- Name of the Project: Oil & Gas development drilling and production (16 exploratory, 73 developmental drilling wells and 9 Production Installations) at Moran Area in Dibrugarh, Sibsagar and Charaideo districts, Assam by M/s Oil India Limited.
- **EC** Identification No, File No and date: EC22A002AS110311, J-11011/156/2017 IA II (I) Dated 28.11.2022.
- Period of Compliance Report: October 2023 to March 2024.

## **Specific Conditions:**

S. No.	CONDITION	COMPLIANCE STATUS
I.	The project proponent shall prepare a site-specific conservation plan and wildlife management plan in case of the presence of Schedule-1 species in the study area, as applicable to the project, and submit to Chief Wildlife Warden for approval. The recommendations shall be implemented in consultation with the State Forest/Wildlife Department in a time bound manner.	Complied OIL has submitted Site - Specific wildlife conservation plan and wildlife management plan to Chief WildLife Warden, Assam for approval. Copy of the same is enclosed as Annexure - I.
H <sub>as</sub>	No drilling activities shall be carried out within 500 m from the water bodies.	<b>Complied</b> No drilling activity is carried out within 500m from water body.
III.	The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented. PP shall ensure implementation of action plan proposed to address issues raised during public hearings dated 24.08.2022, 08.12.2022 & 11.12.2020.	Complied  All the environmental protection measures proposed in the EIA – EMP are being implemented.
IV.	As proposed, no pipelines or its part shall be laid in the Forest land/Protected Area without prior permission/approval from the concerned Forest Department under Forest Act/Wildlife Act.	No pipeline is laid in Forest land/ Protected Area without prior permission/ approval from the concerned department.
V	Total fresh water requirement shall not exceed 25 m <sup>3</sup> /day per well for drilling and will be met through Tankers Supply. Prior permission shall be obtained from the concerned regulatory authority.	Complied  Freshwater requirement for drilling purposes is less than 25 m³/day per well.
VI.	The project proponent will treat and reuse the treated water within the factory and no waste or treated water shall be discharged outside the premises. Mobile ETP coupled with RO shall be installed to reuse the treated water in drilling system. Mobile STP shall also be installed. The size of the waste pit shall be equal to the hole volume+ volume of drill cutting and volume of discarded mud if any. Two feet free board may be left to accommodate rainwater. There shall be separate storm water channel and rainwater shall not be allowed to mix with wastewater. Level of the Drilling site shall be constructed in such way that outside rainwater should not enter into the drilling site. Alternatively, if possible, pit less drilling be practiced instead of the above	Zero Liquid Discharge is maintained at the drilling location. Mobile ETP coupled with RO is installed to treat the effluent generated from the drilling location. Quantity of domestic sewage generated from the drilling locations is minimum and is being treated in ETP.  Test report of ETP treated effluent at location MGT is enclosed as Annexure – II.



VII.	As proposed, produced formation water is stored in formation water tanks shall be disposed to the abandoned wells of OIL after necessary treatment. Separated water from phase separation system will be treated in an ETP and will be reused. Treated effluent shall meet the water quality standards for re-injection well as per the CPCB/SPCB guidelines. PP shall monitor water quality of treated effluent regularly and maintain records.	Currently drilling activity is in progress. Once production commences, Formation water will be treated in Effluent Treatment Plant (ETP) before disposal in water disposal wells. Monitoring of the quality of treated effluent will be carried out before reinjection into the wells.
VIII.	During production, storage and handling, the fugitive emission of methane, if any, shall be monitored using Infra-red camera/ appropriate technology.	Complied Portable Multi-gas detector & Explosimeter are used to detect fugitive emissions of Methane (if any).
IX.	The project proponent also to ensure trapping/storing of the CO <sub>2</sub> generated, if any, during the process and handling.	Complied No CO <sub>2</sub> generated is generated during drilling.
X.	Approach road shall be made pucca to minimize generation of suspended dust.	Complied  Approach road to the drilling location is made pucca to minimize dust generation.
XI.	The project proponent shall make all arrangements for control of noise from the drilling activity. Acoustic enclosure shall be provided for the DG sets along with the adequate stack height as per CPCB guidelines.	Regular maintenance of equipment/ machinery is carried to minimize noise generation. Acoustic enclosures are provided around DG sets and also adequate Stack Height is provided for DG sets as per CPCB guidelines.
XII.	The company shall construct the garland drain to prevent runoff of any oil containing waste into the nearby water bodies. Separate drainage system shall be created for oil contaminated and non-oil contaminated.	Complied Garland drains are constructed around the drilling location to prevent runoff of any oil containing waste into the nearby water bodies.
XIII.	Drill cuttings separated from drilling fluid shall be adequately washed and disposed in HDPE lined pit. Waste mud shall be tested for hazardous contaminants and disposed according to HWMH Rules, 2016. No effluent/drilling mud shall be discharged/disposed off into nearby surface water bodies. The company shall comply with the guidelines for disposal of solid waste, drill cutting and drilling fluids for onshore drilling operation notified vide GSR.546(E) dated 30 <sup>th</sup> August, 2005.	Complied Drill cuttings separated from drilling fluid are disposed in HDPE lined pit and mud is tested for Hazardous contaminants as per Hazardous and Other Wastes (Management & Transboundary) Movement Rules, 2016. OIL has sent the drilling cuttings samples, drilling fluid samples to CSIR – NEIST, Jorhat for analysis. Once the reports are received, they will be submitted to Sub-RO (MoEF&CC), Guwahati. Records of the same along with toxicity test report are enclosed as
XIV.	Oil spillage prevention and mitigation scheme shall be prepared. In case of oil spillage/ contamination, action plan shall be prepared to clean the site by adopting	Annexure – III.  Complied  Oil Spill Contingency Plan is in place.

	proven technology. The recyclable waste (oily sludge) and spent oil shall be disposed of to the authorized recyclers.	In case of Oil spillage/ contamination, action will be taken as per the Oil spill contingency plan prepared by OIL. Recyclable waste (oily sludge) and spent oil is sent to Pollution Control Board, Assam authorized recyclers.
XV.	The project proponent shall take necessary measures to prevent fire hazards, containing oil spill and soil remediation as needed. At fixed installations or plants use of ground flare shall be explored. Ground flaring system with all measures (Protected by a shield or embankment/ enclosed flaring) instead of elevated flare as wildlife sanctuary is located at a distance of 10.6 km.	Complied Fixed firefighting system is installed at drilling locations and in case of any oil spillage necessary remediation actions will be taken as per the Oil Spill Contingency Plan.
XVI.	The project proponent shall develop a contingency plan for H <sub>2</sub> S release including all necessary aspects from evacuation to resumption of normal operations. The workers shall be provided with personal H <sub>2</sub> S detectors in locations of high risk of exposure along with self-containing breathing apparatus.	Complied Contingency Plan for H <sub>2</sub> S release is in place. OIL never encountered H <sub>2</sub> S and no such evidence exists in our field of operation. However, multigas detector and Self Containing Breathing Apparatus (SCBA) are kept available to meet the emergency situation, if any.
XVII.	Blow Out Preventer system shall be installed to prevent well blowouts during drilling operations.	BOP systems are installed at the drilling locations for prevention of Blowouts.
XVIII.	On completion of the project, necessary measures shall be taken for safe plugging of wells with secured enclosures to restore the drilling site to the original condition. The same shall be confirmed by the concerned regulatory authority from environment safety angle. In case of hydrocarbon not found economically viable, a full abandonment plan shall be implemented for the drilling site in accordance with the applicable DGH/Indian Petroleum Regulations. After completion of drilling of any well, the owner or operator shall restore the well site, remove or fill all pits used to contain produced fluids or industrial waste and remove all drilling supplies and equipment not needed for production.	Will be Complied  On completion of the drilling activity, plugging of abandoned wells will be carried out as per the OIL's Well Abandonment, Site Restoration and Reclamation policy.
XIX.	As per the Ministry's OM dated 30.09.2020 superseding the OM dated 01.05.2018 regarding the Corporate Environmental Responsibility (Rs. 9.0 Crores), and as per the action plan proposed by the project proponent to address the socio-economic and environmental issues in the study area, the project proponent, as committed, shall provide education funds in technical training centers/ support in nearby village's schools, support in health care facilities, drinking water supply and funds for miscellaneous activities like solar street lights, battery, solar panel etc., in the nearby villages. The	Complied  Details of the CER expenditure incurred by OIL is enclosed as Annexure - IV



	action plan shall to be completed within 1 year as proposed.	
XX.	No lead acid batteries shall be utilized in the project/site.	Complied
		No lead acid batteries are utilized at the drilling location.
XXI.	Occupational health surveillance of the workers shall be carried out as per the prevailing Acts and Rules. All workers & employees shall be provided with required safety kits/mask for personal protection.	Complied Occupational Health Surveillance of workers engaged in drilling operation is being carried out on regular basis. All workers & employees engaged in drilling operation are provided with Personal Protective Equipment (PPE). Details of the IME & PME are enclosed as Annexure -V.
XXII.	Oil content in the drill cuttings shall be monitored and report & shall sent to the Ministry's Regional Office.	Complied  Drill cuttings samples are collected from the drilling location and sent to the CSIR – NEIST, Jorhat for analysis. Once the test reports are received, they will be submitted to Sub-RO(MoEF&CC), Guwahati.
XXIII.	The project proponent shall prepare operating manual in respect of all activities, which would cover all safety & environment related issues and measures to be taken for protection. One set of environmental manual shall be made available at the drilling site/ project site. Awareness shall be created at each level of the management. All the schedules and results of environmental monitoring shall be available at the project site office. Remote monitoring of site should be done.	Complied  SOPs for all the operations covering safety and environment related issues are prepared. OIL has prepared Environmental manual which is made available at the drilling location. Copy of the same is enclosed Annexure — B. Also, all the environmental monitoring reports related to ambient air quality, Stack Gas monitoring, ETP effluent, Noise level are maintained at the drilling location.
XXIV.	PP shall sensitize and create awareness among the people working within the project area as well as its surrounding area on the ban of Single Use Plastic in order to ensure the compliance of Notification published by MOEFCC on 12 <sup>th</sup> August, 2021. A report along with photographs on the measures taken shall also be included in the six-monthly compliance report being submitted to concerned authority	Complied OIL has arranged an awareness drive on the ban on single-use plastic at Naharkatia MV School on 24.05.2023. Photographs of the same are enclosed Annexure – VI.

## **General Conditions:**

S. No.	CONDITION	COMPLIANCE STATUS



I.	No further expansion or modifications in the plant, other than mentioned in the EIA Notification, 2006 and its amendments, shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change/SEIAA, as applicable. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry/SEIAA, as applicable, to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.	Complied  No further expansion or modification other than mentioned in the EIA Notification, 2006 and its amendments, is carried out without prior approval of the Ministry of Environment, Forest and Climate Change.
II.	The energy source for lighting purpose shall be preferably LED based, or advanced having preference in energy conservation and environment betterment.	Complied  LED lights are installed for lighting purposes at the drilling locations.
III.	The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under the Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).	Complied.  Noise level at the drilling locations is kept within the permissible limits by providing acoustic enclosures around the DG sets.
IV,	The company shall undertake all relevant measures for improving the socioeconomic conditions of the surrounding area. CER activities shall be undertaken by involving local villages and administration and shall be implemented. The company shall undertake ecodevelopmental measures including community welfare measures in the project area for the overall improvement of the environment.	Complied  Details of the CER expenditure incurred by OIL is enclosed as Annexure – IV.
V.	The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management/pollution control measures shall not be diverted for any other purpose.	Complied OIL has earmarked funds for environment management/ pollution control measures.
VI.	A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, Zilla Parishad/Municipal Corporation. Urban local Body and the local NGO. if any, from whom suggestions/ representations, if any, were received while processing the proposal.	Complied
VII.	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data (both in hard copies as well as by email) to the respective Regional Office of MoEF&CC, the respective Zonal Office of CPCB and SPCB. A copy of Environmental Clearance and six-monthly compliance status report shall be posted on the website of the company.	EC compliance report for the period April 2023 to September 2023 was submitted to Sub-RO. Guwahati, Zonal Office CPCB, Shillong and, Chairman - Pollution Control Board Assam vide L.No. S&E/E/43C-1/52 dated 11.01.2024. Also, copy of the EC



		and Six-monthly compliance report are uploaded to OIL website under the link <a href="https://www.oil-india.com/Environmental.aspx">https://www.oil-india.com/Environmental.aspx</a>
VIII.	The environmental statement for each financial year ending 31st March in Form-V as is mandated shall be submitted to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Offices of MoEF&CC by e-mail.	Environment Statement (Form – V) for the F.Y. 2022-23 was submitted to Pollution Control Board, Assam vide No. S&E/E/21(B)/940 dated 20.09.2023. Copy of the same is enclosed as <b>Annexure</b> – <b>C</b> .
IX.	The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB/Committee and may also be seen at Website of the Ministry and at https://parivesh.nic.in/. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the concerned Regional Office of the Ministry.	Complied.  Advertisement regarding the issuance of the Environment Clearance was published in two newspapers i.e., Amar Asom and Assam Tribune dated 10.12.2022. Copies of the same are enclosed as Annexure – VII.
X.	The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.	Will be complied.
XI.	This Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, if any, as may be applicable to this project.	Agreed.





Annexure - I

Salety & Engineering Designment P.O. DULIASAN-Picon2, ASSAM, INDIA Photo: 0374-2870842

Phone 0374-2500542 Fac 0374-2807796

Dated: 25.08.2021

Ref. No. S&E/E-43(4)/1157

To
The Principal Chief Conservator of Forest &
Chief Wild Life Warden
Office of the Principal Chief Conservator of Forest &
Head Of Forest Forces
Aranya Bhawan, Panjabari, Guwahati, Assam - 781037

Subject: Submission of Wildlife Conservation Plan for Schedule-1 species for "Onshore Oil & Gas development drilling and production" in Dibrugarh, Sibsagar and Charaideo districts under Moran, Moran Extension, Dholiya and some portion of Dumduma (Block A) PMLs of Oil India Limited.

Sir,

Oil India Limited, has applied Environment Clearance from MoEP&CC for the above-mentioned project vides online File No. J-11011/156/2017-IA-H(I).

According to the requirement of Environment Clearance application, we are herewith submitting the Wildlife Conservation Plan for Schedule-1 species against our above proposal for your kind consideration.

Thanking you,

Yours faithfully Off India Limited

(Sarbeswar Basumatary)
Chief General Manager (HSE) &
Nodal Officer (EC, FC, NBWL)
For Resident Chief Executive





# WILDLIFE CONSERVATION PLAN FOR SCHEDULE-I SPECIES FOR Onshore Oil & Gas development drilling and production (16 exploratory and 73 developmental drilling wells) in Dibrugarh, Sibsagar and Charaideo Districts under Moran, Moran Extension, Dholiya and some portion of Dumduma (Block A) PMLs (Moran Block)





## **CONTENTS**

ABBREVIAT	IONS	Ι
1	INTRODUCTION	1
2	HABITAT AND WILDLIFE STATUS	9
3	IMPACT ON BIODIVERSITY	49
4	WILDLIFE CONSERVATION PLAN FOR PROTECTED SPECIES	58
ANNEXURE	1	65
ANNEXURE	2	69
ANNEXURE	3	<i>7</i> 1
ANNEXURE	4	74
ANNEXURE	5	76
ANNEXURE	6	81
ANNEXURE	7	83
ANNEXURE	8	87
ANNEXURE	9	92
ANNEXURE	10	99
ANNEXURE	11	103
ANNEXURE	12	109
ANNEXURE	13	162



## LIST OF TABLES

Table L.I	Details of Coordinates of Moran Block	2
Table 2.1	Distribution of Land use and Land Cover in Study Area	11
Table 2.2	Summary of Micro-Meteorological Data	15
Table 2.3	Phytosociology of Tree species within the Study Area	30
Table 2.4	Phytosociology of Shrub species	31
Table 2.5	Phytosociology of Herbs and Grasses	32
Table 2.6	Species Richness and diversity within Study Area	34
Table 2.7	List of Amphibian Species in the Study Area	38
Table 2.8	List of Reptilian Species in the Study Area	39
Table 2.9	List of Avifauna in the Study Area	40
Table 2.10	List of Mammalian Species in the Study Area	41
Table 2.11	Plankton Recorded from the Study Area	43
Table 2.12	Scheduled Animal Species in the Study Area	44
Table 4.1	Conservation Plan for Schedule-I Species in the Study Area	59
Table 4.2	Budget for Wildlife Conservation Plan	64
LIST OF FIG	GURES	
Figure 1.1	Regional Setting Map of Moran Block	3
Figure 1.2	Toposheet of Moran Block	4
Figure 2.1	Topography Map	10
Figure 2.2	Distribution of land use and land cover in the Study Area	12
Figure 2.3	Soil, Groundwater and Surface water Monitoring Locations	14
Figure 2.4	Windrose of Study Area during Study Period	16
Figure 2.5	Air, Noise, Met and Traffic Monitoring Locations	17
Figure 2.6	Drainage in the study area	21
Figure 2.7	Description of Sample Plot	25
Figure 2.8	Photographs of Different Type of Habitats in the Study Area	29
Figure 2.9	Ecological Sensitivity Map	35



## **ABBREVIATIONS**

CC	Community Concultation
СРСВ	Community Consultation
	Central Pollution Control Board
DG	Diesel Generator
EN	Endangered
ETP	Effluent Treatment Plant
FD	Discussion with Forest Department
FGGS	Field Group Gathering Station
FSI	Forest Survey of India
GBH	Girth at Breast Height
GCS	Gas Compressor Station
GG	Gas Generator
HSD	High Speed Diesel
IUCN	International Union for the Conservation of Nature
IVI	Important Value Index
KLD	Kilo Liter per Day
KW	Kilo Watt
LARR	Land Acquisition, Rehabilitation and Resettlement Act, 2013
LC	Least Concern
MMT	million metric ton
MoEF&CC	Ministry of Environment, Forest and Climate Change
NH	National Highway
NT	Near Threatened
OCS	Oil Collection System
OIL	Oil India Limited
OWS	Oil Water Separator
PML	Petroleum Mining Lease
PS	Primary survey
RCC	Reinforced Cement Concrete
RD	Relative Density
RF	Reserved Forest
USA	United States of America
VU	Vulnerable
WPA	Wildlife Protection Act
WWF	World Wide Fund
*****	FFORM PYIME I MIM



## INTRODUCTION

### **BACKGROUND**

1

Oil India Limited (OIL), a Government of India Navaratna Enterprise, is engaged in carrying out exploration activities for hydrocarbon in its operational areas of Upper Assam, Arunachal Pradesh and Mizoram in the North Eastern part of India. OIL has significant presence in pan-India and overseas. Government of Assam has awarded Petroleum Mining Lease (PML) in Dibrugarh, Sibsagar and Charaideo districts and adjoining areas for exploration and development of oil and gas to OIL covering Sapekaint, Borhat, Moran Extension and Dumduma PMLs.

Earlier, OIL obtained Environmental Clearance (EC) from MoEF&CC for drilling of two development and six exploratory wells in Moran area vide letter no. F. No. J-11011/1259/2007 - IA II (I) dated 1st November 2011.

Oil intends to drill 89 (Eighty nine) onshore exploratory and developmental wells, 9 Nos. of production installations and laying of approximately 480 km of pipelines in Moran Block in Dibrugarh, Sibsagar and Charaideo Districts under Moran, Moran Extension, Dholiya and some portion of Dumduma (Block A) PMLs [hereinafter referred as the proposed expansion Project or the Project].

Development and production activities in Moran Block is part of OIL's larger plan of development of hydrocarbons in 10 hydrocarbon Blocks in Dibrugarh, Tinsukia, Sibsagar and Charaideo districts of Assam Upper Assam region.

## **OVERVIEW OF THE PROJECT**

The project include OIL's proposed onshore Oil & Gas development and production in Moran Block in Dibrugarh, Sibsagar and Charaideo Districts under Moran, Moran Extension, Dholiya and some portion of Dumduma (Block A) PMLs.

The area is located in the western part of OIL's operational area in Upper Assam Basin, to the west and northwest of Moran Oilfield and extends upto ONGC operated area of Panidihing in the west. The area also encompasses the oil bearing Eocene structure of Madhakali, gas bearing Barail structure of Dikharipathar and recently discovered oil bearing Eocene structure of Dimowkina. Other areas falling under the proposed project will consider Tiloinagar, Borbil-Diroi, Lakwagaon, Dikharipathar and Borbhuibil, etc.

#### OBJECTIVES OF PROPOSED DRILLING AND PRODUCTION ACTIVITY

The project will ultimately cater to fulfil the energy requirement of India. The dependency of India on import of crude oil will be lessened to an extent. Additionally, the project will benefit people living in neighbouring villages in



relation to direct & indirect employment associated with various project activities and will boost the local economy. Specific objectives of the proposed drilling activities are summarized below:

- To develop and produce hydrocarbons safely
- To augment National Production of oil and gas.

## AREA LOCATION AND ACCESSIBILITY

#### Area Location

The Moran Block is located in Dibrugarh, Sibsagar and Charaideo Districts of Assam. Total area of the Block is extended over 902 sq. km. Moran Block areas falls within the depositional plains of Brahmaputra River and its tributaries Buri Dehing and Disang River. Disang and Buri Dehing River traverses through south-eastern corner and north-western corner of the Moran Block respectively, and finally meets the Brahmaputra River. The project area covers agricultural lands, settlements, tea gardens, homestead plantations and forest lands. Panidehing Wildlife Sanctuary is located approximately 8.3 km from the Moran Block. The Dibru-Saikhowa National Park is approximately 35 km from the Block; Borjan Segment of Bherjan-Borjan-Podumoni Wildlife Sanctuary is approximately 34 km from the Block and the Dehing Patkai Wildlife Sanctuary is located approximately 37 km from the Moran Block.

The coordinates of the four corners of the Moran Block is presented in **Table 1.1**. Regional Setting map of the Moran Block is presented in **Figure 1.1**. Location of the proposed wells and associated production facilities on toposheet (nos. 83I14, 83I15, 83M3, 83M4; scale 1:50000) is shown in **Figure 1.2**.

Table 1.1 Details of Coordinates of Moran Block

Latitude	Longitude
27°18'0.00"N	94°46',9.09"E
27°18'0.00"N	95°1'60.00"E
27°0',60.00"N	95°1'60.00"E
27°0'60.00"N	94°43',3.56"8
	27°18'0.00"N 27°18'0.00"N 27°0',60.00"N

## Accessibility

National Highway 37 (NH-37) traverses through the Moran Block connecting district headquarters Dibrugarh town (Dibrugarh district), Sibsagar town (Sibsagar district) and Sonari (Charaideo district) with the Moran Block. State Highway 27 (SH 27) connecting NH 37 near Moran town with Naharkatia town traverses through Moran Block. Both NH 37 and SH 27 is connected with different parts of Moran Block through motorable access roads. Railway line of Northeast Frontier Railway (NFR) zone traverse within the Moran block connecting Dibrugarh and Sibsagar town. Dibrugarh is the nearest Airport located about 18 kilometres from the Moran Block.



Figure 1.1 Regional Setting Map of Moran Block

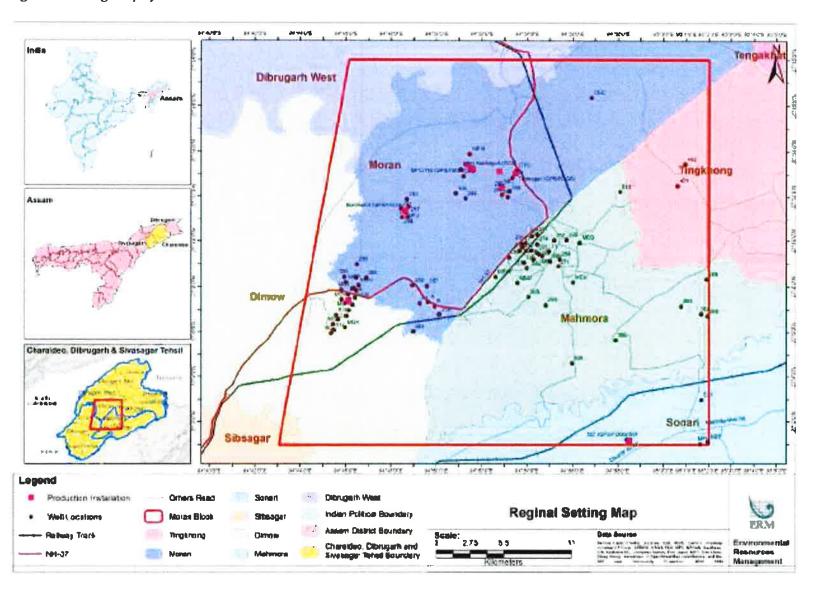
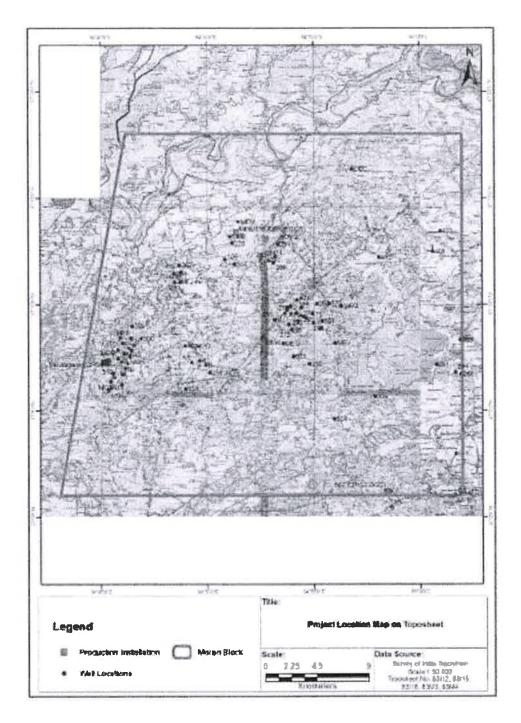




Figure 1.2 Toposheet of Moran Block





## ENVIRONMENTAL SETTINGS OF THE WELLS AND PRODUCTION FACILITY

Environmental settings of the Moran Block is presented below;

- Moran Block spreads across the districts of Dibrugarh, Sibsagar and Charaideo in Assam State.
- Moran Block areas falls within the depositional plains of Brahmaputra River and its tributaries Buri Dehing and Disang River.
- Disang and Buri Dehing River traverses through south-eastern corner and north-western corner of the Moran Block respectively, and finally meets the Brahmaputra River.
- Land use classes in the Moran Block comprise of agricultural lands, settlements, tea gardens, homestead plantations and forest lands.
- Major settlements in Moran Block are Moran, Sonari and Demow.
- Tea processing plants and oil production installation of OIL are the major industries scattered within the Moran Block.
- Panidehing Wildlife Sanctuary is located approximately 8.3 km from the Moran Block. However, no proposed well or production installation is located within 10 km of Panidehing Wildlife Sanctuary. The Dibru-Saikhowa National Park is approximately 35 km from the Block; Borjan Segment of Bherjan-Borjan-Podumoni Wildlife Sanctuary is approximately 34 km from the Block and the Dehing Patkai Wildlife Sanctuary is located approximately 37 km from the Moran Block.

#### PROJECT ACTIVITIES

## Land Procurement

The land required for the well sites and production facilities will be procured from the local villagers or tea garden authority through direct purchase. Generally, OIL will procure the required land through private negotiation. In few cases, OIL may request district authority to acquired land under LARR act 2013, if private negotiation is not successful. Land procurement will be done including crop compensation. No physical displacement will not occur; hence, resettlement and rehabilitation will not be applicable for this project.

Site Preparation & Construction Drill site

Site preparation will involve levelling, filling and consolidation of the site for staging equipment and machinery. Individual sites will be duly fenced to a height of about 2 m using jingle wired fencing or XPM fencing.

Preparation and construction of drill sites and production facilities will involve top soil scraping and storage for future use, elevating the site by excavated material from the site and material brought from authorized quarry area. Reinforced Cement Concrete (RCC) will be used for the construction of foundation system at drill sites. For making foundations of the main rig structure, cast in-situ bored under- reamed piles of specified lengths will also be used.



## Drilling & Testing

The exploitation of hydrocarbons requires the construction of a conduit between the surface and the reservoir. This is achieved by the drilling process. The exploration wells will be drilled using a standard land rig or a "Mobile Land Rig" with standard water based drilling fluid treatment system. This rig will be suitable for deep drilling up to the desired depth of 3900 metres as planned for the project.

During drilling operations, a fluid known as drilling fluid (or 'mud') is pumped through the drill string down to the drilling bit and returns between the drill pipe -casing annulus up to surface back into the circulation system after separation of drill cuttings /solids through solids control equipment. Drilling fluid is essential to the operation and helps in controlling down hole pressure, lift soil/rock cuttings to the mud pit, prevent cuttings from settling in the drill pipe, lubricate, cool and clean the drill bit.

Drill cuttings generated will be collected and separated using a solid control system and temporarily stored on-site in HDPE lined pits. Drilling and wash wastewater generated will also be stored at an onsite HDPE lined pit. The water will be adequately treated in a mobile ETP to ensure conformance to the S No. 72 A (ii) Schedule I - Standards for Emission or Discharge of Environmental Pollutants from Oil Drilling and Gas Extraction Industry of CPCB and will be reused.

There will be other ancillary facilities like Drilling mud system, Effluent Treatment System (ETP), Cuttings disposal, Drill Cementing, equipment etc. and utilities to supply Power (DG sets), water, fuel (HSD) to the drilling process and will be set up as a part of the project.

Between drilling operations for different zones, logging operations will be undertaken to provide information on the potential type and quantities of hydrocarbons present in the target formations.

## Well Site decommissioning

On completion of activities, the wells will be either plugged and connected with flow lines or suspended. In the event of a decision to suspend the well, it will be filled with a brine solution containing very small quantities of inhibitors to protect the well. After the activities, the well will be sealed with a series of cement plugs, all the wellhead equipment will be removed leaving the surface clear of any debris and site will be restored.

## Production Installations

Nine production installations are planned within the Moran. Among the production facilities, five facilities will be located in agricultural land areas;



one facility in open land and three facilities in tea garden areas. The production installation may include the following facilities. Production installations planned within the Moran Block includes the following

- Oil Collection System (OCS)
- Gas Compressor Station (GCS)
- Field Gas Gathering Station (FGGS)

Among the production facilities, two facilities will be located in homestead plantation areas; one facility in agricultural land and one facility in tea garden areas. The production installation may include the following facilities.

# UTILITIES AND RESOURCE REQUIREMENTS

Power: The power requirement for each drill site construction will be met through the 100 KW DG Sets. During drilling, DG sets of 1000 KW capacities, will be used to meet the power requirement for drilling. Lighting and other power requirements at drill sites will met through 200KW DG sets. It is estimated that 3.5 KLD of diesel will be required during drilling phase. Power requirement for the production installations will be met through Gas Generator (GG) sets of 216 KW capacity.

Water: During the drilling operations, water requirement at a drill site is expected to be 60 m³ per day. The water requirement at the drilling sites during construction and drilling phase will be met groundwater after obtaining necessary permission. Potable water requirement at site will be met through packaged drinking water. In addition, a water storage pit of around 1000 m³is proposed to store water for fire water supply the likely source being surface water. For production facility approximately, 5 m³ per day water will be required for construction and 3 m³ per day for workers during construction phase. Approximately 20 m³ per day water is required during the operation of the production installations. The water requirement will be met groundwater after obtaining necessary permission.

Manpower: The estimated employment would be approximately 80 un-skilled temporary workers during the peak construction phase that will be primarily sourced from nearby villages. Additionally, 20 permanent OIL employees will supervise the construction phase. The drilling rig will be operated by approximately 40-50 persons on the rig at any particular time. Approximately 10 persons per shift will be hired during operation phase of production facility. Production facilities are operated in three shifts with approximately 10 persons operating per shift. Personnel involved in a production facility include the Installation Manager, supervisors and other technical staffs.

## POLLUTION SOURCES

 Air emissions: Point source air emissions will be generated from DG/GG sets. Fugitive emissions will occur from vehicles involved in the drilling



- operations and from windblown dust from storage and staging areas within the drill sites and production facilities.
- Noise & Vibrations: Noise and vibration will be generated due to operation
  of drilling rig, DG/GG sets and vehicles.
- Liquid wastes: During the drilling phase, wastewater will be generated as a result of rig wash and dewatering of spent mud and washing of drill cuttings. The wastewater will be treated in an Effluent Treatment System (ETP) at site. The treated water would be reused. Domestic wastewater will be generated from the drill sites would be treated in septic tanks and soak pits. In production facilities, produced formation water will be reused after necessary treatment; surface Runoff after treatment through Oil Water Separator (OWS) and sedimentation tank will be reused.
- Drill cuttings & spent mud: Approximately 380m³ of drill cuttings and 900-1200 m³of spent mud will be generated per site. Drill cuttings and spent mud will be disposed off in a well-designed pit lined with impervious liner located on site.

## PROJECT TIMELINE

Drilling of each well location is expected to take three to four months. It is planned to drill approx. 15 wells per year. After development phase the wells if converted to production wells will continue till the life of the well. The production facilities are permanent facilities. The developmental drilling, construction of production facilities and pipelines would be conducted within 7 years.

## PROJECT COST

Total cost of the project would be approx. 3470 crore rupees.





Recognised By

Pollution Control Board, Assam

Envirocon Building, I.O.C.L (AOD) New Market P.O.: Digboi, Dist.: Tinsukia, Assam - 786 171 Ph: 03751-264414, 9435008657, 8876028672 E-mail: envirocon@rediffmail.com

ISO 9001:2015 Certified ISO 45001:2018 Certified

Report No.: ENV/ARDS/23-24/S-07/WW-12/01

Date

:22/12/2023

Order No.: Telecon

Date

Report Issued To: ADITI R & D SERVICES

Nilesh Buisness Complex, A. T. Road, Digboi, Assam

## TEST RESULTS

Sample Ref. No.: ARDS/2023/S-07/1212/01

Sample Source: Rig S#7/MGT, Demow,

Sample Type: ETP Treated Water (RO)

Collected On : 12-12-2023

Kosumari

St. No.	Parameters  Colour	Results	Limit [G.S.R. 176(E), 02.04.1996
2	Odour	Colourtess	Colourless
3	pH value	Odourless	Odourless
4	Temperature, °C	7.25	5.5 - 9.0
5	TSS, mg/l	24.5	40 °C
6	BOD, mg/l	3.6	100
7	COD, mg/l	<1.0	30
8	Chlorides (as Cl), mg/l	15	100
9	Sulfates (as SO <sub>4</sub> ), mg/l	5.2	600
10	TDS, mg/l	<1.0	1000
11	Sodium, (%)	73	2100
12	Oil & Grease, mg/l	2,2	60
13	Phenolic Compounds as CoH5OH, mg/I	<4.0	10
14	Cyanides , mg/l	< 0.001	1.2
15	Fluorides (as F), mg/l	<0.001	0.2
16	Sulfide (as S), mg/l	<0.1	1.5
17	Chromium (Cr +6), mg/l	10.0>	2.0
18	Chromium (Total) , mg/l	<0.001	0.1
19	Copper, mg/i	<0.001	1.0
20	Lead, mg/l	<0.001	0.2
21	Mercury, mg/l	< 0.001	0,1
22	Nickel, mg/l	<0.001	0.01
23	Zinc, mg/l	<0.001	3.0
is Protoco		< 0.01	2.0



Checked By: Mr. Pankaj Baroi, ENVIROCON

NOTE:

4. Results reported are valid at the time of and under the prevailing conditions of measurement

Z. Results refer only to the particular parameters tested.

3. This test report shall not be reproduced except in full, without the written pennission of ENVIROCON, LO.C.L [AOD] New Market, Digboi ~ 786171, Assam.

Core Services: Environmental Monitoring & Data Generation, EIA & EMP, Environmental Audit & Allied Environmental Management jobs Associate Services: Certification by Competent Person (CIF), NDT, Hydraulic Testing, Chartered Engineer Services etc.



Annexure - III

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	Report No	
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# CSIR-NORTH-EAST INSTITUTE OF SCIENCE & TECHNOLOGY JORHAT - 785 006, ASSAM

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Analytical Chemistry Group, MSTD	Report No. CSIR-NEIST-Jorhat/QSP/N	MR/20/AnC/TR- 3321/2022
TEST REPORT OF BARITE SAMPLE.	DATE	PAGE

## 2. RESULT

Sample Code	Hg (µg/gm)	Cd (µg/gm)
M/S Gimpex Pvt. Ltd	0.05	0.61
M/S Ambika minerals	0.09	0.57

TEST CONDUCTED BY

CHECKED BY

APPROVED BY

O7/03/22

Dr. Ankana Phukan
(Sr. Tech. Officer)

CHECKED BY

APPROVED BY

APPROVED BY

O7/03/22

Dr. A. M. Das

(Chairman, Testing Report Committee)

CHEL WEILBY

K

# CSIR-NORTH EAST INSTITUTE OF SCIENCE AND TECHNOLOGY

(Formerly Regional Research Laboratory) (Council of Scientific & Industrial Research)

JORHAT - 785 006, ASSAM, INDIA

Phone: 0376-2371284/2370012(O) +91 9435557824 (M) EPABX: 2370117, 2370121, 2370139

Gram: RESEARCH Fax: 0376-2370011

E mail: rajibdeka@neist.res.in Website: www.neist.res.in



सी एस आई आर-उत्तर पूर्व विज्ञान तथा प्रोघोगिकी संस्थान (पूर्व क्षेत्रीय अनुनंधान प्रयोगशाना)

(वैज्ञानिक तथा औद्योगिक अनुसंघान परिषद)

जोरहाट - 785006 आसाम, मारत

फोन : 0376-2371284/2370012 (O) +91 9435557824 (M)

Date: 16.03.2022

इपीएबीक्स : 0376-2370117/2370121/2370139 ग्राम : रिसर्च, फैक्स : 0376 2370011 ई.मेल : rajibdeka@neist.res.in

वेबसाईट : www.neist.res.in No. QSP/MgS/01/Testing/2022

From: The Director To

Dr Jugal Hazarika, DGM-Chemical (Lab)

Oil India Limited, P.O.: Duliajan, Dist: Dibrugarh,

Pin: 786602, Assam Phone: 94350 05951

Sub: Analysis of Mercury and Cadmium in Barite Powder Samples. Ref: Your letter no. Chem: 03/10(h)/JH/2020 dated 07.07.2020

For the sample received on 07.07,2020.

With reference to the above, please find enclosed herewith the test report for your needful. For your kind information please note that the report(s) are not to be used for any legal purpose and shall not be produced in any court of law to any dispute whatsoever.

The testing report shall not be utilized for any sales promotion or advertisement. We would be happy if you could send your feedback in the enclosed "customer satisfaction" format so that we can serve you better.

Thanking you,

(Rajib Deka) Principal Scientist

Yours Yaithfully

Head, Research Planning and Business Development Division

Encl: as above

Copy to: HoD/GL, Analytical Chemistry Group, Materials Sciences and Technology Division

An ISO 9001:2015 Certified National R&D Institute of CSIR SU YUU1:2013 Cerujiea ivanional K&D Institute of CSIK Connecting Science & Technology for a Brighter Tomorrow उन्जन भविष्य के लिए विज्ञान एवं प्रीयोगिकी का समन्वय हिन्दी में किसी सभी स्थापाल का क्यास्त्र करने में हम हिन्दी में किये गये पत्राचार का स्वागत करते हैं।

Format No. QSP/MR/20/F.01



CSIR-NORTH-EAST INSTITUTE OF SCIENCE & TECHNOLOGY
JORHAT - 785 006, ASSAM

# TEST REPORT

and as some well species and the seal time at

Report No.: CSIR-NEIST-Jorhat/QSP/MR/20/AnC/TR-3321/2022 (No. of Pages: 03)

## MEMORANDUM

This Test Report is issued by CSIR-North-East Institute of Science & Technology, Jorhat, Assam, India, a National Laboratory under CSIR India. This Report refers only to the particular item submitted for test.

This Report if reproduced for any purpose, commercial or otherwise, should be reproduced in full. The reproduction of a part or an abstract thereof, has to be specifically approved from Director, CSIR-North-East Institute of Science & Technology, Jorhat.

The results reported in the Test Report are valid at the time of and under the stated conditions of measurement.





# CSIR-NORTH-EAST INSTITUTE OF SCIENCE & TECHNOLOGY JORHAT - 785 006, ASSAM

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Name of the Division: Analytical Chemistry Group, MSTD	Report No. CSIR-NEIST-Jorhat/QSP/MR/20/A	AnC/TR- 3321/2022
TEST REPORT OF BARITE	DATE	PAGE
SAMPLE	07/03/2022	1 of 3

## CONTENTS

INDEX

1. SCOPE

: Determination of Cd and Hg in Barite

Supplied by:

Dr. Jugai Hazarika DGM-Chemical (LAB) OIL INDIA Ltd. Duliajan

REFERENCE

: Letter Ref. No.: Chem: 03/10(h)/JH/2020 --- Dated: 07.07.2020

2. TEST RESULTS : Enclosed.

3., CONCLUSION

TEST CONDUCTED BY	CHECKED BY	APPROVED BY
Spleil 2-103/22	Bukin 12022	dellobor
Dr. Ankana Phukan (Sr. Tech. Officer)	Or. P. J. Saikla (Gl., Analytical Chemistry Group, MSTD)	Dr. A. M. Das (Chairman, Testing Report Committee

Released By

Signature & Dat

## SL.NO. 7:- Test report of oil content in drill cuttings.

Reports will be submitted by OIL after receiving the reports from NEIST Jorhat with Ref. No. Chem: 01/10(h)/KKD/2024 on dated 08/01/2024



CHEMICAL DEPARTMENT दुलियाजान ७८६ ६०२ DULIAJAN 786 602 Dist. Dibruarh, Assam, India

Phone: 0374-2800439 (O)
Fax: 0374-2801680
E-mail: chemical@oilindia.in

Ref. No: Chem: 01/10(h)/KKD/2024

Date: 08.01.2024

DIRECTOR, NORTH EAST INSTITUTE OF SCIENCE & TECHNOLOGY JORHAT-785006

Attention: Head-RP&BD, NEIST, Jorhat

Sub: Samples of Drill Cutting, Drilling Mud & Pit Water for analysis under Contract No: 6118548 (New)

Dear Sir,

Please refer to our contract No. 6118548 for hiring the services for analysis of Drill cuttings. Drilling mud and other drilling wastes and Barites Powder along with testing of Sodium Formate samples. In this connection, enclosed please find following three types of samples for your necessary analysis as per Schedule 2 of Hazardous Waste (Management and Handling) Rules, 1989 and forward the test results to GM-Chemical (HoD) within 60-days of receipt of sample.

Sample details:

SINo	Sample Type	Quantity	Analysis for
1	Drill cuttings Sample	14 (Fourteen only)	Analysis of Mercury & oil Content in drill cuttings along with detail testing as per schedule 2 of Hazardous waste Rule, 1989.
2	Pit Water Sample	14 (Fourteen only)	Analysis of Mercury in pit water sample.
3	Drilling Fluid Samples	14 (Fourteen only)	Detailed testing of all parameters as per schedule 2 of Hazardous waste Rule, 1989.

The details of samples of various wells / sources are furnished in the attached sheets for your information please. You are also requested to provide individual analysis report for each sample to comply new guidelines issued by PCBA & MOEF.

Thanking you,

Yours' faithfully, OIL INDIA LIMITED

(KRISHNA KANTA DAS)
GM-CHEMICAL (HoD)
OIL INDIA LIMITED, DULIAJAN

Encl. Annexure: I- III

160kg

Jorhan 705

, Assam india

Oil India Limited - Conquering Newer Horizons



# **TECH ENVIRONMENTAL ENGINEER & CONSUL**



House No-11, Champaknagar, Narayan Path, Bhetapara, Guwahati-781028, www.greentecheec.in Telefax -0361 3501950 Mobile: 9435046677, 9954089052, E-mail: green\_pranjal@hotmail.com, info@greentecheec.in

#### TEST REPORT

ULR Number: TC5991:	23000001193F		GEEC/FM/4	
Report No:GEEC/FL/2	3/TOX/2023/11/06	Date:	21/11/2023	
Name of the Industry:	OIL INDIA Ltd.	Lab ID	GEEC/TT/2023/11/06	
Address;	Oil India Ltd.	Date of Sampling/Collection:	06/11/2023	
	Duliajan District: Dibrugarh,	Date of Receipt in Duliajan:	07/11/2023	
	State : Assam	Date of Receipt in Lab:	08/11/2023	
Rig	S-7	Test Start Date:	13/11/2023	
Location:	MGT	Test End Date:	16/11/2023	
	DRILL FLUID	QUALITY FOR TOXICITY		
	SAN	IPLING RESULT		
Depth	1814 m	Mud Weight (MW,pcf)	69	
Mud Type	Bentonite suspension Mud	MFV sec	55	
Dose	Sample Concentration	Mortality (ln%)	Test Method	
1	Control sample	0		
2	5000 mg/L	10	1	
. 3	10000 mg/L	10	1	
4	20000 mg/L	20	IS 6582 (Part 2)	
5	30500 mg/L	30	<ul> <li>Bioassay using Zebra Fish</li> </ul>	
6	40000 mg/L	50	1	
7	50000 mg/L	50	1	

Remarks: Limit for Toxicity of Drill Fluid 96 Hrs LC 50 > 30000 mg/l by fish toxicity.

Checked by:

Dr. Belinda Lahon Quality Manager

Reviewed by:

Pranjal Buragohain Authorised Signatory

Page 1 of 1



<sup>\*</sup> The results relate only to the item tested.

<sup>\*</sup> The test report shall not be produced except in full, without written approval of the laboratory.

<sup>\*</sup> The test report cannot be used as evidence in the court of law without prior written approval of the laboratory. 

## TO WHOM IT MAY CONCERN

This is to certify that enclosed the IME report (FORM O) of the following employees of M/SJaybee Energy Pvt. Ltd. Drilling section are physically and mentally fit to join work effectively.

S1 No.	Name	Department
1	LOKAJIT DUTTA	RIG MANAGER
2	LALIDHAR GOGOI	RIG MANAGER
3	DINANATH TAMULI	TOOL PUSHER
4	JATIN KR. BORUAH	TOOL PUSHER
5	ANUP KONWAR	NTP
6	BIVU BORUAH	NTP
7	HAMMUJAL CHETIA	DRILLER
8	MANAB BARUAH	DRILLER
9	MONDIP KONWAR	DRILLER
10	BIDYUT BURAGOHAIN	ASST. DRILLER
11	PRODIP GOGOI	ASST. DRILLER
12	PRONB KR. BORUAH	ASST. DRILLER
13	PULOKESH TAMULI	ASST. DRILLER
14	RAJIB GOHAIN	MUD ER.
15	BHASKAR JYOTI BARUAH	MUD ER.
16	ABDUL JAVED	MUD ER.
17	RUPAM NATH	MUD ER.
18	PURNA GOGOI	CHIEF ELECTRICIAN
19	BIMAN PHUKAN	CHIEF ELECTRICIAN
20	BHOKTESWAR SONOWAL	ELECTRICIAN
21	PRANJAL KR. DUTTA	ELECTRICIAN
22	CHANDAN BORAH	ELECTRICIAN
23	DEBAKANTA MECH	ELECTRICIAN
24	RAJA TIPOMIA	ASST. ELECTRICIAN
25	DILIP GUPTA	ASST. ELECTRICIAN
26	RUDRA BORAH	CHIEF MECHANIC
27	PULIN KR. DAS	CHIEF MECHANIC
28	UMA KONWAR	MECHANIC
29	ANJAN SAIKIA	MECHANIC
30	JULU BORUAH	MECHANIC
31	GOURAB GOGOI	ASST. MECHANIC
32	BITU GOGOI	ASST. MECHANIC
33	PULASTYA GOGOI	MECH. PUMP
34	PRANJAL SAIKIA	MECH. PUMP
35	SAMBAL GOGOI	MECH. PUMP
36	GOUTAM GOGOI	ASST , MECH. PUMP
37	RAJNAYAN BORGOHAIN	ASST . MECH. PUMP
38	SURESH DEORI	ASST . MECH. PUMP
39	DIPJYOTI BORGOHAIN	ASST . MECH. PUMP
40	NIPU BORAH	GAS LOGGER



41	MADHUJYA GOGOI	GAS LOGGER
42	RINTU TAMULI	GAS LOGGER
43	PRABAL GOGOI	GAS LOGGER
44	GONDESWAR NIRMOLIA	WELDER
45	BUBUL DEORI	WELDER
46	RAJU KR. DUTTA	MEDICO
47	SUKLA GOGOI	MEDICO
48	MAINA BORAH	TOP MAN
49	UTPAL CH. DUTTA	TOP MAN
50	MANAB JYOTI DAS	TOP MAN
51	JIVRAJ SONOWAL	TOP MAN
52	BISESWAR SONOWAL	TOP MAN
53	SURAJ SONOWAL	TOP MAN
54	ATUL BORAH	
55	PABAN BORUAH	TOP MAN
		TOP MAN
56	RITU KHAKLARI	FLOOR MAN
57	INDRAJIT GOGOI	FLOOR MAN
58	MRIDUL GOGOI	FLOOR MAN
59	BHASKAR JYOTI GOGOI	FLOOR MAN
60	NAVAJIT GOGOI	FLOOR MAN
61	ARUP NANDY	FLOOR MAN
62	DIPANKOR GOGOI	FLOOR MAN
63	MRIDUL BORUAH	FLOOR MAN
64	ARUNJYOTI DUTTA	FLOOR MAN
65	JAYANTA CHAMUWAH	FLOOR MAN
66	MODON GOGOI	FLOOR MAN
67	MANAB GOGOI	FLOOR MAN
68	PANKU SONOWAL	FLOOR MAN
69	SATYARANJAN SAIKIA	FLOOR MAN
70	PAPU BORAH	FLOOR MAN
71	RASIDUL AHMED	FLOOR MAN
72	DIBAKOR GOGOI	FLOOR MAN
73	PRASANTA DHADUMIA	FLOOR MAN
74	RAJIB SONOWAL	FLOOR MAN
75	RAJU GOWALA	FLOOR MAN
76	RAJESH MAZHI	FLOOR MAN
77	SINMOY GOHAIN	FLOOR MAN
78	SAMARJEET BORA	HSE OFFICER
79	UDAY RANJAN PHUKAN	MECHANIC ICE
80	ABHINASH BARUAH	ASST, MECHANIC
81	KHIRUD DHADUMIA	FLOOR MAN
- 01		ASST.
82	CHINMOY PHUKAN	ELECTRICIAN
83	KRISHNA JYOTI BARÜAH	HSE OFFICER
84	UTPAL GOGOI	MECH. PUMP
	LAUT CONCUL	ASST.
85	LALIT SONOWAL	ELECTRICIAN
86	MONTU DOHUTIA	ASST. MECHANIC
87	ANKUR DHADUMIA	FLOOR MAN
88	UMASHANKAR SAH	DRILLER



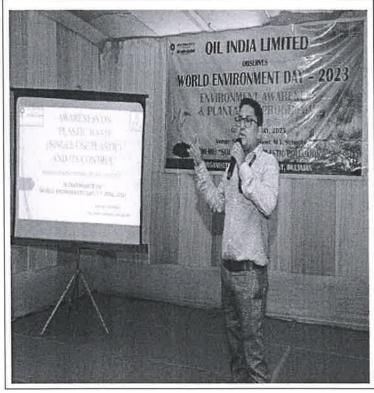
## Annexure - IV

		CER expen	diture in Crores	during F.Y. 2	022-23 to F.	Y. 2023-24	
District	Health Care	Education	Skill development of women	Industrial Training for students	Sports & Cultural events	Social Development/Infrastructure (Drinking Water, Toilets, Road repair, Flood Protection/Erosion control etc.,)	Total
Dibrugarh (Assam)	8.12	8.86	4.41	3.63	0.65	19.45	45.12
Sivasagar (Assam)	0.04	4.53	0.00			4.53	9.10
Charaideo (Assam)	1.67	3.55	1.52	0.76	0.13	4,87	12.50



## ANNEXURE - VI

## AWARENESS DRIVE ON BAN OF SINGLE USE PLASTIC AT NAHARKATIA MV SCHOOL ON 24.05.2023







२ जामाव ग्राप्त

বাদ প্রৱাহ

১০ ডিচেম্বৰ, ২০২২ শনিবাৰ, গুৱাহাটী

# $\mathsf{CLASSIFIED}$

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ওবাহটি বিশ্ববিদ্যালয়ৰ অসমীয়া বিভাগৰ গবেষিকা গায়ৰী মহন্তলৈ ্মেঘালয়ৰ লোক উৎসাবৰ পৰস্পাৰা আৰু পৰিবাৰ্টনা গোৰো আৰু খাটী জনগোঠাৰ বিশেষ WATON CHAKUSARD DEORI by an affidavit Notary Public Dibrugarh. I shall be known as MAYUR CHAKUSARU DEORI for all purpose from today.

## DECLARATION

Arbithson M Marak, S/o Lt : Kiljing K Sangma, Vill & P.O. Dakopgre, Dist-West Garo Hills, State-Meghalaya That some documents my address has been wrongly written as New Chokpot, P.O.-Chokpot, P.S.-Baghmara, Dist-West Garo Hills, State-Meghalaya, Pin 794005 instead of Vill & P.O. Dakopgre, P.S-Tura, Dist-West Garo Hills, State Meghalaya, Pin -794101 Now all official matters my address & Pin will be mention above.

No. DA31/2021/Vol-1/31218

NOTICE IN

1. The Deputy Commissioner, Dhemai stamp of Rs. 8.25 (Rupees eight an hundred and eighty) days only from criteria for supply, installation and

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POSTS:

HANDIOU মহিতা সভাৰ অধিৱেশন াবৰ প্ৰতিনিধি, ৯ ডিচেম্বৰঃ উত্তৰ চম্বত অনুষ্ঠিত হ'বলগা ৩৫ সংখ্যক ইতা সভাৰ অধিৱেশনৰ লাইখাঁটা স্থাপন number and Ed copies of all to র্থাল্লাসৰ মাজত বৃহস্পতিবাৰে লাইখুঁটা যে কৰ্তব্যৰত বিষয়া হেমন্ড চৌধুৰীয়ে।

Arogyamitra/2020-21/139/1650

ABHIYAN SOCIETY, ASSAM



NOTICE

rovisionally shortilisted candidates eligible to appear in the interview nitra (ARM/PMAM) will be held on 12th, 13th and 14th December, nues, date and time of the interview is published in the official hiyan Society, Assam, www.atalamntabhiyan assam gov.in. The eligib

Detailed information regarding the basis of design and other terms and conditions can be accessed in the website of AEGCL to www.engcl.co.m.

Sd/-, Chief General Manager (SLDC)
Assam Electricity Grid Corporation Limited,
E-mail id : cgm.sidc@aegcl.co.in

ऑयल इंडिया लिमिटेड Oil India Limited



वानिष : ১५/১०/২०২২

The Ministry of Environment, Forest and Climate Change (MoEF&CC) has accorded Environmental Clearance for Onshore Oil & Gas development drilling and production against the proposal No. IA/AS/ IND2/226998/2017

The copy of Environmental Clearance, F.No. J-11011/156/2017- All (I) dated 28.11.2022 is available for reference with Pollution Control Soard Assam (PCBA) and may also be seen at the wabsite of MoEF&CC a https://panivesh.nic.in/.

The Ministry of Environment, Forest and Climate Change (McEF&CC), GOI has accorded Environmental Clearance for the said project under the provisions of EIA Notification, 2006

Nodal Officer EC/FC/NBWL, Oil India Limited

উকো বেংক

**UCO BANK** 

श्रभीरेंस कामनी পঞ্জীয়নভুক্ত ডাক খোগে NAME CORRECTION NOTICE INVITING TENDER

My name was written in my DL No AS-1320060045752 Tender in closed envelope in Two Bids from government registered Class-I contractors are invited by the undersigned for the work "Creation of Master Database and BAIDYANATH UPADHAYA II should be Development of Infographic Portraying of Chronicles of corrected as BAIDYANATH Mahatma Gandhi and Unsung Freedom Fighters of Assam at Assam State Museum, Guwahati-1" for an estimated UPADHYAYA My DL renewal application number amount of Rs. 25,00000.00 (Rupees twenty five lakhs) only. is 2182494922 Tender document can be collected from undersign's office from 10/12/2022 on payment of Rs. 2000 (Two thousand only).

Director Directorate of Museums, Assam Ambari, Guwahati-781001

Janasanyog/C/15738/22

হে শ্বহীদ প্রণামো তোমাক

আভি সহাদ দেবসৰ দিনা আমে পাৰয়ালৰ সকলোৱে তোমাৰ বিদেহী আত্মাৰ সদগতিৰ কাৰণে ভগবানৰ ওচৰত প্ৰাৰ্থনা জনালোঁ। সমূহ পৰিয়ালবৰ্গৰহৈ - ড° জয় নাথ শৰ্মা

GNRC

স্বাস্থ্য-বার্তা

সকলোৰে বাবে স্বাস্থ্য সকলোৰে মুখত হাঁহি

এতিয়া জিএনআৰচি হাস্পতালৰ তিনিওটা চৌহদতে মাথোঁ ১,০৮০ টকাতে চিটি ক্ষেন (ব্রেইন), ৩,০০০ টকাতে এম আৰ আই (ব্ৰেইন) আৰু ১০,৫০০ টকাতে এজিঅ'গ্ৰাফী কৰাব পাৰিব।

জিএনআৰচি হাস্পতাললৈ বিনাসূলীয়া এম্বলেঞ্চ সেবা

जारभन १ ১৮००-७८४-००১১ (हेन की) দুৰ্ঘটনাগ্ৰস্ত আৰু জৰুৰীকালীন ৰোগীৰ वारव क्षथम २८ घनेंग विनामृलीया स्मर्वा

## KKHSOU foundation day on Dec 11

GUWAHATI, Dec 9: Krishna Kanta Handiqui State Open University is taking steps to observe its 17th foundation day on December 11 in a grand manner, a press release stated.

The University has decided to celebrate its foundation day at its city office located at Khanapara in the presence of Prof Nageshwar Rao, Vice-Chancellor, Indira Gandhi National Open University as the chief guest and Dr Ranoj Pegu, Minister of Education. Government of Assam as the distinguished guest. Prof Debabrata Das, Vice-Chancellor, Assam Rajiv Gandhi University of Cooperative Management will deliver the special foundation day lecture on 'Open and Distance Learning in India's Northeast: Prospects and Challenges."

A brief of the foundation day would be provided by Dr Arupjyoti Choudhury, Registrar of the University. The Vice-Chancellor of KKHSOU, Prof. RP Das would preside over the celebration.

## Dr Amitabh Chowdhury Memorial Lecture

CITY CORRESPONDENT

GUWAHATI, Dec 9: The Dr Amitabh Chowdhury Memorial Trust is organising the 19th Dr Amitabh Chowdhury Annual Memorial Lecture on the topic 'The city and its dwellers: Guwahati down the ages' at the Kalaguru Bishnu Prasad Rabha auditorium, Cotton University, Panbazar here at 5 pm on December 19.

Noted academic and writer Professor Ranjit Kumar Dev Goswami will deliver the annual lecture.

**OBITUARY** 

# Students finally apr

MAMATA MISHRA

GUWAHATI, Dec 9: This batch had missed their HSLC examination due to Covid-19 and was evaluated based on previous records. Their HS first year examination was also postponed twice due to floods and eventually all had to be promoted on the basis of internal assessment. This batch of 3.71 lakh students will finally appear for a full-fledged examination after a wait of three long years when they will write their HS final examination early next year.

Being the strongest batch ever under the Assam Higher Secondary Education Council (AHSEC), the Coun-



Asomor Chatra Andolan, a book Hrishikesh Goswami, journalist H

# NFR officia granted pro

STAFF REPORTE

GUWAHATI, Dec 9: Kupen Careek NF Railway official who has be sted murder of an Army man water stee from Bareilly to New Delhi, anticipatory bail by the Gaston work

A case has been registered vel Bareilly Junction, Uttar been alleged that Boro, a TTE Commercial dense-

# Young woman found dead

GUWAHATI, Dec 9: The body of a 26-year-old woman, Jeuti Begum, was recovered in a mysterious condition from a rented house in Ganesh Nagar in Chandmari area today. She was a resident of Kamalpur in Kamrup district and had been staying at the house for the last five months. A police source said that there was no mark of external injury on the body. The body was sent for post mortem immediately, he said. - City Correspondent



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## Indian Institute of Technology Guwahati Guwahati-781039, Assam Office of Industrial Interactions and Special Initiatives

Call for the project position Assistant Project Engineer purely on contractual basis in the Project No: CC-ISP-IITG-TO-101 for 11 months in the Centre for Computer and Communication, IIT Guwahati, For detailed advertisements may please visit https://www.iitq.ac.in/iitq\_recruitment Advt. No: IITG/II&St/Project Staff Rectt-2022/27 Asstt. Registrar (II&SI)



## OFFICE OF THE REGISTRAR GAUHATI UNIVERSITY :: GUWAHATI- 14

NOTIFICATION

(Cancellation of Advertisement No. EEC/GU/02/2021, dated 26.02.2021)

It is for information of all concerned that the advertisement vide Ref. No. EEC/GU/02/2021, dated 26.02.2021 for recruitment of 1837 nos. of Grade III and Grade IV vacant posts of Agriculture Department is hereby cancelled on the basis of relevant request letter to the effect received from Joint Secretary to the Govt. of Assam, Agriculture Department.

This is issued as per approval of the Honourable Vice Chancellor, G.U. Sd/- Registrar, Gauhati University

## JAWAHARLAL NEHRU MEMORIAL FUND TEEN MURTI HOUSE, NEW DELHI - 110011

JAWAHARLAL NEHRU SCHOLARSHIPS FOR DOCTORAL STUDIES Jawaharlal Nehru Memorial Fund, Teen Murti House, New Delhi 110011 offers 18 scholarships (UR-6/SC-3/ST-1/OBC-5/EWS-2/ PwD-1) for Ph.D. studies in India to Indian Nationals and 2 scholarships to Nationals of other Asian countries from April 2023 for up to 2 years. The subjects covered are Indian History & Civilization, Sociology, Comparative Studies in Religion & Culture, Economics and Ecology & Environment, Application forms can be downloaded from our website or obtained from the JNMF office. Duly filled in forms should reach the JNMF office latest by 15 January 2023. Further details such as stipend and other terms and conditions will be available in the information Sheet in our website:



www.jnmf.in; Email: jnmf1964@gmail.com

P.O. Duliajan - 786 602, Assam, India ; CIN : L11101AS1959GOI001148

The Ministry of Environment, Forest and Climate Change (MoEF&CC) has accorded Environmental Clearance for Onshore Oil & Gas development drilling and production against the proposal-No. IA/AS/ IND2/226998/2017

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Nodal Officer EC/FC/NBWL, Oll India Limited.

Administrative Secretary

তে শ্বতীদ প্রণায়ো তোমাক



# Common Environment Management Plan for Onshore Oil & Gas **Drilling Activity**





## **Contents**

S.No		Content				
1.0	INTRODUCTION					
2.0	Environmental Management Plan					
3.0	IMPACT ASSESSMENT					
	4.1	Air Quality				
	4.2	Noise Quality				
	4.3	Soil Quality				
	4.4	Water Quality and Hydrogeology				
	4.5	Biological Environment				
	4.6	Socio-Economic Environment				
	4.7	Impact on Community Health & Safety				
1.0	DETA	IL ENVIRONMENTAL MANAGEMENT PLAN				
	5.1	Air Quality Management Plan				
	5.2	Noise Management Plan				
	5.3	Soil Quality Management Plan				
	5.4	Surface Water Quality Management Plan				
	5.5	Ground Water Quality Management Plan				
	5.6	Waste Management Plan				
	5.7	Wildlife Management Plan				
	5.8	Road Safety & Traffic Management Plan				
	5.9	Occupation Health & Safety Management Plan				
	5.10	Management of Social issues and concerns				
	5.11	Emergency Response Plan				
5.0		onment Management Matrix				
6.0	Summ	ary and Conclusion				



## 1.0 INTRODUCTION:

OIL INDIA LIMITED (OIL), a Government of India Maharatna Enterprise, is currently engaged in carrying out hydrocarbon exploration and production activities mostly in its operational areas in Upper Assam, Arunachal Pradesh and Mizoram in the North Eastern part of India. OIL is also undertaking hydrocarbon exploration activities in few Indian states and few overseas countries. Oil India Limited was incorporated on 18th February 1959 to expand and develop the newly discovered oil fields of Naharkatia and Moran in the Indian North East. In 1961, it became a joint venture company between the Indian Government and Burmah Oil Company Limited, UK. In 1981, OIL became a wholly owned Government of India enterprise. Today, OIL is a premier Indian National Oil Company engaged in the business of exploration, development and production of crude oil and natural gas, transportation of crude oil and production of LPG.

Govt. of India and Assam has awarded Petroleum Mining Leases (PML) to OIL for exploration and development of oil & gas at Dibrugarh, Chabua, Tinsukia, Hugrujan, Naharkatiya Extn, Dholiya and Dumduma areas including the adjoining areas in Dibrugarh, Tinsukia and Sibsagar Districts.

## 2.0 Environmental Management Plan

This Environmental Management Plan and Monitoring Framework is a site-specific document for the drilling activities that have been developed to ensure that OIL can implement the project in an environmentally conscious manner and where all contractors, understand the potential environmental risks arising out of the proposed project and take appropriate actions to properly manage such risk.

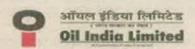
This EMP will be an overview document that will guide environmental management of all aspects of OIL's activities i.e. construction and operation of drilling wells. This EMP will be backed up by more specific Environmental Action Plans, Procedures and Bridging Documents.

The EMP describes the actions to be adopted in terms of:

- National Policies and Regulations;
- Best Practices and guides; and
- Local Environmental and Social Sensitivities.



## The Environment Policy of OIL is presented below.



#### **ENVIRONMENT POLICY**

Oil India Limited is guided by its Core purpose of "being a fastest growing energy company with global presence and providing value to all stake holders". Currently as an E&P company, OIL has a pan India presence with overseas foot prints.

In alignment with the core purpose, OIL is deeply committed to the Preservation of Environment & Ecology, Sustainable Development, Enrichment of the quality of life of Employees, Customers and the Community around its operational areas.

In pursuance of the above mentioned policy OIL is committed to:

- 1. Ensure an environment friendly work place in all our operations.
- 2. Comply with relevant Environmental Laws and Regulations in OIL's operations, prescribed by the statutory bodies.
- Follow a systemic approach to Environmental Management Plan in order to achieve continual performance improvement.
- Adopt technologies that conserve energy, prevent pollution, maximize recycling, reduce -wastes, discharge and emissions.
- 5. Develop green belts and plant trees in and around OfL's operational areas in harmony with nature.
- 6. Protect aesthetic, cultural, social patterns and historical characteristics in and around OTL's operational areas.
- 7. Promote a culture among OIL employees, contractors and all the stake holders associated with OIL for shared responsibility towards environmental protection.
- 8. Promote and nurture a healthy, safe & productive environment in its area of operations.

(S.RATH)

DIRECTOR (OPERATIONS)

Effective Date: 25th April, 2012

Approved in the 420th Board Meeting

1

4 | Page

#### 3.0 IMPACT ASSESSMENT

The potential impacts arising due to the construction and operation of the drilling activities are given below:

- **3.1 Air Quality:** The operation of DG/GG sets, movement of vehicles and machineries during construction and drilling at drill sites will result in the generation of air pollutants viz. PM, NOx and SOx that may affect the ambient air quality temporarily. Air pollutants like particulate matter, hydrocarbons and NOx will also be generated during drilling operations.
- 3.2 Noise Quality: Operation of heavy machinery/equipments and vehicular movement during site preparatory and road strengthening/construction activities may result in the generation of increased noise levels. Operational phase noise impacts are anticipated from therunning of drilling rig and ancillary equipment *viz*. shale shakers, mud pumps and diesel generators, gas generators.
- **3.3 Soil Quality:** Stripping of top soil will affect the soil fertility of the well sites temporarily. Potential adverse impacts on soil quality may also result from improper storage and handling of fuel, lubricants, drilling mud and drill cuttings.
- 3.4 Water Quality and Hydrogeology: All wastewater discharged from the drilling operations will be treated in the ETP and discharges will conform to CPCB standards. As the volume of water to be discharged is small, it is anticipated to cause minor increase in pollution load for specific parameters in receiving water bodies. Uncontrolled surface runoff from the drill sites may compose of waste fluids or storm water mixed with oil and grease and may pollute the surface water quality. However, the surface runoff will be treated with sedimentation tank and oil water separator at site.

#### 3.5 Biological Environment:

The existing vegetation at the proposed drill sites, approach roads and RoU of the pipeline will be felled for site development. Noise generated from drilling operations and vehicular movement within the drill sites and approach roads may affect the reptiles, birds and mammals adversely and may result in their moving away from the project area for a temporary period. OIL will obtain Forest Clearance from MoEF&CC for drilling within the forestlands; all the conditions mentioned in the forest clearance would be complied. Surface runoff from the drill sites contaminated with sediment, may reachsurface water channels and increase the suspended solids load of the channel water. Increaseof suspended solid will increase the turbidity of river water that ultimately will adversely affect the DO level in the water. The turbid water and lower DO may affect the primary productivity of the impacted areas of the rivers. The process effluent will be adequately treated in the ETP to meet the industrial effluent discharge standards. The discharge of treated effluent is not expected to cause perceptible changes in the water quality of the receiving stream.

3.6 Socio-Economic Environment: Approximately 3 ha. land would be required for each well. Land will be purchased from local communities however; no physical displacement during land procurement is anticipated. Additionally, land will also be procured for construction of 100-200 m approach road to the drill site from existing roads. Anticipated number of families directly impacted would be limited to 2-5 nos. for each of the drill sites. The dependency of the landowner in case of generation of livelihood is limited as the land is classified as monocropped agricultural land.



OIL/its contractors would endeavour to provide maximum employment to the local people; however, certain percentage of semi-skilled and highly skilled migrant labour would be used by contractors for manning technical activities. It is anticipated that occasional conflicts would arise with the local community over the recruitment of migrant workers. Discomfort due to dust and noise to adjoining communities, influx of people are likely to occur.

The construction phase of the project is likely to generate both direct and indirect opportunities for employment. The estimated direct employment would be approximately 50 un-skilled workers during the peak construction phase that will primarily sourced from nearby areas. Indirect employment would be primarily in the supply chain as vendors, which are anticipated to be set up to support the construction.

3.7 Impact on Community Health & Safety: Community health and safety of inhabitants residing close to the proposed well sites stand to get affected from frequent heavy vehicular movements along village access roads and due to noise from drilling rig operations, movement of heavy vehicles during construction etc.

#### 4.0 DETAIL ENVIRONMENTAL MANAGEMENT PLAN

## 4.1 Air Quality Management Plan

- Vehicles delivering raw materials like fine aggregates will be covered to prevent fugitive emissions.
- Sprinkling of water on earthworks, material haulage and transportation routes on a regular basis during construction and decommissioning phase of the wells.
- Flare stacks of adequate height would be provided.
- DG/GG set stacks would have adequate height, as per statutory requirements, to be able to adequately disperse exhaust gases
- Periodic monitoring of DG/GG set stack emission will be carried out in accordance with the Environmental Monitoring Plan to assess compliance with CPCB DG set exhaust standards.

#### 4.2 Noise Management Plan

- Selection and use of low noise generating equipment with in-built engineering controls viz. mufflers, silencers, etc.
- All DG/GG sets would be provided with acoustic enclosures.
- Appropriate PPEs (e.g. ear plugs) will be used for by workers while working near high noise generating equipment.
- All vehicles utilized in transportation of raw materials and personnel will have valid Pollution under Control Certificates (PUC).
- All high noise generating equipment will be identified and subjected to periodic preventive maintenance.
- No night time operation of vehicles and construction activities will be undertaken.



#### 4.3 Soil Quality Management Plan

- Drip trays to be used during vehicular/equipment maintenance and during re-fuelling operations.
- Spill kits will be made available at all fuel and lubricant storage areas. All spills/leaks contained, reported and cleaned up immediately.
- Dedicated paved storage area will be identified for the drilling chemicals, fuel, lubricants and oils within the drill sites.
- 1.5 mm HDPE lined pits will be considered for the disposal of unusable drilling mud cuttings and drilling wastewater etc.

#### 4.4 Surface Water Quality Management Plan

- Levelling and grading operations will be undertaken with minimal disturbance to the existing site contours thereby maintaining the general slope and topographical profile of the site.
- During site preparation and construction, surface water run-off will be channelized through appropriately designed drainage system.
- Sediment filters and oil-water separators will be installed to intercept run-off and remove sediment before it enters water courses.
- Domestic wastewater generated from drill sites will be treated through septic tank and soak pit system and then discharged.
- Process wastewater would be treated in Effluent Treatment Plant (ETP)at drill sites.

#### 4.5 Ground Water Quality Management Plan

- Water based mud would be used as a drilling fluid for the proposed project.
- Eco-friendly synthetic based mud if required for deeper sections, will be used after providing intimation to the Pollution Control Board;
- The drill cutting along with spent mud will be stored in HDPE lined pit.

# 4.6 Waste Management Plan

- Use of low toxicity chemicals for the preparation of drilling fluid.
- Management of drill cuttings, waste drilling mud, waste oil and domestic waste, wastewater in accordance with Standards for Emission or Discharge of Environmental Pollutants from Oil Drilling and Gas Extraction Industry of CPCB as modified in 2005.
- The hazardous waste (waste and used oil) will be managed in accordance with Hazardous Waste (Management, Handling & Transboundary Movement) Rules, 2016.
- The kitchen waste will be disposed in nearest municipal/village dumping site on a daily basis through approved waste handling contractors.
- •The sewage generated will be treated through septic tank and soak pit system.
- •Used batteries will be recycled through the vendors supplying lead acid batteries as required under the Batteries (Management & Handling) Rules, 2001.
- The drilling cuttings pit will be bunded and kept covered using tarpaulin sheets during monsoon.



#### 4.7 Wildlife Management Plan

- Movement of heavy vehicles will be restricted at night time, especially if access roads pass though forest areas, as most of the mammals movement occurs during night;
- Noise levels at the drill siteswill be controlled through selection of low noise generating equipment and installation of sufficient engineering controls viz. mufflers, silencers etc.
- No temporary electric supply connection line from the grid will be laid for the proposed project activity. All electric requirements will be supplied from the internal DG sets.
- OIL will have to take Forest Clearance from MoEFCC for development of drill sites, access roads and laying of pipeline within forest areas.

## 4.8 Road Safety & Traffic Management Plan

- The condition of roads and bridges identified for movement of vehicles and drilling rig will be assessed and if required strengthened by OIL to ensure their safe movement.
- Precautions will be taken by the contractor to avoid damage to the public access routes including highways during vehicular movement.
- Traffic flows will be scheduled wherever practicable during period of increased commuter movement.

#### 4.9 Occupation Health & Safety Management Plan

- All machines to be used in the construction will conform to the relevant Indian Standards (IS) codes, will be kept in good working order, will be regularly inspected and properly maintained as per IS provisions and to the satisfaction of the site Engineer.
- Hazardous and risky areas, installations, materials, safety measures, emergency exits, etc. shall be appropriately marked.

## 4.10 Management of Social issues and concerns

- People from adjoining areas especially given job preference through local contractors according to the skill sets possessed.
- Prior to the commencement of the proposed activity, a consultation program will be conducted by
  OIL with the target groups and local authorities. The primary objective of such consultation will be to
  share with the concerned villagers/stakeholders the objective of the proposed project associated
  impacts and their mitigation.
- OIL will give more emphasis and priority on periphery development, development of health facilities and provision for drinking water facility as per Corporate Social Responsibility (CSR) Plan.
- The drill sites would be fenced and gates would be constructed so that the children are refrained from straying into the site.



#### 4.11 Emergency Response Plan

- Drilling rig and related equipment to be used for drilling will be conformed to international standards specified for such equipment.
- Blow-out preventers and related well control equipment shall be installed, operated, maintained and tested generally in accordance with internationally recognized standards.
- Appropriate gas and leak detection system will be made available at each of the drill sites:
- Adequate fire-fighting equipment shall be provided at each drilling site.

The environmental mitigation measures and plans are presented in form of a matrix according to the sequential flow of activities in the project life cycle. The matrix focuses on strategies to be adopted for safe guard of the environment from possible impacts resulting out of the project activities. The strategies have further been detailed out as management procedures and programmes in subsequent sections.

The EMP helps establish the linkage between the activities environmental impacts and mitigation measures and presents the monitoring framework i.e. the Environmental Performance Indicator (EPI) No. as well as the Environmental Quality Indicator (EQI).



## 5.0 Environment Management Matrix

S Na	Activity	Ref	Aspect	Impact	Mitigation Measures	Monitoring	Timing/ Frequency	Responsible Party	Related Plans
1.	Physical Presence of drill site, rig and other machinery.		_	Temporary change in landscape	On completion of works (in phases) all temporary structures, surplus materials and wastes will be completely removed. Only structure required for safety purposes would be retained on the bare drill site.		Construction & Drilling	OIL/Contractor	Waste Management Plan
		1.2	Increase of illumination at night time due to installation of drilling setup	disturbance of the	Appropriate shading of lights to prevent scattering	Grievance records/ Consultation with Villagers	Construction & Drilling	OIL/Contractor	Management of social issues & concerns
		1.3			Preference used of local labour forces to the extent possible	Grievance records	Construction & Drilling	OIL/Contractor	Management of social issues & concerns
2.	Storage & Handling of Materials & Spoils	2.1	_		All loading and unloading activities to be carried out as close as possible to the storage facilities.	Site Inspection	Construction & Drilling	OIL/Contractor	Air Qualit Management
		2.2	Accidental spillage of oil & chemicals	contamination surface water	All spills to be reported and contained to prevent entry of spilled chemicals/fuels to any surface water body or drainage channel	spills/Community	Construction & Drilling	OIL/Contractor	Surface wate quality management plan, Wildlife Management Plan
				Potential impact on soil quality	All spills to be reported and remedial measures to be taken for clean-up of the spill.	Spills/Site	Construction & Drilling	OIL/Contractor	Spill management plan

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5 No	Activity	Ref	Aspect	Impact	Mitigation Measures	Monitoring	Timing/ Frequency	Responsible Party	Related Plans
3.	Transport of Materials, Spoils and Machinery	3.1	Emission of gaseous pollutants from vehicle during transportation of materials, spoils and machinery	air quality along	equipment will be regularly	I.	Construction &Drilling	OIL/Contractor	Air Quality Management plan
					Vehicle / equipment air emissions will be controlled by good practice procedures (such as turning off equipment when not in use);		N IXON		P I
					Vehicle / equipment exhausts observed emitting significant black smoke in their exhausts will be serviced/replaced		St. Toronto.	ii	, = 10, 10, 10, 10, 10, 10, 10, 10, 10, 10,
		3.2	Noise emission during transport of materials, spoils and machinery	deterioration in ambient noise	Undertake preventive maintenance of vehicles and machinery to reduce noise levels.  Restriction on unnecessary use of horns by trucks and	Inspection/Recor ds of	Construction & DrillIng	Oll./Contractor	Noise Quality Management Plan
4.	Operation & maintenance of rig and associated machinery.	41	Emission of air pollutant from DG/GG sets	on air quality due	vehicle in settlement area Preventive maintenance of DG sets to be undertaken as per manufacturers schedule	Site Inspection/Records of repairs	Orilling	OIL/Contractor	Air Quality Management plan
		4.2	Emission of Noise from DG/GG sets	increase of	All workers working near high noise generating equipment to be provided	_	Drilling	OIL/Contractor	Noise Quality Management Plan and

| 2336



S No	Activity		Ref	Aspect	Impact	Mitigation Measures	Monitoring	Timing/ Frequency	Responsible Party	Related Plans
					work place noise level	with Personal Protective equipment				Occupational Health & Safety Management Plan
		-		-		Preventive maintenance of machinery to be undertaken as per manufacturers				
						schedule				
		44, 				Install sufficient engineering control (mufflers) to reduce noise level at source				
			4.3	Emission of noise from operation of the rig	increase of	All workers working near high noise generating equipment to be provided with Personal Protective equipment		Drilling of Wells	OIL/Contractor	Noise Quality Management Plan and Occupational Health & Safety Management Plan
				*		Preventive maintenance of machinery to be undertaken as per manufacturers schedule				
			4:4	Abstraction of ground Water for project usage	,	Optimize use of water during drilling operations	Record Keeping and Auditing	Construction & Drilling	OIL/Contractor	None
		4		Noise from mud pump during preparation of drilling mud	increase of	Preventive maintenance of machinery to be undertaken as per manufacturers schedule		Drilling of Wells	OIL/Contractor	Noise Quality Management Plan and Occupational Health & Safety Management

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S No	Activity	Ref	Aspect	Impact	Mitigation Measures	Monitoring	Timing/ Frequency	Responsible Party	Related Plans
					All workers working near high noise generating equipment to be provided with Personal Protective equipment				Plan
	-	4.6	Accidental spillage of chemicals during preparation drill mud	Contamination of soil resulting loss of soil living organism	Manage spills of contaminants on soil	Records of spills	Drilling of Wells	OIL/Contractor	Spill Management plan
		4.7	Accidental spillage of chemicals during preparation drill mud	on surface water	All spill to be contained so that it does not reach any surface water body or drainage channels		Drilling of Wells	OIL/Contractor	Surface water quality management plan
5.	Operation & maintenance of Vehicles	5.1	Emission of Noise from vehicles	increase of noise	Preventive maintenance of vehicles to be undertaken as and when required		Construction & Drilling	OIL/Contractor	Noise quality management plan
		5.2	Emission of gaseous air pollutant from vehicles	deterioration air	Preventive maintenance of vehicles to be undertaken as and when required	Inspection/Records of	Construction & Drilling	OIL/Contractor	Air quality management plan
		5.3	Spillage of fuels & lubricants from vehicles	soil resulting loss	Adopt best practices e.g. use pumps and dispensing nozzle for transfer of fuel, use of drip trays. Etc.	Inspections/Audit	Construction & Drilling	OIL/Contractor	Spill Management plan
				impact on surface water quality and	The drainage system on site to be provided with Sedimentation tank and Oil-	Site Inspection/Audits	Drilling	OIL/Contractor	Surface water quality management

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5 Na	Activity	Ref	Aspect	Impact	Mitigation Measures	Monitoring	Timing/ Frequency	Responsible Party	Related Plans
				aquatic ecosystem	water Separator to prevent contamination especially oil and grease from being carried off by runoff.				plan and Spil Management plan
6.	Casing & cementing of well	6.1	Noise from machinery during preparation of cement slurry	increase of	Install sufficient engineering control on equipment and machineries (like mufflers in DG sets) to reduce noise and vibration emission levels at source, carry out proper maintenance and subject them to rigid noise and vibration control procedures.		Drilling of Wells	OIL/Contractor	Noise quality management plan
		6.2	Loss of drilling mud and cement slurry during casing of well	contamination of	Proper engineering controls during cementing operation to prevent migration of drilling mud and cement slurry into ground water aquifer		Drilling of Wells	OIL/Contractor	Ground water quality management plan
7.	Temporary storage, handling & disposal of process waste	7.1	Accidental spillage of process waste (unused cement slurry, return mud & drill cuttings) at the temporary storage site	contamination of soil and ground	_	Drilling and Decommissioning Phases	_	OlL/Contractor	Ground water quality management plan
		7.2	temporary storage site	water quality and	All Temporary waste storage area will have proper bunds to prevent any escape of contaminated runoff	Site Inspection and Record keeping	Drilling and Decommissioning Phases	OIL/Contractor	Surface water quality management plan and Spill Management
		i Apr			Ensure that any runoff from such temporary storage area				plan

14 | 12 3 5 1



5 No	Activity	Ref	Aspect	Impact	Mitigation Measures	Monitoring	Timing/ Frequency	Responsible Party	Related Plans
					are channelized into ETP				
		7.3		soil resulting In loss of soil living	Dispose process waste and domestic waste as per regulation/ best practices  Dispose debris and waste in designated areas and as per plan to prevent degradation of land		Construction & Drilling	OIL/Contractor	Waste Management Plan and Spil Management plan
		7.4	Accidental leakage/spillage of oils and lubricants from temporary storages	surface water resulting in deterioration of surface water	All chemical and fuel storage areas will have proper bunds so that contaminated run-off cannot escape into the storm-water drainage system.  The waste pits (waste water and drill cuttings) will be bounded and covered by tarpaulin sheet to prevent mixing of runoff water with waste water and leachate from waste pit and also reduce the volume of waste water.		Construction & Drilling	OIL/Contractor	Waste Management Plan and Spill Management plan
		7.5	Disposal/spillage of spent oils & lubricants into environmental media	soil resulting loss	Ensure recycling of spent oil & lubricant through authorized dealer	Site Inspection	Construction & Drilling	OIL/Contractor	Waste Management Plan and Spill Management plan

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No	Activity	Ref	Aspect	Impact	Mitigation Measures	Monitoring	Timing/ Frequency	Responsible Party	Related Plans
				ecosystem					
		7.6	Disposal of used battery & spent filters in environmental media	1			Construction & Drilling	OIL/Contractor	Waste Management Plan and Spil Management plan
	-	7.7	Offsite disposal of metallic, packing, scrap	Localized visual impacts		Site Inspection and Record Keeping	Construction & Orilling	OIL/Contractor	Waste Management Plan
8.	Testing & Flaring of natural gas	8.1	Emission of air pollutants from flare stack at drill site	localized	Proper engineering controls to ensure complete combustlon of gas Location of Flare stack to be chosen considering the sensitive receptors adjoining the site		Construction & Drilling	OIL S& E Tearnand Drilling team	Waste Management Plan
9.	materials (equipment, chemicals,	9.1	Accidental spillage during storage and handling of materials	contamination of	Impervious storage area, especially for fuel & lubricant, chemical, hazardous waste, etc.	Site Inspection	Construction & Drilling	OIL/Contractor	Spill Management plan
	fuel)			involved in	Personal protective equipment to be provided to workers involving in handling of hazardous materials	Site Inspection	Construction & Drilling	OIL/Contractor	Health and Safety Plan

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No	Activity	Ref	Aspect	Impact	Mitigation Measures	Monitoring	Timing/Frequency	Responsible Party	Related Plans
10.	Technical Emergencies	10.1	Probability of accidental leakage of gas/ liquid hydro-carbons due to fallure of safety devices		Proper engineering controls to prevent leakage of sour gases  Obtain an early warning of emergency conditions so as to prevent a negative impact on personnel, the environment, and assets  Safeguard personnel to prevent injuries or loss of life by either protecting personnel from the hazard and/or evacuating them from the facilities  Minimize the impact of such an event on the environment and the facilities by mitigating the potential for escalation and, where possible, containing the release  Develop evacuation procedures to handle emergency situations.		Drilling	Oll./Contractor	Emergency Response Plan
11.	Dismantling of rig & associated machineries	11.1	dismantling of rig	Temporary deterioration of ambient noise quality resulting in discomfort	All noise generating activities will be restricted during day	Site Inspection	Well Decommissioning Phase	OIL/Contractor	Noise qualit management plan
		11.2	Generation of waste during dismantling of rig	Temporary visual impacts	Storage of waste in designated areas only recyclable waste should be recycled through authorized	Site Inspection	Well Decommissioning Phase	OIL/Contractor	Waste Management Plan

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5 No	Activity	Ref	Aspect	Impact	Mitigation Measures	Monitoring	Timing/ Frequency	Responsible Party	Related Plans
					water recycler				
		11.3	Disposal/spillage of spent oils &lubricants into environmental media	_	contaminants on soil	Site Inspection and Record keeping	Well Decommissioning Phase	OIL/Contractor	Waste Management Plan
				deterioration of surface water quality and aquatic ecosystem					
12.	Transportation of drilling facilities	12.1		localized deterioration of air quality due to	Vehicle / equipment air emissions will be controlled by good practice procedures (such as turning off equipment when not in use); and	and Record	_	OIL/Contractor	Air qualit management plan
					Vehicle / equipment exhausts observed emitting significant black smoke in their exhausts will be				
					serviced/ replaced				
		12.2	Fugitive emissions due to re-entrainment of dust during transport of drilling facilities		Approach road to be sprinkled daily with water	Site Inspection	Well Decommissioning Phase	OIL/Contractor	Air qualit management plan
		12.3	Emission of noise during transport of drilling facilities		Restrict all noise generating operations, except drilling, to daytime		Well Decommissioning Phase	OIL/Contractor	Noise qualit management plan

18 | 2 3 5 3



S No	Activity	Ref	Aspect	Impact	Mitigation Measures	Manitoring	Timing/ Frequency	Responsible Party	Related Plans
-					Restriction on unnecessary				
					use of horns by trucks and				
					vehicle in settlement area				

19 |



#### 6.0 Summary and Conclusion

The EMP has been made to assess the potential significant adverse environmental effects due to the proposed construction and drilling activities.

Mitigation measures have been proposed as part of EMP to minimize adverse environmental impacts, if any. Risk assessment includes Jet Fire and Vapour Cloud Explosion for blowout of wells. The existing Emergency Management Plan of OIL will be extended to this project, strengthened as necessary and implemented in the event of any emergency arising due to above mentioned risks.

The present impact assessment study indicates that the overall impact from the proposed project will be short to medium term, reversible, localised and are not expected to contribute significantly to the surrounding environment. Also, with the implementation of the pollution control and strengthen the existing environment management measures, these anticipated impacts due to proposed site preparation and drilling operation and decommissioning activities of the proposed project will be mitigated. Summary of impact significance without mitigation measures and with mitigation measures is presented at the table below.

## Summary of Impact Significance without and with Mitigation Measures

Impact	Impact significance without mitigation measures	Impact significance with mitigation measures
Aesthetic & visual	Moderate	Minor
Land Use	Negligible	(a)
Soil Quality	Moderate	Minor
Air Quality	Moderate	Minor
Noise Quality	Miljor	Moderate
Road & Traffic	Moderate	Minor
Surface Water Quality	Moderate	Moderate
Ground water resource	Minor	Minor
Ground Water Quality	Moderate	Minor
Terrestrial Ecology	Negligible	
	Minor	Minor
	Majer	Moderate
Aquatic Ecology	Moderate	Moderate
Livelihood & Income generation	Moderate	Moderate
Conflict with local people	Moderate	Moderate
Benefit to Local Enterprises	dogram	
Employment Generation	Hastina	
Occupational health & safety	Moderate	Minor
Community health & safety	Moderate	Minor

OIL will also ensure that the environmental performances of all the activities are monitored throughout execution of the project during site preparation, drilling and decommissioning phases. Monitoring will be carried out for ambient air quality, stack emission, noise quality, quality of treated effluents, surface and groundwater qualities, waste generated and disposed etc. and verified that they meet the prescribed standards. OIL will continue to report environmental performance and submit monitoring reports regularly to statutory authorities.



The effective management system coupled with monitoring of environmental components and efforts for continual improvements will result in satisfactory environmental performance of the proposed oil and gas drilling and development project.

# **THANKS YOU**





Health Safety & Environment Department

P.O. DULIAJAN-786602, ASSAM. INDIA

Phone: 0374-2800542 Fax: 0374-2801796 Email: safety@oilindia.in

Ref. No.: S&E/E/21(B)/940

Date: 20.09.2023

To The Member Secretary, Pollution Control Board, Assam, Bamunimaidam, Guwahati- 781021.

**Sub:** Submission of Environmental Statement (Form-V) under Environment (Protection) Rules, 1986.

Sir,

With reference to the above subject, we are submitting herewith the Environmental Statement (Form-V) for the financial year ending 31st March, 2023 pertaining to the operations of Oil India Limited in the districts of Dibrugarh, Tinsukia, Sivsagar and Charaideo in Assam.

Thanking You,

Yours faithfully OIL INDIA LIMITED

(Ajit Chandra Haloi) Executive Director (HSE)

For Resident Chief Executive

Encl: As above.

#### Copy:

- 1. Regional Executive Engineer, Pollution Control Board Assam, Back Side of ASTC Bus Station, Chowkidinghee, Dibrugarh, PIN: 786001.
- 2. Executive Engineer, Regional Laboratory cum Office, Pollution Control Board Assam, Melachakar, Sibsagar, PIN: 785640.



## FORM - V (See Rule 14)

# ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR ENDING THE 31st MARCH, 2023

#### PART - A

(i) Name and address of the owner/occupier of the industry operation or process.

OIL INDIA LIMITED P.O. DULIAJAN DIST. DIBRUGARH ASSAM -786602.

**Note:** Environmental Statement (Form – V) is pertaining to the operations of Oil India Limited in the districts of Dibrugarh, Tinsukia, Sivasagar and Charaideo in Assam.

(ii) Industry category: Red - Oil and gas extraction (on-shore extraction through drilling wells)

# (iii) Production capacity - Units

OIL's production target is fixed as per the Memorandum of Understanding (MoU) with Ministry of Petroleum and Natural Gas, Govt. of India, which varies from year to year.

Production details during F.Y. 2022-23:

- Crude Oil: 3.114 MMT.
- Natural Gas: 2809.214 MMSCM
- **LPG:** 32,100 MT.

#### (iv) Year of establishment:

OIL INDIA LTD. was formed in 1961 as a joint venture with M/S. Burma Oil Company, UK and on 14th Oct. 1981, OIL became a fully owned Govt. of India Enterprise.

(v) Date of last Environmental Statement submitted: 20.09.2022.

# <u>PART - B</u> WATER AND RAW MATERIAL CONSUMPTION

# (I) Water consumption m<sup>3</sup>/d:

S.No	Purpose	Water Consumption (m <sup>3</sup> / day)
1.	Process & Cooling	14473.7
2.	Domestic	16038.63
	TOTAL	30512.33



Name of Products	Process water consumption per unit of product output		
	During F.Y. 2021-22	During F.Y. 2022-23	
(1)	(2)	(3)	
Hydrocarbon (Crude	1.12 m <sup>3</sup> /MT	1 m <sup>3</sup> /MT	
Oil, Natural Gas, LPG)	(Approx.)	(Approx.)	

# (II) Raw material consumption

*Name of raw materials	Name of products	Consumption of raw material pe unit	
		During	During
		F.Y. 2021-22	F.Y. 2022-23

No raw materials are used as Oil India Limited is engaged in Exploratory and development drilling activities & production of Crude Oil and Natural Gas. However, chemicals such as Bentonite are used for preparation of Water based drilling mud.

PART - C
POLLUTION DISCHARGED TO ENVIRONMENT/UNIT OF OUTPUT

(Parameter as specified in the consent issued).

Pollutants	Quantity of Pollutants Discharged (mass/day)	Concentrations of pollutants in discharges (mass/volume)	Percentage of variation from prescribed standards with reasons
(a) Water	<b>NIL.</b> There is no discharge	• Quality of ETP treated	No variation is observed.
	of pollutants from drilling locations and Production Installations.  • Wastewater generated from drilling locations is treated in Effluent Treatment Plant (ETP) and reused back in the drilling operation.  • The formation water generated after separation	water from the drilling locations is analyzed frequently. (Test report is enclosed as <b>Annexure</b> - <b>1</b> ).	All parameters of treated effluent and Formation water are within the permissible limits.



	treatment is pumped back to the underground formation (depth greater than 1600 m) through formation water disposal wells.	II)	
(b) Air	No major air pollutants are emitted from Oil & Gas exploratory and development drilling and production activities except Stack Gas emissions at drilling locations and Production Installations & Flaring at Oil Collecting Stations.	Ambient Air Quality (AAQ) monitoring is carried out frequently at drilling locations and Production Installations (Test report enclosed as	No variation is observed.  All parameters of Stack Gas emissions and Ambient Air are within the permissible limits.

# PART - D HAZARDOUS WASTES

(As specified under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016)

Hazardous	Category of Hazardous	Total Quantity generated	
Wastes	Waste as per Schedule - I of HW Rules, 2016	During F.Y. 2021-22	During F.Y. 2022-23
a) From process	S.No. 2.2 Sludge containing Oil	9943 MT	4671.52 <b>MT</b>
•	S.No. 5.1 Used or Spent Oil	60 KL	208 KL
	S.No. 33.1 Empty barrels/ containers/liners contaminated with hazardous chemicals/ wastes	41569 Nos.	26616 Nos.
	S.No. 33.2 Contaminated cotton rags or other cleaning materials	3.7 MT	6.19 MT
b) From pollution control facilities	S.No. 33.5 Chemical sludge from waste water treatment	2600 KL	120.84 KL



# PART - E SOLID WASTES

Solid Wastes	Total Quantity		
	During F.Y. 2021-22	During F.Y. 2022-23	
(a) From process			
	23,000 m <sup>3</sup>	27,000 m <sup>3</sup>	
Drill Cuttings	(Approx.)	(Approx.)	
(b) From pollution control facilities	NIL		
(c)			
(1) Quantity recycled or re-utilized within	N/A		
the unit.			
(2) Sold	N/A		
(3) Disposed	N/A		

#### PART - F

PLEASE SPECIFY THE CHARACTERIZATION (IN TERMS OF COMPOSITION AND QUANTUM) OF HAZARDOUS AS WELL AS SOLID WASTES AND INDICATE DISPOSAL PRACTICE ADOPTED FOR BOTH THESE CATEGORIES OF WASTES.

# (I) Hazardous Wastes:

	Name of the Hazardous Waste	Quantity generated during F.Y. 2022-23	Disposal Practices
a)	Sludge containing Oil	4671.52 MT	Sent to Sludge Processing Plant for oil recovery followed by Bioremediation
b)	Used or Spent Oil	208 KL	Stored in barrels under covered shed and sold to authorized recyclers through auction
c)	Empty barrels/ containers/liners contaminated with hazardous chemicals/ wastes	26616 Nos	Sold to authorized recyclers through auction
d)	Contaminated cotton rags or other cleaning materials	6.19 MT	Bioremediation
e)	Chemical sludge from waste water treatment	120.84 KL	Disposed in HDPE lined pits



## (I) Solid Wastes:

Name of the Solid Waste	Quantity generated during F.Y. 2022-23	Disposal Practices
a) Drill Cuttings	27,000 m <sup>3</sup> (Approx.)	Disposed in HDPE lined pits

#### PART - G

# IMPACT OF THE POLLUTION ABATEMENT MEASURES TAKEN ON CONSERVATION OF NATURAL RESOURCES AND ON THE COST OF PRODUCTION

- Acoustic enclosures have been provided around all gensets to reduce noise levels.
- Recovery of drilling mud from drill cuttings by using a combination of Vertical Cutting Dryer (VCD) and a high-performance centrifuge.
- > Wastewater generated from drilling locations is collected in HDPE lined pits, treated in Effluent Treatment Plant (ETP) with Reverse Osmosis unit and the treated effluent is reused back in the drilling operation.
- > Formation water generated from Production Installations is treated in Effluent Treatment Plant (ETP) before disposal in the abandoned/ water disposal wells.
- > Processing of oily sludge for recovery of Crude oil and further treatment of sludge through Bioremediation.
- > Construction of central concrete pit for disposal of waste mud.
- > Treatment of Biomedical waste through incinerator.
- Plantation of 50,000 saplings was carried out at 8 nos. of abandoned OIL well sites.

#### PART - H

# Additional measures/investment proposal for environmental protection, abatement of pollution, prevention of pollution.

- MoU with District Administration, Tinsukia for treating the legacy waste of Tinsukia Municipality through the process of Biomining.
- ➤ Proposal for construction of Community Sewage Treatment Plant (STP) at Duliajan.
- MoU with Digboi Forest division, Assam for carrying out afforestation in 100 Ha of degraded forest area.
- > MoU with IIT Guwahati to study the feasibility of using treated drill cutting as a building material.

#### PART - I

# ANY OTHER PARTICULARS FOR IMPROVING THE QUALITY OF THE ENVIRONMENT.

