1. PREAMBLE

Oil India limited (OIL) a "Maharatna" Category, Government of India Enterprise is a fully integrated National Oil Company operating under the Ministry of Petroleum and Natural Gas. With an impeccable credential spanning over six decades, OIL is actively involved in exploration, production and transportation of crude oil and natural gas as well as refining.

In Rajasthan, OIL is engaged in exploration and production of heavy oil Baghewala Field, located in Bikaner–Nagaur Basin, primarily from the Jodhpur Sandstone reservoir of Infracambrian age. Current oil production from the field is around 1200 barrels (~180 MT) per day, achieved mainly through Cyclic Steam Stimulation (CSS) combined with artificial lift (SRP). This is expected to increase substantially with ongoing field development and further implementation of new technologies, viz. SAGD, MPC, Fishbone drilling etc. along with planned exploration activities in and around Baghewala field.

In addition to Jodhpur Sandstone, Baghewala Field hosts an Upper Carbonate (UC) Formation, where in-place resources of extra-heavy crude are estimated to be around~ 45 MMT. Production attempts from UC using CSS have so far yielded limited results, underscoring the technical challenges and the need for innovative development and recovery approaches.

As part of its strategy, OIL is looking for Business Partner with capability for end to end responsibility of the entire field operations for all appraisal, development and production activities in the Baghewala Field (upper carbonate and sandstone formations).

OBJECTIVE

Purpose of the Pre-Tender Meeting

The purpose of the Pre-Tender Meeting is to engage with prospective business partners to:

- Present OIL's proposed scope and strategic intent for integrated field development
- Share key subsurface and operational challenges
- Solicit technical, operational, and commercial feedback
- Refine the tender strategy prior to formal issuance

Feedback received during this engagement will be considered while finalising the tender framework.

Objective of the Proposed Tender

The proposed tender is intended to identify a technically competent and financially capable Business Partner with proven experience in the development and production of extra-heavy oil reservoirs, particularly in carbonate and sandstone formations or both carbonate and sandstone formations, for end-to-end field development and production operations as single-point responsibility holder. The selected partner is expected to:

- Improve productivity of existing wells
- Execute required drilling and completions
- Evaluate and deploy suitable EOR / thermal / non-thermal technologies

- Maximise hydrocarbon recovery from both reservoirs with efficient reservoir management
- Operate and maintain surface facilities
- Ensure safe, efficient, and sustainable production

Proposed Engagement Model (Indicative)

The engagement is envisaged as an integrated partnership model, wherein the Business Partner will act as a single-point responsibility holder for field development and operational activities. Details related to risk allocation, investment responsibility, remuneration mechanism, and performance metrics will be specified in the tender document.

2. SCOPE OF WORK (Indicative)

The key elements of the proposed scope of work, which will be further detailed in the tender document, include the following:

i) End-to-End Field Operations

The Business Partner will be responsible for the complete planning, execution, and management of field operations associated with the development of (a) Upper Carbonate and (b) Jodhpur Sandstone reservoirs. This includes mobilization of required resources, operational management, field logistics, and integration of drilling, production, and facility operations to ensure safe, efficient, and cost-effective execution.

ii) Monetisation of Established Hydrocarbon Resources

The scope includes monetisation of hydrocarbons already established in the drilled Upper Carbonate wells. This will involve evaluation of existing wells and implementation of necessary well interventions, stimulation programs, and production enhancement measures aimed at improving productivity and ensuring sustained hydrocarbon production.

iii) Drilling and Completion of Planned Wells

The Business Partner will undertake the execution of the remaining drilling and completion activities for the future planned wells in both (a) Upper Carbonate and (b) Jodhpur Sandstone reservoirs. This will include well planning, drilling, completion design, and deployment of suitable technologies appropriate for extra-heavy oil reservoirs to achieve optimal well performance.

iv) Operation and Maintenance of Existing Surface Facilities

The partner will be responsible for the operation and maintenance of existing surface production facilities associated with both the carbonate and sandstone reservoirs. This includes maintaining production infrastructure, ensuring operational reliability, and supporting efficient hydrocarbon handling and evacuation.

v) Development of Additional Surface Facilities

The scope may also include design, engineering, development, and commissioning of additional surface facilities, where required, to support full-field development and production

optimisation. These facilities may include production gathering systems, processing units, flow assurance infrastructure, and other installations necessary for efficient field operations.

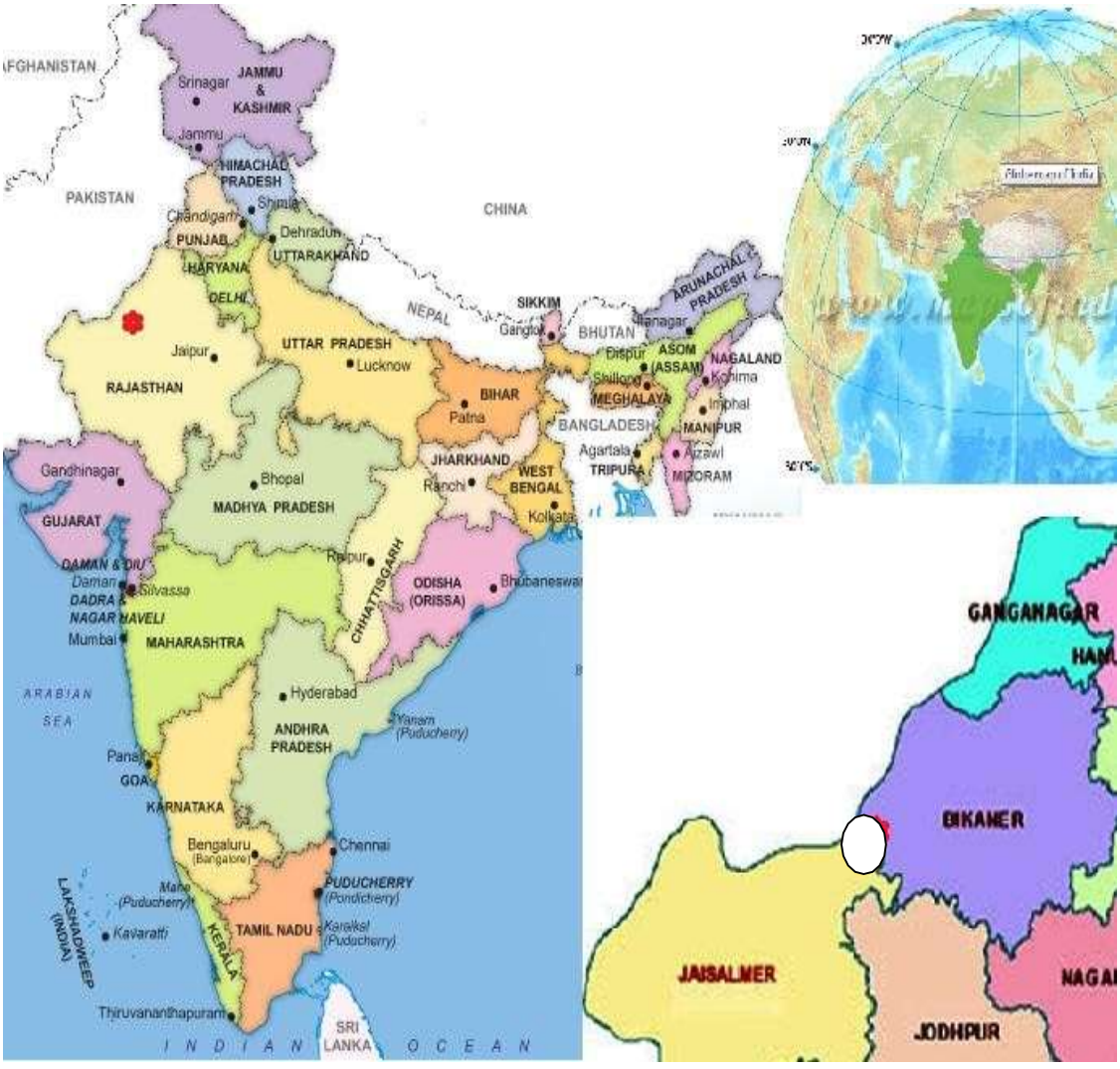
vi) Reservoir Management and Enhanced Oil Recovery (EOR)

The Business Partner will be expected to implement advanced reservoir management practices and evaluate suitable Enhanced Oil Recovery (EOR) strategies for extra-heavy oil reservoirs in both (a) carbonate and (b) sandstone formations. This may include reservoir modelling, production monitoring, and application of appropriate recovery techniques aimed at maximising hydrocarbon recovery.

The Pre-Tender Meeting will provide an opportunity for prospective bidders to understand the proposed project scope, share technical inputs, and provide suggestions that may help in finalising the tender framework.

3. DETAILS OF BAGHEWALA FIELD:

A. GEOGRAPHICAL LOCATION:



Baghewala, the study area (200.26 sq.km), is located at the western part of the country India and in the States of Rajasthan. Rajasthan encompasses most of the area of Great Indian Desert (Thar Desert), which has an edge paralleling the Sutlej-Indus river valley along its border with Pakistan. The region borders Pakistan to the west, Gujarat to the southwest, Madhya Pradesh to the southeast, Uttar Pradesh and Haryana to the northeast and Punjab to the north.

The nearest airport to the operating area is Jaisalmer which is located at a distance of 180 kms and Jodhpur Airport is located at around 350 km. Baghewala installation is approximately 110 km from Phalodi Town and 3 km from Tawariwala village. The installation is located approximately 20 km from the international border.

B. ENVIRONMENTAL CONDITIONS:

Components	**International System (SI)**
Ambient Temperature (Max. Min.)	50 / -1 ° C
Humidity (Max.)	40-60%
Average Rainfall	25 mm (about 0.98 in)/year
Wind velocity (Max.)	128 Km/Hr.
Frequency of Sandstorm	March to September and occasional during the remaining period.
Seismic Zone	III, Moderate
Weather	Four distinct seasons-Pre monsoon, monsoon, post-monsoon, and Winter
Topography of Site	Part of Thar Desert

C. OPERATIONS IN BAGHEWALA FIELD:

The presence of heavy and highly viscous oil (14° – 17° API and 10,000 – 13000 cP at 45° C) was first discovered in Baghewala in the year 1991. Crude oil is produced primarily with the help of SRP (Sucker Rod Pumps). The heavy oil was monetised in May 2017, when transportation arrangements for sale of heavy oil were finalized with ONGC, resulting in regular production, supply and revenue generation. Currently a total of 35 wells out of 47 drilled Jodhpur Wells are in production, and drilling of one Jodhpur Well is under progress. OIL is producing around 1200 barrels/ day oil from Baghewala.

The produced crude is stored in 37.37 kl tanks in individual well locations. The utilization of SRP as an artificial lift technique along with CSS (Cyclic Steam Stimulation) as thermal EOR

technique has been found to be the most effective way for the production of heavy oil in Baghewala Field. Accordingly, most of the wells in Baghewala are thermally completed using thermal wellhead, VIT and are produced using conventional SRP units. The crude oil stored in the tanks are heated with the help of steam and hot water generated by Mobile Steam Generator for flowability enhancement and are then pumped onto Bowsers which are utilized on hiring basis. The crude oil is then transported to ONGCL's North Santhal CTF at Mehsana, Gujarat for processing and further transportation to IOCL's Koyali refinery through their pipeline.

As on date, 5 nos. (Five) wells have been drilled dedicatedly for Upper Carbonate (UC) Reservoir. From one of the UC well produced only 60 (45+15) bbls (Cum.) of heavy oil (API gravity @ 15°C: 8.6 & Dynamic Viscosity at 40 °C: 38174 cP) through consecutives two cycles of CSS.

D. REGIONAL GEOLOGY OF THE AREA:

The Study area is located within the Bikaner-Nagaur Basin, as sub-basin of Rajasthan Basin. Tectonic settings and location map of Baghewala ML and Bikaner-Nagaur basin is presented in Text Fig. 1.1. This Bikaner-Nagaur sub-basin is a category-I basin and is mainly a Late Neoproterozoic-Early Paleozoic basin (~Ediacarian to Late Cambrian) in the north western part of peninsular Indian shield, with relatively thin covers of Late Paleozoic (Permian), Mesozoic and Cenozoic sediments with an area of around 70,000 Sq. Km.

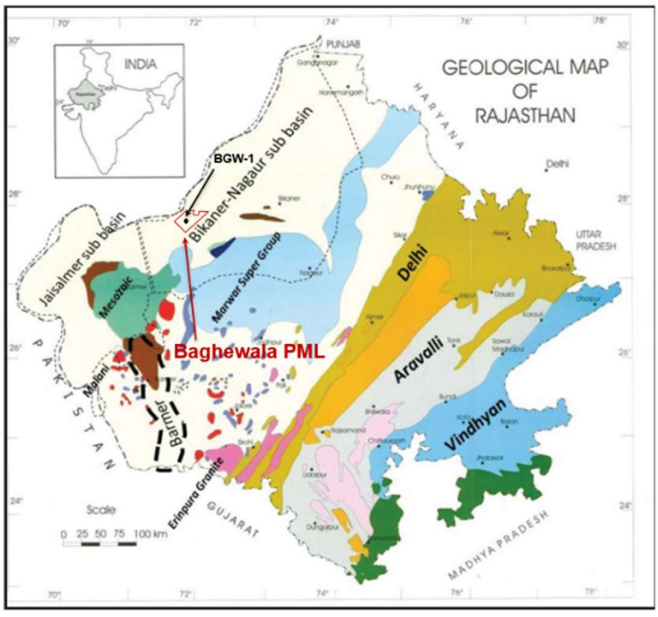


Figure-1.1: A map showing the proposed study area Baghewala PML

In the outcrop areas, the Bikaner basin hosts the Marwar Supergroup, dated from Late Proterozoic (Ediacaran) to Early Paleozoic (Late Cambrian), which rests unconformably over the Middle Neoproterozoic Malani Igneous Suite. The Marwar Supergroup and its constitutive formations are unconformably overlain by Late Permian Bap/ Badhaura Group after a long-term depositional hiatus and an unknown and debated subsidence history.

E. LITHOCOLUMN OF BAGHEWALA WELL:

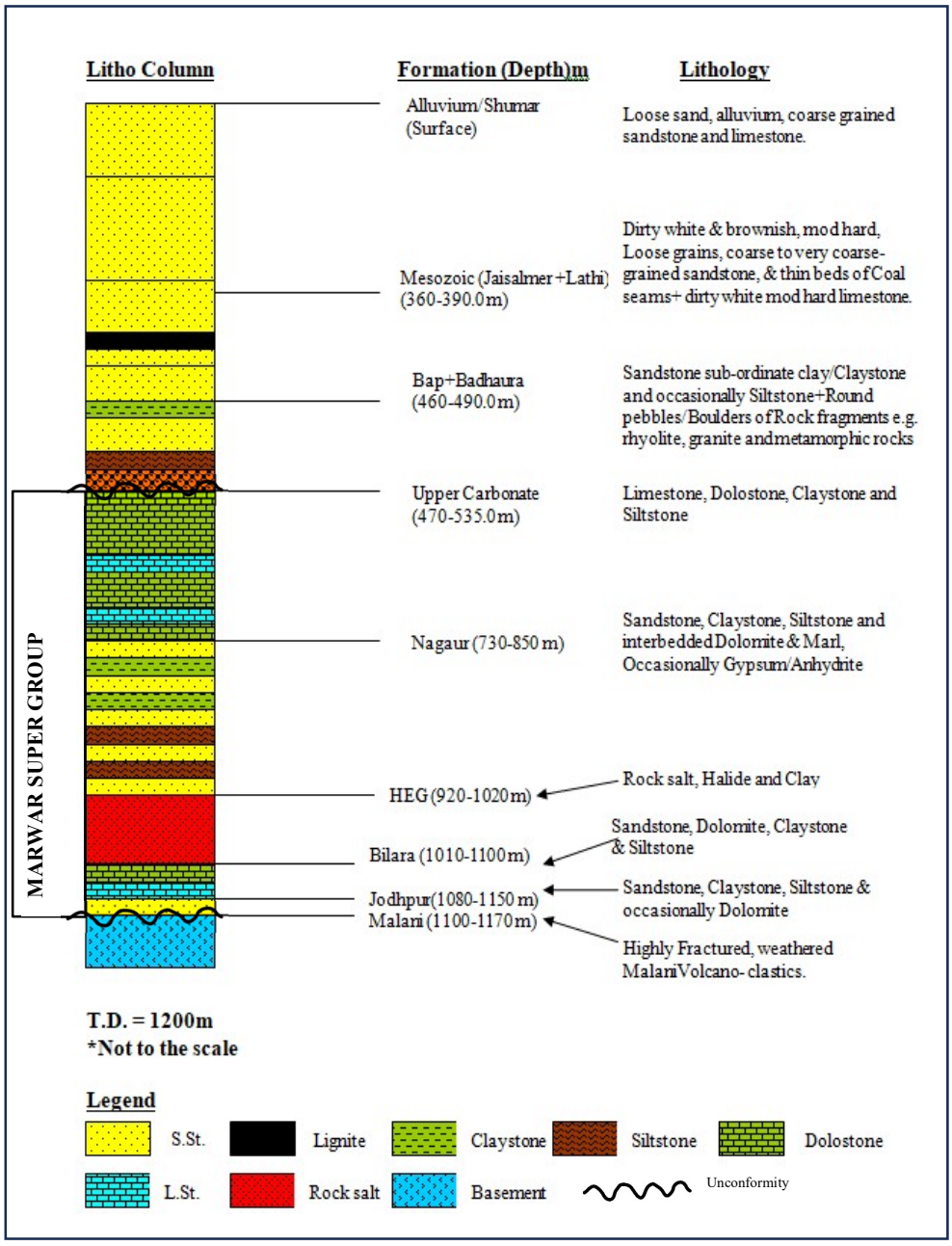


Figure-1.2: A simplified Litho-column of well drilled in Baghewala Area

F. RESERVOIR / ROCK MATRIX / PETROPHYSICAL / CRUDE CHARACTERISTICS OF UPPER CARBONATE & JODHPUR SANDSTONE RESERVOIR (A COMPARISON):

Description	Upper Carbonate		Jodhpur Sandstone	
	Parameters	**Value**	**Parameters**	**Value**
Reservoir Parameters	Reservoir Depth	450 – 550 m	Reservoir Depth	1050 – 1300 m
	Lithology & Geometry	Dolostone/ Dolomitic Limestone (Mud loss prone formation) with wide variation in porosity, as well as hydrocarbon saturation due to presence of fractures with vugs /voids of various sizes).	Lithology & Geometry	Fine to coarse grained, well sorted sandstone (pinkish), with siltstone and claystone.
	Thickness	250-300 m (Gross) 20-50 m (Pay)	Pay Thickness	5 – 23 m
	Bottom Hole Pressure	750 psi (just above Hydrostatic)	Bottom Hole Pressure	1600 psi @ 1100m
	Bottom Hole Temperature	40°C – 42°C	Bottom Hole Temperature	50°C – 52°C
	Crude Characteristics	(°) API: 8-9° Pour Point(°C): +72 ° Density at 15° C, kg/ltr: 1.0094 Sp. Gravity at 60/60°F: 1.0100 Viscosity (cp) Approx.: 26852 cp at 50 ° C Asphaltenes: 8.96% Sulfur, Total, % wt: 2.86 Wax content % (wt.):0.83	Crude Characteristics	(°) API: 14-18 Pour Point(°C): 21 – 27° Sp. Gravity: 0.9679 – 0.9229 Viscosity (cp) Approx.: 5000-15000 cp at 50 ° C Resin: 12.5 % Asphaltenes:7.25 % Paraffin: 17.5% Sulfur, Total, % wt: 1.50 Wax content % (wt.):1.9
Rock Matrix/ Petro-physical Characteristics	Porosity	10 – 18% (based on log data) 17-28 % (based on Core data)	Porosity	18 – 20%
	Permeability	0.02 to 600 mD (from Core data) (For vuggy/fracture zone: >1000 md	Permeability	Less than 1000 mD

5. DATA AVAILABILITY

Relevant subsurface and operational datasets, including well logs, core data, production history, crude analysis, and thermal performance data, will be made available to bidders as part of the tender process.

AA) View above, OIL intends to organize a Pre-Tender meeting on **24.04.2026 (Friday) at OIL House, Jodhpur from 11:00 AM**.

Note:

Pre-Tender queries may also be submitted over email (krishna_das@oilindia.in; prasunjoy_das@oilindia.in; bjdeori@oilindia.in;) latest by 23.04.2026 up to 05:30 PM for better understanding and discussion.

BB) Interested vendors to depute their representative (not more than 2 per vendor) to attend the Pre-Tender meeting to be held as per following details:

Date: 24.04.2026

Time: 11:00 AM

Venue: OIL House, 2A District Shopping Center, NH 62, Saraswati Nagar, Jodhpur, Rajasthan 342005.

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