

Hatfield-3203: Management of surface impacts due to ground deformation from operations

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Challenge

Challenge ID:	HCP-3203	Originator:	Onshore: Hatfield
Title:	Management of surface impacts due to ground deformation from operations.		
Theme:	ON 3.2: Subsidence monitoring - Infrastructure monitoring		
Consortium Lead:	C-CORE	Interviewed Company:	C-CORE
Geography:	ON.REG.00 - Generic onshore		
Challenge Description			
What is not possible / not adequately addressed at present?			
Need to support production management related to surface deformation and subsequent impacts on infrastructure (boreholes, buildings, road networks, etc).			
What effect does this challenge have on operations?			
Increased health and safety risks due to building or transporation network failures .			
Thematic information requirements:	Surface motion (horizontal and vertical) Distribution and status of infrastructure Topographic information		
What do you currently do to address this challenge?			
How is this challenge conventionally addressed?			
Field surveys; typically using GPS.			
What kind of solutions do you envisage could address this challenge?			
InSAR			
What is your view on the capability of technology to meet this need?			
Are you currently using EO tech? If not, why not?			
InSAR is expensive for ongoing operations. If an area overlaps with other operators cost-sharing of services can occur. L-band SAR for deformation mapping (longer wavelength). Address issue of temporal de-correlation, which means PS or target installation			
Challenge Classification			
Impact on Lifecycle (0=none, 4=high):		Climate / Topography / Urgency:	
Pre-license:	2	Climate class:	Generic climate
Exploration:	1	Topographic class:	Not specific
Development:	1	Seasonal variations:	Any season
Production:	4	Impact area:	Environmental, Health and Safety
Decommissioning:	2	Technology urgency:	1 - Mid-Term (5-10 years)
Challenge Information Requirements			
Update frequency:	Semi-monthly		
Data currently used:	LiDAR Airphotos High resolution imagery InSAR		
Spatial resolution:	Basin		

Thematic accuracy:	Not specific
Required formats:	Not Specific
Timeliness (Vintage):	Within a week
Geographic extents:	License
Existing standards:	None

Relevant products

Content by label

There is no content with the specified labels