

**Clarification#2 against tender# PROC-SERVICES/CB/RMD-4281/2019
Full field Integrated Reservoir Simulation Study of Uch Gas Field**

Sr#	Bidder's Clarification	OGDCL response
1	Ref. 3.1.5: G&G data till the finalization of Static model and production data till the finalization of Dynamic model will be provided. Please clarify the data collection cut-off date.	Production data till the start of History Matching and acquired during History Matching will be provided and Consultant has to incorporate all other additional technical data acquired before and during the course of the study.
2	Ref 3.10.17: Consultant will evaluate shrinkage factor for all three lobes and field with consultation of OGDCL professionals. Should Energy rate calculation be reperformed in order to evaluate shrinkage factor accurately?	Yes, accurate Shrinkage factor will be evaluated with consultation of OGDCL professionals.
3	Ref 3.11.1/3.11.2: Recommend the required type and strength of Compression System. Does consultant have to include the design of the compressors/Compressor equipment? Is there any previous compression study/related study available with OGDCL which can be used?	Presently compression is being designed, Consultant will review the already designed compression system and will recommend the additional compression facilities and modifications if required.
4	Ref 3.10.2.5: Coupled run by combining reservoir with surface network. Only base case for coupled run is required? if no, please specify the coupled scenario(s).	All cases will be coupled.
5	Ref 3.3.1: Techlog or any other petrophysical interpretation software used by OGDCL or as recommended by OGDCL Petrophysicist. Petrophysical interpretation shall be carried out in Techlog (as per TOR) and if required data can be delivered in industry standard format.	Tech Log can be used in Petrophysical interpretation
6	Ref 3.3.2: Clay Parameters and Clay Typing. For Clay parameters & clay typing following data required "HNGS data (Spectral Gamma Ray, URAN, THOR, Potassium) for cross plotting.	Use HNGS data as per data availability
7	Ref 3.3.4: Porosity Calculation. Can OGDCL elaborate the Produced transformation, correlations and curves for each rock type;	Porosity will be calculated using multiple porosity log analysis whichever is available. Core

	requirement stated in TOR.	calibration would be done and porosity transform would be generated as per core availability.
8	Ref 3.3.19: Will OGDCL provide selective cut offs for interpretation. Kindly specify scenarios	Reservoir Cut offs sensitivity analysis would be interpreted or judge by contractor, OGDCL would not provide cut off parameters.
9	Ref 3.3.23: The transition zone should be correlated with capillary pressure results. Transition zone can and will be correlated with capillary pressure results only if CP data is available and transition zone clearly been identified on logs.	If Capillary data available
10	List of required data:	
	a. No of available PVT samples.	Presently PVT Analysis are not available, however if acquired during the course of study, the consultant will incorporate. Moreover, Gas analysis reports will be provided.
	b. No. of available SCAL/RCAL reports	Special Core Analysis (SCAL) of 02 wells and Routine Core analysis (RCAL) of 07 wells are available. However, if any additional core analysis acquired during the course of study, the consultant will incorporate.
	c. Total well tests available	Around (33) MITs/ Buildups are available. Consultant will also incorporate additional MITs/ Buildups acquired before and during the course of the study.
	d. Available pressure/production surveys (MDT, PLT, BHP etc.)	PLT of One (01) well is available and around 190 Static Bottom Hole Pressure Surveys (SBHPS) are available. However, any pressure/production surveys (MDT, PLT, BHP etc.) data acquired during the course of study, will also be incorporated by the consultant.
	e. Production and Pressure data (Phases, allocation/metering method & frequency)	Phases (Gas, Condensate and Water), Metering (AGA-3, Gas Calculation through Venturi Method using Bernoulli Equation) Frequency (Daily) and BHP twice in year, along with Diagnostic tool as per requirement.
	f. Surface Network Description (flowlines/pipelines lengths, sizes, schematics and processing plants/facilities)	All the available data will be shared with successful bidder at the time of data collection.

11	Can you please clarify if we can adjust software usage as needed for integration modeling?	We are using Petrel RE software for Reservoir Simulation.
12	Can OGDCL provide an overview of any processing facilities already installed to condition and compress the gas prior to entry to the power plant.	Not at this stage
13	Are the surface Central Processing Facilities to be included within the Integrated Asset Model or can these be approximated using compression curves (Flow vs. Pressure) based on existing power limits?	The matter will be discussed and decided during kickoff meeting with the successful bidder
14	If the surface facilities are to be included in the model please confirm if there is any specified software to be used (e.g. HYSYS, Unisim) and level of modelling detail required.	PipeSIM or equivalent must be used for pipelines and gathering system.
15	Please confirm the level of cost estimation and facilities definition required for any additional compression facilities is order of magnitude.	+/- 5% cost estimation with backup refernces must be provided by the consultants for compression with at least five regional project examples.
16	Scope, workflows and type of Post-Stack inversion is not mentined in the tender.	The seismic data contains all 3 vintages acquired on different years(24 fold and 48 fold seismic data). All the three vintages seismic lines are distributed randomly and cover the whole Uch structure.
17	What will be the mechanism to perform this inversion study.	Successful Bidder can review previous structural interpretation and mapping at our workstation.
18	How the additional time and cost will be adjusted in ongoing Uch Gas Field study?	The successful bidder will visit our interpretation facility for seismic data review and work out the feasibility of acoustic inversion, if possible on available data.
19	Does the ongoing study will be on hold all the seismic inversion data is processed, analyzed and incorporated in the study?	SegY data is available upto migrated stack (post migration). Currently seismic data reprocessing is in progress upto PSTM, if completed at study time then newly reprocessed PSTM data and velocities will be used.