

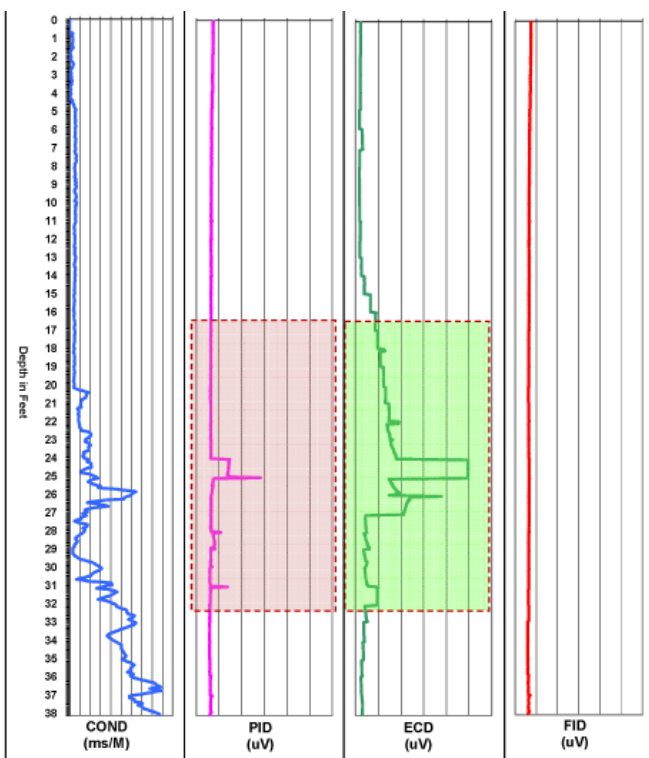
MIP Logs Give Field Advantage to Customers Who Invest in New Technology

The popularity of the Direct Image® Membrane Interface Probe (MIP) continues to grow as its uses increase. MIP is a screening tool used for the rapid delineation of Volatile Organic Contaminants (VOCs) in the subsurface, and serves as an interface between the contaminants and a detector system up-hole. MIP logs identify where contamination is encountered at depth, how concentrations of contaminants at one location compare to the concentrations at other locations, and where the contamination occurs in relation to lithology. In some cases, this is important, time-saving information can only be obtained using the MIP system. MIP lets the customer work smarter and not harder!

The MIP and other DI logging tools provide quick, real-time subsurface information to develop an efficient work plan. On these two pages, four MIP owners, all recognized as MIP Service Specialists based on a training program developed by Geoprobe Systems®, share information about recent MIP projects they've completed. For more information on MIP and Direct Image® products, log on to www.geoprobe-di.com, or call 1-800-436-7762.



FC5000 Field Instrument (top), MIP Controller, and MIP Probe



The log shows detector response vs. depth. The ECD (green) begins to respond to the chlorinated VOCs at approximately 13 ft. bgs. The PID (pink) responds to the higher concentrations at approximately 24 to 25 ft. bgs. The EC (blue) log indicates a tighter soil matrix at approximately 25 to 26 ft. bgs, which may be acting as a barrier to the vertical migration of the contaminants.

MIP Project Summary: ZEBRA Environmental

ZEBRA Environmental mobilized two ATV-mounted MIP/EC (Electrical Conductivity) units and two Geoprobe® 6620DT machines to perform subsurface logging at approximately 70 locations in 28 days. The New York client established a grid pattern for a former manufacturing facility that included indoor and outdoor locations to delineate impacts from chlorinated hydrocarbons. The unique ability of ZEBRA to provide the multiple smaller ATV and track-mounted probe units to access the indoor points was a key factor in ZEBRA being awarded the contract. ZEBRA's two, fully-equipped MIP/EC units completed between 6 and 8 logging points per day to approximately 45-50 ft bgs. The scope of work included steam cleaning and pressure grouting at the completion of each borehole. A total of approximately 2,700 ft of MIP logging was completed at the site.

The two ATV data acquisition vehicles transport and protect the MIP controller unit; the Geoprobe® FC5000 Field Instrument; laboratory-grade PID, FID and ECD detectors; portable power and all required compressed gases; redundant MIP probe/trunk line/probe rack assemblies, and all the tools and supplies needed for MIP/EC logging.

ZEBRA project personnel included Brad Carlson, MIP Project Manager; Will McAllister and Walter Moore, both MIP Operators; and Ethan Plank, Joe Hutchins, and Evan Moraitis, all Geoprobe® Operators. ZEBRA Environmental is recognized as an MIP Service Specialist, and has completed MIP training at the Geoprobe® corporate facilities and adheres to MIP Standard Operating Procedures.

"The real-time data collected each day by the MIP system was uploaded to a customized Sharepoint Website that was remotely accessible by the client. This allowed selected individuals off site to view the data collected and use it in directing the on-going field program."

Matt Ednie, Northeast Regional Manager
ZEBRA Environmental • Albany, NY



Ethan Plank, ZEBRA's Lead Probe Operator, pushes an MIP tool string with the 6620DT probe machine. The ZEBRA ATV-mounted MIP/EC unit (left) incorporates many of the latest system features from Geoprobe Systems® including trunk lines made of PEEK™ materials that minimize time required to clear the return line between logging locations, and the new MIP-Plus probes that operate at 110 VAC @ 5.5 amps.

