

Search history

Search PN=(WO2016028886) (Results 1)

1:

Search [SP]: 1. a wellbore system comprising: a work string and a downhole device connected to a portion of the work string, the downhole device configured to deliver periodic energy pulses to a portion of a wellbore. 2. the system of claim 1, further comprising at least one sensor configured to measure energy pulses in the portion of the wellbore, wherein the at least one sensor is configured to determine at least one property of the wellbore based on the energy pulses detected by the at least one sensor. 3. the system of claim 2, wherein the at least one sensor is connected to the downhole device. 4. the system of claim 2, wherein the periodic energy pulses comprise seismic waves and the at least one sensor comprises a geophone. 5. the system of claim 2, wherein the periodic energy pulses comprise pressure waves and the at least one sensor comprises a pressure sensor. 6. the system of claim 1, wherein the portion of the wellbore further comprises at least one fracture in a formation. 7. the system of claim 6, further comprising a first packing element, wherein the first packing element is positioned below the at least one fracture and the downhole device is positioned adjacent the at least one fracture. 8. the system of claim 7, further comprising a second packing element, wherein the second packing element is positioned above the downhole device. 9. the system of claim 6, wherein the work string comprises coiled tubing. 10. the system of claim 9, wherein the downhole device comprises a vibratory tool and the periodic energy pulses further comprise oscillating pressure waves. 11. the system of claim 10, wherein the vibratory tool is a fluid hammer tool that creates the oscillating pressure waves based on the coand(hacek over a)) effect. 12. the system of claim 11, wherein the frequency of the oscillating pressure waves may be varied during operation of the fluid hammer tool. 13. the system of claim 6, wherein the downhole device is an acoustic device and the periodic energy pulses further comprise acoustic waves. 14. the system of claim 6, further comprising proppant positioned within the at least one fracture, wherein the proppant is configured to release energy when actuated by the periodic energy pulses. 15. the system of claim 14, wherein the proppant further comprises explosive proppant or flagration proppant. 16. the system of claim 6, further comprising at least one sensor configured to measure energy pulses in the portion of the wellbore from the periodic energy pulses. 17. the system of claim 16, wherein the at least one sensor is connected to the downhole device. 18. the system of claim 16, wherein the at least one sensor is configured to determine at least one property of the at least one fracture based energy pulses detected by the at least one sensor. 19. the system of claim 18, wherein the at least one property is a width of the at least one fracture, a length of the at least one fracture, a shape of the at least one fracture, or a propped length of the at least one fracture. 20. a method of supplying energy pulses to a portion of a wellbore comprising: positioning a downhole device adjacent a portion of a wellbore and delivering periodic energy pulses from the downhole device to the portion of the wellbore. 21. the method of claim 20, further comprising determining one or more properties of the wellbore based on energy pulses reflected from the wellbore. 22. the method of claim 20, wherein the portion of the wellbore includes at least one fracture. 23. the method of claim 22, further comprising determining one or more properties of the at least one fracture. 24. the method of claim 23, wherein the one or more properties of the at least one fracture includes a length of the at least one fracture, a width of the at least one fracture, a propped length of the at least one fracture, or a shape of the at least one fracture. 25. the method of claim 20, further comprising modifying a frequency of the periodic energy pulses. 26. the method of claim 25, further comprising modifying a magnitude of the periodic energy pulses. 27. the method of claim 26, further comprising reevaluating the one or more properties of the wellbore based on modified reflected energy pulses. 28. the method of claim 26, wherein modifying a flow rate of fluid flowing through the downhole device modifies the frequency and magnitude of the periodic energy pulses. 29. the method of claim 26, wherein modifying a signal to the downhole device modified the frequency and magnitude of the periodic energy pulses. 30. the method of claim 22, further comprising changing a property of the fracture with the periodic energy pulses. 31. the method of claim 30, wherein the periodic energy pulses enlarges a width or a length of the fracture. 32. the method of claim 30, wherein the periodic energy pulses inhibit growth of the fracture. 33. the method of claim 30, wherein the periodic energy pulses increase the conductivity of the fracture. 34. the method of claim 22, further comprising cleaning up the at least one fracture with the periodic energy pulses. 35. the method of claim 34, wherein cleaning up the at least one fracture further comprises enhancing transport of proppant into the at least one fracture or breaking down a layer of a formation adjacent to the at least one fracture having a low-permeability. 36. a wellbore system comprising: a work string at least one downhole device connected to a portion of the work string, the downhole device configured to deliver periodic energy pulses to a portion of a wellbore and at least one sensor configured to determine at least one property of the wellbore based on detected energy pulses wherein the at least one downhole device is configured to selectively modify a magnitude and a frequency of the periodic energy pulses. 37. the system of claim 36, wherein the periodic energy pulses comprise pressure waves, acoustic waves, or seismic waves. (Results 9)

Search [SP]: system and method for using pressure pulses for fracture stimulation performance enhancement and evaluation a system and method of applying periodic energy pulses to a portion of a wellbore, fracture(s), and/or near wellbore to interrogate and/or stimulate at least a portion of the wellbore, fracture(s), and/or near wellbore. the system includes a downhole device that is configured to deliver periodic energy pulses to a portion of the wellbore. the downhole device may deliver various energy pulses such as pressure waves, seismic waves, and/or acoustic waves. sensors may determine properties of a portion of the wellbore and/or fracture based on energy pulses detected within the wellbore. the sensors may be connected to the downhole tool, may be positioned within the wellbore, and/or may be positioned at the surface. the magnitude and/or frequency of the periodic energy pulses may be varied to change the stimulation and/or interrogation of the wellbore. (Results 0)

Search (system* or device* or apparatus*) and (fracturing or fracking or hydrofracturing or hydrofracking) (Results 45152)

4:

Search 4 and seismic (Results 2153)

5:

Search 5 and (rope or string) (Results 952)

6:

Search 6 and (puls* or wave*) (Results 720)

7:

Search 7 and periodic (Results 209)

8:

Search 8 and (pressur* or acoustic*) (Results 209)

9:

Search 9 and sensor* (Results 195)

10:

Search 10 and geophone (Results 49)

11:

Title: IN SITU THERMAL PROCESSING AND INHIBITING MIGRATION OF FLUIDS INTO OR OUT OF AN IN SITU OIL SHALE FORMATION

Abstract: Source: US2003080604A [EN] An oil shale formation may be treated using an in situ thermal process. Fluid migration into and/or out of a treatments area in the formation may be inhibited. In some embodiments, a barrier may be used to inhibit migration of fluids into and/or out of the treatment area. Heat may be provided to the treatment area and subsequently, hydrocarbons, H₂, and/or other formation fluids may be produced from the formation.

Classifications:

International (IPC 8-9): C10G1/00 C10G49/00 E21B36/00 E21B42/243 E21B43/00 E21B43/24 E21B43/243 E21B43/247 E21B43/28 E21B43/30 E21B43/40 E21B47/00 E21B49/00

E21C41/24 (Advanced/Invention);
E21B47/00 (Core/Invention)

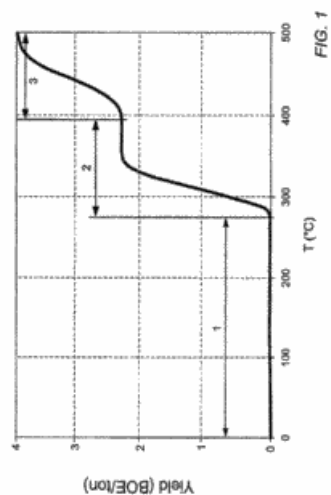
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CPC: E21B43/24 E21B43/2401 E21B43/243 E21B43/247 E21B43/30
European: E21B43/243 E21B43/247 E21B43/30

US: 166/242.1 166/242.100P 166/245 166/250.01 166/250.010P 166/250.07 166/250.070P 166/250.12 166/250.15 166/251.1 166/254.1 166/256 166/256S 166/257 166/261 166/264 166/266 166/267 166/271 166/272.1 166/272.100P 166/272.100S 166/272.2 166/272.3 166/272.7 166/300 166/302 166/302S 166/303 166/308 166/384 166/52 166/57 166/59 166/59S 166/6 166/60 166/60P 166/60S 299/14 299/14P 299/4 299/5 299/5P 299/6 299/7 392/301 392/301P 392/305 392/306 405/130 405/270 405/52 423/131 423/208 423/658.5 507/200 507/200P 585/1 585/2

PatBase - US2003080604_AA

U.S. Patent Apr. 25, 2006 Sheet 1 of 241 US 7,032,660 B2



Family:

Publication number	Publication date	Application number	Application date
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US2003080604 AA	20030501	US20020131352	20020424
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Priority:

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Inventor(s): RYAN ROBERT C

Agent(s): SMART AND BIGGAR

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW

Title: IN SITU THERMAL RECOVERY FROM A RELATIVELY PERMEABLE FORMATION USING GAS TO INCREASE MOBILITY

Abstract: Source: US2003098149A [EN] A method for treating a relatively permeable formation containing heavy hydrocarbons in situ may include providing heat from one or more heat sources to a portion of the formation. The heat may be allowed to transfer from the heat sources to a selected section of the formation. The transferred heat may reduce the viscosity of at least some hydrocarbons within the selected section. A gas may be produced to the selected section of the formation. The gas may produce a flow of hydrocarbons within the selected section. A mixture of hydrocarbons may be produced from the selected section.

Classifications:

International (IPC 8-9): C01B3/24 C10G1/00 C10G47/22 C10G49/00 E21B1/00 E21B17/10 E21B36/00 E21B36/02 E21B36/04 E21B43/14 E21B43/16 E21B43/24 E21B43/243 E21B43/247 E21B43/28 E21B43/295 E21B43/30 E21B43/34 E21B43/40 E21B47/00 E21B47/06 E21B49/00 E21B7/04 (Advanced/Invention); E21B1/00 E21B36/00 E21B43/00 E21B43/16 (Core/Invention)

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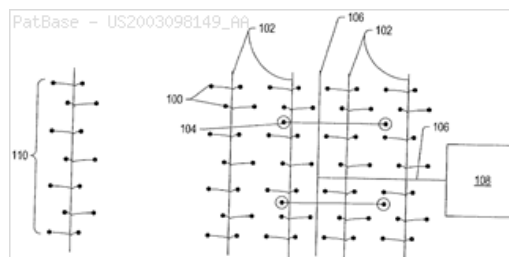
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US: 137/13 166/245 166/250.01 166/250.15 166/256 166/256S 166/257 166/258 166/261 166/263 166/264 166/266 166/267 166/268 166/272.1 166/272.100P 166/272.3 166/272.7 166/302 166/303 166/303S 166/310 166/313 166/369 166/52 166/52P 166/59 166/6 166/60 166/60S 166/75.12 208/370 299/14 507/100 507/100P 585/1 585/2 703/10 705/1



Family:

Publication number	Publication date	Application number	Application date
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Priority:

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Probable Assignee: SHELL OIL CO

Assignee(s): (std): SHELL CANADA LIMITED ; SHELL OIL COMPANY ; SHELL INT RESEARCH MIJ B ; SHELL OIL CO ; SHELL INT RESEARCH ; SHELL CANADA LTD

Assignee(s): SHELL INT RESEARCH MIJ BV ; SHELL INTERNATIONALE RESEARCHMAATSCHAPPIJ B V ; SHELL INTERNATIONALE RESEARCH MAATSCHAPPIJ B V ; SHELL INTERNATIONALE RESEARCH MAATSCHAPPIJ B ; WELLINGTON SCOTT LEE ; VINEGAR HAROLD J ; SUMNU DINDORUK MELIHA DENIZ ; SHELL INTERNATIONALE RESEARCH MAATSCHAPPIJ BV ; STEGEMEIER GEORGE LEO ; SHAHIN GORDON THOMAS ; ZHANG ETUAN ; BERCHENKO ILYA EMIL ; CRANE STEVEN DEXTER ; DE ROUFFIGNAC ERIC PIERRE ; DE ROUFFIGNAC ERIC ; DINDORUK MELIHA DENIZ SUMNU ; ROUFFIGNAC ERIC PIERRE DE ; MAHER KEVIN ALBERT ; ROBERTS BRUCE EDMUNDS ; KARANIKAS JOHN MICHAEL ; MESSIER MARGARET ANN ; RYAN ROBERT CHARLES ; FOWLER THOMAS DAVID ; MESSIER ANN MARGARET

Inventor(s): (std): BERCHENKO ILYA EMIL ; CRANE STEVEN ; CRANE STEVEN DEXTER ; DE ROUFFIGNAC ERIC ; DE ROUFFIGNAC ERIC PIERRE ; DINDORUK MELIHA ; DINDORUK MELIHA DENIZ SUMNU ; FOWLER THOMAS DAVID ; KARANIKAS JOHN M ; KARANIKAS JOHN MICHAEL ; KEEDY CHARLIE R ; MADGAVKAR AJAY M ; MAHER KEVIN ; MAHER KEVIN A ; MAHER KEVIN ALBERT ; MENOTTI JAMES L ; MESSIER ANN ; MESSIER ANN MARGARET ; MESSIER ANNMARGARET ; MESSIER MARGARET ANN ; ROBERTS BRUCE EDMUNDS ; ROUFFIGNAC ERIC PIERRE DE ; RYAN ROBERT C ; RYAN ROBERT CHARLES ; SHAHIN GORDON T ; SHAHIN GORDON THOMAS ; STEGEMEIER GEORGE LEO ; SUMNU DINDORUK MELIHA DENIZ ; VINEGAR HAROLD ; VINEGAR HAROLD J ; WELLINGTON SCOTT ; WELLINGTON SCOTT L ; WELLINGTON SCOTT LEE ; ZHANG ETUAN ; WATKINS WADE ; WARD JOHN M ; VEENSTRA PETER ; VAN HARDEVELD MARTIJN ; SUMNU DINDORUK MELIHA D ; STEGEMEIER GEORGE L ; SHAHIN JR GORDON THOMAS ; SCHOELING LANNY ; ROBERTS BRUCE ; PRATT KIP ; MIKUS TOM ; MICHAEL KARANIKAS JOHN ; MESSIER MARGARET ; LEPPER BRUCE ; HUNSUCKER BRUCE G ; GLANDT CARLOS ; FOWLER THOMAS D ; DEXTER CRANE STEVEN ; CRANE STEVEN D ; CRANE STEVE ; COLES JOHN M ; CARL FRED G ; BIELAMOWICZ LAWRENCE J ; BERCHENKO ILYA E ; BAXLEY PHILIP T ; BASS RONALD ; ROUFFIGNAC ERIC DE ; MARGARET MESSIER ANN ; LEE WELLINGTON SCOTT ; ETUAN ZHANG ; ERIC DE ROUFFIGNAC ; DINDORUK MELIHA DENIZ SUMMU ; KARANICAS JOHN MICHAEL ; ALBERT MAHER KEVIN ; DINDORUK MELIHA DENIZ

Inventor(s): JOHN MICHAEL KARANIKAS ; HAROLD J VINEGAR ; ANN MARGARET MESSIER ; KEVIN ALBERT MAHER ; MELIHA DENIZ SUMNU DINDORUK ; STEVEN DEXTER CRANE ; SCOTT LEE WELLINGTON ; JR GORDON THOMAS ; SHAHIN

Agent(s): SPRUSON AND FERGUSON; SMART AND BIGGAR

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW

Title: ELECTROSEISMIC SURVEYING IN EXPLORATION AND PRODUCTION ENVIRONMENTS

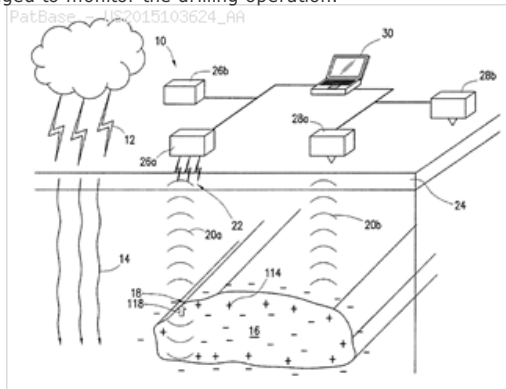
Abstract: Source: US2015103624A [EN] **Systems**, methods, and computer programs for monitoring a drilling operation in a subterranean formation include receiving, from a first **sensor** array, one or more **seismic** signals caused, at least in part, by the drilling operation in the subterranean formation; receiving, from the first **sensor** array, one or more electromagnetic signals generated by an electro **seismic** or seismoelectric conversion of the one or more **seismic** signals caused, at least in part, by the drilling operation in the subterranean formation; and determining a property of one or more of the drillstring and the subterranean formation based, at least in part, on the **seismic** signals and the corresponding electromagnetic signals received from the first **sensor** array. The first **sensor** array is arranged to monitor the drilling operation.

Classifications:

International (IPC 8-9): E21B44/00 E21B47/00 E21B49/00 G01V1/00 G01V1/18 G01V1/20 G01V1/28 G01V1/30 G01V1/40 G01V1/50 G01V11/00 (Advanced/Invention); G01V1/40 (Advanced/Non-invention); E21B44/00 E21B47/00 (Core/Invention)

CPC: G01V1/28 G01V1/181 G01V1/40 G01V2210/32 G01V2210/62 G01V2210/6224 G01V2210/6244 G01V2210/6246 E21B49/00 G01V2210/624 G01V1/306 G01V11/007 G01V1/20

US: 1/1 367/25 367/35 367/7

**Family:**

Publication number	Publication date	Application number	Application date
AU2014334535 AA	20150423	AU20140334535	20141014
AU2014334536 AA	20150423	AU20140334536	20141014
AU2014334538 AA	20150423	AU20140334538	20141014
CA2927504 AA	20160414	CA20142927504	20141014
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CN105531443 A	20160427	CN201480048150	20141014
CN105531603 A	20160427	CN201480049576	20141014
EP3058168 A1	20160824	EP20140853489	20141014
EP3058168 A4	20171101	EP20140853489	20141014
EP3058170 A1	20160824	EP20140854047	20141014
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US2015103625 AA	20150416	US20140512931	20141013
US2015103626 AA	20150416	US20140513002	20141013
US2016131798 AA	20160512	US20160997229	20160115
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US2017261643 AA	20170914	US20170463747	20170320
US9239396 BB	20160119	US20140512900	20141013
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WO15057639 A1	20150423	WO2014US60387	20141014
WO15057640 A1	20150423	WO2014US60388	20141014
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Priority:

US20130890682P 20131014	US20130891096P 20131015	US20140512900 20141013
US20140513002 20141013	US20140512931 20141013	US20160997229 20160115
WO2014US60388 20141014	WO2014US60387 20141014	WO2014US60390 20141014
US20160997237 20160115	US20170463747 20170320	

Probable Assignee: ES XPLORE LLC**Assignee(s):** (std): GRIFFIN MARK ; THOMPSON ARTHUR ; KATZ ALAN ; BENSON TODD W ; ENGLAND ROBERT ; HUNT ENERGY ENTPR L L C ; HUNT ENERGY ENTPR LLC**Assignee(s):** ES XPLORE LLC ; HUNT ENERGY ENTERPRISES LLC**Inventor(s):** (std): ENGLAND ROBERT ; GRIFFIN MARK ; KATZ ALAN ; THOMPSON ARTHUR ; TODD W BENSON ; ROBERT ENGLAND ; MARK GRIFFIN ; BENSON TODD W ; ARTHUR THOMPSON ; ALAN KATZ**Agent(s):** PIZZEYS PATENT AND TRADE MARK ATTORNEYS PTY LTD; KIRBY EADES GALE BAKER; MOORE JOANNE CAMILLA; BAKER BOTTS LLP; WILLIAMS BRADLEY P**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: IN SITU THERMAL PROCESSING OF A RELATIVELY IMPERMEABLE FORMATION IN A REDUCING ENVIRONMENT

Abstract: Source: US2003079877A [EN] A method for treating a relatively low permeability formation containing heavy hydrocarbons in situ may include providing heat from one or more heat sources to a portion of the formation. The heat may be allowed to transfer from the heat sources to a selected section of the formation. The transferred heat may pyrolyze at least some hydrocarbons within the selected section. A mixture of hydrocarbons may be produced from the selected section. In some embodiments, a reducing environment may be maintained in a portion of the formation.

Classifications:

International (IPC 8-9): E21B43/24 E21B43/243 E21B43/247
E21B43/29 E21B43/295 E21B43/30 E21B43/34 E21B43/40
E21B47/06 (Advanced/Invention)

International (IPC 1-7): C10L E21B1/00 E21B43/24 E21B43/30
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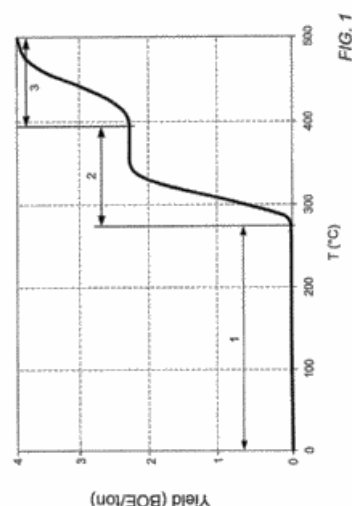
CPC: E21B43/243 E21B43/247 E21B43/30

European: E21B43/243 E21B43/247 E21B43/30

US: 166/245 166/250.01 166/257 166/266 166/267 166/272.1
166/272.100P 166/302 166/57 166/59 166/60 507/200 507/200P
585/1 585/2

PatBase - US2003079877_AA

Patent Application Publication May 1, 2003 Sheet 1 of 208 US 2003/079877 A1



Family:

Publication number	Publication date	Application number	Application date
AU2002303481 AA	20021105	AU20020303481	20020424
AU2002303481 AH	20091119	AU20020303481	20020424
US2003079877 AA	20030501	US20020128695	20020424
US2003130136 AA	20030710	US20020131349	20020424
US2003131995 AA	20030717	US20020128702	20020424
US6782947 BB	20040831	US20020128702	20020424
US7040400 BB	20060509	US20020131349	20020424
WO02086029 A2	20021031	WO2002US13121	20020424
WO2086029 A3	20091001	WO2002US13121	20020424

Priority:

US20010286083P 20010424 US20010340185P 20011024 WO2002US13121 20020424
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Probable Assignee: SHELL OIL CO

Assignee(s): (std): SHELL OIL CO

Assignee(s): SHELL OIL COMPANY ; RYAN ROBERT CHARLES ; WELLINGTON SCOTT LEE ; STEGEMEIER GEORGE LEO ; SHAHIN GORDON THOMAS ; VINEGAR HAROLD J ; ROUFFIGNAC ERIC PIERRE DE ; ZHANG ETUAN ; BERCHENKO ILYA EMIL ; DE ROUFFIGNAC ERIC PIERRE ; FOWLER THOMAS DAVID ; KARANIKAS JOHN MICHAEL ; KEEDY CHARLES ROBERT ; HUNSUCKER BRUCE GERARD

Inventor(s): (std): BERCHENKO ILYA EMIL ; DE ROUFFIGNAC ERIC PIERRE ; FOWLER THOMAS DAVID ; RYAN ROBERT CHARLES ; SHAHIN GORDON THOMAS ; SHAHIN JR GORDON THOMAS ; STEGEMEIER GEORGE LEO ; WELLINGTON SCOTT LEE ; ZHANG ETUAN ; WELLINGTON SCOTT L ; VINEGAR HAROLD J ; SHAHIN GORDON T ; RYAN ROBERT C ; ROUFFIGNAC ERIC PIERRE DE ; MENOTTI JAMES L ; MAHER KEVIN A ; MADGAVKAR AJAY M ; KEEDY CHARLIE R ; KEEDY CHARLES ROBERT ; KARANIKAS JOHN MICHAEL ; KARANIKAS JOHN M ; HUNSUCKER BRUCE GERARD ; WATKINS WADE ; WARD JOHN M ; VEENSTRA PETER ; VAN HARDEVELD MARTIJN ; SUMNU DINDORUK MELIHA D ; STEGEMEIER GEORGE L ; SCHOELING LANNY ; ROBERTS BRUCE ; PRATT KIP ; MIKUS TOM ; MESSIER MARGARET ; LEPPER BRUCE ; HUNSUCKER BRUCE G ; GLANDT CARLOS ; FOWLER THOMAS D ; DE ROUFFIGNAC ERIC ; CRANE STEVE ; COLES JOHN M ; CARL FRED G ; BIELAMOWICZ LAWRENCE J ; BERCHENKO ILYA E ; BAXLEY PHILIP T ; BASS RONALD ; ROUFFIGNAC ERIC DE ; HARDEVELD MARTIJN VAN

Inventor(s): GORDON T SHAHIN ; GEORGE L STEGEMEIER ; FRED G CARL ; ETUAN ZHANG ; ERIC DE ROUFFIGNAC ; CHARLIE R KEEDY ; CARLOS GLANDT ; BRUCE ROBERTS ; BRUCE LEPPER ; BRUCE G HUNSUCKER ; AJAY M MADGAVKAR ; RONALD BASS ; ROBERT C RYAN ; PHILIP T BAXLEY ; PETER VEENSTRA ; MELIHA D SUMNU DINDORUK ; MARTIJN VAN HARDEVELD ; MARGARET MESSIER ; LAWRENCE J BIELAMOWICZ ; LANNY SCHOELING ; KIP PRATT ; KEVIN A MAHER ; JOHN M WARD ; JOHN M KARANIKAS ; JOHN M COLES ; JAMES L MENOTTI ; ILYA E BERCHENKO ; HAROLD J VINEGAR ; WADE WATKINS ; TOM MIKUS ; THOMAS D FOWLER ; STEVE CRANE ; SCOTT L WELLINGTON

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW

Title: **PRESSURE SENSOR** ARRANGEMENT USING AN OPTICAL FIBER AND METHODOLOGIES FOR PERFORMING AN ANALYSIS OF A SUBTERRANEAN FORMATION

Abstract: Source: US2011229071A [EN] A **sensor** arrangement using an optical fiber and methodologies for performing an analysis of a subterranean formation, such as a subterranean formation containing a hydrocarbon based fluid. The **sensor** arrangement may be used to measure one or more physical parameters, such as temperature and/or **pressure**, at a multiplicity of locations in the subterranean reservoir. The **sensor** arrangement may comprise a **sensor** array comprising an elongated outer casing for insertion in the subterranean formation and into a fluid in the subterranean formation. The **sensor** array may comprise an optical fiber defining an optical path that links one or more temperature **sensors** and one or more **pressure sensors** and transports measurement data generated by the temperature and **pressure sensors**. A data processing **system** may be connected to the **sensor** array to receive measurements from the **sensor** array and to compute one or more values of a property of an extraction installation operating on the subterranean formation.

Classifications:

International (IPC 8-9): E21B43/24 E21B47/01 E21B47/06

E21B47/12 G01L1/24 G01L13/00 G01V9/00 G02B6/44

G02B6/50 (Advanced/Invention)

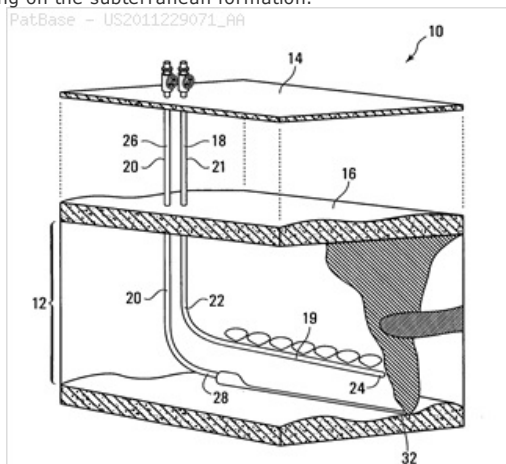
CPC: G01L1/243 E21B43/2406 G02B6/504 G01L1/242 E21B47/06

E21B47/123 G01L1/247 E21B43/2408

European: E21B33/038 E21B43/24S E21B47/06 E21B47/12M2

US: 1/1 385/13 385/13P 73/705

PatBase - US2011229071_AA



Family:

Publication number	Publication date	Application number	Application date
CA2744734 AA	20101028	CA20102744734	20100422
CA2744734 C	20131001	CA20102744734	20100422
CA2790841 AA	20101028	CA20102790841	20100422
CA2790841 C	20140527	CA20102790841	20100422
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US2011229071 AA	20110922	US20100129481	20100422
US2016245071 AA	20160825	US20160147704	20160505
US2018087371 AA	20180329	US20170675505	20170811
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Priority:

CA20102744734	20100422	CA20102790841	20100422	US20090202945P	20090422
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Probable Assignee: WEATHERFORD CANADA LTD

Assignee(s): (std): BALDWIN CHRISTOPHER S ; KIDDY JASON S ; LEFEBVRE PAUL ; LXDATA INC ; NIEMCZUK JOHN B ; VINCELETTE ANDRE R ; WEATHERFORD CANADA PARTNERSHIP

Assignee(s): WEATHERFORD ENGINEERED CHEMISTRY CANADA LTD ; WEATHERFORD CANADA LTD

Inventor(s): (std): VINCELETTE ANDRE R ; NIEMCZUK JOHN B ; LEFEBVRE PAUL ; KIDDY JASON S ; BALDWIN CHRISTOPHER S

Agent(s): SMART AND BIGGAR; DOWELL AND DOWELL P C

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: IN SITU THERMAL PROCESSING OF AN OIL SHALE FORMATION USING A PATTERN OF HEAT SOURCES

Abstract: Source: US2003173080A [EN] A oil shale formation may be treated using an in situ thermal process. A mixture of hydrocarbons, H₂, and/or other formation fluids may be produced from the formation. Heat may be applied to the formation to raise a temperature of a portion of the formation to a pyrolysis temperature. Heat sources may be used to heat the formation. The heat sources may be positioned within the formation in a selected pattern.

Classifications:

International (IPC 8-9): E21B43/24 E21B43/243 E21B43/247 E21B43/30 E21B43/34 E21B47/06 E21C41/24 (Advanced/Invention)

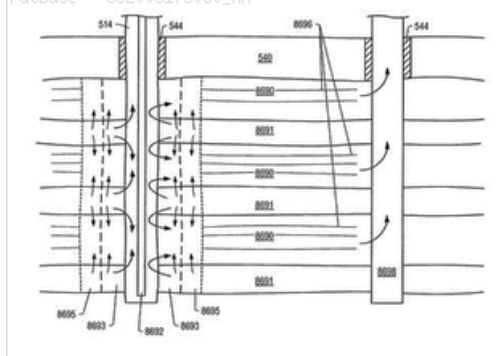
International (IPC 1-7): E21B43/24

CPC: E21B43/24 E21B43/2401 E21B43/243 E21B43/247 E21B43/30

European: E21B43/243 E21B43/247 E21B43/30

US: 166/245 166/250.01 166/250.010S 166/250.1 166/256 166/257 166/257S 166/267 166/267S 166/272.1 166/272.100S 166/302 166/302S 166/57 166/60

PatBase - US2003173080_AA



Title: IN SITU RECOVERY FROM A HYDROCARBON CONTAINING FORMATION USING BARRIERS

Abstract: Source: US2003192691A [EN] A method is described for inhibiting migration of fluids into and/or out of a treatment area undergoing an in situ conversion process. Barriers in the formation proximate a treatment area may be used to inhibit migration of fluids. Inhibition of migration of fluids may occur before, during, and/or after an in situ treatment process. For example, migration of fluids may be inhibited while heat is provided from heaters to at least a portion of the treatment area. Barriers may include naturally occurring portions (e.g., overburden, and/or underburden) and/or installed portions.

Classifications:

International (IPC 8-9): B09C1/02 B09C1/06 C10G45/00 C10G9/24 E21B17/02 E21B36/00 E21B43/16 E21B43/24 E21B43/243

E21B43/30 E21B44/00 E21B47/022 G01V3/26 (Advanced/Invention)

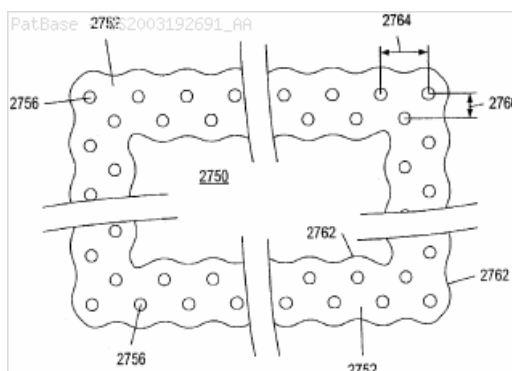
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CPC: E21B43/2401 B09C1/02 B09C1/06 B09C2101/00 C10G9/24 C10G45/00 E21B17/028 E21B43/168 E21B43/24 E21B43/243

E21B43/305 E21B47/02208 G01V3/26 Y02P30/30 Y02P30/44

Y10S210/901 Y10T137/0391

US: 166/245 166/250.01 166/250.12 166/254.1 166/272.1 166/302 166/52 299/6 405/130 405/131 405/270 405/52



Family:

Publication number	Publication date	Application number	Application date
US2003192691 AA	20031016	US20020279291	20021024
US7077198 BB	20060718	US20020279291	20021024

Priority:

US20010334568P 20011024 US20010337136P 20011024 US20020279291 20021024
US20020374970P 20020424 US20020374995P 20020424

Probable Assignee: SHELL OIL CO

Assignee(s): (std): SHELL OIL CO

Assignee(s): WELLINGTON SCOTT LEE ; AYMOND DANNIE ANTOINE ; MAHER KEVIN ALBERT ; MCKINZIE BILLY J ; VINEGAR HAROLD J ; PALFREYMAN BRUCE DONALD ; WATKINS RONNIE WADE ; STEGEMEIER GEORGE LEO ; WARD JOHN MICHAEL

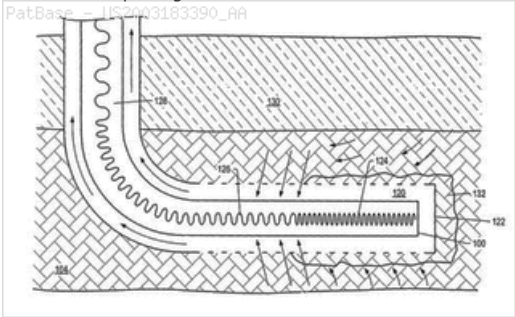
Inventor(s): (std): WELLINGTON SCOTT LEE ; WATKINS RONNIE WADE ; WARD JOHN MICHAEL ; VINEGAR HAROLD J ; STEGEMEIER GEORGE LEO ; PALFREYMAN BRUCE DONALD ; MCKINZIE II BILLY JOHN ; MCKINZIE BILLY J ; MAHER KEVIN ALBERT ; AYMOND JR DANNIE ANTOINE ; AYMOND DANNIE ANTOINE

Title: METHODS AND **SYSTEMS** FOR HEATING A HYDROCARBON CONTAINING FORMATION IN SITU WITH AN OPENING CONTACTING THE EARTH'S SURFACE AT TWO LOCATIONS

Abstract: Source: US2003183390A [EN] In an embodiment, a method for heating a hydrocarbon containing formation may include providing heat from one or more heaters to an opening in the formation. A first end of the opening may contact the earth's surface at a first location and a second end of the opening may contact the earth's surface at a second location. The heat may be allowed to transfer from the opening to at least a part of the formation. The transferred heat may pyrolyze at least some hydrocarbons in the formation. In certain embodiments, providing the heat to the opening may include providing heat, heated materials, and/or oxidation products from at least one heater to the opening.

Classifications:

International (IPC 8-9): B09C1/02 B09C1/06 C10G45/00 C10G9/24 E21B17/02 E21B36/00 E21B36/02 E21B43/16 E21B43/24 E21B43/243 E21B43/30 E21B44/00 E21B47/022 E21B7/04 G01V3/26 (Advanced/Invention)
International (IPC 1-7): E21B36/00
CPC: E21B43/2401 B09C1/02 B09C1/06 B09C2101/00 C10G9/24 C10G45/00 E21B17/028 E21B43/168 E21B43/24 E21B43/243 E21B43/305 E21B47/02208 G01V3/26 Y02P30/30 Y02P30/44 Y10S210/901 Y10T137/0391
US: 166/250.01 166/272.7 166/302 166/313 166/384 166/50 166/59 175/45 175/53 175/61 175/62 405/154.1 405/184 405/184.1



Family:

Publication number	Publication date	Application number	Application date
US2003183390 AA	20031002	US20020279292	20021024
US7063145 BB	20060620	US20020279292	20021024

Priority:

US20010334568P 20011024 US20010337136P 20011024 US20020279292 20021024
US20020374970P 20020424 US20020374995P 20020424

Probable Assignee: SHELL OIL CO

Assignee(s): (std): SHELL OIL CO

Assignee(s): VEENSTRA PETER ; VINEGAR HAROLD J ; WELLINGTON SCOTT LEE ; DE ROUFFIGNAC ERIC PIERREUS ; KARANIKAS JOHN MICHAEL

Inventor(s): (std): DE ROUFFIGNAC ERIC PIERRE ; DE ROUFFIGNAC ERIC PIERREUS ; KARANIKAS JOHN MICHAEL ; VEENSTRA PETER ; VINEGAR HAROLD J ; WELLINGTON SCOTT LEE

Title: FORMING OPENINGS IN A HYDROCARBON CONTAINING FORMATION USING MAGNETIC TRACKING

Abstract: Source: US2003173072A [EN] A method for forming one or more openings in a hydrocarbon containing formation is described. The method may include forming or providing a first opening in the formation. A plurality of magnets may be provided into the first opening. The plurality of magnets may be positioned along a portion of the first opening. The plurality of magnets may produce a series of magnetic fields along the portion of the first opening. A second opening in the formation may be formed using magnetic tracking of the series of magnetic fields. The second opening may be spaced a desired distance from the first opening. Alternate embodiments include use of an energized conduit to create a magnetic field. Such energized conduit can be used alone or with the plurality of magnets.

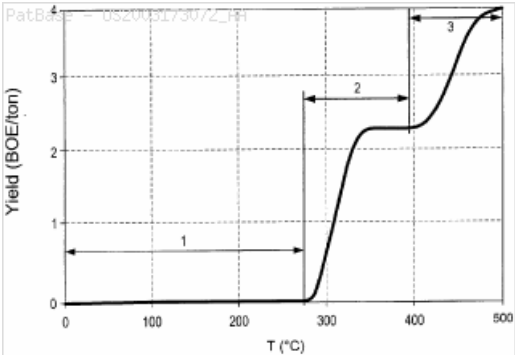
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International (IPC 1-7): E21B43/24

CPC: E21B43/2401 B09C1/02 B09C1/06 B09C2101/00 C10G9/24 C10G45/00 E21B17/028 E21B43/168 E21B43/24 E21B43/243 E21B43/305 E21B47/02208 G01V3/26 Y02P30/30 Y02P30/44 Y10S210/901 Y10T137/0391

US: 166/66.5 175/45 175/61 175/62 324/346



Family:

Publication number	Publication date	Application number	Application date
US2003173072 AA	20030918	US20020279289	20021024
US6991045 BB	20060131	US20020279289	20021024

Priority:

US20010334568P 20011024 US20010337136P 20011024 US20020279289 20021024
US20020374970P 20020424 US20020374995P 20020424

Probable Assignee: SHELL OIL CO

Assignee(s): (std): SHELL OIL CO

Assignee(s): WAGNER RANDOLPH ROGERS ; HARRIS CHRISTOPHER KELVIN ; HARTMANN ROBIN ADRIANUS ; VINEGAR HAROLD J ; PRATT CHRISTOPHER ARNOLD ; LEPPER GORDON BRUCE

Inventor(s): (std): HARRIS CHRISTOPHER KELVIN ; HARTMANN ROBIN ADRIANUS ; VINEGAR HAROLD J ; WAGNER RANDOLPH ROGERS ; PRATT CHRISTOPHER ARNOLD ; LEPPER GORDON BRUCE

Title: IN SITU RECOVERY FROM LEAN AND RICH ZONES IN A HYDROCARBON CONTAINING FORMATION

Abstract: Source: US2003205378A [EN] A method for treating lean and rich zones of a hydrocarbon containing formation is provided. In one embodiment, heat from one or more heaters may be provided to at least a portion of the formation. Heat may be allowed to transfer from the one or more heaters to a first part of the formation. In certain embodiments, the heat from the one or more heaters may pyrolyze at least some hydrocarbons within the first part of the formation. The method may include producing a mixture through a second part of the formation. In some embodiments, the produced mixture may include at least some pyrolyzed hydrocarbons from the first part of the formation. In an embodiment, the second part of the formation may have a higher permeability than the first part of the formation.

Classifications:

International (IPC 8-9): B09C1/02 B09C1/06 C10G45/00 C10G9/24

E21B17/02 E21B36/00 E21B43/16 E21B43/24 E21B43/243

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G01V3/26 (Advanced/Invention)

International (IPC 1-7): E21B43/24

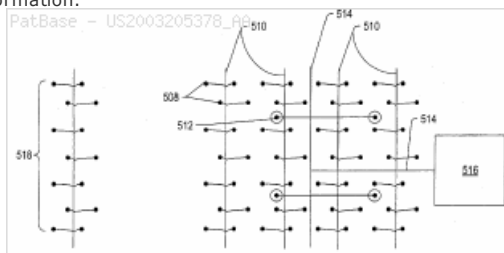
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E21B43/305 E21B47/02208 G01V3/26 Y02P30/30 Y02P30/44

Y10S210/901 Y10T137/0391

US: 166/271 166/272.1 166/272.2 166/302 166/308 166/60



Family:

Publication number	Publication date	Application number	Application date
US2003205378 AA	20031106	US20020279222	20021024
US7066257 BB	20060627	US20020279222	20021024

Priority:

US20010334568P 20011024 US20010337136P 20011024 US20020279222 20021024
US20020374970P 20020424 US20020374995P 20020424

Probable Assignee: SHELL OIL CO

Assignee(s): (std): SHELL OIL CO

Assignee(s): VINEGAR HAROLD J ; WELLINGTON SCOTT LEE ; ROUFFIGNAC ERIC PIERRE DE

Inventor(s): (std): DE ROUFFIGNAC ERIC PIERRE ; ROUFFIGNAC ERIC PIERRE DE ; VINEGAR HAROLD J ; WELLINGTON SCOTT LEE

Title: IN SITU THERMAL PROCESSING OF A HYDROCARBON CONTAINING FORMATION VIA BACKPRODUCING THROUGH A HEATER WELL

Abstract: Source: US2003196801A [EN] A process for producing hydrocarbons through a heater wellbore positioned in a hydrocarbon containing formation. The in situ treatment process may include providing heat from one or more heaters to at least a portion of the formation. The heat may be allowed, in some embodiments, to transfer from one or more heaters to a selected section of the formation. Heat that is allowed to transfer to the selected section may pyrolyze at least some of the hydrocarbons within the selected section. The process may include, in some embodiments, selectively limiting a temperature proximate a selected portion of a heater wellbore to inhibit coke formation at or near the selected portion. In some embodiments fluids may be produced at certain locations of a heater wellbore such that coke formation is inhibited.

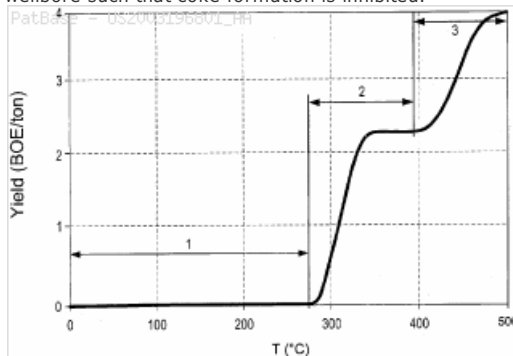
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International (IPC 1-7): E21B43/24 E21B43/30

CPC: E21B43/2401 B09C1/02 B09C1/06 B09C2101/00 C10G9/24 C10G45/00 E21B17/028 E21B43/168 E21B43/24 E21B43/243 E21B43/305 E21B47/02208 G01V3/26 Y02P30/30 Y02P30/44 Y10S210/901 Y10T137/0391

US: 166/245 166/263 166/272.1 166/272.7 166/302 166/303



Family:

Publication number	Publication date	Application number	Application date
US2003196801 AA	20031023	US20020279221	20021024
US6932155 BB	20050823	US20020279221	20021024

Priority:

US20010334568P 20011024 US20010337136P 20011024 US20020279221 20021024
US20020374970P 20020424 US20020374995P 20020424

Probable Assignee: SHELL OIL CO

Assignee(s): (std): SHELL OIL CO

Assignee(s): KARANIKAS JOHN MICHAEL ; ROUFFIGNAC ERIC PIERRE DE ; WELLINGTON SCOTT LEE ; VINEGAR HAROLD J

Inventor(s): (std): DE ROUFFIGNAC ERIC PIERRE ; KARANIKAS JOHN MICHAEL ; WELLINGTON SCOTT LEE ; VINEGAR HAROLD J ; ROUFFIGNAC ERIC PIERRE DE

Title: IN SITU PRODUCTION OF A BLENDING AGENT FROM A HYDROCARBON CONTAINING FORMATION

Abstract: Source: US2004040715A [EN] An in situ process for treating a hydrocarbon containing formation is provided. The process may include providing heat from one or more heaters to at least a portion of the formation. The heat may be allowed to transfer from the reaction zone to a part of the formation such that heat from one or more heaters pyrolyzes at least some hydrocarbons within the part of the formation. A blending agent may be produced from the part of the formation, wherein a mixture produced with the blending agent has at least one selected property.

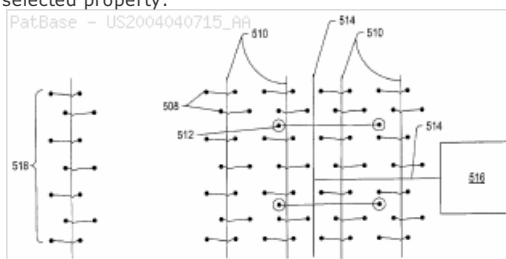
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International (IPC 1-7): E21B43/24

CPC: E21B43/2401 B09C1/02 B09C1/06 B09C2101/00 C10G9/24 C10G45/00 E21B17/028 E21B43/168 E21B43/24 E21B43/243 E21B43/305 E21B47/02208 G01V3/26 Y02P30/30 Y02P30/44 Y10S210/901 Y10T137/0391

US: 137/13 166/272.1 166/279 166/302 166/303 166/310 166/75.12 208/370



Family:

Publication number	Publication date	Application number	Application date
US2004040715 AA	20040304	US20020279227	20021024
US7086465 BB	20060808	US20020279227	20021024

Priority:

US20010334568P 20011024 US20010337136P 20011024 US20020279227 20021024
US20020374970P 20020424 US20020374995P 20020424

Probable Assignee: SHELL OIL CO

Assignee(s): (std): SHELL OIL CO

Assignee(s): KARANIKAS JOHN MICHAEL ; MAHER KEVIN ALBERT ; WELLINGTON SCOTT LEE ; SUMNU DINDORUK MELIHA DENIZ ; VINEGAR HAROLD J

Inventor(s): (std): WELLINGTON SCOTT LEE ; VINEGAR HAROLD J ; SUMNU DINDORUK MELIHA DENIZ ; MAHER KEVIN ALBERT ; KARANIKAS JOHN MICHAEL

Title: PRODUCING HYDROCARBONS AND NON-HYDROCARBON CONTAINING MATERIALS WHEN TREATING A HYDROCARBON CONTAINING FORMATION

Abstract: Source: US2003196788A [EN] A method for treating a hydrocarbon containing formation is provided. In one embodiment, heat from one or more heaters may be provided to at least a portion of the formation. Heat may be allowed to transfer from the one or more heaters to at least a part of the formation. In certain embodiments, the heat from the one or more heaters may pyrolyze at least some hydrocarbons within the formation. In an embodiment, a first fluid may be introduced into at least a portion of the formation. The portion may have previously undergone an in situ conversion process. A mixture of the first fluid and a second fluid (or a second compound) may be produced from the formation. In some embodiments, a first fluid may be provided to the formation prior to pyrolyzing hydrocarbons in the formation, and a second fluid (or a second compound) may be produced prior to pyrolyzing hydrocarbons in the formation. In some embodiments the second fluid or second compound include minerals, metals, salts, or other compounds that may be recovered.

Classifications:

International (IPC 8-9): B09C1/02 B09C1/06 C10G45/00 C10G9/24

E21B17/02 E21B36/00 E21B41/00 E21B43/16 E21B43/24

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E21B44/00 E21B47/022 G01V3/26 (Advanced/Invention)

International (IPC 1-7): E21B36/00

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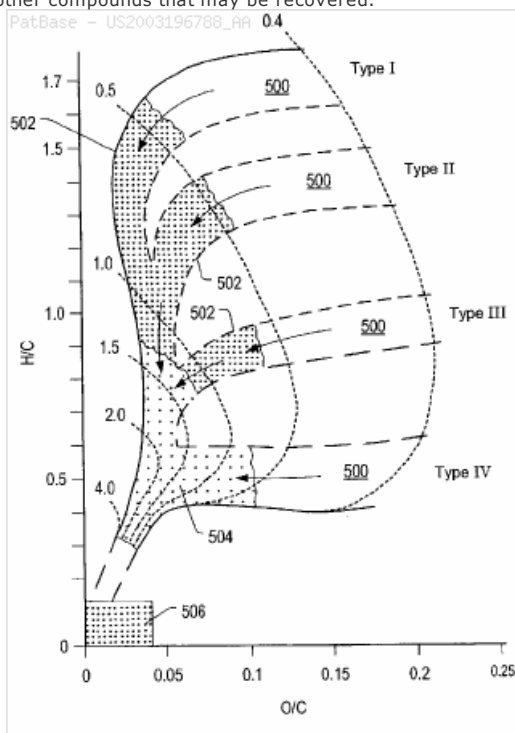
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Y10S210/901 Y10T137/0391

US: 166/245 166/267 166/272.1 166/272.3 166/302 166/303

166/308 166/57 299/14 299/3 299/5 299/7 423/131 423/208

423/658.5



Family:

Publication number	Publication date	Application number	Application date
US2003196788 AA	20031023	US20020279229	20021024
US7100994 BB	20060905	US20020279229	20021024

Priority:

US20010334568P 20011024 US20010337136P 20011024 US20020279229 20021024
US20020374970P 20020424 US20020374995P 20020424

Probable Assignee: SHELL OIL CO

Assignee(s): (std): SHELL OIL CO

Assignee(s): VINEGAR HAROLD J ; WELLINGTON SCOTT LEE ; MAHER KEVIN ALBERT ; ROUFFIGNAC ERIC PIERRE DE ; SCHOELING LANNY GENE

Inventor(s): (std): DE ROUFFIGNAC ERIC PIERRE ; MAHER KEVIN ALBERT ; ROUFFIGNAC ERIC PIERRE DE ; SCHOELING LANNY GENE ; VINEGAR HAROLD J ; WELLINGTON SCOTT LEE

Title: IN SITU THERMAL PROCESSING OF A HYDROCARBON CONTAINING FORMATION TO PRODUCE HEATED FLUIDS

Abstract: Source: US2003192693A [EN] A process for utilizing the heat from fluids produced from a hydrocarbon containing formation, which has been treated in situ. The in situ treatment process may include providing heat from one or more heaters to at least a portion of the formation. The heat may be allowed to transfer from one or more heaters to a part of the formation such that heat from the one or more heaters pyrolyzes at least some hydrocarbons within the part of the formation. Hydrocarbons may be produced from the formation. In an embodiment, heat from the produced fluids may be used for other processes. Examples of other processes may include, but are not limited to, hydrotreating, separations, steam cracking, olefin production, etc.

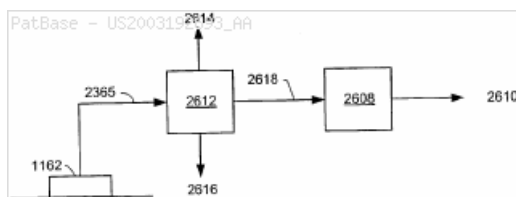
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International (IPC 1-7): E21B43/34

CPC: E21B41/0064 Y02C10/14

US: 166/267 166/302 208/213 585/648 585/652



Family:

Publication number	Publication date	Application number	Application date
US2003192693 AA	20031016	US20020279290	20021024
US7090013 BB	20060815	US20020279290	20021024

Priority:

US20010334568P 20011024 US20010337136P 20011024 US20020279290 20021024
US20020374970P 20020424 US20020374995P 20020424

Probable Assignee: SHELL OIL CO

Assignee(s): (std): SHELL OIL CO

Assignee(s): SHELL OIL COMPANY ; WELLINGTON SCOTT LEE

Inventor(s): (std): WELLINGTON SCOTT LEE

Title: TREATMENT OF A HYDROCARBON CONTAINING FORMATION AFTER HEATING

Abstract: Source: US2003196810A [EN] A method for treating a hydrocarbon containing formation is provided. In one embodiment, heat from one or more heaters may be provided to at least a portion of the formation. Heat may be allowed to transfer from the one or more heaters to at least a part of the formation. In certain embodiments, the heat from the one or more heaters may pyrolyze at least some hydrocarbons in the formation. In an embodiment, a first fluid may be introduced into at least a portion of the formation. The portion may have previously undergone an in situ conversion process. A mixture of the first fluid and a second fluid may be produced from the formation. Such mixture may, in some embodiments, be treated or burned.

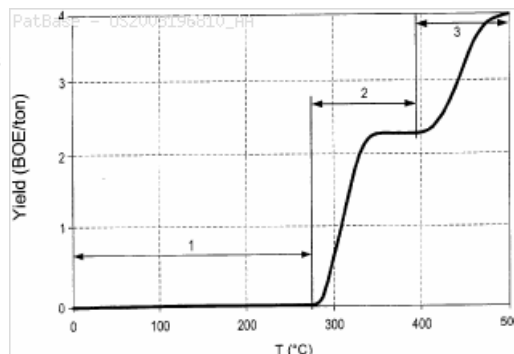
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International (IPC 1-7): E21B43/24

CPC: E21B43/2401 B09C1/02 B09C1/06 B09C2101/00 C10G9/24 C10G45/00 E21B17/028 E21B43/168 E21B43/24 E21B43/243 E21B43/305 E21B47/02208 G01V3/26 Y02P30/30 Y02P30/44 Y10S210/901 Y10T137/0391

US: 166/245 166/285 166/300 166/302 166/305.1 210/901 405/128.48 405/128.5

**Family:**

Publication number	Publication date	Application number	Application date
US2003196810 AA	20031023	US20020279294	20021024
US7128153 BB	20061031	US20020279294	20021024

Priority:

US20010334568P 20011024 US20010337136P 20011024 US20020279294 20021024
US20020374970P 20020424 US20020374995P 20020424

Probable Assignee: SHELL OIL CO

Assignee(s): (std): SHELL OIL CO

Assignee(s): MADGAVKAR AJAY MADHAV ; MAHER KEVIN ALBERT ; MCKINZIE BILLY JOHN ; PALFREYMAN BRUCE DONALD ; ROUFFIGNAC ERIC PIERRE DE ; VINEGAR HAROLD J ; WELLINGTON SCOTT LEE ; STEGEMEIER GEORGE LEO ; RYAN ROBERT CHARLES ; WARD JOHN MICHAEL

Inventor(s): (std): DE ROUFFIGNAC ERIC PIERRE ; MADGAVKAR AJAY MADHAV ; MAHER KEVIN ALBERT ; MCKINZIE BILLY JOHN ; MCKINZIE II BILLY JOHN ; PALFREYMAN BRUCE DONALD ; ROUFFIGNAC ERIC PIERRE DE ; RYAN ROBERT CHARLES ; STEGEMEIER GEORGE LEO ; VINEGAR HAROLD J ; WARD JOHN MICHAEL ; WELLINGTON SCOTT LEE

Title: IN SITU RECOVERY FROM A HYDROCARBON CONTAINING FORMATION USING CONDUCTOR-IN-CONDUIT HEAT SOURCES WITH AN ELECTRICALLY CONDUCTIVE MATERIAL IN THE OVERBURDEN

Abstract: Source: US2004020642A [EN] In an embodiment, a **system** may be used to heat a hydrocarbon containing formation. The **system** may include a conduit placed within an opening in the formation. A conductor may be placed within the conduit. The conductor may provide heat to a portion of the formation. In some embodiments, an electrically conductive material may be coupled to a portion of the conductor in the overburden. The electrically conductive material may lower the electrical resistance of the portion of the conductor in the overburden. Lowering the electrical resistance of the portion of the conductor in the overburden may reduce the heat output of the portion in the overburden. The **system** may allow heat to transfer from the conductor to a section of the formation.

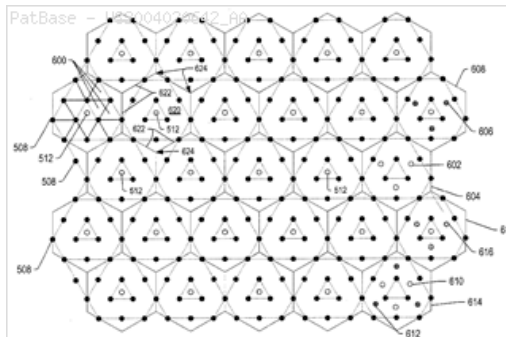
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International (IPC 8-9): B09C1/02 B09C1/06 E21B17/02 E21B43/00 E21B47/022 G01V3/26 (Advanced/Invention)

International (IPC 1-7): E21B43/30

CPC: B09C1/02 B09C1/06 B09C2101/00 E21B17/028 E21B47/02208 G01V3/26

US: 166/245 166/302 392/301



Family:

Publication number	Publication date	Application number	Application date
US2004020642 AA	20040205	US20020279288	20021024
US7165615 BB	20070123	US20020279288	20021024

Priority:

US20010334568P 20011024	US20010337136P 20011024	US20020279288 20021024
US20020374970P 20020424	US20020374995P 20020424	US20020279228 20021024

Probable Assignee: SHELL OIL CO

Assignee(s): (std): SHELL OIL CO

Assignee(s): SHELL OIL COMPANY ; VINEGAR HAROLD J ; BASS RONALD MARSHALL

Inventor(s): (std): BASS RONALD MARSHALL ; VINEGAR HAROLD J

Title: IN SITU RECOVERY FROM A HYDROCARBON CONTAINING FORMATION USING ONE OR MORE SIMULATIONS

Abstract: Source: US2003201098A [EN] **Systems** and methods of using a computer **system** to simulate a process for in situ treatment of a hydrocarbon containing formation are provided. The in situ process may include providing heat from one or more heat sources to at least one portion of the formation. The in situ process may, in some embodiments, include allowing the heat to transfer from the one or more heat sources to a selected section of the formation. In some embodiments, the method may include operating the in situ process using one or more operating parameters. At least one operating parameter of the in situ process may be provided to the computer **system**. In certain embodiments, at least one parameter may be used with a simulation method and the computer **system** to provide assessed information about the in situ process.

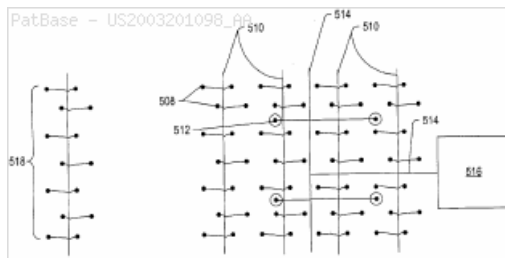
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International (IPC 1-7): E21B44/00

CPC: E21B43/2401 B09C1/02 B09C1/06 B09C2101/00 C10G9/24 C10G45/00 E21B17/028 E21B43/168 E21B43/24 E21B43/243 E21B43/305 E21B47/02208 G01V3/26 Y02P30/30 Y02P30/44 Y10S210/901 Y10T137/0391

US: 166/53 702/12



Family:

Publication number	Publication date	Application number	Application date
US2003201098 AA	20031030	US20020279224	20021024

Priority:

US20010334568P 20011024	US20010337136P 20011024	US20020279224 20021024
US20020374970P 20020424	US20020374995P 20020424	

Probable Assignee: SHELL OIL CO

Assignee(s): BERCHENKO ILYA EMIL ; GINESTRA JEAN CHARLES ; HANSEN KIRK SAMUEL ; KARANIKAS JOHN MICHAEL ; ROUFFIGNAC ERIC PIERRE DE ; VINEGAR HAROLD J ; SHAHIN GORDON THOMAS ; SCHOELING LANNY GENE ; SUMNU DINDORUK MELIHA DENIZ ; SHELL OIL CO

Inventor(s): (std): BERCHENKO ILYA EMIL ; GINESTRA JEAN CHARLES ; HANSEN KIRK SAMUEL ; KARANIKAS JOHN MICHAEL ; ROUFFIGNAC ERIC PIERRE DE ; SCHOELING LANNY GENE ; SHAHIN GORDON THOMAS ; SUMNU DINDORUK MELIHA DENIZ ; VINEGAR HAROLD J

Title: IN SITU THERMAL PROCESSING OF A HYDROCARBON CONTAINING FORMATION AND UPGRADING OF PRODUCED FLUIDS PRIOR TO FURTHER TREATMENT

Abstract: Source: US2003196789A [EN] An in situ treatment process may include providing heat from one or more heaters to at least a portion of the formation. The heat may be allowed to transfer from the one or more heaters to a part of the formation. A fluid may be produced from at least part of the formation. Heat and/or other products in or from fluids produced from the formation may be used for hydrotreating.

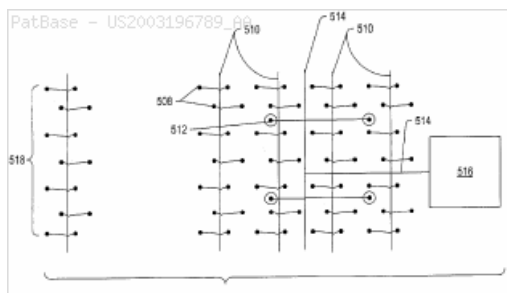
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International (IPC 1-7): E21B43/24

CPC: E21B43/2401 B09C1/02 B09C1/06 B09C2101/00 C10G9/24 C10G45/00 E21B17/028 E21B43/168 E21B43/24 E21B43/243 E21B43/305 E21B47/02208 G01V3/26 Y02P30/30 Y02P30/44 Y10S210/901 Y10T137/0391

US: 166/64



Family:

Publication number	Publication date	Application number	Application date
US2003196789 AA	20031023	US20020279226	20021024

Priority:

US20010334568P 20011024	US20010337136P 20011024	US20020279226 20021024
US20020374970P 20020424	US20020374995P 20020424	

Probable Assignee: SHELL OIL CO

Assignee(s): MADGAVKAR AJAY MADHAV ; RYAN ROBERT CHARLES ; SHELL OIL CO ; WELLINGTON SCOTT LEE

Inventor(s): (std): MADGAVKAR AJAY MADHAV ; RYAN ROBERT CHARLES ; WELLINGTON SCOTT LEE

Title: IN SITU THERMAL PROCESSING OF A HYDROCARBON CONTAINING FORMATION

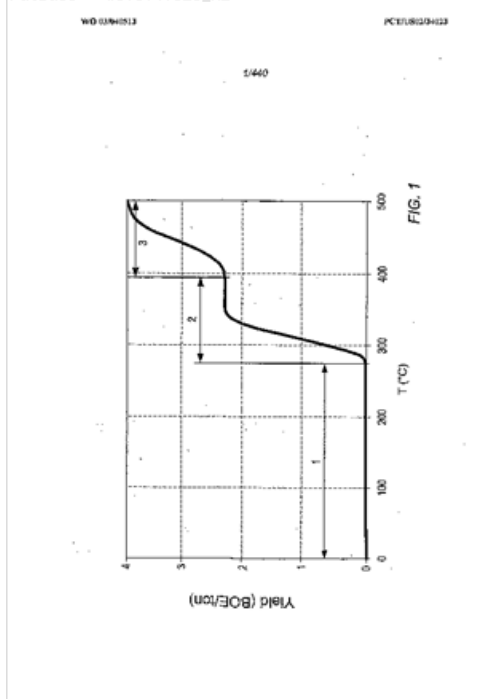
Abstract: An in situ process for treating a hydrocarbon containing formation is provided. The process may include providing heat from one or more heaters to at least a portion of the formation. The heat may be allowed to transfer from the one or more heaters to a part of the formation such that heat from the one or more heat sources pyrolyzes at least some hydrocarbons within the part. Hydrocarbons may be produced from the formation.

Classifications:

International (IPC 8-9): B09C1/02 B09C1/06 C01B3/24 C10G45/00 C10G47/22 C10G49/00 C10G9/24 E21B17/02 E21B36/00 E21B43/16 E21B43/24 E21B43/243 E21B43/295 E21B43/30 E21B43/34 E21B44/00 E21B47/022 G01V3/26 (Advanced/Invention)

CPC: E21B43/2401 B09C1/02 B09C1/06 B09C2101/00 C10G9/24 C10G45/00 E21B17/028 E21B43/168 E21B43/24 E21B43/243 E21B43/305 E21B47/02208 G01V3/26 Y02P30/30 Y02P30/44 Y10S210/901 Y10T137/0391

PatBase - WO03040513_A2



Family:

Publication number	Publication date	Application number	Application date
AU2002349904 AA	20030519	AU20020349904	20021024
AU2002349904 AH	20090730	AU20020349904	20021024
WO03040513 A2	20030515	WO2002US34023	20021024
WO03040513 A3	20090611	WO2002US34023	20021024

Priority:

US20010334568P 20011024 US20010337136P 20011024 US20020374970P 20020424
US20020374995P 20020424 WO2002US34023 20021024

Probable Assignee: SHELL OIL CO

Assignee(s): (std): SHELL CANADA LTD ; SHELL OIL CO

Inventor(s): (std): AYMOND DANNIE ANTOINE JR ; BAI TAI XU ; BASS RONALD MARSHALL ; BAXLEY PHILLIP TEMMONS ; BERCHENKO ILYA EMIL ; BIELAMOWICZ LAWRENCE JAMES ; CARL JR FREDRICK GORDON ; COLE ANTHONY THOMAS ; COLES JOHN MATTHEW ; CRANE STEVEN DEXTER ; DE ROUFFIGNAC ERIC PIERRE ; DEMARTINI DAVID CHARLES ; FOWLER THOMAS DAVID ; HARRIS CHRISTOPHER KELVIN ; HUNSUCKER BRUCE GERARD ; GINESTRA JEAN CHARLES ; GLANDT CARLOS ALBERTO ; HANSEN KIRK SAMUEL ; HARDEVELD ROBERT MARTIJN VAN ; KARANIKAS JOHN MICHAEL ; KEEDY CHARLES ROBERT ; LEPPER GORDON BRUCE ; MADGAVKAR AJAY MADHAV ; MAHER KEVIN ALBERT ; MENOTTI JAMES LOUIS ; MESSIER MARGARET ANN ; MIKUS THOMAS ; PALFREYMAN BRUCE DONALD ; PRATT CHRISTOPHER ARNOLD ; MCKINZIE BILLY JOHN II ; ROBERTS BRUCE EDMUNDS ; ROUFFIGNAC ERIC PIERRE DE ; RYAN ROBERT CHARLES ; SANDBERG CHESTER L ; SCHOELING LANNY GENE ; SHAHIN JR GORDON THOMAS ; SON JAIME S ; STEGEMEIER GEORGE LEO ; VAN HARDEVELD ROBERT MARTIJN ; VEENSTRA PETER ; VINEGAR HAROLD J ; WAGNER RANDOLPH R ; WARD JOHN MICHAEL ; WATKINS RONNIE WADE ; WELLINGTON SCOTT LEE ; ZHANG ETUAN ; STONE FRANCIS M JR ; SUMNU DINDORUK MELIHA DENIZ

Inventor(s): TAI XU BAI ; THOMAS DAVID FOWLER ; THOMAS MIKUS ; STEVEN DEXTER CRANE ; STONE FRANCIS M ; SCOTT LEE WELLINGTON ; RONALD MARSHALL BASS ; RONNIE WADE WATKINS ; MELIHA DENIZ SUMNU DINDORUK ; RANDOLPH R WAGNER ; ROBERT CHARLES RYAN ; ROBERT MARTIJN VAN HARDEVELD ; PETER VEENSTRA ; PHILLIP TEMMONS BAXLEY ; MARGARET ANN MESSIER ; KEVIN ALBERT MAHER ; KIRK SAMUEL HANSEN ; LANNY GENE SCHOELING ; LAWRENCE JAMES BIELAMOWICZ ; HAROLD J VINEGAR ; GORDON BRUCE LEPPER ; ILYA EMIL BERCHENKO ; JAIME S SON ; JAMES LOUIS MENOTTI ; JEAN CHARLES GINESTRA ; JOHN MATTHEW COLES ; JOHN MICHAEL KARANIKAS ; JOHN MICHAEL WARD ; JR FREDRICK GORDON CARL ; JR GORDON THOMAS SHAHIN ; FRANCIS M JR STONE ; GEORGE LEO STEGEMEIER ; AJAY MADHAV MADGAVKAR ; ANTHONY THOMAS COLE ; ERIC PIERRE DE ROUFFIGNAC ; ETUAN ZHANG ; DANNIE ANTOINE JR AYMOND ; DAVID CHARLES DEMARTINI ; CARLOS ALBERTO GLANDT ; CHARLES ROBERT KEEDY ; CHESTER L SANDBERG ; CHRISTOPHER ARNOLD PRATT ; CHRISTOPHER KELVIN HARRIS ; BILLY JOHN II MCKINZIE ; BRUCE DONALD PALFREYMAN ; BRUCE EDMUNDS ROBERTS ; BRUCE GERARD HUNSUCKER

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW

Title: IN SITU RECOVERY FROM A HYDROCARBON CONTAINING FORMATION

Abstract: Source: US2010126727A [EN] An in situ process for treating a hydrocarbon containing formation is provided. The process may include providing heat from one or more heaters to at least a portion of the formation. The heat may be allowed to transfer from the one or more heaters to a part of the formation such that heat from the one or more heat sources pyrolyzes at least some hydrocarbons within the part. Hydrocarbons may be produced from the formation.

Classifications:

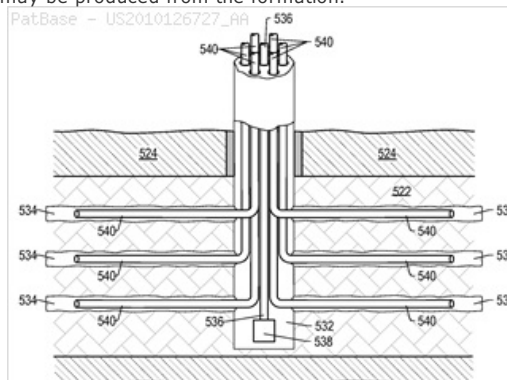
International (IPC 8-9): B09C1/02 B09C1/06 C10G45/00 C10G9/24

E21B17/02 E21B36/00 E21B43/02 E21B43/16 E21B43/24

E21B43/243 E21B43/30 E21B44/00 E21B47/022

G01V3/26 (Advanced/Invention)

US: 166/272.1 166/302



Family:

Publication number	Publication date	Application number	Application date
US2010126727 AA	20100527	US20080329942	20081208
US8627887 BB	20140114	US20080329942	20081208

Priority:

US20010334568P	20011024	US20010337136P	20011024	US20070657442	20070123
US20020279288	20021024	US20020374970P	20020424	US20020374995P	20020424
US20080329942	20081208				

Probable Assignee: SHELL OIL CO

Assignee(s): (std): CRANE STEVEN DEXTER ; DE ROUFFIGNAC ERIC PIERRE ; MESSIER MARGARET ANN ; MAHER KEVIN ALBERT ; ROBERTS BRUCE EDMUNDS ; KARANIKAS JOHN MICHAEL ; SHELL OIL CO ; VINEGAR HAROLD J ; WELLINGTON SCOTT LEE ; SUMNU DINDORUK MELIHA DENIZ

Inventor(s): (std): CRANE STEVEN DEXTER ; DE ROUFFIGNAC ERIC PIERRE ; KARANIKAS JOHN MICHAEL ; MESSIER MARGARET ANN ; MAHER KEVIN ALBERT ; ROBERTS BRUCE EDMUNDS ; VINEGAR HAROLD J ; WELLINGTON SCOTT LEE ; SUMNU DINDORUK MELIHA DENIZ ; SUMNU DINDORUK MELIHA DENIZ

Agent(s): SHELL OIL COMPANY; SHELL OIL CO

Title: IN SITU THERMAL PROCESSING OF A HEAVY OIL DIATOMITE FORMATION

Abstract: Source: US2003173082A [EN] An in situ process for treating a diatomite formation is provided. The process may include providing heat from one or more heaters to at least a portion of the formation. The heat may be allowed to transfer from the one or more heaters to a part of the formation such that heat from the one or more heat sources pyrolyzes at least some hydrocarbons within the part. Hydrocarbons may be produced from the formation.

Classifications:

International (IPC 8-9): E21B43/24 E21B43/243 E21B43/30

E21B47/00 (Advanced/Invention);

E21B43/00 E21B43/16 E21B47/00 (Core/Invention)

International (IPC 1-7): E21B43/24

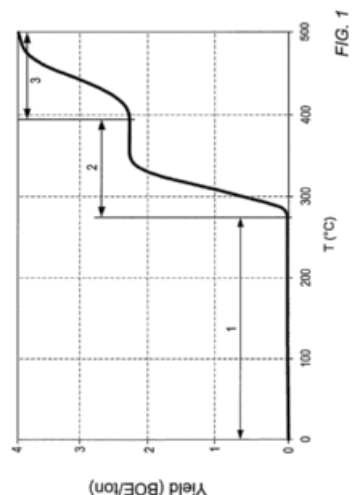
CPC: E21B43/243

European: E21B43/243

US: 166/245 166/250.01 166/272.1 166/272.2 166/302 166/308.1

PatBase - US2003173082_AA

Patent Application Publication Sep. 18, 2003 Sheet 1 of 276 US 2003/0173082 A1



Family:

Publication number	Publication date	Application number	Application date
US2003173082 AA	20030918	US20020279293	20021024
US7104319 BB	20060912	US20020279293	20021024

Priority:

US20010337476P 20011024 US20010338788P 20011024 US20020279293 20021024
US20020375011P 20020424 US20020374997P 20020424

Probable Assignee: SHELL OIL CO

Assignee(s): (std): BERCHENKO ILYA EMIL ; KARANIKAS JOHN MICHAEL ; MAHER KEVIN ALBERT ; ROUFFIGNAC ERIC PIERRE DE ; SHAHIN GORDON THOMAS ; SHELL OIL CO ; VINEGAR HAROLD J ; STEGEMEIER GEORGE LEO ; WELLINGTON SCOTT LEE

Assignee(s): SHELL OIL COMPANY

Inventor(s): (std): KARANIKAS JOHN MICHAEL ; MAHER KEVIN ALBERT ; ROUFFIGNAC ERIC PIERRE DE ; SHAHIN GORDON THOMAS ; STEGEMEIER GEORGE LEO ; VINEGAR HAROLD J ; WELLINGTON SCOTT LEE ; SHAHIN JR GORDON THOMAS ; DE ROUFFIGNAC ERIC PIERRE ; BERCHENKO ILYA EMIL

Inventor(s): JR GORDON THOMAS ; SHAHIN

Title: IN SITU THERMAL PROCESSING OF AN OIL RESERVOIR FORMATION

Abstract: Source: US2003173081A [EN] An in situ process for treating an oil containing formation is provided. The process may include providing heat from one or more heaters to at least a portion of the formation. The heat may be allowed to transfer from the one or more heaters to a part of the formation such that heat from the one or more heat sources pyrolyzes at least some hydrocarbons within the part. Hydrocarbons may be produced from the formation.

Classifications:

International (IPC 8-9): E21B43/24 E21B43/243 E21B43/40

E21B47/00 (Advanced/Invention);

E21B43/16 E21B43/34 E21B47/00 (Core/Invention)

International (IPC 1-7): E21B43/24

CPC: E21B43/243

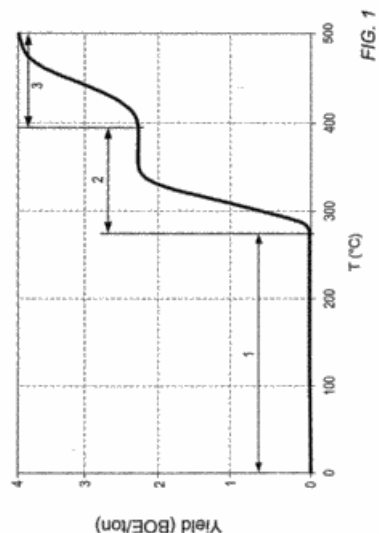
European: E21B43/243

US: 166/245 166/250.01 166/263 166/266 166/267 166/272.1

166/272.3 166/272.6 166/272.7 166/302 166/303 166/50

PatBase - US2003173081_AA

Patent Application Publication Sep. 18, 2003 Sheet 1 of 278 US 2003/0173081 A1



Family:

Publication number	Publication date	Application number	Application date
■ US2003173081 AA	20030918	US20020279230	20021024
■ US7077199 BB	20060718	US20020279230	20021024

Priority:

US20010338625P 20011024 US20010338695P 20011024 US20020279230 20021024
US20020374939P 20020424 US20020374998P 20020424

Probable Assignee: SHELL OIL CO

Assignee(s): (std): BERCHENKO ILYA EMIL ; DE ROUFFIGNAC ERIC P ; FOWLER THOMAS DAVID ; RYAN ROBERT CHARLES ; SHELL OIL CO ; VINEGAR HAROLD J ; WELLINGTON SCOTT LEE ; ZHANG ETUAN

Assignee(s): SHELL OIL COMPANY

Inventor(s): (std): ZHANG ETUAN ; WELLINGTON SCOTT LEE ; VINEGAR HAROLD J ; RYAN ROBERT CHARLES ; FOWLER THOMAS DAVID ; DE ROUFFIGNAC ERIC P ; BERCHENKO ILYA EMIL

Title: OSCILLATING FLUID FLOW IN A WELLBORE

Abstract: Source: US2009008088A [EN] A **system** for oscillating compressible working fluid in a wellbore defined in a subterranean formation includes a fluid supply and a fluid oscillator **device**. The fluid supply communicates compressible working fluid into a conduit disposed within the wellbore. The fluid oscillator **device** is configured to reside in the wellbore. The fluid oscillator **device** includes an interior surface that defines an interior volume of the fluid oscillator **device**, an inlet into the interior volume, and an outlet from the interior volume. The interior surface is static during operation to receive the compressible working fluid into the interior volume through the inlet and to vary over time a flow rate of the compressible working fluid from the interior volume through the outlet.

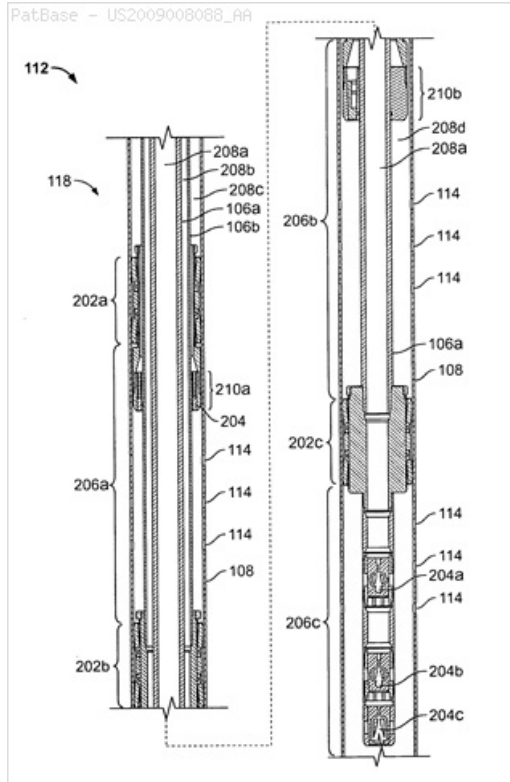
Classifications:

International (IPC 8-9): E03B3/11 E21B28/00 E21B34/08 E21B36/00 E21B36/02 E21B41/00 E21B43/16 E21B43/24 E21B43/25 E21B43/30 E21B47/10 E21B47/14 E21B7/08 H03H9/00 (Advanced/Invention); E21B28/00 E21B34/00 E21B36/00 E21B41/00 E21B43/00 E21B43/16 E21B43/25 E21B47/12 H03H9/00 (Core/Invention)

CPC: E21B47/14 E21B49/008 G01V1/42 G01V1/46 E21B43/24 E21B36/02 E21B41/0042 E21B43/305 Y10T137/2224 Y10T137/2234

European: E21B36/02 E21B41/00L2 E21B43/24 E21B43/30B E21B47/14 E21B49/00P G01V1/42 G01V1/46

US: 1/1 137/833 137/835 166/177.2 166/249 166/272.3 166/272.7 166/302 166/303 166/50 166/50S 166/57 166/57S 166/68 166/68S 367/81 367/81P



US2011036575 AA	20110217	US20080667988	20080630
US2011036576 AA	20110217	US20080667989	20080703
US2011122727 AA	20110526	US20080667978	20080703
US7909094 BB	20110322	US20080120633	20080514
US8701770 BB	20140422	US20080667989	20080703
US9133697 BB	20150915	US20080667988	20080630
WO09009336 A2	20090115	WO2008US68816	20080630
WO09009336 A3	20090312	WO2008US68816	20080630
WO09009412 A2	20090115	WO2008US69137	20080703
WO09009412 A3	20100422	WO2008US69137	20080703
WO09009437 A2	20090115	WO2008US69225	20080703
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WO09009445 A2	20090115	WO2008US69249	20080703
WO09009445 A3	20100429	WO2008US69249	20080703
WO09009447 A2	20090115	WO2008US69254	20080703
WO09009447 A3	20090618	WO2008US69254	20080703

Priority:

US20070948346P 20070706	US20080120633 20080514	WO2008US68816 20080630
US20080667988 20080630	US20080667989 20080703	US20080667978 20080703
WO2008US69225 20080703	WO2008US69249 20080703	WO2008US69137 20080703

Probable Assignee: HALLIBURTON ENERGY SERVICES INC

Assignee(s): (std): CAVENDER TRAVIS W ; DESHMUKH ADITYA SHAILESH ; GLEITMAN DANIEL D ; FIPKE STEVEN RONALD ; DESHMUKH ADITYA SHAILESH ; FERMIN EULALIO ROSAS ; HALLIBURTON ENERGY SERVICES INC ; SCHULTZ ROGER L ; PIPKIN ROBERT L ; ROSAS FERMIN EULALIO ; HALLIBURTON ENERGY SERV INC ; KHALLIBERTON EHNERDZHI SERWISEZ INK ; VELEZ JORGE ENRIQUE ; STEELE DAVID JOE ; STEELE DAVID J

Assignee(s): HALLIBURTON ENERGY SERVICES INK ; INT BUSINESS MACHINES CORP

Inventor(s): (std): SCHULTZ ROGER L ; PIPKIN ROBERT L ; ROSAS FERMIN EULALIO ; JOE STEELE DAVID ; RONALD FIPKE STEVEN ; SHAILESH DESHMUKH ADITYA ; KAVENDER TREJVIS V ; GLEJTMAN DEHNIEL D ; ROSAS FERMIN EHULALIO ; GLEITMAN DANIEL D ; FIPKE STEVEN RONALD ; EULALIO ROSAS FERMIN ; ENRIQUE VELEZ JORGE ; FERMIN EULALIO ROSAS ; DESHMUKH EHDAJTJA SHAJLESH ; FIPKE STIVEN RONAL D ; STEELE DAVID JOE ; VELEZ JORGE ENRIQUE ; STEELE DAVID J ; SHUL TS RODZHER L ; STIL DEHVID DZHO ; VELES KHORKHE EHNRIKE ; CAVENDER TRAVIS W ; DESHMUKH ADITYA SHAILESH ; DESHMUKH ADITYA SHAILESH

Inventor(s): DAVID JOE STEELE ; DANIEL D GLEITMAN ; ADITYA SHAILESH DESHMUKH ; SHUL'TS RODZHER L. ; TRAVIS W CAVENDER ; STEVEN RONALD FIPKE ; FIPKE STIVEN RONAL'D ; ROGER L SCHULTZ ; JORGE ENRIQUE VELEZ ; ROBERT L PIPKIN

Agent(s): NORTON ROSE CANADA SENCRL SRL LLP; NORTON ROSE FULBRIGHT CANADA LLP SENCRL SRL; BENNETT ADRIAN ROBERT J; FISH AND RICHARDSON PC; JOSHUA A; SCOTT F; SCOTT; GRISWOLD JOSHUA A ET AL; GRISWOLD JOSHUA A

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: INSTALLATION AND USE OF REMOVABLE HEATERS IN A HYDROCARBON CONTAINING FORMATION

Abstract: Source: US2004211569A [EN] In an embodiment, a **system** may be used to heat a hydrocarbon containing formation. The **system** may include a heater placed in an opening in the formation. The **system** may allow heat to transfer from the heater to a part of the formation. The transferred heat may pyrolyze at least some hydrocarbons in the formation. The heater may be removable from the opening in the formation and redeployable in at least one alternative opening in the formation.

Classifications:

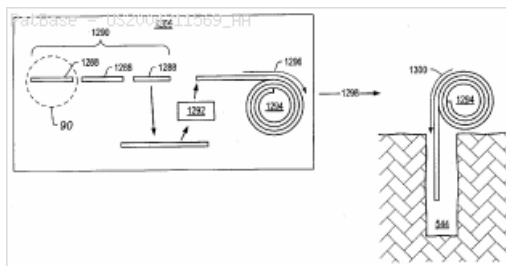
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G01V3/26 (Advanced/Invention)

International (IPC 1-7): E21B19/22

CPC: E21B43/2401 B09C1/02 B09C1/06 B09C2101/00 C10G9/24 C10G45/00 E21B17/028 E21B43/168 E21B43/24 E21B43/243 E21B43/305 E21B47/02208 G01V3/26 Y02P30/30 Y02P30/44 Y10S210/901 Y10T137/0391

US: 166/302 166/380 166/381 166/385



Family:

Publication number	Publication date	Application number	Application date
US2004211569 AA	20041028	US20020279223	20021024
US7156176 BB	20070102	US20020279223	20021024

Priority:

US20010334568P 20011024 US20010337136P 20011024 US20020279223 20021024
US20020374970P 20020424 US20020374995P 20020424

Probable Assignee: SHELL OIL CO

Assignee(s): (std): SHELL OIL CO

Assignee(s): VINEGAR HAROLD J ; WELLINGTON SCOTT LEE ; COLES JOHN MATTHEW ; HUNSUCKER BRUCE GERARD ; PRATT CHRISTOPHER AMOLD ; MENOTTI JAMES LOUIS ; ROUFFIGNAC ERIC PIERRE DE

Inventor(s): (std): COLES JOHN MATTHEW ; DE ROUFFIGNAC ERIC PIERRE ; PRATT CHRISTOPHER AMOLD ; MENOTTI JAMES LOUIS ; HUNSUCKER BRUCE GERARD ; PRATT CHRISTOPHER ARNOLD ; VINEGAR HAROLD J ; WELLINGTON SCOTT LEE ; ROUFFIGNAC ERIC PIERRE DE

Title: IN SITU THERMAL PROCESSING OF A HYDROCARBON CONTAINING FORMATION USING A NATURAL DISTRIBUTED COMBUSTOR

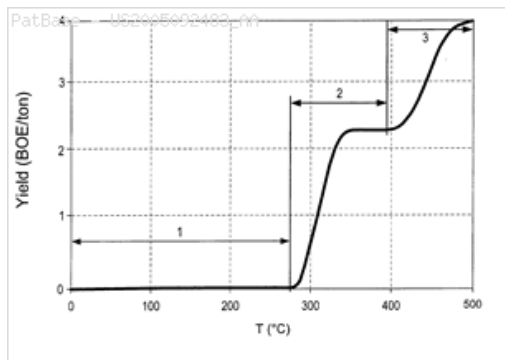
Abstract: Source: US2005092483A [EN] An in situ process for treating a hydrocarbon containing formation is provided. The process may include providing heat from one or more heat sources to at least a portion of the formation. Heat sources may include a natural distributed combustor. The natural distributed combustor may include an oxidizing fluid source to provide oxidizing fluids to a reaction zone in the formation to generate heat within the reaction zone. The heat may be allowed, in some embodiments, to transfer from the reaction zone to a selected section of the formation such that heat from one or more heat sources pyrolyzes at least some hydrocarbons within the selected section. Hydrocarbons may be produced from the formation.

Classifications:

International (IPC 8-9): B09C1/02 B09C1/06 C10G45/00 C10G9/24
E21B17/02 E21B36/00 E21B43/00 E21B43/16 E21B43/24
E21B43/243 E21B43/30 E21B44/00 E21B47/022
G01V3/26 (Advanced/Invention)

International (IPC 1-7): E21B36/04

US: 166/256 166/257 166/60



Family:

Publication number	Publication date	Application number	Application date
US2005092483 AA	20050505	US20020279220	20021024
US7114566 BB	20061003	US20020279220	20021024

Priority:

US20010334568P 20011024 US20010337136P 20011024 US20020279220 20021024
US20020374970P 20020424 US20020374995P 20020424

Probable Assignee: SHELL OIL CO

Assignee(s): (std): SHELL OIL CO

Assignee(s): VAN HARDEVELD ROBERT M ; VINEGAR HAROLD J ; WELLINGTON SCOTT L ; ROUFFIGNAC ERIC PD

Inventor(s): (std): DE ROUFFIGNAC ERIC PIERRE ; ROUFFIGNAC ERIC P D ; VAN HARDEVELD ROBERT M ; VAN HARDEVELD ROBERT MARTIJN ; VINEGAR HAROLD J ; WELLINGTON SCOTT L ; WELLINGTON SCOTT LEE

Inventor(s): WELLINGTON SCOTT ; VINEGAR HAROLD ; ROUFFIGNAC ERIC PD ; VAN HARDEVELD ROBERT ; ROUFFIGNAC ERIC

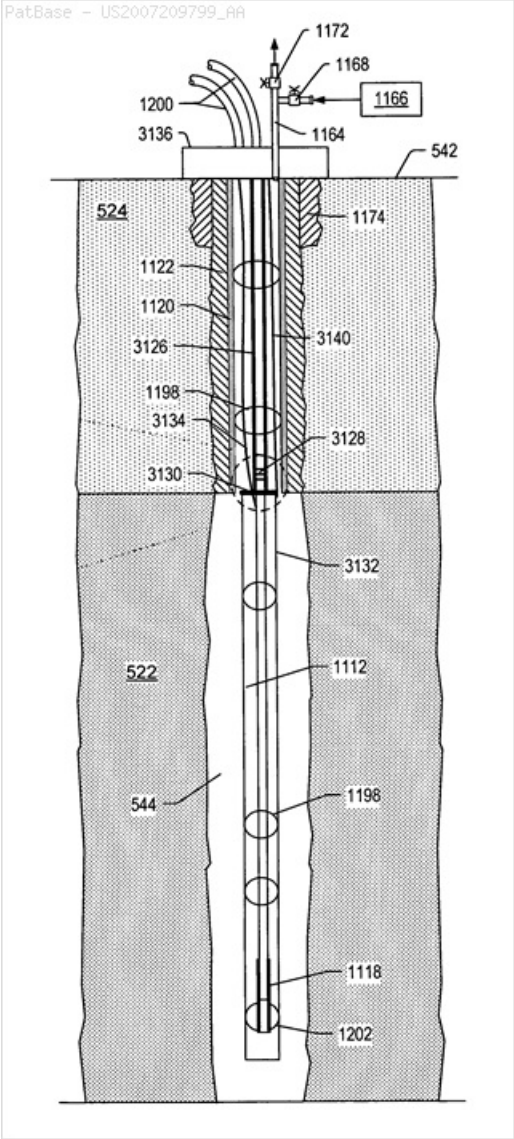
Agent(s): DELCHRISTENSEN, SHELL OIL COMPANY; DELCHRISTENSEN SHELL OIL CO

Title: IN SITU RECOVERY FROM A HYDROCARBON CONTAINING FORMATION

Abstract: Source: US2007209799A [EN] An in situ process for treating a hydrocarbon containing formation is provided. The process may include providing heat from one or more heaters to at least a portion of the formation. The heat may be allowed to transfer from the one or more heaters to a part of the formation such that heat from the one or more heat sources pyrolyzes at least some hydrocarbons within the part. Hydrocarbons may be produced from the formation.

Classifications:

International (IPC 8-9): B09C1/02 B09C1/06 C10G45/00 C10G9/24
E21B17/02 E21B36/00 E21B36/04 E21B43/16 E21B43/24
E21B43/243 E21B43/30 E21B44/00 E21B47/022
G01V3/26 (Advanced/Invention)
US: 166/302 166/60



Family:

Publication number	Publication date	Application number	Application date
US2007209799 AA	20070913	US20070657442	20070123
US7461691 BB	20081209	US20070657442	20070123

Priority:

US20010334568P 20011024	US20010337136P 20011024	US20070657442 20070123
US20020279288 20021024	US20020374970P 20020424	US20020374995P 20020424

Probable Assignee: SHELL OIL CO

Assignee(s): (std): SHELL OIL CO

Inventor(s): (std): BASS RONALD M ; BASS RONALD MARSHALL ; VINEGAR HAROLD J

Inventor(s): BASS RONALD ; VINEGAR HAROLD

Agent(s): SHELL OIL COMPANY; SHELL OIL CO

Title: In situ recovery from a oil shale formation

Abstract: Source: AU2009200992A [EN] IN SITU RECOVERY FROM A OIL SHALE FORMATION Abstract An oil shale formation may be treated using an in situ thermal process. Heat may be provided to a formation from a heat source in the formation. Hydrocarbons within the formation may be pyrolyzed. Hydrocarbons, H₂, and/or other formation fluids may be produced from the formation. In some embodiments, the formation may include a relatively impermeable portion and/or a relatively permeable portion.

Classifications:

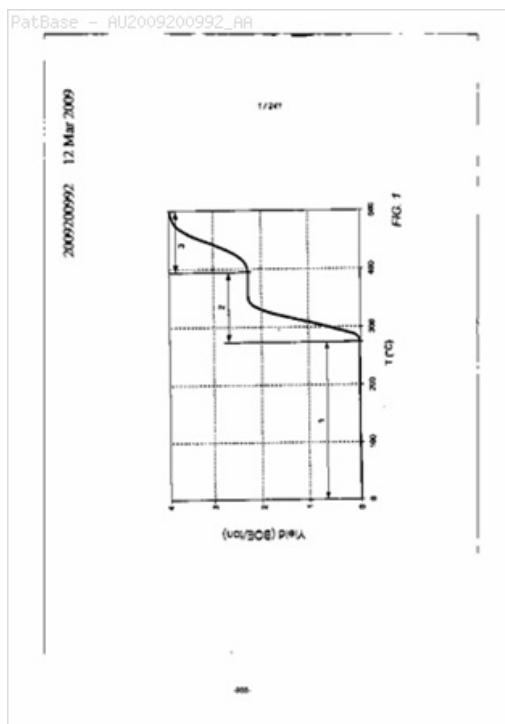
International (IPC 8-9): E21B43/243 E21B43/247 E21B43/30 E21C41/24 G02B5/18 G02B5/32 G02B6/124 G02B6/136

G02B6/293 (Advanced/Invention);

G02B6/12 (Advanced/Non-invention)

CPC: E21B43/24 E21B43/2401 E21B43/243 E21B43/247 E21B43/30

European: E21B43/243 E21B43/247 E21B43/30



Family:

Publication number	Publication date	Application number	Application date
AU2009200992 AA	20090402	AU20090200992	20090312

Priority:

AU20020257221	20020424	AU20090200992	20090312	WO2002US13311	20020424
US20010337249P	20011024	US20010286062P	20010424		

Probable Assignee: SHELL INT RESEARCH

Assignee(s): (std): SHELL INT RESEARCH

Assignee(s): SHELL INT RESEARCH MIJ BV ; SHELL INTERNATIONALE RESEARCH MAATSCHAPPIJ B V

Inventor(s): (std): BASS RONALD ; BAXLEY PHILIP T ; BERCHENKO ILYA E ; BIELAMOWICZ LAWRENCE J ; COLES JOHN M ; CRANE STEVE ; CARL FRED G ; FOWLER THOMAS D ; GIANDT CARLOS ; HARDEVELD MARTIJN VAN ; HUNSUCKER BRUCE G ; KARANIKAS JOHN M ; KEEDY CHARLIE R ; LEPPER BRUCE ; MADGAVKAR AJAY M ; MAHER KEVIN A ; MENOTTI JAMES L ; MESSIER MARGARET ; MIKUS TOM ; PRATT KIP ; ROBERTS BRUCE ; ROUFFIGNAC ERIC DE ; RYAN ROBERT C ; SCHOELING LANNY ; SUMNI DINDORUK MELIHA D ; SHAHIN GORDON T ; STEGEMEIER GEORGE L ; VEENSTRA PETER ; VINEGAR HAROLD J ; WARD JOHN M ; WATKINS WADE ; WELLINGTON SCOTT L ; ZHANG ETUAN

Inventor(s): AJAY M MADGAVKAR ; WADE WATKINS ; STEVE CRANE ; THOMAS D FOWLER ; TOM MIKUS ; VAN HARDEVELD MARTIJN ; SCOTT L WELLINGTON ; RONALD BASS ; ROBERT C RYAN ; PETER VEENSTRA ; PHILIP T BAXLEY ; MARGARET MESSIER ; MARTIJN VAN HARDEVELD ; MELIHA D SUMNI DINDORUK ; KEVIN A MAHER ; KIP PRATT ; LANNY SCHOELING ; LAWRENCE J BIELAMOWICZ ; ILYA E BERCHENKO ; JAMES L MENOTTI ; JOHN M COLES ; JOHN M KARANIKAS ; JOHN M WARD ; HAROLD J VINEGAR ; GORDON T SHAHIN ; FRED G CARL ; GEORGE L STEGEMEIER ; CARLOS GIANDT ; CHARLIE R KEEDY ; DE ROUFFIGNAC ERIC ; ERIC DE ROUFFIGNAC ; ETUAN ZHANG ; BRUCE G HUNSUCKER ; BRUCE LEPPER ; BRUCE ROBERTS

Agent(s): SPRUSON AND FERGUSON

Title: IN SITU RECOVERY FROM A KEROGEN AND LIQUID HYDROCARBON CONTAINING FORMATION

Abstract: Source: US2003178191A [EN] In an embodiment, a method of treating a kerogen and liquid hydrocarbon containing formation in situ may include providing heat from one or more heat sources to at least a portion of the formation. Heat may be allowed to transfer from the one or more heat sources to a part of the formation. In some embodiments, at least a portion of liquid hydrocarbons in the part may be mobilized. At least a portion of kerogen in the part may be pyrolyzed. In certain embodiments, a **pressure** within at least a part of the formation may be controlled. The **pressure** may be controlled to be at least about 2.0 bars absolute. A mixture may be produced from the formation.

Classifications:

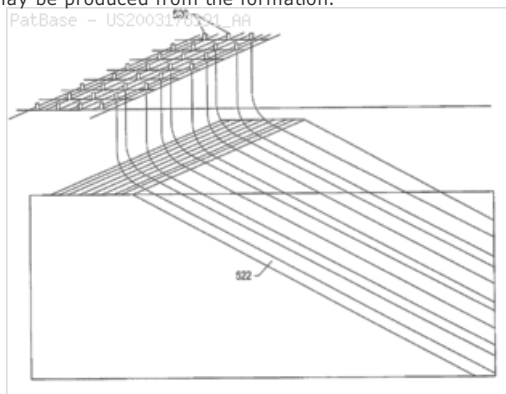
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International (IPC 1-7): E21B36/04

CPC: C09K8/592 E21B36/001 E21B36/04 E21B41/0057 E21B43/24 E21B43/2401 E21B43/243 E21B43/247 E21B43/30 Y02C10/14

European: C09K8/592 E21B36/00B E21B36/04 E21B41/00M2 E21B43/24 E21B43/243 E21B43/247 E21B43/24B E21B43/30 Y02C10/14

US: 166/245 166/257 166/272.1 166/272.2 166/272.7 166/302 166/308 166/50 166/65.1



Family:

Publication number	Publication date	Application number	Application date
US2003178191 AA	20030925	US20020279287	20021024
US7011154 BB	20060314	US20020279287	20021024

Priority:

US20000199213P 20000424	US20000199214P 20000424	US20000199215P 20000424
US20020279287 20021024	US20010337427P 20011024	US20010337405P 20011024
US20020375043P 20020424	US20020374999P 20020424	

Probable Assignee: SHELL OIL CO

Assignee(s): (std): SHELL OIL CO

Assignee(s): SHELL OIL COMPANY ; VINEGAR HAROLD J ; ZHANG ETUAN ; WELLINGTON SCOTT LEE ; BERCHENKO ILYA EMIL ; KARANIKAS JOHN MICHAEL ; MAHER KEVIN ALBERT ; ROUFFIGNAC ERIC PIERRE DE

Inventor(s): (std): ZHANG ETUAN ; WELLINGTON SCOTT LEE ; VINEGAR HAROLD J ; ROUFFIGNAC ERIC PIERRE DE ; MAHER KEVIN ALBERT ; KARANIKAS JOHN MICHAEL ; DE ROUFFIGNAC ERIC PIERRE ; BERCHENKO ILYA EMIL

Title: UPGRADING AND MINING OF COAL

Abstract: Source: US2003173085A [EN] A method for treating a coal formation to alter properties of coal in the formation is provided. In one embodiment, heat from one or more heaters may be provided to at least a portion of the formation. Heat may be allowed to transfer from the one or more heaters to a part of the formation. In certain embodiments, the heat from the one or more heaters may pyrolyze at least some hydrocarbons within the part of the formation. The method may include producing a fluid from the formation. In some embodiments, the produced fluid may include at least some pyrolyzed hydrocarbons from the formation. In an embodiment, after at least some coal has been treated at least a portion of such coal may be produced from the formation.

Classifications:

International (IPC 8-9): E21B36/00 E21B43/00 E21B43/24 E21F7/00 (Advanced/Invention);

E21B36/00 E21B43/00 E21B43/16 E21F7/00 (Core/Invention)

International (IPC 1-7): E21B36/00 E21B43/24 E21C37/16 E21C37/20 E21C41/00

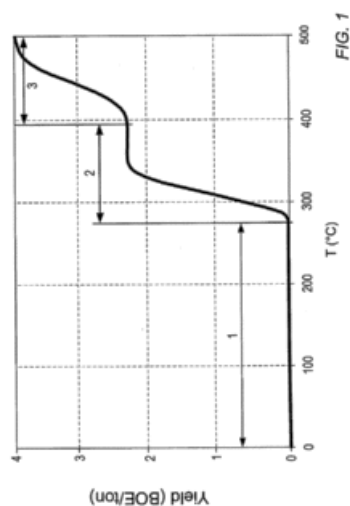
CPC: E21B43/006 E21B43/295 E21F7/00

European: E21B43/00M E21B43/295 E21F7/00

US: 166/302 299/14 299/14S 299/3

PatBase - US2003173085_AA

Patent Application Publication Sep. 18, 2003 Sheet 1 of 305 US 2003/0173085 A1

**Family:**

Publication number	Publication date	Application number	Application date
US2003173085 AA	20030918	US20020279286	20021024
US6969123 BB	20051129	US20020279286	20021024

Priority:

US20010337137P 20011024 US20010338648P 20011024 US20020279286 20021024
US20020375000P 20020424 US20020374996P 20020424

Probable Assignee: SHELL OIL CO

Assignee(s): (std): SHELL OIL CO

Assignee(s): SHELL OIL COMPANY ; VINEGAR HAROLD J ; WELLINGTON SCOTT LEE ; MAHER KEVIN ALBERT

Inventor(s): (std): MAHER KEVIN ALBERT ; VINEGAR HAROLD J ; WELLINGTON SCOTT LEE

Title: METHOD AND **APPARATUS** FOR **SEISMIC** STIMULATION OF FLUID-BEARING FORMATIONS

Abstract: Source: US2003201101A [EN] An **apparatus** and **seismic** method for producing an shock **wave** in an oil well borehole, with a pumping unit arranged at the wellhead, a tubing **string** extending downward into the production casing of the well, a hollow cylinder assembly connected with the bottom of the tube **string**, and pair of plungers arranged within the cylinder assembly and connected with the pumping unit with sucker rods and a polish rod for compressing liquid contained within the cylinder assembly and discharging the compressed liquid into the production casing, thereby generating a shock **wave**. The cylinder assembly includes an upper cylinder, a lower cylinder below the upper cylinder, a crossover cylinder below the upper and lower cylinders, and a compression chamber cylinder containing a compression chamber arranged between the crossover cylinder and the upper cylinder. The lower cylinder is adapted to receive the lower plunger, and the upper cylinder is adapted to receive the upper plunger. The lower plunger has a larger diameter than the upper plunger, and the plunger movement effects the volume of the compression chamber by reduction, the liquid contained therein becomes compressed and is discharged on the down stroke into the well. In addition, remote **seismic** data is collected and processed from remote well locations.

Classifications:

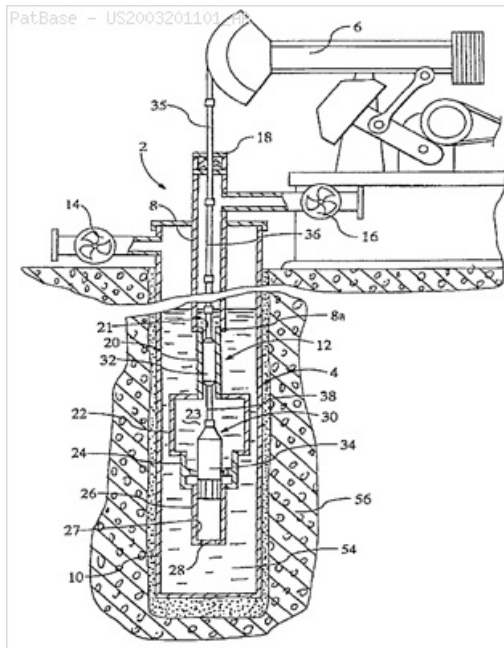
International (IPC 8-9): E21B28/00 E21B43/00 E21B43/12 E21B43/16 E21B43/25 G01V1/02 G01V1/52 (Advanced/Invention); E21B28/00 E21B43/00 E21B43/12 E21B43/16 E21B43/25 G01V1/02 G01V1/40 (Core/Invention)

International (IPC 1-7): E21B28/00 E21B43/00 E21B43/25

CPC: E21B28/00 E21B43/003 E21B43/127 G01V1/02 G01V1/52

European: E21B28/00 E21B43/00C E21B43/12B9C G01V1/02 G01V1/52

US: 166/105.2 166/105.200S 166/177.1 166/177.2 166/177.200S 166/177.6 166/177.600S 166/249



Family:

Publication number	Publication date	Application number	Application date
AT364127 E	20070615	AT19990962880T	19991123
AU200019231 A1	20010612	AU20000019231	19991123
AU200019231 A5	20010612	AU20000019231	19991123
AU779953 B2	20050224	AU20000019231	19991123
BRPI9917564 A	20021126	BR1999PI17564	19991123
BRPI9917564 B1	20090113	BR1999PI17564	19991123
CA2390277 AA	20020503	CA19992390277	19991123
CA2390277 C	20080923	CA19992390277	19991123
CN1314880 C	20070509	CN19998017014	19991123
CN1378615 A	20021106	CN19998017014	19991123
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DK1232330 T3	20071001	DK19990962880T	19991123
EP1232330 A1	20020821	EP19990962880	19991123
EP1232330 A4	20050601	EP19990962880	19991123
EP1232330 B1	20070606	EP19990962880	19991123
ES2286904 T3	20071201	ES19990962880T	19991123
IN216150 B	20080331	IN2002CN00839	20020605
MXPA02005157 A1	20030925	MX2002PA05157	19991123
RU2002116696 A	20040120	RU20020116696	19991123
RU2249685 C2	20050410	RU20020116696	19991123
US2003201101 AA	20031030	US20020132371	20020424
US2012175107 AA	20120712	US20120372827	20120214
US6015010 A	20000118	US19970927032	19970910
US6899175 BB	20050531	US20020132371	20020424
US8459351 BB	20130611	US20120372827	20120214
WO0140623 A1	20010607	WO1999US28060	19991123

Priority:

RU20020116696 19991123 US19970927032 19970910 US20020132371 20020424
 WO1999US28060 19991123 US20100655544 20100104 US20120372827 20120214

Probable Assignee: APPLIED SEISMIC RESEARCH CORP

Assignee(s): (std): APPLIED SEISMIC RES CORP ; APPLIED SEISMIC RESEARCH CORP ; KOSTROV SERGEY A ; WOODEN WILLIAM O

Assignee(s): APPLIED SAYZMIK RESEARCH CORP

Inventor(s): (std): KOSTROV SERGEY ; WOODEN WILLIAM ; WOODEN WILLIAM O ; KOSTROV SERGEY A ; WOODEN

SERGEY A KOSTROV WILLIA ; KOSTROV SERGEJ A ; WILLIAM O WOODEN ; SERGEY A KOSTROV ;
VUDEN VILL JAM O

Inventor(s): SERGEY A KOSTROV WILLIAM O WOODEN ; VUDEN VILL'JAM O.

Agent(s): PHILLIPS ORMONDE FITZPATRICK; RICHES MCKENZIE AND HERBERT LLP

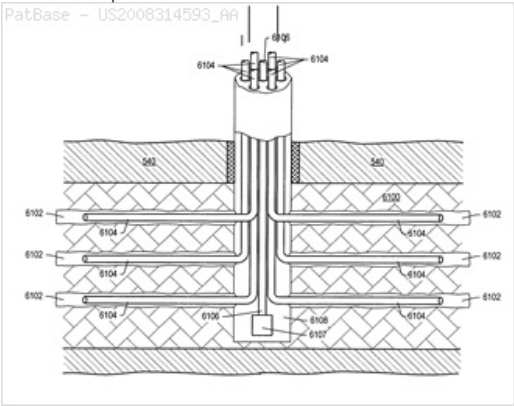
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TT TZ UA UG US UZ VN YU ZA ZW

Title: IN SITU THERMAL PROCESSING OF AN OIL SHALE FORMATION USING A PATTERN OF HEAT SOURCES

Abstract: Source: US2008314593A [EN] A oil shale formation may be treated using an in situ thermal process. A mixture of hydrocarbons, H₂, and/or other formation fluids may be produced from the formation. Heat may be applied to the formation to raise a temperature of a portion of the formation to a pyrolysis temperature. Heat sources may be used to heat the formation. The heat sources may be positioned within the formation in a selected pattern.

Classifications:

International (IPC 8-9): E21B36/00 E21B43/24 E21B43/243 E21B43/247 E21B43/28 E21B43/30 E21C41/24 (Advanced/Invention)
CPC: E21B43/24 E21B43/2401 E21B43/243 E21B43/247 E21B43/30
European: E21B43/243 E21B43/247 E21B43/30
US: 166/272.1 166/302 299/4 299/5



Family:

Publication number	Publication date	Application number	Application date
US2008314593 AA	20081225	US20070809889	20070601
US7735935 BB	20100615	US20070809889	20070601

Priority:

US20010286062P 20010424 US20010337249P 20011024 US20060343913 20060131
US20020131286 20020424 US20070809889 20070601

Probable Assignee: SHELL OIL CO

Assignee(s): (std): SHELL OIL CO

Assignee(s): SHELL OIL COMPANY

Inventor(s): (std): DE ROUFFIGNAC ERIC PIERRE ; MAHER KEVIN ALBERT ; SCHOELING LANNY GENE ; VINEGAR HAROLD J ; WELLINGTON SCOTT LEE

Agent(s): SHELL OIL COMPANY; SHELL OIL CO

Title: IN SITU THERMAL PROCESSING OF AN OIL SHALE FORMATION

Abstract: Source: US2010270015A [EN] A oil shale formation may be treated using an in situ thermal process. A mixture of hydrocarbons, H₂, and/or other formation fluids may be produced from the formation. Heat may be applied to the formation to raise a temperature of a portion of the formation to a pyrolysis temperature. Heat sources may be used to heat the formation. The heat sources may be positioned within the formation in a selected pattern.

Classifications:

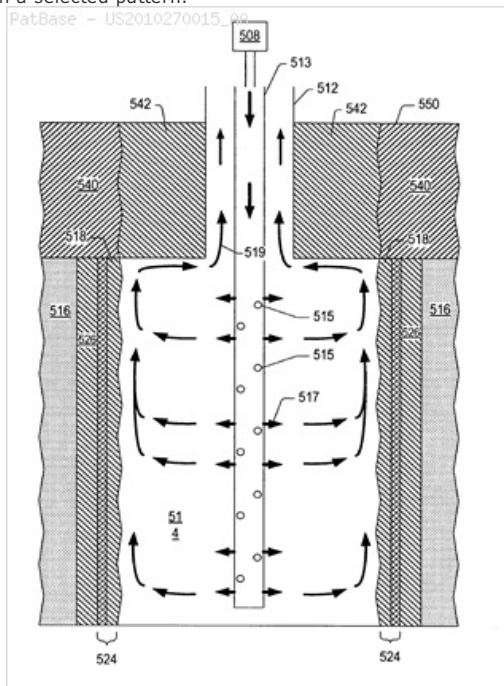
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E21B43/28 E21B43/30 E21C41/24 (Advanced/Invention)

CPC: E21B43/24 E21B43/2401 E21B43/243 E21B43/247 E21B43/30

European: E21B43/243 E21B43/247 E21B43/30

US: 166/272.1 166/272.100P 166/302 299/3



Family:

Publication number	Publication date	Application number	Application date
US2010270015 AA	20101028	US20100767572	20100426
US8608249 BB	20131217	US20100767572	20100426

Priority:

US20010286062P 20010424	US20010337249P 20011024	US20070809889 20070601
US20060343913 20060131	US20020131286 20020424	US20100767572 20100426

Probable Assignee: SHELL OIL CO

Assignee(s): (std): DE ROUFFIGNAC ERIC PIERRE ; MAHER KEVIN ALBERT ; SCHOELING LANNY GENE ; SHELL OIL CO ; VINEGAR HAROLD J ; WELLINGTON SCOTT LEE

Assignee(s): SHELL OIL COMPANY

Inventor(s): (std): DE ROUFFIGNAC ERIC PIERRE ; MAHER KEVIN ALBERT ; SCHOELING LANNY GENE ; VINEGAR HAROLD J ; WELLINGTON SCOTT LEE

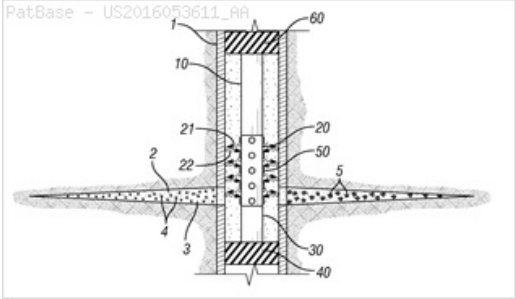
Agent(s): DEL CHRISTENSEN,SHELL OIL COMPANY; DEL CHRISTENSEN SHELL OIL CO

Title: **SYSTEM** AND METHOD FOR USING **PRESSURE PULSES** FOR **FRACTURE** STIMULATION PERFORMANCE ENHANCEMENT AND EVALUATION

Abstract: Source: US2016053611A [EN] A **system** and method of applying **periodic** energy **pulses** to a portion of a wellbore, **fracture**(s), and/or near wellbore to interrogate and/or stimulate at least a portion of the wellbore, **fracture**(s), and/or near wellbore. The **system** includes a downhole **device** that is configured to deliver **periodic** energy **pulses** to a portion of the wellbore. The downhole **device** may deliver various energy **pulses** such as **pressure waves**, **seismic waves**, and/or **acoustic waves**. **Sensors** may determine properties of a portion of the wellbore and/or **fracture** based on energy **pulses** detected within the wellbore. The **sensors** may be connected to the downhole tool, may be positioned within the wellbore, and/or may be positioned at the surface. The magnitude and/or frequency of the **periodic** energy **pulses** may be varied to change the stimulation and/or interrogation of the wellbore.

Classifications:

International (IPC 8-9): E21B28/00 E21B41/00 E21B43/25 E21B43/26 E21B43/263 E21B43/267 E21B47/085 E21B49/00 G01V1/40 G1V1/40 (Advanced/Invention); E21B43/26 E21B43/267 G01V1/52 (Advanced/Non-invention)
CPC: E21B28/00 E21B43/263 E21B43/267 E21B43/26 E21B43/25
US: 166/113 166/244.1 166/250.01 166/250.1 166/308.1 166/63



Family:

Publication number	Publication date	Application number	Application date
AR101609 AA	20161228	AR2015P102696	20150821
CA2958765 AA	20170215	CA20152958765	20150819
CO20170002313 A2	20170630	CO20170002313	20170308
EP3183420 A1	20170628	EP20150834278	20150819
IN201717009071 A	20170818	IN201717009071	20170316
MX2017001975 A1	20170504	MX20170001975	20150819
NO20170279 A	20170227	NO20170000279	20170227
US2016053611 AA	20160225	US20150828902	20150818
WO16028886 A1	20160225	WO2015US45883	20150819

Priority:

US20140040508P 20140822 US20150828902 20150818 WO2015US45883 20150819

Probable Assignee: BAKER HUGHES INC

Assignee(s): (std): BAKER HUGHES INC

Assignee(s): LIVESCU SILVIU ; MOOS DANIEL ; BAKER HUGHES A GE CO LLC

Inventor(s): (std): LIVESCU SILVIU ; MOOS DANIEL ; SILVIU LIVESCU ; DANIEL MOOS

Agent(s): SIM AND MCBURNEY; CAROLINA MERCEDES DAZA MONTALVO; LAMBACHER MICHAEL; JOHNSON REXFORD ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: TORSIONAL FORCE TRANSDUCER AND METHOD OF OPERATION

Abstract: Source: US5159226A [EN] A transducer and method for imparting vibrational signals to a structure are disclosed. In one embodiment, a set of piezoelectric disks are constructed in conjunction with a deformable housing to impart controlled distortions to the structure, such as to a well pipe **string**. Torsional forces are applied to the structure due to the orientation of the piezoelectric material relative to the electric field applied thereto. The piezoelectric material is placed in layers, with the polarization axis orthogonal to the direction of the electric field. Alternate layers are oriented in opposing directions, and alternating electrodes are connected together, so that each layer cooperates with the others to twist the housing in the same direction. To improve transmission, the **apparatus** can be tuned to a frequency determined by a spectrum analysis of the pipe **string**. A reactance mass may be connected to the transducer to increase the amplitude of the imparted vibrations, and also to allow tuning of the frequency of vibrations of the transducer.

Classifications:

International (IPC 8-9): B06B1/06 E21B47/12 E21B47/16 G01V1/46 G01V3/20 H01L41/083 (Advanced/Invention); B06B1/06 E21B47/12 G01V1/40 G01V3/18

H01L41/083 (Core/Invention)

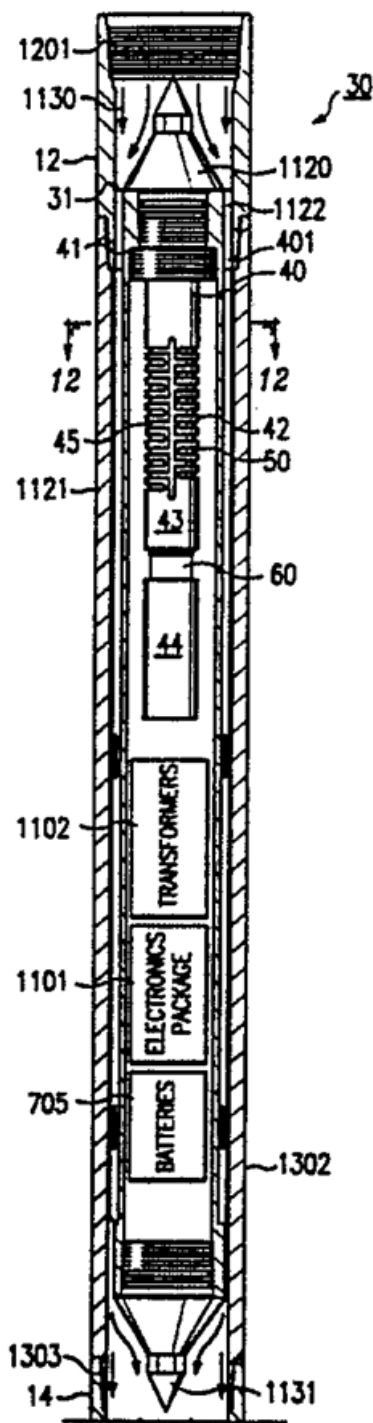
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European: B06B1/06C2 E21B47/12S E21B47/16 G01V1/46 G01V3/20 H01L41/083

US: 310/325 310/328 310/333 310/334 310/358 340/853 367/165 367/82 395/823 395/827 710/3 710/7

PatBase - US5159226_A

**Family:**

Publication number	Publication date	Application number	Application date
AU199228657 A1	19930503	AU19920028657	19921002
US5159226 A	19921027	US19900554030	19900716
US5166908 A	19921124	US19910746309	19910814
US5306980 A	19940426	US19920915928	19920717

US5881310 A	1990309	US19960589834	19960122
WO9201955 A1	19920206	WO1991US04878	19910709
WO9202054 A1	19920206	WO1991US04879	19910709
WO9307514 A1	19930415	WO1992US08412	19921002

Priority:

US19900554022	19900716	US19900554030	19900716	US19920915928	19920717
US19910771758	19911004	US19910695610	19910503	US19910746309	19910814
WO1992US08412	19921002	US19960589834	19960122		

Probable Assignee: ATLANTIC RICHFIELD CO

Assignee(s): (std): ATLANTIC RICHFIELD CO

Assignee(s): ATLANTIC RICHFIELD COMPANY

Inventor(s): (std): KINGMAN JOHN E E ; LIVESAY RONALD B ; MONTGOMERY MELVIN ; MONTGOMERY MELVIN G ; AIRHART TOM PATTERSON

Inventor(s): KINGMAN JOHN E ; TOM PATTERSON AIRHART ; RONALD B LIVESAY ; MELVIN G MONTGOMERY ; JOHN E E KINGMAN

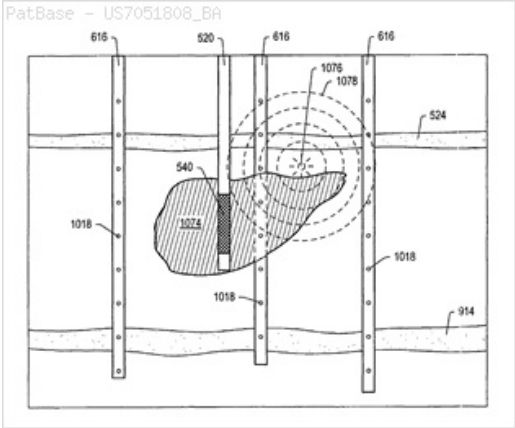
Designated states: AT AU BE CA CH DE DK ES FR GB GR IE IT LU MC NL NO SE

Title: **SEISMIC** MONITORING OF IN SITU CONVERSION IN A HYDROCARBON CONTAINING FORMATION

Abstract: Source: US7051808B [EN] In an embodiment, a **system** may be used to heat a hydrocarbon containing formation. The **system** may include a conduit placed within an opening in the formation. A conductor may be placed within the conduit. The conductor may provide heat to a portion of the formation. In some embodiments, an electrically conductive material may be coupled to a portion of the conductor in the overburden. The electrically conductive material may lower the electrical resistance of the portion of the conductor in the overburden. Lowering the electrical resistance of the portion of the conductor in the overburden may reduce the heat output of the portion in the overburden. The **system** may allow heat to transfer from the conductor to a section of the formation.

Classifications:

International (IPC 8-9): B09C1/02 B09C1/06 E21B17/02
E21B47/022 E21B47/09 G01V3/26 (Advanced/Invention);
E21B47/00 (Core/Invention)
US: 166/250.01 166/250.1 166/250.15 166/302 166/66



Family:

Publication number	Publication date	Application number	Application date
US7051808 BA	20060530	US20020279228	20021024

Priority:

US20010334568P 20011024	US20010337136P 20011024	US20020279228 20021024
US20020374970P 20020424	US20020374995P 20020424	US20020279288 20021024

Probable Assignee: SHELL OIL CO

Assignee(s): (std): SHELL OIL CO

Assignee(s): SHELL OIL COMPANY

Inventor(s): (std): VINEGAR HAROLD J ; DEMARTINI DAVID CHARLES ; BERCHENKO ILYA EMIL

Title: METHOD OF SELECTING A PRODUCTION WELL LOCATION IN A HYDROCARBON SUBSURFACE FORMATION

Abstract: Source: US2014190691A [EN] An in situ process for treating a hydrocarbon containing formation is provided. A method for treating a tar sands formation includes providing heat from one or more heaters to a hydrocarbon containing layer in the formation such that at least some hydrocarbons in the layer are mobilized; and producing at least some of the hydrocarbons through one or more production wells located in the hydrocarbon containing layer. At least one of the production wells is located at a selected depth in the hydrocarbon containing layer so that hydrocarbons of a selected quality are produced from a part of the hydrocarbon containing layer.

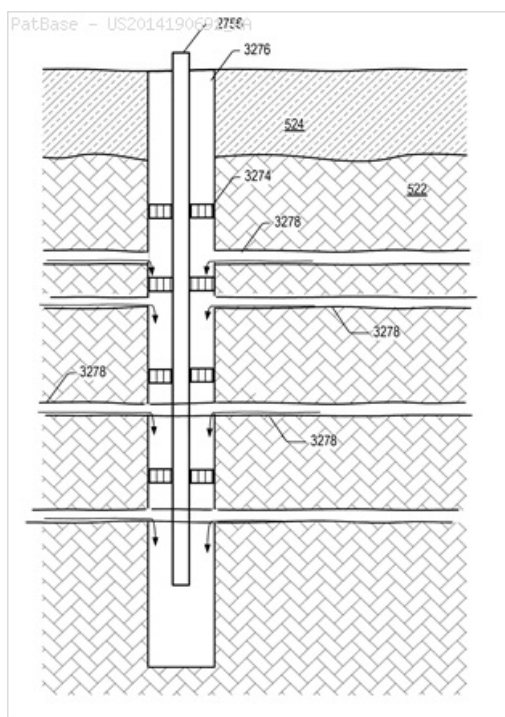
Classifications:

International (IPC 8-9): B09C1/02 B09C1/06 C10G45/00 C10G9/24 E21B17/02 E21B36/00 E21B43/16 E21B43/24 E21B43/243

E21B43/30 E21B44/00 E21B47/02 G01V3/26 (Advanced/Invention)

CPC: E21B43/2401

US: 166/272.1



Family:

Publication number	Publication date	Application number	Application date
US2014190691 AA	20140710	US20140155043	20140114

Priority:

US20010334568P 20011024	US20010337136P 20011024	US20070657442 20070123
US20020279288 20021024	US20020374970P 20020424	US20020374995P 20020424
US20140155043 20140114	US20080329942 20081208	

Probable Assignee: CRANE STEVEN DEXTER

Assignee(s): (std): CRANE STEVEN DEXTER ; DE ROUFFIGNAC ERIC PIERRE ; KARANIKAS JOHN MICHAEL ; MAHER KEVIN ALBERT ; VINEGAR HAROLD J ; WELLINGTON SCOTT LEE ; SUMNU DINDORUK MELIHA DENIZ ; MESSIER MARGARET ANN ; ROBERTS BRUCE EDMUNDS

Inventor(s): (std): CRANE STEVEN DEXTER ; DE ROUFFIGNAC ERIC PIERRE ; KARANIKAS JOHN MICHAEL ; MAHER KEVIN ALBERT ; MESSIER MARGARET ANN ; ROBERTS BRUCE EDMUNDS ; SUMNU DINDORUK MELIHA DENIZ ; VINEGAR HAROLD J ; WELLINGTON SCOTT LEE

Title: METHOD OF MANUFACTURE AND THE USE OF A FUNCTIONAL PROPPANT FOR DETERMINATION OF SUBTERRANEAN FRACTURE GEOMETRIES

Abstract: Source: US2009288820A [EN] Proppants having added functional properties are provided, as are methods that use the proppants to track and trace the characteristics of a fracture in a geologic formation. Information obtained by the methods can be used to design a fracturing job, to increase conductivity in the fracture, and to enhance oil and gas recovery from the geologic formation. The functionalized proppants can be detected by a variety of methods utilizing, for example, an airborne magnetometer survey, ground penetrating radar, a high resolution accelerometer, a geophone, nuclear magnetic resonance, ultra-sound, impedance measurements, piezoelectric activity, radioactivity, and the like. Methods of mapping a subterranean formation are also provided and use the functionalized proppants to detect characteristics of the formation.

Classifications:

International (IPC 8-9): B01J13/02 B23B19/00 B82Y30/00 C04B35/628 C09K8/60 C09K8/74 C09K8/80 E21B43/00 E21B43/267 E21B43/27 E21B47/00 E21B47/10 E21B47/12 E21B49/00 G01V3/24 (Advanced/Invention); C09K8/60 E21B43/00 E21B43/25 E21B47/00 E21B49/00 (Core/Invention)

International (IPC 1-7): E21B43/25 E21B47/00

CPC: C09K8/80 B01J13/02 B82Y30/00 C04B35/62807 C04B35/62823 C04B35/62839 C04B35/62842 C04B35/62894 C04B2235/3418 C04B2235/422 C04B2235/5288 C09K8/805 E21B43/00 E21B43/267 E21B47/00 E21B47/12 E21B49/00 G01V3/24 Y10S507/907 Y10S507/924 Y10T428/29 Y10T428/2991 Y10T428/2993

European: B01J13/02 B82Y30/00 C04B35/628B10 C04B35/628B2B C04B35/628B2H8 C04B35/628B8R C04B35/628P C09K8/80 C09K8/80B E21B43/00 E21B43/267 E21B47/00 E21B47/12 E21B49/00 M04B235/34D M04B235/42C M04B235/52J2

US: 166/249 166/250.1 166/250.100P 166/250.100S 166/251.1 166/251.100S 166/280.2 166/280.200S 428/357 428/403 428/404 507/219 507/219S 507/269 507/269S 507/270 507/270S 507/271 507/907 507/924

Family:

Publication number	Publication date	Application number	Application date
AR071860 AA	20100721	AR2009P101818	20090520
CA2725088 AA	20101119	CA20092725088	20090519
CA2725088 C	20170328	CA20092725088	20090519
CN102099545 A	20110615	CN200980128414	20090519
CN102099545 B	20150610	CN200980128414	20090519
EA022413 B1	20151230	EA20100071331	20090519
EA201071331 A1	20110630	EA20100071331	20090519
EP2307666 A2	20110413	EP20090744812	20090519
GC6395 A	20171107	GC2009P013517	20090519
MX2010012463 A1	20101207	MX20100012463	20090519
US2009288820 AA	20091126	US20090468088	20090519
US2012181020 AA	20120719	US20120432015	20120328
US8168570 BB	20120501	US20090468088	20090519
US9803135 BB	20171031	US20120432015	20120328
WO10011402 A2	20100128	WO2009US44425	20090519
WO10011402 A3	20100910	WO2009US44425	20090519

Priority:

US20080054515P 20080520 US20080054622P 20080520 US20080120317P 20081205
US20090468088 20090519 WO2009US44425 20090519 US20120432015 20120328

Probable Assignee: OXANE MATERIALS INC

Assignee(s): (std): BARRON ANDREW R ; CHATTERJEE DILIP K ; COKER CHRISTOPHER E ; OXANE MATERIALS INC ; XIE YUMING ; SKALA ROBERT D ; HALLIBURTON ENERGY SERVICES INC ; OXANE MAT INC

Assignee(s): COMERICA BANK A TEXAS BANKING ASSOCIATION ; DELTA CENTAURI LLC

Inventor(s): (std): YUMING XIE ; XIE YUMING ; SKALA ROBERT D ; COKER CHRISTOPHER E ; CHATTERJEE DILIP K ; BARRON ANDREW R

Inventor(s): ROBERT D SKALA ; DILIP K CHATTERJEE ; CHRISTOPHER E COKER ; ANDREW R BARRON

Agent(s): DIMOCK STRATTON LLP; NORTON ROSE FULBRIGHT CANADA LLP SENCRL SRL; GRUENECKER KINKELDEY STOCKMAIR AND SCHWANHAUESSER ANWALTSSOZIELTAE; SULEIMAN I AL AMMAR LAW OFFICE; KILYK AND BOWERSOX PLLC; CRAIG W; TUMEY LLP; KILYK LUKE A

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

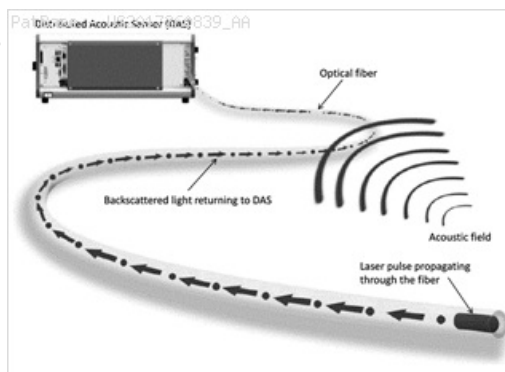
Title: DAS FOR WELL RANGING

Abstract: Source: US2017260839A [EN] Using distributed **acoustic** sensing (DAS) fiber optic cable for borehole surveying and/or well ranging.

Classifications:

International (IPC 8-9): C09K8/00 E21B41/00 E21B43/01 E21B43/16 E21B43/17 E21B43/20 E21B43/24 E21B43/26 E21B44/00 E21B47/00 E21B47/022 E21B47/0228 E21B47/06 E21B47/10 E21B47/12 E21B49/00 G01B11/16 G01F1/66 G01H9/00 G01K11/32 G01N29/24 G01V1/28 G01V1/30 G01V1/40 G01V1/48 G06T17/05 (Advanced/Invention)

CPC: E21B44/00 E21B47/02208 E21B47/02216 G01H9/004 E21B47/00 E21B43/26 E21B43/16 E21B43/20 E21B43/2406 E21B43/166 E21B47/123 E21B47/065 G01K11/32 G01B11/161 E21B47/101 G01F1/666 E21B49/00 E21B41/0092 E21B33/12 E21B47/1015 G01V1/308 G01V1/42 G01V2210/1429 G01V2210/624 E21B43/17 G01V1/48 G01V1/30 G01V1/226 G06T17/05 G01V1/40 G01F1/66 G06F19/00 E21B47/02 E21B47/102



Family:

Publication number	Publication date	Application number	Application date
US2017260839 AA	20170914	US20170453517	20170308
US2017260842 AA	20170914	US20170453434	20170308
US2017260846 AA	20170914	US20170453216	20170308
US2017260849 AA	20170914	US20170453044	20170308
US2017260854 AA	20170914	US20170453650	20170308
US2017342814 AA	20171130	US20170453584	20170308
US2018045040 AA	20180215	US20170453730	20170308
WO17156323 A1	20170914	WO2017US21659	20170309
WO17156328 A1	20170914	WO2017US21667	20170309
WO17156331 A1	20170914	WO2017US21670	20170309
WO17156334 A1	20170914	WO2017US21674	20170309
WO17156337 A1	20170914	WO2017US21678	20170309
WO17156338 A1	20170914	WO2017US21679	20170309
WO17156339 A1	20170914	WO2017US21681	20170309

Priority:

US20160305758P 20160309	US20160305777P 20160309	US20170453517 20170308
US20170453434 20170308	US20170453216 20170308	US20170453044 20170308
US20170453650 20170308	US20170453730 20170308	US20170453584 20170308

Probable Assignee: CONOCO PHILLIPS CO

Assignee(s): (std): ATA ELIAS Z ; BEARDMORE DAVID HALE ; CONOCOPHILLIPS CO ; FRIEHAUF KYLE ; FILICE FRANK P ; CONOCO PHILLIPS CO ; GIBSON MARK R ; JIN GE ; ROY BAISHALI ; KRUEGER KYLE R ; SWAN HERBERT W ; MOSHER CHARLES C ; SMITH BRUCE E ; JURICK DANA M ; TURA ALI

Inventor(s): (std): TURA ALI ; SWAN HERBERT W ; SMITH BRUCE E ; ROY BAISHALI ; MOSHER CHARLES C ; KRUEGER KYLE R ; JURICK DANA M ; JIN GE ; GIBSON MARK R ; FRIEHAUF KYLE ; FILICE FRANK P ; BEARDMORE DAVID HALE ; ATA ELIAS Z

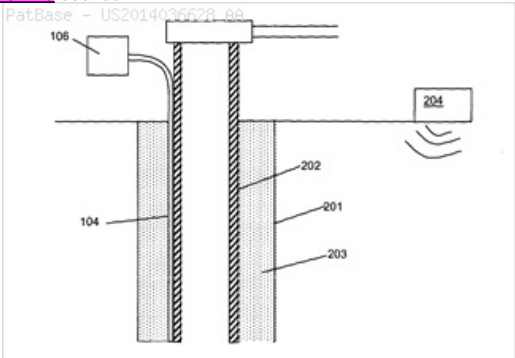
Agent(s): BERGER MICHAEL D

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KH KM KN KP KR KW KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: SUBSURFACE MONITORING USING DISTRIBUTED **ACOUSTIC SENSORS**

Abstract: Source: US2014036628A [EN] This application relates to methods and **apparatus** for geophysical monitoring within wellbores. The method involves interrogating an optical fibre (106) deployed along substantially the entire length of the wellbore (201) to provide distributed **acoustic** sensing and detecting the **acoustic** response from substantially the entire length of the wellbore in response to a **seismic** stimulus (204). The **acoustic** returns from individual sensing portions of the optical fibre can be processed to provide a profile such as a vertical **seismic** profile (VSP). An **acoustic** response from the entire length of the well can be recorded using a single shot of the **seismic** source.

Classifications:
International (IPC 8-9): G01V1/22 G01V1/42 (Advanced/Invention)
CPC: G01V1/42 G01V1/226 G01V1/52 G01V2210/1429 G01V2210/161
European: G01V1/42 S01V210/1429
US: 367/35



Family:

Publication number	Publication date	Application number	Application date
AU2012228034 AA	20120920	AU20120228034	20120316
AU2012228034 BB	20151029	AU20120228034	20120316
BR112013023607 A2	20170207	BR20131123607	20120316
CA2829819 AA	20130911	CA20122829819	20120316
CN103534615 A	20140122	CN201280023944	20120316
EA029021 B1	20180131	EA20130091338	20120316
EA201391338 A1	20140331	EA20130091338	20120316
EP2686709 A2	20140122	EP20120718313	20120316
GB201104423 A0	20110427	GB20110004423	20110316
US2014036628 AA	20140206	US20120004959	20120316
WO12123760 A2	20120920	WO2012GB50585	20120316
WO12123760 A3	20130418	WO2012GB50585	20120316

Priority:

GB20110004423 20110316 WO2012GB50585 20120316

Probable Assignee: QINETIQ LTD

Assignee(s): (std): HILL DAVID ; LEWIS ANDREW ; OPTASENSE HOLDINGS LTD ; QINETIQ LTD

Assignee(s): QINETIQ LIMITED ; OPTASENSE HOLDINGS LIMITED

Inventor(s): (std): ANDREW LEWIS ; DAVID HILL ; HILL DAVID ; LEWIS ANDREW

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; FETHERSTONHAUGH AND CO; DAVIES PHILIP; TOCHER ALASTAIR J ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: In situ recovery from a oil shale formation

Abstract: Source: AU2002257221B [EN] (Claim 1) 1. A method of treating an oil shale formation in situ, comprising: O providing heat from one or more heat sources to at least one portion of the z formation; wherein providing heat from the one or more heat sources to at least the portion of formation comprises: I allowing the heat to transfer from the one or more heat sources to a selected section of the formation; I controlling the heat from the one or more heat sources such that an average temperature within at least a majority of the selected section of the formation is less than I about 375 C; controlling a **pressure** and a temperature within at least a majority of the selected section of the formation, wherein the **pressure** is controlled as a function of temperature, or the temperature is controlled as a function of **pressure**; heating a selected volume of the oil shale formation from the one or more heat sources, wherein the formation has an average heat capacity and wherein the heating pyrolyzes at least some hydrocarbons within the selected volume of the formation; and wherein heating energy/day provided to the volume is equal to or less than Pwr, wherein Pwr is calculated by the equation: $Pwr = h \cdot V_{ss} \cdot C_{ss} \cdot PB$ wherein Pwr is the heating energy/day, h is an average heating rate of the formation, PB is formation bulk density, and wherein the heating rate is less than about 1 C/day; and producing a mixture from the formation which mixture comprises condensable hydrocarbons, wherein about 5 percent by weight to about 3 percent by weight of the condensable hydrocarbons comprise oxygen containing compounds, and wherein the oxygen containing compounds comprise phenols.

Classifications:

International (IPC 8-9): E21B43/243 E21B43/247 E21B43/30 E21C41/24 (Advanced/Invention)

CPC: E21B43/24 E21B43/2401 E21B43/243 E21B43/247 E21B43/30

European: E21B43/243 E21B43/247 E21B43/30

Family:

Publication number	Publication date	Application number	Application date
AU2002257221 AA	20021105	AU20020257221	20020424
AU2002257221 BB	20081218	AU20020257221	20020424

Priority:

US20010286062P 20010424 US20010337249P 20011024 WO2002US13311 20020424

Probable Assignee: SHELL INT RESEARCH

Assignee(s): (std): SHELL INT RESEARCH

Assignee(s): SHELL INT RESEARCH MIJ BV ; SHELL INTERNATIONALE RESEARCH MAATSCHAPPIJ B V

Inventor(s): (std): BASS RONALD ; BAXLEY PHILIP T ; BERCHENKO ILYA E ; BIELAMOWICZ LAWRENCE J ; COLES JOHN M ; CRANE STEVE ; CARL FRED G ; FOWLER THOMAS D ; GLANDT CARLOS ; HARDEVELD MARTIJN VAN ; HUNSUCKER BRUCE G ; KARANIKAS JOHN M ; KEEDY CHARLIE R ; LEPPER BRUCE ; MADGAVKAR AJAY M ; MAHER KEVIN A ; MENOTTI JAMES L ; MESSIER MARGARET ; MIKUS TOM ; PRATT KIP ; ROBERTS BRUCE ; ROUFFIGNAC ERIC DE ; RYAN ROBERT C ; SCHOELING LANNY ; SUMNU DINDORUK MELIHA D ; SHAHIN GORDON T ; STEGEMEIER GEORGE L ; VEENSTRA PETER ; VINEGAR HAROLD J ; WARD JOHN M ; WATKINS WADE ; WELLINGTON SCOTT L ; ZHANG ETUAN

Inventor(s): AJAY M MADGAVKAR ; WADE WATKINS ; STEVE CRANE ; THOMAS D FOWLER ; TOM MIKUS ; VAN HARDEVELD MARTIJN ; SCOTT L WELLINGTON ; RONALD BASS ; ROBERT C RYAN ; PETER VEENSTRA ; PHILIP T BAXLEY ; MARGARET MESSIER ; MARTIJN VAN HARDEVELD ; MELIHA D SUMNU DINDORUK ; KEVIN A MAHER ; KIP PRATT ; LANNY SCHOELING ; LAWRENCE J BIELAMOWICZ ; ILYA E BERCHENKO ; JAMES L MENOTTI ; JOHN M COLES ; JOHN M KARANIKAS ; JOHN M WARD ; HAROLD J VINEGAR ; GORDON T SHAHIN ; FRED G CARL ; GEORGE L STEGEMEIER ; CARLOS GLANDT ; CHARLIE R KEEDY ; DE ROUFFIGNAC ERIC ; ERIC DE ROUFFIGNAC ; ETUAN ZHANG ; BRUCE G HUNSUCKER ; BRUCE LEPPER ; BRUCE ROBERTS

Agent(s): SPRUSON AND FERGUSON

Title: IN SITU THERMAL PROCESSING OF AN OIL SHALE FORMATION USING CONDUCTIVE HEATING

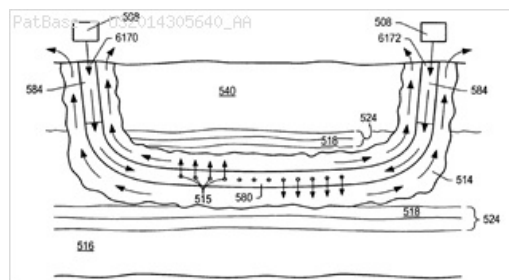
Abstract: Source: US2014305640A [EN] Methods and **systems** of treating an oil shale formation using an in situ thermal process are described herein. A method of treating an oil shale formation in situ includes providing heat from one or more heat sources to at least a portion of the formation; allowing the heat to transfer from at least the portion to a selected section of the formation substantially by conduction of heat; pyrolyzing at least some hydrocarbons within the selected section of the formation; and producing a mixture from the formation.

Classifications:

International (IPC 8-9): E21B43/24 E21B43/243 E21B43/247 E21B43/30 E21C41/24 (Advanced/Invention)

CPC: E21B43/24 E21B43/2401 E21B43/243 E21B43/247 E21B43/30

US: 166/272.1 166/302



Family:

Publication number	Publication date	Application number	Application date
US2014305640 AA	20141016	US20130104605	20131212

Priority:

US20010286062P 20010424	US20010337249P 20011024	US20100767572 20100426
US20070809889 20070601	US20060343913 20060131	US20020131286 20020424
US20130104605 20131212		

Probable Assignee: SHELL OIL CO A DELAWARE CORP

Assignee(s): (std): BERCHENKO ILYA E ; DE ROUFFIGNAC ERIC ; FOWLER THOMAS D ; KARANIKAS JOHN M ; VINEGAR HAROLD J ; RYAN ROBERT C ; ZHANG ETUAN ; SHELL OIL CO ; WELLINGTON SCOTT L ; STEGEMEIER GEORGE L ; SHAHIN JR GORDON T

Assignee(s): SHELL OIL CO A DELAWARE CORP

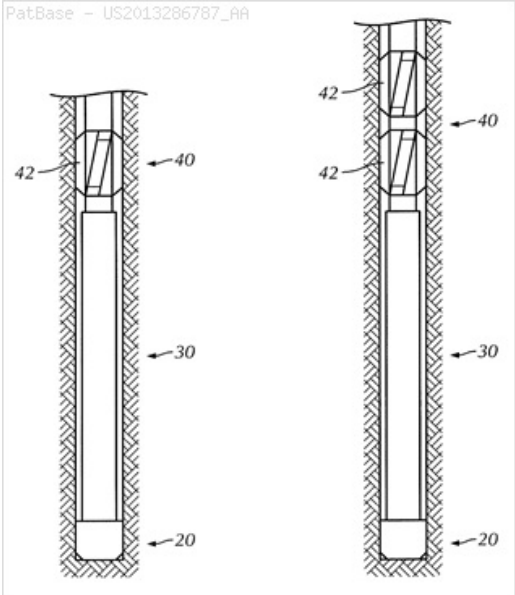
Inventor(s): (std): BERCHENKO ILYA E ; DE ROUFFIGNAC ERIC ; FOWLER THOMAS D ; KARANIKAS JOHN M ; RYAN ROBERT C ; SHAHIN JR GORDON T ; STEGEMEIER GEORGE L ; VINEGAR HAROLD J ; WELLINGTON SCOTT L ; ZHANG ETUAN

Title: LOW-FREQUENCY SEISMIC-WHILE-DRILLING SOURCE

Abstract: Source: US2013286787A [EN] A bottom hole assembly is configured with a drill bit section connected to a pulse generation section. The pulse generation section includes a relatively long external housing, the particular housing length being selected for the particular drilling location. The long external housing is positioned closely adjacent to the borehole sidewalls to thereby create a high speed flow course between the external walls of the housing and the borehole sidewalls. The long external housing includes a valve cartridge assembly and optionally a shock sub decoupler. While in operation, the valve cartridge assembly continuously cycles and uses downhole pressure to thereby generate seismic signal pulses that propagate to geophones or other similar sensors on the surface. The amount of bypass allowed through the valve assembly is selectable in combination with the long external housing length and width to achieve the desired pulse characteristics. The bottom hole assembly optionally includes an acoustic baffle to attenuate wave propagation going up the drill string.

Classifications:

International (IPC 8-9): E21B47/12 E21B47/18 E21B49/00 G01V1/133 (Advanced/Invention)
CPC: E21B49/003 E21B47/18 G01V1/133 G01V11/002
US: 367/143 367/27



Family:

Publication number	Publication date	Application number	Application date
US2013286787 AA	20131031	US20130870866	20130425
US2016130938 AA	20160512	US20150981595	20151228
WO13163471 A1	20131031	WO2013US38281	20130425

Priority:

US20100957049 20101130 US20120638456P 20120425 US20130870866 20130425
US20150981595 20151228

Probable Assignee: TEMPRESS TECHNOLOGIES INC

Assignee(s): (std): KOLLE JACK J ; TEMPRESS TECHNOLOGIES INC ; TEMPRESS TECHNOLOGIES INC

Inventor(s): (std): KOLL JACK J ; KOLLE JACK J

Agent(s): MCBETH RYAN ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

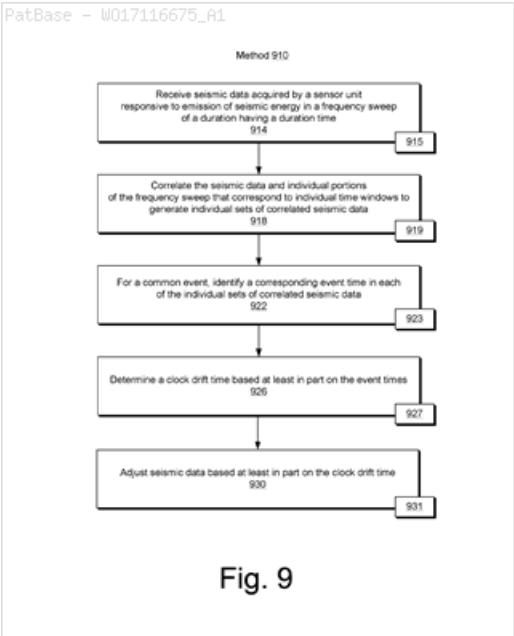
Title: DATA-DRIVEN CLOCK DRIFT ADJUSTMENT

Abstract: A method can include receiving seismic data acquired by a sensor unit responsive to emission of seismic energy in a frequency sweep of a duration having a duration time; correlating the seismic data and individual portions of the frequency sweep that correspond to individual time windows to generate individual sets of correlated seismic data; for a common event, identifying a corresponding event time in each of the individual sets of correlated seismic data; and determining a clock drift time based at least in part on the event times.

Classifications:

International (IPC 8-9): E21B47/00 G01V1/00 G01V1/04 G01V1/16 G01V1/30 (Advanced/Invention)

CPC: G01V2200/12 G01V2200/14 G01V1/26



Family:

Publication number	Publication date	Application number	Application date
WO17116675 A1	20170706	WO2016US66241	20161212

Priority:

US20150272193P 20151229

Probable Assignee: SCHLUMBERGER CA LTD

Assignee(s): (std): SCHLUMBERGER CA LTD ; SCHLUMBERGER TECHNOLOGY BV ; WESTERNGECO LLC

Assignee(s): SCHLUMBERGER CANADA LTD

Inventor(s): (std): IRANPOUR KAMBIZ

Agent(s): MCGOFF KEVIN B ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KH KM KN KP KR KW KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: METHOD OF REAL TIME DIAGNOSTIC OF **FRACTURE** OPERATIONS WITH COMBINATION OF TUBE **WAVES** AND MICROSEISMIC MONITORING

Abstract: Source: US2013079935A [EN] This invention relates to petroleum industry, in particularly, to control and monitoring of processes related to reservoir stimulation. A method of real time diagnostic of **fracture** operations with combination of tube **waves** and microseismic monitoring, comprising performing a **fracture** in a wellbore, recording microseismic activity generated during the **fracturing** operations. Determining of microseismic event locations, generating low frequency **pressure waves** (tube **waves**) near the wellbore, recording of tube **waves** reflections from the **fractures** in real time and analyzing microseismic event locations and tube **waves** reflections from the **fractures**.

Classifications:

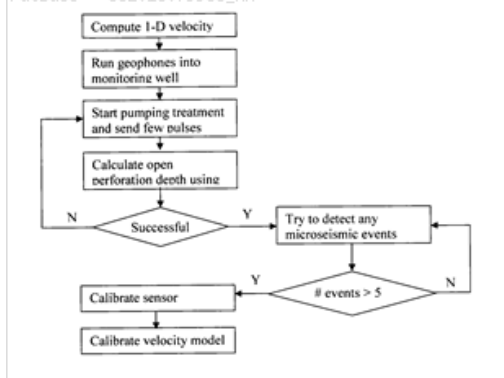
International (IPC 8-9): E21B43/26 E21B47/14 G01V1/00 G01V1/28 G01V1/40 G05D11/00 G05D7/00 G06F17/00 (Advanced/Invention)

CPC: G01V1/282 G05D7/00 G06F17/00 G01V1/40 E21B43/26 E21B47/14 G01V2210/1234

European: E21B43/26 E21B47/14 G01V1/40

US: 700/282 702/11

PatBase - US2013079935_AA



Family:

Publication number	Publication date	Application number	Application date
CA2799719 AA	20121116	CA20112799719	20110519
MX2012013432 A1	20130227	MX20120013432	20110519
RU2010120482 A	20111127	RU20100120482	20100521
RU2455665 C2	20120710	RU20100120482	20100521
US2013079935 AA	20130328	US20110698051	20110519
US9658357 BB	20170523	US20110698051	20110519
WO11145985 A1	20111124	WO2011RU00338	20110519

Priority:

RU20100120482 20100521 WO2011RU00338 20110519

Probable Assignee: SCHLUMBERGER TECHNOLOGY CORP

Assignee(s): (std): BOGDAN ANDREY VLADIMIROVICH ; EMEYANOV DENIS YURIEVICH ; KABANNIK ARTEM VALERIEVICH ; KABANNIK ARTEM VALERYEVICH ; KUZNETSOV DMITRY SERGEEVICH ; SCHLUMBERGER CA LTD ; SCHLUMBERGER HOLDINGS ; PRAD RES AND DEV LTD ; LECERF BRUNO ; TARASENKO KIRILL LEONIDOVICH ; SCHLUMBERGER TECHNOLOGY BV ; SERVICES PETOLIERS SCHLUMBERGER ; SCHLUMBERGER TECHNOLOGY CORP

Assignee(s): SHLJUMBERGER TEKNOLODZHI BV ; SHLJUMBERGER TEKNOLODZHI B V ; SCHLUMBERGER CANADA LTD ; PRAD RESEARCH AND DEVELOPMENT LTD ; SCHLUMBERGER HOLDINGS LTD ; SCHLUMBERGER TECHNOLOGY B V ; PRAD RESEARCH AND DEVELOPMENT LIMITED ; SCHLUMBERGER CANADA LIMITED ; SCHLUMBERGER HOLDINGS LIMITED

Inventor(s): (std): TARASENKO KIRILL LEONIDOVICH ; LECERF BRUNO ; KUZNETSOV DMITRY SERGEEVICH ; KABANNIK ARTEM VALERIEVICH ; EMEYANOV DENIS YURIEVICH ; BOGDAN ANDREY VLADIMIROVICH ; LESERF BRUNO ; KUZNETSOV DMITRIJ SERGEEVICH ; KABANNIK ARTEM VALER EVICH ; EMEL JANOV DENIS JUR EVICH ; BOGDAN ANDREJ VLADIMIROVICH ; KABANNIK ARTEM VALERYEVICH

Inventor(s): KABANNIK ARTEM VALER'EVICH ; EMEL'ANOV DENIS JUR'EVICH ; ANDREY VLADIMIROVICH BOGDAN ; ARTEM VALERIEVICH KABANNIK ; BRUNO LECERF ; DENIS YURIEVICH EMEYANOV ; DMITRY SERGEEVICH KUZNETSOV ; KIRILL LEONIDOVICH TARASENKO

Agent(s): SMART AND BIGGAR; ANDREA E; YAKUSHEVA ELENA GENNADIEVNA

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: **SEISMIC WAVEFIELD** DEGHOSTING

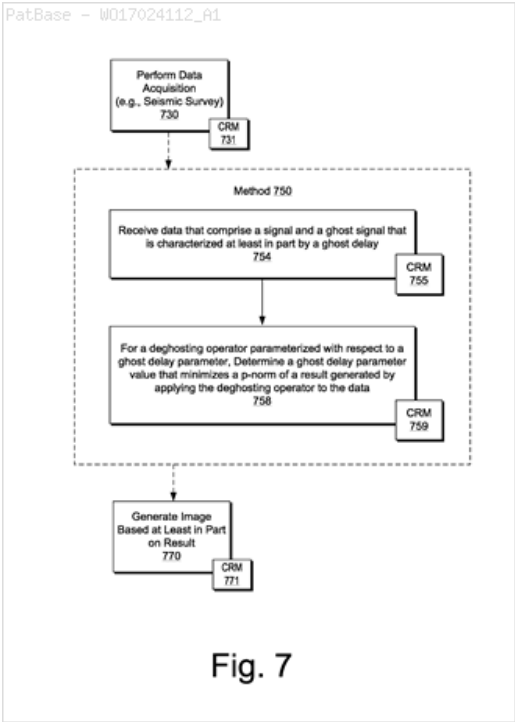
Abstract: A method can include receiving data that include a signal and a ghost signal that is characterized at least in part by a ghost delay; and, for a deghosting operator parameterized with respect to a ghost delay parameter, determining a ghost delay parameter value that minimizes a p-norm of a result generated by applying the deghosting operator to at least a portion of the data.

Classifications:

International (IPC 8-9): G01V1/00 G01V1/36

G01V1/38 (Advanced/Invention)

CPC: G01V1/38 G01V1/364 G01V2210/56



Family:

Publication number	Publication date	Application number	Application date
WO17024112 A1	20170209	WO2016US45494	20160804

Priority:

US20150201921P 20150806

Probable Assignee: GEOQUEST SYSTEMS BV

Assignee(s): (std): GEOQUEST SYSTEMS BV ; SCHLUMBERGER CA LTD ; SCHLUMBERGER TECHNOLOGY CORP ; SERVICES PETROLIERS SCHLUMBERGER

Assignee(s): SCHLUMBERGER CANADA LTD

Inventor(s): (std): CAPRIOLI PHILIPPE ; KAMIL AMIN YOUSIF IZZELDIN ; SCHUBERTH MAXIMILIAN ; VASSALLO MASSIMILIANO

Agent(s): BUKOYE ABIMBOLA ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: REAL-TIME WELL SURVEILLANCE USING A WIRELESS NETWORK AND AN IN-WELLBORE TOOL

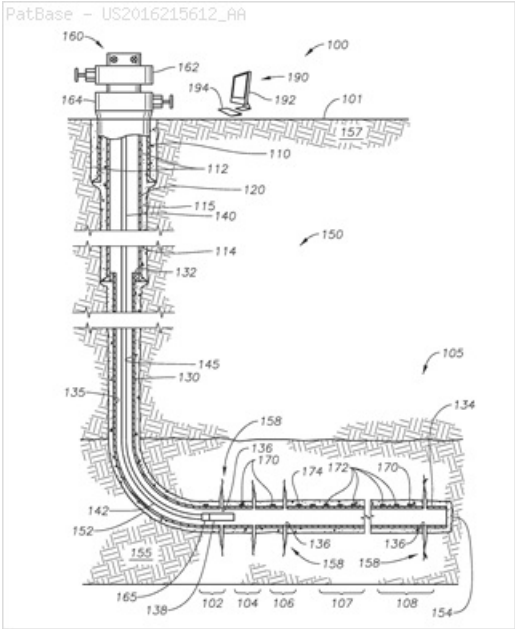
Abstract: Source: US2016215612A [EN] A method of transmitting data in a wellbore uses a signal receiver that is run into the wellbore on a working **string**. The signal receiver receives wireless signals from receiver communications nodes placed along the wellbore. The data from those signals is then sent up the wellbore, either by directing the signals directly up the working **string**, or by spooling the **string** to the surface and uploading the data. **Sensors** and associated communications nodes are placed within the wellbore to collect data. The communications nodes may be the signal receiver nodes; alternatively, the communications nodes may send data from the **sensors** up the wellbore through **acoustic** signals to a receiver communications node. In the latter instance, intermediate communications nodes having electro-**acoustic** transducers are used as part of a novel telemetry **system**.

Classifications:

International (IPC 8-9): E21B47/12 (Advanced/Invention)

CPC: E21B47/122 E21B47/01 E21B47/011

US: 340/854.9



Title: **SYSTEMS** AND METHODS FOR CHARACTERIZING SUBTERRANEAN FORMATIONS UTILIZING AZIMUTHAL DATA

Abstract: Source: US2016334528A [EN] A **system** and method is disclosed for characterizing a subterranean formation utilizing azimuthal data that includes obtaining **seismic** data along a plurality of azimuth angles from a receiver and performing a correction to the **seismic** data to remove an offset effect. The offset effect is based on a distance between the receiver and a **seismic** source. The method further includes analyzing the corrected **seismic** data for an anisotropic region indicative of a subterranean **fracture**.

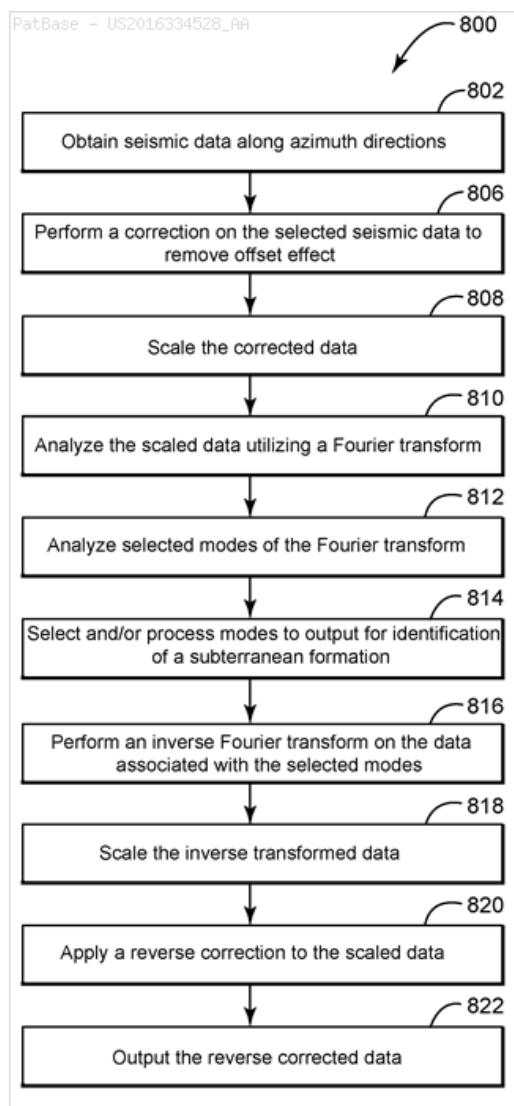
Classifications:

International (IPC 8-9): G01V1/30 G01V1/32

G01V1/36 (Advanced/Invention)

CPC: G01V2210/43 G01V2210/53 G01V1/306 G01V1/32 G01V1/36
G01V2210/626

US: 702/17



Family:

Publication number	Publication date	Application number	Application date
EP3090281 A2	20161109	EP20140844984	20141205
US2016334528 AA	20161117	US20140107150	20141205
WO15101832 A2	20150709	WO2014IB03044	20141205
WO15101832 A3	20151126	WO2014IB03044	20141205

Priority:

US20130922211P 20131231 US20140107150 20141205 US20140929170P 20140120
WO2014IB03044 20141205

Probable Assignee: CGG SERVICES SA

Assignee(s): (std): CGG SERVICES SA

Inventor(s): (std): DESCHIZEAUX BERNARD ; HABERFIELD JONATHAN

Agent(s): PETIT MAXIME; PETIT MAXIME ET AL

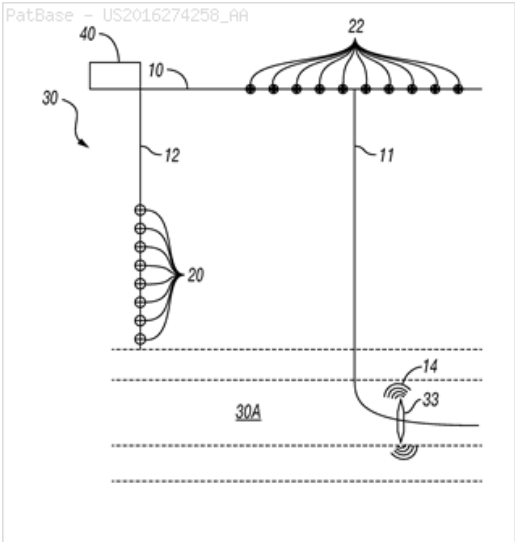
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: PROCESSING MICROSEISMIC DATA

Abstract: Source: US2016274258A [EN] A method for processing microseismic data in which microseismic data is received and a filter is applied to the microseismic data. The filter is designed to whiten the frequency spectrum of the microseismic data. The filter may be a deconvolution filter. The method may allow for a very weak signal of interest to be identified in the microseismic data, even where it would have been very difficult or even impossible to identify the signal of interest in the microseismic data prior to applying the filter to the microseismic data.

Classifications:

International (IPC 8-9): G01V1/28 G01V1/36 (Advanced/Invention); G01V1/28 (Advanced/Non-invention)
CPC: G01V2210/34 G01V1/288 G01V2210/324 G01V1/368 G01V2210/21 G01V2210/646 G01V1/364 G01V2210/123
US: 702/17



Family:

Publication number	Publication date	Application number	Application date
EP2976660 A1	20160127	EP20140768482	20140318
EP2976660 A4	20161116	EP20140768482	20140318
GB201304866 A0	20130501	GB20130004866	20130318
US2016274258 AA	20160922	US20140778001	20140318
WO14147557 A1	20140925	WO20141B59941	20140318

Priority:

GB20130004866 20130318 US20130802997P 20130318 WO20141B59941 20140318
US20140778001 20140318

Probable Assignee: WESTERNGECO LLC

Assignee(s): (std): GECO TECHNOLOGY BV ; SCHLUMBERGER CA LTD ; WESTERNGECO LLC ; WESTERNGECO SEISMIC HOLDINGS

Assignee(s): GECO TECHNOLOGY B V ; SCHLUMBERGER CANADA LTD ; WESTERNGECO SEISMIC HOLDINGS LTD

Inventor(s): (std): PROBERT ANTHONY

Agent(s): SCHLUMBERGER CAMBRIDGE RESEARCH LTD; GAHLINGS STEVEN

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: GUIDED OSCILLATORY WELL PATH DRILLING BY SEISMIC IMAGING

Abstract: Source: US5242025A [EN] Real-time monitoring of a target production zone is followed by an oscillatory drilling path to create a borehole having improved zone drainage capability. Real-time monitoring uses **geophones** placed in adjacent wells or the well being drilled. The drilling process itself generates the **seismic** signals. When the **geophones** are located in the well being drilled, the **seismic** signals are transmitted from downhole to surface through intermittent **pressurization** of drilling mud. Once drilling penetrates the zone, the oscillatory path is followed by **fracturing** to improve fluid drainage paths and minimize additional drilling.

Classifications:

International (IPC 8-9): E21B43/30 E21B44/00 E21B47/022 E21B7/04 (Advanced/Invention);

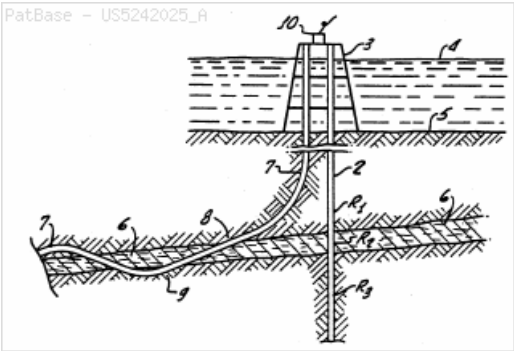
E21B43/00 E21B44/00 E21B47/02 E21B7/04 (Core/Invention)

International (IPC 1-7): E21B7/00

CPC: E21B7/04 E21B43/305 E21B44/005 E21B47/02208

European: E21B43/30B E21B44/00B E21B47/022C E21B7/04

US: 175/26 175/50



Family:

Publication number	Publication date	Application number	Application date
US5242025 A	19930907	US19920906754	19920630

Priority:

US19920906754 19920630

Probable Assignee: UNION OIL CO

Assignee(s): (std): UNION OIL CO

Assignee(s): UNION OIL CO OF CALIFORNIA ; UNION OIL COMPANY OF CALIFORNIA

Inventor(s): (std): AMINZADEH FRED ; NEILL WILLIAM M ; QUINTANA JULIO M ; SAREM A M SAM

PatBase - Search results 17 April 2018

Search query (2): [SP]: 1. a wellbore system comprising: a work string and a downhole device connected to a portion of the work string, the downhole device configured to deliver periodic energy pulses to a portion of a wellbore. 2. the system of claim 1, further comprising at least one sensor configured to measure energy pulses in the portion of the wellbore, wherein the at least one sensor is configured to determine at least one property of the wellbore based on the energy pulses detected by the at least one sensor. 3. the system of claim 2, wherein the at least one sensor is connected to the downhole device. 4. the system of claim 2, wherein the periodic energy pulses comprise seismic waves and the at least one sensor comprises a geophone. 5. the system of claim 2, wherein the periodic energy pulses comprises pressure waves and the at least one sensor comprises a pressure sensor. 6. the system of claim 1, wherein the portion of the wellbore further comprises at least one fracture in a formation. 7. the system of claim 6, further comprising a first packing element, wherein the first packing element is positioned below the at least one fracture and the downhole device is positioned adjacent the at least one fracture. 8. the system of claim 7, further comprising a second packing element, wherein the second packing element is positioned above the downhole device. 9. the system of claim 6, wherein the work string comprises coiled tubing. 10. the system of claim 9, wherein the downhole device comprises a vibratory tool and the periodic energy pulses further comprise oscillating pressure waves. 11. the system of claim 10, wherein the vibratory tool is a fluid hammer tool that creates the oscillating pressure waves based on the coand{hacek over (a)} effect. 12. the system of claim 11, wherein the frequency of the oscillating pressure waves may be varied during operation of the fluid hammer tool. 13. the system of claim 6, wherein the downhole device is an acoustic device and the periodic energy pulses further comprise acoustic waves. 14. the system of claim 6, further comprising proppant positioned within the at least one fracture, wherein the proppant is configured to release energy when actuated by the periodic energy pulses. 15. the system of claim 14, wherein the proppant further comprises explosive proppant or flagration proppant. 16. the system of claim 6, further comprising at least one sensor configured to measure energy pulses in the portion of the wellbore from the periodic energy pulses. 17. the system of claim 16, wherein the at least one sensor is connected to the downhole device. 18. the system of claim 16, wherein the at least one sensor is configured to determine at least one property of the at least one fracture based energy pulses detected by the at least one sensor. 19. the system of claim 18, wherein the at least one property is a width of the at least one fracture, a length of the at least one fracture, a shape of the at least one fracture, or a propped length of the at least one fracture. 20. a method of supplying energy pulses to a portion of a wellbore comprising: positioning a downhole device adjacent a portion of a wellbore and delivering periodic energy pulses from the downhole device to the portion of the wellbore. 21. the method of claim 20, further comprising determining one or more properties of the wellbore based on energy pulses reflected from the wellbore. 22. the method of claim 20, wherein the portion of the wellbore includes at least one fracture. 23. the method of claim 22, further comprising determining one or more properties of the at least one fracture. 24. the method of claim 23, wherein the one or more properties of the at least one fracture includes a length of the at least one fracture, a width of the at least one fracture, a propped length of the at least one fracture, or a shape of the at least one fracture. 25. the method of claim 20, further comprising modifying a frequency of the periodic energy pulses. 26. the method of claim 25, further comprising modifying a magnitude of the periodic energy pulses. 27. the method of claim 26, further comprising reevaluating the one or more properties of the wellbore based on modified reflected energy pulses. 28. the method of claim 26, wherein modifying a flow rate of fluid flowing through the downhole device modifies the frequency and magnitude of the periodic energy pulses. 29. the method of claim 26, wherein modifying a signal to the downhole device modified the frequency and magnitude of the periodic energy pulses. 30. the method of claim 22, further comprising changing a property of the fracture with the periodic energy pulses. 31. the method of claim 30, wherein the periodic energy pulses enlarges a width or a length of the fracture. 32. the method of claim 30, wherein the periodic energy pulses inhibit growth of the fracture. 33. the method of claim 30, wherein the periodic energy pulses increase the conductivity of the fracture. 34. the method of claim 22, further comprising cleaning up the at least one fracture with the periodic energy pulses. 35. the method of claim 34, wherein cleaning up the at least one fracture further comprises enhancing transport of proppant into the at least one fracture or breaking down a layer of a formation adjacent to the at least one fracture having a low-permeability. 36. a wellbore system comprising: a work string at least one downhole device connected to a portion of the work string, the downhole device configured to deliver periodic energy pulses to a portion of a wellbore and at least one sensor configured to determine at least one property of the wellbore based on detected energy pulses wherein the at least one downhole device is configured to selectively modify a magnitude and a frequency of the periodic energy pulses. 37. the system of claim 36, wherein the periodic energy pulses comprise pressure waves, acoustic waves, or seismic waves.

Results: 9**Search history**

Search PN=(WO2016028886) (Results 1)

1:

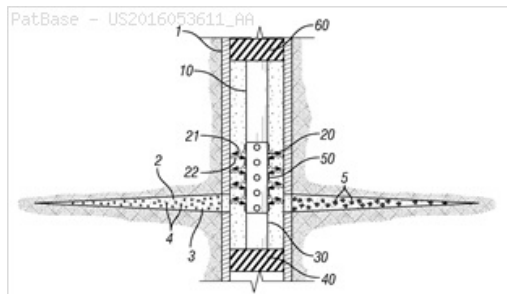
Search [SP]: 1. a wellbore system comprising: a work string and a downhole device connected to a portion of the work string, the downhole device configured to deliver periodic energy pulses to a portion of a wellbore. 2. the system of claim 1, further comprising at least one sensor configured to measure energy pulses in the portion of the wellbore, wherein the at least one sensor is configured to determine at least one property of the wellbore based on the energy pulses detected by the at least one sensor. 3. the system of claim 2, wherein the at least one sensor is connected to the downhole device. 4. the system of claim 2, wherein the periodic energy pulses comprise seismic waves and the at least one sensor comprises a geophone. 5. the system of claim 2, wherein the periodic energy pulses comprises pressure waves and the at least one sensor comprises a pressure sensor. 6. the system of claim 1, wherein the portion of the wellbore further comprises at least one fracture in a formation. 7. the system of claim 6, further comprising a first packing element, wherein the first packing element is positioned below the at least one fracture and the downhole device is positioned adjacent the at least one fracture. 8. the system of claim 7, further comprising a second packing element, wherein the second packing element is positioned above the downhole device. 9. the system of claim 6, wherein the work string comprises coiled tubing. 10. the system of claim 9, wherein the downhole device comprises a vibratory tool and the periodic energy pulses further comprise oscillating pressure waves. 11. the system of claim 10, wherein the vibratory tool is a fluid hammer tool that creates the oscillating pressure waves based on the coand{hacek over (a)} effect. 12. the system of claim 11, wherein the frequency of the oscillating pressure waves may be varied during operation of the fluid hammer tool. 13. the system of claim 6, wherein the downhole device is an acoustic device and the periodic energy pulses further comprise acoustic waves. 14. the system of claim 6, further comprising proppant positioned within the at least one fracture, wherein the proppant is configured to release energy when actuated by the periodic energy pulses. 15. the system of claim 14, wherein the proppant further comprises explosive proppant or flagration proppant. 16. the system of claim 6, further comprising at least one sensor configured to measure energy pulses in the portion of the wellbore from the periodic energy pulses. 17. the system of claim 16, wherein the at least one sensor is connected to the downhole device. 18. the system of claim 16, wherein the at least one sensor is configured to determine at least one property of the at least one fracture based energy pulses detected by the at least one sensor. 19. the system of claim 18, wherein the at least one property is a width of the at least one fracture, a length of the at least one fracture, a shape of the at least one fracture, or a propped length of the at least one fracture. 20. a method of supplying energy pulses to a portion of a wellbore comprising: positioning a downhole device adjacent a portion of a wellbore and delivering periodic energy pulses from the downhole device to the portion of the wellbore. 21. the method of claim 20, further comprising determining one or more properties of the wellbore based on energy pulses reflected from the wellbore. 22. the method of claim 20, wherein the portion of the wellbore includes at least one fracture. 23. the method of claim 22, further comprising determining one or more properties of the at least one fracture. 24. the method of claim 23, wherein the one or more properties of the at least one fracture includes a length of the at least one fracture, a width of the at least one fracture, a propped length of the at least one fracture, or a shape of the at least one fracture. 25. the method of claim 20, further comprising modifying a frequency of the periodic energy pulses. 26. the method of claim 25, further comprising modifying a magnitude of the periodic energy pulses. 27. the method of claim 26, further comprising reevaluating the one or more properties of the wellbore based on modified reflected energy pulses. 28. the method of claim 26, wherein modifying a flow rate of fluid flowing through the downhole device modifies the frequency and magnitude of the periodic energy pulses. 29. the method of claim 26, wherein modifying a signal to the downhole device modified the frequency and magnitude of the periodic energy pulses. 30. the method of claim 22, further comprising changing a property of the fracture with the periodic energy pulses. 31. the method of claim 30, wherein the periodic energy pulses enlarges a width or a length of the fracture. 32. the method of claim 30, wherein the periodic energy pulses inhibit growth of the fracture. 33. the method of claim 30, wherein the periodic energy pulses increase the conductivity of the fracture. 34. the method of claim 22, further comprising cleaning up the at least one fracture with the periodic energy pulses. 35. the method of claim 34, wherein cleaning up the at least one fracture further comprises enhancing transport of proppant into the at least one fracture or breaking down a layer of a formation adjacent to the at least one fracture having a low-permeability. 36. a wellbore system comprising: a work string at least one downhole device connected to a portion of the work string, the downhole device configured to deliver periodic energy pulses to a portion of a wellbore and at least one sensor configured to determine at least one property of the wellbore based on detected energy pulses wherein the at least one downhole device is configured to selectively modify a magnitude and a frequency of the periodic energy pulses. 37. the system of claim 36, wherein the periodic energy pulses comprise pressure waves, acoustic waves, or seismic waves. (Results 9)

Title: SYSTEM AND METHOD FOR USING PRESSURE PULSES FOR FRACTURE STIMULATION PERFORMANCE ENHANCEMENT AND EVALUATION

Abstract: Source: US2016053611A [EN] A system and method of applying periodic energy pulses to a portion of a wellbore, fracture(s), and/or near wellbore to interrogate and/or stimulate at least a portion of the wellbore, fracture(s), and/or near wellbore. The system includes a downhole device that is configured to deliver periodic energy pulses to a portion of the wellbore. The downhole device may deliver various energy pulses such as pressure waves, seismic waves, and/or acoustic waves. Sensors may determine properties of a portion of the wellbore and/or fracture based on energy pulses detected within the wellbore. The sensors may be connected to the downhole tool, may be positioned within the wellbore, and/or may be positioned at the surface. The magnitude and/or frequency of the periodic energy pulses may be varied to change the stimulation and/or interrogation of the wellbore.

Classifications:

International (IPC 8-9): E21B28/00 E21B41/00 E21B43/25
E21B43/26 E21B43/263 E21B43/267 E21B47/085 E21B49/00
G01V1/40 G1V1/40 (Advanced/Invention);
E21B43/26 E21B43/267 G01V1/52 (Advanced/Non-invention)
CPC: E21B28/00 E21B43/263 E21B43/267 E21B43/26 E21B43/25
US: 166/113 166/244.1 166/250.01 166/250.1 166/308.1 166/63



Family:

Publication number	Publication date	Application number	Application date
AR101609 AA	20161228	AR2015P102696	20150821
CA2958765 AA	20170215	CA20152958765	20150819
CO20170002313 A2	20170630	CO20170002313	20170308
EP3183420 A1	20170628	EP20150834278	20150819
IN201717009071 A	20170818	IN201717009071	20170316
MX2017001975 A1	20170504	MX20170001975	20150819
NO20170279 A	20170227	NO20170000279	20170227
US2016053611 AA	20160225	US20150828902	20150818
WO16028886 A1	20160225	WO2015US45883	20150819

Priority:

US20140040508P 20140822 US20150828902 20150818 WO2015US45883 20150819

Probable Assignee: BAKER HUGHES INC

Assignee(s): (std): BAKER HUGHES INC

Assignee(s): LIVESCU SILVIU ; MOOS DANIEL ; BAKER HUGHES A GE CO LLC

Inventor(s): (std): LIVESCU SILVIU ; MOOS DANIEL ; SILVIU LIVESCU ; DANIEL MOOS

Agent(s): SIM AND MCBURNEY; CAROLINA MERCEDES DAZA MONTALVO; LAMBACHER MICHAEL; JOHNSON REXFORD ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: MAPPING FRACTURE DIMENSIONS

Abstract: Source: US2004226715A [EN] Hydraulic fracture dimensions and, optionally, fracture closure pressure and time are determined by adding particulate matter that discharges to create an acoustic signal to the proppant, allowing the particulate matter to discharge, and detecting the acoustic signal with geophones or accelerometers. The particulate matter may be spheres or fibers. The discharge may be explosion, implosion, detonation, or rapid combustion or ignition. The discharge may be triggered by fracture closure or by chemical reaction.

Classifications:

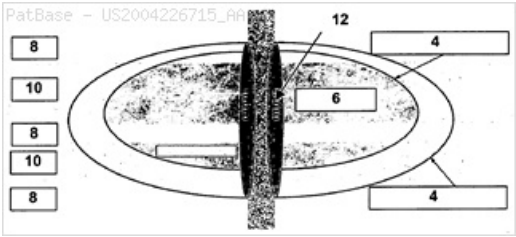
International (IPC 8-9): E21B43/26 E21B43/263 E21B43/267
E21B47/00 (Advanced/Invention);
E21B43/25 E21B47/00 (Core/Invention)

International (IPC 1-7): E21B43/26 E21B47/00

CPC: E21B47/00

European: E21B47/00

US: 166/250.1 166/250.100P 166/271 166/280.2 166/280.200S
166/299 166/308.1 166/308.100S



Family:

Publication number	Publication date	Application number	Application date
CA2522679 AA	20051017	CA20042522679	20040416
CA2522679 C	20091117	CA20042522679	20040416
EA007449 B1	20061027	EA20050001629	20040416
EA200501629 A1	20060224	EA20050001629	20040416
MXPA05010907 A1	20060321	MX2005PA10907	20040416
US2004226715 AA	20041118	US20040824079	20040414
US7134492 BB	20061114	US20040824079	20040414
WO04092540 A1	20041028	WO2004IB01158	20040416

Priority:

US20030463868P 20030418 US20040824079 20040414 WO2004IB01158 20040416

Probable Assignee: SCHLUMBERGER TECHNOLOGY CORP

Assignee(s): (std): BABOUR KAMAL ; BESSON CHRISTIAN ; DESROCHES JEAN ; GZARA KAIS ; SCHLUMBERGER CA LTD ; SCHLUMBERGER CANADA LTD ; SCHLUMBERGER SERVICES PETROL ; SCHLUMBERGER HOLDINGS ; SCHLUMBERGER TECHNOLOGY BV ; SOFITECH NV ; WILLBERG DEAN ; SCHLUMBERGER TECHNOLOGY CORP

Assignee(s): SCHLUMBERGER HOLDINGS LTD ; SERVICES PETROLIERS SCHLUMBERGER ; SOFITECH N V

Inventor(s): (std): BABOUR KAMAL ; BESSON CHRISTIAN ; DESROCHES JEAN ; GZARA KAIS ; WILLBERG DEAN

Inventor(s): CHRISTIAN BESSON

Agent(s): SMART AND BIGGAR; THOMAS O; ROBIN; TIM

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

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

Abstract: Source: US2008271923A [EN] 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.

Classifications:

International (IPC 8-9): E21B1/28 E21B28/00 E21B4/14 E21B41/00 E21B43/26 E21B44/00 E21B44/02 E21B44/06

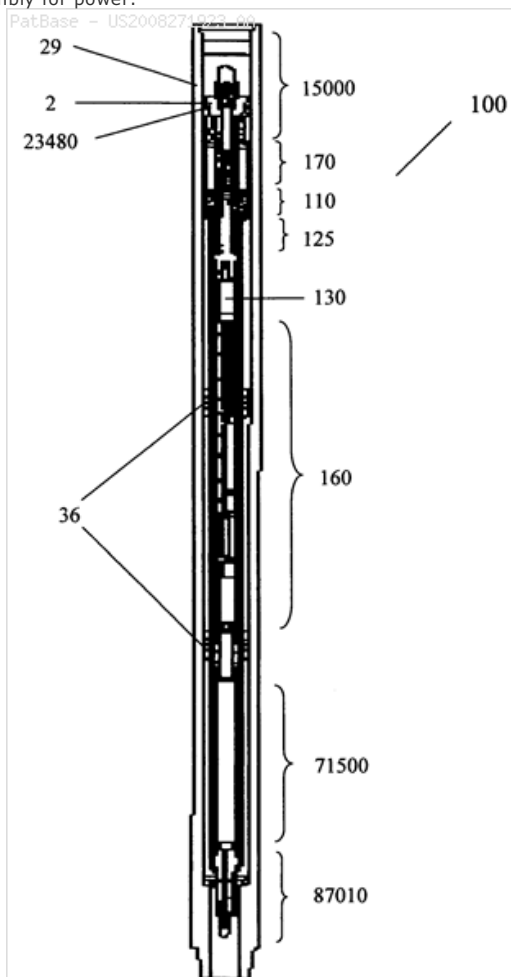
E21B7/24 (Advanced/Invention);

E21B4/00 E21B44/00 E21B7/00 (Core/Invention)

CPC: E21B4/02 E21B7/18 E21B41/0085 E21B1/00 E21B21/10 E21B34/10

European: E21B1/00 E21B4/02 E21B41/00R E21B7/18

US: 166/177.5 166/249 175/25 175/25P 175/317 175/324

**Family:**

Publication number	Publication date	Application number	Application date
CA2686737 AA	20081113	CA20082686737	20080226
CA2686737 C	20151006	CA20082686737	20080226
CA2710281 AA	20090702	CA20082710281	20081217
CA2710281 C	20170530	CA20082710281	20081217
EP2148975 A1	20100203	EP20080726053	20080226
EP2148975 A4	20150506	EP20080726053	20080226
EP2235323 A2	20101006	EP20080864254	20081217
EP2235323 A4	20150506	EP20080864254	20081217
EP2235323 B1	20180307	EP20080864254	20081217
MX2009011937 A1	20091204	MX20090011937	20080226
MX2010006797 A1	20130429	MX20100006797	20081217
RU2009144780 A	20110610	RU20090144780	20080226
RU2010130254 A	20120127	RU20100130254	20081217
US2008271923 AA	20081106	US20070004121	20071220
US2009107723 AA	20090430	US20080316864	20081217
US7836948 BB	20101123	US20070004121	20071220
US7958952 BB	20110614	US20080316864	20081217
WO08136883 A1	20081113	WO2008US02469	20080226
WO09082453 A2	20090702	WO2008US13804	20081217
WO09082453 A3	20091015	WO2008US13804	20081217

Priority:

US20070004121 20071220

US20070927400P 20070503

US20080316864 20081217

Probable Assignee: TELEDRIILL INC

Assignee(s): (std): KUSKO DAVID JOHN ; LERNER DANIEL MAURICE ; TELEDRIILL INC ; VECSERI GABOR

Assignee(s): KUSKO JAMES ; DAVID JOHN KUSKO

Inventor(s): (std): KUSKO DAVID JOHN ; LERNER DANIEL MAURICE ; VECSERI GABOR

Inventor(s): DANIEL MAURICE LERNER ; DAVID JOHN KUSKO ; GABOR VECSERI

Agent(s): BORDEN LADNER GERVAIS LLP; RUETTIGERS JOACHIM; KEHOE LAURA ELLEN; HELLMICH WOLFGANG;
GUERRY LEONARD GRUNE; GUERRY L; GRUNE GUERRY L

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU
CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL
IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT
MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV
SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: WELL MONITORING BY MEANS OF DISTRIBUTED SENSING MEANS

Abstract: Source: US2012057432A [EN] This application describes methods and apparatus for downhole monitoring in real-time. The method involves interrogating an unmodified optic fibre (102) arranged along the path of a well bore (106) to provide a distributed acoustic sensor and sampling data gathered from a plurality of sensing portions of the fibre. The sampled data is then processed to provide a real-time indication of the acoustic signals detected by the sensing portions of the fibre. The real-time indication provides information to an operator or controller of the downwell process with real-time feedback data regarding what is happening during the down-well process which allows the identification of any problems and adjustment of the process parameters.

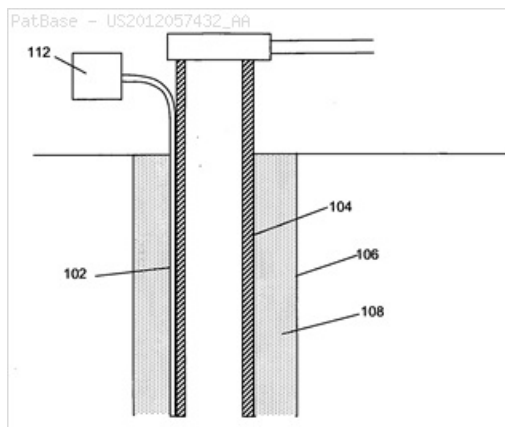
Classifications:

International (IPC 8-9): E21B E21B43/1185 E21B43/26 E21B43/267 E21B47/00 E21B47/10 E21B47/107 E21B47/113 E21B47/12 E21B47/135 E21B47/14 E21B47/16 G01H9/00 G01N29/036 G01S15/00 G01V1/00 G01V1/50 G01V8/02 G01V8/16 H04B10/25 (Advanced/Invention); G01H9/00 (Advanced/Non-invention)

CPC: G01V8/02 E21B43/11857 E21B43/26 E21B47/123 G01H9/004 G01V1/50 G01V2210/1429 G01V2210/646 E21B47/16 E21B47/101 E21B43/267 E21B47/14 G01V8/16 G01N29/036

European: E21B43/1185F E21B43/26 E21B47/10D E21B47/12M2 G01V8/02

US: 166/177.5 166/250.1 166/250.100P 166/308.1 166/308.100S 367/101 367/101S 367/140 367/140S 367/25 367/25S 367/81 367/81P 367/82 367/82P



Family:

Publication number	Publication date	Application number	Application date
AU2010252797 AA	20101202	AU20100252797	20100527
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AU2016203552 AA	20160616	AU20160203552	20160530
AU2016203552 BB	20171214	AU20160203552	20160530
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BRPI1012022 A2	20160510	BR2010PI12022	20100527
BRPI1012028 A2	20160510	BR2010PI12028	20100527
BRPI1012029 A2	20160510	BR2010PI12029	20100527
CA2760066 AA	20111026	CA20102760066	20100527
CA2760644 AA	20111031	CA20102760644	20100527
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CA2760662 AA	20101202	CA20102760662	20100527
CA2760662 C	20170425	CA20102760662	20100527
CN102292518 A	20111221	CN201080005137	20100527
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CN102449263 A	20120509	CN201080023028	20100527
CN102449263 B	20151125	CN201080023028	20100527
CN102597421 A	20120718	CN201080005244	20100527
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GB200909038 A0	20090701	GB20090009038	20090527
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GB201407433 A0	20140611	GB20140007433	20100527
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GB2482839 A1	20120215	GB20110021113	20100527
GB2482839 B2	20140115	GB20110021113	20100527
GB2483584 A1	20120314	GB20110021110	20100527
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GB2511657 A1	20140910	GB20140007433	20100527
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NO20111692 A	20111221	NO20110001692	20111207
PL398045 A1	20120604	PL20100398045	20100527
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RU2568652 C2	20151120	RU20110153416	20100527
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ZA201108666 A	20120926	ZA20110008666	20111124

Priority:

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GB20090019915	20091113	CN201080005244	20100527	AU20160203553	20160530
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GB20110021110	20100527	US20110320877	20111116	US20150816456	20150803

Probable Assignee: OPTASENSE HOLDINGS LTD

Assignee(s): (std): HILL DAVID JOHN ; MCEWEN KING MAGNUS ; OPTASENS KHOLDINGZ LTD ; OPTASENSE HOLDINGS LTD ; QINETIQ LTD ; TINDELL PATRICK ; TINDEL PATRICK

Assignee(s): TINDELL PATRICK PHILLIP ; QINETIQ LIMITED

Inventor(s): (std): MCEWEN KING MAGNUS ; PATRICK TINDELL ; TIN DELL PATRICK ; TINDEL PATRICK ; TINDELL PATRICK ; TINDELL PATRIK ; TINDELL PATRICK PHILLIP ; HILL DAVID JOHN ; JOHN HILL DAVID ; KHILL DEHVID DZHON ; MAGNUS MCEWEN KING ; MAK JUEHN KING MAGNUS ; TINDELL PATRICK PHILIP

Inventor(s): PATRICK PHILIP TINDELL ; MAKYUEN KING MAGNUS ; KHILL DEVID DZHON ; PATRICK TINDEL ; HILL DAVID JOHN MC ; EWENKING MAGNUS ; DAVID JOHN HILL

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; FETHERSTONHAUGH AND CO; OOO YURIDICHESKAYA GORODISSKIY I PARTNERY FA; MCDONNELL BOEHNEN HULBERT AND BERGHOFF LLP; NORTHWAY DANIEL R

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: METHOD OF MANUFACTURE AND THE USE OF A FUNCTIONAL PROPPANT FOR DETERMINATION OF SUBTERRANEAN FRACTURE GEOMETRIES

Abstract: Source: US2009288820A [EN] Proppants having added functional properties are provided, as are methods that use the proppants to track and trace the characteristics of a fracture in a geologic formation. Information obtained by the methods can be used to design a fracturing job, to increase conductivity in the fracture, and to enhance oil and gas recovery from the geologic formation. The functionalized proppants can be detected by a variety of methods utilizing, for example, an airborne magnetometer survey, ground penetrating radar, a high resolution accelerometer, a geophone, nuclear magnetic resonance, ultra-sound, impedance measurements, piezoelectric activity, radioactivity, and the like. Methods of mapping a subterranean formation are also provided and use the functionalized proppants to detect characteristics of the formation.

Classifications:

International (IPC 8-9): B01J13/02 B23B19/00 B82Y30/00 C04B35/628 C09K8/60 C09K8/74 C09K8/80 E21B43/00 E21B43/267 E21B43/27 E21B47/00 E21B47/10 E21B47/12 E21B49/00 G01V3/24 (Advanced/Invention); C09K8/60 E21B43/00 E21B43/25 E21B47/00 E21B49/00 (Core/Invention)
International (IPC 1-7): E21B43/25 E21B47/00
CPC: C09K8/80 B01J13/02 B82Y30/00 C04B35/62807 C04B35/62823 C04B35/62839 C04B35/62842 C04B35/62894 C04B2235/3418 C04B2235/422 C04B2235/5288 C09K8/805 E21B43/00 E21B43/267 E21B47/00 E21B47/12 E21B49/00 G01V3/24 Y10S507/907 Y10S507/924 Y10T428/29 Y10T428/2991 Y10T428/2993
European: B01J13/02 B82Y30/00 C04B35/628B10 C04B35/628B2B C04B35/628B2H8 C04B35/628B8R C04B35/628P C09K8/80 C09K8/80B E21B43/00 E21B43/267 E21B47/00 E21B47/12 E21B49/00 M04B235/34D M04B235/42C M04B235/52J2
US: 166/249 166/250.1 166/250.100P 166/250.100S 166/251.1 166/251.100S 166/280.2 166/280.200S 428/357 428/403 428/404 507/219 507/219S 507/269 507/269S 507/270 507/270S 507/271 507/907 507/924

Family:

Publication number	Publication date	Application number	Application date
AR071860 AA	20100721	AR2009P101818	20090520
CA2725088 AA	20101119	CA20092725088	20090519
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CN102099545 A	20110615	CN200980128414	20090519
CN102099545 B	20150610	CN200980128414	20090519
EA022413 B1	20151230	EA20100071331	20090519
EA201071331 A1	20110630	EA20100071331	20090519
EP2307666 A2	20110413	EP20090744812	20090519
GC6395 A	20171107	GC2009P013517	20090519
MX2010012463 A1	20101207	MX20100012463	20090519
US2009288820 AA	20091126	US20090468088	20090519
US2012181020 AA	20120719	US20120432015	20120328
US8168570 BB	20120501	US20090468088	20090519
US9803135 BB	20171031	US20120432015	20120328
WO10011402 A2	20100128	WO2009US44425	20090519
WO10011402 A3	20100910	WO2009US44425	20090519

Priority:

US20080054515P 20080520 US20080054622P 20080520 US20080120317P 20081205
US20090468088 20090519 WO2009US44425 20090519 US20120432015 20120328

Probable Assignee: OXANE MATERIALS INC

Assignee(s): (std): BARRON ANDREW R ; CHATTERJEE DILIP K ; COKER CHRISTOPHER E ; OXANE MATERIALS INC ; XIE YUMING ; SKALA ROBERT D ; HALLIBURTON ENERGY SERVICES INC ; OXANE MAT INC

Assignee(s): COMERICA BANK A TEXAS BANKING ASSOCIATION ; DELTA CENTAURI LLC

Inventor(s): (std): YUMING XIE ; XIE YUMING ; SKALA ROBERT D ; COKER CHRISTOPHER E ; CHATTERJEE DILIP K ; BARRON ANDREW R

Inventor(s): ROBERT D SKALA ; DILIP K CHATTERJEE ; CHRISTOPHER E COKER ; ANDREW R BARRON

Agent(s): DIMOCK STRATTON LLP; NORTON ROSE FULBRIGHT CANADA LLP SENCRL SRL; GRUENECKER KINKELDEY STOCKMAIR AND SCHWANHAEUSSER ANWALTSSOZIETAET; SULEIMAN I AL AMMAR LAW OFFICE; KILYK AND BOWERSOX PLLC; CRAIG W; TUMEY LLP; KILYK LUKE A

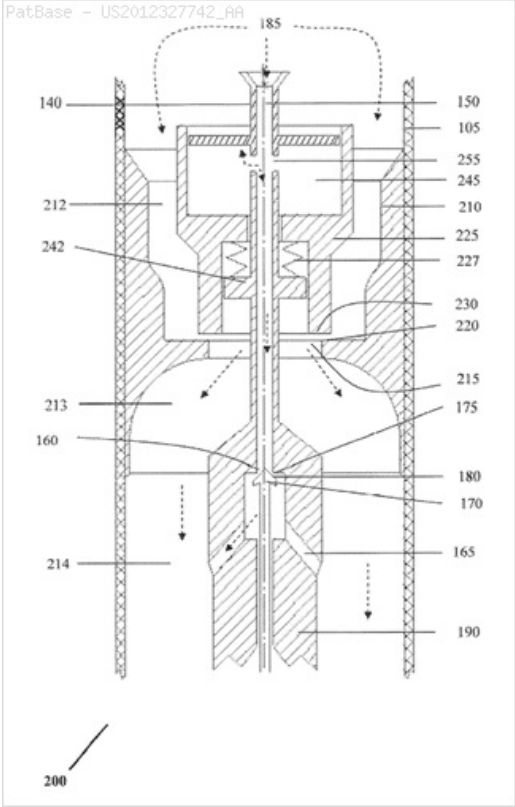
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Title: BOREHOLE FLOW MODULATOR AND INVERTED SEISMIC SOURCE GENERATING SYSTEM

Abstract: Source: US2012327742A [EN] The present invention relates to the vertical seismic profiling (VSP) of geological formations in which profiling is used to obtain information for performing precise interpretations of geophysical seismic data and better understanding of geophysical information. The disclosure involves using a sound source for generating primary and secondary seismic pulses within well boreholes. The seismic profiling system obtains information regarding a geological formation traversed by a borehole with controllable downhole seismic pulse generators with drill string tool(s). The tool(s) have contact with and are coupled to the formation. A seismic pulsing device (SPD) is attached to a portion of the drill string and a valve controller is used to control opening and closing the valve causing high amplitude short duration ultra wide band pressure pulses, generating primary seismic waves sent into surrounding geological formations. This generates secondary seismic waves received that can be detected by geophones or similar devices.

Classifications:

International (IPC 8-9): E21B47/14 E21B47/18 G01V1/02
G01V1/137 G01V1/40 (Advanced/Invention)
CPC: G01V1/137 E21B47/182
European: E21B47/18C G01V1/137
US: 367/25



Family:

Publication number	Publication date	Application number	Application date
US2012327742 AA	20121227	US20100582447	20100302
WO11109014 A1	201110909	WO2010US25895	20100302

Priority:

US20100582447 20100302 WO2010US25895 20100302

Probable Assignee: TELEDRIILL INC

Assignee(s): (std): KUSKO DAVID JOHN ; LERNER DANIEL MAURICE ; VECSEI GABOR

Assignee(s): TELEDRIILL INC ; KUSKO JAMES

Inventor(s): (std): KUSKO DAVID JOHN ; LERNER DANIEL MAURICE ; VECSEI GABOR

Agent(s): GRUNE GUERRY L

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: SYSTEM FOR EXTRACTING HYDROCARBONS FROM UNDERGROUND GEOLOGICAL FORMATIONS AND METHODS THEREOF

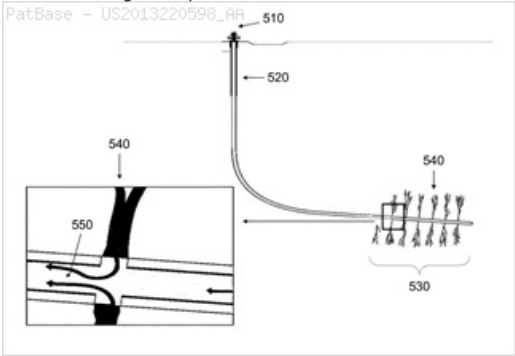
Abstract: Source: US2013220598A [EN] An ultrasonic fracking system and methods of using the same to extract hydrocarbons from underground geological formations (e.g., oil shale, coal beds, etc.) are disclosed. The system includes piezoelectric devices that are used to produce ultrasonic mechanical vibrations and induce fractures in the geological formations. In one embodiment, a system for extracting underground hydrocarbons comprises a plurality of piezoelectric devices capable of producing mechanical waves sufficient to fracture oil shale and other geological formations, a system of delivery for innocuous proppants to create a path of least resistance for enhanced hydrocarbon flow, and a vacuum pump connected to the fractures created by the piezoelectric devices to assist in removing the hydrocarbons.

Classifications:

International (IPC 8-9): E21B28/00 E21B43/00 (Advanced/Invention)

CPC: E21B28/00 E21B43/26

US: 166/177.1 166/249



Family:

Publication number	Publication date	Application number	Application date
US2013220598 AA	20130829	US20120408898	20120229

Priority:

US20120408898 20120229

Probable Assignee:

MINDCAKE LLC

Assignee(s): (std):

BOYD STEPHEN A ; PALUMBO JOHN L

Assignee(s):

MINDCAKE LLC

Inventor(s): (std):

BOYD STEPHEN A ; PALUMBO JOHN L

