

# Dakota Technologies MIP Reference Log

## Conductivity Plot:

The Electrical Conductivity (EC) of the soil is logged simultaneously with the analytical detector data utilizing a dipole arrangement. The EC provides insight into stratigraphy and also contaminant pathways when viewed in relation to detector responses. Typically an increase in EC is indicative of finer grained, tighter soil types.

## PID Plot:

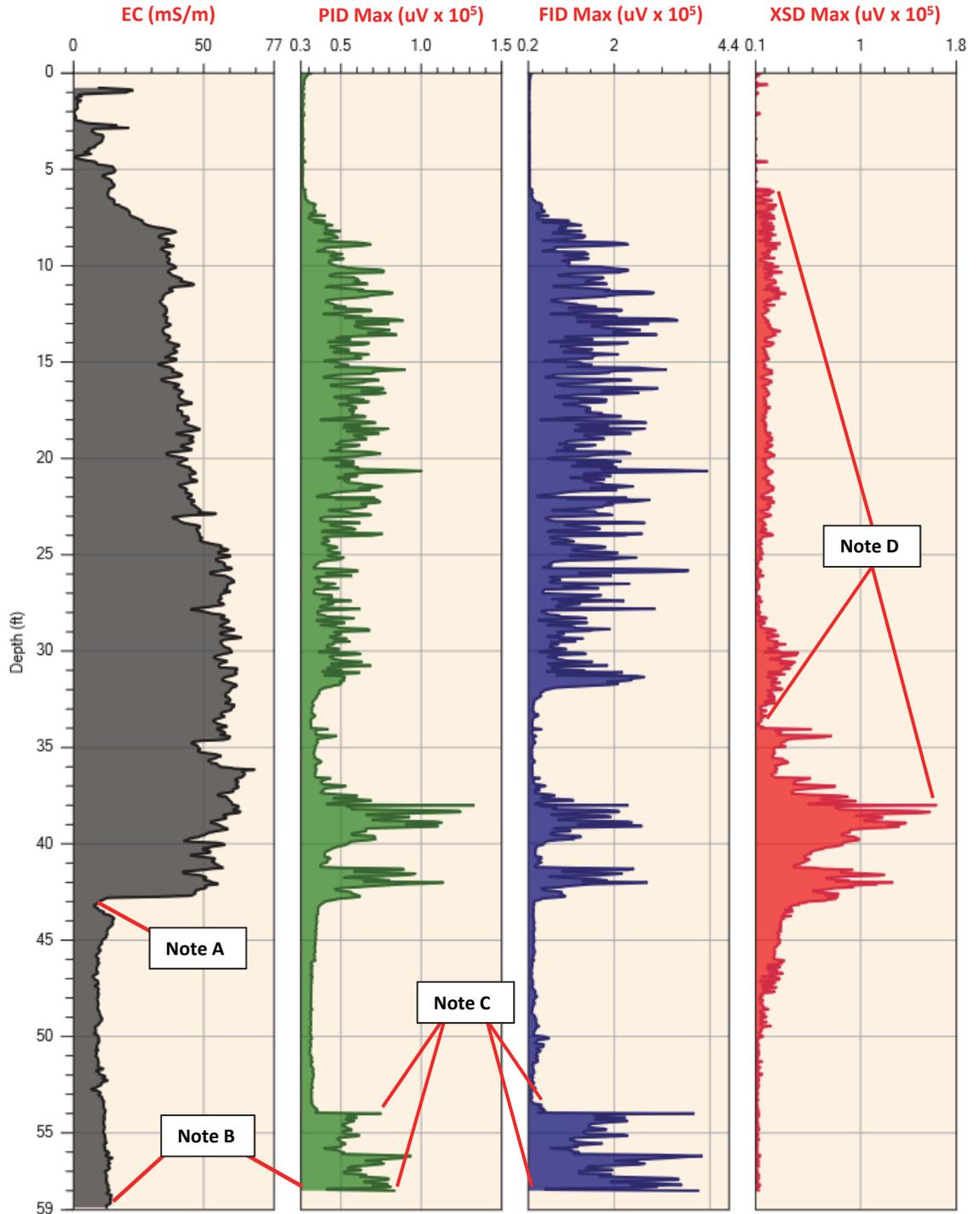
Detects unsaturated, multi-bond compounds (olefins) and aromatic (BTEX) hydrocarbons to approximately 0.5-1 ppm detection limit in all types of soil. Responses are recorded in microvolts.

## FID Plot:

Detects all types of hydrocarbons (including methane and butane) to approximately 10 ppm detection limit. Generally, the FID response is an indication of total hydrocarbons present.

## XSD Plot:

Detects halogenated compounds (i.e. TCE, PCE) to approximately 250 ppb detection limit.



## Note A:

Decreasing EC readings starting at 43 feet are indicative of a transition from a finer soil type (glacial till containing clay) to coarser (sandy) soil type.

## Note B:

The MIP probe was pushed until refusal (push rate of less than 1 ft. /min.) was achieved at 58 feet. Note that the EC readings are recorded to 59 feet. This is because the EC dipole is located about 1 foot lower down on the probe relative to the membrane.

## Note C:

PID and FID responses (in the absence of an XSD response) at 54-58 feet are indicative of aromatics or other unsaturated hydrocarbon contamination (50-100 ppm gas in this example).

## Note D:

XSD responses at 6-34 feet indicate halogenated compounds (TCE and breakdowns at 1-5 ppm in this example) at corresponding depths. The max peak at 38 feet indicates a relatively higher concentration (50-100 ppm in this example) of contaminant.