OTM-058: Identifying ground conditions susceptible to poor coupling

Identifying ground conditions susceptible to poor coupling

Challenge

	Challenge ID	OTM:058				
1	Title	Identifying ground conditions susceptible to poor coupling				
2	Theme ID	ON 1.1: Seismic Planning - Areas of poor coupling				
3	Originator of Challenge	Onshore: OTM				
4	Challenge Reviewer / initiator	PEMEX, Statoil, PetroSA, Petronas				
	General description	Overview of Challenge				
5	What is the nature of the challenge? (What is not adequately addressed at present?)	It is necessary to maintain signal transfer and integrity through good coupling between the baseplate and surface. Obstacles such as small boulders make it impossible to achieve good coupling and consequently, these can demand a change in the sweep location or even prevent the sweep from taking place. This impacts the quality of the survey output. We need to identify where these ground conditions are located and how they interfere with our survey route so that we can plan for these and develop a survey that uses the most efficient lines.				
6	Thematic information requirements	1. Obtain detailed topographic information, 2. Obtain detailed terrain characterisation, 4. Obtain detailed land-use information, 11. Determine lithology, mineralogy and structural properties of the near surface,				
7	Nature of the challenge - What effect does this challenge have on operations?	The quality of output can be reduced if grid spacing is too varied. Quality of output can also be reduced if the coupling at the point is not satisfactory. This can ultimately lead to reservoir understanding being hampered, and thus a reduction in potent				
8	What do you currently do to address this challenge?/ How is this challenge conventionally addressed?	Scouting team deployed ahead of seismic vehicle, remote sensing, historical mapping (e.g. military maps), online imagery				
9	What kind of solution do you envisage could address this challenge?					
10	What is your view on the capability of technology to meet this need? – are you currently using EO tech? If not, why not?					
	Challenge classification					
11	Lifecycle stage	Pre license	Exp.	Dev.	Prod.	Decom.
	Score from impact quantification [1]	2	3	0	0	0
12	Climate classification	NOT CLIMATE SPECIFIC				
13	Geographic context/restrictions	Generic onshore (Unspecified)				
14	Topographic classification / Offshore classification	Generic onshore (Unspecified)				
15	Seasonal variations	Any season				
16	Impact Area	Data quality, operational cost reduction				
17	Technology Urgency (How quickly does the user need the solution)	Immediately (0-2 years)				
	Information requirements					
18	Update frequency	Snap shot requirement				
19	Data Currently used	scouting, remote sensing, historical mapping (e.g. military maps),				
20	Spatial resolution	scouting, remote sensing, historical mapping (e.g. military maps),				
21	Thematic accuracy					
22	Example formats	GeoTIFF / TIFF with TFW. ECW format (better than TIFF for small hand-held devices used on the ground)				
23	Timeliness	Reference data - timeliness not important				
24	Geographic Extent	Reservoir footprint / area of seismic survey				
25	Existing standards	None relevant				

[1] Impact quantification scores: *4 – Critical/ enabling; 3 – Significant/ competitive advantage; 2 – Important but non-essential; 1 – Nice to have; 0 – No impact, need satisfied with existing technology*

Relevant products

Content by label

There is no content with the specified labels