

Hatfield-1204: Assess forest characteristics to plan access and assess hazards

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Challenge

Challenge ID:	HCP-1204	Originator:	Onshore: Hatfield
Title:	Assess forest characteristics to plan access and assess hazards.		
Theme:	ON 1.2: Seismic Planning - Identification of adverse terrain for trafficability		
Consortium Lead:	RPS Group	Interviewed Company:	RPS Group
Geography:	ON.REG.00 - Generic onshore		
Challenge Description			
What is not possible / not adequately addressed at present?			
Knowing access limitations and potential ground conditions is an important factor in planning effective seismic operations. Efficiently moving both equipment and people around is critical to completing a project in good speed. In addition, from a safety perspective, being able to map emergency response times and how (and what type of transport/vehicle) to get from a particular point to any point within the working area may prove critical in a safety of life situation.			
What effect does this challenge have on operations?			
Forest type, tree heights, and thickness of ground cover affect the planning of a seismic survey. Vegetation clearance demands time and increases health and safety exposure. Forest roads/trails can be impassable in different seasons and be in poor condition.			
Thematic information requirements:	Terrain information Land cover Topographic information		
What do you currently do to address this challenge?			
How is this challenge conventionally addressed?			
Field scouting and reconnaissance is usually required. LiDAR where convenient and satellite imagery is also used.			
What kind of solutions do you envisage could address this challenge?			
Bare earth digital terrain models equivalent to LiDAR. High-resolution images that can identify tracks, roads and water courses would be useful. Temporal datasets would also be useful to assess seasonal variations and create a pre-survey baseline.			
What is your view on the capability of technology to meet this need?			
Are you currently using EO tech? If not, why not?			
Identifying suitable access through forested areas is difficult from satellite imagery alone. LiDAR reflectance values and wave form analysis can observe canopy and ground height.			
Challenge Classification			
Impact on Lifecycle (0=none, 4=high):		Climate / Topography / Urgency:	
Pre-license:	2	Climate class:	Generic climate
Exploration:	4	Topographic class:	Forest / woodland
Development:	2	Seasonal variations:	Any season
Production:	2	Impact area:	Health and Safety, Cost reduction
Decommissioning:	1	Technology urgency:	2 - Short term (2-5 years)
Challenge Information Requirements			
Update frequency:	Snapshot		
Data currently used:	LiDAR, high resolution imagery		

Spatial resolution:	License
Thematic accuracy:	Not specific
Required formats:	Not Specific
Timeliness (Vintage):	Within six months
Geographic extents:	Basin
Existing standards:	None

Relevant products

Content by label

There is no content with the specified labels