

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT5873374

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	SECURITY INTEREST

CONVEYING PARTY DATA

Name	Execution Date
WEATHERFORD TECHNOLOGY HOLDINGS LLC	12/13/2019
WEATHERFORD NETHERLANDS B.V.	12/13/2019
WEATHERFORD NORGE AS	12/13/2019
HIGH PRESSURE INTEGRITY INC.	12/13/2019
PRECISION ENERGY SERVICES INC.	12/13/2019
WEATHERFORD CANADA LTD.	12/13/2019
WEATHERFORD SWITZERLAND TRADING AND DEVELOPMENT GMBH	12/13/2019
PRECISION ENERGY SERVICES ULC	12/13/2019
WEATHERFORD U.K. LIMITED	12/13/2019

RECEIVING PARTY DATA

Name:	WELLS FARGO BANK NATIONAL ASSOCIATION AS AGENT
Street Address:	14241 DALLAS PARKWAY SUITE 1300
City:	DALLAS
State/Country:	TEXAS
Postal Code:	75254

PROPERTY NUMBERS Total: 1569

Property Type	Number
Patent Number:	6491105
Patent Number:	6595287
Patent Number:	6536522
Patent Number:	6915849
Patent Number:	6675902
Patent Number:	6580268
Patent Number:	6592334
Patent Number:	6845817
Patent Number:	7032659
Patent Number:	6883612
Patent Number:	7296623
Patent Number:	7594540

PATENT

Property Type	Number
Patent Number:	6834725
Patent Number:	6684737
Patent Number:	7100696
Patent Number:	6446717
Patent Number:	6748823
Patent Number:	7090254
Patent Number:	7617866
Patent Number:	6536520
Patent Number:	7712523
Patent Number:	7793719
Patent Number:	8230933
Patent Number:	7918273
Patent Number:	6745646
Patent Number:	6827150
Patent Number:	6612372
Patent Number:	6736210
Patent Number:	7000692
Patent Number:	7921750
Patent Number:	6845820
Patent Number:	7163057
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Patent Number:	8485067
Patent Number:	6695057
Patent Number:	7114558
Patent Number:	6698518
Patent Number:	6349771
Patent Number:	7213656
Patent Number:	7004248
Patent Number:	6554076
Patent Number:	6598501
Patent Number:	6736214
Patent Number:	6250406
Patent Number:	6516663
Patent Number:	6467547
Patent Number:	6668937
Patent Number:	6494268
Patent Number:	7159669

Property Type	Number
Patent Number:	7258171
Patent Number:	6470975
Patent Number:	6702029
Patent Number:	6976539
Patent Number:	6715567
Patent Number:	6510896
Patent Number:	6832649
Patent Number:	6513588
Patent Number:	6352111
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Patent Number:	6742596
Patent Number:	7073598
Patent Number:	7281587
Patent Number:	7896084
Patent Number:	8251151
Patent Number:	8517090
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Patent Number:	6550551
Patent Number:	6427776
Patent Number:	6640904
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Patent Number:	6547002
Patent Number:	7080685
Patent Number:	6702012
Patent Number:	6851476
Patent Number:	7383876
Patent Number:	6425444
Patent Number:	6688400
Patent Number:	7168497
Patent Number:	6454007
Patent Number:	RE43054
Patent Number:	6571869
Patent Number:	7487831
Patent Number:	6755252
Patent Number:	6966375
Patent Number:	7270181
Patent Number:	6405803

Property Type	Number
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Patent Number:	6662876
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Patent Number:	6612481
Patent Number:	6732806
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Patent Number:	7073601
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Patent Number:	6712153
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Patent Number:	7789135
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Patent Number:	7789137
Patent Number:	7779927
Patent Number:	7779928
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Patent Number:	6712151
Patent Number:	6976536
Patent Number:	6908121
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Patent Number:	7798223
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Patent Number:	7182141
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Patent Number:	6899186
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Patent Number:	6742598
Patent Number:	6732804

Property Type	Number
Patent Number:	6827148
Patent Number:	6691776
Patent Number:	7299872
Patent Number:	7152674
Patent Number:	6830103
Patent Number:	6769491
Patent Number:	6622795
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Patent Number:	6601671
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Patent Number:	6813013
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Patent Number:	6685361
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Patent Number:	6445868
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Patent Number:	6443226

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Patent Number:	7311346
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Patent Number:	7174963
Patent Number:	8563481
Patent Number:	9234125
Patent Number:	6454005
Patent Number:	6502637
Patent Number:	7576038
Patent Number:	6921742
Patent Number:	7028771

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Patent Number:	7255173
Patent Number:	7475732
Patent Number:	7690432
Patent Number:	7350590
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Patent Number:	6953096
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Patent Number:	6915686
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Patent Number:	6957574
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Patent Number:	7163055
Patent Number:	6966367
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Patent Number:	7717182
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Patent Number:	6668684
Patent Number:	7028787
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Patent Number:	8569686
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Patent Number:	7447390
Patent Number:	7497267
Patent Number:	7886819
Patent Number:	7490675
Patent Number:	7806188
Patent Number:	6566649
Patent Number:	6590202
Patent Number:	6700115
Patent Number:	6703837
Patent Number:	6585061
Patent Number:	6646441
Patent Number:	6577129
Patent Number:	6666285
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Patent Number:	6815954
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Patent Number:	6662885
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Patent Number:	7571768
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Patent Number:	8141628
Patent Number:	8279713
Patent Number:	7864629
Patent Number:	9121970
Patent Number:	9885796
Patent Number:	7766098

Property Type	Number
Patent Number:	7885142
Patent Number:	9784057
Patent Number:	8324912
Patent Number:	9581580
Patent Number:	8286732
Patent Number:	8556002
Patent Number:	7755973
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Patent Number:	RE45226
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Patent Number:	8164050
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Property Type	Number
Patent Number:	7600566
Patent Number:	7409998
Patent Number:	RE42030
Patent Number:	7578352
Patent Number:	7585107
Patent Number:	7874352
Patent Number:	10138690
Patent Number:	8567512
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Property Type	Number
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Patent Number:	8141634
Patent Number:	8347964
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Property Type	Number
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Property Type	Number
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Patent Number:	8893779

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Property Type	Number
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Property Type	Number
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Patent Number:	10480291
Patent Number:	10465485

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ATTORNEY DOCKET NUMBER:	1989.677
NAME OF SUBMITTER:	NANCY BROUGHER
SIGNATURE:	/njb/
DATE SIGNED:	12/18/2019

Total Attachments: 115

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**CONFIRMATORY GRANT OF SECURITY INTEREST
IN UNITED STATES PATENTS**

THIS CONFIRMATORY GRANT OF SECURITY INTEREST IN UNITED STATES PATENTS (this "Confirmatory Grant") is made effective as of December 13, 2019 by and from the entities listed on the signature pages hereto (each such entity, together with any other entities that become party to this Confirmatory Grant, being individually referred to herein as a "Grantor" and collectively as the "Grantors"), to and in favor of Wells Fargo Bank, National Association, in its capacity as administrative agent (the "Grantee") for itself and on behalf and for the benefit of the other Secured Parties (as defined in the Security Agreement referenced below).

WHEREAS, WEATHERFORD INTERNATIONAL PLC, an Irish public limited company ("WIL-Ireland"), WEATHERFORD INTERNATIONAL LTD., a Bermuda exempted company limited by shares ("WIL-Bermuda"), WEATHERFORD INTERNATIONAL, LLC, a Delaware limited liability company ("WIL-Delaware"), those additional entities that hereafter become parties thereto as Borrowers in accordance with the terms thereof, the Lenders from time to time party thereto, the Grantee, and the Issuing Banks from time to time party thereto are parties to the Credit Agreement dated as of December 13, 2019 (as the same may be further amended, restated, supplemented or otherwise modified from time to time, the "Credit Agreement");

WHEREAS, the Grantors and the other grantors from time to time party thereto have entered into the U.S. Security Agreement dated as of December 13, 2019 (as the same may be amended, restated, supplemented or otherwise modified from time to time, the "Security Agreement");

WHEREAS, the Grantors own certain Patents (as defined in the Security Agreement), including without limitation the Patents listed on Exhibit A attached hereto, which Patents are issued or pending with the United States Patent and Trademark Office; and

WHEREAS, this Confirmatory Grant has been granted in conjunction with the security interest granted to the Grantee under the Security Agreement. The rights and remedies of the Grantee with respect to the security interest granted herein are without prejudice to and are in addition to those set forth in the Security Agreement and the other Loan Documents, all terms and provisions of which are incorporated herein by reference. In the event that any provisions of this Confirmatory Grant are deemed to conflict with the Security Agreement, the provisions of the Security Agreement shall govern.

NOW, THEREFORE, in consideration of the mutual covenants and agreements set forth herein and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, it is hereby agreed that:

1) Definitions. All capitalized terms not defined herein shall have the respective meanings given to them in the Credit Agreement.

2) The Security Interest.

(a) This Confirmatory Grant is made to secure the satisfactory performance and payment of the Secured Obligations (as defined in the Security Agreement). Upon payment in

full of the Secured Obligations in accordance with the terms of the Credit Agreement, the Grantee shall promptly execute, acknowledge, and deliver to the Grantors all reasonably requested instruments in writing or otherwise, releasing the security interest in the Patents acquired under this Confirmatory Grant. Notwithstanding the foregoing, the security interest in the Patents acquired under this Confirmatory Grant shall automatically be released and the Grantee shall promptly execute, acknowledge and deliver to the Grantors all reasonably requested instruments in writing or otherwise, evidencing such release, in each case, to the extent provided in and in accordance with Section 15.11 of the Credit Agreement.

(b) Each Grantor hereby pledges, assigns and grants to the Grantee, on behalf of and for the benefit of the Secured Parties, a security interest in (1) all of such Grantor's right, title and interest in and to the Patents now owned or hereafter acquired by such Grantor, including without limitation the Patents listed on Exhibit A hereto, together with (2) all proceeds and products of the Patents, and (3) all causes of action arising prior to or after the date hereof for infringement or other violation of the Patents or unfair competition regarding the same (collectively, the "Patent Collateral").

3) Counterparts. This Confirmatory Grant may be executed in any number of counterparts and by different parties in separate counterparts, each of which when so executed shall be deemed to be an original and all of which taken together shall constitute one and the same agreement. Signature pages may be detached from multiple separate counterparts and attached to a single counterpart.

4) Further Actions. Each Grantor authorizes and requests that the Commissioner for Patents of the United States Patent and Trademark Office and any other applicable government officer record this Confirmatory Grant. The Grantors shall take any further actions, including executing any further documentation, necessary to record, perfect or effectuate this Confirmatory Grant and the Grantee's security interest in the Patent Collateral.

5) Authorization to Supplement. If any Grantor shall obtain rights to any new Patents, the provisions of this Confirmatory Grant shall automatically apply thereto. Such Grantor hereby authorizes the Grantee, in consultation with such Grantor, to modify this Confirmatory Grant by amending Exhibit A solely to include any such new Patents of such Grantor. Notwithstanding the foregoing, no failure to so modify this Confirmatory Grant or amend Exhibit A shall in any way affect, invalidate or detract from the Grantee's continuing security interest in all Patent Collateral, whether or not listed on Exhibit A.

6) Governing Law. This Confirmatory Grant and the rights and obligations of the parties hereto shall be governed by, and construed and interpreted in accordance with, the internal laws of the State of New York.

IN WITNESS WHEREOF, the Grantor has executed this Confirmatory Grant of Security Interest in United States Patents effective as of the date first written above.

WEATHERFORD TECHNOLOGY
HOLDINGS, LLC

By: Christine M. Morrison
Name: Christine M. Morrison
Title: Vice President & Secretary

WEATHERFORD NETHERLANDS B.V.

By: _____
Name: August Wilhelm Vorstening
Title: Director

WEATHERFORD NORGE AS

By: _____
Name: Geir Egil Møller Disen
Title: Director

HIGH PRESSURE INTEGRITY, INC.

By: Christine M. Morrison
Name: Christine M. Morrison
Title: Vice President & Secretary

[Signature Page -- Confirmatory Grant of Security Interest in United States Patents]

IN WITNESS WHEREOF, the Grantor has executed this Confirmatory Grant of Security Interest in United States Patents effective as of the date first written above.

WEATHERFORD TECHNOLOGY
HOLDINGS, LLC

By: _____
Name: Christine M. Morrison
Title: Vice President & Secretary

WEATHERFORD NETHERLANDS B.V.

By: _____
Name: August Wilhelm Vorstweg
Title: Director

WEATHERFORD NORGE AS

By: _____
Name: Geir Egil Møller Olsen
Title: Director

HIGH PRESSURE INTEGRITY, INC.

By: _____
Name: Christine M. Morrison
Title: Vice President & Secretary

{Signature Page -- Confirmatory Grant of Security Interest in United States Patents}

IN WITNESS WHEREOF, the Grantor has executed this Confirmatory Grant of Security Interest in United States Patents effective as of the date first written above.

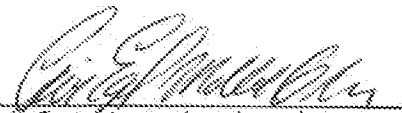
WEATHERFORD TECHNOLOGY
HOLDINGS, LLC

By: _____
Name: Christine M. Morrison
Title: Vice President & Secretary

WEATHERFORD NETHERLANDS B.V.

By: _____
Name: August Wilhelm Versteeg
Title: Director

WEATHERFORD NORGE AS

By: 
Name: Gail Egil Moller Olsen
Title: Director

HIGH PRESSURE INTEGRITY, INC.

By: _____
Name: Christine M. Morrison
Title: Vice President & Secretary

[Signature Page -- Confirmatory Grant of Security Interest in United States Patents]

PRECISION ENERGY SERVICES, INC.

By: Christine M. Morrison
Name: *Christine M. Morrison*
Title: *Vice President & Secretary*

WEATHERFORD CANADA LTD.

By: _____
Name: *Pamela M. Webb*
Title: *Director & Vice President*

WEATHERFORD SWITZERLAND TRADING
AND DEVELOPMENT GMBH

By: _____
Name:
Title:

PRECISION ENERGY SERVICES ULC

By: _____
Name: *Pamela M. Webb*
Title: *Director & Vice President*

[Signature Page -- Confirmatory Grant of Security Interest in United States Patents]

PRECISION ENERGY SERVICES, INC.

By: _____
Name: *Christine M. Morrison*
Title: *Vice President & Secretary*

WEATHERFORD CANADA LTD.

By: *Pm Webb*
Name: *Pamela M. Webb*
Title: *Director & Vice President*

WEATHERFORD SWITZERLAND TRADING
AND DEVELOPMENT GMBH

By: _____
Name: _____
Title: _____

PRECISION ENERGY SERVICES ULC

By: *Pm Webb*
Name: *Pamela M. Webb*
Title: *Director & Vice President*

[Signature Page – Confirmatory Grant of Security Interest in United States Patents]

PRECISION ENERGY SERVICES, INC.

By: _____
Name:
Title:

WEATHERFORD CANADA LTD.

By: _____
Name:
Title:

WEATHERFORD SWITZERLAND TRADING
AND DEVELOPMENT GMBH

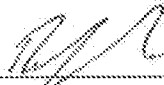

By: _____
Name: Mathias Neuenschwander
Title: Managing Officer

PRECISION ENERGY SERVICES ULC

By: _____
Name:
Title:

[Signature Page -- Confirmatory Grant of Security Interest in United States Patents]

WEATHERFORD U.K. LIMITED

By: 
Name: Richard Khalil Starcher
Title: Director

[Signature Page -- Confirmatory Grant of Security Interest in United States Patents]

**CONFIRMATORY GRANT OF SECURITY INTEREST
IN UNITED STATES PATENTS**

Exhibit A – SCHEDULE OF PATENTS

Title	Application #	Date Filed	Patent #	Grant Date	Assignee
Crossover Housing for Gas Lift Valve	09/803,635	Mar 9, 2001	6491105	Dec 10, 2002	Weatherford Technology Holdings, LLC
Auto Adjusting Well Control System	09/972,390	Oct 5, 2001	6595287	Jul 22, 2003	Weatherford Technology Holdings, LLC
An Artificial Lift Apparatus with Automated Monitoring Characteristics	09/790,855	Feb 22, 2001	6536522	Mar 25, 2003	Weatherford Technology Holdings, LLC
Apparatus and Methods for Conveying Instrumentation Within a Borehole Using Continuous Sucker Rod	10/127,021	Apr 19, 2002	6915849	Jul 12, 2005	Weatherford Technology Holdings, LLC
Improved Progressive Cavity Wellbore Pump for use in Artificial Lift Systems	09/891,150	Jun 25, 2001	6675902	Jan 13, 2004	Weatherford Technology Holdings, LLC
Sucker Rod Dimension Measurement and Flaw Detection System	09/940,865	Aug 28, 2001	6580268	Jun 17, 2003	Weatherford Technology Holdings, LLC
Hydraulic Multiphase Pump	10/036,737	Dec 21, 2001	6592334	Jul 15, 2003	Weatherford Technology Holdings, LLC
Kick Over Tool For Side Pocket Mandrel	10/259,803	Sep 27, 2002	6845817	Jan 25, 2005	Weatherford Technology Holdings, LLC
Intergrated Control System for Beam Pump Systems	10/350,157	Jan 23, 2003	7032659	Apr 25, 2006	Weatherford Technology Holdings, LLC
Rod Pump	10/347,132	Jan 17, 2003	6883612	Apr 26, 2005	Weatherford Technology Holdings, LLC
Methods and Apparatus for Applying Torque and Rotation to Connections	10/723,290	Nov 25, 2003	7296623	Nov 20, 2007	Weatherford Technology Holdings, LLC
Methods and Apparatus for Applying Torque and Rotation to Connections	11/930,287	Oct 31, 2007	7594540	Sep 29, 2009	Weatherford Technology Holdings, LLC
Reinforced Swelling Elastomer Seal Element on Expandable Tubular	10/317,843	Dec 12, 2002	6834725	Dec 28, 2004	Weatherford Technology Holdings, LLC

Power Tong	09/890,314	Jan 4, 2002	6684737	Feb 3, 2004	Weatherford Technology Holdings, LLC
Disconnect For Use in a Wellbore	10/237,565	Sep 9, 2002	7100696	Sep 5, 2006	Weatherford Technology Holdings, LLC
Core-Containing Sealing Assembly	09/584,974	Jun 1, 2000	6446717	Sep 10, 2002	Weatherford Technology Holdings, LLC
Apparatus and Method for Aligning Tubulars	10/100,814	Mar 19, 2002	6748823	Jun 15, 2004	Weatherford Technology Holdings, LLC
Apparatus and Method for Aligning Tubulars	09/958,917	Jan 29, 2002	7090254	Aug 15, 2006	Weatherford Technology Holdings, LLC
Methods and Apparatus for Connecting Tubulars Using a Top Drive	11/221,432	Sep 8, 2005	7617866	Nov 17, 2009	Weatherford Technology Holdings, LLC
Top Drive Casing System	09/550,721	Apr 17, 2000	6536520	Mar 25, 2003	Weatherford Technology Holdings, LLC
Top Drive Casing System	10/389,483	Mar 14, 2003	7712523	May 11, 2010	Weatherford Technology Holdings, LLC
Top Drive Casing System	11/932,619	Oct 31, 2007	7793719	Sep 14, 2010	Weatherford Technology Holdings, LLC
Top Drive Casing System	13/078,743	Apr 1, 2011	8230933	Jul 31, 2012	Weatherford Technology Holdings, LLC
Top Drive Casing System	10/350,218	Jan 23, 2003	7918273	Apr 5, 2011	Weatherford Technology Holdings, LLC
Apparatus and Method for Facilitating the Connection of Pipes (Motor & Pump ...)	10/048,353	Jun 11, 2002	6745646	Jun 8, 2004	Weatherford Technology Holdings, LLC
High Expansion Packer	10/268,007	Oct 9, 2002	6827150	Dec 7, 2004	Weatherford Technology Holdings, LLC
Two Stage Dowhole Packer	09/703,259	Oct 31, 2000	6612372	Sep 2, 2003	Weatherford Technology Holdings, LLC
Apparatus and Methods for Placing Downhole Tools in a Wellbore	09/778,051	Feb 6, 2001	6736210	May 18, 2004	Weatherford Technology Holdings, LLC
Apparatus and Methods for Placing Downhole Tools in a Wellbore	10/848,337	May 18, 2004	7000692	Feb 21, 2006	Weatherford Technology Holdings, LLC

Power Tong Frames	10/432,059	May 15, 2003	7921750	Apr 12, 2011	Weatherford Technology Holdings, LLC
Completion Apparatus and Methods for Use in Hydrocarbon Wells	09/692,592	Oct 19, 2000	6845820	Jan 25, 2005	Weatherford Technology Holdings, LLC
Completion Apparatus and Methods for Use in Hydrocarbon Wells	11/009,685	Dec 10, 2004	7163057	Jan 16, 2007	Weatherford Technology Holdings, LLC
Completion Apparatus and Methods for Use in Hydrocarbon Wells	11/623,253	Jan 15, 2007	7325609	Feb 5, 2008	Weatherford Technology Holdings, LLC
Completion Apparatus and Methods for Use in Hydrocarbon Wells	12/026,387	Feb 5, 2008	7520328	Apr 21, 2009	Weatherford Technology Holdings, LLC
Tubular Joint Detection System	10/276,970	Jun 30, 2003	8485067	Jul 16, 2013	Weatherford Technology Holdings, LLC
Fracturing Port Collar for Wellbore Pack-Off System, and Method for Using Same	10/073,685	Feb 11, 2002	6695057	Feb 24, 2004	Weatherford Technology Holdings, LLC
Filtered Actuator Port for Hydraulically Actuated Downhole Tools	10/726,274	Dec 2, 2003	7114558	Oct 3, 2006	Weatherford Technology Holdings, LLC
Apparatus and Methods for Use of Wellscreen in a Wellbore	09/757,307	Jan 9, 2001	6698518	Mar 2, 2004	Weatherford Technology Holdings, LLC
Flow Actuated Shut-Off Valve	09/459,684	Dec 13, 1999	6349771	Feb 26, 2002	Weatherford Technology Holdings, LLC
Apparatus and Method for Facilitating the Connection of Tubulars Using a Top Drive	95/001,117	Nov 18, 2008	7213656C1	Apr 5, 2013	Weatherford Technology Holdings, LLC
High Expansion Non-Elastomeric Straddle Tool	10/339,375	Jan 9, 2003	7004248	Feb 28, 2006	Weatherford Technology Holdings, LLC
Hydraulically Activated Selective Circulating/Reverse Circulating Packer Assembly	09/784,650	Feb 15, 2001	6554076	Apr 29, 2003	Weatherford Technology Holdings, LLC
Apparatus and a Method for Facilitating the Connection of Pipes	09/890,194	Jul 26, 2001	6598501	Jul 29, 2003	Weatherford Technology Holdings, LLC
Running Tool and Wellbore Component Assembly	09/819,013	Mar 27, 2001	6736214	May 18, 2004	Weatherford Technology Holdings, LLC

A Connection Arrangement for a Two-Piece Annular Body	09/483,338	Jan 14, 2000	6250406	Jun 26, 2001	Weatherford Technology Holdings, LLC
Downhole Electromagnetic Logging into Place Tool	09/778,357	Feb 6, 2001	6516663	Feb 11, 2003	Weatherford Technology Holdings, LLC
Hydraulic Running Tool with Torque Dampener	09/734,489	Dec 11, 2000	6467547	Oct 22, 2002	Weatherford Technology Holdings, LLC
Pipe Assembly with a Plurality of Outlets for use in a Wellbore and Method for Running such a Pipe Assembly	09/869,748	Sep 4, 2001	6668937	Dec 30, 2003	Weatherford Technology Holdings, LLC
Transport and Support Frame for a BOP Assembly	09/692,513	Oct 19, 2000	6494268	Dec 17, 2002	Weatherford Technology Holdings, LLC
Internal Riser Rotating Control Head	10/281,534	Oct 28, 2002	7159669	Jan 9, 2007	Weatherford Technology Holdings, LLC
Internal Riser Rotating Control Head	11/284,308	Nov 21, 2005	7258171	Aug 21, 2007	Weatherford Technology Holdings, LLC
Internal Riser Rotating Control Head	09/516,368	Mar 1, 2000	6470975	Oct 29, 2002	Weatherford Technology Holdings, LLC
Tubing Anchor	09/469,526	Dec 22, 1999	6702029	Mar 9, 2004	Weatherford Technology Holdings, LLC
Tubing Anchor	10/661,446	Sep 11, 2003	6976539	Dec 20, 2005	Weatherford Technology Holdings, LLC
Apparatus for Use in a Wellbore	10/037,529	Jan 4, 2002	6715567	Apr 6, 2004	Weatherford Technology Holdings, LLC
Apparatus and Methods for Utilizing Expandable Sand Screen in Wellbores	09/849,624	May 4, 2001	6510896	Jan 28, 2003	Weatherford Technology Holdings, LLC
Apparatus and Methods for Utilizing Expandable Sand Screen in Wellbores	10/347,527	Jan 17, 2003	6832649	Dec 21, 2004	Weatherford Technology Holdings, LLC
Downhole Apparatus	09/660,774	Sep 13, 2000	6513588	Feb 4, 2003	Weatherford Technology Holdings, LLC
Filter for Subterranean Wells	09/480,245	Jan 11, 2000	6352111	Mar 5, 2002	Weatherford Technology Holdings, LLC

Expander	09/990,772	Nov 16, 2001	6805196	Oct 19, 2004	Weatherford Technology Holdings, LLC
Apparatus and Methods for Tubular Makeup Interlock	09/860,127	May 17, 2001	6742596	Jun 1, 2004	Weatherford Technology Holdings, LLC
Apparatus and Methods for Tubular Makeup Interlock	10/625,840	Jul 23, 2003	7073598	Jul 11, 2006	Weatherford Technology Holdings, LLC
Apparatus and Methods for Tubular Makeup Interlock	95/001,116	Nov 18, 2008	7281587C1	Jul 18, 2013	Weatherford Technology Holdings, LLC
Apparatus and Methods for Tubular Makeup Interlock	11/872,307	Oct 15, 2007	7896084	Mar 1, 2011	Weatherford Technology Holdings, LLC
Apparatus and Methods for Tubular Makeup Interlock	13/029,519	Feb 17, 2011	8251151	Aug 28, 2012	Weatherford Technology Holdings, LLC
Apparatus and Methods for Tubular Makeup Interlock	13/564,315	Aug 1, 2012	8517090	Aug 27, 2013	Weatherford Technology Holdings, LLC
Apparatus and Methods for Tubular Makeup Interlock	10/801,514	Mar 16, 2004	6938697	Sep 6, 2005	Weatherford Technology Holdings, LLC
Apparatus to Actuate a Downhole Tool	09/547,068	Apr 11, 2000	6364037	Apr 2, 2002	Weatherford Technology Holdings, LLC
Apparatus to Actuate a Downhole Tool	10/041,901	Jan 8, 2002	6550551	Apr 22, 2003	Weatherford Technology Holdings, LLC
Sand Removal and Device Retrieval Tool	09/536,937	Mar 27, 2000	6427776	Aug 6, 2002	Weatherford Technology Holdings, LLC
Sand Removal and Device Retrieval Tool	10/163,814	Jun 6, 2002	6640904	Nov 4, 2003	Weatherford Technology Holdings, LLC
Sand Removal and Device Retrieval Tool	10/388,869	Mar 14, 2003	6719056	Apr 13, 2004	Weatherford Technology Holdings, LLC
High Pressure Rotating Drilling Head Assembly with Hydraulically Removable Packer	09/550,508	Apr 17, 2000	6547002	Apr 15, 2003	Weatherford Technology Holdings, LLC
High Pressure Rotating Drilling Head Assembly with Hydraulically Removable Packer	10/783,108	Feb 20, 2004	7080685	Jul 25, 2006	Weatherford Technology Holdings, LLC
High Pressure Rotating Drilling Head Assembly	10/367,154	Feb 14, 2003	6702012	Mar 9, 2004	Weatherford Technology Holdings, LLC

with Hydraulically Removable Packer					
Dual Sensor Freepoint Tool	10/211,252	Aug 2, 2002	6851476	Feb 8, 2005	Weatherford Technology Holdings, LLC
Cutting Tool For Use in a Wellbore Tubular	11/052,939	Feb 8, 2005	7383876	Jun 10, 2008	Weatherford Technology Holdings, LLC
Downhole Sealing	09/470,154	Dec 22, 1999	6425444	Jul 30, 2002	Weatherford Technology Holdings, LLC
Downhole Sealing	10/145,599	May 14, 2002	6688400	Feb 10, 2004	Weatherford Technology Holdings, LLC
Downhole Sealing	10/748,592	Dec 30, 2003	7168497	Jan 30, 2007	Weatherford Technology Holdings, LLC
Method and Apparatus for Casing Exit System Using Coiled Tubing	09/608,196	Jun 30, 2000	6454007	Sep 24, 2002	Weatherford Technology Holdings, LLC
Method and Apparatus for Casing Exit System Using Coiled Tubing	10/950,223	Sep 24, 2004	RE43054	Jan 3, 2012	Weatherford Technology Holdings, LLC
Downhole Surge Pressure Reduction and Filtering Apparatus	09/524,180	Mar 13, 2000	6571869	Jun 3, 2003	Weatherford Technology Holdings, LLC
Downhole Surge Pressure Reduction and Filtering Apparatus	11/778,258	Jul 16, 2007	7487831	Feb 10, 2009	Weatherford Technology Holdings, LLC
Downhole Surge Pressure Reduction and Filtering Apparatus	10/324,412	Dec 20, 2002	6755252	Jun 29, 2004	Weatherford Technology Holdings, LLC
Downhole Surge Pressure Reduction and Filtering Apparatus	10/863,165	Jun 8, 2004	6966375	Nov 22, 2005	Weatherford Technology Holdings, LLC
Downhole Surge Pressure Reduction and Filtering Apparatus	11/245,494	Oct 7, 2005	7270181	Sep 18, 2007	Weatherford Technology Holdings, LLC
Differential Flow Control Valve	09/549,785	Apr 14, 2000	6405803	Jun 18, 2002	Weatherford Technology Holdings, LLC
Non-Cryogenic Production of Nitrogen for On-Site Injection in Well Clean Out	10/315,734	Dec 10, 2002	6929068	Aug 16, 2005	Weatherford Technology Holdings, LLC
Non-Cryogenic Production of Nitrogen for On-Site Injection in Well Clean Out	09/642,447	Aug 18, 2000	6494262	Dec 17, 2002	Weatherford Technology Holdings, LLC

Cleaning and Doping of Tubulars	10/333,763	Aug 29, 2003	7371289	May 13, 2008	Weatherford Technology Holdings, LLC
Flow Control Apparatus for Use in a Wellbore	09/685,368	Oct 10, 2000	6371210	Apr 16, 2002	Weatherford Technology Holdings, LLC
Method of Downhole Tubular Expansion	09/818,119	Mar 27, 2001	6662876	Dec 16, 2003	Weatherford Technology Holdings, LLC
Apparatus, Methods, and Applications for Expanding Tubulars in a Wellbore	09/990,092	Nov 21, 2001	6698517	Mar 2, 2004	Weatherford Technology Holdings, LLC
A Wellscreen	09/917,960	Jul 30, 2001	6612481	Sep 2, 2003	Weatherford Technology Holdings, LLC
One Trip Expansion Apparatus for Use in a Wellbore	10/060,029	Jan 29, 2002	6732806	May 11, 2004	Weatherford Technology Holdings, LLC
Profiled Encapsulation for Use with Instrumented Expandable Tubular Completions	09/964,160	Sep 26, 2001	6932161	Aug 23, 2005	Weatherford Technology Holdings, LLC
Profiled Encapsulation for Use with Instrumented Expandable Tubular Completions	11/183,440	Jul 18, 2005	7073601	Jul 11, 2006	Weatherford Technology Holdings, LLC
Profiled Recess for Instrumented Expandable Components	09/964,034	Sep 26, 2001	6877553	Apr 12, 2005	Weatherford Technology Holdings, LLC
Profiled Recess for Instrumented Expandable Components	11/103,907	Apr 12, 2005	7048063	May 23, 2006	Weatherford Technology Holdings, LLC
Resin Impregnated Continuous Fiber Plug with Non-Metallic Element System	09/893,505	Jun 27, 2001	6712153	Mar 30, 2004	Weatherford Technology Holdings, LLC
Resin Impregnated Continuous Fiber Plug with Non-Metallic Element System	11/101,855	Apr 8, 2005	7124831	Oct 24, 2006	Weatherford Technology Holdings, LLC
Non-Metallic Mandrel and Element System	12/645,954	Dec 23, 2009	7789135	Sep 7, 2010	Weatherford Technology Holdings, LLC
Non-Metallic Mandrel and Element System	12/646,014	Dec 23, 2009	7789136	Sep 7, 2010	Weatherford Technology Holdings, LLC

Non-Metallic Mandrel and Element System	12/646,066	Dec 23, 2009	7789137	Sep 7, 2010	Weatherford Technology Holdings, LLC
Non-Metallic Mandrel and Element System	12/646,055	Dec 23, 2009	7779927	Aug 24, 2010	Weatherford Technology Holdings, LLC
Non-Metallic Mandrel and Element System	12/646,087	Dec 23, 2009	7779928	Aug 24, 2010	Weatherford Technology Holdings, LLC
Translating Downhole Tool	11/021,121	Dec 22, 2004	7343977	Mar 18, 2008	Weatherford Technology Holdings, LLC
Tubing Expansion	10/114,923	Apr 3, 2002	6712151	Mar 30, 2004	Weatherford Technology Holdings, LLC
Tubing Expansion	10/805,914	Mar 22, 2004	6976536	Dec 20, 2005	Weatherford Technology Holdings, LLC
Locking Arrangement for a Threaded Connection	10/277,177	Oct 21, 2002	6908121	Jun 21, 2005	Weatherford Technology Holdings, LLC
Bore Isolation	10/328,500	Dec 24, 2002	7066259	Jun 27, 2006	Weatherford Technology Holdings, LLC
Bore Isolation	11/426,795	Jun 27, 2006	7798223	Sep 21, 2010	Weatherford Technology Holdings, LLC
Apparatus and Method for Mitigating Wear in Downhole Tools	09/647,336	Sep 29, 2000	6722559	Apr 20, 2004	Weatherford Technology Holdings, LLC
Drilling Bit for Drilling While Running Casing	10/168,676	Jun 21, 2002	7216727	May 15, 2007	Weatherford Technology Holdings, LLC
Drillable Drill Bit Nozzle	10/257,662	Mar 5, 2003	6848517	Feb 1, 2005	Weatherford Technology Holdings, LLC
Tubing Expansion	10/306,490	Nov 27, 2002	7144243	Dec 5, 2006	Weatherford Technology Holdings, LLC
Tubing Expansion	13/324,729	Dec 13, 2011	8641407	Feb 4, 2014	Weatherford Technology Holdings, LLC
Tubing Expansion	11/567,108	Dec 5, 2006	8075813	Dec 13, 2011	Weatherford Technology Holdings, LLC
Improved Expander Tool for Downhole Use	10/267,025	Oct 8, 2002	7182141	Feb 27, 2007	Weatherford Technology Holdings, LLC

System for Forming a Window and Drilling a Sidetrack Wellbore	10/079,139	Feb 20, 2002	6695056	Feb 24, 2004	Weatherford Technology Holdings, LLC
Apparatus and Method of Drilling with Casing	10/319,792	Dec 13, 2002	6899186	May 31, 2005	Weatherford Technology Holdings, LLC
Conducting System - Electric Drillstring	10/482,061	Jun 14, 2004	7114970	Oct 3, 2006	Weatherford Technology Holdings, LLC
Method and Apparatus to Reduce Downhole Surge Pressure	10/157,743	May 29, 2002	6834726	Dec 28, 2004	Weatherford Technology Holdings, LLC
Method for Expanding a Sand Screen	10/157,307	May 29, 2002	6742598	Jun 1, 2004	Weatherford Technology Holdings, LLC
Dynamic Mudcap Drilling and Well Control System	10/154,437	May 23, 2002	6732804	May 11, 2004	Weatherford Technology Holdings, LLC
A Downhole Tool for Use in a Wellbore	10/154,489	May 22, 2002	6827148	Dec 7, 2004	Weatherford Technology Holdings, LLC
Downhole Tool Retention Apparatus	09/995,942	Nov 28, 2001	6691776	Feb 17, 2004	Weatherford Technology Holdings, LLC
Hydraulic-Mechanical Jar Tool	10/496,265	May 20, 2004	7299872	Nov 27, 2007	Weatherford Technology Holdings, LLC
Disconnect Devices	10/433,270	Oct 6, 2003	7152674	Dec 26, 2006	Weatherford Technology Holdings, LLC
Improvements to Roller Subs	10/189,343	Jul 3, 2002	6830103	Dec 14, 2004	Weatherford Technology Holdings, LLC
An Anchoring and Sealing System for a Downhole Tool	10/165,613	Jun 7, 2002	6769491	Aug 3, 2004	Weatherford Technology Holdings, LLC
Flow Actuated Valve for use in a Wellbore	09/995,842	Nov 28, 2001	6622795	Sep 23, 2003	Weatherford Technology Holdings, LLC
Subsurface Valve with System and Method of Sealing	10/138,253	May 3, 2002	6854519	Feb 15, 2005	Weatherford Technology Holdings, LLC
Method and Apparatus for Locking Out a Subsurface Safety Valve	10/600,037	Jun 20, 2003	6991040	Jan 31, 2006	Weatherford Technology Holdings, LLC
Optical Sensor Having Differing Diameters	10/191,710	Jul 9, 2002	6668656	Dec 30, 2003	Weatherford Technology Holdings, LLC

Transmission Cable Optical Fiber Protector and Method	09/497,236	Feb 3, 2000	6496625	Dec 17, 2002	Weatherford Technology Holdings, LLC
Fiber Optic Pressure Sensor for DC Pressure and Temperature	09/548,792	Apr 13, 2000	6351987	Mar 5, 2002	Weatherford Technology Holdings, LLC
Speed of Sound Density Meter	10/010,183	Nov 7, 2001	6971259	Dec 6, 2005	Weatherford Technology Holdings, LLC
Phase Flow Measurement in Pipes Using a Density Meter	10/342,052	Jan 14, 2003	7059172	Jun 13, 2006	Weatherford Technology Holdings, LLC
Method and Apparatus for Seismically Surveying an Earth Formation in Relation to a Borehole	09/612,775	Jul 10, 2000	6601671	Aug 5, 2003	Weatherford Technology Holdings, LLC
Pressure Isolated Bragg Grating Temperature Sensor	09/456,113	Dec 6, 1999	6452667	Sep 17, 2002	Weatherford Technology Holdings, LLC
Pressure Isolated Bragg Grating Temperature Sensor	10/193,876	Jul 12, 2002	6813013	Nov 2, 2004	Weatherford Technology Holdings, LLC
A Fabry-Perot Element Based on a Large-Diameter Optical Waveguide	10/151,475	May 17, 2002	6898338	May 24, 2005	Weatherford Technology Holdings, LLC
A Fabry-Perot Element Based on a Large-Diameter Optical Waveguide	11/136,144	May 24, 2005	7209606	Apr 24, 2007	Weatherford Technology Holdings, LLC
Highly Sensitive Accelerometer	10/933,132	Sep 2, 2004	7013729	Mar 21, 2006	Weatherford Technology Holdings, LLC
Method and Apparatus for Determining Component Flow Rates for a Multi-Phase Flow	09/996,626	Nov 28, 2001	6898541	May 24, 2005	Weatherford Technology Holdings, LLC
High Accuracy Bragg Grating Based Pressure Sensor with Dual Resolution Mode	09/487,155	Jan 19, 2000	6414303	Jul 2, 2002	Weatherford Technology Holdings, LLC
Circumferential Strain Attenuator	09/726,061	Nov 29, 2000	6550342	Apr 22, 2003	Weatherford Technology Holdings, LLC
Circumferential Strain Attenuator	10/387,722	Mar 13, 2003	6868737	Mar 22, 2005	Weatherford Technology Holdings, LLC

Fluid Diffusion Resistant Glass-Encased Fiber Optic Sensor	09/494,417	Jan 31, 2000	6626043	Sep 30, 2003	Weatherford Technology Holdings, LLC
Fluid Diffusion Resistant Glass-Encased Fiber Optic Sensor	10/427,335	May 1, 2003	6877378	Apr 12, 2005	Weatherford Technology Holdings, LLC
Fluid Diffusion Resistant Glass-Encased Fiber Optic Sensor	11/104,180	Apr 12, 2005	7036379	May 2, 2006	Weatherford Technology Holdings, LLC
Fiber Optic Cable Connectors for Downhole Applications	09/594,645	Jun 15, 2000	6685361	Feb 3, 2004	Weatherford Technology Holdings, LLC
Fiber Optic Cable Connector with a Plurality of Alignment Features	10/772,091	Feb 3, 2004	7052185	May 30, 2006	Weatherford Technology Holdings, LLC
Fiber Optic Sleeve Assembly for Use at a Splice Junction of a Fiber Optic Cable	09/497,237	Feb 3, 2000	6338579	Jan 15, 2002	Weatherford Technology Holdings, LLC
Distributed Sound Speed Measurements for Multiphase Flow Measurement	09/519,785	Mar 7, 2000	6601458	Aug 5, 2003	Weatherford Technology Holdings, LLC
Distributed Sound Speed Measurements for Multiphase Flow Measurement	10/256,760	Sep 27, 2002	6813962	Nov 9, 2004	Weatherford Technology Holdings, LLC
Optical Fiber Feedthrough Assembly and Method of Making Same	09/628,114	Jul 28, 2000	6445868	Sep 3, 2002	Weatherford Technology Holdings, LLC
Optical Fiber Bulkhead Feedthrough Assembly and Method of Making Same	09/628,264	Jul 28, 2000	6526212	Feb 25, 2003	Weatherford Technology Holdings, LLC
Apparatus for Protecting Sensing Devices	09/726,060	Nov 29, 2000	6501067	Dec 31, 2002	Weatherford Technology Holdings, LLC
Method and System for Determining the Speed of Sound in a Fluid Within a Conduit	09/997,221	Nov 28, 2001	6587798	Jul 1, 2003	Weatherford Technology Holdings, LLC
Method and Apparatus for Determining the Flow Velocity within a Pipe	09/729,994	Dec 4, 2000	6609069	Aug 19, 2003	Weatherford Technology Holdings, LLC
Apparatus for Protecting Sensors within a Well Environment	09/740,757	Nov 29, 2000	6443226	Sep 3, 2002	Weatherford Technology Holdings, LLC

Apparatus for Sensing Fluid in a Pipe	09/740,760	Nov 29, 2000	6782150	Aug 24, 2004	Weatherford Technology Holdings, LLC
Non-Intrusive Temperature Sensor for Measuring Internal Temperature of Fluids within Pipes	09/726,062	Nov 29, 2000	6558036	May 6, 2003	Weatherford Technology Holdings, LLC
Method and Apparatus for Interrogating Fiber Optic Sensors	09/726,059	Nov 29, 2000	6785004	Aug 31, 2004	Weatherford Technology Holdings, LLC
Large Diameter Optical Waveguide, Grating and Laser	09/455,868	Dec 6, 1999	6982996	Jan 3, 2006	Weatherford Technology Holdings, LLC
Large Diameter Optical Waveguide, Grating and Laser	11/324,759	Jan 3, 2006	7437043	Oct 14, 2008	Weatherford Technology Holdings, LLC
Large Diameter Optical Waveguide, Grating and Laser	13/316,069	Dec 9, 2011	8244088	Aug 14, 2012	Weatherford Technology Holdings, LLC
Large Diameter Optical Waveguide, Grating and Laser	12/199,584	Aug 27, 2008	8111963	Feb 7, 2012	Weatherford Technology Holdings, LLC
Method and Apparatus for Calibrating a Distributed Temperature Sensing System	10/153,199	May 21, 2002	6807324	Oct 19, 2004	Weatherford Technology Holdings, LLC
Venturi Augmented Flow Meter	10/186,382	Jun 28, 2002	6698297	Mar 2, 2004	Weatherford Technology Holdings, LLC
System and Method for Monitoring Performance of Downhole Equipment Using Fiber Optic Based Sensors	10/348,445	Jan 21, 2003	7028543	Apr 18, 2006	Weatherford Technology Holdings, LLC
Non-Intrusive Multiphase Flow Meter	10/348,040	Jan 21, 2003	6945095	Sep 20, 2005	Weatherford Technology Holdings, LLC
Side-Hole Cane Waveguide Sensor	10/371,910	Feb 21, 2003	6931188	Aug 16, 2005	Weatherford Technology Holdings, LLC
Side-Hole Cane Waveguide Sensor	12/716,035	Mar 2, 2010	8494322	Jul 23, 2013	Weatherford Technology Holdings, LLC
Side-Hole Cane Waveguide Sensor	13/922,816	Jun 20, 2013	8687926	Apr 1, 2014	Weatherford Technology Holdings, LLC
Side-Hole Cane Waveguide Sensor	14/169,969	Jan 31, 2014	9329334	May 3, 2016	Weatherford Technology Holdings, LLC

Side-Hole Cane Waveguide Sensor	11/179,868	Jul 12, 2005	7669440	Mar 2, 2010	Weatherford Technology Holdings, LLC
Sand Monitoring Within Wells Using Acoustic Arrays	10/392,493	Mar 19, 2003	6837098	Jan 4, 2005	Weatherford Technology Holdings, LLC
Sand Monitoring Within Wells Using Acoustic Arrays	11/028,974	Jan 4, 2005	7028538	Apr 18, 2006	Weatherford Technology Holdings, LLC
Optical Differential Pressure Transducer Utilizing a Bellows and Flexure Stsem	10/393,557	Mar 21, 2003	7047816	May 23, 2006	Weatherford Technology Holdings, LLC
Pressure Compensated Hydrophone	10/393,170	Mar 20, 2003	6882595	Apr 19, 2005	Weatherford Technology Holdings, LLC
Pressure Compensated Hydrophone	11/109,387	Apr 19, 2005	7082079	Jul 25, 2006	Weatherford Technology Holdings, LLC
Deployable Mandrel for Downhole Meaurements	10/384,269	Mar 7, 2003	6986276	Jan 17, 2006	Weatherford Technology Holdings, LLC
Method and Apparatus for Temperature Sensing Utilizing Optical Fiber	11/168,809	Jun 28, 2005	7008103	Mar 7, 2006	Weatherford Technology Holdings, LLC
Large Diameter Optical Waveguide Splice	10/755,708	Jan 12, 2004	8070369	Dec 6, 2011	Weatherford Technology Holdings, LLC
Large Diameter Optical Waveguide Splice	13/311,786	Dec 18, 2014	9477042	Oct 25, 2016	Weatherford Technology Holdings, LLC
Expandable Downhole Tubular	10/423,835	Apr 25, 2003	7077196	Jul 18, 2006	Weatherford Technology Holdings, LLC
Inflatable Packing Element	10/346,015	Jan 15, 2003	6779601	Aug 24, 2004	Weatherford Technology Holdings, LLC
Modular Liner Hanger	11/074,127	Mar 7, 2005	7128147	Oct 31, 2006	Weatherford Technology Holdings, LLC
High Torque Modified Profile Threaded Tubular Connection	10/095,124	Mar 11, 2002	6767035	Jul 27, 2004	Weatherford Technology Holdings, LLC
Gripping or Clamping Mechanisms	11/088,412	Mar 24, 2005	8186246	May 29, 2012	Weatherford Technology Holdings, LLC
Method for Installing an Expandable Coiled Tubing Patch	10/106,178	Mar 26, 2002	6668930	Dec 30, 2003	Weatherford Technology Holdings, LLC

Tube Manufacture	10/102,626	Mar 20, 2002	6745841	Jun 8, 2004	Weatherford Technology Holdings, LLC
Whipstock Assembly and Method of Manufacture	10/510,672	Aug 23, 2005	7353867	Apr 8, 2008	Weatherford Technology Holdings, LLC
Whipstock Assembly for Forming a Window Within a Wellbore Casing	12/099,659	Apr 8, 2008	8245774	Aug 21, 2012	Weatherford Technology Holdings, LLC
Closed Loop Multiphase Underbalanced Drilling Process	10/192,784	Jul 10, 2002	7178592	Feb 20, 2007	Weatherford Technology Holdings, LLC
Closed Loop Multiphase Underbalanced Drilling Process	12/027,071	Feb 6, 2008	7654319	Feb 2, 2010	Weatherford Technology Holdings, LLC
Apparatus for Releasing a Ball into a Wellbore	10/867,960	Jun 15, 2004	7143831	Dec 5, 2006	Weatherford Netherlands B.V.
Apparatus for Releasing a Ball into a Wellbore	10/208,724	Jul 30, 2002	6802372	Oct 12, 2004	Weatherford Netherlands B.V.
Window Forming by Flame Cutting	09/483,437	Jan 14, 2000	6722435	Apr 20, 2004	Weatherford Technology Holdings, LLC
Flush Mounted Spider	10/207,542	Jul 29, 2002	6892835	May 17, 2005	Weatherford Technology Holdings, LLC
Flush Mounted Spider	11/566,482	Dec 4, 2006	7665551	Feb 23, 2010	Weatherford Technology Holdings, LLC
Inflation Tool with Real-Time Temperature and Pressure Probes	10/212,672	Aug 5, 2002	6886631	May 3, 2005	Weatherford Technology Holdings, LLC
Inflation Tool with Real-Time Temperature and Pressure Probes	10/938,335	Sep 10, 2004	7073580	Jul 11, 2006	Weatherford Technology Holdings, LLC
SLICKLINE POWER CONTROL INTERFACE	10/212,673	Aug 5, 2002	6945330	Sep 20, 2005	Weatherford Technology Holdings, LLC
SLICKLINE POWER CONTROL INTERFACE	11/209,899	Aug 23, 2005	7152680	Dec 26, 2006	Weatherford Technology Holdings, LLC
Mechanically Opened Ball Seat and Expandable Ball Seat	10/227,148	Aug 23, 2002	6866100	Mar 15, 2005	Weatherford Technology Holdings, LLC
Downhole Milling Machine and Method of Use	10/407,391	Apr 4, 2003	7188674	Mar 13, 2007	Weatherford Technology Holdings, LLC
Downhole Milling Machine and Method of Use	11/685,595	Mar 13, 2007	7373983	May 20, 2008	Weatherford Technology Holdings, LLC

Automated Pipe Jointing System and Method	10/242,303	Sep 12, 2002	7114235	Oct 3, 2006	Weatherford Technology Holdings, LLC
Tubing Connector Arrangement	10/664,584	Sep 17, 2003	7240928	Jul 10, 2007	Weatherford Technology Holdings, LLC
Tubing Connector Arrangement	11/773,613	Jul 5, 2007	7559582	Jul 14, 2009	Weatherford Technology Holdings, LLC
Method of Coupling Expandable Tubing Sections	12/502,399	Jul 14, 2009	8136216	Mar 20, 2012	Weatherford Technology Holdings, LLC
Method of Hydraulically Actuating and Mechanically Activating a Downhole Mechanical Apparatus	10/251,635	Sep 20, 2002	7077212	Jul 18, 2006	Weatherford Technology Holdings, LLC
Choke Valve Assembly for Downhole Flow Control	10/321,288	Dec 17, 2002	6860330	Mar 1, 2005	Weatherford Technology Holdings, LLC
Internal Pressure Indicator and Locking Mechanism	10/259,218	Sep 27, 2002	6851491	Feb 8, 2005	Weatherford Technology Holdings, LLC
Method, Apparatus and System for Compensating the effects of Borehole Variations	10/293,708	Nov 13, 2002	6765385	Jul 20, 2004	Weatherford Technology Holdings, LLC
Borehole Compensation System and Method for a Resistivity Logging Tool	10/895,613	Jul 20, 2004	6961663	Nov 1, 2005	Weatherford Technology Holdings, LLC
Downhole Filter	10/693,185	Oct 24, 2003	7093653	Aug 22, 2006	Weatherford Technology Holdings, LLC
Downhole Filter	10/900,076	Jul 27, 2004	7188687	Mar 13, 2007	Weatherford Technology Holdings, LLC
Wellbore Isolation Apparatus, and Method for Tripping Pipe During Underbalance Drilling	10/270,015	Oct 11, 2002	7086481	Aug 8, 2006	Weatherford Technology Holdings, LLC
Milling Tool Insert	10/680,725	Oct 7, 2003	7108064	Sep 19, 2006	Weatherford Technology Holdings, LLC
Connector and Method of Use of the Connector	10/031,207	Jul 2, 2002	7011344	Mar 14, 2006	Weatherford Norge AS
Method and Apparatus for Operation in	10/111,984	Sep 4, 2002	6684965	Feb 3, 2004	Weatherford Norge AS

Underground/Subsea Oil and Gas Wells					
Method and Apparatus for Operation in Underground/Subsea Oil and Gas Wells	10/770,666	Feb 3, 2004	6968904	Nov 29, 2005	Weatherford Norge AS
Hydraulic Jar Device	10/250,850	Jul 3, 2003	7163058	Jan 16, 2007	Weatherford Norge AS
Arrangement in a Gripper Mechanism for a Free Pipe/Rodlike End Portion of a Downhole Tool	10/506,128	Jul 1, 2005	7311346	Dec 25, 2007	Weatherford Norge AS
Hydraulic Cam Motor	10/432,128	May 20, 2003	7089847	Aug 15, 2006	Weatherford Norge AS
A Method and a Device for Pressure Controlled Sequential Operation	10/738,366	Dec 17, 2003	7264059	Sep 4, 2007	Weatherford Norge AS
A Device and A Method for Disconnecting a Tool from a Pipe String	10/803,351	Mar 18, 2004	7174963	Feb 13, 2007	Weatherford Norge AS
Corrosion Inhibitor Systems for Low, Moderate and High Temperature Fluids and Methods for Making and Using Same	11/066,600	Feb 25, 2005	8563481	Oct 22, 2013	Weatherford Technology Holdings, LLC
Corrosion Inhibitor Systems for Low, Moderate and High Temperature Fluids and Methods for Making and Using Same	14/059,105	Oct 21, 2013	9234125	Jan 12, 2016	Weatherford Technology Holdings, LLC
Treating Shale and Clay in Hydrocarbon Producing Formations with Combinations of Guar and Potassium Formate	09/803,501	Mar 9, 2001	6454005	Sep 24, 2002	Weatherford Technology Holdings, LLC
Treating Shale and Clay in Hydrocarbon Producing Formations	09/812,422	Mar 20, 2001	6502637	Jan 7, 2003	Weatherford Technology Holdings, LLC
Well Drilling Fluids	11/186,184	Jul 21, 2005	7576038	Aug 18, 2009	Weatherford Technology Holdings, LLC
Well Drilling Fluids	10/223,259	Aug 19, 2002	6921742	Jul 26, 2005	Weatherford Technology Holdings, LLC
Hydrocarbon Recovery	10/159,176	May 30, 2002	7028771	Apr 18, 2006	Weatherford Technology Holdings, LLC

Novel Foamer Composition and Methods for Making and Using Same	10/745,290	Dec 23, 2003	9018145	Apr 25, 2015	Weatherford Technology Holdings, LLC
Active/Passive Seal Rotating Control Head	10/285,336	Oct 31, 2002	7040394	May 9, 2006	Weatherford Technology Holdings, LLC
Instrumentation for a Downhole Deployment Valve	10/677,135	Oct 1, 2003	7255173	Aug 14, 2007	Weatherford Technology Holdings, LLC
Instrumentation for a Downhole Deployment Valve	11/743,808	May 3, 2007	7475732	Jan 13, 2009	Weatherford Technology Holdings, LLC
Apparatus and Methods for Utilizing a Downhole Deployment Valve	12/269,232	Nov 12, 2008	7690432	Apr 6, 2010	Weatherford Technology Holdings, LLC
Instrumentation for a Downhole Deployment Valve	10/288,229	Nov 5, 2002	7350590	Apr 1, 2008	Weatherford Technology Holdings, LLC
Apparatus and Method for Drilling with Casing	10/325,636	Dec 20, 2002	6854533	Feb 15, 2005	Weatherford Technology Holdings, LLC
Expandable Bit With Secondary Release Device	10/335,957	Dec 31, 2002	6953096	Oct 11, 2005	Weatherford Technology Holdings, LLC
Drilling with Concentric Strings of Casing	10/331,964	Dec 30, 2002	6857487	Feb 22, 2005	Weatherford Technology Holdings, LLC
Expandable Sealing Apparatus	10/328,708	Dec 23, 2002	6907937	Jun 21, 2005	Weatherford Technology Holdings, LLC
Expandable Sealing Apparatus	11/158,298	Jun 21, 2005	7070001	Jul 4, 2006	Weatherford Technology Holdings, LLC
Method and Apparatus for Surge Pressure Reduction in a Tool with Fluid Motivator	10/339,367	Jan 9, 2003	7069991	Jul 4, 2006	Weatherford Technology Holdings, LLC
Retrievable Pre-Milled Window with Deflector	10/335,979	Jan 2, 2003	6923274	Aug 2, 2005	Weatherford Technology Holdings, LLC
Control Apparatus for Automated Downhole Tools	10/763,577	Jan 22, 2004	7283060	Oct 16, 2007	Weatherford Technology Holdings, LLC
Linear Displacement Measurement Method and Apparatus	10/348,608	Jan 21, 2003	6994162	Feb 7, 2006	Weatherford Technology Holdings, LLC

Method and Apparatus for Controlling Wellbore Equipment	10/360,547	Feb 6, 2003	6896055	May 24, 2005	Weatherford Technology Holdings, LLC
Method and Apparatus for Controlling Wellbore Equipment	10/936,438	Sep 8, 2004	7264050	Sep 4, 2007	Weatherford Technology Holdings, LLC
Method of Reducing Inner Diameter of Welded Joints	10/360,546	Feb 6, 2003	7168606	Jan 30, 2007	Weatherford Technology Holdings, LLC
Acoustical Telemetry	10/367,645	Feb 14, 2003	7013989	Mar 21, 2006	Weatherford Technology Holdings, LLC
Screen Assembly With Flow Through Connections	10/372,631	Feb 21, 2003	7048061	May 23, 2006	Weatherford Technology Holdings, LLC
Downhole Sub For Instrumentation	10/364,311	Feb 11, 2003	6915686	Jul 12, 2005	Weatherford Technology Holdings, LLC
Gripping Insert and Method of Gripping a Tubular	10/787,846	Feb 26, 2004	7231984	Jun 19, 2007	Weatherford Technology Holdings, LLC
Drilling with Casing Latch	10/795,214	Mar 5, 2004	7360594	Apr 22, 2008	Weatherford Technology Holdings, LLC
Tong	10/794,792	Mar 5, 2004	7281451	Oct 16, 2007	Weatherford Technology Holdings, LLC
Methods and Apparatus for Handling and Drilling with Tubulars or Casing	10/795,129	Mar 5, 2004	7325610	Feb 5, 2008	Weatherford Technology Holdings, LLC
Methods and Apparatus for Handling and Drilling with Tubulars or Casing	11/932,769	Oct 31, 2007	7654325	Feb 2, 2010	Weatherford Technology Holdings, LLC
Full Bore Lined Wellbores	10/794,790	Mar 5, 2004	7413020	Aug 19, 2008	Weatherford Technology Holdings, LLC
Full Bore Lined Wellbores	12/194,349	Aug 19, 2008	7984763	Jul 26, 2011	Weatherford Technology Holdings, LLC
Drill Shoe	10/788,976	Feb 27, 2004	7096982	Aug 29, 2006	Weatherford Technology Holdings, LLC
Expansion Method	10/616,061	Jul 9, 2003	7077210	Jul 18, 2006	Weatherford Technology Holdings, LLC
Method and Apparatus for Handling Wellbore Tubulars	10/818,183	Apr 5, 2004	7370707	May 13, 2008	Weatherford Technology Holdings, LLC

Adjustable Deployment Mechanism for an Actively Clamped Tubing-Conveyed In-Well Seismic Station	10/641,402	Aug 14, 2003	6986389	Jan 17, 2006	Weatherford Technology Holdings, LLC
Tubing Connector and Method of Sealing Tubing Connections	10/848,544	May 18, 2004	7895726	Mar 1, 2011	Weatherford Technology Holdings, LLC
A Method for Making Large Diameter Optical Waveguide Having Bragg Grating and Being Configured for Reducing .	10/458,773	Jun 9, 2003	7080529	Jul 25, 2006	Weatherford Technology Holdings, LLC
Method for Making Large Diameter Multicore Optical Waveguide.	11/459,854	Jul 25, 2006	8769995	Jul 8, 2014	Weatherford Technology Holdings, LLC
Low-Loss Large-Diameter Pigtail	10/755,722	Jan 12, 2004	7430881	Oct 7, 2008	Weatherford Technology Holdings, LLC
Sensing Device Having a Large Diameter D-Shaped Optical Waveguide	13/311,854	Dec 6, 2011	8886001	Nov 11, 2014	Weatherford Technology Holdings, LLC
Apparatus and Method for Measuring Multi-Phase Flows in Pulp and Paper Industry Applications	10/636,095	Aug 7, 2003	7181955	Feb 27, 2007	Weatherford Technology Holdings, LLC
Reliable Outdoor Instrument Cooling System	10/619,936	Jul 15, 2003	6951114	Oct 4, 2005	Weatherford Technology Holdings, LLC
Fiber Optic Cable for Use in Harsh Environments	10/422,396	Apr 24, 2003	7024081	Apr 4, 2006	Weatherford Technology Holdings, LLC
Fiber Optic Cable Systems and Methods to Prevent Hydrogen Ingress	12/686,223	Jan 12, 2010	8111960	Feb 7, 2012	Weatherford Technology Holdings, LLC
Fiber Optic Cable Systems and Methods to Prevent Hydrogen Ingress	12/139,973	Jun 16, 2008	7646953	Jan 12, 2010	Weatherford Technology Holdings, LLC
Housing on The Exterior of a Well Casing for Optical Fibers Sensors	10/441,234	May 19, 2003	6840114	Jan 11, 2005	Weatherford Technology Holdings, LLC
Well Casing Integrity Monitoring System	10/441,233	May 19, 2003	6957574	Oct 25, 2005	Weatherford Technology Holdings, LLC

Optical Accelerometer of Displacement Device Using a Flexure System	10/452,124	Jun 2, 2003	6955085	Oct 18, 2005	Weatherford Technology Holdings, LLC
Protected Optical Fiber Cable and Hydrogen Gettering Agent	10/463,216	Jun 17, 2003	7082239	Jul 25, 2006	Weatherford Technology Holdings, LLC
Closed-Loop System to Complete Oil and Gas Wells	09/487,197	Jan 19, 2000	6397946	Jun 4, 2002	Weatherford Technology Holdings, LLC
Hydraulic Setting Tool for Liner Hanger	10/850,349	May 20, 2004	7114573	Oct 3, 2006	Weatherford Technology Holdings, LLC
Tubing Connector	10/866,319	Jun 11, 2004	7419193	Sep 2, 2008	Weatherford Technology Holdings, LLC
Packer With Metal Sealing Element	10/438,763	May 15, 2003	6962206	Nov 8, 2005	Weatherford Technology Holdings, LLC
Packer With Metal Sealing Element	11/158,184	Jun 21, 2005	7165622	Jan 23, 2007	Weatherford Technology Holdings, LLC
Automated Optical Inspection of Wire-Wrapped Well Screens	10/463,238	Jun 17, 2003	7102745	Sep 5, 2006	Weatherford Technology Holdings, LLC
Tubing Expansion	10/869,458	Jun 16, 2004	7255177	Aug 14, 2007	Weatherford Technology Holdings, LLC
Tubing Expansion	10/809,042	Mar 25, 2004	8746028	Jun 10, 2014	Weatherford Technology Holdings, LLC
Expansion Apparatus	10/886,513	Jul 7, 2004	7234532	Jun 26, 2007	Weatherford Technology Holdings, LLC
Apparatus for Wellbore Communication	10/888,554	Jul 9, 2004	7413018	Aug 19, 2008	Weatherford Technology Holdings, LLC
Apparatus for Wellbore Communication	12/193,917	Aug 19, 2008	7730968	Jun 8, 2010	Weatherford Technology Holdings, LLC
Method and Apparatus for Treating a Well	10/616,455	Jul 9, 2003	7128157	Oct 31, 2006	Weatherford Technology Holdings, LLC
Seal Arrangement	10/902,694	Jul 29, 2004	7370708	May 13, 2008	Weatherford Technology Holdings, LLC
Tubing Expansion Tool	10/913,791	Aug 6, 2004	7325618	Feb 5, 2008	Weatherford Technology Holdings, LLC

Placing Fiber Optic Sensor Line	10/642,402	Aug 15, 2003	6955218	Oct 18, 2005	Weatherford Technology Holdings, LLC
Placing Fiber Optic Sensor Line	11/253,072	Oct 18, 2005	7163055	Jan 16, 2007	Weatherford Technology Holdings, LLC
Methods and Apparatus for Drilling with a Multiphase Pump	10/606,652	Jun 26, 2003	6966367	Nov 22, 2005	Weatherford Technology Holdings, LLC
Method and Apparatus for Drilling with a Multiphase Pump	11/225,466	Sep 13, 2005	7066247	Jun 27, 2006	Weatherford Technology Holdings, LLC
Artificial Lift With Additional Gas Assist	10/648,814	Aug 26, 2003	7063161	Jun 20, 2006	Weatherford Technology Holdings, LLC
Artificial Lift With Additional Gas Assist	11/759,343	Jun 7, 2007	7717182	May 18, 2010	Weatherford Technology Holdings, LLC
Flow Meter Using an Exoanded Tube Section and Sensitive Differential Pressure Measurment	10/647,014	Aug 22, 2003	6910388	Jun 28, 2005	Weatherford Technology Holdings, LLC
Flow Meter Using an Expanded Tube Section and Sensitive Differential Pressure Measurment	11/168,819	Jun 28, 2005	7107860	Sep 19, 2006	Weatherford Technology Holdings, LLC
Flow Meter Using an Expanded Tube Section and Sensitive Differential Pressure Measurment	11/532,995	Sep 19, 2006	7320252	Jan 22, 2008	Weatherford Technology Holdings, LLC
Flow Meter Using an Expanded Tube Section and Sensitive Differential Pressure Measurment	12/017,934	Jan 22, 2008	7658117	Feb 9, 2010	Weatherford Technology Holdings, LLC
Drillable Inflatable Packer & Method of Use	09/940,067	Aug 27, 2001	6578638	Jun 17, 2003	Weatherford Technology Holdings, LLC
Method for Pressurized Mud Cap and Reverse Circulation Drilling from a Floating Drilling Rig Using a Sealed Marine Riser	10/666,088	Sep 19, 2003	7237623	Jul 3, 2007	Weatherford Technology Holdings, LLC
Cement-Through, Tubing Retrievable Safety Valve	10/853,568	May 25, 2004	7314091	Jan 1, 2008	Weatherford Technology Holdings, LLC

Adapter Frame For a Power Frame	10/945,568	Sep 20, 2004	7188548	Mar 13, 2007	Weatherford Technology Holdings, LLC
Automatic False Rotary	10/945,544	Sep 20, 2004	7314090	Jan 1, 2008	Weatherford Technology Holdings, LLC
Automatic False Rotary	11/943,641	Nov 21, 2007	7681631	Mar 23, 2010	Weatherford Technology Holdings, LLC
Friction Reducing Tool and Method for its Use in a Wellbore	09/889,766	Jan 3, 2002	6688409	Feb 10, 2004	Weatherford Technology Holdings, LLC
Whipstock Assembly	09/545,917	Apr 10, 2000	6464002	Oct 15, 2002	Weatherford Technology Holdings, LLC
Whipstock Assembly	10/226,917	Aug 23, 2002	6719045	Apr 13, 2004	Weatherford Technology Holdings, LLC
Permanent Downhole Deployment of Optical Sensors	10/676,376	Oct 1, 2003	7219729	May 22, 2007	Weatherford Technology Holdings, LLC
Vibration Damper Systems for Drilling with Casing	10/977,481	Oct 29, 2004	7409758	Aug 12, 2008	Weatherford Technology Holdings, LLC
Down-Hole Vane Motor	10/696,489	Oct 29, 2003	7172039	Feb 6, 2007	Weatherford Technology Holdings, LLC
Optical Connector Assembly	11/014,620	Dec 16, 2004	7264404	Sep 4, 2007	Weatherford Technology Holdings, LLC
Optical Connector Assembly	11/849,809	Sep 4, 2007	7703988	Apr 27, 2010	Weatherford Technology Holdings, LLC
Optical Connector Assembly	11/849,814	Sep 4, 2007	7844150	Nov 30, 2010	Weatherford Technology Holdings, LLC
Reciprocating Slickline Pump	10/737,703	Dec 15, 2003	7172028	Feb 6, 2007	Weatherford Technology Holdings, LLC
Feedthrough Fiber Strain Relief	11/012,501	Dec 15, 2004	7373072	May 13, 2008	Weatherford Technology Holdings, LLC
Splice for Optical Cable	10/730,716	Dec 8, 2003	6931194	Aug 16, 2005	Weatherford Technology Holdings, LLC
Seal Stack for Sliding Sleeve	10/748,695	Dec 30, 2003	7363981	Apr 29, 2008	Weatherford Technology Holdings, LLC

Flexible Wellbore Broach	11/037,793	Jan 18, 2005	7308940	Dec 18, 2007	Weatherford Technology Holdings, LLC
Pressure Sensor Assembly Suitable for Use in Harsh Environments	10/775,273	Feb 10, 2004	7017417	Mar 28, 2006	Weatherford Technology Holdings, LLC
Seal Assembly for Safety Valve	10/779,478	Feb 13, 2004	7055607	Jun 6, 2006	Weatherford Technology Holdings, LLC
Seal Assembly Energized with Floating Pistons	11/550,590	Oct 18, 2006	7779925	Aug 24, 2010	Weatherford Technology Holdings, LLC
Adjustable Rotating Guides for Spider or Elevator	10/794,800	Mar 5, 2004	6994176	Feb 7, 2006	Weatherford Technology Holdings, LLC
Adjustable Rotating Guides for Spider or Elevator	11/345,066	Feb 1, 2006	7448456	Nov 11, 2008	Weatherford Technology Holdings, LLC
Combined Bragg Grating Wavelength Interrogator and Brillouin Backscattering Measuring Instrument	10/696,766	Oct 29, 2003	7199869	Apr 3, 2007	Weatherford Technology Holdings, LLC
Gripping System for a Tong	11/080,233	Mar 15, 2005	7506564	Mar 24, 2009	Weatherford Technology Holdings, LLC
Apparatus and Methods for Installing Instrumentation Line in a Wellbore	10/812,273	Mar 29, 2004	7213657	May 8, 2007	Weatherford Technology Holdings, LLC
Expandable Tubulars	10/610,309	Jun 30, 2003	6966369	Nov 22, 2005	Weatherford Technology Holdings, LLC
Expandable Tubulars	10/848,558	May 17, 2004	7156179	Jan 2, 2007	Weatherford Technology Holdings, LLC
Apparatus and Methods for Connecting Tubulars	10/850,354	May 20, 2004	7707914	May 4, 2010	Weatherford Technology Holdings, LLC
Casing Running Head	10/850,347	May 20, 2004	7284617	Oct 23, 2007	Weatherford Technology Holdings, LLC
Method of Developing a Re-Entry into a Parent Wellbore from a Lateral Wellbore, and Bottom Hole Assembly for Milling	10/850,046	May 20, 2004	7487835	Feb 10, 2009	Weatherford Technology Holdings, LLC

Efficient Distributed Sensor Fiber	10/862,004	Jun 4, 2004	7113659	Sep 26, 2006	Weatherford Technology Holdings, LLC
Optical Wavelength Setermination Using Multiple Measurable Features	10/862,006	Jun 4, 2004	7109471	Sep 19, 2006	Weatherford Technology Holdings, LLC
Coupling and Sealing Tubulars in a Bore	11/140,184	May 27, 2005	7410001	Aug 12, 2008	Weatherford Technology Holdings, LLC
Methods and Apparatus for Reducing Electromagnetic Signal Noise	11/152,408	Jun 14, 2005	7243028	Jul 10, 2007	Weatherford Technology Holdings, LLC
Flow Nozzle Assembly	11/148,405	Jun 8, 2005	7373989	May 20, 2008	Weatherford Technology Holdings, LLC
Flow Nozzle Assembly	11/551,571	Oct 20, 2006	7597141	Oct 6, 2009	Weatherford Technology Holdings, LLC
Hybrid Threaded Connection for Expandable Tubulars	10/885,824	Jul 7, 2004	7452007	Nov 18, 2008	Weatherford Technology Holdings, LLC
Surge Reduction Bypass Valve	11/167,487	Jun 27, 2005	7299880	Nov 27, 2007	Weatherford Technology Holdings, LLC
Casing Feeder	11/185,281	Jul 20, 2005	7669662	Mar 2, 2010	Weatherford Technology Holdings, LLC
Compression-Tuned Bragg Grating and Laser	09/691,997	Oct 19, 2000	6363089	Mar 26, 2002	Weatherford Technology Holdings, LLC
Apparatus and Methods for Separating and Joining Tubulars in a Wellbore	09/712,789	Nov 13, 2000	6598678	Jul 29, 2003	Weatherford Technology Holdings, LLC
Apparatus and Methods for Separating and Joining Tubulars in a Wellbore	10/389,561	Mar 14, 2003	6851475	Feb 8, 2005	Weatherford Technology Holdings, LLC
Apparatus and Methods for Separating and Joining Tubulars in a Wellbore	10/348,617	Jan 22, 2003	6899181	May 31, 2005	Weatherford Technology Holdings, LLC
Methods and Apparatus for Connecting Tubulars while Drilling	10/382,080	Mar 5, 2003	7107875	Sep 19, 2006	Weatherford Technology Holdings, LLC
Tong for Wellbore Operations	10/011,049	Dec 7, 2001	6668684	Dec 30, 2003	Weatherford Technology Holdings, LLC

Tong for Wellbore Operations	10/748,119	Dec 30, 2003	7028787	Apr 18, 2006	Weatherford Technology Holdings, LLC
Methods and Apparatus for Expanding Tubulars Strings and Isolating Subterranean Zones	10/954,866	Sep 30, 2004	7275602	Oct 2, 2007	Weatherford Technology Holdings, LLC
Methods for Expanding Tubular Strings and Isolating Subterranean Zones	12/467,103	May 15, 2009	8006771	Aug 30, 2011	Weatherford Technology Holdings, LLC
Methods for Expanding Tubular Strings and Isolating Subterranean Zones	11/865,850	Oct 2, 2007	7543637	Jun 9, 2009	Weatherford Technology Holdings, LLC
Reaming Apparatus	11/273,892	Nov 14, 2005	7478548	Jan 20, 2009	Weatherford U.K. Limited
Reaming Apparatus	12/335,623	Dec 16, 2008	8490448	Jul 23, 2013	Weatherford U.K. Limited
Riser Rotating Control Device	10/995,980	Nov 23, 2004	7487837	Feb 10, 2009	Weatherford Technology Holdings, LLC
Non-Elastomer Cement Through Tubing Retrievable Safety Valve	11/255,349	Oct 21, 2005	7543651	Jun 9, 2009	Weatherford Technology Holdings, LLC
Shale Inhibition Additive for Oil/Gas down hole fluids and methods for making and using same	10/999,796	Nov 29, 2004	7268100	Sep 11, 2007	Weatherford Technology Holdings, LLC
Shale Inhibition Additive for Oil/Gas down hole fluids and methods for making and using same	11/891,317	Aug 9, 2007	7566686	Jul 28, 2009	Weatherford Technology Holdings, LLC
Flow Control Apparatus for Use in a Wellbore	11/013,863	Dec 16, 2004	7296633	Nov 20, 2007	Weatherford Technology Holdings, LLC
One-Way Valve for a Side Pocket Mandrel of a Gas Lift System	11/023,990	Dec 28, 2004	7228909	Jun 12, 2007	Weatherford Technology Holdings, LLC
Apparatus and Methods for Operating a Tool in a Wellbore	11/026,963	Dec 30, 2004	7513305	Apr 7, 2009	Weatherford Technology Holdings, LLC
Wellbore Tool with Disintegratable Components	11/018,406	Dec 21, 2004	7350582	Apr 1, 2008	Weatherford Technology Holdings, LLC

Wellbore Tool with Disintegratable Components	11/537,374	Sep 29, 2006	7798236	Sep 21, 2010	Weatherford Technology Holdings, LLC
One-Position Fill-Up and Circulating Tool	11/331,397	Jan 12, 2006	7694744	Apr 13, 2010	Weatherford Technology Holdings, LLC
Expandable Tubulars for Use in a Wellbore	11/359,083	Feb 22, 2006	7686076	Mar 30, 2010	Weatherford Technology Holdings, LLC
Water Detection and 3-Phase Fraction Measurement Systems	11/625,427	Jan 22, 2007	7834312	Nov 16, 2010	Weatherford Technology Holdings, LLC
Water Detection and 3-Phase Fraction Measurement Systems	12/947,586	Nov 16, 2010	8039793	Oct 18, 2011	Weatherford Technology Holdings, LLC
Water Detection and 3-Phase Fraction Measurement Systems	13/250,287	Sep 30, 2011	8274041	Sep 25, 2012	Weatherford Technology Holdings, LLC
Water Detection and 3-Phase Fraction Measurement Systems	13/593,844	Aug 24, 2012	8461519	Jun 11, 2013	Weatherford Technology Holdings, LLC
Multi-Channel Infrared Optical Phase Fraction Meter	11/065,489	Feb 24, 2005	7233001	Jun 19, 2007	Weatherford Technology Holdings, LLC
Multi-Channel Infrared Optical Phase Fraction Meter	11/764,658	Jun 18, 2007	8436309	May 7, 2013	Weatherford Technology Holdings, LLC
Multi-Channel Infrared Optical Phase Fraction Meter	13/761,953	Feb 7, 2013	8569686	Oct 29, 2013	Weatherford Technology Holdings, LLC
Polarization Controlling Optical Fiber Preform and Preform Fabrication Methods	11/364,122	Feb 28, 2006	8286450	Oct 16, 2012	Weatherford Technology Holdings, LLC
Polarization Controlling Optical Fiber Preform and Preform Fabrication Methods	13/612,152	Sep 12, 2012	8689587	Apr 8, 2014	Weatherford Technology Holdings, LLC
Deep Water Drilling with Casing	13/104,748	May 10, 2011	8360160	Jan 29, 2013	Weatherford Technology Holdings, LLC
Whipstock Anchor	11/368,210	Mar 3, 2006	7963341	Jun 21, 2011	Weatherford Technology Holdings, LLC
Balanced Line Safety Valve With Tubing Pressure Assist	11/069,781	Mar 1, 2005	7392849	Jul 1, 2008	Weatherford Technology Holdings, LLC
Valve for Controlling the Flow of Fluid Between an Interior	11/101,687	Apr 8, 2005	7500523	Mar 10, 2009	Weatherford Technology Holdings, LLC

Region of the Valve and an Exterior region of the Valve					
Valve for Controlling the Flow of Fluid Between an Interior Region of the Valve and an Exterior region of the Valve	12/365,634	Feb 4, 2009	8002039	Aug 23, 2011	Weatherford Technology Holdings, LLC
System for Logging Formations Surrounding a Wellbore	11/112,530	Apr 22, 2005	7407006	Aug 5, 2008	Weatherford Technology Holdings, LLC
Method and Apparatus for Friction Reduction in a Downhole Tool	11/152,409	Jun 14, 2005	7434627	Oct 14, 2008	Weatherford Technology Holdings, LLC
Method Of Estimating Pump Efficiency	11/172,214	Jun 29, 2005	7500390	Mar 10, 2009	Weatherford Technology Holdings, LLC
Method Of Estimating Pump Efficiency	12/400,852	Mar 10, 2009	7891237	Feb 22, 2011	Weatherford Technology Holdings, LLC
Optical Fiber Feedthru Using Axial Seals for Bi-Directional Sealing	12/050,655	Mar 18, 2008	7751677	Jul 6, 2010	Weatherford Technology Holdings, LLC
Optical Waveguide Feedthrough Assembly	11/172,616	Jun 30, 2005	8422835	Apr 16, 2013	Weatherford Technology Holdings, LLC
Optical Waveguide Feedthrough Assembly	13/795,323	Mar 12, 2013	9423564	Aug 23, 2016	Weatherford Technology Holdings, LLC
Optical Waveguide Feedthrough Assembly	15/185,311	Jun 17, 2016			Weatherford Technology Holdings, LLC
Pressure Transducer with Optical Waveguide Feedthrough Assembly	11/172,617	Jun 30, 2005	7447390	Nov 4, 2008	Weatherford Technology Holdings, LLC
Shunt Tube Connector Lock	11/154,180	Jun 16, 2005	7497267	Mar 3, 2009	Weatherford Technology Holdings, LLC
Shunt Tube Connector Lock	12/393,741	Feb 26, 2009	7886819	Feb 15, 2011	Weatherford Technology Holdings, LLC
Methods and Apparatus for Optimizing Well Production	11/180,200	Jul 13, 2005	7490675	Feb 17, 2009	Weatherford Technology Holdings, LLC
Methods and Apparatus for Optimizing Well Production	12/369,142	Feb 11, 2009	7806188	Oct 5, 2010	Weatherford Technology Holdings, LLC

Standoff Compensation for Nuclear Measurements	09/579,971	May 26, 2000	6566649	May 20, 2003	Weatherford Technology Holdings, LLC
Standoff Compensation for Nuclear Measurements	09/851,635	May 8, 2001	6590202	Jul 8, 2003	Weatherford Technology Holdings, LLC
Standoff Compensation for Nuclear Measurements	10/112,308	Mar 28, 2002	6700115	Mar 2, 2004	Weatherford Technology Holdings, LLC
Wellbore Resistivity Tool with Simultaneous Multiple Frequencies	09/662,973	Sep 15, 2000	6703837	Mar 9, 2004	Weatherford Technology Holdings, LLC
Calculating Directional Drilling Tool Face Offsets	09/976,129	Oct 15, 2001	6585061	Jul 1, 2003	Weatherford Technology Holdings, LLC
Well Logging System for Determining Resistivity Using Multiple Transmitter-Receiver Groups... Three	10/053,043	Jan 19, 2002	6646441	Nov 11, 2003	Weatherford Technology Holdings, LLC
Well Logging System for Determining Directional Resistivity Using Multiple Transmitter-Receiver Groups Focused...	10/053,041	Jan 19, 2002	6577129	Jun 10, 2003	Weatherford Technology Holdings, LLC
Logging-While-Drilling Apparatus and Methods for Measuring Density	10/078,199	Feb 15, 2002	6666285	Dec 23, 2003	Weatherford Technology Holdings, LLC
Gamma Ray Spectroscopy Logging-While-Drilling System	10/267,944	Oct 8, 2002	6927390	Aug 9, 2005	Weatherford Technology Holdings, LLC
Downhole Calibration System for Directional Sensors	10/359,372	Feb 4, 2003	6966211	Nov 22, 2005	Weatherford Technology Holdings, LLC
Extended Range EMF Antenna	10/511,739	Oct 5, 2005	7518527	Apr 14, 2009	Weatherford Technology Holdings, LLC
Downhole Clock Synchronization Apparatus and Methods for Use in a Borehole Drilling Environment	10/618,269	Jul 9, 2003	7230543	Jun 12, 2007	Weatherford Technology Holdings, LLC
Electromagnetic Borehole Telemetry System Incorporating a Conductive Borehole Tubular	10/649,431	Aug 27, 2003	7145473	Dec 5, 2006	Weatherford Technology Holdings, LLC

Electromagnetic Borehole Telemetry System Incorporating a Conductive Borehole Tubular	10/781,585	Feb 11, 2004	7126492	Oct 24, 2006	Weatherford Technology Holdings, LLC
Spectral Gamma Ray Logging-While-Drilling System	10/809,066	Mar 15, 2004	7253401	Aug 7, 2007	Weatherford Canada Ltd.
Gain Stabilization Apparatus and Methods for Spectral Gamma Ray Measurement System	11/050,005	Feb 1, 2005	7202456	Apr 10, 2007	Weatherford Technology Holdings, LLC
Logging Tool with Response Invariant to Changes in Borehole Pressure	10/990,174	Nov 16, 2004	7151254	Dec 19, 2006	Weatherford Canada Ltd.
Self Contained Temperature for Severe Drilling Environments	11/306,874	Jan 13, 2006	7644760	Jan 12, 2010	Weatherford Canada Ltd.
Method and Apparatus for Measuring Radiation in a Borehole	10/307,033	Nov 27, 2002	7139350	Nov 21, 2006	Weatherford Technology Holdings, LLC
Geometrically Optimized Fast Neutron Detector	09/808,216	Mar 14, 2001	6495837	Dec 17, 2002	Precision Energy Services, Inc.
Geometrically Optimized Fast Neutron Detector	09/805,798	Mar 14, 2001	6639210	Oct 28, 2003	Precision Energy Services, Inc.
Geometrically Optimized Fast Neutron Detector	09/808,621	Mar 14, 2001	6566657	May 20, 2003	Precision Energy Services, Inc.
Apparatus and Method for Actuating Arms	10/032,644	Dec 28, 2001	6702010	Mar 9, 2004	Precision Energy Services, Inc.
Electrical Measurement Apparatus and Method for Measuring an Electrical Characteristic of an Earth...	10/032,981	Dec 28, 2001	6653839	Nov 25, 2003	Precision Energy Services, Inc.
Method and Apparatus for Full Offset Resistivity Imaging for use in Boreholes	10/339,102	Jan 9, 2003	6815954	Nov 9, 2004	Precision Energy Services, Inc.
Apparatus and Method for Determining Density, Porosity, and Fluid Saturation of Formations...	10/852,443	May 24, 2004	6936812	Aug 30, 2005	Precision Energy Services, Inc.
Oil and Gas Well Tubular Inspection	10/307,094	Nov 27, 2002	6924640	Aug 2, 2005	Precision Energy Services, Inc.

System Using Hall Effect Sensors					
Method and Device for the Measurement of the Drift of a Borehole	10/207,383	Jul 30, 2002	6845563	Jan 25, 2005	Weatherford Canada Ltd.
Apparatus and Methods for Measurement of Density of Materials Using a Neutron Source and Two...	09/997,134	Nov 29, 2001	6738720	May 18, 2004	Precision Energy Services, Inc.
Method and Apparatus for Treating Pressurized Drilling Fluid Returns from a Well	09/626,857	Jul 27, 2000	6413297	Jul 2, 2002	Weatherford Canada Ltd.
Rotating Blowout Preventer with Independent Cooling Circuits and Thrust Bearing	09/735,385	Dec 12, 2000	6554016	Apr 29, 2003	Weatherford Canada Ltd.
Rotating Blowout Preventer with Independent Cooling Circuits and Thrust Bearing	10/423,105	Apr 25, 2003	6749172	Jun 15, 2004	Weatherford Canada Ltd.
Method of Dynamically Controlling Bottom Hole Circulation Pressure in a Wellbore	09/858,954	May 17, 2001	6607042	Aug 19, 2003	Weatherford Canada Ltd.
Method and Apparatus for Providing a Stream of Pressurized Substantially Inert Gas	09/983,461	Oct 24, 2001	6662885	Dec 16, 2003	Weatherford Canada Ltd.
Method and Apparatus for Separating and Measuring Solids from Multi-Phase Well Fluids	10/284,173	Oct 31, 2002	6790367	Sep 14, 2004	Weatherford Canada Ltd.
Method and Apparatus to Control the Rate of Flow of a Fluid Through a Conduit	10/807,372	Mar 24, 2004	7702423	Apr 20, 2010	Weatherford Canada Ltd.
Method of Dynamically Controlling Bottom Hole Circulation Pressure in a Wellbore	11/080,663	Mar 16, 2005	7407019	Aug 5, 2008	Weatherford Canada Ltd.
Method and Apparatus for Interconnected, Rolling Rig and Oilfield Building(s)	10/265,026	Oct 4, 2002	6962030	Nov 8, 2005	Weatherford Canada Ltd.

Detector Assemblies and Methods	09/931,552	Aug 16, 2001	6885188	Apr 26, 2005	Weatherford Technology Holdings, LLC
Method and Apparatus for Determining the Orientation of a Borehole	09/931,332	Aug 16, 2001	6728639	Apr 27, 2004	Weatherford Technology Holdings, LLC
Surveying of Boreholes	10/072,129	Feb 5, 2002	6637119	Oct 28, 2003	Weatherford Technology Holdings, LLC
Surveying of Boreholes	10/694,556	Oct 27, 2003	6854192	Feb 15, 2005	Weatherford Technology Holdings, LLC
Steerable Drill Bit Arrangement	10/536,684	May 27, 2005	7445060	Nov 4, 2008	Weatherford Technology Holdings, LLC
Borehole Surveying	10/666,314	Sep 18, 2003	6883240	Apr 26, 2005	Weatherford Technology Holdings, LLC
Controllable Stabilizer	09/494,110	Jan 28, 2000	6290003	Sep 18, 2001	Weatherford Technology Holdings, LLC
Transmitting Sensor Response Data and Power Through a Mud Motor	12/904,301	Oct 14, 2010	8011425	Sep 6, 2011	Weatherford Canada Ltd.
High Temperature Near Infrared for Measurements and Telemetry in Well Boreholes	11/166,879	Jun 24, 2005	7475593	Jan 13, 2009	Weatherford Technology Holdings, LLC
Method for Drilling with Improved Fluid Collection Pattern	10/557,573	Nov 21, 2005	7513304	Apr 7, 2009	Weatherford Canada Ltd.
Borehole Apparatus and Methods for Simultaneous Multimode Excitation and Reception to Determine...	11/348,216	Feb 6, 2006	7529150	May 5, 2009	Weatherford Canada Ltd.
Borehole Apparatus and Methods for Simultaneous Multimode Excitation and Reception to Determine...	12/413,027	Mar 27, 2009	7646674	Jan 12, 2010	Precision Energy Services ULC
Borehole Apparatus and Methods for Simultaneous Multimode Excitation	12/413,205	Mar 27, 2009	7755972	Jul 13, 2010	Precision Energy Services ULC

and Reception to Determine...					
Method and Apparatus for Perforating a Casing and Producing Hydrocarbons	11/740,171	Apr 25, 2007	7571768	Aug 11, 2009	Weatherford Technology Holdings, LLC
Method and Apparatus for Perforating a Casing and Producing Hydrocarbons	12/503,724	Jul 15, 2009	7905285	Mar 15, 2011	Weatherford Technology Holdings, LLC
System and Method for Releasing and Retrieving Memory Tool with Wireline in Well Pipe	11/423,909	Jun 13, 2006	7537061	May 26, 2009	Weatherford Technology Holdings, LLC
Electromagnetic Telemetry Apparatus and Methods for Minimizing Cyclical or Synchronous Noise	11/468,868	Aug 31, 2006	7609169	Oct 27, 2009	Weatherford Technology Holdings, LLC
Integrated Triaxial Antenna for Measurement-While Drilling	11/685,040	Mar 12, 2007	8378908	Feb 19, 2013	Weatherford Technology Holdings, LLC
Reduction of Standoff Effects in Acoustic Measurements	11/623,341	Jan 16, 2007	8194497	Jun 5, 2012	Weatherford Technology Holdings, LLC
Drilling System Comprising a Plurality of Borehole Telemetry Systems	11/567,994	Dec 7, 2006	7894302	Feb 22, 2011	Weatherford Technology Holdings, LLC
System and Method for Obtaining and Using Downhole Data During Well Control Operations	11/847,904	Aug 30, 2007	8781746	Jul 15, 2014	Weatherford Technology Holdings, LLC
System and Method for Reservoir Characterization Using Underbalanced Drilling Data	12/038,715	Feb 27, 2008	7806202	Oct 5, 2010	Weatherford Technology Holdings, LLC
Apparatus and Methods for Measuring Pressure Using a Dual Flow Line Formation Tester	11/855,577	Sep 14, 2007	7805999	Oct 5, 2010	Weatherford Technology Holdings, LLC
Deburring Tool	11/967,384	Dec 31, 2007	8141628	Mar 27, 2012	Weatherford Technology Holdings, LLC
Acoustic Transmitter Comprising a Plurality of Piezoelectric Plates	11/780,957	Jul 20, 2007	8279713	Oct 2, 2012	Weatherford Technology Holdings, LLC

Monopole Acoustic Transmitter Comprising a Plurality of Piezoelectric Discs	11/943,185	Nov 20, 2007	7864629	Jan 4, 2011	Weatherford Technology Holdings, LLC
Monopole Acoustic Transmitter Comprising Piezoelectric Material	12/943,171	Nov 10, 2010	9121970	Sep 1, 2015	Weatherford Technology Holdings, LLC
Monopole Acoustic Transmitter Ring Comprising Piezoelectric Material	14/810,916	Jul 28, 2015	9885796	Feb 6, 2018	Weatherford Technology Holdings, LLC
Directional Drilling Control Using Modulated Bit Rotation	11/848,328	Aug 31, 2007	7766098	Aug 3, 2010	Weatherford Technology Holdings, LLC
Method and Apparatus for Logging Foam Cements in Cased Holes	11/866,221	Oct 2, 2007	7885142	Feb 8, 2011	Weatherford Technology Holdings, LLC
Mechanical Bi-Directional Isolation Valve	12/112,092	Apr 30, 2008	9784057	Oct 10, 2017	Weatherford Technology Holdings, LLC
Measurement Tool and Method of Use	12/236,591	Sep 24, 2008	8324912	Dec 4, 2012	Weatherford Technology Holdings, LLC
Measurement Tool and Method of Use	13/661,676	Oct 26, 2012	9581580	Feb 28, 2017	Weatherford Technology Holdings, LLC
Steering Component Steering Assembly and Method of Steering a Drill Bit in a Borehole	12/480,104	Jun 8, 2009	8286732	Oct 16, 2012	Weatherford Technology Holdings, LLC
Steering Component, Steering Assembly and Method of Steering a Drill Bit in a Borehole	13/651,545	Oct 15, 2012	8556002	Oct 15, 2013	Weatherford Technology Holdings, LLC
Ultrasonic Logging Methods and Apparatus for Automatically Calibrating Measures of Acoustic Impedance of Cement and Other Materials Behind Casing	12/034,990	Feb 21, 2008	7755973	Jul 13, 2010	Weatherford Technology Holdings, LLC
Borehole Imaging and Standoff Determination Using Neutron Measurements	12/119,685	May 13, 2008	7544929	Jun 9, 2009	Weatherford Technology Holdings, LLC
Borehole Measurements Using a Fast and High Energy Resolution Gamma Ray Detector Assembly	13/967,230	Aug 14, 2013	USRE45226	Nov 4, 2014	Precision Energy Services, Inc.

Data Reduction of Images Measured in a Borehole	12/195,810	Aug 21, 2008	10302811	May 28, 2019	Weatherford Technology Holdings, LLC
Configurable Autonomus Led-Based Spectroscope for Downhole Use	12/613,700	Nov 6, 2009	8164050	Apr 24, 2012	Weatherford Technology Holdings, LLC
Multi-Channel Source Assembly for Downhole Spectroscopy	13/452,128	Apr 20, 2012	8536516	Sep 17, 2013	Precision Energy Services, Inc.
Filter Wheel Assembly for Downhole Spectroscopy	12/613,665	Nov 6, 2009	8436296	May 7, 2013	Weatherford Technology Holdings, LLC
Downhole Gas Breakout Sensor	12/894,342	Sep 30, 2010	8411262	Apr 2, 2013	Weatherford Technology Holdings, LLC
Refractive Index Sensor for Fluid Analysis	12/894,324	Sep 30, 2010	8542353	Sep 24, 2013	Weatherford Technology Holdings, LLC
Quintuplex Mud Pump	12/244,946	Oct 3, 2008	8083504	Dec 27, 2011	Weatherford Technology Holdings, LLC
Memory Logging System for Determining the Condition of a Sliding Sleeve	12/261,661	Oct 30, 2008	7810564	Oct 12, 2010	Weatherford Technology Holdings, LLC
Multi-Channel Detector Assembly for Downhole Spectroscopy	12/613,808	Nov 6, 2009	8735803	May 27, 2014	Weatherford Technology Holdings, LLC
Steerable Magnetic Dipole Antenna for Measurement-While-Drilling Applications	12/575,566	Oct 8, 2009	9366780	Jun 14, 2016	Weatherford Technology Holdings, LLC
Steerable Magnetic Dipole Antenna for Measurement-While-Drilling Applications	12/653,000	Jan 6, 2010	8471563	Jun 25, 2013	Weatherford Technology Holdings, LLC
Steerable Magnetic Dipole Antenna for Measurement-While-Drilling Applications	12/873,653	Sep 1, 2010	9140817	Sep 22, 2015	Weatherford Technology Holdings, LLC
Steerable Magnetic Dipole Antenna for Measurement-While-Drilling Applications	13/084,856	Apr 12, 2011	8604796	Dec 10, 2013	Weatherford Technology Holdings, LLC
Steerable Magnetic Dipole Antenna for Measurement While Drilling Applications	15/151,705	May 11, 2016	9885800	Feb 6, 2018	Precision Energy Services, Inc.

Analyzing Toolface Velocity to Detect Detrimental Vibration During Drilling	12/971,202	Dec 17, 2010	9366131	Jun 14, 2016	Weatherford Technology Holdings, LLC
Analyzing Toolface Velocity to Detect Detrimental Vibration During Drilling	15/160,300	May 20, 2016			Weatherford Technology Holdings, LLC
Method and Apparatus for Measuring Formation Anisotropy While Drilling	12/848,430	Aug 2, 2010	8797825	Aug 5, 2014	Weatherford Technology Holdings, LLC
Clustering Process for Analyzing Pressure Gradient Data	13/274,160	Oct 14, 2011	8918288	Dec 23, 2014	Weatherford Technology Holdings, LLC
Clustering Process for Analyzing Pressure Gradient Data	14/550,543	Jun 25, 2015	9581015	Feb 28, 2017	Precision Energy Services, Inc.
Autonomous Formation Pressure Test Process for Formation Evaluation Tool	13/188,947	Jul 13, 2011	8839668	Sep 23, 2014	Weatherford Technology Holdings, LLC
Autonomous Formation Pressure Test Process for Formation Evaluation Tool	14/467,504	Aug 25, 2014	9771797	Sep 26, 2017	Weatherford Technology Holdings, LLC
Valve for a Downhole Tool	13/586,381	Aug 15, 2012	9677348	Jun 13, 2017	Weatherford Technology Holdings, LLC
Analysis of Drillstring Dynamics Using an Angular Rate Sensor	13/651,138	Oct 15, 2012	10480304	Nov 19, 2019	Weatherford Technology Holdings, LLC
Sensor Mounting Assembly for Drill Collar Stabilizer	13/651,864	Oct 15, 2012	9243488	Jan 26, 2016	Weatherford Technology Holdings, LLC
Rotary Expansion	11/549,500	Oct 13, 2006	7836741	Nov 23, 2010	Weatherford Technology Holdings, LLC
Tubing Expansion	11/549,546	Oct 13, 2006	7500389	Mar 10, 2009	Weatherford Technology Holdings, LLC
Tubing Expansion	12/208,493	Sep 11, 2008	7634942	Dec 22, 2009	Weatherford Technology Holdings, LLC
Tubing Expansion	12/633,535	Dec 8, 2009	7913555	Mar 29, 2011	Weatherford Technology Holdings, LLC
Tubing Expansion	13/070,282	Mar 23, 2011	8549906	Oct 8, 2013	Weatherford Technology Holdings, LLC

A Method for Foaming a Hydrocarbon Drilling Fluid and for Producing Light Weight Hydrocarbon Fluids	11/293,859	Dec 2, 2005	7767628	Aug 3, 2010	Weatherford Technology Holdings, LLC
Collar Locator for Slick Pump	11/291,299	Dec 1, 2005	7600566	Oct 13, 2009	Weatherford Technology Holdings, LLC
Critical Velocity Reduction in a Gas Well	11/330,361	Jan 10, 2006	7409998	Aug 12, 2008	Weatherford Technology Holdings, LLC
Critical Velocity Reduction in a Gas Well	12/492,526	Jun 26, 2009	RE42030	Jan 18, 2011	Weatherford Technology Holdings, LLC
Controlled Shared Load Casing Jack System	11/548,835	Oct 12, 2006	7578352	Aug 25, 2009	Weatherford Technology Holdings, LLC
Corrected DTS Measurements Based on Raman-Stokes Signals	11/333,044	Jan 17, 2006	7585107	Sep 8, 2009	Weatherford Technology Holdings, LLC
An Apparatus for Gripping a Tubular on a Drilling Rig	11/609,709	Dec 12, 2006	7874352	Jan 25, 2011	Weatherford Technology Holdings, LLC
Apparatus for Gripping a Tubular on a Drilling Rig	15/254,833	Sep 1, 2016	10138690	Nov 27, 2018	Weatherford Technology Holdings, LLC
Apparatus for Gripping a Tubular on a Drilling Rig	13/009,475	Jan 19, 2011	8567512	Oct 29, 2013	Weatherford Technology Holdings, LLC
Expanding Multiple Tubular Portions	11/611,029	Dec 14, 2006	7726395	Jun 1, 2010	Weatherford Technology Holdings, LLC
Expanding Multiple Tubular Portions	12/790,585	May 28, 2010	8028749	Oct 4, 2011	Weatherford Technology Holdings, LLC
Injection Valve and Method	11/468,631	Aug 30, 2006	7455116	Nov 25, 2008	Weatherford Technology Holdings, LLC
Injection Valve and Method	12/234,184	Sep 19, 2008	7861790	Jan 4, 2011	Weatherford Technology Holdings, LLC
Serialization and Database Methods for Tubulars and Oilfield Equipment	11/564,056	Nov 28, 2006	8463664	Jun 11, 2013	Weatherford Technology Holdings, LLC
Serialization and Database Methods for Tubulars and Oilfield Equipment	15/819,100	Nov 21, 2017			Weatherford Technology Holdings, LLC

Serialization and Database Methods for Tubulars and Oilfield Equipment	13/914,275	Jun 10, 2013	9824347	Nov 21, 2017	Weatherford Technology Holdings, LLC
Stand Compensator	11/621,865	Jan 10, 2007	7546882	Jun 16, 2009	Weatherford Technology Holdings, LLC
Stand Compensator	12/484,437	Jun 15, 2009	8162045	Apr 24, 2012	Weatherford Technology Holdings, LLC
Sonar Sand Detection	11/341,167	Jan 27, 2006	7503217	Mar 17, 2009	Weatherford Technology Holdings, LLC
Managed Pressure and/or Temperature Drilling System and Method	12/278,692	May 21, 2009	8881843	Nov 11, 2014	Weatherford Technology Holdings, LLC
Assembly and Subterranean well tool and Method of Use	09/551,326	Apr 18, 2000	6311778	Nov 6, 2001	High Pressure Integrity, Inc.
Subterranean Well Tool and Slip Assembly	09/482,502	Jan 13, 2000	6354372	Mar 12, 2002	High Pressure Integrity, Inc.
Method and Apparatus for Expanding Tubulars in a Wellbore	11/354,659	Feb 15, 2006	7503396	Mar 17, 2009	Weatherford Technology Holdings, LLC
Energizing Seal for Expandable Connections	11/672,180	Feb 7, 2007	7887103	Feb 15, 2011	Weatherford Technology Holdings, LLC
Adjustable Venturi Valve	11/359,071	Feb 22, 2006	8689883	Apr 8, 2014	Weatherford Technology Holdings, LLC
Temporary Well Zone Isolation	11/380,816	Apr 28, 2006	7513311	Apr 7, 2009	Weatherford Technology Holdings, LLC
Method for Disintegrating a Barrier in a Well Isolation Device	12/390,001	Feb 20, 2009	7963340	Jun 21, 2011	Weatherford Technology Holdings, LLC
System and Method for Deflection Compensation in Power Drive System for Connection of Tubulars	11/608,143	Dec 7, 2006	7568522	Aug 4, 2009	Weatherford Technology Holdings, LLC
System and Method for Deflection Compensation in Power Drive System for Connection of Tubulars	12/534,499	Aug 3, 2009	8167038	May 1, 2012	Weatherford Technology Holdings, LLC

Performance of Permanently Installed Tubing Conveyed Seismic Arrays Using Passive Acoustic Absorbers	14/196,700	Mar 4, 2014	9470815	Oct 18, 2016	Weatherford Technology Holdings, LLC
Managed Pressure Drilling	11/254,993	Oct 20, 2005	8955619	Feb 17, 2015	Weatherford Technology Holdings, LLC
Torque Sub For Use with a Top Drive	11/741,330	Apr 27, 2007	7757759	Jul 20, 2010	Weatherford Technology Holdings, LLC
Torque Sub For Use with a Top Drive	12/813,981	Jun 11, 2010	8047283	Nov 1, 2011	Weatherford Technology Holdings, LLC
Torque Sub For Use with a Top Drive	13/274,424	Oct 17, 2011	8281856	Oct 9, 2012	Weatherford Technology Holdings, LLC
Method and Apparatus for Drilling with Casing	11/750,943	May 18, 2007	8276689	Oct 2, 2012	Weatherford Technology Holdings, LLC
Apparatus and Methods to Protect Connections	11/751,841	May 22, 2007	7798238	Sep 21, 2010	Weatherford Technology Holdings, LLC
Sonar Based Multiphase Flowmeter	11/382,761	May 11, 2006	7401530	Jul 22, 2008	Weatherford Technology Holdings, LLC
Dual Flapper Barrier Valve	11/761,229	Jun 11, 2007	7673689	Mar 9, 2010	Weatherford Technology Holdings, LLC
Stage Cementing Methods used in Casing while Drilling	11/747,849	May 11, 2007	7857052	Dec 28, 2010	Weatherford Technology Holdings, LLC
Milling of Cemented Tubulars	11/834,764	Aug 7, 2007	7823665	Nov 2, 2010	Weatherford Technology Holdings, LLC
Array Temperature Sensing Method and System	11/468,646	Aug 30, 2006	8737774	May 27, 2014	Weatherford Technology Holdings, LLC
Array Temperature Sensing Method and System	11/957,181	Dec 14, 2007	8768111	Jul 1, 2014	Weatherford Technology Holdings, LLC
Releasing and Recovering Tool	11/842,837	Aug 21, 2007	8141634	Mar 27, 2012	Weatherford Technology Holdings, LLC
Releasing and Recovering Tool	13/403,118	Feb 23, 2012	8347964	Jan 8, 2013	Weatherford Technology Holdings, LLC

Wet-Gas Flowmeter	11/625,460	Jan 22, 2007	7654155	Feb 2, 2010	Weatherford Technology Holdings, LLC
Wet-Gas Flowmeter	12/698,772	Feb 2, 2010	7938023	May 10, 2011	Weatherford Technology Holdings, LLC
Active Intake Pressure Control of Downhole Pump Assemblies	11/548,615	Oct 11, 2006	7793683	Sep 14, 2010	Weatherford Technology Holdings, LLC
Oxidative Systems For Breaking Polymer Viscosified Fluids	11/554,834	Oct 31, 2006	7712535	May 11, 2010	Weatherford Technology Holdings, LLC
Distributed Temperature Sensing in A Remotely Operated Vehicle Umbilical Fiber Optic Cable	11/935,860	Nov 6, 2007	7762743	Jul 27, 2010	Weatherford Technology Holdings, LLC
Oil Based Concentrated Slurries and Methods for Making and Using Same	11/765,316	Jun 19, 2007	8728989	May 20, 2014	Weatherford Technology Holdings, LLC
Oil Based Concentrated Slurries and Methods for Making and Using Same	14/269,528	May 5, 2014	9605195	Mar 28, 2017	Weatherford Technology Holdings, LLC
Top Drive Interlock	11/940,661	Nov 15, 2007	7882902	Feb 8, 2011	Weatherford Technology Holdings, LLC
Non-Aqueous Foamer For Gas Lift Injection	11/736,971	Apr 18, 2007	7565933	Jul 28, 2009	Weatherford Technology Holdings, LLC
Pure Silica Core, High Birefringence, Single Polarization Optical Waveguide	11/614,606	Dec 21, 2006	7437044	Oct 14, 2008	Weatherford Technology Holdings, LLC
Pure Silica Core, High Birefringence, Single Polarization Optical Waveguide	12/251,334	Oct 14, 2008	7907807	Mar 15, 2011	Weatherford Technology Holdings, LLC
System and Methods for Tubular Expansion	11/962,290	Dec 21, 2007	8069916	Dec 6, 2011	Weatherford Technology Holdings, LLC
System and Methods for Tubular Expansion	13/293,987	Nov 10, 2011	8522885	Sep 3, 2013	Weatherford Technology Holdings, LLC
Brillouin Distributed Temperature Sensing Calibrated IN-SITU with Raman Distributed Temperature Sensing	12/021,537	Jan 29, 2008	7529434	May 5, 2009	Weatherford Technology Holdings, LLC

Flowmeter Array Processing Algorithm with Wide Dynamic Range	12/025,294	Feb 4, 2008	7881884	Feb 1, 2011	Weatherford Technology Holdings, LLC
Flowmeter Array Processing Algorithm with Wide Dynamic Range	13/019,176	Feb 1, 2011	8280650	Oct 2, 2012	Weatherford Technology Holdings, LLC
Subterranean Well Tool including a Locking Seal Healing System	11/679,302	Feb 27, 2007	7779905	Aug 24, 2010	High Pressure Integrity, Inc.
Subterranean Well Tool including a Locking Seal Healing System	12/861,452	Aug 23, 2010	8191645	Jun 5, 2012	High Pressure Integrity, Inc.
Apparatus and Methods of Flow Testing Formation Zones	12/030,154	Feb 12, 2008	8286703	Oct 16, 2012	Weatherford Technology Holdings, LLC
Apparatus and Methods of Flow Testing Formation Zones	13/649,846	Oct 11, 2012	8720554	May 13, 2014	Weatherford Technology Holdings, LLC
Rotating Control Device Docking Station	12/080,170	Mar 31, 2008	7926593	Apr 19, 2011	Weatherford Technology Holdings, LLC
Rotating Control Device Docking Station	14/604,971	Jan 26, 2015	9784073	Oct 10, 2017	Weatherford Technology Holdings, LLC
Remote Operation of an Oilfield Device	13/048,497	Mar 15, 2011	8408297	Apr 2, 2013	Weatherford Technology Holdings, LLC
System for Drilling a Borehole	13/836,569	Mar 15, 2013	8701796	Apr 22, 2014	Weatherford Technology Holdings, LLC
Rotating Control Device Docking Station	14/188,165	Feb 24, 2014	8939235	Jan 27, 2015	Weatherford Technology Holdings, LLC
Inflow Control Device	11/694,336	Mar 30, 2007	7828067	Nov 9, 2010	Weatherford Technology Holdings, LLC
Downhole Deployment Valves	12/098,264	Apr 4, 2008	8261836	Sep 11, 2012	Weatherford Technology Holdings, LLC
Downhole Deployment Valves	13/608,740	Sep 10, 2012	8522878	Sep 3, 2013	Weatherford Technology Holdings, LLC
Downhole Deployment Valves	13/608,767	Sep 10, 2012	8544549	Oct 1, 2013	Weatherford Technology Holdings, LLC
Downhole Deployment Valves	13/608,784	Sep 10, 2012	8534362	Sep 17, 2013	Weatherford Technology Holdings, LLC

Downhole Deployment Valves	13/960,621	Aug 6, 2013	8789603	Jul 29, 2014	Weatherford Technology Holdings, LLC
Downhole Deployment Valves	14/324,855	Jul 7, 2014	8905140	Dec 9, 2014	Weatherford Technology Holdings, LLC
Apparatus and Methods of Milling a Restricted Casing Shoe	12/098,341	Apr 4, 2008	8146682	Apr 3, 2012	Weatherford Technology Holdings, LLC
Wellhead Completion Assembly Capable of Versatile Arrangements	11/925,498	Oct 26, 2007	7779921	Aug 24, 2010	Weatherford Technology Holdings, LLC
Wellhead Completion Assembly Having Versatile Arrangements	12/843,197	Jul 26, 2010	9140092	Sep 22, 2015	Weatherford Technology Holdings, LLC
Wellhead Completion Assembly Capable of Versatile Arrangements	14/226,275	Mar 26, 2014	RE46241	Dec 20, 2016	Weatherford Technology Holdings, LLC
Dual Control Line System and Method for Operating Surface Controlled Sub-Surface Safety Valve in a Well	11/841,511	Aug 20, 2007	7878252	Feb 1, 2011	Weatherford Technology Holdings, LLC
Foamed Fluid Additive for Underbalance Drilling	11/736,992	Apr 18, 2007	7992653	Aug 9, 2011	Weatherford Technology Holdings, LLC
Pressure Isolation Plug For Horizontal Wellbore and Associated Methods	11/742,835	May 1, 2007	7690436	Apr 6, 2010	Weatherford Technology Holdings, LLC
Apparatus and Methods for Tubular Makeup Interlock	12/852,651	Aug 9, 2010	8356675	Jan 22, 2013	Weatherford Technology Holdings, LLC
Single Mode Optical Fiber with Improved Bend Performance	11/744,327	May 4, 2007	7805039	Sep 28, 2010	Weatherford Technology Holdings, LLC
Single Mode Optical Fiber with Improved Bend Performance	12/892,752	Sep 28, 2010	8712202	Apr 29, 2014	Weatherford Technology Holdings, LLC
Self-Orienting Crossover Tool	12/862,833	Aug 25, 2010	8695709	Apr 15, 2014	Weatherford Technology Holdings, LLC
Method of Anchoring a Progressing Cavity Pump	11/828,887	Jul 26, 2007	7905294	Mar 15, 2011	Weatherford Technology Holdings, LLC
Lockable Anchor for Insertable Progressing Cavity Pump	13/023,714	Feb 9, 2011	8082985	Dec 27, 2011	Weatherford Technology Holdings, LLC
Continuous Flow Drilling Systems and Methods	12/180,121	Jul 25, 2008	8016033	Sep 13, 2011	Weatherford Technology Holdings, LLC

Continuous Flow Drilling Systems and Methods	13/227,260	Sep 7, 2011	8720545	May 13, 2014	Weatherford Technology Holdings, LLC
Continuous Flow Drilling Systems and Methods	14/196,026	Mar 4, 2014	9151124	Oct 6, 2015	Weatherford Technology Holdings, LLC
Termination of Fiber Optic Cable	12/145,592	Jun 25, 2008	7805046	Sep 28, 2010	Weatherford Technology Holdings, LLC
Termination of Fiber Optic Cable	12/892,761	Sep 28, 2010	8301005	Oct 30, 2012	Weatherford Technology Holdings, LLC
Packing Element Booster	11/849,281	Sep 1, 2007	8881836	Nov 11, 2014	Weatherford Technology Holdings, LLC
Spectrally Stabilized Broadband Optical Source	11/855,292	Sep 14, 2007	7560685	Jul 14, 2009	Weatherford Technology Holdings, LLC
Optical Fiber Coating System and Monitoring Method for Improved Thermal Performance in Fiber Optic Sensors	11/861,001	Sep 25, 2007	7697144	Apr 13, 2010	Weatherford Technology Holdings, LLC
Ultra Low Profile Rotating Control Device	11/975,946	Oct 23, 2007	8286734	Oct 16, 2012	Weatherford Technology Holdings, LLC
Low Profile Rotating Control Device	13/621,016	Sep 15, 2002	9004181	Apr 14, 2015	Weatherford Technology Holdings, LLC
Interlocking Low Profile Rotating Control Device	12/893,391	Sep 29, 2010	8844652	Sep 30, 2014	Weatherford Technology Holdings, LLC
Low Profile Rotating Control Device	14/496,681	Sep 25, 2014	10087701	Oct 2, 2018	Weatherford Technology Holdings, LLC
Universal Marine Diverter/Converter Rotating Control Device	11/975,554	Oct 19, 2007	7997345	Aug 16, 2011	Weatherford Technology Holdings, LLC
Location Marker for DTS System	12/028,401	Feb 8, 2008	7769252	Aug 3, 2010	Weatherford Technology Holdings, LLC
Method for Jarring with a Downhole Pulling Tool	12/023,864	Jan 31, 2008	7874364	Jan 25, 2011	Weatherford Technology Holdings, LLC
Remotely Operated Single Joint Elevator	12/258,357	Oct 24, 2008	8215687	Jul 10, 2012	Weatherford Technology Holdings, LLC
Remotely Operated Single Joint Elevator	13/495,914	Jun 13, 2012	8496280	Jul 30, 2013	Weatherford Technology Holdings, LLC

Sonar Circumferential Flow Conditioner	12/035,578	Feb 22, 2008	7607361	Oct 27, 2009	Weatherford Technology Holdings, LLC
Sonar Circumferential Flow Conditioner	12/573,723	Oct 5, 2009	7926360	Apr 19, 2011	Weatherford Technology Holdings, LLC
Top Drive System	12/334,193	Dec 12, 2008	8210268	Jul 3, 2012	Weatherford Technology Holdings, LLC
Method of Using a Top Drive System	15/331,953	Oct 24, 2016	10400512	Sep 3, 2019	Weatherford Technology Holdings, LLC
Top Drive System	13/457,255	Apr 26, 2012	8727021	May 20, 2014	Weatherford Technology Holdings, LLC
Method of Using a Top Drive System	14/273,351	May 8, 2014	9528326	Dec 27, 2016	Weatherford Technology Holdings, LLC
Mechanical Expansion System	11/957,519	Dec 17, 2007	7992644	Aug 9, 2011	Weatherford Technology Holdings, LLC
Measurement Tool and Method of Use	12/335,981	Dec 16, 2008	8281646	Oct 9, 2012	Weatherford Technology Holdings, LLC
Power Tong	10/578,983	Nov 19, 2004	7571667	Aug 11, 2009	Weatherford Norge AS
Method of Disconnecting a Pipe Length	10/582,378	Aug 31, 2006	7707913	May 4, 2010	Weatherford Norge AS
Retrievable Surface Controlled Subsurface Safety Valve for Wells	12/128,790	May 29, 2008	7775291	Aug 17, 2010	Weatherford Technology Holdings, LLC
Expandable Packer	12/389,090	Feb 19, 2009	8201636	Jun 19, 2012	Weatherford Technology Holdings, LLC
Expandable Packer	13/523,656	Jun 14, 2012	8499844	Aug 6, 2013	Weatherford Technology Holdings, LLC
Expandable Packer	13/942,456	Jul 15, 2013	8967281	Mar 3, 2015	Weatherford Technology Holdings, LLC
Expandable Packer	14/622,012	Feb 13, 2015	9903176	Feb 27, 2018	Weatherford Technology Holdings, LLC
Capillary Hanger Arrangement for Deploying Control Line in Existing Wellhead	12/408,527	Mar 20, 2009	8312932	Nov 20, 2012	Weatherford Technology Holdings, LLC
Method for Deploying Subsurface Safety Valve	14/157,726	Jan 17, 2014	9745825	Aug 29, 2017	Weatherford Technology Holdings, LLC

Having Integral Pack Off					
Capillary Hanger Arrangement for Deploying Control Line in Existing Wellhead	13/549,419	Jul 14, 2012	8646536	Feb 11, 2014	Weatherford Technology Holdings, LLC
Subsurface Safety Valve with Integral Pack-Off	12/128,811	May 29, 2008	8100181	Jan 24, 2012	Weatherford Technology Holdings, LLC
Methods and Apparatus for a Downhole Tool	12/058,368	Mar 28, 2008	7836962	Nov 23, 2010	Weatherford Technology Holdings, LLC
Methods and Apparatus for a Downhole Tool	12/908,664	Oct 20, 2010	8316943	Nov 27, 2012	Weatherford Technology Holdings, LLC
Method and Apparatus for Retrieving an Assembly from a Wellbore	12/184,785	Aug 1, 2008	7997336	Aug 16, 2011	Weatherford Technology Holdings, LLC
Apparatus for Handling and Racking Pipes	10/997,930	Nov 29, 2004	7331746	Feb 19, 2008	Weatherford Canada Ltd.
Apparatus for Handling and Racking Pipes	11/785,446	Apr 18, 2007	7794192	Sep 14, 2010	Weatherford Canada Ltd.
Vertical Offline Stand Building and Manipulating System	12/285,305	Oct 1, 2008	7967540	Jun 28, 2011	Weatherford Canada Ltd.
Apparatus for Handling and Racking Pipes	12/385,282	Apr 3, 2009	7967541	Jun 28, 2011	Weatherford Canada Ltd.
Tubular Handling Apparatus	12/435,346	May 4, 2009	8365834	Feb 5, 2013	Weatherford Technology Holdings, LLC
Tubular Handling Apparatus	13/753,242	Jan 29, 2013	8752636	Jun 17, 2014	Weatherford Technology Holdings, LLC
Apparatus and Methods for Wedge Lock Prevention	13/768,995	Feb 15, 2013	8708055	Apr 29, 2014	Weatherford Technology Holdings, LLC
Apparatus and Methods for Wedge Lock Prevention	13/910,862	Jun 5, 2013	8776898	Jul 15, 2014	Weatherford Technology Holdings, LLC
Fill Up and Circulation Tool and Mudsaver Valve	12/435,225	May 4, 2009	8141642	Mar 27, 2012	Weatherford Technology Holdings, LLC
Tools and Methods for Hanging and/or Expanding Liner Strings	12/436,073	May 5, 2009	8286717	Oct 16, 2012	Weatherford Technology Holdings, LLC
Tools and Methods for Hanging and/or Expanding Liner Strings	13/649,870	Oct 11, 2012	8567515	Oct 29, 2013	Weatherford Technology Holdings, LLC

Tools and Methods for Hanging and/or Expanding Liner Strings	13/973,120	Aug 22, 2013	8783343	Jul 22, 2014	Weatherford Technology Holdings, LLC
Method of Controlling Torque Applied to a Tubular Connection	12/429,706	Apr 24, 2009	8297347	Oct 30, 2012	Weatherford Technology Holdings, LLC
Monobore Construction with Dual Expanders	12/428,839	Apr 23, 2009	8020625	Sep 20, 2011	Weatherford Technology Holdings, LLC
Method of Removing Cutters	12/997,331	Mar 28, 2011	9027643	May 12, 2015	Weatherford Technology Holdings, LLC
Passable No-GO for Downhole Valves	12/200,463	Aug 28, 2008	7677304	Mar 16, 2010	Weatherford Technology Holdings, LLC
Magnetic Slip Retention	12/409,661	Mar 24, 2009	8069918	Dec 6, 2011	Weatherford Technology Holdings, LLC
Compliant Expansion Wedge	12/250,080	Oct 13, 2008	7980302	Jul 19, 2011	Weatherford Technology Holdings, LLC
Expandable Liner Hanger and Method of Use	12/575,977	Oct 8, 2009	8443881	May 21, 2013	Weatherford Technology Holdings, LLC
Compliant Expansion Swage	13/158,018	Jun 10, 2011	8356663	Jan 22, 2013	Weatherford Technology Holdings, LLC
Compliant Expansion Swage	13/720,568	Dec 19, 2012	9308566	Apr 12, 2016	Weatherford Technology Holdings, LLC
Expandable Liner Hanger and Method of Use	13/896,452	May 17, 2013	9255467	Feb 9, 2016	Weatherford Technology Holdings, LLC
Expansion Joint with Optic/Hydraulic Bypass	12/258,780	Oct 27, 2008	7810560	Oct 12, 2010	Weatherford Technology Holdings, LLC
Downhole Safety Valve Having Flapper and Protected Opening Procedure	12/548,853	Aug 27, 2009	8424611	Apr 23, 2013	Weatherford Technology Holdings, LLC
Landing String Compensator	12/422,199	Apr 10, 2009	8733447	May 27, 2014	Weatherford Technology Holdings, LLC
Landing String Compensator	14/286,655	May 23, 2014	9353603	May 31, 2016	Weatherford Technology Holdings, LLC
Landing String Compensator	15/169,169	May 31, 2016	9650873	May 16, 2017	Weatherford Technology Holdings, LLC

Wellbore Isolation Tool Using Sealing Element Having Shape Memory Polymer	13/285,656	Oct 31, 2011	8763687	Jul 1, 2014	Weatherford Technology Holdings, LLC
Wellbore Isolation Tool Using Sealing Element Having Shape Memory Polymer	14/295,906	Jun 4, 2014	9567821	Feb 14, 2017	Weatherford Technology Holdings, LLC
Downhole Waterflood Regulator	12/246,938	Oct 7, 2008	7784553	Aug 31, 2010	Weatherford Technology Holdings, LLC
Apparatus and Method for Data Transmission From a Rotating Control Device	12/500,566	Jul 9, 2009	9074443	Jul 7, 2015	Weatherford Technology Holdings, LLC
Apparatus and Method for Data Transmission From a Rotating Control Device	14/790,811	Jul 2, 2015	9371697	Jun 21, 2016	Weatherford Technology Holdings, LLC
Apparatus and Method for Data Transmission From a Rotating Control Device	15/188,320	Jun 21, 2016	9988871	Jun 5, 2018	Weatherford Technology Holdings, LLC
Multiphase Drilling Systems and Methods	12/541,242	Aug 14, 2009	9097085	Aug 4, 2015	Weatherford Technology Holdings, LLC
Methods and Apparatus for Supporting Tubulars	12/208,157	Sep 10, 2008	7926577	Apr 19, 2011	Weatherford Technology Holdings, LLC
Power Slip Assembly for Wellhead Casing and Wellbore Tubing	12/565,009	Sep 23, 2009	8479824	Jul 9, 2013	Weatherford Technology Holdings, LLC
Wellhead Downhole Line Communication Arrangement	13/142,129	Jul 18, 2011	8925628	Jan 6, 2015	Weatherford Technology Holdings, LLC
Wellhead Downhole Line Communication Arrangement	14/560,038	Dec 4, 2014	9695672	Jul 4, 2017	Weatherford Technology Holdings, LLC
Methods and Apparatus for Make Up and Break Out of Tubular Connections	12/244,341	Oct 2, 2008	7975572	Jul 12, 2011	Weatherford Technology Holdings, LLC
System and Method to Expand Tubulars Below Restrictions	13/452,613	Apr 20, 2012	8800669	Aug 12, 2014	Weatherford Technology Holdings, LLC
Dual Isolation Mechanism of Cementation Port	12/651,210	Dec 31, 2009	8727026	May 20, 2014	Weatherford Technology Holdings, LLC

Extendable Cutting Tools for Use in a Wellbore	12/616,107	Nov 10, 2009	8540035	Sep 24, 2013	Weatherford Technology Holdings, LLC
Extendable Cutting Tools for Use in a Wellbore	16/112,468	Aug 24, 2018			Weatherford Technology Holdings, LLC
Extendable Cutting Tools for Use in a Wellbore	13/748,193	Jan 23, 2013	8794354	Aug 5, 2014	Weatherford Technology Holdings, LLC
Extendable Cutting Tools for Use in a Wellbore	14/450,661	Aug 4, 2014	10060190	Aug 28, 2018	Weatherford Technology Holdings, LLC
Drop Ball Catcher Apparatus	10/315,666	Dec 10, 2002	6920930	Jul 26, 2005	Weatherford Technology Holdings, LLC
Guide Tube for Continuous Rod	12/352,464	Jan 12, 2009	8006752	Aug 30, 2011	Weatherford Technology Holdings, LLC
Swellable Packer Having a Cable Conduit	12/393,938	Feb 26, 2009	8083000	Dec 27, 2011	Weatherford U.K. Limited
Swellable Packer Having a Cable Conduit	13/337,833	Dec 27, 2011	8459367	Jun 11, 2013	Weatherford U.K. Limited
Elongated Sealing Member for Downhole Tool	12/393,984	Feb 26, 2009	8636074	Jan 28, 2014	Weatherford U.K. Limited
Elongated Sealing Member for Downhole Tool	14/135,008	Dec 19, 2013	9512691	Dec 6, 2016	Weatherford U.K. Limited
Expandable Member for Downhole Tool	12/393,960	Feb 26, 2009	8464800	Jun 18, 2013	Weatherford U.K. Limited
Apparatus and Method for Providing an Alternate Flow Path in Isolation Devices	12/615,460	Nov 10, 2009	8403046	Mar 26, 2013	Weatherford U.K. Limited
Apparatus and Method for Providing an Alternate Flow Path in Isolation Devices	13/848,552	Mar 21, 2013	8590617	Nov 26, 2013	Weatherford U.K. Limited
Latch Position Indicator System and Method	12/322,860	Feb 6, 2009	8826988	Sep 9, 2014	Weatherford Technology Holdings, LLC
Latch Position Indicator System and Method	14/477,515	Sep 4, 2014	9404346	Aug 2, 2016	Weatherford Technology Holdings, LLC
Latch Position Indicator System and Method	15/165,869	May 26, 2016	10024154	Jul 17, 2018	Weatherford Technology Holdings, LLC
Drilling with a High Pressure Rotating Control Device	12/462,266	Jul 31, 2009	8347983	Jan 8, 2013	Weatherford Technology Holdings, LLC

System and Method for Cooling a Rotating Control Device	14/163,617	Jan 24, 2014	9334711	May 10, 2016	Weatherford Technology Holdings, LLC
Fluid Supply to Scaled Tubulars	15/132,998	Apr 19, 2016	9845653	Dec 19, 2017	Weatherford Technology Holdings, LLC
Rotating Control System and Method for Providing a Differential Pressure	13/735,203	Jan 7, 2013	8636087	Jan 28, 2014	Weatherford Technology Holdings, LLC
Subsea Drilling with Casing	12/620,581	Nov 17, 2009	8839880	Sep 23, 2014	Weatherford Technology Holdings, LLC
Subsea Drilling with Casing	14/494,230	Sep 23, 2014	9719303	Aug 1, 2017	Weatherford Technology Holdings, LLC
Subsea Drilling with Casing	14/591,584	Jan 7, 2015	9493989	Nov 15, 2016	Weatherford Technology Holdings, LLC
Process and System for Creating Enhanced Cavitation	12/357,556	Jan 22, 2009	8011431	Sep 6, 2011	Weatherford Technology Holdings, LLC
Hydraulic Downhole Pump	12/402,316	Mar 11, 2009	8303272	Nov 6, 2012	Weatherford Technology Holdings, LLC
Horizontal Offline Stand Building System	12/318,465	Dec 30, 2008	7992646	Aug 9, 2011	Weatherford Canada Ltd.
Method and Apparatus for Centrifugal Separation	12/369,043	Feb 11, 2009	9010440	Apr 21, 2015	Weatherford Technology Holdings, LLC
Subsea Internal Riser Rotating Control Device System and Method	12/643,093	Dec 21, 2009	8322432	Dec 4, 2012	Weatherford Technology Holdings, LLC
Subsea Internal Riser Rotating Control Head Seal Assembly	13/597,881	Aug 29, 2012	8770297	Jul 8, 2014	Weatherford Technology Holdings, LLC
Rapid Load Stuffing Box Hay Pulley	12/485,195	Jun 16, 2009	8091629	Jan 10, 2012	Weatherford Technology Holdings, LLC
Method and Apparatus for a Packer Assembly	12/411,245	Mar 25, 2009	8186446	May 29, 2012	Weatherford Technology Holdings, LLC
Method and Apparatus for Isolating and Treating Discrete Zones within a Wellbore	12/411,338	Mar 25, 2009	9291044	Mar 22, 2016	Weatherford Technology Holdings, LLC
Downhole Tool Having Setting Valve for Packing Element	12/697,958	Feb 1, 2010	8695697	Apr 15, 2014	Weatherford Technology Holdings, LLC

Downhole Tool Having Setting Valve for Packing Element	14/199,185	Mar 6, 2014	9567822	Feb 14, 2017	Weatherford Technology Holdings, LLC
Signal Operated Tools for Milling, Drilling, and/or Fishing Operations	12/436,077	May 5, 2009	8991489	Mar 31, 2015	Weatherford Technology Holdings, LLC
Signal Operated Drilling Tools for Milling, Drilling, and/or Fishing Operations	14/673,288	Mar 30, 2015	10145196	Dec 4, 2018	Weatherford Technology Holdings, LLC
Swellable Downhole Apparatus and Support Assembly	12/768,882	Apr 28, 2010	8561689	Oct 22, 2013	Weatherford U.K. Limited
Swellable Downhole Apparatus and Support Assembly	13/924,101	Jun 21, 2013	8960315	Feb 24, 2015	Weatherford U.K. Limited
System and Method for Scale Inhibition	12/750,335	Mar 30, 2010	9447657	Sep 20, 2016	Weatherford Technology Holdings, LLC
Retrievable Bridge Plug	12/539,517	Aug 11, 2009	8505623	Aug 13, 2013	Weatherford Technology Holdings, LLC
Retrievable Bridge Plug	13/953,440	Jul 29, 2013	9279307	Mar 8, 2016	Weatherford Technology Holdings, LLC
Removable Packer	12/555,026	Sep 8, 2009	8087458	Jan 3, 2012	Weatherford Technology Holdings, LLC
Adjustable Sheave for Hay Pulley	12/485,154	Jun 16, 2009	8210502	Jul 3, 2012	Weatherford Technology Holdings, LLC
Methods and Apparatus for Subsea Well Intervention and Subsea Wellhead Retrieval	12/490,508	Jun 24, 2009	8307903	Nov 13, 2012	Weatherford Technology Holdings, LLC
Methods and Apparatus for Subsea Well Intervention and Subsea Wellhead Retrieval	13/649,927	Oct 11, 2012	8662182	Mar 4, 2014	Weatherford Technology Holdings, LLC
Indexing Sleeve for Single-Trip, Multi-Stage Fracing	13/022,504	Feb 7, 2011	8403068	Mar 26, 2013	Weatherford Technology Holdings, LLC
Indexing Sleeve for Single-Trip, Multi-Stage Fracing	13/848,376	Mar 21, 2013	9441457	Sep 13, 2016	Weatherford Technology Holdings, LLC
Indexing Sleeve for Single-Trip, Multi-Stage Fracing	12/753,331	Apr 2, 2010	8505639	Aug 13, 2013	Weatherford Technology Holdings, LLC

Cleaning Device for Downhole Tool	11/820,484	Jun 19, 2007	7836947	Nov 23, 2010	Weatherford Switzerland Trading and Development GmbH
Downhole Tool	10/781,937	Feb 20, 2004	7143829	Dec 5, 2006	Weatherford Switzerland Trading and Development GmbH
Downhole Tool	11/586,611	Oct 26, 2006	7404436	Jul 29, 2008	Weatherford Switzerland Trading and Development GmbH
Downhole Impeller Device	11/515,951	Sep 6, 2006	7455113	Nov 25, 2008	Weatherford Switzerland Trading and Development GmbH
Downhole Cleaning Tool and Method of Use	12/204,333	Sep 4, 2008	8002037	Aug 23, 2011	Weatherford Switzerland Trading and Development GmbH
Downhole Tool	12/154,725	May 27, 2008	7798230	Sep 21, 2010	Weatherford Switzerland Trading and Development GmbH
Torque Limiting Device	13/686,564	Nov 27, 2012	9453374	Sep 27, 2016	Weatherford U.K. Limited
Torque Limiting Device	15/270,297	Sep 20, 2016	10036211	Jul 31, 2018	Weatherford U.K. Limited
Continuous Rod Transport System	12/568,053	Sep 28, 2009	8864428	Oct 21, 2014	Weatherford Technology Holdings, LLC
Continuous Rod Transport System	12/912,848	Oct 27, 2010	8869580	Oct 28, 2014	Weatherford Technology Holdings, LLC
Continuous Rod Transport System	14/502,395	Sep 30, 2014	9637038	May 2, 2017	Weatherford Technology Holdings, LLC
Continuous Rod Transport System	14/502,435	Sep 30, 2014	9873366	Jan 23, 2018	Weatherford Technology Holdings, LLC
Gravel Pack Crossover Tool with Low Drag Force	13/294,487	Nov 11, 2011	9523264	Dec 20, 2016	Weatherford Technology Holdings, LLC
Cluster Opening Sleeves for Wellbore Treatment and Method of Use	13/087,635	Apr 15, 2011	8245788	Aug 21, 2012	Weatherford Technology Holdings, LLC
Cluster Opening Sleeves for Wellbore	13/587,470	Aug 16, 2012	8714272	May 6, 2014	Weatherford Technology Holdings, LLC

CLUSTER OPENING SLEEVES FOR WELLBORE TREATMENT AND METHOD OF USE	12/613,633	Nov 6, 2009	8215411	Jul 10, 2012	Weatherford Technology Holdings, LLC
Sealing System	11/570,335	Apr 16, 2007	8678099	Mar 25, 2014	Weatherford Technology Holdings, LLC
Apparatus for Controlling a Downhole Device	11/919,962	Dec 10, 2007	7975767	Jul 12, 2011	Weatherford Technology Holdings, LLC
Remote Actuation of a Downhole Tool	11/667,516	Sep 22, 2005	9115573	Aug 25, 2015	Weatherford Technology Holdings, LLC
Antenna for Use in a Downhole Tubular	14/308,336	Jun 18, 2014	10262168	Apr 16, 2019	Weatherford Technology Holdings, LLC
Packer	11/909,820	Apr 10, 2006	9194213	Nov 24, 2015	Weatherford Technology Holdings, LLC
Wellbore Anchors	11/816,421	Mar 31, 2008	7690424	Apr 6, 2010	Weatherford Technology Holdings, LLC
Bi-Directional Flapper Valve	12/226,577	Oct 22, 2008	8191570	Jun 5, 2012	Weatherford Technology Holdings, LLC
Packer	12/294,078	Mar 27, 2007	8651178	Feb 18, 2014	Weatherford Technology Holdings, LLC
Packer	14/150,053	Jan 8, 2014	9562411	Feb 7, 2017	Weatherford Technology Holdings, LLC
Plug	11/577,866	Oct 3, 2007	8490691	Jul 23, 2013	Weatherford Technology Holdings, LLC
Running Adapter	13/189,758	Jul 25, 2011	8973666	Mar 10, 2015	Weatherford Technology Holdings, LLC
Wellhead Assembly and Method	11/794,847	Jul 6, 2007	7798208	Sep 21, 2010	Weatherford Technology Holdings, LLC
Gravel Pack Assembly for Bottom Up/Toe-to-Heel Packing	12/913,981	Oct 28, 2010	8770290	Jul 8, 2014	Weatherford Technology Holdings, LLC
Shear Coupling Assembly for Use with Rotary and Reciprocating Pumps	12/959,974	Dec 3, 2010	8636057	Jan 28, 2014	Weatherford Technology Holdings, LLC

Methods and Apparatus Relating to Expansion Tools for Tubular Strings	12/723,860	Mar 15, 2010	8714243	May 6, 2014	Weatherford Technology Holdings, LLC
Methods and Apparatus Relating to Expansion Tools for Tubular Strings	14/227,720	Mar 27, 2014	9169722	Oct 27, 2015	Weatherford Technology Holdings, LLC
Downhole Flow Device with Erosion Resistant and Pressure Assisted Metal Seal	12/912,295	Oct 26, 2010	8657010	Feb 25, 2014	Weatherford Technology Holdings, LLC
Hydraulic Tensioning Flange Connector	13/019,795	Feb 2, 2011	8616590	Dec 31, 2013	Weatherford Technology Holdings, LLC
Hydraulic Tensioning Flange Connector	14/089,286	Nov 25, 2013	9009945	Apr 21, 2015	Weatherford Technology Holdings, LLC
Surface Gas Evaluation During Controlled Pressure Drilling	12/905,017	Oct 14, 2010	8899348	Dec 2, 2014	Weatherford Technology Holdings, LLC
Calculation of Downhole Pump Fillage and Control of Pump Based on Said Fillage	12/719,673	Mar 8, 2010	8322995	Dec 4, 2012	Weatherford Technology Holdings, LLC
Calculation of Downhole Pump Fillage and Control of Pump Based on Said Fillage	12/905,919	Oct 15, 2010	8328527	Dec 11, 2012	Weatherford Technology Holdings, LLC
Debris Barrier for Downhole Tools	12/617,539	Nov 12, 2009	9057240	Jun 16, 2015	Weatherford Technology Holdings, LLC
Wavelength Swept Light Source and Filter Based on Sweep Function and its Method of Operation	12/686,941	Jan 13, 2010	8379297	Feb 19, 2013	Weatherford Technology Holdings, LLC
Wavelength Sweep Control	13/762,036	Feb 7, 2013	9007679	Apr 14, 2015	Weatherford Technology Holdings, LLC
Method and Apparatus for a Wellbore Assembly	12/939,873	Nov 4, 2010	8931569	Jan 13, 2015	Weatherford Technology Holdings, LLC
Method and Apparatus for a Wellbore Assembly	15/984,121	May 18, 2018			Weatherford Technology Holdings, LLC
Method and Apparatus for a Wellbore Assembly	14/575,239	Dec 18, 2014	10030481	Jul 24, 2018	Weatherford Technology Holdings, LLC

Tong Positioning Arm	12/947,720	Nov 16, 2010	9068406	Jun 30, 2015	Weatherford Technology Holdings, LLC
Wellhead Control Line Deployment	12/779,544	May 13, 2010	8479828	Jul 9, 2013	Weatherford Technology Holdings, LLC
Wellhead Control Line Deployment	13/922,678	Jun 20, 2013	9382775	Jul 5, 2016	Weatherford Technology Holdings, LLC
Rotating Continuous Flow Sub	12/984,429	Jan 4, 2011	8627890	Jan 14, 2014	Weatherford Technology Holdings, LLC
Rotating Continuous Flow Sub	14/155,083	Jan 14, 2014	9416599	Aug 16, 2016	Weatherford Technology Holdings, LLC
Selective and Non-Selective Lock Mandrel Assembly Having Upward Biased Inner Sleeve	12/869,274	Aug 26, 2010	8474542	Jul 2, 2013	Weatherford Technology Holdings, LLC
Sonic/Acoustic Monitoring Using Optical Distributed Acoustic Sensing	13/106,642	May 12, 2011	8848485	Sep 30, 2014	Weatherford Technology Holdings, LLC
Lubricating Seal for Use with a Tubular	12/824,934	Jun 28, 2010	9175542	Nov 3, 2015	Weatherford Technology Holdings, LLC
Retrievable Slip Mechanism for Downhole Tool	12/838,724	Jul 19, 2010	8893779	Nov 25, 2014	Weatherford Technology Holdings, LLC
Section Mill and Method for Abandoning a Wellbore	13/047,658	Mar 14, 2011	9022117	May 5, 2015	Weatherford Technology Holdings, LLC
Section Mill and Method for Abandoning a Wellbore	16/025,870	Jul 2, 2018			Weatherford Technology Holdings, LLC
Section Mill and Method for Abandoning a Wellbore	14/677,002	Apr 2, 2015	10012048	Jul 3, 2018	Weatherford Technology Holdings, LLC
Connector	13/053,501	Mar 22, 2011	8732934	May 27, 2014	Weatherford U.K. Limited
Multiphase Flow Meter for Subsea Applications Using Hydrate Inhibitor Measurement	12/860,720	Aug 20, 2010	9002650	Apr 7, 2015	Weatherford Technology Holdings, LLC
Optical Fiber Coating to Prevent Adhesion at High Temperature	12/730,841	Mar 24, 2010	9104008	Aug 11, 2015	Weatherford Technology Holdings, LLC

Optical Fiber Coating to Prevent Adhesion at High Temperature	14/793,900	Jul 8, 2015	9435973	Sep 6, 2016	Weatherford Technology Holdings, LLC
Cap String Hybrid Safety System	13/351,146	Jan 16, 2012	8893799	Nov 25, 2014	Weatherford Technology Holdings, LLC
Arrangement of Isolation Sleeve and Cluster Sleeves Having Pressure Chambers	12/877,215	Sep 8, 2010	8893810	Nov 25, 2014	Weatherford Technology Holdings, LLC
Dynamic Load Expansion Test Bench and Method of Expanding a Tubular	12/748,046	Mar 26, 2010	9044802	Jun 2, 2015	Weatherford Technology Holdings, LLC
Emergency Bowl for Deploying Control Line from Casing Head	12/949,983	Nov 19, 2010	8668020	Mar 11, 2014	Weatherford Technology Holdings, LLC
Resin Sealant for Zonal Isolation and Methods for Making and Using Same	12/784,479	May 20, 2010	8899328	Dec 2, 2014	Weatherford Technology Holdings, LLC
Resin Sealant for Zonal Isolation and Methods for Making and Using Same	14/531,027	Nov 3, 2014	10301526	May 28, 2019	Weatherford Technology Holdings, LLC
Wellhead Rotating Breech Lock and Method	12/902,997	Oct 12, 2010	8763708	Jul 1, 2014	Weatherford Technology Holdings, LLC
Fiber Optic Cable for Distributed Acoustic Sensing with Increased Acoustic Sensitivity	13/307,765	Nov 30, 2011	9255836	Feb 9, 2016	Weatherford Technology Holdings, LLC
Fiber Optic Cable for Distributed Acoustic Sensing with Increased Acoustic Sensitivity	14/983,994	Dec 30, 2015	9841315	Dec 12, 2017	Weatherford Technology Holdings, LLC
Compositions and Method for Breaking Hydraulic Fracturing Fluids	12/758,466	Apr 12, 2010	8835364	Sep 16, 2014	Weatherford Technology Holdings, LLC
Compositions and Methods for Breaking Hydraulic Fracturing Fluids	14/328,853	Jul 11, 2014	9175208	Nov 3, 2015	Weatherford Technology Holdings, LLC
Deepwater Completion Installation and Intervention System	13/149,591	May 31, 2011	9068398	Jun 30, 2015	Weatherford Technology Holdings, LLC
Direct Slurry Weight Sensor for Well	14/212,672	Mar 14, 2014	9695670	Jul 4, 2017	Weatherford Technology Holdings, LLC

Operation Mixing Process					
Multiple Control Line Assembly for Downhole Equipment	13/226,810	Sep 7, 2011	8640769	Feb 4, 2014	Weatherford Technology Holdings, LLC
Reversible Rod Tong Jaw System	12/961,640	Dec 7, 2010	8387488	Mar 5, 2013	Weatherford Technology Holdings, LLC
Flow Control Apparatus	13/187,773	Jul 21, 2011	8967265	Mar 3, 2015	Weatherford U.K. Limited
Downhole Backspin Retarder for Progressive Cavity Pump	13/048,383	Mar 15, 2011	8662186	Mar 4, 2014	Weatherford Technology Holdings, LLC
Isolation Valve with Debris Control and Flow Tube Protection	12/845,899	Jul 29, 2010	8708051	Apr 29, 2014	Weatherford Technology Holdings, LLC
Isolation Valve with Debris Control and Flow Tube Protection	14/186,911	Feb 21, 2014	9394762	Jul 19, 2016	Weatherford Technology Holdings, LLC
Isolation Valve with Debris Control and Flow Tube Protection	15/211,461	Jul 15, 2016	10180041	Jan 15, 2019	Weatherford Technology Holdings, LLC
Anchor For Use with Expandable Tubular	13/197,030	Aug 3, 2011	8899336	Dec 2, 2014	Weatherford Technology Holdings, LLC
Apparatus and Methods for Restricting Flow in a Bore	13/866,650	Apr 19, 2013	9140093	Sep 22, 2015	Weatherford Technology Holdings, LLC
Positive Retraction Latch Locking Dog for a Rotating Control Device	13/183,787	Jul 15, 2011	9010433	Apr 21, 2015	Weatherford Technology Holdings, LLC
Positive Retraction Latch Locking Dog for a Rotating Control Device	14/691,202	Mar 4, 2016	9518436	Dec 13, 2016	Weatherford Technology Holdings, LLC
Multi-Sleeve Plunger for Plunger Lift System	12/897,404	Oct 4, 2010	8485263	Jul 16, 2013	Weatherford Technology Holdings, LLC
Signal Operated Isolation Valve	13/227,847	Sep 8, 2011	8978750	Mar 17, 2015	Weatherford Technology Holdings, LLC
Signal Operated Isolation Valve	16/207,812	Dec 3, 2018			Weatherford Technology Holdings, LLC
Signal Operated Isolation Valve	14/659,955	Mar 17, 2015	10151171	Dec 11, 2018	Weatherford Technology Holdings, LLC
Fill Up Tool	14/481,491	Sep 9, 2014	9745810	Aug 29, 2017	Weatherford Technology Holdings, LLC

Fill Up Tool	15/659,704	Jul 26, 2017			Weatherford Technology Holdings, LLC
Method and Apparatus for Isolating and Treating Discrete Zones within a Wellbore	13/274,119	Oct 14, 2011	9267348	Feb 23, 2016	Weatherford Technology Holdings, LLC
Acoustically-Controlled Subsea Rotating Control Device Latching System and Method	13/233,846	Sep 15, 2011	9359853	Jun 7, 2016	Weatherford Technology Holdings, LLC
Test Packer and Method of Use	13/345,578	Jan 6, 2012	8851166	Oct 7, 2014	Weatherford Technology Holdings, LLC
Test Packer and Method For Use	14/502,551	Mar 1, 2016	9371711	Jun 21, 2016	Weatherford Technology Holdings, LLC
Test Packer and Method of Use	15/161,909	May 23, 2016	10167696	Jan 1, 2019	Weatherford Technology Holdings, LLC
Electronic Control System for a Tubular Handling Tool	13/327,296	Dec 15, 2011	9404322	Aug 2, 2016	Weatherford Technology Holdings, LLC
Electronic Control System for a Tubular Handling Tool	16/172,522	Oct 26, 2018			Weatherford Technology Holdings, LLC
Electronic Control System for a Tubular Handling Tool	15/193,722	Jun 27, 2016			Weatherford Technology Holdings, LLC
Electronic Control System for a Tubular Handling Tool	15/193,778	Jun 27, 2016	10253581	Apr 9, 2019	Weatherford Technology Holdings, LLC
Earth Removal Member with Features for Facilitating Drill-Through	13/333,749	Dec 21, 2011	8960332	Feb 24, 2015	Weatherford Technology Holdings, LLC
Drive Shaft Universal Joint Assembly with Radial Elliptical Projections	13/017,805	Jan 31, 2011	8342970	Jan 1, 2013	Weatherford Technology Holdings, LLC
Multiple Sectional Wire-Wrapped Screens	13/170,608	Jun 28, 2011	8602096	Dec 10, 2013	Weatherford Technology Holdings, LLC
Multiple Sectioned Wire-Wrapped Screens	14/072,282	Nov 5, 2013	9416634	Aug 16, 2016	Weatherford Technology Holdings, LLC
Produced Sand Gravel Pack Process	13/653,690	Oct 17, 2012	9334713	May 10, 2016	Weatherford Technology Holdings, LLC

One trip Toe to Heel Gravel Pack and Liner Cementing System	13/345,418	Jan 6, 2012	9260950	Feb 16, 2016	Weatherford Technology Holdings, LLC
Gravel Pack Inner String Adjustment Device	13/345,476	Jan 6, 2012	9068435	Jun 30, 2015	Weatherford Technology Holdings, LLC
Inner String Gravel Pack Sub Bypass	13/345,500	Jan 6, 2012	9085960	Jul 21, 2015	Weatherford Technology Holdings, LLC
Gravel Pack Inner String Hydraulic Locating Device	13/345,544	Jan 6, 2012	9057251	Jun 16, 2015	Weatherford Technology Holdings, LLC
Dry Polymer Mixing Process	13/094,806	Apr 26, 2011	9022120	May 5, 2015	Weatherford Technology Holdings, LLC
Foamed Resin Sealant for Zonal Isolation and Methods for Making and Using Same	13/053,975	Mar 22, 2011	8851174	Oct 7, 2014	Weatherford Technology Holdings, LLC
Debris Barrier Assembly	13/007,998	Jan 17, 2011	8807231	Aug 19, 2014	Weatherford Technology Holdings, LLC
Debris Barrier Assembly	14/304,663	Jun 13, 2014	10030480	Jul 24, 2018	Weatherford Technology Holdings, LLC
Extrusion-Resistant Seals for Expandable Tubular Assembly	13/029,022	Feb 16, 2011	9528352	Dec 27, 2016	Weatherford Technology Holdings, LLC
Stage Tool	13/398,833	Feb 16, 2012	8997882	Apr 7, 2015	Weatherford Technology Holdings, LLC
Anchoring Seal	13/398,831	Feb 16, 2012	9567823	Feb 14, 2017	Weatherford Technology Holdings, LLC
Anchoring Seal	15/393,312	Dec 29, 2016	9920588	Mar 20, 2018	Weatherford Technology Holdings, LLC
Anchoring and Sealing Tool	16/504,013	Jul 5, 2019			Weatherford Technology Holdings, LLC
Anchoring and Sealing Tool	16/180,272	Nov 5, 2018			Weatherford Technology Holdings, LLC
Extrusion Resistant Seals for Expandable Tubular Assembly	15/381,755	Dec 16, 2016	10174579	Jan 8, 2019	Weatherford Technology Holdings, LLC
Telemetry Operated Circulation Sub	13/979,360	Aug 20, 2013	9382769	Jul 5, 2016	Weatherford Technology Holdings, LLC

Magnetic Ranging Method and Apparatus	13/016,731	Jan 28, 2011	8952700	Feb 10, 2015	Weatherford Technology Holdings, LLC
Expandable Open-hole Achor	13/095,803	Apr 27, 2011	9850726	Dec 26, 2017	Weatherford Technology Holdings, LLC
Managed Pressure Cementing	13/676,660	Nov 14, 2002	9249646	Feb 2, 2016	Weatherford Technology Holdings, LLC
Managed Pressure Cementing	15/011,750	Feb 1, 2016	9951600	Apr 24, 2018	Weatherford Technology Holdings, LLC
Method of Incorporating Remote Communication with Oilfield Tubular Handling Apparatus	14/119,392	Apr 4, 2014	9464520	Oct 11, 2016	Weatherford Technology Holdings, LLC
Method of Incorporating Remote Communication with Oilfield Tubular Handling Apparatus	15/257,384	Sep 6, 2016	9926747	Mar 27, 2018	Weatherford Technology Holdings, LLC
Expansion System for an Expandable Tubular Assembly	13/095,839	Apr 27, 2011	8875783	Nov 4, 2014	Weatherford Technology Holdings, LLC
Remotely Operated Isolation Valve	13/237,347	Sep 20, 2011	9163481	Oct 20, 2015	Weatherford Technology Holdings, LLC
Remotely Operated Isolation Valve	16/259,518	Jan 28, 2019			Weatherford Technology Holdings, LLC
Remotely Operated Isolation Valve	14/885,024	Oct 16, 2015	10214999	Feb 26, 2019	Weatherford Technology Holdings, LLC
LWD Borehole Imager	13/236,153	Sep 19, 2011	9500762	Nov 22, 2016	Weatherford Technology Holdings, LLC
Wellbore Cleaning Apparatus and Method	13/683,098	Nov 21, 2012	9291035	Mar 22, 2016	Weatherford Switzerland Trading and Development GmbH
Shoulder Yielding Detection During Tubular MakeUp	13/460,924	May 1, 2012	8726743	May 20, 2014	Weatherford Technology Holdings, LLC
Velocity Strings	13/478,894	May 23, 2012	9228405	Jan 5, 2016	Weatherford Technology Holdings, LLC
Dual Purpose Steam Injection and Production Tool	13/115,677	May 25, 2011	9027642	May 12, 2015	Weatherford Technology Holdings, LLC

Fabrication and Design of Erosion Resistant Flow Port	13/292,965	Nov 9, 2011	9097104	Aug 4, 2015	Weatherford Technology Holdings, LLC
Reciprocating Rod Pump Concept for Sandy Fluids	13/206,411	Aug 9, 2011	8858187	Oct 14, 2014	Weatherford Technology Holdings, LLC
Gas Lift Valve Having Edge-Welded Bellows and Captive Sliding Seal	13/198,468	Aug 4, 2011	9010353	Apr 21, 2015	Weatherford Technology Holdings, LLC
Dual Flow Gas Lift Valve	13/270,254	Oct 11, 2011	9057255	Jun 16, 2015	Weatherford Technology Holdings, LLC
Gas Lift System Having Expandable Velocity String	13/368,564	Feb 8, 2012	9068444	Jun 30, 2015	Weatherford Technology Holdings, LLC
Control System for Downhole Operations	14/123,488	Apr 9, 2014	9863232	Jan 9, 2018	Weatherford Technology Holdings, LLC
Control System for Downhole Operations	15/840,011	Dec 13, 2017	10323500	Jun 18, 2019	Weatherford Technology Holdings, LLC
Apparatus and Method of Zonal Isolation	14/156,178	Jan 15, 2014	9551201	Jan 24, 2017	Weatherford Technology Holdings, LLC
Annular Sealing in a Rotating Control Device	15/171,549	Jun 2, 2016	10053943	Aug 21, 2018	Weatherford Technology Holdings, LLC
Pulsing Tool	13/590,877	Aug 21, 2012	9382760	Jul 5, 2016	Weatherford Technology Holdings, LLC
Reel to Reel Manufacturing Line	10/276,901	Jan 16, 2003	6934459	Aug 23, 2005	Weatherford Canada Ltd.
Reel to Reel Manufacturing Line	11/106,168	Apr 13, 2005	7164841	Jan 16, 2007	Weatherford Canada Ltd.
Apparatus for Generating an Optical Interference Pattern	10/296,079	Jan 16, 2003	6990272	Jan 24, 2006	Weatherford Canada Ltd.
Apparatus for Generating an Optical Interference Pattern	11/264,400	Oct 31, 2005	7079729	Jul 18, 2006	Weatherford Canada Ltd.
Method and Apparatus for Inducing an Index of Refraction Change on a Substrate Sensitive to Electromagnetic Radiation	10/733,325	Dec 12, 2003	7277604	Oct 2, 2007	Weatherford Canada Ltd.
Method and Apparatus for Inducing an Index of Refraction Change on a Substrate Sensitive to	11/680,920	Mar 1, 2007	7418162	Aug 26, 2008	Weatherford Canada Ltd.

Electromagnetic Radiation					
Optical Device for Measuring a Physical Parameter in a Hydrogen Contaminated Sensing Zone	12/438,979	Aug 31, 2007	10400579	Sep 3, 2019	Weatherford Canada Ltd.
Tilted Grating Sensor	12/439,031	Feb 26, 2009	8554024	Oct 8, 2013	Weatherford Canada Ltd.
Tilted Grating Sensor	14/010,770	Oct 25, 2006	9857290	Jan 2, 2018	Weatherford Canada Ltd.
Tilted Grating Sensor	15/824,692	Nov 28, 2017	10190970	Jan 29, 2019	Weatherford Canada Ltd.
Pressure Sensor Arrangement Using an Optical Fiber and Methodologies for Performing an Analysis of a Subterranean Formation	13/129,481	Apr 22, 2010	9347312	May 24, 2016	Weatherford Canada Ltd.
Pressure Sensor Arrangement Using an Optical Fiber and Methodologies for Performing an Analysis of a Subterranean Formation	16/371,350	Apr 1, 2019			Weatherford Canada Ltd.
Pressure Sensor Arrangement Using an Optical Fiber and Methodologies for Performing an Analysis of a Subterranean Formation	15/675,505	Aug 11, 2017	10246989	Apr 2, 2019	Weatherford Technology Holdings, LLC
Temperature Sensor Using an Optical Fiber	13/342,499	Jan 3, 2012	8335406	Dec 18, 2012	Weatherford Canada Ltd.
Temperature Sensor Using an Optical Fiber	13/419,966	Mar 14, 2012	8611703	Dec 17, 2013	Weatherford Canada Ltd.
Temperature Sensor Using an Optical Fiber	13/948,706	Jul 23, 2013	8811776	Aug 19, 2014	Weatherford Canada Ltd.
Apparatus and Method for Measuring the Acoustic Impedance of Wellbore Fluids	13/226,808	Sep 7, 2011	8824240	Sep 2, 2014	Weatherford Technology Holdings, LLC
Ball Valve Float Equipment	13/625,606	Sep 24, 2012	9371918	Jun 21, 2016	Weatherford Technology Holdings, LLC
Gravel Pack and Sand Disposal Device	13/614,569	Sep 13, 2012	9447661	Sep 20, 2016	Weatherford Technology Holdings, LLC

Multiple Shift Sliding Sleeve	13/568,774	Aug 7, 2012	9080420	Jul 14, 2015	Weatherford Technology Holdings, LLC
High Flow Rate Multi Array Stimulation System	13/569,391	Aug 8, 2012	9523261	Dec 20, 2016	Weatherford Technology Holdings, LLC
Selective Set Module for Multi String Packers	13/313,603	Dec 7, 2011	9163476	Oct 20, 2015	Weatherford Technology Holdings, LLC
Valve for Velocity Strings	13/622,760	Sep 19, 2012	9255462	Feb 9, 2016	Weatherford Technology Holdings, LLC
Entry Tube System	13/302,327	Nov 22, 2011	9309751	Apr 12, 2016	Weatherford Technology Holdings, LLC
Neutron Logging Tool with Multiple Detectors	13/661,764	Oct 26, 2012	9012836	Apr 21, 2015	Weatherford Technology Holdings, LLC
Three-Way Flow Sub for Continuous Circulation	13/596,987	Aug 28, 2012	9353587	May 31, 2016	Weatherford Technology Holdings, LLC
Three-Way Flow Sub for Continuous Circulation	15/150,464	May 10, 2016	10107053	Oct 23, 2018	Weatherford Technology Holdings, LLC
Resolution Matched Nonlinear Resolution Enhancement of Well Logs	13/274,069	Oct 14, 2011	9014984	Apr 21, 2015	Weatherford Technology Holdings, LLC
Adjustable Die	13/355,035	Jan 20, 2012	9254528	Feb 9, 2016	Weatherford Technology Holdings, LLC
Seal Assemblies in Subsea Rotating Control Devices	13/645,738	Oct 5, 2012	10000988	Jun 19, 2018	Weatherford Technology Holdings, LLC
Seal Element Guide	13/926,571	Jun 25, 2013	9341043	May 17, 2016	Weatherford Technology Holdings, LLC
Long Lasting Power Source for Completion Applications	13/409,975	Mar 1, 2012	8975861	Mar 10, 2015	Weatherford Technology Holdings, LLC
Swellable Packer in Hookup Nipple	13/453,565	Apr 23, 2012	9359856	Jun 7, 2016	Weatherford Technology Holdings, LLC
Open Hole Resettable Ball Set	13/359,937	Jan 27, 2012	9394773	Jul 19, 2016	Weatherford Technology Holdings, LLC
Gravel Pack Apparatus Having Actuated Valves	13/738,713	Jan 10, 2013	9441454	Sep 13, 2016	Weatherford Technology Holdings, LLC

Gravel Pack Apparatus Having Actuated Valves	15/242,515	Aug 20, 2016	10280718	May 7, 2019	Weatherford Technology Holdings, LLC
Calculating Downhole Cards in Deviated Wells	13/663,155	Oct 29, 2012	9897083	Feb 20, 2018	Weatherford Technology Holdings, LLC
Fluid Load Line Calculation and Concavity Test for Downhole Pump Card	13/663,161	Oct 29, 2012	9810212	Nov 7, 2017	Weatherford Technology Holdings, LLC
Calculating Downhole Pump Card With Iterations on Single Damping Factor	13/663,167	Oct 29, 2012	9810213	Nov 7, 2017	Weatherford Technology Holdings, LLC
Calculating Downhole Pump Card With Iterations on Dual Damping Factors	13/663,174	Oct 29, 2012	9810214	Nov 7, 2017	Weatherford Technology Holdings, LLC
Enhanced Oilfield Swellable Elastomers and Methods for Making and Using Same	13/645,460	Oct 4, 2012	9758658	Sep 12, 2017	Weatherford Technology Holdings, LLC
Apparatus and Method for Completing a Wellbore	13/786,148	Mar 5, 2013	9228407	Jan 5, 2016	Weatherford Technology Holdings, LLC
Gravel Pack Assembly and Method of Use	13/297,129	Nov 15, 2011	9062529	Jun 23, 2015	Weatherford Technology Holdings, LLC
Multi-Cycle Circulating Tool	13/549,247	Jul 13, 2012	9328579	May 3, 2016	Weatherford Technology Holdings, LLC
Multi-Zone Cemented Fracturing System	13/954,522	Jul 30, 2013	9410399	Aug 9, 2016	Weatherford Technology Holdings, LLC
Hard Surfacing Metallic Slip Components for Downhole Tools	13/762,207	Feb 7, 2013	9273527	Mar 1, 2016	Weatherford Technology Holdings, LLC
Hard Surfacing Non-Metallic Slip Components for Downhole Tools	13/762,199	Feb 7, 2013	9097076	Aug 4, 2015	Weatherford Technology Holdings, LLC
Hard Surfacing Non-Metallic Slip Components for Downhole Tools	14/804,109	Jul 20, 2015	9739105	Aug 22, 2017	Weatherford Technology Holdings, LLC
Gas Hydrate Inhibitors and Methods for Making and Using Same	13/348,279	Jan 11, 2012	8932996	Jan 13, 2015	Weatherford Technology Holdings, LLC

In-Well Full-Bore Multiphase Flowmeter for Horizontal Wellbores	13/934,332	Jul 3, 2013	9383476	Jul 5, 2016	Weatherford Technology Holdings, LLC
Downhole Isolation Methods and Apparatus Therefor	13/336,683	Dec 23, 2011	9587459	Mar 7, 2017	Weatherford U.K. Limited
Downhole Isolation Methods and Apparatus Therefor	14/578,674	Dec 22, 2014	9745818	Aug 29, 2017	Weatherford U.K. Limited
Inflow Control Device Having Externally Configurable Flow Ports	13/485,463	May 31, 2012	9725985	Aug 8, 2017	Weatherford Technology Holdings, LLC
Dual Gradient Managed Pressure Drilling	13/752,804	Jan 29, 2013	9328575	May 3, 2016	Weatherford Technology Holdings, LLC
Bottomhole Assembly for Capillary Injection System and Method	13/774,821	Feb 22, 2013	9376896	Jun 28, 2016	Weatherford Technology Holdings, LLC
Self-Cleaning Disc Valve for Piston Pump	13/756,988	Feb 1, 2013	9739275	Aug 22, 2017	Weatherford Technology Holdings, LLC
Torque Control Device for a Downhole Drilling Assembly	13/776,185	Feb 25, 2013	9347279	May 24, 2016	Weatherford Technology Holdings, LLC
Torque Control Device for a Downhole Drilling Assembly	15/161,441	May 23, 2016	10253584	Apr 9, 2019	Weatherford Technology Holdings, LLC
Instrumented Rod Rotator	13/585,048	Aug 14, 2012	9140113	Sep 22, 2015	Weatherford Technology Holdings, LLC
Managed Pressure Drilling System Having Well Control Mode	15/426,229	Feb 7, 2017	10329860	Jun 25, 2019	Weatherford Technology Holdings, LLC
Packer Cup for Sealing in Multiple Wellbore Sizes Eccentrically	14/052,505	Oct 11, 2013	9140095	Sep 22, 2015	Weatherford Technology Holdings, LLC
Wiper Assembly for a Pump	13/850,143	Mar 25, 2013	9482227	Nov 1, 2016	Weatherford Technology Holdings, LLC
Liner Flotation System	13/536,078	Jun 28, 2012	9279295	Mar 8, 2016	Weatherford Technology Holdings, LLC
Compliant Cone System	13/485,379	May 31, 2012	9187988	Nov 17, 2015	Weatherford Technology Holdings, LLC
Sliding Sleeve Having Contracting, Segmented Ball Seat	14/104,238	Dec 12, 2013	9593553	Mar 14, 2017	Weatherford Technology Holdings, LLC

Manipulation of Multi-Component Geophone Array Data to Identify Downhole Conditions	13/851,712	Mar 27, 2013	9611730	Apr 4, 2017	Weatherford Technology Holdings, LLC
Manipulation of Multi-Component Geophone Data to Identify Downhole Conditions	15/423,794	Feb 3, 2017	10087747	Oct 2, 2018	Weatherford Technology Holdings, LLC
Seal Assembly	13/652,137	Oct 15, 2012	10323477	Jun 18, 2019	Weatherford Technology Holdings, LLC
Optical Transducer with Integrated Feedthrough	13/789,863	Mar 8, 2013	9223101	Dec 29, 2015	Weatherford Technology Holdings, LLC
Optical Transducer with Integrated Feedthrough	14/941,836	Nov 16, 2015	9588314	Mar 7, 2017	Weatherford Technology Holdings, LLC
Hydrostatic Tubular Lifting System	14/109,701	Dec 17, 2013	9732591	Aug 15, 2017	Weatherford Technology Holdings, LLC
Cased Hole Chemical Perforator	13/607,963	Sep 10, 2012	9422796	Aug 23, 2016	Weatherford Technology Holdings, LLC
Reverse Cementing Valve	13/439,207	Apr 4, 2012	9334700	May 10, 2016	Weatherford Technology Holdings, LLC
Method and Apparatus for Completing a Well	12/677,660	Oct 17, 2008	8833469	Sep 16, 2014	Weatherford Technology Holdings, LLC
Method of and Apparatus for Completing a Well	14/048,796	Oct 17, 2008	9085954	Jul 21, 2015	Weatherford Technology Holdings, LLC
Method of and Apparatus for Completing a Well	14/743,440	Jun 18, 2015	9359890	Jun 7, 2016	Weatherford Technology Holdings, LLC
Valve Assembly	13/903,259	May 28, 2013	9200501	Dec 1, 2015	Weatherford Technology Holdings, LLC
Switching Device for, and a Method of Switching, a Downhole Tool	12/866,822	Mar 6, 2009	9103197	Aug 11, 2015	Weatherford Technology Holdings, LLC
Switching Device for, and a Method of Switching, a Downhole Tool	14/802,402	Jul 17, 2015	9631458	Apr 25, 2017	Weatherford Technology Holdings, LLC
Switching Device for, and a Method of Switching, a Downhole Tool	15/426,512	Feb 7, 2017	10041335	Aug 7, 2018	Weatherford Technology Holdings, LLC

Pressure Actuable Downhole Tool and a Method for Actuating the Same	12/811,108	Feb 19, 2009	8567510	Oct 29, 2013	Weatherford Technology Holdings, LLC
Apparatus and Method for Setting a Downhole Anchor and Related Telescopic Joint	13/145,473	Jan 22, 2010	9890614	Feb 13, 2018	Weatherford Technology Holdings, LLC
Expandable Slip System	15/018,770	Jan 22, 2010	10267121	Apr 23, 2019	Weatherford Technology Holdings, LLC
Interlocking and Setting Section for a Downhole Tool	15/018,775	Jan 22, 2010	10280715	May 7, 2019	Weatherford Technology Holdings, LLC
Flow Control Device	13/131,459	Dec 4, 2009	8827238	Sep 9, 2014	Weatherford Technology Holdings, LLC
Flow Control Apparatus and Method	13/145,824	Jan 27, 2010	8863848	Oct 21, 2014	Weatherford Technology Holdings, LLC
Tree Plug	12/514,488	Nov 19, 2007	8839872	Sep 23, 2014	Weatherford Technology Holdings, LLC
Activation Device	12/665,641	Mar 1, 2010	8689864	Apr 8, 2014	Weatherford Technology Holdings, LLC
Control System	13/122,186	Oct 1, 2009	8950503	Feb 10, 2015	Weatherford Technology Holdings, LLC
Centralizer	12/743,505	Nov 28, 2008	8555964	Oct 15, 2013	Weatherford Technology Holdings, LLC
Centralizer	14/027,444	Sep 16, 2013	8919437	Dec 30, 2014	Weatherford Technology Holdings, LLC
Centralizer	14/580,398	Dec 23, 2014	9932779	Apr 3, 2018	Weatherford Technology Holdings, LLC
Centralizer	12/933,053	Mar 18, 2009	8820417	Sep 2, 2014	Weatherford Technology Holdings, LLC
Tubing Section	12/866,495	Feb 23, 2009	9702231	Jul 11, 2017	Weatherford Technology Holdings, LLC
Improved Tubing Section Coupling	12/933,015	Mar 23, 2009	9133968	Sep 15, 2015	Weatherford Technology Holdings, LLC
Seal Element	14/529,860	Nov 3, 2014	9915120	Mar 13, 2018	Weatherford Technology Holdings, LLC

Apparatus and Method for Downhole Communication	13/389,630	Aug 23, 2010	9488046	Nov 8, 2016	Weatherford Technology Holdings, LLC
Flow Restrictor	14/416,909	Jan 23, 2015			Weatherford Technology Holdings, LLC
Fiber Optic Multi-Waveguide Monolithic Penetrator/Connector and Methods	13/774,749	Feb 22, 2013	10197752	Feb 5, 2019	Weatherford Technology Holdings, LLC
Monolithic Multi-Optical-Waveguide Penetrator or Connector	16/220,162	Dec 14, 2018			Weatherford Technology Holdings, LLC
Monolithic Multi-Optical-Waveguide Penetrator or Connector	16/220,222	Dec 14, 2018			Weatherford Technology Holdings, LLC
Selective Fracturing System	13/789,912	Mar 8, 2013	9416643	Aug 16, 2016	Weatherford Technology Holdings, LLC
Method and System for Operating a Downhole Tool, for Fracturing a Formation and/or for Completing a Wellbore	14/390,309	Oct 2, 2014	9739127	Aug 22, 2017	Weatherford Technology Holdings, LLC
Apparatus and Method for Controlling a Part of a Downhole Assembly, and a Downhole Assembly	14/406,460	Dec 8, 2014	9834994	Dec 5, 2017	Weatherford Technology Holdings, LLC
Asynchronous DS-CDMA Receiver	13/487,453	Jun 4, 2012	9086504	Jul 21, 2015	Weatherford Technology Holdings, LLC
Standoff Device for Downhole Tools Using Slip Elements	13/605,239	Sep 6, 2012	9470060	Oct 18, 2016	Weatherford Technology Holdings, LLC
Method and System for Transmitting Signals Through a Metal Tubular	10/726,027	Dec 1, 2003	7063148	Jun 20, 2006	Weatherford Technology Holdings, LLC
Deburring Mill Tool for Wellbore Cleaning	13/662,120	Oct 26, 2012	9435176	Sep 6, 2016	Weatherford Technology Holdings, LLC
Apparatus and Methods of Running an Expandable Liner	13/786,195	Mar 5, 2013	9206674	Dec 8, 2015	Weatherford Technology Holdings, LLC
Bidirectional Downhole Isolation Valve	14/150,137	Jan 8, 2014	9518445	Dec 13, 2016	Weatherford Technology Holdings, LLC

Bidirectional Downhole Isolation Valve	15/374,326	Dec 9, 2016	10273767	Apr 30, 2019	Weatherford Technology Holdings, LLC
Bidirectional Downhole Isolation Valve	16/369,008	Mar 29, 2019			Weatherford Technology Holdings, LLC
Seal Stem	13/837,881	Mar 15, 2013	9260926	Feb 16, 2016	Weatherford Technology Holdings, LLC
Cartridge Valve Assembly for Wellhead	13/946,528	Jul 19, 2013	9945200	Apr 17, 2018	Weatherford Technology Holdings, LLC
Cartridge Valve Assembly for Wellhead	15/906,303	Feb 27, 2018			Weatherford Technology Holdings, LLC
Packer Setting and/or Unsetting	13/941,165	Jul 12, 2013	9611708	Apr 4, 2017	Weatherford Technology Holdings, LLC
Expandable Liner	13/954,594	Jul 30, 2013			Weatherford Technology Holdings, LLC
Sliding Sleeve Having Ramped, Contracting, Segmented Ball Seat	14/104,359	Dec 12, 2013	9506321	Nov 29, 2016	Weatherford Technology Holdings, LLC
Sliding Sleeve Having Contracting, Dual Segmented Ball Seat	14/104,305	Dec 12, 2013	9624756	Apr 18, 2017	Weatherford Technology Holdings, LLC
Sliding Sleeve Having Deformable Ball Seat	14/104,367	Dec 12, 2013	9488035	Nov 8, 2016	Weatherford Technology Holdings, LLC
Resettable Ball Seat for Hydraulically Actuating Tools	14/180,618	Feb 14, 2014	9638004	May 2, 2017	Weatherford Technology Holdings, LLC
Expandable Ball Seat for Hydraulically Actuating Tools	13/793,688	Mar 11, 2013	9187978	Nov 17, 2015	Weatherford Technology Holdings, LLC
Packer Having Swellable and Compressible Elements	14/014,041	Aug 29, 2013	9637997	May 2, 2017	Weatherford Technology Holdings, LLC
Extended Length Packer with Timed Setting	14/200,566	Mar 7, 2014	9845656	Dec 19, 2017	Weatherford Technology Holdings, LLC
Double Compression Set Packer	13/826,021	Mar 14, 2013	9476280	Oct 25, 2016	Weatherford Technology Holdings, LLC
Split Foldback Rings with Anti-Hooping Band	14/192,703	Feb 27, 2014	9587458	Mar 7, 2017	Weatherford Technology Holdings, LLC

Sliding Sleeve Having Contracting, Ringed Ball Seat	14/104,065	Dec 12, 2013	9714557	Jul 25, 2017	Weatherford Technology Holdings, LLC
Cement Device Release Mechanism	14/201,575	Mar 7, 2014	9611713	Apr 4, 2017	Weatherford Technology Holdings, LLC
Multiphase Flowmeter for Subsea Applications	14/032,613	Sep 20, 2013	9347310	May 24, 2016	Weatherford Technology Holdings, LLC
Non-metallic Slips Having Inserts Oriented Normal to Cone Face	14/039,032	Sep 27, 2013	9725981	Aug 8, 2017	Weatherford Technology Holdings, LLC
Insert Units for Non-Metallic Slips Oriented Normal to Cone Face	14/446,642	Jul 30, 2014	9677356	Jun 13, 2017	Weatherford Technology Holdings, LLC
Well Isolation	14/431,497	Mar 26, 2015			Weatherford Technology Holdings, LLC
Downhole Apparatus and Method	14/441,752	Nov 7, 2013	10077627	Sep 18, 2018	Weatherford Technology Holdings, LLC
Flow Control Assembly	14/435,982	Apr 15, 2015	10036231	Jul 31, 2018	Weatherford Technology Holdings, LLC
Flow Control Assembly	16/046,723	Jul 26, 2018			Weatherford Technology Holdings, LLC
Method and Apparatus for Actuating Downhole Tools	14/654,106	Jun 19, 2015	10287852	May 14, 2019	Weatherford Technology Holdings, LLC
Method and Apparatus for Actuating Downhole Tools	15/898,953	Feb 19, 2018			Weatherford Technology Holdings, LLC
Real-Time Determination of Fluid Properties Using Density Analysis	13/827,931	Mar 14, 2013	10400595	Sep 3, 2019	Weatherford Technology Holdings, LLC
High Water and Brine Swell Elastomeric Compositions and Method for Making and Using Same	14/033,660	Sep 23, 2013			Weatherford Technology Holdings, LLC
Method and Apparatus for Handling a Tubular	14/043,723	Oct 1, 2013	10337263	Jul 2, 2019	Weatherford Technology Holdings, LLC
Compensating Bails	14/041,841	Sep 30, 2013	9476268	Oct 25, 2016	Weatherford Technology Holdings, LLC

Compensating Bails	15/277,290	Sep 27, 2016	9951570	Apr 24, 2018	Weatherford Technology Holdings, LLC
Downhole Tool Having Slip Inserts Composed of Different Materials	14/172,542	Feb 4, 2014	9416617	Aug 16, 2016	Weatherford Technology Holdings, LLC
Hydraulic Communication Profile	13/766,433	Feb 13, 2013	9528345	Dec 27, 2016	Weatherford Technology Holdings, LLC
Consumable Downhole Packer or Plug	14/164,809	Jan 27, 2014	9482069	Nov 1, 2016	Weatherford Technology Holdings, LLC
Consumable Downhole Packer or Plug	15/276,492	Sep 26, 2016	10415343	Sep 17, 2019	Weatherford Technology Holdings, LLC
Multi-Zone Bypass Packer Assembly for Gravel Packing Boreholes	14/022,959	Sep 10, 2013	9428997	Aug 30, 2016	Weatherford Technology Holdings, LLC
Cable By-Pass for Spooled Cables	14/212,262	Mar 14, 2014	9212533	Dec 15, 2015	Weatherford Technology Holdings, LLC
Controller for Downhole Tool	14/207,266	Mar 12, 2014	9534461	Jan 3, 2017	Weatherford Technology Holdings, LLC
Controller for Downhole Tool	15/373,955	Dec 9, 2016	10480290	Nov 19, 2019	Weatherford Technology Holdings, LLC
Downhole Tool for Debris Removal	13/839,632	Mar 15, 2013	9404329	Aug 2, 2016	Weatherford Technology Holdings, LLC
Graphical Evaluator for Tubular Makeup	29/614,617	Aug 21, 2017			Weatherford Technology Holdings, LLC
Graphical Evaluator for Tubular Makeup	29/614,635	Aug 21, 2017			Weatherford Technology Holdings, LLC
Graphical Evaluator for Tubular Makeup	29/679,455	Feb 6, 2019			Weatherford Technology Holdings, LLC
Gas Lift Valve with Mixed Bellows and Floating Constant Volume Fluid Chamber	14/021,326	Sep 9, 2013	9605521	Mar 28, 2017	Weatherford Technology Holdings, LLC
Gas Lift Valve with Mixed Bellows and Floating Constant Volume Fluid Chamber	15/432,573	Feb 14, 2017	9988886	Jun 5, 2018	Weatherford Technology Holdings, LLC

Apparatus and Methods of Running Casing in a Dual Gradient System	14/179,278	Feb 12, 2014	9657548	May 23, 2017	Weatherford Netherlands B.V.
Piston Float Equipment	14/509,938	Oct 8, 2014	9915124	Mar 13, 2018	Weatherford Technology Holdings, LLC
Novel Strontium Carbonate Bridging Materials and Methods for Making and Using Same	14/068,621	Oct 31, 2013	10047267	Aug 14, 2018	Weatherford Technology Holdings, LLC
Downhole Apparatus and Method	14/649,590	Dec 3, 2013			Weatherford Technology Holdings, LLC
High-Speed Rod-Driven Downhole Pump	13/827,624	Mar 14, 2013	9309753	Apr 12, 2016	Weatherford Technology Holdings, LLC
Time Delay Compensation for Optical Waveguides Using a Bidirectional Wavelength Scan	14/076,766	Nov 23, 2013	9046389	Jun 2, 2015	Weatherford Technology Holdings, LLC
Optical Couplers Used in a Downhole Splitter Assembly	14/280,020	May 16, 2014	9465137	Oct 11, 2016	Weatherford Technology Holdings, LLC
Optical Couples Used in a Downhole Splitter Assembly	15/150,501	May 10, 2016			Weatherford Technology Holdings, LLC
Riser Auxiliary Line Jumper System for Rotating Control Device	14/106,050	Dec 13, 2013	9074425	Jul 7, 2015	Weatherford Technology Holdings, LLC
Surge Immune Liner Setting Tool	14/154,392	Jan 14, 2014	9518452	Dec 13, 2016	Weatherford Technology Holdings, LLC
Hydraulic Set Packer with Piston to Annulus Communication	14/173,307	Feb 5, 2014	9512693	Dec 6, 2016	Weatherford Technology Holdings, LLC
Ball Seat Apparatus and Method	14/152,913	Jan 10, 2014	10161217	Dec 25, 2018	Weatherford Technology Holdings, LLC
Method and Apparatus for Sealing Tubulars	14/152,937	Jan 10, 2014	9745821	Aug 29, 2017	Weatherford Technology Holdings, LLC
Method and Apparatus for Sealing Tubulars	15/688,556	Aug 28, 2017			Weatherford Technology Holdings, LLC
Erosion Ports for Shunt Tubes	14/190,818	Feb 26, 2014	9677383	Jun 13, 2017	Weatherford Technology Holdings, LLC

Shunt Tube Connections for Wellscreen Assembly	14/175,152	Feb 7, 2014	8931568	Jan 13, 2015	Weatherford Technology Holdings, LLC
Shunt Tube Connections for Wellscreen Assembly	14/575,316	Dec 18, 2014	10253602	Apr 9, 2019	Weatherford Technology Holdings, LLC
Thick Wall Shouldered Launcher	14/201,587	Mar 7, 2014	10024144	Jul 17, 2018	Weatherford Technology Holdings, LLC
Top Drive Stand Compensator with Fill Up Tool	13/953,128	Jul 29, 2013	9598916	Mar 21, 2017	Weatherford Technology Holdings, LLC
Downhole Tool and Method	14/081,665	Nov 15, 2013	9759038	Sep 12, 2017	Weatherford Technology Holdings, LLC
Downhole Tool and Method	15/702,515	Sep 12, 2017			Weatherford Technology Holdings, LLC
Downhole Communication	14/771,238	Feb 28, 2014	10294775	May 21, 2019	Weatherford Technology Holdings, LLC
Downhole Communication	16/033,097	Jul 11, 2018			Weatherford Technology Holdings, LLC
Downhole Communication	16/353,295	Mar 14, 2019			Weatherford Technology Holdings, LLC
Downhole Detection	13/800,183	Mar 13, 2013	9677397	Jun 13, 2017	Weatherford Technology Holdings, LLC
Method and Apparatus for Detection and Quantification of Borehole Standoff	13/863,085	Apr 15, 2013	9664812	May 30, 2017	Weatherford Technology Holdings, LLC
Method and Apparatus for Detection and Quantification of Borehole Standoff	15/596,301	May 16, 2017			Weatherford Technology Holdings, LLC
Couplings for Expandable Tubular	14/209,297	Mar 13, 2014	9657555	May 23, 2017	Weatherford Technology Holdings, LLC
Couplings for Expandable Tubular	15/592,642	May 11, 2017	10156128	Dec 18, 2018	Weatherford Technology Holdings, LLC
Telemetry Operated Tools for Cementing a Liner String	14/250,162	Apr 10, 2014	10087725	Oct 2, 2018	Weatherford Technology Holdings, LLC
Telemetry Operated Tools for Cementing a Liner String	16/122,273	Sep 5, 2018			Weatherford Technology Holdings, LLC

Hydraulic Diversion Systems to Enhance Matrix Treatments and Methods for Using Same	16/117,490	Aug 30, 2018	10309172	Jun 4, 2019	Weatherford Technology Holdings, LLC
Big Gap Element Sealing System	14/229,245	Mar 28, 2014	10094198	Oct 9, 2018	Weatherford Technology Holdings, LLC
Big Gap Element Sealing System	16/154,103	Oct 8, 2018			Weatherford Technology Holdings, LLC
Floating Device Running Tool	14/506,411	Oct 3, 2014	9523252	Dec 20, 2016	Weatherford Technology Holdings, LLC
Bldirectional Downhole Deployment Valve	14/313,089	Jun 24, 2014	10132137	Nov 20, 2018	Weatherford Technology Holdings, LLC
Bldirectional Downhole Isolation Valve	15/645,778	Jul 10, 2017	10138710	Nov 27, 2018	Weatherford Technology Holdings, LLC
Bldirectional Downhole Isolation Valve	16/150,549	Oct 3, 2018			Weatherford Technology Holdings, LLC
Capillary Injection Delivery System Having Tubing Anchor	14/248,941	Apr 9, 2014	9856707	Jan 2, 2018	Weatherford Technology Holdings, LLC
Downhole Anchor	15/515,406	Oct 14, 2015			Weatherford U.K. Limited
Sensing in Artificial Lift Systems	14/250,196	Apr 10, 2014	9976398	May 22, 2018	Weatherford Technology Holdings, LLC
Downhole Debris Retriever	14/486,915	Sep 15, 2014	10053961	Aug 21, 2018	Weatherford Technology Holdings, LLC
System and Method for Sealing a Wellbore	14/510,984	Oct 9, 2014			Weatherford Netherlands B.V.
Packoff for Liner Deployment Assembly	13/903,103	May 28, 2013	9650854	May 16, 2017	Weatherford Technology Holdings, LLC
Electronically-Actuated, Multi-Set Straddle Borehole Treatment Apparatus	13/952,001	Jul 26, 2013	10024133	Jul 17, 2018	Weatherford Technology Holdings, LLC
Zone Select Stage Tool System	13/944,568	Jul 17, 2013	9856714	Jan 2, 2018	Weatherford Technology Holdings, LLC
Electronically-Actuated Cementing Port Collar	13/952,202	Jul 29, 2013	9316091	Apr 19, 2016	Weatherford Technology Holdings, LLC

Electronically-Actuated Cementing Port Collar	15/130,757	Apr 15, 2016	10174586	Jan 8, 2019	Weatherford Technology Holdings, LLC
Tubular Handling Tool	14/268,764	May 2, 2014	10125555	Nov 13, 2018	Weatherford Technology Holdings, LLC
Tubular Handling Tool	15/674,848	Aug 11, 2017	10030454	Jul 24, 2018	Weatherford Technology Holdings, LLC
Analysis of Drillstring Dynamics Using Angular and Linear Motion Data From Multiple Accelerometer Pairs	14/050,664	Oct 10, 2013	9567844	Feb 14, 2017	Weatherford Technology Holdings, LLC
Time Division Multiplexing (TDM) and Wavelength Division Multiplexing (WDM) Fast-Sweep Interrogator	14/276,792	May 13, 2014	9778078	Oct 3, 2017	Weatherford Technology Holdings, LLC
Time Division Multiplexing (TDM) and Wavelength Division Multiplexing (WDM) Fast-Sweep Interrogator	15/631,677	Jun 23, 2017	9958300	May 1, 2018	Weatherford Technology Holdings, LLC
Method and Apparatus for Operating a Downhole Tool	14/276,956	May 13, 2014	10227826	Mar 12, 2019	Weatherford Technology Holdings, LLC
Method and Apparatus for Monitoring a Fluid	14/517,622	Oct 17, 2014	10107095	Oct 23, 2018	Weatherford Technology Holdings, LLC
Telemetry Operated Setting Tool	14/082,978	Nov 18, 2013	9428998	Aug 30, 2016	Weatherford Technology Holdings, LLC
Telemetry Operated Setting Tool	15/212,817	Jul 18, 2016	9970251	May 15, 2018	Weatherford Technology Holdings, LLC
Running Tool	14/082,996	Nov 18, 2013	9777569	Oct 3, 2017	Weatherford Technology Holdings, LLC
Telemetry Operated Running Tool	15/723,007	Oct 2, 2017	10422216	Sep 24, 2019	Weatherford Technology Holdings, LLC
Telemetry Operated Cementing Plug Release System	14/083,021	Nov 18, 2013	9523258	Dec 20, 2016	Weatherford Technology Holdings, LLC

Telemetry Operated Cementing Plug Release System	15/357,732	Nov 21, 2016	10221638	Mar 5, 2019	Weatherford Technology Holdings, LLC
Telemetry Operated Expandable Liner System	14/447,288	Jul 30, 2014	9732597	Aug 15, 2017	Weatherford Technology Holdings, LLC
Telemetry Operated Ball Release System	14/083,046	Nov 18, 2013	9528346	Dec 27, 2016	Weatherford Technology Holdings, LLC
Telemetry Operated Ball Release System	15/386,929	Dec 21, 2016	10246965	Apr 2, 2019	Weatherford Technology Holdings, LLC
Apparatus and Methods for Cemented Multi-Zone Completions	13/936,856	Jul 8, 2013	9926783	Mar 27, 2018	Weatherford Technology Holdings, LLC
Apparatus and Methods for Cemented Multi-Zone Completions	15/897,521	Feb 15, 2018			Weatherford Technology Holdings, LLC
Assembly for Toe-to-Heel Gravel Packing and Reverse Circulating Excess Slurry	14/282,692	May 20, 2014	10082007	Sep 25, 2018	Weatherford Technology Holdings, LLC
Vent Valve and Method of Use	14/669,442	Mar 26, 2015	10006553	Jun 26, 2018	Weatherford U.K. Limited
Method and Apparatus for Hydraulic Fracturing	14/076,935	Nov 11, 2013	9714559	Jul 25, 2017	Weatherford Technology Holdings, LLC
Choke	14/896,568	Mar 3, 2016	10428621	Oct 1, 2019	Weatherford Technology Holdings, LLC
Choke	16/529,704	Aug 1, 2019			Weatherford Technology Holdings, LLC
Tubular Handling Tool	14/561,295	Dec 5, 2014			Weatherford Technology Holdings, LLC
Tubular Handling Tool	16/513,463	Jul 16, 2019			Weatherford Technology Holdings, LLC
Autonomous Selective Shifting Tool	14/573,501	Dec 17, 2014	9759040	Sep 12, 2017	Weatherford Technology Holdings, LLC
Small Profile Pressure and Temperature Gauges	14/330,338	Jul 14, 2014	9677963	Jun 13, 2017	Weatherford Technology Holdings, LLC
Small Profile Pressure and Temperature Gauges	15/478,781	Apr 4, 2017	10175131	Jan 8, 2019	Weatherford Technology Holdings, LLC

Extendable and Retractable Stabilizer	14/316,544	Jun 24, 2014	9784047	Oct 10, 2017	Weatherford Technology Holdings, LLC
Method and Apparatus for Communicating Incremental Depth and/or Other Useful Data of a Downhole Tool	14/621,007	Feb 12, 2015	10100630	Oct 16, 2018	Weatherford Technology Holdings, LLC
Milling System for Abandoning a Wellbore	14/496,936	Sep 25, 2014	9938781	Apr 10, 2018	Weatherford Technology Holdings, LLC
Milling System for Abandoning a Wellbore	15/940,507	Mar 29, 2018			Weatherford Technology Holdings, LLC
Centralizer	14/447,187	Jul 30, 2014	10113372	Oct 30, 2018	Weatherford Technology Holdings, LLC
Fiber Optic Splice Protector for Harsh Environments	14/075,534	Nov 8, 2013	9341778	May 17, 2016	Weatherford Canada Ltd.
Reverse Cementation of Liner String for Formation Stimulation	14/797,386	Jul 13, 2015	10094197	Oct 9, 2018	Weatherford Technology Holdings, LLC
Tubular Stabbing Guide	14/910,795	Aug 11, 2014			Weatherford Norge AS & Weatherford U.K. Limited
Toe Sleeve Isolation System for Cemented Casing in Borehole	14/561,693	Dec 5, 2014	9976384	May 22, 2018	Weatherford Technology Holdings, LLC
Wired or Ported Transmission Shaft and Universal Joints for Downhole Drilling Motor	13/974,257	Aug 23, 2013	9657520	May 23, 2017	Weatherford Technology Holdings, LLC
Reusable High Performance Water Based Drilling Fluids	14/506,137	Oct 3, 2014			Weatherford Technology Holdings, LLC
Ultrasonic Logging Methods and Apparatus for Measuring Cement and Casing Properties Using Acoustic Echoes	14/153,174	Jan 14, 2014	10358905	Jul 23, 2019	Weatherford Technology Holdings, LLC
Normalization of Sector Amplitudes using Monopole Amplitudes	14/463,289	Aug 19, 2014	9715025	Jul 25, 2017	Weatherford Technology Holdings, LLC
Use of Downhole Isolation Valve to Sense Annulus Pressure	14/032,866	Sep 20, 2013	9650884	May 16, 2017	Weatherford Technology Holdings, LLC

Strain Isolated Fiber Bragg Grating Sensors	14/497,573	Sep 26, 2014	10451807	Oct 22, 2019	Weatherford Technology Holdings, LLC
Method and Apparatus for Controlling a Downhole Tool	15/505,538	Sep 2, 2015			Weatherford Technology Holdings, LLC
Volume Synchronizer for Tubular Handling Tools	14/091,230	Nov 26, 2013	9528363	Dec 27, 2016	Weatherford Technology Holdings, LLC
Internally Degradable Plugs for Downhole Use	14/535,418	Nov 7, 2014	10309183	Jun 4, 2019	Weatherford Technology Holdings, LLC
Molded Composite Slip of Sheet Molded Compound for Downhole Tool	14/484,386	Sep 12, 2014	10087707	Oct 2, 2018	Weatherford Technology Holdings, LLC
Molded Composite Slip of Sheet Molded Compound for Downhole Tool	16/149,417	Oct 2, 2018			Weatherford Technology Holdings, LLC
Open Hole Expandable Junction	14/614,100	Feb 4, 2015	9714558	Jul 25, 2017	Weatherford Technology Holdings, LLC
Multiple Diameter Expandable Straddle System	14/249,034	Apr 9, 2014	9494020	Nov 15, 2016	Weatherford Technology Holdings, LLC
RFID Device for Use Downhole	15/433,729	Feb 15, 2017			Weatherford Technology Holdings, LLC
Dampener Lubricator for Plunger Lift System	14/137,145	Dec 20, 2013	9587444	Mar 7, 2017	Weatherford Technology Holdings, LLC
System and Method for Managed Pressure Wellbore Strengthening	14/261,914	Apr 25, 2014	10227836	Mar 12, 2019	Weatherford Technology Holdings, LLC
System and Method for Integrated Wellbore Stress, Stability and Strengthening Analyses	14/249,052	Apr 9, 2014	9803475	Oct 31, 2017	Weatherford Technology Holdings, LLC
Differential Pressure Indicator for Downhole Isolation Valve	14/522,852	Oct 24, 2014			Weatherford Technology Holdings, LLC
Continuous Flow System for Drilling Oil and Gas Wells	14/617,270	Feb 9, 2015	10006262	Jun 26, 2018	Weatherford Technology Holdings, LLC
Closure Device for a Surge Pressure Reduction Tool	14/710,285	May 12, 2015	10190397	Jan 29, 2019	Weatherford Netherlands B.V.

Swivel Elevator	14/229,372	Mar 28, 2014	10036215	Jul 31, 2018	Weatherford Technology Holdings, LLC
Cement Pulsation for Subsea Wellbore	14/634,276	Feb 27, 2015	9416620	Aug 16, 2016	Weatherford Technology Holdings, LLC
Sealing Element Mounting	14/701,169	Apr 30, 2015	10077604	Sep 18, 2018	Weatherford Technology Holdings, LLC
Misalignment Mitigation in a Rotating Control Device	14/725,291	Mar 10, 2016	9932786	Apr 3, 2018	Weatherford Technology Holdings, LLC
Magnetic Retrieval Apparatus	14/532,594	Nov 4, 2014	10208553	Feb 19, 2019	Weatherford Technology Holdings, LLC
Stabilizer	14/569,414	Dec 12, 2014	9879485	Jan 30, 2018	Weatherford Technology Holdings, LLC
Wiper and Seal Assembly for a Pump	14/530,461	Oct 31, 2014	10077616	Sep 18, 2018	Weatherford Technology Holdings, LLC
Cu-Ni-Sn Alloy Overlay for Bearing Surfaces on Oilfield Equipment	14/513,315	Oct 14, 2014	9631157	Apr 25, 2017	Weatherford Technology Holdings, LLC
Method and Apparatus for Treating a Wellbore	14/554,969	Nov 26, 2014	9976389	May 22, 2018	Weatherford Technology Holdings, LLC
Method and Apparatus for Treating a Wellbore	14/555,015	Nov 26, 2014	9995112	Jun 12, 2018	Weatherford Technology Holdings, LLC
Method and Apparatus for Treating a Wellbore	14/555,055	Nov 26, 2014	9995113	Jun 12, 2018	Weatherford Technology Holdings, LLC
Method and Apparatus for Treating a Wellbore	14/555,087	Nov 26, 2014	9885225	Feb 6, 2018	Weatherford Technology Holdings, LLC
Method and Apparatus for Treating a Wellbore	15/985,579	May 21, 2018			Weatherford Technology Holdings, LLC
Re-Fracture Apparatus and Method for Wellbore	14/522,960	Oct 24, 2014	9765605	Sep 19, 2017	Weatherford Technology Holdings, LLC
Inflow Control Device Having Elongated Slots for Bridging Off During Fluid Loss Control	14/550,000	Nov 21, 2014	10202829	Feb 12, 2019	Weatherford Technology Holdings, LLC
Burst Sleeve and Positive Indication for Fracture Sleeve Opening	14/560,364	Dec 4, 2014	9885224	Feb 6, 2018	Weatherford Technology Holdings, LLC

Heave Compensation System For Assembling A Drill String	14/541,354	Nov 14, 2014	9631442	Apr 25, 2017	Weatherford Technology Holdings, LLC
Heave Compensation System For Assembling A Drill String	15/457,721	Mar 13, 2017			Weatherford Technology Holdings, LLC
System and Method for Modeling and Design of Pulse Fracturing Networks	14/322,516	Jul 2, 2014	10132147	Nov 20, 2018	Weatherford Technology Holdings, LLC
Downhole Tool and Method for Passing Control Line Through Tool	14/178,004	Feb 11, 2014	9303478	Apr 5, 2016	Weatherford Technology Holdings, LLC
Automatic Event Detection and Control While Drilling In Closed Loop Systems	14/628,850	Feb 23, 2015	10060208	Aug 28, 2018	Weatherford Technology Holdings, LLC
Rotating Control Device Having Jumper for Riser Auxiliary Line	14/593,329	Jan 9, 2015	9422776	Aug 23, 2016	Weatherford Technology Holdings, LLC
High-Rate Injection Screen Assembly with Checkable Ports	14/585,397	Dec 30, 2014	9695675	Jul 4, 2017	Weatherford Technology Holdings, LLC
Improvements In and Relating to Screens	15/113,675	Mar 15, 2017			Weatherford U.K. Limited
Screens	16/036,758	Jan 21, 2015			Weatherford U.K. Limited
Screens	16/239,449	Jan 3, 2019			Weatherford U.K. Limited
Apparatus and Method for Simultaneously Obtaining Quantitative Measurements of Formation Resistivity and Permittivity in Both Water and Oil Based Mud	14/528,568	Oct 30, 2014	9341735	May 17, 2016	Weatherford Technology Holdings, LLC
Apparatus and Method for Simultaneously Obtaining Quantitative Measurements of Formation Resistivity and Permittivity in Both Water and Oil Based Mud	15/139,643	Apr 27, 2016	9684091	Jun 20, 2017	Weatherford Technology Holdings, LLC
Tieback Cementing Plug System	14/639,309	Mar 5, 2015	9797220	Oct 24, 2017	Weatherford Technology Holdings, LLC

Tieback Cementing Plug System	15/908,419	Feb 28, 2018			Weatherford Technology Holdings, LLC
Self-Degradable Hydraulic Diversion Systems and Methods for Making and Using Same	14/257,830	Apr 21, 2014	10202828	Feb 12, 2019	Weatherford Technology Holdings, LLC
Rotating Control Device Radial Seal Protection	14/725,748	May 29, 2015	9567817	Feb 14, 2017	Weatherford Technology Holdings, LLC
Tertiary Sealing Sleeve for Stage Tool	14/876,308	Oct 6, 2015			Weatherford Technology Holdings, LLC
Logging While Drilling Electrical Imager and Method for Measurement in Oil Based Mud	14/305,227	Jun 16, 2014	9797236	Oct 24, 2017	Weatherford Technology Holdings, LLC
Stage Tool with Lower Tubing Isolation	14/719,560	May 22, 2015	9909390	Mar 6, 2018	Weatherford Technology Holdings, LLC
Straddle Packer System	14/318,147	Jun 27, 2014	10138704	Nov 27, 2018	Weatherford Technology Holdings, LLC
Leak-Off Assembly for Gravel Pack System	14/602,438	Jan 22, 2015	9945211	Apr 17, 2018	Weatherford Technology Holdings, LLC
Marine Diverter System with Real Time Kick or Loss Detection	14/710,790	May 3, 2015	9822630	Nov 21, 2017	Weatherford Technology Holdings, LLC
Whipstock Assembly Having Anchor and Eccentric Packer	14/719,745	May 22, 2015	10006264	Jun 26, 2018	Weatherford Technology Holdings, LLC
Inserts Having Geometrically Separate Materials for Slips on Downhole Tool	14/739,962	Jun 15, 2015	10415335	Sep 17, 2019	Weatherford Technology Holdings, LLC
Dart Detector for Wellbore Tubular Cementation	14/717,441	May 20, 2015	9957794	May 1, 2018	Weatherford Technology Holdings, LLC
Downhole Running Cable Having Non-Mettalic Conducting and Load Bearing Wire	15/313,056	Jun 5, 2015	10256010	Apr 9, 2019	Weatherford Technology Holdings, LLC
Downhole Running Cable Depth Measurement	15/313,039	Jun 5, 2015	10273798	Apr 30, 2019	Weatherford Technology Holdings, LLC

Dual Stem Injection Valve	14/834,831	Mar 4, 2016	9593554	Mar 14, 2017	Weatherford Technology Holdings, LLC
Side-Looking NMR Logging Tool	15/759,481	Aug 2, 2016			Weatherford Technology Holdings, LLC
Methods and Apparatus Related to an Expandable Port Collar	14/521,556	Oct 23, 2014			Weatherford Technology Holdings, LLC
Remotely Operated Stage Cementing Methods for Liner Drilling Installations	14/710,086	May 12, 2015	9970258	May 15, 2018	Weatherford Technology Holdings, LLC
Swivel and Method of Use	14/709,953	May 12, 2015	9915105	Mar 13, 2018	Weatherford Technology Holdings, LLC
Surge Immune Stage System for Wellbore Tubular Connection	14/710,090	May 12, 2015	10246968	Apr 2, 2019	Weatherford Netherlands B.V.
Technique for Production Enhancement with Downhole Monitoring of Artificially Lifted Wells	14/719,049	May 21, 2015	9957783	May 1, 2018	Weatherford Technology Holdings, LLC
Revolving Ball Seat for Hydraulically Actuating Tools	14/444,470	Jul 28, 2014	9759044	Sep 12, 2017	Weatherford Technology Holdings, LLC
Enhanced Erosion Resistance Wire Shapes	14/875,825	Oct 6, 2015	10408022	Sep 10, 2019	Weatherford Technology Holdings, LLC
Latch Ring for Casing Hanger in Casing Head	14/453,389	Aug 6, 2014	10018008	Jul 10, 2018	Weatherford Technology Holdings, LLC
Flow Resistant Packing Element System for Composite Plug	14/827,460	Aug 17, 2015	10016918	Jul 10, 2018	Weatherford Technology Holdings, LLC
Centralizer	14/741,235	Mar 1, 2016	10280695	May 7, 2019	Weatherford Technology Holdings, LLC
Centralizer	16/404,106	May 6, 2019			Weatherford Technology Holdings, LLC
Method And Apparatus For Selective Injection	14/542,441	Nov 14, 2014	9856718	Jan 2, 2018	Weatherford Technology Holdings, LLC
Composite Sandwich Panels for Oilfield Valve	15/321,356	Sep 4, 2015	10337627	Jul 2, 2019	Weatherford Technology Holdings, LLC

Hydraulically Actuated Downhole Pump with Traveling Valve	14/877,021	Oct 7, 2015			Weatherford Technology Holdings, LLC
Downhole Casing Pulling Tool	14/851,283	Sep 11, 2015	10309179	Jun 4, 2019	Weatherford Technology Holdings, LLC
Control of Multiple Hydraulic Chokes in Managed Pressure Drilling	14/988,008	Jan 5, 2016	10174571	Jan 8, 2019	Weatherford Technology Holdings, LLC
Acoustic Data Compression Technique	14/752,111	Jun 26, 2015	9605536	Mar 28, 2017	Weatherford Technology Holdings, LLC
Time Division Multiplexing (TDM) and Wavelength Division Multiplexing (WDM) Sensor Arrays	14/308,296	Jun 18, 2014	9389174	Jul 12, 2016	Weatherford Technology Holdings, LLC
Shear Thickening Fluid Controlled Tool	14/922,297	Oct 26, 2015	9810037	Nov 7, 2017	Weatherford Technology Holdings, LLC
Stress Calculations For Sucker Rod Pumping Systems	14/751,940	Jun 26, 2015	10018032	Jul 10, 2018	Weatherford Technology Holdings, LLC
Multi-Function Dart	15/574,409	May 26, 2016			Weatherford Netherlands B.V.
Modular Top Drive	14/948,006	Nov 20, 2015	10132126	Nov 20, 2018	Weatherford Technology Holdings, LLC
Coriolis Flow Meter Having Flow Tube with Equalized Pressure Differential	14/859,531	Sep 21, 2015	10094185	Oct 9, 2018	Weatherford Technology Holdings, LLC
Sliding Sleeve Having Retrievable Ball Seat	14/857,519	Sep 17, 2015	9670751	Jun 6, 2017	Weatherford Technology Holdings, LLC
Composite Fracture Plug and Associated Methods	14/819,015	Aug 5, 2015	10364626	Jul 30, 2019	Weatherford Technology Holdings, LLC
Universal Remote Control System for Hydrocarbon Recovery Tools	14/733,671	Jun 8, 2015	10465494	Nov 5, 2019	Weatherford Technology Holdings, LLC
Reverse Flow Jet Pump	14/943,824	Nov 17, 2015			Weatherford Technology Holdings, LLC
Pivot Joint	14/828,926	Aug 18, 2015	10443769	Oct 15, 2019	Weatherford Technology Holdings, LLC

On-Off Tool for Sucker Rod String	14/946,898	Nov 20, 2015	10273762	Apr 30, 2019	Weatherford Technology Holdings, LLC
Nickel Corrosion Barrier Under Chrome For Sucker Rod Pumps	14/972,675	Dec 17, 2015	10138884	Nov 27, 2018	Weatherford Technology Holdings, LLC
System and Method for Performing Automated Fracture Stage Design	14/559,976	Dec 4, 2014			Weatherford Technology Holdings, LLC
Integrated Drilling Control System	14/874,613	Oct 5, 2015	10113408	Oct 30, 2018	Weatherford Technology Holdings, LLC
Rod Driven Centrifugal Pumping System for Adverse Well Production	14/265,867	Apr 30, 2014	9702232	Jul 11, 2017	Weatherford Technology Holdings, LLC
Rod Driven Centrifugal Pumping System for Adverse Well Production	15/646,945	Jul 11, 2017			Weatherford Technology Holdings, LLC
Pressure Operated Valve Assembly	15/509,467	Sep 17, 2015			Weatherford U.K. Limited
Apparatus for Carrying Chemical Tracers on Downhole Tubulars, Wellscreens, and the Like	15/078,812	Mar 23, 2016	10215003	Feb 26, 2019	Weatherford Technology Holdings, LLC
Apparatus for Carrying Chemical Tracers on Downhole Tubulars, Wellscreens, and the Like	16/272,056	Feb 11, 2019			Weatherford Technology Holdings, LLC
Optical Fiber Coating to Reduce Friction and Static Charge	14/842,984	Sep 2, 2015	10173286	Jan 8, 2019	Weatherford Technology Holdings, LLC
Smarter Slug Flow Conditioning and Control	14/856,936	Sep 17, 2015	10472946	Nov 12, 2019	Weatherford Technology Holdings, LLC
Cutting Tool	15/045,927	Mar 10, 2016			Weatherford Technology Holdings, LLC
Valve Assembly with a Filter Chamber	15/550,516	Feb 11, 2016			Weatherford U.K. Limited
Wellbore Injection System	15/550,532	Feb 11, 2016			Weatherford U.K. Limited
Choke Control Tuned by Flow Coefficient for Controlled Pressure Drilling	14/876,260	Oct 6, 2015	9995098	Jun 12, 2018	Weatherford Technology Holdings, LLC

Force Transferring Member for Use In A Tool	15/147,302	May 5, 2016	10180038	Jan 15, 2019	Weatherford Technology Holdings, LLC
Indexing Stimulating Sleeve and Other Downhole Tools	14/934,338	Nov 6, 2015	10392899	Aug 27, 2019	Weatherford Technology Holdings, LLC
Failsafe Subsurface Controlled Safety Valve	14/887,196	Oct 19, 2015	9745830	Aug 29, 2017	Weatherford Technology Holdings, LLC
Controlled Pressure Drilling System with Flow Measurement and Well Control	14/943,408	Nov 17, 2015	10094186	Oct 9, 2018	Weatherford Technology Holdings, LLC
Valve for a Downhole Pump	15/215,200	Jul 20, 2016	10240598	Mar 26, 2019	Weatherford Technology Holdings, LLC
Pressure Insensitive Counting Toe Sleeve	15/042,260	Feb 12, 2016			Weatherford Technology Holdings, LLC
Sliding Sleeve Having Indexing Mechanism and Expandable Sleeve	15/174,489	Jun 6, 2016	10337288	Jul 2, 2019	Weatherford Technology Holdings, LLC
Modular Top Drive System	15/006,562	Jan 26, 2016			Weatherford Technology Holdings, LLC
Time Delay Toe Sleeve	15/042,235	Feb 12, 2016	10036229	Jul 31, 2018	Weatherford Technology Holdings, LLC
Dual Sleeve Stimulation Tool	15/146,053	May 4, 2016	9970260	May 15, 2018	Weatherford Technology Holdings, LLC
Lift Valve With Bellow Hydraulic Protection and Chatter Reduction	14/947,932	Nov 20, 2015	10161232	Dec 25, 2018	Weatherford Technology Holdings, LLC
Connection Between Wellbore Components	14/611,941	Feb 2, 2015	9745802	Aug 29, 2017	Weatherford Technology Holdings, LLC
Connection Between Wellbore Components	15/688,609	Aug 28, 2017			Weatherford Technology Holdings, LLC
Birefringent Multi-Peak Optical Reference Element and Birefringent Sensor System	14/994,257	Jan 13, 2016	10254198	Apr 9, 2019	Weatherford Technology Holdings, LLC
Birefringent Multi-Peak Optical Reference Element and Birefringent Sensor System	16/268,029	Feb 5, 2019			Weatherford Technology Holdings, LLC

Annular Isolation Device for Managed Pressure Drilling	14/943,972	Nov 17, 2015	10012044	Jul 3, 2018	Weatherford Technology Holdings, LLC
Systems and Methods for Optimizing Formation Fracturing Operations	14/546,301	Nov 18, 2014	10001769	Jun 19, 2018	Weatherford Technology Holdings, LLC
Long-Stroke Pumping Unit	14/992,799	Jan 11, 2016	10196883	Feb 5, 2019	Weatherford Technology Holdings, LLC
Metal-to-Metal Sealing Valve With Managed Flow Erosion Across Sealing Member	15/088,770	Apr 1, 2016	10260313	Apr 16, 2019	Weatherford Technology Holdings, LLC
System and Method for Stress Inversion via Image Logs and Fracturing Data	14/715,880	May 19, 2015			Weatherford Technology Holdings, LLC
Combination Well Control/String Release Tool	15/574,939	May 27, 2016			Weatherford Technology Holdings, LLC
System and Method for Joint Inversion of Bed Boundaries and Petrophysical Properties from Borehole Logs	14/713,591	May 15, 2015	10222498	Mar 5, 2019	Weatherford Technology Holdings, LLC
Acoustically Enhanced Optical Cables	14/994,628	Jan 13, 2016			Weatherford Technology Holdings, LLC
Transducers and Acoustic Emitters For Fiber-Optic-Based Acoustic Sensing	15/543,105	Jan 14, 2016			Weatherford Technology Holdings, LLC
Ball Seat for Use in a Wellbore	14/704,578	May 5, 2015	9708887	Jul 18, 2017	Weatherford Technology Holdings, LLC
Tong Assembly With Torque Measurement	15/574,952	May 5, 2016	10392879	Aug 27, 2019	Weatherford Technology Holdings, LLC
Long Stroke Pumping Unit	15/011,330	Jan 29, 2016	10400761	Sep 3, 2019	Weatherford Technology Holdings, LLC
Direct Drive Pumping Unit	16/378,038	Apr 8, 2019			Weatherford Technology Holdings, LLC
Long Stroke Pumping Unit	16/378,085	Apr 8, 2019			Weatherford Technology Holdings, LLC

Setting Tool with Pressure Shock Absorber	14/868,049	Sep 28, 2015	10301907	May 28, 2019	Weatherford Netherlands B.V.
Temporarily Impermeable Sleeve for Running a Well Component In Hole	15/014,256	Feb 3, 2016	9938802	Apr 10, 2018	Weatherford Technology Holdings, LLC
Slip Configuration for Downhole Tool	14/631,424	Feb 25, 2015	9926765	Mar 27, 2018	Weatherford Technology Holdings, LLC
Centrifugal Separator for Downhole Pump	15/048,805	Feb 19, 2016	10107088	Oct 23, 2018	Weatherford Technology Holdings, LLC
Centralizer with Integrated Stop Collar	15/205,765	Jul 8, 2016	10161198	Dec 25, 2018	Weatherford Technology Holdings, LLC
Tension-Set Tieback Packer	14/693,076	Apr 22, 2015	9874070	Jan 23, 2018	Weatherford Technology Holdings, LLC
Long-Stroke Pumping Unit	15/051,060	Feb 23, 2016	10113544	Oct 30, 2018	Weatherford Technology Holdings, LLC
Long-Stroke Pumping Unit	16/171,757	Oct 26, 2018			Weatherford Technology Holdings, LLC
Diversion Plunger for Reciprocating Rod Pump	15/044,856	Feb 16, 2016			Weatherford Technology Holdings, LLC
System and Method for Fluid Composition Characterization	14/931,729	Nov 3, 2015	9921204	Mar 20, 2018	Weatherford Technology Holdings, LLC
Radial Seal Pressure Reduction Using Internal Pump	15/282,788	Sep 30, 2016	10267117	Apr 23, 2019	Weatherford Technology Holdings, LLC
Active RFID Tag Arrangements for Actuation of Downhole Equipment in Well Fluids	15/747,421	Jul 27, 2016			Weatherford Technology Holdings, LLC
Tubular Cutting Tool	15/136,540	Apr 22, 2016	10370921	Aug 6, 2019	Weatherford Technology Holdings, LLC
Tubular Cutting Tool	16/447,620	Jun 20, 2019			Weatherford Technology Holdings, LLC
Dual Barrier Pump Out Plug	15/155,230	May 16, 2016	10151169	Dec 11, 2018	Weatherford Technology Holdings, LLC

Pump-Through Perforating Gun Combining Perforation With Other Operation	14/979,147	Dec 22, 2015	10221661	Mar 5, 2019	Weatherford Technology Holdings, LLC
Exposed Energetic Device Initiation via Tubing Conveyed Firing Mechanism	15/015,343	Feb 4, 2016	10087727	Oct 2, 2018	Weatherford Technology Holdings, LLC
Downhole Isolation Valve	15/079,865	Mar 24, 2016	10107075	Oct 23, 2018	Weatherford Technology Holdings, LLC
Cutting Assembly for Cutting a Tubular	15/167,274	May 27, 2016	10167690	Jan 1, 2019	Weatherford Technology Holdings, LLC
Gas Lift Method and Apparatus	15/570,840	May 12, 2016			Weatherford U.K. Limited
Radio Frequency Identification Tag Delivery System	15/153,421	May 12, 2016	9911016	Mar 6, 2018	Weatherford Technology Holdings, LLC
Radio Frequency Identification Tag Delivery System	15/880,922	Jan 26, 2018	10198606	Feb 5, 2019	Weatherford Technology Holdings, LLC
Method of and Apparatus for Inverting Three-Dimensional Fluid Property Distribution over the (T1, T2, D) Domain from NMR Measurements	14/790,419	Jul 2, 2015	10393912	Aug 27, 2019	Weatherford Technology Holdings, LLC
Control of Hydraulic Power Flowrate for Managed Pressure Drilling	15/017,418	Feb 5, 2016	10107052	Oct 23, 2018	Weatherford Technology Holdings, LLC
Jumper Tube Connection for Wellscreen Assembly	14/736,910	Jun 11, 2015	10024143	Jul 17, 2018	Weatherford Technology Holdings, LLC
Modular Connection System for Top Drive	15/004,390	Jan 22, 2016			Weatherford Technology Holdings, LLC
Expandable Liner	15/743,929	Jul 13, 2016			Weatherford Technology Holdings, LLC
Tool Identification	15/004,687	Jan 22, 2016			Weatherford Technology Holdings, LLC
Tool Detection and Alignment for Tool Installation	15/233,333	Aug 10, 2016	10465457	Nov 5, 2019	Weatherford Technology Holdings, LLC

Genset for Top Drive Unit	15/258,752	Sep 7, 2016	10309166	Jun 4, 2019	Weatherford Technology Holdings, LLC
Top Drive Torque Measurement Device	15/241,815	Aug 19, 2016	10428602	Oct 1, 2019	Weatherford Technology Holdings, LLC
Combined Multi-Coupler for a Top Drive and a Method for Using the Same for Constructing a Wellbore	15/004,736	Jan 22, 2016	10323484	Jun 18, 2019	Weatherford Technology Holdings, LLC
Self-Removing Plug for Pressure Isolation in Tubing of Well	16/199,545	Nov 26, 2018			Weatherford Technology Holdings, LLC
Combining Multiple Disparate Data Analysis Methods Using Real-time Data to Detect and Prevent Stuck Pipe in Well Construction	15/008,161	Mar 9, 2016			Weatherford Technology Holdings, LLC
Rotating Control Device Having a Partition Seal Assembly	14/969,153	Dec 15, 2015	10344552	Jul 9, 2019	Weatherford Technology Holdings, LLC
Connector System	15/570,843	Oct 31, 2017	10322912	Jun 18, 2019	Weatherford U.K. Limited
Stabilizer for a Steerable Drilling System	15/765,580	Nov 7, 2016			Weatherford Technology Holdings, LLC
Leak-Off Assembly for Gravel Pack System	15/212,528	Jul 18, 2016	10072482	Sep 11, 2018	Weatherford Technology Holdings, LLC
Quick Connect Connection	15/008,688	Jan 28, 2016	10422190	Sep 24, 2019	Weatherford Technology Holdings, LLC
Retrievable Plugging Tool for Tubing	15/286,335	Oct 5, 2016	10309184	Jun 4, 2019	Weatherford Technology Holdings, LLC
Diagnostics of Downhole Dynamometer Data For Control and Troubleshooting of Reciprocating Rod Lift Systems	15/210,319	Jul 14, 2016	10472948	Nov 12, 2019	Weatherford Technology Holdings, LLC
Diagnostics of Downhole Dynamometer Data For Control and Troubleshooting of	16/584,465	Sep 26, 2019			Weatherford Technology Holdings, LLC

Reciprocating Rod Lift Systems					
Liner Deployment Assembly Having Full Time Debris Barrier	15/749,755	Aug 2, 2016			Weatherford Technology Holdings, LLC
Downhole Seal	15/273,048	Sep 22, 2016			Weatherford Technology Holdings, LLC
Pressure Operated Apparatus and Method	15/749,667	Aug 19, 2016			Weatherford U.K. Limited
Predicting Stress-Induced Anisotropy Effect on Acoustic Tool Response	14/934,922	Nov 6, 2015	10393904	Aug 27, 2019	Weatherford Technology Holdings, LLC
Hydraulic Pumping System With Enhanced Piston Rod Sealing	15/162,459	May 23, 2016	10167865	Jan 1, 2019	Weatherford Technology Holdings, LLC
Inflow Control Device Having Externally Configurable Flow Ports and Erosion Resistant Baffles	15/346,228	Nov 8, 2016	10273786	Apr 30, 2019	Weatherford Technology Holdings, LLC
Downhole Artificial Lift System	15/765,590	Oct 5, 2016			Weatherford U.K. Limited
Real-Time Fluid Contamination Prediction Using Bilinear Programming	15/075,791	Mar 21, 2016			Weatherford Technology Holdings, LLC
Method and Apparatus for Controlling the Flow of Well Bore Returns	13/872,713	Mar 9, 2016	10138692	Nov 27, 2018	Weatherford Technology Holdings, LLC
Pump for Controlling the Flow of Well Bore Returns	13/943,970	Jul 17, 2013	9309732	Apr 12, 2016	Weatherford Technology Holdings, LLC
Rotating Flow Control Device for Wellbore Fluid Control Device	14/344,482	Sep 5, 2014	10018012	Jul 10, 2018	Weatherford Technology Holdings, LLC
Rotating Flow Control Diverter Having Dual Stripper Elements (acquired from Elite Energy)	14/406,650	Dec 9, 2014	9683422	Jun 20, 2017	Weatherford Technology Holdings, LLC
Riser With Internal Rotating Flow Control Device	15/315,944	Jun 9, 2015			Weatherford Technology Holdings, LLC
Riser Annular Isolation Device	15/091,418	Apr 5, 2016	10344562	Jul 9, 2019	Weatherford Technology Holdings, LLC

Systems and Methods for Intelligent Diversion Design and Application	14/931,664	Nov 3, 2015	10221649	Mar 5, 2019	Weatherford Technology Holdings, LLC
Systems and Methods for Evaluating and Optimizing Stimulation Efficiency Using Diverters	15/334,074	Oct 25, 2016			Weatherford Technology Holdings, LLC
Gain Stabilization of Radiation Detectors via Spectrum Analysis	14/944,670	Nov 18, 2015	9702990	Jul 11, 2017	Weatherford Technology Holdings, LLC
Gain Stabilization of Radiation Detectors via Spectrum Analysis	15/633,173	Jun 26, 2017	10024988	Jul 17, 2018	Weatherford Technology Holdings, LLC
Drilling Stripping Element	15/301,061	Jul 9, 2015	10190384	Jan 29, 2019	Weatherford Technology Holdings, LLC
Sand Control Screen	15/276,480	Sep 26, 2016	10294760	May 21, 2019	Weatherford Technology Holdings, LLC
Reservoir Analysis with Well Pumping System	14/947,588	Nov 20, 2015	10240452	Mar 26, 2019	Weatherford Technology Holdings, LLC
Well Pumping System with Enclosed Rod Rotator	14/947,919	Nov 20, 2015			Weatherford Technology Holdings, LLC
Downhole Slip Apparatus	15/459,311	Mar 15, 2017			Weatherford U.K. Limited
Control Line Retainer for a Downhole Tool	15/362,987	Nov 29, 2016			Weatherford Technology Holdings, LLC
Calculating Downhole Card in Deviated Wellbore Using Parameterized Segment Calculations	15/362,501	Nov 28, 2016	10450851	Oct 22, 2019	Weatherford Technology Holdings, LLC
Rod String Rotation During Well Pumping Operations	14/964,913	Dec 10, 2015	10167707	Jan 1, 2019	Weatherford Technology Holdings, LLC
Pressure Gauge Insensitive To Extraneous Mechanical Loadings	15/047,303	Feb 18, 2016	10370956	Aug 6, 2019	Weatherford Technology Holdings, LLC
Compensated Top Drive Unit and Elevator Links	15/005,809	Jan 25, 2016			Weatherford Technology Holdings, LLC
Reciprocating Rod Pumping Unit	15/004,260	Mar 1, 2016	10197050	Feb 5, 2019	Weatherford Technology Holdings, LLC

Gravel Pack Manifold and Associated Systems and Methods	14/992,638	Jan 11, 2016	10087724	Oct 2, 2018	Weatherford Technology Holdings, LLC
Power Supply for a Top Drive	15/004,503	Jan 22, 2016	10167671	Jan 1, 2019	Weatherford Technology Holdings, LLC
Power Supply for a Top Drive	16/196,053	Nov 20, 2018			Weatherford Technology Holdings, LLC
Valve Operable Between Open and Closed Configurations in Response to Same Direction Displacement	15/012,453	Feb 1, 2016	9988876	Jun 5, 2018	Weatherford Technology Holdings, LLC
Valve Operable in Response to Engagement of Different Engagement Members	15/012,570	Feb 1, 2016	10167700	Jan 1, 2019	Weatherford Technology Holdings, LLC
Positioning Tool with Extendable Landing Dogs	15/012,623	Feb 1, 2016			Weatherford Technology Holdings, LLC
Ultrasonic Cement and Casing Thickness Evaluation	15/163,105	May 24, 2016	10174604	Jan 8, 2019	Weatherford Technology Holdings, LLC
Dual Layer Fusion Bond Epoxy Coating for Continuous Sucker Rod	15/088,880	Apr 1, 2016			Weatherford Technology Holdings, LLC
Drilling System and Method Having Flow Measurement Choke	15/150,522	May 10, 2016	10227838	Mar 12, 2019	Weatherford Technology Holdings, LLC
Treatment Tool for Use in a Subterranean Well	15/052,207	Feb 24, 2016	10227848	Mar 12, 2019	Weatherford Technology Holdings, LLC
Treatment Tool for Use in a Subterranean Well	16/225,129	Dec 19, 2018			Weatherford Technology Holdings, LLC
Anti-Extrusion Barrier for Packing Element	15/171,671	Jun 2, 2016	10253592	Apr 9, 2019	Weatherford Technology Holdings, LLC
Slip Monitor and Control	15/242,313	Aug 19, 2016			Weatherford Technology Holdings, LLC
Hydraulically Actuated Fluid Communication Mechanism	15/437,492	Feb 21, 2017	10280712	May 7, 2019	Weatherford Technology Holdings, LLC
Hydraulically Actuated Fluid Communication Mechanism	16/361,754	Mar 22, 2019			Weatherford Technology Holdings, LLC

Rotating Control Device, and Installation and Retrieval Thereof	15/153,356	May 12, 2016	10408000	Sep 10, 2019	Weatherford Technology Holdings, LLC
Rotating Control Device, and Installation and Retrieval Thereof	15/850,186	Dec 21, 2017			Weatherford Technology Holdings, LLC
Position Sensing for Wellsite Pumping Unit	15/448,231	Mar 2, 2017	10344573	Jul 9, 2019	Weatherford Technology Holdings, LLC
Low Marking Inserts for Casing/Tubing Tongs	15/349,665	Nov 11, 2016	10145186	Dec 4, 2018	Weatherford Technology Holdings, LLC
Leak Detection for Downhole Isolation Valve	15/425,868	Feb 6, 2017			Weatherford Technology Holdings, LLC
Mechanically Operated Reverse Cementing Crossover Tool	15/184,885	Jun 16, 2016	10392898	Aug 27, 2019	Weatherford Technology Holdings, LLC
Control For Rotary Steerable System	15/282,379	Sep 30, 2016	10415363	Sep 17, 2019	Weatherford Technology Holdings, LLC
Control For Rotary Steerable System	16/532,771	Aug 6, 2019			Weatherford Technology Holdings, LLC
Rotary Steerable System Having Multiple Independent Actuators	15/282,242	Sep 30, 2016	10364608	Jul 30, 2019	Weatherford Technology Holdings, LLC
Roll-Stabilized Rotary Steerable System	15/452,229	Mar 7, 2017	10287821	May 14, 2019	Weatherford Technology Holdings, LLC
Tension-Set Tieback Packer	15/282,896	Sep 30, 2016	10053948	Aug 21, 2018	Weatherford Technology Holdings, LLC
Casing Floation System With Latch-In Plugs	15/335,215	Oct 26, 2016			Weatherford Netherlands B.V.
Top Plug With Transitionable Seal	15/335,118	Oct 26, 2016			Weatherford Netherlands B.V.
Connector Apparatus	16/330,175	Sep 19, 2017			Weatherford U.K. Limited
Downhole Casing Pulling Tool	15/454,921	Mar 10, 2017	10458196	Oct 29, 2019	Weatherford Technology Holdings, LLC
Annulus Isolation in Drilling/Milling Operations	15/208,472	Jul 12, 2016	10344556	Jul 9, 2019	Weatherford Technology Holdings, LLC
Movable Tong Assembly	15/357,823	Nov 21, 2016	10337264	Jul 2, 2019	Weatherford Technology Holdings, LLC

Automated Load Cell Identification	15/337,148	Oct 28, 2016	10436658	Oct 8, 2019	Weatherford Technology Holdings, LLC
Automated Load Cell Identification	16/552,489	Aug 27, 2019			Weatherford Technology Holdings, LLC
Drilling Head with Non-Rotating Annular Seal Assembly	15/221,940	Jul 28, 2016	10190378	Jan 29, 2019	Weatherford Technology Holdings, LLC
Pulsed Neutron Determination of Gravel Pack Density	15/725,051	Oct 4, 2017	10215880	Feb 26, 2019	Weatherford Technology Holdings, LLC
Apparatus and Method for Downhole Data Acquisition and or Monitoring	16/316,544	Jul 18, 2017			Weatherford U.K. Limited
Apparatus and Method of Monitoring a Rod Pumping Unit	15/212,008	Jul 15, 2016	10215012	Feb 26, 2019	Weatherford Technology Holdings, LLC
Downhole Packer Element With Proped Element Spacer	15/276,974	Sep 27, 2016	10294749	May 21, 2019	Weatherford Technology Holdings, LLC
Valve Assembly for Wellbore Equipment	15/332,193	Oct 24, 2016	10208567	Feb 19, 2019	Weatherford Technology Holdings, LLC
Pressure Control Device, and Installation and Retrieval of Components Thereof	15/252,499	Aug 31, 2016	10167694	Jan 1, 2019	Weatherford Technology Holdings, LLC
Pressure Control Device, and Installation and Retrieval of Components Thereof	16/199,375	Nov 26, 2018			Weatherford Technology Holdings, LLC
Techniques for Determining Formation Composition from Measured Nuclear Spectra	15/860,293	Jan 2, 2018	10466384	Nov 5, 2019	Weatherford Technology Holdings, LLC
Jet Pump Lift System for Producing Hydrocarbon Fluids	15/291,250	Oct 12, 2016			Weatherford Technology Holdings, LLC
Packer Setting During High Flow Rate	15/276,094	Sep 26, 2016	10364640	Jul 30, 2019	Weatherford Technology Holdings, LLC
Tension Cutting Casing and Wellhead Retrieval System	15/403,000	Jan 10, 2017	10385640	Aug 20, 2019	Weatherford Technology Holdings, LLC
Sub-Surface Release Plug System	15/452,975	Mar 8, 2017	10378304	Aug 13, 2019	Weatherford Netherlands B.V.

Sub-Surface Release Plug System	16/455,475	Jun 27, 2019			Weatherford Netherlands B.V.
Apparatus and Methods for Operating Gas Lift Wells	15/388,276	Dec 22, 2016			Weatherford Technology Holdings, LLC
Antenna for Downhole Communication	15/848,377	Dec 20, 2017			Weatherford U.K. Limited
Apparatus and Method of Connecting Tubulars	15/455,515	Mar 10, 2017	10465458	Nov 5, 2019	Weatherford Technology Holdings, LLC
Apparatus and Method of Connecting Tubulars	15/889,037	Feb 5, 2018			Weatherford Technology Holdings, LLC
Autonomous Connection Evaluation and Automated Shoulder Detection for Tubular Makeup	15/445,361	Feb 28, 2017	10422450	Sep 24, 2019	Weatherford Technology Holdings, LLC
Autonomous Connection Evaluation and Automated Shoulder Detection for Tubular Makeup	16/450,492	Jun 24, 2019			Weatherford Technology Holdings, LLC
Managed Pressure Control System with Variable Built-In Accuracy	15/375,409	Dec 12, 2016			Weatherford Technology Holdings, LLC
Defect Penetration Estimate Using Magnetic Flux Image Enhancement	15/341,408	Nov 2, 2016	10393702	Aug 27, 2019	Weatherford Technology Holdings, LLC
Apparatus and Methods for Use in Wellbore Packing	15/701,591	Sep 12, 2017			Weatherford U.K. Limited
Retrieval of Multi-component Plunger in Well Plunger Lift System	15/290,829	Oct 11, 2016			Weatherford Technology Holdings, LLC
Well Testing with Jet Pump	15/298,708	Oct 20, 2016	10408043	Sep 10, 2019	Weatherford Technology Holdings, LLC
Subsurface Pump for Use in Well Artificial Lift Operations Having an Interior Flow Passage of a Plunger being in Communication with a Fluid Chamber via a Filter	15/299,978	Oct 21, 2016	10385663	Aug 20, 2019	Weatherford Technology Holdings, LLC

Well Artificial Lift Operations with Sand and Gas Tolerant Pump	16/411,452	May 14, 2019			Weatherford Technology Holdings, LLC
Gripper Assembly for Continuous Rod and Methods of Use Thereof	15/281,274	Sep 30, 2016	10392875	Aug 27, 2019	Weatherford Technology Holdings, LLC
Gripper Assembly for Continuous Rod	16/551,043	Aug 26, 2019			Weatherford Technology Holdings, LLC
Pumping Unit Bases with Driven Piles	15/345,674	Nov 8, 2016			Weatherford Technology Holdings, LLC
Low Profile Stop Collar (Bow Sleeve)	15/364,395	Nov 30, 2016			Weatherford Technology Holdings, LLC
Downhole Apparatus	15/953,030	Apr 13, 2018			Weatherford U.K. Limited
Apparatus and Methods for Counterbalancing a Pumping Unit	15/345,288	Nov 7, 2016			Weatherford Technology Holdings, LLC
X-Ray Based Fatigue Inspection of Downhole Component	15/595,603	May 15, 2017			Weatherford Technology Holdings, LLC
Downhole Valve Assembly	16/607,041	Apr 19, 2018			Weatherford Technology Holdings, LLC
Installation and Retrieval of Pressure Control Device Releasable Assembly	15/378,213	Dec 14, 2016			Weatherford Technology Holdings, LLC
Installation and Retrieval of Pressure Control Device Releasable Assembly	15/378,267	Dec 14, 2016	10370923	Aug 6, 2019	Weatherford Technology Holdings, LLC
Tool Coupler for Use with a Top Drive	15/656,508	Jul 21, 2017	10355403	Jul 16, 2019	Weatherford Technology Holdings, LLC
Tool Coupler for Use with a Top Drive	16/511,686	Jul 15, 2019			Weatherford Technology Holdings, LLC
Actuator Assembly	16/610,432	May 2, 2018			Weatherford Technology Holdings, LLC
Determining Angular Offset Between Geomagnetic and Gravitational Fields While Drilling Wellbore	15/487,214	Apr 13, 2017			Weatherford Technology Holdings, LLC

Systems and Methods for Optimization of the Number of Diverter Injections and the Timing of the Diverter Injections Relative to Stimulant Injection	15/439,757	Feb 22, 2017			Weatherford Technology Holdings, LLC
Chemical Injection Valve with Stem Bypass Flow	15/799,039	Oct 31, 2017			Weatherford Technology Holdings, LLC
Positioning Tool	15/667,504	Aug 2, 2017			Weatherford Technology Holdings, LLC
Optical Imaging and Assessment System for Tong Cassette Positioning Device	15/681,141	Aug 18, 2017	10366507	Jul 30, 2019	Weatherford Technology Holdings, LLC
Dual Torque Transfer for Top Drive System	15/447,881	Mar 2, 2017	10132118	Nov 20, 2018	Weatherford Technology Holdings, LLC
Coupler With Threaded Connection For Pipe Handler	15/444,016	Feb 27, 2017			Weatherford Technology Holdings, LLC
Downhole Tool Coupling System	15/670,897	Aug 7, 2017			Weatherford Technology Holdings, LLC
Tool Coupler with Data and Signal Transfer Methods for Top Drive	15/730,305	Oct 11, 2017			Weatherford Technology Holdings, LLC
Combined Multi-Coupler with Rotating Locking Method for Top Drive	15/445,758	Feb 28, 2017			Weatherford Technology Holdings, LLC
Interchangeable Swivel Combined Multicoupler	15/607,159	May 26, 2017			Weatherford Technology Holdings, LLC
Correction for Drill Pipe Compression	15/599,683	May 19, 2017	10443334	Oct 15, 2019	Weatherford Technology Holdings, LLC
Self-Adjusting Slips	15/445,558	Feb 28, 2017			Weatherford Technology Holdings, LLC
Retention System for Bottom Hole Assembly and Whipstock	15/730,455	Oct 11, 2017			Weatherford Technology Holdings, LLC
Sealing Apparatus and Associated Methods of Manufacturing	15/463,837	Mar 20, 2017			Weatherford Technology Holdings, LLC

Gripping Apparatus and Associated Methods of Manufacturing	15/464,131	Mar 20, 2017	10472911	Nov 12, 2019	Weatherford Technology Holdings, LLC
Combined Multi-Coupler for Top Drive	15/656,914	Jul 21, 2017			Weatherford Technology Holdings, LLC
Combined Multi-Coupler for Top Drive	15/627,237	Jun 19, 2017			Weatherford Technology Holdings, LLC
Combined Multi-Coupler with Rotating Fixations for Top Drive	15/447,926	Mar 2, 2017	10480247	Nov 19, 2019	Weatherford Technology Holdings, LLC
Tool Coupler with Sliding Coupling Members for Top Drive	15/448,297	Mar 2, 2017			Weatherford Technology Holdings, LLC
Combined Multi-Coupler with Locking Clamp Connection for Top Drive	15/627,428	Jun 19, 2017			Weatherford Technology Holdings, LLC
Tool Coupler with Threaded Connection for Top Drive	15/457,572	Mar 13, 2017	10247246	Apr 2, 2019	Weatherford Technology Holdings, LLC
Tool Coupler with Threaded Connection for Top Drive	15/806,560	Nov 8, 2017			Weatherford Technology Holdings, LLC
Combined Multi-Coupler with Rotating Locking Method for Top Drive	15/721,216	Sep 29, 2017			Weatherford Technology Holdings, LLC
Combined Multi-Coupler	15/656,684	Jul 21, 2017	10443326	Oct 15, 2019	Weatherford Technology Holdings, LLC
Combined Multi-Coupler	16/540,959	Aug 14, 2019			Weatherford Technology Holdings, LLC
Subsurface Reciprocating Pump For Gassy and Sandy Fluids	15/489,951	Apr 18, 2017	10450847	Oct 22, 2019	Weatherford Technology Holdings, LLC
Subsea Rotating Control Device Apparatus Having Debris Barrier	15/678,222	Aug 16, 2017			Weatherford Technology Holdings, LLC
Differential Flow Measurement with Coriolis Flowmeter	15/882,900	Jan 29, 2018			Weatherford Technology Holdings, LLC
Pressure Control Device for Use With a Subterranean Well	15/597,813	May 17, 2017	10392872	Aug 27, 2019	Weatherford Technology Holdings, LLC
Pressure Control Device for Use With a Subterranean Well	16/428,923	May 31, 2019			Weatherford Technology Holdings, LLC

Shifting Tool Resettable Downhole	15/602,275	May 23, 2017			Weatherford Technology Holdings, LLC
Shifting Tool Resettable Downhole	15/602,636	May 23, 2017	10480266	Nov 19, 2019	Weatherford Technology Holdings, LLC
Safety Valve with Integral Annular Chamber Housing	15/602,907	May 23, 2017			Weatherford Technology Holdings, LLC
Safety Valve with Integral Annular Chamber Housing	16/529,680	Aug 1, 2019			Weatherford Technology Holdings, LLC
Casing Scraper Activated and Deactivated Downhole	16/604,010	Jun 9, 2017			Weatherford Technology Holdings, LLC
Whipstock Assembly for Forming a Window	15/953,988	Apr 16, 2018			Weatherford Technology Holdings, LLC
Local Electric Power Generation on a Tong by Hydraulic Power	15/607,049	May 26, 2017			Weatherford Technology Holdings, LLC
Electric Tong with Onboard Hydraulic Power Unit	15/675,404	Aug 11, 2017			Weatherford Technology Holdings, LLC
Well Fluid Flow Control Choke	15/727,293	Oct 6, 2017			Weatherford Technology Holdings, LLC
Temporary Barrier for Inflow Control Device	15/593,466	May 12, 2017			Weatherford Technology Holdings, LLC
Assessing Organic Richness Using Microresistivity Images and Acoustic Velocity	15/632,971	Jun 26, 2017	10393920	Aug 27, 2019	Weatherford Technology Holdings, LLC
Bearing Fault Detection for Surface Pumping Units	15/487,106	Apr 13, 2017			Weatherford Technology Holdings, LLC
Fiber Optic Cable for Inhibiting Breaching Fluid Flow	15/864,205	Jan 8, 2018	10338336	Jul 2, 2019	Weatherford Technology Holdings, LLC
Fiber Optic Cable for Inhibiting Breaching Fluid Flow	16/230,488	Dec 21, 2018			Weatherford Technology Holdings, LLC
Shunt Tube Connection Assembly	15/951,859	Apr 12, 2018			Weatherford Technology Holdings, LLC
Shroud Assembly	15/951,923	Apr 12, 2018			Weatherford Technology Holdings, LLC

Pressure Integrity Testing of One-Trip Completion Assembly	16/611,464	May 22, 2018			Weatherford Technology Holdings, LLC
Communication Through a Hanger and Wellhead	15/588,536	May 5, 2017			Weatherford Technology Holdings, LLC
Method and System for Performing Operations and for Improving Production in Wells	09/586,648	Jun 1, 2000	7283061	Oct 16, 2007	Weatherford Technology Holdings, LLC
Method and System for Performing Operations and for Improving Production in Wells	10/323,536	Dec 18, 2002	7400263	Jul 15, 2008	Weatherford Technology Holdings, LLC
Method and Assembly for Identifying and Tracking Assets	09/843,998	Apr 27, 2001	7014100	Mar 21, 2006	Weatherford Technology Holdings, LLC
Method and Assembly for Identifying and Tracking Assets	11/377,736	Mar 16, 2006	7677439	Mar 16, 2010	Weatherford Technology Holdings, LLC
Method and Assembly for Identifying and Tracking Assets	12/725,254	Mar 16, 2010	8091775	Jan 10, 2012	Weatherford Technology Holdings, LLC
Apparatus and Method for Downhole Well Equipment and Process Management, Identification, and Actuation	09/536,953	Mar 28, 2000	6333700	Dec 25, 2001	Weatherford Technology Holdings, LLC
Systems, Assemblies and Processes for Controlling Tools in a Well Bore	12/102,687	Apr 14, 2008	10119377	Nov 6, 2018	Weatherford Technology Holdings, LLC
Systems, Assemblies and Processes for Controlling Tools in a Well Bore	12/044,087	Mar 7, 2008	9194227	Nov 24, 2015	Weatherford Technology Holdings, LLC
Systems, Assemblies and Processes for Controlling Tools in a Well Bore	14/938,412	Nov 11, 2015	10107071	Oct 23, 2018	Weatherford Technology Holdings, LLC
Production Logging Processes and Systems	13/081,926	Apr 7, 2011	8850899	Oct 7, 2014	Weatherford Technology Holdings, LLC
Processes for Fracturing a Well	13/210,473	Aug 16, 2011	8783350	Jul 22, 2014	Weatherford Technology Holdings, LLC
Provision of Internal Lines in a Well Tool	15/638,885	Jun 30, 2017			Weatherford Technology Holdings, LLC

Rotary Steerable System Having Actuator with Linkage	15/796,844	Oct 29, 2017			Weatherford Technology Holdings, LLC
Rotating Disk Valve for Rotary Steerable Tool	15/796,845	Oct 29, 2017			Weatherford Technology Holdings, LLC
Method and Apparatus for Formation Evaluation	15/804,412	Nov 6, 2017			Weatherford Technology Holdings, LLC
Apparatus and Method for Cutting Casings	15/815,594	Nov 16, 2017			Weatherford Technology Holdings, LLC
System and Method for Handling Pumping Units in Out-of-balance Condition	15/643,769	Jul 7, 2017			Weatherford Technology Holdings, LLC
Shifting Tool and Associated Methods for Operating Downhole Valves	15/682,907	Aug 22, 2017			Weatherford Technology Holdings, LLC
Apparatus and Methods for Tong Operation	15/682,427	Aug 21, 2017	10472906	Nov 12, 2019	Weatherford Technology Holdings, LLC
Apparatus and Methods for Tong Operation	16/678,519	Nov 8, 2019			Weatherford Technology Holdings, LLC
Method and System for Evaluating Tubular Makeup	15/792,592	Oct 24, 2017			Weatherford Technology Holdings, LLC
Method and System for Evaluating Tubular Makeup	16/169,682	Oct 24, 2018			Weatherford Technology Holdings, LLC
Tool Joint Finding Apparatus and Method	15/789,262	Oct 20, 2017			Weatherford Technology Holdings, LLC
Artificial Lift System with Enclosed Rod Rotator	15/698,571	Sep 7, 2017			Weatherford Technology Holdings, LLC
Corrosion Resistant Sucker Rod	16/074,602	Nov 28, 2017			Weatherford Technology Holdings, LLC
Corrosion Resistant Sucker Rod	16/074,594	Aug 11, 2017			Weatherford Technology Holdings, LLC
Pressure Equalization for Well Pressure Control Device	15/783,871	Oct 13, 2017			Weatherford Technology Holdings, LLC
Installation and Retrieval of Well	15/783,884	Oct 13, 2017			Weatherford Technology Holdings, LLC

Pressure Control Device Releasable Assembly					
Flow Control Device	15/838,023	Dec 11, 2017			Weatherford Technology Holdings, LLC
Well Tool Anchor and Associated Methods	15/699,592	Sep 8, 2017			Weatherford Technology Holdings, LLC
Plug System	16/109,459	Aug 22, 2018			Weatherford Technology Holdings, LLC
Gas Lift Mandrel Manufacture with Solid-State Joining Process	15/936,837	Mar 28, 2018			Weatherford Technology Holdings, LLC
Wellbore Tool Coupling Mechanism	15/843,844	Dec 15, 2017			Weatherford Technology Holdings, LLC
Control System for Hydrocarbon Recovery Tools	15/804,671	Nov 6, 2017			Weatherford Technology Holdings, LLC
Control System for Hydrocarbon Recovery Tools	15/804,690	Nov 6, 2017	10480291	Nov 19, 2019	Weatherford Technology Holdings, LLC
Control System for Hydrocarbon Recovery Tools	16/531,372	Aug 5, 2019			Weatherford Technology Holdings, LLC
Alternating Liquid Gas Fracturing for Enhanced Oil Recovery of Well	15/849,119	Dec 20, 2017			Weatherford Technology Holdings, LLC
Tong Assembly	15/815,590	Nov 16, 2017			Weatherford Technology Holdings, LLC
Bottom Hole Assembly for Configuring Between Artificial Lift Systems	15/712,989	Sep 22, 2017			Weatherford Technology Holdings, LLC
Chemical Injection Valve with Enhanced Sealing Capability	15/799,176	Oct 31, 2017			Weatherford Technology Holdings, LLC
Erosion Resistant Shunt Tube Assembly for Wellscreen	15/814,522	Nov 16, 2017	10465485	Nov 5, 2019	Weatherford Technology Holdings, LLC
Erosion Resistant Shunt Tube Top Ring	15/954,129	Apr 16, 2018			Weatherford Technology Holdings, LLC
Load Balanced Power Section	15/814,541	Nov 16, 2017			Weatherford Technology Holdings, LLC

Well Plugs and Associated Systems and Methods	15/841,651	Dec 14, 2017			Weatherford Technology Holdings, LLC
Pressure Control Device with Composite Annular Seal Assembly	15/824,179	Nov 28, 2017			Weatherford Technology Holdings, LLC
Multiple Setting and Unsetting of Inflatable Well Packer	15/831,659	Dec 5, 2017			Weatherford Technology Holdings, LLC
Multiple Setting and Unsetting of Inflatable Well Packer	16/415,775	May 17, 2019			Weatherford Technology Holdings, LLC
Wear Bushing Deployment and Retrieval Tool for Subsea Wellhead	15/892,275	Feb 8, 2018			Weatherford Technology Holdings, LLC
Assembly and Method for Performing Aligned Operation With Tool Oriented in Downhole Tubular	15/896,585	Feb 14, 2018			Weatherford Technology Holdings, LLC
Packing Element Booster with Ratchet Mechanism	15/847,706	Dec 19, 2017			Weatherford Technology Holdings, LLC
Compensation System for a Tong Assembly	16/109,312	Aug 22, 2018			Weatherford Technology Holdings, LLC
Tubular Stabbing Guide for Tong Assembly	15/917,459	Mar 9, 2018			Weatherford Technology Holdings, LLC
Tong Cassette Positioning Device	16/109,222	Aug 22, 2018			Weatherford Technology Holdings, LLC
Downhole Casing Pulling Tool	15/924,009	Mar 16, 2018			Weatherford Technology Holdings, LLC
Bouyant System for Installing a Casing String	16/408,742	May 10, 2019			Weatherford Technology Holdings, LLC
Bouyant System for Installing a Casing String	15/982,151	May 17, 2018			Weatherford Technology Holdings, LLC
Hydraulic Drilling Jar with Hydraulic Lock Piston	15/944,147	Apr 3, 2018			Weatherford Technology Holdings, LLC
Wellbore Tong	16/032,310	Jul 11, 2018			Weatherford Technology Holdings, LLC

Apparatus and Methods for Determining Operational Mode of Tong Assembly	PCT/US2019/047320	Aug 20, 2019			Weatherford Technology Holdings, LLC
Apparatus and Methods for Determining Operational Mode of Tong Assembly	16/109,071	Aug 22, 2018			Weatherford Technology Holdings, LLC
Sensor System for Tong Assembly	16/109,414	Aug 22, 2018			Weatherford Technology Holdings, LLC
Slant Well Pumping Unit	15/965,718	Apr 27, 2018			Weatherford Technology Holdings, LLC
Valve Assembly for Downhole Pump of Reciprocating Pump System	15/981,677	May 16, 2018			Weatherford Technology Holdings, LLC
Pumping Unit Counterweight Balancing	15/972,746	May 7, 2018			Weatherford Technology Holdings, LLC
Pumping Unit Counterweight Balancing	16/522,625	Jul 25, 2019			Weatherford Technology Holdings, LLC
Rotational Lock for Mating Wellhead Components	PCT/US2018/034201	May 23, 2018			Weatherford Technology Holdings, LLC
Streamlined Valve Assembly for Downhole Pump of Reciprocating Pump System	16/026,400	Jul 3, 2018			Weatherford Technology Holdings, LLC
Wiper Ring Assembly with Energizing Member	16/026,296	Jul 3, 2018			Weatherford Technology Holdings, LLC
Apparatus and Method for Forming a Lateral Wellbore	16/052,377	Aug 1, 2018			Weatherford Technology Holdings, LLC
Tong Assembly with Door Position Sensors	16/671,861	Nov 1, 2019			Weatherford Technology Holdings, LLC
Segmented Brake Band	16/274,952	Feb 13, 2019			Weatherford Technology Holdings, LLC
GLV-Gas Lift Valve Ultra Shear	16/046,758	Jul 26, 2018			Weatherford Technology Holdings, LLC
Cable to Reduce Optical Fiber Movement and Methods to Fabricate	16/511,190	Jul 15, 2019			Weatherford Technology Holdings, LLC

Interlocking Expanding Frac Plug	16/054,855	Aug 3, 2018			Weatherford Technology Holdings, LLC
Autonomous Connection Makeup and Evaluation	16/229,859	Dec 21, 2018			Weatherford Technology Holdings, LLC
Tubular Handling Apparatus	16/210,107	Dec 5, 2018			Weatherford Technology Holdings, LLC
Method for Applying Thread Lubricant to a Sucker Rod Connection	16/170,825	Oct 25, 2018			Weatherford Technology Holdings, LLC
Diverter Tool and Associated Methods	16/253,773	Jan 22, 2019			Weatherford Technology Holdings, LLC
Float Shoes Having Concrete Filled, Eccentric Nose with Jets	16/217,930	Dec 12, 2018			Weatherford Technology Holdings, LLC
Wellbore Apparatus for Setting a Downhole Tool	16/270,426	Feb 7, 2019			Weatherford Technology Holdings, LLC
Non-Shearing Whipstock Attachment and Release Mechanism	16/220,531	Dec 14, 2018			Weatherford Technology Holdings, LLC
Fault-Tolerant Pressure Relief System for Drilling	16/222,462	Dec 17, 2018			Weatherford Technology Holdings, LLC
Degradable Plugs	16/193,675	Nov 16, 2018			Weatherford Technology Holdings, LLC
A Rotary Gripping Apparatus for a Power Tong	16/657,572	Oct 18, 2019			Weatherford Technology Holdings, LLC
Apparatus and Method for Locating Tool Joint	16/379,142	Apr 9, 2019			Weatherford Technology Holdings, LLC
Bottom Hole Assembly with a Cleaning Tool	16/176,852	Oct 31, 2018			Weatherford Technology Holdings, LLC
High Expansion Well Tool and Associated Methods	16/224,993	Dec 19, 2018			Weatherford Technology Holdings, LLC
Self-Aligning Universal Subsea Multi-Stab Connection Plate	62/808,640	Feb 21, 2019			Weatherford Technology Holdings, LLC
Combined Riser Termination and MPD Joint	62/944,044	Dec 5, 2019			Weatherford Technology Holdings, LLC

Domed Landing Profile for Float Equipment	16/431,399	Jun 4, 2019			Weatherford Technology Holdings, LLC
Caliper-Behind-Casing from Pulsed Neutron Apparatus	16/421,829	May 24, 2019			Weatherford Technology Holdings, LLC
A Whipstock Assembly	16/431,457	Jun 4, 2019			Weatherford Technology Holdings, LLC
Jet Pump Controller with Downhole Prediction	16/363,592	Mar 25, 2019			Weatherford Technology Holdings, LLC
Corrosion and Abrasion Resistant Sucker Rod	16/276,658	Feb 15, 2019			Weatherford Technology Holdings, LLC
Pumping Unit Having Zero-Imbalanced Beam, Lagging Counterweights, and Setback Crank Point	16/372,218	Apr 1, 2019			Weatherford Technology Holdings, LLC
Retrievable Anti-Extrusion Foldback-Ring Backup for Sealing Element	62/801,496	Feb 5, 2019			Weatherford Technology Holdings, LLC
Sonic Processing of Dispersive Waves in Acoustic Logging	62/811,986	Feb 28, 2019			Weatherford Technology Holdings, LLC
Processing of Dispersive Waves in Acoustic Logging	16/400,716	May 1, 2019			Weatherford Technology Holdings, LLC
Setting Tool for a Liner Hanger	16/656,198	Oct 17, 2019			Weatherford Technology Holdings, LLC
Neutron Time of Flight Logging	16/460,867	Jul 2, 2019			Weatherford Technology Holdings, LLC
A New Approach for Borehole Compensation of the Capture Ratio during Pulsed-Neutron Porosity Logging	62/832,061	Apr 10, 2019			Weatherford Technology Holdings, LLC
Borehole Compensation During Pulsed-Neutron Porosity Logging	16/584,318	Sep 26, 2019			Weatherford Technology Holdings, LLC
Improved Connection for Polished Rod Liner Assembly	16/392,051	Apr 23, 2019			Weatherford Technology Holdings, LLC
Control Line Gas Scavenger Module	16/398,480	Apr 30, 2019			Weatherford Technology Holdings, LLC

Tubing Tester Valve	16/398,660	Apr 30, 2019			Weatherford Technology Holdings, LLC
Closed Hole Circulation Drilling with Continuous Downhole Monitoring	16/435,529	Jun 9, 2019			Weatherford Technology Holdings, LLC
ILT Grip Verification - No Human Intervention	62/834,903	Apr 16, 2019			Weatherford Technology Holdings, LLC
Downhole Fiber Optic Wet Mate Connections	16/529,624	Aug 1, 2019			Weatherford Technology Holdings, LLC
Hydraulics Model Realtime Calibration with SPP	16/433,837	Jun 6, 2019			Weatherford Technology Holdings, LLC
Dissolvable Elements for Downhole Tools	62/876,431	Jul 19, 2019			Weatherford Technology Holdings, LLC
Outflow Control Device	16/417,399	May 20, 2019			Weatherford Technology Holdings, LLC
Positioned Latch With Automatic Engagement Feature	16/528,214	Jul 31, 2019			Weatherford Technology Holdings, LLC
High Axial Load and Wear Resistant Blades for "SpiraGlider" Centralizer for DwC Application	16/523,616	Jul 26, 2019			Weatherford Technology Holdings, LLC
Automatic Surge and Swab Compensation	16/554,465	Aug 28, 2019			Weatherford Technology Holdings, LLC
Method and System for Boosting Sealing Elements of Downhole Barriers	62/859,977	Jun 11, 2019			Weatherford Technology Holdings, LLC
Strengthened Design for Packer/Bridge Plug Slips	16/509,643	Jul 12, 2019			Weatherford Technology Holdings, LLC
Plug in Place for Frac Plugs	62/872,828	Jul 11, 2019			Weatherford Technology Holdings, LLC
Fracturing method using a physics-based integrated tool to model elastic fluids with low proppant settling rate, and improved friction performance	62/875,293	Jul 17, 2019			Weatherford Technology Holdings, LLC

Application of Elastic Fluids in Hydraulic Fracturing Implementing a Physics-Based Analytical Tool	16/539,645	Aug 13, 2019			Weatherford Technology Holdings, LLC
Apparatus and Method for Wet Shoe Applications	16/539,305	Aug 13, 2019			Weatherford Technology Holdings, LLC
Stinger for Communicating Fluid Line with Downhole Tool	16/552,878	Aug 27, 2019			Weatherford Technology Holdings, LLC
Measuring Component Concentrations of Nonhomogeneous Immiscible Mixtures in Multiphase Flows using Near-Infrared (NIR) Filter Photometry	16/654,672	Oct 16, 2019			Weatherford Technology Holdings, LLC
Corrosion Inhibiting Sucker Rod Thread Protector	62/913,230	Oct 10, 2019			Weatherford Technology Holdings, LLC
System and Method for Electric Flow Control	62/894,236	Aug 30, 2019			Weatherford Technology Holdings, LLC
Centralizer for Wireline Tool	16/596,463	Oct 8, 2019			Weatherford Technology Holdings, LLC
Foresite EDGE	62/931,071	Nov 5, 2019			Weatherford Technology Holdings, LLC