

NAMCOR

NATIONAL PETROLEUM CORPORATION OF NAMIBIA (PTY) LTD

FARM OUT OPPORTUNITIES OFFSHORE NAMIBIA

**APPEX 2020
London
3-5 March 2020**

**VICTORIA SIBEYA
Executive: Upstream Exploration**



NAMCOR
EXPLORING & FUELLING NAMIBIA

Presentation Outline

 **Introduction _ NAMCOR business overview**

 **Sedimentary Basins**

 **Hydrocarbon Licensing Status**

 **E&P Database**

 **Farm-In Opportunities (Block 2714 A & B, 2815&2915 and Block 2914A)**

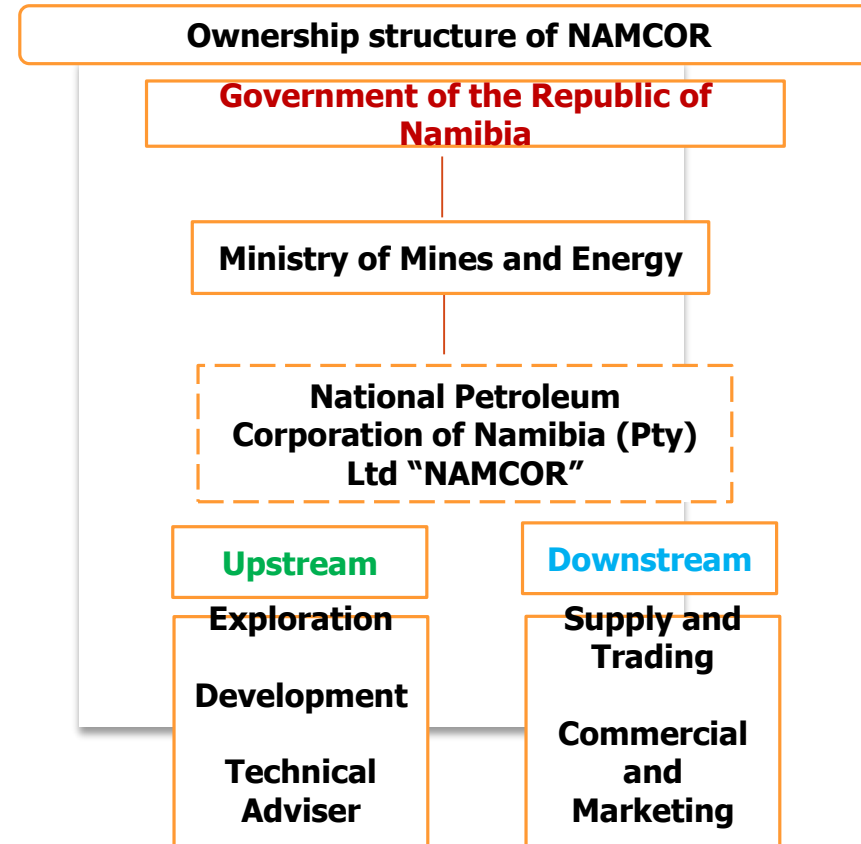
NAMCOR Business Overview

NAMCOR's mandate as an SOE of the Ministry of Mines and Energy allows it to participate across the value chain

Legally enacted entity established under the Petroleum (Exploration and Production) Act of 1991

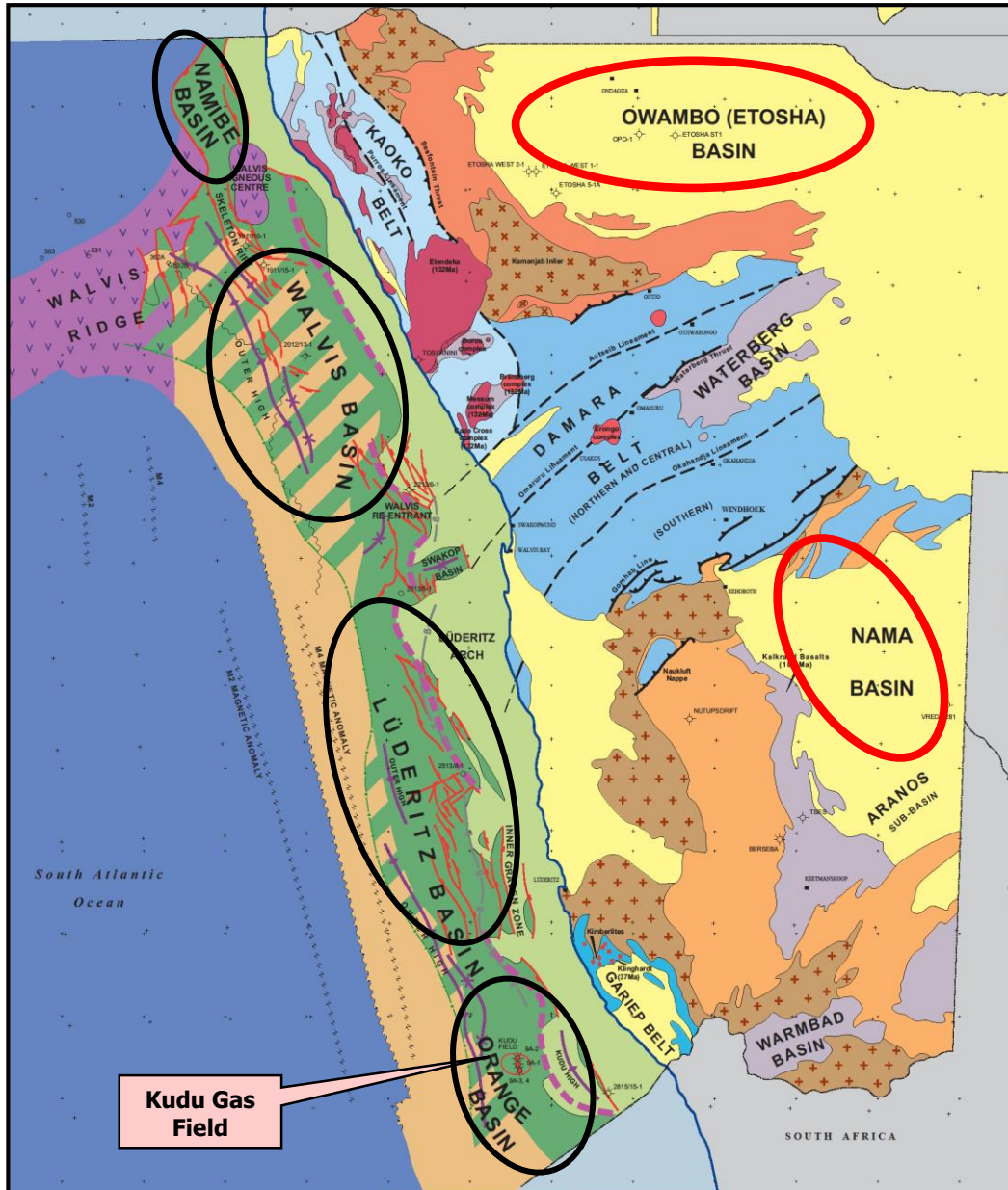
Main functions:

- Ensuring optimum exploitation of Namibia's petroleum resources and meaningful Namibian participation in petroleum-related activities
- Marketing and Promotion
- Technical Advisory Services to the Ministry of Mines & Energy









SEDIMENTARY BASINS

Sedimentary Basins



Legend: Offshore Geology

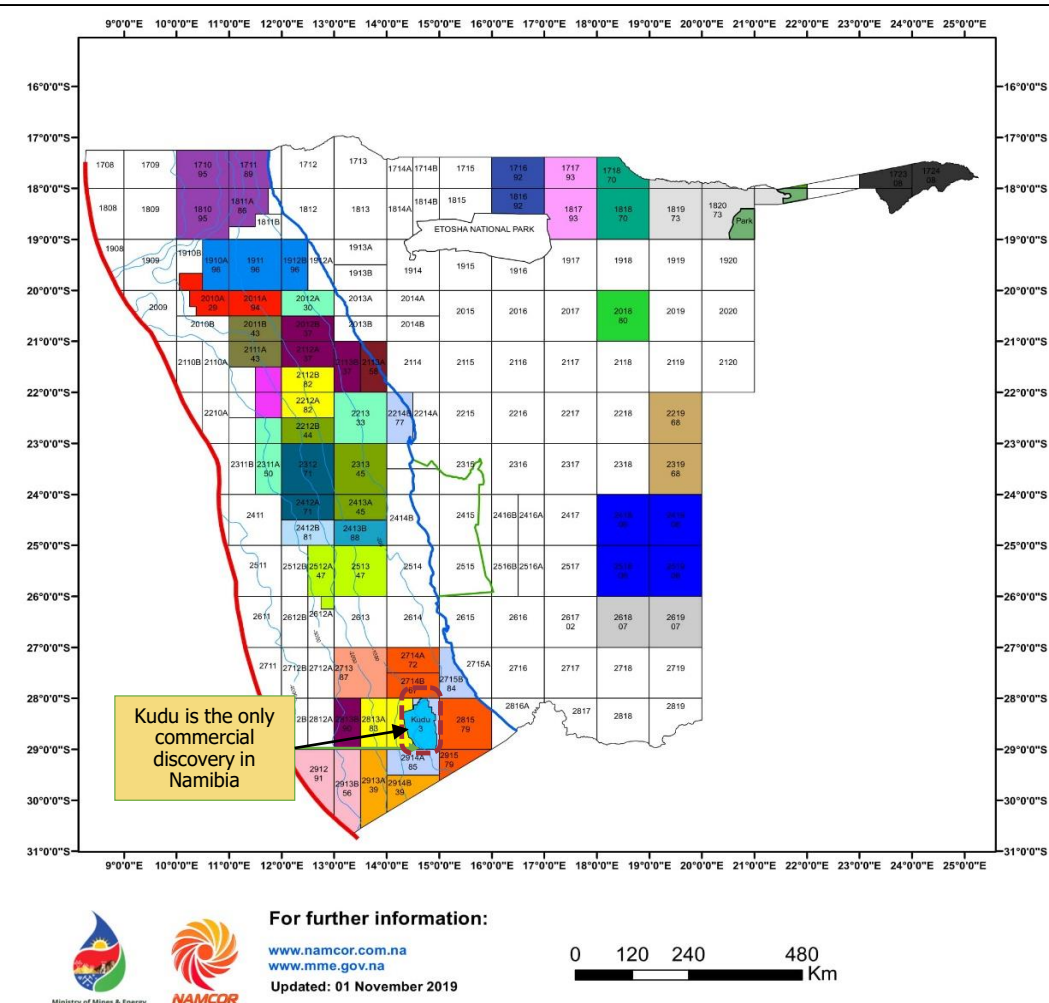
-  Early Cretaceous to Tertiary Drift Section overlying continental basement
-  ?Late Jurassic to Early Cretaceous Syn-rift section
-  Main Area of seaward-dipping reflectors
-  Tentative area of syn-rift section underlying seaward dipping reflectors
-  Walvis Ridge volcanics
-  Oceanic Crust

 4 Sedimentary basins offshore

 2 onshore Basins

HYDROCARBON LICENSING STATUS

Hydrocarbon License Status



- Believed to hold significant hydrocarbon potential due to a geological similarity with Brazil and Angola.
- Relatively unexplored with only 24 Exploration & appraisal wells drilled so far in an area that covers more than 500,000 km² offshore.
- Eight of the wells are located in the Kudu gas field have 1.4 TCF
- First well drilled offshore Namibia in the Orange basin was gas discovery, In 2012, Wingat well discovered non-commercial reserves of light oil in Walvis Basin.
- About 39 exploration licences, 1 production licence and 3 reconnaissance licences have been issued.



AZINAM

SERICAENERGY



Exxon

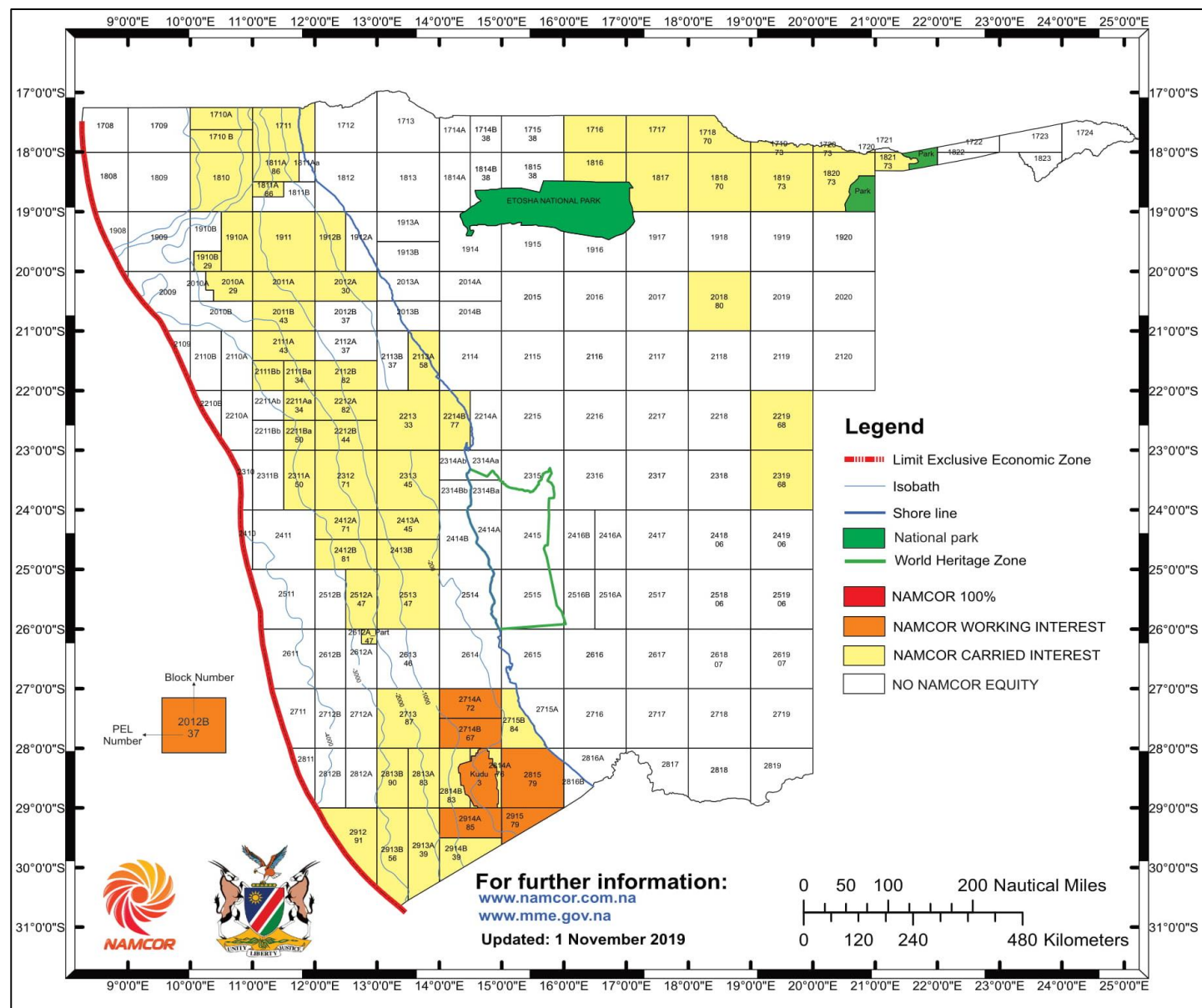


NAMCOR's participation

An average of 10% carried interest in 97% of the issued licenses

Exploration Assets with NAMCOR working interest

Block/PEL	Participation
2714A (PEL 67)	67%
2714B (PEL 72)	67%
2815&2915 (PEL 79)	67%
2914A (PEL 85)	20%



E & P Database

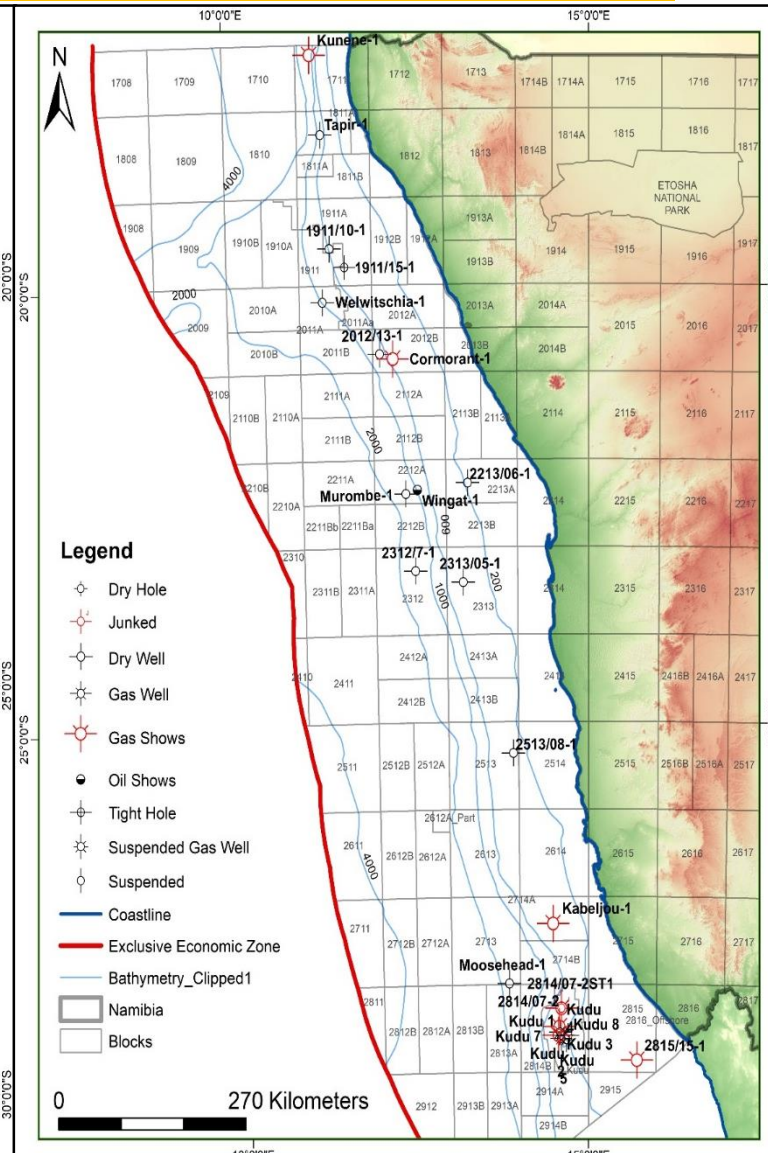
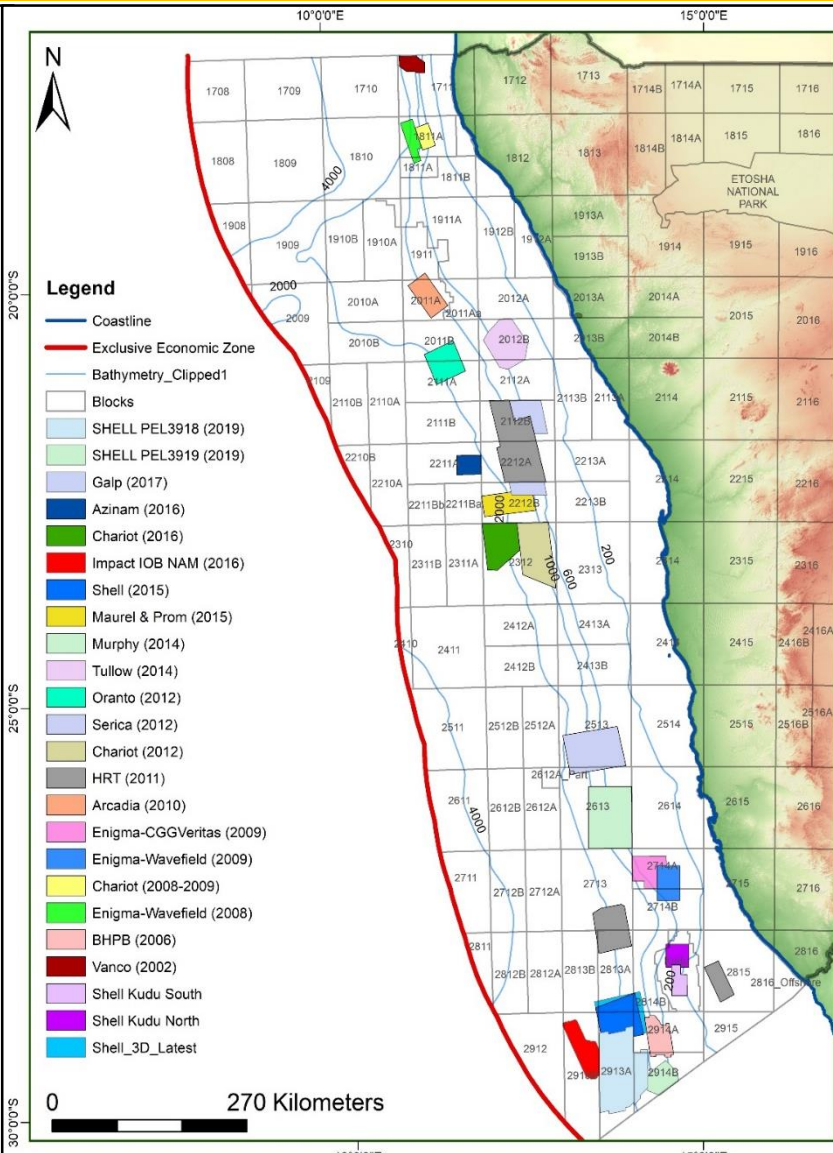
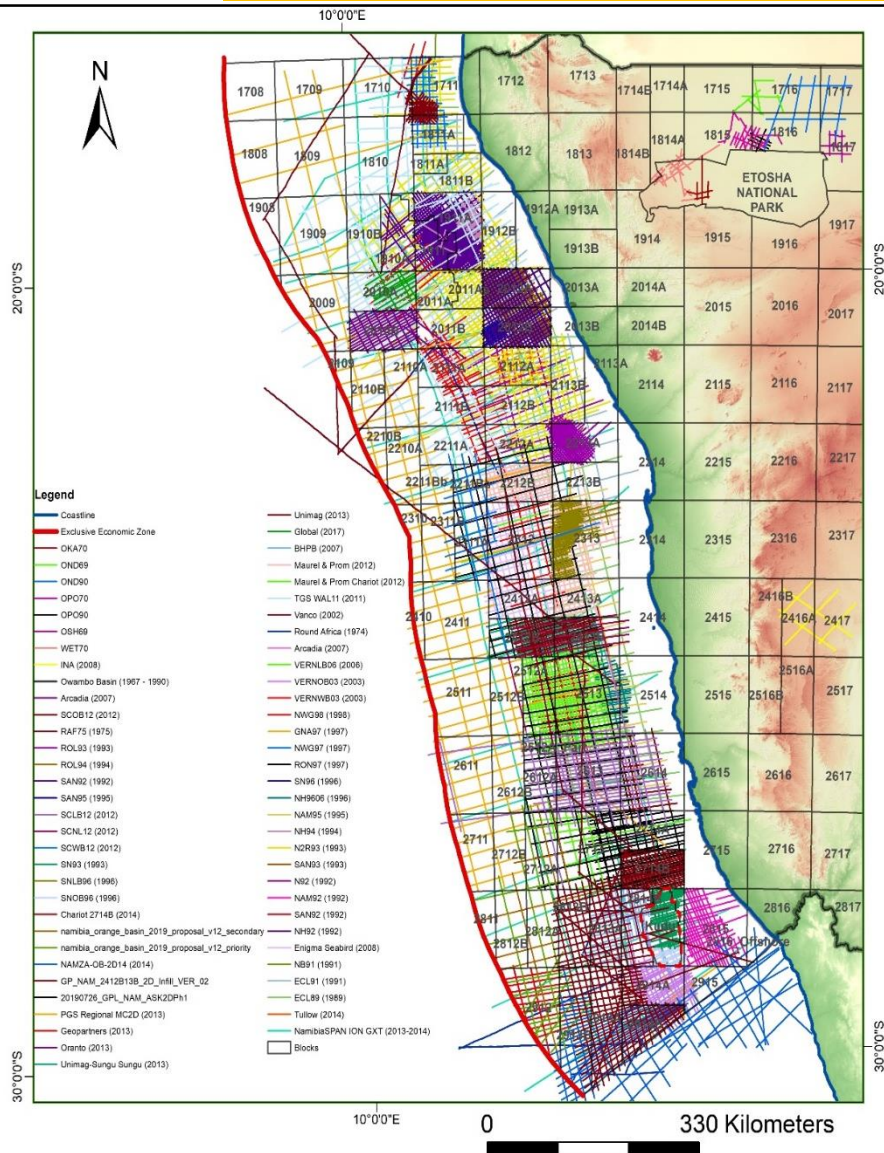
E & P Database










2D

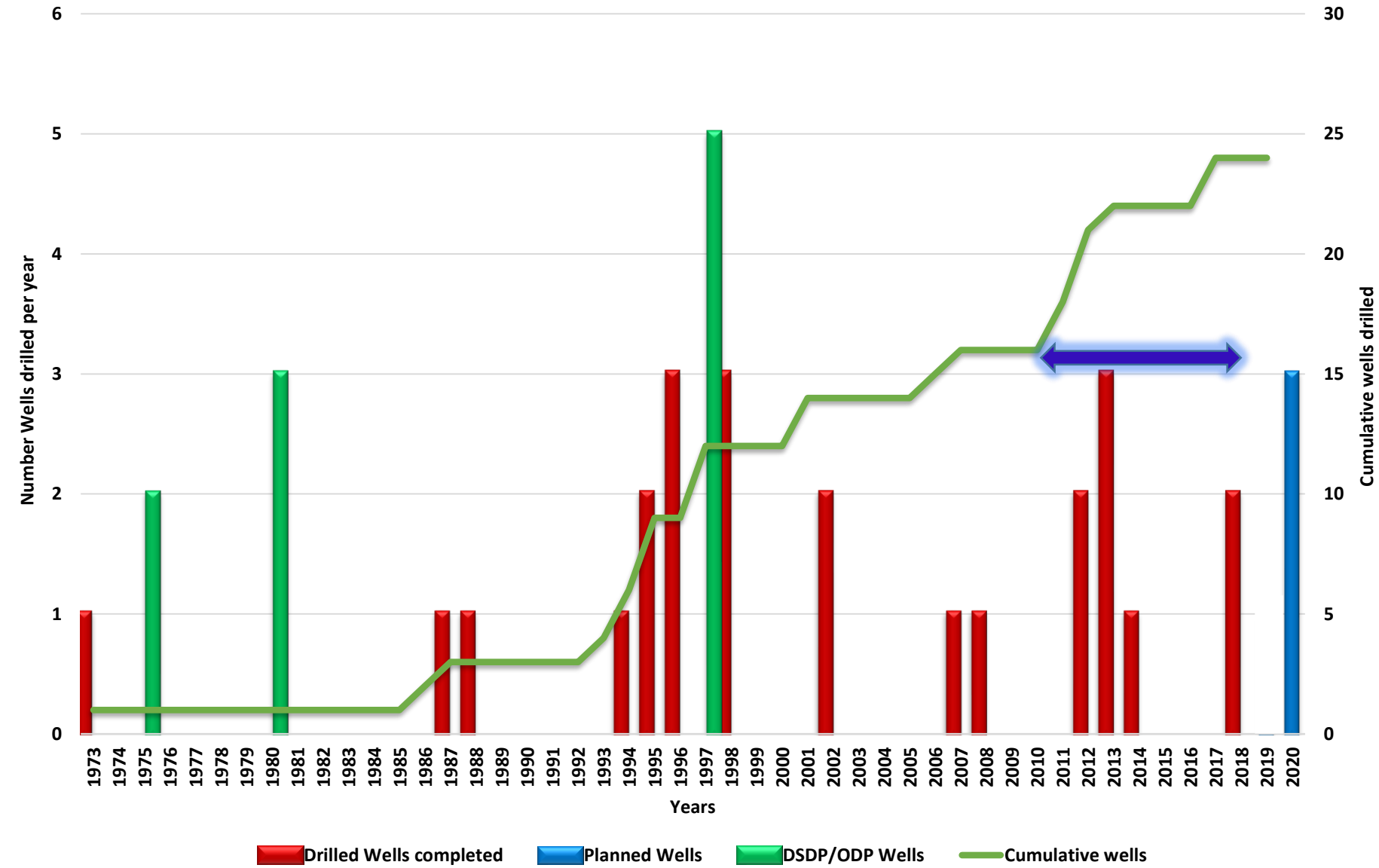
3D

Wells



Wells Coverage

-  16 Exploration wells drilled offshore
-  8 appraisal wells – Kudu Gas Field
-  10 DSDP/OPD
-  Total planned – 2 well (2020) & 1 well (2021)
-  Potential two wells onshore
-  **Total drilled – 24 wells offshore**
-  Extremely under-explored – few drilled wells



NAMCOR In-House Projects

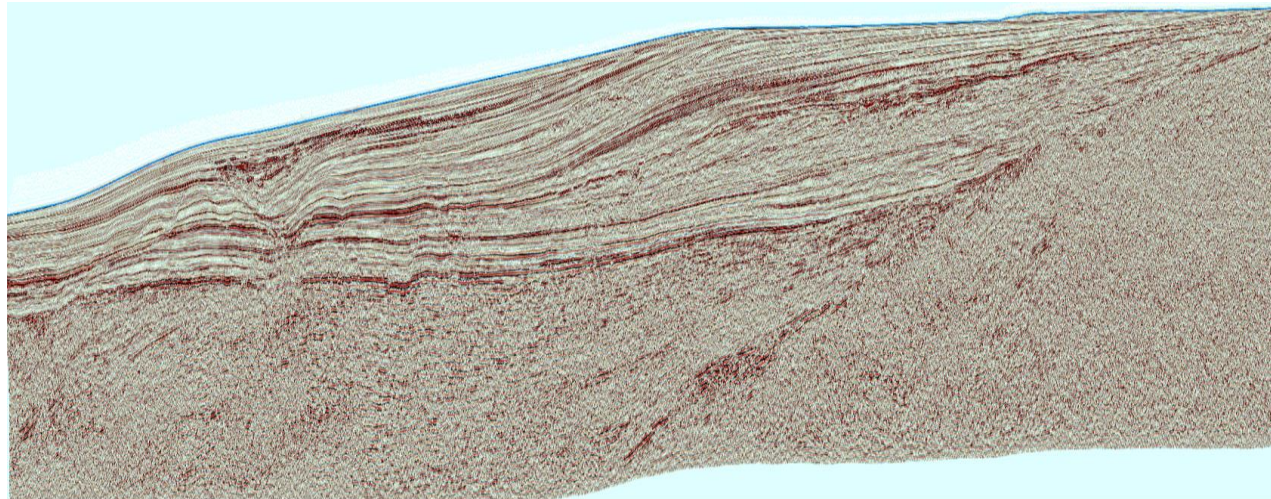
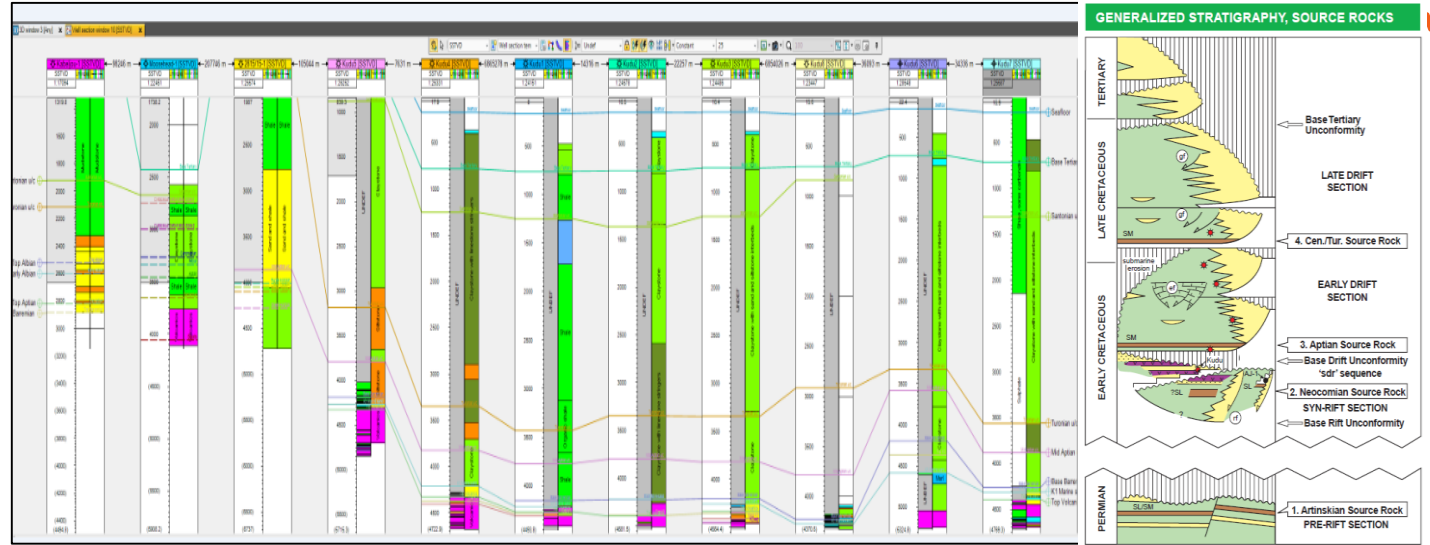


NAMCOR

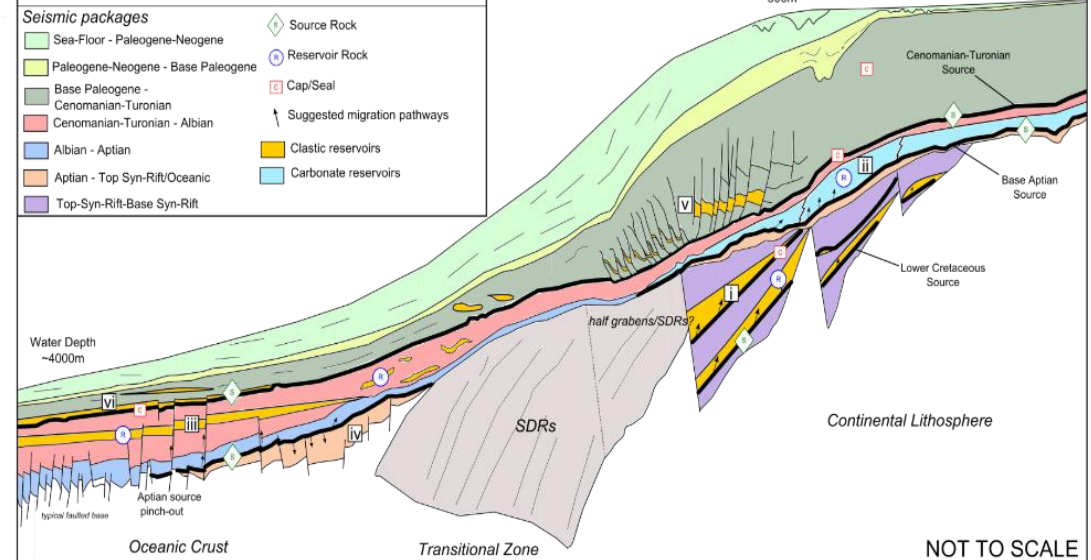
Prospect Inventory Project

- ✓ Updated lithological chart of Orange Basin
- ✓ Update regional tectonostratigraphic interpretation of Orange Basin
- ✓ Play definition and play concepts
- ✓ Regional Stratigraphy update

Syn-Rift Play Project



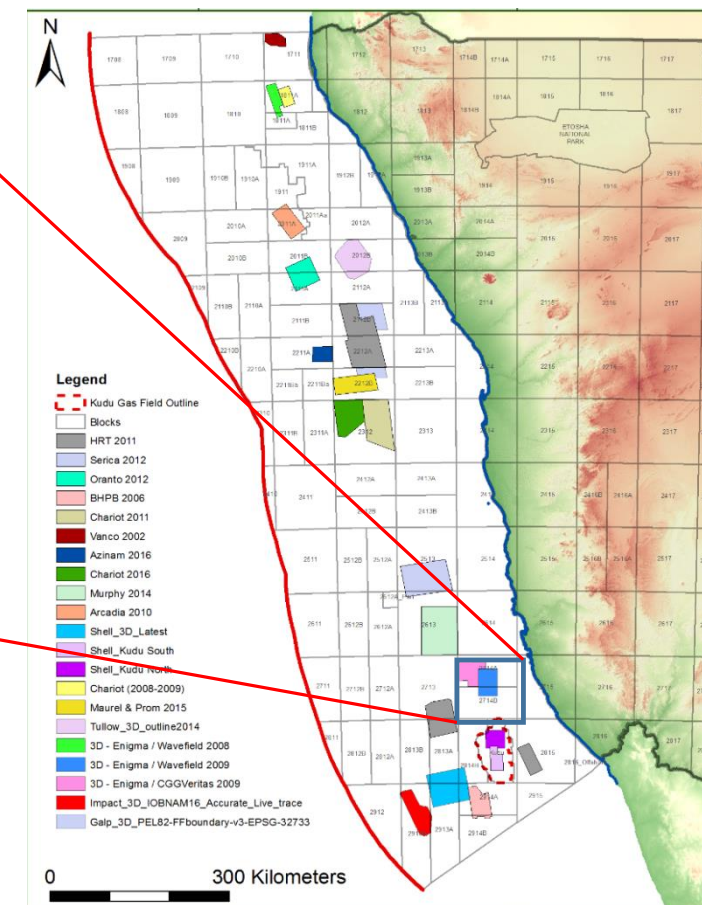
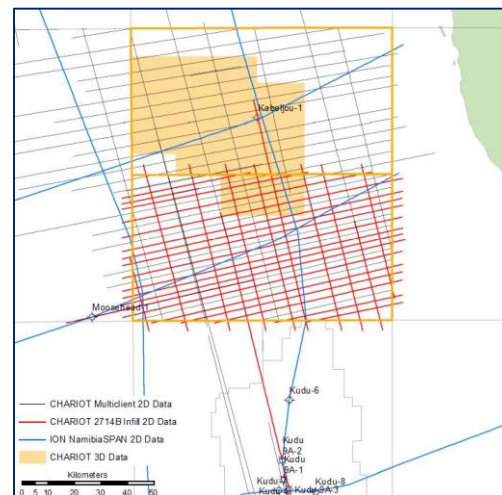
Namibian Margin Play Concepts



FARM-IN OPPORTUNITIES

PEL 67 & 72 : LICENSE SUMMARY

Licence Activities	
Licence	67 & 72
Water Depth Range	200-1,500m
Blocks	2714A and 2714B
Operator (WI%)	NAMCOR 67%
Partners (WI%)	Quiver 33%
Location	Orange Basin Namibia
Size	10,945 sq.km



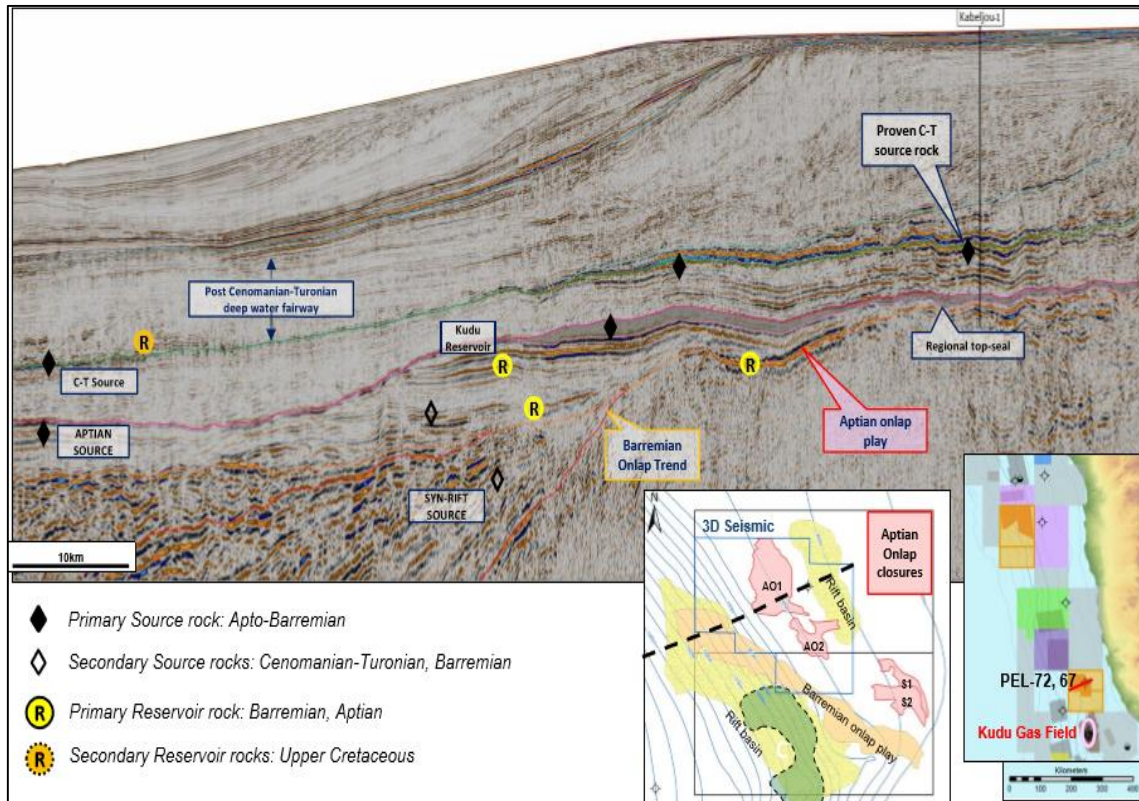
The exploration datasets acquired in Block 2714:

- About 6,930 km of 2D seismic data
- 3 500 km² 3D seismic data
- Kabeljou-1 Well

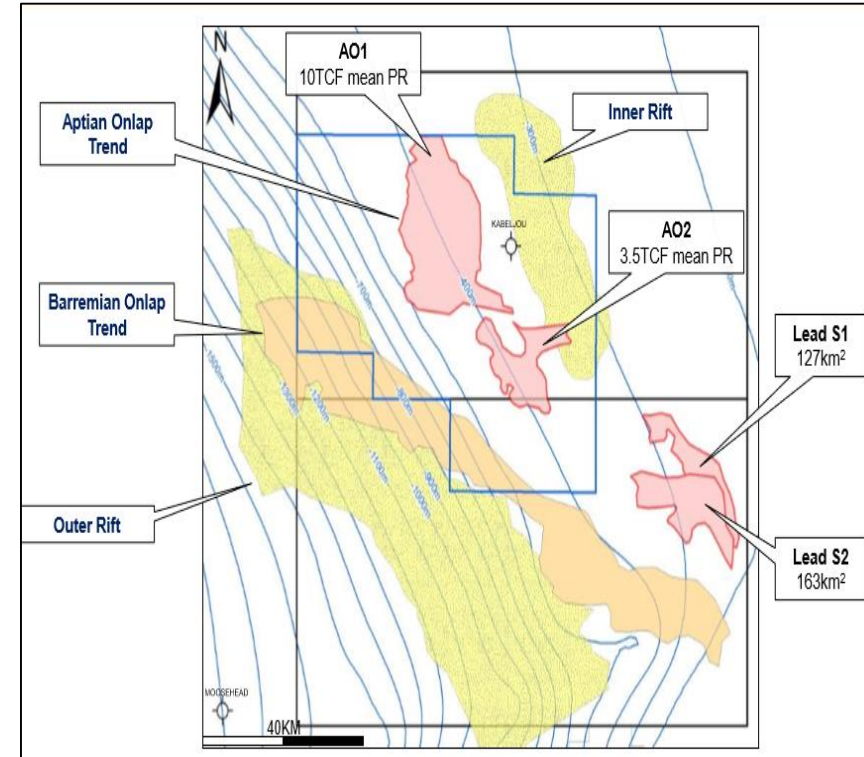
In addition have access to:

- Orange Basin Regional Reports
- Other well reports from nearby Orange Basin wells
- Aerial Gravity (Sandwell & Smith)

LEADS/PROSPECTS



(After Chariot, 2017)



Potential Targets

Leads/Prospects	Reservoir	Lead Age
Inner Rift	Lower Cretaceous sandstone	Barremian or Older (Lower Cretaceous)
Barremian Onlap Play	Lower Cretaceous sandstone	Barremian
Aptian Onlap Play	Cretaceous sandstone	Aptian

PEL 79 LICENSE SUMMARY




LICENSE OWNERSHIP

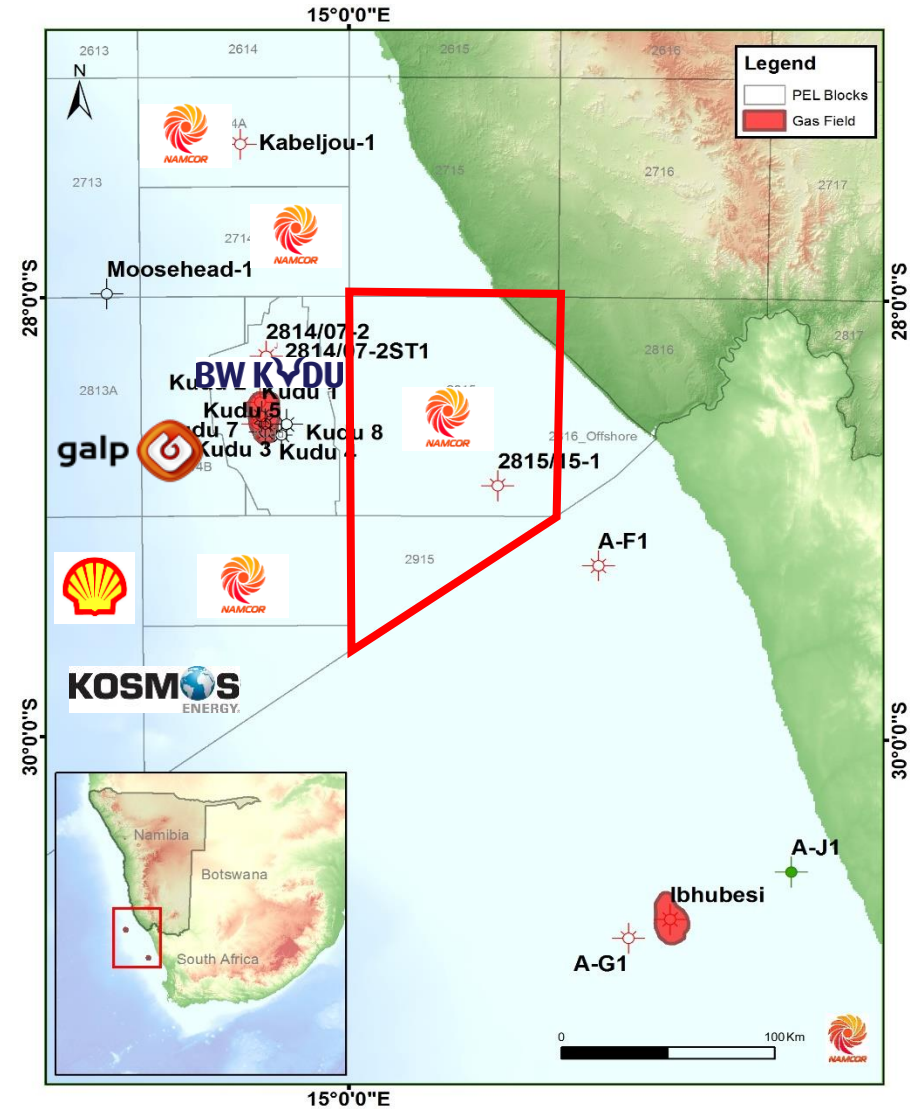
Companies	Participating Interests (%)
NAMCOR	67%
Giraffe Energy CC	33%

ACREAGE AREA

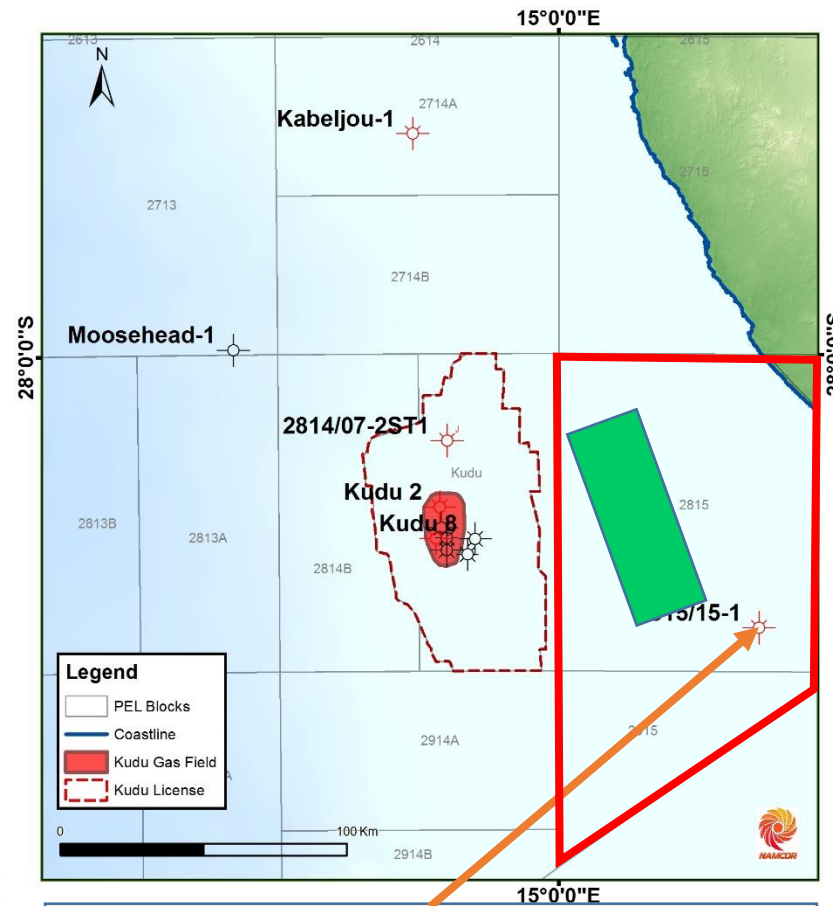
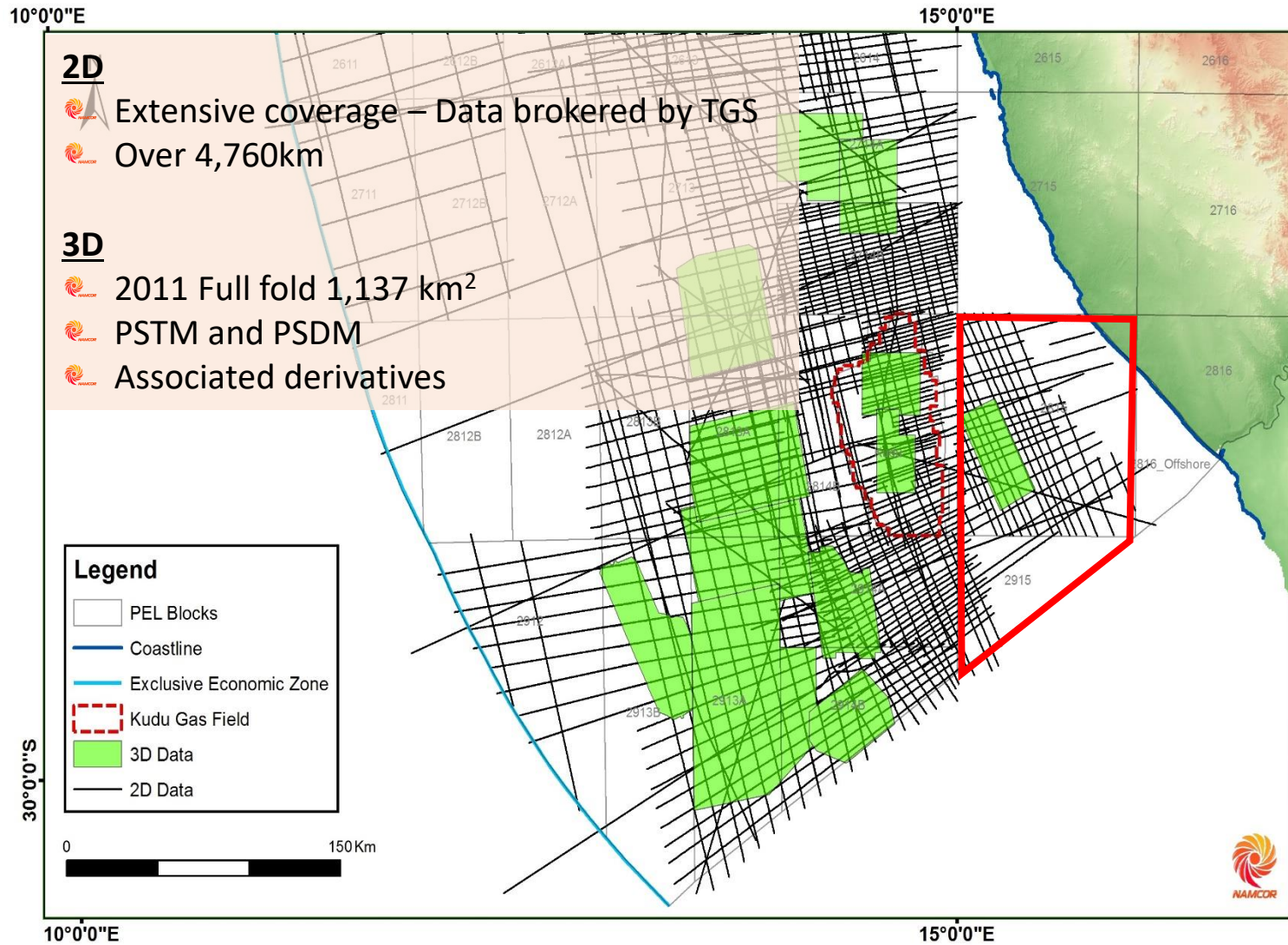
Area Size (km2)	Water Depth (m)
13,829	0-210

RESOURCE REPORT (DeGolyer& MacNaughton-December 2013)

-  5,385 MMBOil (STOIP)
-  33 Tcf-gas
-  1,248 BBbl -condensate



DATA AVAILABILITY

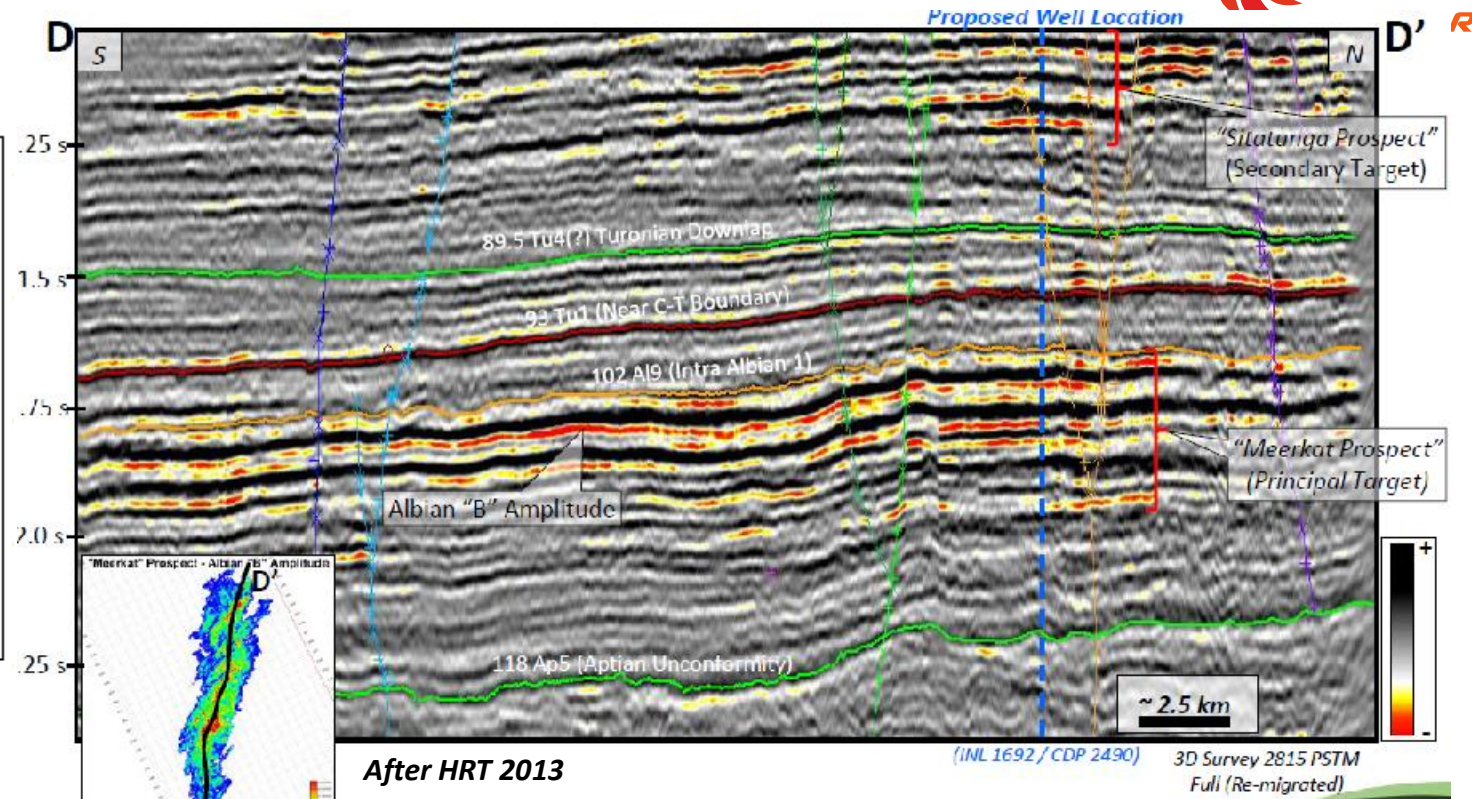
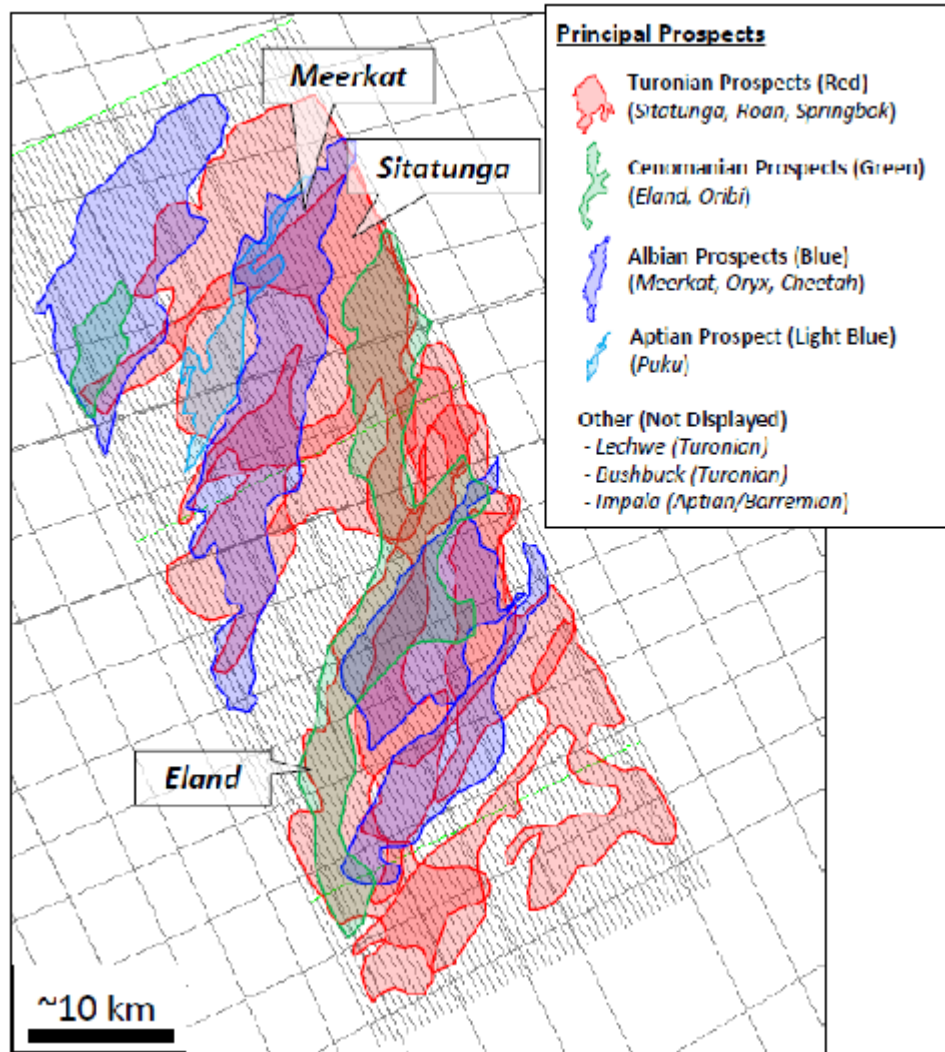


2815/15-1

- Drilled 1996 (Chevron)
- Thick Upper & Lower fluvial -deltaic sandstones facies (Stratigraphic trap)
- Gas shows encountered at 2847-2861m; 9m net tight gas sand, low porosity avg. 8.5%











LEADS/PROSPECTS

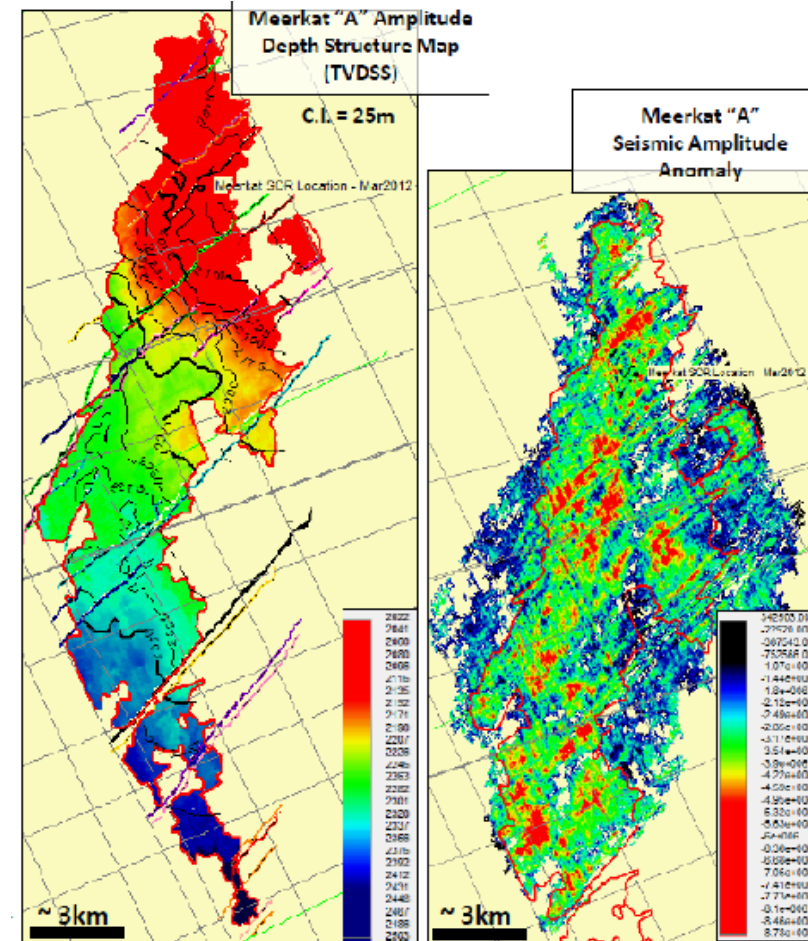


Block 2815 & 2915 Potential Targets			
Prospect	Reservoir	Lead Age	Size (km ²)
Meerkat (Blue)	Albian coastal/shallow marine	Albian	250
Sitatunga (Red)	Turonian shallow marine	Turonian	220
Eland (Green)	Cenomanian shallow marine	Cenomanian	150

Courtesy of HRT 2013

MEERKAT PROSPECT – SUMMARY

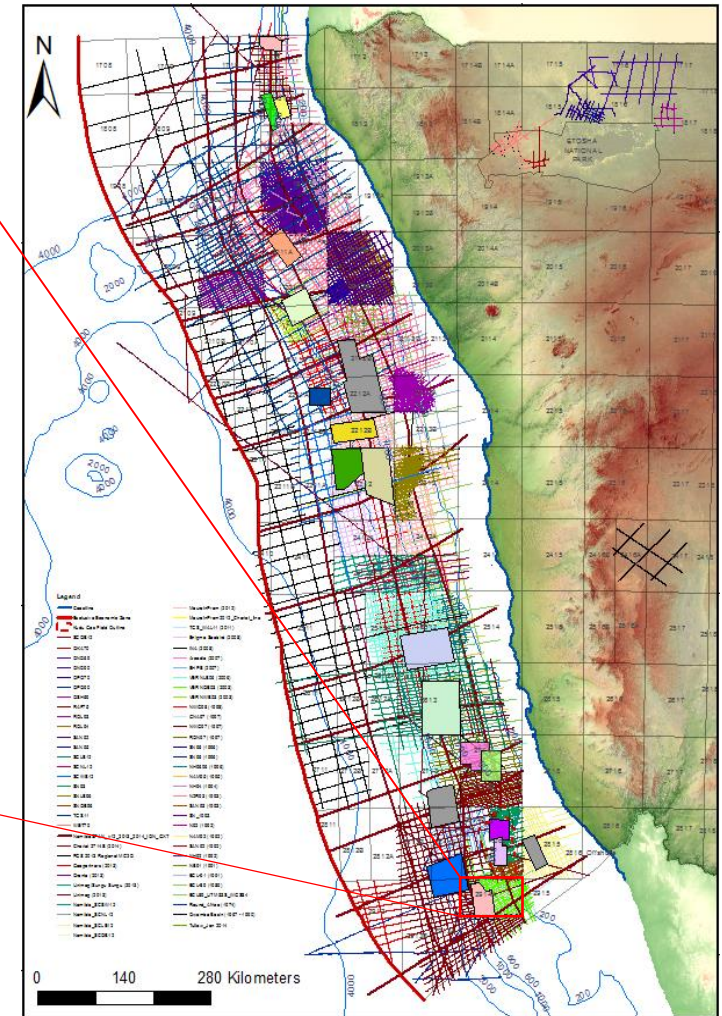
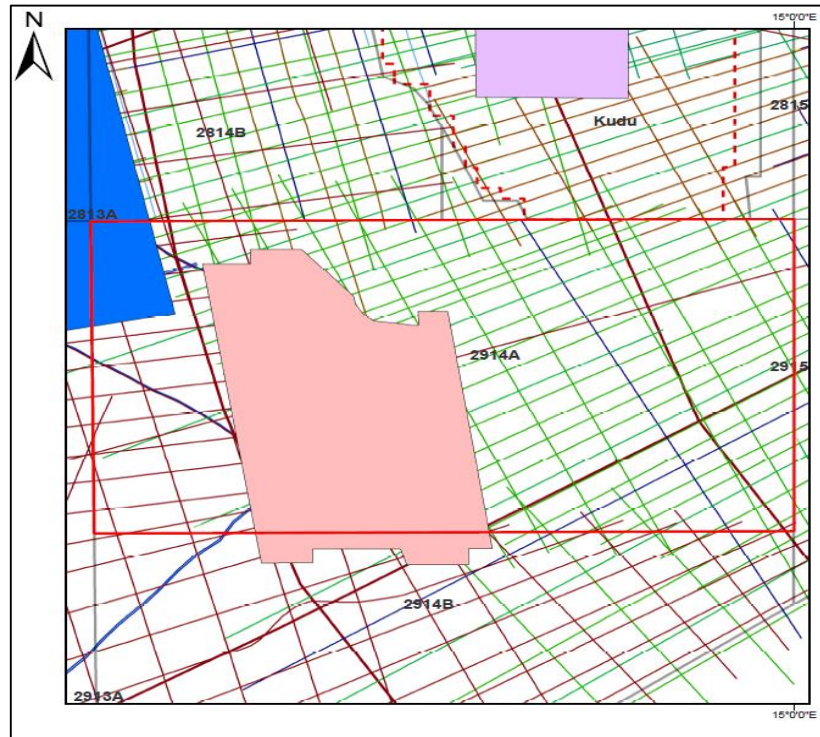
-  **Water Depth: 183-220m**
-  **Resource Potential: >2.6 billion bbls**
-  **Prospect Extent: 250 km²**
-  **Reservoir Thickness: 600m (gross)**
-  **Reservoir EOD: Shallow Marine Sandstone**
-  **Reservoir Age: Albian (102–111 Ma)**
-  **Trap: Stratigraphic trap with low structural relief**
-  **Source Rock:**
 - 1) Marine SR (Aptian SR)
 - 2) Lacustrine SR (Syn-Rift Section)



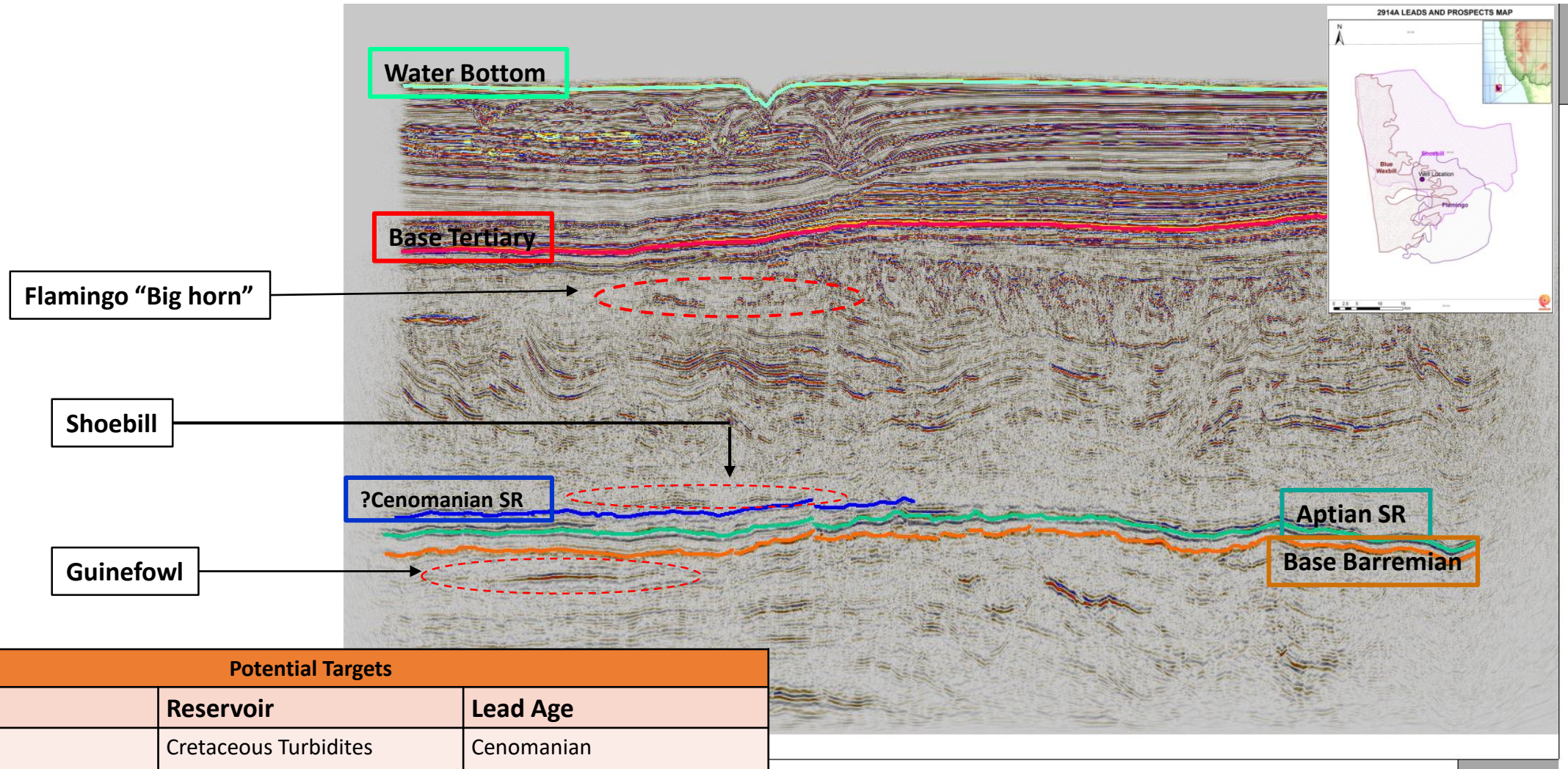
Courtesy of HRT 2013

PEL 85: LICENSE SUMMARY

License Status	
Water Depth	200-1000m
Block	2914A
Operator	Rhino Resources 55%
Partners	NAMCOR 30% (10% Carried and 20% WI) and Korres 15%
Location	Orange Basin
Block Size	5,000 sq.km










LEADS AND PROSPECTS

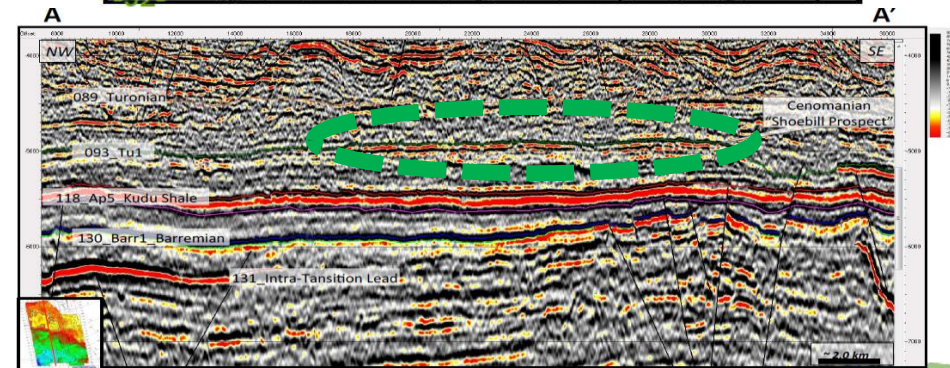
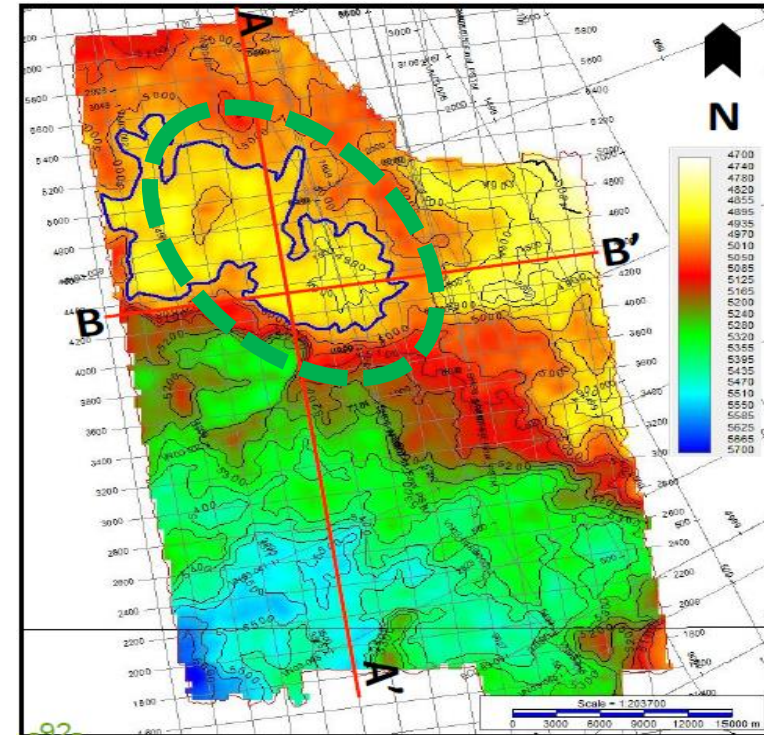


Potential Targets		
Prospect	Reservoir	Lead Age
Shoebill	Cretaceous Turbidites	Cenomanian
Blue Waxbill	Cretaceous Turbidites	Barremian
Scops Owl	Cretaceous Turbidites	Aptian
Guineafowl	Cretaceous Turbidites	Barremian

Depth structure: Top Reservoir – Cenomanian Unconformity

SHOEBILL PROSPECT (MAIN)

-  **Potential resource:** ~2.3 billion bbls
-  **Prospect extent:** 300 km²
-  **Reservoir thickness:** 270 m (gross)
-  **Reservoir EOD:** Basin Floor Fan Sandstone
-  **Reservoir age:** Cenomanian (93-97 Ma)
-  **Trap:** Structural and stratigraphic trap with an unconformity trap
-  **Source rock:**
 - ✓ Marine SR (Cenomanian 93Ma)
 - ✓ Marine SR (Aptian 118 Ma)



Source: HRT, 2013



Conclusion

- 🌟 Namibia is privileged with excellent geodatabase available to make sound investment decisions and improve geological understanding.
- 🌟 Progressive seismic acquisition both onshore and offshore Namibia helps with de-risking prospects.
- 🌟 Proven offshore petroleum system from past and recent drilled wells coupled with increased exploration activities have unlocked hydrocarbon potential in Namibia. This has attracted major oil and gas companies which will play a vital role in developing hydrocarbon resources in Namibia.
- 🌟 NAMCOR is undertaking regional studies such as the PI Project with the aim of building in-house capacity for G & G team and enhance G & G understanding of the subsurface for the benefit of the Oil & Gas sector in Namibia.
- 🌟 NAMCOR is now actively involved in Hydrocarbon Exploration in Namibia and we are open to new partnerships in our Exploration projects with working interest.

For more information:

visit NAMCOR's booth

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