

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

Assignment ID: PAT6147610

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	SECURITY INTEREST	
CONVEYING PARTY DATA		
Name		Execution Date
TDW DELAWARE, INC.		06/10/2020
RECEIVING PARTY DATA		
Company Name:	JPMORGAN CHASE BANK, N.A., AS ADMINISTRATIVE ASSISTANT	
Street Address:	10 SOUTH DEARBORN	
Internal Address:	FLOOR L2	
City:	CHICAGO	
State/Country:	ILLINOIS	
Postal Code:	60603	
PROPERTY NUMBERS Total: 69		
Property Type	Number	
Application Number:	09757188	
Application Number:	09877318	
Application Number:	10172691	
Application Number:	10790454	
Application Number:	10825873	
Application Number:	10909986	
Application Number:	11113550	
Application Number:	11132773	
Application Number:	11133514	
Application Number:	11213467	
Application Number:	11284620	
Application Number:	11431215	
Application Number:	11724018	
Application Number:	11936182	
Application Number:	12028078	
Application Number:	12115611	
Application Number:	12135831	
Application Number:	12167664	
Application Number:	12175932	

PATENT

Property Type	Number
Application Number:	12236217
Application Number:	12256150
Application Number:	12326448
Application Number:	12340979
Application Number:	12350335
Application Number:	12351479
Application Number:	12355133
Application Number:	12403664
Application Number:	12411138
Application Number:	12470654
Application Number:	12539696
Application Number:	12572752
Application Number:	12642031
Application Number:	12830939
Application Number:	12840049
Application Number:	13502984
Application Number:	13669989
Application Number:	14493479
Application Number:	14565206
Application Number:	14810082
Application Number:	14985038
Application Number:	14989442
Application Number:	15011946
Application Number:	15185140
Application Number:	15688477
Application Number:	15728320
Application Number:	15745840
Application Number:	15882295
Application Number:	15939996
Application Number:	16040599
Application Number:	16111753
Application Number:	16154208
Application Number:	16163245
Application Number:	16168057
Application Number:	16181975
Application Number:	16284292
Application Number:	16284300
Application Number:	16381937

Property Type	Number
Application Number:	16420989
Application Number:	16432144
Application Number:	16448890
Application Number:	16792455
Application Number:	16812985
Application Number:	16845658
Application Number:	16853169
Application Number:	62856202
Application Number:	62874753
Application Number:	62892370
Application Number:	62958148
Application Number:	62994039

CORRESPONDENCE DATA

Fax Number: (214)745-5390

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 2147455612

Email: ngraham@winstead.com

Correspondent Name: NANCY GRAHAM C/O WINSTEAD PC

Address Line 1: 2728 N. HARWOOD STREET

Address Line 2: SUITE 500

Address Line 4: DALLAS, TEXAS 75201

ATTORNEY DOCKET NUMBER: 13312-657

NAME OF SUBMITTER: NANCY GRAHAM

SIGNATURE: /Nancy Graham/

DATE SIGNED: 06/10/2020

Total Attachments: 11

source=Patent Security Agreement - TDW Delaware#page1.tif
source=Patent Security Agreement - TDW Delaware#page2.tif
source=Patent Security Agreement - TDW Delaware#page3.tif
source=Patent Security Agreement - TDW Delaware#page4.tif
source=Patent Security Agreement - TDW Delaware#page5.tif
source=Patent Security Agreement - TDW Delaware#page6.tif
source=Patent Security Agreement - TDW Delaware#page7.tif
source=Patent Security Agreement - TDW Delaware#page8.tif
source=Patent Security Agreement - TDW Delaware#page9.tif
source=Patent Security Agreement - TDW Delaware#page10.tif
source=Patent Security Agreement - TDW Delaware#page11.tif

PATENT SECURITY AGREEMENT

THIS PATENT SECURITY AGREEMENT, dated as of June 10, 2020 (this “Patent Security Agreement”), is made by TDW Delaware, Inc., a Delaware corporation (the “Grantor”), and JPMorgan Chase Bank, N.A., in its capacity as collateral agent (the “Collateral Agent”).

RECITALS

The Grantor, T. D. WILLIAMSON, INC., an Oklahoma corporation (“Company”), and certain subsidiaries of the Company are parties to the First Amended and Restated Pledge and Security Agreement of even date herewith, in favor of the Collateral Agent (the “Security Agreement”), pursuant to which the Grantor is required to execute this Patent Security Agreement.

ACCORDINGLY, the Grantor and the Collateral Agent, on behalf of the Secured Parties, hereby agree as follows:

Section 1. Defined Terms. Capitalized terms used herein without definition are used as defined in the Security Agreement.

Section 2. Grant of Security Interest in Patent Collateral. The Grantor, as collateral security for the prompt and complete payment and performance when due (whether at stated maturity, by acceleration or otherwise) of the Obligations, hereby pledges to the Collateral Agent, and hereby grants to the Collateral Agent, for the benefit of the Secured Parties, a security interest in the following Collateral of the Grantor (the “Patent Collateral”):

(a) all of its Patents and all Patent licenses providing for the grant by or to the Grantor of any right under any Patent, including those referred to on Schedule 1 hereto;

(b) all reissues, reexaminations, continuations, continuations-in-part, divisionals, and extensions of the foregoing; and

(c) all income, royalties, proceeds and liabilities at any time due or payable or asserted under and with respect to any of the foregoing, including all rights to sue and recover at law or in equity for any past, present and future infringement, misappropriation, violation or other impairment thereof.

Section 3. Security Agreement. The security interest granted pursuant to this Patent Security Agreement is granted in conjunction with the security interest granted to the Collateral Agent pursuant to the Security Agreement and the Grantor hereby acknowledges and agrees that the rights and remedies of the Collateral Agent with respect to the security interest in the Patent Collateral made and granted hereby are more fully set forth in the Security Agreement, the terms and provisions of which are incorporated by reference herein as if fully set forth herein. In the event that any provision of this Patent Security Agreement conflicts with any provision of the Security Agreement, the Security Agreement shall govern.

Section 4. Grantor Remains Liable. The Grantor hereby agrees that, anything herein to the contrary notwithstanding, the Grantor shall assume full and complete responsibility for the

prosecution, defense, enforcement or any other necessary or desirable actions in connection with its Patents subject to a security interest hereunder.

Section 5. Security Agreement. This Patent Security Agreement is in addition to and not a restatement, novation, or release of any other patent security agreement between the Grantor and the Collateral Agent

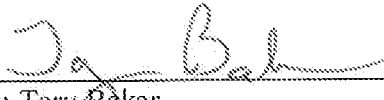
Section 6. Governing Law. **THIS PATENT SECURITY AGREEMENT AND ALL MATTERS RELATING HERETO (WHETHER SOUNDING IN CONTRACT, TORT OR OTHERWISE) SHALL BE GOVERNED BY, AND SHALL BE CONSTRUED AND ENFORCED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO CONFLICTS OF LAWS PRINCIPLES.** In addition, the provisions of Sections 7.15, 7.17, 7.18, 7.19, 7.20 and 8.1 of the Security Agreement are incorporated herein by reference, *mutatis mutandis*.

[SIGNATURE PAGES FOLLOW]

IN WITNESS WHEREOF, the Grantor has caused this Patent Security Agreement to be executed and delivered by their duly authorized officers as of the date first set forth above.

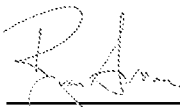
GRANTOR:

TDW DELAWARE, INC.

By: 
Name: Tory Baker
Title: Vice President and Treasurer

COLLATERAL AGENT:

JPMORGAN CHASE BANK, N.A.

By: 
Name: Ryan Aman
Title: Authorized Officer

SCHEDULE 1
TO
PATENT SECURITY AGREEMENT

Title	Country	Status	App. No.	Filing Date	Patent No.	Issue Date
REMOVABLE CLOSURE SYSTEM	US	Issued	09/757,188	1/9/2001	6,286,553	9/11/2001
APPARATUS FOR TAPPING A HOLE IN A PIPELINE	US	Issued	09/877,318	6/8/2001	6,648,562	11/18/2003
A METHOD OF DISTRIBUTING INHIBITOR CONTAINED WITHIN A GAS PIPELINE	US	Issued	10/172,691	6/14/2002	6,755,916	6/29/2004
INHIBITOR DISPENSING PIPELINE PIG	US	Issued	10/790,454	3/1/2004	6,874,193	4/5/2005
ID-OD DISCRIMINATION SENSOR CONCEPT FOR A MAGNETIC FLUX LEAKAGE INSPECTION TOOL	US	Issued	10/825,873	4/15/2004	6,847,207	1/25/2005
MECHANICAL WELDABLE FITTING FOR USE IN TAPPING A PIPELINE	US	Issued	10/909,986	8/3/2004	7,216,795	5/15/2007
CAM-ASSISTED, WEDGE ACTUATED, METAL-TO-METAL SEAL, BLOCK AND BLEED PLUGGING TOOL	US	Issued	11/113,550	4/25/2005	7,270,139	9/18/2007
HIGH TEMPERATURE COMPLETION PLUG	US	Issued	11/132,773	5/19/2005	7,353,839	4/8/2008
CROSS-LINE PLUGGING SYSTEM	US	Issued	11/133,514	5/20/2005	7,311,114	12/25/2007
REMOTE MONITOR SYSTEM FOR A LONGITUDINALLY POSITIONABLE CONTROL BAR	US	Issued	11/213,467	8/26/2005	7,316,176	1/8/2008

Title	Country	Status	App. No.	Filing Date	Patent No.	Issue Date
PIPELINE HYDROSTATIC TEST METHODS USING ISOLATION TOOLS	US	Issued	11/284,620	11/22/2005	7,475,591	1/13/2009
LOCKING PLUG FOR CLOSING THE SIDEWALL OF A PIPE	US	Issued	11/431,215	5/10/2006	7,546,847	6/16/2009
SYSTEM FOR USE IN TAPPING A PIP	US	Pending	11/724,018	3/14/2007	7,398,910	7/15/2008
DOUBLE BLOCK AND BLEED PLUG	US	Issued	11/936,182	11/7/2007	7,841,364	11/30/2010
VORTEX INHIBITOR DISPERSAL PIG	US	Issued	12/028,078	2/8/2008	7,827,646	11/9/2010
PIPELINE PIG SIGNAL WITH ADJUSTABLE MOUNTING	US	Issued	12/115,611	5/6/2008	7,861,665	1/4/2011
VERIFIABLE CLOSING AND LOCKING SYSTEM OF A CYLINDRICAL PASSAGEWAY	US	Issued	12/135,831	6/9/2008	8,001,988	8/23/2011
SPEED REGULATED PIPELINE PIG	US	Issued	12/167,664	7/3/2008	8,650,694	2/18/2014
COMPOSITE LOAD TRANSFERRING TECHNIQUE	US	Issued	12/175,932	7/18/2008	7,900,655	3/8/2011
TWO-PIECE CLOSURE DEVICE	US	Issued	12/236,217	9/23/2008	8,251,238	8/28/2012
DOUBLE BLOCK AND BLEED PLUG	US	Issued	12/256,150	10/22/2008	8,307,856	11/13/2012
COMPOSITE WRAP REPAIR OF INTERNAL DEFECTS	US	Issued	12/326,448	12/2/2008	7,673,655	3/9/2010
FUSEABLE COMPLETION PLUG	US	Issued	12/340,979	12/22/2008	8,262,838	9/11/2012
PIPELINE PIG LAUNCH PIN AND RETRACTION SYSTEM	US	Issued	12/350,335	1/8/2009	8,052,801	11/8/2011
TELESCOPING DOUBLE BLOCKING PIPE PLUG	US	Issued	12/351,479	1/9/2009	7,766,047	8/3/2010
PIPELINE CLEANING PIG WITH SELF-ENERGIZING	US	Issued	12/355,133	1/16/2009	8,650,695	2/18/2014

Title	Country	Status	App. No.	Filing Date	Patent No.	Issue Date
DIAGONALLY ORIENTED SCRAPERS						
BLOCK AND BLEED PLUGGING TOOL EMPLOYING SEALS ON A PIPELINE EXTERIOR	US	Issued	12/403,664	3/13/2009	8,047,219	11/1/2011
INTERNAL COMPOSITE REPAIR APPARATUS	US	Issued	12/411,138	3/25/2009	7,926,516	4/19/2011
A SYSTEM AND METHOD FOR DETECTING THE PASSAGE OF AN OBJECT IN PIPELINE INCLUDING SHIELDED MAGNETOMETER AND A MICROCONTROLLER WITH ADAPTIVE THRESHOLDING DETECTION MEANS	US	Issued	12/470,654	5/22/2009	8,378,667	2/19/2013
SPEED CONTROL DRIVE SECTION WITH FAILSAFE VALVE	US	Issued	12/539,696	8/12/2009	8,479,345	7/9/2013
PIPELINE INSPECTION TOOL WITH OBLIQUE MAGNETIZER (SMFL)	US	Issued	12/572,752	10/2/2009	8,653,811	2/18/2014
PIPELINE INSPECTION TOOL WITH DOUBLE SPIRAL EMAT SENSOR ARRAY	US	Issued	12/642,031	12/18/2009	8,319,494	11/27/2012
PROGRESSIVE DEWATERING AND INHIBITOR DISPERSAL ROLLING PIG	US	Issued	12/830,939	7/6/2010	8,151,483	4/10/2012
PIPELINE DEBRIS SHEARING DEVICE	US	Issued	12/840,049	7/20/2010	9,089,884	7/28/2015
MACHINE-ACTUATED AND REMOVABLE SAFETY CLOSURE	US	Issued	13/502,984	4/19/2012	9,091,382	7/28/2015

Title	Country	Status	App. No.	Filing Date	Patent No.	Issue Date
WITH ANTI-ROTATION AND MACHINE-RELEASED HOLDER						
PIPELINE PIG SIGNAL TRIGGER CAVITY SEAL	US	Issued	13/669,989	11/6/2012	9,248,477	2/2/2016
METAL SEAL FITTING FOR USE ON A PIPELINE (MSF)	US	Issued	14/493,479	9/23/2014	10,030,774	7/24/2018
SYSTEM AND METHOD FOR NON-DESTRUCTIVE, IN-SITU, POSITIVE MATERIAL IDENTIFICATION OF A PIPE	US	Issued	14/565,206	12/9/2014	9,880,056	1/30/2018
PIPELINE DEBRIS SHEARING DEVICE	US	Issued	14/810,082	7/27/2015	9,505,040	11/29/2016
DEVICE FOR SEALING PIPELINES (ODORI)	US	Issued	14/985,038	12/30/2015	9,746,088	8/29/2017
SYSTEM AND METHOD OF PREVENTING FLOW BLOCKING WHEN USING AN AUTOMATED PIG LAUNCHER	US	Issued	14/989,442	1/6/2016	9,651,190	5/16/2017
PIPELINE PIG SIGNAL TRIGGER CAVITY SEAL	US	Issued	15/011,946	2/1/2016	9,551,450	1/24/2017
FLUIDIC PIG LAUNCHER AND METHOD OF ITS USE	US	Issued	15/185,140	6/17/2016	10,295,105	5/21/2019
DEVICE FOR SEALING PIPELINES (ODORI)	US	Issued	15/688,477	8/28/2017	10,094,479	10/9/2018
LARGE-GAP-SEAL ("LGS") ASSEMBLY	US	Issued	15/728,320	10/9/2017	10,436,372	10/8/2019
MULTI-DIAMETER FOAM PIG	US	Issued	15/745,840	1/18/2018	10,627,039	4/21/2020
SYSTEM AND METHOD FOR NON-DESTRUCTIVE, IN-SITU, POSITIVE MATERIAL IDENTIFICATION OF A PIPE	US	Issued	15/882,295	1/29/2018	10,215,638	2/26/2019

Title	Country	Status	App. No.	Filing Date	Patent No.	Issue Date
THICK, LONG SEAM WELDING SYSTEM AND METHOD FOR DISTORTION CONTROL AND NON POST WELD HEAT TREATMENT OF PIPELINE HOT TAP FITTINGS	US	Pending	15/939,996	3/29/2018		
METAL SEAL FITTING FOR USE ON A PIPELINE (MSF)	US	Pending	16/040,599	7/20/2018		
DIRECTED JET IMPULSE PIG LAUNCHING SYSTEM AND METHOD OF ITS USE	US	Pending	16/111,753	8/24/2018		
DEVICE FOR SEALING PIPELINES (ODORI)	US	Pending	16/154,208	10/8/2018		
SHAFT MECHANICAL LOCK FOR PIPELINE ISOLATION TOOLS	US	Pending	16/163,245	10/17/2018		
USE OF HIGH SPEED RADIO FREQUENCY PROTOCOLS FOR COMMUNICATION WITH PIPELINE PIGS AND INSPECTION TOOLS	US	Issued	16/168,057	10/23/2018	10,567,090	2/18/2020
FUSIBLE SIZE-ON-SIZE OR REDUCED BRANCH FITTING FOR USE WITH POLYETHYLENE PIPE	US	Pending	16/181,975	11/6/2018		
SYSTEM AND METHOD FOR NON-DESTRUCTIVE, IN-SITU, POSITIVE MATERIAL IDENTIFICATION OF A PIPE	US	Pending	16/284,292	2/25/2019		
PIPELINE PIG WITH HYDRAULICALLY BALANCED COLLAPSIBLE SEALING ELEMENTS	US	Pending	16/284,300	2/25/2019		

Title	Country	Status	App. No.	Filing Date	Patent No.	Issue Date
SPEED CONTROL DRIVE SECTION WITH FAILSAFE VALVE	US	Pending	16/381,937	4/11/2019		
NON-INVASIVE PIPELINE PIG SIGNAL USING VIBRATION SENSORS	US	Pending	16/420,989	5/23/2019		
VESSEL CLOSURE DEVICE WITH FAIL SAFE FAILURE DETECTION MEANS	US	Pending	16/432,144	6/5/2019		
ISOLATION PLUG WITH ENERGIZED SEAL	US	Pending	16/448,890	6/21/2019		
USE OF HIGH SPEED RADIO FREQUENCY PROTOCOLS FOR COMMUNICATION WITH PIPELINE PIGS AND INSPECTION TOOLS	US	Pending	16/792,455	2/17/2020		
POLYETHYLENE PIPE SERVICE SYSTEM INCLUDING QUICK CONNECT MEANS FOR POLYETHYLENE PIPE TAPPING, PLUGGING, AND COMPLETION OPERATIONS	US	Pending	16/812,985	3/9/2020		
PIPELINE TOOL WITH COMPOSITE MAGNETIC FIELD FOR INLINE INSPECTION	US	Pending	16/845,658	4/10/2020		
MULTI-DIAMETER FOAM PIG	US	Pending	16/853,169	4/20/2020		
SINGLE POINT CONTACT TRIAXIAL SENSOR HEAD FOR ILI	US	Expired	62/856,202	6/3/2019		

Title	Country	Status	App. No.	Filing Date	Patent No.	Issue Date
WEAR INDICATOR FOR USE WITH PIPELINE PIG COMPONENTS HAVING A PIPE WALL CONTACTING SURFACE	US	Pending	62/874,753	7/16/2019		
PLUGGING SYSTEM WITH QUICK OPEN AND CLOSE OPERATING DISC	US	Pending	62/892,370	8/27/2019		
RE-SETTABLE PIPELINE GAUGING TOOL WITH DEFORMABLE BODY	US	Pending	62/958,148	1/7/2020		
PRESSURE- RESPONSIVE, DEFORMABLE, SELF- INTEGRATING PIGGING ELEMENT FOR USE IN PIPELINE PIGGING APPLICATIONS (SELF-INTEGRATING PIG)	US	Pending	62/994,039	3/24/2020		