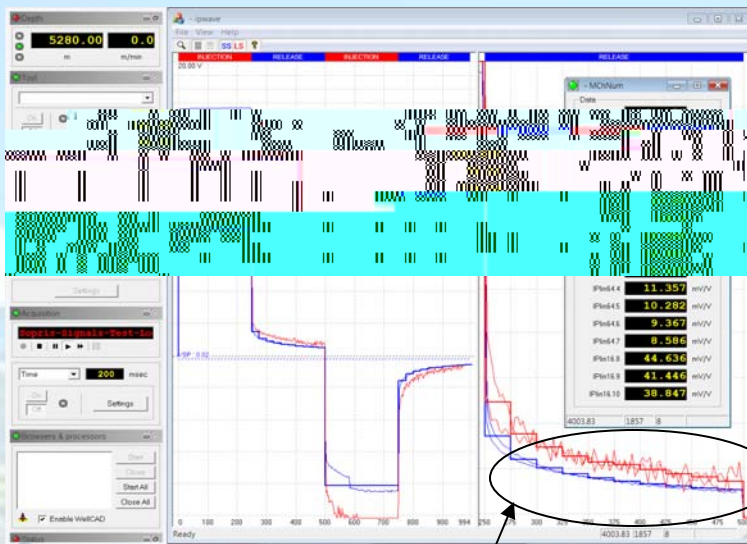


# QL40IP INDUCED POLARIZATION PROBE

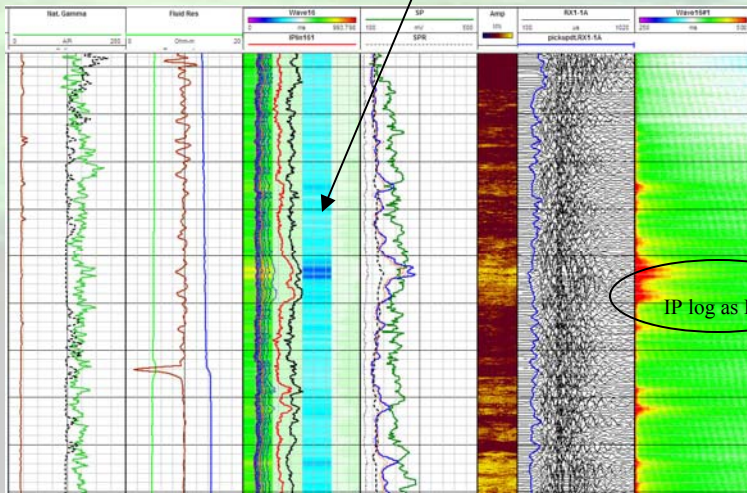
Historically, IP logging has been used to detect disseminated pyrite in sedimentary rocks. In uranium roll-front deposits there is sometimes a higher concentration of pyrite on the reduced side of the roll, when compared to the oxidized side; IP may be used to distinguish these geochemical depositional systems. In coals seams, IP logs have been used to detect pyrite and other ferrous material. Montmorillonite clay is found in reducing sedimentary depositional systems and yields an IP response. Detection of sulfides in igneous and metamorphic rocks can be done with IP logs.

We have improved the measurement of this basic phenomenon of charge separation in rocks that occurs when an external voltage is applied and created the new **QL40-IP** tool and **IPWAVE** browser for **MATRIX** users.



*MATRIX IPWAVE Browser shows injection and relaxation waveforms for both the 16 and 64 inch spacing, along with the amplitude of each user-configurable time-domain measure window.*

**10 new time-window logs for 16 & 64" spacing**



*WellCAD Summary plot showing natural gamma, fluid resistivity, 10-window IP, SP & SPR, acoustic televiewer, full waveform sonic, and the IP log displayed as an image log through a mineralized zone.*

M<sub>64</sub>

M<sub>16</sub>

Current Electrode

# QL40IP INDUCED POLARIZATION PROBE

## Specifications

Length:	208 cm (82")
Diameter:	40 mm (1.6")
Weight:	10 Kg (22 lbs)
Pressure Rating:	200 Bar (3000 PSI)
Temp. Rating:	70 °C
Sensor (s):	stainless steel electrodes
Current Output:	500mA, 10 Hz injection wave
Measurement Range:	10 user-configurable IP windows, 0 – 100% (mV/V)
Accuracy:	1% full scale
Resolution:	0.1 mV/V

## Features

Users can configure 10 time windows during chargeability relaxation curve to characterize IP response.  
10 Hz injection frequency

## Advantages

More flexibility than other suppliers.  
Users can customize time-domain windows for application.

## QL Stack Possibilities

QL40GR (gamma) + QL40IP + QL40MGS (Magnetic susceptibility): mining, exploration  
QL40GR (gamma) + QL40IP + QLOBI (optical televiewer): exploration, bedding Planes, fractures  
QL40GR (gamma) + QL40IP + QLABI (acoustic televiewer): exploration, bedding Planes, fractures  
QL40GR (gamma) + QL40IP + QL40HII (dual induction): clay-typing, lithology analysis

## Recommended Spares

QL40-IS4, Four-conductor Isolation Bridle  
QL40-GO4, Four-conductor Probe Top Assembly