

Title (en)
CORE AND DRILL BITS WITH INTEGRATED OPTICAL ANALYZER

Title (de)
KERN UND BOHRMEISSEL MIT INTEGRIERTEM OPTISCHEM ANALYSATOR

Title (fr)
TRÉPANS DE CAROTTAGE ET DE FORAGE À ANALYSEUR OPTIQUE INTÉGRÉ

Publication
EP 2715032 A1 20140409 (EN)

Application
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Priority
US 2011038839 W 20110602

Abstract (en)
[origin: WO2012166138A1] A disclosed method for obtaining a core sample includes directing light at a core sample being collected, receiving reflected light from the core sample, and analyzing the received reflected light to determine one or more characteristics of the core sample and/or form an image of the core sample. Characteristics include rock type, hydrocarbon type, water concentration, porosity, and permeability. The light may be infrared (IR), visible, and/or ultraviolet (UV). The received reflected light may be passed through one or more multivariate optical elements (MOEs). Measurements made at two different positions on the core sample may be used to determine a coring rate. A described coring bit includes a barrel to receive a core sample, a light source illuminating the core sample as it enters the barrel, a detector system that receives reflected light from the core sample, and an optical transmission system communicating light to and from the core sample.

IPC 8 full level
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