



Maapera Analytics Inc.

ESA Phase II - Use Case

Background:

One of the most reliable concepts in science is that more data typically yields better and more reliable conclusions. In the environmental remediation sector the scale of sites can often be quite large and the relative amount of data is comparatively small.

By definition an Environmental Site Assessment Phase II is supposed to provide the information to create a site conceptual model so that decisions such as whether to undertake a remediation activity is required and, if so, then what the remediation technique(s) or plan should be. Current practice for soil analysis limits the number of data points available due to the use of expensive laboratory analytical testing. Reviews of Alberta Environment audits have found that more than 25% of subsurface contaminated sites failed.

Impacts of Current Practice:

- Missed geological features in site conceptual model
- Poor or inaccurate delineation
- Source migration missing

How Maapera Changes Things:

Using Maapera's Rapid Soil Analysis System, 10X more data points can be obtained and thus a complete picture of subsurface contamination can be created. Maapera can deliver this level of information in near real time as well. This is compared to typical lab analytical techniques that have delays of up to 7 days. By obtaining continuous vertical data, a full three dimensional conceptual site model can be built and delivered during the field work of a Phase II ESA.

Like never before, a full understanding of a contaminated site is now possible during field activities for both in the field and the office.

Cost Savings:

Avoiding remobilization due to missing data = \$2,000 - 25,000 depending on site

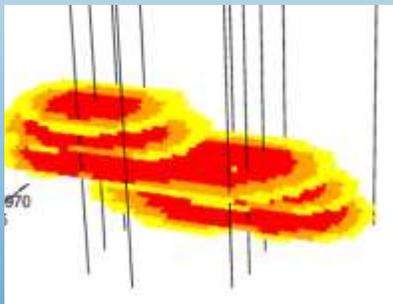
Standby time waiting for Lab Results = \$1,250 - 15,000 depending on site

Smart Sample Selection for Lab = \$300

Reduced time to prepare site concept model = \$500

Total Cost Savings:

\$4,050 - 40,800



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1-833-SOIL-411