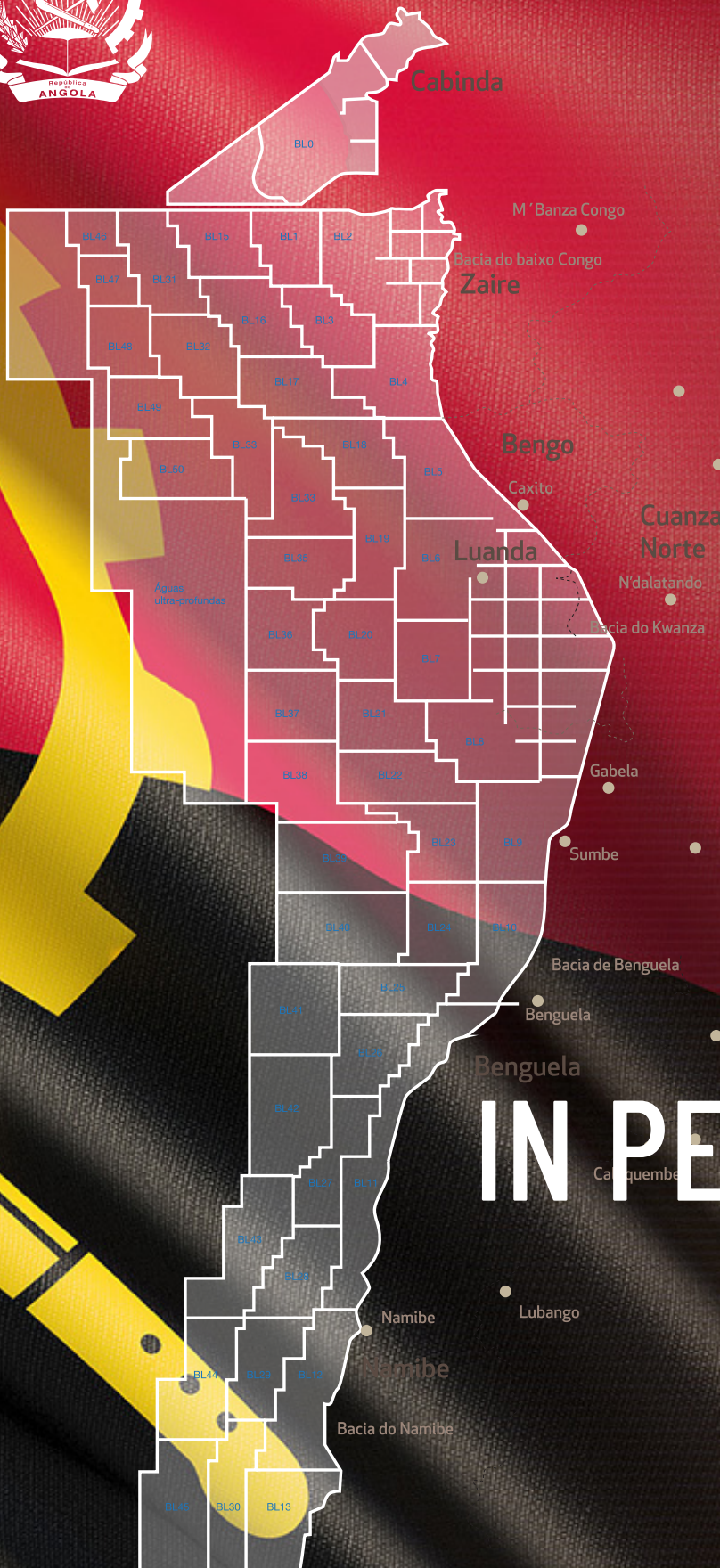
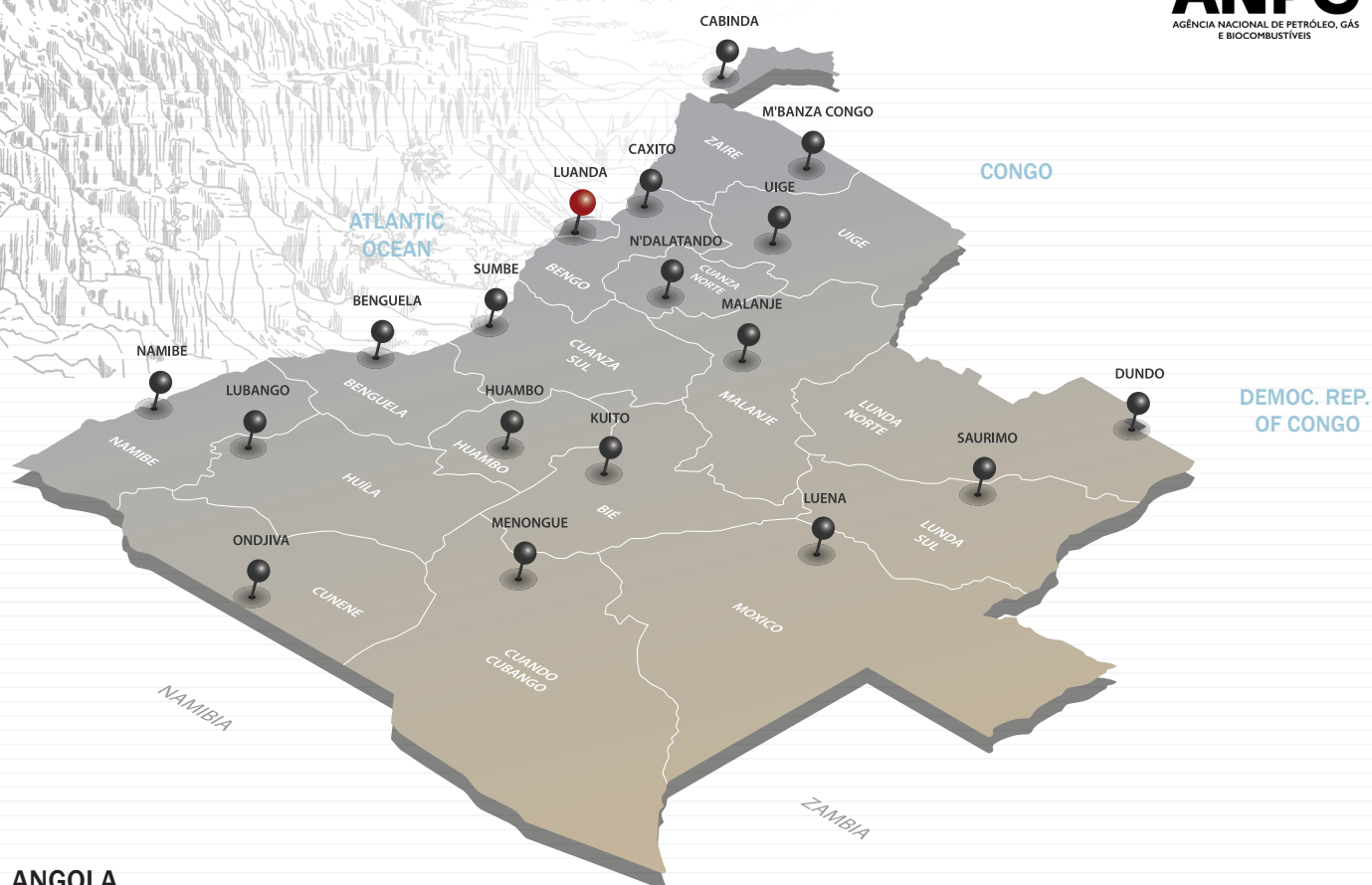




ANPG
AGÊNCIA NACIONAL DE PETRÓLEO, GÁS
E BIOCOMBUSTÍVEIS



E&P DATA FOR BLOCKS IN PERMANENT OFFER



ANGOLA

Geographic description

Angola is located on the South Atlantic coast of West Africa, between Namibia and the Republic of Congo, also bordering the Democratic Republic of Congo and Zambia, to the east. The country is divided into an arid coastal strip that extends from the Republic of Namibia, practically reaching Luanda.

The Zambezi River and several tributaries of the Congo River have their sources in the country, which has a maritime border of 1,650 km and a land border of 4,837 km.

Angola has an extensive territory, with an area of 1,246,700 km², divided into 18 provinces.

Bengo	Área: 199.049 km ²	Capital: N'Dalatando	Moxico
Capital: Caxito	Cunene	Área: 24.110 km ²	Capital: Luena
Área: 33.016 km ²	Capital: Ondjiva	Luanda	Área: 223.023 km ²
Benguela	Área: 87.342 km ²	Capital: Luanda	Namibe
Capital: Benguela	Huambo	Área: 2.257 km ²	Capital: Namibe
Área: 31.788 km ²	Capital: Huambo	Lunda Norte	Área: 58.137 km ²
Bié	Área: 34.270 km ²	Capital: Lucapa	Uíge
Capital: Cuito	Huíla	Área: 103.000 km ²	Capital: Uíge
Área: 70.314 km ²	Capital: Lubango	Lunda Sul	Área: 58.698 km ²
Cabinda	Área: 75.002 km ²	Capital: Saurimo	Zaire
Capital: Cabinda	Cuanza Sul	Área: 77.637 km ²	Capital: M'Banza Congo
Área: 7.270 km ²	Capital: Sumbe	Malanje	Área: 40.130 km ²
Cuando Cubango	Área: 55.660 km ²	Capital: Malanje	
Capital: Menongue	Cuanza Norte	Área: 97.602 km ²	

ABOUT ANPG

The National Agency for Oil, Gas and Biofuels, referred to in short as “Agência” or “ANPG”, was created in 2019 by means of Presidential Decree No. oilfield in Angola. Among the actions taken to restructure the sector, the transfer of the Concessionaire function, previously held by Sonangol E.P., to the newly created Agency was approved, in order to ensure greater political coordination, increase the effectiveness of processes and create conditions for private investment activities in the national oil industry.

ANPG became the National Concessionaire with the specific attributions of regulating, supervising and promoting the execution of petroleum activities in the field of operations and contracting of the oil, gas and biofuels sector.

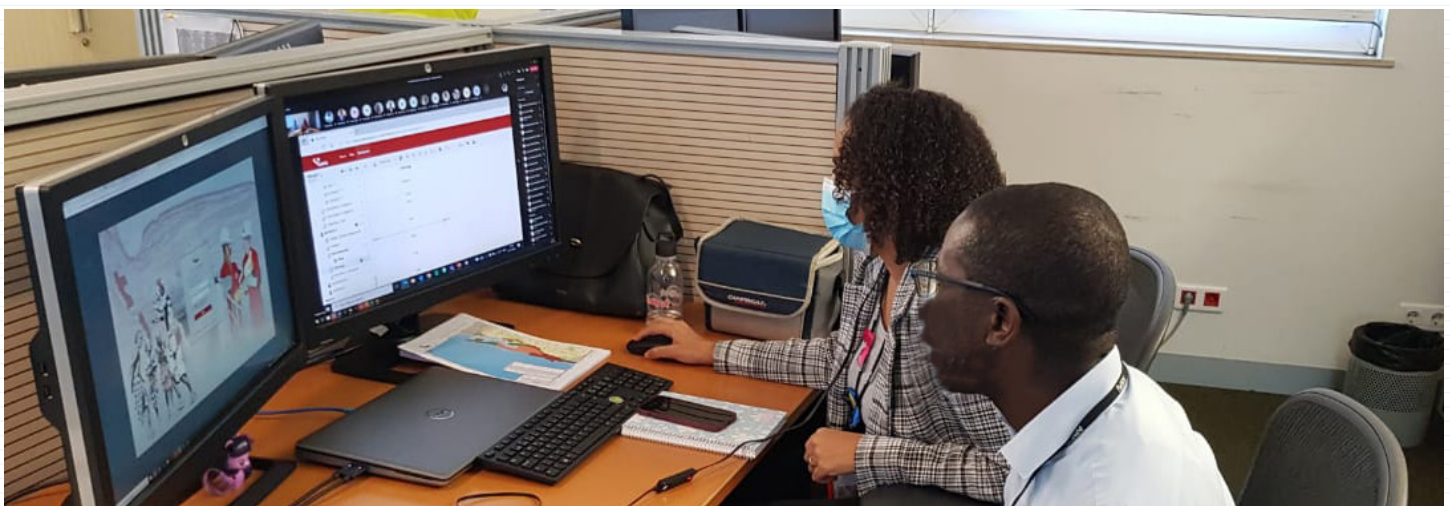
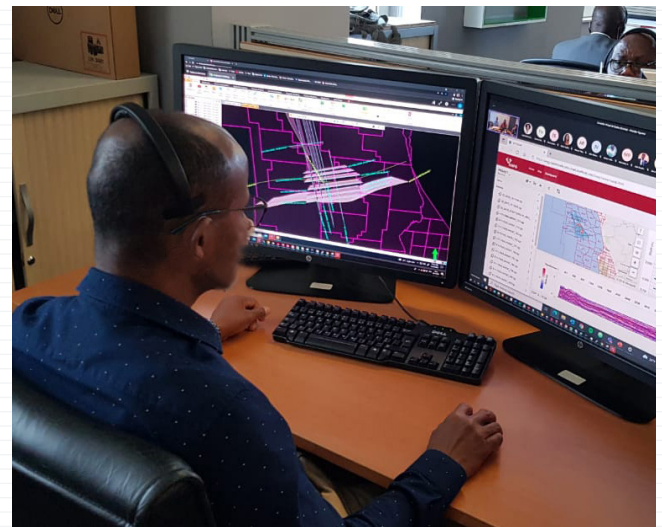
Through Presidential Decree No. 52/19, of February 18, the General Strategy for the Allocation of Petroleum Concessions for the period 2019-2025 was approved.



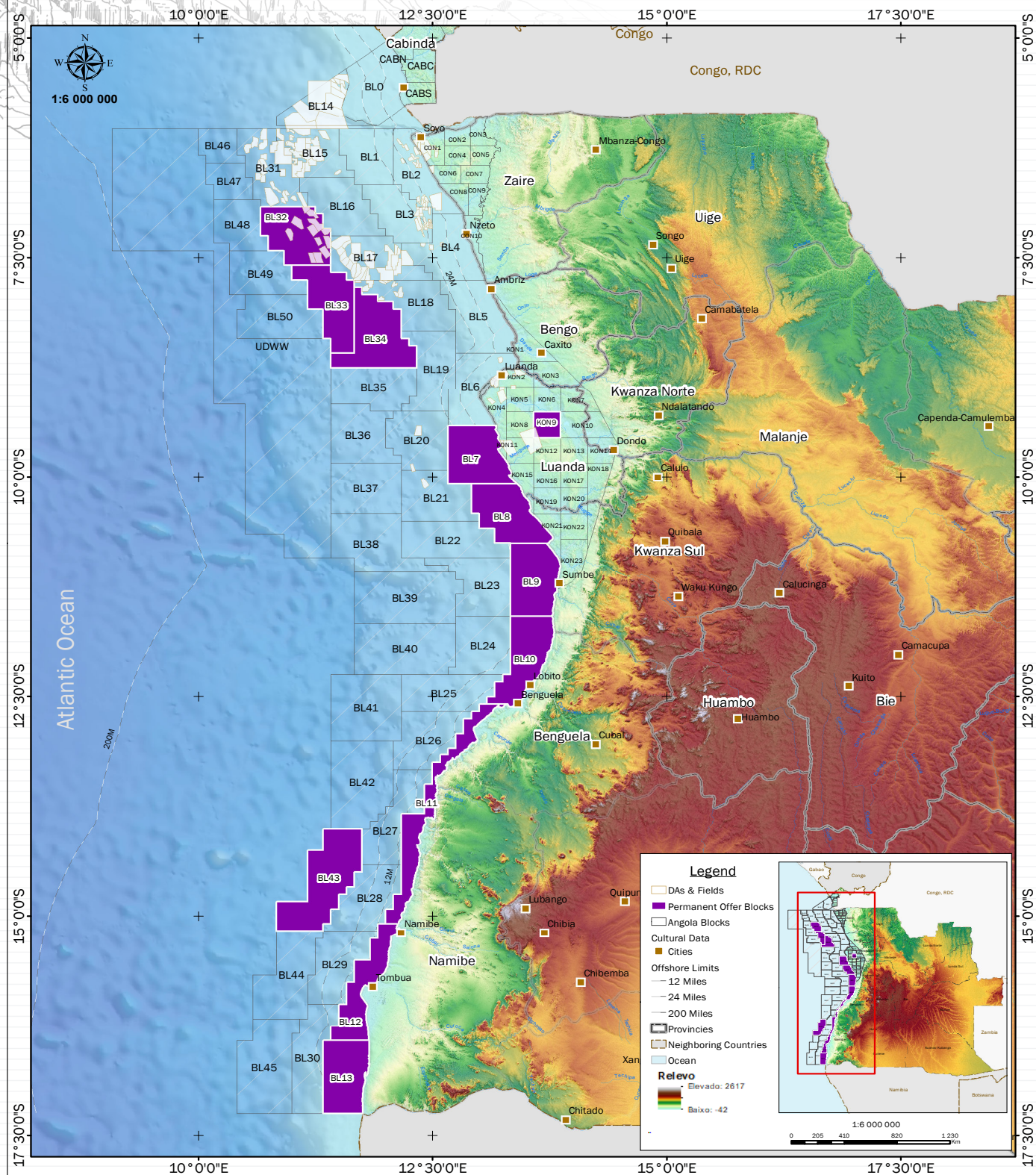
DATA CENTER AND TECHNICAL INFORMATION

In ANPG’s organizational framework, the data management function represents careful planning, control, storage and availability of Exploration and Production assets. The Centre, guarantees the management and archiving, as well as the execution of geological and cartographic mapping and the subsequent availability of this data to internal and external customers.

The Data Center’s role also includes disciplines for the development, execution and supervision of plans, policies, projects, processes and procedures aimed at adopting market practices and maximizing the use of the specialized information collection.



PERMANENT OFFER BLOCKS MAP



ABOUT THE PERMANENT OFFER REGIME

Presidential Decree No. 249/21, of October 5, approves the rules and procedures for the continuous offering of oil concessions, aiming to streamline access to Areas and Blocks uninterruptedly, in order to attract potential investors and promote the expansion of geological knowledge of Angola's oil potential.

Through the Permanent Offer Regime, it is possible to allocate Free Areas in Concessioned Blocks, concessions that are not part of the General Strategy for Allocation of Concessions 2019-2025, Concessions Allocated to the Concessionaire, as well as those that, resulting from bidding processes, have not received proposals.

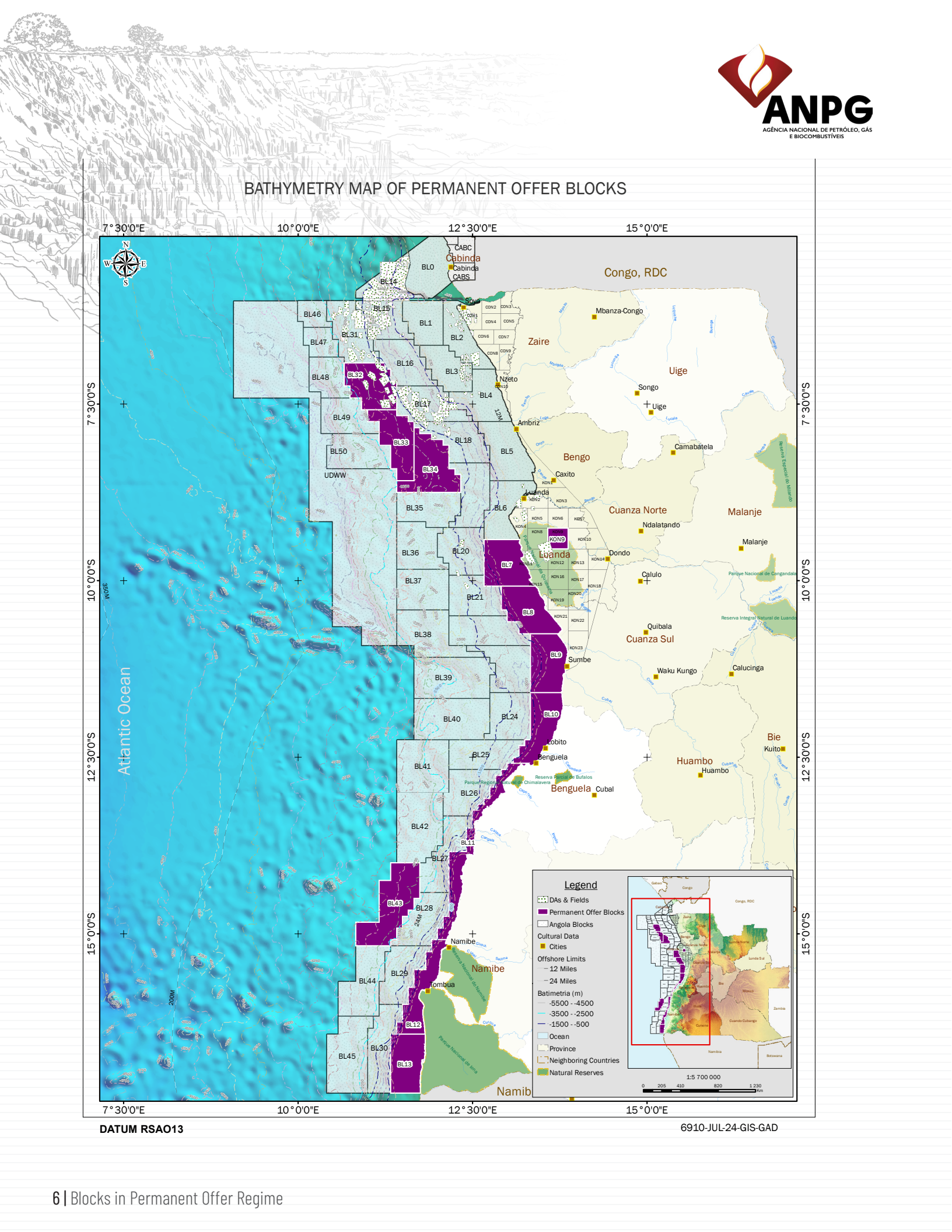
To qualify for the aforementioned regime, the investor must submit to the National Concessionaire the proposal for the award of the block of interest, and must prove the technical capacity of his/her company to become an

Operator, by presenting a set of information indicating its human resources structure with professional experience in the management and execution of oil operations.

He/she must also prove his/her financial capacity, submitting annual reports including the balance sheet and accounts for the last three years or since its incorporation. In the case of a company that has been incorporated for a shorter period of time, the reports must be those audited by an independent entity of recognized suitability. It should be noted that any disqualification of the bidder, due to non-compliance with the requirements, does not prevent the investor from participating again.

Check out the opportunities available in the Angolan oil sector on the following pages, combined with our good business environment.



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BATHYMETRY MAP OF PERMANENT OFFER BLOCKS

This map displays the bathymetry of the Atlantic Ocean off the coast of Angola, highlighting permanent offer blocks. The map includes geographical coordinates from 7° 30' 0" E to 15° 0' 0" E longitude and 7° 30' 0" S to 15° 0' 0" S latitude. Key features include:

- Geographical Labels:** Congo, RDC; Zaire; Bengo; Luanda; Cuanza Norte; Malanje; Cuanza Sul; Huambo; Namibe; Namibia.
- Cities and Towns:** Mbanza-Congo, Uíge, Camabatela, Dondo, Calulo, Quibala, Waku Kungo, Calucinga, Lobito, Benguela, Namibe, Tombua.
- Offshore Limits:** -12 Miles, -24 Miles.
- Bathymetry (m):** -5500 - -4500, -3500 - -2500, -1500 - -500.
- Legend:**
 - DAs & Fields
 - Permanent Offer Blocks
 - Angola Blocks
 - Cultural Data
 - Cities
 - Offshore Limits
 - Bathymetry (m)
 - Ocean
 - Province
 - Neighboring Countries
 - Natural Reserves
- Inset Map:** A small map showing the location of the study area within the context of neighboring countries (Congo, RDC, Zambia, Botswana, Namibia) and provinces (Luanda, Bengo, Cuanza Norte, Cuanza Sul, Huambo, Namibe).
- Scale:** 1:5 700 000.
- DATUM:** RSAO13.
- Date:** 6910-JUL-24-GIS-GAD.

BLOCK 7/21

Block 7 is located in shallow waters of the Kwanza maritime basin, with an approximate area of 4,849 km² and water depths ranging from 0 to 800 m.

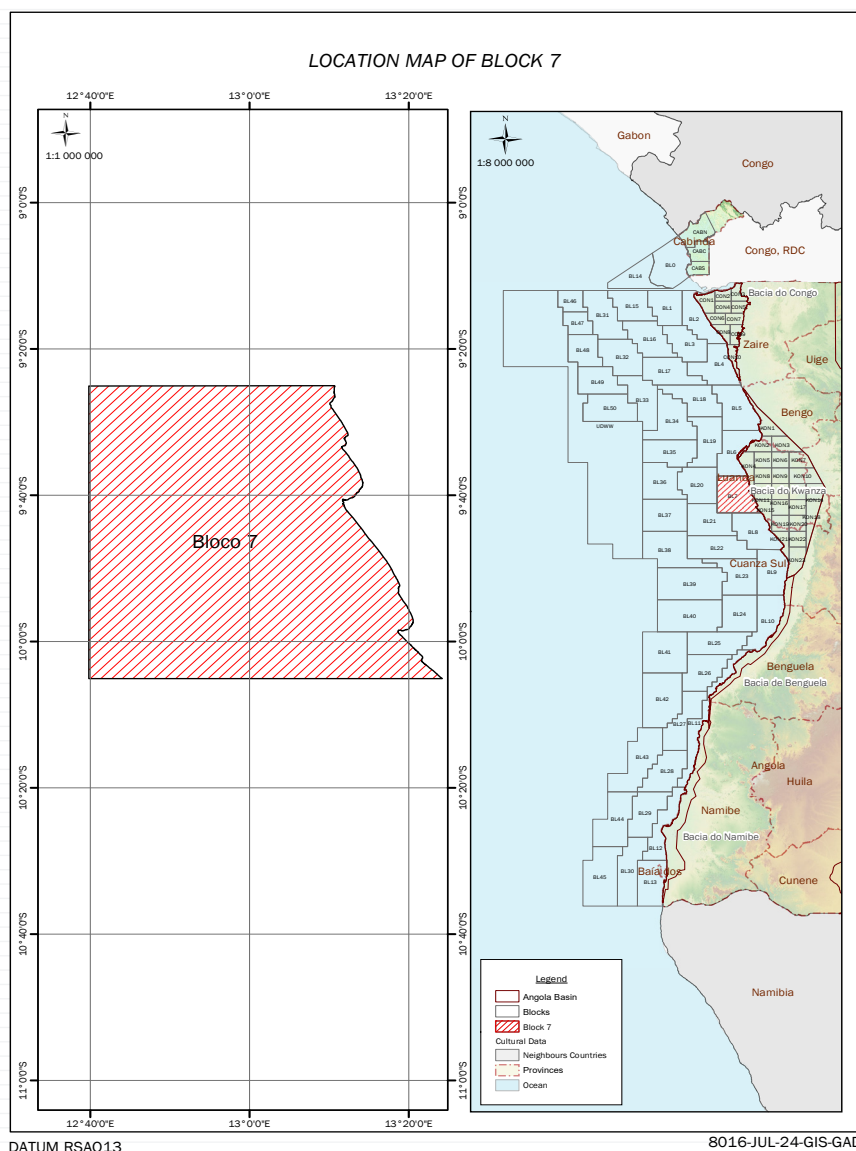
It is bounded by:

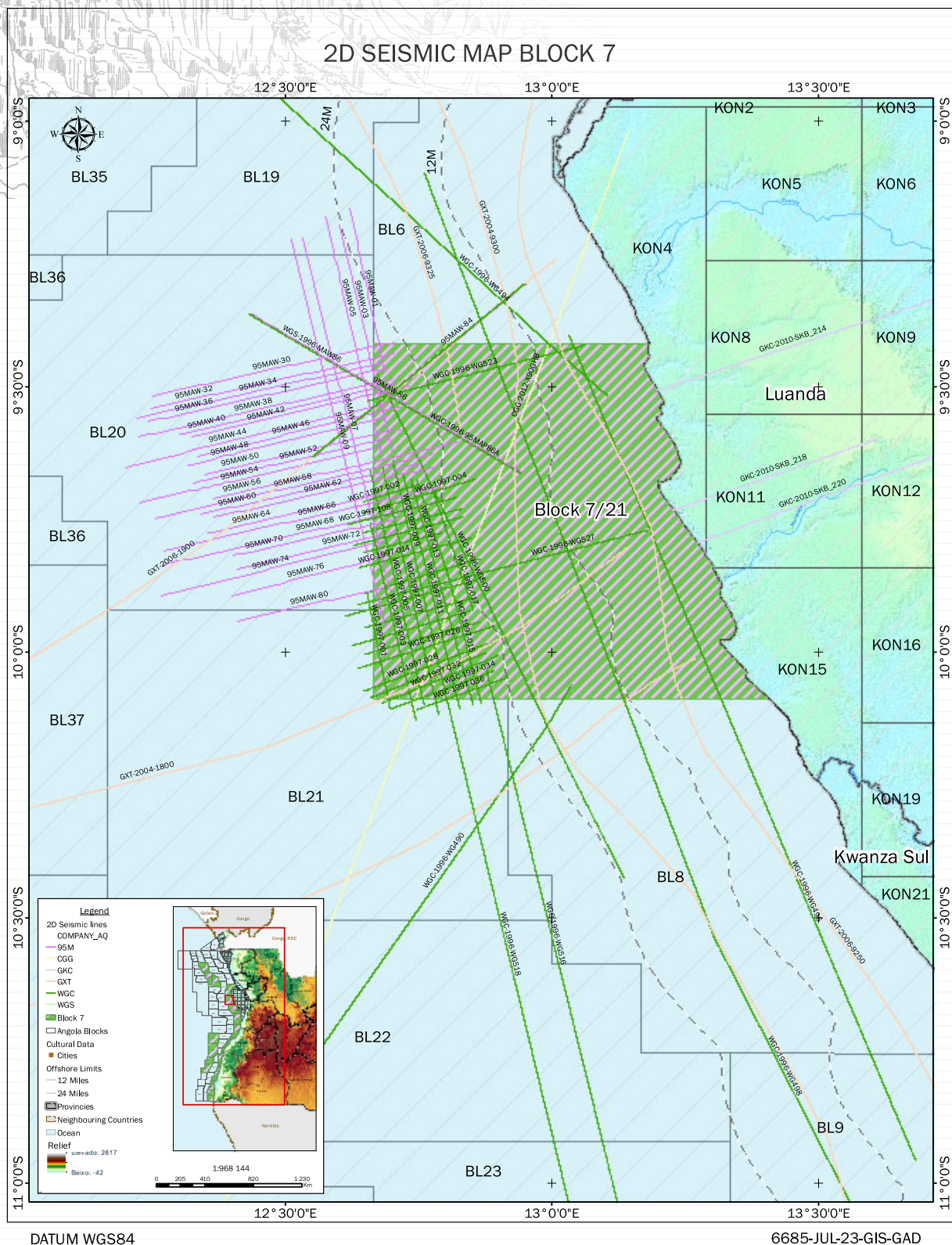
- To the north by Block 6;
- To the south by Blocks 8 and 21;
- To the east by KONs Blocks 4 and 15;
- To the west by Blocks 20 and 21.

Block 7/21 has approximately 5,816 km of 2D seismic coverage and 1,557 km² of 3D seismic coverage.

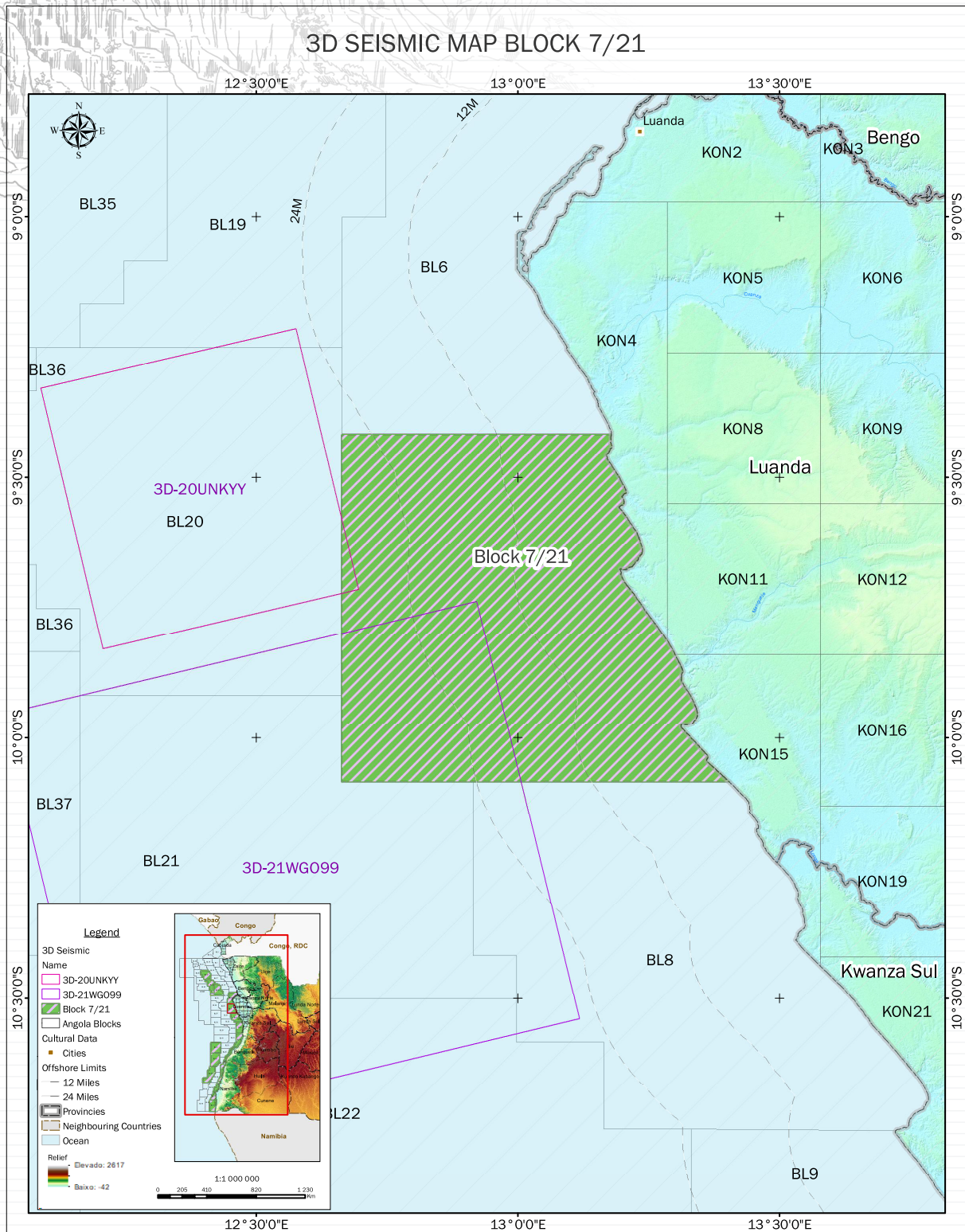
The Pre-Salt unit is characterized by the presence of geological structures of the horst and graben type, strongly influenced by plate tectonics during the pre-rift and rift periods. The possible reservoirs in this lithostratigraphic unit were deposited on the flanks and structural highs (lucula sands, coquina-type carbonates and microbiolites). The source rocks were deposited in the structural lows, composed of lacustrine clays and carbonate sequence.

In the Post-Salt, the presence of raft-type structures (turtle shell) of the Albian age is visible, extremely influenced by salt tectonics, giving rise to the formation of listric faults. Antiform and synform structures from the Upper Cretaceous to Tertiary are also observed. In the Tertiary, turbidite channels equivalent to those tested and proven in the Lower Congo Basin are evident.





2D Seismic Coverage Map



BLOCK 8/21

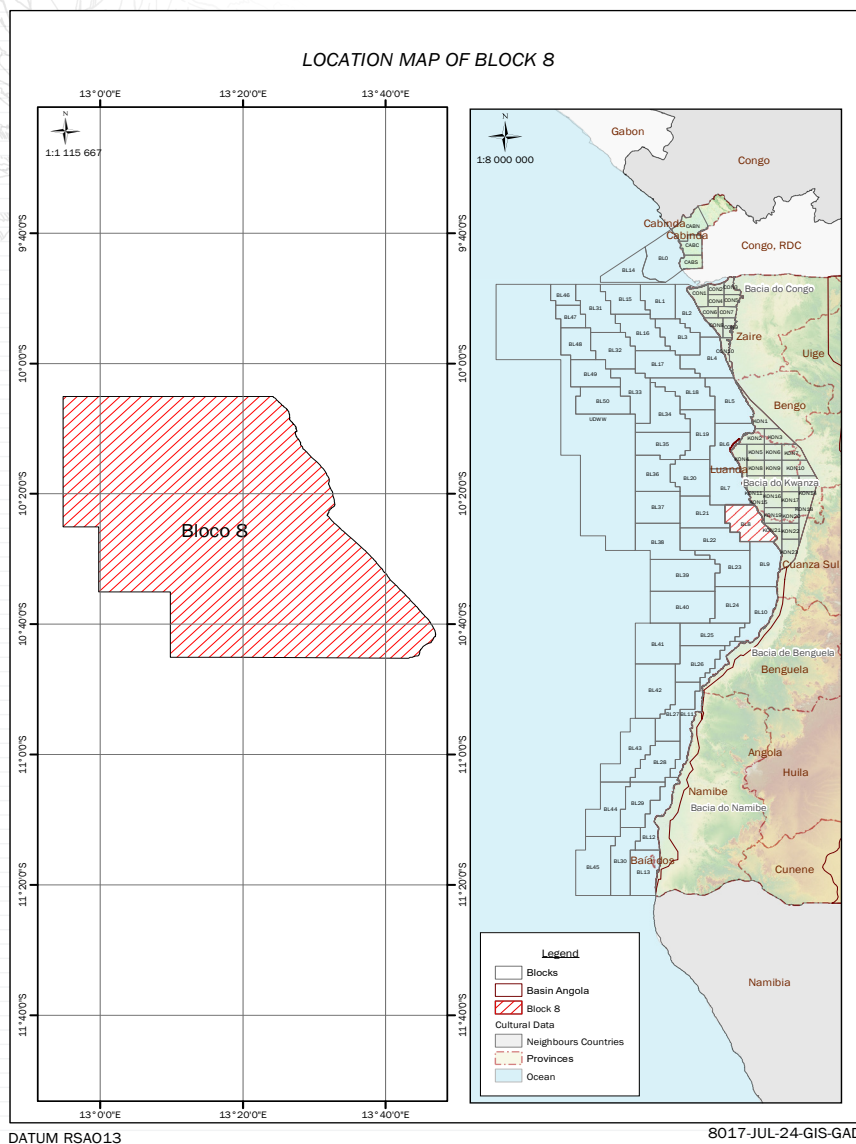
Located offshore in the Kwanza Basin, with an area of 4,835 km² and a water depth ranging from 30 to 600 m.

It is bounded by:

- To the North by Block 7
- To the South by Blocks 9 and 22
- To the East by Blocks KON15 and KON21
- To the West by Blocks 21 and 22.

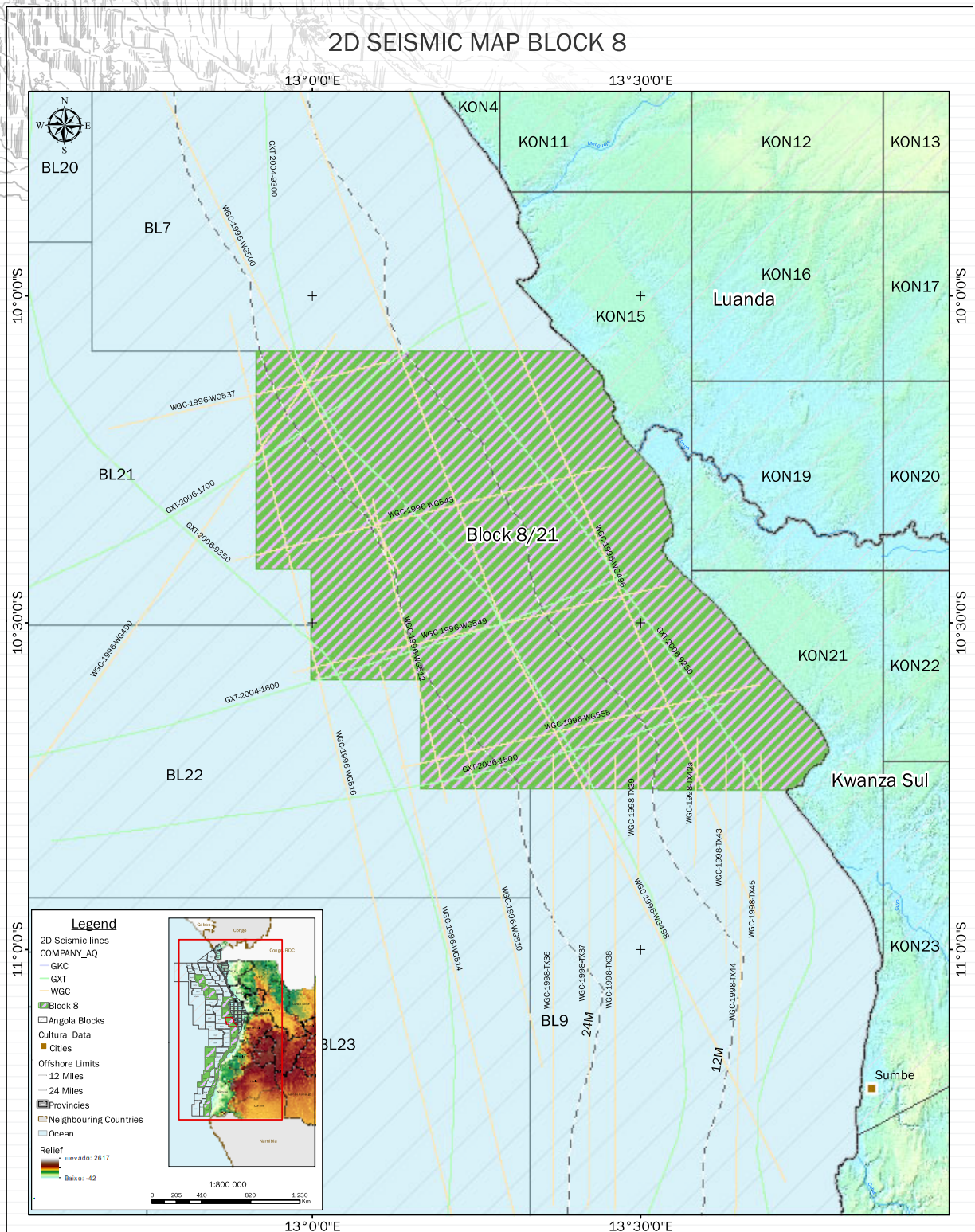
Block 8/21 has a 2D seismic coverage of approximately 5,376 km and 1,200 km² of 3D seismic coverage, with 2 wells drilled (Ametista-1 and Berílio-1, in the Oligocene, Albian and Pre-salt).

The geological model is characterized by a system of normal faults in the basement forming horsts and grabens. In the grabens, we find sapropelic sediments rich in organic matter from the Cuvo Vermelho Formation, constituting the main source rock of the pre-salt.

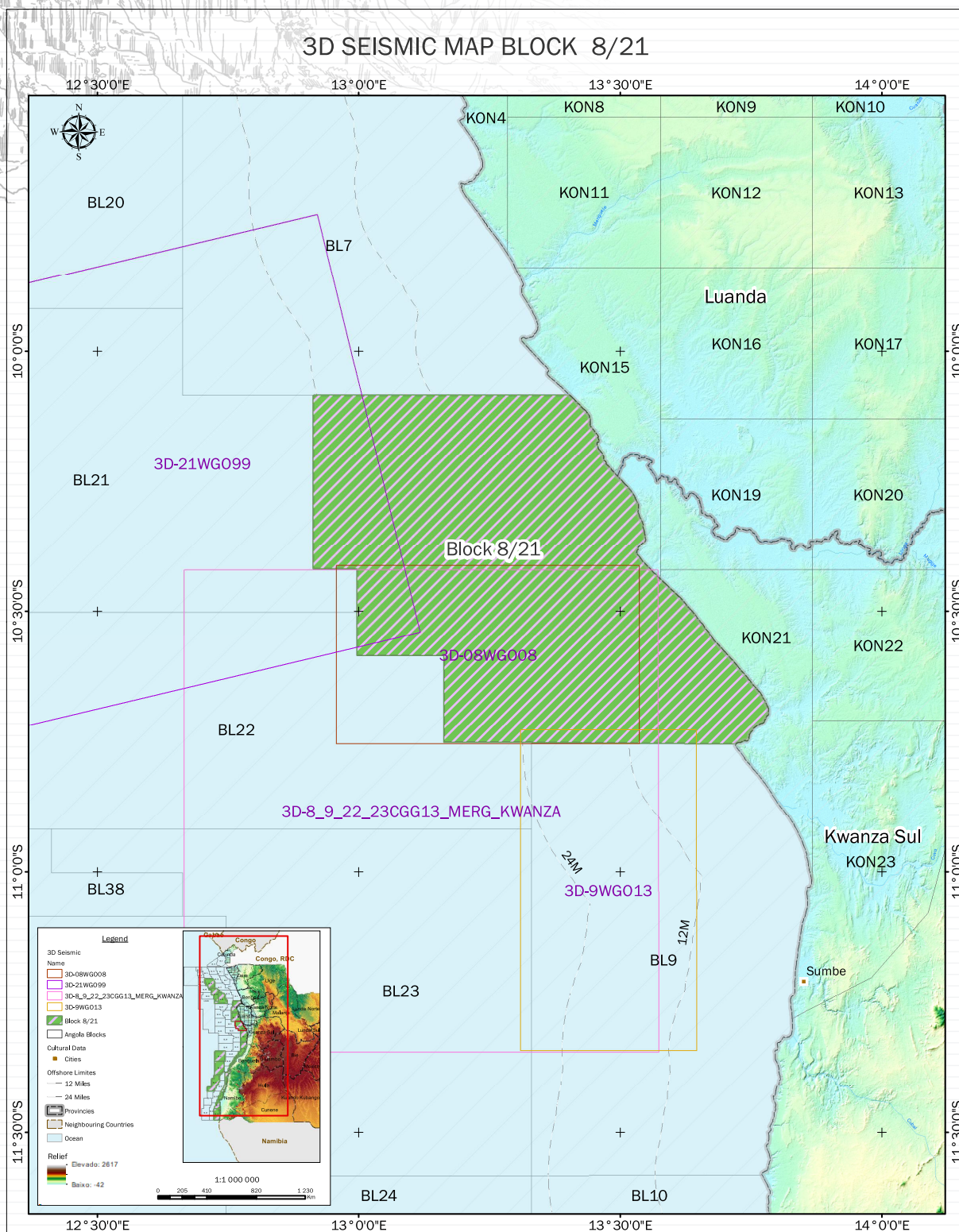


At the top of the horsts, lacustrine carbonates of the equivalent Toca Formation were deposited, while on the flanks, sandstone sediments in the form of pinchouts against fault planes, being the probable reservoirs of the Equivalente Erva Formation. The domes and diapirs of the salt layer, responsible for the post-salt structure, may act as a seal at this level.

The Albian is characterized by normal syndepositional growth faults, anticlines and rafts. The Upper Cretaceous is characterized by normal faults resulting from the movement of salt. The Tertiary is less faulted with clastic sedimentation where reservoirs formed by the turbidite channels of the Oligo-Miocene are found.



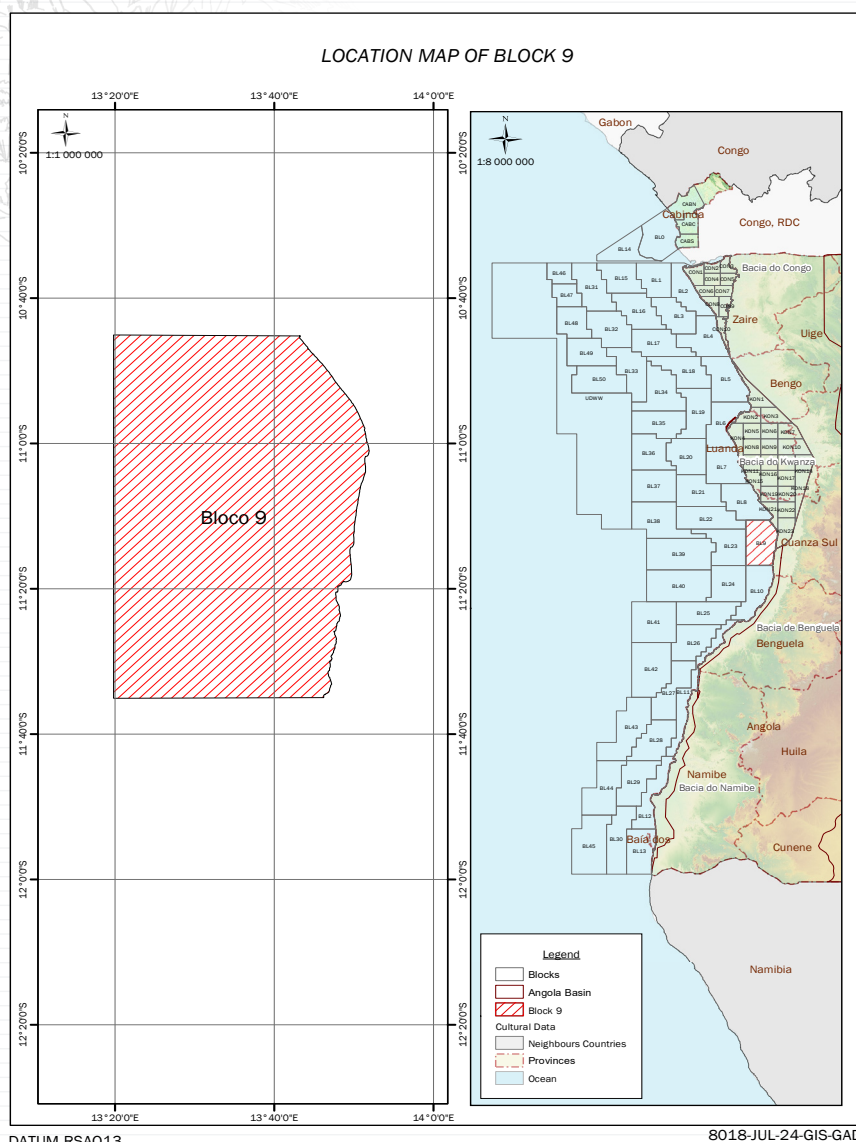
6686-JUL-23-GIS-GAD



BLOCK 9/21

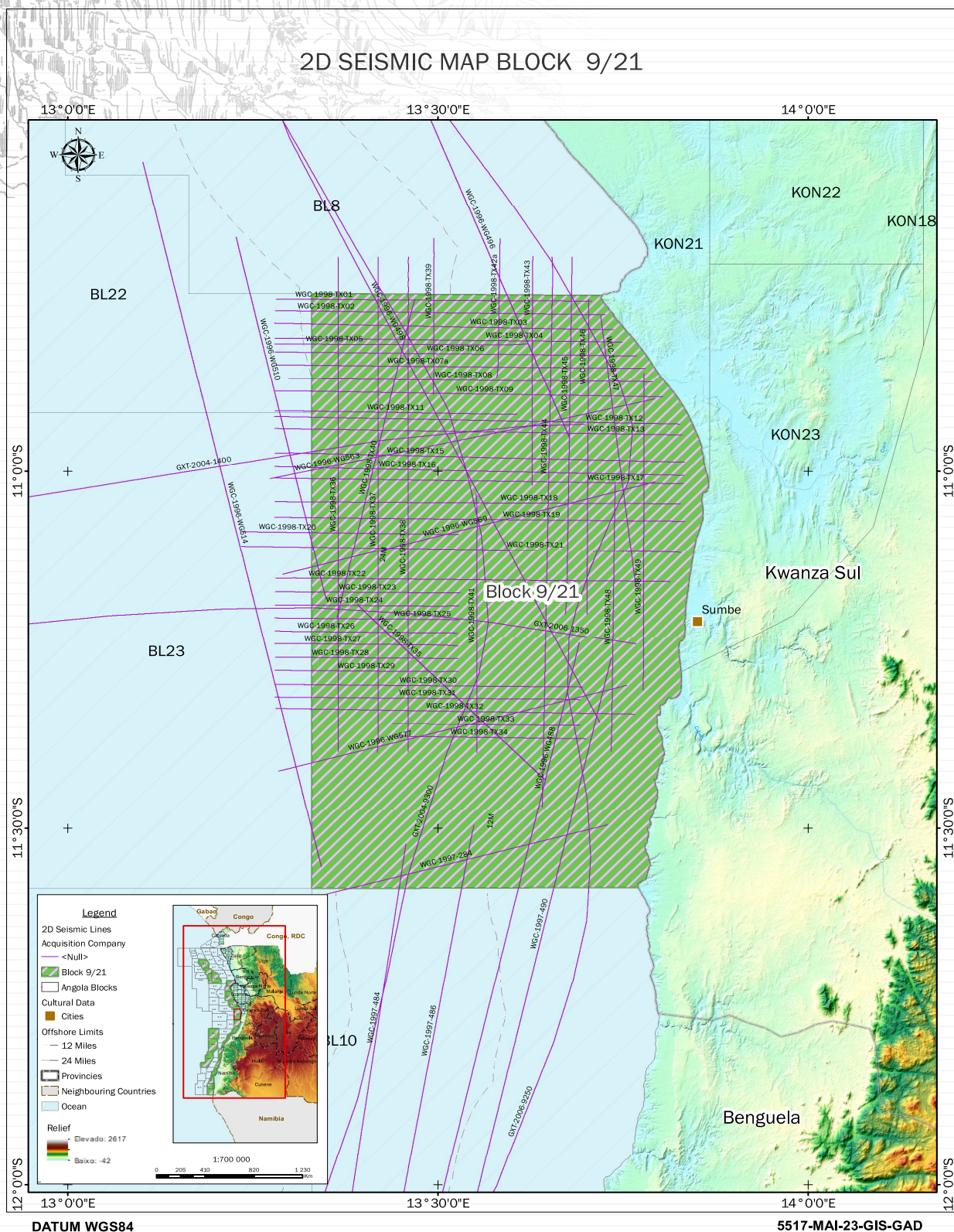
Block 9/21 is located in the Kwanza off-shore basin, with an area of approximately 4,001.36 km² and a water depth ranging from 0 - 1,000 m. It is bounded by: - Block 8 to the north; - Block 10 to the south; - KONs 21 and 23 to the east; - Blocks 22 and 23 to the west. A total of 5,571 km of 2D seismic data and 2,650 km² of 3D seismic data were acquired and a total of 8 wells were drilled (Múcua-1, Maboque-1, Abacaxi-1, Dendén-1, Pitanga-1, Goiaba-1, Jambo-1 and Loengo-1, in the Tertiary, Albian and Pre-salt layers). Three discoveries (Maboque-1, 26.7° API; Abacaxi-1, 20-25° API and Denden-1, 25° API).

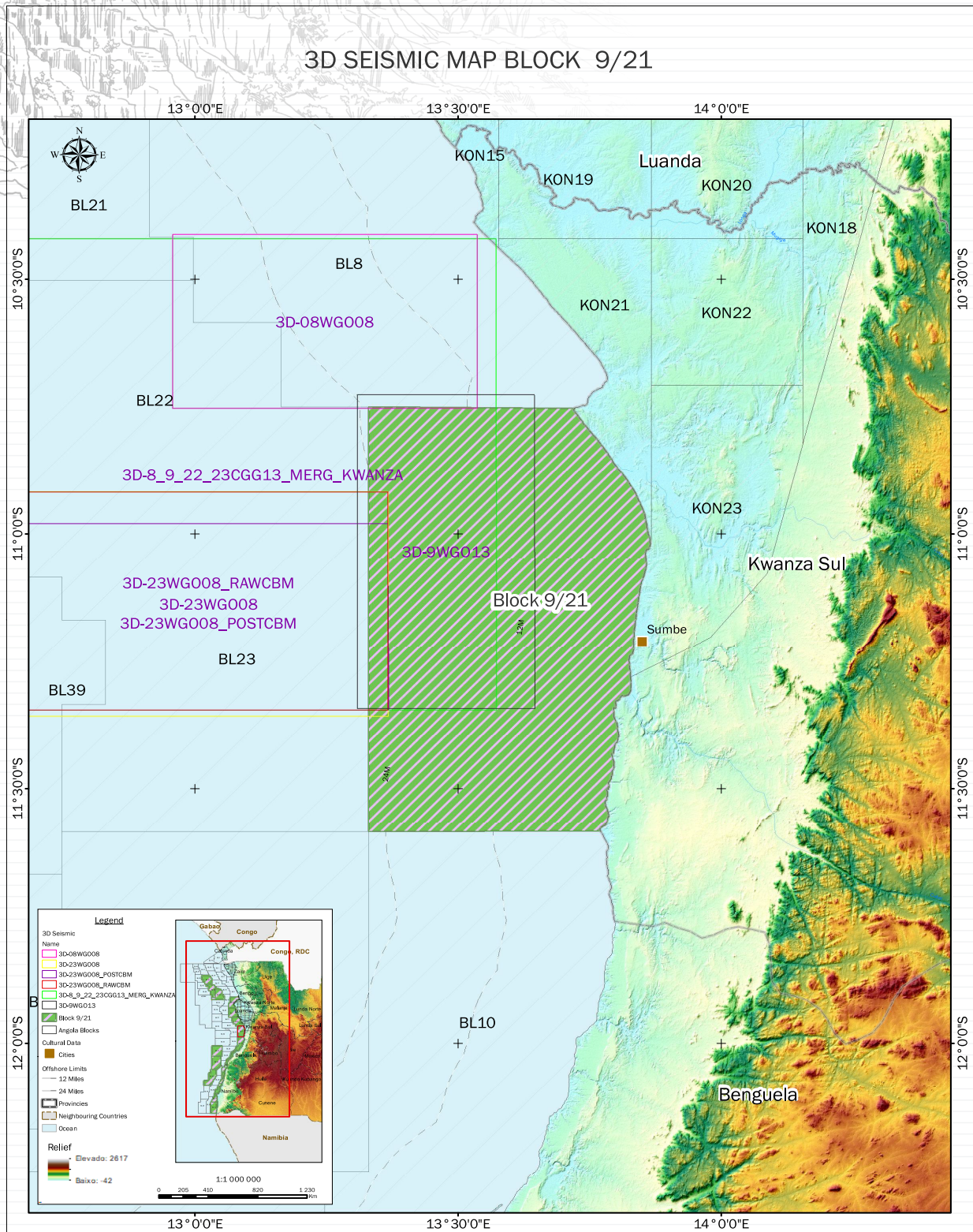
The geological model presents a system of faults in the basement in the Pre-salt Unit, forming horst and graben-type structures. A system of deep lakes was installed in the grabens, typical of anoxic environments, which provided the deposition of sapropelic sediments that contributed to the accumulation and preservation of organic matter (Cuvo Vermelho Formation), constituting the main source rock of the Pre-salt.



At the top of the horsts, lacustrine carbonates equivalent to the Toca do Baixo Congo Formation were deposited; on the flanks of the horsts, sandstone sediments were deposited in the form of pinchouts against fault planes, constituting a probable reservoir. The Sal Maciço Formation has a variable thickness and occurs across almost the entire extension of the Basin, with a strong tectonic influence, forming salt walls that contributed positively to the structuring of the entire Post-Salt.

In the Post-Salt Unit, the Albian level is characterized by normal growth faults with listric tailings, forming antiform structures; the Tertiary is marked by post-depositional extensional faults, whose reservoirs are formed by turbidite channels.





DATUM WGS84

5536-MAI-23-GIS-GAD

BLOCK 10

Block 10 is located in the southern part of the Benguela maritime basin, located in central Angola. It is bounded to the north by Block 9, to the south by Block 11, to the west by Blocks 24 and 25 and to the east by the coast-line. It has an area of approximately 4,789 km² and a water depth ranging from 20 to 500 meters.

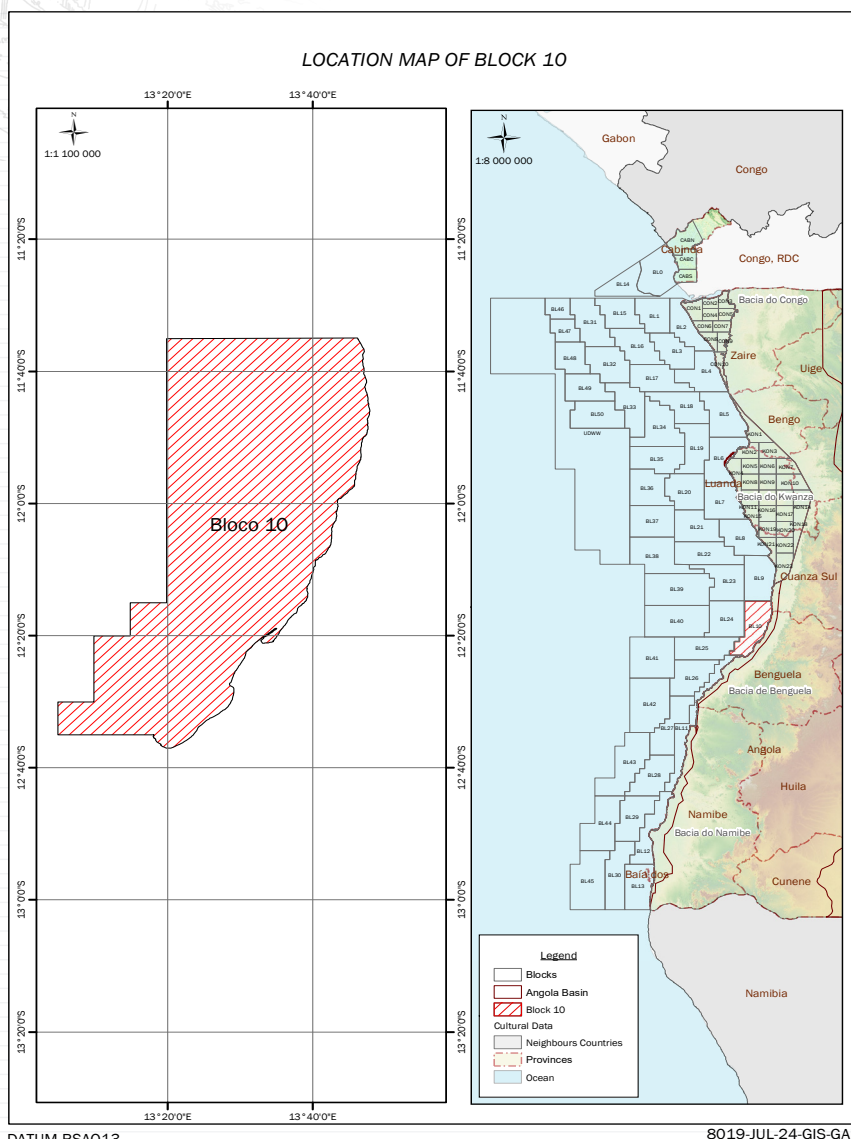
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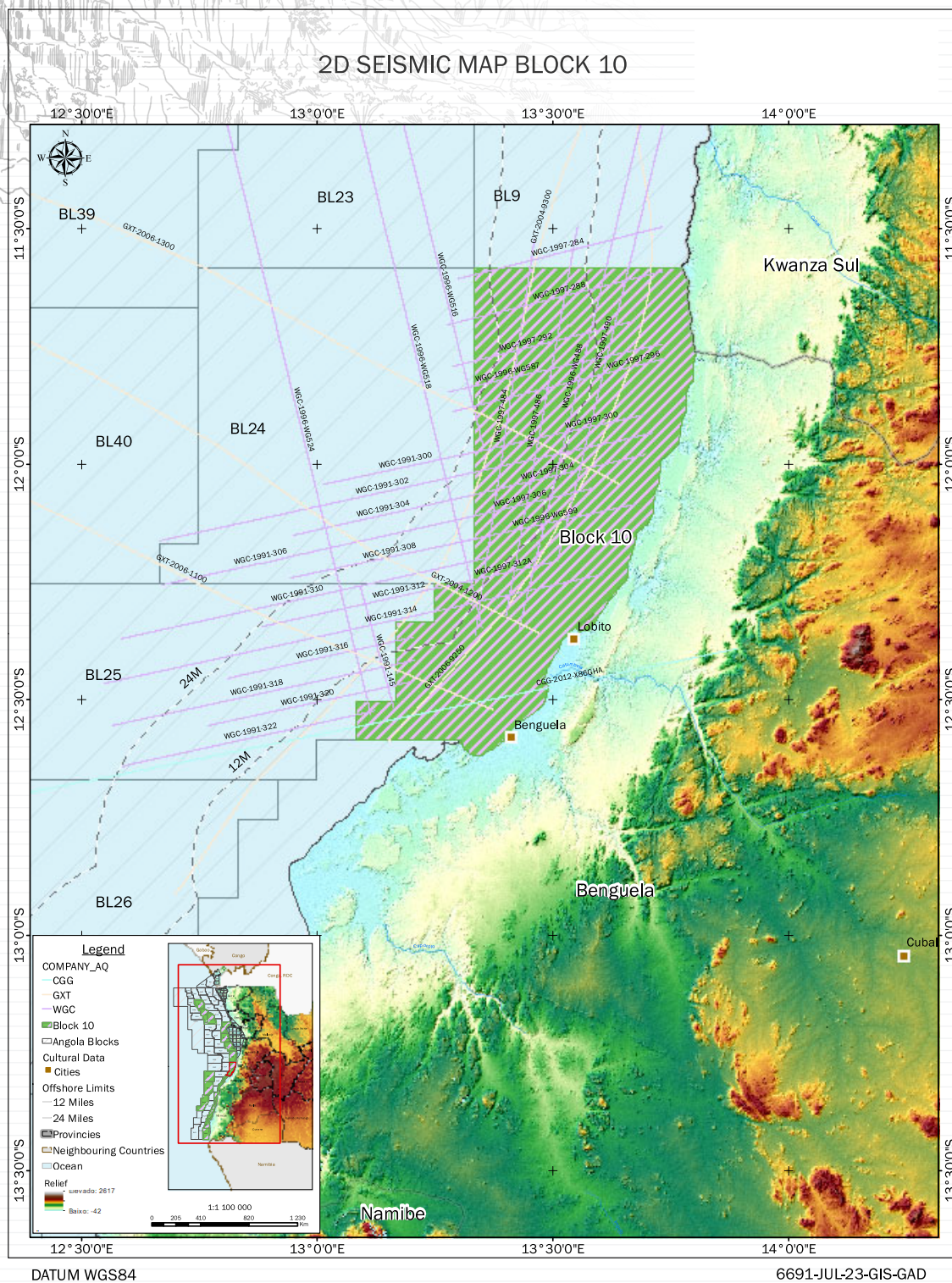
To the north by Block 9;
To the south by Block 11;
To the east by the coastline;
To the west by Blocks 24 and 25.

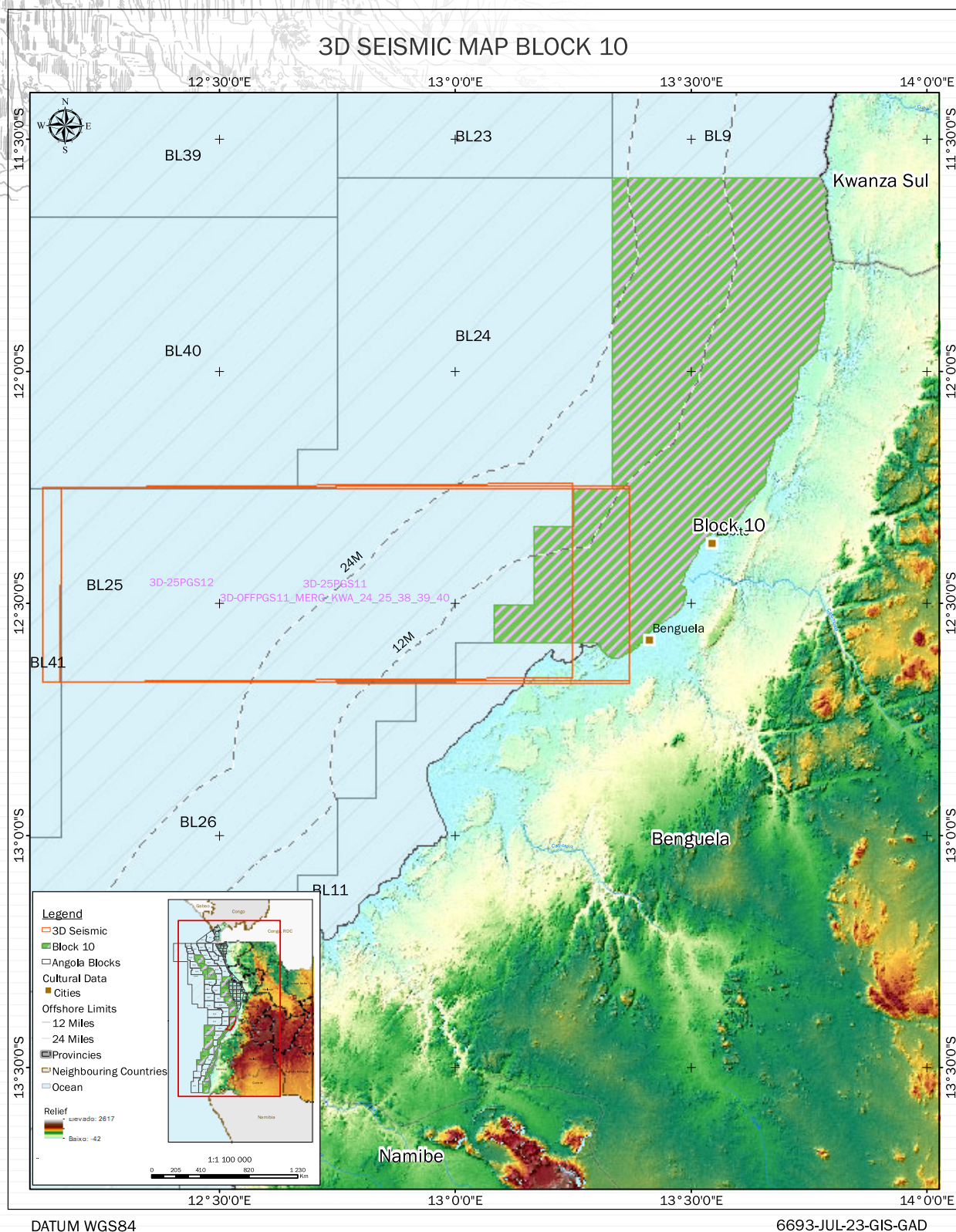
A total of 1,492 km of 2D seismic data and 1,180.99 km² of 3D seismic data were acquired and two wells were drilled, Ngueve-1 and Henda-1.

The Pre-Salt is characterized by geological structures resulting from large faults in the Rift phase, creating structures such as horsts and grabens. To the East of the Block, carbonates were deposited on top of the horsts, known as good reservoirs, and to the West, clays rich in organic matter were deposited at the bottom of the grabens.

The Post-Salt, at the Albian level, is characterized by growth faults with listric tailings, to the West by rafts, semi-rafts and rollovers, and to the East by antiform structures. In the Tertiary, extensional faults and complexes of Oligo-Miocene sandstone channels can be observed.





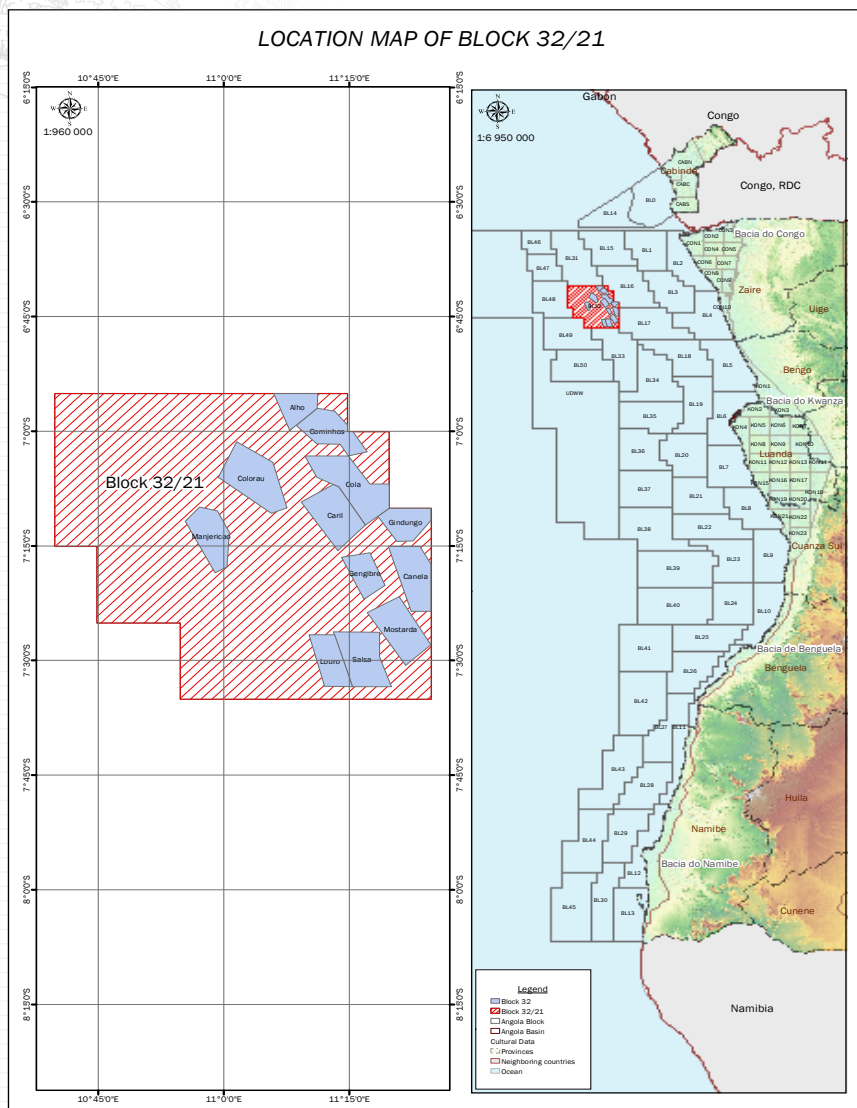


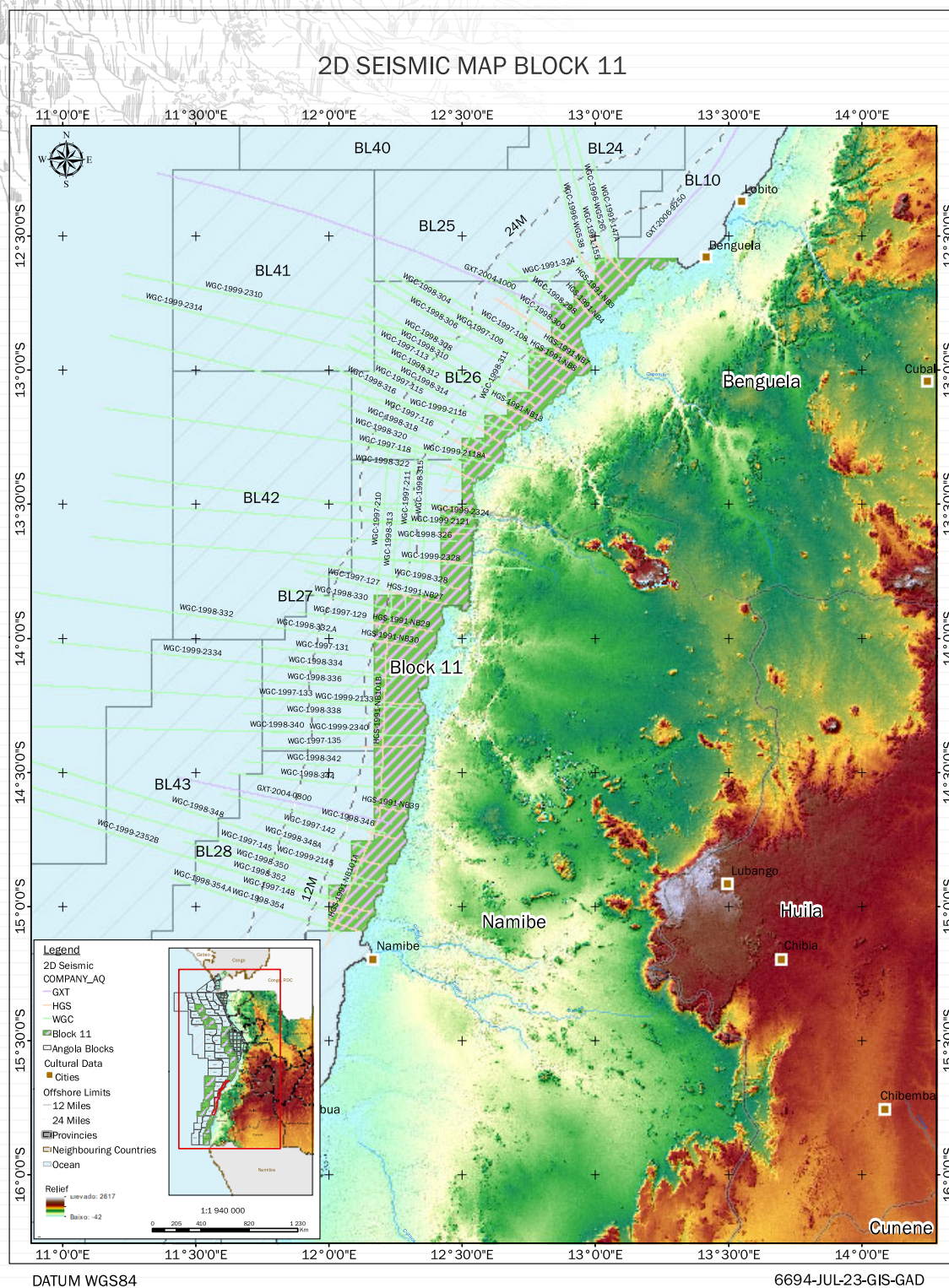
BLOCK 11

The Block is located in the Namibe Maritime Basin, covering an area of approximately 5,074 km² and with a water depth ranging from 0 to 200 meters. It is bounded by: - Block 10 to the North; - Block 12 to the South; - the coastline to the East; - Blocks 25, 26, 27 and 28 to the West. Block 11 has a 2D seismic coverage of approximately 1,492 km.

The main tectonic events known in Block 11, as observed from magnetometry (RTP), gravimetry (public domain Bouguer anomaly) and seismic data, are the Syn-rift and Post-rift phases from the Cretaceous to the Recent age.

The geological structures in the Pre-salt are characterized by plate tectonics in the Rift phase, while in the Post-salt they are characterized by salt tectonics in the Post-rift phase, which originated in the Cretaceous the formation of mounds on top of the horsts and sandstone channels in the Oligo-Miocene interval.





BLOCK 12

Block 12 is located in the southern part of the Namibe maritime basin, in southern Angola. It has an area of approximately 4,219.19 km² and a water depth ranging from 0 to 400 meters.

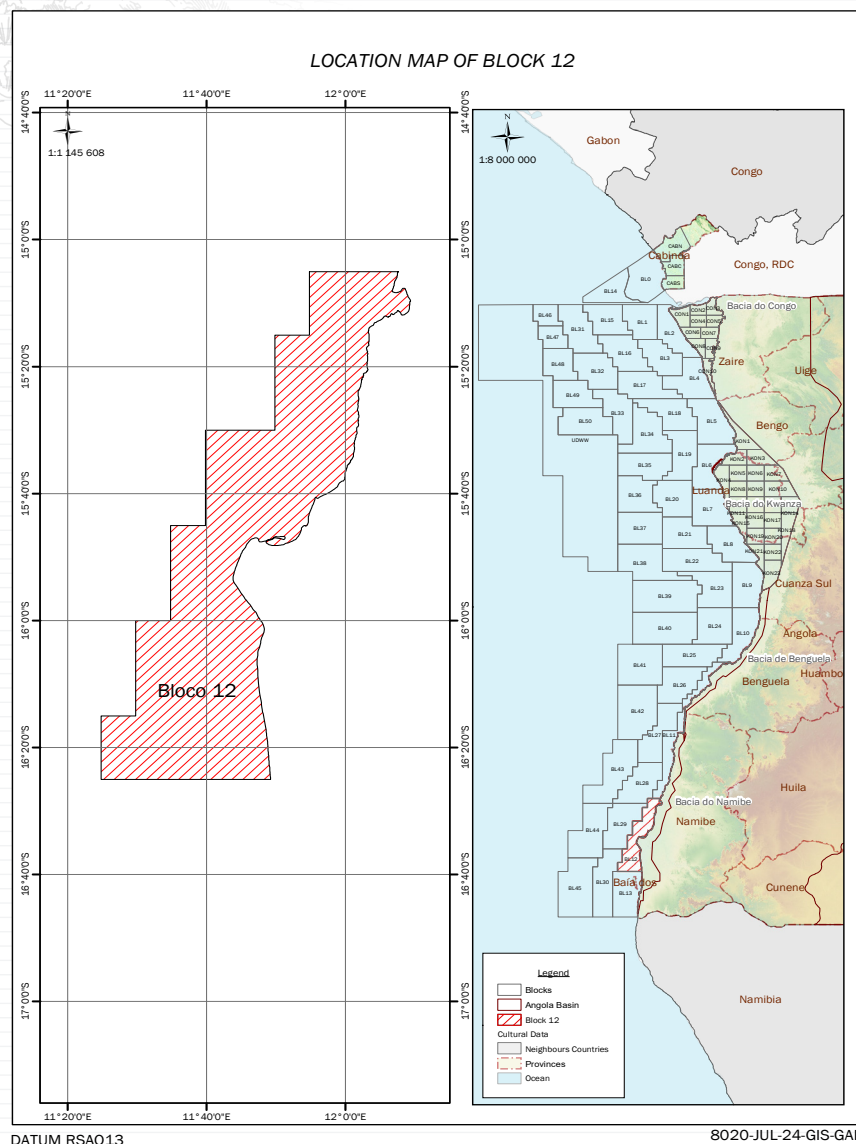
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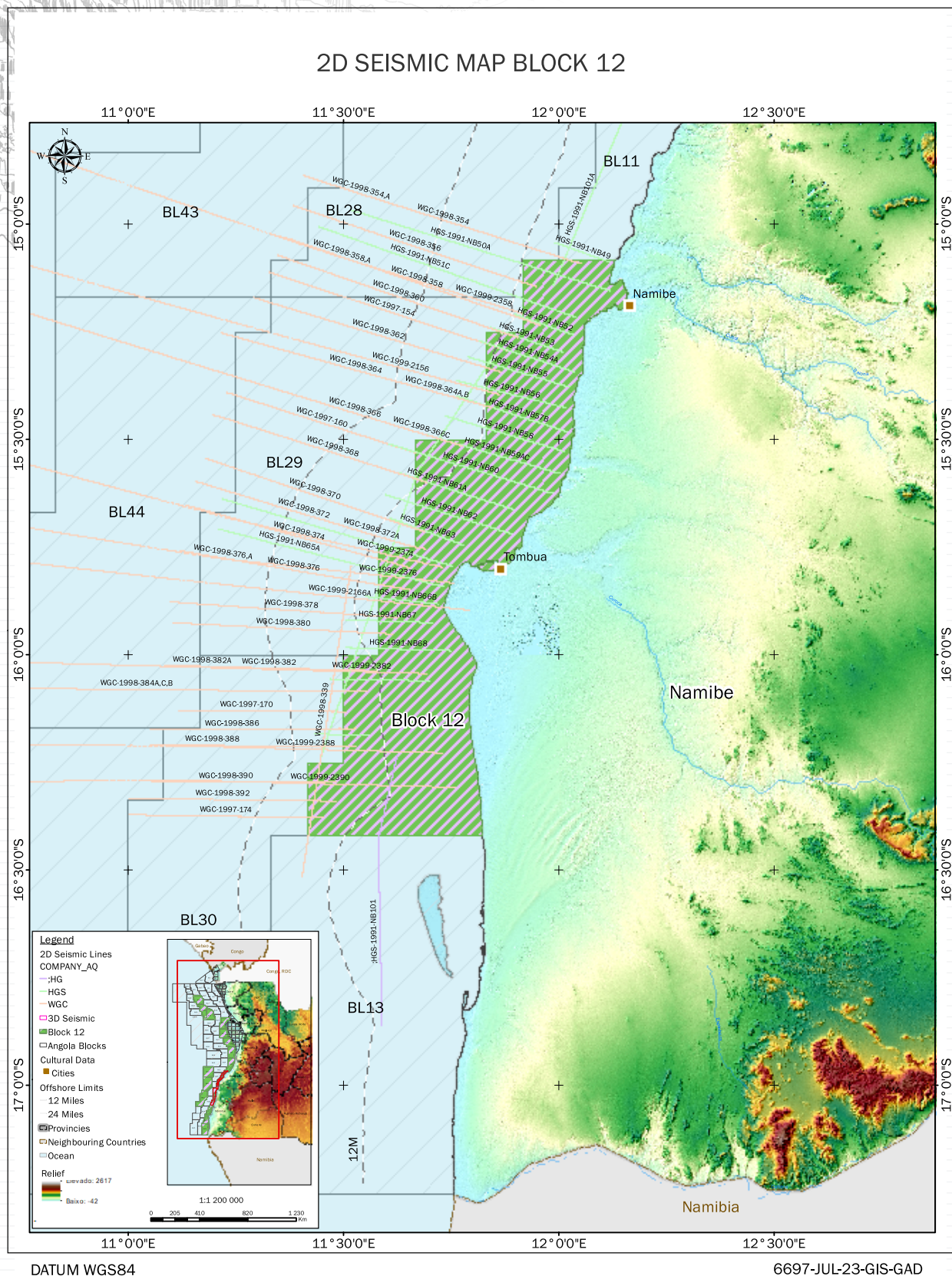
- To the north by Block 11;
- To the south by Block 13;
- To the east by the coastline;
- To the west by Blocks 28, 29 and 30;

It has a 2D seismic coverage of approximately 1,824 km.

The main tectonic events observed from magnetometry (RTP), gravimetry and seismic data indicate that in the pre-salt the geological structures are characterized by strong tectonism, resulting in the formation of structural highs and lows, in which the top of the highs is associated with the formation of mound-shaped carbonate reservoirs and sandstone channels on their fault planes.

Grabens are generally structures suitable for the deposition of source rock. The post-salt layer, characterized by salt tectonics, consists of antiforms, rafts, semi-rafts, growth faults with listric rejects at the Albian and Upper Cretaceous levels, and sandstone channels in the Oligo-Miocene interval.





BLOCK 13

Block 13 is located in the Namibe Maritime Basin, covering an area of approximately 4,513 km², with a water depth ranging from 50 to 1,000 m.

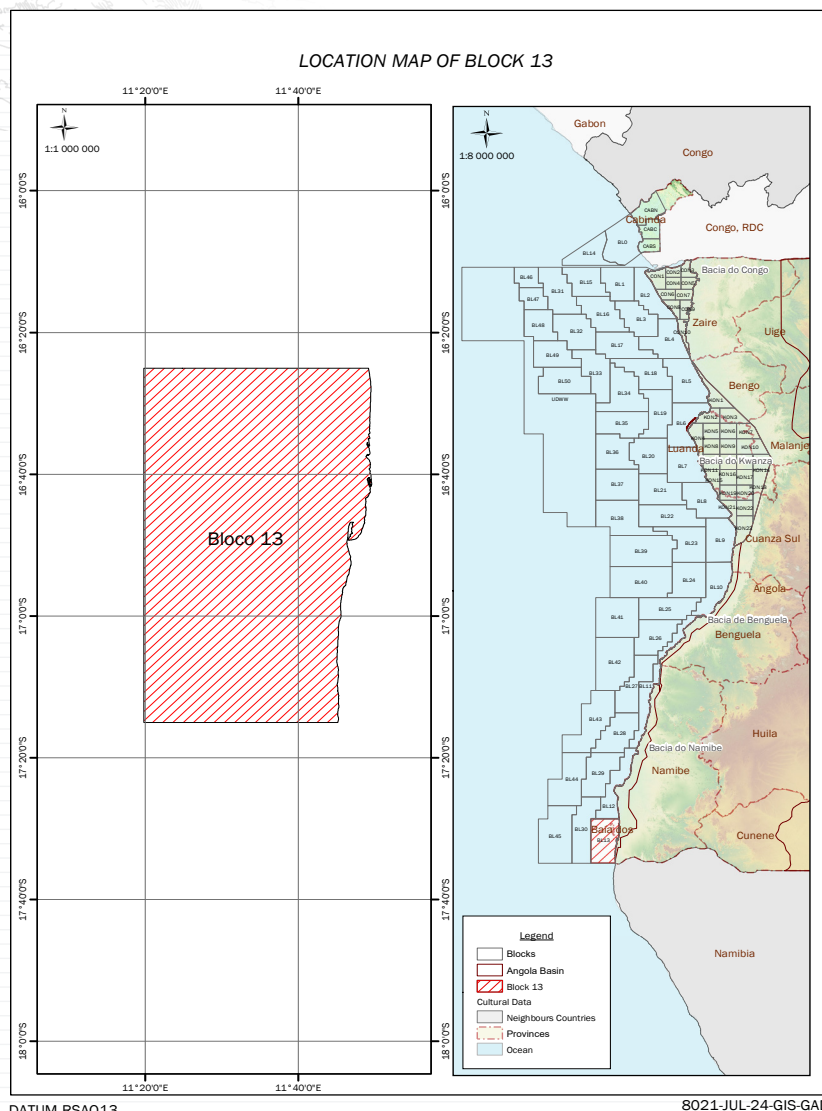
It is bounded by:

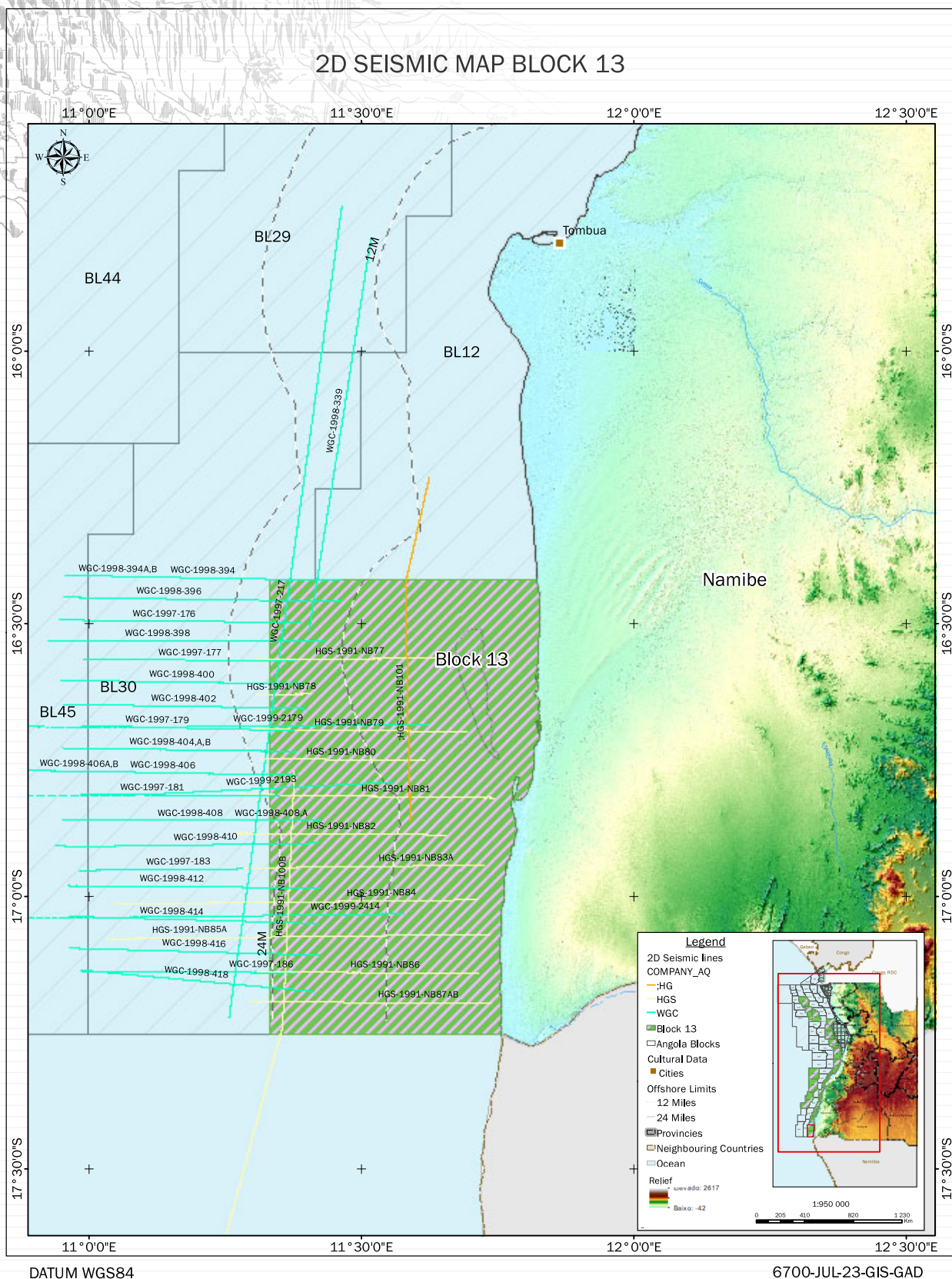
- To the North by Block 12;
- To the South by the Namibian Maritime Basin;
- To the East by the onshore portion of the Namibe Basin;
- To the West by Block 30.

It has a seismic coverage of approximately 1,742 km.

This Block, located furthest south of the shallow waters of the Basin, has a basement with accentuated faults due to the strong tectonism that gave rise to the horsts and grabens, observed from magnetometry (RTP), gravimetry (Bouguer anomaly in the public domain) and seismic data.

From the seismic character, possible mounds were identified at the top of the horsts, pinchout structures in the Pre-salt sequence. In the Post-salt at the Albian level, the Block is characterized by rafts, anticlines and sandstone channels in the Oligo-Miocene interval.





2D Seismic Coverage Map

BLOCK 32/21

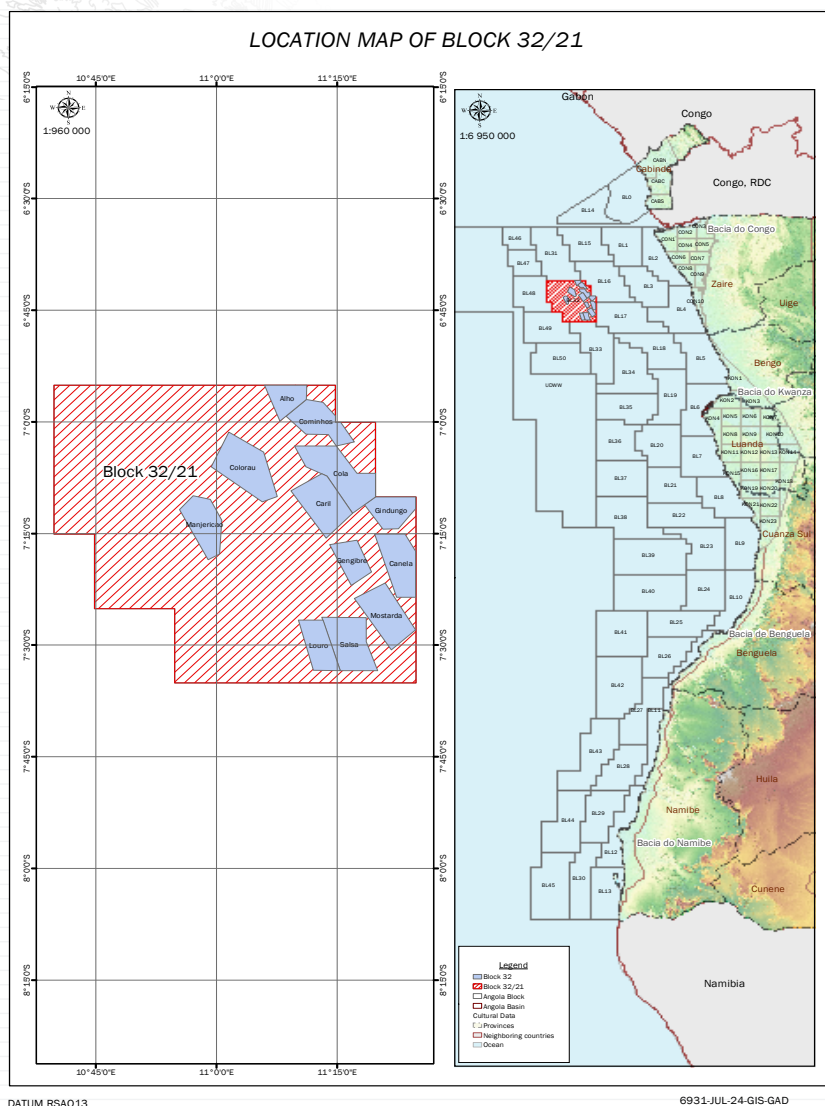
Block 32 is located in the Lower Congo Off-shore Basin of Angola, in ultra-deep waters at a water depth of 1,500–2,500 m, with an area of approximately 5,089 km².

It is bounded by:

- Block 31 to the north;
- Block 33 to the south;
- Blocks 16 and 17 to the east;
- Block 48 to the west;

The block has a coverage of 13,832 km² of 3D seismic and approximately 1,435 km² of 4D seismic. Twenty-eight exploration wells were drilled, 16 of which were research wells and 12 were appraisal wells. Among the research wells, 14 discoveries and 2 dry wells were declared.

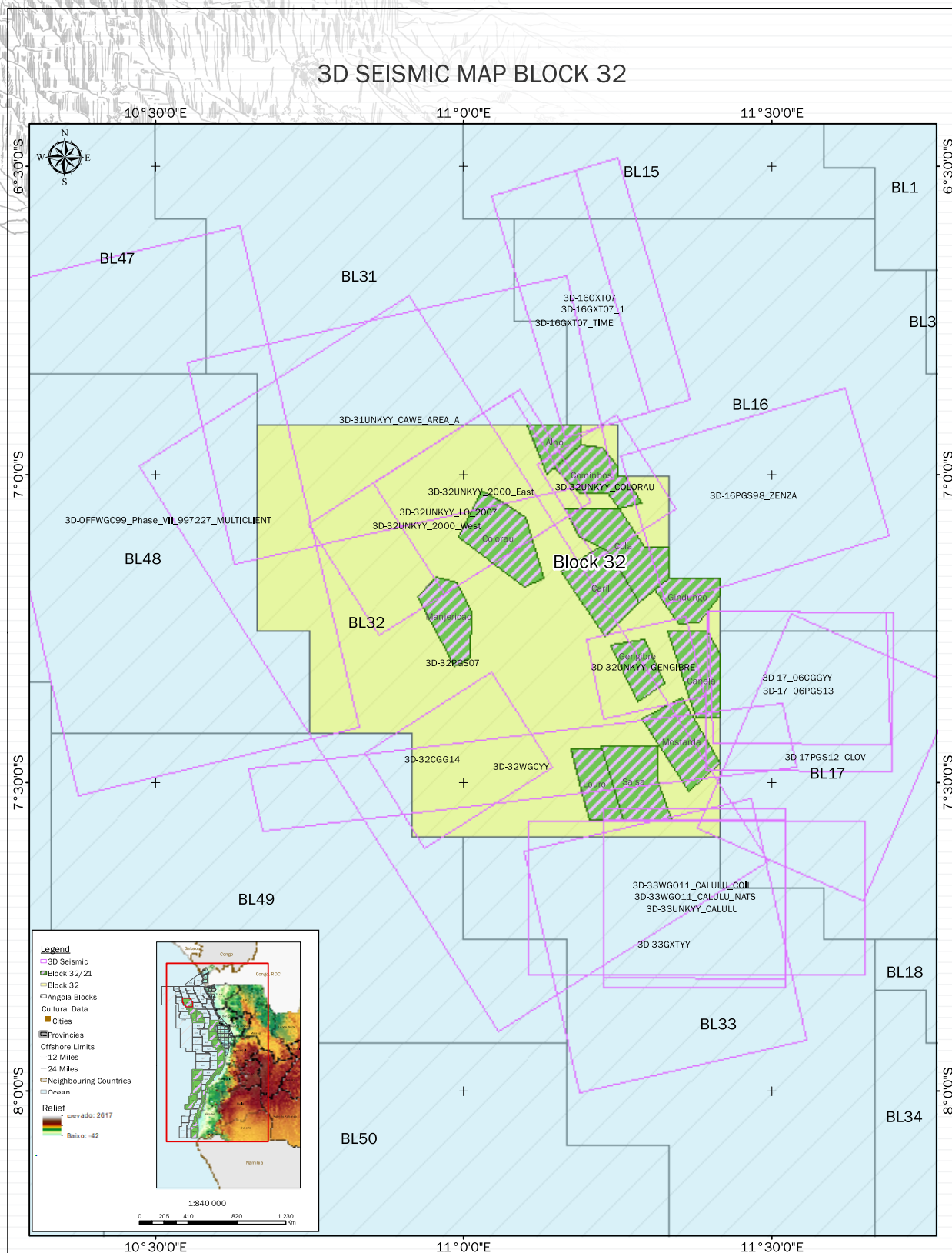
The Pre-Salt Unit has as its source rock the organic-rich clays of the Bucomazi Formation, deposited in grabens. The reservoirs are the sands of the Lucula Formation and the sandstones deposited on the flanks of the horsts with pinchout terminations. The lacustrine carbonates found on the tops of the horsts constitute the reservoirs of the Toca Formation, as do the sand layers of the Chela Formation. The massive salt of Aptian age constitutes the main seal at the level of this unit.



The Post-Salt Unit has as source rocks the claystones and calcilutites of the Pinda Formation, the dolomitic limestones and sandstones constitute the main reservoirs and the clays are the regional seal at the Albian level.

The Upper Cretaceous claystones (source rock) and the sandstones (reservoirs) of the Iabe Formation. In the Tertiary, the clays of the Malembo Formation act as source rocks and the seal, as reservoirs, the sands of this same formation.

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BLOCK 34/21

Block 34 is located offshore Angola, in the Lower Congo Basin, in an area of approximately 5,934 km², and a water depth ranging from 1,500 to 2,800 m.

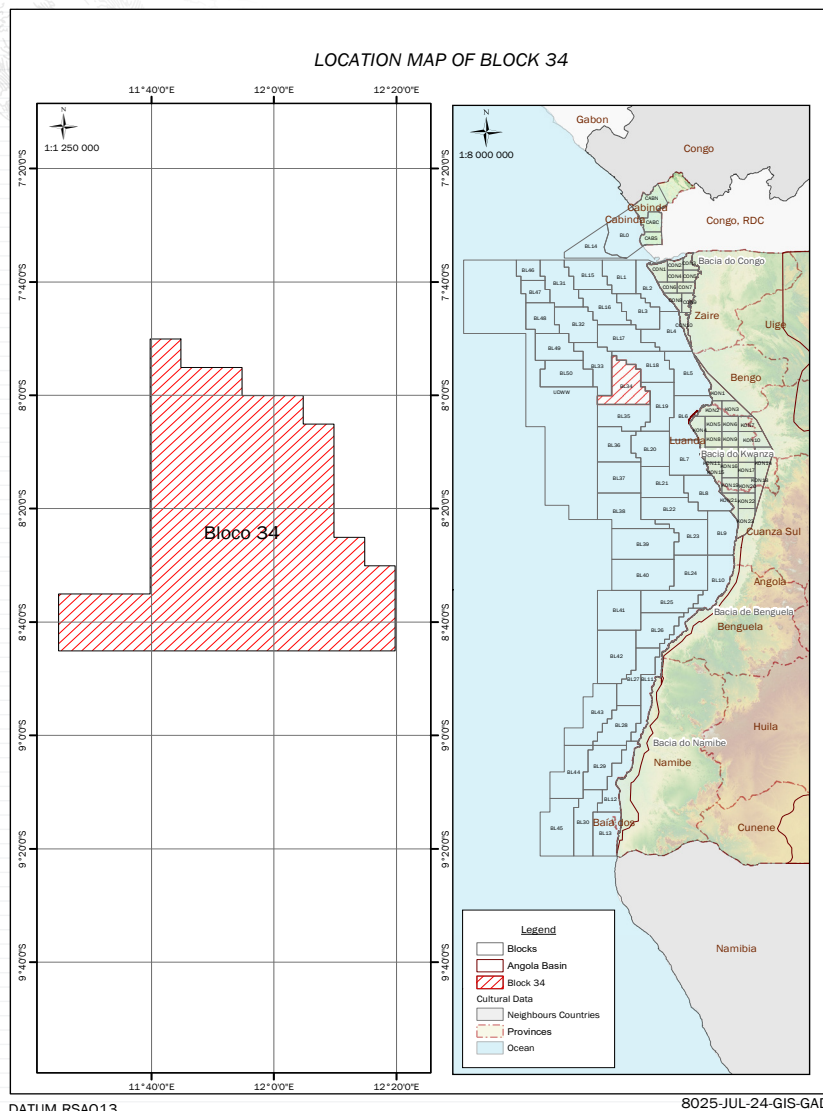
It is bounded by:

- Block 18 to the north;
- Block 35 to the south;
- Blocks 18 and 19 to the east;
- Block 33 to the west

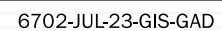
The Block has coverage of approximately 2,500 km of 2D seismic and 5,662 km² of 3D seismic and 2 (two) wells were drilled, N´Gandu-1 and N´Demba-1.

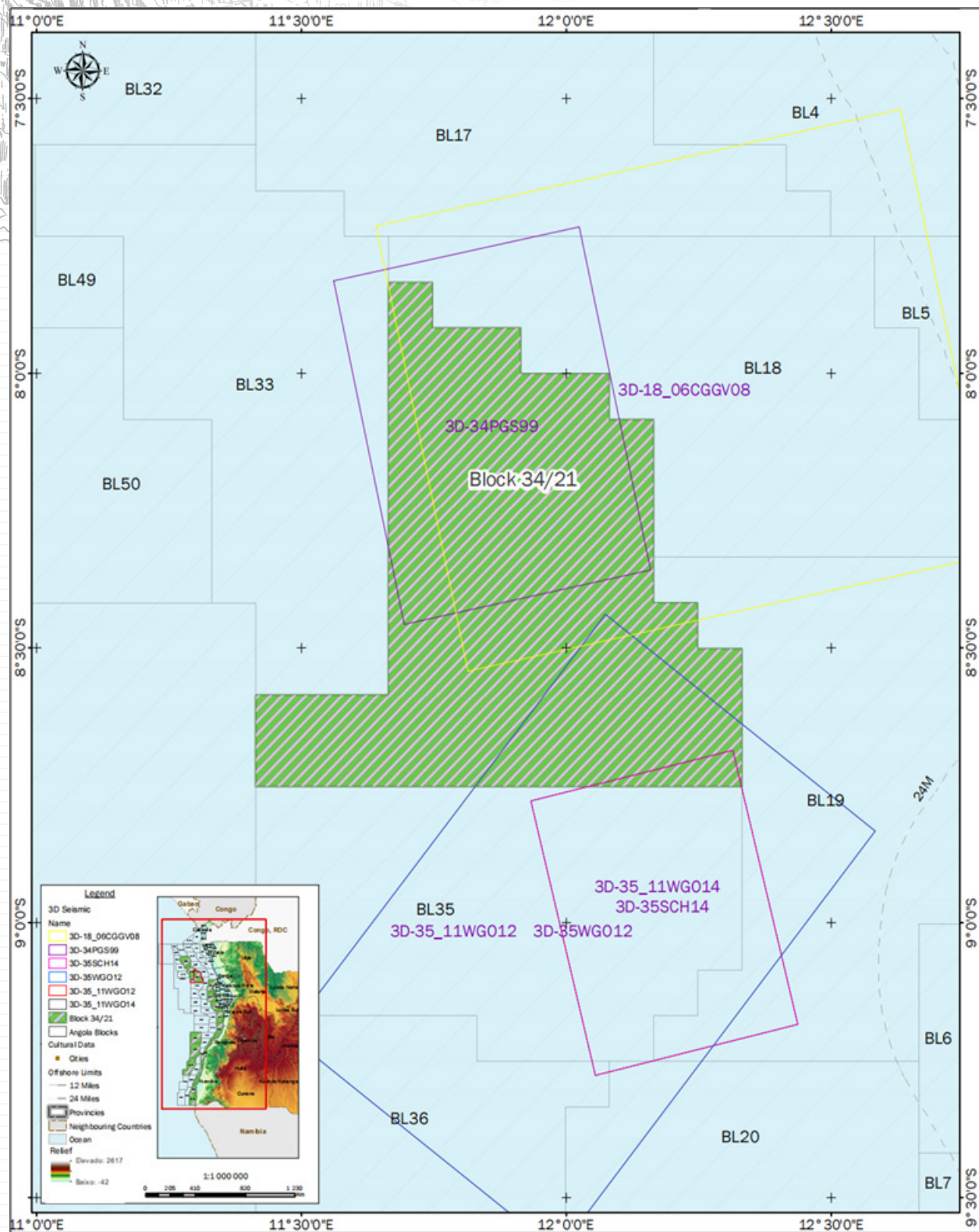
The Pre-Salt Unit has as its source rock the clays rich in organic matter of the Bucomazi Formation, deposited in the grabens. The sands of the Lucula Formation and the sandstones deposited on the flanks of the horsts with pinchout terminations serve as reservoirs. The lacustrine carbonates found on the tops of the horsts constitute the reservoirs of the Toca Formation, as well as the sand layers of the Chela Formation. The massive salt of Aptian age constitutes the main seal at the level of this unit.

The Post-Salt Unit has as source rocks the claystones and calcilutites of the Pinda Formation, the dolomitic limestones and sandstones constitute the main reservoirs and the clays are the regional seal at the Albian level. The Upper Cretaceous has claystones (source rock), and the sandstones (reservoirs) of the Iabe Formation. In the Tertiary, the clays of the Malembo Formation act as source rocks and the seal, as reservoirs, the sands of this same formation.



2D Seismic Coverage Map





2D Seismic Coverage Map

BLOCK 43

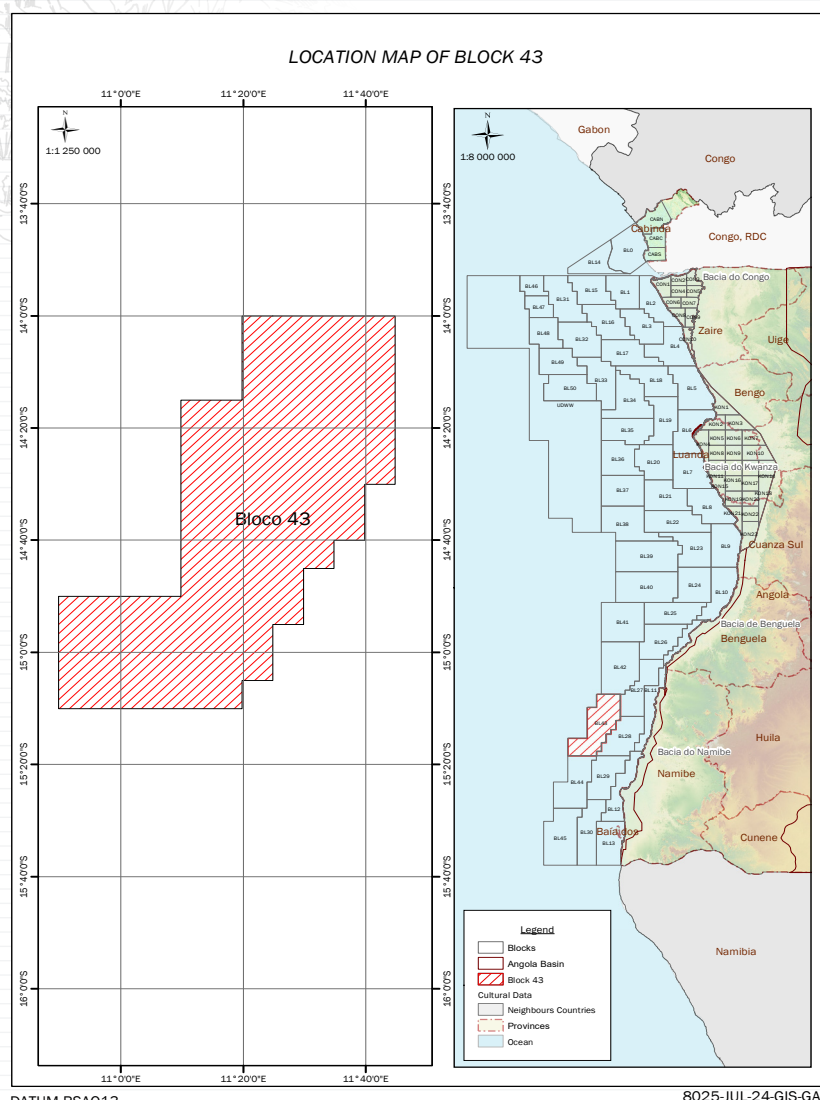
Block 43 is located in the northwest part of the offshore Namibe Basin. The Block extends approximately 7,067.12 km² and has a water depth varying between 2,500 and 3,000 m.

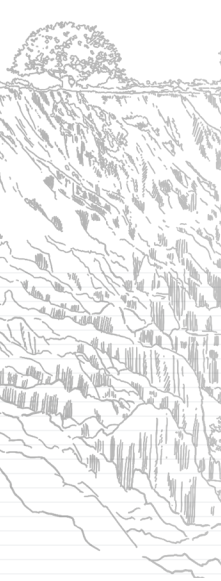
It is bounded:

- To the North by Block 42,
- To the South by Block 44,
- To the East by Blocks 27 and 28 and
- To the West by the Atlantic Ocean.

With a 2D seismic coverage of approximately 1,544 km, the main tectonic events known in the Block were identified from the integration of seismic, magnetometry (RTP) and gravimetry (Bouguer anomaly) data, which allowed the evidence of structural highs and lows at the pre-salt level, with the deposition of carbonates at the top of the horsts, and pinchout sands on the fault planes of the horsts constituting reservoirs.

The continuous and parallel reflectors in the grabens possibly indicate the presence of source rock. At the Post-Salt level, the occurrence of Albian sediments and Oligo-Miocene sandstone channels were identified, forming possible reservoirs.





History:

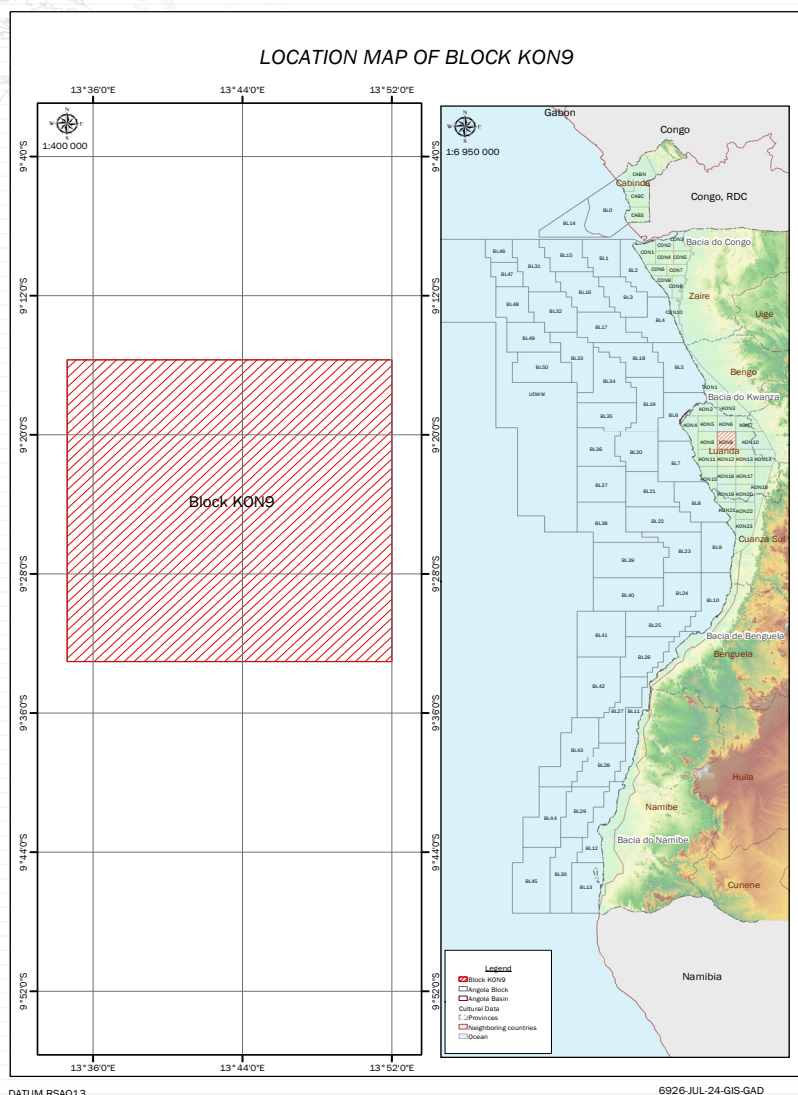
- Four exploration wells were drilled
- 2D seismic: 227.70 km (PSTM), 1970s and 106.05 km (PSTM/PSDM), 2010.

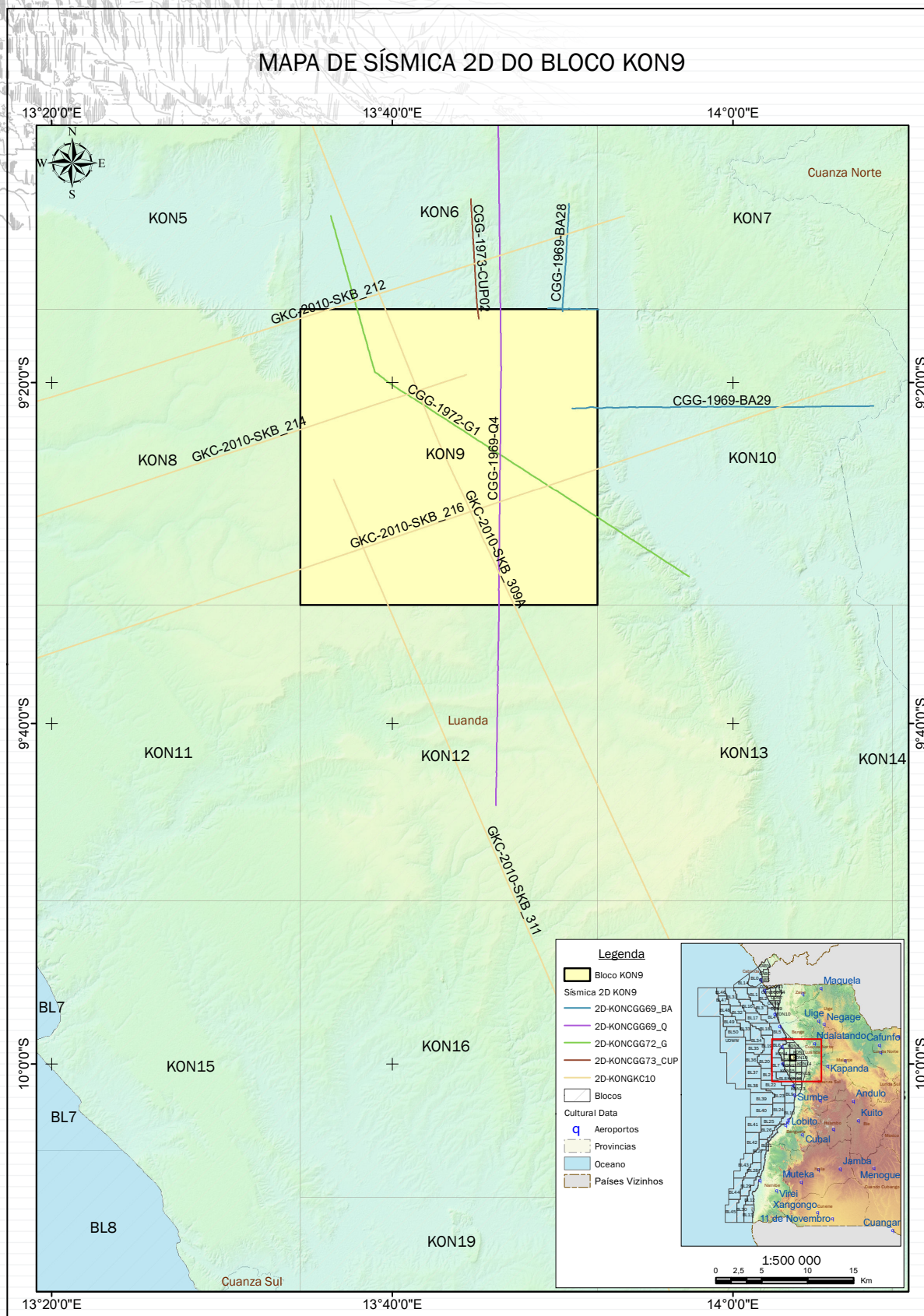
Observations:

On the surface of Block KON 9, there are outcrops dating from the Upper Cretaceous to the Recent period. According to the geological model, the basement is characterized by normal faults that induced the formation of horsts and grabens.

The syn-rift sequence was deposited on these structures. The sag phase occurs locally as a result of the peneplanation of the Basin. The Post-salt layer is thick and defined by anticlines.

The drilled wells reached final depths between 1,225 m and 2,434.60 m, and two of them had evidence of hydrocarbons at the Lower and Upper Cretaceous levels.







Os documentos relativos à manifestação de interesse deverão ser submetidos para o seguinte endereço:

ANPG – Agência Nacional do Petróleo, Gás e Biocombustíveis

Edifício Torres do Carmo – Torre 2, Rua Lopes Lima

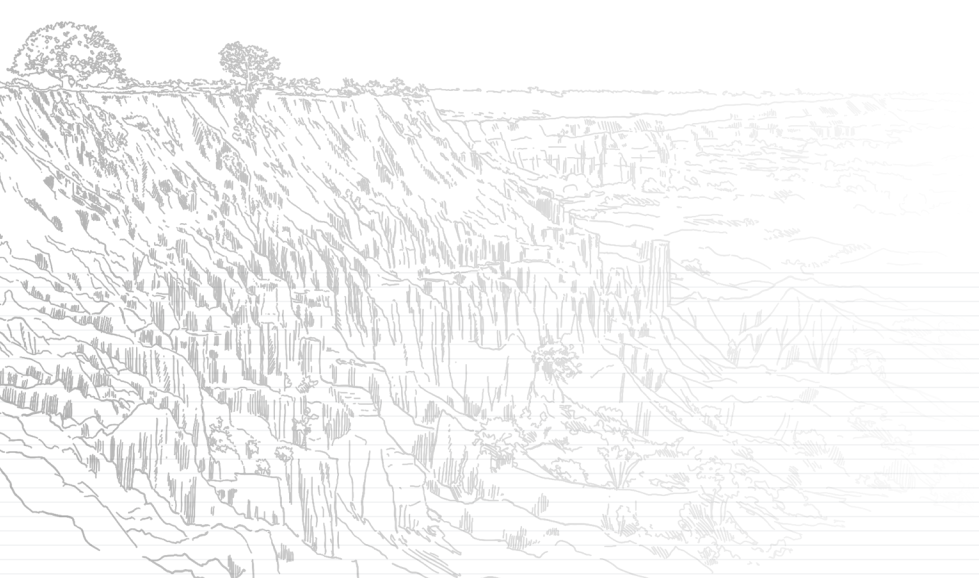
Distrito Urbano da Ingombota, Luanda – República de Angola

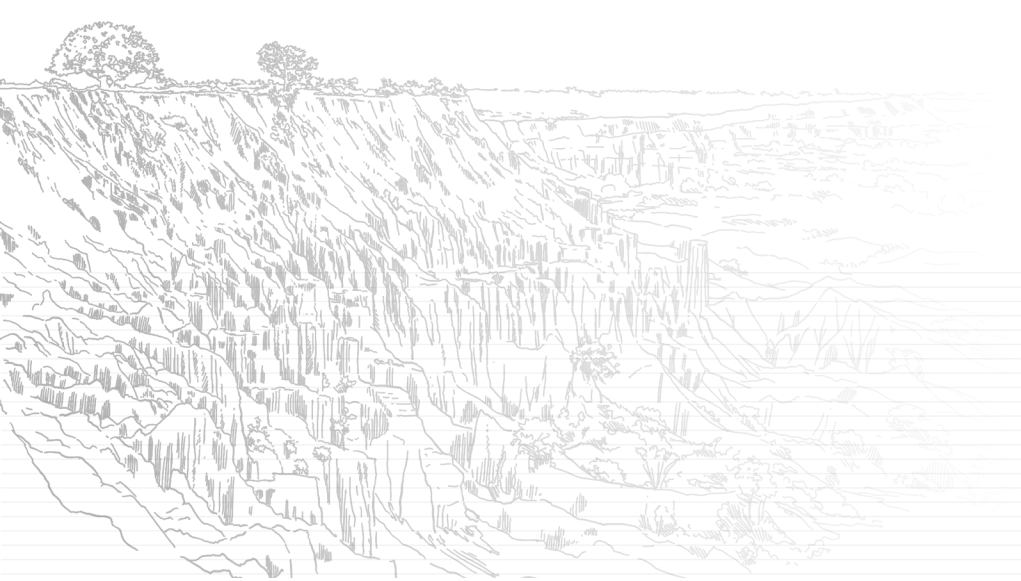
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