

Pakistan Offshore Bid Round

2024



Directorate General Petroleum Concessions
Ministry of Energy (Petroleum Division)
Islamabad, Pakistan



INDEX



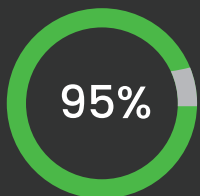
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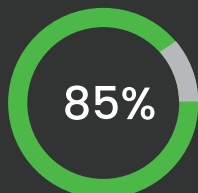
ATTRACTIVE FISCAL AND REGULATORY POLICY FOR PETROLEUM INVESTORS



- Sliding scale production sharing arrangement.
- Foreign investment is fully protected under foreign investment protection law.
- G2G arrangement for foreign state-owned companies.
- Guarantee of Government to buy gas.
- Right to remit funds.
- Payments in USD.
- Transferrable work units.
- Royalties treated as expense for tax.
- Only 5% tax on equipment.
- No ring fencing.
- Tenure of license/lease.
- Option to sell to 3rd party.
- Separate Policies for Tight Gas (upto \$12.6/MMBTU).



PROFIT OIL/
GAS UPTO



COST
RECOVERY

\$7 – \$9

GAS PRICE
USD/MMBTU

4 YRS

HOLIDAY ON
ROYALTY

Bonanza of US\$ 1/MMBTU over and above well head gas price for first three offshore discoveries



PROCEDURE FOR GRANT OF E&P RIGHTS AND REQUIREMENTS



Competitive Bidding

Petroleum Exploration License for entering PCA or PSA



G to G

Petroleum Exploration License for entering PCA or PSA to Strategic Partner Companies



Direct Negotiation

Non-exclusive Reconnaissance Permits for undertaking studies and multi-client surveys



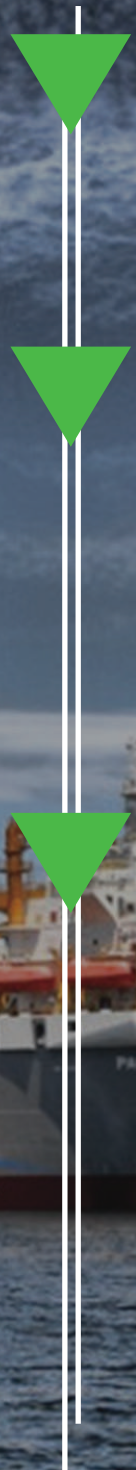
3 years' experience as operator or JV partner



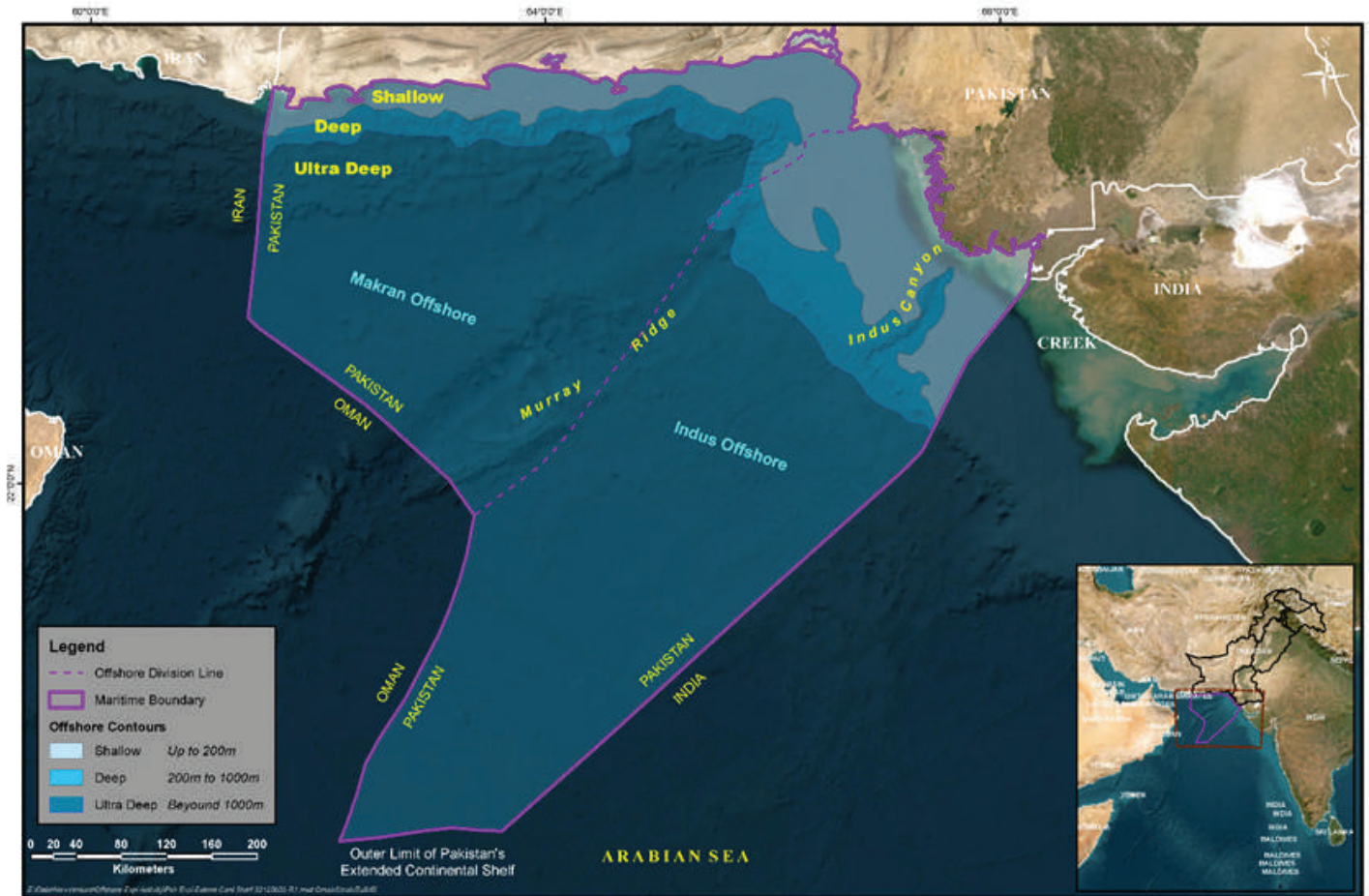
Demonstratable Technical and Financial capability



Within a period not exceeding ninety days after award of a petroleum right, the contractor shall either become incorporated in Pakistan or obtain permission to operate in Pakistan as a registered branch office of a foreign company.



INTRODUCTION



Pakistan's offshore consists of two distinct geological basins namely Indus and Makran, combined both basins encompass an area greater than 282,623 sq. km. The offshore area is further subdivided into shallow, Deep, and Ultra Deep Zones. The Govt of Pakistan (GoP) is offering investment opportunities in Indus Offshore with investor-friendly attractive fiscal terms, revised in 2023.

The Indus Offshore has the **world's second-largest** delta-fan system, after the Ganges in Bengal, with a sediment thickness of up to 10 km. This system is also analogous to some of the world's prolific hydrocarbon-bearing deltas, e.g., Nile, Mahakam, and Niger.

Considering the large size of the Indus offshore basin (157,868 sq. km) well drilled per sq. km area does not reflect the actual exploration potential of the entire basin. Since 2000, only 4 wells have been drilled which indicates the negligible exploration efforts as compared to many other global offshore areas.



No commercial discovery has been made to date. Pak Can-1 (OGDCL 1985) is the only well that flowed hydrocarbons (3.7 MMscfd gas; 98% Methane). However, in addition to Pak Can-1, hydrocarbon discoveries in the adjacent Indian offshore Kutch basin confirm the presence of a working petroleum system in the region and thereby encourage to explore the same plays in the Indus Offshore, Pakistan.

Moreover, the proven plays of the onshore Indus basin may extend into the offshore region. However, none of the earlier drilled wells in the Indus Offshore optimally targeted these plays.

Overall, the Indus Offshore basin may have multi-Tcf gas potential and is the candidate for a classical play-based exploration approach.

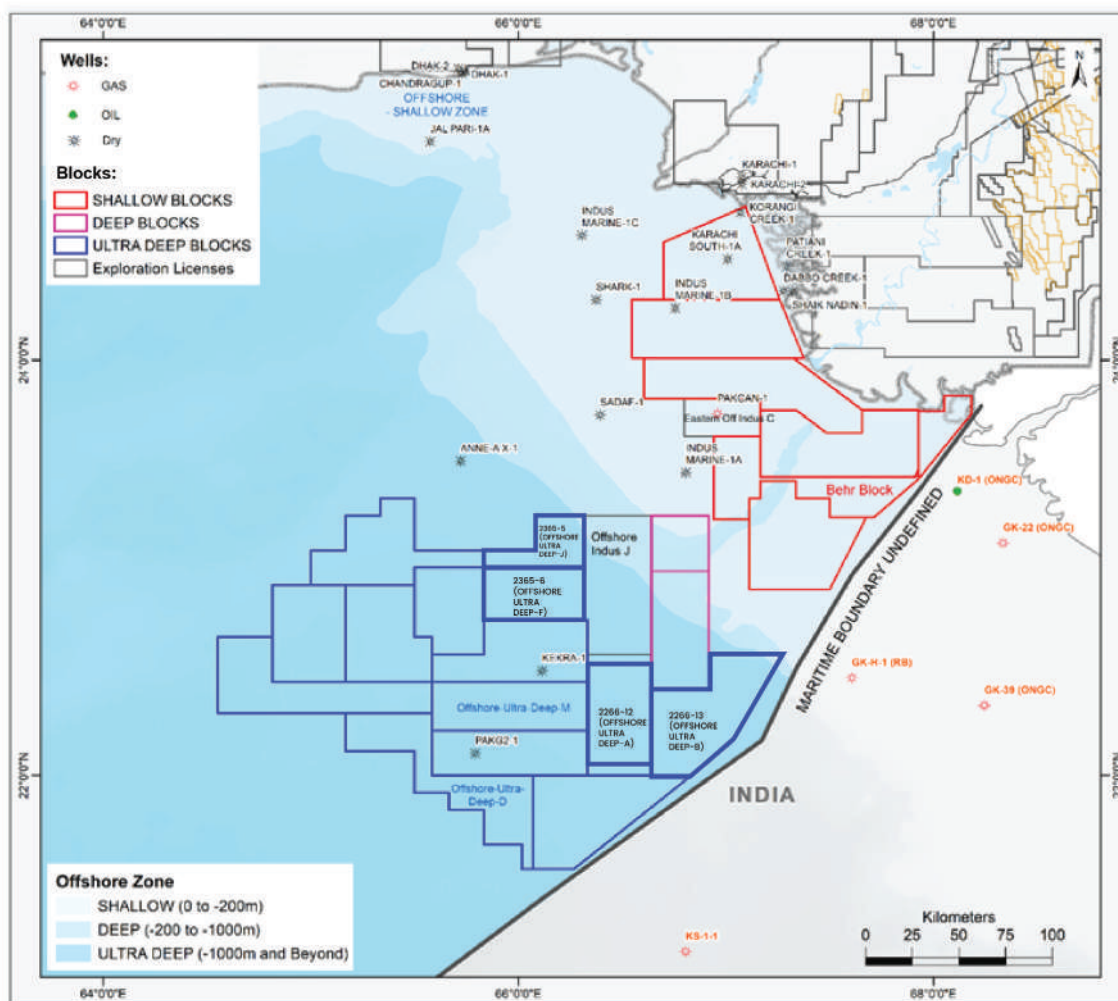


Figure-2 Location of Blocks for Bid Round 2024

BIDDING PROCESS

GoP is offering Blocks for competitive Bidding in two Phases. Roadmap and tentative timelines for bidding process are as below:-



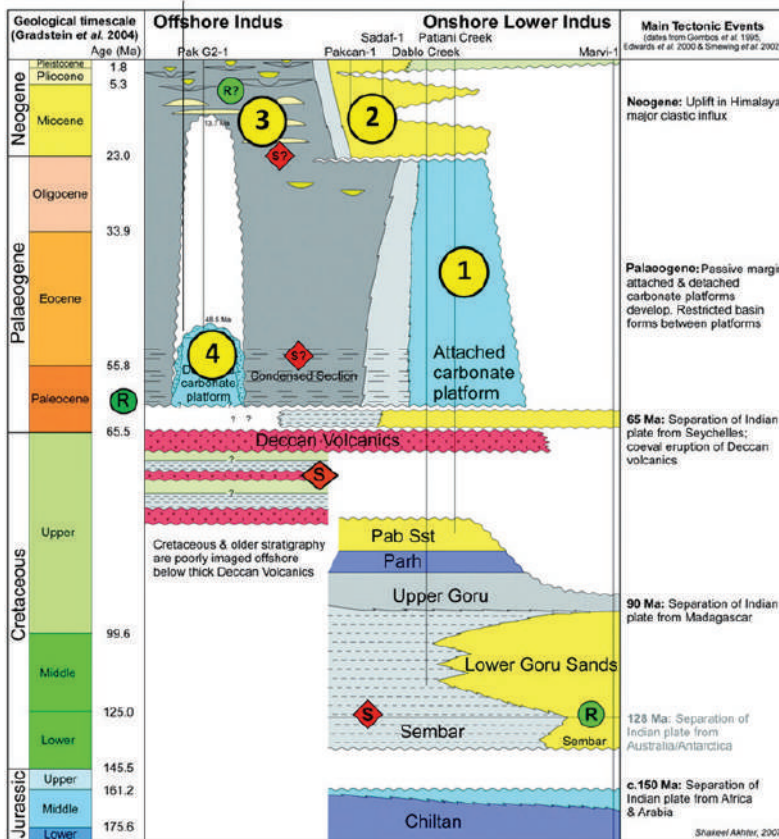
S.NO.	BLOCK NAME	AREA (Sq.Kms)	ZONE	SEISMIC COVERAGE		WELL	WATER DEPTH
				2D (L.Km's)	3D (Sq. KM) As of Process/Field Data		
6 Blocks in Shallow Water (<200m)							
1	BEHR (2366-9)	2481.44	O	6689.9	809.27	No Well	0-200m
2	BIN QASIM SOUTH (2466-10)	2021.69	O	7399.01	1080	KARACHI SOUTH-1A KORANGI CREEK-01	0-200m
3	GHARO CREEK (2466-9)	2453.05	O	11665.49545	1080	INDUS MARINE-1B	0-200m
4	KETI BANDAR (2367-6)	2464.75	O	6729.27	725.6	No Well	0-200m
5	KOCHI CREEK (2366-8)	2450.14	O	10602.30858	410.99	No Well	0-200m
6	ZARRAR(2267-3)	2424.8	O	6232	No Data	No Well	0-200m
2 Blocks in Deep Water (200-1000m)							
1	OFFSHORE DEEP-A (2266-14)	1774.2	O	4305.5	3619.85	No well	200-1000m
2	OFFSHORE DEEP-B (2266-10)	833.78	O	5151.69	1606.58	No Well	200-1000m
4 Blocks in Ultra Deep Water (>1000m)							
1	OFFSHORE ULTRA DEEP-A (2266-12)	1774.2	O	7892.09	995.85	No Well	>1000m
2	OFFSHORE ULTRA DEEP-B (2266-13)	833.78	O	4124.37	3619.85	No Well	>1000m
3	OFFSHORE ULTRA DEEP-F (2265-6)	1373.56	O	5057.1	No Data	No Well	>1000m
4	OFFSHORE ULTRA DEEP-J (2365-5)	900.36	O	3883	992.21	No Well	>1000m

Table-1 Statistics of Blocks on offer for Phase-1

PLAYS TYPES



The generalized stratigraphy and various play types of Indus Offshore are shown in below Figure-3



Following potential plays needs to be explored in future exploration campaign:

- 1** Shelf Edge Carbonate Build-up
- 2** Miocene Delta
- 3** Channel Levee System
- 4** Deep Water Carbonate Build-up

Figure-3 Generalized stratigraphy of Indus Offshore

Source Rock

Paleocene

Drilled only in Karachi South-1 well with TOC ranging from 1-3%

Miocene

TOC ranges from 1-3.5% in Indus Marine A-1

300m of source rock interval with TOC Range of 1.26-3.24% drilled in PakCan-1 well

Seal Rock

Miocene & Oligocene Shales

Intra-formational shales of Miocene and Oligocene may act as top seal

EXPLORATION HISTORY

1

As of to date, only 14 wells have been drilled in Indus Offshore

2

11 in Shallow water and 3 in Ultra-deep water

3

6 wells for Paleogene/ Cretaceous Plays and 6 wells for Miocene clastic Play

4

2 wells for carbonates build-ups (Deep water)

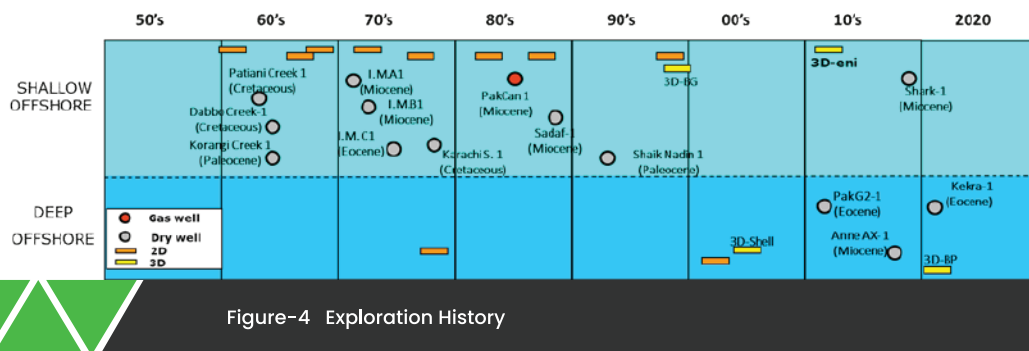
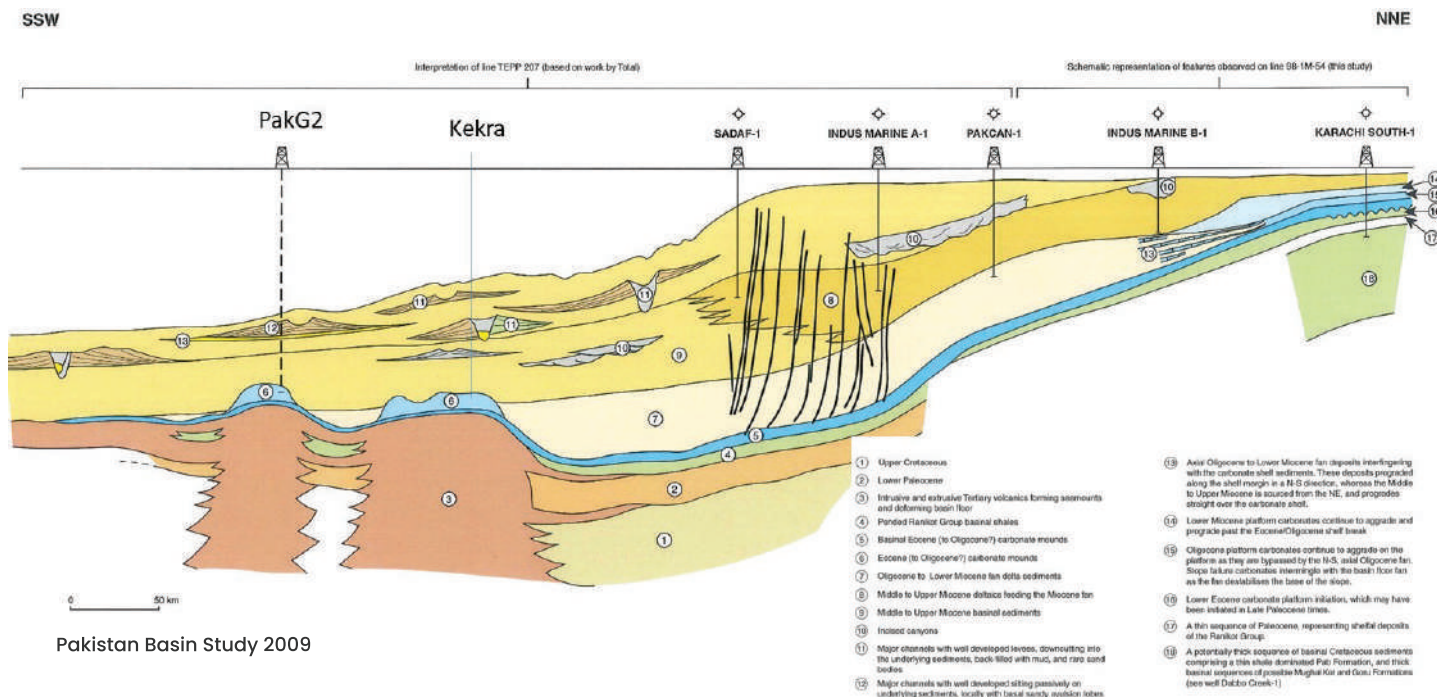


Figure-4 Exploration History

PakCan-1 well drilled in 1985 tested 3.7 MMscfd thermogenic gas, indicating good potential for Miocene clastic sands as source rock & reservoir.



Pakistan Basin Study 2009

Figure-5 Regional geo-seismic cross section

Regional geo-seismic section (Figure-5) depicts the overall geological setting and extent of various plays being targeted in the past.



TOTAL SEISMIC DATA COVERAGE



So far ~64,000 L.KM 2D and 11950.5 Sq. km 3D seismic data have been acquired in the Indus offshore (Figure-6).



No. of 3D Seismic
11 surveys



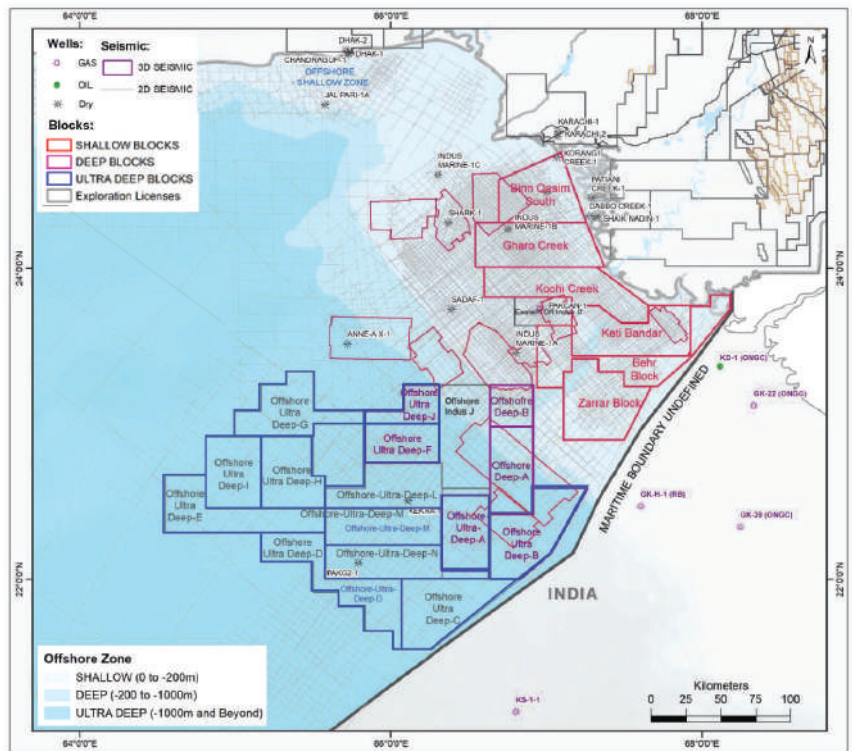
3D Coverage
11950.5 Sq. Kms



No. of 2D Lines
1172



2D Coverage
63913.60 L. Kms



Opportunities & risks

Figure-6 Total Seismic Coverage Maps of Indus Offshore

- ▶ Indus Offshore is the largest and least-explored basin with an estimated resource potential of 10–40 Tcf.
- ▶ Working petroleum system, proven by 3.7 MMscfd flow of gas at Pakcan-1
- ▶ Mainly Gas play with possibility of oil play in the eastern periphery – Marginal oil discovery at KD-1 (India).
- ▶ Significant volume of 2D and 3D seismic is already available
- ▶ Source and Charge are key Play elements that require play-based approach to unlock the HC potential of this huge sedimentary area





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