

Search query (3): [SP]: background[0001] the present disclosure relates to a method of treating lost circulation issues stemming from loss zones during the drilling and cementing process through the use of a thixotropic cement.[0002] lost circulation is a well-known industry problem that may result in non-productive time during drilling and cementing and/or the loss of drilling and cementing fluids to the surrounding formation. lost circulation is the partial or complete loss of drilling fluid or cement slurries into formation voids during drilling, circulation, running casing or cementing operations. estimates show that these types of losses occur during drilling on approximately 20-25 percent of wells worldwide. such losses can be extremely expensive and troublesome, resulting in lost rig time, stuck pipe, blow-outs and sometimes the outright abandonment of expensive wells. these losses also cause reduced production and lost man-hours among other things.[0003] lost circulation problems can happen at any depth and can occur when the total pressure exerted against the formation exceeds the formation breakdown pressure or when there are sizeable fractures or fissures connecting the wellbore to the surrounding formation. lost circulation problems are generally caused by four types of formations: 1) natural or induced fractured formations 2) vugular or cavernous formations 3) highly permeable formations and 4) unconsolidated formations. these formations can be aggravated upon drilling or due to severe loads applied during drilling on weak formations having a low fracture gradient. these formations can cause many levels of losses depending on their size and location.[0004] one method of addressing lost circulation is to add sized particulate matter to the fluid being placed into the formation with the expectation that properly sized particulates will then block fissures, pore face, or other openings for the wellbore to the surrounding formation. however, such particulate solutions are best suited for wellbores in locations where relatively minor losses are seen. wellbores experiencing moderate to severe losses are less amenable to a sized particulate solution. furthermore, losses that are treated during drilling can sometimes resume during cementing due when, for example, a cement with higher density than drilling fluid is used.[0005] the usual procedure to treat moderate to severe losses during drilling is to pump a batch of lost circulation material (lcm) fluid, often called an lcm pill. this pill fills the crevices of the loss zone and may also provide wellbore strengthening to enable further drilling. however, in case of severe losses, even such a pill treatment may not be effective. in such cases, chemical solutions like polymers, viscofiers, foams, polyurethanes, calcium carbonates and crosslinked gels have been suggested. however, such chemical solutions may be inconsistent to apply and tend to vary based on the well temperature. moreover, they can be difficult to place, requiring expertise to ensure that the correct area surrounding the wellbore is treated. there is a need for a methodology with a greater degree of success and consistency in treating loss zones.brief description of the drawings[0006] the following figures are included to illustrate certain aspects of the present disclosure, and should not be viewed as exclusive embodiments. the subject matter disclosed is capable of considerable modifications, alterations, combinations, and equivalents in form and function, without departing from the scope of this disclosure.[0007] fig. 1 illustrates the sequence of operational steps in performing an embodiment of the present method.[0008] fig. 2a is the first half of a flow chart illustrating the decision steps and procedural steps of an embodiment of the present method.[0009] fig. 2b is the second half of a flow chart illustrating the decision steps and procedural steps of an embodiment of the present method.[0010] fig. 3 illustrates an exemplary output graph of rheological test results.detailed description[0011] the present disclosure relates to a method of treating a loss zone during drilling or running casing. the method generally comprises the steps of encountering a loss zone in a wellbore during drilling or running casing and pumping a treatment fluid into the loss zone. the treatment fluid is a gel capable of gelling, breaking when sheared, and building back shear strength after shearing is removed.[0012] to facilitate a better understanding of the present disclosure, the following examples of preferred or representative embodiments are given. in no way should the following examples be read to limit, or to define, the scope of the disclosure.[0013] the present disclosure provides a reliable approach to treat severe losses by using a thixotropic cement system that comprises a specialized treatment fluid. in some embodiments, a suitable specialized treatment fluid has density less than about 11 pounds per gallon and may contain polymers, cement, clay, stabilizers, and/or fibrous fillers. this specialized treatment fluid is able to gel rapidly and, once it is in gel form, its viscosity is reduced (broken) when subjected to shear. after shear is removed, the treatment fluid builds back gel strength quickly. this process can be repeated multiple times, and mechanical strength builds over time. [0014] in shorthand, the mechanism behind the functioning of a thixotropic cement system is as follows. during circulation (placement or pumping), it behaves as an ordinary cement system with low enough viscosities to allow the treatment fluid to flow effectively into the loss zone. one advantage to using this type of treatment fluid is that since it is a thixotropic fluid, it is relatively easy to place and its flow stops very quickly after placement. in addition, once the treatment fluid stops flowing, it immediately begins to build compressive strength. there are many different methods for placement of this type of treatment fluid. for example, the placement of this type of thixotropic fluid typically occurs in the form of a squeeze process. squeeze can occur at once in case of a running or a walking squeeze or can occur in stages in the case of a hesitation squeeze. during a walking or running squeeze, the entire targeted volume is placed into the loss zone at once. during a hesitation squeeze, a predefined volume is placed into the loss zone followed by a waiting period, after which there is another placement period. this cycle continues until the entire targeted volume is placed. regardless of the type of squeeze, the overall process remains the same. after placement in loss zone, the treatment fluid placed in the loss zone has a tendency to flow for a brief period under the effect of annular hydrostatic column pressure above the loss zone. this phase can be qualified as the quasi-static or no-flow period depending on the shear rates experienced by the treatment fluid placed in the loss zone. during this low shear rate or no-flow period, the treatment fluid rapidly builds gel strength due to its thixotropic behavior, thus avoiding further flow into the loss zone. additionally, because a cement based treatment fluid is used in the process, after the static period described above, it also builds compressive strength resulting in wellbore strengthening. this system works over a wide range of densities, temperatures and loss sizes and is more consistent in treating losses than prior art methods. to provide additional wellbore strengthening, conventional cement may be pumped into loss zones behind the treatment fluid, if desired. [0015] fig. 1 shows the sequence of operational steps for the above mechanism. the drill string 10, open hole 12, and lost circulation zones 14 are shown. in stage 1, drilling fluid 16 occupies both the loss zone 14 and the wellbore 18. in stage 2, treatment fluid 20 is pumped into the loss zone 14. stage 3 is the static period where the gel strength of the treatment fluid 20 is allowed to build-up under the influence of annular hydrostatic pressure above the loss zone 14. here, quasi-static or a no-flow condition may be observed in the loss zone 14 depending on the rate of gel strength build-up, volume of treatment fluid in the loss zone and the level of annular hydrostatic pressure. in stage 4, residual treatment fluid 20 and mud are recirculated after the desired static time is allowed for gel strength build-up.[0016] the use of treatment fluid to treat loss zones is not without risks. by virtue of the thixotropic mechanism, there is a risk of the treatment fluid setting in the wellbore and/or drill pipe, especially when the treatment fluid cannot be pushed out of drill string completely, due to either pump failure or inaccurate volume predictions. therefore, engineering calculations are necessary to determine the maximum gel strength build-up allowed to avoid hard setting. these maximum gel strengths are dependent on the location of the loss zone, the loss zone's geometry, the rate of loss, the annular hydrostatic pump pressure, the pump pressure and the temperature. this in-turn provides a recommendation of maximum downtime (in case the pump is down, such as when there is treatment fluid left in the drill string).[0017] other calculations and projections should be made before the treatment process begins as well. pressure for recirculation of the residual treatment fluid in the tubular and annulus after a successful placement job should be determined to ensure that recirculation is possible. the rheology of the treatment fluid system should be tuned to allow easy placement. additional static time should

Results: 10

1) Family number: 49244022 (US2011172922A)

© PatBase

Title: DROP/PUMP MEMORY THROUGH-CASING MEASUREMENT LOGGING TOOLS

Abstract: The present disclosure relates to apparatus and methods for evaluating an earth formation through a drillstring during tripping of the drillstring. The apparatus may include a logging instrument including a formation evaluation sensor configured to be dropped or pumped into a drillstring at the end of drilling. The logging instrument may be configured to make measurements through a homogenous portion of the drillstring while the drillstring is being tripped. The apparatus may include a memory and processor for logging data for later retrieval. The method may include making at least one measurement indicative of a property of an earth formation using a sensor operatively associated with a logging instrument, wherein the logging instrument is conveyed to proximate to a homogeneous portion of a drilling tubular using the drilling tubular.

Classifications:

International (IPC 8-9): E21B47/00 E21B47/10 E21B47/12 E21B47/26

G01N23/00 G01V1/40 G01V5/04 G01V5/08 G01V5/10

G06F19/00 (Advanced/Invention)

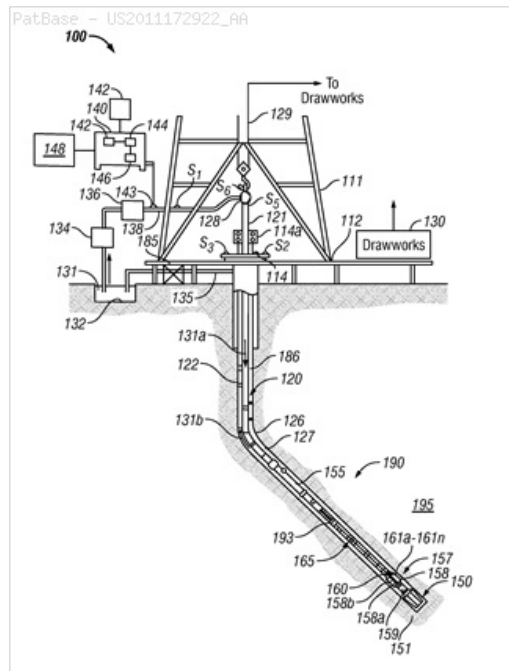
CPC: E21B47/124 E21B23/08 G01V5/10 G01V5/045 G01V5/105

G01V5/101

European: E21B23/08 E21B47/12S G01V5/10 G01V5/10B

US: 250/258 250/260 250/269.1 250/269.100S 250/269.4 250/269.400P

250/269.6 250/269.600S 702/8 702/8P 73/152.14 73/152.140S



Family:

Publication number	Publication date	Application number	Application date
BR112012017012 A2	20160405	BR20121117012	20101222
GB201212959 A0	20120905	GB20120012959	20101222
GB2489867 A1	20121010	GB20120012959	20101222
NO20120773 A	20120802	NO20120000773	20120704
US2011172922 AA	20110714	US20100972213	20101217
US2012043459 AA	20120223	US20110167912	20110624
US8669516 BB	20140311	US20110167912	20110624
WO11084828 A2	20110714	WO2010US61777	20101222
WO11084828 A3	20111117	WO2010US61777	20101222

Priority:

US20100293995P 20100111 US20100375618P 20100820 US20100972213 20101217
WO2010US61777 20101222 US20110167912 20110624

Probable Assignee: BAKER HUGHES INC

Assignee(s): (std): BAKER HUGHES INC ; CHACE DAVID M ; EVANS JOHN G ; HILL FREEMAN L

Inventor(s): (std): HILL FREEMAN L ; CHACE DAVID M ; EVANS JOHN G

Inventor(s): JOHN G EVANS ; DAVID M CHACE ; FREEMAN L HILL

Agent(s): MOSSMAN KUMAR AND TYLER PC; BYNUM TODD 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 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

2) Family number: 30758046 (US2003195120A)

© PatBase

Title: ACID SOLUBLE, HIGH FLUID LOSS PILL FOR LOST CIRCULATION

Abstract: High fluid loss acid soluble lost circulation material and spotting pill comprising the lost circulation material. The spotting pill preferably is weighted to a density substantially the same as the drilling fluid used to treat the formation.

Classifications:

International (IPC 8-9): C09K8/16 C09K8/50 C09K8/504 E21B33/138 (Advanced/Invention); C09K8/02 C09K8/50 E21B33/138 (Core/Invention)

International (IPC 1-7): C09D1/00 C09K3/00 C09K7/00 C09K7/02 E21B33/138

CPC: Y10S507/906 C09K8/5045 C09K8/16

European: C09K8/16 C09K8/504B

US: 106/31.01 175/72 507/140 507/269 507/906

Family:

Publication number	Publication date	Application number	Application date
AU2002365886 AA	20030617	AU20020365886	20021127
AU2002365886 BB	20070125	AU20020365886	20021127
BRPI0214805 A	20041214	BR2002PI14805	20021127
CA2468741 AA	20040528	CA20022468741	20021127
CA2468741 C	20090728	CA20022468741	20021127
GB200412421 A0	20040707	GB20040012421	20021127

GB2399851 A1	20040929	GB20040012421	20021127
GB2399851 B2	20050713	GB20040012421	20021127
NO20042657 A	20040624	NO20040002657	20040624
US2003195120 AA	20031016	US20010997830	20011130
US6790812 BB	20040914	US20010997830	20011130
WO03048266 A1	20030612	WO2002US37978	20021127

Priority:

US20010997830 20011130 WO2002US37978 20021127

Probable Assignee: BAKER HUGHES INC

Assignee(s): (std): BAKER HUGHES INC ; CARR MICHELLE ; CLAPPER DENNIS K ; HALLIDAY WILLIAM S ; JARRETT MICHAEL

Assignee(s): JARRETT MICHAEL A

Inventor(s): (std): CARR MICHELLE ; CLAPPER DENNIS K ; DENNIS K CLAPPER ; HALLIDAY WILLIAM S ; JARRETT MICHAEL ; JARRETT MICHAEL A ; MICHELLE CARR ; WILLIAM S HALLIDAY ; MICHAEL JARRETT

Inventor(s): MICHAEL A JARRETT

Agent(s): HERBERT SMITH FREEHILLS; FPA PATENT ATTORNEYS PTY LTD; FREEHILLS PATENT ATTORNEYS; SIM AND MCBURNEY

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 GQ GR GW 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 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 ZM ZW

3) Family number: 45102112 (US2010132948A)

© PatBase

Title: DELAYED BREAKING OF WELL TREATMENT FLUIDS

Abstract: An embodiment of a downhole method of breaking of a well treatment fluid relates to overcrosslinking a polymeric thickener with an overcrosslinking agent such as an excess crosslinking agent and/or an excess alkaline material, wherein either or both the agent and/or material may be encapsulated.

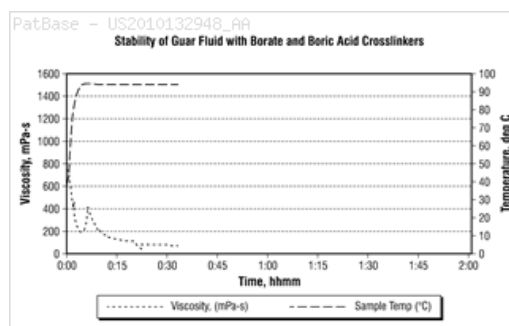
Classifications:

International (IPC 8-9): E21B43/00 E21B43/22 E21B43/25 E21B43/26 E21B43/267 E21B7/00 (Advanced/Invention); E21B43/00 E21B43/25 (Core/Invention)

CPC: C09K8/64 C09K8/685 C09K8/703 C09K8/706 C09K8/90 C09K2208/08 C09K2208/26

European: C09K8/64 C09K8/68B C09K8/70B C09K8/70E C09K8/90 M09K208/08 M09K208/26

US: 166/300 166/305.1 166/308.5



Family:

Publication number	Publication date	Application number	Application date
CA2686104 AA	20100603	CA20092686104	20091119
MX2009012819 A1	20100621	MX20090012819	20091126
RU2009144806 A	20110610	RU20090144806	20091202
RU2509879 C2	20140320	RU20090144806	20091202
US2010132948 AA	20100603	US20080327468	20081203
US8276667 BB	20121002	US20080327468	20081203

Priority:

US20080327468 20081203

Probable Assignee: SCHLUMBERGER TECHNOLOGY CORP

Assignee(s): (std): CLUM ERIC ; FEDOROV ANDREY ; FU DIANKUI ; KOCHMAR LARISA ; LEVANYUK OLESYA ; SCHLUMBERGER CA LTD ; SCHLUMBERGER TECHNOLOGY BV ; SCHLUMBERGER TECHNOLOGY CORP

Assignee(s): SHLUMBERGER TEKNOLODZHI BV ; SCHLUMBERGER CANADA LTD

Inventor(s): (std): FEDOROV ANDREJ VLADIMIROVICH ; FEDOROV ANDREY ; FU DAJANKUI ; FU DIANKUI ; KLUM EHRIC ; KOCHMAR LARISA ; KOCHMAR LARISA IVANOVNA ; CLUM ERIC ; LEVANJUK OLESJA VLADIMIROVNA ; LEVANYUK OLESYA

Inventor(s): OLESYA LEVANYUK ; DIANKUI FU ; ERIC CLUM ; ANDREY FEDOROV ; LARISA KOCHMAR

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

4) Family number: 53725198 (US2013118235A)

© PatBase

Title: COMBINED RHEOMETER/MIXER HAVING HELICAL BLADES AND METHODS OF DETERMINING RHEOLOGICAL PROPERTIES OF FLUIDS

Abstract: A method of determining rheological properties can include dispensing a fluid into a rheometer including a stator having at least one helical blade, measuring torque (T) due to relative rotation between the stator and a rotor of the rheometer at different rotational speeds (RPM's), calculating shear stress (SS) as follows: $SS = T\beta / K$, and calculating volume averaged shear rate (VASR) as follows: $VASR = k1sRPM\alpha$, where K, k1, alpha and beta are experimentally-derived coefficients. A method of

mixing fluids and performing a rheological test on the admixed fluids can include dispensing a fluid into a rheometer, then dispensing another fluid into the rheometer, then mixing the fluids with at least one helical blade of the rheometer, and then measuring torque due to relative rotation between a stator and a rotor of the rheometer. A rotary rheometer can include a rotor, and a stator having at least one helical blade.

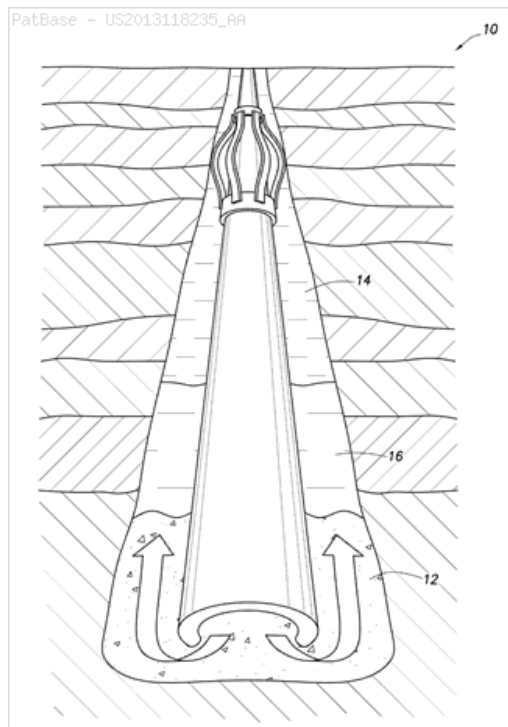
Classifications:

International (IPC 8-9): E21B47/00 G01N11/10 G01N11/14 G01N33/38 G01V9/02 (Advanced/Invention)

CPC: G01N11/14 G01N33/383

US: 73/54.01 73/54.02 73/54.03 73/54.23 73/54.28 73/54.31 73/54.35 73/54.39

PatBase - US2013118235_AA



Family:

Publication number	Publication date	Application number	Application date
CA2854491 AA	20140502	CA20122854491	20121012
CA2854491 C	20161213	CA20122854491	20121012
EP2776871 A1	20140917	EP20120847895	20121012
EP2776871 A4	20150408	EP20120847895	20121012
IN03615DN2014 A	20150213	IN2014DN03615	20140505
MX2014005518 A1	20140605	MX20140005518	20121012
SG11201401429T A1	20140926	SG20141101429	20121012
US2013118235 AA	20130516	US20110293469	20111110
US2013247653 AA	20130926	US20130894762	20130515
US2014311225 AA	20141023	US20140322823	20140702
US8794051 BB	20140805	US20110293469	20111110
US9702799 BB	20170711	US20130894762	20130515
US9702800 BB	20170711	US20140322823	20140702
WO13070382 A1	20130516	WO2012US60085	20121012

Priority:

US20110293469 20111110 WO2012US60085 20121012 US20130894762 20130515
US20140322823 20140702

Probable Assignee: HALLIBURTON CO

Assignee(s): (std): BALARAMAN BALASUNDARAM ; GAUGLER DREW H ; GRAY DENNIS ; HALLIBURTON CO ; HALLIBURTON ENERGY SERVICES INC ; PANGU GANESH SHRINIWAS ; MORGAN RONNIE GLEN ; HALLIBURTON ENERGY SERV INC ; MORGAN RONNIE G ; PINDIPROLU SAIRAM KS ; PINDIPROLU SAIRAM K S

Assignee(s): PANGU GANESH S ; HALLIBURTON ENERGY SERVICES INC10200 BELLAIRE BOULEVARDHOUSTONTX77072US ; HALLIBURTON ENERGY SERVICES INC3000 N. SAM HOUSTON PARKWAY E.HOUSTONTX77032-3219US

Inventor(s): (std): GAUGLER DREW H ; GRAY DENNIS ; PANGU GANESH SHRINIWAS ; PINDIPROLU SAIRAM KS ; MORGAN RONNIE GLEN ; BALARAMAN BALASUNDARAM ; PINDIPROLU SAIRAM K S ; PANGU GANESH S ; MORGAN RONNIE G

Inventor(s): BALARAMAN BALASUNDARAMIN ; GANESH S PANGU ; BALASUNDARAM BALARAMAN ; RONNIE G MORGAN ; SAIRAM KS PINDIPROLU ; PANGU GANESH SIN ; PINDIPROLU SAIRAM K SIN ; MORGAN RONNIE GUS

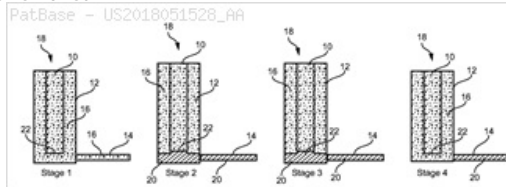
Agent(s): EMERY JAMIESON LLP; PARLEE MCLAWS LLP; BENNETT ADRIAN ROBERT J; SMITH IP SERVICES PC; CHAMBERLAIN; CHAMBERLAIN HRDLICKA; SMITH MARLIN R

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 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 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

Abstract: A method of treating lost circulation issues stemming from loss zones during the drilling and cementing process through the utilization of a thixotropic cement. The method comprises the steps of encountering a loss zone in a bore hole during drilling or running casing and pumping a treatment fluid into the loss zone, wherein the treatment fluid is a gel capable of gelling, breaking when sheared, and building back shear strength after shearing is removed.

Classifications:

International (IPC 8-9): C09K8/03 C09K8/42 C09K8/487 C09K8/50 E21B21/00 E21B33/13 E21B33/138 (Advanced/Invention)
CPC: C09K8/42 E21B33/13 E21B33/138 C09K8/428 C09K8/487 E21B21/003 C09K8/50



Family:

Publication number	Publication date	Application number	Application date
AU2015390232 AA	20170831	AU20150390232	20150407
AU2015390232 BB	20190207	AU20150390232	20150407
BR112017019039 A2	20180417	BR20171119039	20150407
CA2978056 AA	20170828	CA20152978056	20150407
CO20170009122 A2	20171121	CO20170009122	20170907
GB201713433 A0	20171004	GB20170013433	20150407
GB2550313 A1	20171115	GB20170013433	20150407
MX2017011463 A1	20171214	MX20170011463	20150407
NO20171403 A	20170830	NO20170001403	20170830
SG11201706517R A1	20170928	SG20171106517	20150407
US2018051528 AA	20180222	US20150556601	20150407
WO16163996 A1	20161013	WO2015US24730	20150407

Priority:

US20150556601 20150407 WO2015US24730 20150407

Probable Assignee: HALLIBURTON CO

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

Assignee(s): RAVI KRISHNA M ; JANDHYALA SIVA RAMA KRISHNA ; PATIL RAHUL CHANDRAKANT ; PATIL SANDIP PRABHAKAR ; GAHLAWAT RAVINDER

Inventor(s): (std): KRISHNA M RAVI ; RAHUL CHANDRAKANT PATIL ; RAVINDER GAHLAWAT ; SANDIP PRABHAKAR PATIL ; SIVA RAMA KRISHNA JANDHYALA ; RAVI KRISHNA M ; PATIL SANDIP PRABHAKAR ; PATIL RAHUL CHANDRAKANT ; JANDHYALA SIVA RAMA KRISHNA ; GAHLAWAT RAVINDER

Agent(s): PHILLIPS ORMONDE FITZPATRICK; PARLEE MCLAWS LLP; CAROLINA MERCEDES DAZA MONTALVO; KAISER IONA 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

6) Family number: 30043475 (US2003221831A)

Title: METHODS OF GENERATING GAS IN WELL TREATING FLUIDS

Abstract: Improved methods of generating gas in and foaming well treating fluids introduced into a subterranean zone are provided. A method of the invention includes the steps of combining one or more gas generating chemicals with the well treating fluid and combining one or more delayed encapsulated activators having selected release times with the well treating fluid containing the gas generating chemicals so that the gas generating chemicals react with the delayed encapsulated oxidizing agent activators and gas and foam are formed in the treating fluid while the treating fluid is being pumped and after being placed in the subterranean zone.

Classifications:

International (IPC 8-9): C04B28/04 C04B38/02 C09K3/00 C09K8/38 C09K8/42 C09K8/46 C09K8/473 C09K8/516 C09K8/518 C09K8/70 C09K8/94 E21B33/13 (Advanced/Invention)

International (IPC 1-7): C09K17/00 C09K3/00 C09K7/08 E21B33/13 E21B33/138 E21B43/22 E21B43/26

CPC: Y10S507/902 C04B20/12 C04B28/02 C04B28/04 C04B38/02 C04B40/0633 C04B2103/0067 C09K8/46 C09K8/473 C09K8/516 C09K8/518 C09K8/703

European: C04B20/12 C04B28/02 C04B28/04 C04B38/02 C04B40/06C C09K8/46 C09K8/473 C09K8/516 C09K8/518 C09K8/70B M04B103/00R

US: 106/672 106/673 106/673S 106/675 106/677 106/677S 106/678 106/678S 166/292 166/293 166/300 166/300S 166/308 166/308.1 166/308.100S 166/308.2 166/308.200S 166/308.3 166/309 166/309S 507/202 507/211 507/217 507/219 507/219S 507/245 507/245S 507/251 507/251S 507/254 507/254S 507/269 507/269S 507/273 507/273S 507/275 507/275S 507/902 507/922 507/922S

Family:

Publication number	Publication date	Application number	Application date
AU2003227974 AA	20031219	AU20030227974	20030522
BRPI0311422 A	20050315	BR2003PI11422	20030522
CA2486567 AA	20041118	CA20032486567	20030522
EP1511822 A1	20050309	EP20030725442	20030522
MXPA04011874 A1	20050331	MX2004PA11874	20030522
US2003221831 AA	20031204	US20020159588	20020531
US2004168801 AA	20040902	US20040792999	20040304

US2005126781 AA	20050616	US20050048293	20050131
US6722434 BB	20040420	US20020159588	20020531
US6992048 BB	20060131	US20040792999	20040304
WO03102107 A1	20031211	WO2003GB02231	20030522

Priority:

US20020159588 20020531 WO2003GB02231 20030522 US20040792999 20040304
US20050048293 20050131

Probable Assignee: HALLIBURTON CO

Assignee(s): (std): HALLIBURTON CO ; HALLIBURTON ENERGY SERV INC ; HALLIBURTON ENERGY SERVICES INC ; LUKE KAREN ; MORGAN RICKEY L ; RAVI KRISHNA M ; REDDY B RAGHAVA ; WAIN CHRISTOPHER PAUL

Assignee(s): REDDY B

Inventor(s): (std): KRISHNA M RAVI ; LUKE KAREN ; MORGAN RICKEY L ; RAVI KRISHNA M ; REDDY B RAGHAVA ; RICKEY L MORGAN ; KAREN LUKE ; B RAGHAVA REDDY

Inventor(s): B ; RAVI KRISHNA ; MORGAN RICKEY ; REDDY B

Agent(s): CALLINANS ; FISHER ADAMS KELLY CALLINANS ; SPRUSON AND FERGUSON ; OGILVY RENAULT LLP SENCRL SRL ; CRAIG W RODDY HALLIBURTON ENERGY SERVICES ; CRAIG W ; BAKER BOTTS 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

7) Family number: 2882507 (US4809781A)

© PatBase

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

8) Family number: 54627528 (US2013220620A)

© PatBase

Title: METHODS, DEVICES, AND KITS RELATING TO THE IMPLEMENTATION OF GELLED FLUIDS HAVING A TRANSIENT GEL MICROSTRUCTURE

Abstract: Equipment associated with a gelled fluid may be manipulated based on a stress response of the gelled fluid as determined by a gel microstructure destruction model comprising an equivalent work integral function. Further, systems and devices may be configured to manipulated equipment associated with a gelled fluid based on a stress response of the gelled fluid as determined by a gel microstructure destruction model comprising an equivalent work integral function.

Classifications:

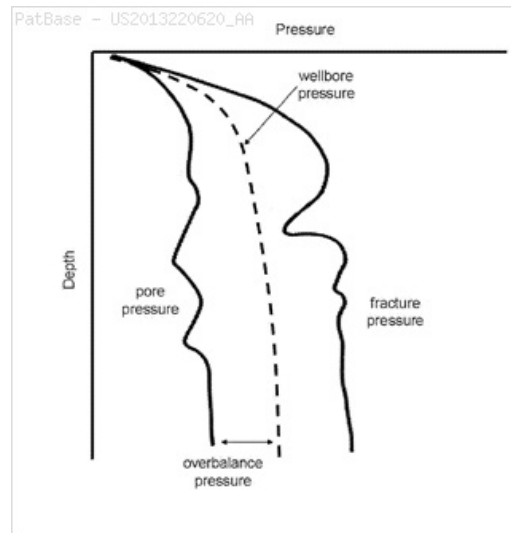
International (IPC 8-9): B01J19/06 E21B23/00 E21B43/00 E21B43/22

E21B43/26 E21B44/00 G06G7/48 (Advanced/Invention);

E21B23/00 E21B44/00 (Core/Invention)

CPC: E21B43/26 E21B23/00 E21B44/00 E21B43/00 E21B21/08

US: 166/305.1 166/308.5 166/381 703/10



Family:

Publication number	Publication date	Application number	Application date
AU2013226505 AA	20130906	AU20130226505	20130212
AU2013226505 BB	20160303	AU20130226505	20130212
BR112014017116 A2	20170613	BR20141117116	20130212
BR112014017116 A8	20170704	BR20141117116	20130212
BR112014017116 A8	20170704	BR20141117116	20130212
BR112014017116 A8	20170613	BR20141117116	20130212
CA2860799 AA	20140707	CA20132860799	20130212
CA2860799 C	20161011	CA20132860799	20130212
DE602013004641 D1	20160225	DE201360004641T	20130212
EA030517 B1	20180831	EA20140091097	20130212
EA201491097 A1	20150227	EA20140091097	20130212
EP2820238 A2	20150107	EP20130708265	20130212
EP2820238 B1	20160113	EP20130708265	20130212
GC7730 A	20180507	GC2013P023638	20130223
MX2014010303 A1	20141013	MX20140010303	20130212
MX349525 B	20170802	MX20140010303	20130212
US2013220620 AA	20130829	US20120408005	20120229
US8938380 BB	20150120	US20120408005	20120229
WO13130261 A2	20130906	WO2013US25756	20130212
WO13130261 A3	20140710	WO2013US25756	20130212

Priority:

US20120408005 20120229 EP20130708265 20130212 WO2013US25756 20130212

Probable Assignee: HALLIBURTON CO

Assignee(s): (std): HALLIBURTON CO ; HALLIBURTON ENERGY SERV INC ; HALLIBURTON ENERGY SERVICES INC ; MAXEY JASON ERIC ; JAMISON DALE ; JAMISON DALE E

Assignee(s): HALLIBURTON ENERGY SERVICES INC10200 BELLAIRE BOULEVARDHOUSTONTX77072US ; HALLIBURTON ENERGY SERVICES INC HOUSTON

Inventor(s): (std): JASON ERIC MAXEY ; MAXEY JASON ERIC ; DALE JAMISON ; JAMISON DALE ; JAMISON DALE E

Inventor(s): DALE E JAMISON ; JAMISON DALEUS ; MAXEY JASON ERICUS ; MAXEY JASON ERIC SPRING ; JAMISON DALE HUMBLE

Agent(s): PIZZEYS; PHILLIPS ORMONDE FITZPATRICK; EMERY JAMIESON LLP; PARLEE MCLAWS LLP; HOFFMANN EITL PATENT U RECHTSANWAELTE PARTMBB; HOFFMANN EITL; SABA AND CO TMP; HOLLY; MCDERMOTT WILL AND EMERY LLP; KAISER IONA N

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 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 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

9) Family number: 55525551 (US2015159076A)

© PatBase

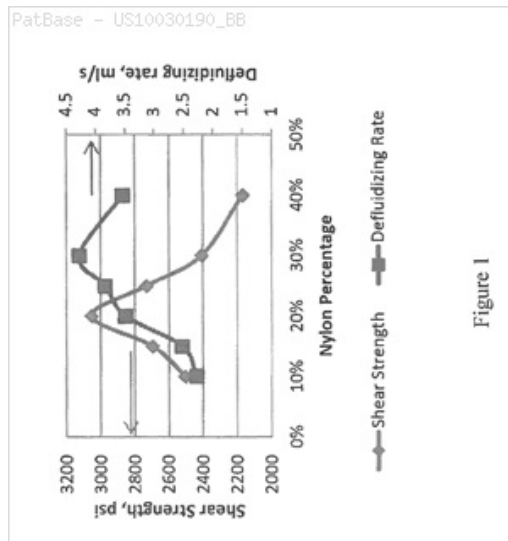
Title: ACID SOLUBLE DEFLUIDIZING PILLS

Abstract: An acid soluble defluidizing pill for reducing fluid loss in a wellbore is provided that includes an oleaginous or non-oleaginous base fluid; at least one synthetic fiber; and at least one inorganic crystalline fiber; in which one or more of the synthetic fiber and the inorganic crystalline fiber are at least substantially acid soluble.

Classifications:

International (IPC 8-9): C09K8/03 C09K8/04 C09K8/32 C09K8/42 C09K8/50 C09K8/516 C09K8/565 C09K8/575 E21B21/00 E21B33/13 E21B33/138 E21B43/16 E21B43/22 (Advanced/Invention)

CPC: C09K2208/08 C09K8/5758 E21B21/003 C09K8/424 E21B43/16



Family:

Publication number	Publication date	Application number	Application date
MX2014016005 A1	20150413	MX20140016005	20130701
MX2014016006 A1	20150413	MX20140016006	20130701
MX2014016010 A1	20150413	MX20140016010	20130701
US2015159076 AA	20150611	US20130412607	20130701
US2015166869 AA	20150618	US20130412642	20130701
US2015344766 AA	20151203	US20130412652	20130701
US10030190 BB	20180724	US20130412607	20130701
US10093845 BB	20181009	US20130412642	20130701
WO14008190 A1	20140109	WO2013US48934	20130701
WO14008191 A1	20140109	WO2013US48938	20130701
WO14008193 A1	20140109	WO2013US48940	20130701

Priority:

US20120667179P 20120702	US20130787807P 20130315	US20130787263P 20130315
US20130789263P 20130315	US20130412607 20130701	US20130412642 20130701
US20130412652 20130701	WO2013US48934 20130701	WO2013US48938 20130701
WO2013US48940 20130701		

Probable Assignee: M I LLC

Assignee(s): (std): MI LLC

Assignee(s): M I L L C ; M I LLC

Inventor(s): (std): ARIAS PRADA JORGE ; GUO QUANXIN ; MOFFITT JOHN D ; PRADA JORGE ARIAS ; YOUNG STEVEN PHILIP ; QUANXIN GUO

Inventor(s): STEVEN PHILIP YOUNG ; JORGE ARIAS PRADA ; JOHN D MOFFITT

Agent(s): DAVID J; SMITH DAVID J; HINKLEY SARA KM 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

10) Family number: 55050861 (US2013284518A)

© PatBase

Title: METHOD OF USING MULTI-COMPONENT FIBERS AS LOST-CIRCULATION MATERIAL

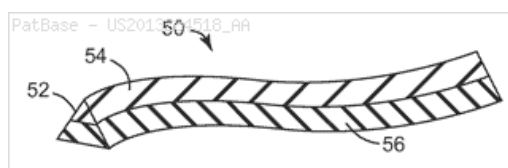
Abstract: A method of forming a subterranean well and a method of reducing lost circulation in a subterranean well while drilling the subterranean well are disclosed. The methods include using multi-component fibers as lost-circulation materials. The multi-component fibers having external surfaces and include at least a first polymeric composition and a second polymeric composition. At least a portion of the external surfaces of the multi-component fibers includes the first polymeric composition, which at least partially adhesively bonds the mud cake formed during the method.

Classifications:

International (IPC 8-9): C09K8/035 C09K8/22 C09K8/24 C09K8/508 C9K8/22 E21B21/00 E21B33/138 E21B43/22 (Advanced/Invention)

CPC: C09K8/035 E21B21/003 C09K2208/08

US: 175/65



Family:

Publication number	Publication date	Application number	Application date
BR112014026497 A2	20170627	BR20141126497	20130328
CA2869956 AA	20141008	CA20132869956	20130328

 CN104302727 A	20150121	CN201380022222	20130328
 EA201401032 A1	20150430	EA20140001032	20130328
 EP2841526 A1	20150304	EP20130781646	20130328
 IN07768CN2014 A	20160701	IN2014CN07768	20141021
 US2013284518 AA	20131031	US20130833807	20130315
 WO13162819 A1	20131031	WO2013US34320	20130328

Priority:

US20120639486P 20120427 US20130833807 20130315 WO2013US34320 20130328

Probable Assignee: 3M CO

Assignee(s): (std): 3M CO ; 3M INNOVATIVE PROPERTIES CO

Assignee(s): 3M INNOVATIVE PROPERTIES CO3M CENTERPOST OFFICE BOX 33427SAINT PAULMN55133-3427US ; CRANDALL MICHAEL D ; RUTKOWSKI KEITH A ; MATA CLARA E ; WU YONG K ; KADOMA IGNATIUS A

Inventor(s): (std): CLARA E MATA ; CRANDALL MICHAEL D ; IGNATIUS A KADOMA ; KADOMA IGNATIUS A ; KEITH A RUTKOWSKI ; MATA CLARA E ; MICHAEL D CRANDALL ; RUTKOWSKI KEITH A ; WU YONG K ; WU YONGKANG ; YONG K WU

Inventor(s): WU YONG KUS ; RUTKOWSKI KEITH AUS ; MATA CLARA EUS ; KADOMA IGNATIUS AUS ; CRANDALL MICHAEL DUS

Agent(s): SMART AND BIGGAR; HERZOG FIESSER AND PARTNER PATENTANWALTE PARTG MBB; GROSS KATHLEEN B ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE 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 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