MI SWACO

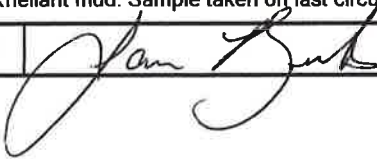## Reverse Phase Extraction (RPE) Method for Detection of Oil Contamination in Non-Aqueous Drilling Fluids (NAF)

Figure 1

RPE Analytical Report
Certificate of Analysis

Operator:	Perenco	Area and Block:	Caju Well
OCS-G Number:	Offshore Brazil	Rig Name:	Diamond – Ocean Star
Collection Date:	05-May, 2013	Collection Time:	12:00 hrs
Analysis Date:	05-May, 2013	Analysis Time:	12:00 hrs
Analyst:	Jason Brooks	Permit Number:	

Method Reference: Appendix 6 to Subpart A of Part 435

Sample ID	Sample Results	Yes	No	Result (Pass/Fail)
Mud Sample 1	Mud Sample 1 fluoresces equal to or greater than the positive control?		X	PASS
Mud Sample 2	Mud Sample 2 fluoresces equal to or greater than the positive control?		X	PASS
	Does Mud Sample 1 result agree with Mud Sample 2 result?	X		PASS

Results above are acceptable if Mud Sample fluoresces less than positive control, and Mud Sample 1 agrees with Mud Sample 2.

	Quality Control Results	Yes	No	Acceptable? (Yes/No)
	Does Reagent Blank (RB) fluoresce?		X	YES
	Mud Sample fluoresces less than positive control?	X		YES
	Mud Sample 1 fluoresces equal to or greater than the positive control?		X	YES
	Mud Sample 2 fluoresces equal to or greater than the positive control?		X	YES

Quality control results are acceptable if all answers are "Yes".

Comments: 10.2ppg Rheliant mud. Sample taken on last circulation of 12 ¼" x 14 ¾" (HO) section prior to POOH for casing job.

Analyst Signature:		Date:	05-05-13

Reverse Phase Extraction (RPE) Method for Detection of Oil Contamination in Non-Aqueous Drilling Fluids (NAF)

Figure 1

RPE Analytical Report					
Certificate of Analysis					
Operator:	Perenco		Area and Block:	Caju Well	
OCS-G Number:	Offshore Brazil		Rig Name:	Diamond – Ocean Star	
Collection Date:	16-May, 2013		Collection Time:	19:00 hrs	
Analysis Date:	16-May, 2013		Analysis Time:	19:00 hrs	
Analyst:	Jody Lane		Permit Number:		
Method Reference: Appendix 6 to Subpart A of Part 435					
Sample ID	**Sample Results**		**Yes**	**No**	**Result (Pass/Fail)**
Mud Sample 1	Mud Sample 1 fluoresces equal to or greater than the positive control?			X	PASS
Mud Sample 2	Mud Sample 2 fluoresces equal to or greater than the positive control?			X	PASS
	Does Mud Sample 1 result agree with Mud Sample 2 result?		X		PASS
Results above are acceptable if Mud Sample fluoresces less than positive control, and Mud Sample 1 agrees with Mud Sample 2.					
	Quality Control Results		**Yes**	**No**	**Acceptable? (Yes/No)**
	Does Reagent Blank (RB) fluoresce?			X	YES
	Mud Sample fluoresces less than positive control?		X		YES
	Mud Sample 1 fluoresces equal to or greater than the positive control?			X	YES
	Mud Sample 2 fluoresces equal to or greater than the positive control?			X	YES
Quality control results are acceptable if all answers are "Yes".					
Comments: 10.0ppg Rheliant mud. Sample taken prior to starting to drill 8.5″ section.					
Analyst Signature:			Date:		16-05-13

Reverse Phase Extraction (RPE) Method for Detection of Oil Contamination in Non-Aqueous Drilling Fluids (NAF)

Figure 1

RPE Analytical Report						
Certificate of Analysis						
Operator:	Perenco		Area and Block:	Caju Well		
OCS-G Number:	Offshore Brazil		Rig Name:	Diamond – Ocean Star		
Collection Date:	29-May, 2013		Collection Time:	00:40 hrs		
Analysis Date:	29-May, 2013		Analysis Time:	00:45 hrs		
Analyst:	Gabriel		Permit Number:			
Method Reference: Appendix 6 to Subpart A of Part 435						
Sample ID	**Sample Results**		**Yes**	**No**	**Result (Pass/Fail)**	
Mud Sample 1	Mud Sample 1 fluoresces equal to or greater than the positive control?			X	PASS	
Mud Sample 2	Mud Sample 2 fluoresces equal to or greater than the positive control?			X	PASS	
	Does Mud Sample 1 result agree with Mud Sample 2 result?		X		PASS	
Results above are acceptable if Mud Sample fluoresces less than positive control, and Mud Sample 1 agrees with Mud Sample 2.						
	Quality Control Results		**Yes**	**No**	**Acceptable? (Yes/No)**	
	Does Reagent Blank (RB) fluoresce?			X	YES	
	Mud Sample fluoresces less than positive control?		X		YES	
	Mud Sample 1 fluoresces equal to or greater than the positive control?			X	YES	
	Mud Sample 2 fluoresces equal to or greater than the positive control?			X	YES	
Quality control results are acceptable if all answers are "Yes".						
Comments: 12.9ppg Rheliant mud. Sample taken on the shakers (before the degasser) – 6.5% gas						
Analyst Signature:	*Gabriel O.K Andrade*			Date:	29-05-13	

Reverse Phase Extraction (RPE) Method for Detection of Oil Contamination in Non-Aqueous Drilling Fluids (NAF)

Figure 1

RPE Analytical Report
Certificate of Analysis

Operator:	Perenco	Area and Block:	Caju Well
OCS-G Number:	Offshore Brazil	Rig Name:	Diamond – Ocean Star
Collection Date:	29-May, 2013	Collection Time:	2:20 hrs
Analysis Date:	29-May, 2013	Analysis Time:	2:25 hrs
Analyst:	Gabriel	Permit Number:	

Method Reference: Appendix 6 to Subpart A of Part 435

Sample ID	Sample Results	Yes	No	Result (Pass/Fail)
Mud Sample 1	Mud Sample 1 fluoresces equal to or greater than the positive control?		X	PASS
Mud Sample 2	Mud Sample 2 fluoresces equal to or greater than the positive control?		X	PASS
	Does Mud Sample 1 result agree with Mud Sample 2 result?	X		PASS

Results above are acceptable if Mud Sample fluoresces less than positive control, and Mud Sample 1 agrees with Mud Sample 2.

	Quality Control Results	Yes	No	Acceptable? (Yes/No)
	Does Reagent Blank (RB) fluoresce?		X	YES
	Mud Sample fluoresces less than positive control?	X		YES
	Mud Sample 1 fluoresces equal to or greater than the positive control?		X	YES
	Mud Sample 2 fluoresces equal to or greater than the positive control?		X	YES

Quality control results are acceptable if all answers are "Yes".

Comments: 12.6 ppg Rheliant mud. Bottoms Up Sample taken on the shakers (before the degasser) – 35.5% gas

Analyst Signature:	*Gabriel OtO Cindrade*	Date:	29-05-13