

Title (en)

METHOD AND APPARATUS FOR DETERMINING THE HIGH SIDE OF A DRILL STRING DURING GAMMA MWD OPERATIONS AND CORRELATING GAMMA EVENTS THEREWITH

Title (de)

VERFAHREN UND VORRICHTUNG ZUR BESTIMMUNG DER HOHEN SEITE EINES BOHRSTRANGS WÄHREND GAMMA-MBD-OPERATIONEN UND ZUM KORRELIEREN VON GAMMAEREIGNISSEN DAMIT

Title (fr)

PROCEDE ET DISPOSITIF PERMETTANT DE DETECTER LA PARTIE SUPERIEURE D'UNE COLONNE DE FORAGE AU COURS D'OPERATIONS MWD GAMMA ET DE CORRELER LES EVENEMENTS GAMMA AVEC CELLES-CI

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Application

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Abstract (en)

[origin: WO02082124A1] A directionally sensitive MWD gamma tool (10) and method of use that facilitates geosteering operations by providing formation characteristics data and correlating such data with a referenced orientation of the tool (10). A first embodiment includes an array (14) of gamma sensors radially arranged within the tool (10) and that is circumferentially exposed to the formation. In an alternative embodiment, a single gamma sensor comprising a scintillation crystal and photomultiplier tube is arranged within a rotating shield so as to focus the direction of formation interrogation. In another aspect of the preferred embodiments, the invention provides an array of magnetic and gravitational sensors that together provide data sufficient to establish an absolute reference orientation of the directional gamma sensor positioned on the tool (10). The methods for implementing the apparatus of the invention include transmitting individual channel counts for gathered gamma sensor data independently to the surface for analysis, or correlating and identifying high side and low side portions of the data prior to transmission to the surface and selectively transmitting such information as has been identified for geosteering operations.

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