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BLOCK: Kalat North (2966-4)

ONSHORE BLOCK BIDDING ROUND 2025

MINISTRY OF ENERGY PETROLEUM DIVISION (DGPC)

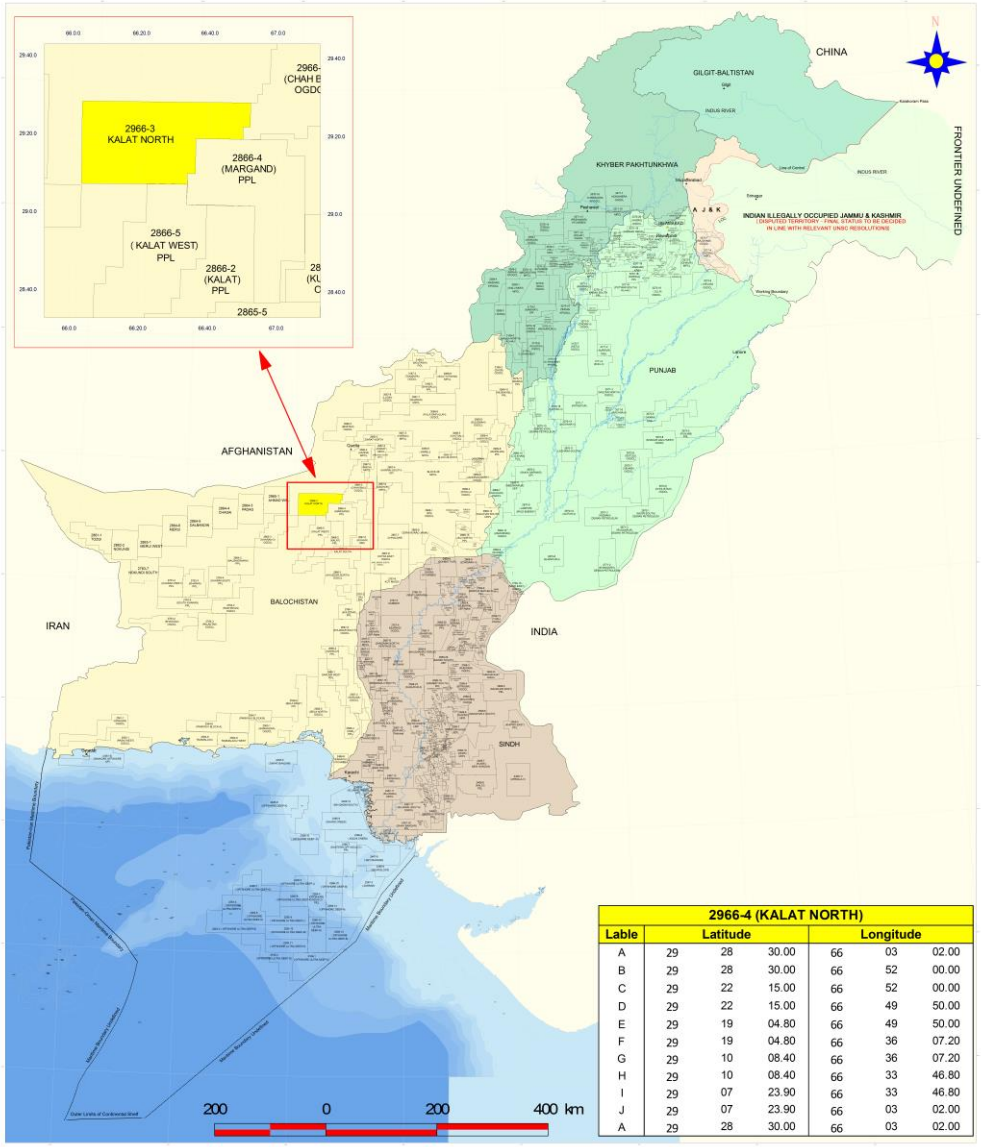
Introduction

- Kalat North Block covers an area of 2,499.96 sq km
- Location: Kalat, Mastung and Noshki districts , Balochistan, Pakistan.
- Geological Basin: Balochistan Basin of Pakistan.
- The block falls in Prospectivity Zone I(F).
- Estimated Resources of the Balochistan Basin:
  - Oil: 8,676 million barrels
  - Gas: 78 trillion cubic feet
- PPL acquired some 2D data of about 724 (L. Kms.) in the block within the year 2009.
- The Block is surrounded by Kalat West (South), Margand (East) and Ahmad Wal (West) blocks .
- The wells drilled in the near vicinity are:
  - Kalat X-01
  - Pandrani X-01
  - Morgandh X-01
- Major discoveries in the surrounding is from Morgandh X-01.

*Riaz Ahmed 1998, Hydrocarbon Resource Base of Pakistan, Pakistan Journal of Hydrobarbon Research, Vol 10, 1-10

Directorate General of Petroleum Concessions

Location Map of Kalat North Block

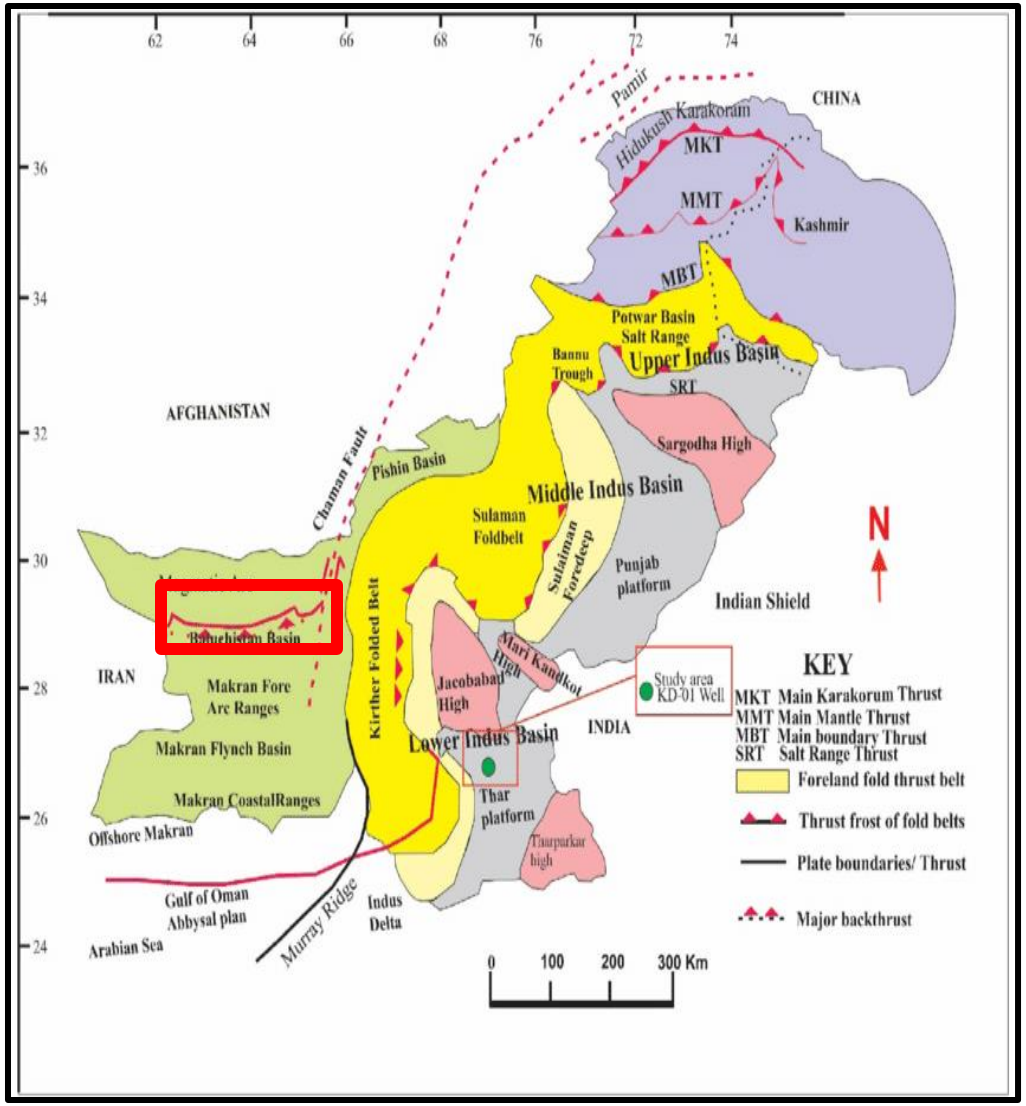


2966-4 (KALAT NORTH)						
Lable	Latitude			Longitude		
A	29	28	30.00	66	03	02.00
B	29	28	30.00	66	52	00.00
C	29	22	15.00	66	52	00.00
D	29	22	15.00	66	49	50.00
E	29	19	04.80	66	49	50.00
F	29	19	04.80	66	36	07.20
G	29	10	08.40	66	36	07.20
H	29	10	08.40	66	33	46.80
I	29	07	23.90	66	33	46.80
J	29	07	23.90	66	03	02.00
A	29	28	30.00	66	03	02.00

KALAT NORTH (2966-4)		Available Data		Total Area (Sq. Kms)	Area by District	Percentage %	Districts
Zone	I (F)	2D Seismic (L.Kms)	724.00	2,499.96	484.36	19.37	Nushki
Grid Area	33.41	3D Seismic (Sq.Kms)	NA		366.11	14.64	Mastung
Province	Balochistan	No. Wells	NA		1649.49	65.98	Kalat

Geological Map

- The subduction of Arabian plate beneath the Indo-Pak subcontinent produced variable compressional structures in Baluchistan Basin.
- Towards the Makran area, these fold beds are much more pronounced.
- Chaghai Magmatic arc is also a consequence of these collisions.
- The anticlinal structures produced along with a combination of thrust faults and anticlines act as favorable environments for hydrocarbon accumulation in the area.
- Towards the west, along the Afghanistan boundary is the Chamman strike slip fault (a transform fault) having characteristics associated with compressional components.



Dar, Qamar UZ Zaman, et al. "The impact of diagenesis on the reservoir quality of the early Cretaceous Lower Goru sandstones in the Lower Indus Basin, Pakistan." *Journal of Petroleum Exploration and Production Technology* (2022): 1-16.

Petroleum System

- **Source Rock**:

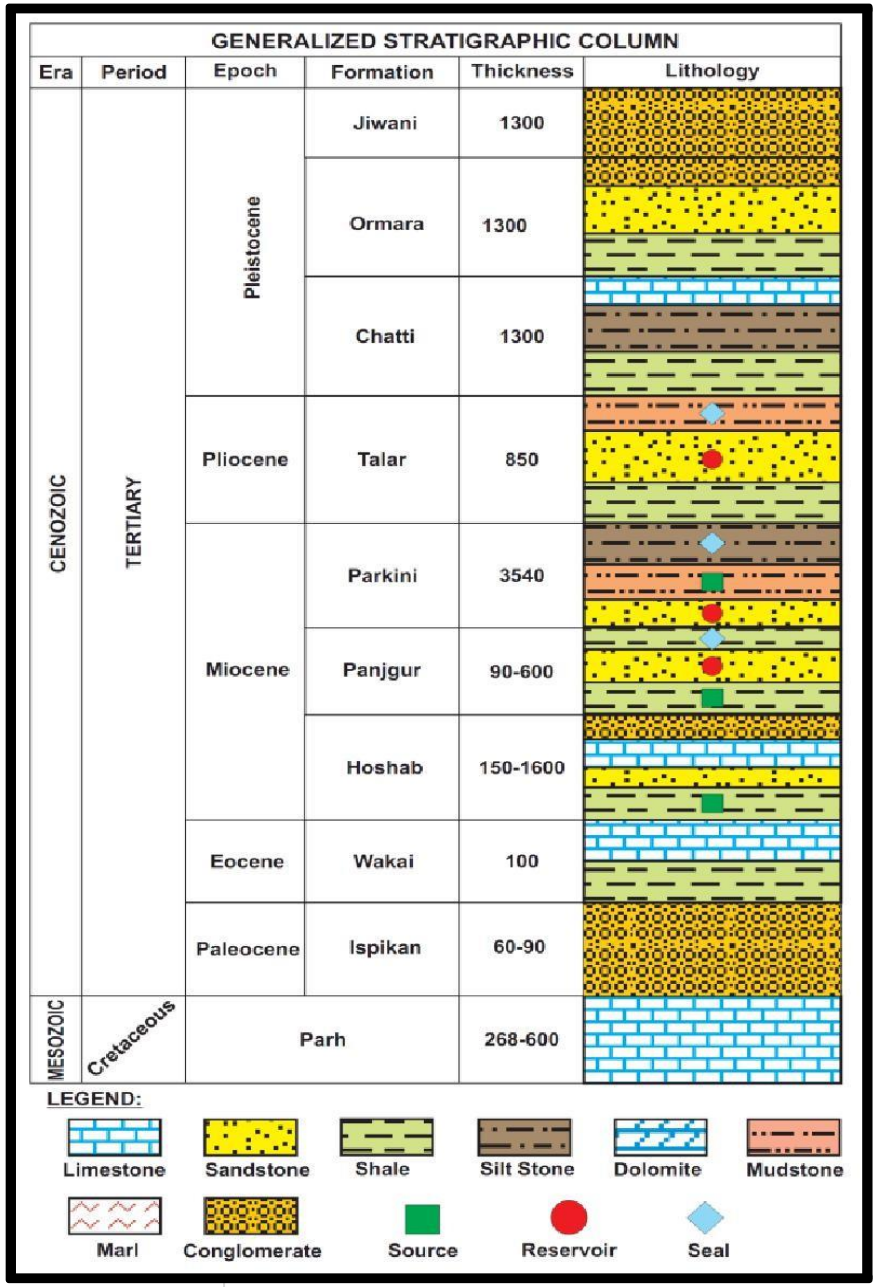
1. The main source rock of Makran Fold-belt include shales of Oligocene (Hoshab Formation), Miocene (Panjgur and Parkini Formation) and Pliocene (Talar Formations).
2. The estimated organic matter for the source rocks ranges from about 0.48 wt. % to 5.62 wt. % TOC with gas generation potential.

- **Reservoir Rock**:

3. Middle to Upper Miocene turbidities of Panjgur and Parkini Formation are considered as reservoir rocks.
4. Lithologically turbidities are fine to coarse grained sandstones with shale intercalations. Panjgur samples show sandstone porosities of up to 17.34%.

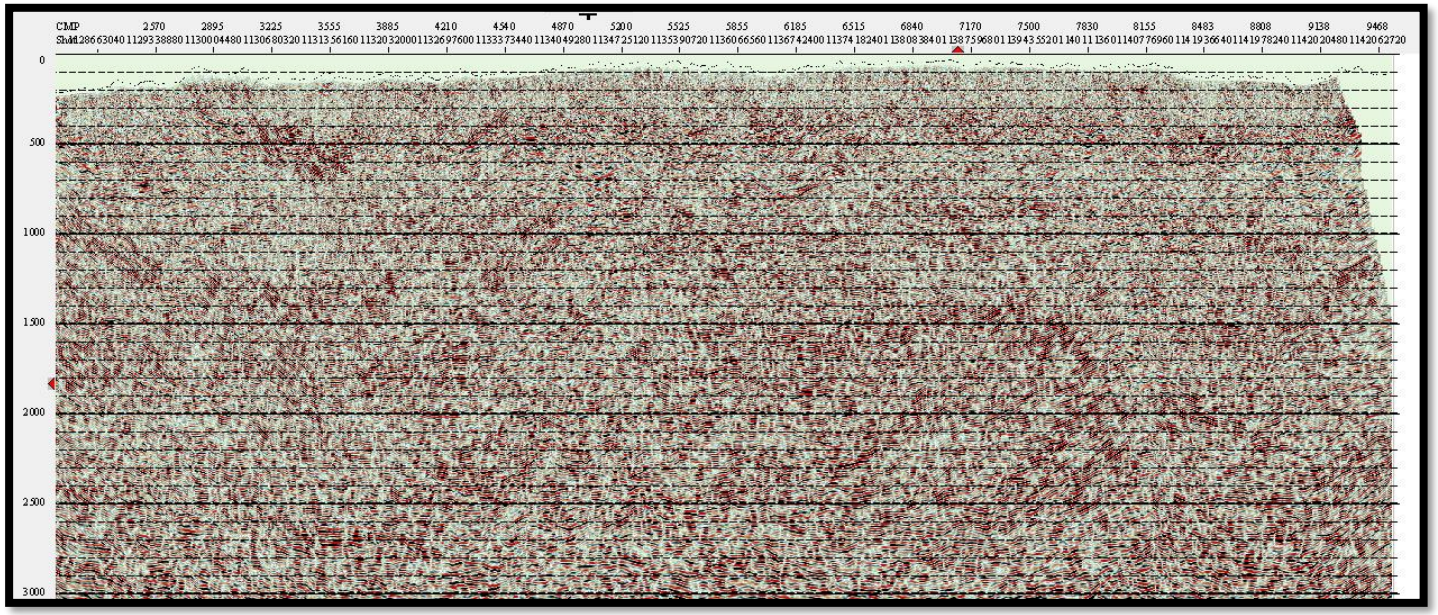
- **Seal**:

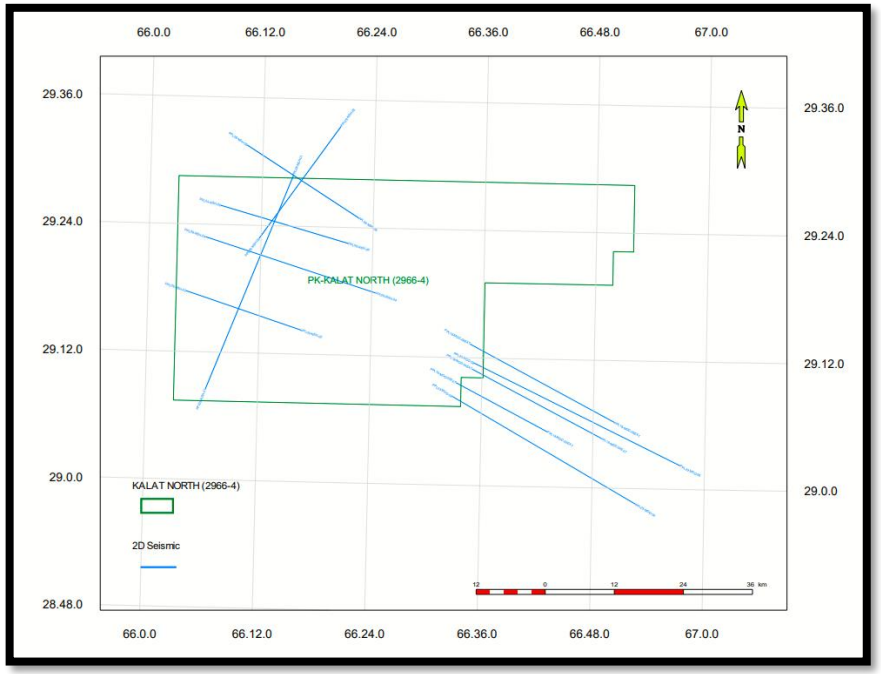
5. Shale horizons of abyssal sediments in Panjgur and Parkini formations are characteristically fine grained and well cemented which might provide an adequate seals



Cromie, Conall, et al. "Tectonostratigraphic evolution and hydrocarbon prospectivity south of Gwadar Bay, Makran accretionary wedge, offshore SW Pakistan." *Journal of Petroleum Geology* 45.2 (2022): 179-199.

Prospectivity

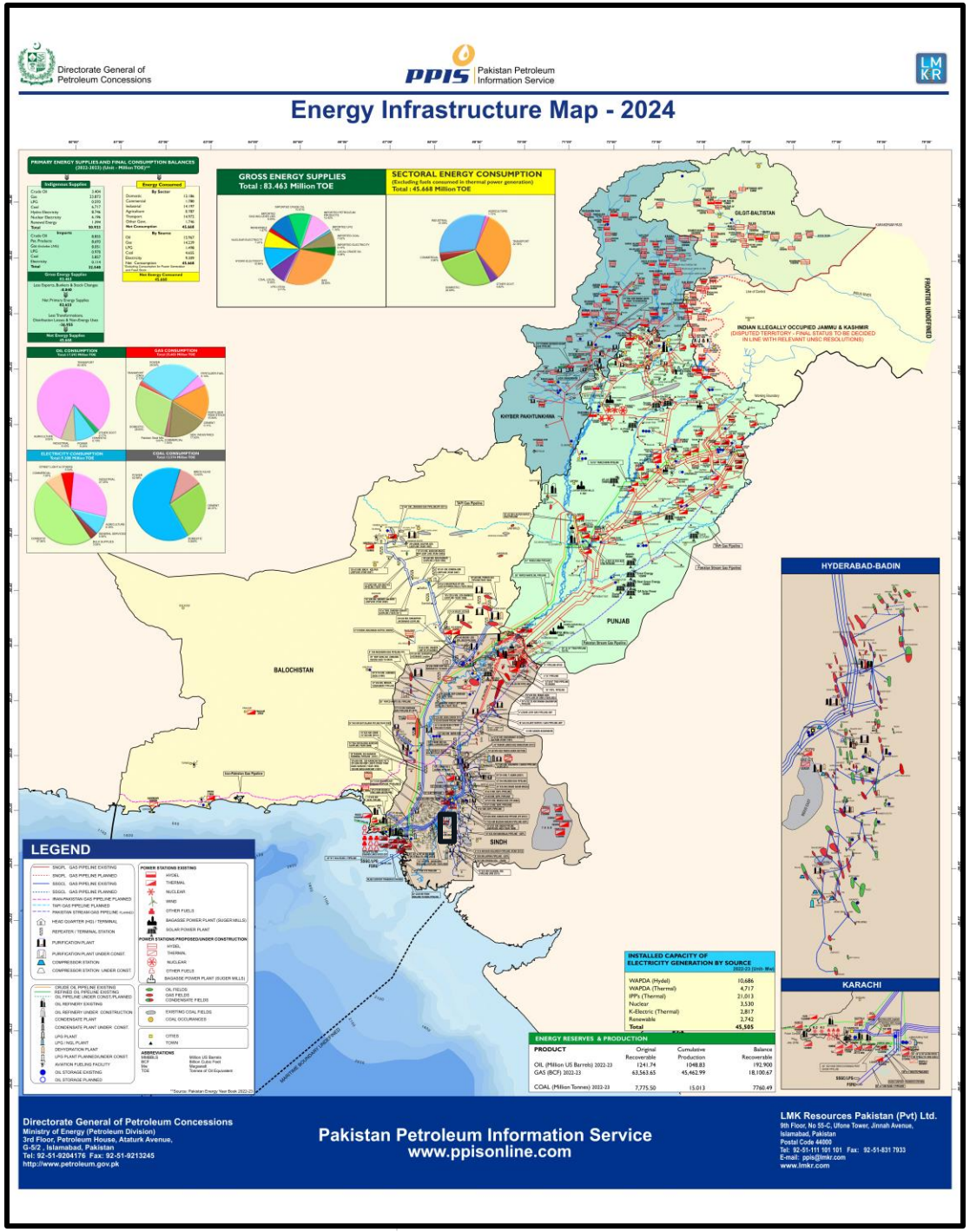




- The main trapping mechanism in this area is considered to be thrust related anticlines
- In recent past, nearby blocks have successful gas discoveries.
- High resolution seismic data can allow to delineate true potential of the block.

Infrastructure Map

- Nearest infrastructure gas pipeline is available North-East of the block.
- 18-24” gas pipeline infrastructures are present in the region.
- Towards south of the block, a pipeline connecting Jhal Magsi is planned
- Major discoveries in the surrounding is from Morgandh X-01.
- Government support to companies for infrastructure development



Investment Benefits

- Moderate risk, high reward
- Largest gas discovery in the geographic province
- Low cost on infrastructure development within limited timeframe
- Return on Investment within 3 years
- Attractive government policies for foreign investors
- Excellent purchase rate set by the Government against the discovered commodity
- Government will Guarantee to buy the gas.
- Attractive price in case of tight gas discovery.

Block Summary

Item	Indicators
Proven multiple sources in the region	Positive Indicator
Nearby discoveries	Positive Indicator
Nearby Infrastructure	Positive Indicator
ROI in 3 Years	Positive Indicator

THANK YOU