

TRACE™

Redevelopment On or Near Oil and Gas Wellsites in Alberta – A Minefield of Safety, Environmental, and Planning Considerations

Presented by:

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Presentation Overview

1. Background
2. Risks
3. Responsibilities
4. Risk Assessment
5. Development Constraints
6. Case Studies
7. Questions

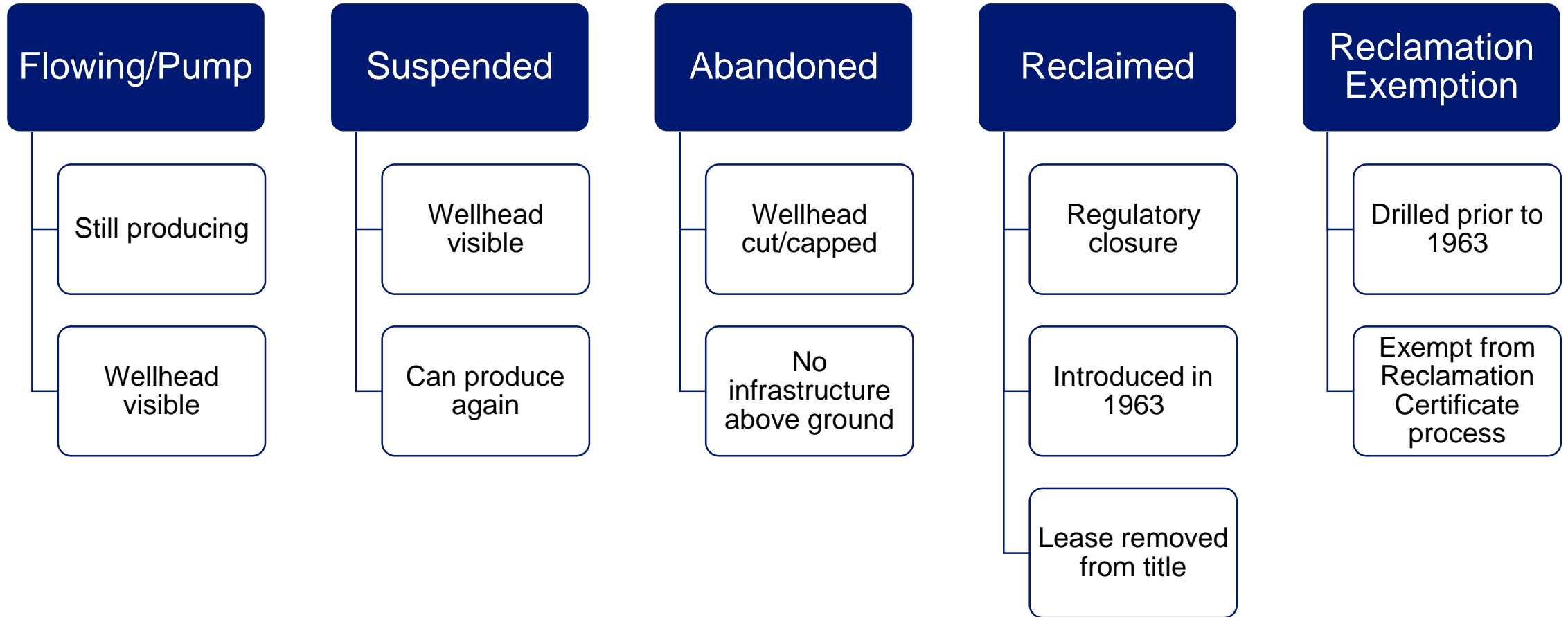
Background

- Alberta oil and gas history
- Medicine Hat
- Turner Valley
- Leduc
- Fort McMurray
- 460,000 wells in Alberta



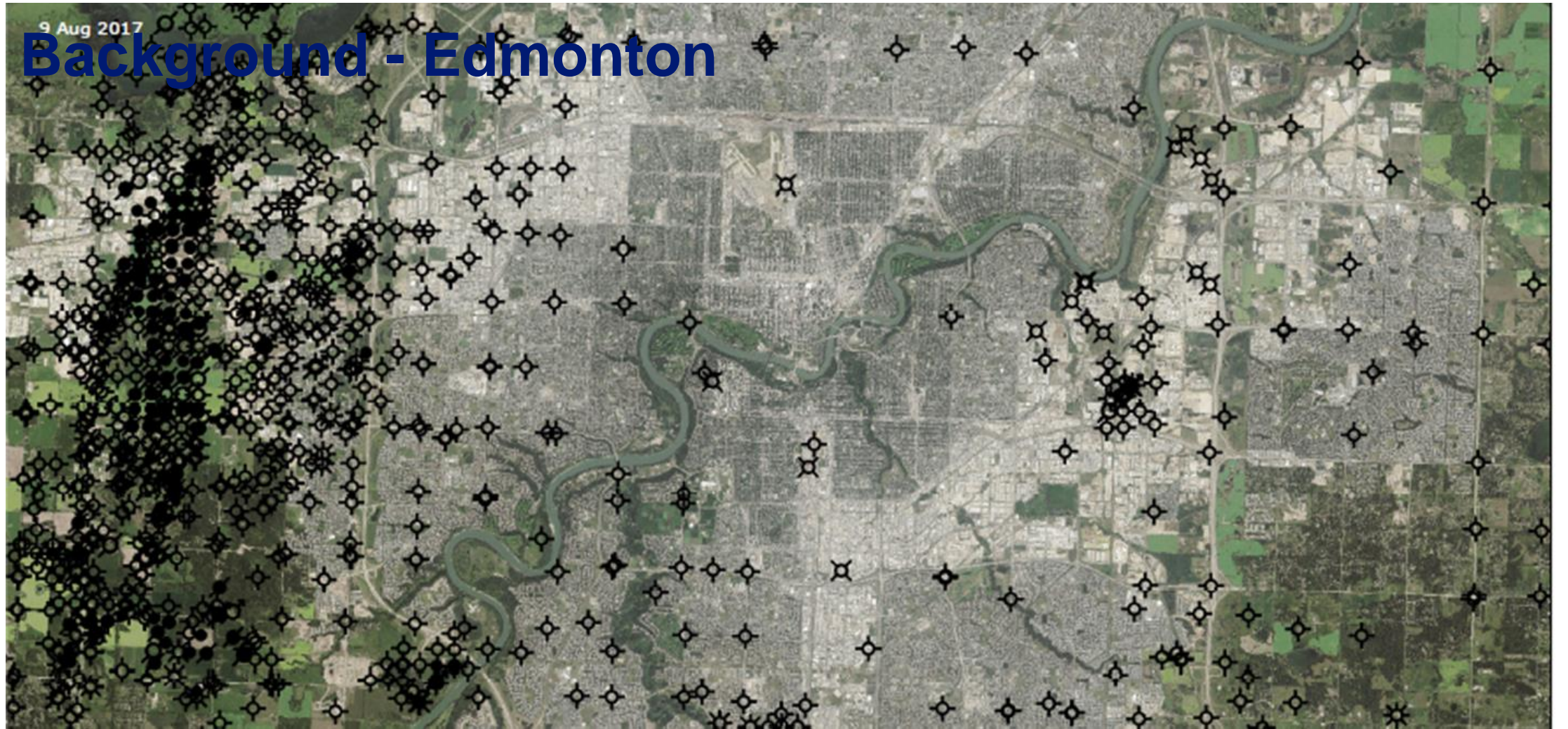
Base Image Courtesy of Canada Base Map – Transportation Services

Background – Well Status



9 Aug 2017

Background - Edmonton



Information Courtesy of Abacus Datagraphics Ltd.

Risks

- Spills
- Tanks
- Flares
- Drilling Waste Disposal Areas



Spills



Information Courtesy of Abacus Datagraphics Ltd.



Tanks and Flares



Drilling Waste Disposal Areas

- Drilling wastes
- Compliance options
- Tour reports



Photo Courtesy of Calgary Glenbow Museum and Archives

Quantifying Risk

Phase 1(I) Environmental Site Assessment (ESA)

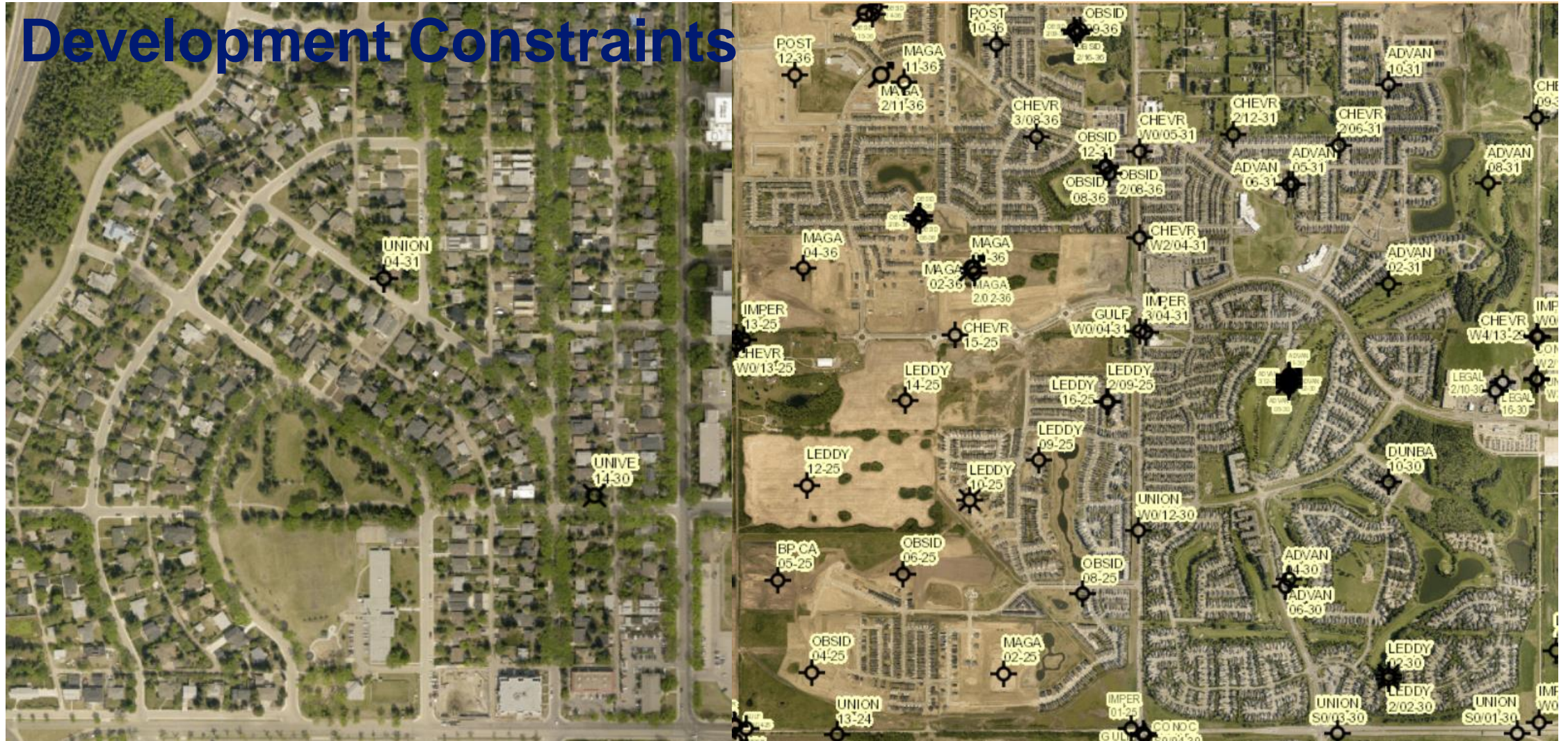
- Canadian Standards Association Group (CSA) Standard: Transactional Phase I ESA
- Oil and Gas: CSA Standard + review of drilling reports and well file information

Phase 2(II) ESA / Remediation / Site-specific Guideline Development

- One or more of these steps is required if the well was drilled before 1990s
- Electromagnetic (EM) surveys help to focus assessments
- Subsoil Salinity Tool, site-specific guidelines, human health risk assessment



Development Constraints



Development Constraints



'Forgotten and ignored' An Alberta couple fights a leaky oil well

By Alannah Page | News, Energy, Politics | April 8th 2019

Local News

Calmar families asked to leave homes again this summer in effort to staunch methane leak

Information courtesy of the Edmonton Journal

Information Courtesy of the CBC

Abandoned oil and gas wells put unfair burden on Alberta landowners, taxpayers, study says

Information courtesy of Canada's National Observer

OIL WELLS

Abandoned oil wells jeopardize Alberta homes

Information courtesy of The Globe and Mail

Who Pays?

- Abandoned vs reclaimed
- Reclamation exempt
- Timing constraints
- Multiple regulators
- Stakeholders



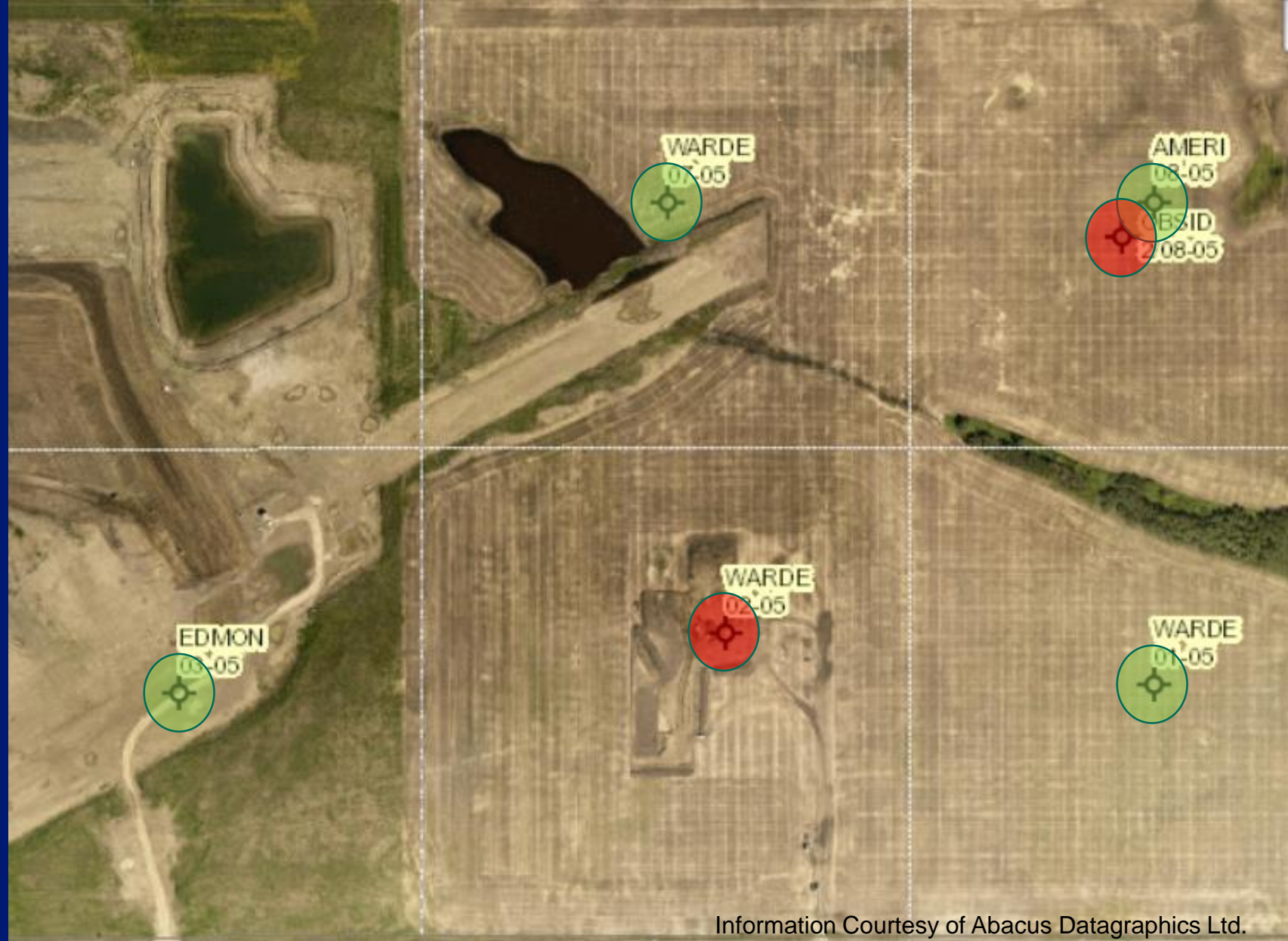
Case Study 1#

- Multiple wellsites
- Future residential development
- Wells status
- ESA process
- Regulatory closure



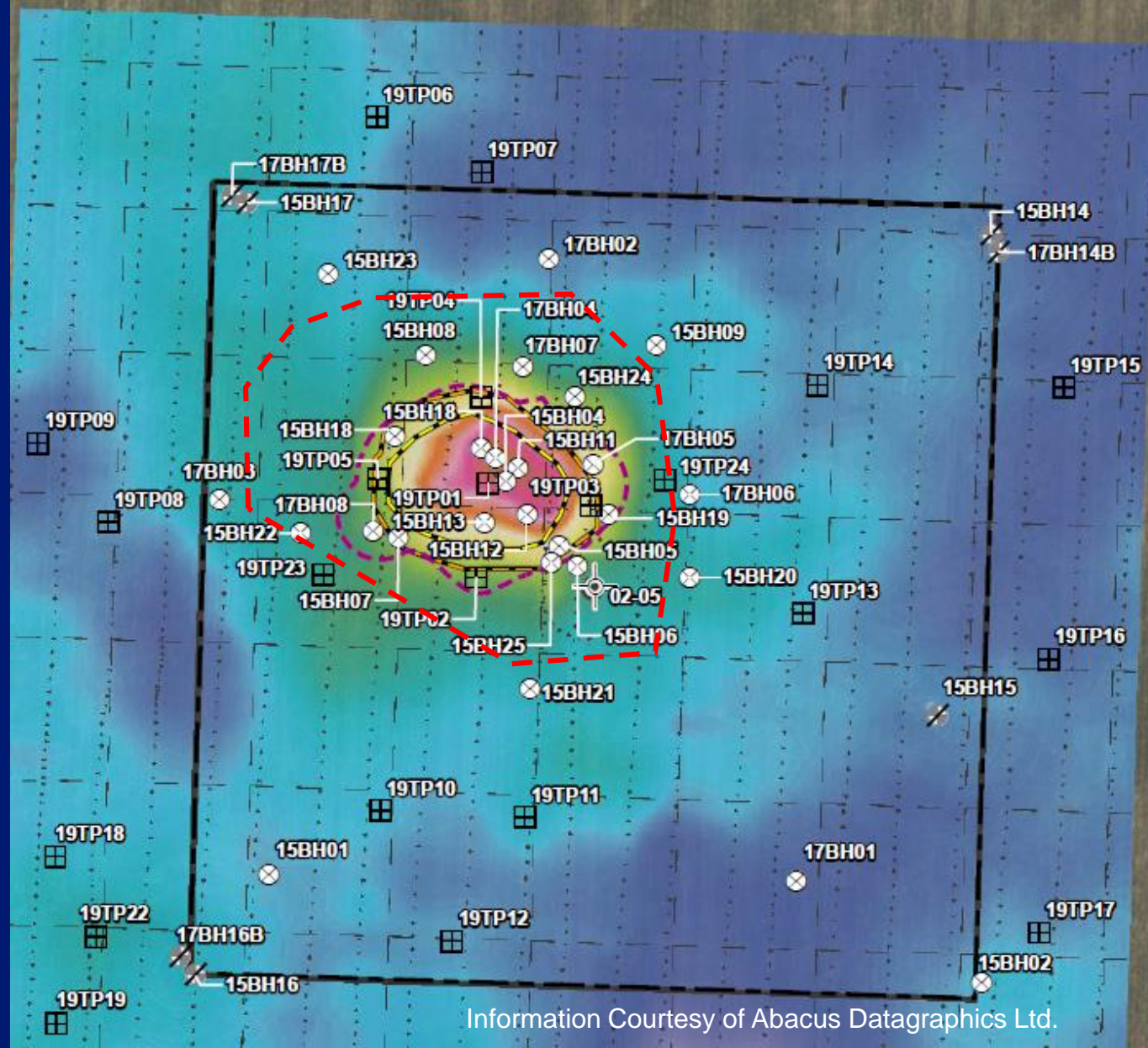
Information Courtesy of Abacus Datagraphics Ltd.

Case Study 1#



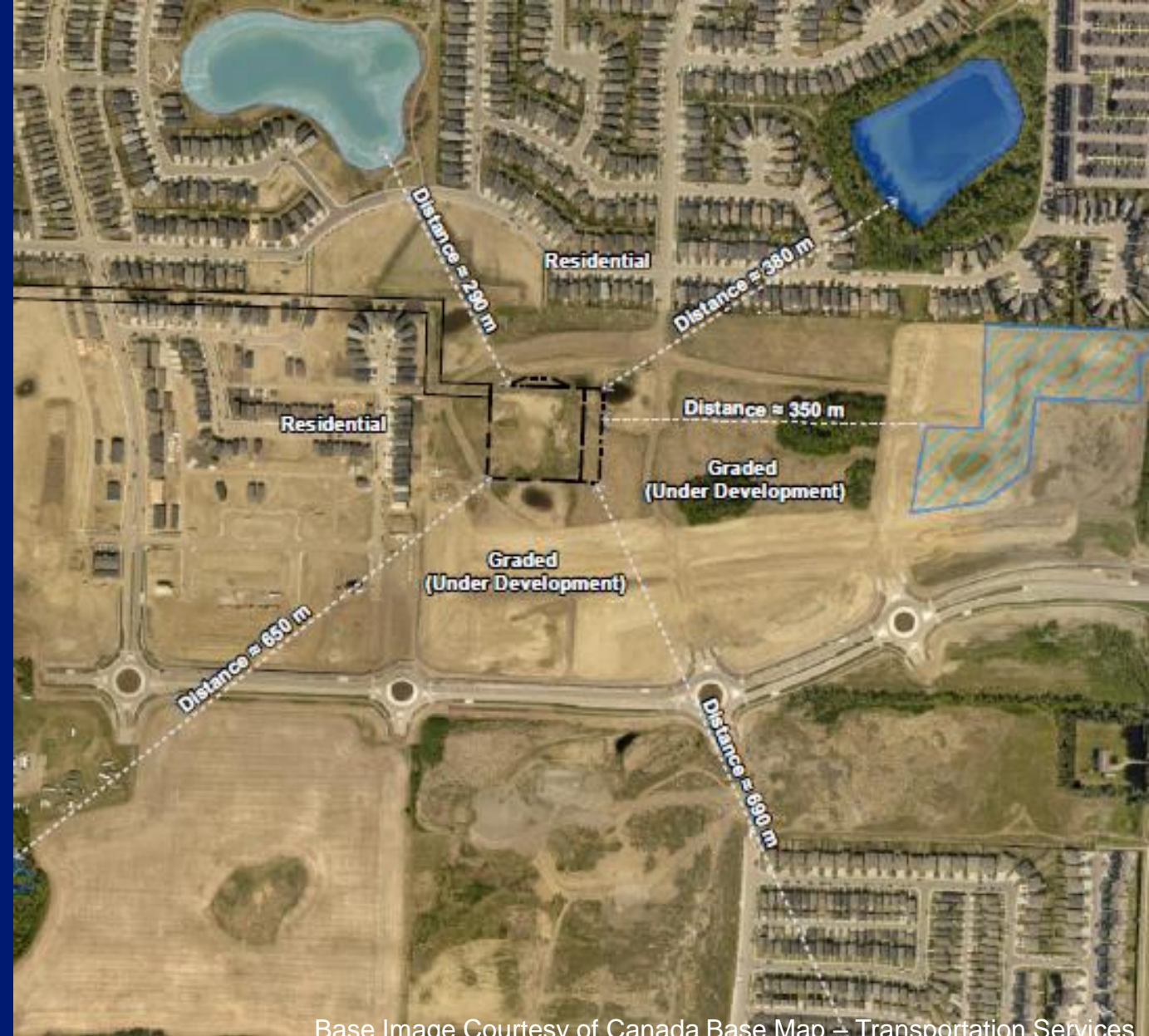
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Case Study 1#



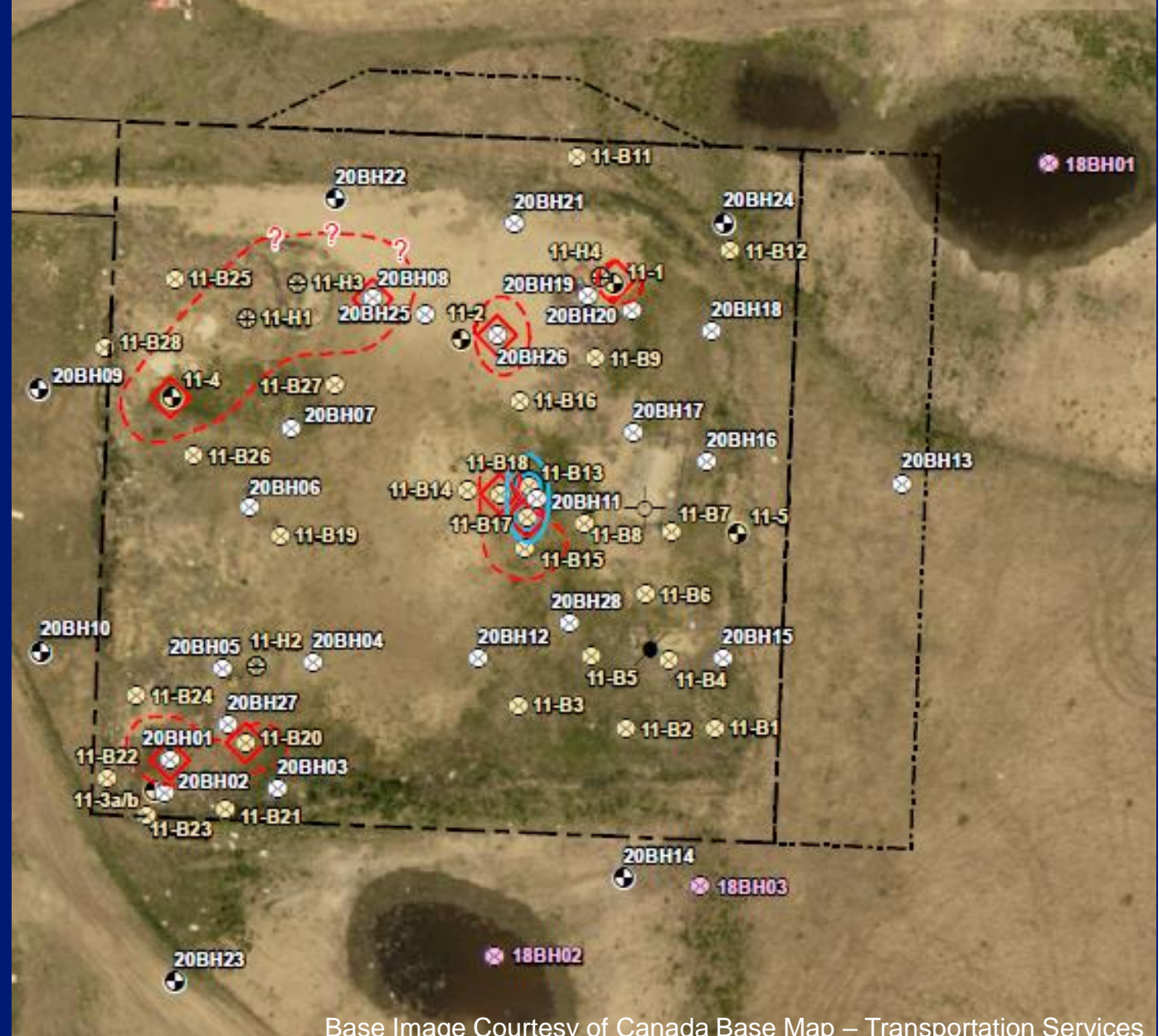
Case Study 2#

- Former battery
- Three suspended wells
- Future residential
- ESA process
- Regulatory closure
- Redevelopment



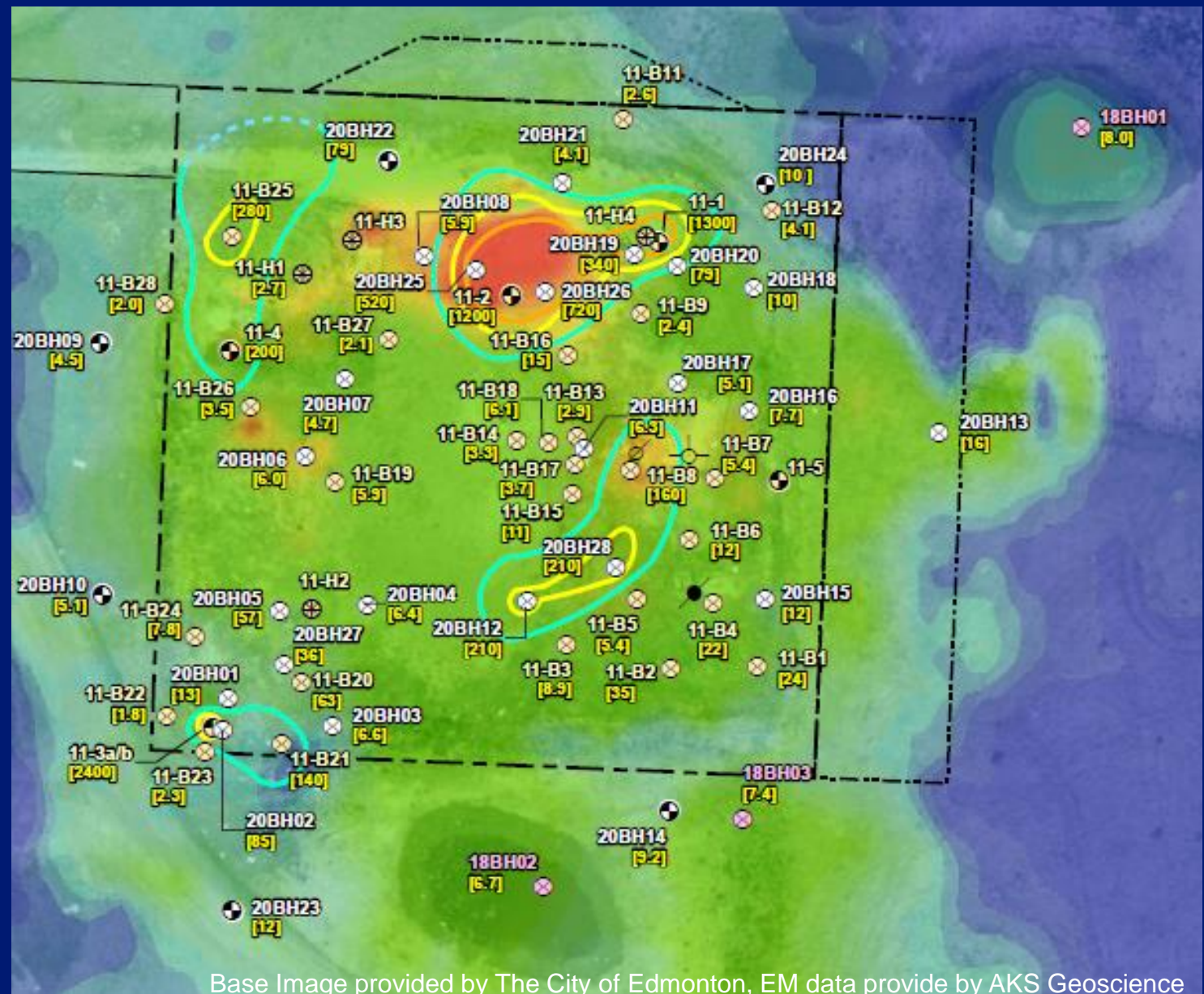
Base Image Courtesy of Canada Base Map – Transportation Services

Case Study 2#



Base Image Courtesy of Canada Base Map – Transportation Services

Case Study 2#



Questions?

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