

Title (en)

WATER SATURATION AND SAND FRACTION DETERMINATION FROM BOREHOLE RESISTIVITY IMAGING TOOL, TRANSVERSE INDUCTION LOGGING AND A TENSORIAL WATER SATURATION MODEL

Title (de)

WASSERSÄTIGUNGS- UND SANDFRAKTIONSBESTIMMUNG MIT HILFE EINER BOHRLOCHWIEDERSTANDSABBILDUNGSVORRICHTUNG, EINER TRANSVERSALE INDUKTIONSBOHRLOCHMESSUNG UND EINE TENSORIALES WASSERSÄTTIGUNGSMODELLS

Title (fr)

DETERMINATION DE LA SATURATION EN EAU ET D'UNE FRACTION DE SABLE A PARTIR D'UN OUTIL D'IMAGERIE DE LA RESISTIVITE DES Puits DE FORAGE, D'UNE DIAGRAPHIE PAR INDUCTION TRANSVERSALE ET D'UN MODELE TENSORIEL DE SATURATION EN EAU

Publication

EP 1155342 A4 20060524 (EN)

Application

EP 99968973 A 19991229

Priority

- US 9931104 W 19991229
- US 22296798 A 19981230
- US 16094399 P 19991022

Abstract (en)

[origin: WO0039612A1] The total porosity the formation, (13), including a fractional volume of the shale (13), and a resistivity of the shale are determined (22), in a laminated reservoir including sands that may have dispersed shales therein. A tensor petrophysical model determines the laminar shale volume and laminar sand conductivity from vertical and horizontal conductivities derived from multi-component induction log data (10). The volume of dispersed shale and the total and effective porosities of the laminar sand fraction are determined using a Thomas-Stieber-Juhasz approach. Removal of laminar shale conductivity and porosity effects reduces the laminated shaly sand problem to a single dispersed shaly sand model to which the Waxman-Smiths equation can be applied.

IPC 1-7

G01V 3/18

IPC 8 full level

G01V 3/28 (2006.01); **G01V 11/00** (2006.01)

CPC (source: EP)

G01V 3/28 (2013.01); **G01V 11/00** (2013.01)

Citation (search report)

- No further relevant documents disclosed
- See references of WO 0039612A1

Cited by

CN104020276A

Designated contracting state (EPC)

GB IT

DOCDB simple family (publication)

WO 0039612 A1 20000706; BR 9916714 A 20011204; BR 9916714 B1 20120807; EP 1155342 A1 20011121; EP 1155342 A4 20060524

DOCDB simple family (application)

US 9931104 W 19991229; BR 9916714 A 19991229; EP 99968973 A 19991229