

Hatfield-2301: Identify discreet lithology

Identify discreet lithology

Challenge

Challenge ID:	HCP-2301	Originator:	Onshore: Hatfield
Title:	Identify discreet lithology.		
Theme:	ON 2.3: Surface Geology Mapping - Lithological discrimination		
Consortium Lead:	Arup	Interviewed Company:	Arup
Geography:	ON.REG.00 - Generic onshore		
Challenge Description			
What is not possible / not adequately addressed at present?			
Require accurate detection and extrapolation of lithology and soil units is challenging. For example, identify green clay rather than bedrock for seismic survey using vibroseis equipment.			
What effect does this challenge have on operations?			
Reduces uncertainty, improves decision making for exploration and field development.			
Thematic information requirements:		Lithology Ortho base images	
What do you currently do to address this challenge?			
How is this challenge conventionally addressed?			
Geological maps. Field geological mapping. Multispectral satellite image analysis			
What kind of solutions do you envisage could address this challenge?			
Multispectral and hyperspectral imagery			
What is your view on the capability of technology to meet this need?			
Are you currently using EO tech? If not, why not?			
Satellite imagery is already well suited although has low accessibility due to technical skills required for processing. Spectral libraries are inconsistent across differing geographic and terrain groups. New developments (e.g. EnMAP) will provide opportunities for increased accuracy/detail and take-up.			
Challenge Classification			
Impact on Lifecycle (0=none, 4=high):		Climate / Topography / Urgency:	
Pre-license:	1	Climate class:	Generic climate
Exploration:	3	Topographic class:	Not specific
Development:	2	Seasonal variations:	Any season
Production:	1	Impact area:	
Decommissioning:	0	Technology urgency:	3 - Immediately (0-2 years)
Challenge Information Requirements			
Update frequency:	Snapshot		
Data currently used:	Multispectral Hyperspectral Airborne geophysics		
Spatial resolution:	Regional to License		
Thematic accuracy:	Not specific		
Required formats:	Not Specific		
Timeliness (Vintage):	Reference data		

Geographic extents:	Regional to License
Existing standards:	None

Relevant products

Content by label

There is no content with the specified labels