

AFRICA ENERGY WEEK

MOZAMBIQUE UPSTREAM

POTENTIAL OPPORTUNITIES

OPEN ACREAGES



November 2021



ABOUT ENH

- ENH is the a National Oil Company (NOC) of the Republic of Mozambique.
- National entity responsible for the exploration, production and commercialization of oil, established in 1981.
- Represents the state participation interest in commercial operations, holding equity stakes in all exploration and production concessions and many other Oil and Gas projects.
- Appointed as domestic gas aggregator to manage 25% allocated gas, with a vision to speed up the industrial development of Mozambique.



CONCESSION AREAS UNDER EXPLORATION & PRODUCTION

Áreas Concessionadas & Produção de Moçambique



EXPLORATION

Area A5-A

Búzi

Area A5-B

Mazengá

Area Z5-C

Inhassoro

Area Z5-E

Block PT5-C

DEVELOPMENT

Area 1 →



Area 4 →



Area 4 →



PSA →



PRODUCTION

PPA



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ENH - UPSTREAM OPERATIONS



EXPLORATION



Expl. wildcat

BUZI, A5-A, A5-B, Z5-C, Z5-D & PT5-C

Expl. appraisal

P&T (PPA & PSA)

ÁREA 1

ÁREA 4

Expl. EPCC in negotiation

MAZENGA



DEVELOPMENT



Light Oil & Gas

P&T (PSA)

LNG

ÁREA 1

ÁREA 4

FLNG

ÁREA 4



Subsidiaries (SPV)

ENH Rovuma Área 1, S.A.

ENH FLNG 1, S.A.



PRODUCTION (processing)



Gas & Condensate

P&T (PPA)



subsidiary



TRANSPORT (pipeline)



Pipeline (865 km)

Pipeline - ROMPCO



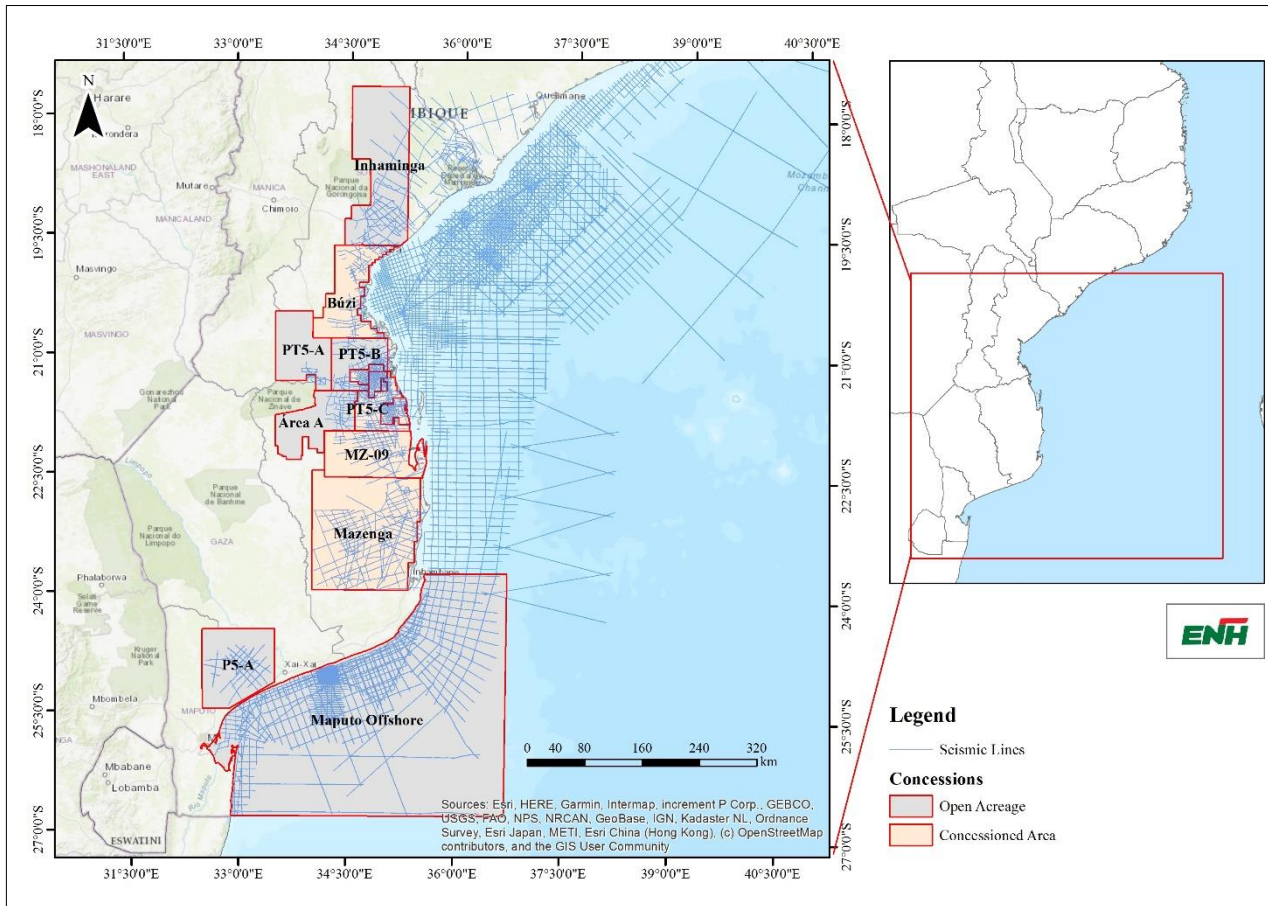
subsidiary



Open Acreages

- **Mozambique Basin** (Background & Data Base)
 - PT5-A
 - PT5-B
 - Palmeiras P5-A
 - Area A
 - Inhaminga
 - Maputo Offshore
- **Rovuma Basin** (Background & Data Base)
 - Rovuma Onshore

Open Acreages: Mozambique Basin

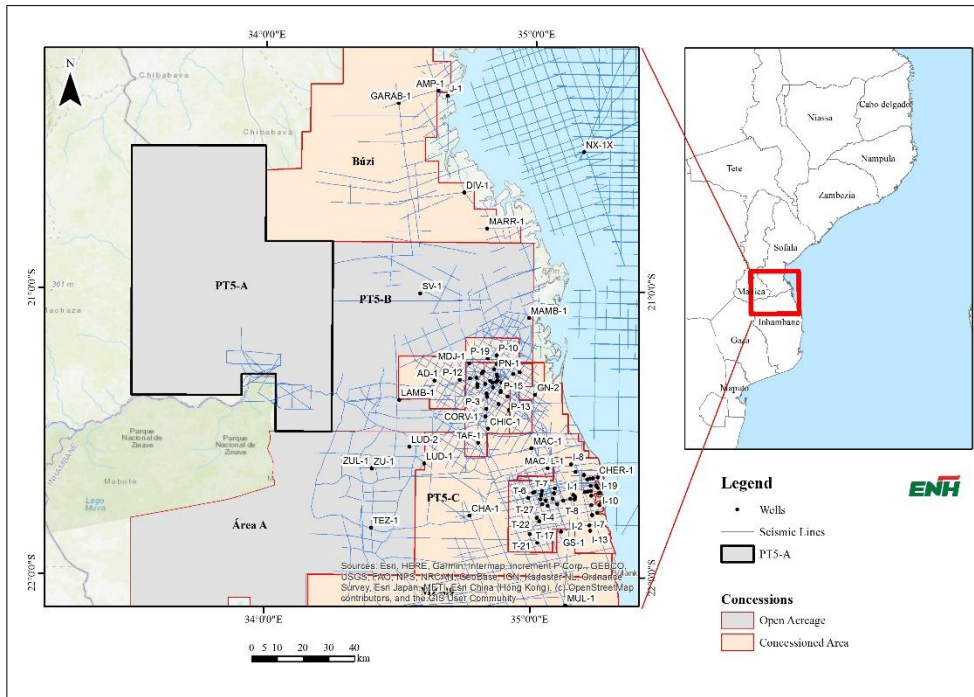


The open acreages in Mozambique basin are:

- PT5-A
- PT5-B
- Palmeiras P5-A
- Area A
- Inhalinga
- Maputo Offshore

PT5-A

Seismic Data

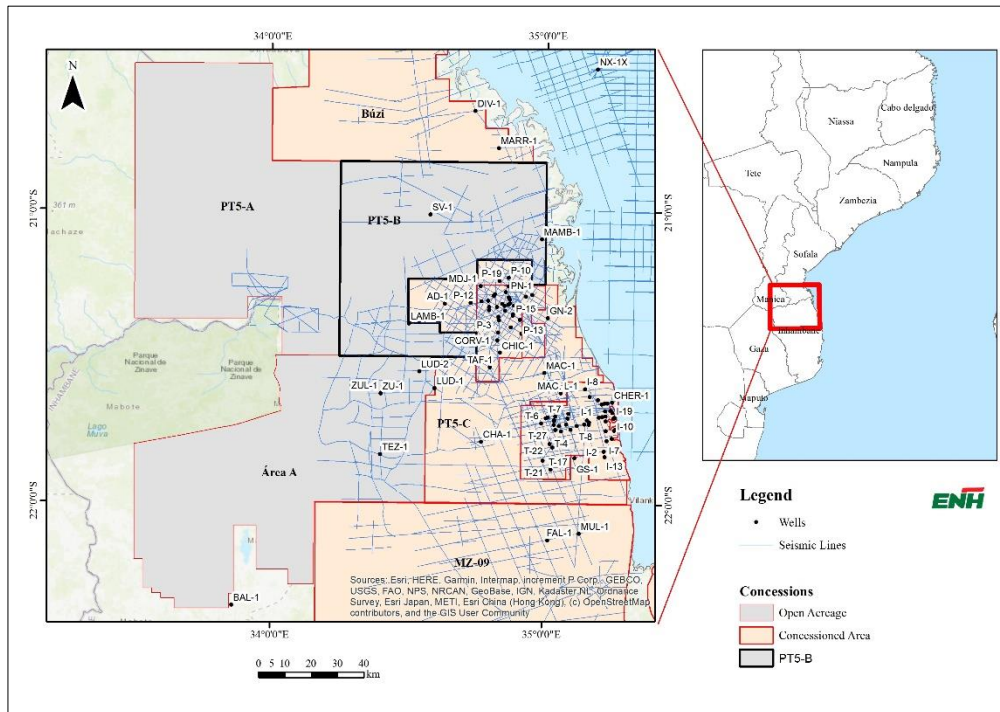


Background

- Located in the onshore Mozambique basin, between Inhambane and Sofala provinces, close to the Pande gas field (western boundary of this field). It covers an area of 11680 km²;
- The concession is located in the inner-graben systems develop as a result of Gondwana break-up, along the onshore Mozambique basin;
- Several wells drilled around the concession (with hydrocarbon shows at multiple Stratigraphic levels from the Lower Grudja Fm.)

PT5-B

Seismic Data



Background

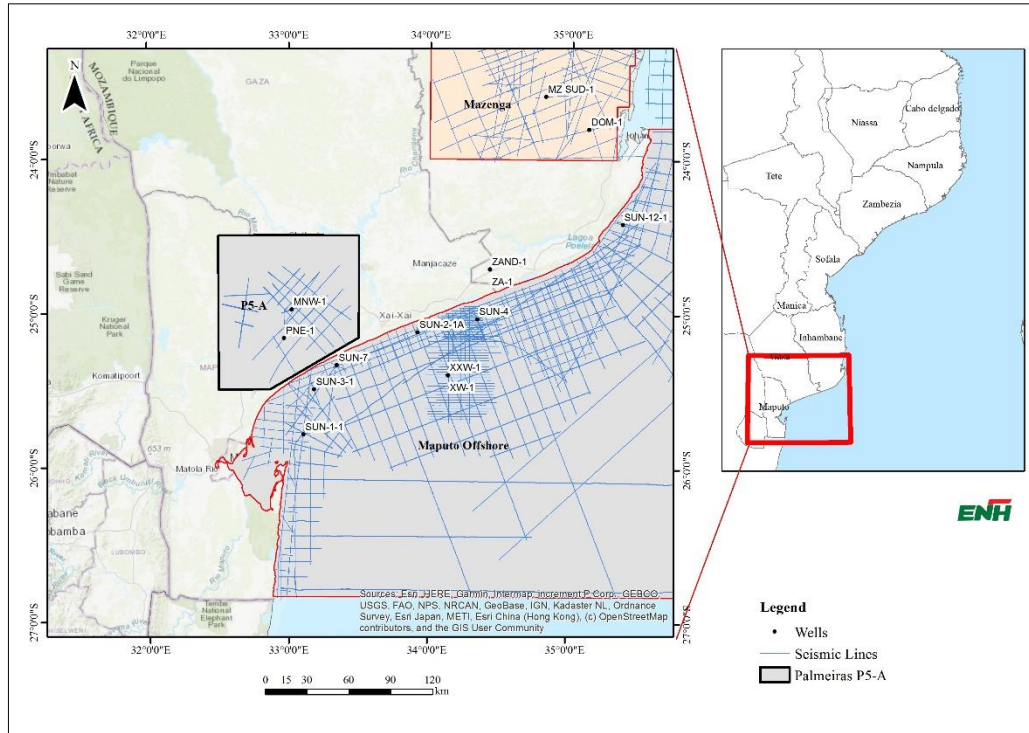
- The concession is located in the Central part of the Mozambique Basin, bordered in the Southeast by the Pande gas field and in the North by the Buzi block. its about 4.356 km².
- In the regional geotectonic context, the PT5-B block is based on the structure known as the Sul do Save High.
- The PT5-B block is covered by about 1460 km of two-dimensional (2D) seismic data and three(3) wells drilled in the concession, Lambo-1 and North Save-1 considered dry wells & Mambone-1 (with hydrocarbon shows at Lower Grudja and Domo Fm Stratigraphic level).

Well Information

Wells	Year	TD(mTDVss)	Target Interval	Drilling Results
Lambo-1	1967	1664	L. Grudja	Dry
Mambone-1	1957	3611	Lupata	Dry with gas Show
North S-1	2010	2025	L. Grudja	Dry

Palmeiras-P5A

Seismic Data



Well Information

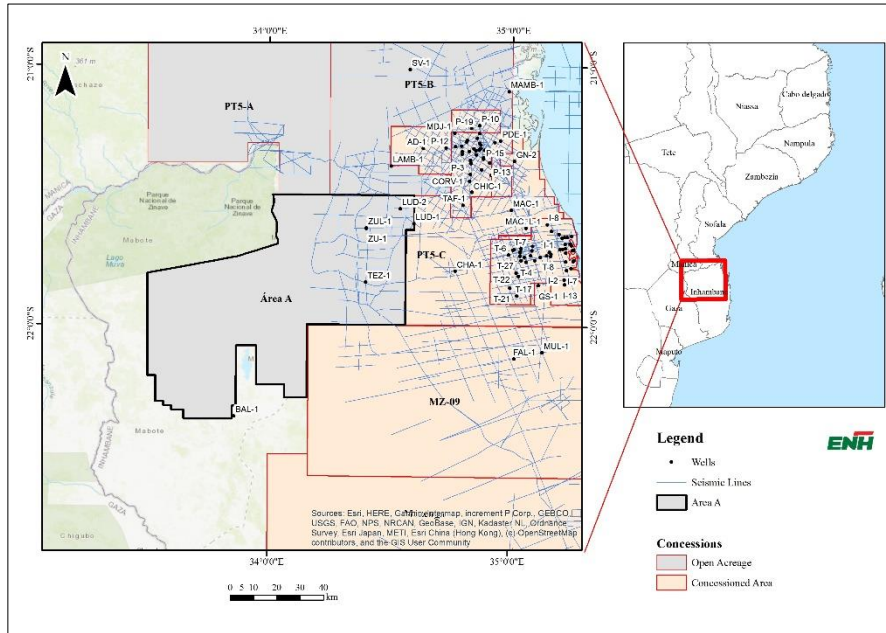
Wells	Year	TD (m TDVss)	Target Interval	Drilling Results
Palmeira NE-1	1971	4470 (Cretaceous)	Cretaceous Sandstone	Dry with possible oil show in Lower Domo Shale Fm.
Macia NW-1	1971	2338 (Cretaceous)	Cretaceous Sandstone	Dry well

Background

- The Palmeira block covers an area of 9997 km². Is located in the southern onshore Mozambique basin;
- The block is covered by 900 Skm of 2D seismic data acquired in 1970 (low quality data);
- Two (2) exploration wells drilled in 1971, both dry with HC indication in deeper sequences (Lower Cretaceous);
- Target interval comprises Cretaceous aged reservoirs deposited under Deltaic and shallow marine environments (same Lower Grudja Fm in Pande-Temane-Inhassoro fields).

Area A

Seismic Data



Background

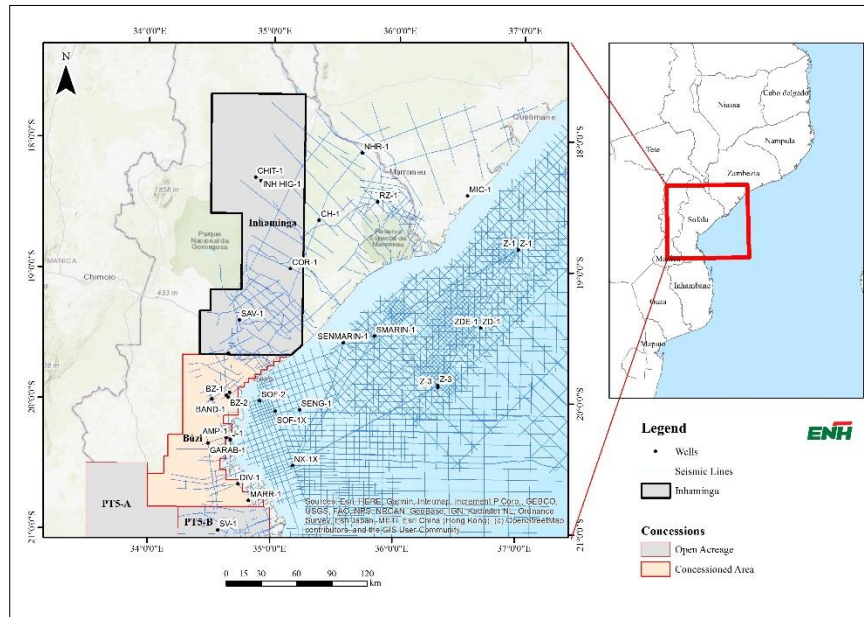
- Covers an area of 6695.3 km². Is located in the southern onshore Mozambique basin, in Inhambane province;
- 5 exploration wells drilled by Gulf between 1956 and 1967, 1 well drilled by Sasol in 2017;
- 2,247 km of 2D seismic data acquired over the block in 2012/13;
- Target of interest are the Upper Cretaceous Lower Grudja reservoirs from G-6 to G-12 levels.

Well Information

Wells	Year	TD (m TDVss)	Target Interval	Drilling Results
Lambo-1	1967	1647	Lower Grudja (Cretaceous)	Dry hole
Balane-1	1956	3119.2	Cretaceous and tertiary Sandstones	Dry hole
Luido-1	1965	1585	Lower Grudja G-11 (Cretaceous)	Dry hole with gas shows at G-6, G-10 and G-11
Luido-2	1967	1779	Lower Grudja (Cretaceous)	Dry hole
Pande-1	1961	3492	Lower Grudja (Cretaceous)	Gas flow
Teca-1	1962	3196	Lower Grudja (Cretaceous)	Dry hole with four (4) gas shows
Zualane-1	1967	1678	Lower Grudja G-11A (Cretaceous)	P & A, max. gas show
Tafula-1	1965	1589	Lower Grudja G-12 (Cretaceous)	P & A, gas shows at G-8 and G-11
Babane-1	2017	2342	Lower Grudja G-6, G-10 and Domo Sandstone (Cretaceous)	Dry hole

Inhaminga

Seismic Data



Well Information

Wells	Year	TD (m TDVss)	Target Interval	Drilling Results
Corone-1	2004	2180	Lower Grudja G-9 (Cretaceous)	P & A, with shows
Savane-1	2004	1962	Lower Grudja G-11 (Cretaceous)	P & A, with shows
Chite-1	2010	3500	Sena and Lower Grudja Fms (Cretaceous)	P & A Dry hole
Inhaminga High-1	2011	3600	N/A	Dry hole
Chipondene 1	2008	750	N/A	Result unreported
Chipondene 1ST	2008	1710	N/A	Dry hole
Sangussi-1A	2008	2250	Lower Grudja G-9 & G-10 (Cretaceous)	P & A, with gas show

Background

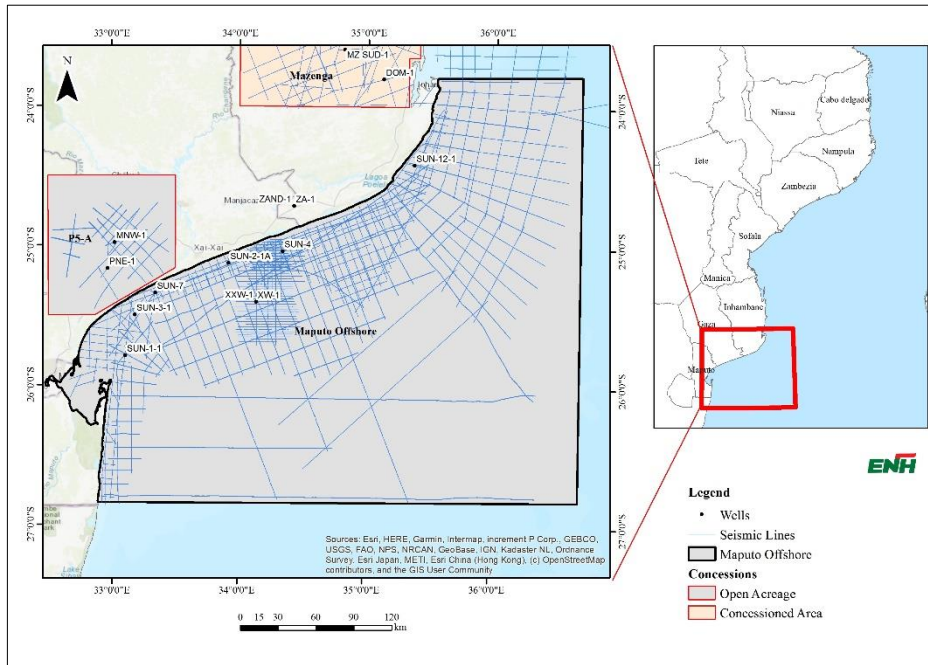
- Covers an area of approximately 10715 km². Is located in the northern onshore Mozambique basin;
- Partly covered by seismic data (~2222 km);
- 6 wells (old wells) + 5 Inhaminga wells (drilled between 2009-2010);

HC evidence

- Gas shows in Lower Grudja Fm. southern part of this concession (Savane-1);
- Rio Condue gas seep (Temane gas composition);
- Gas shows in 2 shallow wells from the 1930s (Inhaminga-4 and 5).

Maputo Offshore

Seismic Data



Background

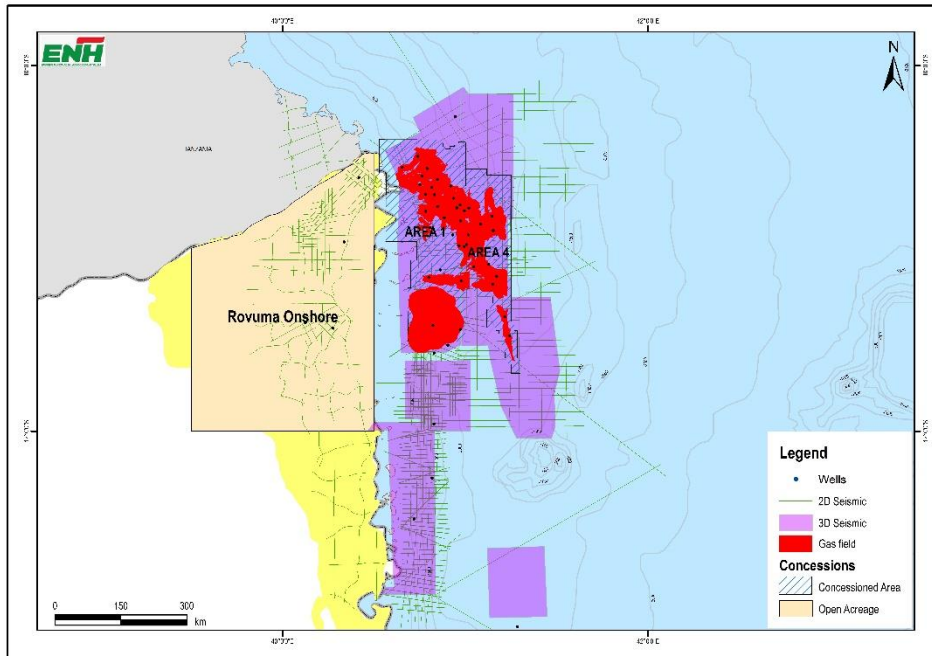
- The Southern Mozambique Offshore block is located in the offshore part of Southern Mozambique Basin. It occupies an area of approximately 118,950 km²;
- 22154.1 km of 2D acquired within the area of interest;
- 7 wells drilled, all dry.

Well Information

Wells	Year	TD (m TDVss)	Target Interval	Drilling Results
Sunray -1	1970	3356	Lower Grudja and Domo Sandstone (Cretaceous)	Dry hole
Sunray -2	1970	1235	Lower Grudja (Cretaceous)	Dry hole
Sunray-3	1970	3591	Lower Grudja and Domo Sandstone (Cretaceous)	P &A with some minor oil staining in Lower Grudja Fm.
Sunray-4	1970	1345	Lower Grudja (Cretaceous)	Dry hole
Sunray-7	1970	3069	Lower Grudja and Domo Sandstone (Cretaceous)	Dry hole
Sunray-12	1970	2453	Lower Grudja (Cretaceous)	Dry hole
Xai-Xai West-1	1988	1917	Lower Grudja, Domo Sst and Maputo Fms(Cretaceous)	Dry hole

Rovuma Onshore

Seismic Data



Well Information

Wells	Year	TD (m TDVss)	Target Interval	Drilling Results
Mocimboa-1	1986	3494	Oligocene Roll-over anticlines (Tertiary) and Albian submarine Fans (Cretaceous)	P & A, with gas shows and oil traces
Mecupa-1, Mecupa-1 ST	2009	2898	Oligocene-Miocene structural-stratigraphic traps	P & A, gas shows in Oligocene-Miocene sandstone
Tembo-1, Tembo-1 ST	2014	4500	Cretaceous and Jurassic structural-stratigraphic traps	P & A, gas discoveries in 3 m sands from Albian aged reservoir (with recoverable resources <2 BCM)
Kifaru-1	2015	3100	Oligocene-Miocene structural-stratigraphic traps	Dry hole

Background

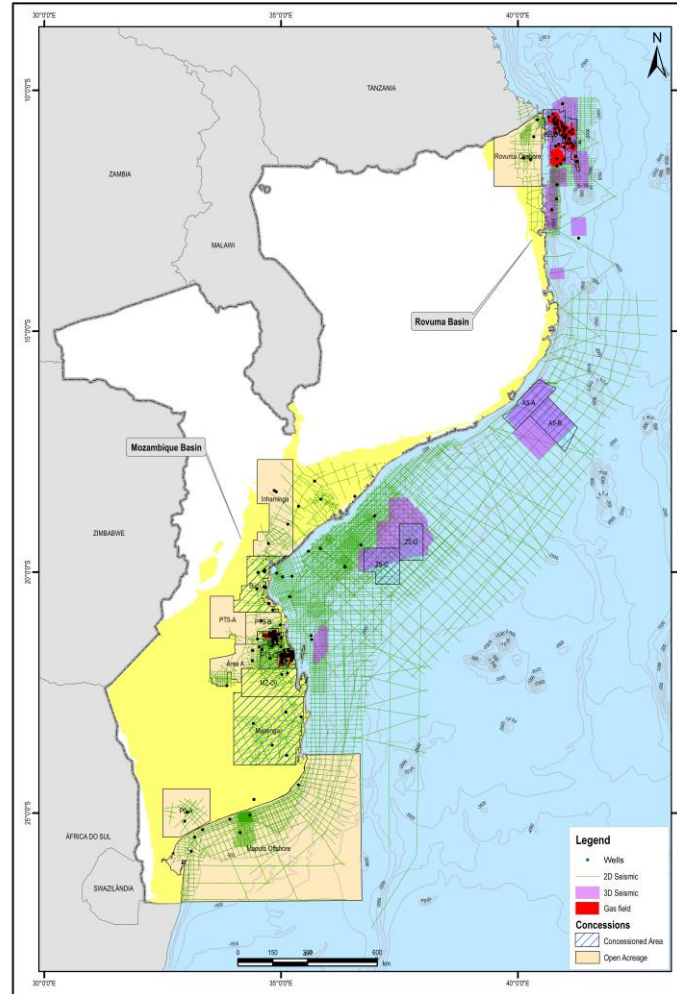
- Located in northern Mozambique adjacent to the border with Tanzania. To the east it is bounded by A1 & A4. Covers an area of 15000 km²;
- In terms of seismic data, the block is covered by 3951 Km of 2D seismic data;
- 4 wells drilled, with one non commercial discovery in Tembo-1 well;
- Hydrocarbon presence in the block is supported by non commercial discoveries of gas, gas show and oil traces.
- Shallow targets with good amplitude response.

Conclusions

Active Areas



Open Acreage



We have a clear understanding that we must treat our resources with wisdom, as **we embrace the paradigm to shift towards clean energy** while pursuing economic development.

ENH is not only looking at resources located at Rovuma basin but onshore and offshore along the Country;

There are several open areas from previous Bidding rounds that are available for direct negotiations with our regulator, the National Institute of Petroleum “INP”;

- We do welcome potential investors to discuss with ENH potential partnerships on those prospects.

Muito Obrigado

