

OTM-059: Understanding outcrop mineralogy

Understanding outcrop mineralogy

Challenge

	Challenge ID	OTM:059				
1	Title	Understanding outcrop mineralogy				
2	Theme ID	ON 2.3: Surface Geology Mapping - Lithological discrimination				
3	Originator of Challenge	Onshore: OTM				
4	Challenge Reviewer / initiator	Exxon, Tullow				
	General description	Overview of Challenge				
5	What is the nature of the challenge? (What is not adequately addressed at present?)	Outcrop mineralogy can be indicative of the mineralogy below the surface and therefore suggest how or how readily a formation may be produced. This is most important for shale or tight reservoirs. Outcrop analysis is relatively easily performed and it is generally cheap to do so, but it requires the deployment of ground staff to take samples. This has a lag time associated with it and in hostile environments, this may also not be possible from a HSE perspective.				
6	Thematic information requirements	11. Determine lithology, mineralogy and structural properties of the near surface,				
7	Nature of the challenge - What effect does this challenge have on operations?	If we could readily understand the lithology of formation outcrops without deploying ground staff, we could more rapidly and safely obtain an understanding of remote or hostile areas. It would also enable us to make informed decisions earlier in the deci				
8	What do you currently do to address this challenge?/ How is this challenge conventionally addressed?	Field geological studies undertaken				
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]	4	4	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	Operational cost reduction, environment, strategic decision enabler				
17	Technology Urgency (How quickly does the user need the solution)	Immediately (0-2 years)				
	Information requirements					
18	Update frequency					
19	Data Currently used	Ground survey				
20	Spatial resolution	Ground survey				
21	Thematic accuracy					
22	Example formats					
23	Timeliness	Reference data - timeliness not important				
24	Geographic Extent	Reservoir footprint / area of seismic survey				
25	Existing standards					

[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