

GVI PRE-SITE ASSESSMENT PROCESS – THE DESKTOP STEPS

1. Determine the size and scope of the project, including the infrastructure necessary for full development.
2. Delineate local study area boundaries on digital ortho-rectified colour imagery.
3. Map proposed development target area by projection specific coordinates.
4. Overlay the GVI data layer for the area on the air photo imagery.
5. Are anthropogenic features available within the target zones?
6. Adjust target(s) to minimize footprint in undeveloped GVI site types.
7. Map current ACIMS (Alberta Conservation Information Management System), FWMIS (Fisheries and Wildlife Management Information System) data, and Historic Resource Values.
8. Use GVI attribute table and Range Plant Community Guide to flag GVI site types sensitive to disturbance.
9. Identify potential construction issues and explore possible options.
10. Adjust target(s) to avoid or minimize disturbance where possible.

SIZE AND SCOPE OF LOCAL STUDY AREA

- ✘ Digital ortho-rectified colour imagery of the potential development area.



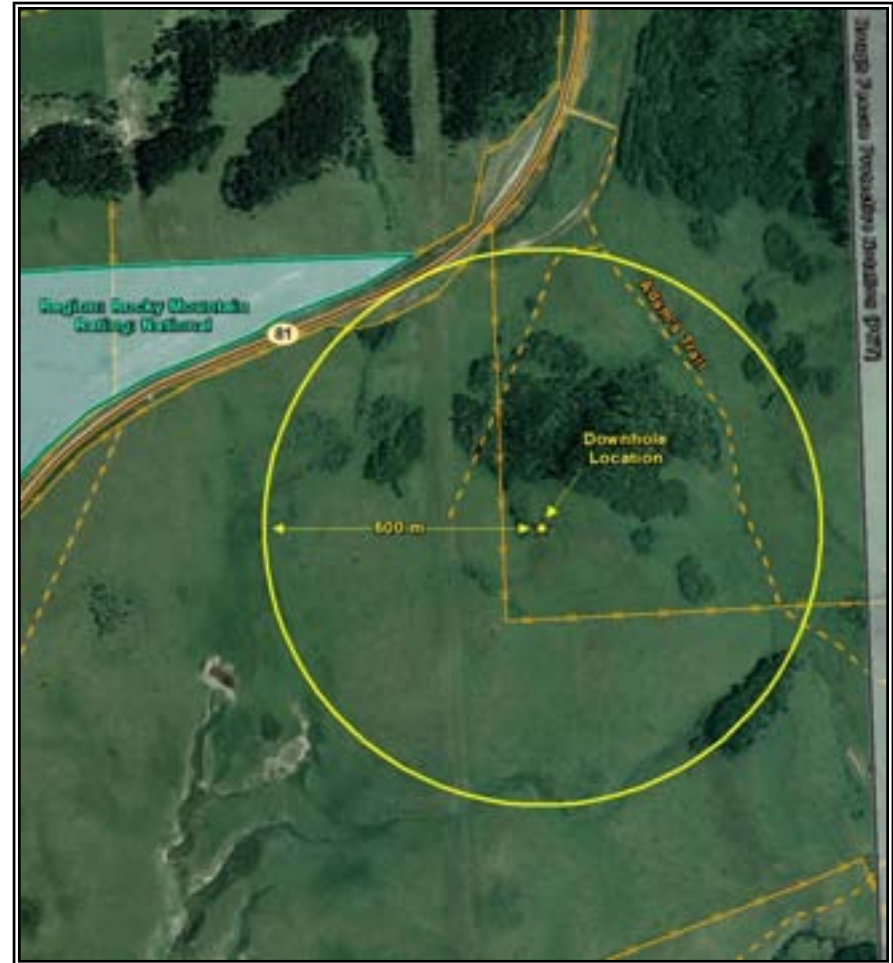
DELINEATE LOCAL STUDY AREA

- ✘ Transportation Features.
- ✘ Protective Notations (PNT).
 - + Note: Two PNTs within study area.
- ✘ Environmentally Significant Areas (2009).
- ✘ Range Management Features (e.g. Fencing).



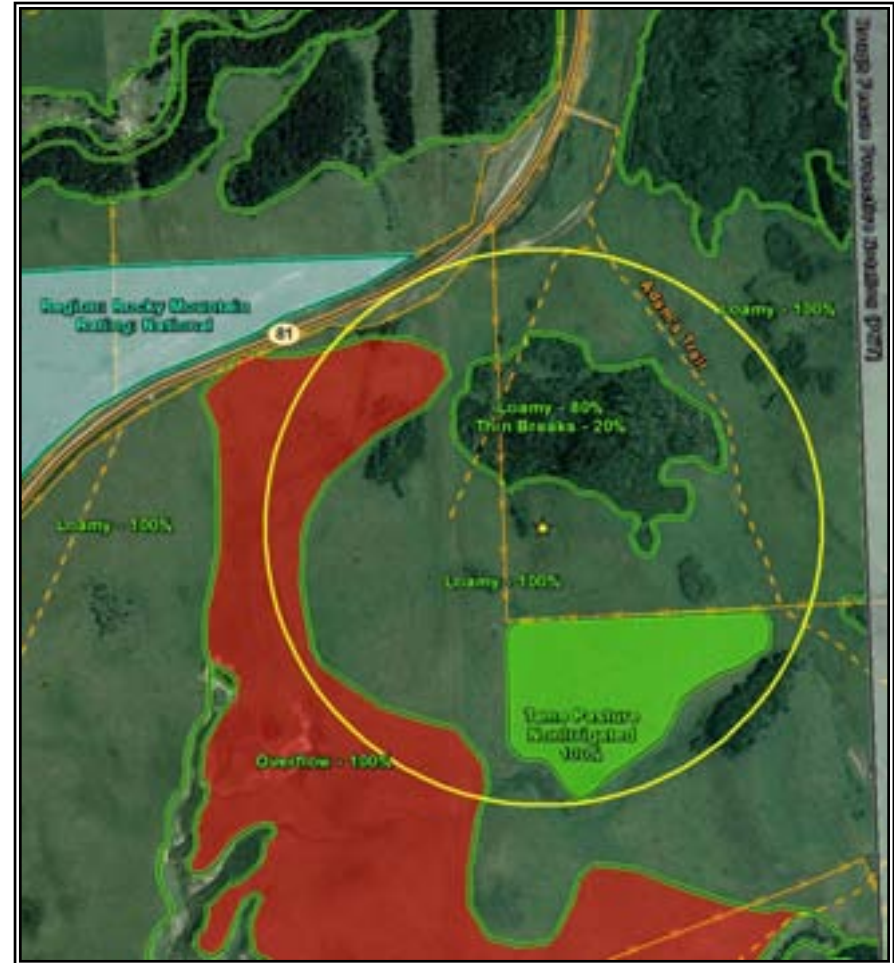
DEVELOPMENT TARGET AREA

- Add coordinates of target down-hole location.
- Maximum spatial adjustment buffer around the target (600m).



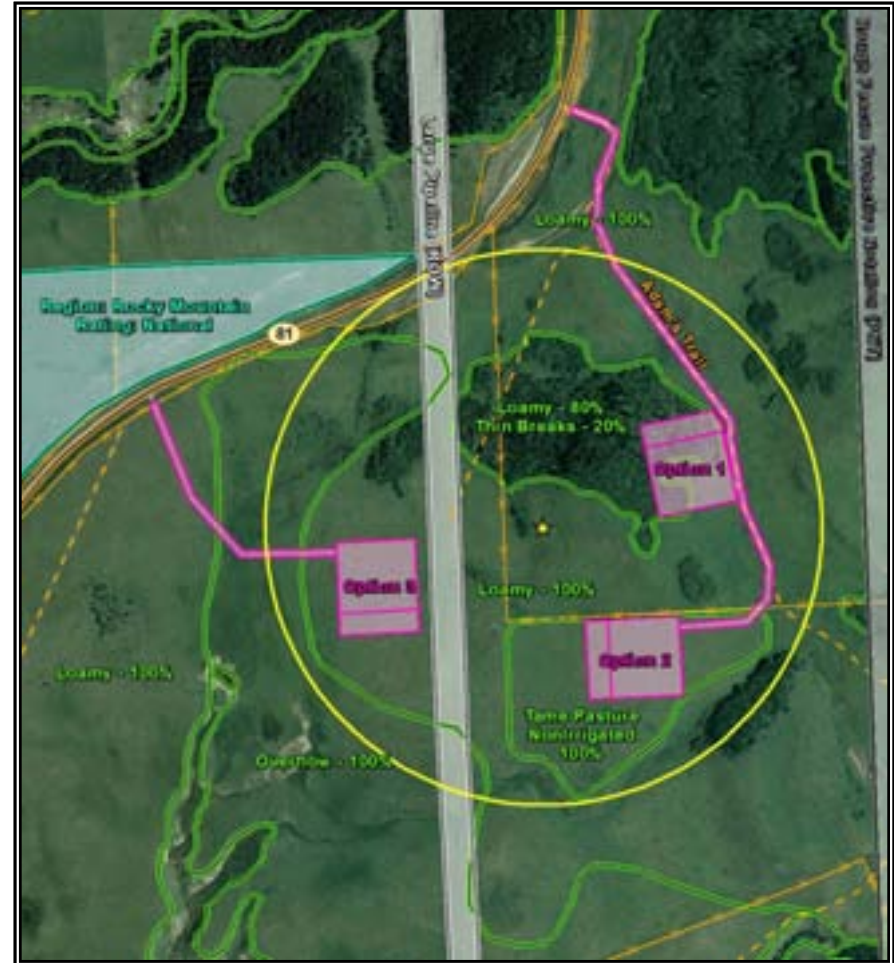
GRASSLAND VEGETATION INVENTORY

- ✘ Overlay of the Grassland Vegetation Inventory (GVI).
- ✘ Identification of **least suitable** GVI site type.
- ✘ Identification of **most suitable** GVI site type.



PROPOSED FOOTPRINT

- ✘ Provide options for proposed development locations within the remaining acceptable areas of the downhole target buffer.
- ✘ Map coordinates for surface



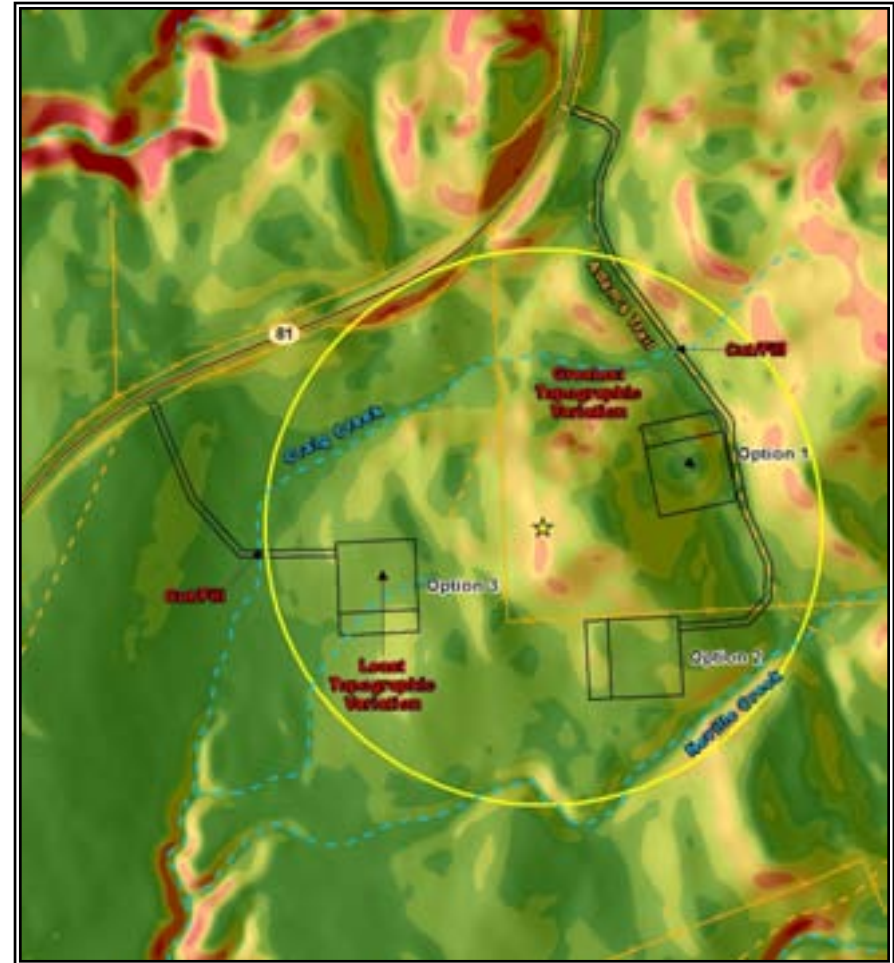
ADDITIONAL VALUES MAPPED

- ✘ Additional values are now added:
 - + ACIMS data
 - + FWMIS data
 - ✘ Including Critical Ungulate Winter Range (CUWR)
 - + Known Noxious Plant locations
 - + Water resources



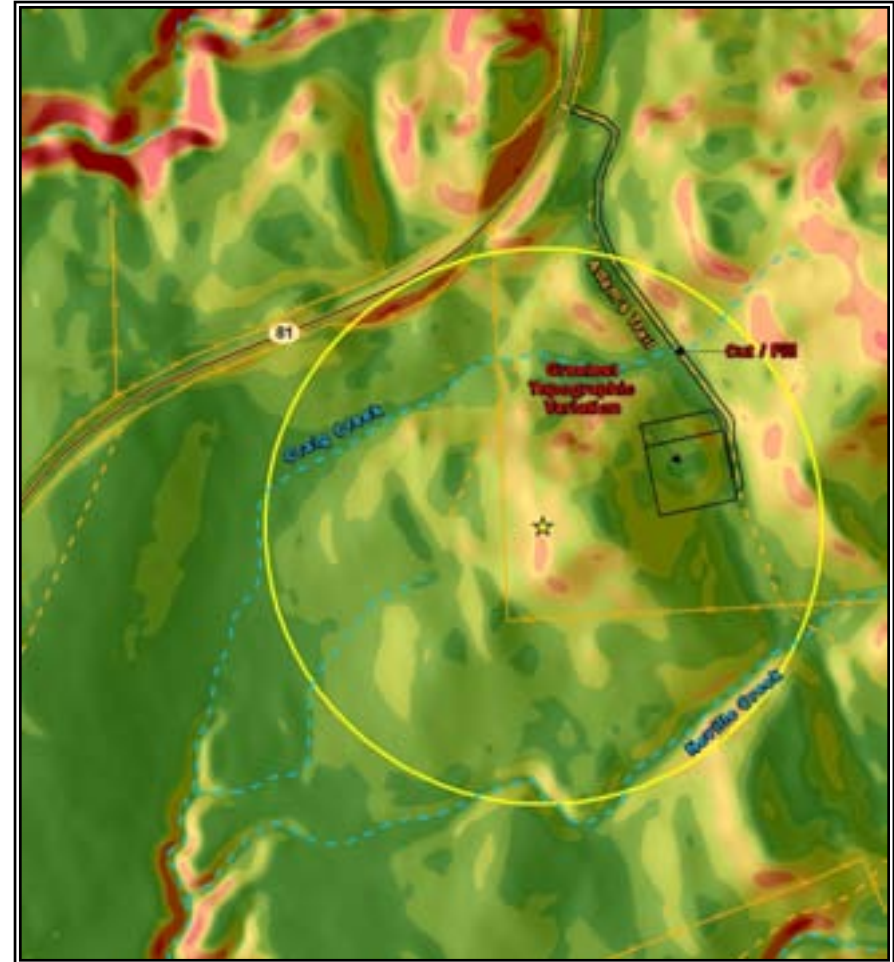
CONSTRUCTION ISSUES IDENTIFIED

- ✘ Digital Elevation Model added.
- ✘ Creek crossing identified.
- ✘ Slope Analysis
- ✘ Topographic issues identified (e.g. cut and fill).



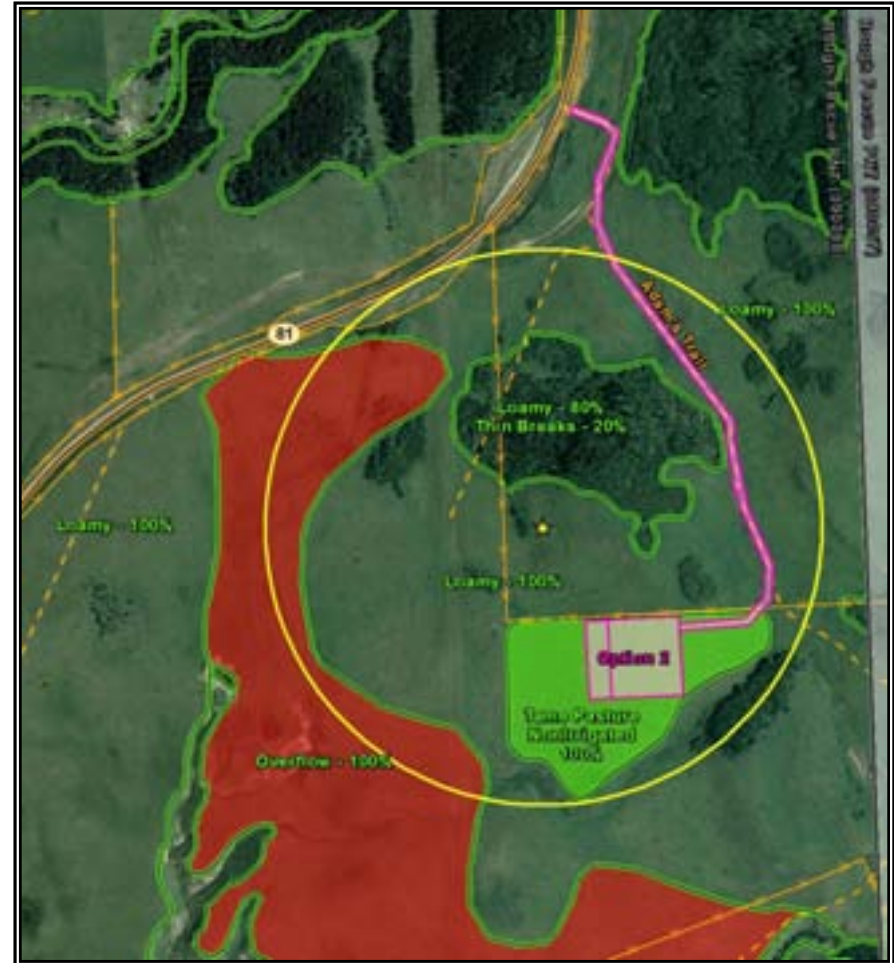
OPTION 1 REVIEW - DISADVANTAGES

- ✘ Access
 - + Development within the PNT.
 - + Creek crossing.
- ✘ FWMIS Occurrences.
- ✘ ACIMS Occurrences.
- ✘ CUWR
 - + timing constraint
- ✘ Topography
 - + Significant well site variation.



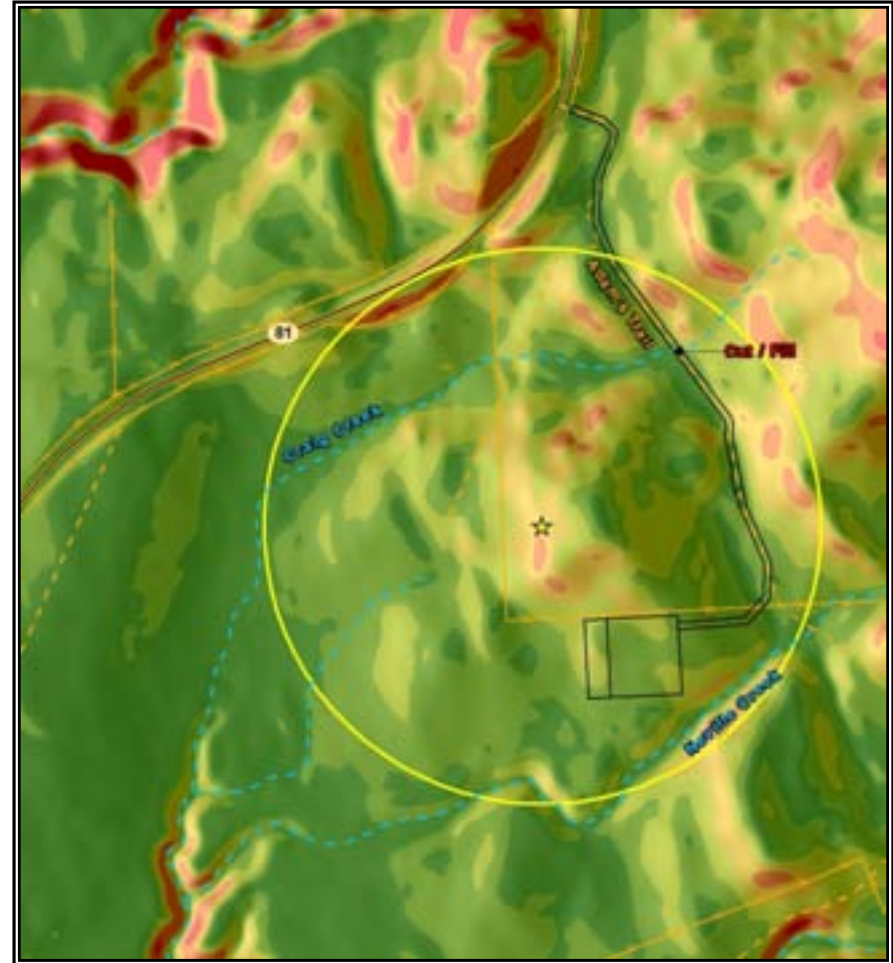
OPTION 2 REVIEW - ADVANTAGES

- ✗ Access
 - + Making use of an existing anthropogenic feature.
- ✗ Conservation
 - + Development primarily within a Tame Pasture site type.



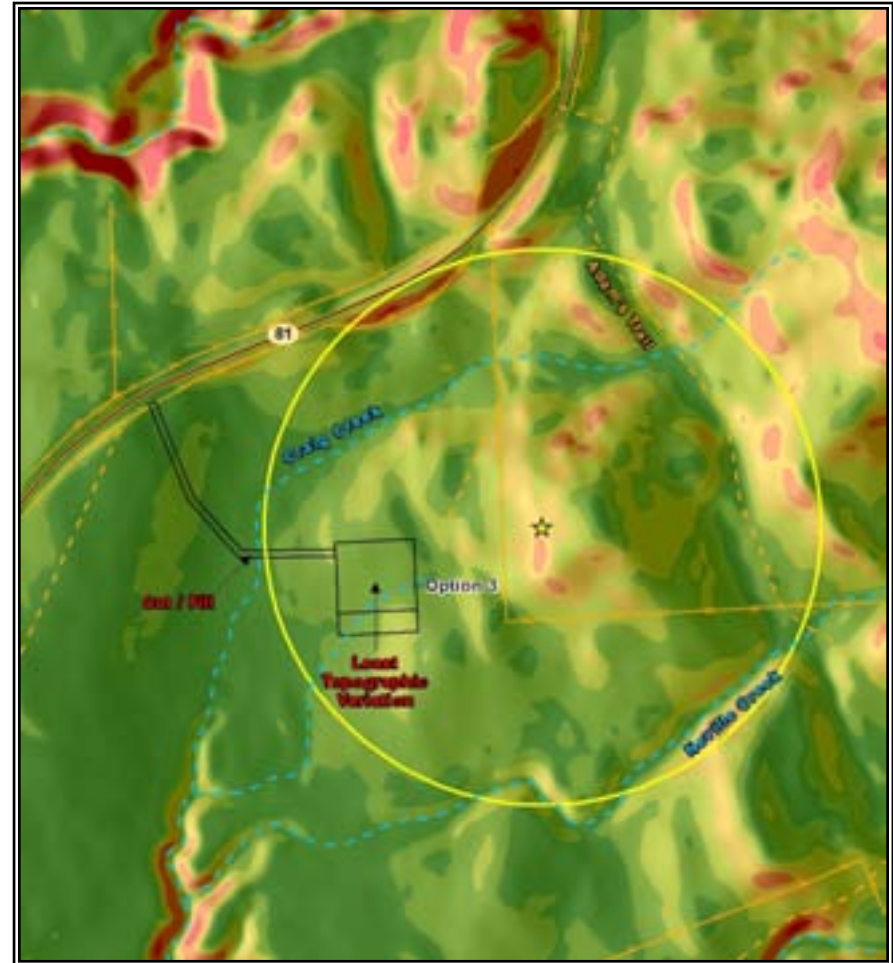
OPTION 2 REVIEW - DISADVANTAGES

- ✘ Access
 - + Development within the PNT.
 - + Creek crossing.
 - + Longest access.
 - + Weed locations.
- ✘ Topography
 - + Some wellsite variation.



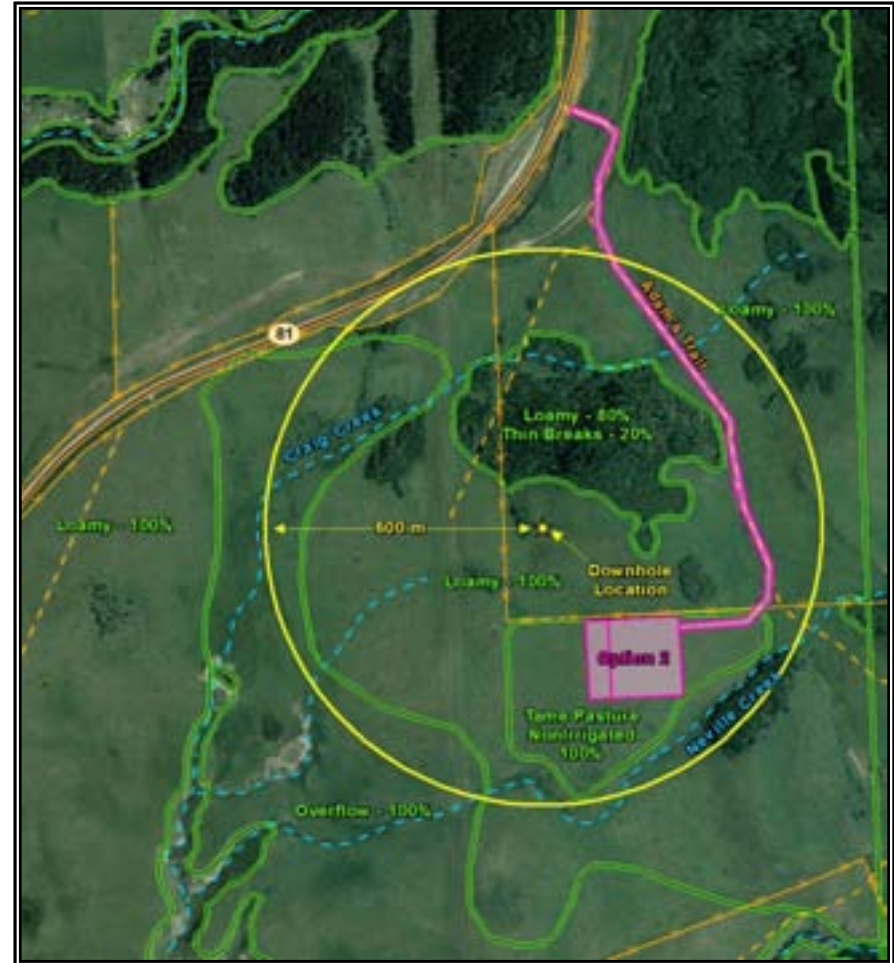
OPTION 3 REVIEW - ADVANTAGES

- ✘ Access
 - + Length (short).
- ✘ Topography
 - + Minimal wellsite variation.



PREFERRED OPTION: OPTION 2

- ✘ Consideration of available information makes Option 2 the preferred site from which to proceed with the more costly fieldwork requirements of the pre-site assessment process.



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GVI USE IN PRE-SITE ASSESSMENT

