

**ANNEXURE-I****Tender No. : GFD2788L14/3P****Tender Date : 05.03.2014**

Item No./ Mat. Code	Material Description	Quantity	UOM
<b>10</b> 0C000525	<p><b>NODAL ANALYSIS SOFTWARE:</b> Nodal Analysis Software is a steady-state, multi phase flow simulator for the design and diagnostic analysis of oil and gas production systems. This software tools model multiphase flow from the reservoir to the wellhead. This software also analyzes flowline and surface facility performance to generate comprehensive production system analysis. With advanced modeling algorithms for nodal analysis, PVT analysis, gas lift, and erosion and corrosion modeling, Nodal Analysis Software helps to optimize production and injection operations.</p> <p>Capabilities</p> <p>The program should have following facilities</p> <ol style="list-style-type: none"> <li>1. Steady-state multiphase flow simulator for the design and diagnostic analysis of oil and gas production systems from reservoir to processing facility <ol style="list-style-type: none"> <li>a. Production system analysis enables to perform a comprehensive nodal analysis at any point in hydraulic system using multiple sensitivity parameters</li> <li>b. Design new and analyze existing vertical, horizontal, and multilateral wells</li> </ol> </li> <li>2. It should include all the standard completion model types for vertical horizontal and fractured wells, and allow for complex multilayered completions using different reservoir inflow parameters and fluid descriptions</li> <li>3. It should perform a comprehensive sensitivity analysis at any point in hydraulic system using multiple parameters</li> <li>4. It should simulate field production system to improve production, make better decisions, and maximize asset value</li> <li>5. Production Performance Analysis - Nodal Analysis</li> <li>6. It should generate performance tables for our existing reservoir simulators and standard pressure and temperature profiles</li> <li>7. It should incorporate all the current industry-standard multiphase flow correlations. In addition to the empirical flow correlations, software provides for at least 3 additional industry mechanistic flow models such as OLGA Steady State, Leda Flow Point Model and TUFFP Unified Flow Model. This will provide engineers to model flow more accurately for all inclination angles, pipe diameter and fluid properties where standard empirical models may fail to predict.</li> <li>8. It should have accurate heat transfer calculations including buried and partially buried conditions enable insulation studies and the overall thermal design of system</li> <li>9. Software should include routines to determine CO2 corrosion rates and erosional velocity limits for pipeline, allowing to design for safe pipeline operation</li> <li>10. Software should include models of all common surface facilities equipment to determine their impact on system design. Sensitivity options in software should also be used to design systems by varying key system parameters, thus enabling optimal pipeline and equipment sizes to be determined</li> </ol> <p>Platform/ Graphical and Report Output: # Windows XP, Vista, 7 and UNIX/ Linux compliant # Should be able to import files from MS-Excel, MS-Access and other ODBC compliant databases.</p>	1	NO

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	Compliant Database: # Export plots to BMP,GIF, JPG,TIF etc., formats # Report to be exported in various word processors. # Ensure that the output from the software should be plotted / printed on a wide range of printers and plotters.		
	<b>INSTALLATION &amp; COMMISSIONING</b>		
10	Installation & Commissioning	1	UNI
	<b>TRAINING OF ITEM NO 10</b>		
10	Training on Item no 10	1	UNI

**Standard Notes:** The media for the software should be portable.

The software shall be installed at Centre of Excellence of OIL, Guwahati, Assam, India. The supplier shall undertake to load and install the software and demonstrate that all functions of the software/software are in good condition at Guwahati. The installation should be completed to OIL's satisfaction within one week of arrival of the software at Guwahati. The software should be tested with test data provided by OIL. However if such data are not available with OIL, the supplier will have to use their own data to OIL's satisfaction. Familiarization with the new functionalities of the software should be provided at the site of installation.

- Special Notes :**
1. The items shall be brand new, unused & of prime quality shall warrant (in the event of an order ) that the product supplied will be free from all defects & fault in material, workmanship & manufacture and shall be in full conformity with ordered specifications. This clause shall be valid for 18 months from the date of dispatch /shipment or 12 months from the date of receipt of the items at site which ever is earlier. The defective materials, if any, rejected by us shall be replaced by the supplier at their own expenses. Bidders must confirm the same while quoting.
  2. The minimum FOB/FCA changes incase of partial order for reduced quantity / terms shall have to be indicated by the bidder. In case this is not indicated specifically, the changes quoted would be prorata calculated and the same will be binding on the bidder.
  3. All items shall be as per the specifications, standards and description given, item specifications, standards or descriptions furnished in the offer shall be supported by the makers' catalogue/literature. Specifications, standards furnished in order without supporting markers' catalogue/literature shall not be accepted.
  4. Bidder shall be OEM or authorized dealer of OEM. Valid dealership certificate should be enclosed along with the bid or else the offer will be rejected. Items if imported from India, the certificate of country of origin to be provided.
  5. Offer shall include all the items. Offer containing only for part of the item listed shall not be accepted.
  6. Bidder shall provide the offer in format enclosed herewith.
  7. In event of an order, the materials must be embossed with the followings:
    - a. PURCHASE ORDER NO.

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- b. MANUFACTURED FOR OIL
- c. MANUFACTURER'S NAME

8. Validity of the offers should be 120 days from the date of bid opening. Bids with lesser validity shall be rejected.

9. Quotation must be submitted in triplicate.

Tender No. : GFD2788L14/3P  
Tender Date : 05.03.2014  
Bid Closing On : 07.05.2014 at 13:00 hrs.(IST)  
Bid Opening On : 07.05.2014 at 13:00 hrs.(IST)

**Tender issued to following parties only:**

Slno	V_Code	Vendor Name	City/Country
1	100384	HALLIBURTON ENERGY SERVICES INC	TEXAS 77205
2	101154	WEATHERFORD INTERNATIONAL INC	TEXAS - 77027
3	101241	PETROLEUM EXPERTS LTD.	EDINBURGH,
4	101468	GEOQUEST SYSTEMS B V	
5	101765	PARADIGM GEOPHYSICAL PTY LTD.	W AUSTRALIA 6000
6	102206	FEKETE ASSOCIATES INC.	CALGARY, ALBERTA, CANADA
7	102796	GI.LUNDTOFTEVEJ 1C	
8	102797	GEOGRAPHIX	
9	102798	GEOLOGIC SYSTEM LIMITED	
10	102868	KAPPA MIDDLE EAST ASIA W.L.L.	
11	204284	RESERVOIL	NAVI MUMBAI