

QL40-OBI2G-UV Data Sheet

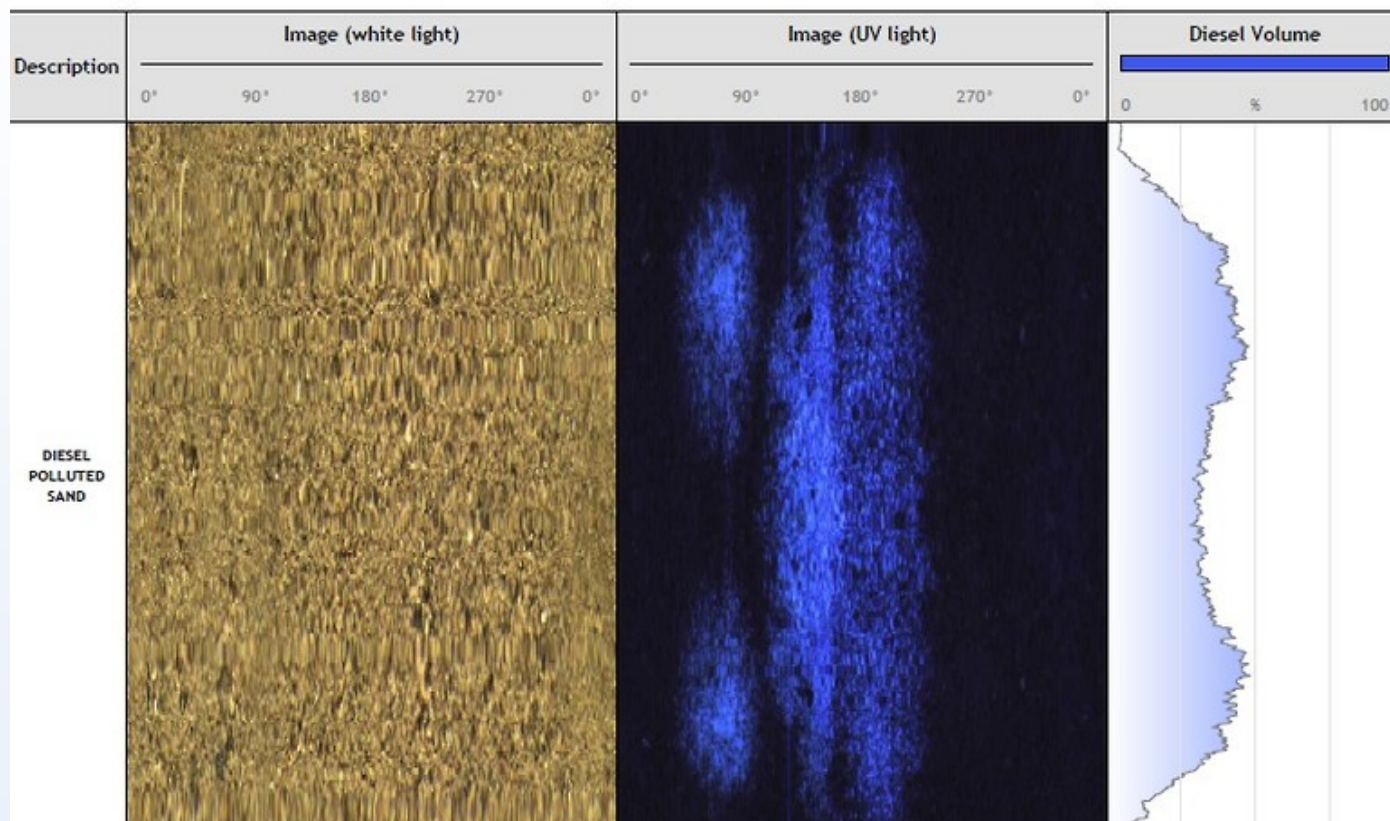
Part of the Optical televiewer range, the QL40-OBI2G-UV probe allows the user to not only capture the visible light images of the soil and lithologies within a borehole, but also allows the capture of High sensitivity Ultra Violet images of the subsurface. The probe produces a 365 nm UV LED light as it is lowered into the borehole, which emits a sapphire window/ interface into the soil.

The still images are captured at 30 fps in order to detect the UV induced fluorescence of light in non -aqueous phase liquids (i.e. Anthracene). When operating this system the user, the OIP interface, FI6000 instrument and a laptop are needed, these components will allow the collection of EC data, rate of penetration, area of fluorescence (%) and optical power content (%) to be collected.

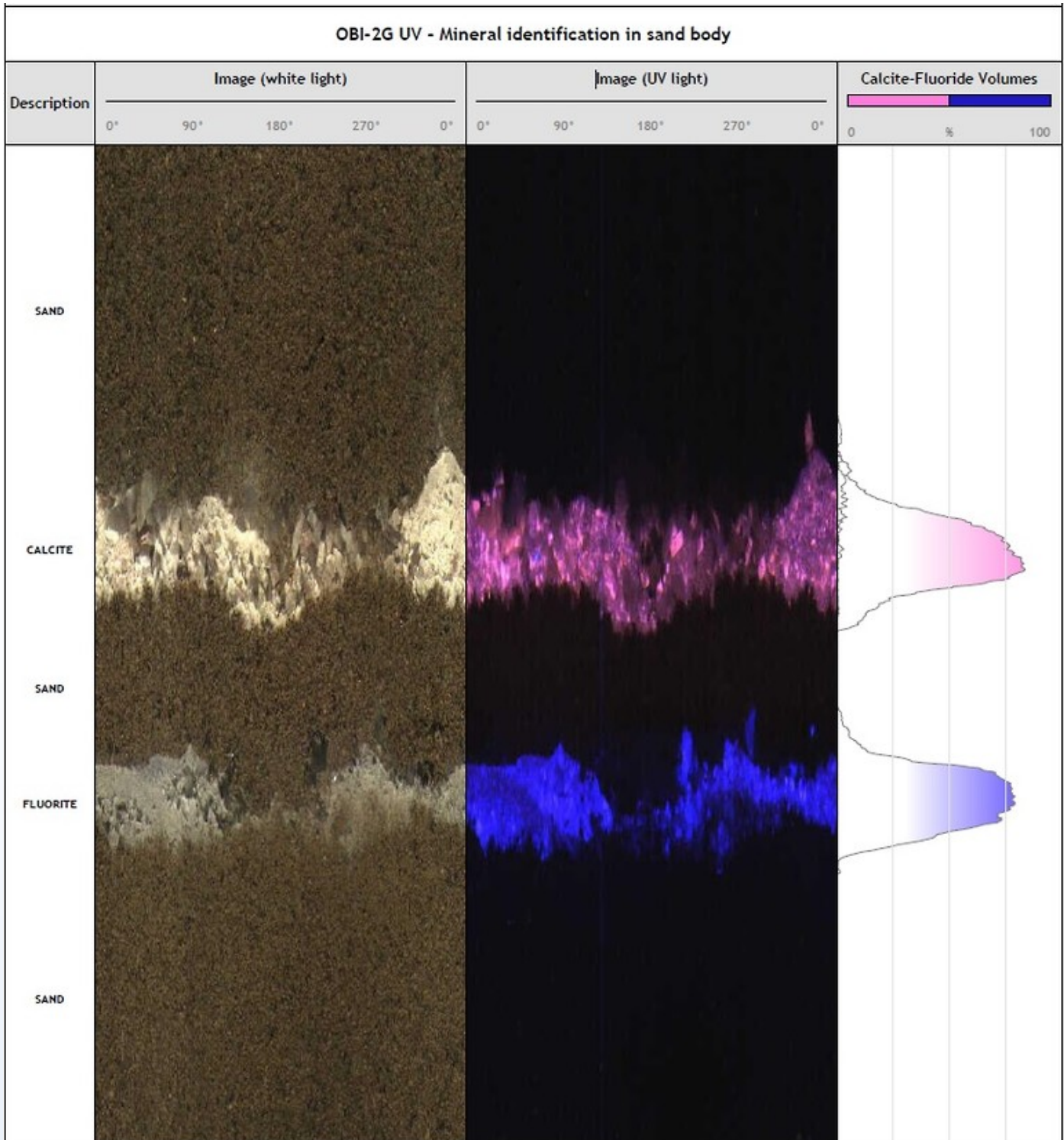
This instrument has been recently used to try and determine the relationship between % fluorescence and fluid concentration of different petroleum fuels. The results showed that diesel fuels have greater fluorescence (% area coverage) than gas or crude oil (i.e more than 10%) within saturated silica rich sand. This optical televiewer was able to detect these concentrations using the CMOS camera, which is capable of capturing pixel by pixel images, to a 24 bit RGB true color and 1800 azimuth resolution.

The Q40-OBI2G-UV can be applied to a variety of environmental , geological and hydro-geological studies to assess the hazard and risks posed by non-aqueous liquids in subsurface materials, enabling the user to laterally and horizontally track the migration of these fluids.

OBI-2G UV - Diesel polluted sand body



QL40-OBI2G-UV results from a pollution study examining the Diesel concentrations in a body of sand. Courteously supplied by Mt Sopris.



QI40-OBI2G-UV results from a pollution study examining the Calcite and Fluorite mineral concentrations in a body of sand. Courteously supplied by Mt Sopris.

Operating Conditions

W - Water ?

M - Mud

D- Dry ?

S - Steel ?

P - PVC Borehole ?

UC- Uncased ?

*Centralization is not required, it can only operate in clear water or dry conditions

Product Dimensions

Physical	Dimensions (L x W x H)	Weight
(instrument only)	1.47 m x x	5 kg

Technical Specifications

UV Wavelength:	365nm-UVA
Image Sensor:	CMOS 1/3 inches Digital Sensor
Resolution:	24 Bit RGB true colour and 1800 pixel azimuthal resolution
Precision:	3 axis accelerometer and magnetometer
Optimal Operating Temperature:	70°C