Title (en)

FLOW HYDRAULIC AMPLIFICATION FOR A PULSING, FRACTURING, AND DRILLING (PFD) DEVICE

Title (de)

HYDRAULISCHE STRÖMUNGSVERSTÄRKUNG FÜR EINE PFD-VORRICHTUNG (PFD - PULSING, FRACTURING AND DRILLING)

Title (fr)

AMPLIFICATION HYDRAULIQUE D'ÉCOULEMENT POUR UN DISPOSITIF D'ÉMISSION D'IMPULSIONS, DE FRACTURATION, ET DE FORAGE (PFD)

Publication

EP 2148975 A4 20150506 (EN)

Application

EP 08726053 A 20080226

Priority

- US 2008002469 W 20080226
- US 92740007 P 20070503

Abstract (en)

[origin: WO2008136883A1] Disclosed is a device and method and/or system for generating pulses to improve drilling rates, the ability to drill straighter and farther or fracturing or injection efficiencies in a geological formation that may contain desirable hydrocarbons. This system may also be used in other types of drilling or fracturing operations, whether to unclog arteries or to open formations for underground storage in conjunction with pulsing/fracturing. Alternately, this system could be used to create large pulses downhole for seismic purposes in that they are of such magnitude that they could be readily received in nearby wells or several of uphole locations. The system and method comprises several pulse generating devices longitudinally and axially positioned within an annular drill collar flow channel or PIM such that the PFD medium flows through the annular drill collar flow channel and the PFD medium is guided into one or more sets of selectively reversible flow, upper and lower flow connecting channels, wherein the connecting channels are connected to an inner flow channel and the annular drill collar flow channel, and wherein the annular drill collar flow channel is acted upon by one or more flow throttling devices. In one of the devices listed, the device utilizes one or more turbines residing near and within proximity of a flow diverter that diverts drilling mud into and away from turbine blades such that the force of the PFD medium causes the turbine blades and the turbine to rotationally spin around a coil assembly for power.

IPC 8 full level

E21B 44/00 (2006.01)

CPC (source: EP)

E21B 4/02 (2013.01); **E21B 7/18** (2013.01); **E21B 41/0085** (2013.01)

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Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

DOCDB simple family (publication)

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