

Board's Report

It gives me great pleasure to present, on behalf of the Board of Directors of your Company, the **27th Annual Report** on the business and operations of Oil and Natural Gas Corporation Limited (ONGC/the Company) and the Audited Statements of Accounts for the financial year ended **31.03.2020** (FY'20), together with the Auditors' Report and Comments on the Accounts by the Comptroller and Auditor General (CAG) of India.

Despite massive and unprecedented disruption due to COVID-19 during the end of the FY'20 and resultant adverse socio-economic environment, your Company along with its group companies, sustained performance, recorded success and growth not only in its core activities of Exploration and Production (E&P) of crude oil and natural gas but also in other areas of our business.

Crude oil and natural gas production by the Company, including its share in Joint Ventures (PSC JVs) during FY'20 was 48.25 MMTOE (Million Tons of Oil Equivalent) which is about 3.6 per cent less than the production during FY'19 (50.04 MMTOE). Your Company has been making all efforts to arrest the decline in the production from its matured fields through various measures like Improved Oil Recovery (IOR) and Enhanced Oil Recovery (EOR) methods and other production enhancement methods. Further, your Company has made commendable performance in the core area of exploration by registering Reserve Replacement Ratio of 1.19. All efforts are being made to enhance production.

During FY'20, the accretion to In-place Hydrocarbons from Company operated domestic fields has been 100.22 MMTOE in 2P and Estimated Ultimate Reserve (EUR) was 53.21 MMTOE in 2P. In terms of 3P category, in-place hydrocarbon accretion was 98.99 MMTOE and EUR was 40.74 MMTOE on account of exploratory efforts from the Company-operated areas in India.

- 55.26 MMTOE (about 56% of total 3P In-place volume) has been accreted from New Discoveries.

- 43.73 MMTOE (about 44% of total 3P In-place volume) has been accreted as an outcome of Field growth.

Your Company's share in In-place volume of accretion in the Joint Venture (JV) fields in India, where it is not the operator, have been estimated to the extent of 7.14 MMT O+OEG (3P) and 1.59 MMT O+OEG in EUR (3P).

Your Company had four direct subsidiaries, namely ONGC Videsh Limited (OVL), Mangalore Refinery and Petrochemicals Limited (MRPL), Hindustan Petroleum Corporation Limited (HPCL) and Petronet MHB Limited (PMHBL).

Your Company also has nine Associates/ Joint Ventures, namely ONGC Petro additions Limited (OPaL), ONGC Tripura Power Company Limited (OTPC), ONGC TERI Biotech Limited (OTBL), Dahej SEZ Limited (DSL), Mangalore SEZ Limited (MSEZL), Indradhanush Gas Grid Limited (IGGL), Pawan Hans Helicopters Limited (PHL), Petronet LNG Limited (PLL) and Rohini Heliport Limited (RHL).

1. Major Highlights: FY'20

The major highlights of your Company during FY'20 are:

- a) Standalone production has been 44.57 MMTOE against 45.86 MMTOE during FY'19.
- b) Value Added Products (VAP) production was 3,548 (Thousand Tones) KT as compared to 3,641 KT during FY'19 - mainly due to less receipt of condensate.
- c) Your Company drilled 500 wells (Exploratory wells: 106, Development and Side Track wells: 394) in spite of less Rig Months and lockdown due to COVID-19. FY'20 is the fourth consecutive year when your Company has drilled 500 or more wells.
- d) During the year gas production commenced from the Offshore Deep-water Project



'Cluster-2 Development of KG-DWN-98/2', in East Coast on 05.03.2020 from the well #U3B.

- e) Your Company declared total 12 discoveries (7 New Prospects and 5 New Pools) in its operated acreages.
- f) Reserve Replacement Ratio (RRR) from domestic fields was 1.19 with respect to 2P reserves. With this, the Company achieved Reserve Replacement Ratio (2P) of more than 1 for the 14th consecutive year.
- g) Your Company monetized 22 discoveries. Out of these, 4 discoveries at Vanjiyur, Billakurru, Nandigamma North and Sundulbari, were made in the current year and remaining 18 pertain to preceding years.
- h) Buoyed by the path-breaking successes in well Hatta-2 in Vindhyan and Asokenagar-1 in Bengal on-land Basin last year, a conscious effort was undertaken for acquisition of open acreage areas around these discoveries.
- i) Panna-Mukta operations were handed over back to the Company by the current operator on 21.12.2019 post expiry of PSC contract with JV partners. Your Company has taken over these fields after 25 years. Your Company has taken over operations of these fields seamlessly and revived production.
- j) Your Company was awarded 15 blocks in different rounds under Open Acreage Licensing Policy (OALP) bidding.

The Company also bagged all seven Oil and Gas Blocks offered in the fourth bid round of the OALP of the Ministry of Petroleum and Natural Gas (MoPNG).

- k) Under the Policy Framework to promote and incentivize EOR method for oil and gas, Government of India (GoI) presented an opportunity to your Company to further expand its EOR portfolio. Under this policy,

22 onshore and 5 offshore fields qualified for EOR Screening. Four onshore fields (Balol, Santhal, Sanand and Gandhar) have already been put under commercial EOR applications. Further, commercial EOR schemes have been implemented in two onshore fields (Viraj and North Kadi) after ER policy.

- l) Eleven major projects, costing around ₹ 218,822 Million, were completed during the year. Further, as on 31.03.2020, a total of 17 major projects (Development-10, Infrastructure-7) were under various stages of implementation.
- m) Three major projects (MHNRD Phase-IV, HRP-III, PRP-VI) with an investment of ₹ 64,870 Million and envisaged oil and gas gain of 13.62 MMTOE were approved.
- n) Your Company announced Notice Inviting Offer (NIO) in June, 2019 seeking participation for enhancement of oil and gas production from its 64 marginal nomination fields by infusion of new technology. Notice of Award (NOA) were issued on 14.05.2020 to seven successful bidders, in 13 contract areas, for 49 of these marginal nomination fields.
- o) Hazira Dahej Naphtha Pipeline (HDNPL), to facilitate direct supply of Naphtha from the Company's Hazira Plant to OPaL, commissioned in Nov'2019, resulting in substantial cost savings in transportation of Naphtha to OPaL.
- p) Hazira Plant has been successful in production of special grade of High Flash High Speed Diesel (HFHSD) – viz. NATO grade HFHSD, for specific use of Indian Navy being supplied through Indian Oil Corporation Limited (IOCL). Supply of NATO grade HFHSD started from Hazira Plant from August 2019.
- q) Your Company has obtained 9 patents and also filed for another 9 patents.

- r) Your Company raised USD 300 Million 10-year bond at coupon rate of 3.375% in International Market, lowest by any Indian Issuer for 10 year or longer tenure, which further demonstrates the credentials of your Company as an integrated energy major in international investor community.
- s) Revenue from operations stood at ₹ 962,136 Million against ₹ 1,096,546 Million (restated) in FY'19.
- t) Net profit was ₹ 134,445 Million against ₹ 267,646 Million during FY'19 (restated) mainly due to lower realisation on crude and exceptional item towards impairment.

2. Global Recognitions

Your Company has been ranked at 17th among global energy majors in the world by Platt's Top 250 Global Energy Company Rankings-2019 based on assets, revenues, profits and return on invested capital. Among Indian companies, your Company has been ranked at No. 1. The leading international business journal Forbes in its 2020 list has ranked your Company 5th largest in India and 269th worldwide based on sales, profit, assets and market value. Further, your Company is ranked 190th globally and 3rd in India in 2020 ranking update of **Fortune Global 500 list**.

3. Details of discoveries

Your Company has declared following twelve new discoveries during FY'20 in its operated acreages, which resulted in accretion of 55.26 MMTOE In-place volume and 7.76 MMTOE of EUR.

Prospect discoveries:

- 1) Vanjiyur oil discovery #3 in Cauvery On land (L-II Petroleum Mining Lease - PML);
- 2) Billakurru gas discovery #1 in KG On land (Godavari Mining Lease -ML);
- 3) Nandigama North oil discovery #1 in KG On land (West Godavari PML);

- 4) B-218 oil discovery in Mumbai Offshore (Shallow Water - SW) in extension of NW-MH PML;
- 5) B-219 oil discovery in Mumbai Offshore (SW) in extension of NW-MH PML;
- 6) R-12-6 oil discovery in Mumbai Offshore (SW) in Ratna & R-series PML; and
- 7) YS-6-2 gas discovery in KG offshore (Yanam PML).

Pool discoveries:

- 8) SDP-55 Pay (Mid. Bhuban) gas discovery in SD#12 in Sundulbari-Agartala Dome in Assam and Assam Arakan (A&AA) basin;
- 9) SDP-22 and 23 pays (Upper Bhuban) gas discovery in SD#15 in West Tripura PML in A&AA basin;
- 10)SD-6 Pay gas discovery in Gummaturu-1 (GMTAA) in Raghavapuram Formation in Kavitam Additional PML in KG Onshore;
- 11)SD-4 Pay gas discovery in Penugonda-5 (PGAE) in Raghavapuram Formation in Kavitam Additional PML in KG Onshore; and
- 12)L-II Pay (Bandra Formation) in WO-24-10 (SW WO-24 field), in NW-MH PML in Western offshore Basin.

Out of 12 discoveries made during FY'20, four discoveries i.e. Vanjiyur, Billakurru, Nandigama North and SDP-55 of well SD-12 were monetized during the same year. Total 22 discoveries were monetized during FY'20, in addition to above 18 discoveries of the earlier periods were also monetized during the year.

4. Award of E&P Blocks

Your Company was awarded 15 Blocks under OALP Rounds (OALP-II, OALP-III, and OALP-IV), with an area of 32,117 Km² of exploration acreage in different sedimentary basins of the country - 23,732 Km² of the acreage in onshore while 8,385 Km² in offshore (Shallow Water



(SW): 5,894 Km²; Deep Water (DW): 2,491 Km². Your Company has already started exploratory activities in few of the awarded blocks and has acquired 1,432.14 Square Kilometer (SKM) of 3D data in MN-DWHP-2018/1 block (Mahanadi deep-water) and 310 Line Kilometer (LKM) of 2D and 88.22 SKM of 3D seismic data in MB-OSHP-2018/1 block (Mumbai Offshore-SW).

5. Reserve Position and Reserve Accretion

Your Company adopted Petroleum Resource Management System (PRMS) for estimation of hydrocarbon reserves. With this approach, as on 01.04.2020, accretion of In-Place Hydrocarbons (3P) from the Company operated fields stood at 98.99 MMTOE due to exploratory efforts, out of which 56 per cent accretion were on account of New Discoveries.

Total In-Place Reserve Accretion during FY'20 in domestic basins was 106.14 MMTOE, including 7.14 MMTOE from the Company's share in PSC JVs.

As on 01.04.2020, total In-Place Hydrocarbon Volume (3P) of the Company Operated and JV Fields stood at 9,997.22 MMTOE against 10,002.63 MMTOE as on 01.04.2019. The Estimated Ultimate Recovery (3P) at the end of FY'20 was assessed at 3,286.63 MMTOE against 3251.60 MMTOE estimated as on 01.04.2019.

During the year, the Estimated Ultimate Recovery (EUR) accretion in 2P category from the Company operated areas in India was 53.21 MMTOE.

Accretion of In-Place Hydrocarbons and Estimated Ultimate Recovery (EUR) by the Company in its operated areas and in Non-Operated areas (JV Share) during FY'20 and position of In-Place Hydrocarbons and Estimated Ultimate Recovery (EUR) as on 01.04.2020 were as below:

Units in MMTOE

In-place Hydrocarbon volumes and Estimated Ultimate Recovery (EUR)							
Accretion during the year 2019-20					Position as on 01.04.2020		
Reserve Type		Company Operated	JV Operated	Total	Company Operated	JV Operated	Total
In-place Hydrocarbon	2P	100.22	2.71	102.93	8,150.16	667.82	8,817.98
	3P	98.99	7.14	106.14	9,305.04	692.18	9,997.22
EUR	2P	53.21	1.74	54.95	2,939.78	119.68	3,059.45
	3P	40.74	1.59	42.33	3,166.74	119.89	3,286.63

Note: EUR position as on 01.04.2020 (EUR=Cumulative Production + Reserves + Contingent Resources).

Units in MMTOE

Position of Reserves and Contingent Resources as on 01.04.2020				
As per PRMS#	Category	Company Operated	JV Operated	Total
Reserves	2P	751.72	20.64	772.35
	3P	810.38	20.85	831.23
Contingent Resources	2C	408.38	-	408.38
	3C	576.68	-	576.68

Note: # as per PRMS adopted w.e.f. 01.04. 2019.

Units in MMTOE

The details of Reserve Accretion (2P-Proved and Probable) for the last five years in Company's basins is given in the table below.			
Year	Company Assets (1)	Company's share in JVs (2)	Total (3)=(1)+(2)
2015-16	65.58	0.80	66.38
2016-17	64.32	0.22	64.54
2017-18	67.83	1.02	68.85
2018-19	63.02	11.45	74.47
2019-20	53.21	1.74	54.95

Note: Reserve Accretion reported in terms of 2P reserves.

6. Drilling of Wells

Your Company drilled 500 wells during FY'20, including 5 exploratory and 10 development wells in KG deep-water block, as against 516 drilled during FY'19, as given under:

Well Description	FY'19	FY'20
Exploratory (including shale)	105	106
Development	373	357
Side Tracks	38	37
<i>Total</i>	<i>516</i>	<i>500</i>

7. Oil, Gas and VAP Production

Crude oil and natural gas production of the Company along with its share in the PSC JVs during FY'20 was 48.25 MMTOE (23.35 MMT of crude oil and 24.90 BCM of gas) which was ~3.58% less than production during FY'19 (50.04 MMTOE).

On standalone basis, Company's production during the year was 44.57 MMTOE; with a decrease of 2.82% (45.86 MMTOE in FY'19).

On standalone basis, production from Company operated fields was 20.71 MMT of crude oil

(21.11 MMT in FY'19) and 23.85 BCM (Billion cubic meters) of Natural gas (24.75 BCM in FY'19).

Your Company's share of production through JV operations was 2.64 MMT of crude oil (3.12 MMT in FY'19) and 1.04 BCM of natural gas (1.06 BCM during FY'19).

Production of VAP was 3.548 MMT against 3.640 MMT in FY'19 – (decreased by 2.6%).

Details of production, sales quantity and value, productwise during FY'20 with comparison of FY'19 is as under:



Description	Unit	Production Qty		Sales Qty		Value (₹ in Million)	
		FY'20	FY'19	FY'20	FY'19	FY'20	FY'19
Crude Oil	(MMT)	23.35	24.23	21.34	22.50	6,48,363	775,729
Natural Gas	(BCM)	24.90	25.81	19.40	20.48	1,93,556	188,389
Value Added Products (VAP)							
Liquefied Petroleum Gas	000 MT	1,013	1,107	1,011	1,109	36,038	43,490
Naphtha	000 MT	1,115	1,175	1,177	1,154	39,863	46,861
Ethane-Propane	000 MT	345	414	346	414	8,155	10,063
Ethane	000 MT	536	455	535	456	12,937	10,109
Propane	000 MT	224	210	219	207	7,251	7,948
Butane	000 MT	125	114	125	115	4,208	4,470
Superior Kerosene Oil	000 MT	54	66	55	71	2,465	3,355
Others*	000 MT	135	99	91	58	4,178	2,585
<i>Sub Total (VAP)</i>	<i>000 MT</i>	<i>3,548</i>	<i>3,640</i>	<i>3,559</i>	<i>3,584</i>	<i>1,15,095</i>	<i>128,881</i>
<i>Total</i>						<i>9,57,014</i>	<i>1,092,999</i>

*Others include ATF, Sulphur-P, Sulphur-C, LSHS, HSD, LDO and MTO

Production from Overseas Assets - ONGC Videsh Ltd

Your Company's overseas operations are carried out exclusively through ONGC Videsh Limited (OVL), the wholly owned subsidiary. OVL in turn conducts its operations either directly or through its subsidiaries. Production from overseas assets during FY'20 was 14.981 MMTOE in comparison to 14.833 MMTOE during FY'19; an increase of approx. 1%. The oil production during FY'20 was 9.755 MMT; 3.4% less compared to the production (10.097 MMT) during FY'19. The reduction is mainly because of exit from the Greater Nile Petroleum Operating Company (GNPOC), Sudan in August 2019, and lesser than anticipated production from Vankor field in Russia, San Cristobal and Carabobo fields in Venezuela, and ACG, Azerbaijan. The gas production of 5.226 BCM during the year was 10.3% higher compared to FY'19 production of 4.736 BCM with better performance of Block 6.1 in Vietnam and A1&A3 projects in Myanmar.

Oil and Gas production of your Company including contribution from JVs and Overseas assets for FY'20 was 63.23 MMTOE (against 64.88 MMTOE in FY'19).

8. COVID-19 and ONGC's response

The COVID-19 pandemic, which originated in late-2019, has now assumed substantial global proportions with significant human, societal and economic impact. Radical lockdown measures that were executed, early on, across several countries, accounting for more than half of the global population and energy consumption, to contain the spread of the disease brought the world to a standstill like never-seen before.

While lockdown measures still continue in some form in different countries based on the current severity of the pandemic, the economic impact of the lockdown was particularly pronounced in the month of April, 2020. Like any other sector of the economy, oil and gas industry too has

been adversely affected by the fallout of the COVID-19 pandemic.

Oil and gas counts among the country's essential and strategic resources and sustaining hydrocarbon operations becomes even more critical under exceptional circumstances such as this. Your Company has taken cognition of its role as the country's leading upstream player and stands well equipped to sustain this kind of emergency situation. Based on the perceived threat posed by the pandemic and in anticipation of a possible disruption in future, the Company has prepared itself operationally to ensure critical supplies of oil and gas without compromising the health and safety of its valued workforce including contract workers.

However, the challenges posed by COVID-19 are multi-layered, complex and evolving on a daily basis – a situation that is unprecedented for our times. Your Company's COVID-19 response is premised on preserving 'People, Material and Resources', and continuously reassessing its efficacy and effectiveness and also revisiting the strategies based on regular updates from operations teams, channel partners, and in-house HSE, Risk and Medical teams. For better coordination and information dissemination, ODAY Desk (ONGC Covid19 Assistance for You), a 24x7 Helpdesk for Covid19 has been established. Further, your Company has maintained its average production levels throughout the period as the country has been under a state of lockdown notwithstanding the supply and logistical constraints imposed by the situation. Furthermore, your Company embarked upon a massive country wide well-coordinated crew change operation named '**Operation Nishtha**', to ensure safe return of operational crews, who had been performing extended duty for 50-60 days against their normal duty pattern of 14 days at various location of field operations.

As a responsible corporate, your Company contributed ₹ 3,000 Million to PM CARES fund and around ₹ 242 Million worth of CSR projects have so far been undertaken countrywide benefitting more than 43 lakh fellow countrymen

through distribution of food supplies, masks, PPE kits, sanitizers and funding of ventilators in hospitals. ONGCians, on their part, donated two days' salary in the month of April'20; and one day salary during May and June 2020 amounting to about ₹ 255 Million to PM CARES Fund.

9. Technology induction/up-gradation

Technology induction/up-gradation in various areas of operations is a continuous process in your Company to remain effective and competitive. The following technologies were evaluated/ inducted during FY'20:

a. Remote sensing image processing software suite with extensions/add-ins for physics-based atmospheric correction.

Software: ERDAS Imagine, Extension/ Plug-in: ATCOR: Software would help in basic and advanced raster image data processing and pre-processing of multispectral/hyper-spectral visible-shortwave infrared as well as thermal infrared image data with built-in extension for radioactive-transfer physics-based absolute atmospheric and in spectral mapping of lithology and identifications of micro-seeps, thus providing an interpretative edge over existing verticals. This would also support batch processing of large data volumes dedicated with built-in spatial modelling functionality to integrate spatial and non-spatial data. It is useful for 3D geospatial rendering and geoprocessing, topographic analysis and manipulation of DEM/ DSM/ DTM data derived from stereo-photogrammetry, SAR or LiDAR for hydrographic and geomorphic derivatives.

b. CUDA FORTRAN Compiler Graphic Processing units (GPUs) have evolved into programmable, highly parallel computational units with very high memory bandwidth. GPU designs are optimized for the computations found in graphics rendering, but are general enough to be useful in many data-parallel, compute-intensive programs common in high-performance computing. The compiler



has been inducted with the intent of developing specialized software applications as a part of R&D activities.

c. CRAM (Common Reflection Angle Migration):

A new depth migration software which is a multi-arrival depth domain solution which works in local angle domain and outputs angle gathers in depth. This is a highly compute (computational) intensive and resource intensive application. CRAM is designed for detailed velocity model building and for precise imaging in areas with complex structure and velocity for 3D onshore and offshore data.

d. Big Data analytics:

The Company has successfully implemented big data analytics using Machine learning approach. This technology can be employed to handle large datasets for analysing seismic and micro-seismic data, improving reservoir characterization and simulation etc. The approach was successfully implemented in the prediction of reservoir properties in B-12/ C26 area of western offshore basin during FY'20.

e. Broadband processing technology:

In-house capability for Broadband processing technology of broadband data has been developed, which helped in increasing image resolutions with its analysis on Amplitude Versus Offset, leading to substantial savings of foreign exchange.

f. E-line Well Intervention Services:

The first E-line Intervention job was carried out in well HSC-2ZH of Heera field in Western Offshore Basin. Rig-less well intervention services were deployed with the objective to retrieve Grating Light Valve (GLVs) and set these GLVs in the deviated zone (angle: 68°) to maximize production. In the past, there had been various constraints to retrieve and reinstall GLV in high deviation wells with other intervention technologies that were deployed in the field. The GLV change job was successfully completed in this well.

g. Dual Zone Testing (DST):

DST has added immense value during testing in the Well B189#A by saving significant Rig-days (six days) and by providing real time data, opening a new chapter for future dual zone testing in a single DST run. Use of dual zone DST helped the Company in improving operational efficiency and also maintaining the highest level of operational standards along with safety in the offshore environment.

h. GEOTEST1000.

A new state-of-the-art technology GEOTEST-Triaxial Rock testing laboratory from Vinci Technology, France was inducted in June 2019 and will be helpful in determining the varied range of geo-mechanical properties.

i. Up-gradation of processing system for genomic analysis:

Technology up-gradation of processing system to amplify the target 16s rRNA gene of bacteria for identification of oil degrading bacteria through Polymerize Chain Reaction was successfully completed during the year. This technological up-gradation will help in isolating and finding potent Polycyclic Aromatic Hydrocarbon (PAH) degrading bacteria for bioremediation of soil and effluents contaminated with high concentration of PAH and will be useful in field implementation project for bioremediation of crude oil contaminant soil and effluents.

j. Under the Make in India campaign

Your Company, in collaboration with IOCL, has developed the following materials for operational requirements:

1. Base Oils suitable for Drilling Fluids for Low Toxicity Oil Base Mud; and
2. High Pressure Extreme Pressure lubes for Drilling Fluids.

10. Technology developed/ tested in-house and absorbed for IOR/ EOR processes:

a. North Kadi polymer flood:

The chemical EOR technology i.e. polymer flood in North Kadi field was conceptualised for

commercialization. The scheme was commissioned on 17.01.2020 ahead of its target schedule of August, 2021. The target STOIP of the scheme is approximately 18 MMT and the envisaged incremental oil in polymer flood at end of 15 years will be approximately 0.769 MMT over base case.

- b. Bechraji Polymer flood pilot:** Feasibility Report for polymer flood in Bechraji heavy oil field of Mehsana Asset was approved. This is for the first time that polymer flood is planned in heavy oil. The Pilot started on 06.05.2019.
- c. Commercialization of ASP Flood in Viraj (K-IX+X):** Field scale Alkali-Surfactant-Polymer flooding (ASP) scheme consists of four phases of chemical injection followed by chase water injection. The implementation of the ASP project commenced in July'19.

The commercialization of ASP injection in K-IV sand of Viraj field envisages ASP injection @1,120 m³/d through fourteen injectors in inverted 5-spot pattern. It envisaged oil recovery of 0.3 to 0.6 MMT.

- d. Cyclic Steam Stimulation (CSS) Pilot in Lanwa Field:** Lanwa CSS pilot is being taken up with an envisaged incremental gain of 0.312 MMT. The scheme is likely to commence during FY'21.
- e. Immiscible Gas Injection in Borholla Field:** Immiscible gas injection EOR initiated on pilot scale in Borholla Field, Jorhat from January 2017. Positive results observed in terms of increase in reservoir pressure and arrest of production decline. Based on success of pilot scheme, full field development scheme has been prepared with envisaged incremental oil gain of 0.3 MMT and recovery of 35.6% by 2030. Field Report (FR) has been approved and scheme is under implementation.
- f. Gas Assisted Gravity Drainage (GAGD) in Kasomarigaon Field:** GAGD EOR scheme in Kasomarigaon Field, Jorhat envisaged

incremental oil gain of 0.31 MMT with recovery of 33% by 2030. FR has been approved and the project is under implementation.

- g. Immiscible Gas Injection in Bokabil pay of Khoraghat Field:** The immiscible gas injection EOR scheme envisaged incremental oil gain of 0.153 MMT and recovery of 22.7% by 2035. FR has been approved and the project is under implementation.
- h. Miscible CO₂ in Gandhar Field:** Simulation for GS-9 and GS-11 layers were studied and incremental oil gain of 8-10% is expected by 2042 with 75 new injector wells. Lab studies and simulation were completed and EOR implementation has been planned by injecting CO₂ captured from IOCL's Koyali refinery. In this regard, Memorandum of Understanding was signed with IOCL on 01.07.2019.
- i. LoSal water flood in Mumbai High Field:** As a step towards solution search for offshore EOR, single well micro pilot for Low Salinity (LoSal) water flood was carried out in January 2017 in Mumbai High South field. Based on laboratory and field results, multi-well pilot application of Low Salinity Water Flood (LSWF) in western periphery of Mumbai High Field is currently under implementation which envisages incremental oil gain of 0.846 MMT by 2035. The project is likely to commence during FY'21.
- j. During FY'20, the following technologies were developed by the Institute of Oil and Gas Production technology (IOGPT), Panvel:**
 - i. "Enzyme Application for Wellbore Cleaning to Remove Mud Cake in Oil/Gas Wells to Enhance the Productivity"**
 - The patented formulation is useful for effective degradation of mud polymer cake formed in horizontal section of well bore during drilling operations.
 - ii. "Gelled Emulsified Acid System for Stimulation of Carbonate Reservoirs".**



The patent formulation is a Gelled Emulsified Acid System with dual properties of high viscosity and reaction retardation for effective matrix acidization and acid fracturing of carbonate reservoirs.

iii. “Composition and Process for Preparation of a Fracturing Fluid”.

The patent relates to a formulation and process for preparation of a polymer-free fracturing fluid comprising of visco-elastic surfactant.

iv. “Method for Recovering Heavier Hydrocarbons from Liquefied Natural Gas”.

The patented process offers high efficiency in cold energy utilization, minimizes infrastructure requirements and maximizes recovery of heavier hydrocarbons. It also reduces utility requirements and can be easily integrated with existing LNG regasification terminals.

v. ‘Novel Demulsifiers for Separation of Water from Oil and Preparation thereof’

jointly with M/s. National Chemical Laboratory, Pune, Maharashtra. The patent relates to a low temperature process for demulsification of crude oil using novel crude oil demulsifier with greater than 95% efficiency.

vi. Copyright for “Software i-Procal v-1”, developed on Visual Basic Platform for Sizing and Rating of Various Process Equipment.

vii. Identification of Suitable Diverters for Improving Diversion Efficiency for Fracturing Operation in more than one Perforated Interval:

With comprehensive laboratory experimentations and studies, IOGPT has developed a Novel, eco-friendly, biodegradable particulate Poly Lactic Acid Pill for application in fluid diversion in hydraulic fracturing operations.

viii. Work-over Fluid for Sub Hydrostatic

Gas Wells: An innovative eco-friendly Polylactide based Self-degradable Loss Control Particulate Pill could be developed by IOGPT after extensive laboratory studies to address fluid loss in sub-hydrostatic gas wells.

ix. H₂S Reduction in Dispatched Oil from B-193 Platform:

IOGPT recommended scheme of use of sweet gas as stripper gas in a stripper column was successfully implemented in B-193 process complex to sweeten the crude oil.

x. Wax removal by Exothermic Chemical Reaction:

A technology developed by IOGPT utilizes the heat liberated through controlled exothermic chemical between aqueous nitrogenous salts for melting the paraffin deposits. The technology was successfully implemented in wells of Mehsana and Cambay Asset.

11. Other Exploration Initiatives and Activities

a. National Seismic Programme (NSP):

Towards complying with the mandate of 2D seismic Acquisition, Processing and Interpretation (API) of 42,211 LKM assigned by Gol in un-appraised areas of Indian sedimentary basins grouped in 11 on-land sectors, your Company, as on 31.03.2020, has completed data acquisition of 40,137.38 LKM (95.1%) and processed about 35,422.38 LKM (83.9%) of complete seismic lines. The interpretation of data is also being carried out and at the end of FY'20, your Company completed the interpretation of about 22,003.97 LKM (52.1%). This data in turn would contribute in augmenting domestic production of oil and gas. The entire assignment of the on-going API Project would be completed during FY'21.

b. Basement Exploration:

To continue with the efforts towards Basement Exploration, your Company has characterized

MAKING A STRATEGIC MOVE

basement reservoirs in different basins during FY'20. It adopted various initiatives including fracture characterization and fracture distribution modelling. This included drilling of 22 wells together with 11 exploratory wells with Basement as a main objective in different acreages of the Company falling in A&AA, Cambay, Cauvery, KG and Western Offshore Basins. An innovative work flow has been adopted for the first time in Fracture Characterization of intrusive bodies within Mesozoic Sequence in different blocks viz. GK-28/42, GK-OSN-2009/1, GK-OSN-2010/1, GS-OSN-2004/1, falling in Kutch-Saurashtra area in Western Offshore. The entire study was carried out on facies model of Trap by preparing General Circulation Models and fracture modelling supplemented with stochastic porosity mapping and calibrations. The study helped in identification of five prospects in GK-28/42 area for future exploration. Basement prospectivity analysis based on Automatic Fault Extraction and Vector Analysis around B-45, B-192 and WO-24 fields, south west of Mumbai High area has also been completed during the year with identification of two more prospects. Your Company has been involved in successful planning and monitoring of basement reservoir in Thirunagari, Pundi and Panadanallur fields of Cauvery Basin. During FY'20 Padra-132,135,136 wells in Cambay basin produced oil and gas; and in totality the Production curve has shown a sharp rise in the Trap section in last five years in the Padra area due to optimal placement of wells in the fractured zones. Twenty three new locations have been firmed up in Padra area for targeting specific fractures.

c. HP-HT Exploration:

High Pressure-High Temperature (HP-HT) and tight reservoirs are known to have typical challenges in the form of bore-hole complications, fluid design, high-cost drilling technology, HP-HT cementing, well construction and other reservoir engineering

problems. Despite these challenges, your Company has successfully established hydrocarbon in HP-HT reservoirs like, - Bhuvnagiri, Malleswaram, Periyakudi, Kottalanka, Bantimulli South, Yanam shallow Offshore, GS-OSN-2004,G-4-6 and certain areas of Assam Arakan Fold Belt.

During FY'20, HP-HT and tight gas plays had a mixed bag of successes and failure. Exploration in Yanam shallow offshore in KG basin has led to discovery of gaseous hydrocarbons from the lower synrift sequence in the well YS-6-2 sub (drilled in FY'19) indicating development of sweet spots. Your Company has notified YS-6-2 sub-gas discovery as a new prospect. The successful testing of the well using state-of-the-art technologies and testing fluids proved the capabilities of the Company. On the other front, the wells in Deendayal block in East Coast, where testing with multiple HP-HT hydro-fracturing did not yield the desired results, continue to be a challenge in developing the complex HP-HT reservoirs.

Geo-cellular Modelling, dynamic modeling and reservoir simulation studies of Nagyalanka field in Andhra Pradesh were undertaken, based on which nine development locations were identified and three locations are prioritized for drilling and multistage hydro-fracturing where an incremental oil production from these locations is around 300 m³. Multiple hydro-fracturing in the Eastern Offshore field DDW-D5 has been completed and during the year two wells DDW-D6 and DDW-D7, in the same area, have been taken up for drilling. Another well B-41-2 in Mumbai Offshore basin was drilled, which on testing did not give any encouraging results.

Presently, your Company has been producing from four HP-HT fields viz. Periyakudi in Cauvery Basin, Bantumilli South and Nagayalanka fields in KG Onland and Deen Dayal West field in KG Offshore.



12. Exploration and Production from Unconventional Sources

a. Coal Bed Methane (CBM):

Currently your Company is operating four CBM blocks in Jharia, Bokaro and North Karanpura in Jharkhand and Raniganj in West Bengal. Exploration activities have been completed in these blocks and developmental activities are at an advanced stage in three of these blocks viz. Bokaro, Jharia and North Karanpura.

During FY'20, in Bokaro CBM block, 26 wells (18 vertical and 8 inclined) were drilled and 17 wells were tested. Dewatering has been taken up by lowering artificial lifts. Gas break-in was observed in 13 wells.

In North Karanpura CBM Block, total 26 wells were taken up for drilling; out of which 18 wells have already been drilled. In addition, Hydro-fracturing has been carried out in 19 wells and gas break-in was observed in four of these wells.

b. Shale Gas:

Your Company has assessed shale gas/oil potential in 24 blocks from 50 nomination PML blocks identified for shale gas/oil exploration in the country. As on 31.03.2020, drilling of 29 wells (including 10 exclusive wells and 19 dual objective wells) were completed in four basins viz. A&AA, Cambay, Cauvery and KG Basins. Further, two exclusive shale wells (NJSGA in Cambay Basin and MDSGA in KG Basin) and one dual objective well PGAE (KG Basin) were drilled.

Currently, one dual objective well LKEAA in KG Basin is under drilling. Efforts are on to establish the shale gas/oil potential in the identified blocks. Indications of presence of shale oil have been recorded in wells like - JMSGa, NSGB and NJSGA in Cambay Basin and WGSGA in KG Basin during activation after hydro-fracturing. One

zone within Nawagam Middle Pay (Tight Reservoir) of shale well NGSGA of Cambay Basin was hydro-fractured and on activation produced oil. The shale well WGSGA in KG Basin, requires further activation whereas in another well GNSGC in Cambay Basin hydro-fracturing job is to be carried out.

c. Underground Coal Gasification:

Your Company had taken an initiative to test the Underground Coal Gasification (UCG) technology in India for which all the ground work has been completed with obligatory inputs for construction and implementation of UCG R&D Pilot Project at Vastan Mine block site belonging to GIPCL in Naninaroli, Surat district, Gujarat to establish UCG technology. However, there is not much progress as all state PSUs of Gujarat, including MOU partner, Gujarat Industries Power Company Limited, backed out of the UCG project due to the low calorific value of the Syngas.

Additionally, processing of gas at surface shall be a challenge as Syngas has many impurities and contamination, and also non-availability of business partners from Coal/ Chemical/ Power sectors for business ease during pilot/ commercialization. Considering all the factors and current gas price scenario, your Company might not commit further in this line of business.

d. Gas Hydrate Exploration Program

Your Company has been an active contributor to gas hydrates exploratory research under National Gas Hydrate Program (NGHP) of GoI since its inception in the year 1997. So far, your Company has played a significant role in successful execution of NGHP-01 and NGHP R&D Expedition-02. With the focus on the pilot production testing, the gas hydrate reservoirs discovered during NGHP-02 (Block KG-DWN-98/5) have been delineated and Geo-cellular modelling for the gas hydrate rich reservoir has been completed to

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get detailed cell-wise geophysical/reservoir parameters around the proposed site for pilot production test during next NGHP-03 expedition.

Potential exploitation methodologies like sand control measures, well design, well bore completions and depressurization techniques, various production simulation modelling and other studies have been carried out in collaboration with USA.

Gas Hydrate Research & Technology Centre (GHRTC) of your Company is involved in R&D activities in exploration for gas hydrate prospects in Indian deep waters and potential exploitation methodologies for gas hydrates through in-house efforts and PAN-IIT collaborations. This institute will also contribute to Gol's plan to commercialize

Gas Hydrates as energy resource, at the earliest.

Presently, your Company has been working on identification of gas hydrate prospective areas in part of CY-DWN-2004/1 and MNDWN-2002/1 blocks in Cauvery and Mahanadi Basin respectively for future field expeditions. Besides, your Company has also been working on pre-stack seismic data analysis for Gas hydrates characterization/delineation in part of KGDWN 98/2 Block in KG offshore.

13. Oil & Gas Projects

Projects completed during FY'20

Following eleven major projects (9 development and 2 Infrastructure) costing around ₹ 218,822 Million were completed during the year:

SI No	Project Name	Completion Date	Project Cost (₹ in Million)	Oil gain* (MMT)	Gas Gain (BCM)
Development Projects					
1	NW B-173A Development Plan	03.05.2019	3,655	0.76	0.213
2	Field Development Plan of NELP Block KG-ONN-2003/1-NAGYALANKA-KG ONLAND	10.09.2019	2,850	0.83	0.343
3	Development of BSE-11 Block	13.10.2019	5,442	0.57	0.568
4	4 th Phase Development NBP Field	03.10.2019	11,136	2.08	-
5	Daman Development Project	31.10.2019	47,972	3.811	26.93
6	MH South Redevelopment Ph-III	31.03.2020	49,539	7.547	3.864
7	Integrated Development of B-127 Cluster Fields(including B-55 field)	31.03.2020	20,209	1.992	4.68
8	Enhanced Recovery of Bassien field through Mukta, Panna formations	31.03.2020	46,549	1.729	18.83
9	Development of B-147 Field	31.03.2020	5,271	0.489	0.708
Infrastructure Projects					
10	Assam Renewal Project	26.12.2019	23,842	-	-
11	Construction of one ETP and three ETPs with WIPs	30.11.2019	2,357	-	-
	<i>Total</i>		<i>218,822</i>	<i>19.808</i>	<i>56.136</i>

* Oil gain includes condensate



Project under implementation:

As on 01.04.2020, seventeen major projects were under implementation with a total projected cost of around ₹ 625,925 Million with envisaged oil and gas gain of ~121 MMTOE.

Projects approved for implementation

During FY'20, the following three offshore projects were approved for implementation:

1) Pipeline Replacement Project-VI: Project was approved on 30.05.2019 with an investment of ₹ 7,639.20 Million. Project envisages laying of 11 pipeline segments in Mumbai High, Neelam & Heera and B&S Assets. The project is expected to be completed by December 2020.

2) Mumbai High North Redevelopment Phase-IV: Project was approved on 22.04.2019 with an investment of ₹ 32,288 Million. The scheme envisages one Conventional platform, new living quarter and revamp/ replacement work and drilling of 43 wells. The scheme envisages incremental gain of 4.249 MMT oil and 0.49 BCM gas by March 2035. The project is expected to be completed by March 2022.

3) Heera Re-development Phase-III Project: The project was approved on 31.05.2019 with an investment of ₹ 24,947 Million. The scheme envisages installation of two New Well platform (HM & HN), laying nine pipeline segment of total length 48.5 Kms, Top-side modifications at Heera Complex, Neelam Complex and seven well platforms and drilling of 26 wells. The scheme envisages incremental production of 3.06 MMT oil and 5.82 BCM gas by March 2035. The project is expected to be completed by May 2022.

In addition, the Company's mega offshore

deep-water project in East Coast i.e. **Cluster-2 Development of KG-DWN-98/2**, was in advanced stage of completion. **First gas achieved on 05.03.2020** after completing tie-back of one Gas Well [U-3-B] to the existing Vashishta facility at water depth of 1,300 meters.

14. Financial Highlights:

Your Company earned Profit After Tax (PAT) of ₹ 134,445 Million, down by 49.77% over FY'19 (₹ 267,646 Million - restated) and registered Revenue from Operations of ₹ 962,136 Million, down by 12.26% over FY'19 (₹ 1,096,546 Million).

Highlights – Standalone Financial Statements

- Revenue from Operations : ₹ 962,136 Million
- Profit After Tax (PAT) : ₹ 134,445 Million
- Contribution to Exchequer : ₹ 411,019 Million
- Return on Capital Employed : 22.44%
- Debt-Equity Ratio : 0.07:1
- Earnings/ Share : ₹ 10.69
- Book Value/ Share : ₹ 154

Particulars	₹ in Million	
	2019-20	2018-19*
Revenue from operations	962,136	1,096,546
Other Income	61,050	72,652
Total Revenue	1,023,186	1,169,198
Profit Before Interest Depreciation & Tax (PBIDT)	467,083	579,773
Profit Before Tax (PBT)	203,687	400,291
Profit After Tax (PAT)	134,445	267,646
Transfer to General Reserves	50,094	154,362

* re-stated figures.

15. Change in Share Capital:

There is no change in capital structure of the Company.

16. Dividend

Your Company has paid interim dividend of ₹5 per share of ₹5 each (100%) in March 2020 amounting to ₹62,901.40 Million besides ₹12,929.40 Million applicable Dividend Distribution Tax.

The Board of Directors has not recommended any final dividend with a view to conserve cash for investments in business operations.

The Dividend Distribution policy as formulated by the Company, may be accessed at the web link [https://www.ongcindia.com/wps/wcm/connect/en/investors/policies](https://www ONGC India.com/wps/wcm/connect/en/investors/policies).

17. Management Discussion and Analysis Report

As per the terms of regulations 34(2)(e) of the SEBI Listing Regulations, the Management Discussion and Analysis Report (MDAR) as appended, forms part of this Report.

18. Financial Accounting

The Financial Statements of the Company for FY'20 have been prepared in compliance with the applicable provisions of the Companies Act, 2013 including Indian Accounting Standards (Ind AS) and Guidance Note on Accounting for

Oil and Gas Producing Activities issued by the Institute of Chartered Accountants of India.

The Company has issued two series of Non-Convertible Debentures (NCDs) with issue size of ₹ 5,000 Million and ₹ 10,000 Million on 31.07.2020 and 11.08.2020 respectively. Both series of NCDs have been listed on Bombay Stock Exchange.

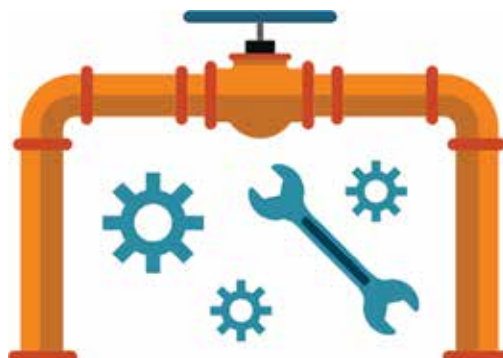
Besides issue of NCDs, there have been no material changes and commitments, which affect the financial position of the Company, which have occurred between the end of the financial year to which the financial statements relate and the date of this Report.

19. Loans, Guarantees or Investments

Your Company is engaged in Exploration & Production (E&P) business which is covered under the exemption provided under Section 186(11) of the Companies Act, 2013. Accordingly, the details of loans given, investment made or guarantee or security given by the Company to subsidiaries and associates is not reported.

20. Details relating to deposits covered under Chapter V of the Act:

Your Company has not accepted any deposit during the year. Further, there was no outstanding deposit and/or unpaid or unclaimed principal amount or interest against any deposit either at the beginning or at the end of FY'20.





21. Credit Rating of Securities:

Details of the Credit Ratings of Debt Securities of the Company as on 31.03.2020:

1	Name of Debt Security	International Bonds (Senior unsecured notes) issued by the Company and subsidiaries which are guaranteed by the Company	International Bonds (Senior unsecured notes) issued by the Company and subsidiaries which are guaranteed by the Company	Commercial Paper up to ₹10,000 crore outstanding at any point of time
2	Credit Rating obtained	Rating : Baa2 (Negative) [Including for Issuer Rating]	BBB- (Stable) [Including for Issuer Rating]	[ICRA]A1+, CARE A1+
3	Name of the credit rating agency	Moody's Investors Service	S&P Global Ratings	ICRA Limited (ICRA), CARE Ratings Limited (CARE)
4	Date on which the credit rating was obtained	February 2005 and annual surveillance thereon every year.	November 2012 and annual surveillance thereon every year.	ICRA: 18.06.2018 revalidated on 17.09.2018, 11.12.2018, 14.03.2019, 18.06.2019, 22.07.2019, 20.11.2019 and 2.03.2020 CARE: 25.06.2018 and revalidated on 21.08.2018, 27.12.2018, 22.02.2019, 29.04.2019, 18.06.2019, 20.09.2019, 17.01.2020, 25.02.2020 and 21.03.2020.
5	Revision in the credit rating	Yes, foreign currency rating and Local issuer Rating is downgraded from Baa1 to Baa2.	Not Applicable	Not Applicable
6	Reasons provided by the rating agency for a downward revision, if any	Due to increasing uncertain oil price environment, Company's depleted cash reserves and government guidelines that constrains state-owned enterprises' ability to lower dividends, Company's baseline credit assessment (BCA) and ratings are materially challenged at the previous rating level and its credit profile insufficient to remain above India's Baa2 sovereign rating. The rating outlook is negative in line with the outlook on India's sovereign rating.	Not Applicable	Not Applicable

Note: Pursuant to downgrade of India's sovereign rating from Baa2 to Baa3 on 01.06.2020, Moody's Investor Services had downgraded Company's local and foreign currency issuer and issue rating from Baa2 to Baa3 on 02.06.2020.

22. Investor Education and Protection Fund (IEPF)

Details of transfer of unclaimed dividends and eligible shares to IEPF have been placed in the Corporate Governance Report, which forms part of this Annual Report.

23. Related Party Transaction

Particulars of contracts or arrangements with related parties as referred to in Section 188(1) of the Companies Act, 2013, is provided in specified Form AOC-2, and placed at **Annexure-A**.

Brief details about subsidiaries/ Associates and Joint Ventures:

Subsidiaries:

a) ONGC Videsh Limited

ONGC Videsh Ltd (OVL/ONGC Videsh), the wholly-owned subsidiary of your Company for carrying on E&P activities outside India, has participation in 37 oil and gas projects in 17 countries, viz. - Azerbaijan (2 projects), Bangladesh (2 Projects), Brazil (2 projects), Colombia (7 projects), Iran (1 project), Iraq (1 project), Israel (1 project), Kazakhstan (1 project), Libya (1 project), Mozambique (1 Project), Myanmar (6 projects), Russia (3 projects), South Sudan (2 projects), Syria (2 projects), UAE (1 project), Venezuela (2 projects) and Vietnam (2 projects). In FY'20, OVL exited from 4 projects, viz., GNPOC and Sudan Pipeline Project, Sudan, PEL-0037, Namibia, and PEP57090, New Zealand. Exploratory Blocks GUA OFF-2, RC-9 & RC-10 in Colombia, and Satpayev in Kazakhstan are under relinquishment and OVL plans to exit exploratory block LLA69 in Colombia during FY'21.

Out of these 37 projects, OVL is the Operator in 13 projects, Joint Operator in 6 projects and in remaining 18 projects it is non-operator. OVL has a combination of 14 producing,

4 discovered/ under development, 16 exploration projects and 3 pipeline projects. OVL's share in production of oil and oil equivalent gas (O+OEG) is provided under the heading 'Production from Overseas Assets by OVL' in para 7 above.

Gross consolidated revenue of OVL for FY'20 was ₹ 1,55,383 Million (against ₹ 1,46,320 Million) and registered ₹ 4,540 Million as PAT during FY'20 as against ₹ 16,823 Million during FY'19. The decrease in profit is mainly on account of lower crude oil price realization and impairment provisions.

Significant Funding activities

5 year Notes of USD 750 Million which were due for redemption in July 2019, were duly redeemed by raising a syndicated loan facility of USD 500 Million from international commercial banks and the balance requirements were sourced from internal accruals. 8.54% Unsecured Non-Convertible redeemable Bonds in the nature of Debentures issued for value aggregating ₹ 3,700 Million which were listed on National Stock Exchange were duly redeemed on 06.01.2020. Further, OVL refinanced USD 1,000 Million during March 2020 out of USD 1,775 Million falling due in November 2020.

Memorandum of Understanding (MoU)

Eastern Cluster Cooperation Agreement (ECCA) was signed on 17.09.2019 between Rosneft, Russia and Indian Consortium consisting of OVL, BPRL, IOCL and OIL to widen the scope of cooperation between India and Russia in E&P sector.

Significant events in the area of Exploration & Operations:

1. OVL achieved the highest ever production of 14.981 MMTOE in FY'20.



2. ACG, Azerbaijan:

The execution of Azeri Central East project, involving engineering, fabrication and installation of processing and drilling rig platform, commenced in April 2019. The project is scheduled to deliver first oil in the year 2023 and envisages cumulative incremental production of 300 Million Barrels (MMBBLs).

3. Sakhalin 1 , Russia

- During FY'20, Sakhalin-1 Consortium decided to build 6.2 MMT/year Russian Far East LNG plant as a part of Chayvo Phase-2 gas development. Phase 2 development envisages monetizing huge gas reserves, in excess of 6 Trillion Cubic Feet (TCF), pending for long due to lack of suitable monetization option.
- During FY'20, Sakhalin-1 project achieved highest ever yearly average production of 258.5 Thousand Barrels of Oil Per Day (KBOPD).

4. Rovuma Area-1, Mozambique :

- Area 1 Concessionaires have taken Final Investment Decision (FID) for the initial two-train Golfinho/Atum Project on 18.06.2019.
- Area-1 has executed LNG Sale Purchase Agreements (SPAs) for a significant volume.
- Area-1 consortium obtained First Mover status with approval of the Shared Facilities Construction Proposal from Government of Mozambique (GoM) on 20.03.2019. This enables Area-1 to lead the construction of the onshore facilities shared by Area-1 and Area-4.

5. GPOC, South Sudan: First oil achieved from El-Nar and El-Toor field of Block 1, 2 & 4 on 30.04.2019 and 30.05.2019 respectively.

6. SPOC, South Sudan: Block 5A Exploration and Production Sharing Agreement (EPSA) extension has been offered by Government of South Sudan up to the year 2037 along with the extension of exploration period for 54 months i.e. till July 2024. The resumption activities are underway in the field, while execution of addendum to EPSA is awaited.

7. CPO-5, Colombia: The Block is currently producing from two wells. Further 3D seismic API and drilling of exploration and appraisal wells has been planned.

8. BM SEAL-4, Brazil :

- Two wells were drilled during the year, and initial results are encouraging. Further studies are in progress.
- The first well MB-2 encountered oil and gas and during Testing (DST), the well flowed approx. 600,000 m³/d of gas and 475 m³/d of condensate. The second well MB-9, additional exploratory well over MWP, encountered oil & water in different sand columns. Currently, all discoveries made in Moita Bonita PAD are being evaluated by Operator for an Integrated Development Project.

9. A1 and A3 Myanmar:

- Under new Exploration Program in Block A-3, drilling of 3 exploratory wells commenced on 24.11.2019.
- Drilling of first well Kissapanadi was completed on 26.12.2019, with insignificant gas show.
- Second well, Mahar-1 has been established as a new gas discovery with an estimated gas in place (GIIP) of 1,056 billion cubic feet/BCF (2C). The well flowed gas at 38 MMSCFD (Million standard cubic feet per day) with 12 m net pay interval.

- Drilling of third exploratory well **Yan Aung Myin-1** was completed on 04.04.2020, with insignificant gas show.

10. Block 06.1, Vietnam:

- Drilling of exploratory well PLDCC-1X-ST1 has achieved success with the discovery of Permeable Low-Density Cellular Concrete (PLDCC) field. Plan is in progress for drilling of an appraisal well in 2020.
- PSC Extension for the block 06.1, in view of discovery in PLDCC, is under process.

Direct Subsidiaries and Joint Ventures of OVL:

- i. **ONGC Nile Ganga B.V. (ONGBV):** ONGBV, a subsidiary of OVL, is engaged in E&P activities directly or through its subsidiaries/JVs in Sudan, South Sudan, Syria, Venezuela, Brazil and Myanmar. ONGBV holds 25% Participating Interest (PI) in Greater Nile Oil Project (GNOP), Sudan with its share of oil production of about 0.097 MMT during FY'20. OVL has exited from GNOP Sudan w.e.f 31.08.2019. ONGBV also holds 25% PI in Greater Pioneer Operating Company (GPOC), South Sudan. Production from GPOC, South Sudan resumed on 25.08.2018 after prolonged shutdown since December 2013 and produced 0.564 MMT in FY'20.

ONGBV holds 16.66% to 18.75% PI in four Production Sharing Contracts in Al Furat Project (AFPC), Syria. Due to force majeure conditions in Syria, there was no production in AFPC project during FY'20. ONGBV holds 40% PI in San Cristobal Project in Venezuela through its wholly owned subsidiary ONGC Nile Ganga (San Cristobal) BV with its share of oil & oil equivalent gas production of about 0.175 MMTOE during FY'20. ONGBV holds 27% PI in BC-10 Project in Brazil through its wholly owned subsidiary ONGC Campos Ltd. with its share of oil and oil equivalent gas

production of about 0.577 MMTOE during FY'20. It also holds 25% PI in Block BM-SEAL-4 located in deep-water offshore, Brazil through its wholly owned subsidiary ONGC Campos Ltda. ONGBV also holds 8.347% PI in South East Asia Gas Pipeline Co. Ltd., (SEAGP) for onshore Pipeline project, Myanmar through its wholly owned subsidiary ONGC Caspian E&P B.V.

- ii. **ONGC Narmada Limited (ONL):** ONL has been retained for acquisition of future E&P projects in Nigeria.

- iii. **ONGC Amazon Alaknanda Limited (OAAL):** OAAL, a wholly-owned subsidiary of OVL, holds stake in E&P projects in Colombia, through Mansarovar Energy Colombia Limited (MECL), a 50:50 joint venture company with Sinopec of China. During FY'20, OVL's share of oil and oil equivalent gas production in MECL was about 0.419 MMTOE.

- iv. **Imperial Energy Limited (IEL):** IEL, a wholly-owned subsidiary of OVL incorporated in Cyprus, has its main activities in the Toms region of Western Siberia, Russia. During FY'20, Imperial Energy's oil and oil equivalent gas production was about 0.241 MMTOE.

- v. **Carabobo One AB:** Carabobo One AB, a subsidiary of OVL incorporated in Sweden, indirectly holds 11% PI in Carabobo-1 Project, Venezuela. During FY'20, OVL's share of oil and oil equivalent gas production was about 0.094 MMTOE.

- vi. **ONGC BTC Limited:** ONGC BTC Limited holds 2.36% interest in the Baku-Tbilisi-Ceyhan Pipeline ("BTC") which owns and operates 1,768 km oil pipeline running through Azerbaijan, Georgia and Turkey. The pipeline mainly carries crude oil from the ACG fields from Azerbaijan to the Mediterranean Sea.

- vii. **Beas Rovuma Energy Mozambique Limited (BREML):** BREML was incorporated



in British Virgin Islands (BVI) and has been migrated to Mauritius w.e.f. 23.01.2018. OVL holds 60% shares in BREML and the balance 40% are held by Oil India Ltd. BREML holds 10% PI in Rovuma Area 1, Mozambique.

viii. ONGC Videsh Atlantic Inc. (OVAL): OVL has setup a Geological and Geophysical (G&G) Centre at Houston, USA through its wholly owned subsidiary ONGC Videsh Atlantic Inc. The Centre caters to requirement of OVL including G&G studies of its existing portfolio of projects.

ix. ONGC Videsh Rovuma Limited, Mauritius: ONGC Videsh Rovuma Limited a wholly owned subsidiary of OVL was incorporated in Mauritius for re-structuring the 10% PI in Rovuma Area 1, Mozambique.

x. ONGC Videsh Rovuma Limited, India: OVL transferred its entire 10% PI in Rovuma Area-1 to its wholly owned subsidiary ONGC Videsh Rovuma Limited, incorporated in India, on 01.01.2020.

xi. ONGC Videsh Singapore Pte. Ltd.: This company was incorporated by OVL on 18.04.2016 in Singapore for acquisition of shares in Vankorneft, Russia, through its subsidiary ONGC Videsh Vankorneft Pte Limited (OVVL). OVVL holds 26% shares in Vankorneft, Russia and its share of production during FY'20 was 4.981 MMTOE.

xii. Indus East Mediterranean Exploration Ltd.: Indus East Mediterranean Exploration Limited, a wholly owned subsidiary of OVL was incorporated in Israel on 02.02.2018 and engaged in E&P activities related to Block-32, Offshore Israel.

xiii. ONGC Mittal Energy Limited (OMEL): OVL along with Mittal Investments Sarl (MIS) promoted OMEL, a joint venture company incorporated in Cyprus. OVL and MIS together hold 98% equity shares of OMEL in

the ratio of 49.98:48.02, remaining 2% shares are held by SBI Capital Markets Ltd. OMEL also holds 1.20% of the issued share capital of ONGBV by way of Class-C shares issued by ONGBV exclusively for Syrian Assets and is being financed by Class-C Preference Shares issued by ONGBV.

xiv. SUDD Petroleum Operating Company: SUDD Petroleum Operating Company (SPOC), a Joint Operating Company incorporated in South Sudan to operate in Block 5A, South Sudan in which OVL, Petronas and Nilepet of South Sudan holds 24.125%, 67.875% and 8% PI respectively. Block 5A is located in the prolific Muglad basin and is spread over an area of about 20,917 SKM.

xv. MozLNG1 Holding Company Ltd: The MozLNG1 Holding Company Ltd incorporated at Abu Dhabi Global Market (ADGM), UAE by the Area-1 Concessionaires with shareholding in proportion to the PI holding in Area-1 Concession Contract as part of the Area 1 Project Finance Structure for the initial two train LNG development. OVL and BREML, as Concessionaires in Area 1 Concession Contract, each holds 10% shareholding in MozLNG1 Holding Company Ltd. The MozLNG1 Holding Company Ltd owns 100% shares of Mozambique LNG1 Company Pte Ltd incorporated at Singapore for Marketing and Shipping activities and Moz LNG1 Financing Company incorporated ADGM for project financing activities.

xvi. Falcon Oil & Gas B.V. (FOGBV): FOGBV was incorporated in Netherlands on 02.02.2018. OVL's wholly owned subsidiary ONGBV holds 40% shares in FOGBV, IOC and BPRL holds 30% shares each though their respective Dutch subsidiaries. FOGBV holds 10% PI in Lower Zakum Concession for a period of forty years with effect from 09.03.2018. During FY'20, OVL's share of oil production was about 0.800 MMT.

b) Hindustan Petroleum Corporation Limited (HPCL)

Your Company holds 51.11% stake in HPCL, a Schedule 'A', Maharatna, and listed entity. HPCL owns and operates 2 major refineries – one at Mumbai (7.5 Million metric tonnes per annum - MMTPA) and the other one at Visakhapatnam (8.3 MMTPA). It also owns and operates the largest Lube Refinery in the country with a capacity of 428 TMT (thousand metric tonne). It has second largest share of product pipelines in India with a network of more than 3,370 Kms.

During FY'20, HPCL refineries achieved combined refining throughput of 17.18 Million Metric Tonnes (MMT) with capacity utilization of 109%. Both the Refineries were up-graded to produce BS VI compliant transportation fuels and BS VI grade petrol (Motor spirit-MS) and high speed diesel (HSD) were produced and distributed Pan India basis as per the timelines stipulated by Government of India. Mumbai Refinery achieved highest ever LOBS (Lube Oil Base Stock) production with 478 TMT. Vizag refinery has started the production of VLSFO (Very Low Sulphur Fuel Oil of Sulphur less than 0.5%) to meet the regulatory requirement of MARPOL (Marine Pollution) Protocol. Lower Refinery throughput during FY'20 (compared to FY'19 throughput of 18.44 MMT) was mainly due to planned shutdowns required for upgradation of the refineries for BS VI fuel and revamps of secondary units at Vishakhapatnam Refinery to cater to upcoming new primary processing units in Visakh Refinery Modernization Project (VRMP), a brown field expansion of the refinery at Visakhapatnam.

HPCL achieved combined Gross Refining Margin of USD1.02 per barrel during the year as compared to USD 5.01 per barrel during FY'19. Gross refining margins (GRMs) were lower in comparison to FY'19 mainly due to inventory losses and reduced cracks in Diesel, Liquefied Petroleum Gas (LPG) and Fuel Oil.

During FY'20, HPCL achieved the highest ever sales volume of 39.6 MMT compared to FY'19 sales of 38.7 MMT. Domestic sales of Petrol increased by 4.7% compared to FY'19 while LPG sales grew by 7.3 per cent.

HPCL commissioned record number of 1,194 new retail outlets and 245 new LPG distributorships during FY'20 taking the number of total retail outlets to 16,476 and LPG distributors to 6,110 as on 31.03.2020. With its thrust on natural gas as a new line of business, HPCL has commenced CNG sales at 476 outlets. Construction activities at Chhara LNG gasification terminal are in progress. HPCL is also participating in cross country natural gas pipelines in Joint venture with other companies.

Revenue from operations of HPCL for FY'20 was ₹ 2,874,169 Million (against ₹ 2,969,463 Million) and registered ₹ 26,373 Million as PAT during FY'20 as against ₹ 60,287 Million during FY'19. Decrease in PAT was mainly because of impact of inventory losses due to sharp fall in crude prices and exchange rate fluctuations. For FY'20, HPCL has proposed a final dividend of ₹ 9.75 per share.

Direct Subsidiaries of HPCL

i. Prize Petroleum Company Limited

Prize Petroleum Company Ltd (PPCL) is a wholly owned subsidiary of HPCL. PPCL is the upstream arm of HPCL and is in the business of Exploration and Production (E&P) of Hydrocarbons as well as providing services for management of E&P blocks.

ii. HPCL Bio Fuel Limited

HPCL Biofuels Ltd (HBL) is a wholly owned subsidiary of HPCL. The company was incorporated on 16.10.2009 as a backward integration initiative to foray into manufacture of ethanol. HPCL Biofuels Ltd. (HBL) is a wholly owned subsidiary company of



HPCL. HBL was promoted as a backward integration initiative to enable HPCL's foray into manufacturing of Ethanol for blending in Petrol. HBL presently has two integrated Sugar-Ethanol-Cogeneration plants at Sugauli and Lauriya in the state of Bihar.

iii. HPCL Rajasthan Refinery Limited

HPCL Rajasthan Refinery Ltd. (HRRL) is a joint venture of HPCL and Government of Rajasthan with 74% equity participation by HPCL and balance 26% by Government of Rajasthan. HRRL is setting up a 9 MMTPA capacity Greenfield refinery cum petrochemical complex in the state of Rajasthan. HPCL and the Government of Rajasthan entered into a revised Memorandum of Understanding on 18.04.2017 for the construction of the said Refinery with revised parameters. The revised Joint Venture Agreement was signed on 17.08.2017.

iv. HPCL Middle East FZCO

HPCL Middle East FZCO, a 100% Subsidiary of HPCL was incorporated on 11.02.2018 as a free zone company under Dubai Airport Free Zone and Establishment Card was issued on 22.03.2018. The company, established for trading of lubricants, greases, petrochemicals and refined petroleum products, commenced its operations thereby supplying HP Lubricants to 11 Countries.

c) Mangalore Refinery and Petrochemicals Limited (MRPL)

Your Company holds 71.63 % equity stake in MRPL, a Schedule 'A' Mini Ratna company and listed entity, which is a single location 15 MMTPA Refinery. Further, HPCL, another subsidiary of your Company, also holds 16.96% in MRPL.

MRPL's refinery is established with a versatile design with complex secondary processing units and a high flexibility to process Crudes of various API, delivering a variety of quality

products. Refining throughput of MRPL during FY'20 was lower at 14.14 MMT, against 16.43 MMT during FY'19, mainly due to unprecedented water scarcity faced during first quarter and minor landslide during second quarter of operation, aftermath of the intensified monsoon. This culminated in negative GRM of USD 0.23/bbl for FY'20 (USD 4.06/bbl during FY'19).

FY'20, Financial Performance: In stressed global market conditions, MRPL registered a standalone turnover of ₹ 6,07,515 Million (₹ 7,23,151 Million in FY'19) and recorded Net Loss of ₹ 27,076 Million (against Net Profit of ₹ 3,320 Million in FY'19). GRM for MRPL was negative at USD 0.23/bbl (against positive USD 4.06/bbl during FY'19). The primary reason for reduction in GRM/ profitability were disruptions in operations due to water shortage during Q1, landslide inside refinery during Q2 and impact of COVID in the last quarter.

Subsidiary of MRPL

ONGC Mangalore Petrochemicals Limited (OMPL)

ONGC Mangalore Petrochemicals Limited (OMPL), is a subsidiary of MRPL holding 51% and the balance 49% is held by your Company. OMPL has set-up Aromatic Complex with an annual capacity 914 Thousand Tons Per Annum (KTPA) of Para-xylene and 283 KTPA of Benzene in Mangalore Special Economic Zone (MSEZ) as a value-chain integration project aligning with MRPL's operations. OMPL has introduced a new product, viz., Paraffinic Raffinate in the export market and started sale of Heavy Aromatics in domestic market. Performance of OMPL during FY'20 was severely affected due to unprecedented fall in International prices of Para-Xylene and Benzene owing to various factors like Capacity additions in China, Crude volatility and US-China Trade issues etc. OMPL maintained excellent safety record of zero LTI

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(Lost time Injury) consistently during past 4 years.

d) Petronet MHB Limited (PMHBL)

During FY'20 your Company along with its subsidiary HPCL acquired additional 34.56% shares of PMHBL and post-acquisition both, your Company and HPCL, are maintaining the equal share holding as increased at 49.99%. This acquisition resulted better cost economics, revenue maximization and better synergetic opportunities for ONGC group.

PMHBL owns and operates a 362 kilometer (KM) multi-product pipeline to transport of MRPL's products from Mangalore to the hinterland of Karnataka. Total throughput of PMHBL for FY'20 was 2.93 MMT against 3.36 MMT in FY'19.

Associates and Joint Ventures:-

e) ONGC Petro additions Limited (OPaL)

OPaL is a mega petrochemical project established in Dahej SEZ and incorporated on 15.11.2006 for utilizing in-house production of C2-C3 and Naphtha from Hazira and Uran units of the Company. Total project cost of OPaL was ₹ 308,260 Million. Your Company, GAIL and GSPC holds 49.36%, 49.21% and 1.43% of equity shares of OPaL respectively.

OPaL was commissioned in 2016-17 and has been ramping up its production in phases. OPaL has established itself in domestic/export market with sale of prime grade products. OPaL operated at average 88% capacity in FY'20; and aggregated more than 1.6 Million Tones of polymer and chemical sales.

OPaL has obtained Food Grade approvals for all polymer grades as per US-FDA, EU and Indian standard. OPAL has also obtained RoHS-III approval for all these polymer grades as per EU directive. During the year, much awaited Hazira Dahej Naphtha Pipeline

was commissioned which will reduce the feed cost to OPaL and increase the profitability.

Total Income of OPaL during FY'20 was ₹ 102,071 Million (against ₹ 97,854 Million in FY'19) and posted loss after tax of ₹ 20,897 Million (₹ 14,203 Million during FY'19).

f) ONGC Tripura Power Company Limited (OTPC)

OTPC was incorporated on 27.09.2004 as a joint venture of your Company. Currently your Company holds (50%) along with the Government of Tripura (0.5%) and IL&FS Energy Development Co. Ltd. (IEDCL - an IL&FS subsidiary) (12.03%); IL&FS Finance (13.79%) and Global Infrastructure Partner 23.5%.

OTPC has a 726.6 MW gas based Combined Cycle Power Plant at Palatana, Tripura with two generating units with equal capacity. The basic objective of the project is to monetize idle gas assets of the Company in landlocked Tripura State and to boost exploratory efforts in the region. Power evacuation for both the units is done through 663 KM long 400 KV double circuit transmission network by North-East Transmission Company Limited (NETC), a joint venture of Power Grid Corporation, OTPC and Governments of the North-Eastern states. Average Plant load factor (PLF) for FY'20 was 61%; mainly due to shut down of one unit for about six months.

Total Income of OTPC during FY'20 was ₹ 12,765 Million (against ₹ 14,558 Million in FY'19) and PAT was ₹ 705 Million (against ₹ 2,139 Million during FY'19).

g) ONGC TERI Biotech Limited (OTBL)

OTBL is a JV formed and incorporated on 26.03.2007 by your Company (49.98%) along with The Energy Research Institute (TERI) (48.02%) and the balance 2% shares are held by individuals. OTBL has developed various Biotechnical Solutions for oil and gas Industry



through collaborative researches involving the Company and TERI. These technologies include Bioremediation, Paraffin Degrading Bacteria (PDB), Wax Deposition Prevention (WDP) and Microbial Enhanced Oil Recovery (MeOR) which are being provided to oil and gas industries both in India and abroad.

Total Income of OTBL during FY'20 was ₹ 262 Million (against ₹ 245 Million in FY'19) and PAT was ₹ 75 Million (₹ 67 Million during FY'19).

h) Dahej SEZ Limited (DSL)

DSL, a 50:50 JV of the Company along with Gujarat Industrial Development Corporation, was formed and incorporated on 21.09.2004 for establishing a multi-product SEZ at Dahej. Your Company has set up C2-C3 Extraction Plant as a value-chain integration project in this SEZ, which serve as feeder unit to ONGC Petro-additions Limited, JV of your Company.

Revenue from Operations of DSL during FY'20 was ₹ 649 Million (compared to ₹ 578 Million in FY'19) and PAT was ₹ 461 Million (against ₹ 330 Million during FY'19).

i) Mangalore SEZ Limited (MSEZL)

MSEZ is a Special Economic Zone promoted by the Company with an equity stake of 26% along with KIADB (23%), IL&FS (50%), OMPL (0.96%) and KCCI (0.04%). MSEZ, was set up and incorporated on 24.02.2006 for development of necessary infrastructure to facilitate and locate industrial establishments including OMPL. MSEZ is operational since April 2015.

Total Revenue of MSEZL during FY'20 was ₹ 1,741 Million (against ₹ 2,068 Million in FY'19) and loss after tax of ₹ 316 Million (PAT ₹ 24 Million during FY'19).

j) Pawan Hans Limited (PHL)

PHL, an Associate of the Company, with 49% holdings, was formed with the

Government of India holding remaining 51% of the capital, primarily for catering to the logistic requirements of offshore and other remote area oil fields. PHL is a Mini Ratna-I Category PSU, having fleet of 43 helicopters. The Government of India is in the process of identifying a strategic investor for its entire holding and hence, your Company has also decided to exit PHL along with the Government.

k) Petronet LNG Limited (PLL)

Petronet LNG Limited (PLL), a JV of the Company, which was incorporated on 02.04.1998 with 12.50% equity holding along with identical stakes held by other Oil PSU co-promoters viz., IOCL, GAIL and BPCL, is a listed Company. PLL, one of the fastest growing world-class companies in the Indian energy sector, has set up the country's first LNG receiving and regasification terminal at Dahej, Gujarat, and another terminal at Kochi, Kerala. While the plant at Dahej terminal has 17.5 MMTPA capacity, the Kochi terminal has capacity of 5 MMTPA.

PLL has recorded total Revenue of ₹ 355,620 Million during FY'20 as compared to ₹ 383,954 Million in the previous year. Further, PAT of PLL was ₹ 27,609 Million in FY'20 as compared to ₹ 22,306 Million in FY'19. PLL has proposed a final dividend of ₹ 7 per share for FY'20.

l) Indradhanush Gas Grid Limited (IGGL)

Your Company has subscribed 20% equity capital in IGGL, a JV company along with IOCL, GAIL, OIL and NRL, formed and incorporated on 10.08.2018 for the purpose of laying 1,656 KM pipeline covering north-east states with a Capex of ₹ 92,650 Million. IGGL has initiated the project related activities. MoPNG has already approved Viability Gas Funding (VGF) of ₹ 55,590 Million which is 60% of the project cost.

Total Income of IGGL during FY'20 was ₹ 17 Million (against ₹ 6 Million in FY'19) and the

net loss during the year stood reduced at ₹ 53 Million (₹ 121 Million during FY'19).

m) Rohini Heliport Limited (RHL):

Your Company has subscribed 49% equity capital in Rohini Heliport Limited with Government of India's stake as 51%, RHL is a mirror company of Pawan Hans Limited incorporated on 07.01.2019 for enabling disinvestment of PHL.

n) Companies Which Have Become/ Ceased To Be Company's Subsidiaries, Joint Ventures And Associates Companies during FY'20

- a) Companies which has become subsidiaries: NIL.
- b) Companies which has ceased to be subsidiaries: NIL.
- c) Companies which has become a joint venture or associate: NIL.
- d) Companies which has ceased to be a joint venture or associate: NIL.

24. Start-up Initiative

'ONGC Start-up Fund' (the Fund) was initiated with ₹ 1,000 Million on the 60th foundation day of the Company (on 14.08.2016) towards fostering, nurturing and incubating new ideas related to energy sector and to promote entrepreneurship among young Indians. Through the Fund, your Company intends to create an ecosystem that is conducive for growth of Start-ups having technology-enabled ideas in the energy sector.

The Fund provides support measures such as seed capital, hand-holding, mentoring, market linkage and follow-ups, through engagement with selected Start-Ups, in collaboration with SINE of IIT Bombay and L-Incubator of IIM-Lucknow (Incubators).

The Fund periodically invites application for support from budding Start-ups. Seven

proposals for investments aggregating to ₹ 315 Million have been firmed, out of which ₹ 210 Million has been disbursed. There are several proposals from many Start-ups seeking funding support which are at different stages of evaluation and due-diligence for investment.

Solar Chulha Initiative

Your Company also supported installation of 86 solar electric Chulhas and 5 solar thermal Chulhas in Betul village in Madhya Pradesh, as a pilot project. These Chulhas are working efficiently and the villagers have migrated to these newly installed Chulhas for their domestic purposes.

25. Health, Safety and Environment (HSE)

Being a high risk industry, safety of employees is the top-most priority of your Company. Hydrocarbon Exploration & Production (E&P) operations are being carried out in varied climatic regions ranging from deserts to coastal areas, hilly terrains to forests, shallow to deep water and also in ultra-deep water areas. E&P activities often interact with the ecosystems and may have physicochemical and bio-geochemical impact on the surrounding Environment. Your Company, being a responsible Corporate makes all efforts for protection and preservation of Environment.

The Company has a robust HSE Policy including e-Waste Policy in line with the existing rules, regulations and guidelines. Your Company has established a dedicated Institute, viz. Institute of Petroleum Safety, Health and Environment Management (IPSHEM) at Goa, for research and development in the field of Health, Safety and Environment Management apart from conducting training programs.

Your Company takes all the requisite measures to minimize the impact of E&P activities on the environment by adoption of clean technologies for gaseous emissions, liquid effluent and solid waste generated out of its operations. Your Company has implemented globally recognized



Quality, Health, Safety and Environment (QHSE) Management System conforming to requirements of QHSE Certifications ISO 9001, ISO 14001 and ISO 18001 (OHSAS) and certified by reputed agencies for Occupational Health and Safety Assessment Series at all the operational units. Corporate guidelines on online incident reporting, investigation and compliance of audit observations have been developed and implemented for maintaining uniformity throughout the organization in line with the best international practices.

HSE Highlights

Internal Safety Audits and External Safety Audits

To check the conformity of activities and processes with the existing HSE management systems as well as to prevalent rules, regulations, guidelines and standards, regular internal audits are being conducted by multi-disciplinary teams of the Company. During the year, Internal Safety Audits were conducted at 266 Installations. In addition, external safety audits are conducted periodically by Oil Industry Safety Directorate (OISD) and the Directorate General of Mines Safety (DGMS).

OISD conducts Safety Audits on regular basis. During FY'20, 55 Safety Audits/ Surprise Safety Audits and 2 Pre-Commissioning Audits were conducted by OISD. Compliance status for the observations raised by OISD as on 31.03.2020 was 94.05 per cent.

DGMS is a Regulatory Agency under the Ministry of Labour and Employment, Government of India in matters pertaining to occupational safety, health and welfare of persons employed in mines including oil-mines. It carries out periodic inspections of onshore facilities of the Company. During FY'20, DGMS carried out inspections at 143 Installations. Compliance status for the contraventions raised by agency as on 31.03.2020 was 97.69%.

Concerted efforts are being made to liquidate Safety Audit Recommendations within the stipulated timelines. Expected date of completion for compliance of audit observations is firmed up based on the criticality and volume of work involved. Suitable compensatory safety measures are put in place till the audit observations are complied with.

Waste Water Management: Your Company monitors the usage of waste water and maintains the quality of effluent discharged conforming to statutory requirements specified for discharge of treated effluent at surface/ subsurface. The Company has 32 number of Effluent Treatment Plants across onshore work centers to treat approx. 92,710 m³/day of waste water produced during E&P operations. For Offshore effluent treatment, Produced Water Conditioners have been installed at process platforms. Sewage Treatment Plants for treatment of sewage water generated are also provided at offshore facilities.

Solid Waste Management: For environmentally safe disposal of oily waste, OTBL has developed specialized patented technology for bioremediation of oily sludge/oil contaminated soil. The technology uses a consortium of Hydrocarbon degrading bacteria which reduces the Total Petroleum Hydrocarbons levels in waste/soil to less than 1 per cent. During FY'20, 65,225 Metric Tones of oily sludge/oil contaminated waste has been bio-remediated.

Environmental Clearances: During the year FY'20, your Company received 10 environment clearances (ECs) from Ministry of Environment, Forest and Climate Change (MoEFCC) for carrying out exploration, development and production activities in 77 fields in onshore and offshore areas. Approvals were also accorded for drilling of 302 exploratory and 6 development wells, setting up of a Central Processing Facility, Deen Dayal Development project in KG Offshore and Expansion of Onshore Gas Terminal and Central Processing Plant in KG Offshore.

Regular interactions with Forest officials of Central and State Governments followed by their

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field visits to the Company's operational sites at Jorhat and Damoh resulted in issuance of new Guidelines dated 30.09.2019 by MoEFCC simplifying the procedures for carrying out seismic surveys and exploratory drilling in forest areas and resulting in substantial savings of resources and time for E&P industry

Since 2013, your Company has been accredited by Quality Council of India (QCI) – National Accreditation Board for Education & Training (NABET) as an EIA Consultant Organization which is a prerequisite for preparing EIA reports for accord of ECs by MoEFCC. The Company has been re-accredited third time in a row with validity extending up to 26.05.2021. The accreditation is beneficial in securing the ECs for Company's projects.

Other Initiatives:

- An ambitious awareness campaign implemented during FY'20 on **Ten Safety Rules** has been carried out at all installations in which 10,789 personnel participated. In addition, 52,500 personnel have participated since its launch during FY'17.
- HSE Index, introduced during FY'18, for benchmarking installations on various parameters like detection and suppression system, environment parameters, evacuation systems, and equipment integrity, has been implemented at all work centres.
- Regular Mock drills are being conducted at installations/rigs to check the efficacy of preparedness against defined emergency scenarios. During FY'20, nearly 13,000 mock drills were conducted.
- Mines Vocational Training - MVT is being imparted to both the Company employees and contract personnel through 10 in house training centres. During FY'20, 4,110 personnel (1,035 Company Employees and 3,075 Contractual Personnel) were trained.
- In order to enhance the safety standards as well as ensure proactive measures, your

Company has taken a unique initiative of issuing Predictive Safety Alerts using data analytics. Analysis of past accidents data, near misses and audit observations for the last five years is carried out and correlated to publish predictive safety alerts based on which Installations are advised about the potential risks and the mitigation measures in order to minimise the risks.

- Safety Alert is a brief guidance material that highlights an incident or unsafe practice and outlines the required action to prevent their occurrence. The information is disseminated to stakeholders for evaluation and taking appropriate action. Such alerts are regularly uploaded on Company's internal portal ongcreports.net for wider circulation and awareness among those involved in operations along with Safety Advisories for generic audit observations and their compliances to help improve the safety measures.
- Your Company renewed the agreement entered with OTBL on 08.05.2019 for further ten years for Bioremediation of Oily Wastes and other Microbial techniques for enhanced Oil recovery at various work centre of the Company.
- Your Company is a participant member of Oil Spill Response Limited (OSRL), UK for availing Tier-III Oil Spill Response services. During FY'20, Annual Preparedness Review was organized with OSRL on 21.01.2020 at Mumbai which was attended by participants from Offshore Assets.
- World Environment Day was celebrated on 05.06.2019 on the United Nations Environment Program (UNEP) Theme - Air Pollution, at all work centres of the Company. At the registered office of the Company, a talk by Director General of the Centre of Science and Environment and leading environmentalist, Padmashree Ms. Sunita Narain was organized.



- An e-book titled “Connecting with the Biodiversity of ONGC” was released, based on information collected during baseline studies for EIA of the E&P projects of operational areas of the Company. The book is a repository of natural sights, forest, land pastures and water bodies and also the various species of flora and fauna which include endangered and near threatened species. This repository basically aims to create awareness/sensitization by sharing information which would be useful for all the inhabitants of the Company’s operational areas.
- Your Company showcased its efforts on Bio-diversity Conservation at the 13th Conference of Parties of the Convention on migratory species on the theme “Migratory species connect the planet and together we welcome them home”, under the aegis of United Nations Environment Programme, hosted by India during 17.02.2020 to 22.02.2020 at Gandhinagar, Gujarat in which 129 countries participated. As an exhibitor, your Company showcased efforts for Bio-diversity conservation and future conservation action plan of the migratory species. “Green Hub project” sponsored by the Company was also showcased wherein youth from across North East India were trained in wildlife videography who are currently engaged in various assignment related to conservation of biodiversity and documentation.

26. Carbon Management and Sustainable Development

Clean Development Mechanism (CDM):

Climate change and global warming arising out of human activities is the biggest concern globally. Meeting the challenges require proactive innovative solution to sustain economic activities with minimal impact on environmental systems. So far the Company

has registered 15 CDM projects with the United Nations Framework Convention on Climate Change (UNFCCC) under the Kyoto protocol, demonstrating its commitment towards protection of our environment and sustainable development. During FY’20, following three new projects are under validation process for registration as CDM projects:

- 5 MW solar power project at Ankleshwar,
- 1 MW solar power project at IPSHEM-Goa, and
- Rooftop solar power projects at work centres of Gujarat, Assam and Dehradun.

As on 31.03.2020, your Company had 2,209,417 Certified Emission Reductions (CERs) in CDM account [1 CER = 1 ton CO₂ equivalent].

Greenhouse Gas (GHG) Accounting and Mitigation:

Your Company aims to reduce GHG emissions by focusing on energy efficiency. Greenhouse Gas Accounting of the Company is being carried out every year based on GHG protocol and is disclosed in Sustainability Report of the Company.

Global Methane Initiative:

The Global Methane Initiative (GMI) is an action-oriented initiative from United States Environment Protection Agency (USEPA) to reduce global fugitive methane emissions to enhance economic growth, promote energy security, improve the environment, and reduce greenhouse gases emission. Under this programme, during FY’20, GMI survey was conducted at Uran Plant, Hazira Plant and 17 production installations of Assam Asset. Since 2007, the Company could prevent approximately 20.48 MMSCM of methane gas leakages in to the atmosphere with an environmental benefit of approximately 306,250 ton CO₂ Equivalent (TCO₂e) through this programme.

Solar and wind energy initiatives:

During FY'20, the Company has implemented 7 MW of Solar Power Plants and projects for 6.6 MW are under the final stages of implementation. The total Installed Capacity of Solar power as on 31.03.2020 was 25 MW. The solar capacity of the Company would increase further to 50 MW by 2020-21. Further, two wind power projects - 102 MW at Jaisalmer, Rajasthan and 51 MW at Kutch, Gujarat – are operational. The total installed capacity of Renewable Energy of your Company as on 31.03.2020 stood at 178 MW.

Replacement of conventional lights with LED lighting:

During FY'20, 73,000 conventional lights were replaced with LED lights across various work centers of the Company, taking the total to 2.75 Lakhs LED Lights under implementation of LED lighting program. This initiative has helped in reduction of carbon intensity and saving of ₹ 357 Million annually.

Micro Turbines and Dynamic Gas Blending system:

As a part of sustainability initiative, this year also, the use of Micro Turbines and Dynamic Gas Blending systems (in diesel engines of drilling rig) were taken up in different locations of the Company.

Carbon Capture, Storage and Utilisation (CCSU)

CCSU is the only clean technology capable of decarbonising major industrial sectors including refining and petrochemicals. As per the recommendations of Task force constituted by Ministry of Coal, under the aegis of TIFAC (Technology, Information, Forecasting and Assessment Council), roadmap of CCUS for India is being prepared. Your Company, being party to the task force, proposed CO₂-EOR as the top priority area for utilization of anthropogenic CO₂. Further, your Company signed an MoU with Indian Oil Corporation Limited (IOCL) on

01.07.2019 for CO₂ based EOR in Gandhar Field of the Company by injecting CO₂ captured from IOCL's Koyali refinery into specially prepared wells. Presently feasibility study is being conducted by the Company for assessing the requirements of surface facilities, quantity of CO₂ required and financial implications.

Electric Vehicle pilot project

Your Company promotes the use of clean fuel in its operations as well as transportation. In March 2019, first batch of 5 electric vehicles were flagged off under pilot project at Delhi, in collaboration with Energy Efficiency Services Limited, a joint venture of Central Public Sector Enterprises (CPSEs) under Ministry of Power, Gol.

Video Conferencing- a step towards mitigating scope-3 emission

Taking advantage of the digital revolution like broadband and web-cam, your Company has adopted video conferencing for interaction of top management with key executives across the work centers. Presentations and business meetings are being held through video conferencing which reduces the travel cost, saves executive man-hours and mitigating scope-3 emissions from air travel. Besides that, your Company has been utilising video conferencing and other audio-video means extensively to mitigate the constraints due to pandemic COVID-19.

Sustainable Water Management

Different types of water management projects like rain water harvesting projects, sewage treatment plants, and re-use of produced water were implemented in line with existing policies of the Company. A large rainwater harvesting project at the IPSHEM, Goa harvests the run-off water from the large institute campus in a 1000 m³ capacity ground tank and utilizes the harvested water for its various utilities and for conducting training programmes on fire fighting. As a way forward, Uran plant of your Company



will be setting up a 10,000 m³/day capacity Seawater Desalination Plant, scalable to 20,000 m³/day capacity, which will eliminate the total fresh water requirement of the plant, in couple of years from now. With this project alone, your Company's water footprint would be reduced initially by 16% and upto 32% with the scaling up of capacity of the plant.

ONGC Group Sustainability Report:

Your Company launched its independently assured 'Sustainability Report' in the year 2009-10 and from then onwards the Company gradually expanded the boundary of reporting by including its subsidiaries and JVs. The report is prepared based on Global Reporting Initiative (GRI) Standard and independently assured through third party assurers as per AA 1000 AS Standard. ONGC Group Sustainability report FY'19 was released on 19.03.2020. Copy of reports may be accessed at www.ongcindia.com

27. Business Responsibility Report

Clause (f) of sub-regulation (2) of regulation 34 of SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015, stipulates that the Annual Report shall contain a Business Responsibility Report describing the initiatives taken by the listed entity from an environmental, social and governance perspective in the format specified. Accordingly, the Business Responsibility Report for FY'20 has been appended to this Annual Report.

28. Internal Financial Control System

Your Company has put in place adequate Internal Financial Controls by laying down policies and procedures to ensure the efficient conduct of its business, safeguarding of its assets, prevention and detection of frauds and errors, accuracy and completeness of the accounting records, and timely preparation of reliable financial information commensurate with the operations of the Company. Effectiveness of Internal Financial Controls is ensured through

management reviews, self-assessment and independent testing by the Internal Audit Team indicating that your Company has adequate Internal Financial Controls over Financial Reporting in compliance with the provisions of the Companies Act, 2013 and such Internal Financial Controls are operating effectively. The Audit Committee reviews the Internal Financial Controls to ensure its effectiveness for achieving the intended purpose. Independent Auditors Report on the Internal Financial Controls of the Company in terms of Clause (i) of Sub-Section 3 of Section 143 of the Companies Act, 2013 by the Statutory Auditors is placed along with the Financial Statements.

29. Human Resource Development

Your Company's operations are in challenging terrains – deserts, jungles, border areas, remote fields and offshore. Your Company truly values its Human Resource, i.e., ONGCians who commit themselves towards pursuit of E&P of hydrocarbons to ensure India's Energy security. To keep their morale high, your Company extends welfare benefits to employees and their dependents by way of comprehensive medical care, education, housing, social security and other facilities.

There were 30,105 employees on rolls as on 31.03.2020. These ONGCians dedicated themselves for securing excellent performance of your Company during the year. The workforce in-take strategy pursued by your Company caters to meet the demands of maintaining a steady flow of talent, in a business which is characterized by high risks and uncertainties, enormous costs, rapid technological advances, physically challenging work environment, fluctuating product prices and growing competition. Your Company's talent management strategy is focused on building an optimal and competent workforce to meet business needs, and it is also centered around workforce planning and talent acquisition, performance management, capacity building, career growth, succession planning and leadership development.

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During FY'20, 15,416 executives and 5,044 non-executives were imparted appropriate training in relevant domains/ areas, spanning 163,156 executive and 17,966 non-executive training days.

During FY'20, 697 Graduate Trainees (GTs), in five batches, were familiarized with various E&P activities as part of 'Induction Training'. For the first online onboarding training programs were organized for 442 newly joined GTs from all work centers. Induction Program for Unionized Category Employees on their elevation to executive cadre was introduced by ONGC Academy in association with Skill Development Centres. Five training programmes were conducted through foreign faculty which were attended by 118 participants. Your Company also pursued structured initiatives for maintaining a vibrant academia – industry interface through Chairs, participation in various academia-industry level forums, which conduct workshops, seminars, and conferences.

Major Emergency Management trainings were conducted through in-house faculty for the first time for Offshore Installation Managers. Four-day Emergency Management training was introduced and second line managers of Offshore were trained as per Emergency Response plans of the Company.

In 2019, your Company introduced two focused leadership development programmes for junior and middle level executives - FuEL programme (Future Energy Leaders) for E1 to E3 level executives and OYL programme (ONGC Young Leaders) for E4 and E5 level executives. These customized programmes were in association with Centres of Excellences (IIMs) to groom young executives as future leaders who will take ONGC to the next level.

Your Company also initiated a program for identification of competencies and development of leadership for its Mid – Level executives through Online Development Centres, with

detailed Individual Development Plans for their development based on the assessments.

To keep the workplace lively and the workforce engaged and vibrant, your Company also conducted 'Business Games' to hone the business acumen of its executives through business quizzes, business simulations and case-study presentations. During FY'20, a total of 260 teams and 1,029 executives participated in such games.

Similarly, 'Fun Team Games' (FTG) were organized for E0 and below level employees to inculcate MDT (Multi-disciplinary Team) concept and spirit of camaraderie and belongingness to the organization, which was very well received by the participants. 158 Teams comprising 632 employees participated in FTG organized during FY'20.

Employee Welfare Trusts

Your Company has established following Trusts for welfare and social security of employees:-

Employees Contributory Provident Fund (ECPF) Trust manages Provident Fund accounts of employees of your Company.

Post-Retirement Benefit Scheme (PRBS) Trust manages the pension fund of employees of your company. The Scheme was converted into a Defined Contribution Scheme in accordance with DPE guidelines in November 2013.

Composite Social Security Scheme (CSSS) formulated by your Company provides an assured ex-gratia payment in the event of unfortunate death or permanent disability of an employee while in service. In case of separation other than Death/ Permanent total disability, employee's own contribution along with interest is refunded.

Gratuity Fund Trust established for payment of gratuity as per the provisions of the Gratuity Act.



Your Company has a 'Sahyog Trust' for its Sahyog Yojana to provide ex-gratia financial grant for sustenance, medical assistance and treatment, rehabilitation, education, marriage of female dependent and alleviation of any hardship or distress to secure the welfare of the workforce and their kin, who do not have adequate means of support. The beneficiaries under this scheme include casual, contingent, daily rated, part-time, adhoc, contract appointees, and tenure based employees, apprentices and trainees engaged by your Company besides regular and past employees. Under the scheme, an amount of ₹ 50.10 Million was disbursed by the Trust during FY'20 to 1,170 beneficiaries.

Your Company has instituted **Asha Kiran Scheme** to meet the emergency needs of the ex-employees retired prior to 01.01.2007. The scheme was launched as per DPE guidelines with a corpus of 1.5% of profit before tax.

Implementation of Govt. Directives for Priority Section

Your Company complies with the Government directives for Priority Section of the society. The percentage of Scheduled Castes (SC) and Scheduled Tribe (ST) employees were 15.4 percent and 10.5 percent respectively as on 31.03.2020.

Your Company is fully committed for the welfare of SC and ST communities. The following welfare activities are carried out by your Company for their betterment in and around its operational areas:-

- **Annual Component Plan**

Under Annual Component Plan for SC/ST, every year allocation of ₹ 200 Million is made. Out of this, ₹ 60 Million is distributed amongst all the work-centres of the Company for taking up welfare activities for communities in and around areas of the Company's operations. In addition, ₹ 140 Million is managed centrally, and is earmarked for special projects/proposals/ schemes for the welfare of areas/

persons belonging to SC/ST communities. The amount under component plan is utilised for taking up various measures for the welfare and up-liftment of the needy people of the said communities. This fund is especially meant for providing help and support in Education and Training, Community Development and Medical and Health Care.

- **Scholarship to meritorious students**

Your Company provides 1,000 scholarship for meritorious SC and ST students for pursuing higher professional courses at different Institutes and Universities across the country in Graduate Engineering, MBBS, PG courses of MBA and Geo-Sciences. The major feature of the scheme is that the scholarships have been equally divided for both Boys and Girls students. The scholarship amount is extended up to ₹ 48,000/- per annum per student subject to conditions of the scheme.

Women Empowerment

Women employees constituted 7.3 per cent of your Company's workforce as on 31.03.2020. During the year, various programmes for women empowerment and development, including programmes on gender sensitization were organized. Your Company actively supported and nominated the women employees for programmes organized by reputed agencies. All middle level women executives underwent an Online Development Centre program for identification, assessment and development of leadership competencies. Special engagement initiatives were undertaken, such as story-writing contest, for sharing their unique journeys of courage and inspiration from the female perspective.

Disclosure under the Sexual Harassment

Your Company has complied with the provisions under the Sexual Harassment of women at workplace (Prevention, Prohibition and Redressal) Act, 2013 including constitution of Internal Complaints Committees (ICC) for

dealing with complaints of sexual harassment of women at workplace. Four complaints of sexual harassment were received during FY'20. Skill enhancement programs were conducted for members of ICC to equip them with requisite skill for enquiring into complaints. The Company also issued detailed guidelines for dealing with complaints of sexual harassment. A dedicated page on Prevention of Sexual Harassment, with useful resources on creating awareness, has been added on the internal portal of the Company.

Work-Life Balance

Your Company believes in provides an enabling environment for work-life balance of its employees. Townships at many work centres have developed facilities like gymnasiums, clubs, sports facilities and music rooms. Facilities for gym, sports, yoga, library, etc. are also provided in Offshore Living Quarters. During the year, outbound programmes with families were also organized at various work centres. In addition, cultural programmes involving employees and their families were also conducted involving ONGC Officers' Mahila Samiti and Resident Welfare Associations of Company's residential colonies. Your Company has an adventure wing named 'ONGC Himalayan Association' which organizes adventure programmes like mountaineering, trekking, water rafting, snow skiing, desert safari, Aero sports etc. which adds towards employee morale, engagement, team spirit, camaraderie, stress management and spirit to explore the unknown.

30. Industrial Relations

Your Company maintained harmonious Industrial Relations throughout the Company. Man-days loss due to internal industrial action was reported as 'NIL' for FY'20.

31. Compliance under the Right to Information Act, 2005

Your Company has a well-defined mechanism in place to deal with the RTI applications received

under the Right to Information Act 2005. Your Company has a designated senior level officer as a 'Nodal Officer' to oversee its implementation. The applications received are processed by the 22 executives designated as 'Central Public Information Officers' (CPIOs) in various work centres across the Company, in compliance of Sections 5(1) and 5(2) of the Act. The particulars of all the quasi-judicial authorities under the ambit of RTI Act, 2005 have been uploaded on the Company website ([www.ongcindia.com](http://www ONGCINDIA.COM)) for information of the general public. Further, in compliance of Government directives, your Company is successfully processing the online applications under the Act.

Your Company received 1,973 applications (including 34 transferred by other Public Authorities) during FY'20, and 206 RTI applications were carried forward from FY'19. Against 1,848 applications information as sought were provided, 57 applications were rejected and 44 applications were transferred to other public authorities, in accordance with the provisions of the RTI Act, 2005. There were 422 first appeals, which were disposed-off during the period. Additionally, 94 Second Appeals which were listed for hearing before the Central Information Commission during FY'20 were also processed.

32. Implementation of Official Language Policy

Your Company makes concerted efforts for promotion and implementation of Official Language. In this regard, some of the steps taken during the year were:

- Unicode Hindi software installed in all offices.
- Hindi workshops conducted at regular intervals in all work centres.
- Hindi technical seminars, 'kavi-gosthies', kavi-sammelans and Hindi plays were organized at various work centres.
- Various programmes for promotion of Hindi were organised at all work centres of the



Company during 'Rajbhasha Fortnight' (14-28.09.2019) and 'Vishwa Hindi Diwas' (10.01.2020).

- 17th Annual Official Language Review Meeting was held during 24-25.07.2019 at Guwahati.
- A two days Special Hindi workshop and 'Twarit Anuvad Prashikshan' program during 27-28.02.2020 for official language officers posted at various work centres of the Company and Members of Town Official Language Implementation Committee, Dehradun was organised.
- Your Company bagged 'Sarvotkrisht Rajbhasha Puruskar' from 'Vishwa Hindi Parishad' on 09.09.2019 at New Delhi.
- Hindi Teaching Scheme of Government of India was implemented effectively at all regional work centres of the Company.
- E-Roster of Employees regarding working knowledge of Hindi has been put in place.
- Hindi e-magazines were published by all work centres.
- Paperless office has been made bi-lingual for effective implementation of Official Language policy. Besides, Unicode has been installed in SAP platform for enabling bilingual working.

33. Sports

Your Company continued its support for development of sports in the country by providing employment opportunities to sportspersons and also granting scholarships to budding talents in 25 games. Your Company also sponsored various sports associations/ federations/ sports bodies for organizing sports events as well as developing sporting infrastructure. The support has enabled many sportspersons to achieve excel and bring home laurels for the nation and the organization. Some of the significant achievements of our sportspersons during the year were as follows:

- Nine ONGCians participated in 21st Commonwealth Championships held at Cuttack, in July, 2019 and won 6 Gold, 3 Silver and 1 Bronze medal.
- Mr. B. Sai Praneeth (Badminton), Mr. Harmeet Desai (Table Tennis) and Ms. Swapna Barman (Athletics - On Scholarship) were conferred the prestigious "Arjuna Award" instituted by Gol, for FY'19.
- The total number of National Awardees in the organization stood at 55:
 - o Padma Bhushan: 1 (Mr. Pankaj Advani);
 - o Padma Shri: 6 (Mr. Pankaj Advani, Mr. Koneru Humpy and Mr. Virat Kohli and three former ONGCians - Mr. Jaspal Rana, Mr. Virender Sehwag and Mr. Gautam Gambhir);
 - o Rajiv Gandhi Khel Ratna: 2 (Mr. Pankaj Advani and Mr. Virat Kohli);
 - o Arjuna Award: 44;
 - o Dhyanchand Award – 2 (Mr. Bhupender Singh and Mr. Manpreet Singh).
- Ms. M. R. Poovamma secured individual bronze medal for the country in Asian Championships at Doha and won 2 silver medals in relay races. Ms. Poovamma is also part of the Indian Squad which is being trained for 2021 Tokyo Olympics.
- Mr. Om Prakash Singh who is currently on training for Tokyo 2021, participated in the SAF games held at Kathmandu in December 2019. He won a silver medal in the games.
- ONGCian Mr. Sai Praneeth is the first Indian male badminton player in 36 years to win a bronze medal at the BWF World Championships in 2019 after Mr. Prakash Padukone in 1983. Sai Praneeth was honoured with the Arjuna Award in 2019. He also won Bronze medal at the World Championships in Basel and Japan Open, 2019.

- ONGCian Mr. Pankaj Advani, Padma Bhushan, Padma Shri, Rajiv Gandhi Khel Ratna, Arjuna Awardee, won GOLD Medal in World Billiards Championship (150-up format), in Myanmar, Sept 2019, in Asian Snooker Tour, Bangalore, April 2019, IBSF World Team Snooker Championship, Myanmar, Sept 2019 and in ACBS Asian Snooker Championship, Qatar, June 2019.

He won Silver medal in ACBS Asian Team Snooker, Doha, June 2019, World Cup Snooker Team Championship, Qatar, July 2019 and brought Bronze medal for the country in IBSF World 6 Red Snooker Championship, Myanmar, Sept 2019 and in ACBS Asian Billiards Championship, Chandigarh, May 2019

- Arjuna Awardee Mr. Shiva Thapa won Gold Medal and was declared as Best Boxer in 2nd India Open International Boxing Tournament at Guwahati in May 2019. Earlier in Asian Boxing Championship at Bangkok, Thailand in April 2019, he won Bronze Medal for India and Gold Medal in President's Cup International Boxing Tournament at Astana (Kazakhstan) in June 2019. Gold Medal in Olympic Test event at Tokyo in Oct 2019. Bronze Medal in 71st Boxing International Tournament Stranja Cup, at Stranja (Sofia) in Jan 2020.
- Padmashri and Arjuna Awardee, Ms. Koneru Humpy won the FIDE Women Grand Prix Tournament at Russia in Sept 2019 and finished 2nd in the FIDE Women Grand Prix Tournament, Monaco and established clear lead in the FIDE Women GP Series 2019-20 and won the World Women Rapid Chess Championship 2019, Russia in Dec 2019. She won the Cairns Cup Women International Tournament, St. Louis, USA in Feb 2020.
- ONGCian Mr. Virat Kohli has been ranked as one of the world's most famous athletes by ESPN and one of the most valuable athlete brands by Forbes. In April 2019, he was named the captain of India's squad for the 2019 Cricket World Cup.

In Nov 2019, he scored his 70th century (27 Test and 43 ODI) in international cricket which makes him the second most successful centurion in ODI cricket after Sachin Tendulkar. Virat Kohli has been given honours as Captain of ICC ODI Team of the Year: 2019, ICC Test Team of the Year: 2019, ICC Spirit of Cricket: 2019.

- Your Company organised the 3rd edition of the Para Games on 03.12.2019 on International Disability Day in which 210 PWDs from different work-centres of the Company including more than 20 players from 6 Oil PSUs participated. ONGC is the only public sector enterprise to organise Para Games to promote sporting talent of persons with disabilities.

34. Corporate Social Responsibility (CSR)

Your Company meticulously take care of its social responsibility and in this pursuit has spent ₹ 6,069.67 Million during the FY'20, which is higher than spending obligations of the Company for the year. Major highlights of CSR activities for the FY'20, is as under:

- 60% of CSR expenditure towards School Education, Nutrition and Healthcare as notified by DPE for CSR of CPSE's in 2019-20;
- 33% of CSR Budget executed towards Swachhta Projects as directed by MoPNG;
- CSR expenditure aligned towards achieving the objectives of UN Sustainable Development Goals, covering 12 out of 17 sustainable development goals;
- 20 Aspirational Districts adopted in 11 states where 599 projects have been implemented amounting to ₹ 61.51 Million benefitting 4 lakhs rural population;
- 4.30 Lakh patients benefitted through healthcare initiatives; and
- 4.98 Lakh students benefitted through educational initiatives.



A report on CSR and details of activities is enclosed with this report at **Annexure-B**.

Efforts of the Company has been recognized at various forums including the prestigious International recognition of S&P Platts Global Energy Awards, 2019 – the only Indian company to receive this award for CSR. Other host of awards are placed at **Annexure-C** of this Report.

35. Awards and Accolades

Consistent with the trend in preceding years, your Company, its various operating units and its senior management have been recipients of various awards and recognitions. Detail of such accolades is placed at **Annexure-C**.

36. Regulatory or Courts order

During FY'20, there was no order or direction of any court or tribunal or regulatory authority which either affecting Company's status as a going concern or which significantly affecting Company's business operations.

37. Directors' Responsibility Statement

Pursuant to the requirement under Section 134 of the Companies Act, 2013, with respect to Directors' Responsibility Statement, it is hereby confirmed that:

- a) In the preparation of the annual accounts, the applicable accounting standards were followed and there was no material departures from the same;
- b) The Directors had selected such accounting policies and applied them consistently and made judgments and estimates that were reasonable and prudent, so as to give a true and fair view of the state of affairs of the Company as at 31.03.2020 and of the profit of the Company for the year ended on that date;
- c) The Directors had taken proper and sufficient care for the maintenance of adequate accounting records in accordance with the

provisions of the Companies Act, 2013, for safeguarding the assets of the Company and for preventing and detecting fraud and other irregularities;

- d) The Directors had prepared the annual accounts of the Company on a 'going concern' basis;
- e) The Directors had laid down internal financial controls which were being followed by the Company and that such internal financial controls were adequate and were operating effectively; and
- f) The Directors had devised proper systems to ensure compliance with the provisions of all applicable laws and that such systems are adequate and operating effectively.

38. Corporate Governance

A detailed report on Corporate Governance as stipulated under Regulation 34(3) of SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015 is appended and forms part of the Annual Report.

39. Statutory Disclosures

Your Directors have made necessary disclosures, as required under various enactments including the Companies Act, 2013 and the SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015.

40. Annual Return

Pursuant to Section 134(3)(a) read with Section 92(1) of the Act, Annual Return of the Company is placed at <https://www.ongcindia.com/wps/wcm/connect/en/investors/annual-return/>

41. Particulars of Employees

Your Company being a Government Company, the provisions of Section 197(12) of the Companies Act, 2013 and relevant Rules issued thereunder are not applicable.

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The terms and conditions of the appointment of Functional Directors are subject to the applicable guidelines issued by the Department of Public Enterprises (DPE), Government of India. The salary and terms and conditions of the appointment of Company Secretary, a Key Managerial Person of the Company, and other employees are also in line with the parameters prescribed by the DPE.

42. Energy Conservation

The information required under section 134(3) (m) of the Companies Act, 2013, read with the Companies (Accounts) Rules, 2014, is annexed as **Annexure-D**.

43. Audit Committee

In compliance with Section 177(8) of the Companies Act, 2013, the details regarding Audit Committee is provided under Corporate Governance Report which forms part of this Annual Report.

There was no instance during FY'20, where the Board had not accepted any recommendation of the Audit Committee.

44. Vigil Mechanism:

Details regarding Vigil Mechanism is provided under Corporate Governance report which forms part of this Annual Report.

45. Risk Management Policy and Implementation:

The Company has a Board approved Risk Management Policy. Risk framework and Risk portfolio are periodically monitored by the Risk Management Committee, Audit Committee and the Board.

46. Auditors

The Statutory Auditors of your Company are appointed by the Comptroller and Auditor General of India (CAG). There were 6 chartered accountants firms namely M/s. MKPS & Associates, M/s. G.M. Kapadia & Co., M/s. R.

Gopal & Associates, M/s. Kalani & Co., M/s. SARC & Associates and M/s. R.G.N. Price & Co. who were appointed as Joint Statutory Auditors of the Company for FY'20.

The Statutory Auditors have been paid a total remuneration of ₹ 46.97 Million towards audit fees, certification and other services. The above fees are inclusive of applicable service tax/ GST but exclusive of re-imbursalment of travelling and out of pocket expenses.

47. Auditors' Report on the Accounts

Statutory Auditors Reports and the comments of CAG on standalone and consolidated accounts of the Company are placed along with respective financial statements for FY'20.

There is no qualification in the Statutory Auditors Reports on the Financial Statements of the Company for FY'20.

The Comments of Comptroller & Auditor General of India (C&AG) and the reply of the Management thereto form part of this Report, is annexed as **Annexure-E**.

During FY'20, there has not been any fraud reported by the Auditors of the Company.

48. Cost Audit

There were 6 cost accountants firms, namely M/s. M. Krishnaswamy & Associates, M/s. Musib & Co., M/s. Chandra Wadhwa & Co., M/s. Bandopadhyaya Bhaumik & Co., M/s. N. D. Birla & Co., M/s. Joshi Apte & Associates, appointed by the Board as Joint Cost Auditors of the Company for FY'20. Necessary cost audit report shall be prepared by the said auditors and filed with the Central Government as per requirements under the Companies Act, 2013.

49. Secretarial Audit

Your Company had engaged M/s. Ashu Gupta & Co., Company Secretaries in whole-time practice, as Secretarial Auditors for conducting Secretarial Audit for FY'20. Their report is



enclosed as **Annexure-F**, which shall form part of this Report.

Reply of management to the qualifications made in the Secretarial Audit Reports are as under:-

1. Board Composition & Evaluation:

The Company, being a CPSE, composition of its Board of Directors is the prerogative of the President of India as provided under the Articles of Association of the Company. The Ministry of Corporate Affairs (MCA) vide notifications dated 05.06.2015 and 05.07.2017 exempted government companies from the provisions relating to appointment, performance evaluation and remuneration of directors. Further, it is learnt that Department of Public Enterprises (DPE) has recommended the proposal to SEBI for similar exemption to government companies under the provisions of Listing Regulations in view of the distinct nature of the administration of CPSEs.

2. Related Party Transaction (RPT):

In terms of RPT Policy, all the contracts/ arrangements/ transactions entered by the Company during FY'20 with related parties were in the ordinary course of business and on an arm's length basis. Transactions with related parties have been disclosed under **Annexure-A** to this report. SEBI Regulations provide for prior approval of related party transactions excepting the transactions with government companies and wholly-owned subsidiaries.

The qualification is with respect to the requirement for prior omnibus approval under Regulation 23 of the Listing Regulations, since such approval was accorded by the Audit Committee at the meeting held on 26.07.2019. In this regard, necessary system is put in place to avoid this technical non-compliance in future.

50. Directors

Your Company being a Government Company, policy on directors' appointment and remuneration is not applicable and also evaluation of their performance is exempted vide notification dated 05.06.2015 issued by the Ministry of Corporate Affairs.

Appointments/Cessation etc.

Since the 26th Annual General Meeting held on 30.08.2019, change in composition of Board is as under-

- i. S/Shri Ajai Malhotra, Shirish B Kedare and K M Padmanabhan, Independent Directors, ceased to be the directors of the Company w.e.f. 20.11.2019.
- ii. S/Shri Sumit Bose, Deepak Sethi and Vivek Mallya Independent Directors, ceased to be the directors of the Company w.e.f. 31.01.2020.
- iii. Shri Santrupt B Misra, Independent Director, ceased to be the director of the Company w.e.f. 06.02.2019.
- iv. Shri Rajesh Madanlal Aggarwal, has been nominated by MoPNG as Government Nominee Director w.e.f. 24.03.2020, in place of Shri Rajiv Bansal.
- v. Shri Om Prakash Singh has been appointed as the Director (Technology & Field Services) of the Company w.e.f. 01.04.2020, in place of Shri Navin Chandra Pandey, who superannuated on 31.03.2020.
- vi. Shri Anurag Sharma has been appointed as the Director (Onshore) of the Company w.e.f. 01.06.2020, in place of Shri Sanjay Kumar Moitra, who superannuated on 31.05.2020.

The Board places on record its appreciation for commendable contribution of S/Shri Ajai Malhotra, Shirish B Kedare, K M Padmanabhan, Sumit Bose, Deepak Sethi, Vivek Mallya, Santrupt B Misra, Rajiv Bansal, Navin Chandra

MAKING A STRATEGIC MOVE

Pandey and Sanjay Kumar Moitra during their tenure on the Board of your Company.

As on 31.03.2020, there were 11 Directors (including two women Directors) on the Board, comprising of 7 Executive Directors (including the Chairman and Managing Director) and 4 Non-Executive Directors - 2 Government Nominee Directors and 2 Independent Directors. There was vacancy for 7 Independent Directors to meet the requirement under the provisions of Companies Act, 2013 as well as Listing Regulations, 2015.

51. Acknowledgement

Your Directors are highly grateful for all the help, guidance and support received from the Ministry of Petroleum and Natural Gas, Ministry of Finance, DPE, MCA, MEA, and other agencies in Central and State Governments. Your Directors acknowledge the constructive suggestions received from Auditors and Comptroller and

Auditor General of India and are grateful for their continued support and cooperation.

Your Directors thank all share-owners, business partners and all members of the ONGC Family for their faith, trust and confidence reposed in the Board.

Your Directors wish to place on record their sincere appreciation for the unstinting efforts and dedicated contributions put in by the ONGCians at all levels, in spite of the challenging and unprecedented pandemic situation, to ensure that the Company continues to sustain, grow and excel.

On behalf of the Board of Directors

New Delhi
01.09.2020

Sd/-
Shashi Shanker
Chairman and Managing Director



ONGC holds the largest share of hydrocarbon acreages in India (61% in PEL areas and 81% in ML areas)