## CLARIFICATION#1 AGAINST TENDER # PROC-SERVICES/CB/EXPL-2040/2017- AVO INVERSION AND RESERVOIR CHARACTERIZATION THAL SOUTH 3D SEISMIC DATA THAL E.L

## Following clarification has been made in the TOR. Prospective bidders are advised to submit their bids accordingly.

| Sr # | Reference Section in TOR  | Existing Clause                                     | Amended Clause  |
|------|---------------------------|---|---|
| 1    | TOR clause#2.1            | The primary objective of the proposed study is      | The primary objective of the proposed study is AVO      |
|      | (objective)               | AVO processing/analysis and pre stack Elastic       | processing/analysis and pre stack Elastic Inversion of  |
|      |                           | Inversion of Thal South 3D seismic data in order    | Thal South 3D seismic data in order to enhance the      |
|      |                           | to obtain physical parameters of the subsurface     | vertical resolution and obtain acoustic, elastic and    |
|      |                           | and rock properties over the area. The study        | other rock properties of subsurface units that are      |
|      |                           | should provide detailed high-resolution property    | helpful in quantitative interpretation of the area.     |
|      |                           | volumes along with litho facies and probability     | The study should provide detailed high-resolution       |
|      |                           | distribution. The study would enable to             | property volumes along with litho facies and            |
|      |                           | understand reservoir and relationship between       | probability distribution. The study would enable to     |
|      |                           | petrophysical and elastic properties. The study     | understand reservoir and relationship between           |
|      |                           | Window including norizons of interest lies from     | petrophysical and elastic properties. The study         |
|      |                           | 1300 ms to 3300ms.                                  | window including nonzons of interest lies from 1300     |
|      | TOD alourant 2.2 of Saara | Further on estimation of lithe facion distribution  | ms to 3300ms.   |
| 2    | TOR clause# 3.3 of Scope  | Further, an estimation of litho facies distribution | Further, an estimation of litho facies distribution and |
|      | OI WORK                   | and their classifications, bulk water saturation,   | their classifications, bulk water saturation, fluid     |
|      |                           | notice physical and elastic properties and          | content and building a relationship between petro-      |
|      |                           | illustrating the effect of porosity and water       | offect of porosity and water saturation (Sw) variations |
|      |                           | saturation (Sw) variations in the reservoir are     | in the reservoir as well as neural network based        |
|      |                           | included in the scope of work                       | HDI volume are included in the scope of work            |
| 3    | TOR annexure-V            |   | Neural Network based DHI to optimize the drilling       |
|      | (Deliverables) following  |   | location (Revised Annexure-V is attached for            |
|      | point is included in the  |   | reference).   |
|      | deliverables              |   |   |

Deliverable for 3D seismic data AVO Inversion and reservoir characterization for THAL SOUTH 3D

| Sr. No. | Description   | Format          | Recommended Media                | No. of Copies. |
|---------|---|-----------------|----------------------------------|----------------|
| 1.      | Stacks/Results of intermediate<br>processing for QC and decision<br>making, Weekly Report   | SEGY/PPT        | DVD/External Drive/<br>FTP/Email | 02 sets        |
| 2.      | Edited and conditioned Well<br>Logs (including but not limited<br>to DTC, DTS, RHOB), TD<br>pairs etc.  | ASCII           | DVD                              | 02 sets        |
| 3.      | Conditioned gathers, Estimated<br>Wavelet. Near, mid and far<br>Angle/offset gathers &<br>Angle/offset Stacks , Intercept<br>& Gradient Stack Volumes,<br>Synthetic Seismograms, rock<br>physics analysis and cross<br>plots, AVO classes and their<br>cross plots etc. | SEGY            | LTO-4/IBM-3592<br>Cartridge      | 02 sets Each   |
| 4.      | Vp, Vs, P-Impedance, S-<br>Impedance, Density, Vp/Vs,<br>Poison's Ratio, Mu-Rho,<br>Lambda Rho, lithology,<br>Probability, Effective Porosity,<br>Water Saturation, cross plots,<br>Fluids, and Facies estimations,<br>geobodies extraction and<br>volumetrics etc.     | SEGY<br>volumes | LTO-4/IBM-3592<br>Cartridge      | 02 sets Each   |
| 5.      | Neural Network based DHI to optimize the drilling location.   | SEGY<br>volumes | LTO-4/IBM-3592<br>Cartridge      | 02 sets Each   |
| 6.      | Provisional Report  | MS Word<br>PDF  | DVD& colored Hard<br>Copy        | 02 sets Each   |
| 7.      | Final Report  | MS Word<br>PDF  | DVD& colored Hard<br>Copy        | 04 sets Each   |