

## Constraints Mapping in Support of Oil and Gas Exploration and Development

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### Abstract

Exploration and development of resources maybe limited by the sensitivity of subsurface and surface features. Identification of sensitive features during the planning process can assist in determining the location of facilities or in development of mitigation measures for certain situations. This type of planning has often been used in general routing selection for pipelines and gathering systems and, more recently, in greater detail in the oil sands region in mapping of surface sensitivities as constraints.

Mapping of constraints is useful for pipeline route selection, long-term development planning, and short-term facility site selection. An evaluation of the considerations in using constraints mapping for different sensitivities will be presented. These sensitivities are those typical issues which face development today and will include a presentation of such items, including for example, historical sites and saturated soils. An example of constraints mapping applied to industrial development will be provided and current regulatory acceptance for this methodology will be explained.