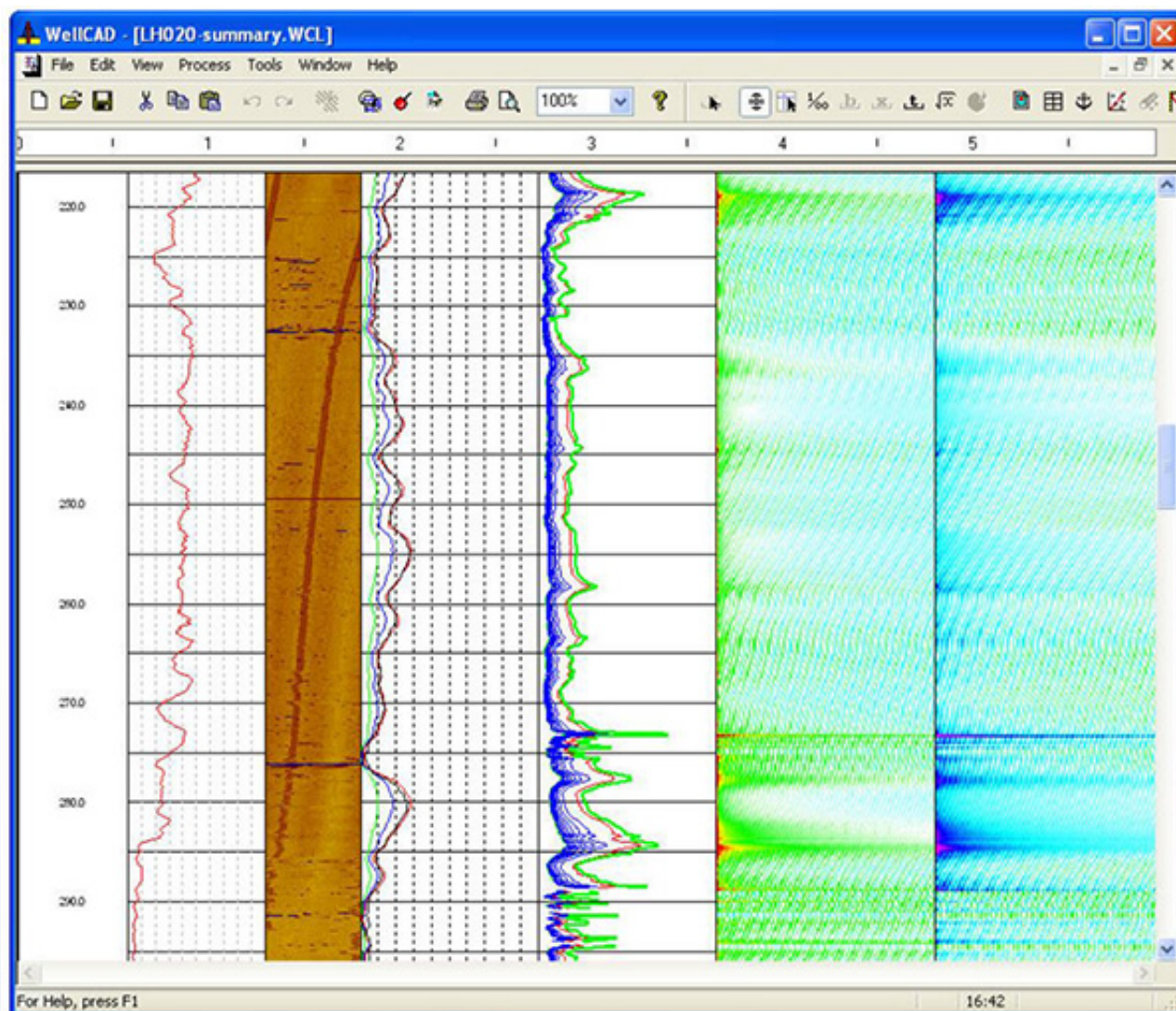


## QL40-ELOG Data Sheet

The QL40ELOG multi-point resistivity probe sub can be run stand-alone or with other QL tools in a custom stack. Measurements include 8, 16, 32, and 64-inch (0.2, 0.4, 0.8, 1.6 meter) normal resistivity, single point resistance (SPR), and self-potential (SP). Other QL probes commonly stacked with the QL40ELOG include the QL40GR (natural gamma), QL40FTC-B (temperature of fluid resistivity), and the QL40CAL (3-arm caliper), but many possibilities exist owing to the flexibility of the QL (Quick Link) family. Normal resistivity measurements, single point resistance, and self-potential measurements are designed for surveying open (uncased) fluid filled boreholes.



QL40-ELOG data presented in WellCAD alongside an Acoustic Televiewer log. Image courtesy of Mount Sporis Instruments Inc.

### Features

- Four resistivity measurements compared to just two from most other manufacturers.
- Slimline at only 40mm diameter.
- Easy one-person operation.

### QL40-IP

The QL40-ELOG can be upgraded to the QL40-IP in order to obtain the chargeability measurements in addition to SP and SPR readings from the lithological units within the borehole.

The QL-40-IP has two additional digitized channels, 16 to 64-inch potential electrodes and a current electrode (IP charging source) which allows the user to collect the injection and the relaxation measurements as a function of real time. Each of these IP channels are then subdivided into 10 discrete channels, enabling full waveform data collection.

This product can be used in mineral exploration projects to locate and map the extent of igneous, metamorphic and Iron ore deposits with increasing depth and is able to collect data with high precision. For example, allows the user to detect small accumulations of pyrite in the local dissemination zone around a quartz vein in a sedimentary formation.

Please be aware that in order to ensure complete isolation (i.e. separation of the current source from the reference electrode) the bridle must always be used when collecting the data, enabling the injected current to travel into the formation.

Features:

- Can be operated in aqueous environments/muddy conditions
- Detects fine accumulations of cation rich layers and identifies the chargeability between lithological units.
- Can be used to delineate linear features such as faults, micro fractures and has been used in studies which look at economic dissemination zones.

### **QL40-DLL3**

The Dual Lateral Log can be used in conjunction with the Elog sub and other quick link tools or as a standalone tool, to enable the user to collect simultaneous dual spaced ,focused resistivity measurements at two different depths.

The instrument uses the initial injected current and equates the injected current to the potential electrode which is centrally located on the probe, allowing shallow and deep resistivity measurements to be collected. The shallow measurements are determined using two guard electrodes compared to four guard electrodes and the cable armour (i.e. Return of the injected current) when recording deep (LL3D) values. This ensures accurate data collection which is ideal for geological studies when investigating bed boundaries, facies and the identification of hydro stratigraphic units as it provides excellent vertical resolution.

Features:

- Allows the user to obtain resistivity measurements at two different depths.
- Excellent vertical resolution which can be used to help determine the bed boundaries and hydrostratigraphic units.

### **Operating Conditions**

**W** - Water ?

**M** - Mud ?

**D**- Dry

**S** - Steel

**P** - PVC Borehole

**UC**- Uncased ?

\*Centralizers not required

## Product Dimensions

Physical	Dimensions (L x W x H)	Weight
(instrument only)	208cm x 4.2cm x 4.2cm	10kg

## Technical Specifications

<b>QL40- ELOG - Resistivity Probe:</b>	Pressure: 200 Bar (3000 PSI).
<b>Operating Temperature:</b>	Up to 70°C.
<b>Sensor:</b>	Stainless steel electrodes, normal array.
<b>Accuracy:</b>	1% F.S.
<b>Resolution:</b>	0.1 Ohm-meters, 0.1 Ohms, 0.1mV.
<b>QL40-IP -Induced Polarization Probe:</b>	Dimensions: 190cm long with a 43mm diameter, 9kg weight
<b>Max. Temperature and Min. Pressure requirements:</b>	(Max) 70°C 200 bar (Min)
<b>Power Requirements:</b>	120VDC, (Min) 80VDC and (Max) 160VDC ; 32V at up to 500mA current source
<b>Electrodes:</b>	50mm (current), 18mm (measured), 304 stainless steel
<b>Spontaneous Potential:</b>	+/- 18V (Range), 0.5mV ( Resolution) and +/- 2.5mV accuracy
<b>QL40-DLL3:</b>	A dual spaced focused resistivity probe