

LPG IMPORT JETTY AT DAHEJ

REQUEST FOR QUOTATION

FOR

BATHYMETRY AND TOPOGRAPHIC SURVEY

Consultant

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Client



Hindustan Petroleum Corporation Ltd.
Gresham Assurance Building, 2nd Floor, Sir P. M. Road
Fort, Mumbai – 400 001

MARCH 2019



RFQ FOR BATHYMETRY AND TOPOGRAPHIC SURVEY
DOCUMENT NO : IIT-HPCL-RFQ-001

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1. INTRODUCTION

Hindustan Petroleum Corporation Limited (HPCL) intends to develop a LPG import terminal north of existing Birla Copper Jetty at Dahej, Gujarat.

The HPCL has appointed Department of Ocean Engineering, IIT Madras as the consultant for the preparation of Detailed Feasibility Report through a Letter of acceptance Dated 14th March 2019.

This document describes the requirement for carrying out **Bathymetry and topographic survey** at the proposed site. Following definition applies this specification and all associated work to carry out the survey works.

- The CLIENT where used in this specification shall mean Hindustan Petroleum Corporation Limited.
- BIDDER is a contractor bidding for this work.
- The CONTRACTOR is the party which will carry out the said bathymetry survey, topographic survey and services to perform the duties specified by the OWNER / OWNER's Engineer / CONSULTANT.
- The CONSULTANT means the OWNER's Engineer in this case is The Department of Ocean Engineering, IIT Madras (Prof. S. Nallayarasu).





2. SITE LOCATION



The Proposed site is located at Dahej, Gujarat. The location of the proposed site is shown in figure 2.1.



Figure 2.1 Location of site

The survey extent and location shown is approximate. Actual coordinates shall be agreed upon establishing the boundaries. Total survey area is approximately 10 sq. km (both Bathymetry and Topography).



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3. SURVEY REQUIREMENTS

3.1 Scope of work

The scope of work includes the following.

- Bathymetric survey at grid spacing of 50m and the survey lines shall be perpendicular to the coast line (high water line).
- Onshore topographic survey in the inter-tidal and coastal zone with a grid spacing of 50m in both directions.

The approximate extent is shown in the location map attached.

The separation between the bathymetry and topography shall depend on the tidal levels at the time of survey and actual extent shall be determined by the contractor. Equipment shall be suitable for carrying of bathymetry and topography in such tidal variation to the extent of 12m in open sea condition.



3.2 Methodology

Bathymetric survey of the area includes region from 0m to 20m water depth (excluding tide) and suitable vessels/equipment shall be mobilised to complete the survey including portion along the breakwater. Following points are to be noted.

- a) All survey shall be conducted in calm weather conditions to avoid contamination of the data due to large vessel motions.
- b) All equipment used for the survey shall be calibrated and certified by third party prior to use (within 1 month prior to the survey).
- c) Echo sounder of suitable frequency for marine operations shall be deployed. Technical details of the same shall be furnished with the quotation. The water depth accuracy shall be minimum 0.01m.
- d) Tide shall be measured during the period of bathymetric survey and tidal correction to the measured water depth shall be incorporated.



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- e) Heave measurement device shall be part of the deployed vessel to correct the heave motion of the floating craft from the measured water depth. Heave correction shall be applied based on measured heave motion.
- f) Horizontal positioning shall be made using suitable Global positioning system to an accuracy of $\pm 1.0\text{m}$.
- g) The measured seabed depths with respect to Chart Datum shall be plotted using suitable software such as HYPACK MAX or equivalent and all the elevations shall be reduced to chart Datum using suitable bench mark located near Dahej Port.
- h) Coordinates of the boundary corners of the proposed site shall be established using Spheroid Everest 1830 using WGS 84 coordinate system.
- i) Contour plots shall be prepared together with local UTM coordinates and also latitude and longitude.
- j) Berthing of water crafts shall be arranged at a suitable location by the bidder.



3.3 Commercial conditions

The following commercial conditions apply to the bid.

- Prices shall be quoted using the price proforma given in section 4.
- All quoted prices shall exclude GST and the same shall be separately indicated.
- Prices shall be valid for 3 months.
- Payment shall be made within 30 days of submission of invoices and certified by CONSULTANT.
- Payment of 90% shall be paid upon completion of all field works and submission of draft report, bathymetry and topographic charts.
- The final payment of 10% shall be made upon submission of final reports and drawings (5 copies) incorporating comments.
- No standby charges whatsoever will be paid due to weather conditions, unforeseen situations, local issues etc.
- Contractor shall arrange all permits required for the survey work. Charges related to the permits shall be included in the lump sum fee quoted by the firm.



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- Bidder shall engage experienced personnel with experience in working in the area with high current in open sea.

3.4 Schedule



The mobilisation, field work, preparation charts and report shall be completed within 3 weeks from the date of work order.

3.5 Deliverables

Following shall be minimum deliverables.

- Daily Field report including calibration of the devices and duly signed by CONTRACTOR and Client representative.
- Survey report including interpreted data and corrected final results.
- A1 size color prints of surveyed area in suitable scale such that the information can be read correctly.
- Text file of raw measured water depth data
- Autocad version of contour maps
- All drawings, reports shall be submitted in soft and hard copy. Drawings shall be submitted in editable Autocad (official version) format.



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4. PRICE PROFORMA

The price shall be quoted in the following format and this document shall be signed on all pages submitted together with the bid.

Sl. No	Description of work	Unit	Price (Indian Rs excluding GST)	Remarks
1.	Bathymetric and Topographic Survey as per the area defined and specifications	Lump sum		
	Total			

Note : The lump sum fee quoted shall be excluding GST.

The above firm scope of work is defined as per the area of coverage and scope defined in this document and fee shall be including all equipment, man power, mobilisation, demobilisation, license fee, permit charges if any to be paid to local authorities and Gujarat Maritime Board, Gujarat statement departments etc. all inclusive.

Signature of the bidder with company seal



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APPENDIX A

SURVEY COORDINATES



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	OWNER: 	HINDUSTAN PETROLEUM CORPORATION LTD. GRESHAM ASSURANCE BUILDING, 2ND FLOOR, SIR P. M. ROAD, FORT, MUMBAI - 400 001
TITLE: SURVEY BOUNDARY		
PROJECT: LPG IMPORT JETTY AT DAHEJ, GUJARAT.		
DRAWING NO: IITM-HPCL-DAHEJ-DWG-0XX	DATE: 20.03.19	REV: X