

## 2PIA-1000 EM Induction / Magnetic Susceptibility

The 2PIA-1000 probe measures conductivity and / or magnetic susceptibility of the material around the probe. The probe is provided with the standard Poly probe top, which will enable the user to run this induction tool under the 2PGA-1000, Poly - Gamma. The probe is based on the Geonics EM-39 slimline induction tool. Conductivity is measured in millisiemens per meter (mS/m). Magnetic Susceptibility is measured in percent of primary magnetic field.

The tool has been optimized to measure conductivity therefore Magnetic Susceptibility measurements may be qualitative rather than quantitative.

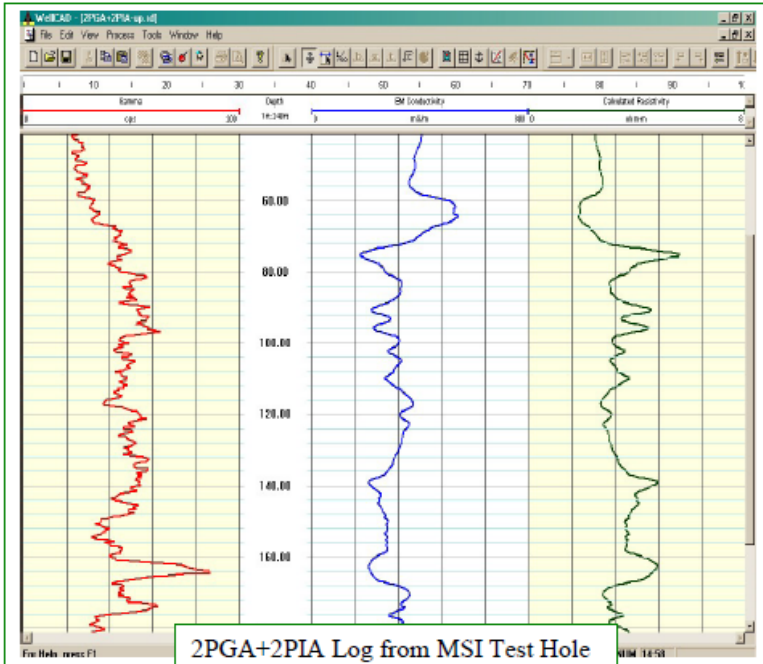
In the standard configuration magnetic susceptibility is not output because the second pulse driver is disconnected from the Magnetic susceptibility output so it can be used by the gamma measurement when the 2PGA-1000 is attached.

If it is desired to operate this probe assembly with the 2PGA-1000, than customer should order the induction, or magnetic Susceptibility. mode. If the probe is not run with gamma, both measurements can be output simultaneously.

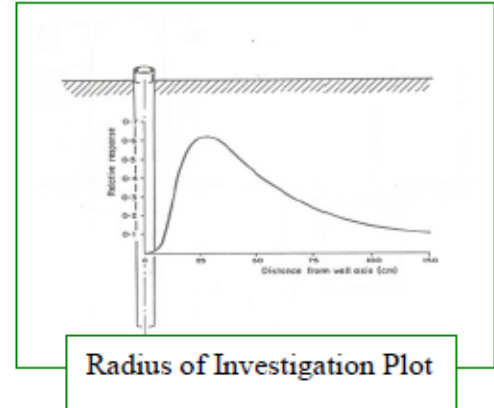
| <u>General Specifications</u>                    |  |
|--|--|
| <b>Power Requirements</b>                        | MIN. 30 VDC/MAX. 80 VDC @ 50mA - 90mA depending on tool configuration                  |
| <b>Tool Output</b>                               | Pulse type, positive and negative going , 1.25uS wide from ~ 12.5 KHz to 17.5 KHz.     |
| <b>Radius of Investigation</b>                   | Radius of maximum sensitivity 28 cm<br>Minimum radius of sensitivity 10 cm             |
| <b>Vertical Resolution</b>                       | 65 cm  |
| <b>Ranges or Scales</b>                          | 100mS/m, 1000mS/m, 10000mS/m   |
| <b>Accuracy</b>                                  | 5% of full scale   |
| <b>Resolution</b>                                | 0.02 % of full scale   |
| <b>Repeatability</b>                             | +/- 2% full scale for temperature changes less than 10 degrees Centigrade              |
| <b>Noise level</b>                               | Less than 0.5 mS/m   |
| <b>Measurement point</b>                         | 91.4 cm (36"), from the joint of the probe top.  |
| <b>Temperature range</b>                         | -30 to 50 degrees Centigrade   |
| <b>Operating frequency</b>                       | 39.2 KHz   |
| <b>Primary field source</b>                      | Self contained dipole transmitter  |
| <b>Sensor</b>                                    | Self contained dipole receiver   |
| <b>Coil separation</b>                           | 50 cm  |
| <b>Maximum depth</b>                             | 1000 m (water filled)  |
| <b>Length</b>                                    | 170 cm   |
| <b>Diameter</b>                                  | 3.65 cm  |
| <u>Specifications (Mag. Susceptibility Mode)</u> |  |
| <b>Ranges or Scales</b>                          | 0-300 ppt  |
| <b>Accuracy</b>                                  | ± 5% at 30 ppt   |
| <b>Repeatability</b>                             | Larger of ± 2 % or ± 0.2 ppt<br>(for probe temperature changes of less than 10 deg. C. |
| <b>Noise level</b>                               | Less than 0.02 ppt   |



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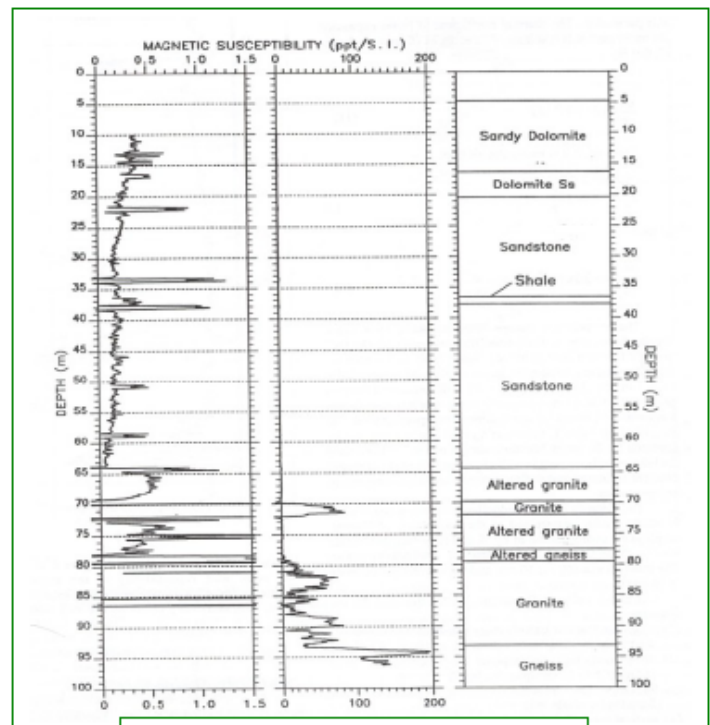
2PGA+2PIA Log from MSI Test Hole



Radius of Investigation Plot

Part Number: 2PIA-1000, 2EMA P-1000

Recommended Spares / Accessories:  
 2ADP-1010: MSI Single – Poly adapter  
 4EMD-1000: Calibration Coil



EM39 Mag. Susceptibility Log