



**Oil and Natural Gas Corporation Limited**

**Investors' Meet  
FY'17**

**29<sup>th</sup> May 2017  
Mumbai**

# Presentation overview

- 
- 1 Exploratory efforts
  - 2 Drilling
  - 3 O+OEG Production
  - 4 Development projects
  - 5 Financials
  - 6 Overseas operations
  - 7 MRPL
  - 8 ONGC Group
  - 9 Integration projects
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# Exploratory efforts





# Exploration Successes

FY'17: 23 Oil & Gas discoveries (4 in NELP blocks)  
Oil & Gas: 12; Gas/Gas-Condensate: 8; Oil: 3 (Onshore: 13; Offshore:10)

New Prospects Discovery: 12		
Offshore		
1	KGS092NA-SRI-1 / SRI-AA	Oil & Gas
2	B-34-2 / B-34-B	Oil & Gas
3	B-157N-1 / B-157N-A	Oil & Gas
4	GS-71-1/ GS-71-AA	Oil & Gas
5	B-154N-1 / B-154N-A	Oil & Gas
6	D-30-2/ D-30-A	Oil & Gas
7	G-1-N-2 / G-1-N-AB	Oil & Gas
8	GKS101NCA-1 /GKS101NCA-A	Gas
Onshore		
9	South Akholjuni / Akholjuni-29/ AKAP	Oil & Gas
10	Suphayam-2 /SUAA	Oil & Gas
11	Jabera-4 / RJBF	Gas
12	Dayalpur-1 / SUAB	Oil & Gas

New Pool Discovery :11		
Offshore		
1	MBS051NAA-2 / NAA-B	Gas & Condensate
2	B-12C / B-12C-2 / B-12C-A	Gas & Condensate
Onshore		
3	Dahej/ Dahej-20 / DJAT	Gas
4	Nambar/ Nambar-12 /NRAF	Gas
5	Nadiad / Nadiad-4 / NDDA	Oil
6	Kesanapalli / Kesanapalli West Deep -1 /KWD-AA	Oil & Gas
7	West Penugonda/ Thurupu Vipparu-1 / TVAA	Gas
8	Geleki / G-390 / GKHX	Oil
9	Khoraghat / Khoraghat-38_Z/ KHBB_Z	Oil & Gas
10	Olpad / Olpad-47 / OPAM	Gas
11	Gandhar-724(GGAM)	Oil

Kutch Basin

Jabera discovery brings Vindhayan Basin to reserve map of India

Domestic Acreages (including ONGC's share in joint ventures)

- Accretion of In-place volume of hydrocarbons : 203.24 MMtoe
- 2P Ultimate reserve accretion : 64.54 MMtoe
- 2P Reserve Replacement Ratio (RRR) : 1.45

# Focus on quick monetization

Dahej-20, Gujarat

Akholjuni-29, Gujarat

Gandhar-724, Gujarat

Nambar-12, Jorhat

Suphayam-2, Jorhat

Dayalpur-1, Jorhat

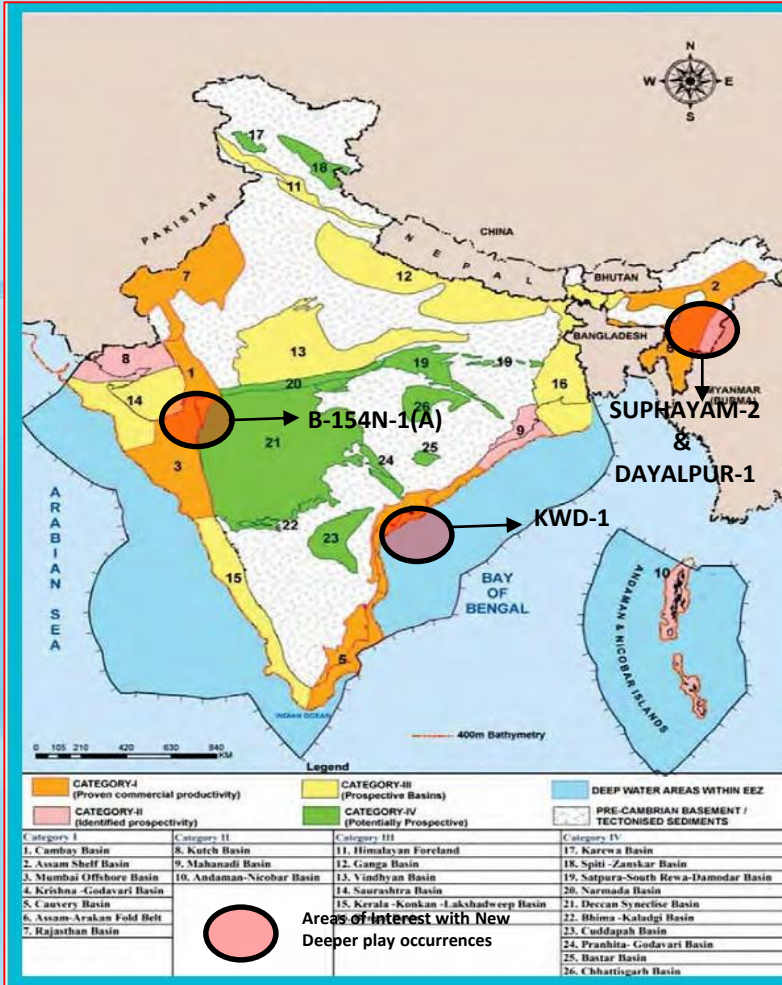
Geleki-390, Assam

Kesanapalli-West, AP

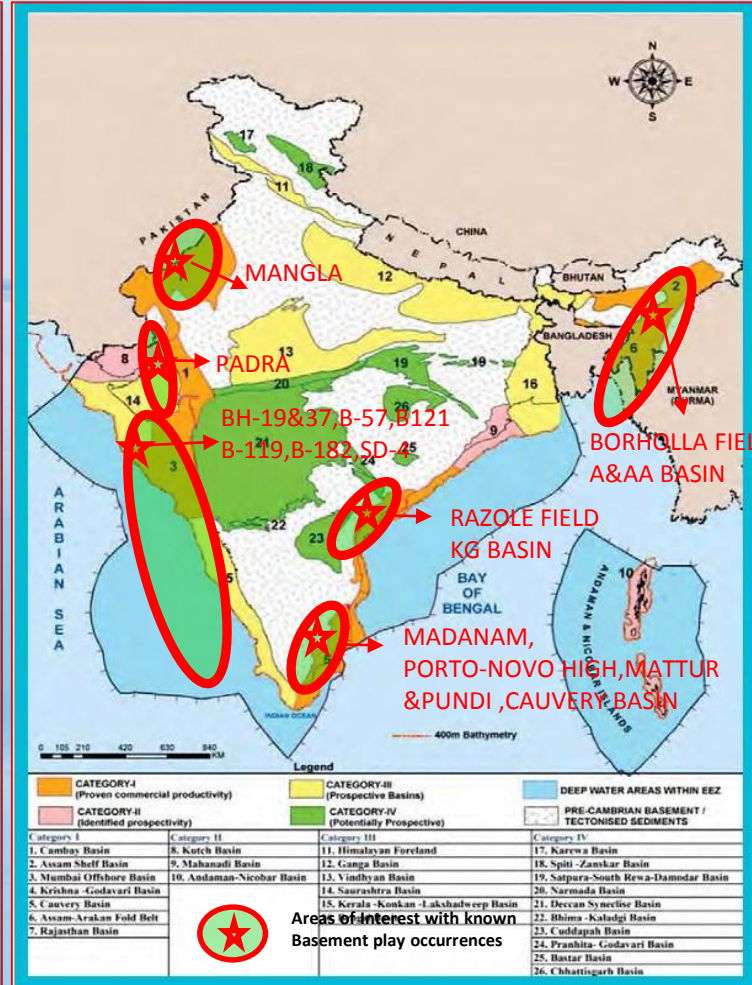
- 8 out of 13 onshore discoveries monetized during FY'17 itself
  - Ultimate reserve: 3.4 MMtoe
  - Production potential = 0.218 MMtoe/year



# Focus on Growth in established Basins



NEW DEEPER PLAYS



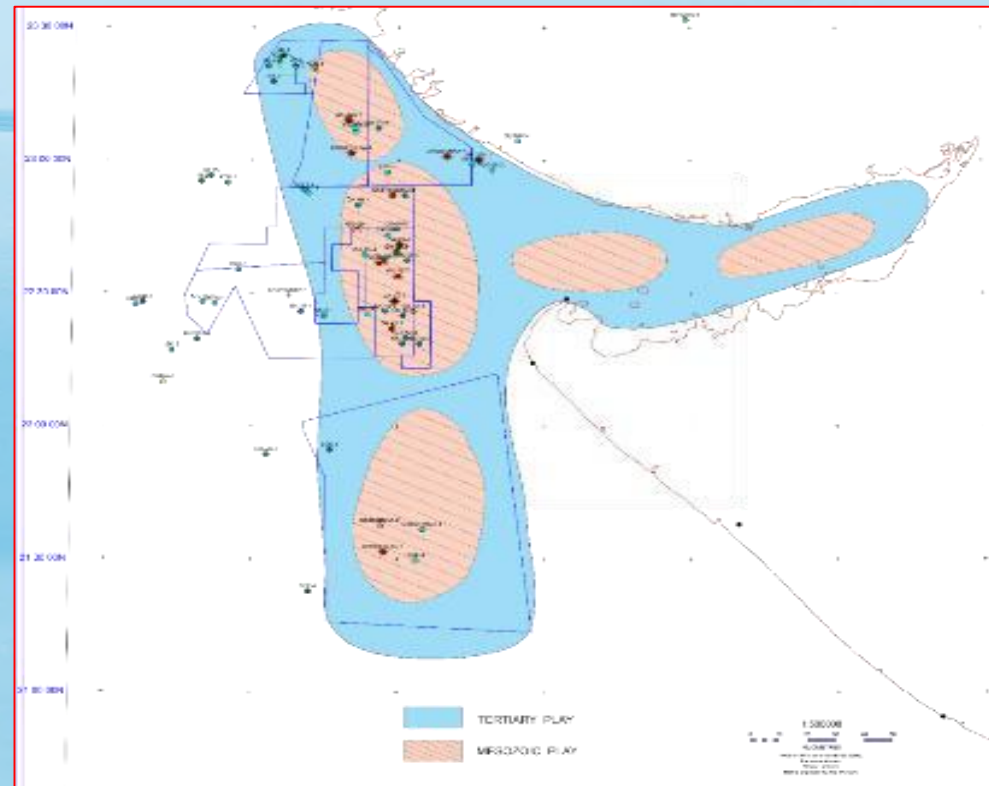
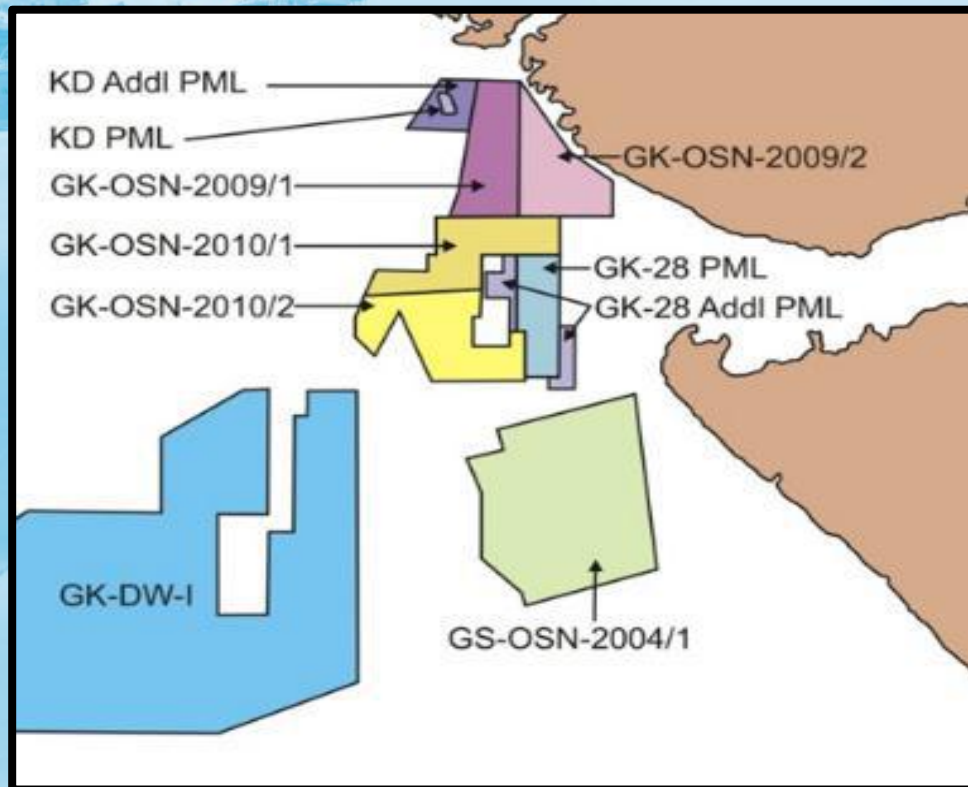
BASEMENT PLAYS

## Target Areas

- Basement play.
- Syn rift play
- Deeper plays
- Paleocene-Eocene plays
- Stratigraphic plays

# Focus on bringing new Basin on Production

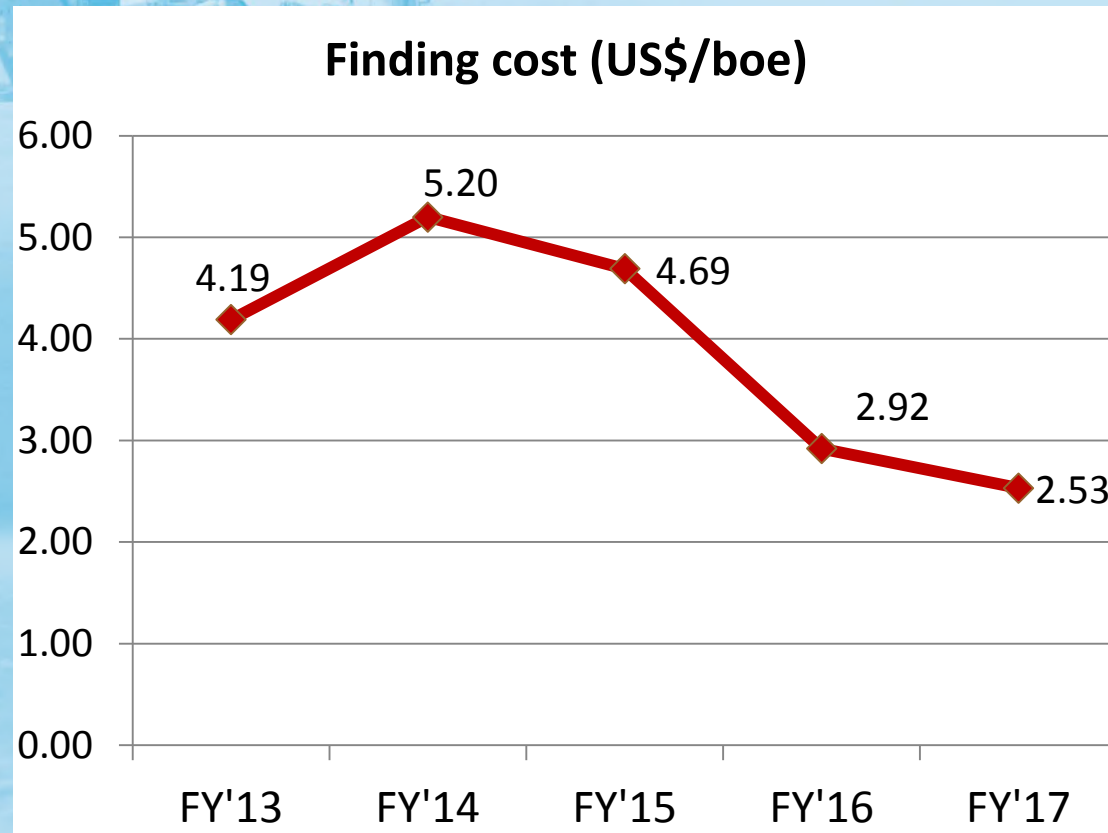
## Kutch Offshore : Potential to produce



- 17 discoveries in Kutch Saurashtra offshore
- Established 110 MMT(O+OEG) Inplace hydrocarbons and 29.87 MMT(O+OEG) Ultimate reserves.
- Aggressive drilling campaign targeting Tertiary & Mesozoic play underway



## Decreasing finding cost



### Contributed by:

- Drilling efficiency
- Reduction in dry well cost
- Higher exploration successes
- Reduction in cost of services

- **Induction of new state-of-the-art technology in exploration**
  - **Latest technologies like Broadband 3D seismic survey in Western Offshore for improvement in subsurface imaging.**
  - **3D Ocean Bottom Cable (OBC) survey**
  - **Advanced Airborne Gravity Gradiometry (AGG) Survey**
  - **High-end technologies like Saturn probe, Lithoscanner, Isolation scanner, Sonic while drilling etc.**

# Reassessment of HC resources

Gol initiative for “Re-assessment of Hydrocarbon Resources”  
in Indian sedimentary basins undertaken by ONGC.

- 100 geoscientists of ONGC in 12 working teams on the job.
- These studies are ongoing in 26 different basins - onland, shallow water, deepwater. To be completed by Nov'17.
- This project is scheduled to be completed in 27 months (01.09.2015 - 30.11.2017)
- Work association and review with National/International Domain experts/ DGH at periodic intervals
- Would generate knowledge base and new insights in each basin



**48% of unappraised sedimentary onland area is being covered through NSP. An initiative by Government of India.**

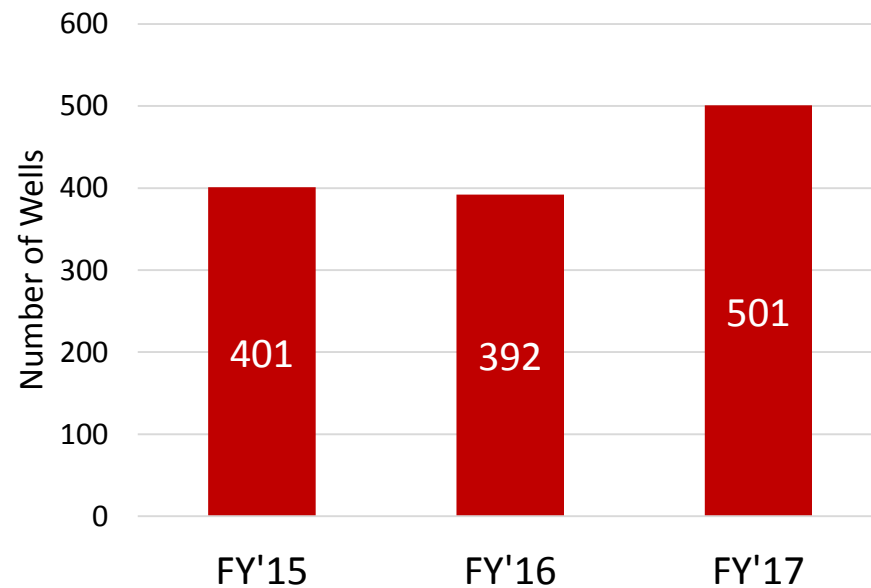
- 48,243 LKM of onland 2D seismic survey API proposed
- ONGC to carry out API of 40,835 LKM in all states other than NE
- Started in Sept'16; completion by Mar'19
- The data to be populated in National Data Repository (NDR)
- The programme helps ONGC in knowledge building

# Drilling

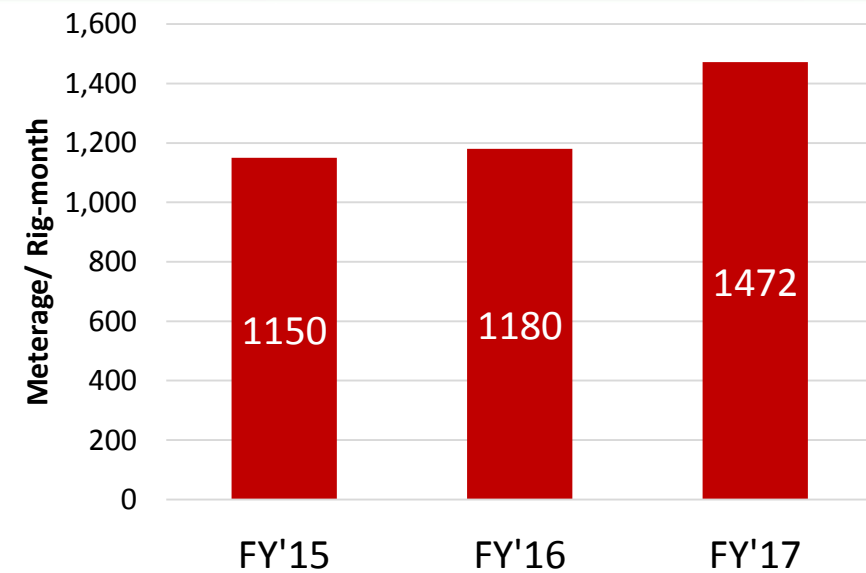
**Highest-ever - 501 Wells Drilled during FY'17**

**Highest Ever - 401 Development Wells Drilled during FY'17**  
**Highest Ever - 35 Rigs deployed in Offshore**

Number of wells



Commercial Speed (meterage/rig-month)

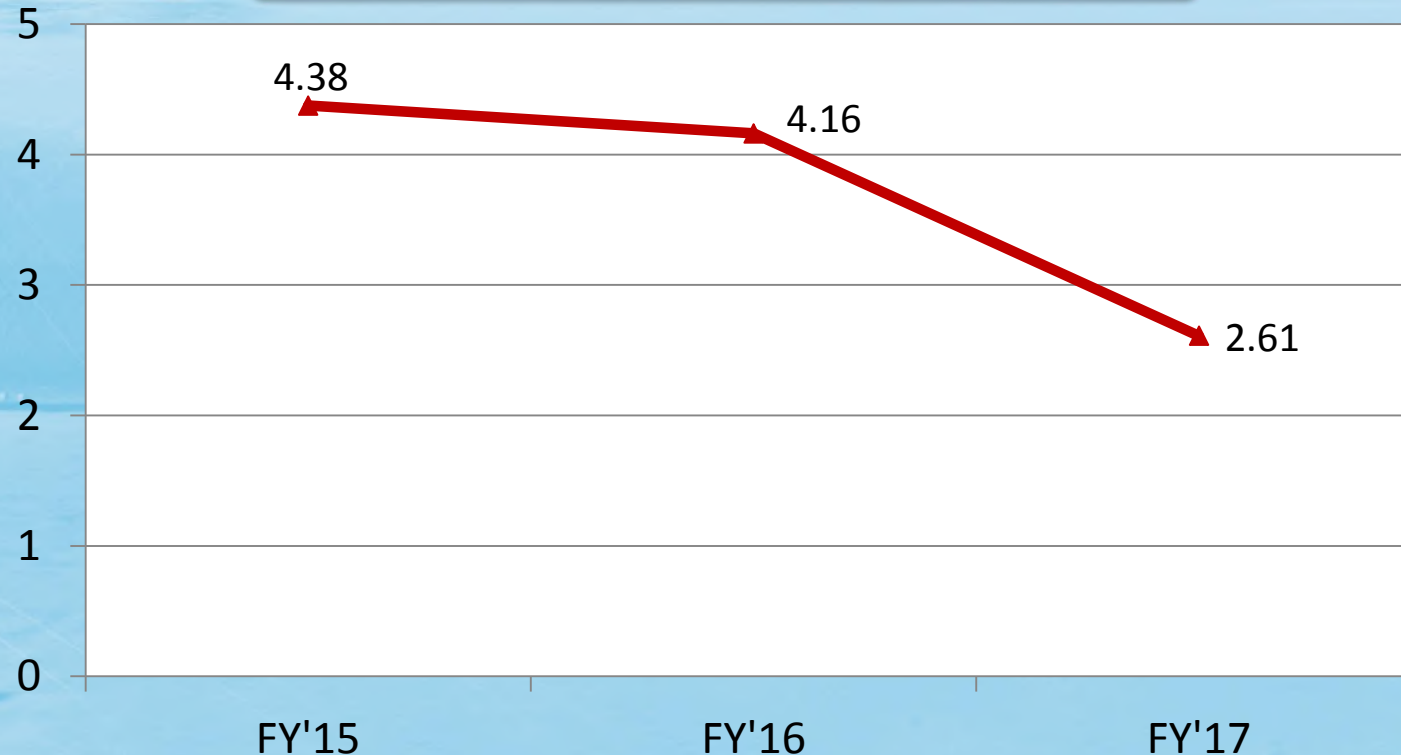




# Drilling cost

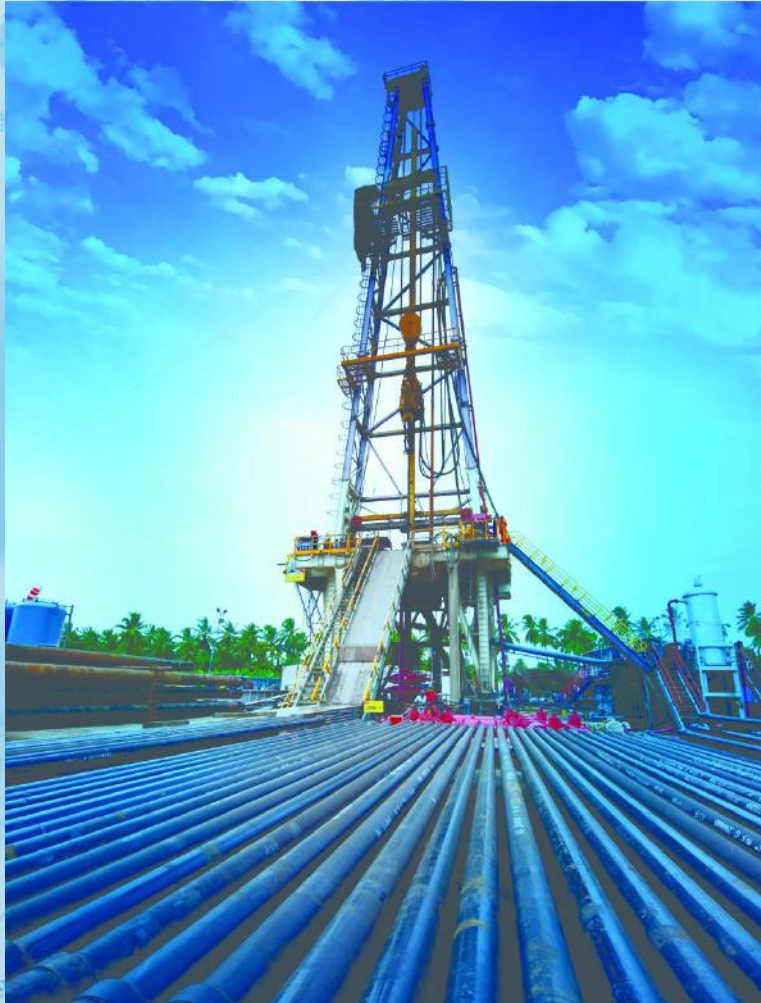
**FY'17: Offshore drilling cost per meter reduced by 37%**

Drilling cost (Rs. Lakh/meter)



**Reason for drilling cost reduction:** Improvement in operational efficiency, introduction of new technology, reduction in cost of hired services.

## Drilling efficiency improvement measures



### Technology infusion

- Resource optimization through Batch Drilling in Offshore & Pad Drilling in onshore
- Under Balanced Drilling
- Technology penetration in onshore drilling at par with offshore
- Use of Advanced Hybrid bits

### Operational efficiency improvement

- Increase in commercial speed by 20%
- Reduction in NPT by 17%
- Production testing with lighter rigs
- Introduction of Company-within-Company Concept (CwC) in Western Offshore
- 24x7, 3 tier monitoring through SCADA

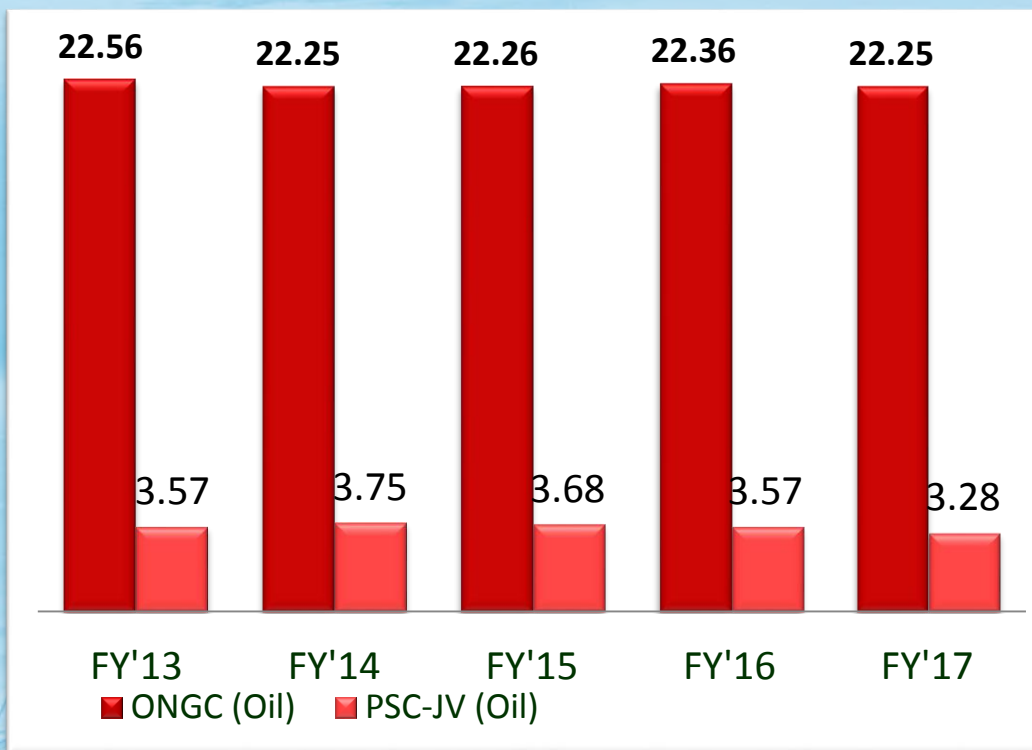
# O+OEG Production



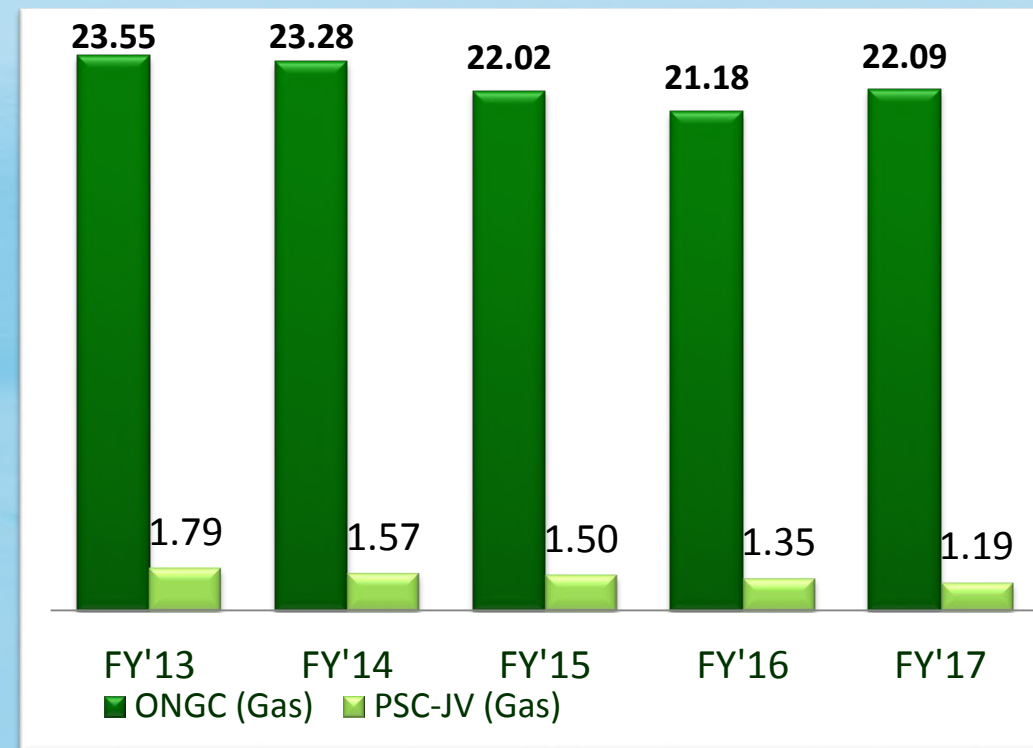
# ONGC: Domestic Production

- FY'17: Standalone O+OEG output 44.34 MMtoe (1.8% more than FY'16)

## Crude oil production (MMT)



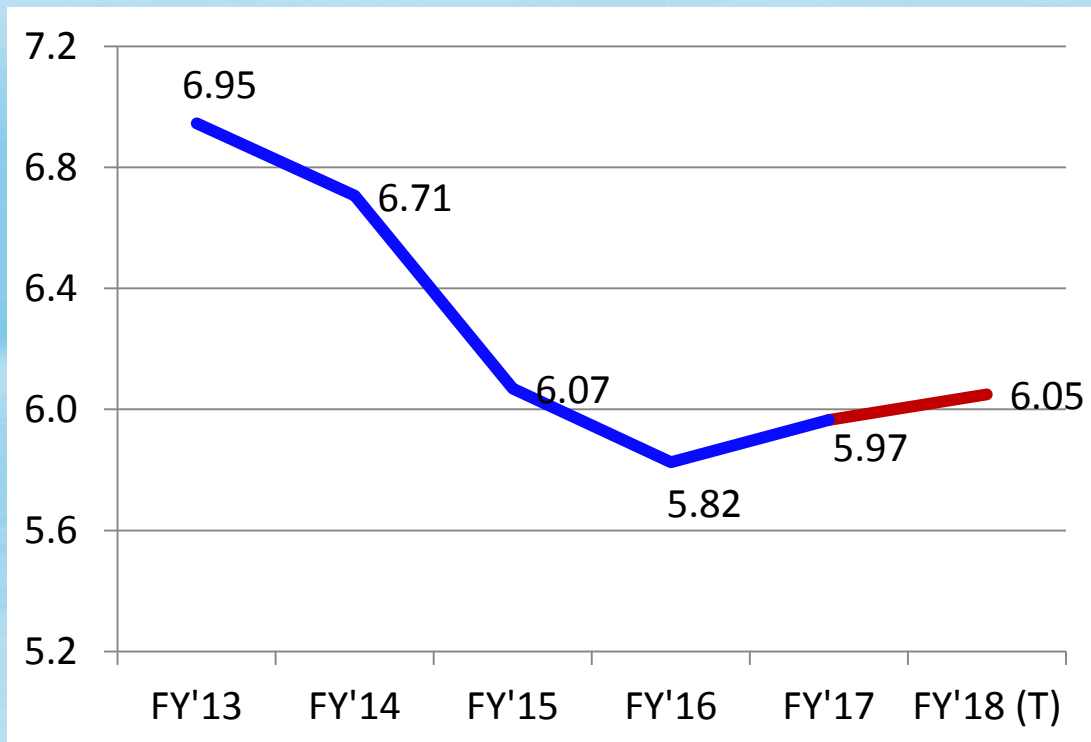
## Natural gas production (BCM)



# ONGC: Domestic Production - Onshore

Trend reversal - Onshore Crude oil increased by 2.4%, projected to increase next year also.

## Onshore crude oil production (MMT)



(T) - Target

FY'17: Production increase mainly due to various initiatives and early monetization of discoveries in

- Ankleshwar,
- Cauvery (Madnam) &
- Rajahmundry (Keshnapalli West), etc.

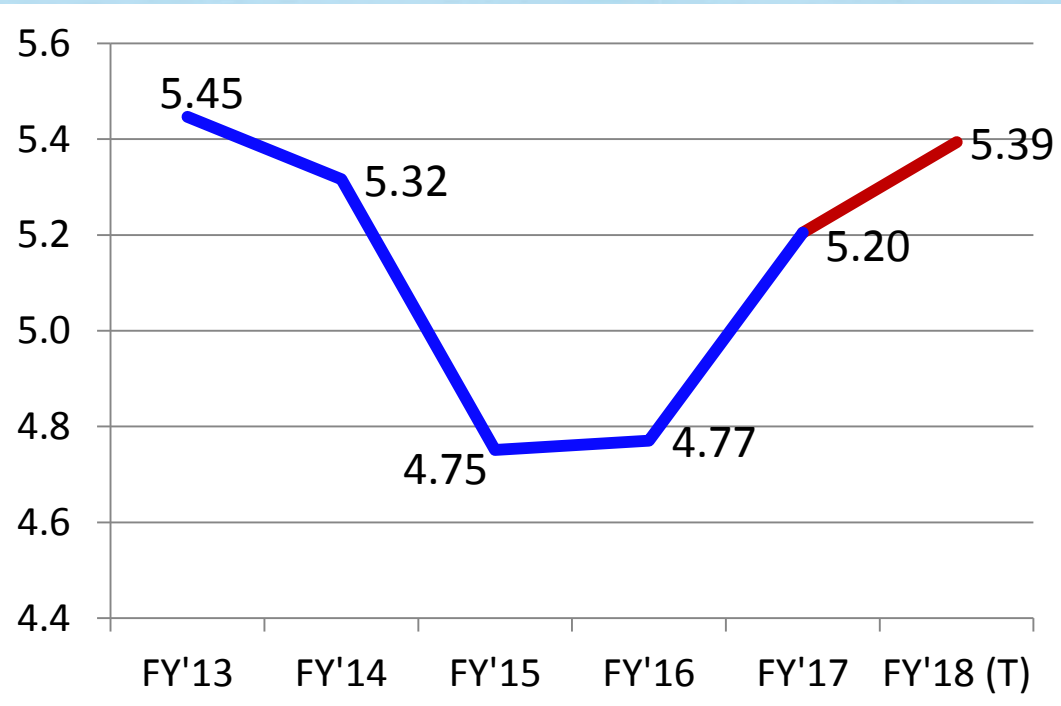
FY'18: Production increase expected

- Cauvery (Madnam)
- Rajahmundry (Keshnapalli west)
- Ahmedabad (Gamij) &
- Mehsana

# ONGC: Domestic Production - Onshore

Onshore Natural gas production increased by 9.1%; projected to increase

## Onshore Natural gas production (BCM)



FY'17: Increase from

- Rajahmundry (GDU commissioning),
- Tripura (Dev wells & Sonamura GCS) and
- Ankleshwar (GS-4 Gas Cap wells in Gandhar)

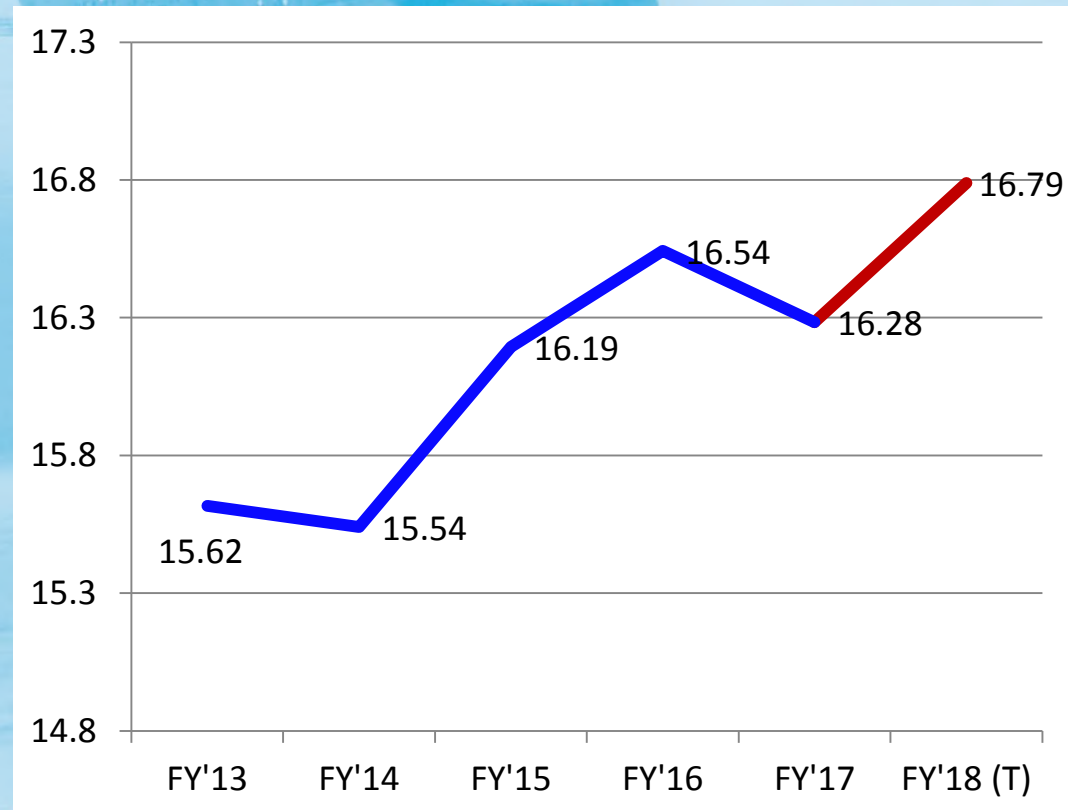
FY'18: Increase expected from

- Rajahmundry and
- Cauvery Assets



## Offshore oil production to increase in FY'18

### Offshore crude oil production (MMT)

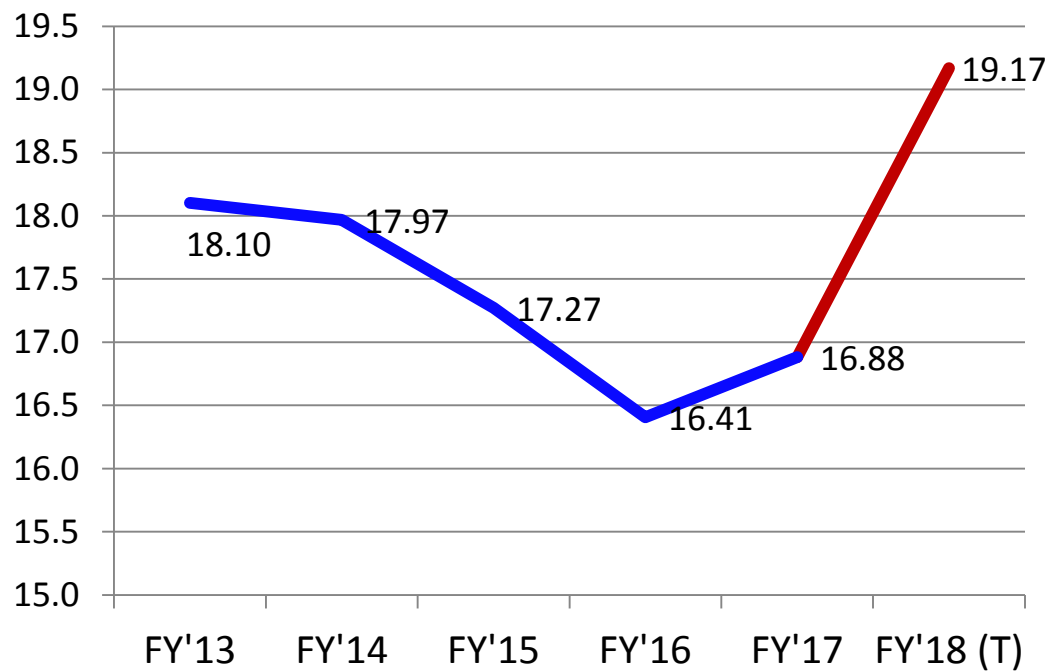


- During FY'17, production increased from 60,093 TPD to 62,434 TPD.
- Increased base production shall facilitate higher production in FY'18.

- During FY'18, production to increase mainly from WO-16, B-127 and
- Increase in condensate due to increase in gas from Daman and C-26

Offshore gas production increased by 3%

## Offshore Natural gas production (BCM)



During FY'17, gas production rate increased from 54 MMSCMD to 64 MMSCMD

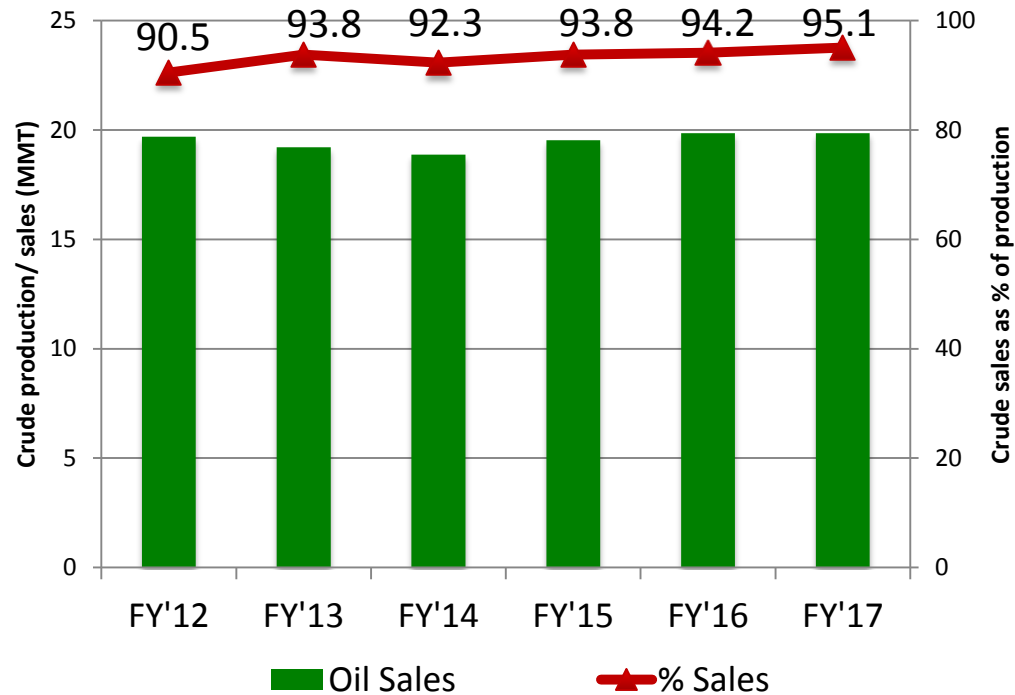
- C-26 cluster/Daman in Western Offshore and
- Deep Water well S2AB in Eastern Offshore

FY'18: Expected to increase with contribution from

- Field development Daman/C-26
- Vasishta & S1 Development
- WO-16 & B-127

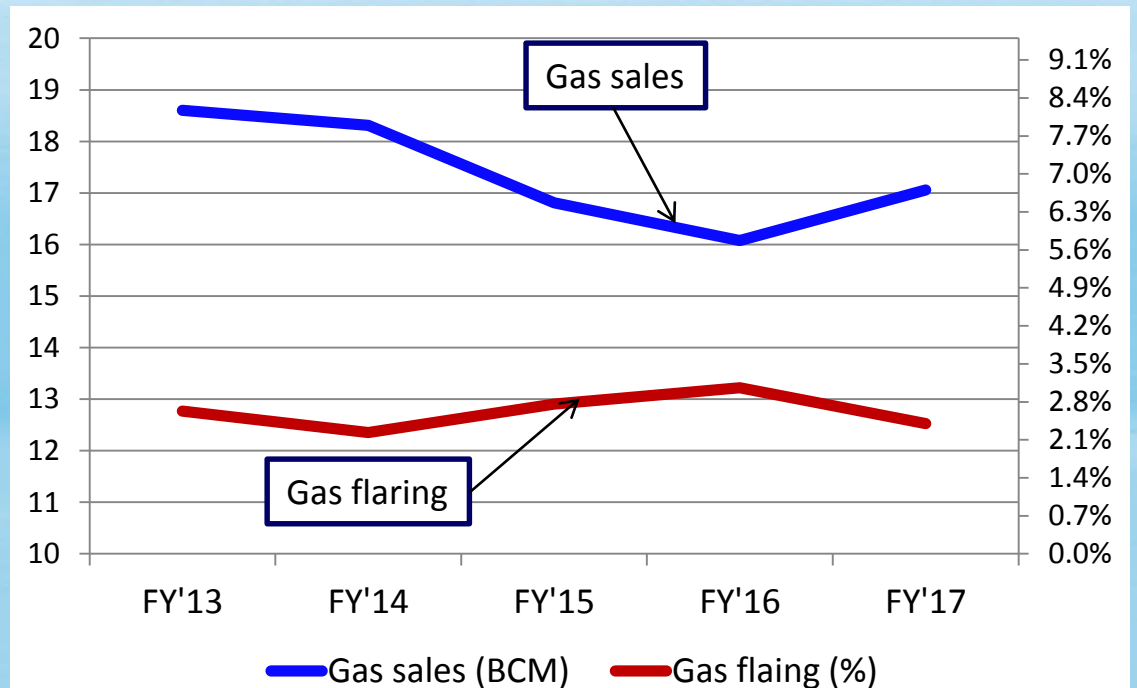
## Crude oil & gas sales increased

ONGC: Crude oil sales (MMT)



Increase in sale on account of improved processing, control and reduction of losses

ONGC: Gas sales (BCM)

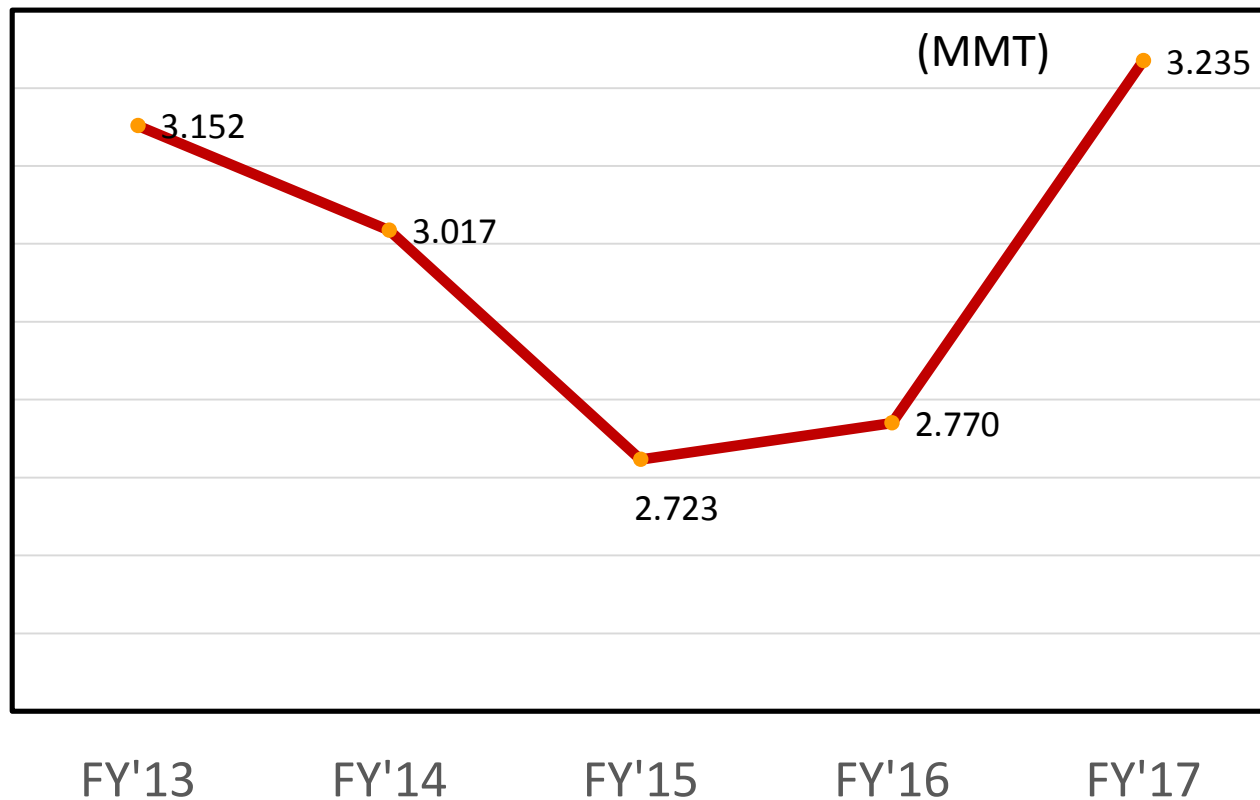


Gas flaring reduced in FY'17 to 2.4% vs 3.06% in FY'16



# ONGC: VAP production

VAP production increased in by 17% with contribution from C2-C3 and Hazira plants. C2-C3 plant now fully operational



# Development projects

# Ongoing projects (1/3)

19 production projects (₹ 80,136 Crore) under implementation

Sl. No	Name of Project	Project Cost ₹ Crore	Peak Prodn MMTOE	Field life prodn (MMTOE)	Completion
1	Development of C-26 Cluster Fields*	2,592	1.23	6.58	Dec' 2017
2	Development of Vasistha & S-1 Fields*	4,259	2.17	15.96	Dec' 2017
3	Development of B-127 Cluster Fields	2,666	1.21	6.67	Mar' 2018
4	Development of Western Periphery (ZC)*	600	0.41	1.25	Mar' 2018
5	MH North Redevelopment Ph-III*	5,813	1.58	12.25	May' 2018
6	Enhanced Recovery of Bassien field*	4,620	3.36	19.01	Mar' 2019
7	MH South Redevelopment Ph-III*	6,069	1.44	11.41	Mar' 2019

\*Full/Part production started

Contd...



# Ongoing projects (2/3)

19 production projects (₹ 80,136 Crore) under implementation

Sl. No	Name of Project	Project Cost ₹ Crore	Peak Prodn MMTOE	Field life prodn (MMTOE)	Completion
8	NW B-173A Development Plan	474	0.15	0.97	May' 2019
9	Field Development Plan of MADANAM	390	0.37	3.75	Apr' 2019
10	Daman Development Project**	6,086	3.59	32.68	Oct' 2019
11	Redevelopment of Gamij field	1,881	0.52	4.15	Nov' 2019
12	Development of B-147 Field	546	0.16	1.20	Nov' 2019
13	Development of BSE-11 Block	511	0.22	1.14	Nov' 2019
14	4th Phase Development NBP Field	969	0.23	2.08	Nov' 2019

\*\* Part production started

Contd...

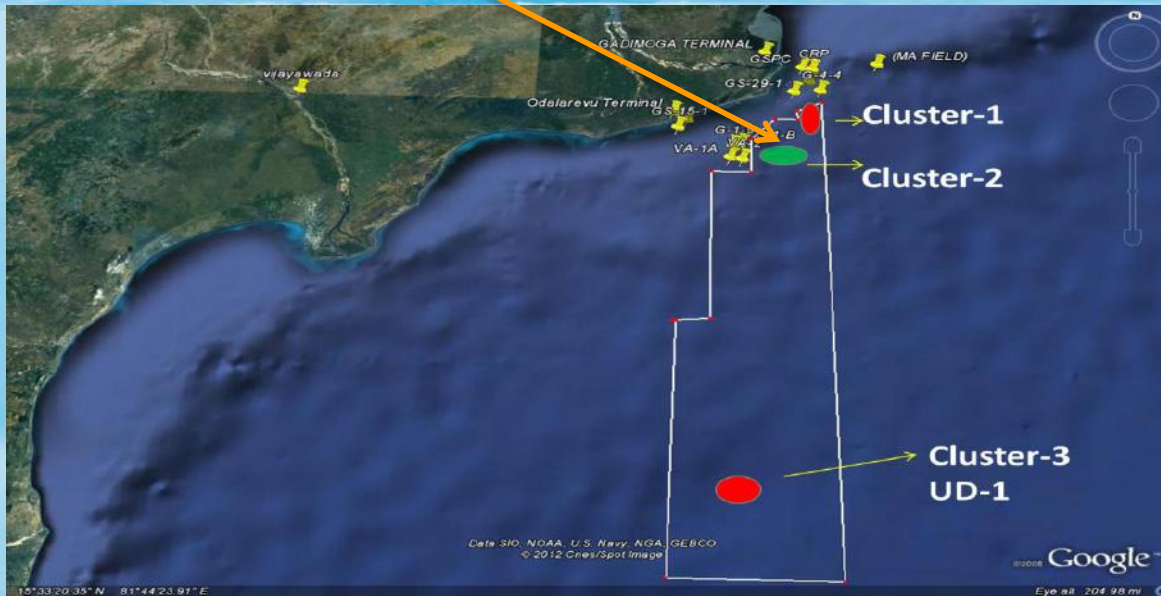
# Ongoing projects (3/3)

19 production projects (₹ 80,136 Crore) under implementation

Sl. No	Name of Project	Project Cost ₹ Crore	Peak Prodn MMTOE	Field life prodn (MMTOE)	Completion
15	Neelam Redevelopment Plan	2,819	0.88	7.55	May' 2020
16	Field Development Plan KG-DWN-98/2	34,012	9.20	71.36	Jun' 2020
17	Development of R-Series Fields R-12 (Ratna)	4,007	0.94	7.91	May' 2021
18	Field Development Plan of CBM Bokaro	659	0.32	4.09	Mar' 2023
19	Redevelopment of Santhal Field	1,163	0.31	3.44	May' 2026
<b>Total</b>		<b>80,136</b>		<b>213.45</b>	

💧 KG-DWN-98/2 development being taken up with an investment of US\$ 5,076 million

Cluster-2 being developed first



## Peak production from East Coast

**Oil: 88,870 bopd (FY'22)**

**Gas: 47 mmscmd (FY'23)**

**Peak oil: 78,000 bopd**  
**Peak Gas: 15.57 mmscmd**

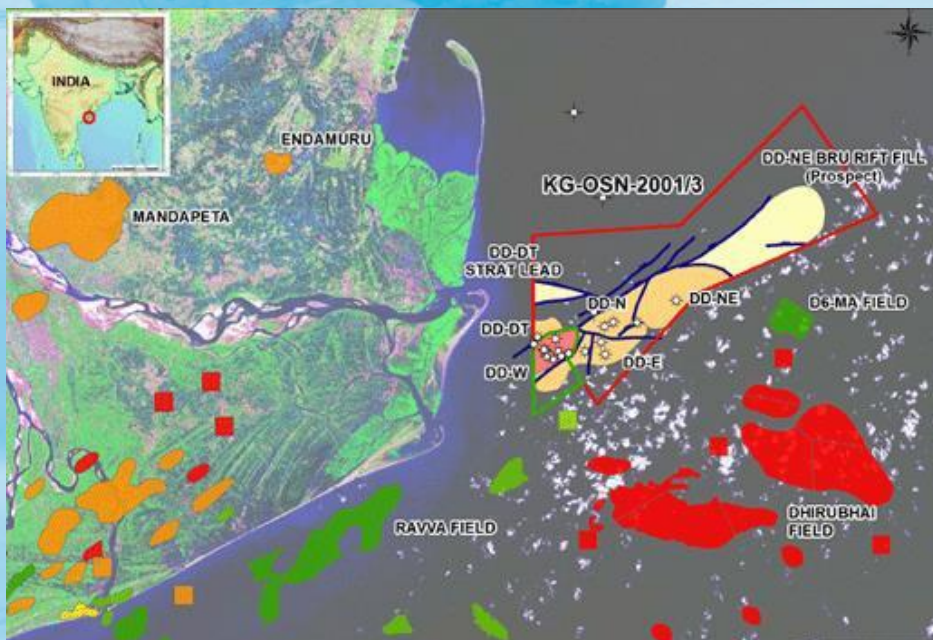
**Cumulative production**  
**Oil: 25.87 MMT**  
**Gas: 45.49 BCM**

**First Gas: June'2019**  
**First Oil: March'2020**



# Acquisition of Deendayal West field

Farm-in/Farm-out (FIFO) agreement with GSPC on 10<sup>th</sup> March 2017 to acquire 80% PI with operatorship in block KG-OSN-2001/3



❖ Agreed Consideration is USD 1,195 Million, in two parts;

- ❖ For Deendayal west field (DDW)
- ❖ For rest of contract area

❖ 1-April-2017 onwards: GSPC to operate as custodian and act as per the instructions of ONGC.

The acquisition to help towards synergetic approach for development of ONGC's HP/HT fields in the East Coast

## ONGC has taken a lead role in the national mission for gas hydrates

- Based on the results of NGHP-01 and NGHP-02, the areas have been identified in KG Basin for further studies
- Work plan for NGHP-03 has been firmed up and it is planned to carry out pilot production testing in KG deep water areas.
- Based on the results of NGHP-03, further course of action for commercialization of gas hydrates in the country will be firmed up.
- ONGC has established **Gas Hydrate Research & Technology Centre (GHRTC) ONGC, Panvel.**



Deepwater D/S Chikyu as deployed  
in NGHP 02

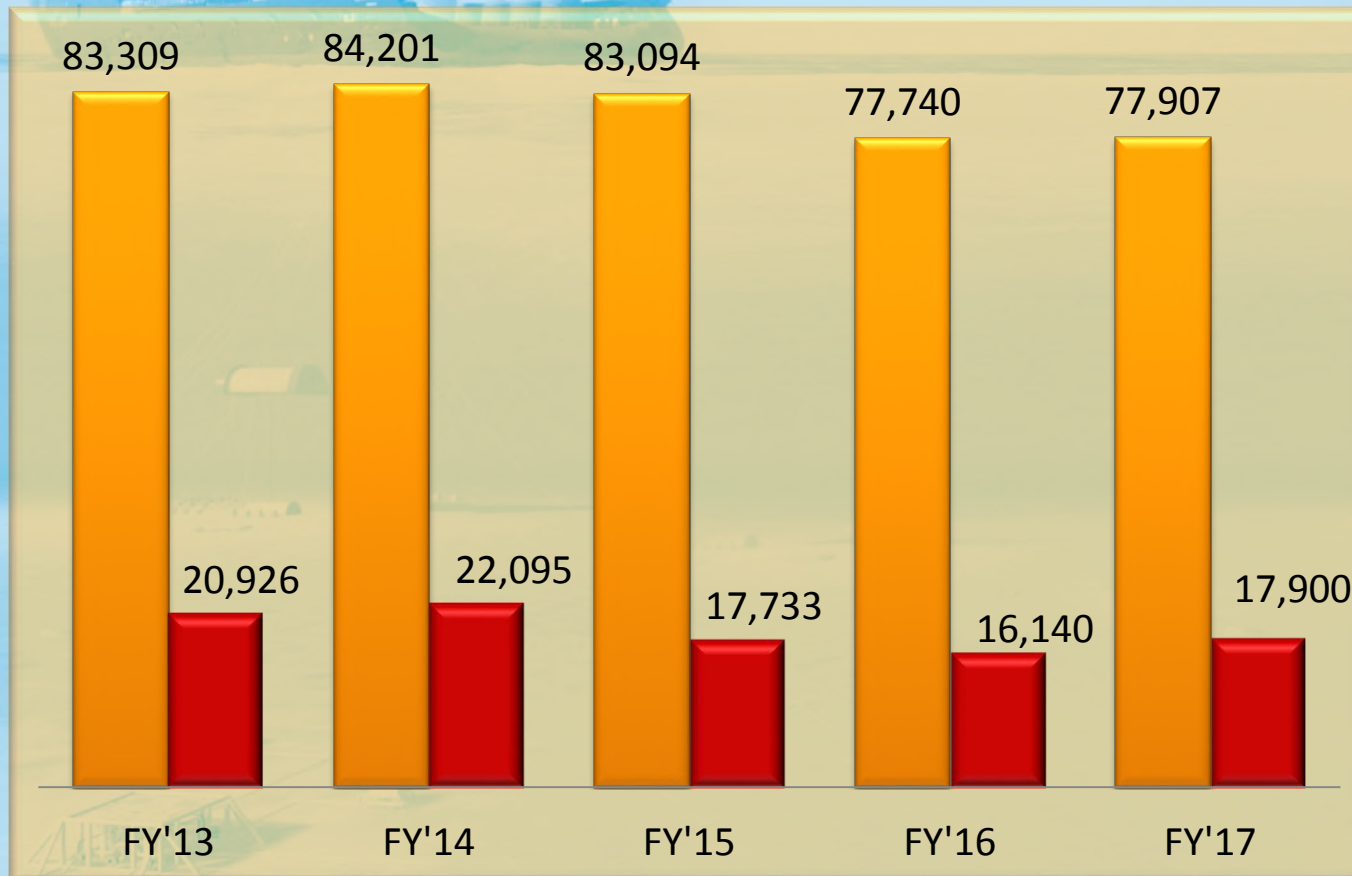
NGHP 02 estimates 134 tcf gas in 8400  
sq. km in KG Basin



# ONGC: Financials



## Gross Revenue & PAT (₹ Crore)



### Higher profits despite:

- Past royalty expense of ₹ 2,444 Crore
- Provision for Pay revision (one time cost Rs. 1,944 Crore)

### Higher profits due to:

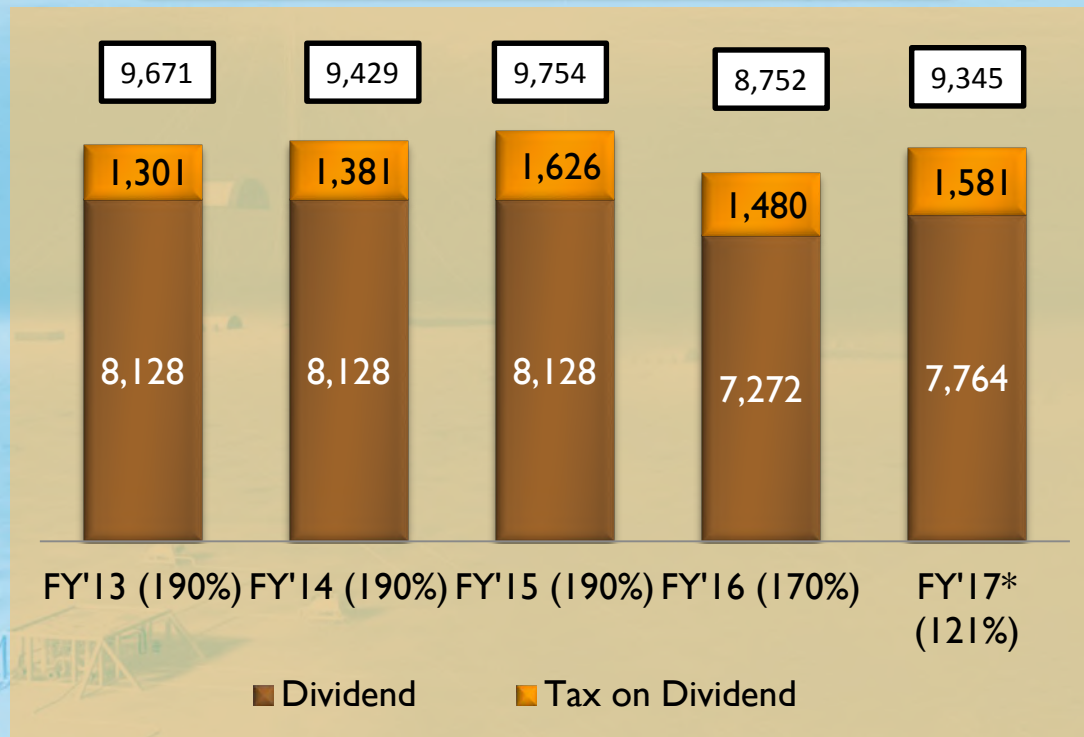
- Higher crude price realization
- Reduction in Exploratory cost write off
- Reversal of impairment

# ONGC: Dividend

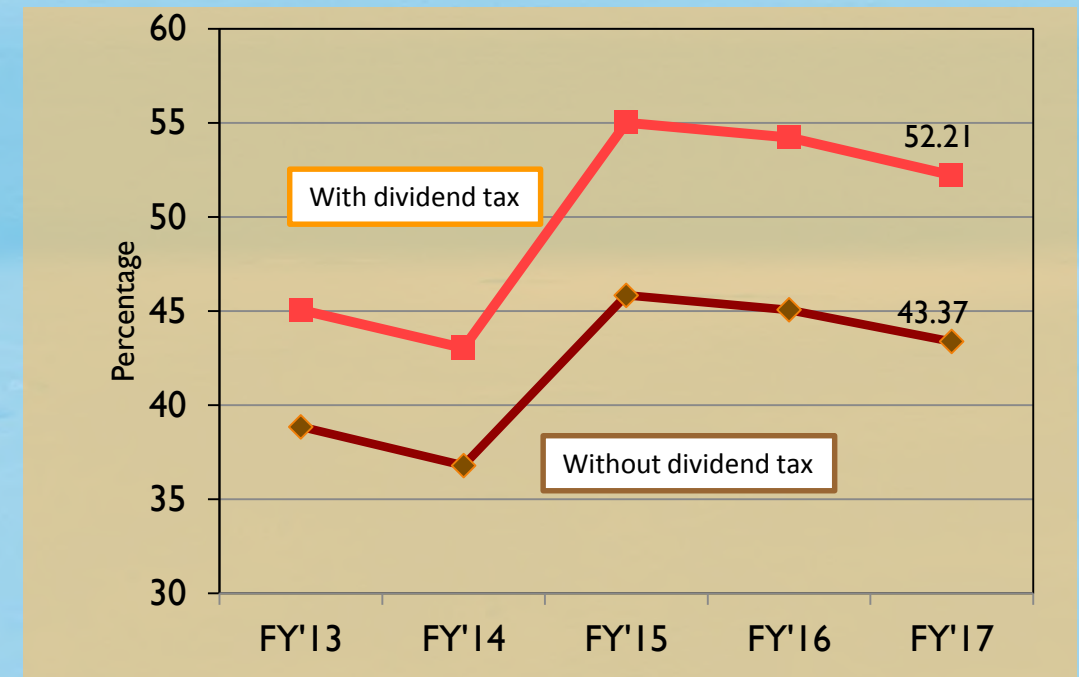
FY'17: Dividend 121 percent\*; total payout ₹ 7,764 Crore

Plus Dividend Tax of ₹ 1,581 Crore

Dividend (₹ Crore)

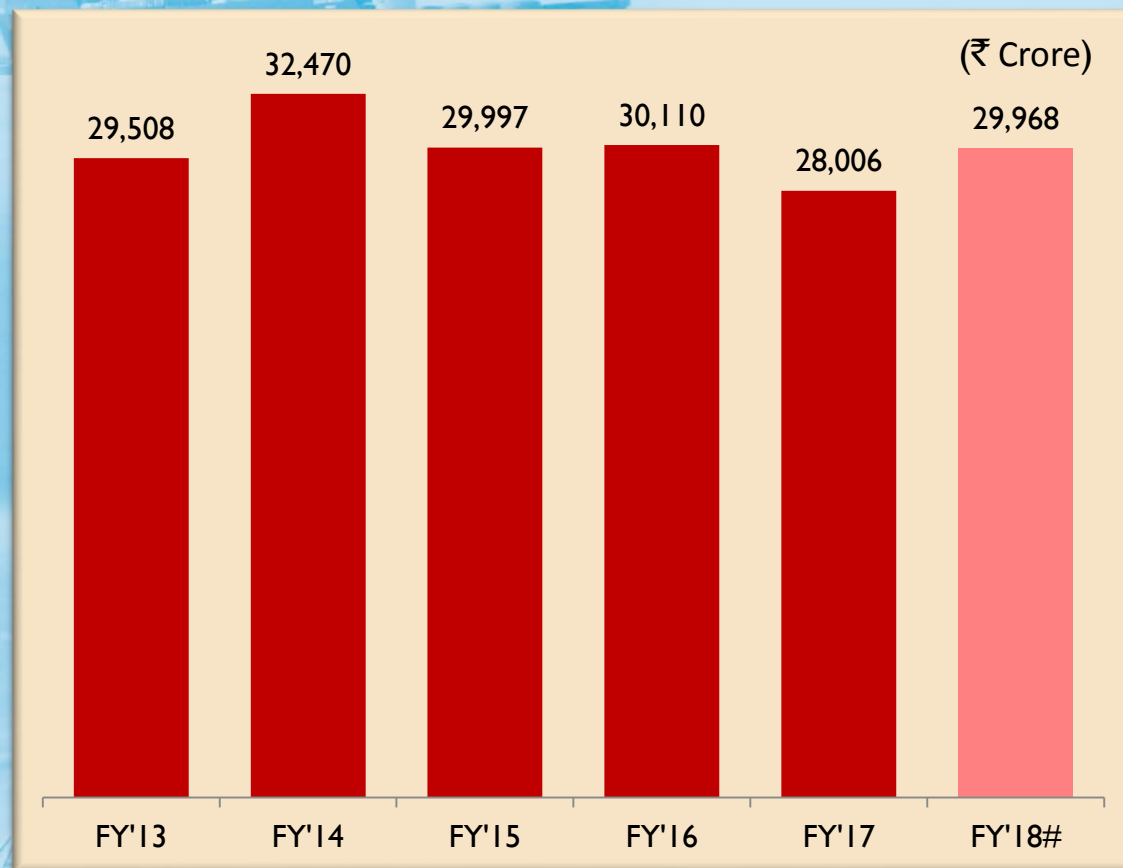


Dividend pay-out ratio (%)

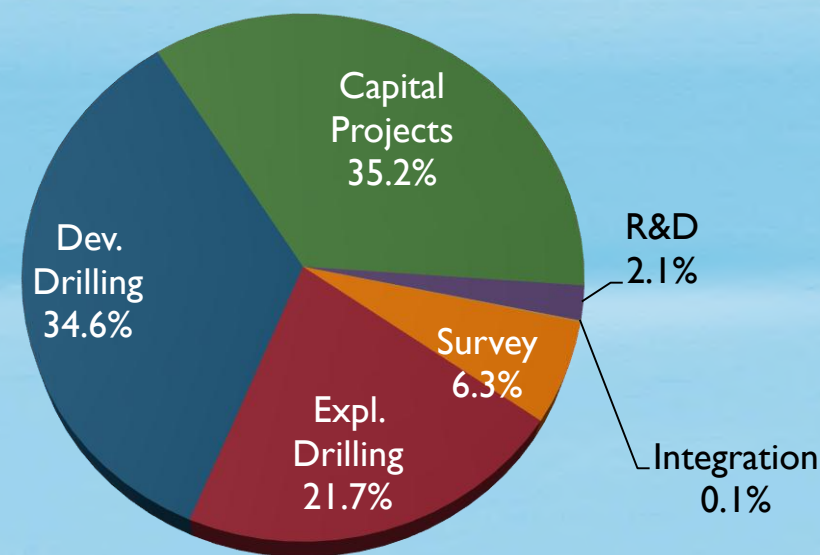


\* Adjusted post bonus

₹ 150,091 Crore Capex in last 5 years



Capex FY'17



#Target



# Overseas Operations

- ▶ ONGC Videsh, a wholly owned subsidiary of ONGC



- ▶ Overseas investment US\$ 27.51 billion till FY'17
- ▶ 2P Reserves of 704 MMtoe as on 01.04.2017
- ▶ FY'17: Oil & Gas production 12.80 MMtoe



# ONGC Videsh: Global footprint

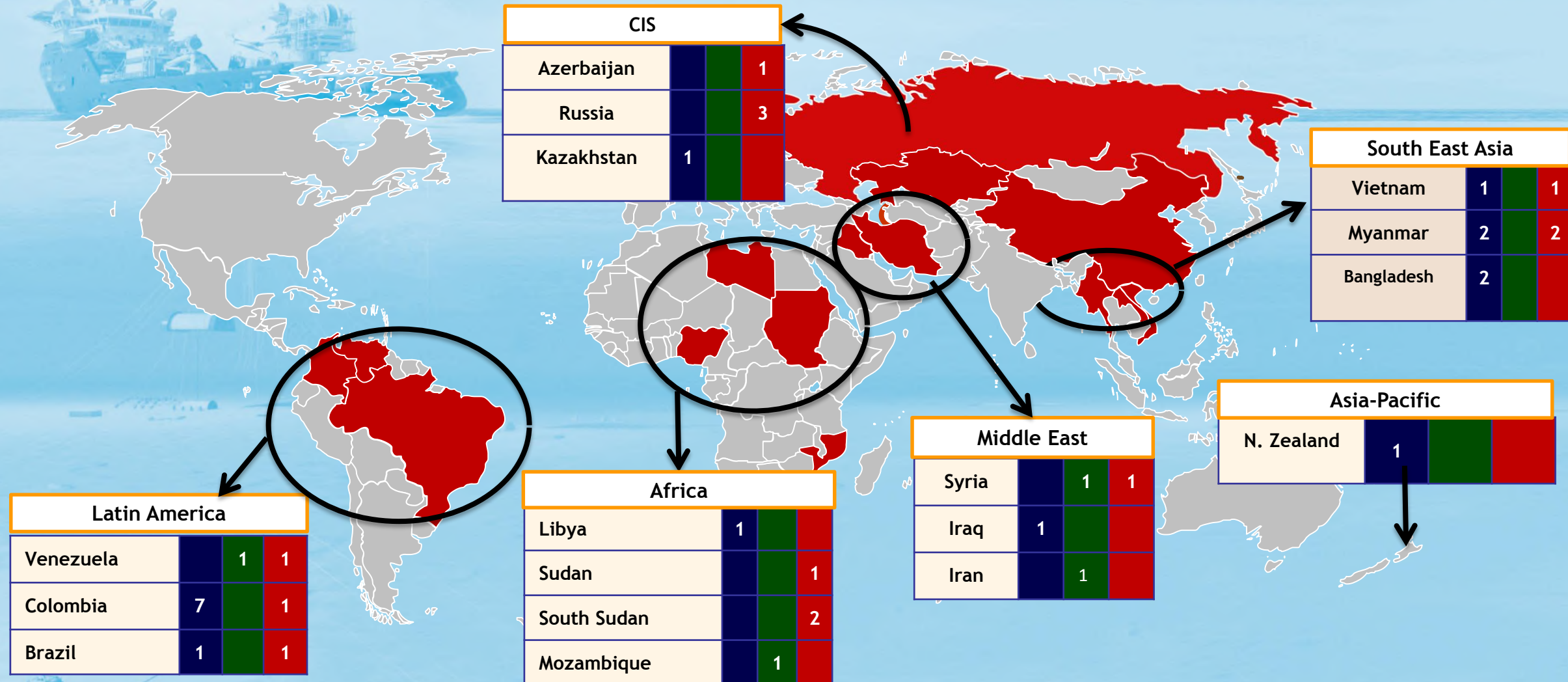
37 projects in 17 countries

Producing: 14

Discovered/  
Develop: 4

Exploration: 17

Pipeline: 2

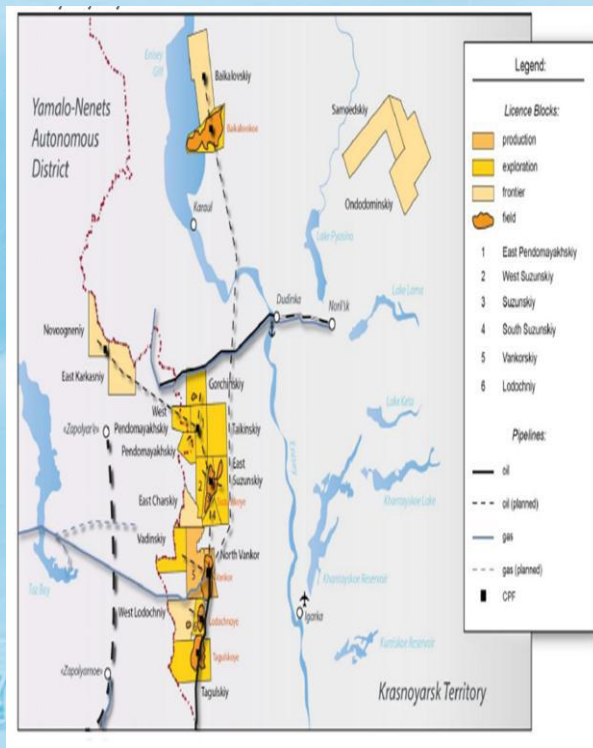




# Stake in Vankorneft

**ONGC Videsh acquired 26% shareholding in Vankorneft, the second largest field by production and accounts for 4% of Russian production**

Vankor starts generating revenue; Profit = Rs. 750 Crore during FY'17 (for part year operations)

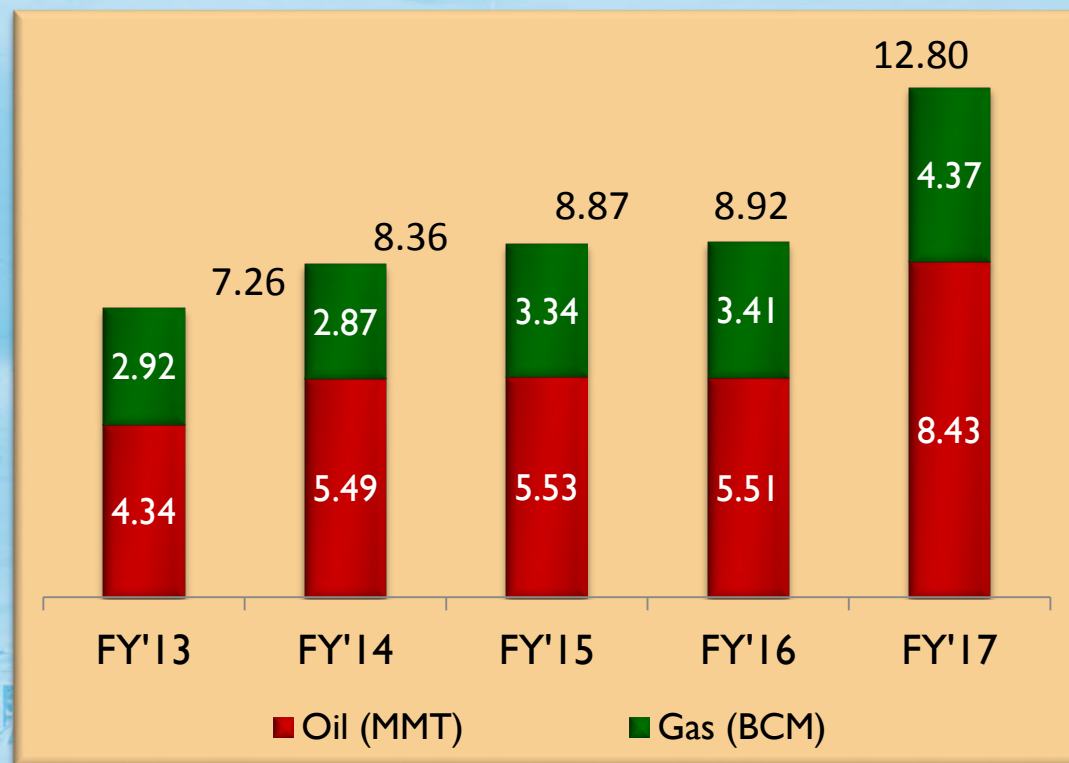


- Acquisition of Vankor has resulted in addition of 124.61 MMtoe of 2P reserves
- Production potential of 4.368 MMT of crude oil and 1.595 BCM of gas; totalling to 5.963 MMtoe (73% of OVL's other than Vankor)

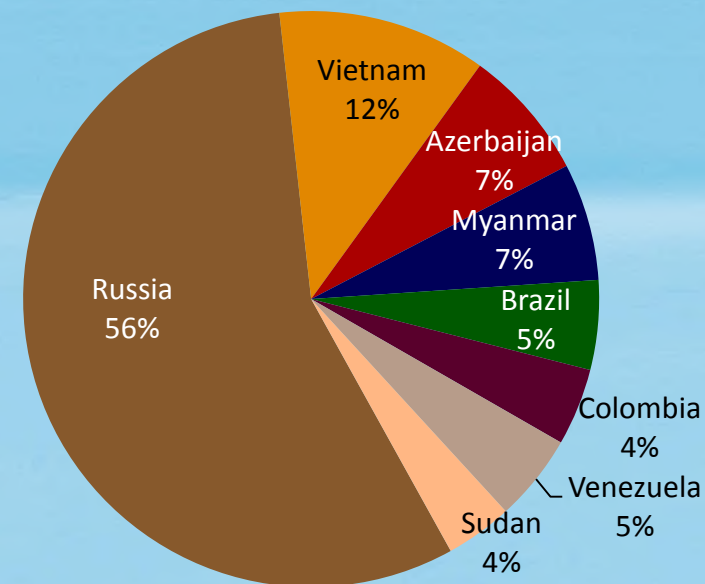
# ONGC Videsh: Overseas Production

**FY'17: Highest-ever production of 12.80 MMtoe (increase of 43%)**

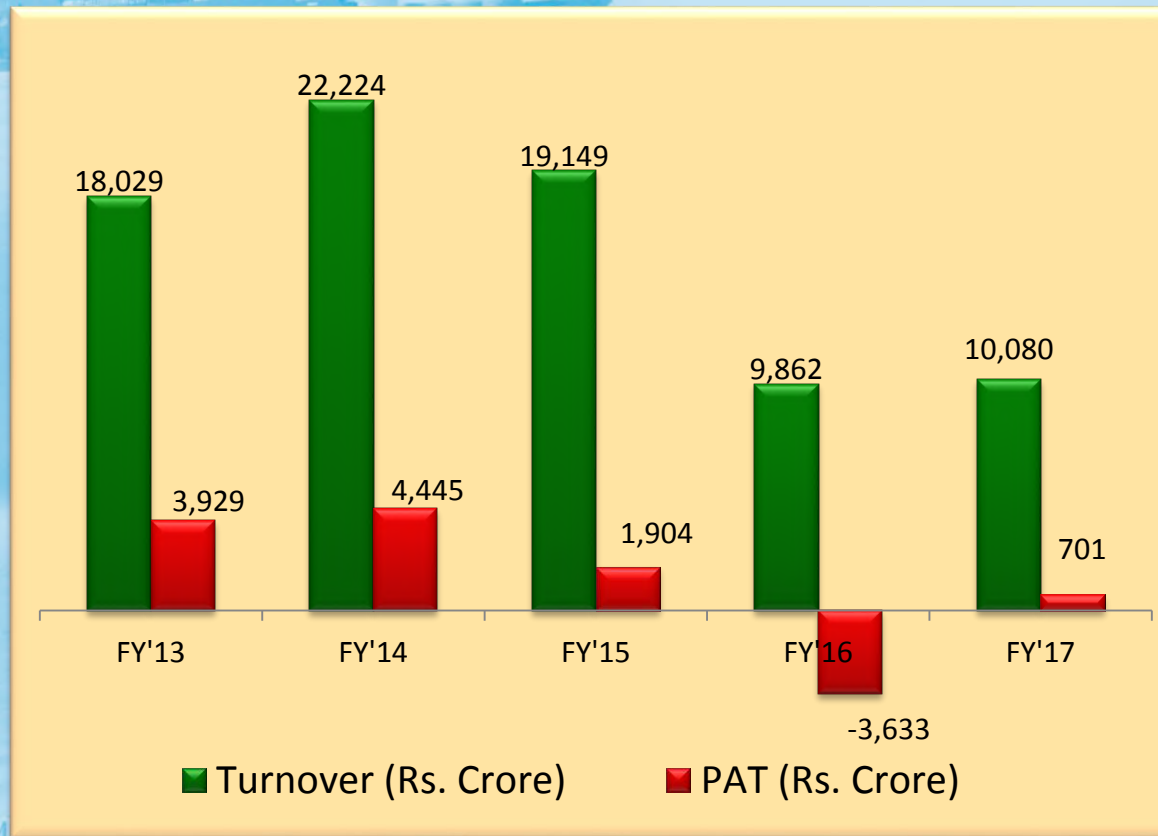
Mainly due to acquisition of stake in Vankor



FY'17: Country wise production



## Total Income & PAT (₹ Crore)



**Despite low oil prices earned profit after tax during FY'17**





# **Mangalore Refinery Petrochemicals Ltd. (MRPL)**

# Mangalore Refinery Petrochemicals Ltd. (MRPL)

15 MMTPA state-of-art Refinery; Now a Schedule-A Company

Highest-ever throughput of 16.27 MMT during FY'17

15 MMTPA state-of-art Refinery

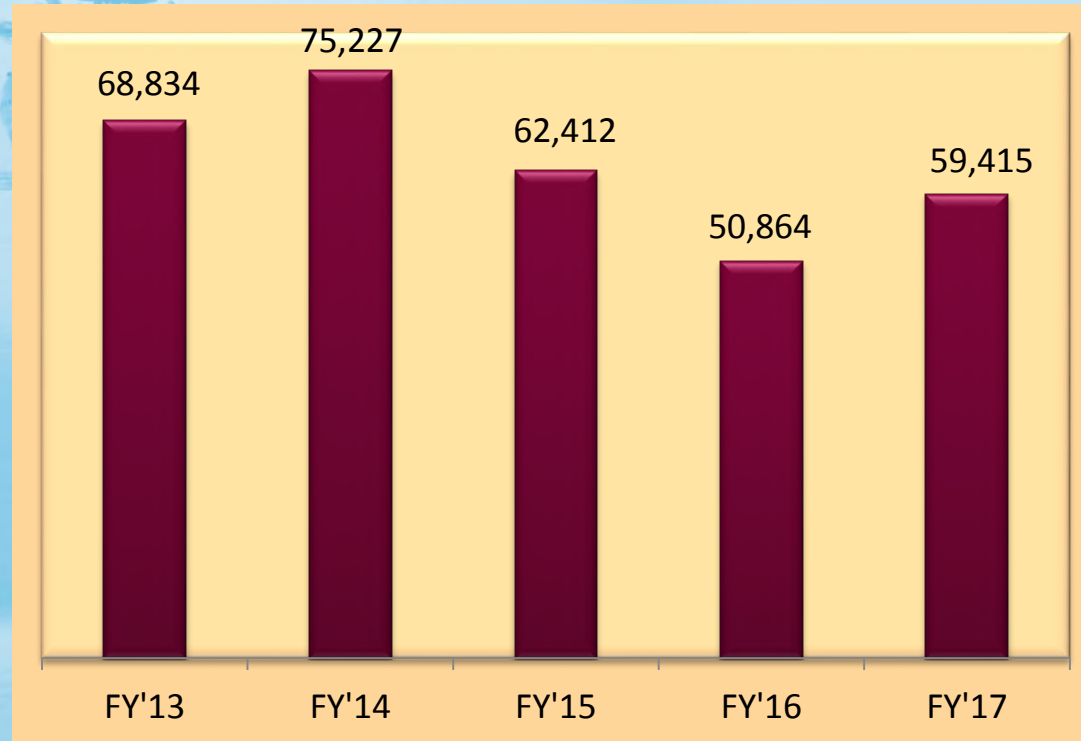


## FY'17

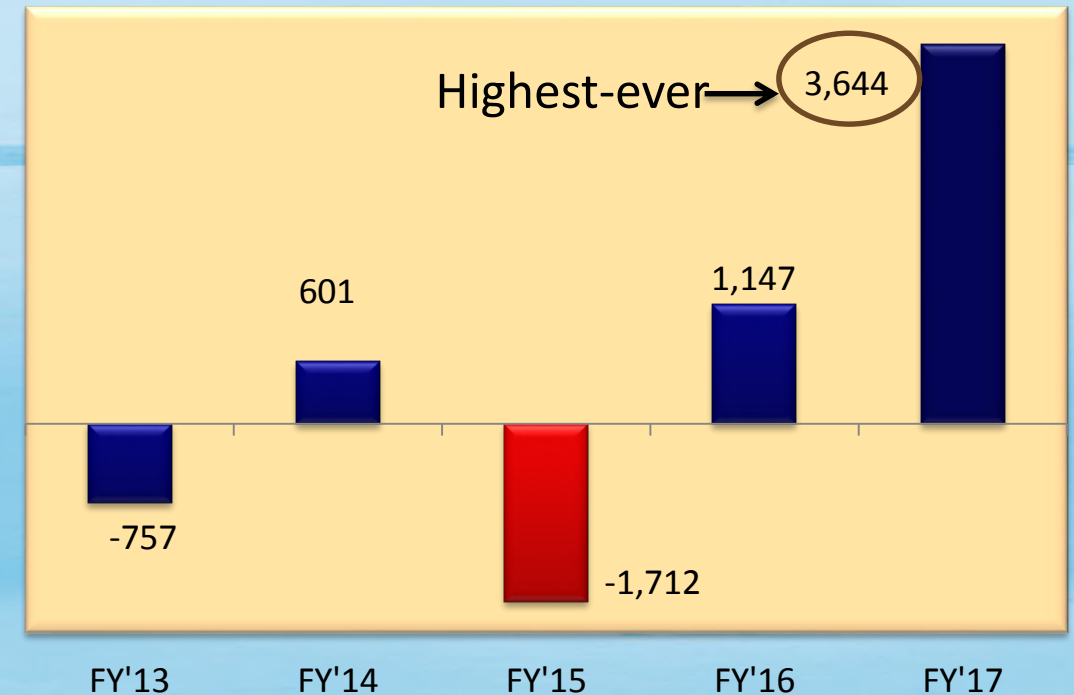
- Highest-ever production/ dispatch of
  - Poly-propylene (264 TMT)
  - LPG (858 TMT)
  - Diesel (6,565 TMT)
  - MS (1,142 TMT)

# MRPL: Financials\*

## Turnover (₹ Crore)



## Profit after Tax (₹ Crore)



During FY'17 GRM 7.75 \$/bbl; one of the best among PSU refineries

Recommended Dividend @60% (Rs. 6 per share) amounting to ₹ 1,051.56 Crore.

\* Stand-alone



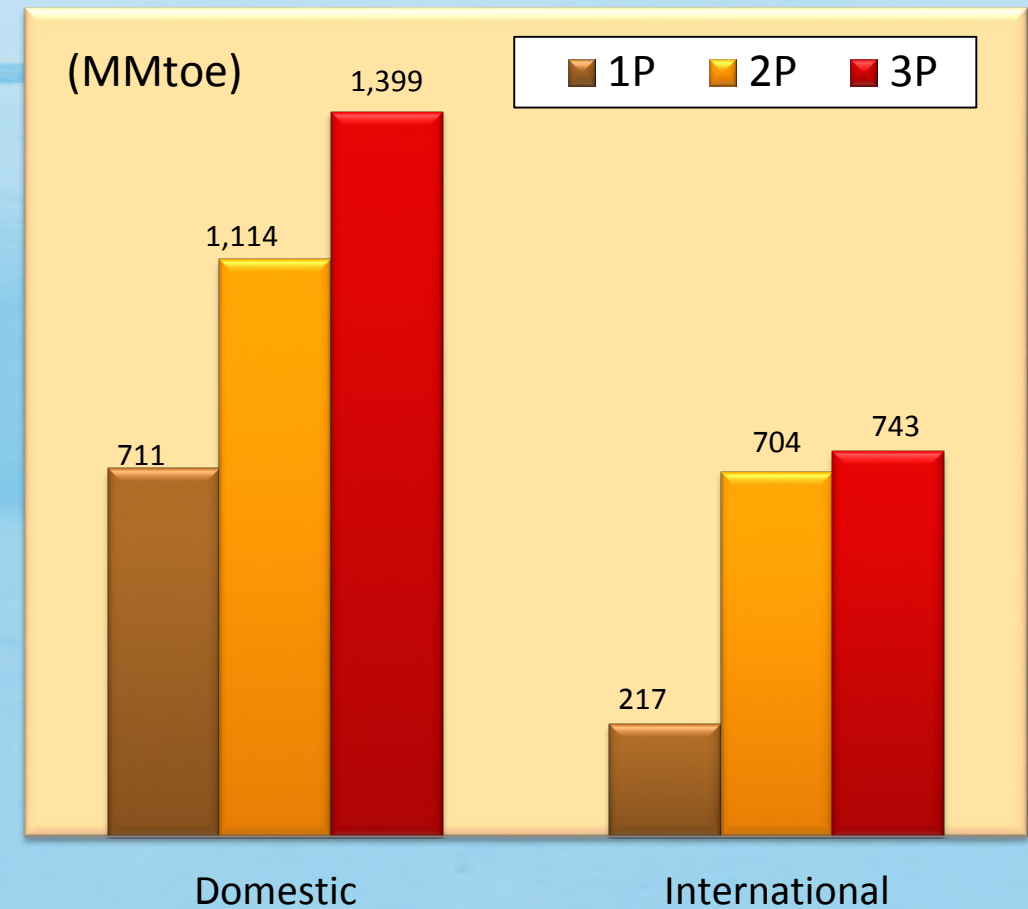
# ONGC GROUP

# ONGC Group: Reserves 1<sup>st</sup> April 2017

2P Reserves = 1,817.96 MMToe

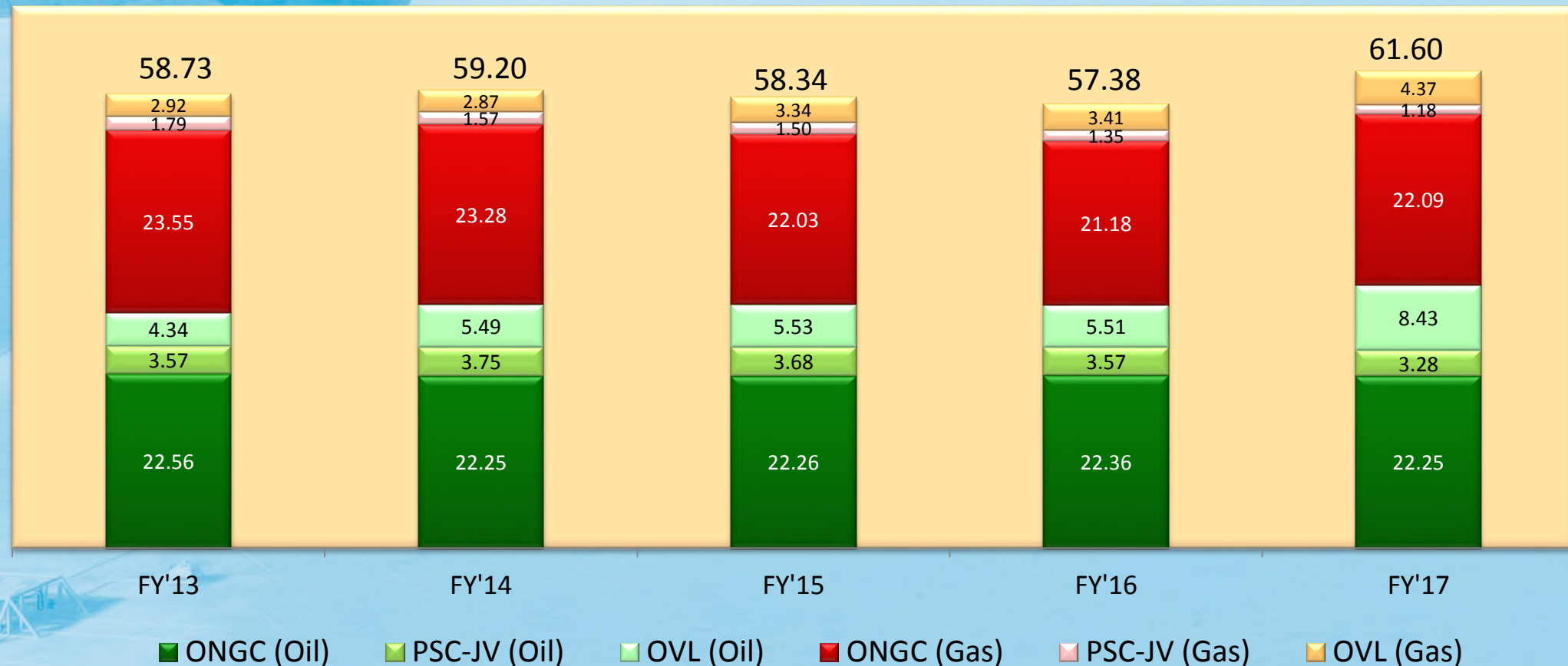
## Reserves (2P)

Mtoe	Oil	Gas	Total
ONGC	464.02	631.43	1095.45
PSC JV	12.06	6.65	18.71
OVL	320.74	383.06	703.80
<b>Total</b>	<b>797.82</b>	<b>1021.14</b>	<b>1817.96</b>



# ONGC Group: O+OEG Production, FY'17

FY'17: Production increased by 7.4% compared to FY'16 as contribution from Overseas Assets – Sakhalin & Vankorneft fields in Russia and positive contribution from domestic fields





# ONGC Group: Financials, FY'17

ONGC Group PAT increased by 59% during FY'17

₹ Crore

Turnover

1,35,664

1,42,149

FY'16

FY'17

PAT

12,875

20,498

FY'16

FY'17

The background of the slide is a light blue image of an offshore oil rig on the sea. The rig is a large, complex structure with multiple decks and cranes, situated in the middle ground. The sea is calm, and the sky is a pale blue with some light clouds. In the foreground, there are some smaller, less distinct structures, possibly part of the same rig or other nearby installations.

# Integration projects

**All Joint venture - OPaL, OTPC, OMPL, PMHBL, DSZ and MSEZ are now operational and started generating revenue.**



## Feedstock integration project of ONGC (Utilizing C2 C3 and C4 gas feed and Naphtha produced by ONGC)

Hon'ble Prime Minister dedicated OPaL to the nation  
on 7<sup>th</sup> March 2017



- ▶ 1.1 MMTPA Ethylene Cracker
- ▶ All Units commissioned during Dec 2016-Feb 2017
- ▶ Largest Dual feed cracker in south Asia and 2<sup>nd</sup> largest in the world

**POLYMERS**  
1.4 million tonnes per annum



**CHEMICALS**  
0.5 million tonnes per annum

### FEEDSTOCK

- C2, C3, C4 from C2-C3 Plant
- Naphtha from Uran & Hazira

### PRODUCTS

LLDPE/ HDPE/ Butene-1/ PP/ CBFS/  
Benzene/ Pv Gas/ Butadiene





Successfully raised Rs 7,286 Crore through Compulsorily Convertible Debenture at competitive interest rates.

**With this the entire equity of Rs 11,230 Crore has been tied.**

OPaL Polypropylene, HDPE and LLDPE well accepted by the market.

The liquid products such as Butadiene, Benzene etc being exported at good price.



Largest Polymer Warehouse in India – 1,28,250 sq. m.



Locational Advantage – Strong Connectivity



State of the art Infrastructure

## Moving Forward



- OPaL revenue with 100% capacity utilization at current prices – Rs. 15,000 Crore.
- With Marketing channels getting established PAN India with the onboarding of Channel partners, OPaL is geared up to take benefit of current high margins in polymers due to prevailing feed advantage.

**Per Capita  
Consumption**

**India  
10 Kgs**

**World  
32 Kgs**

### GROWTH DRIVERS

Increasing Middle Class  
Higher Disposable Income  
Urbanisation



**Demand  
13.05 million MT**



**Import  
4.21 million MT**



**Production  
8.84 million MT**



**Average Growth  
10-12% p.a.**



Aromatic Petrochemical Complex producing Paraxylene & Benzene; production commenced from 1st October 2014

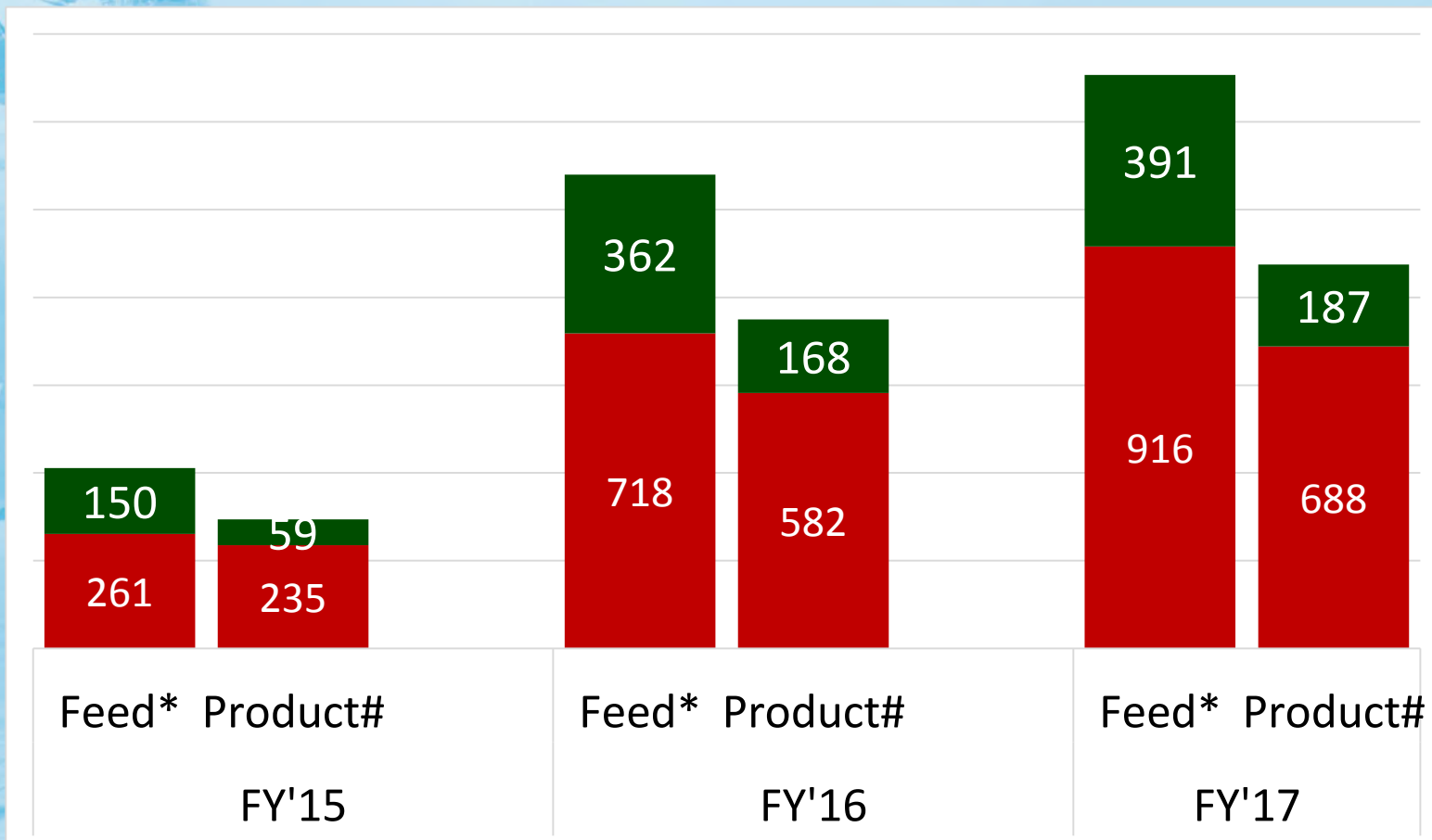


- OMPL is consistently operating at ~ 95% capacity utilization in the past six months, achieving positive PAT for the first time in the month of February 2017
- Achieved highest revenue of ₹ 5,256 Crore with highest exports of ₹ 3,900 Crore in FY17 establishing a niche presence in the International market



# OMPL: Feed receipt & throughput trend

Capacity utilization increased consistently; 83% in FY'17

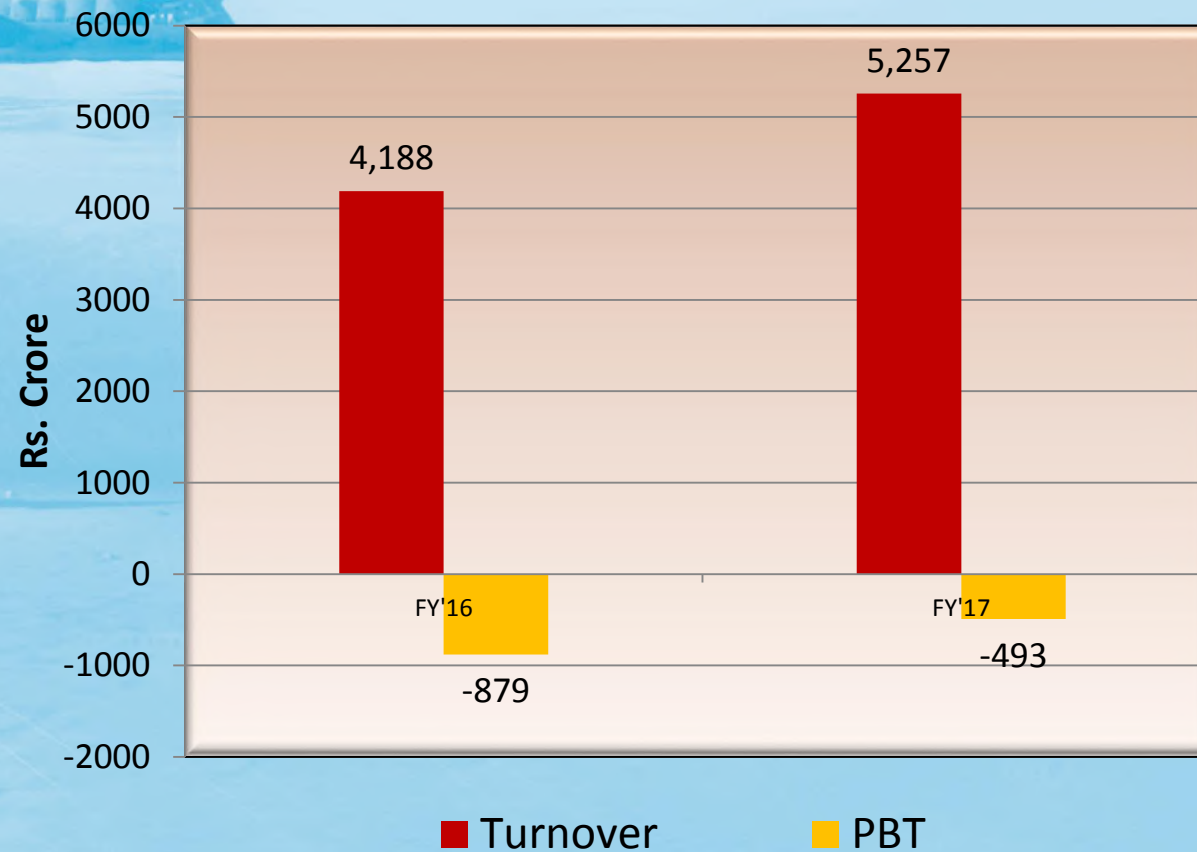


\* Naphtha & Aromatics

# Paraxylene & Benzene

# OMPL: Financial

## Financials



## 726.6 MW (363.3x2) Combined Cycle Gas Turbine (CCGT) thermal power plant

- ▶ Plant achieved highest generation of 747 MW (103%) on 15th February 2017.
- ▶ Generated record 4170 million units during FY'17
- ▶ Meets 35% power requirement of North Eastern states.
- ▶ First Dividend paying standalone gas based power generation company in India
- ▶ CERC certification obtained

Equity holding: ONGC (50%), Govt. of Tripura (0.5%), IEDCL (26%) & IDFC (23.5%)



IEDCL: IL&FS Energy Development Company Limited

IDFC: India Infrastructure Fund-II through IDFC Alternatives Ltd's

Project cost: ₹ 4,047 Crore. (Debt/Equity=75:25)

### Financials FY'17

- Turnover ₹ 1,298 Crore up 18% from ₹ 1,099 Crore during FY'16
- Net Profit ₹ 130.45 Crore, a 9 fold jump from ₹ 12.96 Crore in FY'16.





# Responsible Corporate Citizen

# ONGC launches Start-up

100 crore start-up fund launched on Diamond Jubilee year to foster, nurture and incubate new ideas related to oil and gas sector.



The initiative is in line with Govt. initiative 'Start-up India'.

ONGC to provide the entire support chain for start-ups including seed capital, hand-holding, mentoring market linkage and follow-ups.

Aim is to increase the contribution of fresh implementable ideas in the oil and gas sector.



# Make in India Campaign

**ONGC assigned lead role for Upstream Sector in GOI's flagship program "Make in India Campaign",**



"Purchase Preference linked with Local Content" (PP-LC) Policy conceived by ONGC formally launched across all Oil & Gas PSU.

Feasibility Study for 'Petroleum Economic Zone' conducted on behalf of MoPNG.

Identification of items to initiate product development program to reduce the import content in procurement.



# Everest Expedition



- ❖ Expedition flagged off by Hon'ble Minister of State (I/C), P&NG, Shri Dharmendra Pradhan on 28<sup>th</sup> March 2017.
- ❖ First of its kind initiative by any corporate
- ❖ Seven ONGC team members have successfully accomplished Mission Everest - the crown of the earth.

# Caring society

## Few Focus Areas

Women empowerment

Education, Employment

Health care – Remote areas

Swatch Bharat Kosh

Environment protection

Promotion of artisans

Clean Ganga Project  
Water management

Infrastructure devl.

Promoting sports

Slum area development

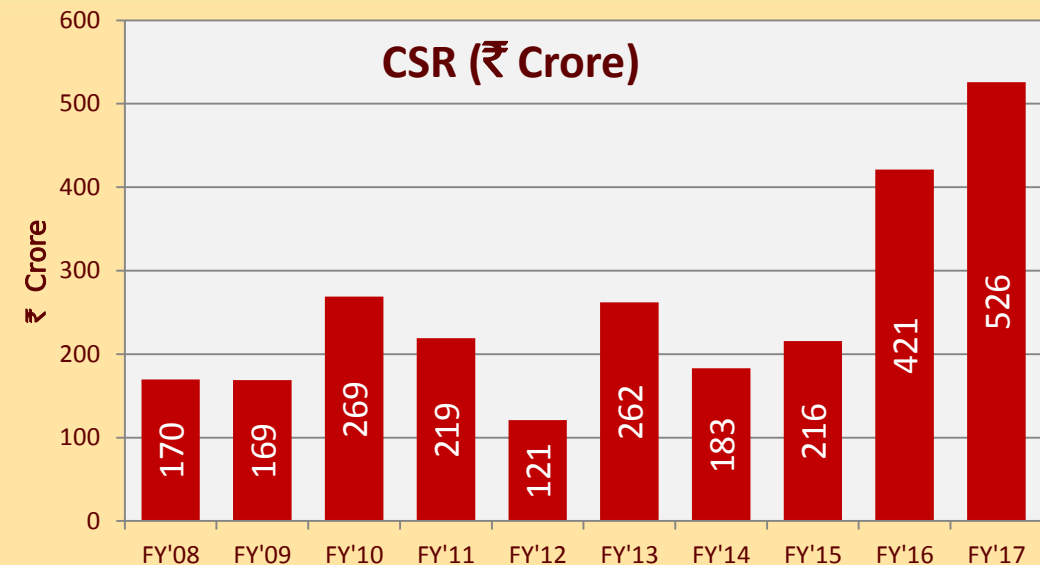
Promoting down trodden

PM's National Relief fund

Benefits to Armed  
Forces/ War widows

Preservation to National  
Heritage

CSR Expenditure ₹ 2,559.93 Crore in last 10 years



ONGC pursuing major projects - setting up Educational Institutes, Hospitals





**Thank you**