

13. Preliminary Exploration (G3) for limestone in Vadekhan Block, Rajkot district, Gujarat

Implementing Agency: MECL

Features		Details
Block ID		Vadekhan Limestone Block
Current Exploration Agency		PRB Infraprojects Pvt Ltd
Previous Exploration Agency		Commissioner of Geology and Mining (CGM), Gujarat
Previous Geological Exploration Report		➤ The Commissioner of Geology and Mining (CGM), Gujarat has carried out geological exploration in the area during (1997-98) & (2010-11). ➤ Pre-detailed Mineral Survey scheme in parts of Upleta & Jam-Jodhpur talukas of Rajkot and Jamnagar district Gujarat Stat by CGM. (Toposheet No. 41 K/1 and 41 G/13) ➤ Geochemical mapping in toposheet 41K/01 in Jamnagar, Rajkot and Junagadh districts, Gujarat (interim report- field season: 2016-17) FSP code: GCM/WR/GUJ/2016/108 /2016-17, item no. 131
Commodity		Limestone
Mineral Belt		Gaj-Miliolite Formation
Completion Period with entire Time Schedule and Cost		Completion Period----- 10 Months Project Cost – 68.61 Lacs
Objectives		1. Geological mapping in 1:4000 scale to delineate the surface outcrops of Limestone and other lithounits. 2. Systematic collection of Bed Rock samples and analysis. 3. To dig 15-20 Nos. of pits/6 BH (800X800) for understanding the thickness and the quality of the lime stone (Being varying thickness of the deposit) to decipher depth persistence and subsurface continuity of bedded deposits. To estimate the in-situ resource of Limestone from G3 stage of exploration and preparation of Geological Report (GR). 4. Carry out mineral exploration works as per Minerals (Evidence of Mineral Contents) Rule-2015, Mineral (Auction) Rules-2015 and MMDR Amendment act-2015. In turn to facilitate the Government of Gujarat in auctioning of the block.
Whether the work will be carried out by the proposed agency or through outsourcing and details thereof. Components to be outsourced and Name of the outsource agency		Entire work shall be Carried out by M/s PRB Infraprojects Pvt. Ltd. (In house)

	Name/Number of Geoscientists	Two Geologist (2G) & Surveyor (1)																					
	Expected Field days (Geology) (Approved by TCC members)	a. Geologist:120, Field Days+35 HQ Days b. Surveyor – 15 days																					
1.	Location																						
	Latitude / Longitude	<table border="1"> <thead> <tr> <th colspan="3">Vadekhan Block Area</th></tr> <tr> <th>BP No.</th><th>Latitude</th><th>Longitude</th></tr> </thead> <tbody> <tr> <td>A</td><td>21°46'58.34"</td><td>70°3'44.16"</td></tr> <tr> <td>B</td><td>21°47'54.49"</td><td>70°3'05.72"</td></tr> <tr> <td>C</td><td>21°48'06.95"</td><td>70°3'59.50"</td></tr> <tr> <td>D</td><td>21°47'19.17"</td><td>70°4'37.10"</td></tr> <tr> <td></td><td></td><td></td></tr> </tbody> </table>	Vadekhan Block Area			BP No.	Latitude	Longitude	A	21°46'58.34"	70°3'44.16"	B	21°47'54.49"	70°3'05.72"	C	21°48'06.95"	70°3'59.50"	D	21°47'19.17"	70°4'37.10"			
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	Villages	Vadekhan																					
	Tehsil / Taluk	Upleta																					
	District	Rajkot																					
	State	Gujarat																					
2.	Area(hectares/square kilometers)																						
	Block Area	6.19 Sq KM																					
	Forest Area	Mainly forest land with bushy vegetation																					
	Government Land Area	-----																					
	Private Land Area	-----																					
3.	Accessibility																						
	Nearest Rail Head	Jam-Jodhpur-railway-station-20 Km																					
	Road	NH-27 Nearest Highway to the block area																					
	Airport	Porbandar airport – 50 Km																					
4.	Hydrography																						
	Local Surface Drainage Pattern (Channels)	The drainage pattern is sub-dendritic in nature																					
	Rivers / Streams	A stream is flowing through the north western part of the Proposed block area																					
5.	Climate																						
	Mean Annual Rainfall	1200 mm																					
	Temperatures (December)(Minimum)	Minimum-20°C																					
	Temperatures (June) (Maximum)	Maximum-44°C																					
6.	Topography																						
	Toposheet Number	41 K/01																					
	Morphology of the Area	The area consists of gently undulating terrain with small hillocks. The area has a moderate gradient towards west. The valleys are found to be miliolitic limestone bearing																					
7.	Availability of baseline geosciences data																						
	Geological Map (1:50K)	Attached (refer Plate No.-IV)																					
	Geochemical Map	Available																					
	Geophysical Map (Aero geophysical, Ground geophysical, Regional as well as local scale GP maps)	Not Available																					

8.	Justification for taking up G4stage mineral exploration	The NOC has been given by CGM Gujarat. The area comprises of Limestone of Miliolite Formation, which is reported to be of cement grade. GSI has carried out quaternary geological mapping in the parts of Saurashtra area in the FS 1971-72 and has reported occurrence of high-grade lime stones in the Gaj and Miliolite Formations. (Report by K.K. Verma and U.B. Mathur) The PRB team has visited the area and collected 5 bed rock samples of Miliolitic limestone exposed in the area. The results of the analysis indicate that the samples meet chemical-grade classification criteria. The compositional assessment revealed an average silica (SiO₂) content of 1.2% and a calcium oxide (CaO) concentration of 50%, suggesting potential industrial applications. Recently in 9th TCC-II meeting held on 29th & 30th May-2025, DPR was approved and the TCC was recommended for EC approval.
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