

Title (en)
ASSESSMENT, MONITORING AND CONTROL OF DRILLING OPERATIONS AND/OR GEOLOGICAL-CHARACTERISTIC ASSESSMENT

Title (de)
BEURTEILUNG, ÜBERWACHUNG UND STEUERUNG VON BOHRAKTIVITÄTEN UND/ODER BEURTEILUNG VON GEOLOGISCHEN EIGENSCHAFTEN

Title (fr)
ÉVALUATION, SURVEILLANCE ET COMMANDE DES OPÉRATIONS DE FORAGE ET/OU ÉVALUATION DES CARACTÉRISTIQUES GÉOLOGIQUES

Publication
EP 2880260 A1 20150610 (EN)

Application
EP 13825213 A 20130801

Priority
• US 201261678451 P 20120801
• US 2013053129 W 20130801

Abstract (en)
[origin: WO2014022614A1] In monitoring/control of drilling operation a dimensionality of a full-scale model (e.g., characterizing variables related to cuttings transport, gas migration and/or the like) is reduced and data from a plurality of geographically distributed (e.g., depth varying) sensors is received, and a surrogate model is used to estimate variables in real-time. Use of the surrogate model may enable, e.g., particle-filtering processes to be employed during the estimation while still allowing for real-time estimations, avoiding excessive use of reasonable computational resources (e.g., memory and processing speeds) and/or the like. Operating controls or the like may then be set based on the estimated variables. For example, drilling control parameters may be adjusted based on estimated variables to avoid lost circulation, kicks, stuck pipe, and catastrophic events, optimize drilling parameters such as rate of penetration, improve drilling success probabilities and efficiency and/or the like.

IPC 8 full level
E21B 44/00 (2006.01); **E21B 47/08** (2012.01); **G01V 11/00** (2006.01)

CPC (source: EP US)
E21B 44/00 (2013.01 - EP US); **E21B 47/00** (2013.01 - EP US); **E21B 49/00** (2013.01 - US); **G01V 11/00** (2013.01 - EP US); **G01V 1/40** (2013.01 - EP US); **G01V 2200/16** (2013.01 - EP US); **G01V 2210/66** (2013.01 - EP US)

Cited by
US11697989B2

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
WO 2014022614 A1 20140206; EP 2880260 A1 20150610; EP 2880260 A4 20150812; MX 2015001362 A 20150916; US 2015226049 A1 20150813

DOCDB simple family (application)
US 2013053129 W 20130801; EP 13825213 A 20130801; MX 2015001362 A 20130801; US 201314419216 A 20130801