

OIL INDIA LIMITED
RAJASTHAN FIELD
JODHPUR

AMENDMENT No. 4 Dated 03.05.2024
To TENDER No. GEM/2024/B/4761784

This amendment against Tender No. GEM/2024/B/4761784 is issued as under:

A. The Bid Closing/Technical Bid Opening Date of the Tender is extended as:

Bid Closing Date & Time: 10.05.2024 at 15-00 hrs. (IST)

Technical Bid Opening Date & Time: 10.05.2024 at 15-30 hrs. (IST)

B. Revised Proforma of Undertaking for Local Content have been uploaded in lieu of existing.

C. New Section-V of Part-3 is included for Block and Well details.

D. All other terms & Conditions remain unchanged.

UNDERTAKING FOR LOCAL CONTENT

(To be submitted in the letter head of the bidder)

Tender No. _____

We, _____ (Name of the bidder) have submitted Bid against Tender No. _____ dated _____ for _____.

We hereby undertake that we meet the mandatory minimum local content requirement as mandated by Public Procurement (Preference to Make in India) Order, 2017 of Department for Promotion of Industry and Internal Trade (DPIIT), Govt. of India as revised vide Order No. P-45021/2/2017-PP (BE-II) dated 16th September 2020 (and as amended time to time) with modifications as notified vide MoPNG Order No. FP-20013/2/2017-FP-PNG-Part (4) (E-41432) dated 26th April 2022 (including subsequent amendments thereof, if any). The percentage of Local Content is ____ %.

We further declare that the percentage of Local content for the tendered Goods/Services has been calculated in conjunction with the directive issued by Ministry of Petroleum and Natural Gas vide notification no. **FP-20013/2/2017-FP-PNG-Part (4) (E-41432)** dated **26.03.2024**.

For and on behalf of _____

Authorized signatory _____

Name _____

Designation _____

Contact No. _____

PART-3, SECTION-V
BLOCK AND WELL DETAILS

1.0 DRILLING PROGRAM:

The program includes drilling and testing of 36 (thirty-six wells in Baghewala Field & Dandewala field under Rajasthan Field, Oil India Limited. All wells are designated as exploratory/development wells, vertical and / or deviated (J Bend/Horizontal). The maximum TVD is 1100 m to 2000m. However, at the discretion of the company the services may be used in other operational areas of Rajasthan.

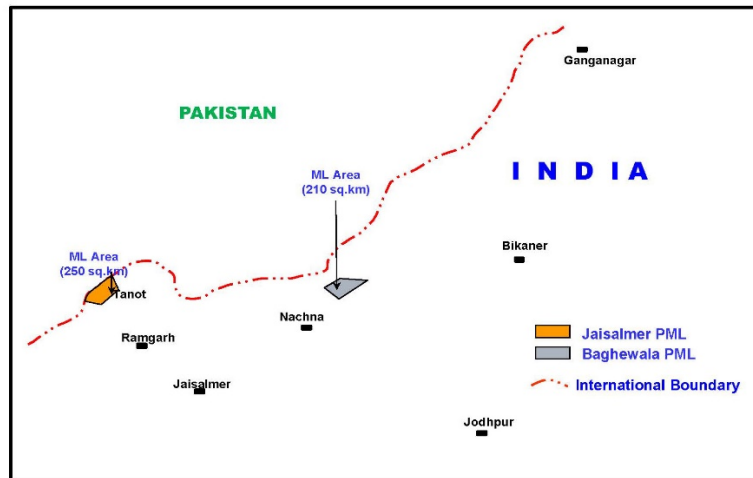
2.0 BLOCK AREA

The Work is to be performed in Western India (Rajasthan Project) herein after referred to as the Contract Area in accordance with the drilling program.

2.1.0 BASIC INFORMATION OF THE BLOCK:

BLOCK INFORMATION:

The Baghewala PML covers an area of 210 sq. km. Presently the block has validity of 20 years with effect from 30.05.2023 (twenty years). The Baghewala heavy oil field in Bikaner-Nagaur basin of Rajasthan was discovered way back in 1991 through drilling of first exploratory well BGW-1 in the Baghewala structure. The well encountered heavy oil (17° - 19° API) in deeper Jodhpur sandstone and Lower Bilara formation of Infracambrian age.



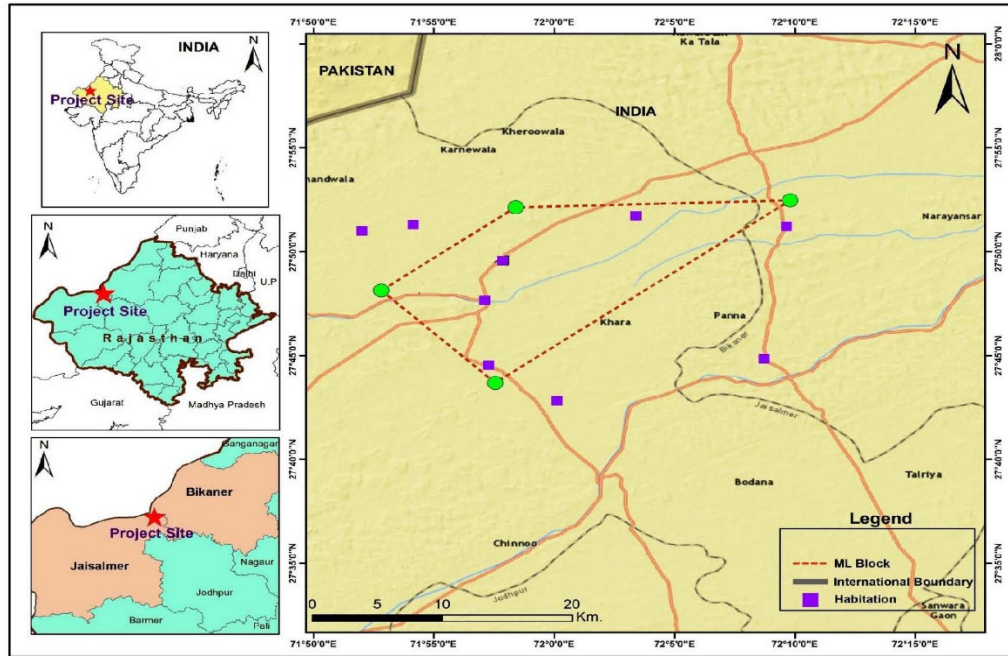


Figure : BAGHEWALA PML LOCATION

2.1.1 BRIEF DESCRIPTION OF AREA:

The 210 sq. km. Bagheewala PML Block is located in the western part of the Rajasthan in the Jaisalmer District in India.

Topography: The terrain is flat, sandy and mostly rough with sand dunes forming the undulating topography. At some places, agricultural fields and forest patches are present. The Indira Gandhi Canal branches flow through the Block area. The general elevation and slope of the Block area varies in the range of 110 to 180 m above mean sea level (m. asl) and 0 to 25 (in degree), respectively.

Geology: Bagheewala Block is located in the Bikaner-Nagaur basin of west Rajasthan. The Bikaner-Nagaur basin constitutes a Late Proterozoic – Early Paleozoic basin in the north western part of peninsular Indian shield. Structurally Bikaner-Nagaur basin is bounded in the east by Delhi-Aravalli folding and in the south, south-west by Pokhran-Nachna high, separating Jaisalmer basin and to the north-east lies the Delhi-Sargodha ridge.

The Bikaner-Nagaur is a shallow Infracambrian-Paleozoic basin with a Precambrian basement comprised of Malani Igneous Suite and Delhi Metamorphites. The igneous and metamorphic rocks at places are

overlain and intruded by Malani Volcanics (Rhyolites) of Pre-Cambrian age. These rocks are unconformably overlain by Marwar Super Group. The Marwar Super Group is comprised of the arenaceous Jodhpur Formation, the calcareous Bilara Formation containing stromatolytic carbonates & clastics, Hanserian Evaporites & salts (HEG Formation) and argillaceous-arenaceous Nagaur Formation of Infracambrian to lower Cambrian age. The Marwar Supergroup is overlain by thick Upper Carbonate formation of Lower/Infra Cambrian age comprising of predominantly dolomites, limestone with shales and Evaporites. The Lower Paleozoic sequence is unconformably overlain by the Upper-Carboniferous Glacial Bap Boulder Beds and marine Badhaura sandstones. For the major period in Mesozoic times, the basin remained uplifted and most of the Mesozoic sequences are absent. Successively upward, the Tertiary sediments comprising Khuiala equivalent (Palana shale), Marh sandstone and Jogira fullers earth have been deposited.

Seismic Consideration: According to seismic-zoning map of India [IS 1893: 2002], the study region falls in Zone III of the seismic zones of India.

Climate and Meteorology:

The study area lies in arid climatic region of Thar Desert. In general, the climate of the project area is hot and dry. The region has only two prominent seasons i.e. Summer and Winter with a brief spell of Monsoon. The mean daily maximum temperature in summer ranges from 40° C to 48 °C. It reaches up to 50-55° C during peak summer. Minimum recorded ambient temperature ranges between -2-5) ° C. The rainfall in these areas is scanty and scarce. The average normal rainfall is only 1" (25mm).

Land Use: The Land Use pattern within the block can be broadly classified into 5 categories only i.e. Agriculture, Canal, Desert, Vegetation and Settlement.

SL. No.	Land Use Category	Area (km2)	Percentage (%)
1	Agriculture	61.45	28.95
2	Canal	3.52	1.66
3	Desert	142.95	67.34
4	Vegetation	3.25	1.53
5	Settlement	1.11	0.52
	Total	212.28	100

Table: Land Use Distribution of the Study Area

2.1.2 COMMUNICATION TO THE BLOCK:

The block is located in Jaisalmer district of Rajasthan state and covers an area of 210 sq.km. The Geographical coordinates and Area of the PML block are represented in the following table.

Points	Latitude (N)			Longitude (E)			Approximate Area (sq.km)
	Degree	Min	Sec	Degree	Min	Sec	
A	27	43	41	71	57	33	210
B	27	48	08	71	52	49	
C	27	52	08	71	58	24	
D	27	52	28	72	09	48	

Table: Co-ordinates and Area of the Jaisalmer PML Block
The communication to the Jaisalmer block can be made through air, rail and road.

- i) Nearest Town: Phalodi (Approximately 77 km aerial)
- ii) Nearest airport: Jodhpur.
- iii) Nearest Railway Station: Phalodi

2.1.3 Proposed Casing Program for Baghewala field (subject to change):

Hole Size(inches)				Shoe Depth(meters)
Size(Inch)	Type of csg	Wt (ppf)	Open Hole size (Inch)	
13 5/8	N-80	68	17 ½	250-470
9 5/8	N-80	47	12 1/4	770-1120
7		29	8 1/2	1170/1200

2.1.4 GEOLOGY OF THE AREA:

Generalised Stratigraphy of Baghewala Field:

AGE	FORMATION	DEPTH (m)	LITHOLOGY (Average)	REMARKS
QUARTERNARY + TERTIARY	Alluvium / Shumar	Surface	Sand/Sandstone (50%-60%) + Clay/Claystone (40%-50%)	
MESOZOIC	Jaisalmer + Lathi	~500	Sand/Sandstone (20%-30%) + Clay/Claystone (40%-50%) + Limestone (20%-30%)	
PERMIAN	Bap and Badhaura	~550	Sand/Sandstone (20%-30%) + Clay/Claystone (40%-50%) + Dolomite(30%-40%)	
	Upper Carbonate	~600	Sand/Sandstone (30%-35%) + Clay/Claystone (20%-30%)	Potential loss

INFRA-CAMBBRIAN			+ Dolomite(40%-50%) +Traces of Limestone	circulation zone
	Nagaur	~800	Dolomite(20%-25%) + Clay/Claystone (35%-40%) + Sand/Sandstone(30%-35%) + Siltstone (5%-10%) + Anhydrite (Trace -5%)	
	HEG	~1100	Clay/Claystone(35%) + Sand/Sandstone(35%) + Dolomite(25%) + Anhydrite(5%-10%) + Traces of Halite & Siltstone	Potential over gauge zone
	Bilara	~1200	Sand/Sandstone(40%-45%) + Clay/Claystone(50%-55%) + Dolomite (2%-5%)	
	Jodhpur	~1270	Sand/Sandstone(95%) + Clay/Claystone(4%) + Siltstone(1%)	

Challenges

- ✓ **Mud loss/ total mud loss:** Frequent mud loss encountered in the range 520m-900m in the previous wells. These losses were arrested by spotting 10-12% LCM pills, cement plugs.
- ✓ **Stuck pipe:** During PO from drilled depth 793m string got stuck at 668m & it was freed by working on string by 45T of over pull in Baghewala#3.
- ✓ **Poor ROP:** Observed poor ROP in the dolomite formation in the wells.
- ✓ **Hole over gauge:** Mainly in the Halite formation.

The well plan may change depending on the well design approved during execution
