Smart Solutions for Today's Geoscientist

BLOCK: KALAT SOUTH (2865-5)

ONSHORE BLOCK BIDDING ROUND 2025

MINISTRY OF ENERGY PETROLEUM DIVISION (DGPC)

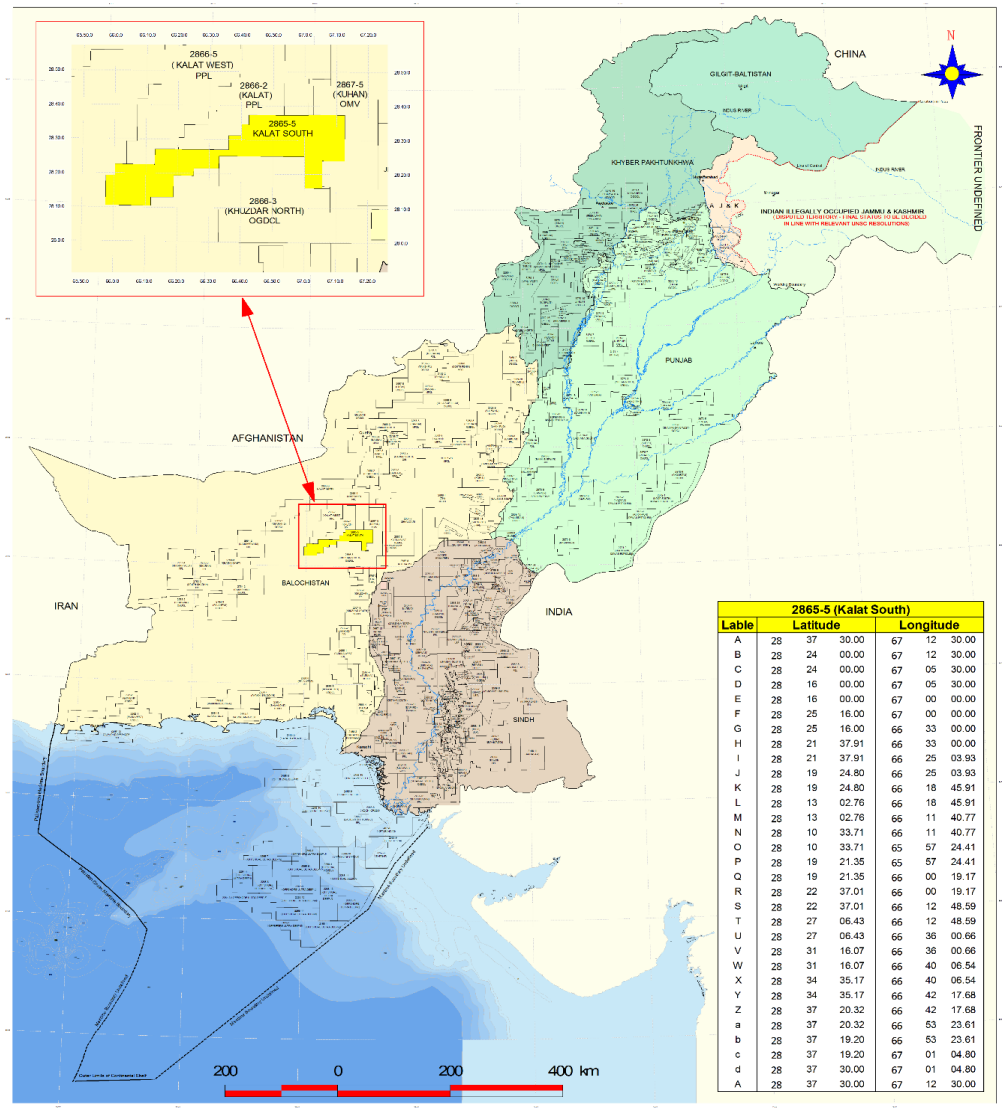
Introduction

- Kalat South Block covers an area of 2488.19 Sq. Kms.
- Location: Jhal Magsi, Khuzdar, Sikanadar Abad and Kalat district, Balochistan, Pakistan.
- Geological Basin:, Balochistan, Basin Pakistan.
- The block falls in Prospectivity Zone II.
- Estimated Resources of the Balochistan Basin*:
  - Oil: 8,676 million barrels
  - Gas: 78 trillion cubic feet
- PPL and OGDCL acquired approximately 261.15 L. Kms and 224.85 L. Kms of 2D seismic data in 2018 and 2020, respectively, bringing the total acquisition to 486.0 L. Kms within the block.
- The Block is surrounded by Kalat (North), Khuzdar North (South), Kuhan (East) and Kalat West (North-West) blocks.

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

Directorate General of Petroleum Concessions

Location Map of Kalat South Block

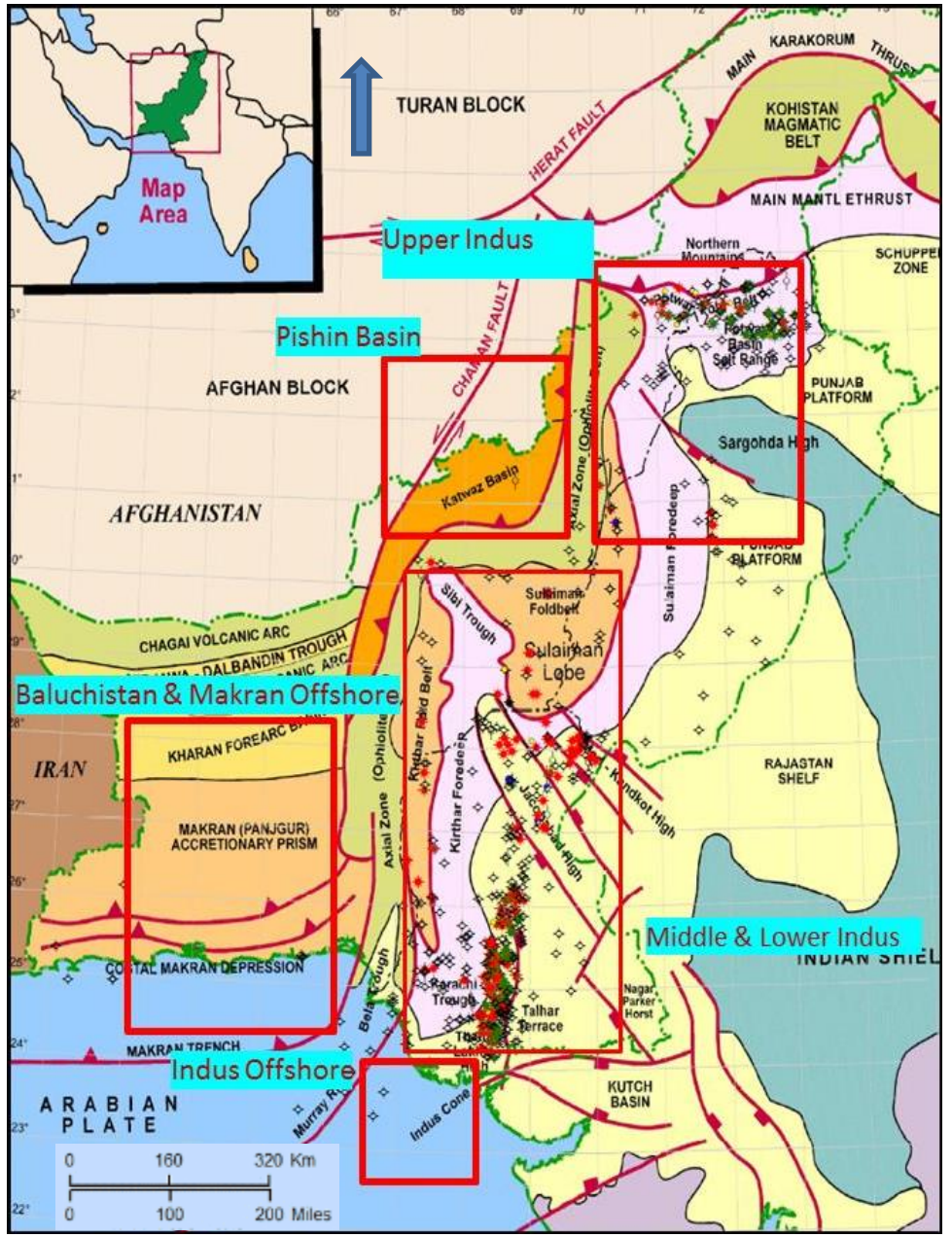


2865-5 (Kalat South)					
Lable	Latitude			Longitude	
A	28	37	30.00	67	12 30.00
B	28	24	00.00	67	12 30.00
C	28	24	00.00	67	05 30.00
D	28	16	00.00	67	05 30.00
E	28	16	00.00	67	00 00.00
F	28	25	16.00	67	00 00.00
G	28	25	16.00	66	33 00.00
H	28	21	37.91	66	33 00.00
I	28	21	37.91	66	25 03.93
J	28	19	24.80	66	25 03.93
K	28	19	24.80	66	18 45.91
L	28	13	02.76	66	18 45.91
M	28	13	02.76	66	11 40.77
N	28	10	33.71	66	11 40.77
O	28	10	33.71	65	57 24.41
P	28	19	21.35	65	57 24.41
Q	28	19	21.35	66	00 19.17
R	28	22	37.01	66	00 19.17
S	28	22	37.01	66	12 48.59
T	28	27	06.43	66	12 48.59
U	28	27	06.43	66	36 00.66
V	28	31	16.07	66	36 00.66
W	28	31	16.07	66	40 06.54
X	28	34	35.17	66	40 06.54
Y	28	34	35.17	66	42 17.68
Z	28	37	20.32	66	42 17.68
a	28	37	20.32	66	53 23.61
b	28	37	19.20	66	53 23.61
c	28	37	19.20	67	01 04.80
d	28	37	30.00	67	01 04.80
A	28	37	30.00	67	12 30.00

KALAT SOUTH(2865-5)		Available Data		Total Area (Sq. Kms)	Area by District	Districts	Percentage %
Zone	II	2D Seismic (L.Kms)	486.00	2,488.19	7.96	Kalat	0.32
Grid Area	32.93	3D Seismic (Sq.Kms)	NA		4.44	Jhal Magsi	0.18
Province	Balochistan	No. Wells	NA		1634.91	Khuzdar	65.71
					840.88	Sikanadar Abad	33.79

Geological Map

- Rocks have been deposited in varying sea level conditions, marine to continental environments, highlighting the dynamic tectonics having a strong impact on the sedimentation history.
- The Kalat Anticlinorium is composed mainly of thick to massive Jurassic limestone on NNE trending doubly plunging anticlinal hilly ranges.
- Kalat Plateau is located south of Kalat anticlinorium. It is apparently a large graben or depression filled with Eocene limestone. Numerous reverse and strike-slip faults can be observed. Khuzdar Knot, with an area of about 3000 Sq. Kms, is composed mainly of irregular shaped intensely deformed geological features.
- The area has been influenced by the tectonic events as a result of separation of the Indian Plate from the African Plate during the Jurassic and northward movement with anticlockwise rotation and collision with the Eurasian Plate in the north during Tertiary.
- Rifting formed horsts and grabens on the western margin of Indo-Pakistan Plate.



Khan, N. A. a. M. R., 2012. Evaluation of a Distinct Sub-Play for Enhanced Exploration in an Emerging Petroleum Province, Bannu-Kohat Sub-Basin, Pakistan. *AAPG International Conference and Exhibition.*

Petroleum System

- **Source Rock**:

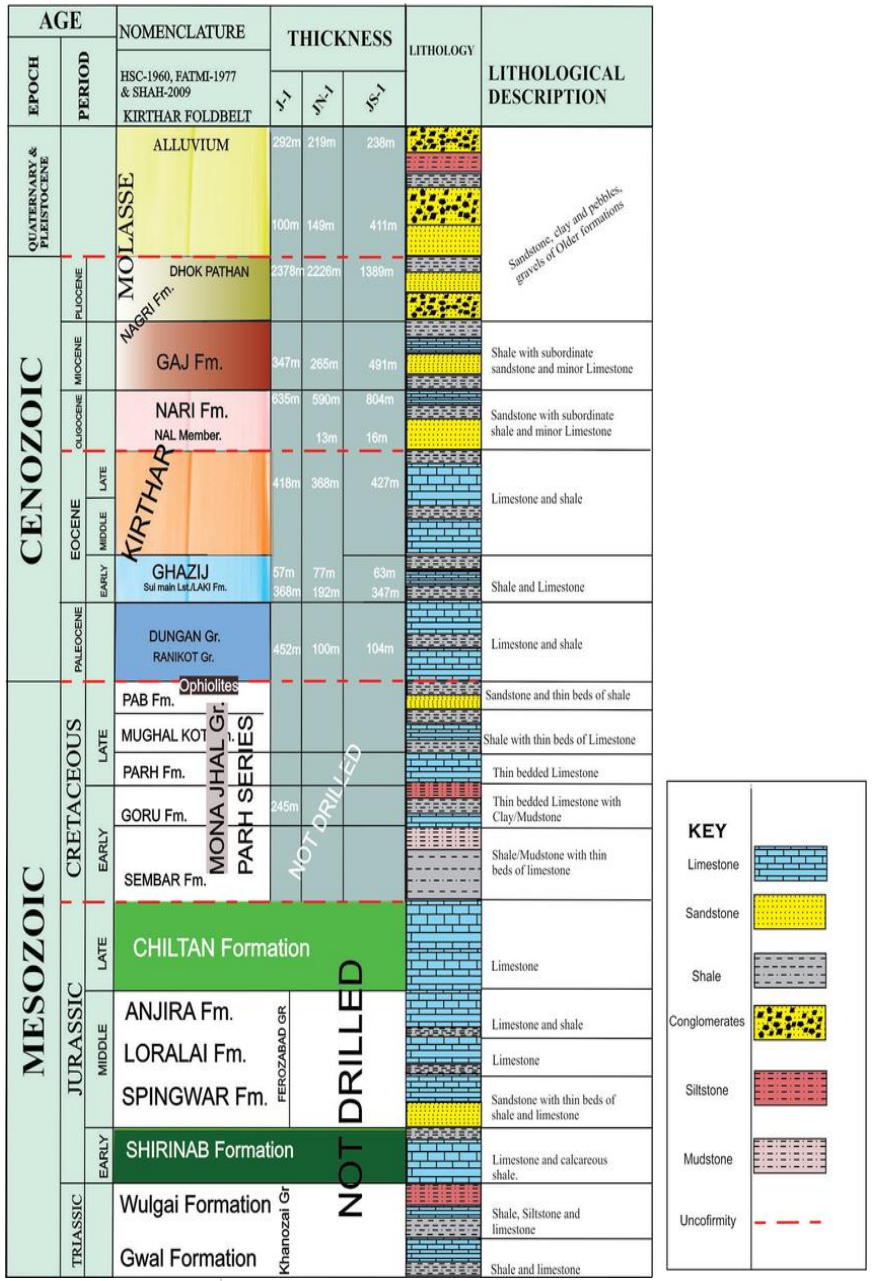
1. Anjira Member of the Shirinab Formation is considered as the main source rock.
2. The anoxic shales of The Early Cretaceous Sembar constitute the most prolific source rock in the area.

- **Reservoir Rock**:

3. Sandstones of Lower Goru are the primary reservoirs in the Lower and Middle Indus Basins, whereas Mughalkot and Pab sandstones are the main producers in the frontal mountains of the Kirthar Fold Belt.
4. Dunghan limestone is In Nushki, Late Eocene Wakabi Sandstone is regarded as the main reservoir.

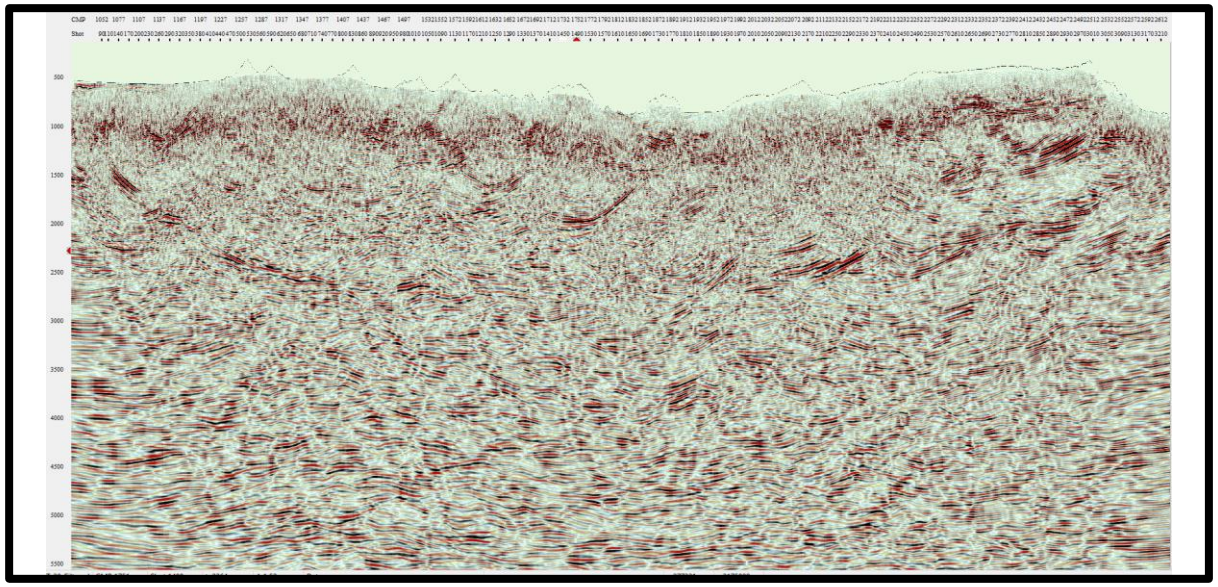
- **Seal**:

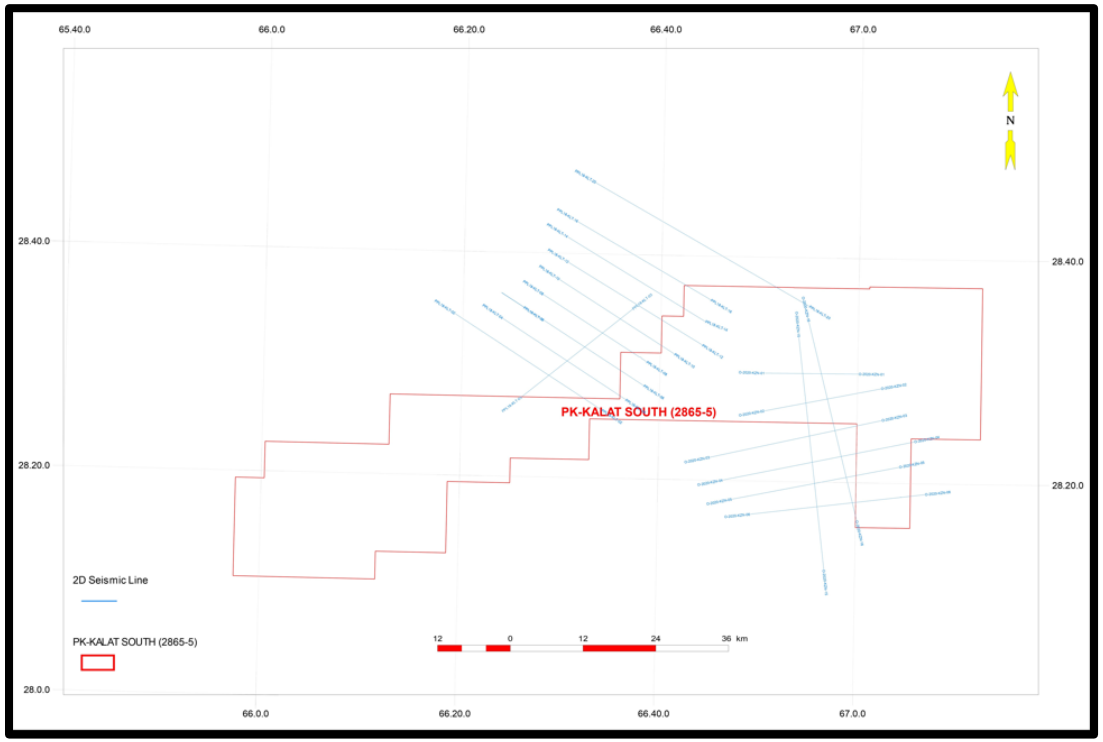
5. Lime muds and shales of Chiltan, Anjira and Spingwar Formations can provide effective top seals.
6. The Cretaceous Formations could be considered as effective top seal for the underlying Jurassic carbonate reservoirs.
3. Eocene Ghazij shales provide effective regional seal to the underlying Dunghan carbonates.
4. In Nushki area, the Oligocene Murga Faqirzai shales are considered top seal to the underlying Eocene reservoirs.



Khan Arshad, M. I. ,. D. M. I. A. N., 2011. *Structural Styles and Hydrocarbon Potential of Western Kirthar Fold Belt.* Islamabad, PAPG/SPE Annual Technical Conference.

Prospectivity

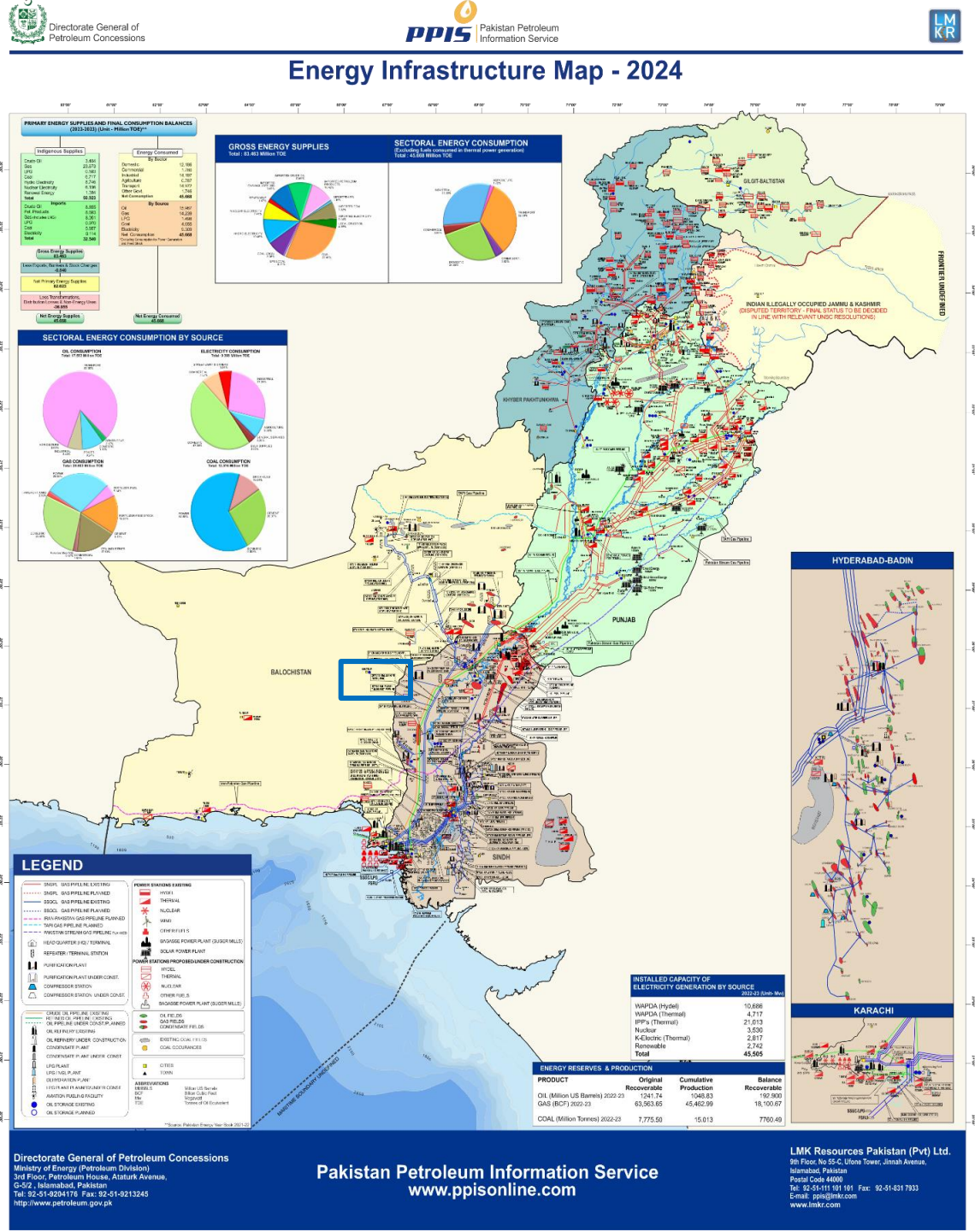




- The main trapping mechanism in this area is considered to be tilted fault block traps.
- High resolution seismic data can allow to delineate true potential of the block

Infrastructure Map

- Government support to companies for infrastructure development
- Gas fields exist near the block.
- Thermal power stations exist near the block.



Investment Benefits

- High risk, high reward.
- Largest gas discovery in the geographic province.
- High 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 or oil discovered.
- Attractive price in case of tight gas discovery.

Block Summary

Item	Indicators
Probable multiple sources in the region	Positive Indicator
Discoveries in Geographical Province	Positive Indicator
Nearby Infrastructure	Positive Indicator
ROI in 3 Years	Positive Indicator

THANK YOU