



**ANPG**

Agência Nacional de Petróleo,  
Gás e Biocombustíveis

ANGOLA: OIL AND GAS  
POTENCIAL AND  
**BUSINESS  
OPPORTUNITIES  
FOR INVESTORS**

B R O C H U R E

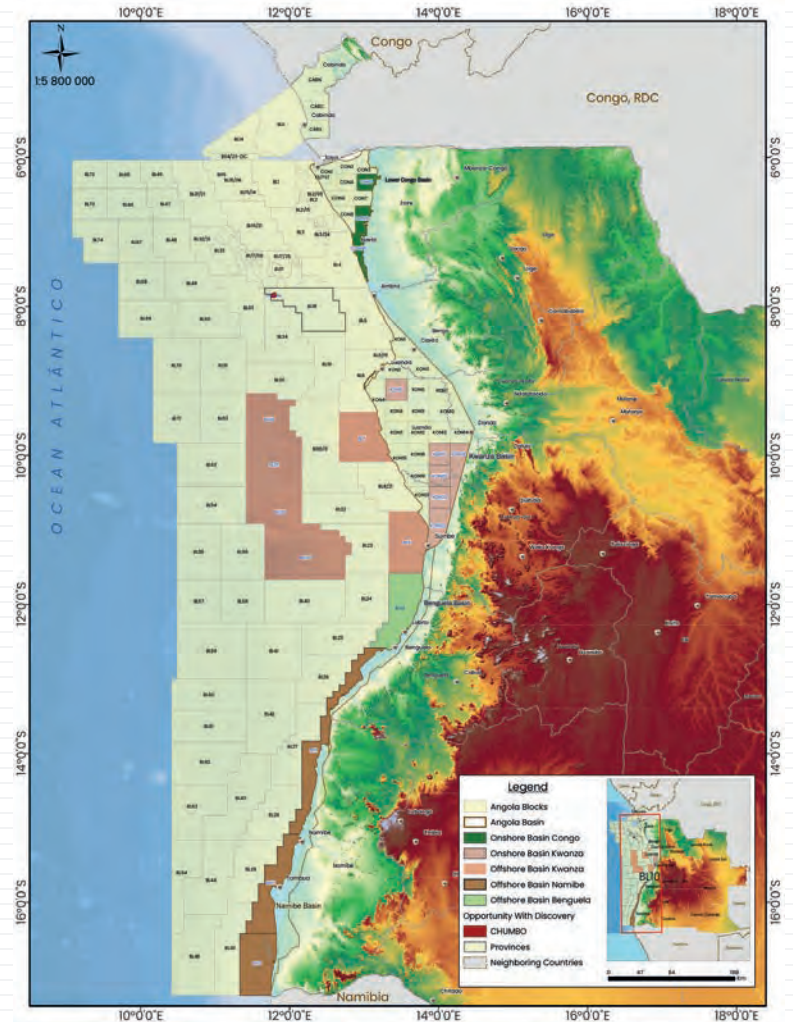
# INTRODUCTION

This document aims to present the petroleum potential of a portfolio of 20 blocks currently available for promotion and investment, located in the onshore Lower Congo and Kwanza basins, as well as in the offshore Congo, Kwanza, Benguela, and Namibe basins. It highlights their key geological characteristics, current exploration status, and associated opportunities.

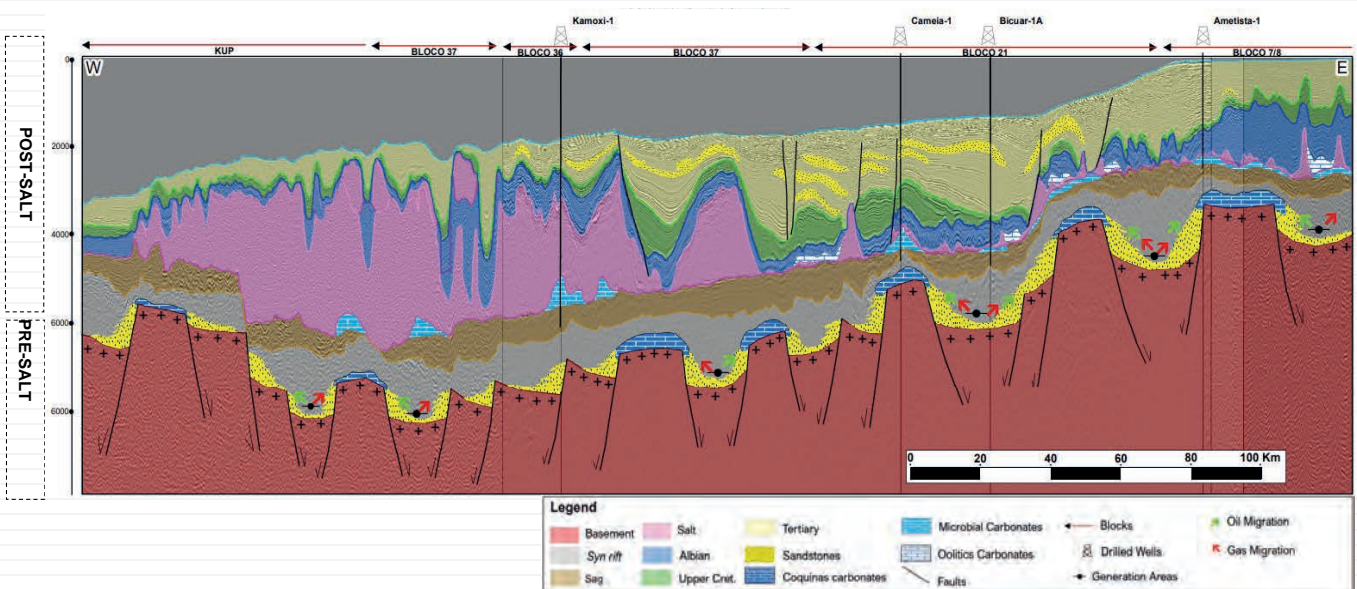
Angola benefits from a proven, robust, and highly productive petroleum system, supported by multiple sedimentary basins with a strong track record of significant discoveries and substantial potential for additional hydrocarbon resources. In this context, the availability of these blocks represents a strategic opportunity to accelerate exploration activities, attract quality investment, and support the sustainable development of the national energy sector.

This document outlines the key attributes of each block, including location, geological setting, level of exploration maturity, and the main elements underpinning their petroleum prospectivity. The objective is to provide a structured and integrated view of each area's potential, supporting the technical assessment process of prospective investors and strategic partners.

As such, this material is intended to serve as a strategic promotional tool, showcasing the exploration potential of these assets while reinforcing the ongoing commitment to the development and valorization of Angola's hydrocarbon resources.



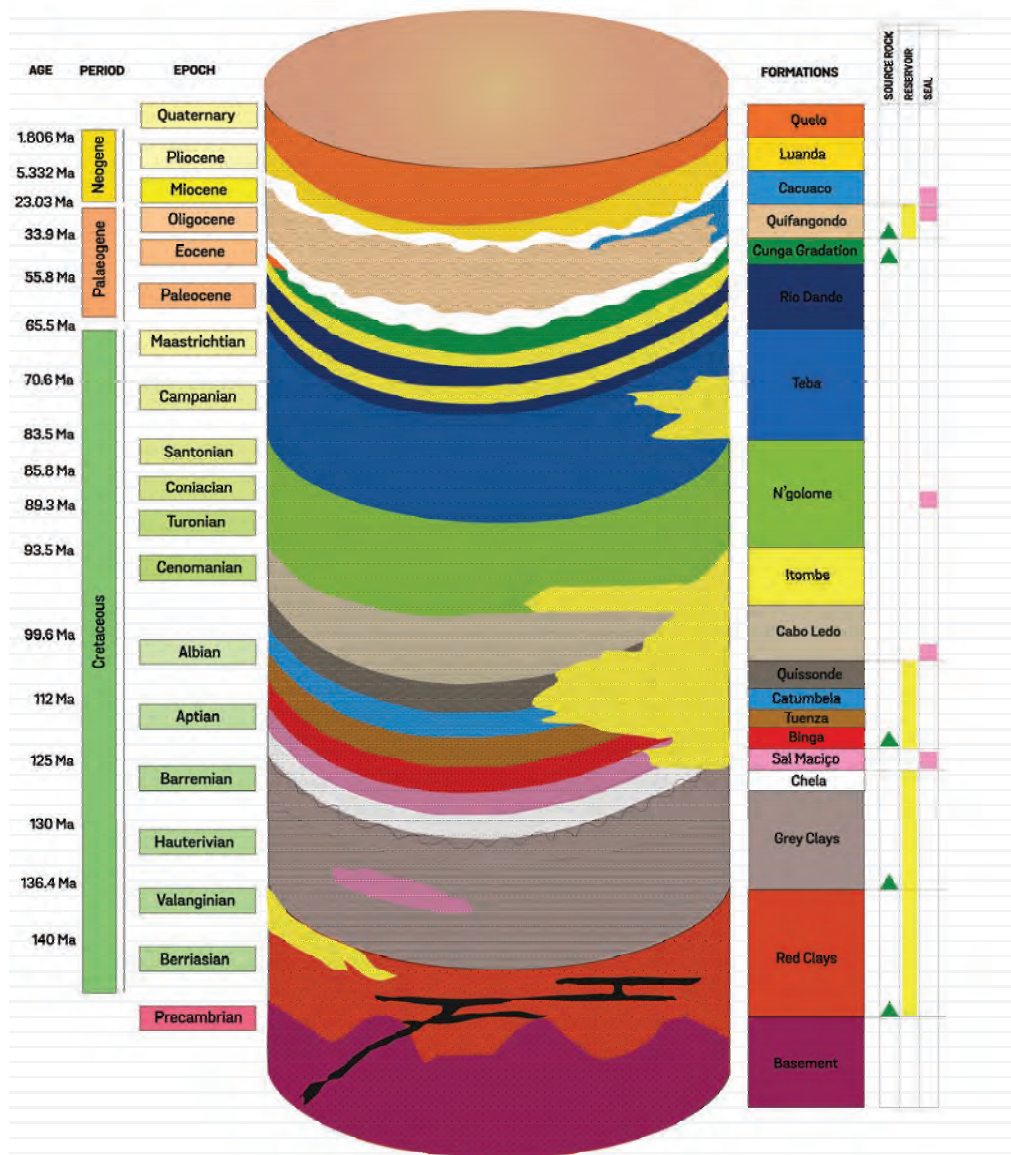
## GEOLOGICAL AND STRUCTURAL MODEL



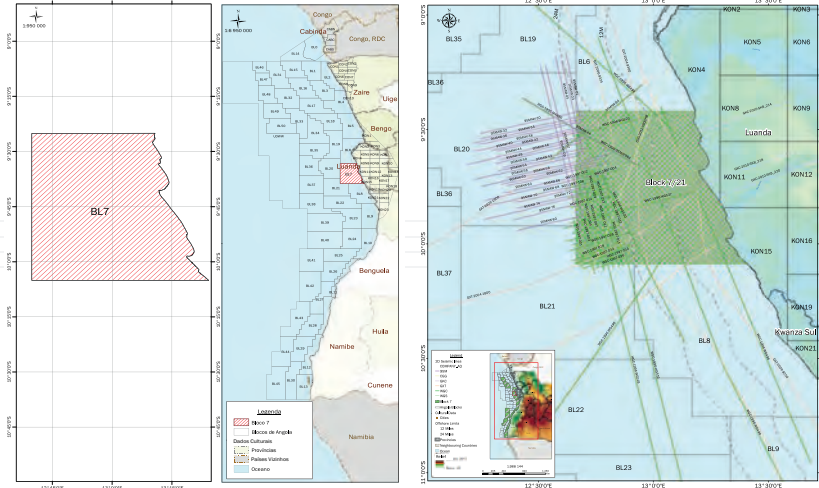
The pre-salt unit is structurally characterized by faults eradicated in the basement, giving rise to horsts and grabens, i.e. structural highs and lows that constitute the primary hydrocarbon generation and accumulation zones. At the bottom of the grabens, fine materials rich in organic matter were deposited. This organic-rich material, which constitutes the source rock of the Cuvo Formation, is crucial for understanding the hydrocarbon generation process. It feeds the sandstone reservoirs deposited on the flank of the Horsts, equivalent to the Lucula Formation, and the carbonates at the top of the Horsts, equivalent to the Toca Formation, both in the Lower Congo. At the top of this sequence, a sag-type basin has formed where we find sandstones and microbiolites carbonates from the Cuvo Cinzento Formation. This sequence culminates in the deposition of the Sal Maciço Formation, which acts as a regional seal for the pre-salt unit and structures the post-salt.

Syn-depositional normal faults with listric tailings structurally characterize the post-Salt. As a result of salt tectonics, salt diapirs and raft and anticlinal structures were formed, the latter being the main hydrocarbon traps in the Albian. The Binga Formation is the main generator, feeding the oolitic limestone reservoirs of the same Formation and, as cover rock, the intraformational clays of the same Formation. In the Upper Cretaceous, we have the clays of the Cabo Ledo Formation as the source rock, the sands of the Itombe and Teba Formations as reservoirs, the clays of the upper Itombe Formation and the clays of the upper Teba Formation as the seal. In the Tertiary, the clays and marls of the Cunga-gratitude Formation and the Quifangondo Formation, with their crucial role, act as the source rock, the sandstone channels of the Quifangondo Formation as the reservoir and the clays of the same formation as the seal.

## PETROLEUM SYSTEM



# BLOCK 7/21

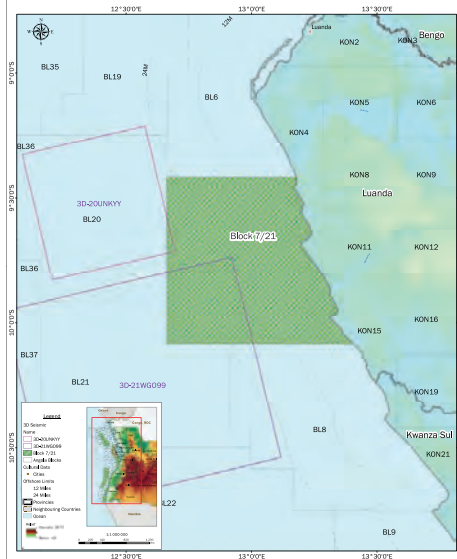


## LOCATION

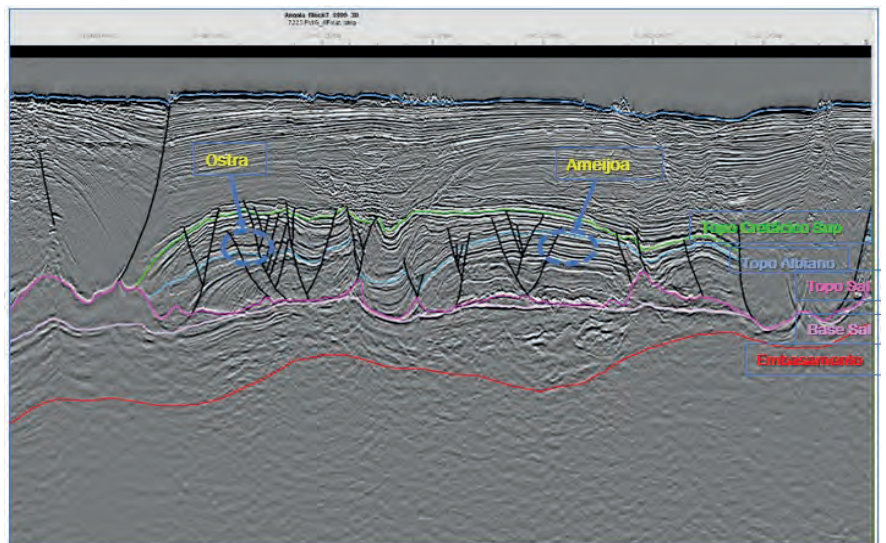
Located in the shallow water of the Kwanza Basin, being limited to the North by Block 6, to the South by Block 8, to the East by the onshore portion of the Luanda and to the West by Blocks 20 and 21, with a geographical area of 4 849 Km<sup>2</sup> and a water depth from 200 to 800 m deep.

Block 7 as a shallow water of the Kwanza Basin has its sedimentary history characterized by paleoambiental variations between continental, transitional and marine ambients, in which two (2) lithostratigraphic units stand out.

- Pre-Salt Unit;
- Post-Salt Uni.

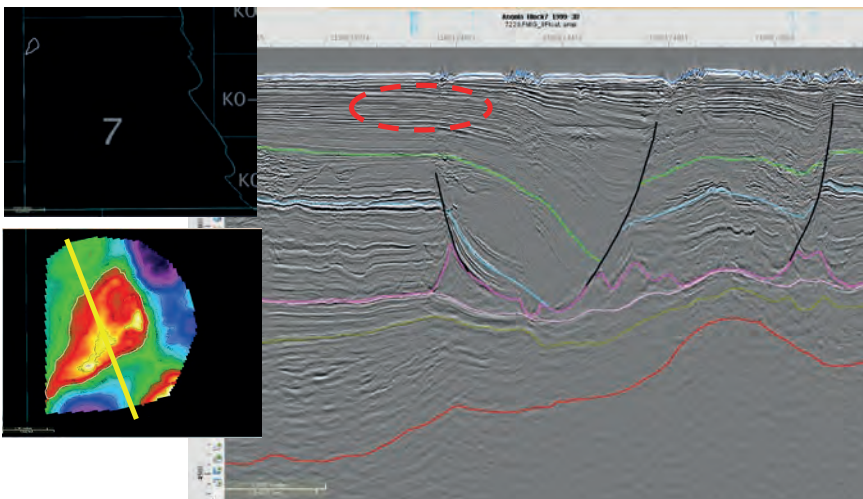


## OPPORTUNITIES



## Other Opportunities

This Lead L is a 4-way closure at the pre-Salt level in the northern part of Block 7, targeting the sag microbials and having the shales of the Cuvó Formation as the source rock.

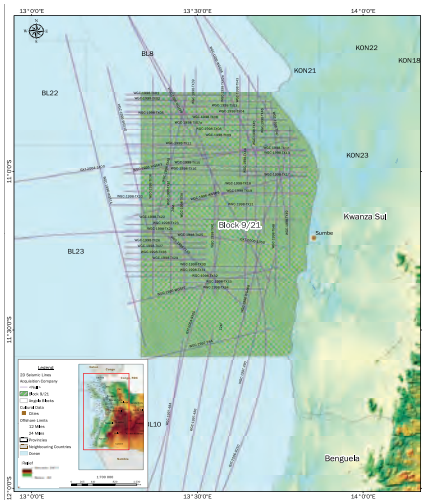
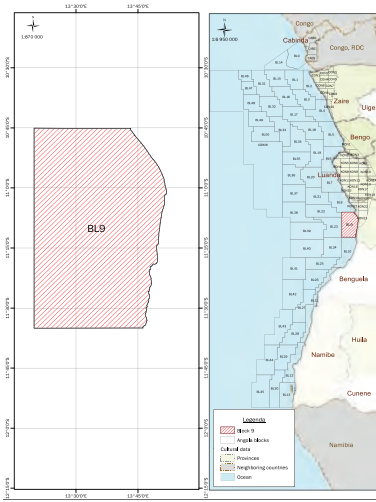


## Matured Prospects

Regarding to the prospects, 6 were identified, as shown in Figure 8, namely:

- AMÉIJOA
- AMÉIJOA WEST
- BERBIGÃO
- BERBIGÃO NORTH
- OSTRÁ
- PERBIGAM

# BLOCK 9/21

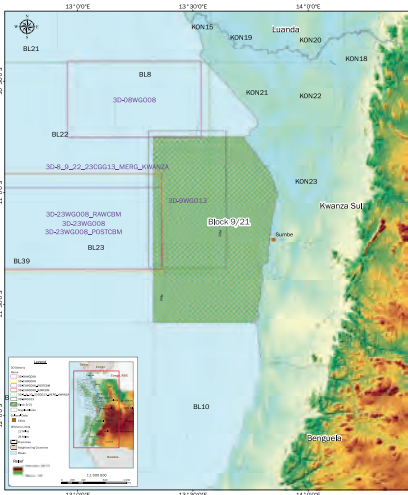


## LOCATION

Located Offshore Kwanza Basin, limited to the North by Blocks 8 and 22, to the South by Block 10, to the East by Blocks KON 21 and KON 23 and to the West by Block 23, in an area of approximately 4 001,36 km<sup>2</sup> where the water depth ranges from 0 to 1 000 m.

Block 9 is part of the shallow waters of the Kwanza Basin and its sedimentary history is characterized by paleoenvironmental variations between continental, transitional and marine environments, in which two (2) lithostratigraphic units are evident.

- Pre-Salt Unit;
- Post-Salt Unit.



Exploration activities have started in 1980-1983 by CITIES SERVICE. In 03/11/1998 the concession was granted to a new contractor group formed by the Operator TEXACO (40%), MOBIL (35%), EAGLE ENERGY (15%) and NORSE HYDRO (10%). In 01/03/2010 the most recent contractor group led by COBALT (40%) in partnership with SONANGOL P&P (20% carry), NAZAKI (30%) and ALPER (10%) was created.

During the exploration phase 5 570 km<sup>2</sup> 2D and 2 602 km<sup>2</sup> 3D seismic were acquired. From 1982 to 1983 CITIES SERVICE drilled Múcuá-1, Maboque-1, Abacaxi-1, Dendén-1 and Pitanga-1 wells, all with oil shows. After the DST, Dendén-1 flow of 780 bopd. In 1998, TEXACO reprocessed 3 740 km high resolution 2D seismic leading to a good correlation with 3D seismic data.

As a result of the 3D seismic acquisition, processing and interpretation, 8 (eight) leads were identified with estimated resources of 1 471,3 MMBO STOOIP and 1 (one) prospect of 96 MMBO STOOIP.

## EXPLORATION OPPORTUNITIES

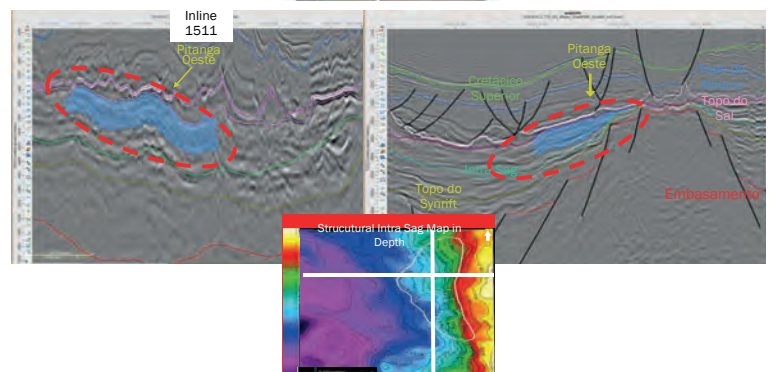
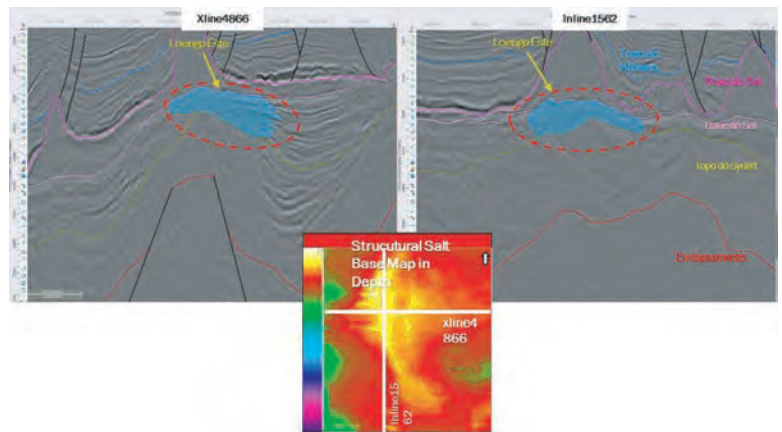
Following the 3D seismic acquisition, processing and interpretation, 3 prospects were identified, highlighting Loengo East with estimated resources of 96 MMBO STOOIP and 9 leads reaching up to 1 471,3 MMBO (STOOIP).

### LOENGO EAST PROSPECT

Within an area of 18 km<sup>2</sup>, it aims the pre-Salt lacustrine carbonates (coquinas) prograding to platform carbonates (sag) and presents a stratigraphic trap with a 3-way closure sealed by the intraformational shales of the Toca Formation.

### PITANGA WEST LEAD

It shows distinguished seismic facies at the edge of the platform in the Sag and Synrift sections and as source rocks Type I and III from lacustrine environments, sealed by the Salt (Loeme Formation) and the Aptian carbonates on a stratigraphic trap.



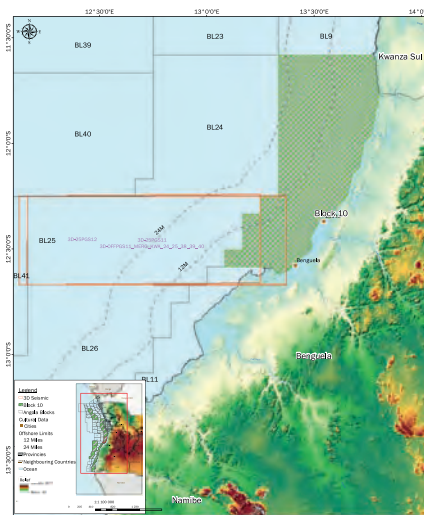
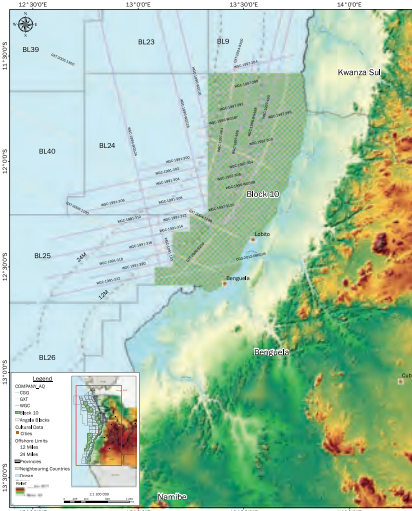
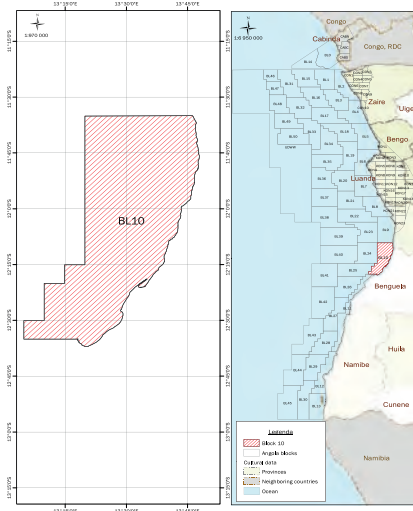
## BLOCK 10

### LOCATION

Located to the west of Angola in the Maritime Basin of Benguela, south of the Kwanza onshore basin, in shallow waters with a water depth ranging from 0 to 475 m and a total coverage of approximately 4,780.00 Km<sup>2</sup>.

Block 10 is flanked by:

- North by Block 9;
- South through Block 11;
- East by the Province of Benguela;
- West through Blocks 24 and 25.

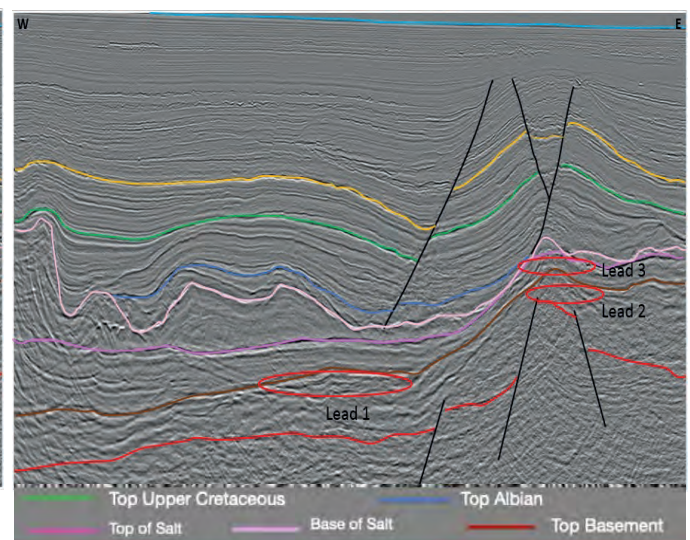
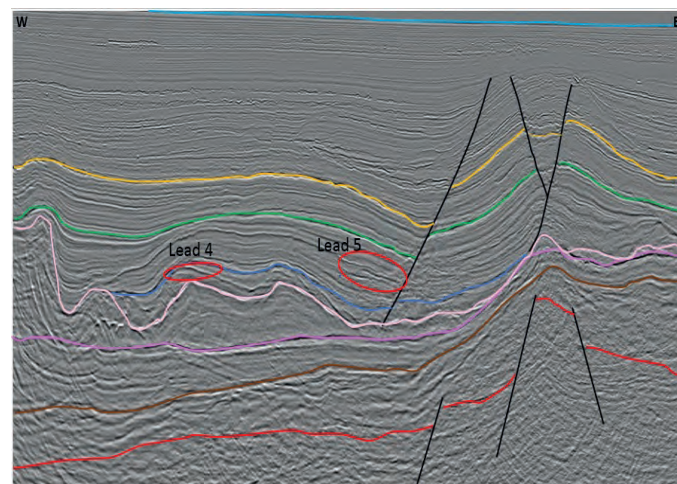


### IDENTIFIED LEADS

#### Leads 1, 2, 3 - Pre-Salt

Lead 1 is characterized by a stratigraphic trap in the Syn-rift section, consisting of a possible channel complexes, forming the sandstone reservoirs of the Lower Cuv Fm. (Lucula equivalent in the Congo Basin), while lead 2, consists of carbonates at the top of the horsts corresponding to Fm. Play equivalent. Lead 3 identified in the Sag section, is characterized by microbialitic carbonates, with structural closure within the salt base. The source rock at the pre-salt level is represented by the clays of the Red and Gray Cuvo Formations.

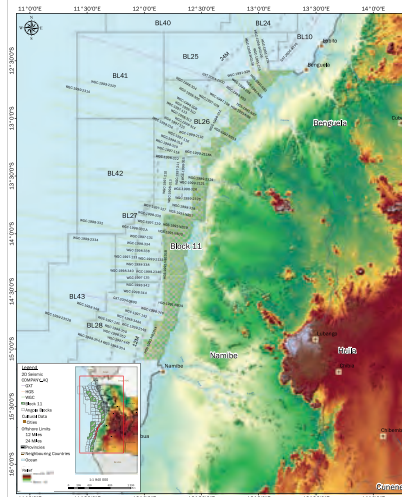
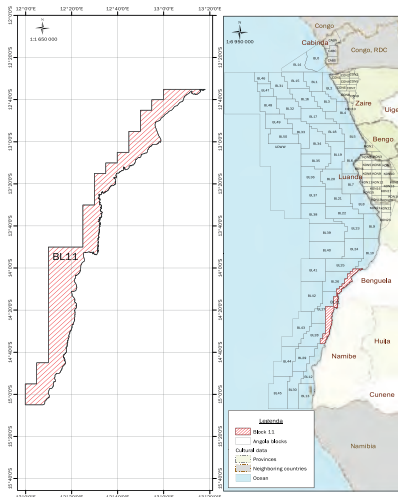
These reservoirs are sealed by the clays of the Quifangondo Fm. (Malemo Fm. Equivalent in the Congo Basin) and are charged by Aptian, Albian and Eocene



#### Leads 4, 5 - Post-Salt

Lead 4 is characterized by an anticlinal structure, possibly constituted by carbonates, located in the post-saliferous section at the Albian level, representing a potential reservoir in this play. Lead 5 is probably composed of arenitic reservoirs that act as injectites sealed by a growth fault with a lithic waste at Turonian level and clays overlying the structure. The hydrocarbon in these reservoirs may have been generated in the Albian and in the structural lows of the pre-salt section.

# BLOCK 11



## LOCATION

Located in the west of Angola, precisely in the Namibe maritime basin, in shallow waters and with a water depth that varies between 0 and 450 m and a total coverage of approximately 5,074.00 Km<sup>2</sup>.

Block 11 is flanked by:

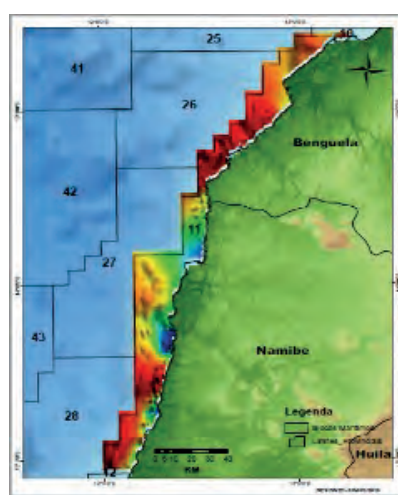
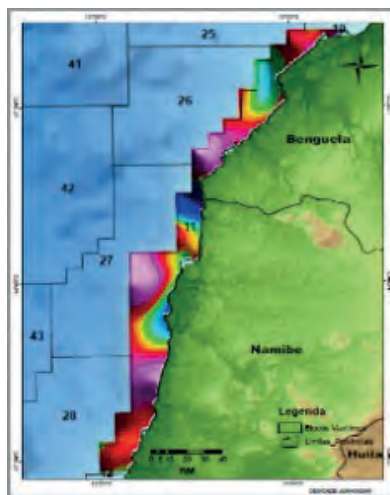
- To the north by Block 10;
- South through Block 12;
- To the East by the Namibe and
- Benguela Basins;
- West through Blocks 26, 27 and 28

Block 11 has a 2D seismic coverage of approximately 16,495.27 Km, totaling 154 lines.

The main tectonic-sedimentary events were observed in outcrop, magnetometry, gravimetry and seismic data, which allowed us to infer about the structuring and sedimentation of the block, the latter being from the Lower Cretaceous to the recent period, which can be divided into sequences of the Pre and Post-Salt.

In Block 11 we can clearly identify the various structural styles characteristic of our bank basins.

At the pre-salt level, the geological structures are influenced by the rifting of the basin that gave rise to the formation of highs and lows, located in the distal zone of the Block. Due to its configuration, it is believed that the possible source rock was deposited in the structural lows of the adjacent blocks. Reservoir rocks are located on the flanks and heights of the basement.



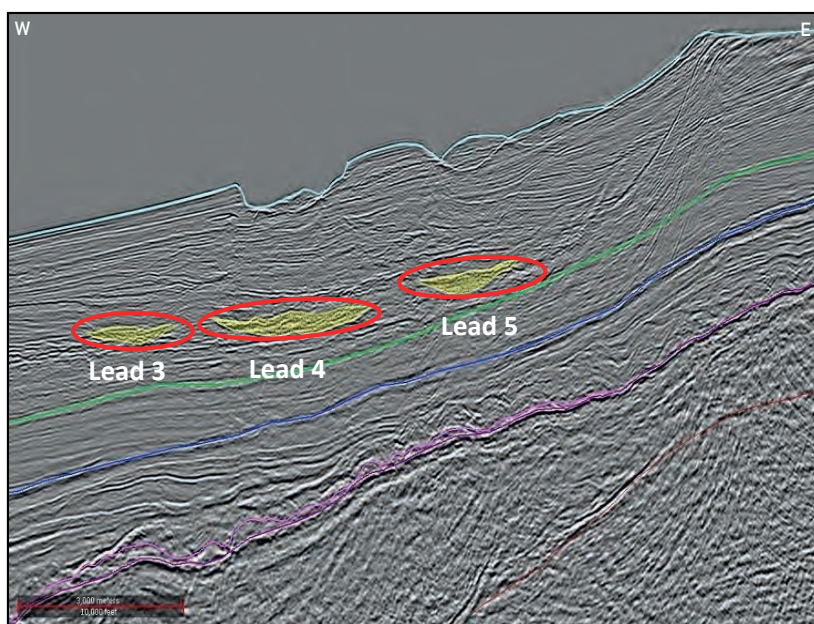
## IDENTIFIED LEADS

### Lead 1, 2 - Pre -Salt (Sag & Syn-rift)

Lead 1 is composed of Sag sediments that target a possible reservoir characterized by microbiolite carbonates formed on top of a basement high, which is sealed by the salt and a possible four-way closure. The second lead is a Syn-Rift, formed by carbonates. The possible source rock are the clay facies equivalent to Fm. Cuvo.

### Lead 3, 4, 5 - Post-Sal (Tertiary)

These Leads are characterized by turbiditic channels intercalated with clays with charging potential equivalent to the Malembo and Quifangondo formation in the Congo and Kwanza basin as well as clays equivalent to the Iabe formation in the Upper Cretaceous. According to field camp studies result, sand reservoirs with good properties are expected in this zone.



## BLOCK 12

### LOCATION

Located west of Angola in the Namibe maritime basin, in shallow waters with a water depth that varies between 0 and 450 m and a total coverage of approximately 4,218.94 Km<sup>2</sup>.

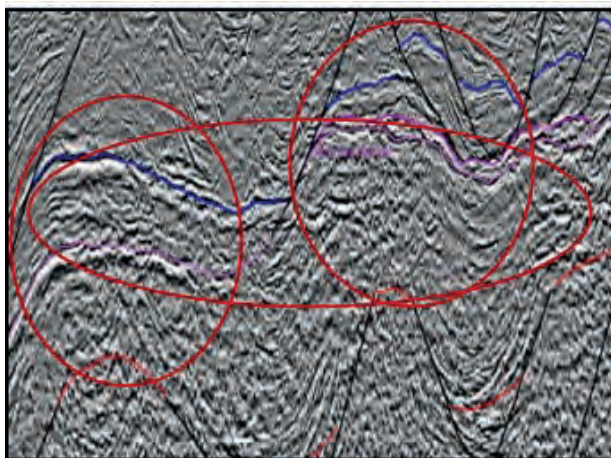
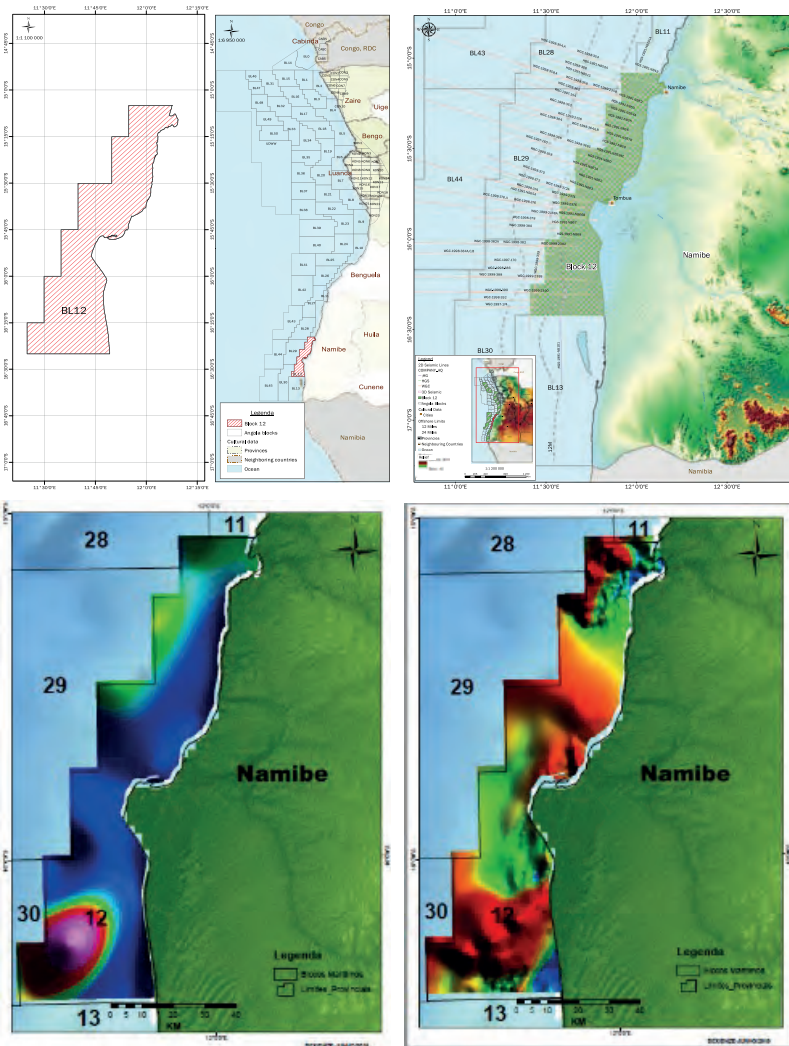
Block 12 is flanked by:

- North by Block 11;
- South through Block 13;
- To the east by the Onshore
- Namibe Basin;
- West through Blocks 29 and 30.

Block 12 has a 2D seismic coverage of approximately 3,348.85 km, totaling 54 lines. This Block presents the following characteristics visible from the seismic: A reasonable thickness of sediments in the pre-salt, considering that it is a block located in shallow waters, where the accommodation space is smaller. It is believed that in the case of generation at this level, it must occur in adjacent blocks to the West of the Basin.

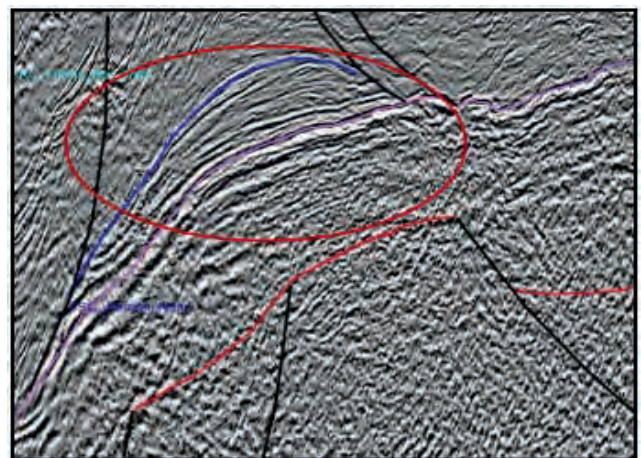
The post-salt was moderately affected by salt tectonics, in which growth failures with stripe tailings are visible, giving rise to raft-shaped structures possibly made up of carbonates at the Albian level.

Possible turbidite channels in the tertiary are also observed.



**Lead 1 - Pre- & Post-Salt (Sag & Albian)**

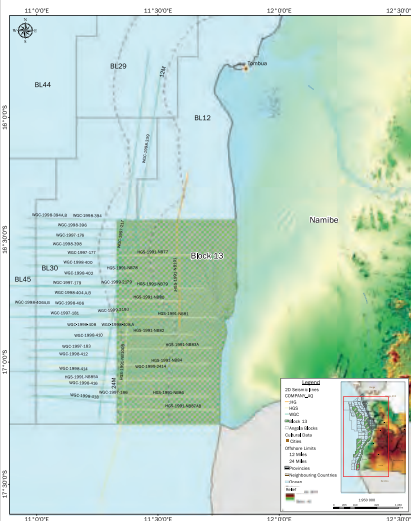
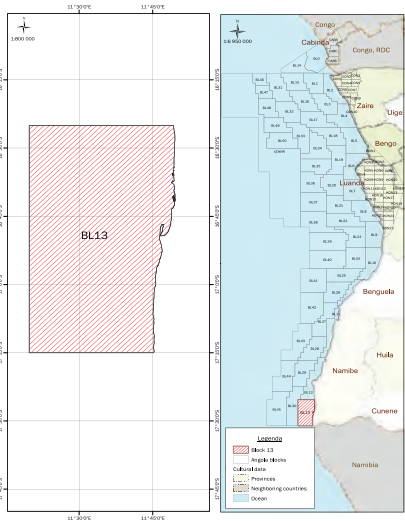
Lead 1 comprises Sag and Albian sediments. The first target is characterized by a possible reservoir consisting of microbialithic carbonates formed in a basement high, having the salt as seal and a possible four-way closure. The second lead is a rollover structure formed due to the salt tectonics. The possible source rock is the clay facies equivalent to the Cuvo and Pinda Fm.



**Leads 2 - Post-Salt (Albian)**

Lead 2 is possibly characterized by mound-shaped carbonates from the Albian, targeting excellent reservoirs confirmed by oolitic carbonates samples collected in the field. A possible hydrocarbon-source rock are the clay facies of the Cuvo and Pinda Equivalent Formations.

# BLOCK 13



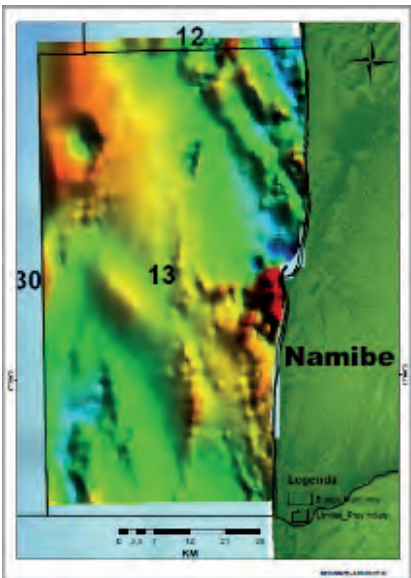
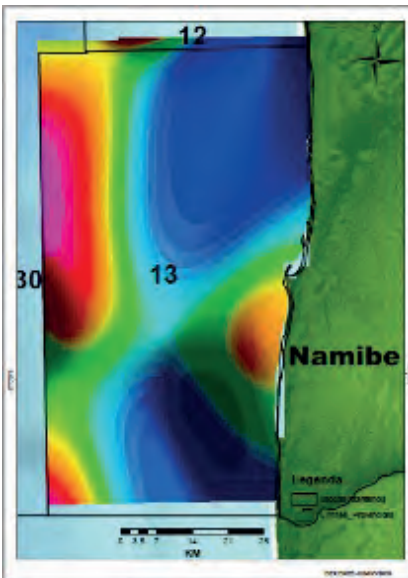
## LOCATION

Located to the west of Angola in the Maritime Basin of Benguela, south of the Kwanza onshore basin, in shallow waters with a water depth ranging from 0 to 475 m and a total coverage of approximately 4,780.00 Km<sup>2</sup>.

Block 10 is flanked by:

- North by Block 9;
- South through Block 11;
- East by the Province of Benguela;
- West through Blocks 24 and 25.

Block 13 has a 2D seismic coverage of approximately 1,900.10 km, totaling 31 lines.



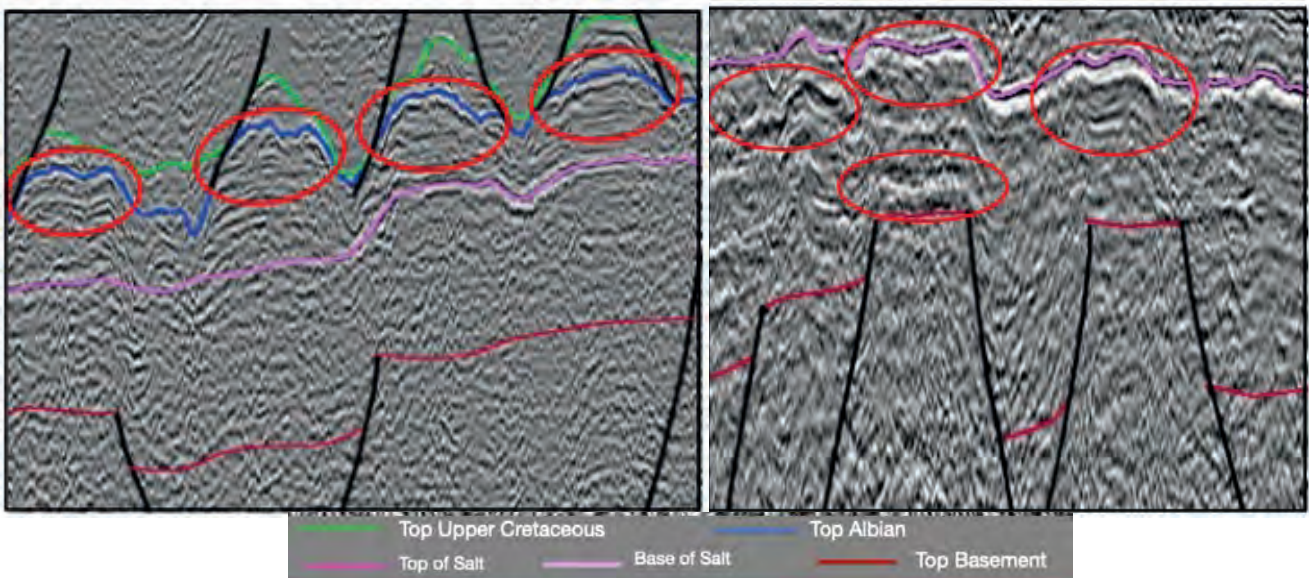
## Leads 1-4 - Pre-salt

Leads 1 to 4, possibly formed by Syn-rift and Sag lacustrine carbonates, coquinas and microlites as potential reservoir with well-defined closures. The structures are sealed by overlying clays and the Cuvo Fm. equivalent is the possible source rock in the Pre-salt.

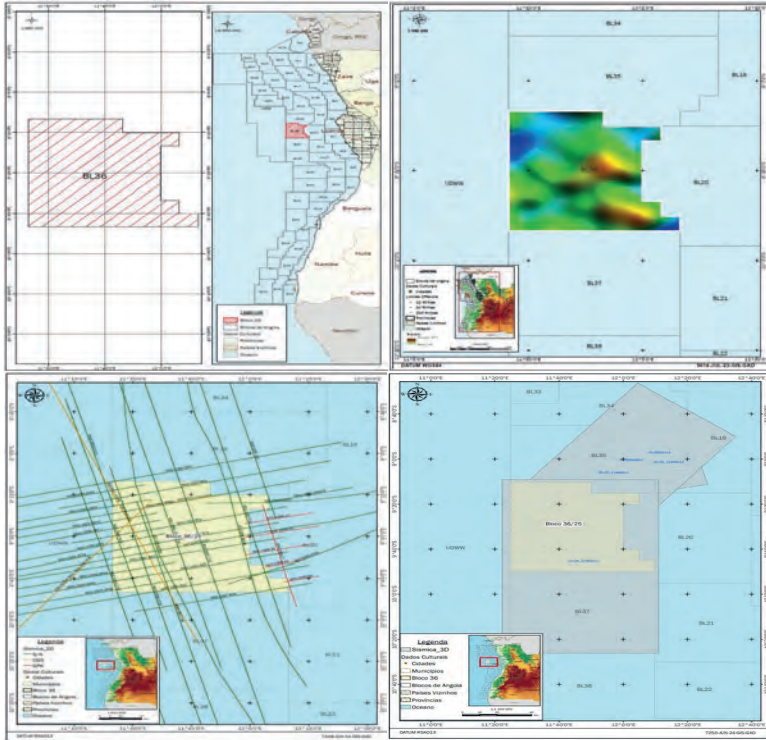
## Leads 1-4 - Post-salt

Leads 1 to 4, possibly formed by Syn-rift and Sag lacustrine carbonates, coquinas and microlites as potential reservoir with well-defined closures. The structures are sealed by overlying clays and the Cuvo Fm. equivalent is the possible source rock in the Pre-salt.

## IDENTIFIED LEADS



# BLOCK 36



## LOCATION

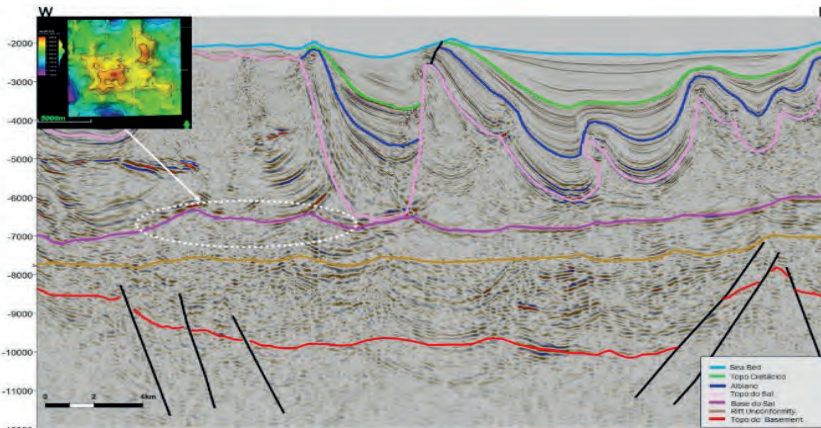
Located in the Offshore portion of the Kwanza Basin, on a sheet of water between 1200 and 2700 m deep, bordered to the north by Block 37, to the south by Block 39, to the east by Block 22 and to the west by the Atlantic Ocean.

Area: 4.876 Km<sup>2</sup>

## AVAILABLE DATA

1. 1992: Acquisition of 1.226 km of vintage 2D seismic by GECO;
2. 2012: Magnetometric and gravimetric survey by the company Fugro; acquisition of 14.588 Km<sup>2</sup> of multi-client 3D seismic by PGS;
3. 2014: Drilling of the Kamoxi-1 exploration well.

## OPPORTUNITIES

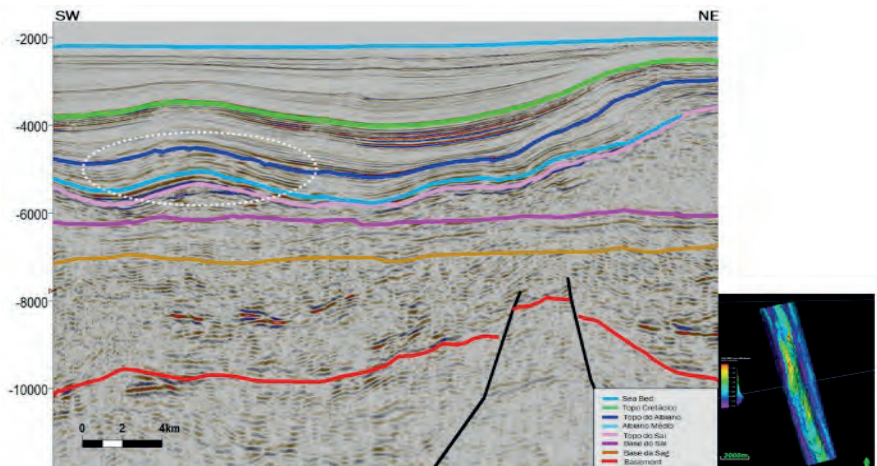


### LEAD UPPER SAG\_EL (WS1, L3)

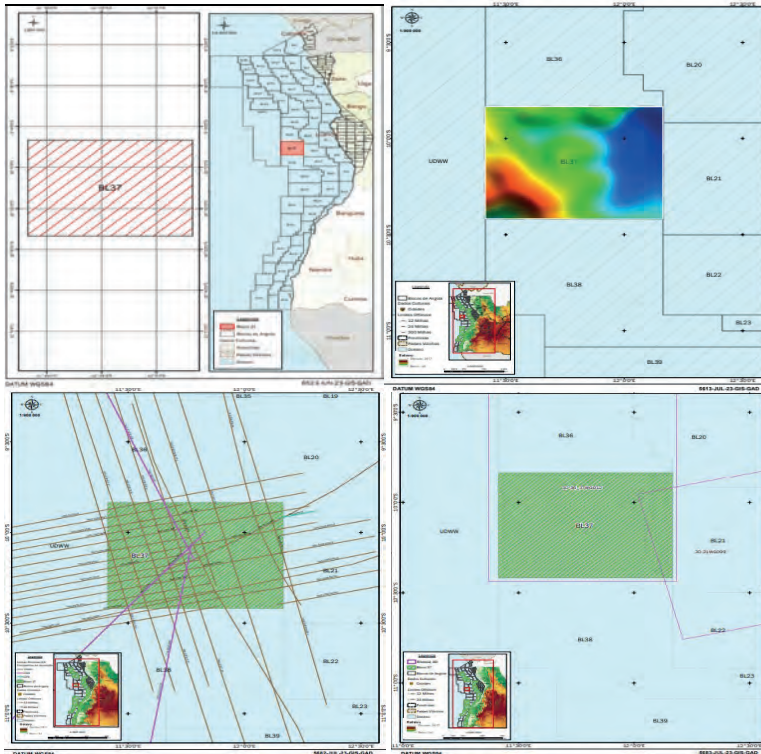
The structure features closure in all four directions at the Sag level in the Pre-salt. The clays of the Cuvo Formation serve as the generators, while the reservoirs comprise microbiolites, carbonates, buildups, and sandstones. As cover rock, the Evaporites of the Sal Maciço Formation act as an effective seal.

### LEAD ALBIAN\_STRAT\_EL (WS1, L1)

The structure features closure in all four directions at the Sag level in the Pre-salt. The clays of the Cuvo Formation serve as the generators, while the reservoirs comprise microbiolites, carbonates, buildups, and sandstones. As cover rock, the Evaporites of the Sal Maciço Formation act as an effective seal.



# BLOCK 37



## LOCATION

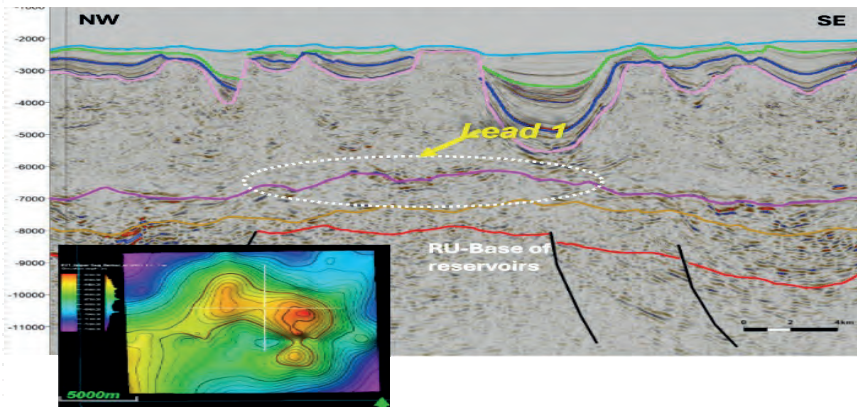
Located in the Offshore portion of the Kwanza Basin, it is bordered to the north by Block 36, to the south by Block 38, to the east by Blocks 20 and 21, and to the west by the Atlantic Ocean.

Area: 5.315,5 Km<sup>2</sup>

## AVAILABLE DATA

1. 1993: Acquisition of 1,226 Km of 2D seismic by WesternGeco;
2. 1999: Acquisition of 10,500 Km<sup>2</sup> of 3D seismic by WesternGeco;
3. 2012: Magnetometric and gravimetric survey by Fugro;
4. 2014 - 2015: Drilling of the Omosi-1 and Vali-1 exploration wells.

## OPPORTUNITIES

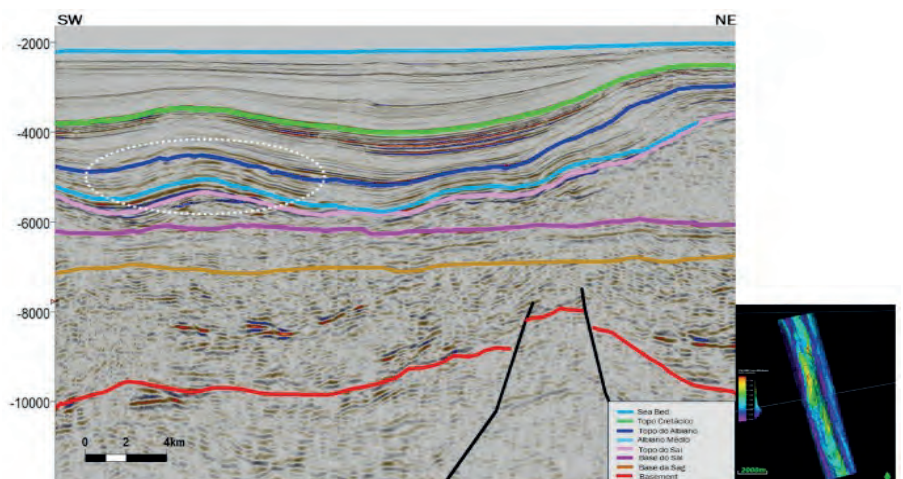


### LEAD UPPER SAG\_AC (WS3, L2)

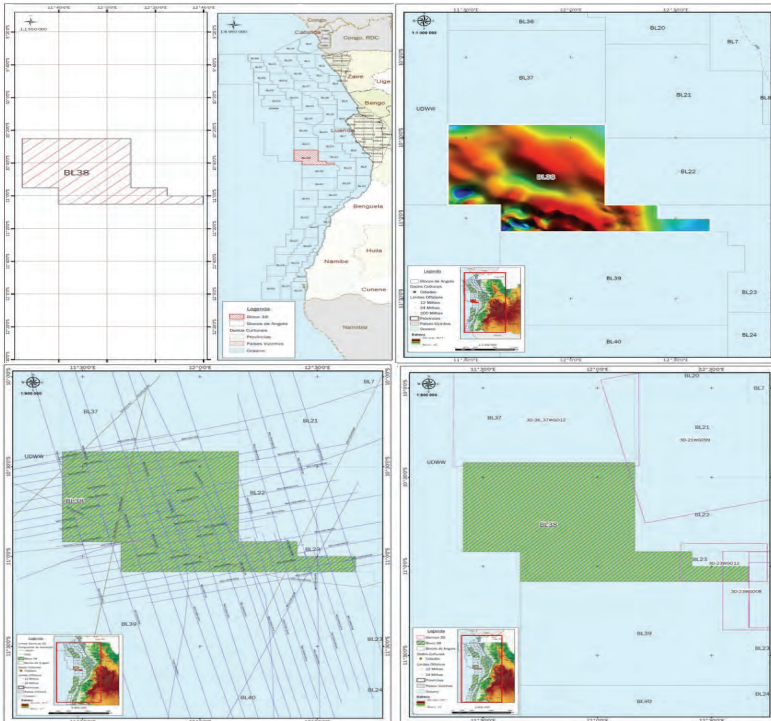
An anticlinal structure with closure in all four directions, at the Sag level in the Pre-salt, clays from the Cuvo Formation serve as the generators. The reservoirs are microbial carbonates, buildups, and sandstones, and the cover rock is Evaporites from the Sal Maciço Formation.

### LEAD MIOCENE COMBO GB (WS3, L1)

Structure at the Miocene level with closure in all four directions, the source rocks are the clays of the Binga and Cunga Gratidão Formations, the turbiditic channels as reservoirs, and the cover rock is the intraformational clays of the Quifangondo Formation.



## BLOCK 38



### LOCATION

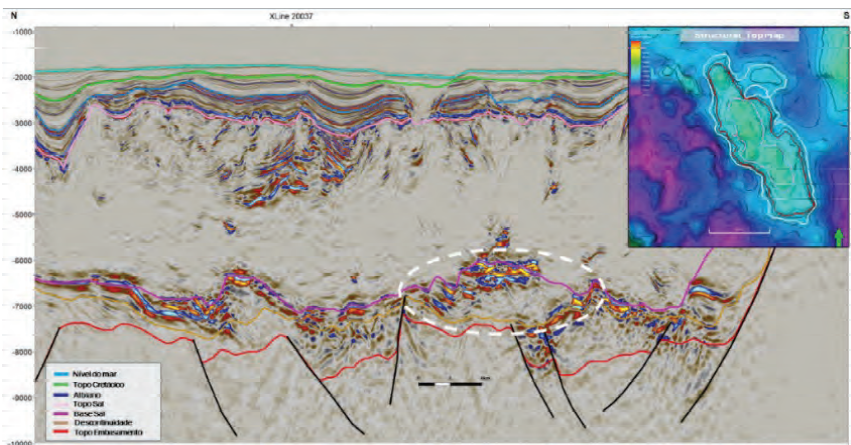
Located in the Offshore portion of the Kwanza Basin in a water depth of between 1,200 and 2,700 m, it is bordered to the north by Block 37, to the south by Block 39, to the east by Block 22 and to the west by the Atlantic Ocean.

Area: 4.900 Km<sup>2</sup>

### AVAILABLE DATA

1. 1992: Acquisition of 1500 km of vintage 2D seismic by GECO;
2. 2012: Magnetometric and gravimetric survey by the company Fugro; acquisition of 5,630 km<sup>2</sup> of multi-client 3D seismic. pela PGS;
3. 2014: Drilling of the Jacaré-1 exploration well.

## OPPORTUNITIES

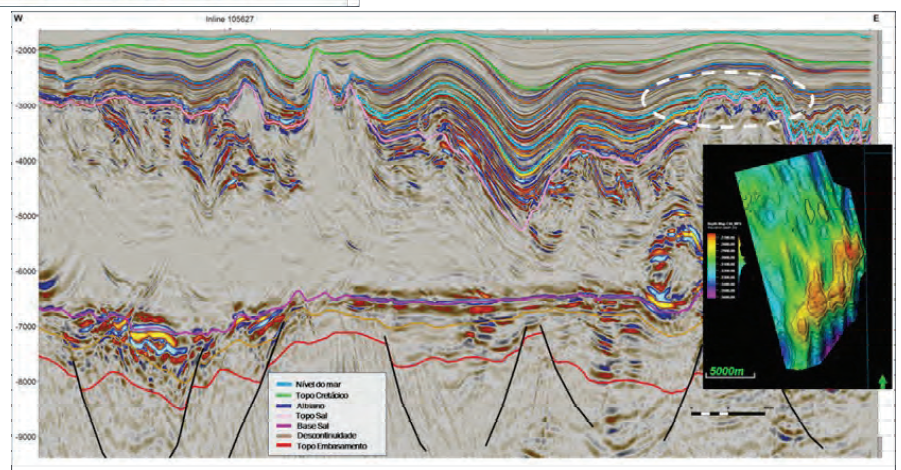


### LEAD UPPER SAG\_DOMAL\_IM (WS3, L1)

Structure at Sag level, in the Pre-salt, with closure in all four directions, the clays of the Cuvo Formation are the generators, the reservoirs are the Coquinas-type carbonates, and the cover rock is the evaporites of the Sal Maciço Formation.

### LEAD ALBIAN\_STRUC\_GB (WS2, L1)

Structure at Albian level with closure in all four directions. The source rock is the clays of the Binga Formation, the oolitic limestones and sandstones of the same Formation are the potential reservoirs, and the cover rock is the intraformational clays of the Binga Formation.



## BLOCK 39

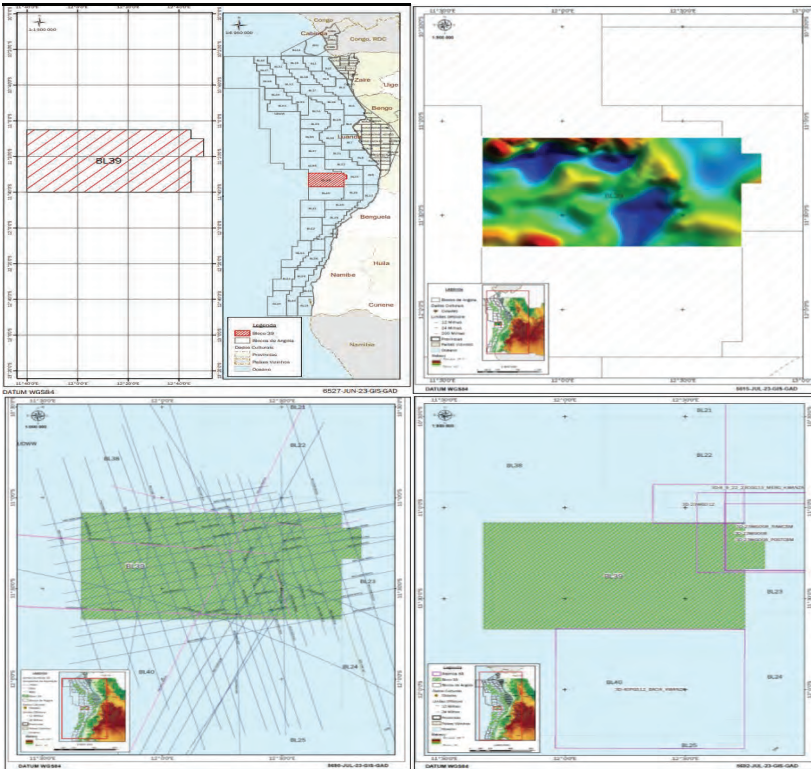
### LOCATION

Located in the Offshore portion of the Kwanza Basin, it is bordered to the north by Block 38, to the south by Block 40, to the east by Block 23 and to the west by the Atlantic Ocean.

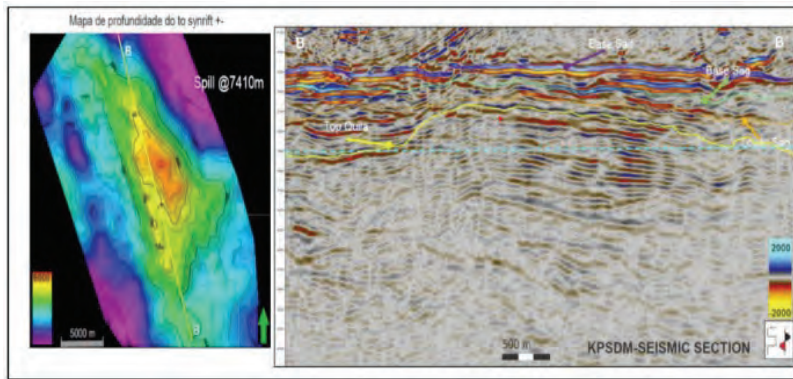
Area: 7 809 Km<sup>2</sup>

### AVAILABLE DATA

1. 1989 - 2006: Acquisition of 2,710 km of 2D seismic by Halliburton, GX Technology and WesternGeco;
2. 2012: Magnetometric and gravimetric survey by Fugro;
3. 2013: acquisition of 5,206 km<sup>2</sup> of multi-client 3D seismic by PGS;
4. 2014: drilling of the Dilolo-1 exploration well.



## OPPORTUNITIES

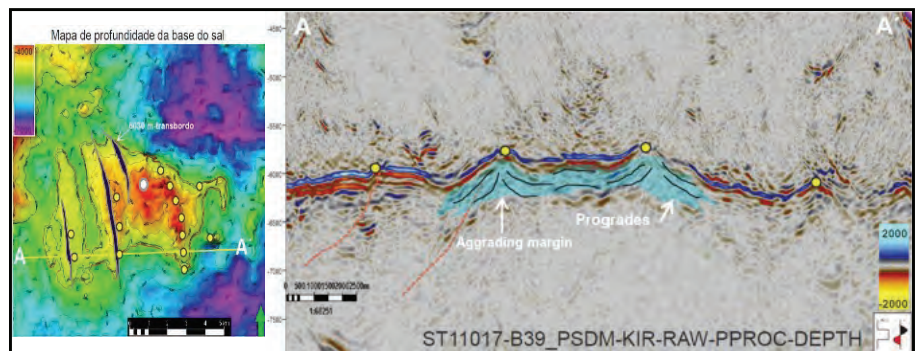


### PRE-SALT LEAD QUILA

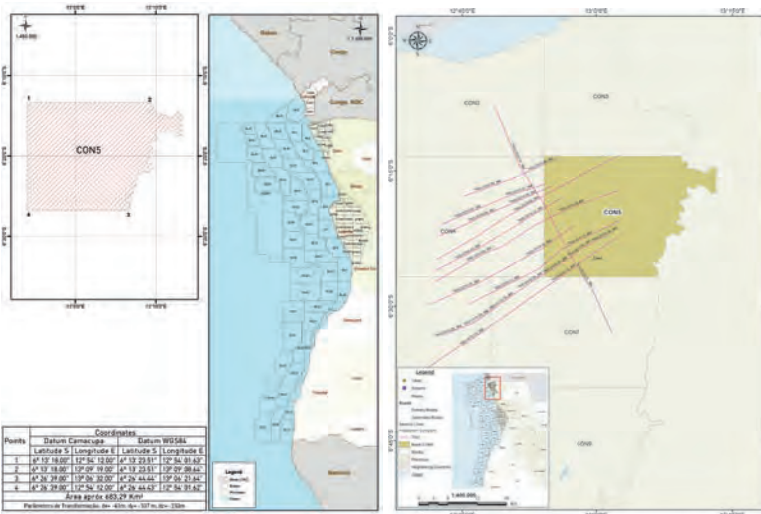
Structure at the level of the Sag and Syn-rift of the Pre-salt, with structural closure in all four directions, the clays of the Cuvo Formation are the generators; the reservoirs are the Coquinas-type carbonates and as cover rock, the evaporites of the Sal Maciço Formation.

### PRE-SALT LEAD NEGOLOME

Structure at the level of the Sag and Syn-rift of the Pre-salt, with structural closure in all four directions, the clays of the Cuvo Formation are the generators; the reservoirs are the Coquinas-type carbonates and as cover rock, the evaporites of the Sal Maciço Formation.



# BLOCK CON 5



## LOCATION

Located to the East of the Onshore Lower Congo Basin, limited to the North by Block CON 3, to the East by basement's outcrops, to the South by Block CON 7 and to the West by Block CON 4.

**Area:** 683,29 Km<sup>2</sup>.

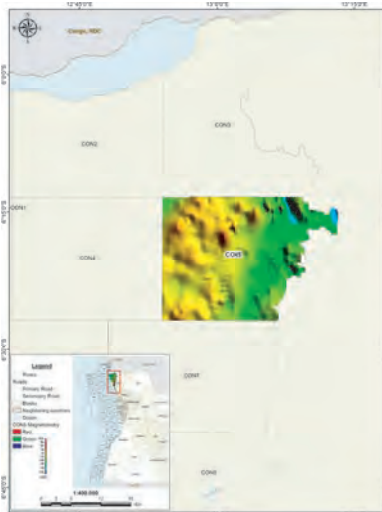
**Historic:** 2D Seismic: 124,61 km (2009).

According to the geological model, the pre-salt is characterized by a strongly failed basement, with the formation of horsts and grabens.

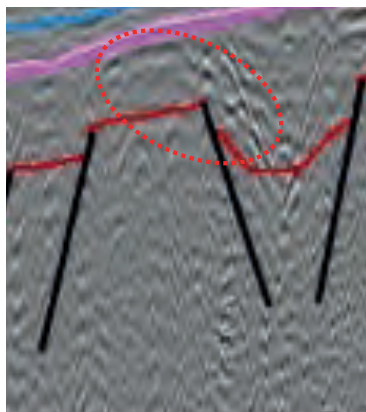
In the grabens, fine sediments rich in organic matter were deposited, constituting possible generating rocks. At the pre-salt level, the main reservoirs are sandstones (Chela Fm.).

At the Aptian level, there is a thin layer of salt which constitute a potential regional seal.

The Post-salt is characterized by little to few structures.



## PROSPECTIVITY



Leads have been identified at the following stratigraphic level:

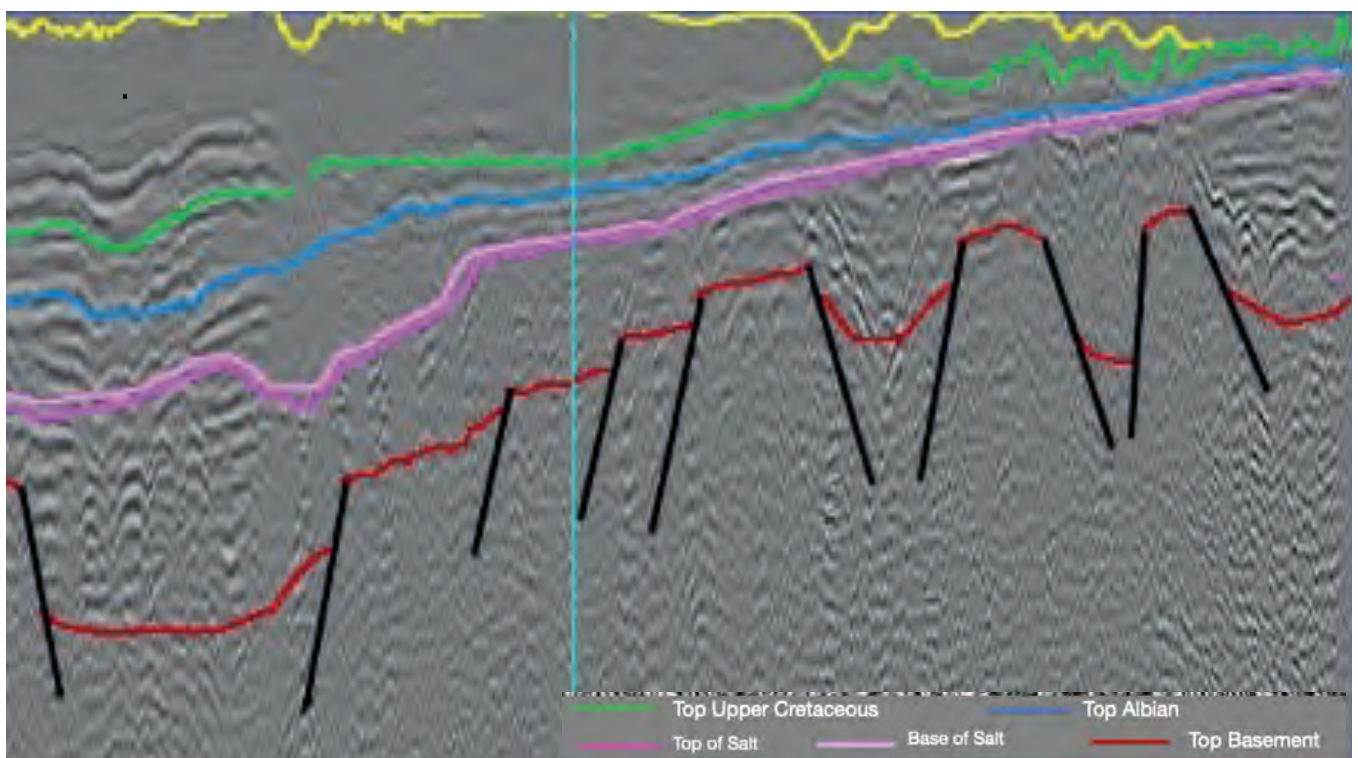
- **Pre-salt:** Syn-rift, Sag

**Pre-salt Lead (Syn-rift):** the reservoir is constituted by sandstones on the flanks of the structural highs and/or by carbonatics mounds deposited on top of the horsts.

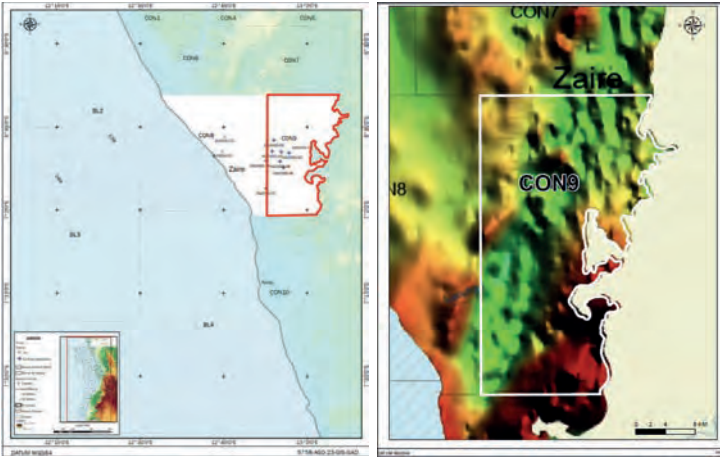
The seal is provided by the Loeme formation and/or by intraformational clays of the Bucomazi formation.

The Main Source Rock is characterized by clays rich in organic matter from the Bucomazi formation.

It presents traps of the combined type (structural and stratigraphic).



## BLOCK CON 9



### LOCATION

Located in Onshore Lower Congo Basin and is bounded to the north by the Block CON7, to the south by Block CON10, to the east by Basement and to the west by Block CON8.

- **Area:** 757.75 km<sup>2</sup>
- 6 Exploration wells drilled
- No seismic data acquired.

### PROSPECTIVITY

#### Post- salt | Albian

- **Source:** Shales of Pinda Fm. & Bucomazi shales
- **Reservoir:** Pinda Fm. sandstones and Oolitic marine limestones
- **Seal:** Shales from Upper Cretaceous
- **Trap:** Combined

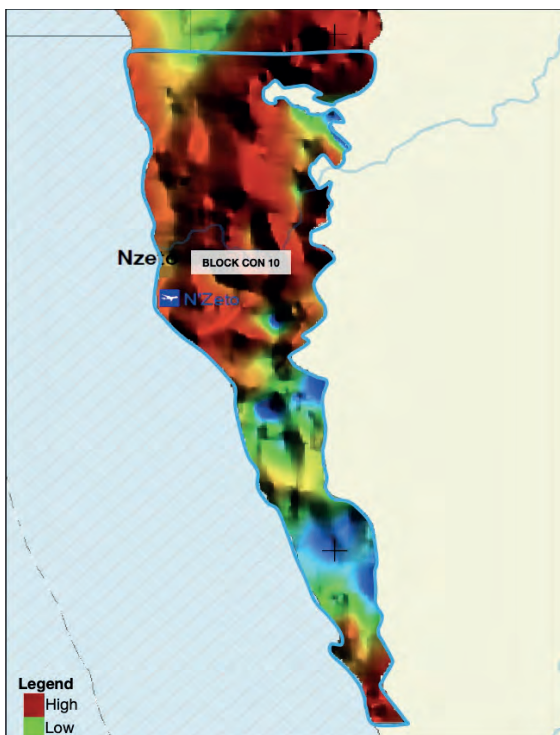
#### Pre- salt | Syn rift & Sag

- **Source:** Bucomazi Fm. lacustrine shales
- **Reservoir:** Lucula & Chela Fms. sandstone and Toca carbonates onto basement highs
- **Seal:** Salt & Bucomazi intraformational shales
- **Trap:** Combined

### DRILLED WELLS

Block	Well Name	Target	Operator	Results
CON9	Ngondo-1	Pinda Fm.	Petrofina	Oil shows
	Ngondo-2	Pinda Fm.	Petrofina	Oil shows
	Ngondo-3	Pinda Fm.	Petrofina	Oil shows
	Ngondo-5	Pinda Fm.	Petrofina	Oil shows
	Ngondo-6	Pinda Fm.	Petrofina	Oil shows
	Ngondo-8	Pinda Fm.	Petrofina	Oil shows

## BLOCK CON 10



### LOCATION

**North:** Block KON 22  
**East:** Block KON 18  
**South:** Pre-Cambrian  
**West:** Blocks 9 and KON 21  
**Area:** 1 550,47 Km<sup>2</sup>

### PROSPECTIVITY

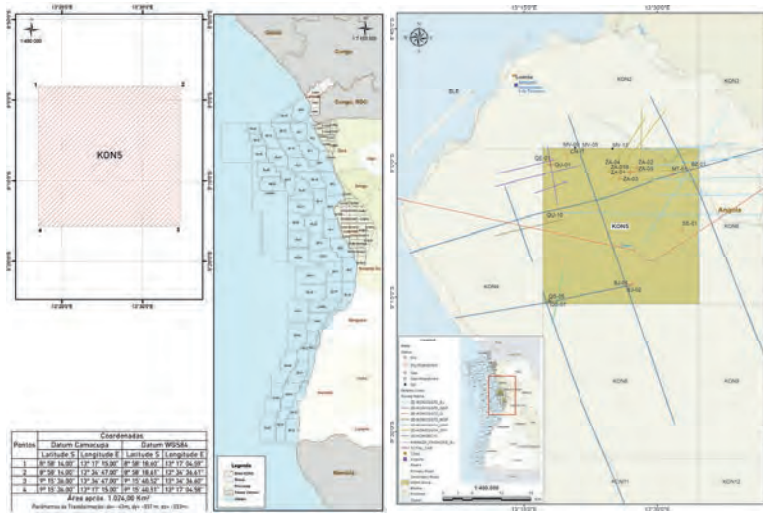
#### Post- salt | Albian

- **Source:** Shales of Pinda Fm. & Bucomazi shales
- **Reservoir:** Pinda Fm. sandstones and Oolitic marine limestones
- **Seal:** Shales from Upper Cretaceous
- **Trap:** Combined

#### Pre- salt | Syn rift & Sag

- **Source:** Bucomazi Fm. lacustrine shales
- **Reservoir:** Lucula & Chela Fms. sandstone and Toca carbonates onto basement highs
- **Seal:** Salt & Bucomazi intraformational shales
- **Trap:** Combined

## BLOCK KON 5



### LOCATION

Northweste of the Onshore Kwanza Basin limited to the North by Block KON 2, to the East by Block KON 6, to the South by Block KON 8 and to the West by Block KON 4.

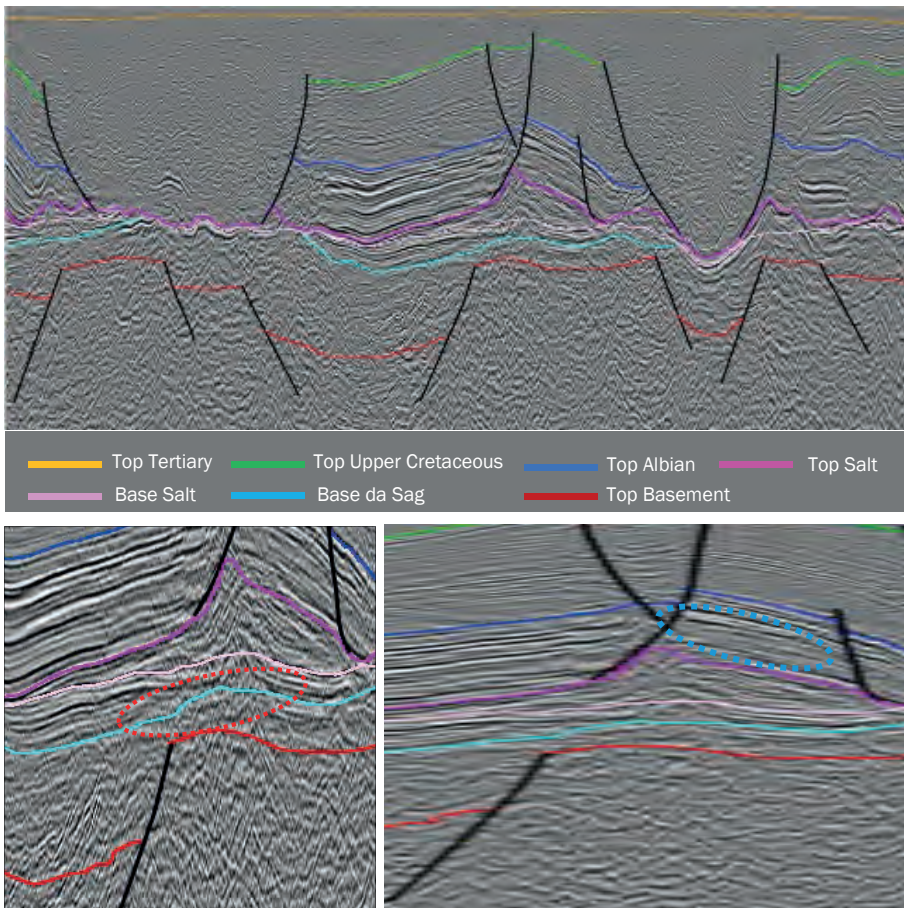
**Area:** 1024 Km<sup>2</sup>

### Historic:

- 20 wells drilled (13 Appraisal wells and 7 development wells);
- 2 Production fields discovered (Quenguela South - gas and Mulenvos South - Oil).
- **2D Sismic:** 295,45 Km (PSTM), during the 70's and 102,03 Km (PSTM/PSDM) in 2010.

On the surface of Block KON 5, there are outcrops that date back to the Oligocene until the recent age. According to the geological model, in this Block, the pre-salt layer is characterized by normal faults eradicated in the basement that induced the formation of horsts and grabens structures and the syn-rift sequence was deposited on these structures. The sag phase occurs locally as a result of the basin's peneplain. The Post-salt is characterized by saline tectonics, causing the formation of antiforms and tertiary pits associated with normal faults.

### PROSPECTIVITY



Leads have been identified at the following stratigraphic level:

- **Pre-salt:** Syn-rift, Sag
- **Post-salt:** Albian, Upper Cretaceous and Tertiary.

**Pre-salt Leads:** multiple target (syn-rift and sag), reservoirs characterized in the syn-rift by coquina type carbonates from Toca Fm. eq, located in a structural high and in the sag by carbonates of type microbiolites and/or by a sandy layer of the Gray Cuvo Fm., confirmed by the wells (MV-5, BJ-1 e ZA-4).

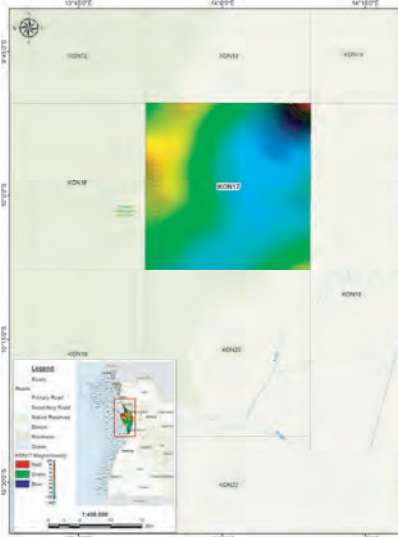
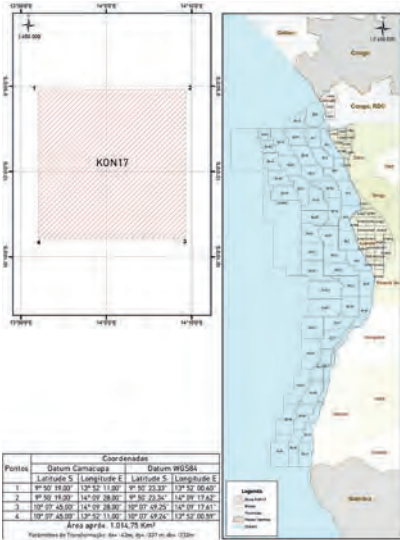
A thick layer of salt and the Gray Cuvo Fm., work as an effective seal.

Source Rock: Red Cuvo Fm, clays proven by the wells MV-5 and ZA-4, and Gray Cuvo Fm. Clays proven by the wells BJ-1, MV-5.

Trap: A combined type (structural and stratigraphic).

**Post-salt Leads (Albian):** reservoirs consisting of carbonates from Catumbela Fm., proven by the wells BJ-1, ZA-4, MV-5, MV-13 and SE-1, with a structural type trap characterized by normal fault growth. The marls of Binga Fm. identified by the well ZA-4 constitute the main source rock at this level. The seal is formed by the intraformational clays from the Upper Cretaceous (Cabo Ledo Fm.).

# BLOCK KON 17



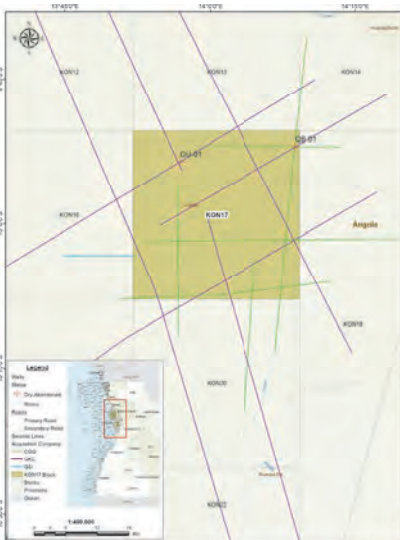
## LOCATION

Southeast part of the Onshore Kwanza Basin is limited to the North by Block KON 13, to the East by Block KON 18, in the South by Block KON 20 and in the West by Block KON 16.

**Area:** 1 014.75 Km<sup>2</sup>

## Historic:

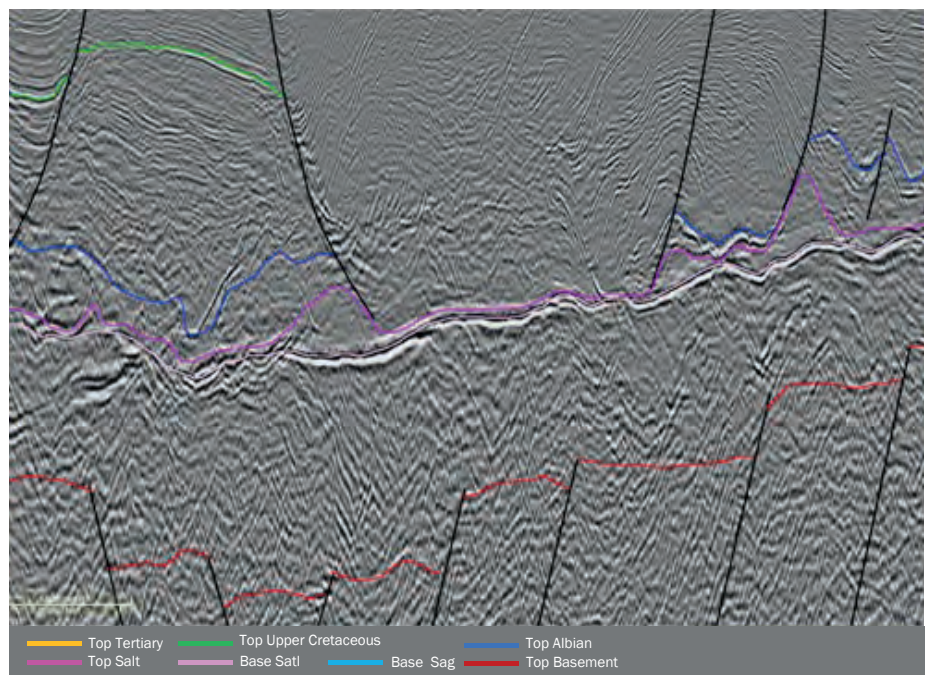
- 2 Appraisal wells drilled
- **2D Sísmica:** 147,56 Km (PSTM), during the 70's and 159,20 Km (PSTM/PSDM) in 2010.



According to the geological model the basement is characterized by normal faults that induced the formation of horsts and grabens on which were deposited the syn-rift sequence. The sag phase occurs locally as a result of the basin's peneplaning. The Post-salt sequence is defined with normal thrust faults and anticline structures. A Tertiary pit is visible in the Northeastern part of the block.

In the Gunza-1 well, located in the Northwest part of the Block oil traces were identified, while in the Quembeje-1 well located in the Northeast part of the block found traces of Oil and gas.

## PROSPECTIVITY



Leads have been identified at the following stratigraphic level:

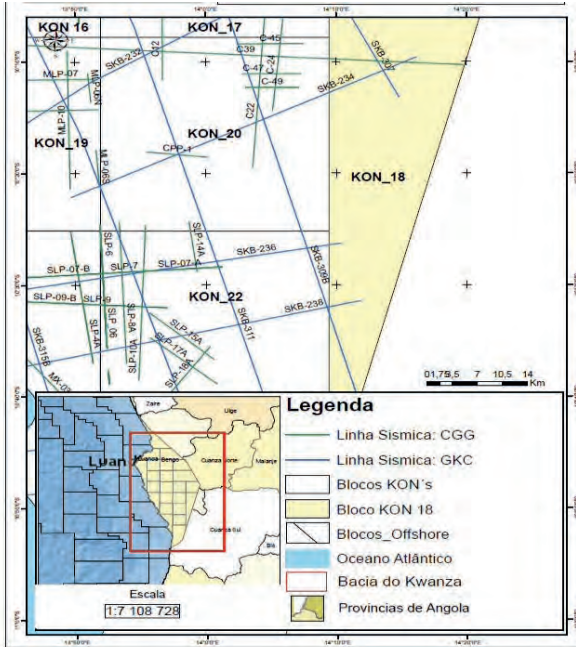
- **Pre-salt:** Syn-rift, Sag

**Pre-salt Leads (Sag):** the reservoir is made up of microbiolitic carbonates of Gray Cuvo Fm., confirmed by the Quembeje-1 and Gunza-1 wells.

The salt layer represents a regional seal.

The clays from the Red Cuvo Fm., located in the structural lows and clays from the Gray Cuvo Fm., represents the main source rocks for this section. It presents a combined trap type.

# BLOCK KON 18

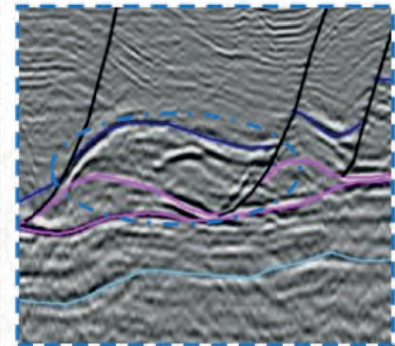
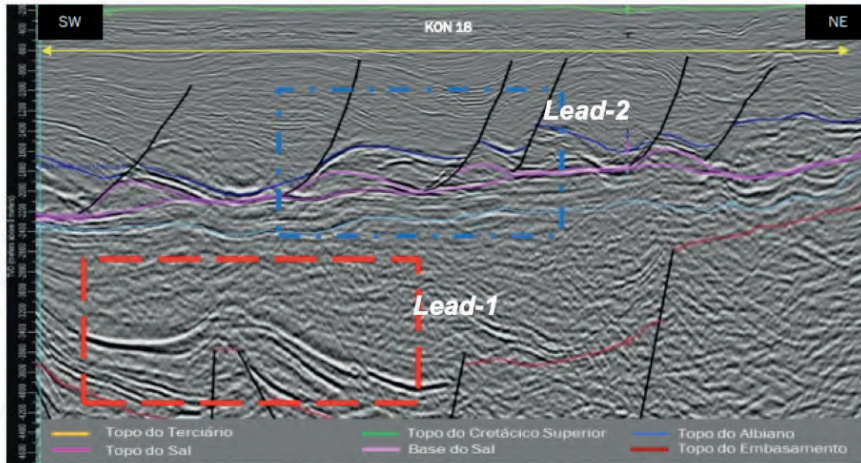


## LOCATION

- North:** Block KON 14
- East:** Pre-Cambrian Basement
- South:** Block KON 23
- West:** Blocks KON17, KON20 and KON 22
- Area:** 1 547.49 Km<sup>2</sup>

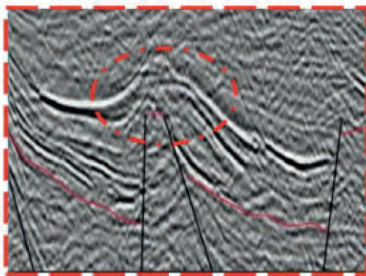
According to the geological model, the basement is characterized by normal faults that originated the formation of horsts and grabens and on these structures the syn-rift sequence was deposited. The post-salt is defined by normal syndepositional growth faults. The salt tectonics originated the formation of rafts and tertiary pits that occur in the west part of the block.

## PROSPECTIVITY



### Post - salt / Albian | Lead2

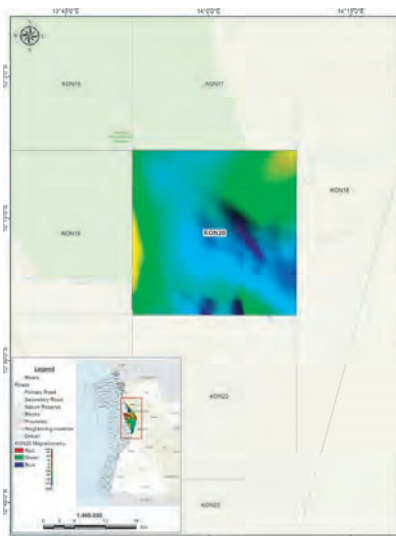
- **Trap:** Structural, Stratigraphic and combination
- **Seal:** Upper Cretaceous Cabo Ledo Formation shale
- **Reservoir:** Catumbela Formation carbonates
- **Source:** Binga Formation organic-rich shale



### Pre - salt / Sag | Lead1

- **Trap:** Stratigraphic, base salt structural closure
- **Seal:** Massive salt layer
- **Reservoir:** Chela Fm. equivalent sandstone and carbonates in base salt closure
- **Source:** Cuvo Fm. organic-rich lacustrine shale

## BLOCK KON 20



### LOCATION

Southeast of the Offshore Kwanza Basin limited to the North by Block KON 17, to the East by Block KON 18, to the South by Block KON 22 and to the East by Block KON 19.

**Area:** 1 014.75 Km<sup>2</sup>

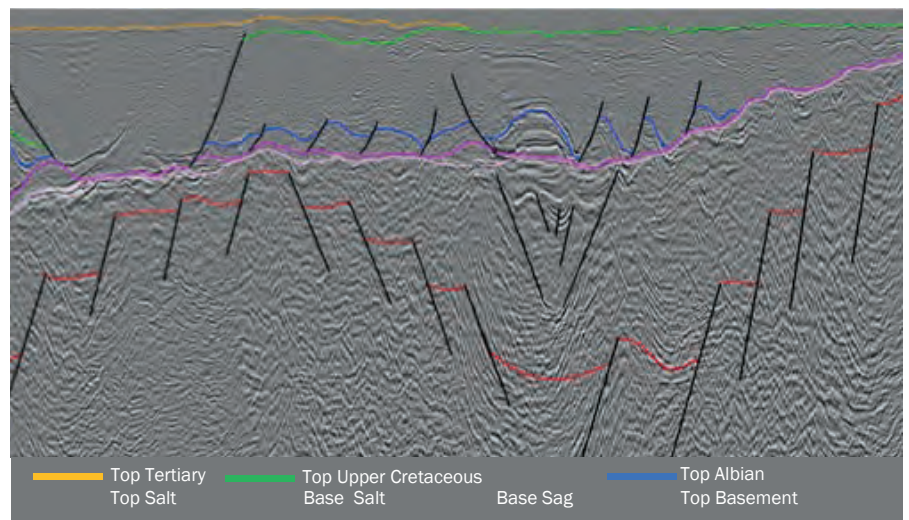
### Historic:

- 1 appraisal well drilled in the Block
- **2D Seismic:** 121,89 km (PSTM), during the 70's and 127,53 km (PSTM/PSDM) in 2010.

According to the geological model, the basement is characterized by normal faults that originated the formation of horsts and grabens and on these structures the syn-rift sequence was deposited. The post-salt is defined by normal syndepositional growth faults. The salt tectonics originated the formation of rafts and tertiary pits that occur in the west part of the block.



### PROSPECTIVITY



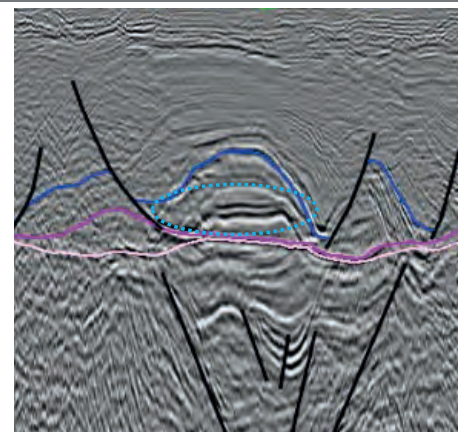
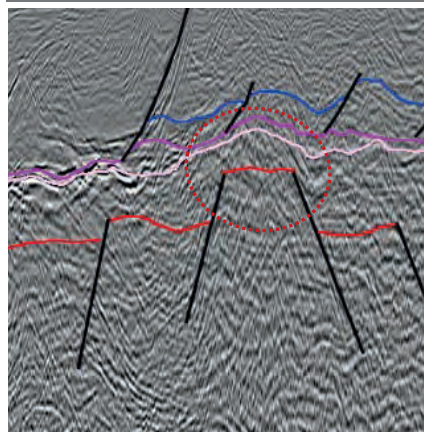
Leads have been identified at the following stratigraphic level:

- **Pre-salt:** Syn-rift, Sag
- **Post-salt:** Albian, Upper Cretaceous and Tertiary.

**Post-salt Leads (Albian):** reservoir consisting of oolitic and/or sandstone carbonates from Binga Fm. Rich organic matter rocks from the Binga, Gray and Red represent the source rock in this section.

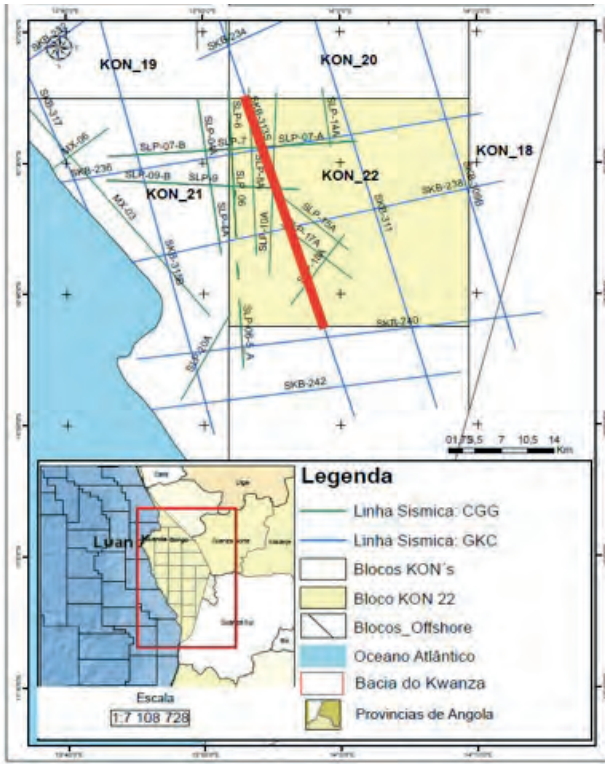
The intraformational clays from Cabo Ledo Fm., constitute the seal. The trap is of a combined type.

**Pre-salt Leads (Sag):** reservoir consisting of carbonate sediments from Gray Cuvo Fm.



Identified in the Capolo-1. The clays from the Red Cuvo Fm., located in the structural lows, crossed by the Capolo-1 well, represents the main source rocks for this section. The Aptian salt layer represents a regional seal for both syn-rift and sag. The trap for this lead is combined.

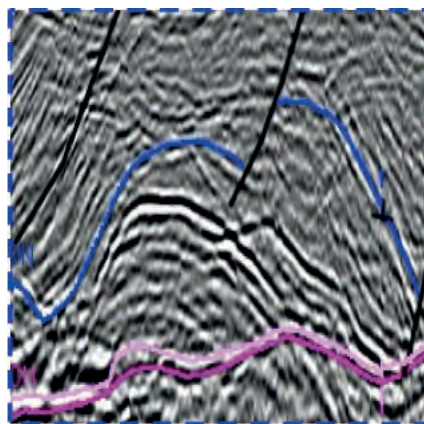
## BLOCK KON 22



### LOCATION

**North:** Block KON 20  
**East:** Block KON 18  
**South:** Block KON 23  
**West:** Blocks KON 21  
**Area:** 1 009,81 Km<sup>2</sup>

### PROSPECTIVITY



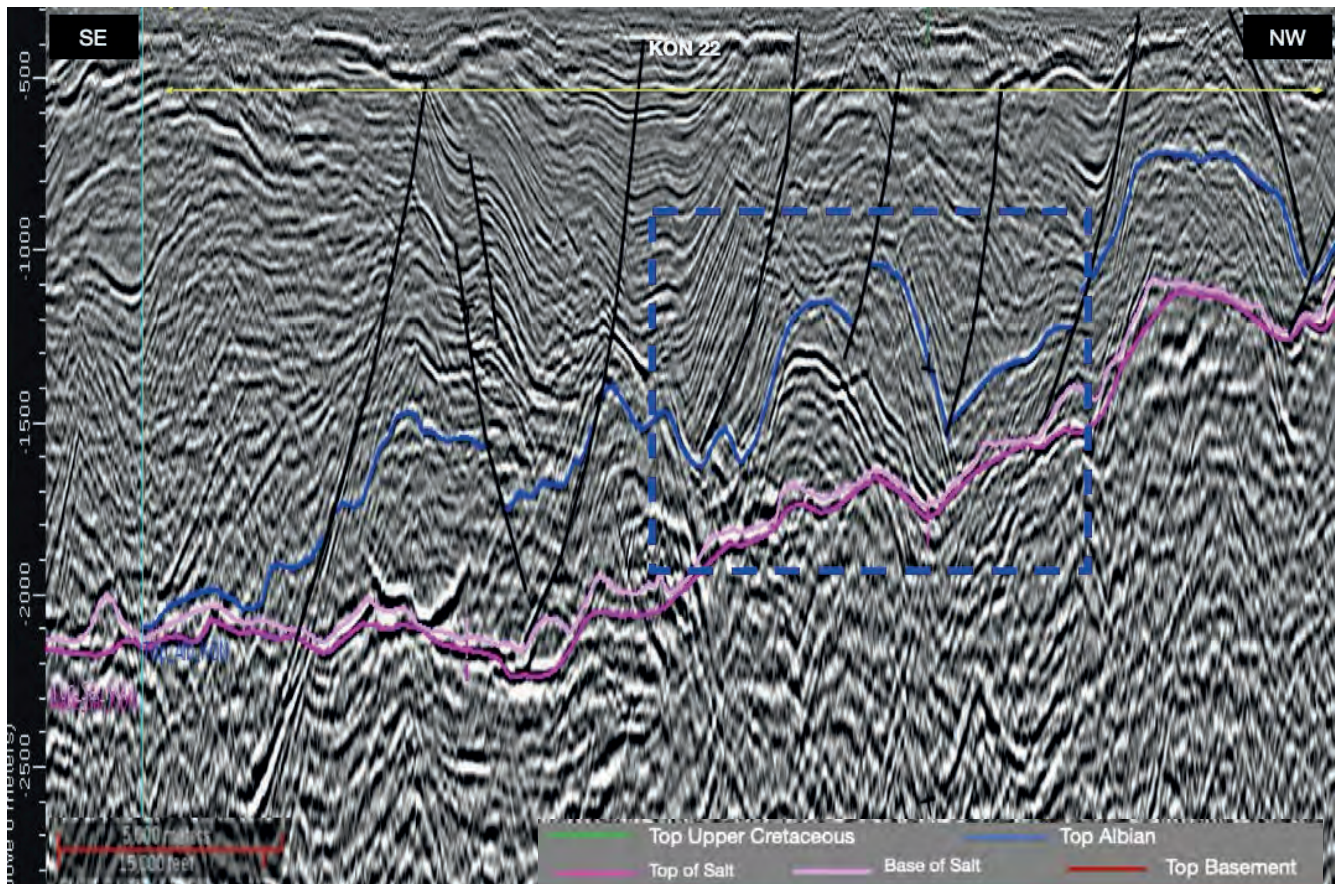
**Post-Salt  
Lead-1**

**Source-rock:** Shales of the Binga Fm.

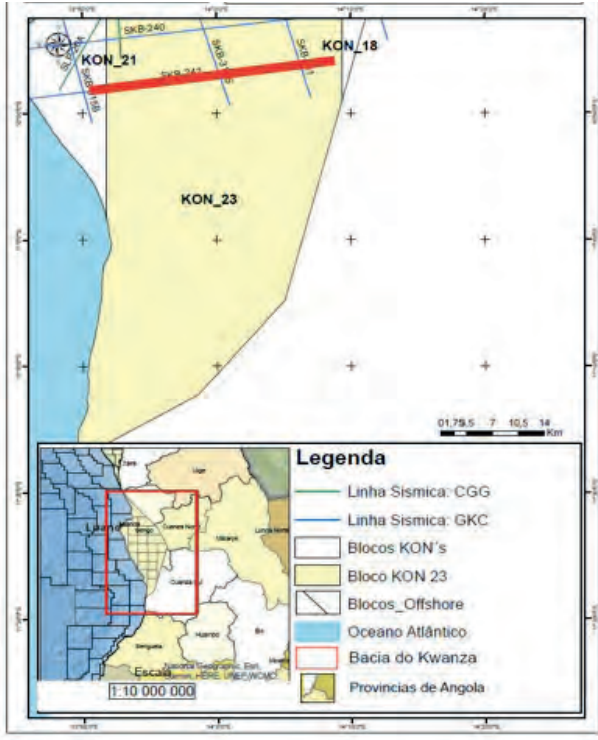
**Reservoir:** Oolitic Carbonates of the Binga Fm and Sandstones

**Seal:** The salted Facies of the Tuenza Fm or the shales of the Quissonde Fm.

**Trap:** Combined



## BLOCK KON 23



### LOCATION

**North:** Block KON 22  
**East:** Block KON 18  
**South:** Pre-Cambrian Basement  
**West:** KON 21 & BLOCK 9  
**Area:** 1 550,47 Km<sup>2</sup>

### PROSPECTIVITY

#### Post-Salt Lead-1

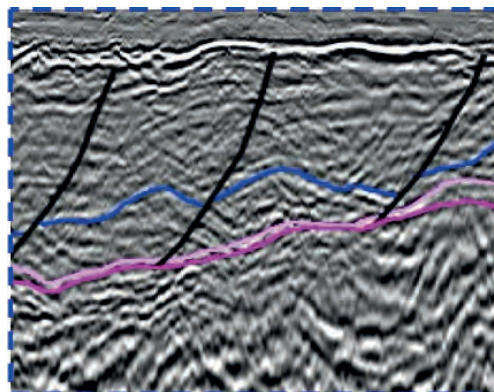
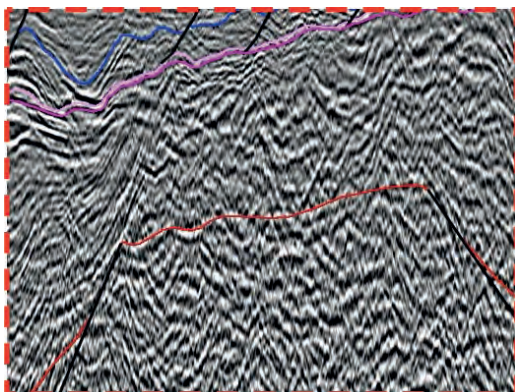
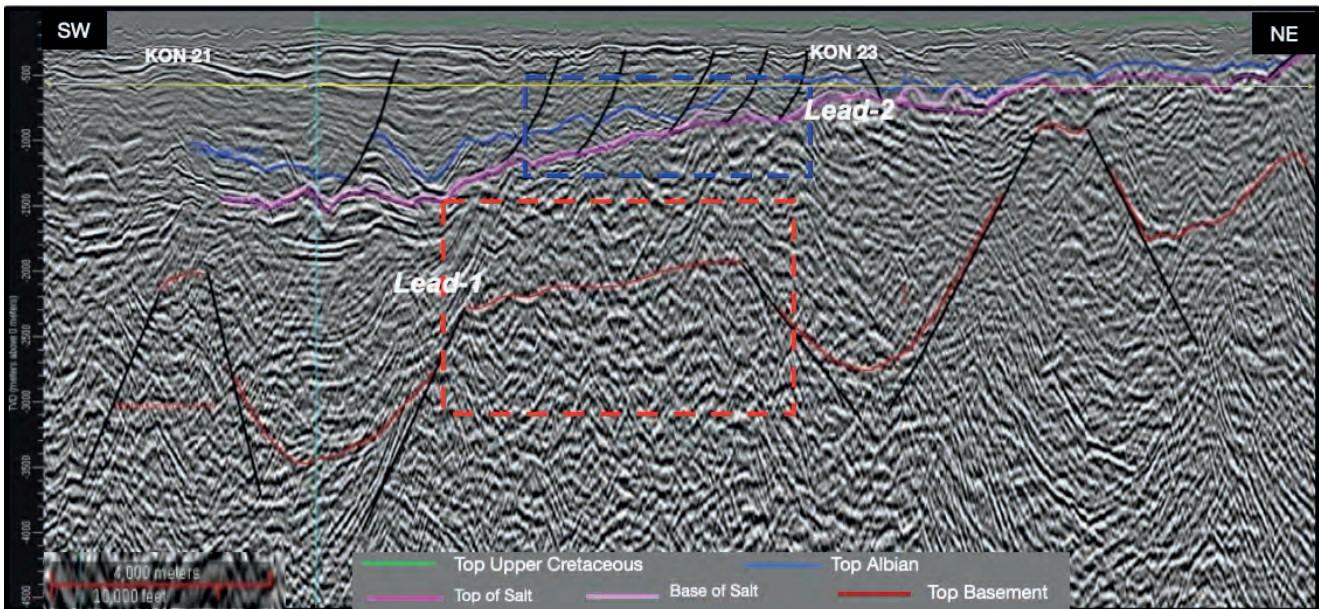
**Source-rock:** Shales of the Red Cuvo Fm. Vermelho  
**Reservoir:** Carbonates & Sandstones of the Chela Fm. eq.  
**Seal:** Evaporites of the Sal Maciço Fm.

**Trap:** Combined

#### Post-Salt Lead-2

**Source-rock:** Shales of the Red Cuvo Fm. Vermelho  
**Reservoir:** Carbonates & Sandstones of the Chela Fm. eq.  
**Seal:** Evaporites of the Sal Maciço Fm.

**Trap:** Combined



# ANPG

Agência Nacional de Petróleo, Gás e Biocombustíveis





# ANGOLA

ANPG

Agência Nacional de Petróleo, Gás e Biocombustíveis

E-mail: [info@anpg.co.ao](mailto:info@anpg.co.ao)

Tel.: +244 224 628 000

Website: [www.anpg.co.ao](http://www.anpg.co.ao)

Edifício Torres do Carmo-Torre 2, Rua Lopes Lima, Distrito Urbano da Ingombota,  
Município de Luanda, República de Angola