GSTIN : 20AAAAI0686D1ZA
भारतीय प्रौद्योगिकी संस्थान (भारतीय खनि विद्यापीठ), धनबाद
धनबाद, झारखण्ड, भारत, पिन-826004
(शिक्षा मंत्रालय, भारत सरकार के अधीन राष्ट्रीय महत्त्व का एक संस्थान)
INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES), DHANBAD
DHANBAD, JHARKHAND, INDIA, PIN-826004
(An Institute of National Importance under Ministry of Education, Govt. of India)
PROJECT PURCHASE SECTION || Email: projectpurchase@iitism.ac.in || Website: www.iitism.ac.in

GP-PRJ-031-24-25 18th September, 2024

# Corrigendum

Reference No. GP-PRJ-031-24-25 dated 28.08.2024

Subject: Extension of date for submission and Opening of Bids for Supply and Installation of Radexpro 3D Professional

| Particulars | Date & Time | |
|---|---|---|
| Last date and time for submission of tenders | ~~18.09.2024 at 1:00 PM~~ | 03.10.2024 at 1:00 PM |
| Date and time of opening of tenders | ~~18.09.2024 at 3:00 PM~~ | 03.10.2024 at 4:00 PM |

*The other terms & conditions of the tender will remain the same.*

Deputy Registrar
Project Purchase Section
O/o Dean (R&D)
IIT (ISM) Dhanbad

GSTIN : 20AAAAI0686D1ZA
भारतीय प्रौद्योगिकी संस्थान (भारतीय खनि विद्यापीठ), धनबाद
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GP-PRJ-031-24-25 18th September, 2024

## Request for Quotation

**To,**

**Subject: Supply & Installation of Radexpro 3D Professional**

**Sir,**
Indian Institute of technology (Indian School of Mines), Dhanbad is interested in the purchase of the materials/ equipment listed below:

| Sl. No. | Detailed Specifications | Quantity |
|---|---|---|
| 1. | **Supply & Installation of RadExPro 3D Professional (Detailed specification as per Annexure- II)** | 01 No |

**INSTRUCTIONS:**

1) Please attach relevant technical literature of the item.
2) Please fill in the attached **form 01** (Declaration of Local content) regarding class of supplier.
3) Please mention the warranty/ guarantee period in your offer. Equipment/ material supplied must have a minimum warranty/ guarantee of **12 months**.
4) Please attach authorization certificate from OEM.
5) Please mention after-sales service information in your offer.
6) ***Please attach a certificate that the quoted price is not more than that of any other Govt. organization/ institution in India. This must be mentioned in the offer letter clearly***.
7) The rates should be quoted for each item separately as per price schedule attached as annexure I.
8) The items/ materials shall be required to be delivered to the Department of **Applied Geophysics** IIT (ISM) Dhanbad at the risk and cost of the tenderer.
9) Your tender must be **valid for a minimum of 120 days** from the date of opening of the tender.
10) The stores are required to be delivered within 30 days; late delivery may not be accepted.
11) Full details of stores offered should be given in the tender along with supporting & relevant literature/ Technical Literature.
12) The items offered should be of good quality conforming to BIS or equivalent standard, where applicable.
13) ***Advance payment is not admissible.*** Payment shall normally be made within 45 days subject to receipt and acceptance & installation (as per Purchase Order Terms) of the ordered materials/items.
14) In the event of the supplier failing to supply the materials or install the same as per contract condition, IIT (ISM) Dhanbad shall have the right to deploy a suitable agency/ third party to get the job completed at the risk and cost of the supplier.
15) Tender may please be submitted ***in sealed cover only super scribed with Enquiry No. GP-PRJ-031-24-25 latest by 18.09.2024***
16) The offer must be submitted in the office of Deputy Registrar (Project Purchase Section), Office of Dean(R&D), CRF Building 2nd Floor, IIT (ISM), Dhanbad– 826004 (Jharkhand, India) only. Please send your offer by Regd. Post / Speed Post/ Courier along with Courier receipt. Tender/ quotation will be received during IIT (ISM) Dhanbad working hours only (i.e. Monday to Friday). At any circumstances by hand delivery is not acceptable. Bids sent through Email/Fax or submitted in unsealed cover(s) will not be accepted and such bids will be treated as non-responsive bids.

17) **Performance Bank Guarantee:** A bank guarantee issued by a Nationalized / Scheduled Commercial Bank in India towards PBG for an amount equal to 10% of total value of purchase order and valid till the period

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beyond two months of completion of warranty period should be submitted in favor of **Registrar, IIT (ISM) Dhanbad.**

18) Any other information that you may like to obtain, you are free to contact IIT (ISM) Dhanbad before submission of tender.

19) IIT (ISM) Dhanbad reserves the right to accept and/or to reject any/all tenders without assigning any reason.

20) **Payment**: will be made within 45 days after satisfactory supply, inspection, installation/commissioning/ satisfactory services & acceptance and on submission of pre-receipted tax invoice, delivery challan, warranty certificate and installation report in triplicate

21) **Please attach purchase order copies of the same equipment which you have supplied to any other Govt., public sector and autonomous institutions**.

22) **a) In a tender, either the Indian agent on behalf of the principle/ OEM and the Principle/OEM itself can bid but both cannot bid simultaneously for the same item/product in the same tender.**
**b) If an agent submits bid on behalf of the principle/ OEM, the same agent shall not submit a bid on behalf of another principle/ OEM in the same tender for the same item/product.**

Deputy Registrar
Project Purchase Section
Office of Dean (R&D)
IIT(ISM), Dhanbad

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**Annexure –I**

**1. PRICE SCHEDULE FOR GOODS BEING OFFERED WITHIN INDIA**

Name of the Bidder_____
NIT Reference No. _____
File Reference No. _____

| Sl. No. | Full Description of items with (HSN Code/SAC Code) | Quantity | Unit Price (in INR) | Total Amount (in INR) |
|---|---|---|---|---|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| Ex-Works Price- | | | | |
| Packing & Forwarding | | | | |
| Transportation | | | | |
| FOR (IIT ISM) Dhanbad | | | | |
| GST/IGST (their rate(s) as the case may be, clearly specified) | | | | |
| Insurance up to Destination/handover (in case of fabrication) | | | | |
| Installation & Commissioning charge | | | | |
| Training charges, if any | | | | |
| Additional Warranty Charges, if any | | | | |
| Annual Maintenance Charge, if any | | | | |

*(On the basis of the technical specifications submitted)

Total Bid Price_____ in words_____

Note:

(a) The Price schedule of optional items shall be indicated in a separate sheet in the same Performa.

(b) Cost spare parts may be indicated separately

Signature of Bidder
Name _____

Business

Address_____

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# Form-1

**Declaration by bidder**

**(Please specify Class of Supplier and Local Content percentage)**

**In accordance and manner as specified in Order No. P45021/2/2017-PP (BE-II) dated: 04th June 2020 and 2nd March 2021 issued by DIPP, Ministry of Commerce and Industries, GoI.**

To,

The Director,

Indian Institute of Technology (Indian School of Mines)

Dhanbad -826004

Respected Sir,

In accordance with the order No. P-45021/2/2017-PP (BE-II) dated 04th June 2020 and P-45021/2/2017-BE-II-Part (1) (E-50310) dated 4th March 2021 I hereby declare that

I am aware about all provision mentioned in Tender No. **GP-PRJ-031-24-25** as well as order No. P-45021/2/2017-PP (BE-II) dated 04th June 2020 and P-45021/2/2017-BE-II-Part (1) (E-50310) dated 4th March 2021 and abides by the same.

I declare that for this tender, I am a **Class-I local supplier / Class-II local supplier / Non-local supplier** (Strike out whichever is not applicable) and classification is based on local content of goods/services/work offered by bidder in this tender.

**Local content (in percentage) in offered** good/services/work is: **_____%**

***Whereas* 'Local Content'** means the amount of value added in India which shall, unless otherwise prescribed by the Nodal Ministry, be the total value of the item procured (excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties) as a proportion of the total value, in percent.

The services such as transportation, insurance, installation, commissioning, training and after sales service support like ACM/CMC etc. are not included as Local content in case of imported products.

The local content for all inputs which constitute the said goods/services/works has been verified and bidder is responsible for the correctness of the claims made therein.

Date:
Signature:
Name of Authorized Signatory:
Name of Bidder:
Seal of Bidder:

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**Annexure -II**

## Technical Specification of RadExPro Professional 3D Ver. 2024.1

| Sl No. | Technical Specification | Professional |
|---|---|---|
| **1** | **Input / Output** | |
| | Input data from SEG-Y, SEG-2, SEG-B, SEG-1, SCS-3 files, with optional header remapping | X |
| | Input data from SEG-D, SEG-D (rev.3) and FairFieldNodal Receiver Gather files, with optional header remapping | X |
| | Input GPR data from LOGIS, Zond, RAMAC/GPR, GSSI, Pulse EKKO formats | X |
| | Input trace from ASCII file | X |
| | Input DAS data from Terra15, Fotech, PRODML (Sintela) HDF5, ASN and Silixa files | X |
| | Reading data from tapes | X |
| | Data output to SEG-Y files | X |
| | Data input/output via replicas system | X |
| | Integration Python project into RadExPro processing flows | X |
| | Continuous recording data slicing | X |
| **2** | **Geometry assignment** | |
| | Import from SPS and UKOOA P1-90 files | X |
| | Import from ASCII | X |
| | Import from OGP P1/11 | X |
| | Calculation using built-in equation calculator | X |
| | Display and editing using built-in spreadsheet editor | X |
| | Dedicated module for near-surface geometry assignment | X |
| | Dedicated module for marine geometry assignment | X |
| | Dedicated module for VSP geometry assignment | X |
| | Crooked line 2D/3D binning | X |
| **3** | **Trace editing** | |
| | Resample | X |
| | Kill trace | X |
| | Zero-padding | X |
| | Inverse | X |
| | Muting (top, bottom, surgical) | X |
| | Trace length change | X |
| **4** | **Header fields manipulations** | |
| | Mathematical operations | X |
| | Spreadsheet editor | X |
| | Import from ASCII files, export to ASCII | X |
| | Smoothing average | X |
| | Shift of header values to specified number of traces | X |
| | Header Enumerator | X |
| | Header NMO/NMI | X |
| | Graphs | X |
| | Cross-plots and histograms | X |
| | Header 2D spatial interpolation | X |
| **5** | **Dataset combining** | |
| | Trace-by-trace subtraction/addition of 2 datasets | X |

| | | |
|---|---|---|
| | Vertical merge of 2 datasets along a horizon | X |
| | Adaptive Wavefield Subtraction | X |
| **6** | **Amplitudes** | |
| | Amplitude corrections: time raised to power, exponential, automatic gain control (AGC), trace equalization, time-variant gain | X |
| | Spherical Divergence Correction | X |
| | Time Variant Amplitude Gain | X |
| | AGC removal | X |
| | Ensemble Equalization | X |
| | DC removal | X |
| | Surface-consistent amplitude corrections for source and receiver | X |
| **7** | **Statics** | |
| | Refraction statics calculation | X |
| | Interactive refraction statics calculation (trial 100 launches) | X |
| | Elevation statics calculation | X |
| | Residual statics calculation | X |
| | Maximum Power Autostatics | X |
| | Correlation Stack Enhancement | X |
| | Trim statics | X |
| | Apply Statics | X |
| **8** | **Denoising** | |
| | Burst Noise Removal | X |
| | Frequency filtering (common and time-variant):<br>simple bandpass<br>Ormsby bandpass<br>Butterworth high-pass/low-pass/bandpass<br>notch | X |
| | 2D average/median/alpha-trimmed filtering | X |
| | F-K filtering | X |
| | Time frequency domain (TFD) noise attenuation (auto/manual) | X |
| | 2D F-X predictive filtering | X |
| | 3D F-X-Y predictive filtering | X |
| | Sparse F-K Filtering | X |
| | Sparse Radon Filtering | X |
| | F-K Amplitude Power | X |
| | Structural Smoothing | X |
| | Deblending | X |
| **9** | **Deconvolutions and Wavelet Shaping** | |
| | Signature/Phase/Predictive/Spiking Deconvolution | X |
| | Surface-consistent Deconvolution | X |
| | Nonstationary predictive Deconvolution | X |
| | Automatic Wavelet Extraction | X |
| | Kolmogoroff Spectral Factorization | X |
| | Derive Match Filter | X |
| | Filter application | X |

| | | |
|---|---|---|
| | Spectral Whitening | X |
| | Spectral Shaping | X |
| | Wavelet Processor | X |
| | Geophone -> DAS Conversion | X |
| | Q Filtering | X |
| **10** | **Multicomponent processing** | |
| | Hodogram analysis | X |
| | 2C/3C Rotation | X |
| | Rotation of FairFieldNodal multicomponent data | X |
| **11** | **Interpolation** | |
| | Trace interpolation along the line | X |
| | Interpolation of set of 2D lines into a 3D volume | X |
| | 3D linear interpolation | X |
| | 3D F-Kx-Ky Regularization | X |
| | Sparse F-K Interpolation | X |
| **12** | **Trace transforms and trace math** | |
| | Linear and Parabolic Radon transforms | X |
| | Amplitude spectrum calculation | X |
| | Phase spectrum calculation | X |
| | Autocorrelation and crosscorrelation functions | X |
| | Logarithm and exponent of trace | X |
| | Convolution | X |
| | Trace/trace and trace/scalar arithmetic | X |
| | Power of trace | X |
| | Radial trace transform (direct and inverse) | X |
| | Stockwell transform | X |
| **13** | **Time-depth conversion** | |
| | Conversion between time and depth domain using different types of velocity functions | X |
| **14** | **Migrations and DMO** | |
| | Pre-/Post-stack 2D/3D Kirchhoff time migration (on CPU and GPU) | X |
| | 2D/3D F-K Stolt migration | X |
| | 3D F-K Stolt migration with variable velocity | X |
| | T-K migration | X |
| | 2D F-K DMO | X |
| **15** | **Velocities and CDP stacking** | |
| | 3D CDP binning | X |
| | Crooked line 2D CDP binning | X |
| | CDP gathers | X |
| | Super gathers | X |
| | Velocity manipulation | X |
| | Trace<->Velocity Table Transfer | X |
| | Interactive analysis of stacking velocities | X |
| | Horizon-based velocity analysis | X |

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| | | |
|---|---|---|
| | Automatic horizon-based velocity analysis | X |
| | NMO/NMI-correction | X |
| | LMO/LMI-correction | X |
| | Stacking | X |
| | Angle Stack | X |
| | Angle Muting | X |
| **16** | **Offshore data processing** | |
| | Marine geometry assignment | X |
| | Import geometry from UKOOA P1-90 files | X |
| | Dropped/missed shots correction | X |
| | Import tidal statics | X |
| | 2D/3D HiRes marine statics calculation | X |
| | De-bubbling | X |
| | Radon demultiple | X |
| | 2D SRME | X |
| | Zero-offset demultiple (for near-offset data) | X |
| | SharpSeis™ adaptive deghosting/broadband processing | X |
| | Adaptive wavefield subtraction | X |
| | PZ Calibration | X |
| **17** | **QC and attribute analysis** | |
| | Pre-stack shot/receiver gather QC: estimation of mean, 2D RMS and mean 1D RMS amplitude, signal-to-noise ratio, resolution and apparent frequency pre-stack within an arbitrary polygon or a rectangular window | X |
| | Fold and offset sampling calculation | X |
| | Survey, fold and offset sampling maps | X |
| | Analysis of attribute dependency on linked cross-plots and histograms | X |
| | Mapping attributes on top of topography background | X |
| | Estimate of average, RMS, minimum, maximum, absolute maximum amplitude post-stack within a window along a horizon | X |
| | Determination of time of maximum, minimum, and absolute maximum amplitude post-stack within a window along a horizon | X |
| | Estimate of peak frequency, apparent frequency, visible frequency, centroid frequency, and frequency | X |
| | Estimation of signal-to-noise ratio post-stack along a horizon | X |
| | Computation of auto-correlation and cross-correlation functions | X |
| | Interactive estimate of velocities of all types of waves | X |
| | Reflection strength, instantaneous frequency, instantaneous phase | X |
| | Interactive QC maps and cross plots | X |
| | Interactive data display from QC maps (shot/receiver/CMP gather) | X |
| | Ensemble header statistics (min, max, average, number of values above threshold – total of max consecutive) | X |
| | QC stats: total shot count, bad shot count, CMP coverage | X |

| | | |
|---|---|---|
| **18** | **Refraction** | |
| | Processing time-curves of refracted waves (plus-minus and GRM) | X |
| | First-break travel-time tomography | X |
| **19** | **Vibroseis** | |
| | Correlation | X |
| | Synthetic vibroseis sweep generation | X |
| | Harmonic distortion analysis (time-frequency plots) | X |
| **20** | **Surface Wave Analysis** | |
| | Multichannel Analysis of Surface Wave (MASW) | X |
| **21** | **VSP** | |
| | VSP geometry assignment for vertical or inclined wells | X |
| | Hodogram analysis, 2C and 3C rotation | X |
| | Generation of synthetic seismograms for different wave types | X |
| | Separation of wavefields of different wave types | X |
| | Calculation of arrival time of direct wave or reflected wave from a specified reflector for horizontal layered model | X |
| | Layer velocity modeling | X |
| | Estimation of Q | X |
| | Far-offset VSP NMO-correction | X |
| | Import of well-log data, import and export of velocity models | X |
| | Joint interpretation of VSP, logging, and seismic data | X |
| | VSP Kirchhoff migration | X |
| | 2D VSP/Crosswell Kirchhoff Depth Migration | X |
| | VSP-CDP transformation | X |
| **22** | **Display and printing** | |
| | Various modes of data display | X |
| | Display of WT/VA traces on top of color-coded velocity or seismic data | X |
| | Support of several data displays at a time, several datasets in one display | X |
| | Synchronized scale, scroll and gain in several display windows for data comparison | X |
| | Interactive calculation of frequency spectrum and F-K spectrum of arbitrary data fragment | X |
| | Display of several spectrum graphs in one window | X |
| | Display of trace header fields | X |
| | Display of profile crossing point marks | X |
| | Display of lines, attributes, horizons, on the interactive map | X |
| | Interactive display of data along an arbitrary line selected on the Map | X |
| | Display of attributes on linked cross-plots and histograms | X |
| | Printing and export of cross-plots and histograms to a bitmap | X |
| | Printing of processing results with print preview | X |

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| | | |
|---|---|---|
| **23** | **3D Volume Display / Time Slice generation** | |
| | 3D volume display | X |
| | 3D Time slice generation | X |
| **24** | **Data and processing management** | |
| | Processing within projects. A project can be easily moved to a new location together with all associated data and processing parameters | X |
| | Work with several projects at a time | X |
| | Processing flows can be combined into several queues and run in parallel | X |
| | Processing flows can be copied with all procedures and parameters | X |
| | Project and flows can be protected by password in admin mode | X |
| | Export/import of processing flows | X |
| | Export/import of datasets in RadExPro data exchange format | X |
| | Processing history | X |
| | Data run-time resorting on input into the flow | X |
| | Fast resorting of big data volumes | X |
| | Flow Replication | X |
| | Combining several flows into processing queue, parallel execution of several queues | X |
| | Batch processing of several files with the same flow | X |
| | Horizon interpolation/extrapolation, transfer from pick to trace headers and back | X |
| **25** | **Interpretation** | |
| | Horizon picking, manual and automatic | X |
| | Gridding of horizons and attributes | X |
| | Attribute calculation along horizons | X |
| | 3D Autopicker | X |
| | Acoustic inversion (genetic algorithm) | X |