PatBase - Search results 17 September 2018
Search query (3): [SP]: background[0001] this disclosure relates generally to equipment utilized and operations performed in conjunction with a subterranean well and, in an example described below, more particularly provides a well completion system and method.[0002] it can be highly desirable to decrease expenses, reduce time, simplify operations and increase reliability in well completions. therefore, it will be readily appreciated that improvements are continually needed in the art of well completions.brief description of the drawings[0003] fig. 1 is a representative partially cross-sectional view of one example of a well completion system and associated method which can embody principles of this disclosure.[0004] fig. 2 is a representative enlarged scale partially cross-sectional view of an abrasive jet perforator perforating a zone in the system and method of fig. 1.[0005] fig. 3 is a representative partially cross-sectional view of the zone being fractured.[0006] fig. 4 is a representative partially cross-sectional view of a flushing technique.[0007] fig. 5 is a representative partially cross-sectional view of a plug substance being flowed into perforations.[0008] fig. 6 is a representative partially cross-sectional view of the plug substance being pressurized and flowed into fractures in the zone.[0009] fig. 7 is a representative reduced scale partially cross-sectional view of the abrasive jet perforator being repositioned to another zone.[0010] fig. 8 is a representative further reduced scale cross-sectional view of the system, in which multiple zones have been fractured.[0011] fig. 9 is a representative enlarged scale partially cross-sectional view of another example of the system and method, in which a valve is used to deliver a fracturing fluid and/or the plug substance to the zone.[0012] fig. 10 is a representative partially cross-sectional view of another example of the system and method, in which the plug substance is delivered to the zone via a well annulus.[0013] fig. 11 is a representative flowchart for one example of the method.[0014] fig. 12 is a representative partially cross-sectional view of another example of the system and method, in which the perforator is displaced upward only after the plug substance is delivered to the perforations.[0015] fig. 13 is a representative partially cross-sectional view of another example of the system and method, in which the perforator is displaced downward after the perforating operation.detailed description[0016] representatively illustrated in fig. 1 is a well completion system 10 and associated method which can embody principles of this disclosure. however, it should be clearly understood that the system 10 and method are merely one example of an application of the principles of this disclosure in practice, and a wide variety of other examples are possible. therefore, the scope of this disclosure is not limited at all to the details of the system 10 and method described herein and/or depicted in the drawings.[0017] in the fig. 1 example, a tubular string 12 is conveyed into a wellbore 14 lined with casing 16 and cement 18. although multiple casing strings would typically be used in actual practice, for clarity of illustration only one string of casing 16 is depicted in the drawings.[0018] as used herein, the term "casing" is used to refer to a protective wellbore lining. casing could be of the types known to those skilled in the art as casing, tubing or liner. casing may be segmented or continuous. casing may be pre-formed or formed in situ. casing may be made of steel, other metals or alloys, polymers, composites, or any other material. the scope of this disclosure is not limited to use of any particular type of casing, or to use of casing at all.[0019] as used herein, the term "cement" is used to refer to a material which hardens to secure and seal a casing in a wellbore. cement does not necessarily comprise a cementitious material, since hardenable polymers (such as epoxies) or other materials may be used instead. cement may harden due to hydration, passage of time, exposure to heat, exposure to a hardening agent, or due to any other stimulus. the scope of this disclosure is not limited to use of any particular type of cement, or to use of cement at all.[0020] although the wellbore 14 is illustrated as being vertical, sections of the wellbore could instead be horizontal or otherwise inclined relative to vertical. although the wellbore 14 is completely cased and cemented as depicted in fig. 1, any sections of the wellbore in which operations described in more detail below are performed could be uncased or open hole. thus, the scope of this disclosure is not limited to any particular details of the system 10 and method.[0021] the tubular string 12 of fig. 1 comprises coiled tubing 20 and a perforating assembly 22. as used herein, the term "coiled tubing" refers to a substantially continuous tubing that is stored on a spool or reel 24. the reel 24 could be mounted, for example, on a skid, a trailer, a floating vessel, a vehicle, etc., for transport to a wellsite. although not shown in fig. 1, a control room or cab would typically be provided with instrumentation, computers, controllers, recorders, etc., for controlling equipment such as an injector 26 and a blowout preventer stack 28.[0022] it is not necessary for the tubular string 12 to include coiled tubing. in some examples, the tubular string 12 could comprise jointed pipe.[0023] when the tubular string 12 is positioned in the wellbore 14, an annulus 30 is formed radially between them. fluid, slurries, etc., can be flowed from surface into the annulus 30 via, for example, a casing valve 32. one or more pumps 34 may be used for this purpose. fluid can also be flowed to surface from the wellbore 14 via the annulus 30 and valve 32.[0024] fluid, slurries, etc., can also be flowed from surface into the wellbore 14 via the tubing 20, for example, using one or more pumps 36. fluid can also be flowed to surface from the wellbore 14 via the tubing 20.[0025] in the fig. 1 system 10 and method, the perforating assembly 22 is used to perforate each of multiple zones 38a-c of a formation 38 penetrated by the wellbore 14. the zones 38a-c may be sections or intervals of a same earth formation, or they may be sections or intervals of multiple formations. any number of zones may be perforated.[0026] in this example, the zones 38a-c are perforated in succession from the lowermost (farthest from surface along the wellbore 14) zone 38a to the uppermost (closest to surface along the wellbore) zone 38c. however, in other examples the zones 38a-c may not be perforated in succession, or they may not be perforated from the lowermost to the uppermost zone. multiple zones could be perforated simultaneously. thus, the scope of this disclosure is not limited to any particular number, order, combination, configuration or arrangement of zones being perforated.[0027] referring additionally now to fig. 2, an enlarged scale view of the perforating assembly 22 is representatively illustrated in the system 10, with the perforating assembly being positioned in the wellbore 14 at the zone 38a. however, the perforating assembly 22 may be used in other systems and methods, in keeping with the principles of this disclosure.[0028] in this view it may be seen that the perforating assembly 22 includes at least one perforator 40 and a tubing connector 48 for connecting the perforator to the tubing 20. the perforator 40 is used to form perforations 42 through the casing 16 and cement 18, in order to provide for fluid communication between the wellbore 14 and the zone 38a. [0029] in this example, the perforator 40 is an abrasive jet perforator with erosion resistant nozzles 44 to direct an abrasive slurry 46 toward the casing 16, so that the perforations 42 will be formed through the casing and cement 18, and into the zone 38a. for example, the slurry 46 could be a composition including water and abrasive particles (such as, sand, ceramics, calcium carbonate or another soluble substance, etc.).[0030] note that any number of perforations 42 may be formed in each of the zones 38a-c. flow rate, pressure, nozzle diameter, number of nozzles 44, abrasive slurry 46 composition, flow duration and other factors will determine a size (e.g., diameter and length) of the perforations 42 formed by the perforator 40.[0031] in other examples, other types of perforators may be used. for example, an explosive shaped charge perforating gun may be used to form the perforations 42. thus, the scope of this disclosure is not limited to use of any particular type of perforator.[0032] referring additionally now to fig. 3, the zone 38a is being fractured by flowing a fracturing fluid 50 under pressure into the zone via the perforations 42. the fracturing fluid 50 may be in the form of a slurry, with proppant 54 mixed therein to prop open fractures 52 formed in the zone. the proppant 54 may be sand,
Results: 46

Search history

Search 1:	PN=(WO2016081263) (Results 1)
Search 2:	[SP]: 1-16. (canceled) 17. a well completion method, comprising: in a single trip into a wellbore, the following steps being performed for each of multiple zones penetrated by the wellbore: a) perforating the zone using an abrasive perforatorb) then displacing the perforator in the wellbore away from the earth's surfacec) then fracturing the zone andd) plugging the fractured zone with a flowable plug substance. 18. the method of claim 17, wherein the plug substance is flowed to the zone in step d via at least one of the group consisting of a well annulus, the abrasive perforator and a tubing used to convey the abrasive perforator in the wellbore. 19. the method of claim 17, wherein pressure is applied to the wellbore, thereby forcing the plug substance into the zone in step d, the pressure being applied via a well annulus or via a tubing used to convey the abrasive perforator in the wellbore. 20. the method of claim 17, further comprising allowing fluid to flow from the zone into the wellbore by performing at least one of the group consisting of removing the plug substance, dissolving the plug substance, breaking the plug substance, liquefying the plug substance, flowing an acid to contact the plug substance and dispersing the plug substance. 21. the method of claim 17, wherein the plug substance comprises at least one of the group consisting of calcium carbonate, gel, sand and a combination of calcium carbonate and gel. 22. the method of claim 17, wherein the plug substance comprises at least one of the group consisting of poly-lactic acid, poly-glycolic acid and nylon fibers. 23. the method of claim 17, wherein the plug substance prevents flow into one of the zones while another of the zones is being fractured. 24. the method of claim 17, wherein the abrasive perforator is displaced while at least one of the following steps is performed: flowing the plug substance into the well,pressurizing the plug substance in the well,flowing the plug substance into the zone in step d andflowing an abrasive through a tubular string that conveys the abrasive perforator in the well. 25. the method of claim 17, wherein a restriction is present in a casing at a location closer to the earth's surface than the zones, the restriction preventing conveyance of a packer or bridge plug to the zones. 26. the method of claim 17, wherein the perforator is displaced in the wellbore toward the earth's surface to a next one of the zones in succession only after flow from the wellbore into a previously perforated zone is substantially prevented. 27. the method of claim 26, wherein, at a conclusion of step d, the perforator either displaces in the wellbore toward the earth's surface, or remains motionless. 28. the method of claim 17, wherein the perforator remains farther from the earth's surface than perforations of the zone while the zone is fractured in step c, and while fluid communication from the wellbore to the zone is substantially prevented in step d. 29. the method of claim 17, wherein, while step d commences, the perforator either displaces in the wellbore away from the earth's surface, or is motionless, andwherein, at a conclusion of step d, the perforator displaces in the wellbore toward the earth's surface, or is motionless. 30. the method of claim 17, wherein step d comprises displacing the perforator in the wellbore while the fractured zone is being plugged. (Results 0)
Search	[SP]: background[0001] this disclosure relates generally to equipment utilized and operations performed in conjunction with a subterranean well

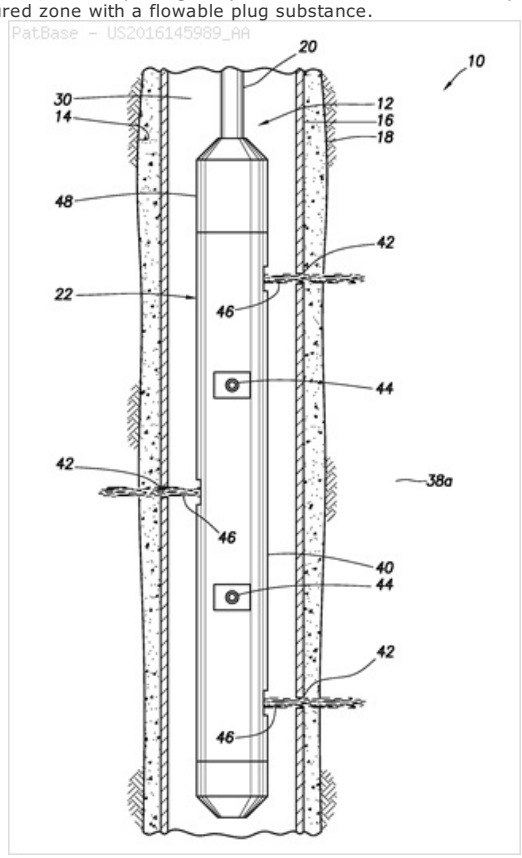
3: and, in an example described below, more particularly provides a well completion system and method.[0002] it can be highly desirable to decrease expenses, reduce time, simplify operations and increase reliability in well completions. therefore, it will be readily appreciated that improvements are continually needed in the art of well completions.brief description of the drawings[0003] fig. 1 is a representative partially cross-sectional view of one example of a well completion system and associated method which can embody principles of this disclosure.[0004] fig. 2 is a representative enlarged scale partially cross-sectional view of an abrasive jet perforator perforating a zone in the system and method of fig. 1.[0005] fig. 3 is a representative partially cross-sectional view of the zone being fractured.[0006] fig. 4 is a representative partially cross-sectional view of a flushing technique.[0007] fig. 5 is a representative partially cross-sectional view of a plug substance being flowed into perforations.[0008] fig. 6 is a representative partially cross-sectional view of the plug substance being pressurized and flowed into fractures in the zone.[0009] fig. 7 is a representative reduced scale partially cross-sectional view of the abrasive jet perforator being repositioned to another zone.[0010] fig. 8 is a representative further reduced scale cross-sectional view of the system, in which multiple zones have been fractured. [0011] fig. 9 is a representative enlarged scale partially cross-sectional view of another example of the system and method, in which a valve is used to deliver a fracturing fluid and/or the plug substance to the zone.[0012] fig. 10 is a representative partially cross-sectional view of another example of the system and method, in which the plug substance is delivered to the zone via a well annulus.[0013] fig. 11 is a representative flowchart for one example of the method.[0014] fig. 12 is a representative partially cross-sectional view of another example of the system and method, in which the perforator is displaced upward only after the plug substance is delivered to the perforations.[0015] fig. 13 is a representative partially cross-sectional view of another example of the system and method, in which the perforator is displaced downward after the perforating operation.detailed description[0016] representatively illustrated in fig. 1 is a well completion system 10 and associated method which can embody principles of this disclosure. however, it should be clearly understood that the system 10 and method are merely one example of an application of the principles of this disclosure in practice, and a wide variety of other examples are possible. therefore, the scope of this disclosure is not limited at all to the details of the system 10 and method described herein and/or depicted in the drawings.[0017] in the fig. 1 example, a tubular string 12 is conveyed into a wellbore 14 lined with casing 16 and cement 18. although multiple casing strings would typically be used in actual practice, for clarity of illustration only one string of casing 16 is depicted in the drawings.[0018] as used herein, the term "casing" is used to refer to a protective wellbore lining. casing could be of the types known to those skilled in the art as casing, tubing or liner. casing may be segmented or continuous. casing may be pre-formed or formed in situ. casing may be made of steel, other metals or alloys, polymers, composites, or any other material. the scope of this disclosure is not limited to use of any particular type of casing, or to use of casing at all.[0019] as used herein, the term "cement" is used to refer to a material which hardens to secure and seal a casing in a wellbore. cement does not necessarily comprise a cementitious material, since hardenable polymers (such as epoxies) or other materials may be used instead. cement may harden due to hydration, passage of time, exposure to heat, exposure to a hardening agent, or due to any other stimulus. the scope of this disclosure is not limited to use of any particular type of cement, or to use of cement at all.[0020] although the wellbore 14 is illustrated as being vertical, sections of the wellbore could instead be horizontal or otherwise inclined relative to vertical. although the wellbore 14 is completely cased and cemented as depicted in fig. 1, any sections of the wellbore in which operations described in more detail below are performed could be uncased or open hole. thus, the scope of this disclosure is not limited to any particular details of the system 10 and method. [0021] the tubular string 12 of fig. 1 comprises coiled tubing 20 and a perforating assembly 22. as used herein, the term "coiled tubing" refers to a substantially continuous tubing that is stored on a spool or reel 24. the reel 24 could be mounted, for example, on a skid, a trailer, a floating vessel, a vehicle, etc., for transport to a wellsite. although not shown in fig. 1, a control room or cab would typically be provided with instrumentation, computers, controllers, recorders, etc., for controlling equipment such as an injector 26 and a blowout preventer stack 28.[0022] it is not necessary for the tubular string 12 to include coiled tubing. in some examples, the tubular string 12 could comprise jointed pipe.[0023] when the tubular string 12 is positioned in the wellbore 14, an annulus 30 is formed radially between them. fluid, slurries, etc., can be flowed from surface into the annulus 30 via, for example, a casing valve 32. one or more pumps 34 may be used for this purpose. fluid can also be flowed to surface from the wellbore 14 via the annulus 30 and valve 32.[0024] fluid, slurries, etc., can also be flowed from surface into the wellbore 14 via the tubing 20, for example, using one or more pumps 36. fluid can also be flowed to surface from the wellbore 14 via the tubing 20.[0025] in the fig. 1 system 10 and method, the perforating assembly 22 is used to perforate each of multiple zones 38a-c of a formation 38 penetrated by the wellbore 14. the zones 38a-c may be sections or intervals of a same earth formation, or they may be sections or intervals of multiple formations. any number of zones may be perforated.[0026] in this example, the zones 38a-c are perforated in succession from the lowermost (farthest from surface along the wellbore 14) zone 38a to the uppermost (closest to surface along the wellbore) zone 38c. however, in other examples the zones 38a-c may not be perforated in succession, or they may not be perforated from the lowermost to the uppermost zone. multiple zones could be perforated simultaneously. thus, the scope of this disclosure is not limited to any particular number, order, combination, configuration or arrangement of zones being perforated.[0027] referring additionally now to fig. 2, an enlarged scale view of the perforating assembly 22 is representatively illustrated in the system 10, with the perforating assembly being positioned in the wellbore 14 at the zone 38a. however, the perforating assembly 22 may be used in other systems and methods, in keeping with the principles of this disclosure.[0028] in this view it may be seen that the perforating assembly 22 includes at least one perforator 40 and a tubing connector 48 for connecting the perforator to the tubing 20. the perforator 40 is used to form perforations 42 through the casing 16 and cement 18, in order to provide for fluid communication between the wellbore 14 and the zone 38a. [0029] in this example, the perforator 40 is an abrasive jet perforator with erosion resistant nozzles 44 to direct an abrasive slurry 46 toward the casing 16, so that the perforations 42 will be formed through the casing and cement 18, and into the zone 38a. for example, the slurry 46 could be a composition including water and abrasive particles (such as, sand, ceramics, calcium carbonate or another soluble substance, etc.).[0030] note that any number of perforations 42 may be formed in each of the zones 38a-c. flow rate, pressure, nozzle diameter, number of nozzles 44, abrasive slurry 46 composition, flow duration and other factors will determine a size (e.g., diameter and length) of the perforations 42 formed by the perforator 40.[0031] in other examples, other types of perforators may be used. for example, an explosive shaped charge perforating gun may be used to form the perforations 42. thus, the scope of this disclosure is not limited to use of any particular type of perforator.[0032] referring additionally now to fig. 3, the zone 38a is being fractured by flowing a fracturing fluid 50 under pressure into the zone via the perforations 42. the fracturing fluid 50 may be in the form of a slurry, with proppant 54 mixed therein to prop open fractures 52 formed in the zone. the proppant 54 may be sand, (Results 46)

1) Family number: 62457833 (US2016145989A)

Title: WELL COMPLETION

Abstract: A well completion method can comprise, in a single trip into a wellbore, the following steps being performed for each of multiple zones penetrated by the wellbore: abrasively perforating the zone with a tubing deployed perforating assembly, fracturing the perforated zone with flow from surface via a well annulus, and then plugging the fractured zone with a removable plug substance, the perforating assembly displacing in the wellbore while the fractured zone is being plugged. Another well completion method can comprise, in a single trip into a wellbore, the following steps being performed for each of multiple zones penetrated by the wellbore: perforating the zone using an abrasive perforator, then displacing the perforator in the wellbore away from the earth's surface, then fracturing the zone, and plugging the fractured zone with a flowable plug substance.

Classifications:
International (IPC 8-9): C09K8/50 E21B23/00 E21B33/13 E21B33/138 E21B43/114 E21B43/14 E21B43/16 E21B43/26 (Advanced/Invention)
CPC: E21B43/261 E21B33/138 E21B43/14 E21B43/114
US: 166/281



Family:

Publication number	Publication date	Application number	Application date
AR102713 AA	20170322	AR2015P103771	20151119
AU2015350289 AA	20160526	AU20150350289	20151112
AU2015350289 BB	20161201	AU20150350289	20151112
CA2933578 AA	20160610	CA20152933578	20151112
CA2933578 C	20180410	CA20152933578	20151112
CN105917072 A	20160831	CN201580004718	20151112
CO16173525 A2	20170911	CO20160173525	20160629
US2016145989 AA	20160526	US20150720532	20150522
US2018030822 AA	20180201	US20170727030	20171006
US9810051 BB	20171107	US20150720532	20150522
WO16081263 A1	20160526	WO2015US60280	20151112

Priority:

US20140082299P 20141120 US20150103786P 20150115 US20150720532 20150522
WO2015US60280 20151112 US20170727030 20171006

Probable Assignee: THRU TUBING SOLUTIONS INC

Assignee(s): (std): THRU TUBING SOLUTIONS INC

Assignee(s): WATSON BROCK W ; BRITTON MARK S ; FERGUSON ANDREW M ; LOVING STANLEY W ; SCHULTZ ROGER L

Inventor(s): (std): FERGUSON ANDREW M ; LOVING STANLEY W ; BRITTON MARK S ; SCHULTZ ROGER L ; WATSON BROCK W

Inventor(s): ANDREW M FERGUSON ; STANLEY W LOVING ; BROCK W WATSON ; MARK S BRITTON ; ROGER L SCHULTZ

Agent(s): PIZZEYS PATENT AND TRADE MARK ATTORNEYS PTY LTD; FETHERSTONHAUGH AND CO; CAROLINA MERCEDES DAZA MONTALVO; SMITH IP SERVICES PC; SMITH MARLIN R

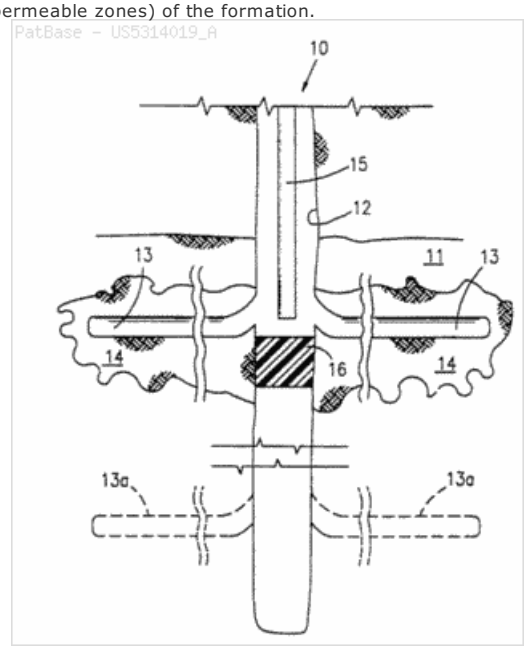
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX 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

2) Family number: 11579739 (US5314019A)

Title: Method for treating formations

Abstract: A method for treating a formation having zones of varying permeabilities to improve the sweep efficiency of a drive fluid through the formation. At least one radial, relative horizontal bore is formed from a relative vertical wellbore and extends outward into a high-permeability zone of said formation. A gelant is injected into said formation through the radial bore(s) and flows into the higher-permeability zones of the formation. After the gelant is in place, the wellbore is shut-in to allow the gelant to set to form a flow-blocking gel in the treated zones of formation. Secondary recovery operations are then resumed and the drive fluid (e.g. water) will now flow through the previously unswept (i.e. less-permeable zones) of the formation.

Classifications:
International (IPC 8-9): C09K8/512 C09K8/88 E21B33/138 E21B43/16 E21B43/30 (Advanced/Invention)
International (IPC 1-7): E21B33/138 E21B43/22
CPC: C09K8/512 C09K8/887 E21B33/138 E21B43/16 E21B43/305
European: C09K8/512 C09K8/88C E21B33/138 E21B43/16 E21B43/30B
US: 166/270 166/292 166/295 166/50



Family:

Publication number	Publication date	Application number	Application date
US5314019 A	19940524	US19920925536	19920806

Priority:
US19920925536 19920806

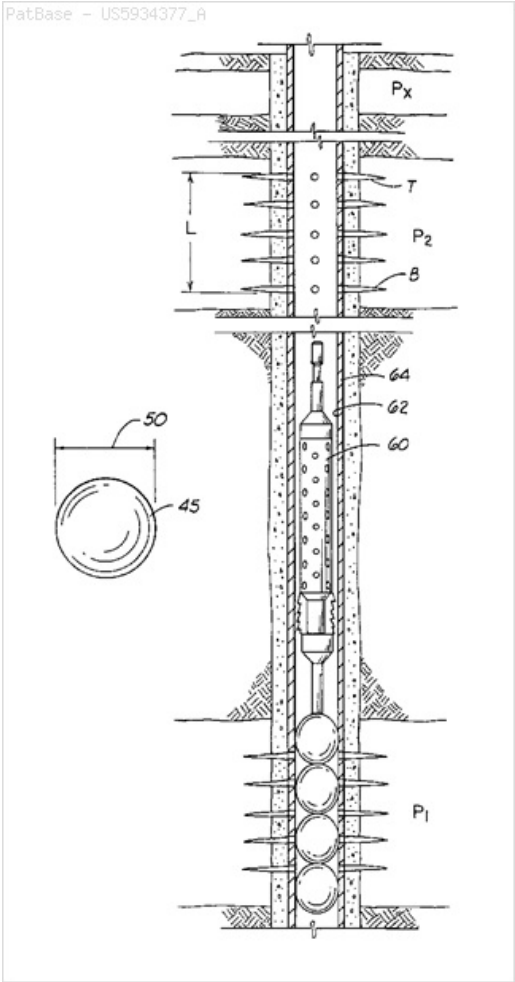
Probable Assignee:	MOBIL OIL CORP
Assignee(s): (std):	MOBIL OIL CORP
Assignee(s):	MOBIL OIL A CORP OF NY CORP
Inventor(s): (std):	HONARPOUR MEHDI M

3) Family number: 11663112 (US5934377A)

Title: Method for isolating hydrocarbon-containing formations intersected by a well drilled for the purpose of producing hydrocarbons therethrough

Abstract: A method for isolating subterranean formations or zones intersected by a single wellbore is provided. The method comprises perforating a zone intersected by the wellbore and pumping a sealing means into the wellbore to seal against the side of the casing above and below the perforations to prevent communication from the zone into the wellbore after the casing has been perforated. The method further comprises fracturing the zone through the perforations prior to sealing and thus isolating the zone. Other zones thereabove are likewise perforated, fractured, sealed and thus isolated by pumping sealing means into the wellbore to seal the casing adjacent the perforations to prevent communication from the affected zones into the wellbore.

Classifications:
International (IPC 8-9): E21B23/08 E21B33/12 E21B43/14 E21B43/17 (Advanced/Invention); E21B23/00 E21B33/12 E21B43/00 (Core/Invention)
International (IPC 1-7): E21B33/13 E21B43/14 E21B43/17 E21B43/26
CPC: E21B23/08 E21B33/12 E21B43/14
European: E21B23/08 E21B33/12 E21B43/14
US: 166/281 166/284 166/297 166/308 166/308.1



Family:

Publication number	Publication date	Application number	Application date
CA2239417 AA	19981203	CA19982239417	19980602
CA2239417 C	20040817	CA19982239417	19980602
US5934377 A	19990810	US19970868317	19970603

Priority:
US19970868317 19970603 CA19982239417 19980602

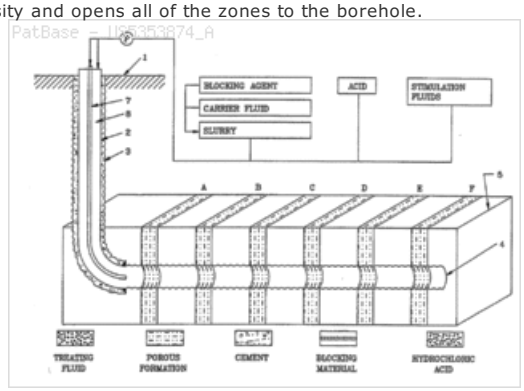
Probable Assignee: HALLIBURTON CO
Assignee(s): (std): HALLIBURTON ENERGY SERV INC
Assignee(s): HALLIBURTON ENERGY SERVICES INC ; SAVAGE RONALD E ; HALLIBURTON CO
Inventor(s): (std): SAVAGE RONALD E
Agent(s): OGILVY RENAULT LLP SENCRL SRL

4) Family number: 11694251 (US5353874A)

Title: Horizontal wellbore stimulation technique

Abstract: A method of treating a downhole formation in a wellbore having multiple zones of porosity by circulating a carrier fluid downhole to the lowermost zone of porosity, and then flowing an acid soluble blocking agent into the wellbore. The blocking agent is translocated to a location where it is free to flow along the lower end of the borehole and seal the zones of porosity. The blocking agent is a mixture of acid soluble material that is relatively insoluble in the carrier fluid, and is of a size to block the pores of the zones of porosity so that flow into the zones is severely reduced. A solution of acid is spotted downhole within a selected zone of porosity. The solution of acid degrades the blocking agent and the degraded blocking agent becomes admixed with the carrier fluid and the flow restriction of the blocking agent within the zone is destroyed. Next a treatment fluid for stimulating the selected zone is conveyed downhole and forced into the opened selected zone until the zone is stimulated. The residual blocking agent is removed from the borehole by circulating a solution of acid downhole and into contact with the acid soluble material that is blocking the untreated pores of the zones of porosity and opens all of the zones to the borehole.

Classifications:
International (IPC 8-9): C09K8/72 E21B43/25 E21B43/26 (Advanced/Invention); C09K8/60 E21B43/25 (Core/Invention)
International (IPC 1-7): E21B43/25
CPC: C09K8/72 E21B43/25 E21B43/261
European: C09K8/72 E21B43/25 E21B43/26P
US: 166/281 166/282 166/50



Family:

Publication number	Publication date	Application number	Application date
US5353874 A	19941011	US19930020641	19930222

Priority:

US19930020641 19930222

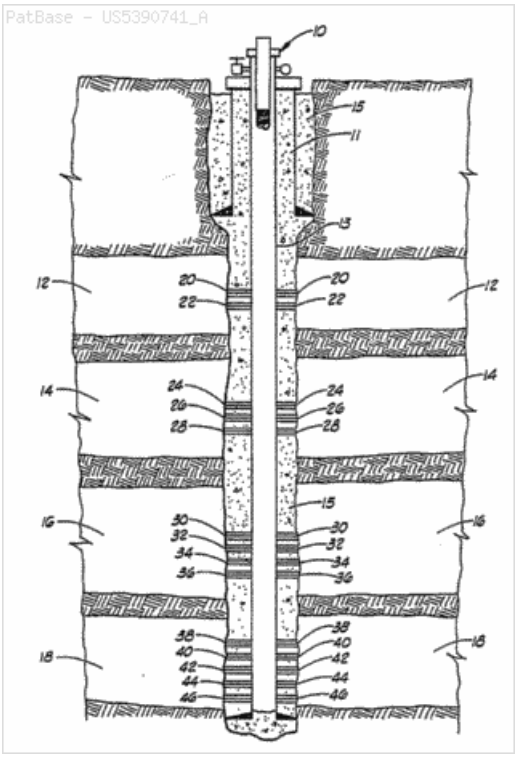
Probable Assignee: MANULIK MATTHEW C
Assignee(s): (std)**:** MANULIK MATTHEW C
Inventor(s): (std)**:** MANULIK MATTHEW C

5) Family number: 11791205 (US5390741A)

Title: Remedial treatment methods for coal bed methane wells

Abstract: Methods of remedially treating coal bed methane wells to enhance the production of methane therefrom are provided. The methods basically comprise pumping a clean out fluid into the well and into producing zones communicated with the well by perforations therein. The pumping of the clean out fluid is continued while adding perforation sealers thereto to thereby seal perforations and producing zones which are not plugged and to divert the clean out fluid into perforations and producing zones which are partially plugged. An aqueous acid solution is next pumped into the partially plugged perforations and producing zones whereby acid soluble solid materials in the perforations and producing zones are dissolved. The well is shut in, reverse flowed and then returned to production.

Classifications:
International (IPC 8-9): C09K8/52 C09K8/72 C09K8/94 E21B43/00 E21B43/26 (Advanced/Invention)
International (IPC 1-7): E21B37/00 E21B43/27
CPC: C09K8/52 C09K8/72 C09K8/94 E21B43/006 E21B43/261
European: C09K8/52 C09K8/72 C09K8/94 E21B43/00M E21B43/26P
US: 166/284 166/307 166/309 166/312



Family:

Publication number	Publication date	Application number	Application date
US5390741 A	19950221	US19930171085	19931221

Priority:
US19930171085 19931221

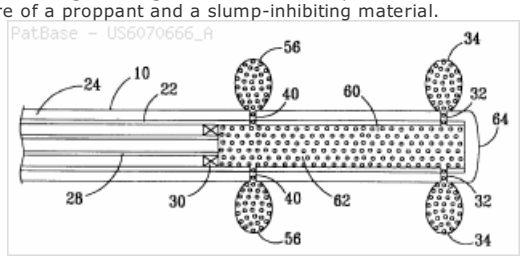
Probable Assignee: HALLIBURTON CO
Assignee(s): (std): HALLIBURTON CO ; TAURUS EXPLORATION INC
Assignee(s): HALLIBURTON COMPANY
Inventor(s): (std): PAYTON RICHARD A ; SINGLETON JR ROBERT F ; SPARKS JR DANIEL P ; VALENTINE TERRY L

6) Family number: 12286344 (US6070666A)

Title: Fracturing method for horizontal wells

Abstract: A method for fracturing a horizontal well at a plurality of locations along the length of the horizontal portion of the well by plugging previously fractured downstream fracture zones with a mixture of a proppant and a slump-inhibiting material.

Classifications:
International (IPC 8-9): E21B33/138 E21B43/26 (Advanced/Invention); E21B33/138 E21B43/25 (Core/Invention)
International (IPC 1-7): E21B43/267
CPC: E21B33/138 E21B43/26
European: E21B33/138 E21B43/26
US: 166/280 166/281 166/308 166/308.1 166/50



Family:

Publication number	Publication date	Application number	Application date
US6070666 A	20000606	US19980070579	19980430

Priority:

US19980070579 19980430

Probable Assignee: CONOCO PHILLIPS CO

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

Assignee(s): ATLANTIC RICHFIELD COMPANY ; CONOCO PHILLIPS CO ; CONOCOPHILLIPS CO ; PHILLIPS PETROLEUM CO

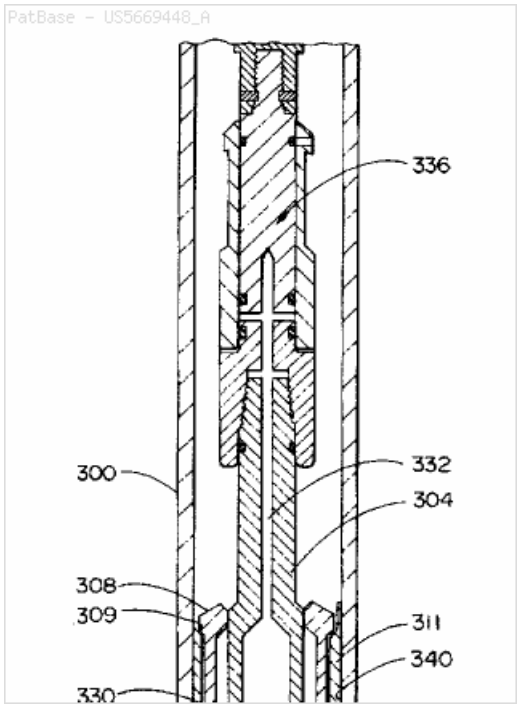
Inventor(s): (std): MONTGOMERY CARL T

7) Family number: 13233582 (US5669448A)

Title: Overbalance perforating and stimulation method for wells

Abstract: A method of stimulating a well subsequent to the formation of perforations whereby, subsequent to the perforating, pressure is suddenly applied to the perforations at a pressure above the fracturing pressure to extend created fractures in the formation. A bridging means is utilized to isolate the upper portion of the casing from a lower portion having perforations. The casing above the bridging means is charged with a stimulation fluid. At a predetermined pressure the bridging means releases the stimulation fluid into contact with the perforations to substantially simultaneously create or initiate a fracture into the formation from each perforation.

Classifications:
International (IPC 8-9): E21B33/12 E21B33/129 E21B34/06 E21B43/116 E21B43/26 (Advanced/Invention);
E21B33/12 E21B34/00 E21B43/11 E21B43/25 (Core/Invention)
International (IPC 1-7): E21B43/26
CPC: E21B33/12 E21B33/1293 E21B33/1294 E21B34/063 E21B43/116 E21B43/26
European: E21B33/12 E21B33/129L E21B33/129N E21B34/06B E21B43/116 E21B43/26
US: 166/177.5 166/297 166/308 166/308.1



Family:

Publication number	Publication date	Application number	Application date
US5669448 A	19970923	US19950569822	19951208

Priority:

US19950569822 19951208

Probable Assignee: HALLIBURTON CO

Assignee(s): (std): HALLIBURTON ENERGY SERV INC

Assignee(s): HALLIBURTON ENERGY SERVICES INC ; HALLIBURTON CO

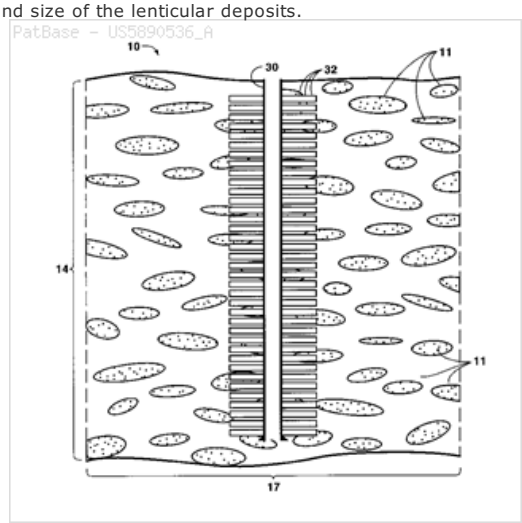
Inventor(s): (std): ANDERSON MERLIN F ; BERSCHEIDT KEVIN T ; GEORGE FLINT RAYMOND ; HENKE JOSEPH A ; MINTHORN JAMES W ; PRUDHOMME JOSEPH M ; SAVAGE RONALD E ; VANN DUDLEY ; WHITE BRIAN R

8) Family number: 20695703 (US5890536A)

Title: Method for stimulation of lenticular natural gas formations

Abstract: A method for stimulating production from wells drilled into natural gas reservoirs characterized by lenticular deposits. The reservoir thickness through which the wells are drilled is divided into multi-stage zones that are further divided into single-stage zones. Each single-stage zone is perforated and then fractured. The fracturing is conducted in multiple stages to sequentially fracture each of the single-stage zones within a multi-stage zone; the fracturing stages being separated by ball sealers. Well spacing may also be controlled to match fracture drainage and size of the lenticular deposits.

Classifications:
International (IPC 8-9): E21B43/00 E21B43/14 E21B43/26 E21B43/267 E21B43/30 (Advanced/Invention)
International (IPC 1-7): E21B43/14 E21B43/26
CPC: E21B43/006 E21B43/14 E21B43/26 E21B43/261 E21B43/267 E21B43/30
European: E21B43/00M E21B43/14 E21B43/26 E21B43/267 E21B43/26P E21B43/30
US: 166/284 166/297 166/308.1



Family:

Publication number	Publication date	Application number	Application date
AU199890204 A1	19990316	AU19980090204	19980814
AU736644 B2	20010802	AU19980090204	19980814
CA2300395 AA	20000207	CA19982300395	19980814
CN1268207 A	20000927	CN19988008550	19980814
DE19882627 T	20000928	DE19981082627T	19980814
DE19882627 T1	20000928	DE19981082627T	19980814
EA001243 B1	20001225	EA20000000255	19980814
EA200000255 A1	20000828	EA20000000255	19980814
PL338903 A1	20001120	PL19980338903	19980814
US5890536 A	19990406	US19980134659	19980814
WO9910623 A1	19990304	WO1998US16949	19980814
WO9910623 C1	19990514	WO1998US16949	19980814

Priority:

US19970057202P 19970826 US19980134659 19980814 WO1998US16949 19980814

Probable Assignee: EXXON MOBIL CORP

Assignee(s): (std): EXXON PRODUCTION RES CO ; EXXONMOBIL UPSTREAM RES COMPAN ; EXXON PRODUCTION RESEARCH CO ; EXXONMOBIL UPSTREAM RES CO ; EXXON MOBIL UPSTREAM RES COMPA

Assignee(s): EXXON MOBIL UPSTREAM RESEARCH CO ; EXXON MOBIL UPSTREAM RESEARCH COMPANY ; EXXON MOBIL CORP ; EXXONMOBIL UPSTREAM RESEARCH CO ; EXXONMOBIL UPSTREAM RESEARCH CO HOUSTON ; EXXON PRODUCTION RESEARCH COMPANY ; EXXONMOBIL UPSTREAM RESEARCH COMPANY ; LAMB WALTER J ; NIERODE DALE E

Inventor(s): (std): DALE E NIERODE ; LAMB WALTER J ; NIERODE DALE E ; WALTER J LAMB ; NIERODE DALE E LAMB WALTER J

Agent(s): WATERMARK PATENT AND TRADE MARKS ATTORNEYS; WATERMARK INTELLECTUAL PROPERTY PTY LTD; BORDEN LADNER GERVAIS LLP

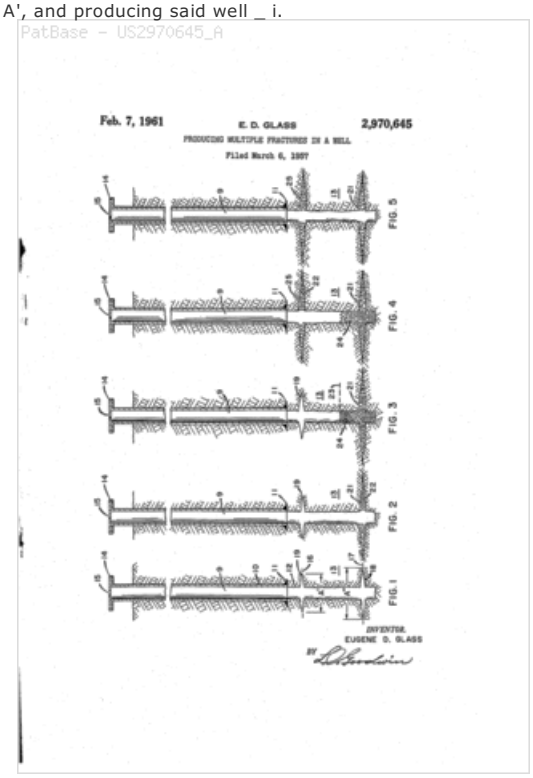
Designated states: AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CU CY CZ DE DK EE ES FI FR GA GB GE GH GM GN GR GW HR HU ID IE IL IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MC MD MG MK ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT UA UG UZ VN YU ZW

9) Family number: 21953634 (US2970645A)

Title: PRODUCING MULTIPLE FRACTURES IN A WELL

Abstract: (Claim 1) 1. A method of hydraulically fracturing a formation penetrated by a well at a multiplicity of selected elevations comprising in sequence undercutting said formation at the iowest of said selected elevations for a substantial distance around said well to produce an undercut having an area A" in a plañe substantially perpendicular to the axis of said well, undercutting said formation at at least one of said selected elevations above said lowest elevation for a substantial distance around said well to produce an undercut having an area A' in a p.ane substantially perpendicular to the axis of said well, said area A" bemg substantially greater than said area A' injectmg a first quantity of fracturing fluid into said welí and into said undercuts in said formation, simultaneously applymg sufficient pressure to said fracturing fluid in said undercuts to produce and extend a first fracture at said area A ' into said formation, temporarily sealing said first fracture to an extent sufficient to withstand subsequent fractunng pressures in said well, injecting a second quantity of fracturing fluid into said well and into said formation under sufficient pressure to produce and extend a second fracture at said area A', and producing said well _ i.

Classifications:
International (IPC 8-9): E21B43/26 (Advanced/Invention); E21B43/25 (Core/Invention)
International (IPC 1-7): E21B43/26
CPC: E21B43/261
European: E21B43/26P
US: 166/281 405/53



Family:

Publication number	Publication date	Application number	Application date
US2970645 A	19610207	US19570644369	19570306

Priority:
US19570644369 19570306

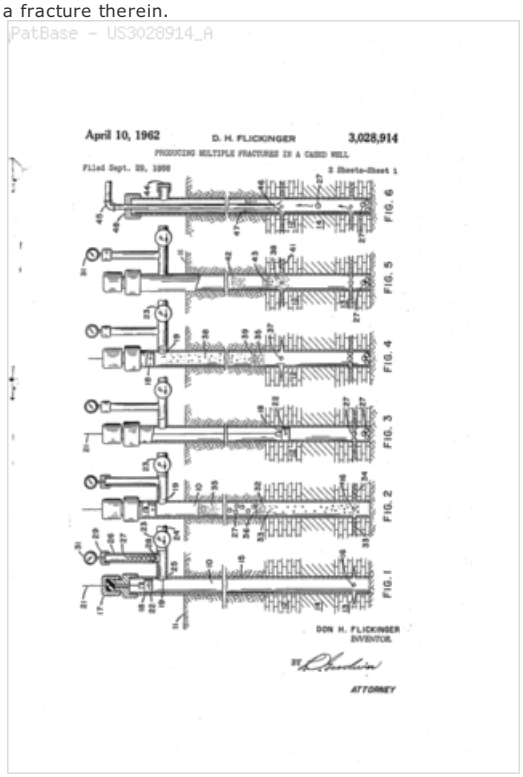
Probable Assignee: PAN AMERICAN PETROLEUM CORP
Assignee(s): (std): PAN AMERICAN PETROLEUM CORP
Inventor(s): (std): GLASS EUGENE D

10) Family number: 22437162 (US3028914A)

Title: PRODUCING MULTIPLE FRACTURES IN A CASED WELL

Abstract: (Claim 1) A process for treating a first formation in a cased well having casing perforations opposite another formation comprising the steps of injecting into said well a fluid containing sufficient substantially impermeable perforation bridging elements to plug ail previously produced perforations, displacing said first fluid through said previously produced perforations into said another formation until flow through said previously produced perforations has been stopped by said bridging element and maintaining said previously produced perforations in a plugged condition by holding a pressure in said well greater than the formation pressure, producing a multiplicity of perforations in said casing opposite said first formation, said multiplicity of perforations being grouped sufficiently to be in fluid communication with one another behind said casing, and then injecting a treating fluid into said first formation under sufficient pressure to produce a fracture therein.

Classifications:
International (IPC 8-9): E21B43/26 (Advanced/Invention); E21B43/25 (Core/Invention)
International (IPC 1-7): E21B43/26
CPC: E21B43/26
European: E21B43/26
US: 166/284 166/308.1 166/313



Family:

Publication number	Publication date	Application number	Application date
US3028914 A	19620410	US19580764131	19580929

Priority:

US19580764131 19580929

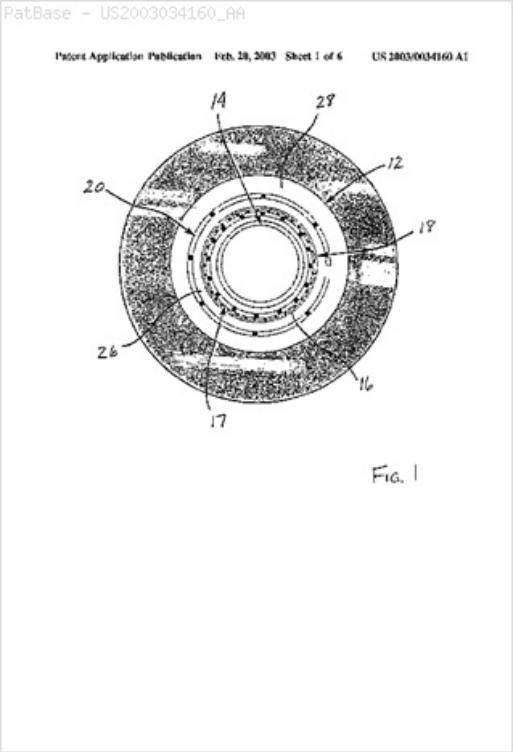
Probable Assignee:	PAN AMERICAN PETROLEUM CORP
Assignee(s): (std):	PAN AMERICAN PETROLEUM CORP
Inventor(s): (std):	FLICKINGER DON H

11) Family number: 28023381 (US2003034160A)

Title: Methods and apparatus for completing wells

Abstract: Improved methods and apparatus for completing a subterranean zone penetrated by a wellbore are provided. The improved methods basically comprise the steps of placing a sand control screen (e.g., screens, screened pipes, perforated liners, prepacked screens, etc.) and an outer shroud assembly mounted over the sand screen in the wellbore adjacent the zone to be completed, the shroud having perforated and blank (non-perforated) segments with the blank segments corresponding to selected intervals of the wellbore, for example problem zones such as shale streaks or isolated zones where flows are restricted by mechanical seals or packers, and injecting particulate material into the wellbore, whereby gravel packing takes place in the remaining length of the wellbore/shroud annulus without voids. The inner annulus between the shroud and screen provides an alternate flow path for the slurry to bypass the blocked intervals and continue with its placement. Mechanical seals or packers may be used in combination with the shroud and associated sand screen. The method is also applicable to placing gravel packs in a cased and perforated well drilled in the zone.

Classifications:
International (IPC 8-9): E21B43/04 E21B43/08 E21B43/267 (Advanced/Invention); E21B43/02 (Core/Invention)
International (IPC 1-7): E21B E21B43/04 E21B43/08 E21B43/10 E21B43/267
CPC: E21B43/045 E21B43/08
European: E21B43/04 E21B43/04C E21B43/08
US: 166/227 166/231 166/235 166/236 166/278 166/51



Family:

Publication number	Publication date	Application number	Application date
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BRPI0203175 B1	20130122	BR2002PI03175	20020813
CA2395721 AA	20030214	CA20022395721	20020726
DE60226674 D1	20080703	DE20026026674	20020812
EP1284336 A1	20030219	EP20020255616	20020812
EP1284336 B1	20080521	EP20020255616	20020812
NO20023639 A	20030217	NO20020003639	20020731
NO20023639 A0	20020731	NO20020003639	20020731
NO333101 B1	20130304	NO20020003639	20020731
US2003034160 AA	20030220	US20010929255	20010814
US2005082061 AA	20050421	US20040944131	20040917
US6830104 BB	20041214	US20010929255	20010814
US7100691 BB	20060905	US20040944131	20040917

Priority:
US20010929255 20010814 CA20022395721 20020726 US20040944131 20040917

Probable Assignee: HALLIBURTON CO

Assignee(s): (std): GIBSON RON ; GIBSON RONALD A ; HALLIBURTON ENERGY SERV INC ; NGUYEN PHILIP D ; SANDERS MICHAEL W ; LORD DAVID ; MCMECHAN DAVID ; LORD DAVID L ; MCMECHAN DAVID E

Assignee(s): HALLIBURTON ENERGY SERVICES INC ; HALLIBURTON CO

Inventor(s): (std): SANDERS MICHAEL W ; NGUYEN PHILIP D ; MCMECHAN DAVID EUGENE ; MCMECHAN DAVID E ; MCMECHAN DAVID ; LORD DAVID LESLIE ; LORD DAVID L ; LORD DAVID ; GIBSON RONALD A ; GIBSON RON

Inventor(s): SANDERS MICHAEL ; NGUYEN PHILIP ; GIBSON RONALD ; DAVID LORD ; DAVID MCMECHAN ; MICHAEL W SANDERS ; PHILIP D NGUYEN ; RON GIBSON

Agent(s): OGILVY RENAULT LLP SENCRL SRL; WAIN CHRISTOPHER PAUL ET AL; CONLEY ROSE PC; AL C

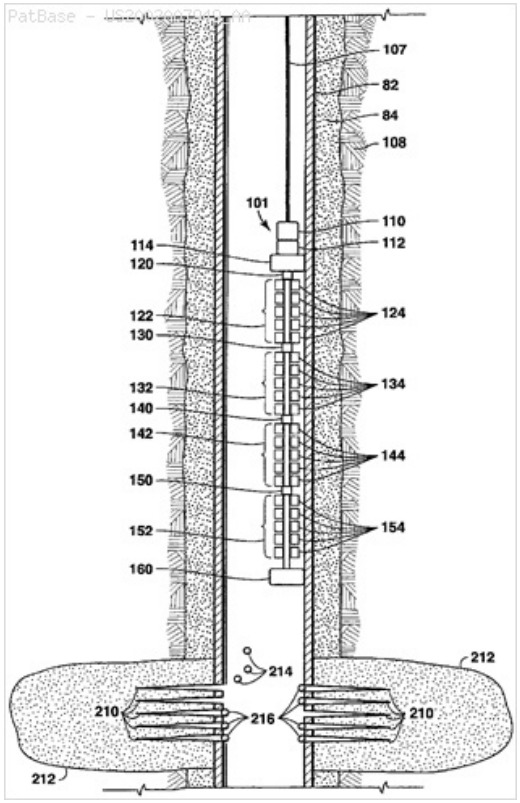
Designated states: DE DK FR GB IT NL

12) Family number: 28166432 (US2002007949A)

Title: Method for treating multiple wellbore intervals

Abstract: This invention provides a method for treating multiple intervals in a wellbore by perforating at least one interval then treating and isolating the perforated interval(s) without removing the perforating device from the wellbore during the treatment or isolation. The invention can be applied to hydraulic fracturing with or without proppant materials as well as to chemical stimulation treatments.

Classifications:
International (IPC 8-9): E21B33/124 E21B33/138 E21B34/06 E21B34/16 E21B43/04 E21B43/11 E21B43/116 E21B43/16 E21B43/17 E21B43/26 E21B43/27 (Advanced/Invention);
E21B43/04 E21B43/17 E21B43/26 G01V3/00 (Core/Invention)
International (IPC 1-7): E21B33/13 E21B34/06 E21B34/16 E21B43/04 E21B43/14 E21B43/16 E21B43/17 E21B43/26 E21B43/267
CPC: E21B33/124 E21B33/138 E21B43/116 E21B43/26 E21B43/261
European: E21B33/124 E21B33/138 E21B43/116 E21B43/26 E21B43/26P
US: 166/278 166/284 166/284S 166/297 166/297S 166/305.1 166/305.100S 166/308.1 166/308.100P



Family:

Publication number	Publication date	Application number	Application date
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AU2001276926 AA	20020130	AU20010276926	20010716
AU2001276926 BB	20060427	AU20010276926	20010716
AU200176926 A1	20020130	AU20010076926	20010716
AU200176926 A5	20020130	AU200100769260	20010716
BRPI0112616 A	20030429	BR2001PI12616	20010716
BRPI0112616 B1	20100908	BR2001PI12616	20010716
CA2416040 AA	20030115	CA20012416040	20010716
CA2416040 C	20080930	CA20012416040	20010716
CL2001001598 A1	20020606	CL20010001598	20010706
CL48029 B	20111229	CL20010001598	20010706
CN1298961 C	20070207	CN20018012953	20010716
CN1443268 A	20030917	CN20018012953	20010716
DE60122532 D1	20061005	DE20016022532	20010716
DE60122532 T2	20070301	DE20016022532T	20010716
DZ3387 A1	20020124	DZ20000003387	20000716
EA004186 B1	20040226	EA20030000159	20010716
EA200300159 A1	20030626	EA20030000159	20010716
EG23200 A	20010731	EG20010000785	20010717
EP1305501 A1	20030502	EP20010954698	20010716
EP1305501 A4	20050406	EP20010954698	20010716
EP1305501 B1	20060823	EP20010954698	20010716
GC1959 A	20120503	GC2001P001492	20010715
IN00034MN2003 A	20070504	IN2003MN00034	20030106
IN213339 B	20070413	IN2003MN00034	20030106
MXPA03000422 A1	20031014	MX2003PA00422	20010716
MY121476 A	20060128	MY20010003382	20010717
NO20030241 A	20030318	NO20030000241	20030117
NO20030241 A0	20030117	NO20030000241	20030117
NO324164 B1	20070903	NO20030000241	20030117
OA12336 A	20060515	OA20031000007	20010716
PE01982002 A1	20020425	PE20010000707	20010716

TH26092 B	20090605	TH20011002801	20010716
TH49330 A	20020207	TH20011002801	20010716
TNSN01107 A1	20030403	TN2001SN00107	20010717
TW499538 B	20020821	TW20010117376	20010716
US2002007949 AA	20020124	US20010891673	20010625
US6543538 BB	20030408	US20010891673	20010625
WO0206629 A1	20020124	WO2001US22284	20010716

Priority:

US20000219229 20000718 US20000219229P 20000718 US20010891673 20010625
WO2001US22284 20010716

Probable Assignee: EXXON MOBIL CORP

Assignee(s): (std)**:** EXXON MOBIL UPSTREAM RES CO ; EXXONMOBIL UPSTREAM RES CO ; EXXONMOBIL UPSTREAM RES COMPAN ; EXXONMOBIL UPSTREAM RESEARCH COMPANY ; SOREM WILLIAM A ; TOLMAN RANDY C

Assignee(s): NYGAARD KRIS J ; EXXONMOBIL UPSTREAM RESEARCH CO ; EXXON MOBIL UPSTREAM RESEARCH CO ; EL RABAA A M ; EL RABAA ABDEL WADOOD M ; EXXON MOBIL CORP

Inventor(s): (std)**:** EL RABAA ABDEL WADOOD M ; EL RABAA RANDY C TOLMAN KRIS J ; NEGAARD KRIS J ; TOLMAN RANDY C ; TOLMAN C ; SOREM WILLIAM A ; SOREM A ; NYGAARD KRIS J ; NYGAARD J ; EL RABAA M ; EL RABAA A M

Inventor(s): EL RABAA A ; AM EL RABAA ; A M EL RABAA ; EL RABAA AM ; KRIS J NYGAARD ; RANDY C TOLMAN ; RANDY C TOLMAN KRIS J NYGAARD A M EL RABAA ; SOREM ; TOLMAN RANDY C NYGAARD KRIS J EL RABAA A M SOREM WILLIAM A ; WILLIAM A SOREM ; WILLIAM A

Agent(s): WATERMARK PATENT AND TRADE MARKS ATTORNEYS; WATERMARK INTELLECTUAL PROPERTY PTY LTD; BORDEN LADNER GERVAIS LLP; SILVA Y CIA; SAUD M A SHAWWAF LAW OFFICE

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 EE ES FI FR GA GB GD GE GH GM GN 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 PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

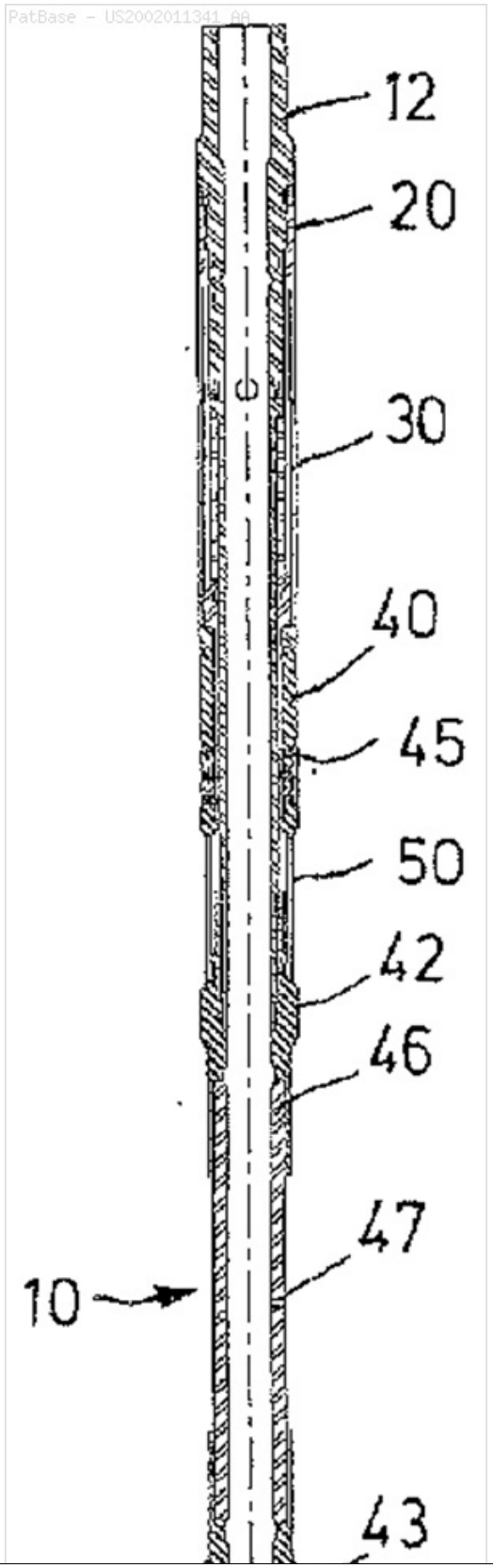
13) Family number: 28272168 (US2002011341A)

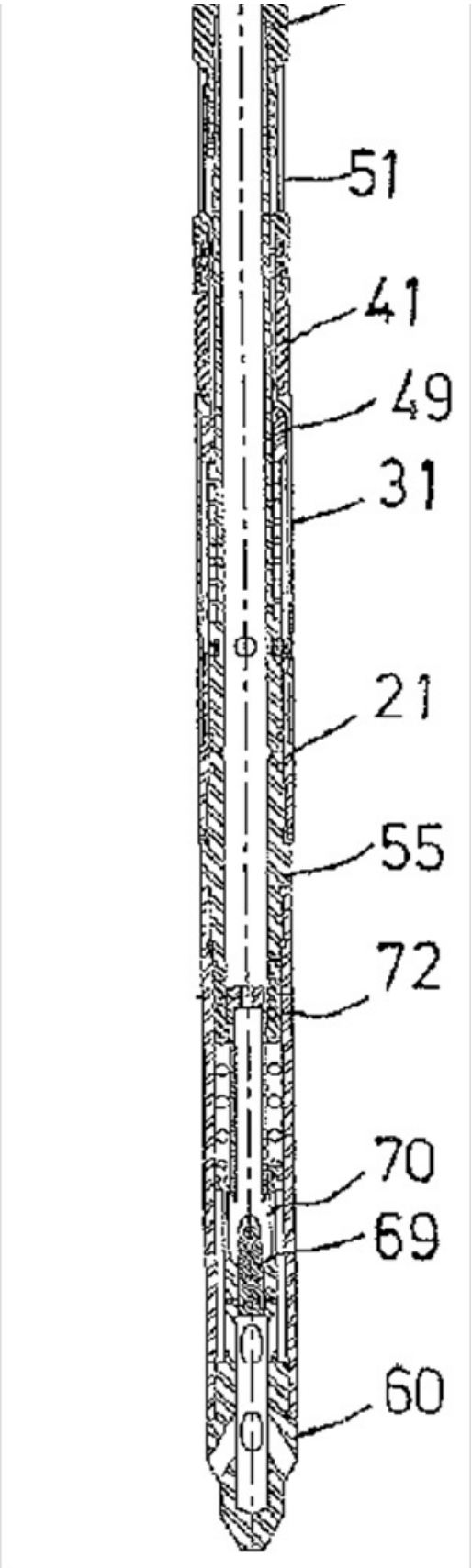
Title: Pack-off system

Abstract: A pack-off system for packing off an area of interest in a wellbore, the pack-off system comprising a body, two spaced-apart selectively settable packing elements on the body for sealing off the area of interest, selectively actuatable setting apparatus connected to the body for selectively setting the two spaced-apart selectively settable packing elements, the selectively actuatable setting apparatus actuatable by fluid under pressure introduced into the pack-off system. A method for packing off an area of interest in a wellbore, the method including installing a pack-off system as described herein in the wellbore to pack-off the area of interest. Such a method may also include flowing treatment fluid from the pack-off system to an area of interest in an earth formation and/or adjacent a wellbore in the earth.

Classifications:

International (IPC 8-9): E21B21/00 E21B33/12 E21B33/124 E21B34/06 E21B34/08 E21B34/10 E21B43/26 (Advanced/Invention); E21B33/12 E21B34/00 (Core/Invention)
International (IPC 1-7): E21B E21B23/00 E21B23/04 E21B23/06 E21B33/12 E21B33/124 E21B33/126 E21B34/08 E21B34/10 E21B43/16 E21B43/25 E21B43/26
CPC: E21B34/08 E21B21/002 E21B33/124 E21B34/10 E21B43/26 E21B33/12 E21B33/1243
European: E21B21/00F E21B33/12 E21B33/124 E21B33/124B E21B34/08 E21B34/10 E21B43/26
US: 166/126 166/127 166/142 166/142S 166/184 166/185 166/185S 166/186 166/191 166/191S 166/305.1 166/305.100P 166/308 166/308.1 166/308.100P 166/374 166/387 166/387S





Family:

Publication number	Publication date	Application number	Application date
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AU2003244986 AA	20030904	AU20030244986	20030205
CA2390133 AA	20020503	CA20002390133	20001006
CA2390133 C	20060411	CA20002390133	20001006
CA2474518 AA	20040726	CA20032474518	20030205

CA2474518 C	20080930	CA20032474518	20030205
CA2489063 AA	20050602	CA20042489063	20041201
CA2489063 C	20090707	CA20042489063	20041201
DE60018445 D1	20050407	DE20006018445	20001006
DE60018445 T2	20051229	DE20006018445T	20001006
EP1226332 A1	20020731	EP20000966313	20001006
EP1226332 B1	20050302	EP20000966313	20001006
GB200416306 A0	20040825	GB20040016306	20030205
GB200426384 A0	20050105	GB20040026384	20041201
GB2401628 A1	20041117	GB20040016306	20030205
GB2401628 B2	20050720	GB20040016306	20030205
GB2408762 A1	20050608	GB20040026384	20041201
GB2408762 B2	20070404	GB20040026384	20041201
NO20021793 A	20020626	NO20020001793	20020417
NO20021793 A0	20020417	NO20020001793	20020417
NO20043201 A	20041101	NO20040003201	20040727
NO20045295 A	20050603	NO20040005295	20041202
NO335890 B1	20150316	NO20040005295	20041202
NO337894 B1	20160704	NO20040003201	20040727
US2002011341 AA	20020131	US20010858153	20010515
US2002195248 AA	20021226	US20020073685	20020211
US2004129421 AA	20040708	US20030726274	20031202
US6253856 BA	20010703	US19990435388	19991106
US6695057 BB	20040224	US20020073685	20020211
US7114558 BB	20061003	US20030726274	20031202
WO0134938 A1	20010517	WO2000GB03889	20001006
WO03069117 A1	20030821	WO2003GB00509	20030205

Priority:

US19990435388 19991106 WO2000GB03889 20001006 US20010858153 20010515
US20020073685 20020211 WO2003GB00509 20030205 US20030726274 20031202
CA20042489063 20041201

Probable Assignee: WEATHERFORD TECHNOLOGY HOLDINGS LLC

Assignee(s): (std): GIROUX RICHARD L ; HARDING RICHARD PATRICK ; HOFFMAN COREY E ; WEATHERFORD LAMB ; WEATHERFORD LAMB INC ; WEATHERFORD TECHNOLOGY HOLDINGS LLC ; INGRAM GARY D ; WEATHERFORD TECH HOLDINGS LLC

Assignee(s): INGRAM GARY DURON ; LAUREL DAVID ; WEATHERFORD TECHNOLOGY HOLDINGS LLC2000 ST. JAMES PL.HOUSTONTX77056US ; WEATHERFORD LAMB INC600-515 POST OAK BOULEVARDHOUSTONTX77027US ; WEATHERFORD LAMB INC2000 ST. JAMES PLACEHOUSTONTX77056US ; HOFFMAN COREY EUGENE ; BEEMAN ROBERT STEPHEN ; ELLIS JASON ; HAUGEN DAVID MICHAEL ; HOFFMAN COREY

Inventor(s): (std): BEEMAN STEPHEN ; COREY E HOFFMAN ; ELLIS JASON ; GARY D INGRAM ; GIROUX RICHARD L ; HAUGEN MICHAEL ; HOFFMAN COREY ; HOFFMAN COREY E ; HOFFMAN EUGENE ; HOFFMANN COREY E ; INGRAM DURON ; INGRAM GARY D ; RICHARD L GIROUX ; INGRAM GARY DURON ; HOFFMANN COREY EUGENE ; LAUREL DAVID ; LAUREL DAVID F ; HOFFMAN COREY EUGENE ; HAUGEN DAVID MICHAEL ; BEEMAN ROBERT STEPHEN

Inventor(s): GIROUX RICHARD LUS ; GARY DURON INGRAM ; ELLIS JASONUS ; DAVID F LAUREL ; COREY EUGENE HOFFMAN ; BEEMAN ROBERT STEPHENUS ; HAUGEN DAVID MICHAELUS ; LAUREL DAVIDUS ; HOFFMAN COREYUS ; HOFFMAN COREY EUS ; HOFFMAN COREY EUGENEUS ; ROBERT STEPHEN BEEMAN ; INGRAM GARY DUS ; INGRAM GARY DURONUS ; JASON ELLIS

Agent(s): MARKS AND CLERK; DEETH WILLIAMS WALL LLP; PATTERSON AND SHERIDAN LLP

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 SC SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

14) Family number: 2882507 (US4809781A)

Title: Method for selectively plugging highly permeable zones in a subterranean formation

Abstract: Relatively high permeability zones in a subterranean formation vertically bounded by relatively low permeability zones are selectively plugged by first injecting a solidifiable selective gel solution, preferably a xanthan/chromium gel solution, at a pressure sufficient to cause the gel solution to coat and temporarily plug the injection face of the low permeability zones without any significant amount of the gel penetrating the low permeability zones while allowing the gel solution to flow into the relatively high permeability zones. Reasonably promptly thereafter and before the selective gel solution solidifies in the high permeability zones, a solidifiable non-selective solution is injected into the formation that preferentially enters the relatively high permeability zones and allowed to solidify and plug the relatively high permeability zones. Thereafter, a flushing agent having a gel breaker is injected into the formation that removes the selective gel coating from the face of the relatively low permeability zones thereby restoring permeability of the face of these zones. Thereafter, flooding fluids injected into the formation will preferentially enter the low permeability oil-rich zones to improve sweep efficiency and total oil recovery from the formation.

Classifications:
International (IPC 8-9): C09K8/512 C09K8/60 E21B33/138 (Advanced/Invention)
International (IPC 1-7): E21B33/138 E21B43/16
CPC: C09K8/512 C09K8/60 C09K2208/26 E21B33/138
European: C09K8/512 C09K8/60 E21B33/138 M09K208/26
US: 166/261 166/270 166/273 166/292 166/295 166/300 166/305.1

Family:

Publication number	Publication date	Application number	Application date
US4809781 A	19890307	US19880171072	19880321

Priority:

US19880171072 19880321

Probable Assignee:	MOBIL OIL CORP
Assignee(s): (std):	MOBIL OIL CORP
Assignee(s):	MOBIL OIL A CORP OF NY CORP
Inventor(s): (std):	HOEFNER MARK L

15) Family number: 30085490 (US2001050172A)

Title: Method and apparatus for stimulation of multiple formation intervals

Abstract: The invention provides an apparatus and method for perforating and treating multiple intervals of one or more subterranean formations intersected by a wellbore by deploying a bottom-hole assembly ("BHA") having a perforating device and at least one sealing mechanism within said wellbore. The BHA may be deployed in the wellbore using a tubing string or cable; or alternatively, the BHA may be deployed using a tractor system attached directly to the BHA. The perforating device is used to perforate the first interval to be treated. Then the BHA is positioned within the wellbore such that the sealing mechanism, when actuated, establishes a hydraulic seal in the wellbore to positively force fluid to enter the perforations corresponding to the first interval to be treated. A treating fluid is then pumped down the wellbore and into the perforations created in the perforated interval. The sealing mechanism is released, and the steps are then repeated for as many intervals as desired, without removing the BHA from said wellbore.

Classifications:

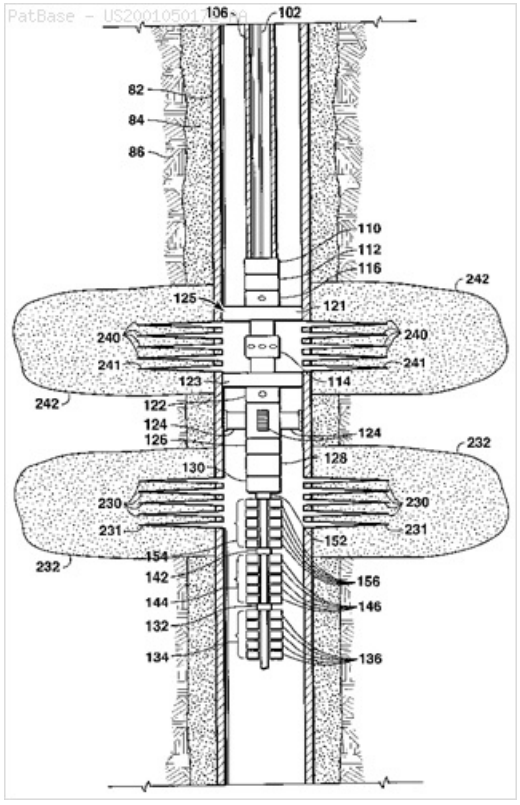
International (IPC 8-9): E21B17/20 E21B23/00 E21B23/14 E21B33/12 E21B33/124 E21B33/129 E21B33/134 E21B43/00 E21B43/11 E21B43/117 E21B43/119 E21B43/14 E21B43/25 E21B43/26 E21B43/267 E21D1/06 (Advanced/Invention);
E21B43/267 (Advanced/Non-invention);
E21B23/00 E21B33/12 E21B43/00 E21B43/11 E21B43/25 E21B7/00 E21D1/00 (Core/Invention)

International (IPC 1-7): E12B33/124 E21B033/124 E21B033/129 E21B043/119 E21B043/267 E21B23/00 E21B29/00 E21B29/02 E21B33/12 E21B33/124 E21B33/129 E21B33/134 E21B43/00 E21B43/11 E21B43/116 E21B43/119 E21B43/14 E21B43/24 E21B43/267 E21B7/00 E21D1/06

CPC: E21B17/203 E21B43/117 E21B43/26 E21B47/04 E21B43/14 E21B43/11 E21B23/14 E21B33/12 E21B43/25 E21B2023/008

European: E21B17/20B E21B23/14 E21B33/12 E21B43/11 E21B43/117 E21B43/25 E21B43/26 E21B47/04 P21B23/00T

US: 166/120 166/133 166/135 166/177.5 166/191 166/222 166/222S 166/281 166/297 166/297S 166/298 166/305.1 166/305.100S 166/308 166/308.1 166/308.6 166/313 166/384 166/385 166/386 166/55 166/55.1 166/55.100S 166/55.2 166/55.200S 166/55S



Family:

Publication number	Publication date	Application number	Application date
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AU2001236978 AA	20010827	AU20010236978	20010214
AU2001236978 BB	20041223	AU20010236978	20010214
AU200136978 A1	20010827	AU20010036978	20010214
AU200136978 A5	20010827	AU20010036978	20010214
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DE60146829 D1	20120906	DE20016046829	20010214
DK2282002 T3	20121015	DK20010185217T	20010214
DZ3378 A1	20010823	DZ20010003378	20010214
EA004100 B1	20031225	EA20020000857	20010214
EA200200857 A1	20030424	EA20020000857	20010214
EG23117 A	20040428	EG20010000121	20010212
EP1264075 A1	20021211	EP20010909197	20010214
EP1264075 A4	20040811	EP20010909197	20010214
EP1264075 B1	20180620	EP20010909197	20010214
EP2282002 A2	20110209	EP20100185217	20010214
EP2282002 A3	20110504	EP20100185217	20010214
EP2282002 B1	20120711	EP20100185217	20010214
IN203903 B	20070518	IN2002MN00956	20020715
MXPA02007728 A1	20021011	MX2002PA07728	20010214

NO20023571 A	20021014	NO20020003571	20020726
NO20023571 A0	20020726	NO20020003571	20020726
NO330514 B1	20110509	NO20020003571	20020726
NZ520310 A	20040827	NZ20010520310	20010214
OA12171 A	20060508	OA20021000231	20010214
PE10192001 A1	20011024	PE20010000156	20010213
PL196155 B1	20071231	PL20010365452	20010214
PL365452 A1	20050110	PL20010365452	20010214
RO121145 B1	20061229	RO20020001114	20010214
TH21515 B	20070302	TH20011000480	20010213
TH47791 A	20011018	TH20011000480	20010213
TNSN01026 A1	20030403	TN2001SN00026	20010214
TW485215 B	20020501	TW20010103055	20010212
UA74818 C2	20021216	UA20020907451	20010214
US2001050172 AA	20011213	US20010781597	20010212
US2002092650 AA	20020718	US20020085518	20020228
US2003051876 AA	20030320	US20020278519	20021023
US2005178551 AA	20050818	US20050100252	20050406
US6394184 BB	20020528	US20010781597	20010212
US6520255 BB	20030218	US20020085518	20020228
US6957701 BB	20051025	US20020278519	20021023
US7059407 BB	20060613	US20050100252	20050406
VN8464 A1	20100625	VN20020000738	20010214
WO0161146 A1	20010823	WO2001US04635	20010214
WO0161146 B1	20011129	WO2001US04635	20010214

Priority:

US20000182687 20000215 US20000182687P 20000215 US20000244258P 20001030
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EP20100185217 20010214 WO2001US04635 20010214 US20020085518 20020228
US20020278519 20021023 US20050100252 20050406

Probable Assignee: EXXON MOBIL CORP

Assignee(s): (std)**:** EXXON MOBIL CORP ; EXXON MOBIL UPSTREAM CO ; EXXON MOBIL UPSTREAM RES COMPA ; EXXON MOBIL UPSTREAM RESEARCH CO ; EXXONMOBIL UPSTREAM RES CO ; EXXONMOBIL UPSTREAM RES COMPAN ; EXXONMOBIL UPSTREAM RESEARCH CO ; TOLMAN RANDY C ; SOREM WILLIAM A ; SHAFER LEE L ; EXXONMOBILE UPSTREAM RES COMPA

Assignee(s): EXXONMOBIL UPSTREAM RESEARCH CO CORP URC SW 3 ; EXXONMOBIL UPSTREAM RESEARCH COMPANY CORP URC SW 3 ; EXXONMOBIL UPSTREAM RESEARCH CO HOUSTON ; EXXONMOBILE UPSTREAM RESEARCH COMPANY ; NYGAARD KRIS J ; GOSS GLENN S ; KINISON DAVID A ; EXXONMOBILE UPSTREAM RESEARCH CO ; EXXON MOBIL UPSTREAM RESEARCH COMPANY ; CARLSON LAWRENCE O

Inventor(s): (std)**:** GOSS GLEN S ; KINISON RAND C TOLMAN LAWRENCE ; TOLMAN RANDY C ; TOLMAN RANDY ; TOLMAN RAND C ; SOREM WILLIAM A ; SOREM WILLIAM ; SHAFER LEE L ; SHAFER LEE ; SHAFER LEE I ; RAND C TOLMAN ; NYGAARD KRIS J ; NYGAARD KRIS ; KINISON DAVID A ; KINISON DAVID ; GOSS GLENN S ; GOSS GLENN ; GOSS GLEEN S ; LAWRENCE O CARLSON ; DAVID A KINISON ET AL ; CARLSON LAWRENCE O ; CARLSON LAWRENCE ; AL DAVID A KINISON ET ; KINSON DAVID A

Inventor(s): CARLSON LAWRENCE CYPRESS ; TOLMAN RANDY KINSON DAVID GROSS GLENN SHAFER LEE CARLSON LAWRENCE NYGAARD KRIS SOREM WILLIAM ; DAVID A KINISON ; KRIS J NYGAARD ; GLENN S GOSS ; GLEEN S GOSS ; LEE L SHAFER ; LEE I SHAFER ; SOREM WILLIAM KATY ; TOLMAN RANDY SPRINGN ; WILLIAM A SOREM ; RANDY C TOLMAN LAWRENCE O CARLSON DAVID A KINISON KRIS J NYGAARD GLENN S GOSS ; RANDY C TOLMAN ; KINSON DAVID ; NYGAARD KRIS HOUSTON ; RAND C TOLMAN LAWRENCE O CARLSON DAVID A KINISON ; SHAFER LEE BIG PINEY ; GOSS GLENN KINGWOOD ; GROSS GLENN ; KINISON DAVID KINGWOOD

Agent(s): WATERMARK PATENT AND TRADE MARKS ATTORNEYS; WATERMARK INTELLECTUAL PROPERTY PTY LTD; BORDEN LADNER GERVAIS LLP; SILVA Y CIA; JOSE ANTONIO LLOREDA LONDONO; UEXKUELL AND STOLBERG; EXXONMOBIL CHEMICAL EUROPE INC; MARESCHAL ANNE; EXXONMOBIL UPSTREAM RESEARCH COMPANY; EXXONMOBIL UPSTREAM RESEARCH CO; EXXONMOBIL UPSTREAM RESEARCH CO LAW DEPT

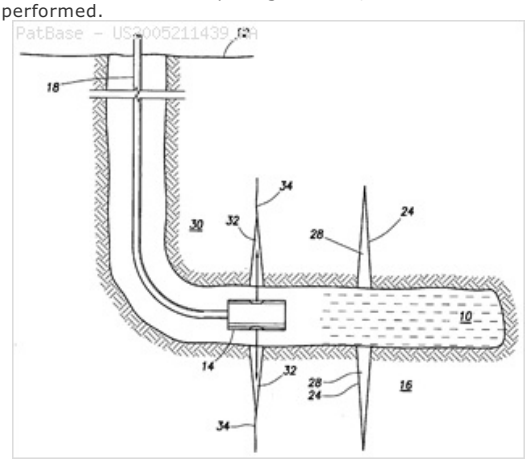
Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CR CU CY CZ DE DK DM DZ EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD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

16) Family number: 32273340 (US2005211439A)

Title: METHODS OF ISOLATING HYDRAJET STIMULATED ZONES

Abstract: The present invention is directed to a method of isolating hydrajet stimulated zones from subsequent well operations. The method includes the step of drilling a wellbore into the subterranean formation of interest. Next, the wellbore may or may not be cased depending upon a number of factors including the nature and structure of the subterranean formation. Next, the casing, if one is installed, and wellbore are perforated using a high pressure fluid being ejected from a hydrajetting tool. A first zone of the subterranean formation is then fractured and stimulated. Next, the first zone is temporarily plugged or partially sealed by installing an isolation fluid into the wellbore adjacent to the one or more fractures and/or in the openings thereof, so that subsequent zones can be fractured and additional well operations can be performed.

Classifications:
International (IPC 8-9): E21B33/13 E21B43/11 E21B43/112 E21B43/114 E21B43/25 E21B43/26 E21B43/267 (Advanced/Invention); E21B33/13 E21B43/11 E21B43/25 (Core/Invention)
International (IPC 1-7): E21B43/25 E21B43/26
CPC: E21B43/114 E21B43/25 E21B43/261
European: E21B43/114 E21B43/25 E21B43/26P
US: 166/177.5 166/280.1 166/280.2 166/281 166/284 166/292 166/298 166/305.1 166/307 166/308.1 166/308.3



Family:

Publication number	Publication date	Application number	Application date
AR049792 AA	20060906	AR2005P101095	20050321
AU2005224422 AA	20050929	AU20050224422	20050223
AU2005224422 BB	20090917	AU20050224422	20050223
BRPI0509063 A	20070821	BR2005PI09063	20050223
BRPI0509063 B1	20160510	BR2005PI09063	20050223
CA2560611 AA	20060920	CA20052560611	20050223
CA2560611 C	20091020	CA20052560611	20050223
MXPA06010875 A1	20061215	MX2006PA10875	20050223
RU2006137362 A	20080427	RU20060137362	20050223
RU2375561 C2	20091210	RU20060137362	20050223
US2005211439 AA	20050929	US20040807986	20040324
US2006000610 AA	20060105	US20050221544	20050908
US2008110622 AA	20080515	US20070739188	20070424
US7225869 BB	20070605	US20040807986	20040324
US7225869 C1	20110419	US20040807986	20040324
US7681635 BB	20100323	US20050221544	20050908
US7766083 BB	20100803	US20070739188	20070424
WO05090747 A1	20050929	WO2005GB00672	20050223

Priority:

US20040807986 20040324 WO2005GB00672 20050223 US20050221544 20050908 US20070739188 20070424

Probable Assignee: HALLIBURTON CO

Assignee(s): (std): FARABEE LELDON MARK ; HALLIBURTON CO ; HALLIBURTON ENERGY SERV INC ; HALLIBURTON ENERGY SERVICES INC ; KHEHLLIBERTON EHNERDZHI SERVIS ; MCDANIEL BILLY W ; WILLETT RONALD M ; SURJAATMADJA JIM B ; WAIN CHRISTOPHER PAUL

Assignee(s): KHEHLLIBERTON EHNERDZHI SERVISIZ INK

Inventor(s): (std): EAST LOYD E ; ADAMS DAVID M ; WILLETT RONALD M ; MAKDEHNIEL BILLI U ; FARABI LELDON MARK ; FARABEE LELDON MARK ; FARABEE LELDON M ; EAST LLOYD E ; ALBA RUBEN A ; UILLETT RONAL D M ; SURJAATMADJA JIM B ; SURDZHAATMADZHA DZHIM B ; MCDANIEL BILLY W

Inventor(s): MCDANIEL BILLY ; SURJAATMADJA JIM ; FARABEE LELDON ; ALBA RUBEN ; WILLETT RONALD ; BILLY W MCDANIEL ; JIM B SURJAATMADJA ; LELDON MARK FARABEE ; RONALD M WILLETT ; UILLETT RONAL'D M.

Agent(s): CALLINANS; FISHER ADAMS KELLY CALLINANS; SPRUSON AND FERGUSON; OGILVY RENAULT LLP SENCRL SRL; JOHN W WUSTENBERG; ROBERT A KENT; BAKER BOTTS LLP; JOHN W; ROBERT A; MCDERMOTT WILL AND EMERY LLP

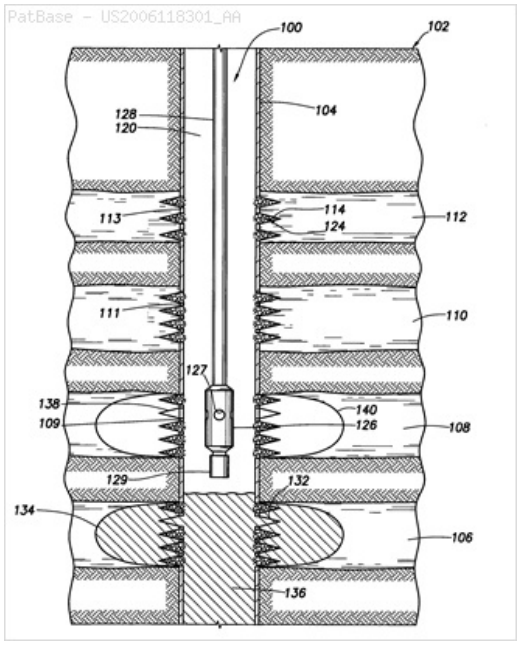
Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU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

17) Family number: 33057505 (US2006118301A)

Title: METHODS OF STIMULATING A SUBTERRANEAN FORMATION COMPRISING MULTIPLE PRODUCTION INTERVALS

Abstract: A method of stimulating a production interval adjacent a well bore having a casing disposed therein, that comprises introducing a carrier fluid comprising first particulates into the well bore, packing the first particulates into a plurality of perforations in the casing, perforating at least one remedial perforation in the casing adjacent to the production interval, and stimulating the production interval through the at least one remedial perforation. Also provided are methods of stimulating multiple production intervals adjacent a well bore.

Classifications:
International (IPC 8-9): C09K8/508 C09K8/575 C09K8/68 E21B33/138 E21B43/114 E21B43/25 E21B43/267 (Advanced/Invention); C09K8/50 C09K8/56 C09K8/60 E21B43/00 E21B43/25 (Core/Invention)
International (IPC 1-7): E21B43/25
CPC: E21B43/114 E21B43/25 E21B43/26 C09K8/508 C09K8/5751 C09K8/68
European: C09K8/508 C09K8/575B C09K8/68 E21B43/114 E21B43/25 E21B43/26
US: 166/280.1 166/280.2 166/280.200P 166/280.200S 166/281 166/281S 166/282 166/283 166/290 166/292 166/294 166/295 166/297 166/297S 166/298 166/308.2 166/308.200P 166/308.200S 507/224 507/225 523/130



Family:

Publication number	Publication date	Application number	Application date
AU2005311147 AA	20060608	AU20050311147	20051018
AU2005311147 BB	20100617	AU20050311147	20051018
CA2589798 AA	20070604	CA20052589798	20051018
CA2589798 C	20100112	CA20052589798	20051018
MX2007006620 A1	20080111	MX20070006620	20051018
RU2007125129 A	20090110	RU20070125129	20051018
RU2398959 C2	20100910	RU20070125129	20051018
US2006118301 AA	20060608	US20040004441	20041203
US2006124309 AA	20060615	US20050284356	20051121
US7273099 BB	20070925	US20040004441	20041203
US7398825 BB	20080715	US20050284356	20051121
WO06059056 A1	20060608	WO2005GB04009	20051018
WO07057637 A1	20070524	WO2006GB04102	20061102

Priority:
US20040004441 20041203 WO2005GB04009 20051018 US20050284356 20051121

Probable Assignee: HALLIBURTON CO

Assignee(s): (std): ATTAWAY DAVID J ; CAVENDER TRAVIS W ; CURTIS PHILIP ANTHONY ; DUSTERHOFT RONALD G ; HALLIBURTON ENERGY SERV INC ; WAIN CHRISTOPHER PAUL ; NGUYEN PHILIP D ; SURJAATMADJA JIM B ; NGUYEN PHILIP DUKE ; EAST LOYD E JR ; KHEHLLIBERTON EHNERDZHI SERVIS

Assignee(s): HALLIBURTON CO ; HALLIBURTON ENERGY SERVICES INC ; KHEHLLIBERTON EHNERDZHI SERVISIZ INK ; EAST LOYD E

Inventor(s): (std): ATTAWAY DAVID J ; CAVENDER TRAVIS W ; DUSTERHOFT RONALD G ; EAST JR LOYD E ; EAST LOYD E JR ; SURJAATMADJA JIM B ; NGUYEN PHILIP D ; NGUYEN PHILIP DUKE ; KAVENDER TRAVIS V ; IST LOJD EH ML ; ATTAUEHJ DEHVID DZH

Inventor(s): SURJAATMADJA JIM ; ATTAWAY DAVID ; TRAVIS W CAVENDER ; LOYD E JR EAST ; EAST LOYD EJR ; EAST LOYD E ; DAVID J ATTAWAY ; LOYD E EAST JR ; NGUYEN PHILIP ; EAST LOYD ; DUSTERHOFT RONALD ; CAVENDER TRAVIS

Agent(s): FISHER ADAMS KELLY CALLINANS; CALLINANS; SPRUSON AND FERGUSON; OGILVY RENAULT LLP SENCRL SRL; ROBERT A KENT; HALLIBURTON ENERGY SERVICES INC; ROBERT A; FLETCHER YODER AND VAN SOMEREN; BAKER BOTTS LLC; KENT ROBERT A

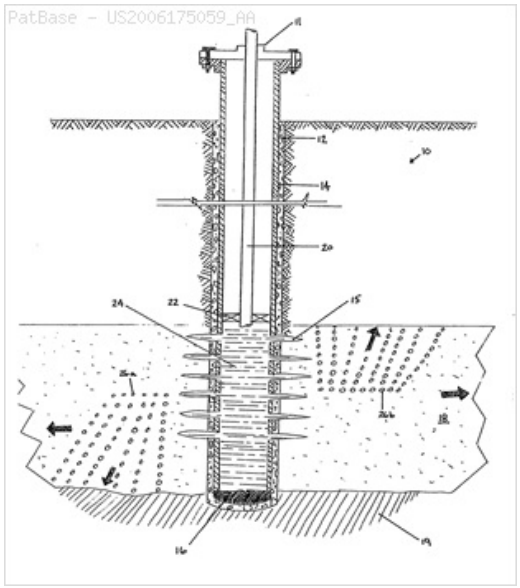
Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MY MZ NA NE NG NI NL NO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

18) Family number: 33189631 (US2006175059A)

Title: SOLUBLE DEVERTING AGENTS

Abstract: Methods and compositions for stimulating single and multiple intervals in subterranean wells by diverting well treatment fluids into a particular direction or into multiple intervals using water soluble coated diverting agents are described. The water soluble coating of the diverting material is preferably a collagen, poly(alkylene) oxide, poly(lactic acid), polyvinylacetate, polyvinylalcohol, polyvinylacetate/polyvinylalcohol polymer or a mixture thereof applied as a coating on any number of proppants. The method allows for the diverting of the flow of fluids in a downhole formation during a well treatment, such as during a fracturing process. Following completion of a treatment such as a hydraulic stimulation, the soluble diverting agent can be dissolved and removed by the water component of the well production.

Classifications:
International (IPC 8-9): C09K8/487 C09K8/516 C09K8/60 C09K8/70 C09K8/80 E21B43/12 E21B43/14 E21B43/25 E21B43/26 E21B43/267 (Advanced/Invention);
C09K8/80 (Advanced/Non-invention);
C09K8/42 C09K8/60 E21B43/00 E21B43/25 (Core/Invention)
CPC: C09K8/805 E21B43/14 E21B43/261 C09K8/487 C09K8/80
European: C09K8/487 C09K8/80B E21B43/14 E21B43/26P
US: 166/283 166/313 166/313S



Family:

Publication number	Publication date	Application number	Application date
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CA2595686 C	20120918	CA20062595686	20060120
CN101146888 A	20080319	CN200680009369	20060120
CN101146888 B	20120808	CN200680009369	20060120
GB200714796 A0	20070912	GB20070014796	20060120
GB2437869 A1	20071107	GB20070014796	20060120
GB2437869 B2	20100616	GB20070014796	20060120
MX2007008850 A1	20080116	MX20070008850	20060120
NO20074239 A	20071015	NO20070004239	20070820
RU2007131659 A	20090227	RU20070131659	20060120
RU2433157 C2	20111110	RU20070131659	20060120
US2006175059 AA	20060810	US20060336344	20060120
WO06088603 A1	20060824	WO2006US01916	20060120

Priority:

US20050646231P 20050121 US20060336344 20060120 WO2006US01916 20060120

Probable Assignee: FAIRMOUNT SANTROL INC

Assignee(s): (std): AKBAR SYED ; FAIRMOUNT MINERALS ; FAIRMOUNT MINERALS LTD ; SINCLAIR A R ; OKELL PATRICK R ; SINCLAIR A RICHARD ; FEHJRMAUNT MINERALZ LTD

Assignee(s): FAIRMOUNT SANTROL INC F K A FAIRMOUNT MINERALS LTD ; FAIRMOUNT SANTROL INC ; BARCLAYS BANK PLC AS COLLATERAL AGENT ; BARCLAYS BANK PLC COLLATERAL AGENT AS

Inventor(s): (std): OKELL PATRICK R ; AKBAR SYED ; SINCLAIR A R ; SINCLAIR A RICHARD ; SYED AKBAR ; SINKLER A RICHARD ; AKBAR SIED ; OUKELL PATRIK R

Inventor(s): A RICHARD SINCLAIR ; OKELL PATRICK ; PATRICK R OKELL ; SINCLAIR A

Agent(s): MACRAE AND CO; HOWREY LLP

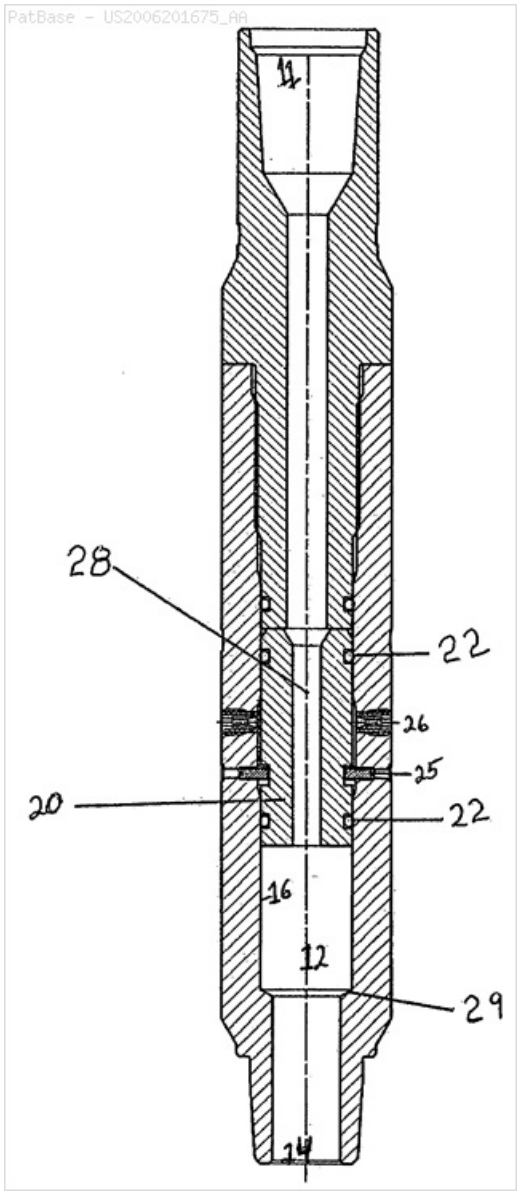
Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LC LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH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

19) Family number: 33342096 (US2006201675A)

Title: ONE TRIP PLUGGING AND PERFORATING METHOD

Abstract: A tubing conveyed tool for use in perforating a well bore utilizing abrasive perforating techniques. The perforating tool is particularly useful in non-vertical wells. The perforating tool is designed to permit running and setting a bridge plug, and then perforating the well bore without requiring the removal of the tool string. An eccentric weight bar can also be used to allow for directional perforating in non-vertical wells. The eccentric weight bar uses gravity to cause the bar to rotate to a predetermined position.

Classifications:
International (IPC 8-9): E21B29/00 E21B34/10 E21B43/11 E21B43/114 E21B43/26 (Advanced/Invention);
E21B34/00 (Advanced/Non-invention);
E21B43/11 (Core/Invention)
CPC: E21B34/10 E21B34/103 E21B2034/007 E21B43/114
European: E21B43/114
US: 166/169 166/194 166/222 166/298 166/318 166/374 166/381 166/55 166/55.2 166/55.200P 166/55P



Family:

Publication number	Publication date	Application number	Application date
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US2011114316 AA	20110519	US20060372527	20060309
US2011114316 AB	20110519	US20060372527	20060309
US2012024519 AA	20120202	US20110267331	20111006
US2012118557 AA	20120517	US20120359347	20120126
US8066059 BB	20111129	US20060372527	20060309
US8210250 BB	20120703	US20110267331	20111006
US8403049 BB	20130326	US20120359347	20120126
US8783338 BA	20140722	US20130774693	20130222
US9777558 BA	20171003	US20150887923	20151020

Priority:

US20050661262P 20050312 US20060372527 20060309 US20110267331 20111006
US20120359347 20120126 US20130774693 20130222 US20140301031 20140610
US20150887923 20151020

Probable Assignee: THRU TUBING SOLUTIONS INC

Assignee(s): (std)**:** CUDD PRESSURE CONTROL INC ; FERGUSON ANDREW M ; LOVING STANLEY W ; LOVING STANLEY WAYNE ; THRU TUBING SOLUTIONS INC ; MCKINLEY BRYAN F ; NORMAN DALE ; MCKINLEY BRYAN FRANKLIN

Inventor(s): (std)**:** FERGUSON ANDREW ; FERGUSON ANDREW M ; LOVING STANLEY W ; MCKINLEY BRYAN ; MCKINLEY BRYAN F ; NORMAN DALE ; MCKINLEY BRYAN FRANKLIN ; LOVING STANLEY WAYNE ; LOVING STANLEY

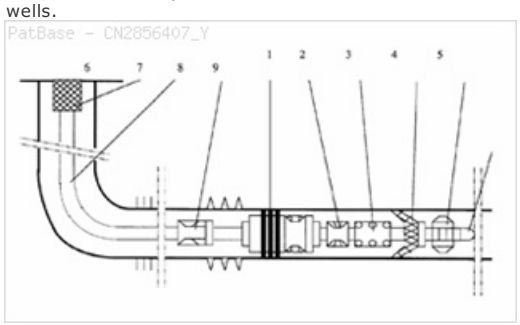
Agent(s): WONG CABELLO LUTSCH RUTHERFORD AND BRUCCULERI LLP; MARY M

20) Family number: 34132594 (CN2856407Y)

Title: Perforating and fracturing string of horizontal well

Abstract: A horizontal well perforation pressing-crack combined operation pipe string comprises a well mouth tap 1, a tubing string 2, a perforating gun 6, a leather cup packer 7 and a centralizer 8. The pipe string is characterized in that a hydraulic packer 4 is installed between a safe joint 3 and a pressure transmission valve 5. The utility model can not only complete the perforation and pressing-crack (acidification) in one up-down of the tubing string, but also can realize the sealing and un-sealing of the packer by hydraulic pressure, accordingly avoids sealing and fishing the down-hole fixed bridge packer and reduces the operation difficulty of the. The utility model achieves reasonable design, simple structure, convenient operation method and reliable working, is applicable in down-hole operation of horizontal wells and other wells.

Classifications:
International (IPC 8-9): E21B43/00 E21B43/11 E21B43/26 (Advanced/Invention);
E21B43/00 E21B43/11 E21B43/25 (Core/Invention)



Family:

Publication number	Publication date	Application number	Application date
CN2856407 Y	20070110	CN200520107551U	20050531

Priority:
CN200520107551U 20050531

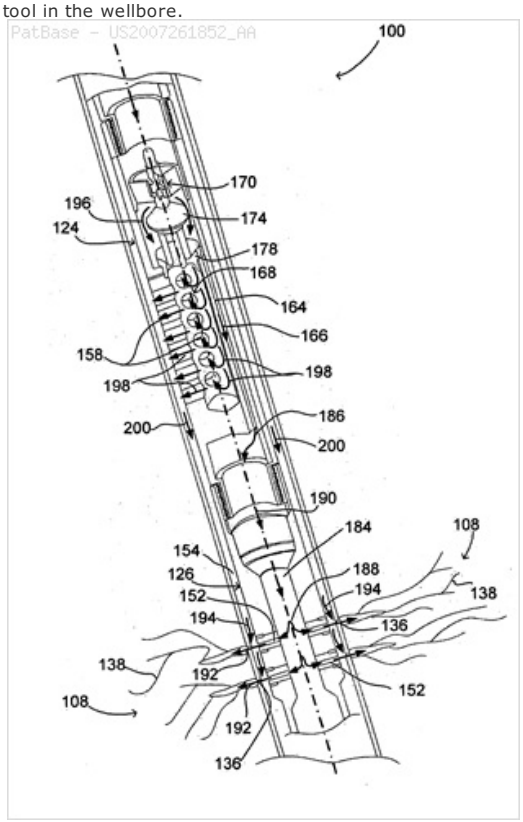
Probable Assignee:	PETROCHINA CO LTD
Assignee(s): (std):	PETROCHINA CO LTD
Assignee(s):	PETROCHINA CO
Inventor(s): (std):	WANG FENG SUI
Inventor(s):	FENG SUI WANG

21) Family number: 40810039 (US2007261852A)

Title: PERFORATING AND FRACTURING

Abstract: In a system and method of fracturing a subterranean formation, fluid for perforating is received in a downhole tool through a tubing string, the downhole tool residing in a wellbore. A wall of the wellbore is perforated proximate the downhole tool. A fluid for fracturing is received in the downhole tool through the tubing string. The subterranean formation proximate the downhole tool is fractured. The operations of receiving a fluid for perforating, perforating, receiving a fluid for fracturing, and fracturing are performed while keeping at least a portion of the downhole tool in the wellbore.

Classifications:
International (IPC 8-9)**:** E21B28/00 E21B43/11 E21B43/114 E21B43/26 E21B43/267 (Advanced/Invention);
E21B28/00 E21B43/11 E21B43/25 (Core/Invention)
CPC: E21B43/114 E21B43/26 E21B43/267
European: E21B43/114 E21B43/26 E21B43/267
US: 166/177.5 166/297 166/298 166/305.1 166/308.1 166/55 166/55.1



Family:

Publication number	Publication date	Application number	Application date
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CA2650632 C	20110712	CA20072650632	20070509
DK178471 B1	20160411	DK20080001732	20081208
DK200801732 A5	20081208	DK20080001732	20081208
GB200819083 A0	20081126	GB20080019083	20070509
GB2450829 A1	20090107	GB20080019083	20070509
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NO20084280 A	20081209	NO20080004280	20081014
US2007261852 AA	20071115	US20060430679	20060509
US7337844 BB	20080304	US20060430679	20060509
WO07129099 A2	20071115	WO2007GB01702	20070509
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Priority:
US20060430679 20060509 WO2007GB01702 20070509

Probable Assignee: HALLIBURTON CO

Assignee(s): (std)**:** CURTIS PHILIP ANTHONY ; HALLIBURTON CO ; HALLIBURTON ENERGY SERV INC ; HALLIBURTON ENERGY SERVICES INC ; SURJAATMADJA JIM B ; HARRIES MICHAEL

Inventor(s): (std)**:** HARRIES MICHAEL ; HARRIS MICHAEL ; MICHAEL HARRIES ; SURJAATMADJA JIM B

Inventor(s): SURJAATMADJA JIM ; JIM B SURJAATMADJA

Agent(s): OGILVY RENAULT LLP SENCRL SRL; NORTON ROSE OR SENCRL SRL LLP; JOHN W WUSTENBERG; WUSTENBERG JOHN W; FISH AND RICHARDSON PC; JOHN W

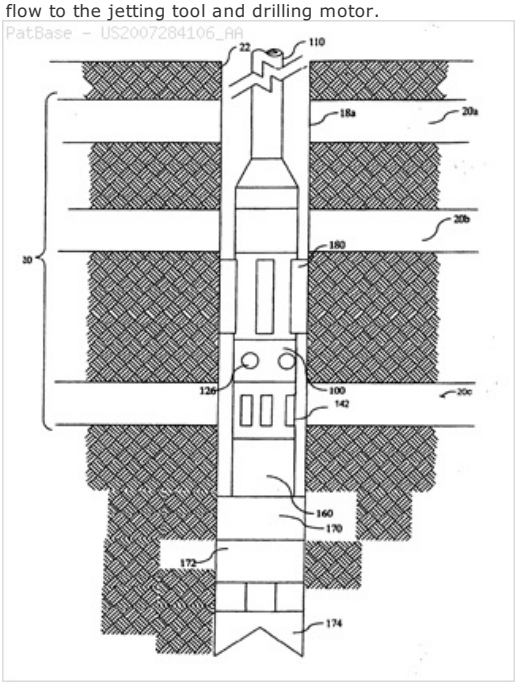
Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MT MW MX MY MZ NA NE NG NI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

22) Family number: 40901956 (US2007284106A)

Title: METHOD AND APPARATUS FOR WELL DRILLING AND COMPLETION

Abstract: Disclosed is a method and apparatus for forming wellbores and in a single trip for also performing multistage wellbore treatments. The disclosed apparatus comprises a bore forming apparatus in the form of a hydraulic drilling motor and bit; a well treatment apparatus in the form of a jetting tool and means for controlling flow to the jetting tool and drilling motor.

Classifications:
International (IPC 8-9): E21B29/00 E21B43/26 (Advanced/Invention); E21B29/00 E21B43/25 (Core/Invention)
CPC: E21B34/02 E21B43/114
European: E21B34/02 E21B43/114
US: 166/298 166/308.1 166/55



Family:

Publication number	Publication date	Application number	Application date
US2007284106 AA	20071213	US20060450717	20060612

Priority:
US20060450717 20060612

Probable Assignee:	HALLIBURTON CO
Assignee(s): (std):	GRIGSBY TOMMY F ; KALMAN MARK D ; NGUYEN PHILIP D
Assignee(s):	HALLIBURTON CO ; HALLIBURTON ENERGY SERVICES INC
Inventor(s): (std):	GRIGSBY TOMMY F ; KALMAN MARK D ; NGUYEN PHILIP D
Agent(s):	ROBERT A KENT

23) Family number: 40901988 (US2007284109A)

Title: METHODS AND DEVICES FOR TREATING MULTIPLE-INTERVAL WELL BORES

Abstract: Methods and devices are provided for treating multiple interval well bores. More particularly, an isolation assembly may be used to allow for zonal isolation to allow treatment of selected productive or previously producing intervals in multiple interval well bores. One example of a method for treating a multiple interval well bore includes the steps of: providing an isolation assembly comprising a liner and a plurality of swellable packers wherein the plurality of swellable packers are disposed around the liner at selected spacings; introducing the isolation assembly into the well bore; allowing at least one of the plurality of swellable packers to swell so as to provide zonal isolation of at least one of a plurality of selected intervals; establishing fluidic connectivity to the at least one of a plurality of selected intervals; and treating the at least one of a plurality of selected intervals.

Classifications:

International (IPC 8-9): E21B29/00 E21B33/12 E21B33/122 E21B33/124 E21B33/127 E21B34/12 E21B34/14 E21B43/00 E21B43/08 E21B43/10 E21B43/11 E21B43/114 E21B43/14 E21B43/16 E21B43/25 E21B43/26 E21B43/267 E21B43/27 E21B47/00 (Advanced/Invention);
E21B29/00 E21B33/12 E21B34/00 E21B43/00 E21B43/02 E21B43/11 E21B43/16 E21B43/25 E21B47/00 (Core/Invention)
CPC: E21B33/1208 E21B33/124 E21B43/26 E21B34/12 E21B34/14 E21B43/08 E21B43/10 E21B43/114 E21B43/14 E21B43/267
European: E21B33/124 E21B33/12F E21B34/12 E21B34/14 E21B43/08 E21B43/10 E21B43/114 E21B43/14 E21B43/26 E21B43/267
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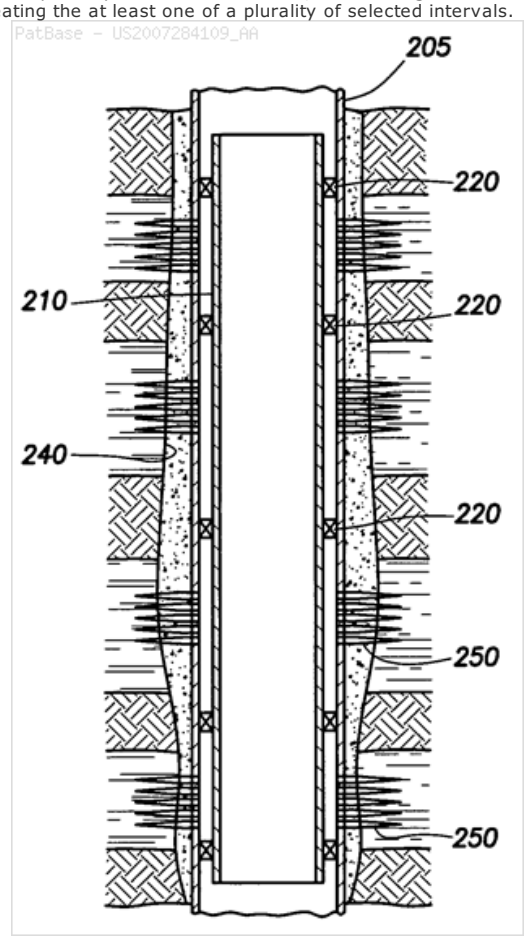

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BRPI0712341 A2	20120131	BR2007PI12341	20070322
BRPI0809576 A2	20140923	BR2008PI09576	20080402
CA2582679 AA	20071209	CA20072582679	20070323
CA2582679 C	20091013	CA20072582679	20070323
CA2625662 AA	20081110	CA20082625662	20080313
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DE602008025093 D1	20130725	DE200860025093T	20080402
DK2027360 T3	20100823	DK20070712950T	20070322
DK2145076 T3	20110919	DK20080736889T	20080402
DK2251525 T3	20130826	DK20080174373T	20080402
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EP2027360 B2	20170118	EP20070712950	20070322
EP2145076 A1	20100120	EP20080736889	20080402
EP2145076 B1	20110608	EP20080736889	20080402
EP2251525 A1	20101117	EP20100174373	20080402
EP2251525 B1	20130529	EP20100174373	20080402
MX2008015613 A1	20090109	MX20080015613	20070322

MX2009011682 A1	20091110	MX20090011682	20080402
NO20084979 A	20090302	NO20080004979	20081127
RU2395667 C1	20100727	RU20080152294	20070322
RU2412347 C1	20110220	RU20090145712	20080402
US2007284109 AA	20071213	US20060450654	20060609
US2008156496 AA	20080703	US20070746656	20070510
US2009211759 AA	20090827	US20090435128	20090504
US7478676 BB	20090120	US20060450654	20060609
US7575062 BB	20090818	US20070746656	20070510
US7874365 BB	20110125	US20090435128	20090504
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WO08139132 A1	20081120	WO2008GB01197	20080402

Priority:

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Probable Assignee: HALLIBURTON CO

Assignee(s): (std)**:** ALTMAN RICHARD ; ALTMAN RICHARD A ; CLAYTON ROBERT ; COURVILLE PERRY WAYNE ; CURTIS PHILIP ANTHONY ; HALLIBURTON ENERGY SERVICES INC ; EAST LOYD E JR ; HALLIBURTON ENERGY SERV INC ; EAST LOYD E ; EAST LOYD ; EAST JR LOYD E ; HALLIBURTION ENERGY SERVICES INC ; HALLIBURTON CO ; KHEHLLIBERTON EHNERDZHI SERVIS ; KHEHLLIBERTON EHNERDZHI SERVISIZ INK

Assignee(s): HALLIBURTON ENERGY SERVICES INC DUNCAN

Inventor(s): (std)**:** CLAYTON ROBERT ; COURVILLE PERRY WAYNE ; EAST JR LOYD ; EAST JR LOYD E ; EAST LOYD ; EAST LOYD E ; EAST LOYD E JR ; KLEHJTON ROBERT ; KURVILL PERRI UEHJN ; ALTMAN RICHARD ; ALTMAN RICHARD A ; IST LOJD EH ML

Inventor(s): JR LOYD E EAST ; KURVILL' PERRI UEHJN ; LOYD E EAST ; LOYD E EAST JR ; PERRY WAYNE COURVILLE ; RICHARD A ALTMAN ; ROBERT CLAYTON ; EAST LOYD E JR TOMBALL ; EAST LOYD E TOMBALL

Agent(s): CALLINANS; FISHER ADAMS KELLY CALLINANS; SPRUSON AND FERGUSON; OGILVY RENAULT LLP SENCRL SRL; WEISSE RENATE DIPL PHYS DR ING; CURTIS PHILIP ANTHONY; COTTRILL EMILY ELIZABETH HELEN; JOHN W WUSTENBERG; WUSTENBERG JOHN W; BAKER BOTTS LLP; JOHN W; MCDERMOTT WILL AND EMERY; CURTIS PHILIP ANTHONY ET AL

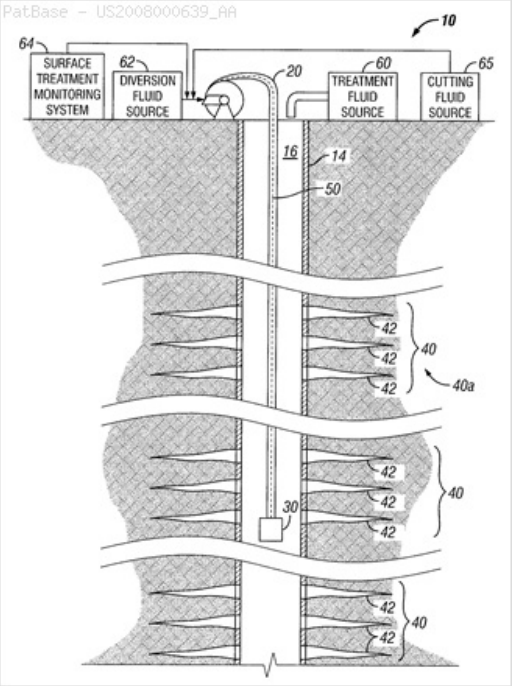
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ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

24) Family number: 41018154 (US2008000639A)

Title: METHOD AND SYSTEM FOR TREATING A SUBTERRAEAN FORMATION USING DIVERSION

Abstract: A method well treatment includes establishing fluid connectivity between a wellbore and at least one target zone for treatment within a subterranean formation, which is intersected by a wellbore. The method includes deploying coiled tubing into the wellbore and introducing a treatment composition into the wellbore. The method includes contacting a target zone within the subterranean formation with the treatment composition, introducing a diversion agent through the coiled tubing to an interval within a wellbore and repeating the introduction of the treatment, the contacting of the target zone and the introduction of the diversion agent for more than one target zone.

Classifications:
International (IPC 8-9): E21B19/00 E21B21/00 E21B43/00 E21B43/12 E21B43/14 E21B43/16 E21B43/26 E21B47/00 E21B47/10 (Advanced/Invention);
E21B43/00 E21B43/16 E21B43/25 E21B47/00 E21B47/10 (Core/Invention)
CPC: E21B43/12 E21B43/14 E21B43/25 E21B43/26
European: E21B43/14 E21B43/25
US: 166/222 166/222S 166/250.01 166/250.010S 166/250.17 166/250.170S 166/281 166/310 166/90.1 166/90.100S



Family:

Publication number	Publication date	Application number	Application date
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RU2587197 C2	20160620	RU20110120145	20070626
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US2011186298 AA	20110804	US20110045146	20110310
US2013168082 AA	20130704	US20120547159	20120712
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US8646529 BB	20140211	US20120547159	20120712
WO08001310 A1	20080103	WO2007IB52478	20070626

Priority:

US20060806058P 20060628 US20070751172 20070521 EP20070789808 20070626
WO2007IB52478 20070626 RU20090102650 20090127 US20110045146 20110310
US20120547159 20120712

Probable Assignee: SCHLUMBERGER TECHNOLOGY CORP

Assignee(s): (std): BENTLEY DOUG ; CLARK W E ; CLARK WILLIAM ERNEST ; DANIELS JOHN ; FREDD CHRISTOPHER N ; SCHLUMBERGER HOLDINGS ; LASSEK JOHN ; SCHLUMBERGER CA LTD ; MILLER CHARLES ; PRAD RES AND DEV NV ; PRAD RES AND DEV LTD ; SCHLUMBERGER TECHNOLOGY BV ; SCHLUMBERGER SERVICES PETROL ; SCHLUMBERGER TECHNOLOGY CORP ; SHLYUMBERGER TEKNOLODZHI BV

Assignee(s): SHLJUMBERGER TEKNOLODZHI BV ; PRAD RESEARCH AND DEVELOPMENT NV ; SERVICES PETROLIERS SCHLUMBERGER ; SCHLUMBERGER HOLDINGS LTD ; PRAD RESEARCH AND DEVELOPMENT LTD ; SCHLUMBERGER CANADA LTD ; PRAD RESEARCH AND DEVELOPMENT N V

Inventor(s): (std): BENTLEY DOUG ; CLARK W E ; DANIELS JOHN ; FREDD CHRISTOPHER N ; MILLER CHARLES ; MILLER CHARLZ ; MILLER CHARL Z ; LASSEK DZHON ; KLARK V E ; FREDD KRISTOFER N ; DENIELS DZHON ; DEHNIELS DZHON ; BENTLI DUG ; CLARK WILLIAM ERNEST ; LASSEK JOHN

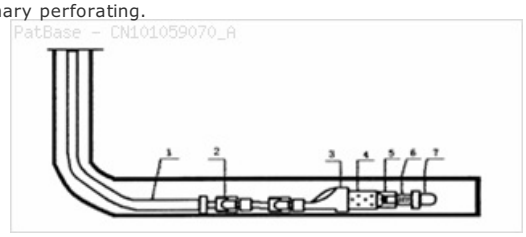
Inventor(s):	LASSEK JOHN KATY ; MILLER CHARLES HOUSTON ; MILLER CHARL'Z ; W E CLARK ; WE CLARK ; FREDD CHRISTOPHER N NOVOSIBIRSK ; JOHN DANIELS ; JOHN LASSEK ; DANIELS JOHN OKLAHOMA CITY ; DOUG BENTLEY ; CLARK W E OKLAHOMA CITY ; CLARK WE ; BENTLEY DOUG EDMOND ; CHARLES MILLER ; CHRISTOPHER N FREDD
Agent(s):	SMART AND BIGGAR; STOOLE BRIAN DAVID; RZANIAK MARTIN; SULEIMAN I AL AMMAR LAW OFFICE; SCHLUMBERGER TECHNOLOGY DAVID CATE CORP; RACHEL; ROBIN; DAVID; MYRON; DARYL R; TIM; MYRON K; DARYL; CATE DAVID
Designated states:	AE AG AL AM 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 SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

25) Family number: 41096320 (CN101059070A)

Title: Perforation, fracturing integrated method and its technique pipe

Abstract: An integral method of perforating hole and fracturing in oil industry and its process pipe column. The first step: aiming the hydraulic ejector 4 at the oil and gas well designed perforating hole section and processing hydraulic projecting, forming a (or more) projecting pore path on the oil and gas layer; the second step: after the pore path is formed, projecting the fracturing fluid into pore path from ejector nipple through oil pipe in very high speed, while projecting certain fluid into the annular according design to improve the well bore pressure, so the ground layer generates cracks and the cracks start extending towards deeper layer. The process pipe column includes hydraulic ejector (4), single-flow valve (5), screen pipe (6) and so on, the oil pipe (1), universal joint (2), eccentric locator (3), hydraulic ejector (4), single-flow valve (5), screen pipe (6) and blind head (7) are connected sequentially, it applies to the multistage layered pressing crack of barefoot horizontal well and composes the perforating hole and fracturing into one unit; it has longer penetrating depth and bigger perforating hole aperture than ordinary polyenergy perforating and avoids the injury of reservoir caused by ordinary perforating.

Classifications:
International (IPC 8-9): E21B43/00 E21B43/11 E21B43/26 (Advanced/Invention);
E21B43/00 E21B43/11 E21B43/25 (Core/Invention)



Family:

Publication number	Publication date	Application number	Application date
CN101059070 A	20071024	CN200610076296	20060421

Priority:
CN200610076296 20060421

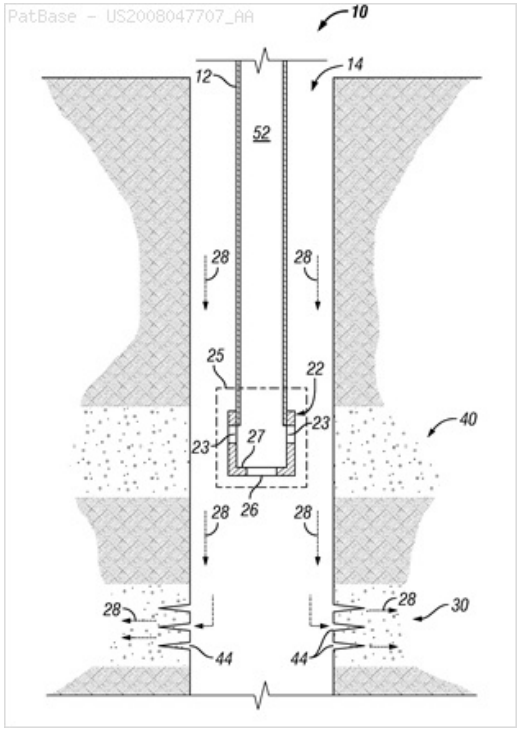
Probable Assignee:	PETROCHINA CO LTD
Assignee(s): (std):	PETROCHINA CO LTD
Assignee(s):	PETROCHINA CO
Inventor(s): (std):	FU GANGDAN ZHAO
Inventor(s):	GANGDAN ZHAO FU

26) Family number: 41555165 (US2008047707A)

Title: METHOD AND SYSTEM FOR TREATING A SUBTERRANEAN FORMATION

Abstract: A system that is usable with a well includes a tubular string, which includes a jetting sub. Fluid is communicated outside an annular region that surrounds the string to a first zone of the well for purposes of treating the first zone. During the communication of the fluid through the annular region, fluid is communicated through the tubing string and through the jetting sub to perforate a second zone of the well.

Classifications:
International (IPC 8-9)**:** E21B43/114 E21B43/16 E21B7/18 E21C45/00 (Advanced/Invention);
E21B43/16 E21B7/18 E21C45/00 (Core/Invention)
CPC: E21B34/063 E21B43/114
European: E21B34/06B E21B43/114
US: 166/192 166/270 166/298 166/305.1 166/55



Family:

Publication number	Publication date	Application number	Application date
BRPI0703388 A	20080219	BR2007PI03388	20070823
US2008047707 AA	20080228	US20070751377	20070521
US8281860 BB	20121009	US20070751377	20070521

Priority:
US20060823609P 20060825 US20070751377 20070521

Probable Assignee: SCHLUMBERGER TECHNOLOGY CORP

Assignee(s): (std)**:** AJUMOGOBIA BESTMAN SOMIARI ; BONEY CURTIS ; PRAD RES AND DEV NV ; SCHLUMBERGER TECHNOLOGY CORP

Assignee(s): PRAD RESEARCH AND DEVELOPMENT N V

Inventor(s): (std)**:** AJUMOGOBIA BESTMAN SOMIARI ; BONEY CURTIS

Inventor(s): CURTIS BONEY ; SOMIARI AJUMOGOBIA BESTMAN

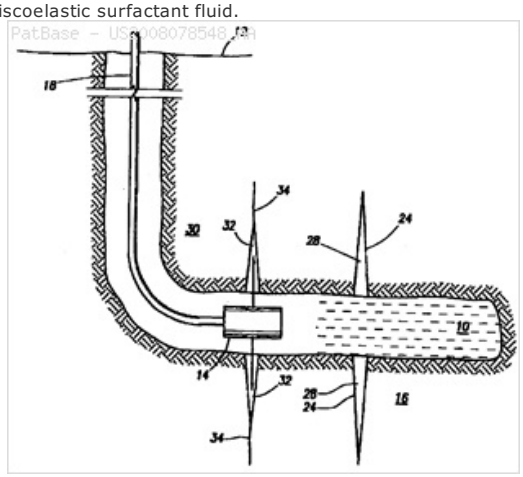
Agent(s): SCHLUMBERGER TECHNOLOGY DAVID CATE CORP; ROBIN; DARYL; JEREMY

27) Family number: 41668472 (US2008078548A)

Title: METHODS OF FRACTURING A SUBTERRANEAN FORMATION USING A JETTING TOOL AND A VISCOELASTIC SURFACTANT FLUID TO MINIMIZE FORMATION DAMAGE

Abstract: A method of fracturing a production interval of a subterranean formation adjacent a wellbore that is open hole or has an uncemented liner is provided. The method comprises the steps of: (a) perforating a zone of the production interval by injecting a pressurized fluid through a hydrajetting tool into the subterranean formation, so as to form one or more perforation tunnels; and (b) injecting a fracturing fluid into the one or more perforation tunnels so as to create at least one fracture along each of the one or more perforation tunnels; wherein at least a portion of at least one of the pressurized fluid and the fracturing fluid comprises a viscoelastic surfactant fluid. According to another aspect, a method of fracturing a production interval of a subterranean formation adjacent a wellbore that is open hole or has an uncemented liner is provided, wherein the method comprises the steps of: (a) perforating a zone of the production interval by injecting a pressurized fluid through a hydrajetting tool into the subterranean formation, so as to form one or more perforation tunnels; (b) injecting a fracturing fluid into the one or more perforation tunnels so as to create at least one fracture along each of the one or more perforation tunnels; and (c) plugging at least partially the one or more fractures in the zone with an isolation fluid; wherein at least a portion of at least one of the pressurized fluid, the fracturing fluid, and the isolation fluid comprises a viscoelastic surfactant fluid.

Classifications:
International (IPC 8-9): E21B43/114 E21B43/26
E21B43/267 (Advanced/Invention);
E21B43/11 E21B43/25 (Core/Invention)
International (IPC 1-7): E21B43/26
CPC: C09K8/68 C09K2208/30 E21B43/114 E21B43/26
European: C09K8/68 E21B43/114 E21B43/26 M09K208/30
US: 166/280.1 166/280.100P 166/281 166/281S 166/297 166/298 166/298S 166/307 166/307S 166/311



Family:

Publication number	Publication date	Application number	Application date
AR063060 AA	20081223	AR2007P104319	20070928
AU2007301720 AA	20080403	AU20070301720	20070925
CA2662306 AA	20090303	CA20072662306	20070925
EP2066867 A1	20090610	EP20070804391	20070925
MX2009002101 A1	20090310	MX20090002101	20070925
NO20090918 A	20090429	NO20090000918	20090302
US2008078548 AA	20080403	US20060540880	20060929
US7571766 BB	20090811	US20060540880	20060929
WO08037981 A1	20080403	WO2007GB03646	20070925

Priority:

US20060540880 20060929 WO2007GB03646 20070925

Probable Assignee: HALLIBURTON CO

Assignee(s): (std): CURTIS PHILIP ANTHONY ; HALLIBURTON ENERGY SERV INC ; PAULS RICHARD W ; SURJAATMADJA JIM B ; WELTON THOMAS D

Assignee(s): HALLIBURTON ENERGY SERVICES INC ; HALLIBURTON CO

Inventor(s): (std): PAULS RICHARD W ; SURJAATMADJA JIM B ; WELTON THOMAS D

Inventor(s): JIM B SURJAATMADJA ; THOMAS D WELTON ; RICHARD W PAULS

Agent(s): CALLINANS; FISHER ADAMS KELLY CALLINANS; SPRUSON AND FERGUSON; OGILVY RENAULT LLP SENCRL SRL; ROBERT A KENT; BOOTH ALBANESI AND SCHROEDER LLC; ROBERT A; CURTIS PHILIP ANTHONY ET AL

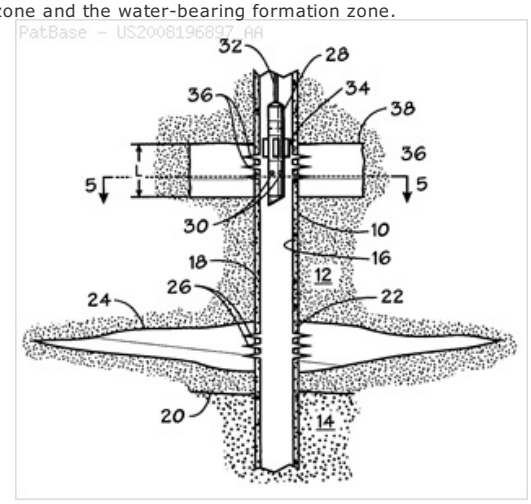
Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE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

28) Family number: 42110927 (US2008196897A)

Title: METHODS OF COMPLETING WELLS FOR CONTROLLING WATER AND PARTICULATE PRODUCTION

Abstract: Disclosed embodiments relate to methods of completing wells in subterranean formations. An exemplary embodiment comprises forming an artificial barrier to water flow, wherein the artificial barrier is located at or above a hydrocarbon-water interface between a water-bearing formation zone and a hydrocarbon-bearing formation zone. The exemplary embodiment further comprises consolidating a portion of the hydrocarbon-bearing formation zone, wherein the artificial barrier is located between the consolidated portion of the hydrocarbon-bearing formation zone and the water-bearing formation zone.

Classifications:
International (IPC 8-9): C09K8/504 C09K8/512 C09K8/516 E21B33/13 E21B43/12 E21B43/26 E21B43/32 (Advanced/Invention);
C09K8/50 E21B33/13 E21B43/00 E21B43/12 E21B43/25 (Core/Invention)
CPC: C09K8/502 C09K8/508 C09K8/512 E21B43/32
European: C09K8/502 C09K8/508 C09K8/512 E21B43/32
US: 166/285 166/285S 166/294 166/294S 166/295



Family:

Publication number	Publication date	Application number	Application date
US2008196897 AA	20080821	US20070706737	20070215
US7934557 BB	20110503	US20070706737	20070215
WO08099154 A1	20080821	WO2008GB00476	20080208

Priority:

US20070706737 20070215

Probable Assignee: HALLIBURTON CO

Assignee(s): (std): CURTIS PHILIP ANTHONY ; HALLIBURTON ENERGY SERV INC ; NGUYEN PHILIP DUKE

Assignee(s): HALLIBURTON ENERGY SERVICES INC ; HALLIBURTON CO

Inventor(s): (std): NGUYEN PHILIP D ; NGUYEN PHILIP DUKE

Agent(s): HALLIBURTON ENERGY SERVICES INC; MCDERMOTT WILL AND EMERY LLP; ROBERT A; CURTIS PHILIP ANTHONY ET AL

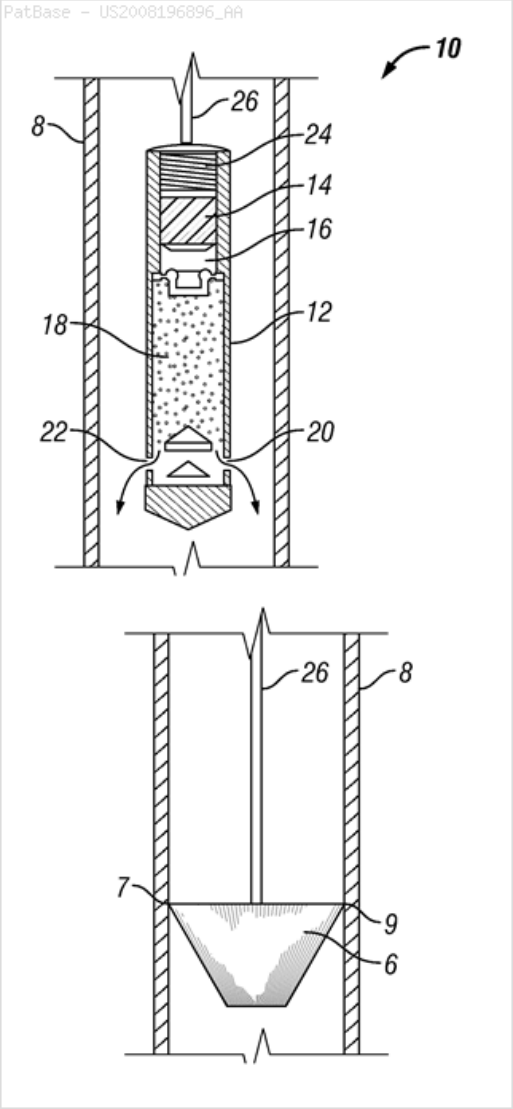
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA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

29) Family number: 42111411 (US2008196896A)

Title: METHODS AND APPARATUS FOR FIBER-BASED DIVERSION

Abstract: Methods and apparatus are described for fiber-based fluid diversion in hydrocarbon-containing wells. One method embodiment of the invention comprises treating a first zone in a well; conveying a tool into the well, the tool carrying a composition comprising fibers; and activating the tool to deploy enough of the composition to form a fibrous plug and at least partially plug the first zone. The tool may be a positive displacement bailer, and an apparatus of the invention comprises a positive displacement bailer; the bailer comprising a compartment for holding a composition comprising fibers for forming fiber-based plugs in a well; the compartment partially defined by and cooperating with a positive displacement portion to expel and selectively deploy the composition in the well to form one or more fiber-based plugs in the well.

Classifications:
International (IPC 8-9): E21B33/12 E21B43/116 E21B43/26 (Advanced/Invention); E21B33/12 E21B43/11 E21B43/25 (Core/Invention)
International (IPC 1-7): C09K7/00 E21B43/26
CPC: E21B43/26 E21B43/267
European: E21B43/26 E21B43/267
US: 166/281 166/285 166/55.2



Family:

Publication number	Publication date	Application number	Application date
AR065347 AA	20090603	AR2008P100630	20080214
EA013276 B1	20100430	EA20080000339	20080214
EA200800339 A1	20080829	EA20080000339	20080214
MX2008001985 A1	20090225	MX20080001985	20080211
US2008196896 AA	20080821	US20070857859	20070919

Priority:
US20070890085P 20070215 US20070857859 20070919

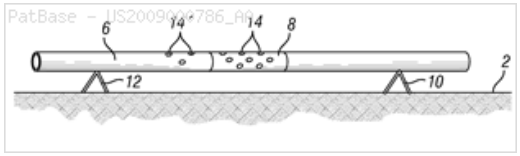
Probable Assignee: SCHLUMBERGER TECHNOLOGY CORP
Assignee(s): (std): BONEY CURTIS L ; BUSTOS OSCAR ; SCHLUMBERGER TECHNOLOGY BV
Assignee(s): SCHLUMBERGER TECHNOLOGY CORP ; SCHLUMBERGER TECHNOLOGY B V
Inventor(s): (std): BONEY CURTIS L ; BUSTOS OSCAR ; BONY CERTIS L
Inventor(s): CURTIS L BONEY ; OSCAR BUSTOS
Agent(s): SCHLUMBERGER TECHNOLOGY DAVID CATE CORP

30) Family number: 42760221 (US2009000786A)

Title: METHODS OF PRODUCING FLOW-THROUGH PASSAGES IN CASING, AND METHODS OF USING SUCH CASING

Abstract: Methods of making and using wellbore casing are described, one method comprising providing a plurality of flow-through passages in a portion of a casing while the casing is out of hole; temporarily plugging the flow-through passages with a composition while out of hole; running the casing in hole in a wellbore intersecting a hydrocarbon-bearing formation; and exposing the composition to conditions sufficient to displace the composition from the flow-through passages while in hole. Methods of using the casing may include pumping a stimulation treatment fluid through the casing string and into a formation through the flow-through passages in the first casing joint; plugging the flow-through passages in the first casing section; and exposing a second casing joint of the casing string to conditions sufficient to displace the composition from the flow-through passages in the second casing joint.

Classifications:
International (IPC 8-9): E21B29/02 E21B43/08 E21B43/10 E21B43/11 E21B43/25 E21B43/28 (Advanced/Invention);
E21B43/00 E21B43/02 E21B43/11 E21B43/25 (Core/Invention)
CPC: E21B43/086 E21B43/28
European: E21B43/08S E21B43/28
US: 166/296 166/297 166/300 166/376 166/386



Family:

Publication number	Publication date	Application number	Application date
CA2687591 AA	20081231	CA20082687591	20080619
US2009000786 AA	20090101	US20070769284	20070627
US2011005754 AA	20110113	US20100878498	20100909
US7810567 BB	20101012	US20070769284	20070627
US8020620 BB	20110920	US20100878498	20100909
WO09001256 A2	20081231	WO2008IB52427	20080619
WO09001256 A3	20090430	WO2008IB52427	20080619

Priority:

US20070769284 20070627 WO2008IB52427 20080619 US20100878498 20100909

Probable Assignee: SCHLUMBERGER TECHNOLOGY CORP

Assignee(s): (std)**:** BROWN J ERNEST ; BRYANT IAN D ; DANIELS JOHN ; MAUTH KEVIN ; NORRIS MARK ; PRAD RES AND DEV LTD ; SWAREN JASON ; WATERS GEORGE ; SCHLUMBERGER TECHNOLOGY BV ; SCHLUMBERGER HOLDINGS ; SCHLUMBERGER SERVICES PETROL ; SCHLUMBERGER CA LTD ; SCHLUMBERGER TECHNOLOGY CORP

Assignee(s): SERVICES PETROLIERS SCHLUMBERGER ; SCHLUMBERGER HOLDINGS LTD ; PRAD RESEARCH AND DEVELOPMENT LTD ; SCHLUMBERGER CANADA LTD

Inventor(s): (std)**:** BROWN J ERNEST ; BRYANT IAN D ; DANIELS JOHN ; MAUTH KEVIN ; NORRIS MARK ; SWAREN JASON ; WATERS GEORGE

Agent(s): SCHLUMBERGER TECHNOLOGY DAVID CATE CORP; DAVID; ROBIN; JEFFREY; MICHAEL; CATE DAVID

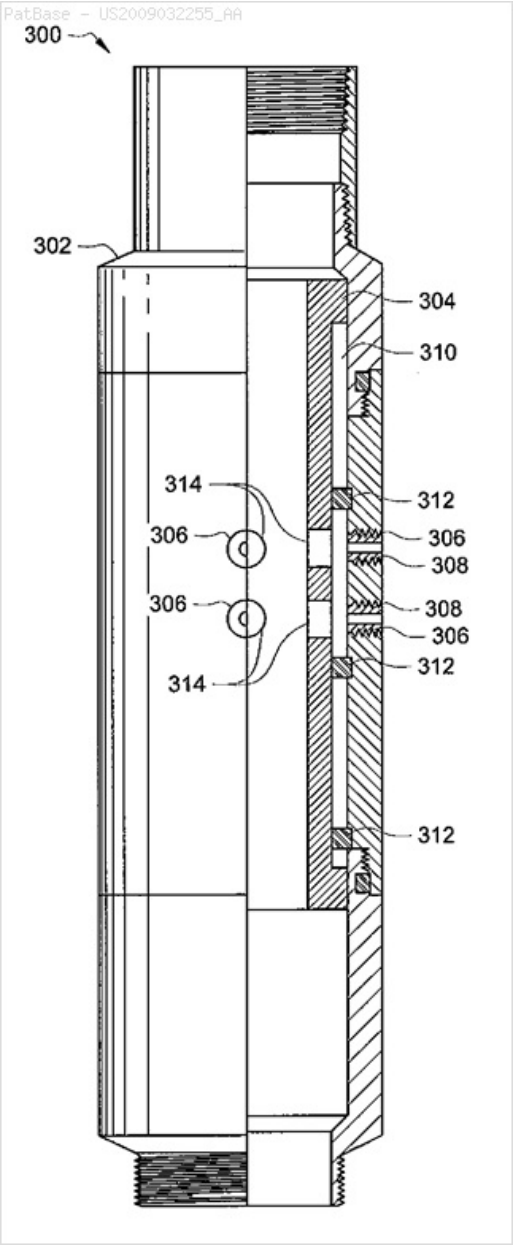
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA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

31) Family number: 42907070 (US2009032255A)

Title: METHOD AND APPARATUS FOR ISOLATING A JET FORMING APERTURE IN A WELL BORE SERVICING TOOL

Abstract: An embodiment of a well bore servicing apparatus includes a housing having a through bore and at least one high pressure fluid aperture in the housing, the fluid aperture being in fluid communication with the through bore to provide a high pressure fluid stream to the well bore, and a removable member coupled to the housing and disposed adjacent the fluid jet forming aperture and isolating the fluid jet forming aperture from an exterior of the housing. An embodiment of a method of servicing a well bore includes applying a removable member to an exterior of a well bore servicing tool, wherein the removable member covers at least one high pressure fluid aperture disposed in the tool, lowering the tool into a well bore, exposing the tool to a well bore material, wherein the removable cover prevents the well bore material from entering the fluid aperture, removing the removable member to expose a fluid flow path adjacent an outlet of the high pressure fluid aperture, and flowing a well bore servicing fluid through the fluid aperture outlet and flow path.

Classifications:
International (IPC 8-9): E21B33/13 E21B43/11 E21B43/114 E21B43/26 (Advanced/Invention);
E21B33/13 E21B43/11 E21B43/25 (Core/Invention)
International (IPC 1-7): E21B43/26
CPC: E21B33/13 E21B43/11 E21B43/114 E21B43/26
European: E21B33/13 E21B43/11 E21B43/114 E21B43/26
US: 166/177.4 166/177.5 166/185 166/222 166/281 166/285 166/298 166/300 166/305.1 166/308.1 166/376 166/55



Family:

Publication number	Publication date	Application number	Application date
AR067781 AA	20091021	AR2008P103361	20080801
AT539231 E	20120115	AT20080776122T	20080804
BRPI0814338 A2	20150120	BR2008PI14338	20080804
CA2694146 AA	20090212	CA20082694146	20080804
CA2694146 C	20120403	CA20082694146	20080804
DE602008012368 D1	20120322	DE200860012368T	20080804
EP2183462 A1	20100512	EP20080776122	20080804
EP2183462 B1	20111228	EP20080776122	20080804
MX2010001203 A1	20100304	MX20100001203	20080804
US2009032255 AA	20090205	US20070833802	20070803
US2010126724 AA	20100527	US20100691135	20100121

US7673673 BB	20100309	US20070833802	20070803
US7963331 BB	20110621	US20100691135	20100121
WO09019461 A1	20090212	WO2008GB02646	20080804

Priority:

US20070833802 20070803 EP20080776122 20080804 WO2008GB02646 20080804
US20100691135 20100121

Probable Assignee: HALLIBURTON CO

Assignee(s): (std)**:** CURTIS PHILIP ANTHONY ; HALLIBURTON ENERGY SERV INC ; HOWELL MATTHEW T ; SURJAAMADA JIM B

Assignee(s): SURJAATMADJA JIM B ; HALLIBURTON ENERGY SERVICES INC ; HALLIBURTON ENERGY SERVICES INC DUNCAN ; HALLIBURTON CO

Inventor(s): (std)**:** CURTIS PHILIP ANTHONY ; HOWELL MATTHEW ; HOWELL MATTHEW T ; SURJAAMADA JIM ; SURJAAMADA JIM B ; SURJAAMADJA JIM B ; SURJAATMADJA JIM ; SURJAATMADJA JIM B

Inventor(s): SURJAAMADA JIM B DUNCAN ; HOWELL MATTHEW T DUNCAN ; JIM B SURJAATMADJA ; MATTHEW T HOWELL ; PHILIP ANTHONY CURTIS

Agent(s): NORTON ROSE CANADA SENCRL SRL LLP; WEISSE RENATE DIPL PHYS DR ING; CURTIS PHILIP ANTHONY; JOHN W WUSTENBERG; JOHN W; CONLEY ROSE PC; CURTIS PHILIP ANTHONY ET AL

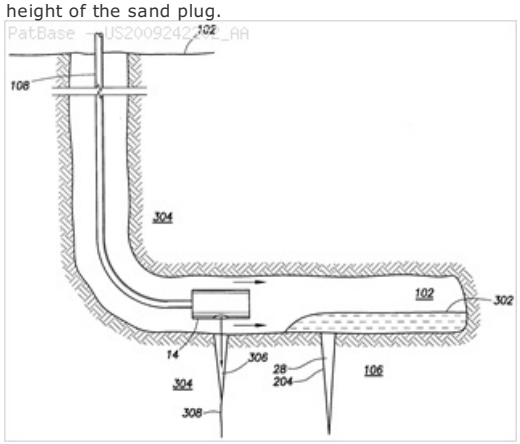
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ 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

32) Family number: 43782314 (US2009242202A)

Title: METHOD OF PERFORATING FOR EFFECTIVE SAND PLUG PLACEMENT IN HORIZONTAL WELLS

Abstract: Methods of isolating portions of a subterranean formation are disclosed. The planned settled height of a sand plug in a well bore adjacent a first zone of the subterranean formation is determined. The first zone is then perforated using a hydrajetting tool which is oriented so as to form perforations below the planned settled height of the sand plug.

Classifications:
International (IPC 8-9): E21B33/12 E21B33/13 E21B43/114 E21B43/14 E21B43/25 E21B43/26 (Advanced/Invention); E21B33/13 E21B43/00 E21B43/25 (Core/Invention)
International (IPC 1-7): E21B33/12
CPC: E21B43/114 E21B43/26
European: E21B43/114 E21B43/26
US: 166/177.5 166/192 166/281 166/292 166/308.1



Family:

Publication number	Publication date	Application number	Application date
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AU2009229063 AA	20091001	AU20090229063	20090313
AU2009229063 BB	20140529	AU20090229063	20090313
CA2719562 AA	20091001	CA20092719562	20090313
CA2719562 C	20140204	CA20092719562	20090313
EP2276909 A2	20110126	EP20090724668	20090313
MX2010010615 A1	20101214	MX20100010615	20090313
US2009242202 AA	20091001	US20080057099	20080327
US8096358 BB	20120117	US20080057099	20080327
WO09118512 A2	20091001	WO2009GB00679	20090313
WO09118512 A3	20110120	WO2009GB00679	20090313

Priority:
US20080057099 20080327 WO2009GB00679 20090313

Probable Assignee: HALLIBURTON CO

Assignee(s): (std): CURTIS PHILIP ANTHONY ; HALLIBURTON ENERGY SERV INC ; MOIR CLARKE G ; RISPLER KEITH A ; SURJAATMADJA JIM B

Assignee(s): HALLIBURTON ENERGY SERVICES INC ; HALLIBURTON CO

Inventor(s): (std): MOIR CLARKE G ; RISPLER KEITH A ; SURJAATMADJA JIM B

Inventor(s): KEITH A RISPLER ; JIM B SURJAATMADJA ; CLARKE G MOIR

Agent(s): CALLINANS; SPRUSON AND FERGUSON; FISHER ADAMS KELLY CALLINANS; NORTON ROSE FULBRIGHT CANADA LLP SENCRL SRL; COTTRILL EMILY ELIZABETH HELEN; ROBERT A KENT; MCDERMOTT WILL AND EMERY LLP; ROBERT A; CURTIS PHILIP ANTHONY

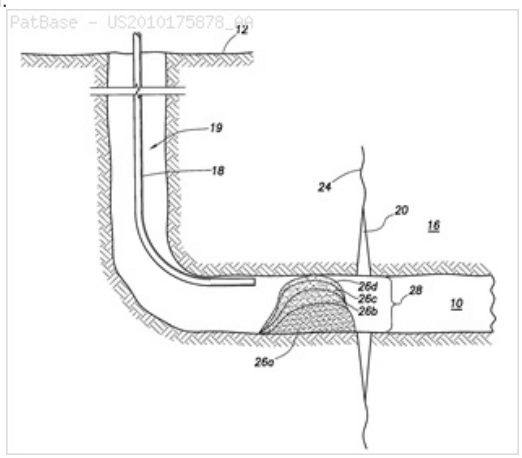
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ 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

33) Family number: 45960884 (US2010175878A)

Title: METHODS OF SETTING PARTICULATE PLUGS IN HORIZONTAL WELL BORES USING LOW-RATE SLURRIES

Abstract: Methods for setting particulate plugs in at least partially horizontal sections of well bores are disclosed. In one embodiment, a method comprises the step of selecting a deposition location for a particulate plug within the at least partially horizontal section of the well bore. The method further comprises the step of providing a pumping conduit capable of delivering slurries to the deposition location. The method further comprises the step of pumping a first slurry through the pumping conduit to the deposition location such that a velocity of the first slurry in the well bore at the deposition location is less than or equal to the critical velocity of the first slurry in the well bore at the deposition location.

Classifications:
International (IPC 8-9): E21B33/12 E21B33/13 E21B33/134 E21B43/16 E21B43/267 (Advanced/Invention);
E21B33/12 E21B33/13 E21B43/16 E21B43/25 (Core/Invention)
CPC: E21B33/1208 E21B33/134
European: E21B33/12F E21B33/134
US: 166/192 166/280.1 166/280.100P 166/285 166/285S 166/295 166/295S 166/305.1 166/305.100S



Family:

Publication number	Publication date	Application number	Application date
AU2010205479 AA	20100722	AU20100205479	20100114
AU2010205479 BB	20130131	AU20100205479	20100114
CA2748930 AA	20100722	CA20102748930	20100114
CA2748930 C	20140408	CA20102748930	20100114
EP2391797 A1	20111207	EP20100701895	20100114
MX2011007032 A1	20110720	MX20110007032	20100114
US2010175878 AA	20100715	US20090354551	20090115
US8074715 BB	20111213	US20090354551	20090115
WO10082025 A1	20100722	WO2010GB00052	20100114

Priority:

US20090354551 20090115 WO2010GB00052 20100114

Probable Assignee: HALLIBURTON CO

Assignee(s): (std): CURTIS PHILIP ANTHONY ; EAST LOYD E ; MCMECHAN DAVID E ; HALLIBURTON ENERGY SERV INC ; TODD BRADLEY L ; MCMECHAN LEGAL REPRESENTATIVE CORINE ; RISPLER KEITH A ; WHITT KI CHERRYL

Assignee(s): HALLIBURTON ENERGY SERVICES INC ; HALLIBURTON CO ; HALLIBURTON ENERGY SERIVES INC

Inventor(s): (std): MCMECHAN DAVID E ; MCMECHAN LEGAL REPRESENTATIVE CORINE ; RISPLER KEITH A ; TODD BRADLEY L ; WHITT KI CHERRYL ; EAST LOYD E

Inventor(s): KEITH A RISPLER ; LOYD E EAST ; DAVID E MCMECHAN

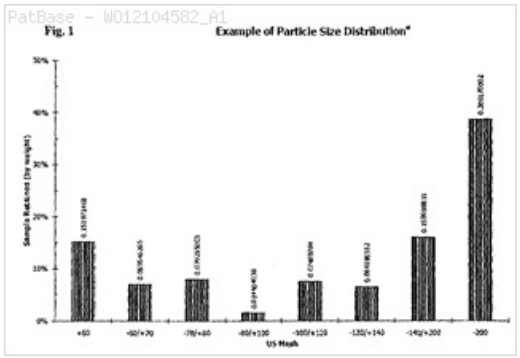
Agent(s): CALLINANS; FISHER ADAMS KELLY CALLINANS; SPRUSON AND FERGUSON; NORTON ROSE OR SENCRL SRL LLP; NORTON ROSE FULBRIGHT CANADA LLP SENCRL SRL; CURTIS PHILIP ANTHONY; ROBERT A KENT; MCDERMOTT WILL AND EMERY LLP; ROBERT A

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 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 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

34) Family number: 48234921 (US2011028358A)

Title: METHODS OF FLUID LOSS CONTROL AND FLUID DIVERSION IN SUBTERRANEAN FORMATIONS

Abstract: Improved methods of placing and/or diverting treatment fluids in subterranean formations are provided. In one embodiment, the methods comprise introducing a treatment fluid into a subterranean formation penetrated by a well bore, wherein the treatment fluid comprises: a base fluid, and a plurality of solid particulates comprising at least one selected from the group consisting of: a scale inhibitor, a chelating agent, and a combination thereof, wherein the solid particulates are substantially insoluble in the base fluid; and allowing at least a portion of the solid particulates to form a barrier or at partially divert a subsequent fluid.



Classifications:
International (IPC 8-9): C04B28/02 C09K8/03 C09K8/42 C09K8/467 C09K8/504 C09K8/516 C09K8/528 C09K8/536 C09K8/56 C09K8/60 C09K8/68 C09K8/70 C09K8/72 C09K8/80 C09K8/88 C09K8/92 C9K8/70 E21B33/13 E21B43/04 E21B43/16 E21B43/22 E21B43/25 E21B43/26 E21B43/267 (Advanced/Invention);
C04B103/00 (Advanced/Non-invention)
CPC: C09K8/528 C09K8/70 C09K8/86 C09K8/885 E21B43/261 C09K8/032 C09K8/426 C09K8/5045 Y10S507/922 Y10S507/924 C09K8/72 C09K8/80 C09K8/92 C09K8/03 C04B28/02 C04B2103/0045 C09K8/42 C09K8/467 C09K8/516 C09K8/536 C09K8/685 C09K2208/18 E21B43/267 C04B24/003 C04B24/06 C04B24/123
European: C04B28/02 C09K8/03 C09K8/03B C09K8/42 C09K8/42P C09K8/467 C09K8/504B C09K8/516 C09K8/528 C09K8/536 C09K8/68B C09K8/70 C09K8/72 C09K8/80 C09K8/86 C09K8/88B C09K8/92 E21B43/267 E21B43/26P M04B103/00P M09K208/18
US: 166/279 166/280.1 166/280.1 166/280.100P 166/281 166/284 166/300 166/305.1 166/305.100P 166/308.1 166/308.100P 166/380 166/380.1 507/200 507/200S 507/203 507/219 507/219P 507/236 507/236S 507/237 507/237S 507/241 507/241S 507/260 507/263 507/263S 507/266 507/266S 507/273 507/922 507/924

Family:

Publication number	Publication date	Application number	Application date
AR084040 AA	20130417	AR2011P104446	20111130
AR084949 AA	20130710	AR2012P100288	20120130
AU2012213241 AA	20120809	AU20120213241	20120130
AU2012213241 BB	20141023	AU20120213241	20120130
AU2012232911 AA	20120927	AU20120232911	20120322
AU2012232911 BB	20150423	AU20120232911	20120322
CA2825689 AA	20130725	CA20122825689	20120130
CA2825689 C	20170103	CA20122825689	20120130
CA2827973 AA	20130821	CA20122827973	20120322
CA2827973 C	20160503	CA20122827973	20120322
EP2670815 A1	20131211	EP20120704885	20120130
EP2688975 A1	20140129	EP20120712705	20120322
MX2013008770 A1	20131017	MX20130008770	20120130
MX2013010866 A1	20131017	MX20130010866	20120322
US2011028358 AA	20110203	US20090512232	20090730
US2011120712 AA	20110526	US20110017745	20110131
US2011120713 AA	20110526	US20110017856	20110131
US2011168395 AA	20110714	US20110070511	20110324
US2012024530 AA	20120202	US20110017611	20110131
US2012138303 AA	20120607	US20100957522	20101201
US8657003 BB	20140225	US20100957522	20101201
US8697612 BB	20140415	US20110017856	20110131
US8853137 BB	20141007	US20110017611	20110131
US9023770 BB	20150505	US20110017745	20110131
WO11012861 A1	20110203	WO2010GB01447	20100729
WO12072985 A1	20120607	WO2011GB01673	20111201
WO12104582 A1	20120809	WO2012GB00097	20120130
WO12127191 A1	20120927	WO2012GB00263	20120322

Priority:

US20090512232 20090730 US20100957522 20101201 US20110017745 20110131
US20110017856 20110131 US20110017611 20110131 US20110070511 20110324
WO2012GB00097 20120130 WO2012GB00263 20120322

Probable Assignee: HALLIBURTON CO

Assignee(s): (std): COTTRILL EMILY ELIZABETH HELEN ; CURTIS PHILIP ANTHONY ; HALLIBURTON CO ; HALLIBURTON ENERGY SERV INC ; HALLIBURTON ENERGY SERVICES INC ; TODD BRADLEY L ; WELTON THOMAS D ; TODD BRADLEY LEON ; TURNER CRAIG ROBERT

Inventor(s): (std): TODD BRADLEY L ; TODD BRADLEY LEON ; WELTON THOMAS D

Inventor(s): BRADLEY L TODD ; BRADLEY LEON TODD ; THOMAS D WELTON

Agent(s): CALLINANS; SPRUSON AND FERGUSON; FISHER ADAMS KELLY CALLINANS; NORTON ROSE FULBRIGHT CANADA LLP SENCRL SRL; TURNER CRAIG ROBERT; COTTRILL EMILY ELIZABETH HELEN; ROBERT A KENT; MCDERMOTT WILL AND EMERY LLP; CRAIG W; HOLLY; BOOTH ALBANESI SCHROEDER LLC; BAKER BOTTS LLP; CURTIS PHILIP ANTHONY; TURNER CRAIG ROBERT 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

35) Family number: 48846262 (US2011100625A)

Title: METHOD FOR FORMING AN ISOLATING PLUG

Abstract: The invention relates to methods for isolating near-wellbore zones and fractures and can be used for plugging fractures in the near-wellbore zone during the removal of the fracturing fluid, as well as for plugging different kinds of fractures and branches in the casing. The method for forming an isolating-plug includes the injection of a slurry containing dispersed fibers into a well and subsequent formation of a plug to isolate the relevant section of the well and to prevent the fluid penetration. The slurry is admixed with amphiphilic substances, and the fibers used are capable of adsorbing the amphiphilic substances on their surface.

Classifications:
International (IPC 8-9): E21B33/00 E21B33/13 E21B43/22 (Advanced/Invention)
CPC: C09K8/516 C09K2208/08 E21B33/13
European: C09K8/516 E21B33/13 M09K208/08
US: 166/293

Family:

Publication number	Publication date	Application number	Application date
RU2009137265 A	20110420	RU20090137265	20091009
US2011100625 AA	20110505	US20100901695	20101011

Priority:

RU20090137265 20091009

Probable Assignee: SCHLUMBERGER TECHNOLOGY CORP

Assignee(s): (std): SCHLUMBERGER TECHNOLOGY CORP

Inventor(s): (std): KHLESTKIN VADIM KAMIL EVICH ; POPOV KONSTANTIN IGOREVICH

Inventor(s): KHLESTKIN VADIM KAMIL'EVICH

36) Family number: 49158133 (US2011162846A)

Title: MULTIPLE INTERVAL PERFORATING AND FRACTURING METHODS

Abstract: A method for perforating and fracturing a wellbore in a single trip may include installing one or more reservoir access subs on a liner at pre-determined intervals. The method may also include running the liner into the wellbore, securing the liner to the wellbore, and running a bottomhole assembly into the wellbore. The method may further include activating at least one of the reservoir access subs so as to allow fluid communication between the liner and the wellbore, and fracturing at least one interval proximate the activated reservoir access sub. The steps of running the bottomhole assembly into the wellbore, activating the reservoir access subs, and fracturing the interval may be performed in a single trip into the wellbore.

Classifications:
International (IPC 8-9): E21B43/11 (Advanced/Invention)
CPC: E21B43/114 E21B43/26
European: E21B43/114 E21B43/26
US: 166/298

Family:

Publication number	Publication date	Application number	Application date
US2011162846 AA	20110707	US20100683338	20100106

Priority:

US20100683338 20100106

Probable Assignee: HALLIBURTON CO

Assignee(s): (std): EAST JR LOYD E ; MCNEIL FRASER ; MILLER BROCK W ; PALIDWAR TROY F

Assignee(s): HALLIBURTON CO ; HALLIBURTON ENERGY SERVICES INC

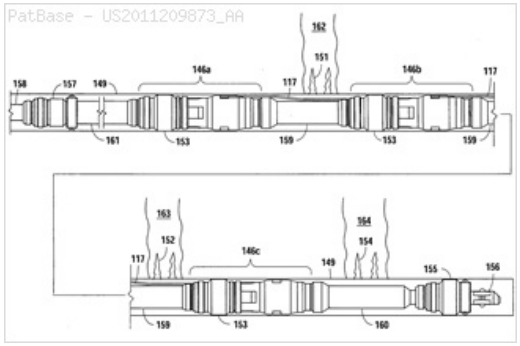
Inventor(s): (std): EAST JR LOYD E ; MCNEIL FRASER ; MILLER BROCK W ; PALIDWAR TROY F

37) Family number: 49503692 (US2011209873A)

Title: METHOD AND APPARATUS FOR SINGLE-TRIP WELLBORE TREATMENT

Abstract: The apparatus consists of a tubular housing carried into the well on a workstring. A series of spaced isolation modules is provided for each zone and carried into the well on a tubular conduit. The first, or most downstream module includes first and second sealing mechanisms to isolate the first zone to be treated. A full bore valve is provided that is activated to closed position by an activating component in response to a source of a first level of pressure to isolate the first zone from other parts of the well bore. A port within the housing is initially blocked but selectively opened concurrently with the activation of the first sealing means to manipulate the second sealing mechanism to fully isolate the selected zone and the module. As the module is activated, a second full bore valve is activated to seal the interior of the housing upstream of the first module by manipulation of the tubular string.

Classifications:
International (IPC 8-9): E21B34/00 (Advanced/Invention)
CPC: E21B43/26 E21B23/04 E21B33/124 E21B34/10 E21B43/14
European: E21B23/04 E21B33/124 E21B34/10 E21B43/14 E21B43/26
US: 166/320



Family:

Publication number	Publication date	Application number	Application date
US2011209873 AA	20110901	US20110932108	20110217

Priority:

US20100305621P 20100218 US20110932108 20110217

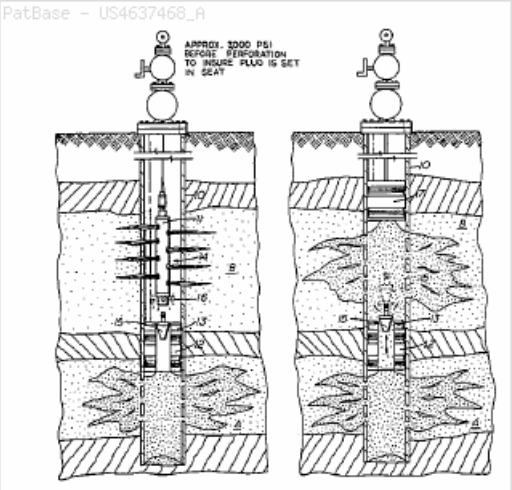
Probable Assignee: OILTOOL ENGINEERING SERVICES INC
Assignee(s): (std): STOUT GREGG W
Assignee(s): OILTOOL ENGINEERING SERVICES INC
Inventor(s): (std): STOUT GREGG W

38) Family number: 5194810 (US4637468A)

Title: Method and apparatus for multizone oil and gas production

Abstract: A lower formation of a multizone well is perforated by a perforating gun lowered by wireline, and then fractured. A packer (modified Pengo packer) with a central bore and a valve seat is positioned within the casing between the lower and upper formations. A plug is set into the packer valve seat by a perforating gun and released by shearing a shear pin. The well is pressurized to maintain the plug in the valve seat, the perforating gun raised, and the casing opposite the upper formation perforated. The gun is removed, and the upper formation fractured. After a suitable flow-back period, another packer is then positioned in the casing above the upper perforated formation. The pressure differential between formations maintains the plug seated, allowing the upper formation to be produced. When a change in pressure differential raises the plug off the valve seat, the lower formation may be produced. After pressures in the formations have equalized, the plug is removed by a retrieving tool constructed to permit simultaneous bailing of sand and grappling of the tool. After retrieval of the tool, the formations may be produced by conventional mechanical lift methods.

Classifications:
International (IPC 8-9): E21B33/129 E21B34/06 E21B43/116 E21B43/14 (Advanced/Invention);
E21B33/12 E21B34/00 E21B43/00 E21B43/11 (Core/Invention)
International (IPC 1-7): E21B43/14
CPC: E21B33/1294 E21B34/06 E21B43/116 E21B43/14
European: E21B33/129N E21B34/06 E21B43/116 E21B43/14
US: 166/133 166/151 166/297 166/311 166/313 166/325 166/55.1



Family:

Publication number	Publication date	Application number	Application date
US4637468 A	19870120	US19850771588	19850903

Priority:
US19850771588 19850903

Probable Assignee: DERRICK JOHN M
Assignee(s): (std)**:** DERRICK JOHN M
Inventor(s): (std)**:** DERRICK JOHN M

39) Family number: 52445115 (US2014131035A)

Title: SAFETY SYSTEM FOR AUTONOMOUS DOWNHOLE TOOL

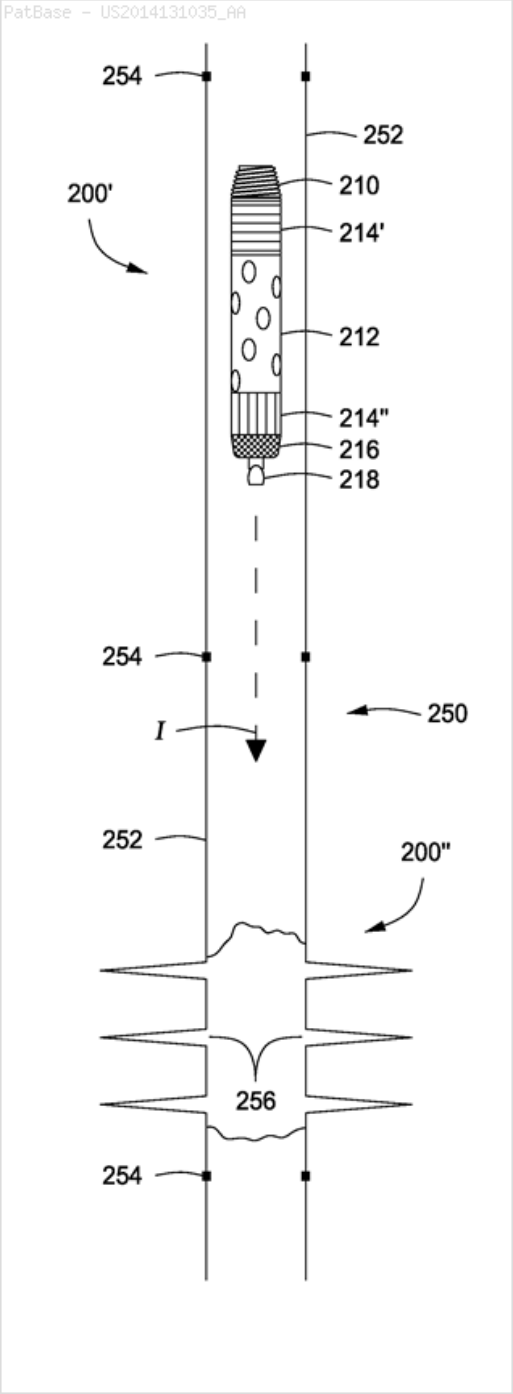
Abstract: A tool assembly for performing a wellbore operation including an actuatable tool, a location device, and on-board controller are together dimensioned and arranged to be deployed in the wellbore as an autonomous unit. The actuatable tool, such as a perforating gun having associated charges, perforates a wellbore along a selected zone of interest. The location device, such as casing collar locator, senses the location of the actuatable tool based on a physical signature provided along the wellbore. The on-board controller or micro-processor is configured to send an activation signal to the actuatable tool when the location device has recognized a selected location of the tool based on the physical signature. The tool assembly further includes a multi-gate safety system. The safety system prevents premature activation of the actuatable tool.

Classifications:

International (IPC 8-9): E21B33/12 E21B43/1185 E21B43/119 E21B43/26 E21B43/263 E21B44/00 E21B47/09 (Advanced/Invention)

CPC: E21B43/263 E21B44/005 E21B33/1204 E21B43/119 E21B43/26

US: 166/255.1 166/53



Family:

Publication number	Publication date	Application number	Application date
GC5861 A	20170710	GC2012P020858	20120326
US2014131035 AA	20140515	US20120005166	20120309
US2018135398 AA	20180517	US20170848825	20171220
US9903192 BB	20180227	US20120005166	20120309
WO12161854 A2	20121129	WO2012US28529	20120309
WO12161854 A3	20140501	WO2012US28529	20120309

WO12161854 A8	20130404	WO2012US28529	20120309

Priority:

US20110489165P 20110523 US20120005166 20120309 WO2012US28529 20120309
US20140005166 20140130 US20170848825 20171220

Probable Assignee: EXXON MOBIL CORP

Assignee(s): (std)**:** ANGELES BOZA RENZO M ; ANTCHEV PAVLIN B ; ENTCHEV PAVLIN B ; EXXON MOBIL CORP ; SAUERMILCH PETER W ; GAHR JASON Z ; TOLMAN RANDY C ; STANTON ROBERT C ; KING GEORGE R ; EXXONMOBIL UPSTREAM RES CO ; WINEMILLER ELTON

Assignee(s): EXXONMOBIL UPSTREAM RESEARCH CO ; EXXONMOBIL UPSTREAM RESEARCH COMPANY

Inventor(s): (std)**:** ENTCHEV PAVLIN B ; GAHR JASON Z ; KING GEORGE R ; SAUERMILCH PETER W ; STANTON ROBERT C ; TOLMAN RANDY C ; WINEMILLER ELTON ; ANGELES BOZA RENZO M ; ANTCHEV PAVLIN B

Inventor(s): ELTON WINEMILLER ; PAVLIN B ENTCHEV ; PETER W SAUERMILCH ; RANDY C TOLMAN ; RENZO M ANGELES BOZA ; ROBERT C STANTON ; GEORGE R KING ; JASON Z GAHR

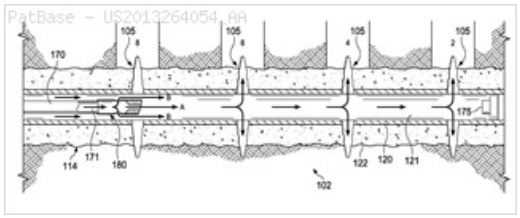
Agent(s): SAUD M A SHAWWAF LAW OFFICE; EXXONMOBIL UPSTREAM RESEARCH CO LAW DEPARTMENT; JAMES RICK F ET AL

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 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

40) Family number: 54918243 (US2013264054A)

Title: MULTI-INTERVAL WELLBORE TREATMENT METHOD

Abstract: A method of servicing a subterranean formation comprising providing a wellbore penetrating the subterranean formation and having a casing string disposed therein, the casing string comprising a plurality of points of entry, wherein each of the plurality of points of entry provides a route a fluid communication from the casing string to the subterranean formation, introducing a treatment fluid into the subterranean formation via a first flowpath, and diverting the treatment fluid from the first flowpath into the formation to a second flowpath into the formation.



Classifications:
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CPC: E21B29/08 E21B33/12 E21B43/114 E21B43/14 E21B47/00 E21B43/162 E21B43/267 E21B34/14
US: 166/250.01 166/250.1 166/270.1 166/280.1 166/281 166/285 166/298 166/300 166/305.1 166/308.1 166/308.2 166/313 166/386 166/50

Family:

Publication number	Publication date	Application number	Application date
AR090627 AA	20141126	AR2013P101135	20130408
AU2013246411 AA	20131017	AU20130246411	20130313
AU2013246411 BB	20160225	AU20130246411	20130313
CA2868337 AA	20140923	CA20132868337	20130313
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GB201414390 A0	20140924	GB20140014390	20130313
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GB2520585 B2	20160120	GB20140014390	20130313
IN07327DN2014 A	20150424	IN2014DN07327	20140901
MX2014009981 A1	20141024	MX20140009981	20130313
PL410259 A1	20151109	PL20130410259	20130313
US2013264054 AA	20131010	US20120442411	20120409
US2015027692 AA	20150129	US20140515183	20141015
US8887803 BB	20141118	US20120442411	20120409
US9725998 BB	20170808	US20140515183	20141015
WO13154727 A2	20131017	WO2013US30784	20130313
WO13154727 A3	20140626	WO2013US30784	20130313

Priority:

US20090358079 20090122
US20120403423 20120223
US20130754397 20130130
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US20090566467 20090924
US20120442411 20120409
WO2013US30784 20130313
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US20100686116 20100112
US20120567953 20120806
US20130892710 20130513

Probable Assignee: HALLIBURTON CO

Assignee(s): (std): EAST JR LOYD EDDIE ; EAST LOYD EDDIE ; GARDINER NICHOLAS HUBERT ; HALLIBURTON ENERGY SERV INC ; HALLIBURTON CO ; HALLIBURTON ENERGY SERVICES INC ; LINDSAY SHARLENE DAWN

Assignee(s): HALLIBURTON ENERGY SERVICES INC10200 BELLAIRE BOULEVARDHOUSTONTX77072US ; EAST LOYD EDDIE JR

Inventor(s): (std): EAST JR LOYD EDDIE ; EAST LOYD EDDIE ; GARDINER NICHOLAS HUBERT ; EAST LOYD EDDIE JR ; LINDSAY SHARLENE DAWN

Inventor(s): LINDSAY SHARLENE DAWNUS ; SHARLENE DAWN LINDSAY ; NICHOLAS HUBERT GARDINER ; LOYD EDDIE EAST JR ; GARDINER NICHOLAS HUBERTUS ; EAST LOYD EDDIE JRUS

Agent(s): SPRUSON AND FERGUSON; PIZZEYS PATENT AND TRADE MARK ATTORNEYS; PHILLIPS ORMONDE FITZPATRICK; NORTON ROSE FULBRIGHT CANADA LLP SENCRL SRL; CONLEY ROSE PC; CRAIG; CRAIG W; BAKER BOTTS LLP; CONLEY ROSE PC ET AL

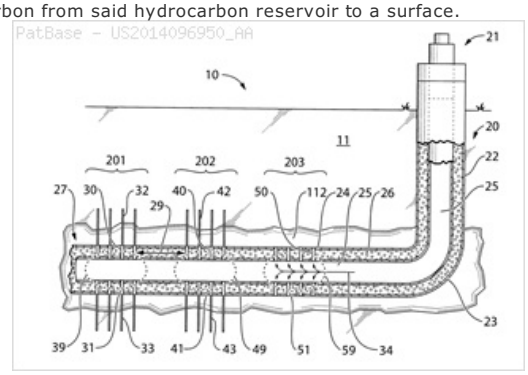
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY 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

41) Family number: 56193264 (US2014096950A)

Title: HYDRAULIC FRACTURING PROCESS FOR DEVIATED WELLBORES

Abstract: A method of stimulating an interval in a hydrocarbon reservoir equipped with a deviated wellbore having a casing, wherein said interval comprises at least two sequential stages in said wellbore without isolation means, said method comprising: i) introducing a first stage ii) introducing a second stage in the same wellbore wherein said first stage, and second stage are not separated by any isolation means; and optionally iii) recovering hydrocarbon from said hydrocarbon reservoir to a surface.

Classifications:
International (IPC 8-9): E21B43/119 E21B43/26 E21B43/263 (Advanced/Invention)
CPC: E21B43/26 E21B43/263
US: 166/247 166/308.1 166/50



Family:

Publication number	Publication date	Application number	Application date
AR093192 AA	20150527	AR2013P100055	20130104
CA2795940 AA	20140404	CA20122795940	20121121
CN105026684 A	20151104	CN201280077552	20121121
CN105026684 B	20180504	CN201280077552	20121121
GB201507159 A0	20150610	GB20150007159	20121121
GB2522145 A1	20150715	GB20150007159	20121121
MX2015004345 A1	20150610	MX20150004345	20121121
US2014096950 AA	20140410	US20120683610	20121121
WO14053043 A1	20140410	WO2012CA01077	20121121

Priority:
US20120709588P 20121004 US20120683610 20121121 WO2012CA01077 20121121

Probable Assignee: NEXEN ENERGY ULC

Assignee(s): (std): CHERNIK PETER ; NEXEN ENERGY ULC ; NEXEN INC ; PYECROFT JAMES FREDERICK

Assignee(s): PYECROFT JAMES F ; NEXEN ENERGY INC

Inventor(s): (std): CHERNIK PETER ; JAMES FREDERICK PYECROFT ; PETER CHERNIK ; PYECROFT JAMES F ; PYECROFT JAMES FREDERICK

Agent(s): HEENAN BLAIKIE LLP; CHERNYS JACQUELINE; NORTON ROSE FULBRIGHT CANADA LLP SENCRL SRL

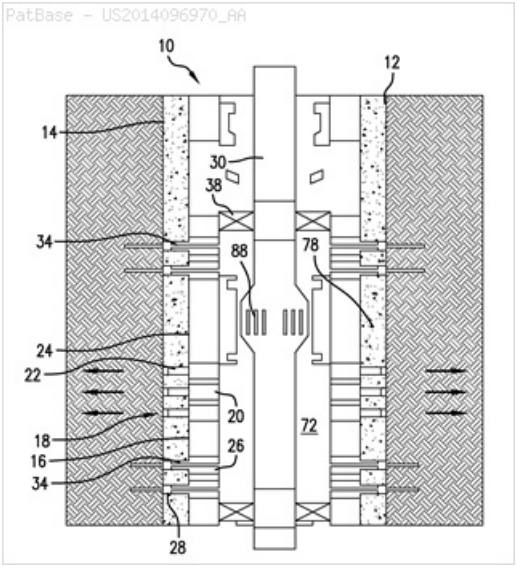
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY 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

42) Family number: 56193820 (US2014096970A)

Title: MULTI-ZONE FRACTURING AND SAND CONTROL COMPLETION SYSTEM AND METHOD THEREOF

Abstract: A multi-zone fracturing and sand control completion system employable in a borehole. The system includes a casing. A fracturing assembly including a fracturing telescoping unit extendable from the casing to the borehole and a frac sleeve movable within the casing to access or block the fracturing telescoping unit; and, an opening in the casing. The opening including a dissolvable plugging material capable of maintaining frac pressure in the casing during a fracturing operation through the telescoping unit. Also included is a method of operating within a borehole.

Classifications:
International (IPC 8-9): E21B43/08 E21B43/112 E21B43/14 E21B43/17 E21B43/26 (Advanced/Invention)
CPC: E21B43/26 E21B43/112 E21B43/14
US: 166/177.5 166/308.1



Family:

Publication number	Publication date	Application number	Application date
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AU2013330419 BB	20161020	AU20130330419	20130906
BR112015007459 A2	20170704	BR20151107459	20130906
GB201507425 A0	20150617	GB20150007425	20130906
GB2525324 A1	20151021	GB20150007425	20130906
GB2525324 B2	20170614	GB20150007425	20130906
NO20150361 A	20150324	NO20150000361	20150324
NO342359 B1	20180514	NO20150000361	20150324
US2014096970 AA	20140410	US20120648489	20121010
US9033046 BB	20150519	US20120648489	20121010
WO14058548 A1	20140417	WO2013US58437	20130906

Priority:

US20120648489 20121010 WO2013US58437 20130906

Probable Assignee: BAKER HUGHES INC

Assignee(s): (std): ANDREW COLIN P ; BAKER BRADLEY G ; BAKER HUGHES INC ; JOHNSON MICHAEL H

Inventor(s): (std): ANDREW COLIN P ; BAKER BRADLEY G ; BRADLEY G BAKER ; COLIN P ANDREW ; JOHNSON MICHAEL H ; MICHAEL H JOHNSON

Agent(s): FREEHILLS PATENT ATTORNEYS; FPA PATENT ATTORNEYS PTY LTD; CANTOR COLBURN LLP

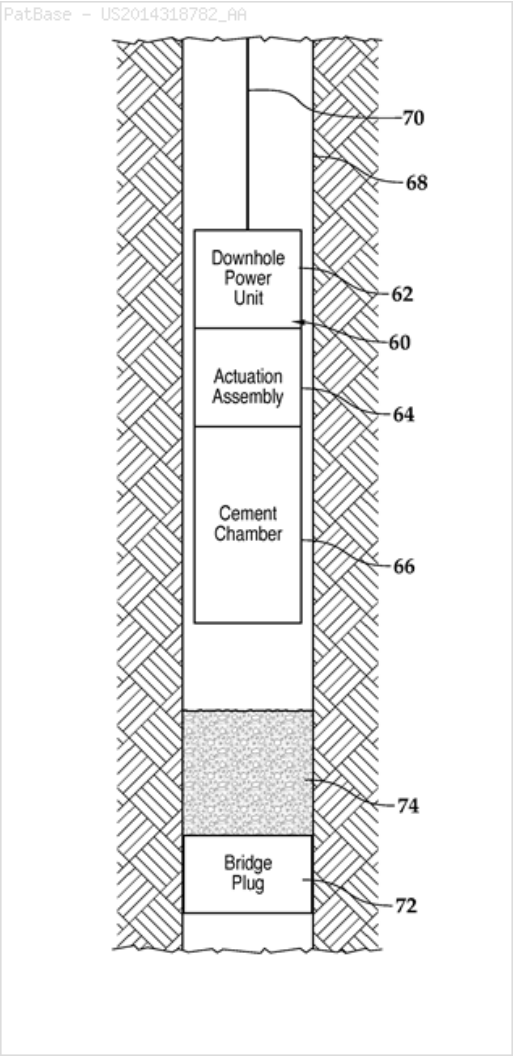
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW 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

43) Family number: 57700059 (US2014318782A)

Title: POSITIVE DISPLACEMENT DUMP BAILER AND METHOD OF OPERATION

Abstract: A dump bailer assembly includes a downhole power unit and a dump bailer body. A piston is disposed within the dump bailer body and is releasably coupled to a moveable shaft of the downhole power unit. An actuation assembly is disposed proximate a first end of the dump bailer body and a barrier is positioned proximate a second end of the dump bailer body. A wellbore agent is disposed within the dump bailer body between the barrier and the piston. In operation, the downhole power unit retracts the moveable shaft shifting the piston toward the first end and energizing the actuation assembly. Further operation of the downhole power unit releases the moveable shaft from the piston such that the energized actuation assembly shifts the piston toward the second end such that interaction between the piston and the wellbore agent opens the barrier and dispenses the wellbore agent.

Classifications:
International (IPC 8-9): E21B27/00 E21B27/02 E21B33/13 (Advanced/Invention); E21B33/13 (Advanced/Non-invention)
CPC: E21B27/02 E21B33/13
US: 166/177.4 166/286



Family:

Publication number	Publication date	Application number	Application date
US2014318782 AA	20141030	US20140259641	20140423
US9790755 BB	20171017	US20140259641	20140423
WO14175872 A1	20141030	WO2013US37923	20130424

Priority:
WO2013US37923 20130424 US20140259641 20140423

Probable Assignee: HALLIBURTON CO

Assignee(s): (std): HALLIBURTON CO ; HALLIBURTON ENERGY SERV INC ; HALLIBURTON ENERGY SERVICES INC

Inventor(s): (std): BOURQUE CODY PAUL

Agent(s): HAYNES AND BOONE LLP; YOUST LAWRENCE R

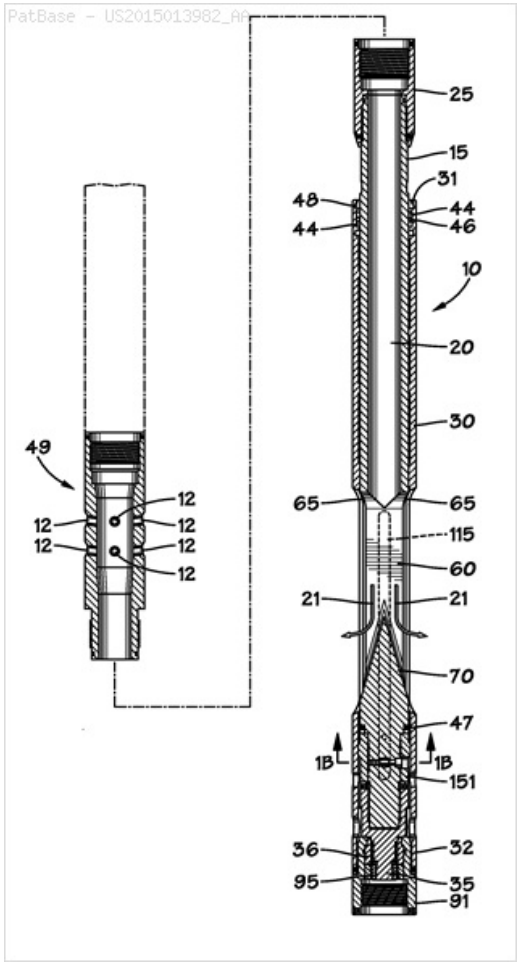
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY 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

44) Family number: 58278603 (US2015013982A)

Title: FRACTURING VALVE

Abstract: A downhole tool capable of performing both perforating and fracturing operations has a valve portion comprising a tubular mandrel having a through bore continuous with a tubing string, and a frac window through the side of the tubular mandrel. An outer sleeve is radially disposed around the tubular mandrel. The outer sleeve includes a sleeve port in a sidewall. The tubular mandrel slides relative to the sleeve by application and release of set down weight on a coiled tubing string. When the valve is closed, there is no fluid communication from the tubing string out of the frac window. When the valve is open, fluid communication from the tubing string through the aligned window and port is enabled. The valve may be installed in a downhole tool having a perforation device, allowing fracturing to be carried out following perforation without the need to trip the tool between fracturing and perforating operations.

Classifications:
International (IPC 8-9): E21B33/124 E21B34/06 E21B34/12 E21B34/14 E21B43/11 E21B43/26 E21B43/267 (Advanced/Invention); E21B34/00 (Advanced/Non-invention)
CPC: E21B43/26 E21B2034/007 E21B34/14 E21B34/12
US: 166/180 166/280.1 166/297 166/298 166/316 166/334.1



Family:

Publication number	Publication date	Application number	Application date
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CA2856184 AA	20150110	CA20142856184	20140709
CA2873541 AA	20150604	CA20142873541	20141204
US2015013982 AA	20150115	US20140321558	20140701
US2015083419 AA	20150326	US20140560891	20141204
US2018230776 AA	20180816	US20180887264	20180202
US9903182 BB	20180227	US20140560891	20141204

Priority:

CA20132820704 20130710 US20130911841P 20131204 US20140321558 20140701
CA20142856184 20140709 US20140560891 20141204 CA20142873541 20141204
US20180887264 20180202

Probable Assignee: NCS OILFIELD SERVICES CANADA INC

Assignee(s): (std): NCS MULTISTAGE INC ; NCS MULTISTAGE LLC ; NCS OILFIELD SERVICES CANADA INC

Assignee(s): GETZLAF DONALD ; LEGGET SHAWN ; RAVENSBERGEN JOHNRR1 S2 C34DEWINTONA1T0L 0X0CA ; RAVENSBERGEN JOHN ; WELLS FARGO BANK NATIONAL ASSOCIATION ADMINISTRATIVE AGENT AS ; BRUNSKILL DOUGLAS ; BRUNSKILL DOUGLAS JAMES ; GETZLAF DON64 DOUGLAS WOODS PARK SECALGARYA1T2Z 2K6CA ; BRUNSKILL DOUGLAS JAMES227 PARKRIDGE HILL S.E.CALGARYA1T2J 4Z7CA ; BRUNSKILL DOUGLAS JAMES800, 840-7TH AVENUE SWCALGARYA1T2P 3G2CA ; GETZLAF DON ; NCS OILFIELD SERVICES CANADA INC800, 840-7TH AVENUE SWCALGARYA1T2P 3G2CA ; GETZLAF DONALD64 DOUGLAS WOODS PARK SECALGARYA1T2Z 2K6CA ; NCS OILFIELD SERVICES CANADA INC222, 11929-40TH STREET SECALGARYA1T2Z 4M8CA

Inventor(s): (std): BRUNSKILL DOUGLAS JAMES ; RAVENSBERGEN JOHN ; GETZLAF DONALD ; LEGGETT SHAWN ; LEGGET SHAWN ; GETZLAF DON

Inventor(s): RAVENSBERGEN JOHNRR1 S2 C34DEWINTONA1T0L 0X0CA ; GETZLAF DONALD64 DOUGLAS WOODS PARK SECALGARYA1T2Z 2K6CA ; BRUNSKILL DOUGLAS ; GETZLAF DON64 DOUGLAS WOODS PARK SECALGARYA1T2Z 2K6CA ; BRUNSKILL DOUGLAS JAMES227 PARKRIDGE HILL S.E.CALGARYA1T2J 4Z7CA ; BRUNSKILL DOUGLAS JAMES800, 840-7TH AVENUE SWCALGARYA1T2P 3G2CA

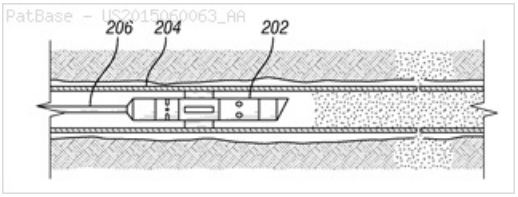
Agent(s): SMART AND BIGGAR; BLANK ROME LLP

45) Family number: 58629001 (US2015060063A)

Title: WELL TREATMENT

Abstract: Using in situ channelization treatment fluids in multistage well treatment is disclosed. Also disclosed are methods, fluids, equipment and/or systems for treating a subterranean formation penetrated by a wellbore, relating to in situ channelization treatment fluids.

Classifications:
International (IPC 8-9): C09K8/60 E21B33/13 E21B34/14 E21B43/14 E21B43/22 E21B43/247 E21B43/26 E21B43/267 (Advanced/Invention)
CPC: E21B43/26 E21B43/267 E21B33/13 E21B34/14
US: 166/185 166/279 166/280.1



Family:

Publication number	Publication date	Application number	Application date
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AR097534 AA	20160323	AR2014P103283	20140902
US2015060063 AA	20150305	US20130016571	20130903
US2015060064 AA	20150305	US20130043125	20131001
US9587477 BB	20170307	US20130043125	20131001
US9631468 BB	20170425	US20130016571	20130903
WO15034647 A1	20150312	WO2014US51170	20140815
WO15034652 A1	20150312	WO2014US51294	20140815

Priority:

US20130016571 20130903 US20130043125 20131001

Probable Assignee: SCHLUMBERGER TECHNOLOGY CORP

Assignee(s): (std): PRAD RES AND DEV LTD ; SCHLUMBERGER CA LTD ; SCHLUMBERGER TECHNOLOGY CORP ; SCHLUMBERGER TECHNOLOGY BV ; SCHLUMBERGER HOLDINGS ; SCHLUMBERGER SERVICES PETROL ; SCHLUMBERGER TECH BV

Assignee(s): SERVICES PETROLIERS SCHLUMBERGER ; SCHLUMBERGER HOLDINGS LTD ; SCHLUMBERGER CANADA LTD ; PRAD RESEARCH AND DEVELOPMENT LTD

Inventor(s): (std): LAFFERTY TED ; LAFFERTY THEODORE ; MATTHEW J MILLER ; MILLER MATTHEW J ; THEODORE LAFFERTY

Agent(s): ANDREA E; VANDERMOLEN MATHIEU 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

46) Family number: 59134571 (US2015122489A)

Title: SYSTEMS AND METHODS FOR DOWNHOLE COMMUNICATION

Abstract: A method of conducting multiple stage treatments. The method includes running a string into a borehole. The string having at least a first sleeve assembly and a second sleeve assembly. The first sleeve assembly in a position closing a port in the string; communicating from a radial exterior of the string or from a location downhole of the first and second sleeve assemblies to a first electronic trigger of the first sleeve assembly to trigger the first sleeve assembly into moving longitudinally relative to the string to open the port. Performing a treatment operation through the port; communicating from the radial exterior of the string or from a location downhole of the first and second sleeve assemblies to a second electronic trigger of the second sleeve assembly to trigger the second sleeve assembly into moving longitudinally relative to the string to close the port.

Classifications:

International (IPC 8-9): E21B17/00 E21B33/12 E21B33/124 E21B34/06 E21B34/12 E21B34/14 E21B43/14 E21B43/247 E21B43/26 E21B47/12 E21B7/00 (Advanced/Invention);
E21B34/00 (Advanced/Non-invention)
CPC: E21B43/14 E21B34/066 E21B2034/007 E21B43/26 E21B47/122 E21B43/247 E21B33/12 E21B34/06 E21B34/12 E21B33/124
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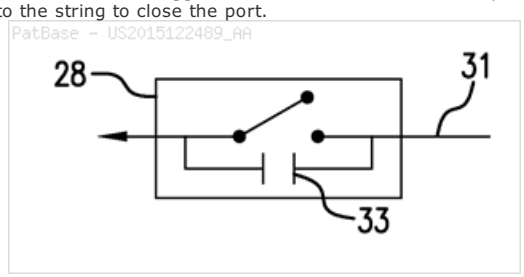

Family:

Publication number	Publication date	Application number	Application date
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AU2014347200 AA	20150514	AU20140347200	20141003
AU2014347200 BB	20170831	AU20140347200	20141003
AU2017219163 AA	20170921	AU20170219163	20170829
AU2018200328 AA	20180201	AU20180200328	20180115
AU2018200331 AA	20180201	AU20180200331	20180115
CA2928397 AA	20160421	CA20142928397	20141003
CA2928397 C	20180327	CA20142928397	20141003
CA2944339 AA	20160928	CA20142944339	20141003
EP3102782 A1	20161214	EP20140860374	20141003
EP3102782 A4	20180307	EP20140860374	20141003
GB2534764 A1	20160803	GB20160007234	20141003
NO20160631 A	20160415	NO20160000631	20160415
NO20161463 A	20160915	NO20160001463	20160915
US2015122489 AA	20150507	US20140258254	20140422
US2015122493 AA	20150507	US20140258484	20140422
US2016032683 AA	20160204	US20150879516	20151009
US9404340 BB	20160802	US20140258484	20140422
US9745823 BB	20170829	US20150879516	20151009
US9926769 BB	20180327	US20140258254	20140422
WO15069396 A1	20150514	WO2014US58994	20141003
WO15069397 A1	20150514	WO2014US58995	20141003

Priority:

US20130901135P 20131107
AU20140347199 20141003
WO2014US58995 20141003
AU20180200328 20180115
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AU20170219163 20170829

Probable Assignee: BAKER HUGHES INC

Assignee(s): (std): BAKER HUGHES A GE CO ; BAKER HUGHES A GE CO LLC ; BAKER HUGHES INC ; HOLMES KEVIN C ; WOOD EDWARD T ; MILLS AUBREY C

Inventor(s): (std): AUBREY C MILLS ; EDWARD T WOOD ; HOLMES KEVIN C ; KEVIN C HOLMES ; MILLS AUBREY C ; WOOD EDWARD T

Agent(s): FREEHILLS PATENT ATTORNEYS; FPA PATENT ATTORNEYS PTY LTD; SIM AND MCBURNEY; MARKS AND CLERK; JEFFREY PHILIP MICHAEL; CANTOR COLBURN LLP

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