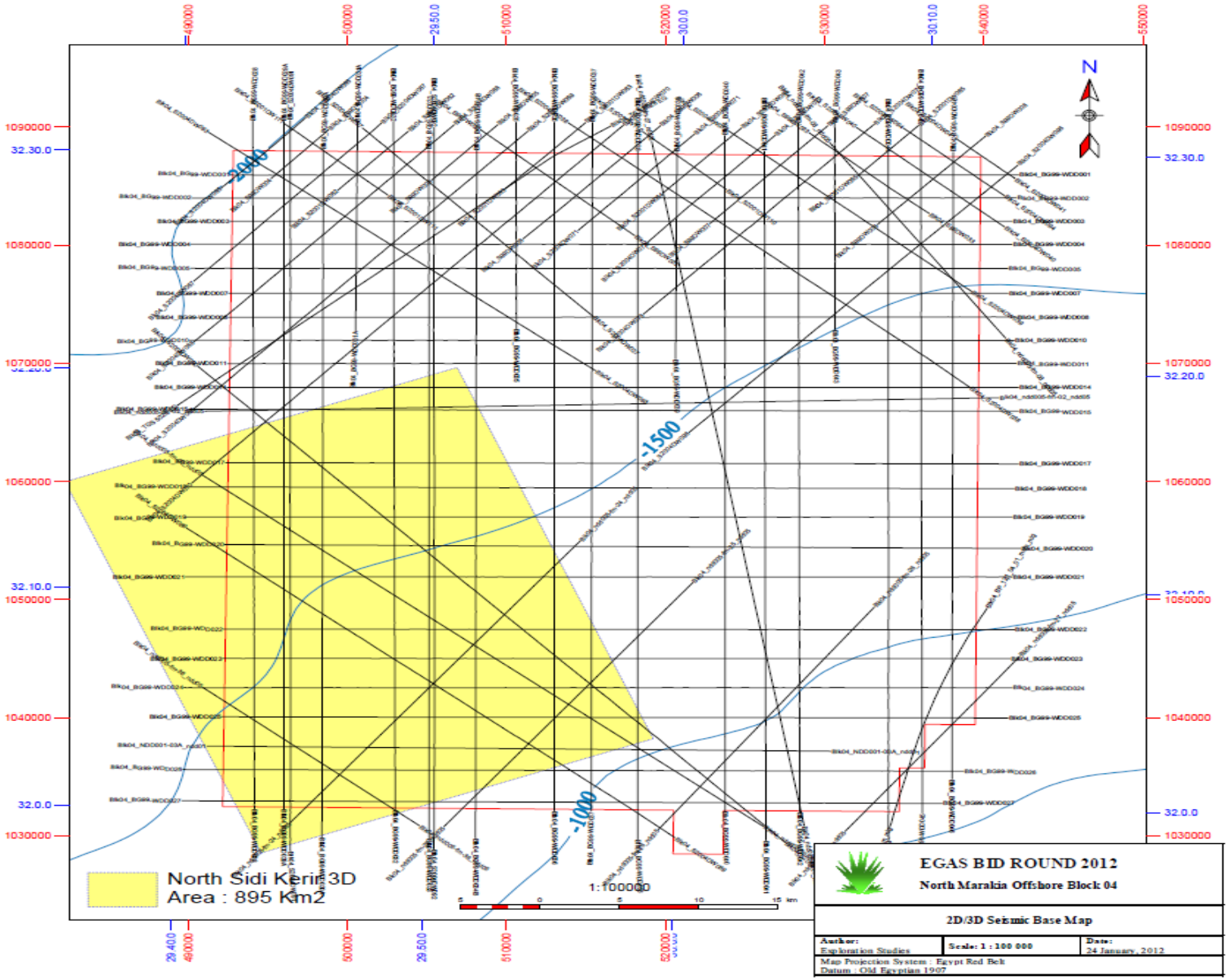
A) "2D" SEISMIC DATA (Segy Standard Format)

Survey Name	Digital 2D Data (Km)	No. of Seismic lines
BG99-WDD	2051	41
BP Geostreamer	20	1
bp NDO	330	10
S99DW	72	7
S2001DW	49	6
S2004DW	556	20
TGS	36	1
TOTAL	3114	86

B) "3D" SEISMIC DATA (Segy Standard Format)

Survey Name	Total Selected Sq. Km	Remarks
N. SIDI KERIR	895 Km^2	BG

Block 4
N. Marakia offshore



Block 4
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PRICE LIST							
Block No.	Block Name	Area (Km^2)	Principal Data Package			3D Surveys	
			2D Total Line Km	Drilled Wells	Price US$	3D Survey Km^2	Price US$
4	N. Marakia Offshore	2600	3114	-	112030	895 (N. Sidi Kerir)	492350

- 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

PROSPECTIVITY

Plio-Pleistocene Play Concept:

This play was successfully explored in the adjacent development lease and discovered as gas bearing sand in submarine channel complex.

Reservoir:

The slope channel consists of turbidite sands in the most discoveries gas nearby the block.

Source:

The Plio-Pleistocene sediments provide an excellent source for biogenic gas.

Sealing:

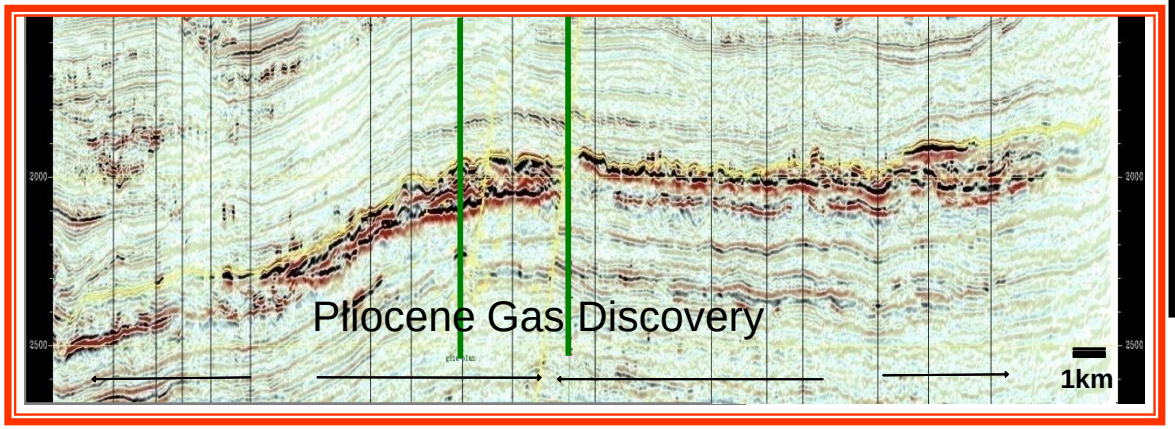
The massive shales act as a good seal in the vicinity of the block.

Trapping:

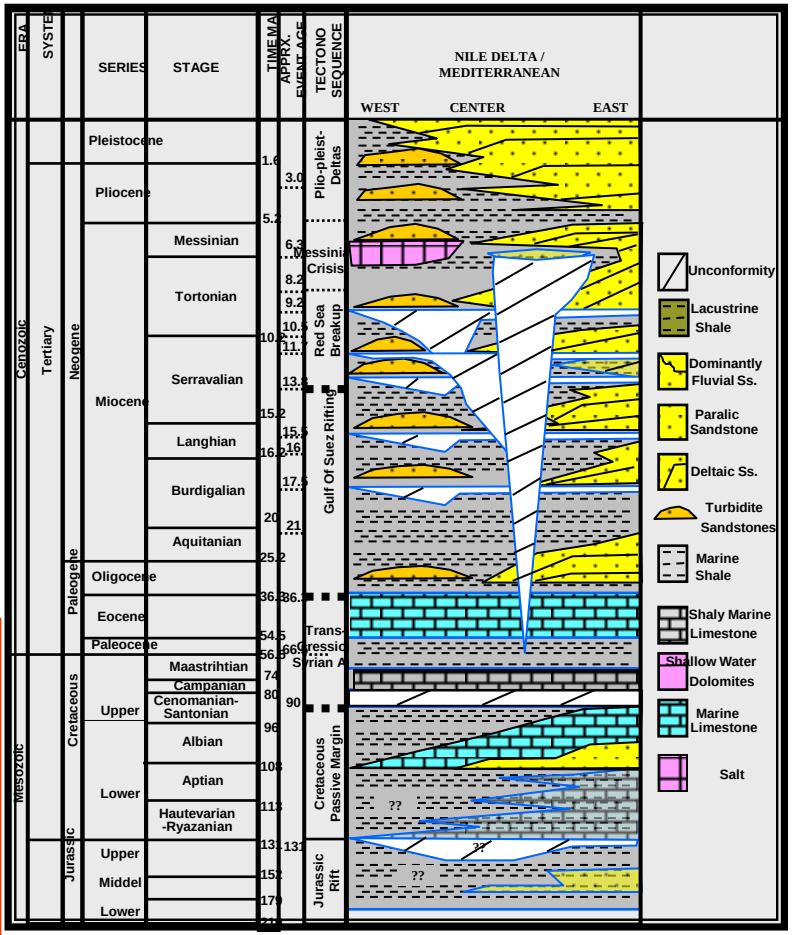
Stratigraphic traps are predominant with subsequent structural trap.

Charge:

It is highly anticipated that the reservoirs in the Plio-Pleistocene play is charged directly from the shale deposited which acting as a good source rock.



GENERALIZED STRATIGRAPHIC COLUMN



PROSPECTIVITY

Messinian Play Concept:

This play is represented by Abu Madi channel which has deposited in deltaic/shallow marine environment just after the end of the Messinian salt crisis.

Source:

The terrestrial and marine deposits developed during Oligocene-Miocene time are considered the main source rocks.

Reservoir:

The reservoir was deposited in channel/levee environment which significally encountered below the Rosetta anhydrite as hydrocarbon bearing sand in La 52-1 well drilled by Shell and El King-1 well drilled by Apache.

Trapping:

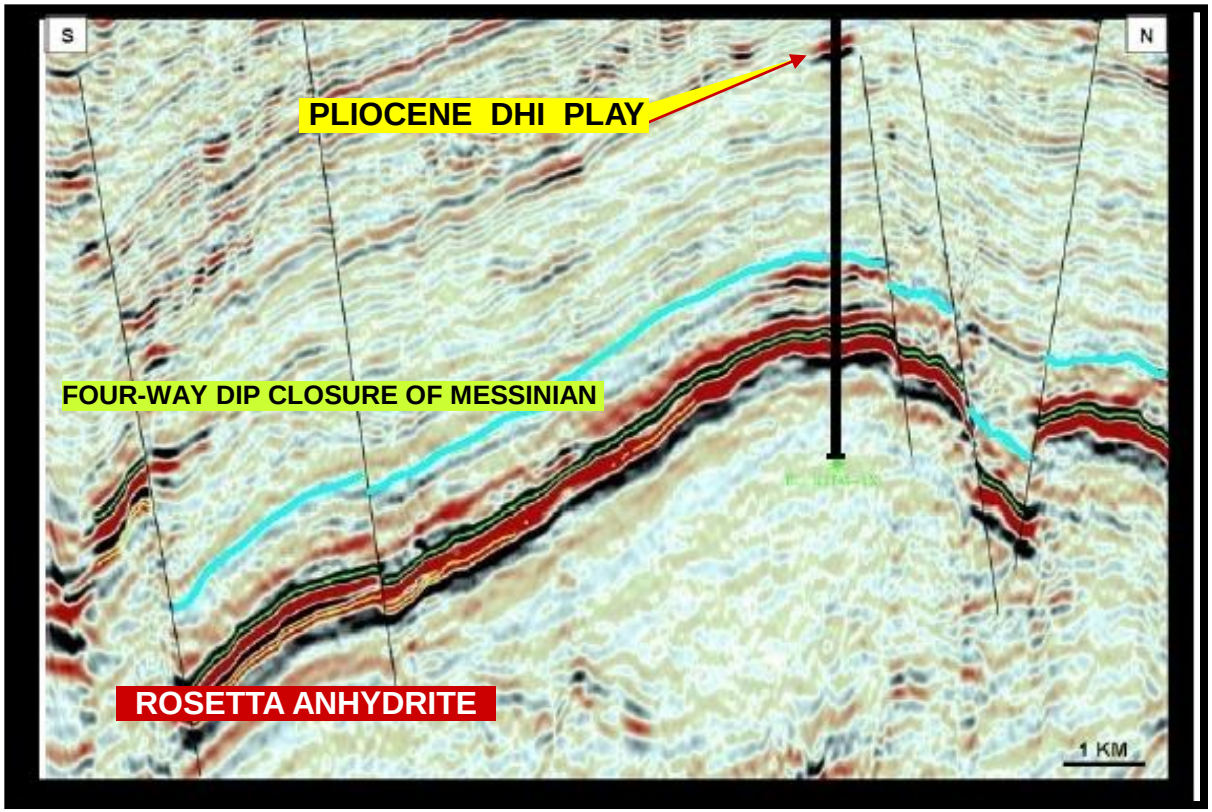
Structural traps in the form of rotated fault blocks and four ways dip closure.

Sealing:

Thick shale bodies and Rosetta anhydrite act as a good seal.

Charging:

It is carried out through deep seated faults.



Serravallian Play Concept:

This play is successfully discovered in the nearby development lease by Taurus Deep well in the Serravallian channel, which means that this play is still promising and required more exploration efforts.

Reservoir:

Reservoir sands are thought that it deposited in shallow marine environment and most likely occur at numerous intervals.

Source:

The source rocks are Oligocene-Miocene sediments similar to that sources the numerous thermogenic offset development lease.

Sealing:

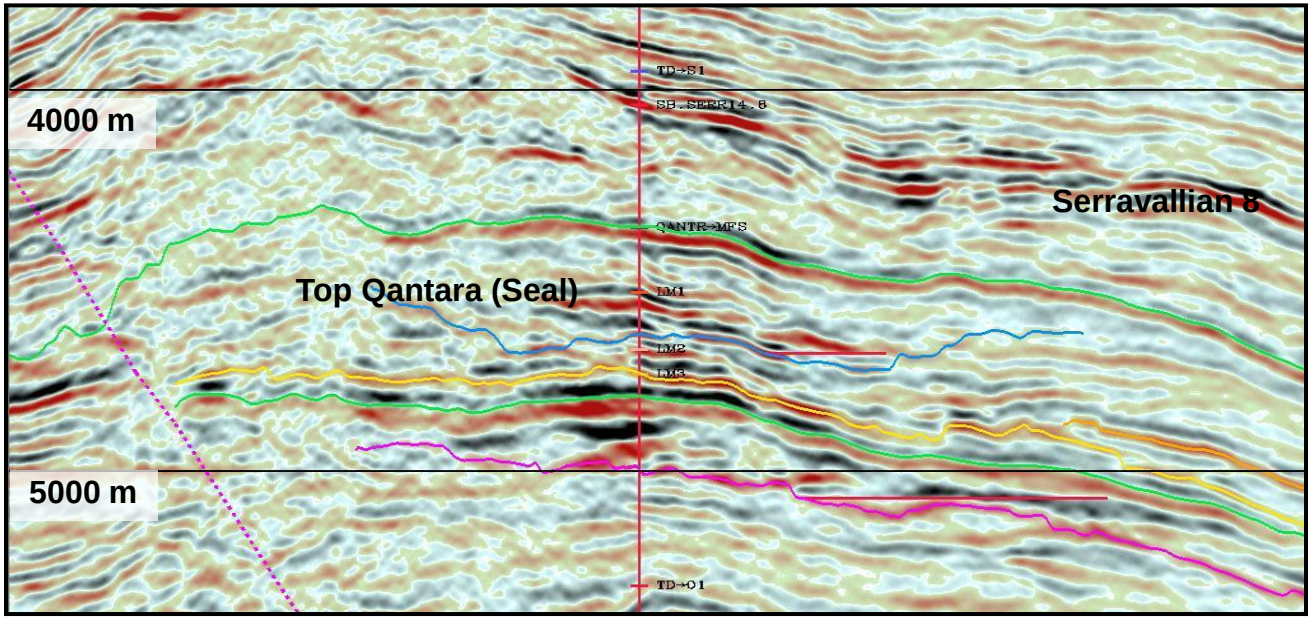
Inter-formational and basal Pliocene shales act as a good seal.

Trapping:

Combination of structural and stratigraphic traps.

Charge:

It is expected that it carried out from the underlying Oligocene-Miocene deposits.



Serravallian

Gas Discovery

PROSPECTIVITY

Langhian / Burdigalian Play Concept:

This play is represented by slope channel system prove up commercial gas volumes in the lower Miocene target. This target successfully penetrated in Alex development Lease by Raven-1 well and in El Burullus Concession by Rahamat-1 well as gas and condensates bearing sand.

Source :

A regional geological study carried out in the area indicates that the Oligocene and Early Miocene sediments are the main sources for the hydrocarbon generation. The expected hydrocarbon type is wet gas in this target.

Reservoir:

The reservoirs are well developed and successfully discovered as gas bearing sand in the nearby discoveries (Raven-1 and Rahamat-1 wells).

Trapping:

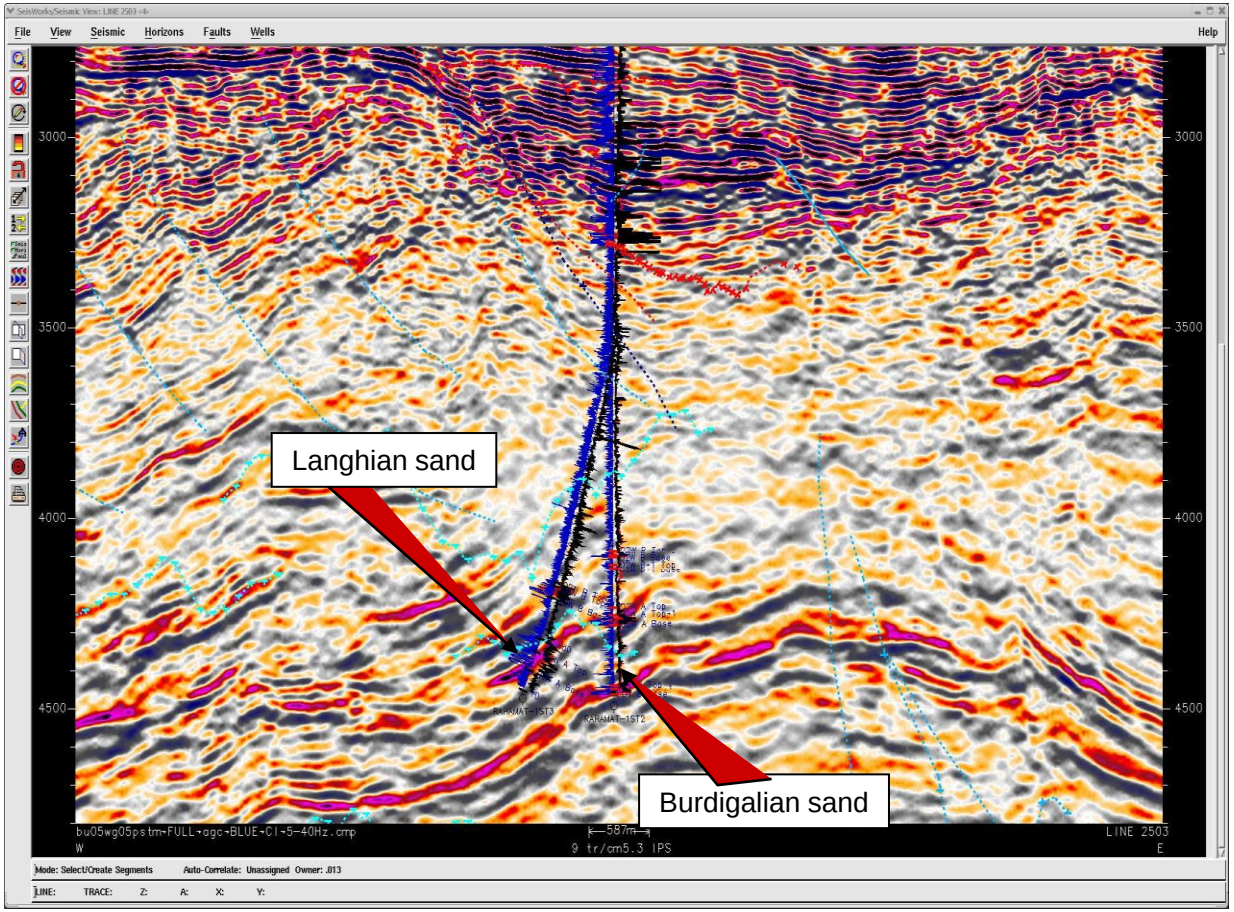
Structural with large and gentle closure, possible stratigraphic trap might allow the hydrocarbon to be present also below the structural traps since the reservoir distribution is clearly present on the plane.

Sealing:

Serravalian and Tortonian shales are very efficient seals.

Charge:

It is highly anticipated that ,charging is carried out directly from the underlying source rocks and by deep-seated normal faults.



PROSPECTIVITY

Oligocene Play Concept :

The Oligocene channel systems are very promising as hydrocarbon potential in the Mediterranean province where it is successes as oil bearing sand as in Thineh-1 well and gas bearing sand as in WMDW , PFMD-1 and Satis-1 wells.

Source :

Early Tertiary sequence are considered the main thermogenic source rocks for the Oligocene reservoirs and these confirmed by the discovered wells that penetrated the Oligocene sequence.

Reservoir:

Oligocene sand was deposited in a series of turbidities channel sand with high reservoir quality and easily recognized on the seismic sections by strong amplitude anomaly.

Trapping:

Most of the Oligocene discoveries are trapped in the anticlinal structure form four-way dip closure.

Sealing:

Sealing capacity is confirmed by thick section of shale deposits.

Charging:

Charging is carried out directly from the underlying source rocks and by deep-seated faults.