



**Expression of Interest (EOI)**  
**for**  
**“ Demulsification of Viraj GGS Crude Oil by dosing  
suitable Demulsifier”**

## **1. Introduction:**

Oil & Natural Gas Corporation Ltd or ONGC is the flagship Oil & Gas Company of India. Formed on August 14, 1956 as the Oil & Natural Gas Commission with the singular strategic and national objective of ensuring India's energy security and incorporated on June 23, 1994. Oil and Natural Gas Corporation Ltd ("ONGC"), a company incorporated under the laws of India, having its registered office at Deendayal Urja Bhawan, 5, Nelson Mandela Marg, Vasant Kunj, New Delhi-110070, India.

## **2. Background:**

Viraj field is located towards the north of Jhalora field in Ahmedabad-Mehsana tectonic block of Cambay basin (plate-1). The field was discovered in 1977 through exploratory well SK-46 (later re-named as VJ-1), which produced oil and gas from C+D pay. One major producing pay i.e. K-IX+X (L-I,L-II and L-III) and three minor producing pays i.e. K-VIII, Mandhali and C+D pays have been discovered so far in this filed.

Location details of Viraj field:

ONGC Installation	:	Viraj GGS
Nearby Village	:	Jaidevpura
Nearest Town	:	Kadi
Nearby Railway Station	:	Ahmedabad
Nearest Airport	:	Ahmedabad

ASP Flooding was started in the K-IX+X sand of the Viraj field as Chemical EOR in order to increase recovery from the field. Project detail is as below

Implementation	From July'2019 onwards
No of ASP injectors	14
No. of oil producers	36
Injection rate	1120 m <sup>3</sup> /day
Liquid withdrawal	~1500 m <sup>3</sup> /d
ASP Slug	0.3 PV (Alkali 2.5%, Surfactant-0.25% and Polymer-1500 ppm for 56 months) Only Polymer Injection of 1200 ppm@1120

M<sup>3</sup>/Day will start from Feb'2024.

Due to the injection of ASP slug in to the field, production has been increased however; produced Crude oil emulsion stability has also increased due to the presence of Surfactant and Polymer with the produced Crude oil. So, at present regular oil soluble demulsifier is ineffective to treat the Crude Oil of Viraj GGS due to the change in nature of the Crude Oil.

❖ **Current properties of Viraj GGS Crude Oil emulsion:**

1	Source	Group Separator
2	Installation	Viraj GGS
3	Emulsion W/C (% v/v)	70-80
4	Dry Density at 15 0C (gm/cc)	0.9200-0.9400
5	API	18.9-22.0
6	Pour Point (0C)	18
7	Wax (%w/w)	5.43
8	Saturates (%w/w)	53.2
9	Aromatic (%w/w)	27.24
10	Resin (%w/w)	16.67
11	Asphaltene (%w/w)	2.89

❖ Treatment philosophy of Crude Oil in Viraj GGS and operating condition of Heater Treater (HT):

1. Total number of HT in Viraj GGS along with their operating philosophy: Total 4 nos. of HTs are running presently. One HT with CMS BMS is under commissioning stage. Further one more HT installation is planned in future. Ideally Three HTs are operated in Primary and one HT as secondary. Due to winter conditions, all four HTs are run in Primary as of now.

2.HT temperature: ~65 deg C (In winters), ~75 deg C (In Summer)

3.HT capacity : Volume capacity of each HT is 32 m3.

4. Retention time in HT: Considering the high Water cut of 80% crude oil emulsion being produced, Retention time may be considered in the range of 30 to 40 minutes for designing Demulsifier.

All the Heaters are serviced every six month. Average servicing time is 15-20 days.

Vendor can observe actual treatment philosophy along with retention time before offering suitable demulsification services for achieving the objective.

**3.Objective:**

Objective is to maintain the desired W/c in treated Crude oil from Viraj GGS, by dosing suitable demulsifier.

**4.Broad Scope of Work:**

**Contractors Scope of Work:**

1. Designing of suitable Demulsifier for the treatment of Crude Oil emulsion of Viraj Field.

2. Supply of required quantities of Demulsifier to the Viraj GGS along with unloading and loading.
3. Modification of demulsifier in case it does not work in the field.
4. Round the clock testing of Crude Oil samples (i.e. W/c) of Heater treater on every two Hour.
5. Contractor has to mobilize all lab instruments for the testing of Crude Oil at the Viraj GGS premises and installation to be done before starting the job.
6. Contractor has to develop suitable demulsifier to treat Viraj GGS Crude Oil. Entire supply chain management of Demulsifier will be in the scope of contractor.
7. All Oil industry safety standards to be maintained while carrying out oil testing and related experiments in room provided by ONGC. ONGC Gate passes to be obtained for entry of contractors personnel inside GGS.
8. Contractor has to maintain following treated Crude Oil parameters.

SN	Properties	Parameters
1	Water Content of treated oil at dispatch line, percent by volume	8.0 (Maximum)

9. Contractor has to use suitable demulsifier in which Organic Chloride content, ppm must be less than 100 ppm.
10. Contractor shall obtain permit to work as per the statutory & ONGC guidelines and shall strictly comply with all safety requirements of the work permit during permit duration, failing which Company's representative will have the right to stop the work and all cost and time effect thereof shall be to Contractor's account.
11. Contractor shall provide all necessary PPE to their employees including Safety Helmet, Safety shoes, dungaree and other PPE as per requirement of the job.
12. Contractor has to arrange transportation of its manpower to Viraj GGS on its own.
13. Contractor shall ensure and take all the required precautions so that there is no damage to any nearby existing facility whether owned by the Company or a third party. Financial implications, if any, for the damage to any existing facility and its consequences during execution, shall be to Contractor's account and shall be recovered from the Contractor.
14. Contractor coordinator shall arrange a weekly meeting with ONGC to appraise weekly progress/status.
15. Contractor needs to submit chemical consumption details per month to ONGC along with Monthly bill.
16. Contractor will be allowed to analyse Crude oil of Viraj Field to identify suitable demulsifier at Chemistry laboratory, Viraj GGS, before starting the services [Max. 15 days, which includes mobilization period].
17. Contractor has to provide bio-data of all the personnel will have to be provided for COMPANY's approval.

**ONGC Scope:**

1. Room for the set-up of laboratory with water and electricity supply.
2. Necessary approval for the entry of Contract personal inside GGS premises.
3. Maintenance of dosing pump in case of any failure to counter downtime.

4. Sufficient space for storage of required chemical at site.

**5. Pre-Qualification Criteria:**

Considering the nature of the project and capabilities required to execute the project on end to end approach with single point responsibility, it is anticipated that the prospective service provider may be one who is technically as well as financially competent should meet the following experience, technical criteria and submit the requisite documents to fulfil the requirements:

**Bidders' Experience Criteria:-**

<b>1.</b>	<b>Technical rejection criteria:</b> The following vital technical conditions should be strictly complied with, failing which the bid will be rejected
	Bid should be complete in all aspects covering entire scope of job/ supply and should conform to the technical specifications indicated in the bid document, duly supported with technical catalogues/ literatures, wherever applicable. Incomplete and non-conforming bids will be rejected outright.
	Manufacturer's experience:- Bidder should be the manufacturer/Supplier of the demulsifier & he should satisfy the following along with documentary evidence, which should be enclosed along with the techno-commercial bid:  (a)Minimum 01 years of experience of manufacturing of demulsifier OR providing demulsification services.  For meeting the requirement above at (a), the period reckoned shall be the period prior to the originally scheduled date of opening of the techno-commercial bid.  Documentary evidence in respect of the above should be submitted in the form of copies of relevant Purchase Orders along with copies of any of the documents in respect of satisfactory execution of each of those Purchase Orders, such as - (i) Satisfactory Inspection report (OR) (ii) Satisfactory supply completion / Installation report (OR) (iii) Consignee Received Delivery Challans (OR) (iv) Central Excise Gate Pass / Tax Invoices issued under relevant rules of Central Excise / VAT/GST (OR) (v) any other documentary evidence that can substantiate the satisfactory execution of each of the purchase orders.

Bidders are required to submit following documents, for meeting technical criteria

**6. Contact Person of the Manufacturer:**

<b>Name</b>	
<b>Position</b>	

<b>Telephone number</b>	
<b>Fax Number</b>	
<b>Address</b>	
<b>E-mail</b>	

### **7. Undertaking by Service Provider / Oil & Gas Field operators**

The following undertaking shall be provided by the prospective bidder: -

“The information provided in the support of qualification criteria is factually correct and the company meets the pre-qualification criteria”.

### **8. General Instruction on Submission of EOI**

Your expression of interest (EOI) shall be on company’s letter head, duly signed by authorized signatory and documents as required above shall be submitted in hard copy within Twenty One(21) days from the date of publication of this EOI. Soft copy of EOI sent through email with covering letter followed by hard copy through courier shall also be accepted.

Interested Service Provider / Vendors must respond to this notification within 21 days from date of publication of EOI with covering letter as per Annexure-I and clarification if any in electronic format (pdf files only) by email to [Mondal\\_Ramesh@ongc.co.in](mailto:Mondal_Ramesh@ongc.co.in) and copied to [dixit\\_keshav@ongc.co.in](mailto:dixit_keshav@ongc.co.in).

It shall be the bidder(s) responsibility to ascertain for themselves any regulatory compliances / taxes and duties or other statutory clearances / permissions etc and obtain the same within the respective project schedule.

For enquiries please contact at the following address

Name : Ramesh Mondal  
 Designation : Sr. Chemist  
 Address : 207B, Avani Bhavan, ONGC, Chandkheda, Ahmedabad-380005  
 Phone : 9909048685  
 E-mail : [Mondal\\_Ramesh@ongc.co.in](mailto:Mondal_Ramesh@ongc.co.in)

### **9. EOI Meet:**

ONGC also intends to hold an Expression of Interest Meet from 10 AM onwards, tentatively on (30 Days from the date of publishing). The venue for the meet shall be 1<sup>st</sup> Floor, ST Conference room, Avani Bhavan, ONGC, Western sector, Chandkheda, Ahmedabad-380005. In case prospective bidders desire to present / demonstrate their capability, experience and other details as sought through this EOI on one to one basis, they may indicate the same, so that suitable arrangements can be made. The presentations should be of approx. 10 minute duration and may be followed by 15-20 minutes interaction. Prospective bidders, if interested can also visit Ahmedabad Asset in advance at their own cost before closing date of EOI.

- i. The participating bidders are required to give a soft copy of their presentation along with suggestions, if any, to ONGC immediately after the meeting.

- ii. ONGC reserves the right to accept, reject, or modify the suggestions presented/submitted against the EOI while formulating technical specifications and scope of work for the tender.
- iii. It is to be noted that mere response, enlistment through the EOI does not guarantee award of job. The award of job will be decided on the basis of Tender and will depend upon ONGC laid procedures/ guidelines only. No payment shall be made towards preparation / submission / presentation in connection with EOI

**10. Confidentiality:**

All information received by ONGC as part of this EOI, will be ONGC's property and will be kept strictly confidential and utilized for its internal purposes only.

**Covering letter for EOI for Service provider**

Dear Sir,

This has reference to your EOI document no..... dated..... on the subject.

..... (Name of Company) hereby convey consent for considering the expression of interest (EOI) along with information/documents submitted in response to the.....

We confirm that ..... (Name of the Company) meets the qualification criteria mentioned in the subject EOI document.

Signature

(Name & Designation of Authorized person)