

**CLARIFICATION#3 AGAINST TENDER # PROC-SERVICES/CB/EXPL-4979/2021– HIRING OF SERVICES FOR A GEOCHEMICAL EVALUATION OF THE PETROLEUM SYSTEMS OF KOHAT-POTWAR FOLD BELTS, UPPER INDUS BASIN, PAKISTAN**

Following Clarifications have been made in the subject tender.

Sr#	Questions for Clarification	OGDCL Reply
1	<p><b>Sample types and condition for TOC.</b> The list of analyses start with rock samples for total organic carbon content determination (TOC). Before the TOC analysis can be done the sample has to be available as crushed powder. Before that the samples might be ditch cuttings or core or side wall cores and they may be unwashed (contaminated with drilling fluids) which might be water or oil based. The samples if unwashed will need washing to remove the mud and then crushing and possibly lithological descriptions provided. The samples if drilled with an oil based fluid will need to be solvent cleaned to get rid of the oil before the TOC screen and certainly before the Rock-Eval pyrolysis analyses are conducted. Oil based fluid contamination will also seriously impact on any follow on solvent extraction type analyses and biomarker studies. So my question is, can you advise what condition the sample from wells might be in and should we allow for sample preparation (washing, description, crushing etc.)?</p>	<p>For total organic carbon content(TOC) determination, the samples will be from outcrops, cores and ditch cuttings. The samples are unwashed and some of them may have been drilled with oil base mud. So sample preparation (washing, extraction, crushing, description, etc.) will be required before analyses.</p>