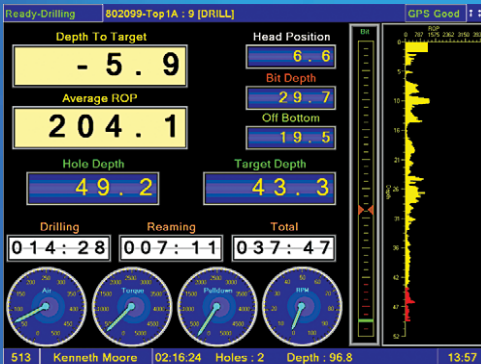


DEI^X

Drill Data Logging



Operator Display



DEI-X Module



Stratalogger

The DEI-X is the latest addition to Thunderbird's family of drill monitors for rotary blasthole drills. It is truly a revolutionary product with features and capability unmatched in the industry. These include Wi-Fi connections to the mine office, displaying drill pattern maps to the operator, strata-logging, cameras, and logging hole position with LPGPS. The DEI-X platform can also be readily upgraded to a Drill Navigation system for those mines that may require a navigation system at some point in the future.

OPERATOR DISPLAY

- Sunlight readable, VGA, touch display
- Enhanced graphical interface
- Drilling parameters and times
- Sensor and Health monitoring
- Overdrilling and Pipe-in-the-Hole warnings
- 3D views of pattern and drilled holes
- View single or multiple drill patterns
- 2 Way text messaging

DEI-X ON-BOARD SYSTEM

- Intel Atom with 1 GB Ram Processor & 16GB Compact Flash Memory
- Water & dust proof (IP65/NEMA 4)
- Upgradeable from older Thunderbird DEI Plus or Logger systems
- Built-in shutdown circuitry to insure no data is lost
- Outputs for audible or visual alarms
- Optional upgrades include: Sensor Manager, cameras, GPS receivers
- Integration with Fleet Management Systems
- Remote internet access for support and system upgrades
- Available for all makes and models of rotary blasthole drills

DATA LOGGING

- Operator and Sampler ID numbers
- Depth drilled, hole numbers, pattern number
- Report pre-shift inspections
- Drilling, tramming, delay codes and downtime
- Drill bits and drill stem components
- Tracks over or under drilling
- Operator comments on the holes
- Optional sensor values and Drilling Index or Specific Energy of drilling using Stratalogger
- Optional drill and hole locations using LPGPS

