



MERCATOR PETROLEUM
L I M I T E D
(a subsidiary of Mercator Limited)

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B - wing, Nariman Point,
Mumbai - 400021, India.
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Date: 27th May, 2015

Ref: MPL/CB03/FICO/252

To,
Member Secretary,
Gujarat Pollution Control Board,
Paryavaran Bhavan,
Sector - 10A,
Gandhinagar - 382 010

Sub: Submission of Environmental Statement (FORM V) for FY 2014-15.

Ref: F No J-11011/28/2011-IA II (I) Exploratory Drilling (Onshore) for Oil and Gas (8 Wells) in Block CB ONN 2005/3 in District Bharuch by Mercator Petroleum Limited - Environmental Clearance dated 11th August, 2014 ("EC")

Dear Sir/Madam,

We, Mercator Petroleum Limited (MPL) refer to the aforementioned EC awarded to us by MoEF. Pursuant to this EC, MPL hereby submits an Environmental Statement for financial year ending 31st March, 2015 in Form V to Gujarat Pollution Control Board ("GPCB") as prescribed under the Environment (Protection) Rules, 1986.

Yours Sincerely,

Dr. Rabi Bastia
Alternate MC Member
Encl: As Above

Cc: Regional Office, Western Region, Kendriya Paryavaran Bhavan, Link Road No 3, E-5 Ravi Shankar Nagar Bhopal-462016 (MP), Telefax - 0755-2465054

FORM – V

(See Rule 14)

From:

Mercator Petroleum Limited
Mittal Tower – B Wing
Nariman Point
Mumbai -400021

To

Gujarat Pollution Control Board
Sector – 10 A
GANDHINAGAR 382 043

ENVIRONMENTAL STATEMENT for the financial year ended 31st March, 2015

PART – A

(i)	Name and address of the Owner / occupier of the Industry operation or Process.	Mercator Petroleum Limited Mittal Tower – B Wing Nariman Point Mumbai – 400021
(ii)	Industry Category-	
	Primary (STC Code)	1b) Oil and Gas exploration, development & production
	Secondary (STC Code)	-
(iii)	Production Capacity Units	Well Dharti # 1 Drilling campaign, between 25th June, 2014 and 26th Aug, 2014 (total 63 days)
(iv)	Year of Establishment	
(v)	Date of the last Environmental Statement submitted.	n/a

PART - B

Water and Raw Material Consumption

(1) Water Consumption m³/ day

Process - Drilling Operation -	14 m ³ / day
Cooling -	NIL
Domestic -	6 m ³ / day
Total	20 m ³ / day

Notes:

1. There was no continuous process operation. Site Construction and drilling operation for Well Dharti -1 was about 63 days.
2. About 120 M³ of water was maintained in a lined pit for firefighting and drilling. Water from drilling waste water treatment plant was added into this pit.

Name of Product	Process water consumption per unit of product output	
	During the previous Financial Year	During the current Financial Year
	(1)	(2)
Well drilling of Dharti # 1 including other activities between 25th June, 2014 and 26th Aug	NIL	
Drilling	NIL	882 M ³
Domestic	NIL	378 M ³

(ii) Raw Material Consumption

Name of raw materials	Name of Products	Consumption of raw material per unit of output	
		During the previous Financial Year - NIL	During the current Financial Year – See details below
(i)	List of Mud materials consumed during the drilling process – Attached as Annexure 1A		
(ii)	List of Cement Materials consumed during the drilling process – Attached as Annexure 1B		

PART - C

Pollution discharged to environment / unit of output

(Parameter as specified in the consent issued)

Pollutants	Quantity of pollutants discharged (mass/day)	Concentration of pollutants in discharges (mass/volume)	Percentage of variation from prescribed standards with reasons
Waste Water	<p>Waste water along with mud was discharged in the PVC lined waste pit. Waste water from the pit was treated in the mobile ETP.</p> <p>Total waste water treated in the drilling campaign of 63 days was approximately 400 m³.</p>	<p>Refer Annexure 2 and 3 for the test results. Mercury was Below detectable Limit</p> <p>Waste water was treated in the mobile waste water treatment plant and treated water was put into water pit for reuse.</p>	Nil
Air Emissions	Air emission was from diesel generator used during drilling campaign.	Analysis report is in Annexure 4. Air emission was within limit	Nil

PART – D

HAZARDOUS WASTE

(As specified under Hazardous Wastes (Management and Handling) Rules, 1989)

Hazardous Waste	Total Quantity (Kg.)	
	During the previous Financial Year	During the current Financial Year
a) From Process (Drilling)		
Drill cuttings	Nil	The amount disposed to TSDF was about 630.9 Metric Tons. Oil and Grease concentration was below detectable Limit. Refer Annexure 5 Mercury concentration was below the detectable limit. Refer Annexure 3
b) From pollution control facilities	Nil	Nil

**PART – E
Solid Wastes**

	Total Quantity	
	Previous FY	Current FY
Solid Waste	Nil	
From process		
Solid hazardous waste	Nil	As given in part D above
Other hazardous waste Empty drilling material bags and empty drums, cardboard, paper	Nil	Solid waste of about 1 Ton
Kitchen waste	Nil	About 200 kg per day was disposed through local waste disposal site.
From Pollution Control Facility		
	Nil	Nil

PART – F

Please specify the characterizations (in terms of composition of quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

Drill cuttings waste: Drill cuttings waste was allowed to evaporate in the waste pit. After drying solid waste was disposed through TSDF site.

All parameter concentration was within the limit.

Nonhazardous waste: Like empty chemical bags, empty drums, metal scrap, cardboard, paper:

Empty drums were returned to Rig contractor. Other nonhazardous waste was disposed of through local recycler.

PART – G

Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of production.

Good industry and operational practices helped in ensuring no oil spillages. Noise and air pollution control measures were effective and no complaints were received from locals during drilling operation. The drilling operation was executed without any unwanted incident and following measures helped in achieving it.

- 1) Measures were undertaken to reduce noise levels at drill site. DG sets used had acoustic enclosure and complying with CPCB guidelines.
- 2) Ear Plugs/ muffs were provided to working staff.
- 3) Oil contaminated and non-oil contaminated drilling fluids were separate.
- 4) Drilling waste water and drill cuttings were collected in the HDPE lined pit and dried with solar evaporation. Waste water collected in pit was treated through mobile ETP. Effluent water was reused / recycled.
- 5) Drill cuttings were sent to the TSDF site.
- 6) No H₂S was expected in the field however portable H₂S gas detectors were provided in the field.
- 7) Blow Out preventer system was installed during drilling operations.

PART – H

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

This will be taken up when data is available in further drilling operations.

PART – I

Any other particulars for improving the quality of the environment.

Efforts will be made through awareness training of environment to look for waste reduction measures.



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Enviro Care Pvt. Ltd.**

■ MOEF Recognized Laboratory ■ Enlisted with GPCB ■ Environmental Consultants, Auditors & Analyst ■ Specialized in REIA, EIA, EC, CPCB, registration, WWTP, STP, APCM

Corporate Office :- 28, 29,30, Parmeshwar Estate-II, Phase-I, Opp. AMCO Bank, GIDC Estate, Vatva, Ahmedabad-382 445. Gujarat, India.
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TEST CERTIFICATE

Site-2
Oil & Grease Report

Company Name and Address

M/s. Chetankumar Virchandbhai Shah 27, Siddharth Society, T.B.Hospital Road, Behind Upnagar Jain Derasar, Mehsana	Report No: BECPL/LAB/R/201406457 Issue Date: 29/07/2014 Sample Ref No: BECPL/LAB/S/2011406457 Customer's Reference : Verbal
--	--

Description of Sample : Drift Cutting	Quantity/No of Sample : 500gram / One
Date of Sampling : 21/07/2014	Sampling Procedure : --
Sample Receipt Date : 22/07/2014	Date of Performance of Test : 22/07/2014
Sample Submitted By : Client	Packing / Seal : unseal
Test Parameter : As per Table	Date of Completion of Test : 29/07/2014
Analysis By : Mansi Nilesb	Test Method : Soil Analysis

Sr. no	Name of sample	Result	Unit
01	Oil & Grease	BDL	%

Mansi
(Government Analyst)
Date: 29/07/2014



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TEST CERTIFICATE

Company Name and Address

M/s. Chetankumar Virchandbhai Shah 27, Siddharth Society, T.B.Hospital Road, Behind Upnagar Jain Derasar, Mchsana	Report No: BECPL/LAB/R/201407807 Issue Date: 28/07/2014 Sample Ref No: BECPL/LAB/S/201407807 Customer's Reference : Verbal
--	---

Date & time of sampling : 25/07/2014 02:10 pm	Sample collected by : BECPL TEAM
Date of receipt of sample : 26/07/2014	Analysis starting date : 26/07/2014
Description of sample : Ambient Air(Nr. Main Gate)	Analysis completion date : 28/07/2014
Side location : Dharti #1 ghelda village	

Monitoring Date:

Wind Direction : SW TO NE
Duration Of Sampling : 24 HRS
Ambient Temperature : 38 °C

Result Table:

Parameter	Reference Method	Lab Id Coad	Unit	Result	Gpcb Limite
PM ₁₀	IS : 5182(Part-XXIII) 1999	15/LB/AM/PM ₁₀	μ g/m ³	82	100
PM _{2.5}	Gravimetric Method	15/LB/AM/PM _{2.5}	μ g/m ³	40	60
SO _x	IS : 5182 (Part-II) 2001	15/LB/AM/SO _x	μ g/m ³	34	80
NO _x	IS : 5182 (Part-VI) 2006	15/LB/AM/NO _x	μ g/m ³	36	80
HC	IS : 5182(Part-XII) 2004	15/LB/AM/HC	μ g/m ³	BDL	160

(Government Analyst)
Date: 28/07/2014

End of test report

This report is issued under the following terms & conditions:

- the report is refer only to the sample tested and not applies to the bulk.
- The results shows in this test report may differ based on varius factors including, temperature, humidity, perssure, retention time etc.
- The test report cannot be reproduced wholly or in part and cannot be used for promotional or publicity purpose without the wrritten consent of labortory department, BECPL
- Samples will be retained for a period of saven (7) days after completion of the analysis.longer retention periods can be arranged, on request of the coustomer.
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TEST CERTIFICATE

Company Name and Address

M/s. Chetankumar Virchandbhai Shah 27, Siddharth Society, T.B.Hospital Road, Behind Upnagar Jain Derasar, Mehsana	Report No: BECPL/LAB/R/201407805 Issue Date: 08/08/2014 Sample Ref No: BECPL/LAB/S/201407805 Customer's Reference : Verbal
--	---

Date & time of sampling : 25/07/2014 Day Time
Mode of Sampling : Garb
Monitoring Done by : BECPL
Measuring Condition : Type - 2 SLM
Frequency Weighing: Network - A
Time weighing: Slow

RESULT TABLE

Sr. No.	Location	Time	NOISE LEVEL, BD (A)		
			MIN	MAX	GPCB LIMIT
	Dharti #1 ghelda village				
01	Near main gate	12:20 p.m.	60.3	63.6	75 (ambient air)
02	Near D G set	12:35 p.m.	80.6	86.4	90 (work zone area)
03	Near drilling well	12:55 p.m.	80.1	86.2	90 (work zone area)
04	Admin office	01:20 p.m.	54.1	57.4	75 (ambient air)
05	Cementing plant	02:05 p.m.	77.2	80.6	90 (work zone area)
06	Nr mud tank	02:20 p.m.	65.1	67.6	75 (ambient air)
07	Near etp plant	01:45 p.m.	64.2	69.1	75 (ambient air)

Ambient Noise Standard: Day Time Shall Mean From 06.00 A.M. To 10.00 P.M.

Reference Method: IS 9989:1981 Assessment Of Noise With Respect To Community Response.

(Government Analyst)

Date: 08/08/2014

End of test report

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TEST CERTIFICATE

Company Name and Address

M/s. Chetankumar Virchandbhai Shah 27, Siddharth Society, T.B.Hospital Road, Behind Uppnagar Jain Derasar, Mehsana	Report No: BECPL/LAB/R/201407808 Issue Date: 28/7/2014 Sample Ref No: BECPL/LAB/S/201407808 Customer's Reference : Verbal
---	--

Date & time of sampling : 25/07/2014 12:45 pm Date of receipt of sample : 26/07/2014 Description of sample : Stack Attached To DG Set (1200 KVA) Side location : Dharti #1 ghelda village	Sample collected by : becpl team Analysis starting date : 26/07/2014 Analysis completion date : 28/07/2014
--	--

MONITORING DATE:

Fuel Used	: Diesel
Stack Height & Diameter (Meter)	: 4&0.609
Ambient Temperature (°C)	: 40
Temperature of Stack Gas (°C)	: 352
Manometer Reading (Mm Hg)	: 1.4
Average Velocity of Stack Gas (M/Sec)	: 5.80
Duration of Sampling (Minites)	: 20
VOLUME of Gas Sampled (Nm ₃)	: 0.218

RESULT TABLE:

Parameter	Reference Method	Lab Id Coad	Unit	Result
PM	IS : 11255 (Part-I) 1985	16/LB/AM/PM	Mg/Nm ³	85
So ₂	IS : 11255 (part-II) 1985	16/LB/ST/so ₂	Ppm	58
NO _x	IS : 11255 (Part-VII) 2005	16/LB/ST/NO _x	Ppm	30
CO ₂	IS : 13270-1992 ORSAT method	16/LB/ST/CO ₂	%	7.87
O ₂	IS : 13270-1992 ORSAT method	16/LB/ST/O ₂	%	9.95
N ₂	IS : 13270-1992 ORSAT method	16/LB/ST/N ₂	%	76.3
CO	IS : 13270-1992 ORSAT method	16/LB/ST/CO	%	2.40
HC	IS : 5182 (Part-XII) 2004	16/LB/AM/HC	Mg/Nm ³	0.47

- Sampling port hole is not provided as per CPCB guideline. Sampling was conducted from final exhaust fan.

(Government Analyst)

Date: 28/07/2014

End of test report

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TEST CERTIFICATE

Company Name and Address

M/s. Chetankumar Virchandbhai Shah 27, Siddharth Society, T.B.Hospital Road, Behind Upnagar Jain Derasar, Mehsana	Report No: BECPL/LAB/R/201407806 Issue Date: 08/08/2014 Sample Ref No: BECPL/LAB/S/201407806 Customer's Reference : Verbal
--	---

Date & time of sampling : 25/07/2014 **Night Time**
 Mode of Sampling : Garb
 Monitoring Done by : BECPL
 Measuring Condition : Type - 2 SLM
 Frequency Weighing: Network - A
 Time weighing: Slow

RESULT TABLE

Sr. No.	Location	Time	NOISE LEVEL, BD (A)		
			MIN	MAX	GPCB LIMIT
01	Near main gate	10:00 p.m.	57.3	60.4	75 (ambient air)
02	Near D G set	10:15 p.m.	70.2	76.4	90 (work zone area)
03	Near drilling well	10:35 p.m.	70.4	74.5	90 (work zone area)
04	Admin office	11:05 p.m.	46.8	50.2	75 (ambient air)
05	Cementing plant	11:15 p.m.	72.1	76.9	90 (work zone area)
06	Nr mud tank	11:30 p.m.	55.5	59.8	75 (ambient air)
07	Near ETP plant	11:50 p.m.	54.2	57.3	75 (ambient air)

Ambient Noise Standard: Night Time Shall Mean From 10.00 P.M. To 6.00 A.M.

Reference Method: IS 9989:1981 Assessment Of Noise With Respect To Community Response.

(Government Analyst)

Date: 08/08/2014

End of test report
This report is issued under the following terms & conditions:

- The Results Shows In This Test Report May Differ Based On Varius Factors Including, Temperature, Humidity, Perssure, Etc.
- The Test Report Cannot Be Reproduced Wholly Or In Part And Cannot Be Used For Promotional Or Publicity Purpose Without The Wrriten Consent Of Labortory Department, BECPL
- We Strictly Maintain The Confidently Of All The Monitoring Result And Not Reveal To Third Party Unless Required By The Statutory Or Legal Requirement



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Side - 2
Mercury Report
Soil, Water, Solid

TEST CERTIFICATE

Company Name and Address

M/s. Chetankumar Virchandbhai Shah 27, Siddharth Society, T.B.Hospital Road, Behind Upnagar Jain Derasar, Mehsana	Report No: BECPL/LAB/R/201406445 Issue Date: 29/07/2014 Sample Ref No: BECPL/LAB/S/201406445 Customer's Reference: Verbal
--	--

Description of Sample : Drill Cutting	Quantity/No of Sample : liter / One
Date of Sampling : 21/07/2014	Sampling Procedure : Grab Sample
Sample Receipt Date : 22/07/2014	Date of Performance of Test : 22/07/2014
Sample Submitted By : Client	Packing / Seal : unseal
Test Parameter : As per Table	Date of Completion of Test : 29/07/2014
Analysis By : Mansi	Test Method : Solid Analysis

Sr. no	Name of sample	Result	Unit
01	Mercury	BDL	Mg/kg

BDL = below detectable limit.

Mansi
(Government Analyst)
Date: 29/07/2014

Annexure - 2



**Bhagwati
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TEST CERTIFICATE

Company Name and Address

M/s. Chetankumar Virchandbhai Shah 27, Siddharth Society, T.B.Hospital Road, Behind Upnagar Jain Derasar, Mehsana	Report No: BECPL/LAB/R/2013156 Issue Date: 11/08/2014 Sample Ref No: BECPL/LAB/S/2011405340 Customer's Reference : Verbal
---	--

Description of Sample : Wastewater Date of Sampling : 02/08/2014 Sample Receipt Date : 04/08/2014 Sample Submitted By : Client Test Parameter : As per Table Analysis By : Mansi, Nitesh	Quantity/No of Sample : 2 lit / One Sampling Procedure : Grab Sample Date of Performance of Test : 04/08/2014 Packing / Seal : unseal Date of Completion of Test : 11/08/2014
--	---

Sr.No.	Test Parameters	Results	Test Method	GPCB Limit	Unit
		Ghelda village			
1	pH	6.4	APHA, 4500-H+B, 21 st Ed., 2005	6.5 to 8.5	--
2	Colour	19.6	APHA, 2120-C/B, 21 st Ed., 2005	100	Co.pt
3	Total Dissolved Solids	1820	APHA, 2540-C, 21st Ed., 2005	2100	mg/l
4	Total Suspended Solids	83	APHA, 2540-D, 21st Ed., 2005	100	mg/l
5	Oil & Grease	3.8	APHA, 5520-D, 21st Ed., 2005	10	mg/l
6	Chlorides	476.08	APHA, 4500-C1 B, 21st Ed., 2005	600	mg/l
7	BOD (20°C @ 5 day)	27.8	APHA, 5210-B, 21st Ed., 2005	30	mg/l
8	Chemical Oxygen Demand	76.8	APHA, 5220-B, 21st Ed., 2005	100	mg/l
9	Ammonical Nitrogen	3.4	APHA, 4500-NH ₃ B, 21st Ed., 2005	50	mg/l
10	Sulphate	76.40	APHA, 4500-SO ₄ ²⁻ E, 21st Ed., 2005	1000	mg/l
11	Fluoride	0.2	APHA, 4500-FD, 21st Ed., 2005	2	mg/l
12	Phenol	0.4	APHA, 5530-B, 21st Ed., 2005	1.0	mg/l
13	Total Hardness as CaCO ₃	273	APHA, 2340-C, 21st Ed., 2005	--	mg/l
14	Calcium	90.4	APHA, 3500-Ca B, 21st Ed., 2005	--	mg/l
15	Magnesium	13.8	APHA, 3111-B, 21st Ed., 2005	--	mg/l
16	Copper	0.31	APHA, 3111-B, 21st Ed., 2005	3.0	mg/l
17	Zinc	0.16	APHA, 3111-B, 21st Ed., 2005	5.0	mg/l
18	Total Chromium	BDL	APHA, 3111-B, 21st Ed., 2005	2.0	mg/l
19	Mercury	BDL	APHA, 3112-B, 21st Ed., 2005	0.01	mg/l
20	Lead	BDL	APHA, 3111-B, 21st Ed., 2005	0.1	mg/l
21	Nickel	BDL	APHA, 3111-B, 21st Ed., 2005	3.0	mg/l
22	Cadmium	BDL	APHA, 3111-B, 21st Ed., 2005	2.0	mg/l
23	Cyanide	BDL	APHA, 4500-CN-D, 21st Ed., 2005	Nil	mg/l
24	Sulphide	BDL	APHA, 4500-PD, 1st Ed., 2005	2.0	mg/l
25	% Sodium	41.7	APHA, 3500-Na B, 21st Ed., 2005	60	mg/l
26	Sodium Absorption Ratio	2.3	APHA, 3500-Na B, 21st Ed., 2005	26	mg/l

BDL = Below Detectable Limit.

(Signature)

(Government Analyst)

Date: 11/08/2014

Recognized Environmental Laboratories under The Environment (Protection) Act, 1986 valid upto 21-05-2017
 Note: This report is subject to terms & conditions mentioned elsewhere.



**Bhagwati
Enviro Care Pvt. Ltd.**

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* Environmental Consultants, Auditors & Analyst * Specialized in REA, EIA, EC, CPCB registration, WWTP, STP, APCM * Enlisted with GPCB

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TEST CERTIFICATE

Company Name and Address

M/s. Chetankumar Virchandbhai Shah 27, Siddharth Society, T.B.Hospital Road, Behind Upnagar Jain Derasar, Mehsana	Report No: BECPL/LAB/R/2013112 Issue Date: 29/07/2014 Sample Ref No: BECPL/LAB/S/2011405306 Customer's Reference : Verbal
--	--

Description of Sample : Wastewater	Quantity/No of Sample : 2 lit / One
Date of Sampling : 21/07/2014	Sampling Procedure : Grab Sample
Sample Receipt Date : 22/06/2014	Date of Performance of Test : 22/07/2014
Sample Submitted By : Client	Packing / Seal : unseal
Test Parameter : As per Table	Date of Completion of Test : 29/07/2014
Analysis By : Mansi, Nilesh	

Sr.No.	Test Parameters	Results	Test Method	GPCB Limit	Unit
		Gheda village			
1	pH	7.5	APHA, 4500-H+B, 21 st Ed., 2005	6.5 to 8.5	--
2	Colour	18.6	APHA, 2120-C/B, 21 st Ed., 2005	100	Co pt
3	Total Dissolved Solids	1740	APHA, 2540-C, 21st Ed., 2005	2100	mg/l
4	Total Suspended Solids	73	APHA, 2540-D, 21st Ed., 2005	100	mg/l
5	Oil & Grease	3.5	APHA, 5520-D, 21st Ed., 2005	10	mg/l
6	Chlorides	485.08	APHA, 4500-Cl B, 21st Ed., 2005	600	mg/l
7	BOD (20°C @ 5 day)	25.8	APHA, 5210-B, 21st Ed., 2005	30	mg/l
8	Chemical Oxygen Demand	92.8	APHA, 5220-B, 21st Ed., 2005	100	mg/l
9	Ammonical Nitrogen	3.4	APHA, 4500-NH ₃ B, 21st Ed., 2005	50	mg/l
10	Sulphate	79.40	APHA, 4500-SO ₄ ²⁻ E, 21st Ed., 2005	1000	mg/l
11	Fluoride	0.2	APHA, 4500-FD, 21st Ed., 2005	2	mg/l
12	Phenol	0.4	APHA, 5530-B, 21st Ed., 2005	1.0	mg/l
13	Total Hardness as CaCO ₃	273	APHA, 2340-C, 21st Ed., 2005	--	mg/l
14	Calcium	92.4	APHA, 3500-Ca B, 21st Ed., 2005	--	mg/l
15	Magnesium	13.8	APHA, 3111-B, 21st Ed., 2005	--	mg/l
16	Copper	0.31	APHA, 3111-B, 21st Ed., 2005	3.0	mg/l
17	Zinc	0.16	APHA, 3111-B, 21st Ed., 2005	5.0	mg/l
18	Total Chromium	BDL	APHA, 3111-B, 21st Ed., 2005	2.0	mg/l
19	Mercury	BDL	APHA, 3112-B, 21st Ed., 2005	0.01	mg/l
20	Lead	BDL	APHA, 3111-B, 21st Ed., 2005	0.1	mg/l
21	Nickel	BDL	APHA, 3111-B, 21st Ed., 2005	3.0	mg/l
22	Cadmium	BDL	APHA, 3111-B, 21st Ed., 2005	2.0	mg/l
23	Cyanide	BDL	APHA, 4500-CN-D, 21st Ed., 2005	Nil	mg/l
24	Sulphide	BDL	APHA, 4500-PD, 1st Ed., 2005	2.0	mg/l
25	% Sodium	41.7	APHA, 3500-Na B, 21st Ed., 2005	60	mg/l
26	Sodium Absorption Ratio	2.3	APHA, 3500-Na B, 21st Ed., 2005	26	mg/l

BDL = Below Detectable Limit.

(Government Analyst)

Date: 29/07/2014

Recognized Environmental Laboratories under The Environment (Protection) Act, 1986 valid upto 21-05-2017
Note: This report is subject to terms & conditions mentioned overleaf

Annexure 1 - A**CB3**

Chemical Name	Unit Size	Consumption during drilling activity
Barite	1 MT	272
bentonite	1 MT	10
biocide	19 Ltr	39
CaCO3 (F)	1 MT	5.5
CaCO3 (M)	1 MT	2
Caustic Soda	25 Kg	66
citric acid	25 Kg	10
CG	205 Ltr	37
EP Lubricant	205 Ltr	9
KCL	1 MT	42
PAC LV	25 Kg	127
PAC R	25 Kg	51
PHPA	25 Kg	50
Polyamine	205 Ltr	44
PGS	25 Kg	101
Soda Ash	50 Kg	32
Sulphonated Asphalt	25 Kg	340
XC Polymer	50 LBS	82
Drilling Detergent	200 Ltr	4
Resinex	25 Kg	0
DEFOAMER	200 Ltr	1
250 MESH	Nos	2
80 MESH	Nos	21



RAW MATERIAL CONSUMPTION

Annexure 1B		
CB3		
General Purpose FLAC D - 207 - Import Chemical	LB	100
D 800 - Mid Temperature Retarder - Import Chemical	LB	575
D065 TIC dispersant	LB	175
D047 Liquid Antifoam Agent - Import Chemical	LB	40
Calcium Chloride	GALLON	1435
D907, Cement Glass G	MT	113
Spacer B 250	LB	660
D - 122 A, Chemical Wash concentrate	GALLON	30
D167 UNIFLAC solid	LB	275
D 206 Antifoaming Agent	GALLON	34
D 600 G GASBLOK	GALLON	1233
D 066 Silica Flour	LB	16280

