CLARIFICATION#2 AGAINST TENDER # PROC-SERVICES/CB/EXPL-3203/2018 INTEGRATED STUDY FOR STRATIGRAPHIC LEADS EVALUATION IN PALECONE & CRETACEOUS ZONES OF FATEHUPR AND LADHANA BLOCKS

Following Clarifications has been made in the subject tender.

S. No.	Clarifications	OGDCL Reply
1	Have any of the wells in the project been cored? If so, will there be core reports available to us to use in our assessment?	Multan North-01 has 03 side wall cores in cretaceous and core reports will be available for the study. Biostratigraphy reports are available for Ahmadpur-01, Zindapir-01 and Bahu-01 (a well close to Multan north-01).
2	Will the seismic data in the Petrel project be in depth or time?	Seismic data will be in time domain. A layer cake velocity model of the area is also available and the TWT seimic can be converted into Depth using the Velocity model.
3	Will we receive the wireline logs for the wells in the project?	The wireline logs of 06 adjacent wells will be available for the study as shown on the base map in TOR.
4	Which logs will be available? Ie: Vp, Vs, Gr, Den (what type?), Res, PE, Facies logs?	Each well will include the following logs in the zone of interest: 1) Multan North-01 Wireline logs: BS, CAL GR, HDRA, NPHI, RHOB, SP, PF, TENS, DT Calculated: P-Impedance, Discrete Lithology log 2) Bahu-01 Wireline logs: DT, GR, CAL, RS, BIT, ResMLL, SP, RUK, PEF, NPHI, RHOB 3) Zakria-01 Wireline logs: GR, DT 4) Dhodak Wireline logs: GR, LLD, LLS, NPHI, RHOZ, DT 5) Zindapir-01 Wireline logs: DT, GR, LLD, LLS, MSFL, NPHI RHOB 6) Ahmadpur-01 Wireline logs: C1, DRHO, DT, ILD, ILM, LLD, LLS, MSFL, NPHI, PEF, RHOB, ReSFLU, SP, CAL, GR Calculated: P-Impedance, Discrete Lithology log

5	Will ODGCL's seismic interpretation be in the Petrel project? Will this include the interpretation of their inversion work as well?	The seismic interpretation is in the Petrel project. The seismic and log interpretations by OGDCL will be available in the project.
6	Will we be given the location of the stratigraphic leads that OGDCL have identified to date in the project area? How many have been identified?	The location of 03 stratigraphic leads will be given in the project.
7	How many (and which) wells are included in the data set? The map shows only three wells tying to the seismic.	06 wells will be available as shown on the base map in TOR. All six wells are not located inside the exploration blocks 03 wells are tied with the seismic in the blocks under study as shown on the basemap. There is no seismic tie with the 02 wells on the western side of the blocks. these wells are included to correlate the sequences with the eastern wells.
8	Are the petrophysical evaluations for these wells available?	petrophysical logs will be available for Ahmadpur-01 and Multan North-01
9	Is any biostratigraphy data available (reports) available?	Biostratigraphy reports are available for Ahmadpur-01, Zindapir-01 and Bahu-01 (close to Multan north-01).
10	Are source rock reports, temperature data available to understand the hydrocarbon source?	OGDCL want to focus on reservoir and seal rocks in the study. OGDCL basin studies team has already worked on the source rocks.
11	Is there any remote sensing data (gravity, magnetics)?	There is no Remote sensing data for the blocks
12	Are there any other relevant reports and data available, e.g. on surface geology, legacy data, previous reports, historical geological survey data?	The area comprising the expl. blocks is covered with thick alluvium and there is no outcrop/surface geology. Stratigraphic surfaces interpretation (based on GR, DT, PEF, RHOB, NPHI and biostratigraphy) will be available for study. The previous reports will be shared for the study. Each well will include the following logs in the zone of interest: 1) Multan North-01 Wireline logs: BS, CAL GR, HDRA, NPHI, RHOB, SP, PF, TENS, DT Calculated: P-Impedance, Discrete Lithology log 2) Bahu-01 Wireline logs: DT, GR, CAL, RS, BIT, ResMLL, SP, RUK, PEF, NPHI, RHOB 3) Zakria-01 Wireline logs: GR, DT

		4) Dhodak Wireline logs: GR, LLD, LLS, NPHI, RHOZ, DT 5) Zindapir-01 Wireline logs: DT, GR, LLD, LLS, MSFL, NPHI RHOB 6) Ahmadpur-01 Wireline logs: C1, DRHO, DT, ILD, ILM, LLD, LLS, MSFL, NPHI, PEF, RHOB, ReSFLU, SP, CAL, GR Calculated: P-Impedance, Discrete Lithology log
13	Is fresh horizons seismic interpretation is required or OGDCL horizons seismic interpretation will be provided for review?.	OGDCL horizons interpretation on seismic will be provided for review
14	How many wells will be studied and integrated with seismic data.	06 wells will be available as shown on the basemap in TOR. All six wells are not located inside the exploration blocks 03 wells are tied with the seismic in the blocks under study as shown on the basemap. There is no seismic tie with the 02 wells on the western side of the blocks. these wells are included to correlate the sequences with the eastern wells.
15	As per the TOR, we understand that no wells have been drilled in the blocks since seismic data acquisition in 2015? Could you clarify how much well data will be made available for this study to perform callibration of seismic data?	06 wells will be available as shown on the base map in TOR. All six wells are not located inside the exploration blocks. 03 wells are tied with the seismic in the blocks under study as shown on the basemap. There is no seismic tie with the 02 wells on the western side of the blocks. these wells are included to correlate the sequences with the eastern wells. petrophysical logs will be available for Ahmadpur-01 and Multan North-01 Biostratigraphy reports are available for Ahmadpur-01, Zindapir-01 and Bahu-01 (close to Multan north-01). Each well will include the following logs in the zone of interest: 1) Multan North-01 Wireline logs: BS, CAL GR, HDRA, NPHI, RHOB, SP, PF, TENS, DT Calculated: P-Impedance, Discrete Lithology log

		2) Bahu-01 Wireline logs: DT, GR, CAL, RS, BIT, ResMLL, SP, RUK, PEF, NPHI, RHOB 3) Zakria-01 Wireline logs: GR, DT 4) Dhodak Wireline logs: GR, LLD, LLS, NPHI, RHOZ, DT 5) Zindapir-01 Wireline logs: DT, GR, LLD, LLS, MSFL, NPHI RHOB 6) Ahmadpur-01 Wireline logs: C1, DRHO, DT, ILD, ILM, LLD, LLS, MSFL, NPHI, PEF, RHOB, ReSFLU, SP, CAL, GR Calculated: P-Impedance, Discrete Lithology log
16	With reference to Point 6.2 of SOW, how much interpreted well log data will be made available for the study?	the well data interpretation will include Stratigraphic surfaces interpretation (based on GR, DT, PEF, RHOB, NPHI and biostratigraphy)
17	With reference to Point 6.2 of SOW, how much seismic data will be made available for the study? Number of lines?	the seismic interpretation will be available on 45 nos. of seismic lines (Aprox. 2400 line Km)
18	With reference to Point 6.11 of SOW, will OGDCL provide the 2D seismic attributes or they will have to be generated by the consultant?	The seismic attributes will be generated by the consultant.