



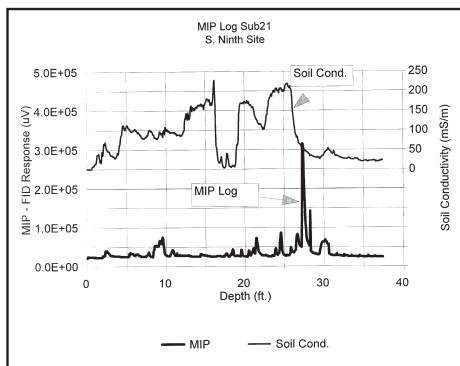
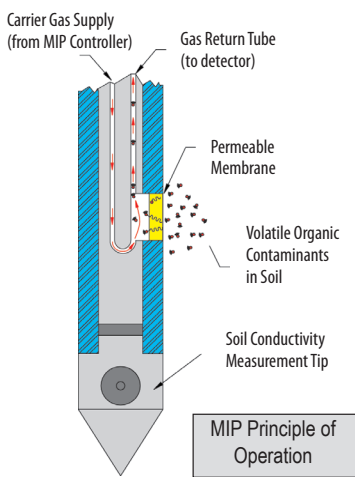
Geoprobe® Direct Image® Membrane Interface Probe (MIP)

The MIP system is the only commercially available tool that provides graphical representation of contaminate distribution and soil lithology in the subsurface.

- Detects volatile compounds in gaseous, dissolved, or free phases.
- Operates in both saturated & unsaturated materials.
- Built to withstand percussion driving
- Provides simultaneous electrical conductivity log.
- Provides depth location of contaminants

Acquisition Software & Instrument Features:

- Graphical display of depth, conductivity, probing speed, probe temperature
- Up to four detector systems can be used for analysis
- Data can be displayed real time & saved directly to a field laptop stored in an ASCII format
- All log files can be named and stored and packaged in a compact zip file
- GPS input can be stored on logs
- Automated instrument configuration and probe testing features provide rapid & accurate log set up.
- Data can be quickly reviewed & printed in the field using the Geoprobe® DI Viewer software*
- Ability to display real-time log on a secondary monitor via connection to laptop



A Problem Solving Tool Combination.
The MIP output gives both lithologic information, in the form of a conductivity log, and contaminant information, in the form of detector response. In this log, obtained from a UST site, hydrocarbon contamination is found at a depth of 27 feet (8 m). Note that the soil conductivity indicates that lithology changes from clay to sand at this depth.

MIP Specifications

MIP Compatible Detectors

Contaminants	Detection Limit*	Carrier Gases
PID BTEX	1ppm	Nitrogen, Helium, Compressed Air
XSD Chlorinateds (TCE, PCE)	250 ppb	Nitrogen, Helium, Compressed Air
FID Methane, Butane	NA	Nitrogen, Helium, Compressed Air
ECD Chlorinateds (TCE, PCE)	250 ppb	Nitrogen, 95% Argon, 5% Methane
DELCD Chlorinateds (TCE, PCE)	1ppm	Nitrogen, Helium, Compressed Air

*Limiting factors are: Signal-to-Noise Ratio, Length of trunkline, Membrane wear

Typical Trunkline Flow and Pressure

100 ft. Trunkline	150 ft. Trunkline	200 ft. Trunkline	
Primary Gauge	20 psi	20 psi	20 psi
Mass Flow Controller	7-12 psi	9-15 psi	12-17 psi
Probe Flow in mL/min	20-60 mL/min*	20-60 mL/min*	20-60 mL/min*
Dryer Flow in mL/min	2 x Probe Flow	2 x Probe Flow	2 x Probe Flow
Max. Operating Depth	60 ft. (18 m)	110 ft. (33.5 m)	150 ft. (46 m)

*Optimal Flow 40 mL/min

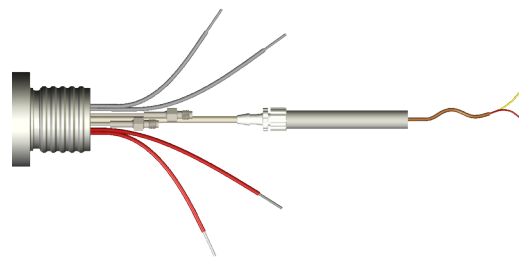
PC Requirements

Laptop computer that meets the following minimum system requirements:
Windows XP or Windows Vista 32-bit operating system.
PC minimum hardware requirements:
1 GHz Pentium compatible processor, 1 GB RAM, 600 MB free space on hard drive, CD/DVD drive, USB 2.0 port, screen resolution 1024 x 768

Membrane Operating Temperature	90 to 120 degrees C (typical)
Probe Rod Required	Geoprobe® 1.5 in. rods
Conductivity Array	Dipole
Data Acquisition	20 data points per foot
Expected Probe Life	1,000 to 1,500 ft. (305 to 460 m)

Client-Supplied Equipment

- Laptop Computer
- Electrical Generator
- Detector System (available from Geoprobe Systems™)
- Compressed Gasses
- Flow Meter
- Volt Meter



*DI Viewer is post-processing software available by free download from geoprobe.com/downloads
Notice: MIP systems and parts are offered for sale only to qualified companies through special MIP-Partner license agreements.

