



PROFILING BOREHOLE SONAR

Multi-frequency profiling sonar surveys provide a unique method of imaging large fluid-filled caverns, voids, and engineered structures. COLOG utilizes an advanced digital sonar head adapted to standard geophysical wireline. Sonar images are oriented by an onboard 3-axis magnetometer and accelerometer. Heading, pitch and roll are displayed on the acquisition screen and are integrated into the binary data stream for post processing and image presentation.

The data acquisition interface panel allows the sonar head to be configured in real-time while logging. This adjustability provides the necessary control to select a wide range of frequency and range resolutions, allowing adaptation to different subsurface conditions.

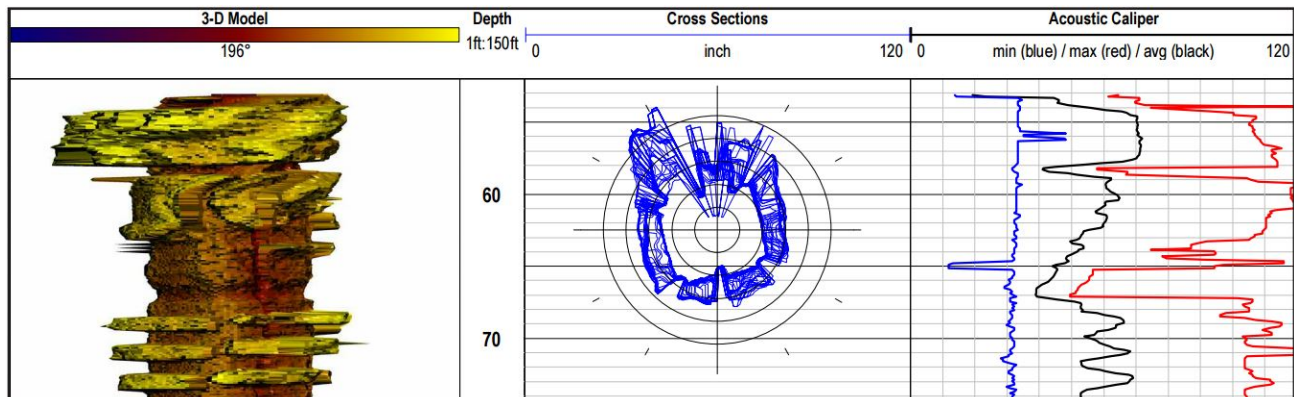
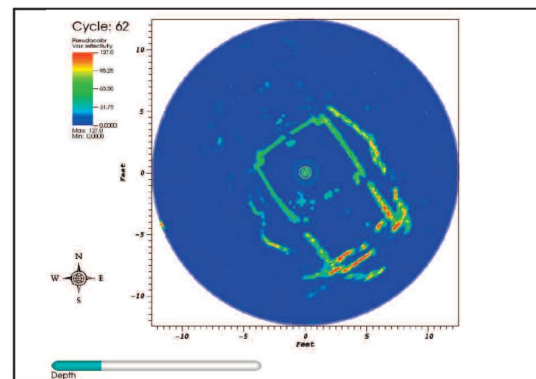
In-house software (SonarSHED™) has been developed in to create a processing platform to accommodate the two- and three-dimensional acoustic displays and virtual images.

APPLICATIONS:

- + Karst Geology / Solution Cavities
- + Underground Fluid-Filled Voids
- + Submerged Mine Shafts / Mine Reclamation Programs
- + Land Subsidence / Sinkhole Investigations
- + Drilled Foundation Pier Imaging
- + Storage Tanks and Submerged Construction Boxes

PROBE SPECIFICATIONS:

Diameter:	89 mm (3.5 in.)
Length:	1.35 m (4.42 ft.)
Max Temperature Rating:	70°C (158°F)
Max Pressure Rating:	200 bar (2900 psi)
Operating Conditions:	Fluid-Filled Environments
Access Hole Diameter:	96 mm (3.8 in.) Minimum
Frequency:	280 kHz to 1 MHz (5 kHz step interval)
Radial Distance Range:	1 m to 200 m; user defined
Azimuthal Resolution:	150, 300, 400, 600, 1200 samples per 360°; user defined
Vertical Resolution:	Dependent on void dimensions, beam width, and logging speed



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