



Accomplishments and Capabilities of Indian Oil in CBM

Development of CBM Blocks

24th April, 2019

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- ❖ **Indian Oil's Foray into Exploration and Production of Oil & Gas**
- ❖ **Indian Oil - A Successful Operator in Cambay Basin**
- ❖ **Indian Oil in the Field of Coal Bed Methane (CBM)**
- ❖ **India Oil's Capabilities to Become a Successful CBM Operator**

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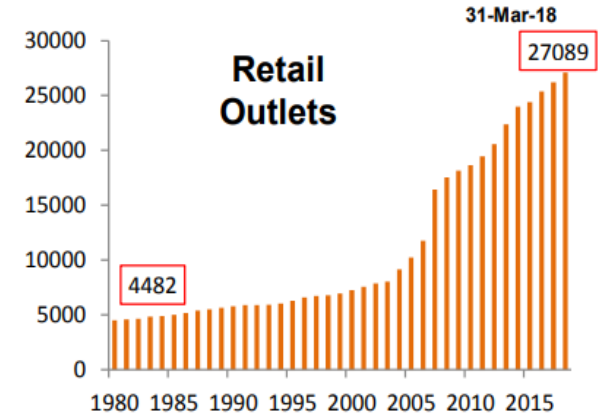
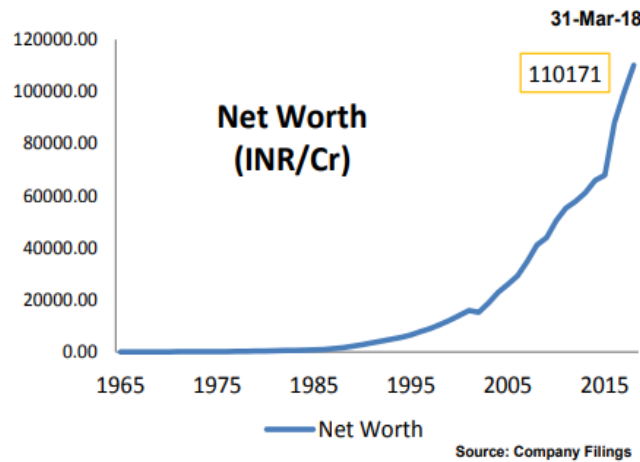
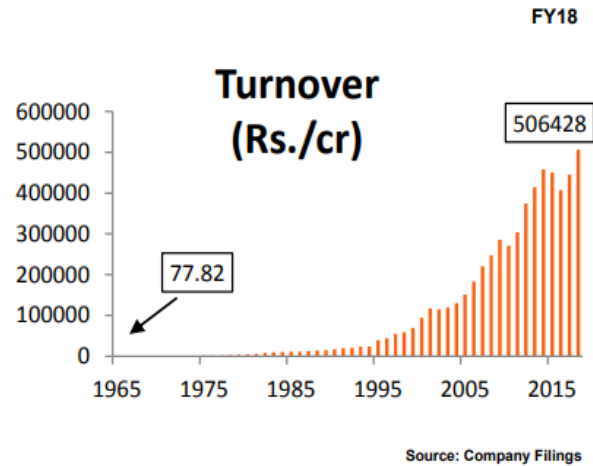
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Indian Oil Corporation: The Future of India's Energy

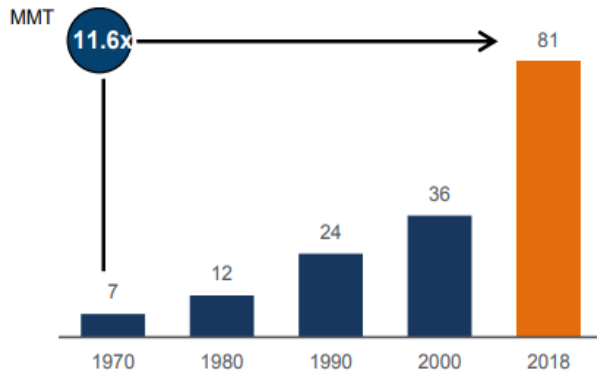


Our Journey at a Glance

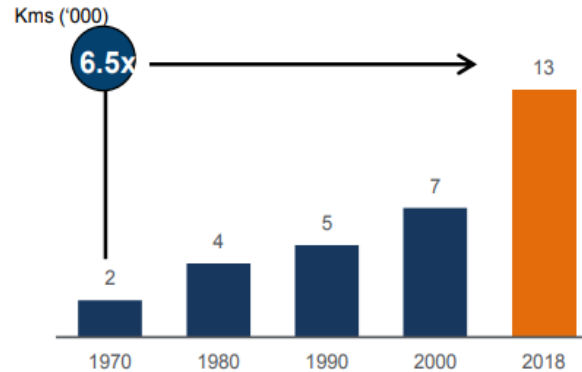
From a humble beginning to an Oil Giant



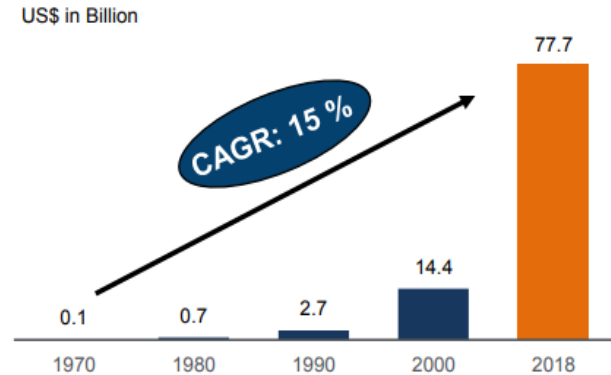
Refining Capacity



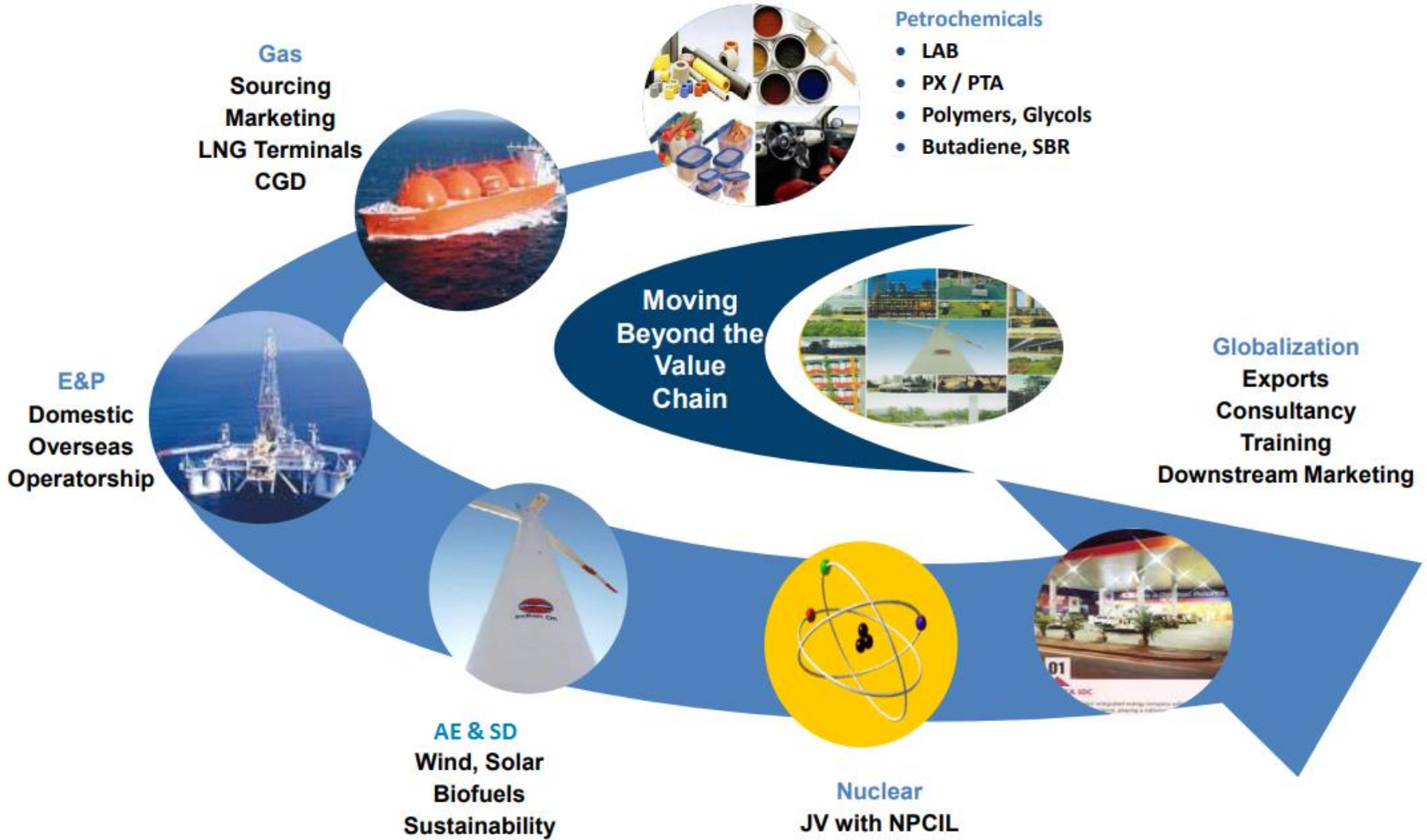
Pipeline Network



Turnover



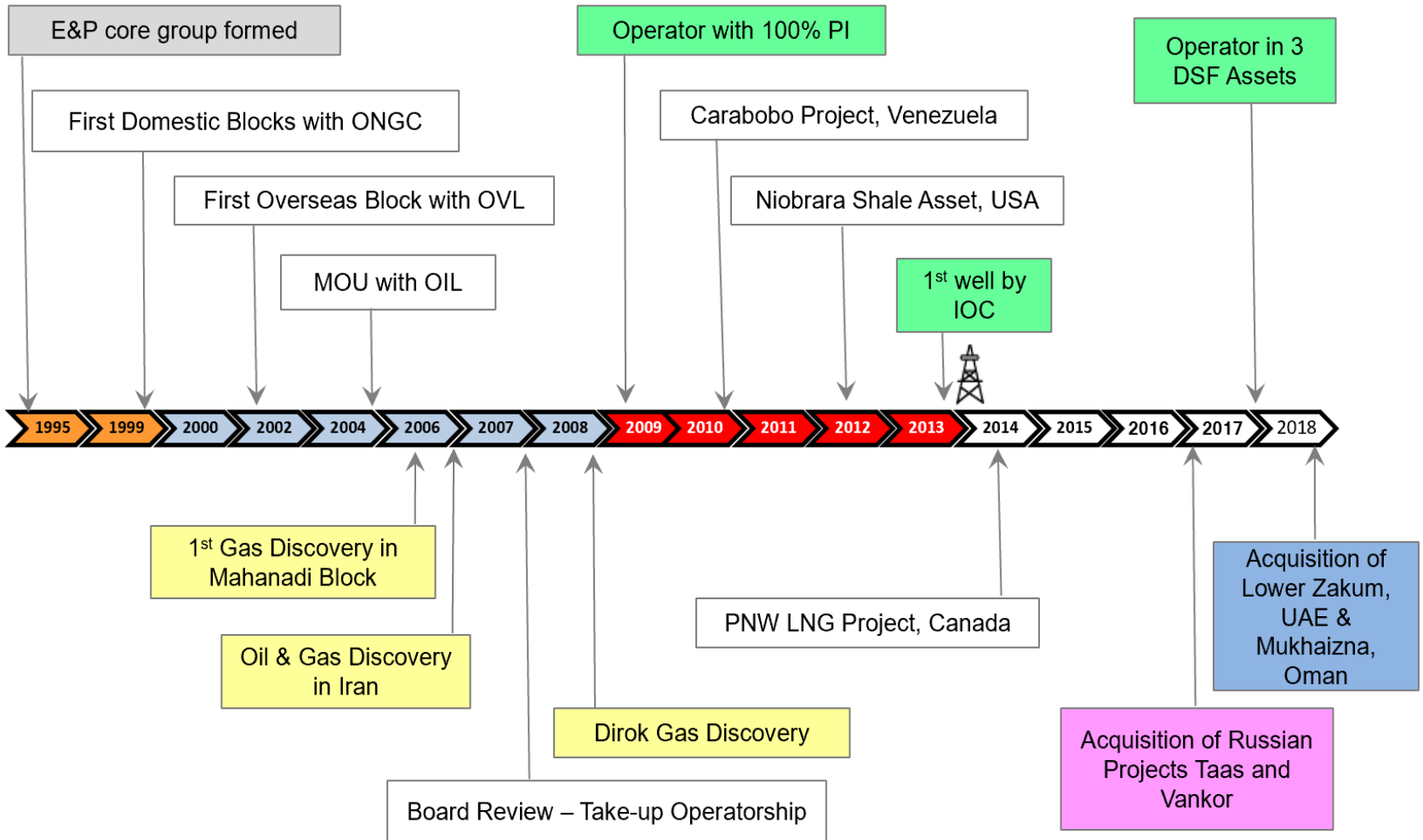
Diversification by Indian Oil



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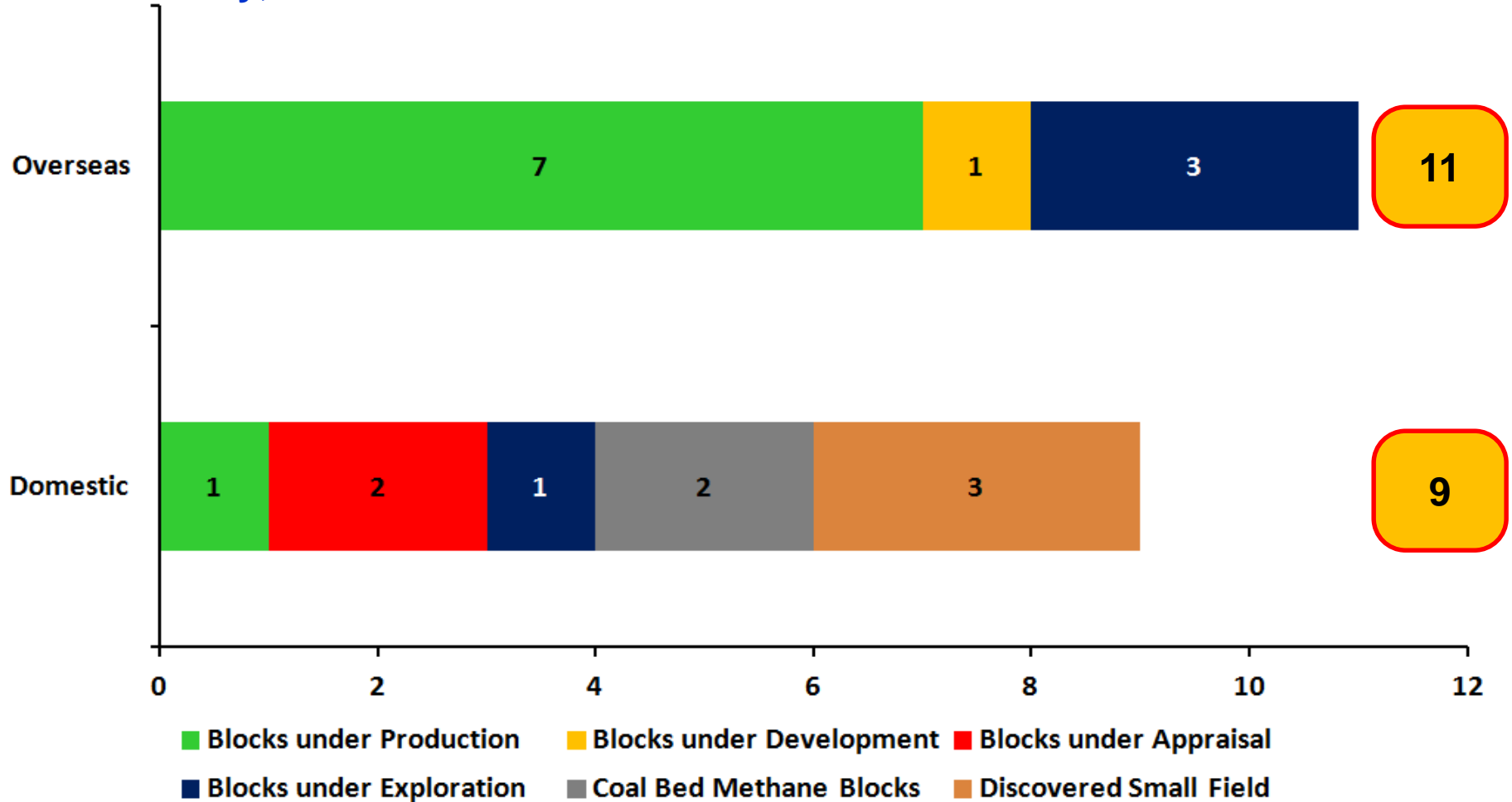
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Indian Oil's Journey in E&P



E&P Overview

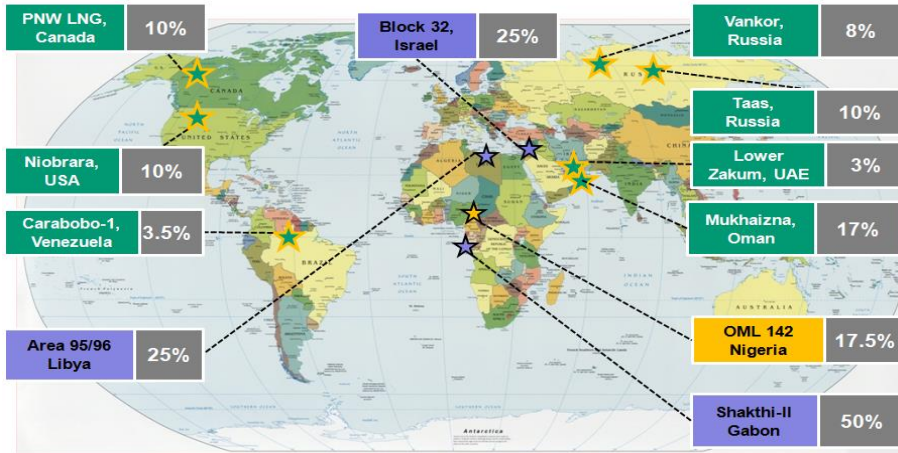
❖ Presently, IndianOil has 11 Overseas and 9 Domestic Active E&P Assets.



* IndianOil has one more block in Iran, wherein major gas discovery was made and presently finalisation of Development Service Contract is awaited

E&P Overview

E&P Overview Overseas Oil & Gas Assets



★ Producing Assets : 7 ★ Development Asset: 1 ★ Exploration Assets: 3

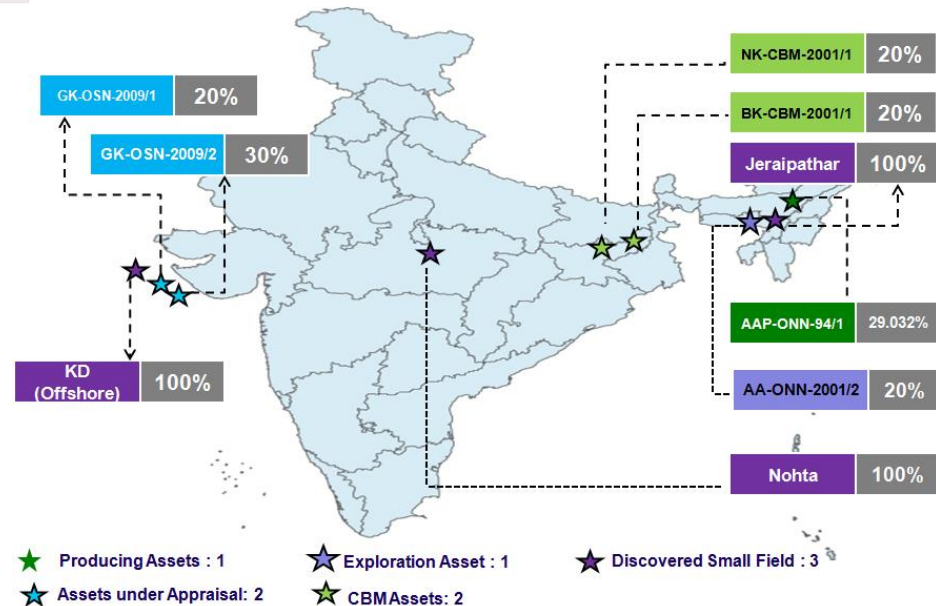
Domestic Assets

- ★ Producing Assets : 1
- ★ Assets under Appraisal: 2
- ★ CBM Assets: 2
- ★ Exploration Asset : 1
- ★ Discovered Small Field: 3

Overseas Assets

- ★ Producing Assets : 7
- ★ Development Asset: 1
- ★ Exploration Assets: 3

* IndianOil has one more block in Iran

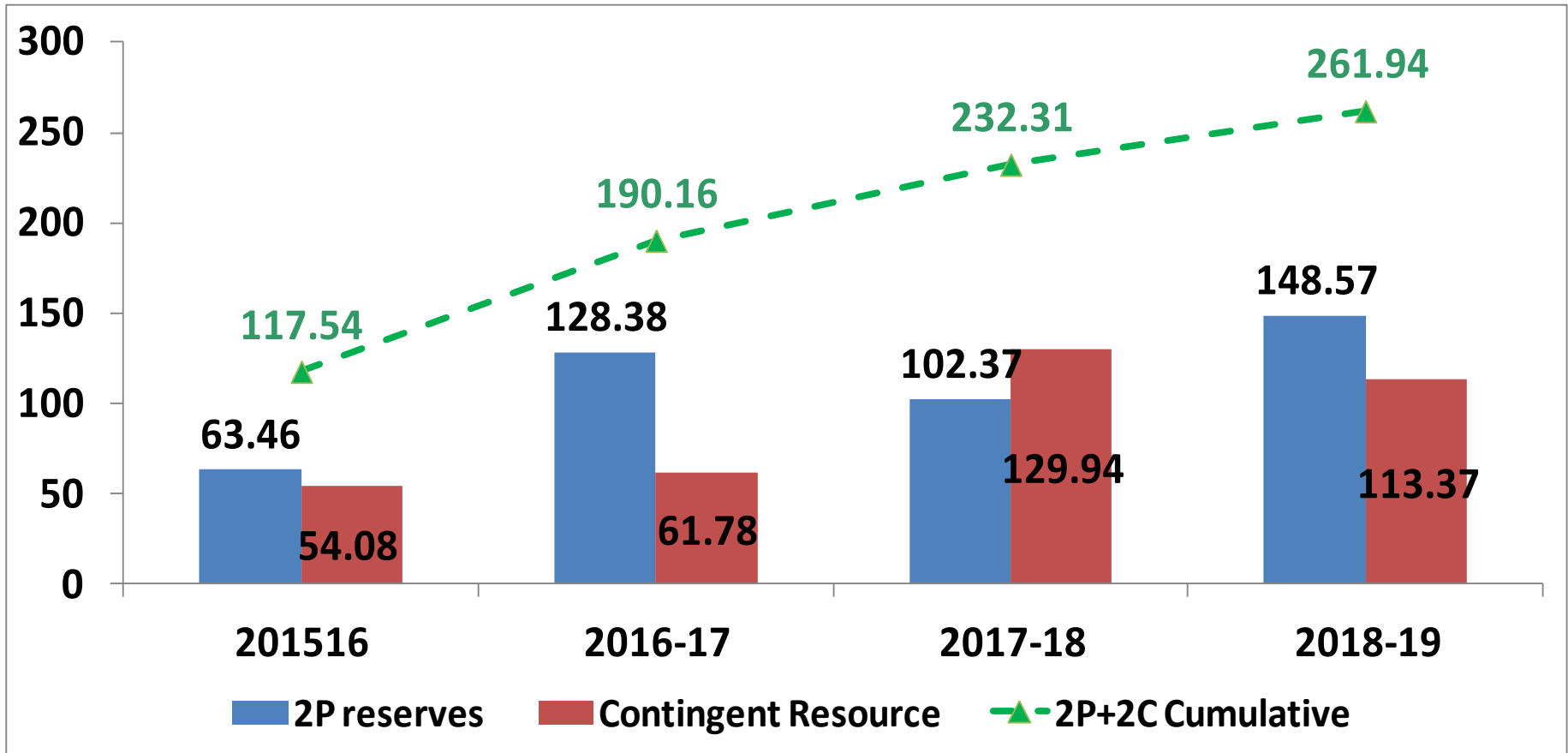


★ Producing Assets : 1 ★ Exploration Asset : 1 ★ Discovered Small Field : 3
 ★ Assets under Appraisal: 2 ★ CBM Assets: 2

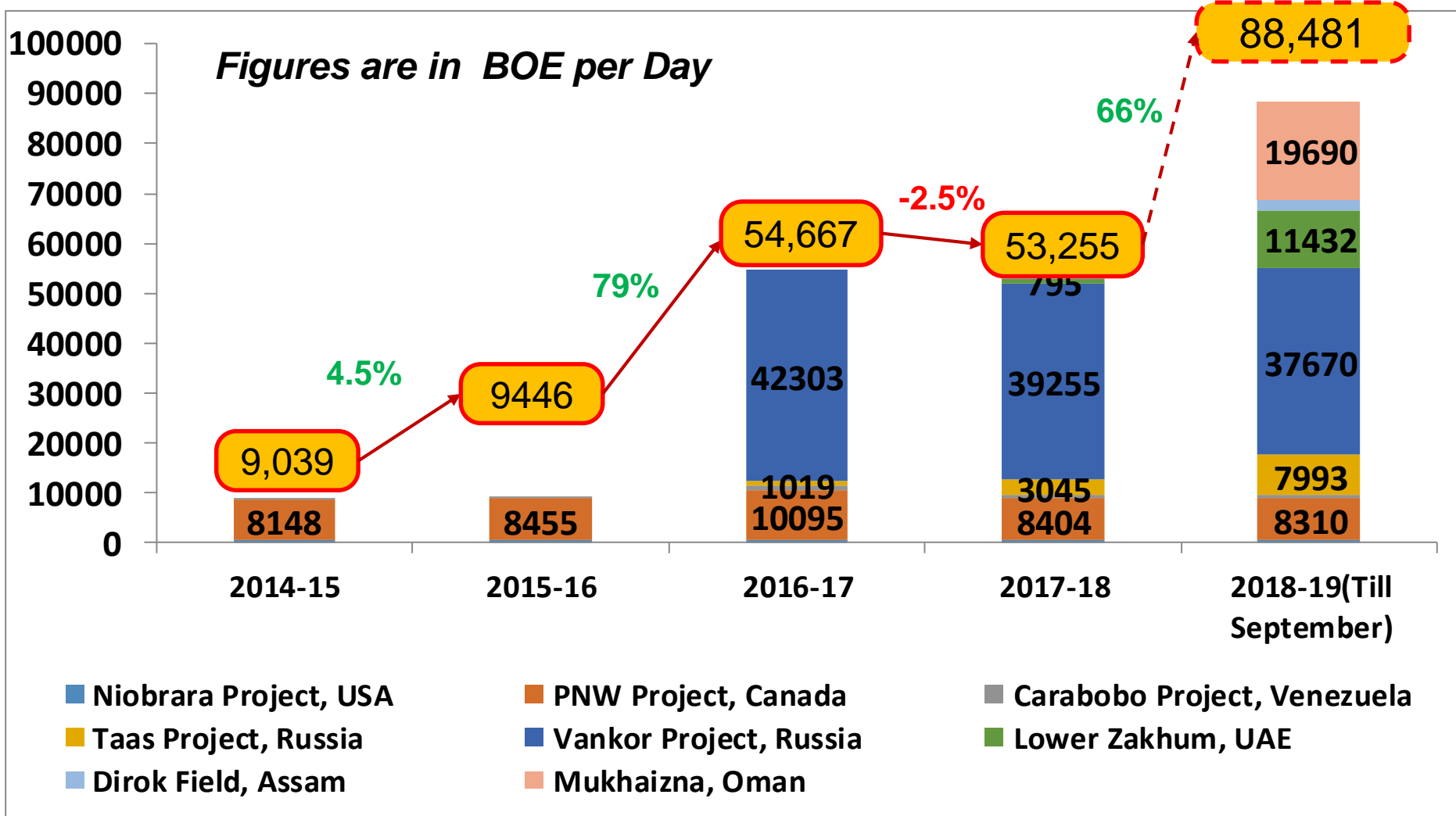
Reserves & Resources

❖ 2P Reserves & Contingent Resources

(All figures in MMToe)



Production Overview



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Work Done as an Operator in Cambay Basin

- ❖ **Indian Oil was awarded two exploratory blocks in Cambay basin in NELP-VII bidding round in 2008**
- ❖ **Successfully carried out the following activities:**
 - **280 sq. km of 3D seismic data acquisition,**
 - **3D Seismic Data Processing**
 - **3D Seismic Data Interpretation and identification of most favorable well locations**
 - **Well Planning and Designing**
 - **Procurement of Materials**
 - **Lining up several service providers**

Work Done as an Operator in Cambay Basin

❖ **Successfully carried out the following:**

- **Opening of Project Office**
- **Environmental Clearance**
- **Liasoning with Statutory Authorities and Govt. Authorities for various approvals**
- **Land Acquisition**
- **Civil works at well site and approach roads**
- **Drilling of 10 wells (Max. drilled depth - 3100 m)**
- **Well Testing**
- **Well Abandonment and Site Restoration**

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Indian Oil in CBM

- ❖ One of the oldest CBM players in India
- ❖ Entered into the area of CBM operations in 2001 along with ONGC during the 1st licensing round of CBM
- ❖ Two development blocks in the prominent area
- ❖ Committed investment of Rs. 460 cr
- ❖ About to start gas monetization in the current FY

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Indian Oil's Manpower

❖ Indian Oil's young team comprises the following:

Discipline	Experience (Yrs)			Total
	0-5	6-10	10+	
	No of Personnel			
Geophysics	4	2	3	9
Geology	14	3	3	20
Petro-physicist	-	-	-	0
Drilling	1	2	-	3
Petroleum Engineer	7	4	3	14
Reservoir	-	-	1	1
Production	-	-	1	1
Commercial	-	-	2	2
Civil/LAQ	-	-	1	1
Legal	-	-	1	1
HSE	-	-	1	1
Total				53

Indian Oil's Manpower

- ❖ Further, IndianOil recruits experienced mid level executives for specialized roles in E&P
- ❖ Also, appoints Consultants in the areas of Geology, Geo-physics Drilling, Reservoir and Production Engineering
- ❖ Manpower worked with international operators like Petronas, Roseneft, ADNOC and Occidental Petroleum which enhances the capabilities and access to international best practices of project management
- ❖ Dedicated Contracts and Procurement cell specialized in E&P activities

In-house Infrastructure

- ❖ Indian Oil established a state of art data center (Anweshan) with the following software:

Sl. No.	Name of Software	Application
1.	Schlumberger Petrel	Seismic Interpretation/Static, Dynamic Modelling, G&G Data Interpretation
2.	Schlumberger Techlog	Well Log Analysis
3.	Schlumberger Eclipse	Reservoir Studies/Simulation
4.	Halliburton Decision Space	Seismic Interpretation/Static, Dynamic Modelling, G&G Data Interpretation
5.	Landmark Drilling Software	Well Engineering & Design
6.	Schlumberger Oil Field Management	Production Data Analysis
7.	Hampson-Russell	AVO & Inversion

Capabilities of IndianOil in CBM

Geological data acquisition and data interpretation

Estimation of In-place, Reserve and other related reservoir parameters

Selection of core-holes, pilot wells and development well location

Detailed Well Engineering and Well design for drilling

Tendering of work/services and material procurement

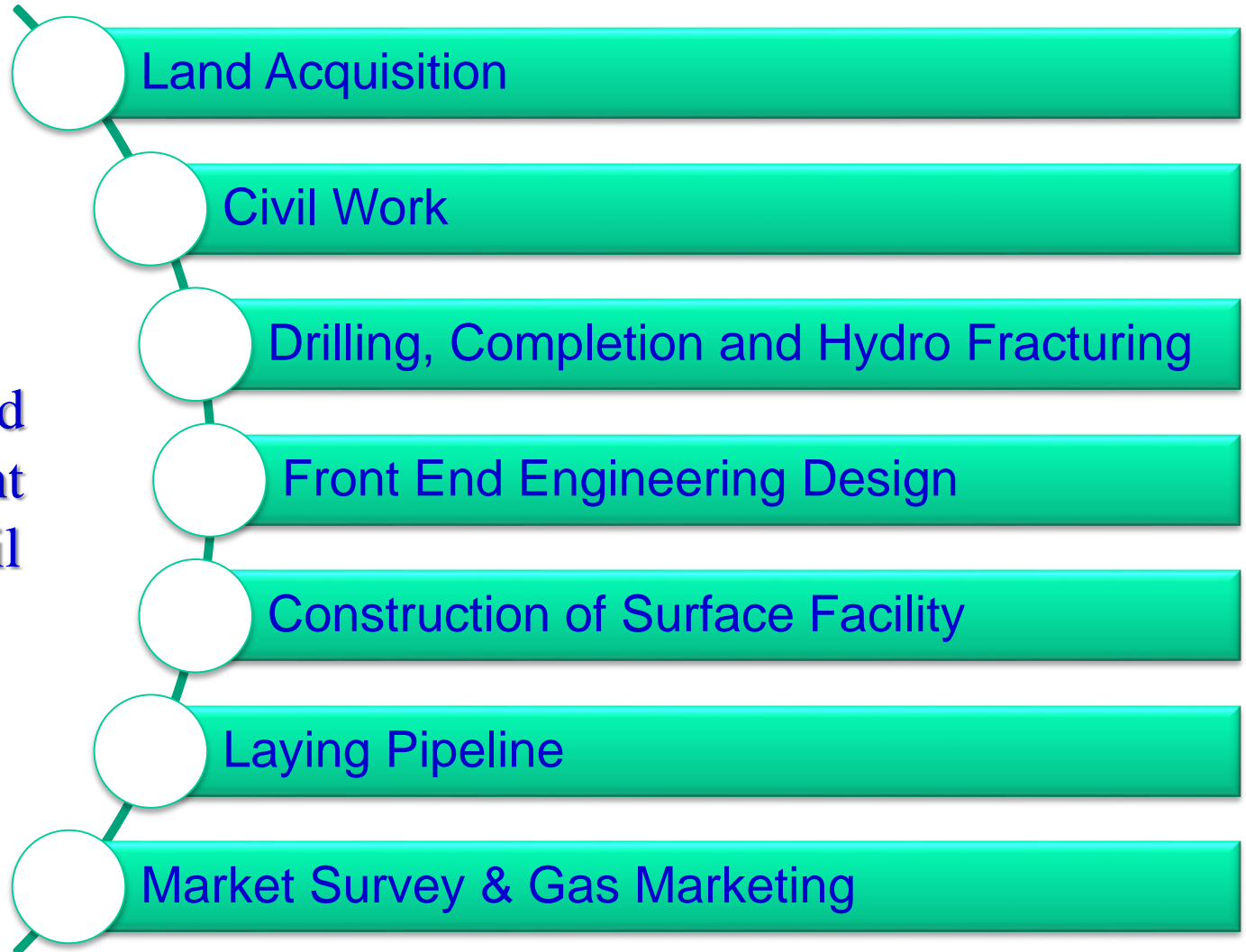
Designing of Procedures, manuals and bridging documents for drilling operations

Supervision by experienced manpower during drilling operations including drilling engineers, reservoir engineers, well site geologists and petro-physicists

Core expertise in laying pipeline, creating surface facilities and huge gas marketing network adds to the experience of existing strength of E&P

Capabilities of IndianOil in CBM

CBM Field
Development
by Indian Oil



Thank You