

INVITATION TO BID		BID DUE DATE AND TIME
BOARD OF SUPERVISORS OF LOUISIANA STATE UNIVERSITY AND AGRICULTURAL & MECHANICAL COLLEGE		09/29/2020 11:00 AM CT
SOLICITATION RFQ-0000001235 SUPPLIER # SUPPLIER NAME AND ADDRESS <div style="border: 1px solid black; height: 100px; width: 100%; margin-top: 10px;"></div>	RETURN BID TO Louisiana State University and Agricultural and Mechanical College Procurement 213 Thomas Boyd Hall Baton Rouge, LA 70803 Buyer Nicole Covarrubias Buyer Phone Buyer Email ncovarrubias1@lsu.edu Issue Date 08/13/2020	
TITLE: LSU Petroleum Engineering 3-D Immersive Bench Visualization System		
Addendum 03: Notice is given to all parties that this Solicitation is amended by the University as stated herein. This Addendum is hereby made an official part of this solicitation. See attached for Supplier inquiries and responses.		
<p>To Be Completed By Supplier</p> <ol style="list-style-type: none"> _____ "No Bid" (sign and return this page only). _____ My Company does not wish to receive future solicitations for this spend category. Specify your Delivery: To be made within _____ days after receipt of order. If applicable, Supplier's Addendum Acknowledgement/Response: As an authorized agent/signatory of the supplier, I/we acknowledge receipt of this Addendum, and _____ submit no alterations/clarifications to our original bid. _____ submit superseding revisions/clarifications to our original bid as written herein or attached hereto. <p style="text-align: center;">General Instructions to Suppliers</p> <ol style="list-style-type: none"> Sealed bids for furnishing the items and/or services specified are hereby solicited, and will be received by LSU Procurement at the "Return Bid To" address stated above, until the specified due date and time. Read the entire solicitation, including all terms, conditions and specifications. All bid information and prices must be typed or written in ink. Any corrections, erasures or other forms of alteration to unit price are to be initialed by the supplier. Bid prices are to be quoted FOB LSU/Destination and inclusive of any and all applicable shipping and handling charges unless otherwise specified in the solicitation. Any invoiced delivery charges not quoted and itemized on the LSU purchase order are subject to rejection and non-payment. Payment is to be made within 30 days after receipt of properly executed invoice, or delivery and acceptance, whichever is later. By signing this solicitation, the supplier certifies compliance with all general instructions to suppliers, terms, conditions and specifications; and further certifies that this bid is made without collusion or fraud. 		
SUPPLIER NAME	MAILING ADDRESS	
AUTHORIZED SIGNATURE	CITY, STATE ZIP	
PRINTED NAME	PHONE #	
TITLE	FAX #	
E-MAIL	FEDERAL TAX ID #	

Addendum 03
RFQ-1235
Supplier Inquiry & Response

Q1. If this could please be expanded on. This section states that the university is providing the data sets that need to be render, but is there a specific software required or functions that need to be met?

A1. We are seeking 3D immersive visualization and VR solution, stereoscopic rendering, tracking and associated hardware.

We use subsurface modeling, characterization and visualization softwares and associated data - drilling, production and geosteering softwares. Software examples we currently use include Petrel, CMG, Intersect, Techlog, Eclipse, Avizio, etc. Applications are mainly to oil and gas industry (reservoir modeling, simulation and characterization, well placement optimization).

Q1a. Also what file formats are the data sets that need to be rendered

A1a. Multiple data formats compliant with softwares that we currently use as listed above. Data types enabled would include wells, seismic, surfaces, or models, etc. As one example, Petrel well data type can have the "las" format for well log, ASCII format for trajectories, well header may be text file, deviations in "dev" format, et cetera.

Q2.Can you clarify your expectations regarding the "necessary software [...] to fully operate and control the system and render and visualize 3-D data sets"?

A2.We are seeking VR solution, and immersive visualization using 2 screens (wall and floor). Supplier will provide 3D rendering/visualization through stereoscopic glasses and immersive screens (4-6 simultaneous users), and tracking through joystick/mouse control by primary user. We have oil and gas industry level softwares donated from companies like Schlumberger, Petroleum Experts, Computer Modeling Group (CMG).

Q2a. Are you expecting to use existing software that you already have?

A2a. No, we are seeking VR solution software.

Q2b. Which applications are you using to generate these 3-D datasets?

A2b.We are using subsurface modeling, characterization and visualization softwares; drilling, production and geosteering softwares. Some examples include Petrel, CMG, Intersect, Techlog, Eclipse, Abaqus, Flac 3D, etc. Data types enabled would include wells, seismic, surfaces, or models, etc. Applications are mainly to oil and gas industry (reservoir modeling, simulation and characterization).

Q2c. Can you clarify requirements for this software to support 3-D stereoscopic rendering (ref. III.A.8) , multiple displays (ref. III.A.1), and user tracking (ref. III.A.16)? (Very few commercially available applications support these large-scale VR display features.)

A2c. We are seeking VR solution, and immersive visualization using 2 screens (wall and floor). Supplier will provide 3D rendering/visualization through stereoscopic glasses and immersive screens (4-6 simultaneous users), and tracking through joystick/mouse control by primary user. We have oil and gas industry level softwares donated from companies like Schlumberger, Petroleum Experts, Computer Modeling Group (CMG). We use them for 3D earth and reservoir modeling, 3D reservoir simulation, well modeling and geosteering applications, and decision making.

Q3. If the answers to question 2 involve software without support for the display system, should respondents provide alternative software solutions and/or conversion workflows to utilize the system?

A3. Yes, supplier shall provide conversion workflows or VR solutions system compliant with the visualization system they are providing, as well as with the oil and gas industry softwares that we are using, examples of current software – CMG, Petrel, Intersect, Eclipse, etc.

Q4. Shall the wall have a projector screen or painted wall?

A4. Projector/Wall Screen is required. Painted wall is not acceptable.

A4a. Is there a specific manufacturer in mind here? The only product that comes to mind here is Snaplock type floors that are used as dance floors. The issue with these is having the ability to level the surface.

A4a.No.

Q4b. Would you consider a wood surface with an oil-based paint that can be cleaned with soap and water

Q4b. No.