

# Hatfield-2505: Identify geophysical properties of the subsurface

Identify geophysical properties of the subsurface

## Challenge

|  |   |                                 |                                   |
|--|---|---------------------------------|-----------------------------------|
| <b>Challenge ID:</b>   | HCP-2505  | Originator:                     | Onshore: Hatfield                 |
| <b>Title:</b>  | <b>Identify geophysical properties of the subsurface.</b>           |                                 |                                   |
| Theme:   | ON 2.5: Surface Geology Mapping - Engineering geological evaluation |                                 |                                   |
| Consortium Lead:   | Arup  | Interviewed Company:            | Arup                              |
| Geography:   | ON.REG.00 - Generic onshore   |                                 |                                   |
| <b>Challenge Description</b>   |   |                                 |                                   |
| What is not possible / not adequately addressed at present?  |   |                                 |                                   |
| Identify geophysical properties to inform geological modelling and geotechnical evaluations.   |   |                                 |                                   |
| What effect does this challenge have on operations?  |   |                                 |                                   |
| Surface geophysical and airborne geophysical are expensive and have health and safety concerns.  |   |                                 |                                   |
| Thematic information requirements:   | Lithology, structural geology, surficial geology                    |                                 |                                   |
| What do you currently do to address this challenge?<br>How is this challenge conventionally addressed?   |   |                                 |                                   |
| Surface and down-hole geophysics, but not always possible due to site / location constraints   |   |                                 |                                   |
| What kind of solutions do you envisage could address this challenge?   |   |                                 |                                   |
| Spaceborne geophysics to complement airborne and ground based geophysical surveys.   |   |                                 |                                   |
| What is your view on the capability of technology to meet this need?<br>Are you currently using EO tech? If not, why not?  |   |                                 |                                   |
| EO can complement ground based and airborne techniques and provide wider geographic coverage at lower cost.<br>High resolution DEMs required for modelling and terrain correction during geophysical processing. |   |                                 |                                   |
| <b>Challenge Classification</b>  |   |                                 |                                   |
| Impact on Lifecycle (0=none, 4=high):  |   | Climate / Topography / Urgency: |                                   |
| Pre-license:   | 1   | Climate class:                  | Generic climate                   |
| Exploration:   | 3   | Topographic class:              | Not specific                      |
| Development:   | 3   | Seasonal variations:            | Any season                        |
| Production:  | 2   | Impact area:                    | Health and Safety, Cost reduction |
| Decommissioning:   | 0   | Technology urgency:             | 2 - Short term (2-5 years)        |
| <b>Challenge Information Requirements</b>  |   |                                 |                                   |
| Update frequency:  | Snapshot  |                                 |                                   |
| Data currently used:   | Airborne and ground-based geophysics                                |                                 |                                   |
| Spatial resolution:  | Regional to License   |                                 |                                   |
| Thematic accuracy:   | Not specific  |                                 |                                   |
| Required formats:  | Not Specific  |                                 |                                   |
| Timeliness (Vintage):  | Reference data  |                                 |                                   |
| Geographic extents:  | License   |                                 |                                   |

|                     |      |
|---------------------|------|
| Existing standards: | None |
|---------------------|------|

## Relevant products

## Content by label

There is no content with the specified labels

