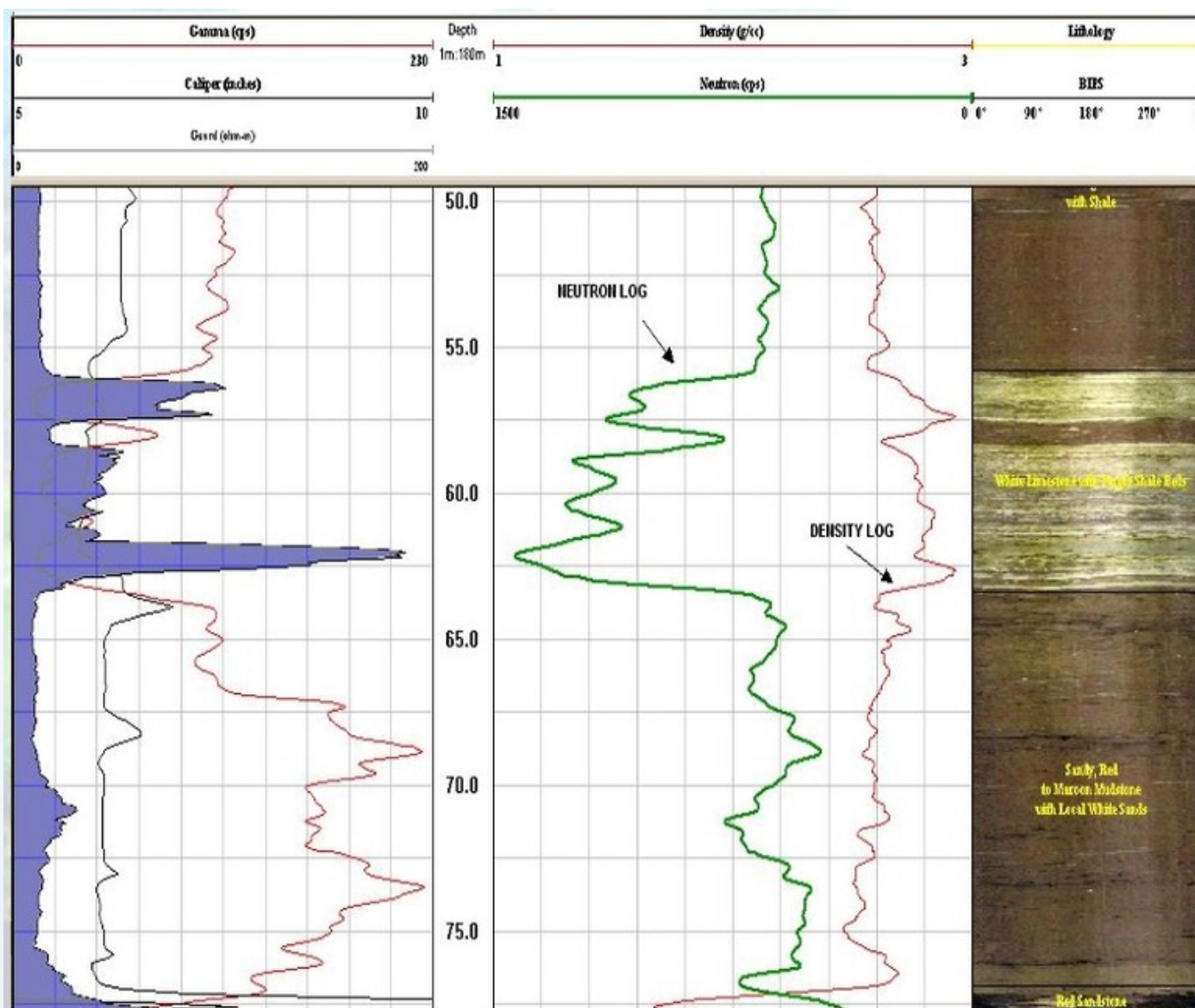


QL40-NEU Data Sheet

Commonly used in hydrogeological, petrophysical, environmental and some geotechnical applications, the QL40-NEU can be used to measure in situ porosity, aquifer quality data and can be used to detect gas zones/ gas-liquid contacts when used in conjunction with other borehole logs.

Using an Am²⁴¹Be neutron source, the probe creates a thermal neutron flux, (due to the high neutron energy emitted by the Am source) which passes through the formations and is detected by the He-3 thermal neutron detector. This energy is directly proportional to the hydrogen ion concentration within the lithostratigraphy, which relates to the water fill porosity (in unsaturated conditions the flux is directly proportional to the moisture content). The improved sensitivity of the He-3 detector allows the probe to take precise measurements using a relatively small source strength of 1 curie, in all borehole environments.



This tool enables the user to obtain real time quantitative porosity measurements in wet, dry and muddy conditions, whilst improving the imaging resolution, allowing the user to image thin lithological beds. As this is a quick Link bottom sub, the QL40-NEU can be stacked with the other QL tools in the product line, allowing more versatility and

adaptability (e.g can be combined with the QL40-GR, QL40-DEV and QL40-ELOG tools for quantitative, lithological and porosity estimates).

Operating Conditions

W - Water ?

M - Mud ?

D- Dry ?

S - Steel ?

P - PVC Borehole ?

UC- Uncased ?

*Centralization is not required

Product Dimensions

Physical	Dimensions (L x W x H)	Weight
(instrument only)	134 cm x 4 cm x	5.5 kg

Technical Specifications

Maximum Operating Pressure:	200 (bar) ; 2900 (PSI)
Maximum Operating Temperature (°C):	70 °C
Detector:	He ³
Source:	AM241Be (Americium - Beryllium) 1-3 Curie strength
Source - Detector Spacing:	35 cm
Measurements:	Neutron Porosity (cps)