

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT3694831

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	SECURITY INTEREST
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
TRICAN WELL SERVICE LTD.	11/15/2015
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	COMPUTERSHARE TRUST COMPANY OF CANADA
<b>Street Address:</b>	600, 530 - 8TH AVENUE S.W.
<b>City:</b>	CALGARY, ALBERTA
<b>State/Country:</b>	CANADA
<b>Postal Code:</b>	T2P 3S8
<b>PROPERTY NUMBERS Total: 10</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	14593040
Application Number:	14644281
Application Number:	14681681
Application Number:	14734954
Application Number:	14793528
Application Number:	14794066
Application Number:	14796637
Application Number:	14801619
Application Number:	14849205
Application Number:	14851237
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(713)651-5246
<i>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.</i>	
<b>Phone:</b>	713-651-5567
<b>Email:</b>	annie.aymond@nortonrosefulbright.com
<b>Correspondent Name:</b>	ANNIE AYMOND-NORTON ROSE FULBRIGHT USLLP
<b>Address Line 1:</b>	1301 MCKINNEY STREET
<b>Address Line 4:</b>	HOUSTON, TEXAS 77010
<b>ATTORNEY DOCKET NUMBER:</b>	HSBC/TRICAN/CTCC-11503835

<b>NAME OF SUBMITTER:</b>	ANNIE AYMOND
<b>SIGNATURE:</b>	/Annie Aymond/
<b>DATE SIGNED:</b>	01/13/2016
<b>Total Attachments: 17</b> source=CA_IP_Security_Agreement_Trican_Computershare#page1.tif source=CA_IP_Security_Agreement_Trican_Computershare#page2.tif source=CA_IP_Security_Agreement_Trican_Computershare#page3.tif source=CA_IP_Security_Agreement_Trican_Computershare#page4.tif source=CA_IP_Security_Agreement_Trican_Computershare#page5.tif source=CA_IP_Security_Agreement_Trican_Computershare#page6.tif source=CA_IP_Security_Agreement_Trican_Computershare#page7.tif source=CA_IP_Security_Agreement_Trican_Computershare#page8.tif source=CA_IP_Security_Agreement_Trican_Computershare#page9.tif source=CA_IP_Security_Agreement_Trican_Computershare#page10.tif source=CA_IP_Security_Agreement_Trican_Computershare#page11.tif source=CA_IP_Security_Agreement_Trican_Computershare#page12.tif source=CA_IP_Security_Agreement_Trican_Computershare#page13.tif source=CA_IP_Security_Agreement_Trican_Computershare#page14.tif source=CA_IP_Security_Agreement_Trican_Computershare#page15.tif source=CA_IP_Security_Agreement_Trican_Computershare#page16.tif source=CA_IP_Security_Agreement_Trican_Computershare#page17.tif	

## CANADIAN INTELLECTUAL PROPERTY SECURITY AGREEMENT

This CANADIAN INTELLECTUAL PROPERTY SECURITY AGREEMENT, dated as of November 12, 2015 (as amended, amended and restated, supplemented or otherwise modified from time to time, this **Agreement**), is made by (a) TRICAN WELL SERVICE LTD., an Alberta corporation (the **Borrower**) and (b) EACH OF THE OTHER GRANTOR PARTIES HERETO, (each such party, including the Borrower, a **Grantor** and, collectively, the **Grantors**), in favor of COMPUTERSHARE TRUST COMPANY OF CANADA, in its capacity as collateral trustee under the Intercreditor Agreement (as defined in the Security Agreement) for the benefit of the Senior Secured Parties (as defined therein) pursuant to the Intercreditor Agreement (together with its successors and assigns in such capacity, the **Collateral Trustee**).

### WITNESSETH:

**WHEREAS**, pursuant to a Canadian Obligor Security Agreement dated as of the date hereof (as such agreement may be amended, amended and restated, supplemented or otherwise modified from time to time, the **Security Agreement**), among the Grantors, the Collateral Trustee and each other person that becomes a party thereto pursuant to the terms thereof, each Grantor has granted to the Collateral Trustee a security interest in substantially all of such Grantor's property, including, without limitation, the Collateral referred to in Section 1 below; and

**WHEREAS**, pursuant to the Security Agreement, each Grantor has agreed to execute this Agreement in respect of its Collateral for recording with the Canadian Intellectual Property Office and any other office in which a security interest in the Collateral may be recorded under the laws of any other applicable jurisdiction.

**NOW, THEREFORE**, in consideration of the premises and the mutual covenants and agreements hereinafter set forth, each Grantor and the Collateral Trustee agree as follows:

#### 1 Grant of Security

Each Grantor hereby grants to the Collateral Trustee for the benefit of the Beneficiaries (as defined in the Security Agreement) a security interest in and to all of such Grantor's right, title and interest in and to its intellectual property, whether or not such interest is joint or in common with one or more third parties or another Grantor, including the following (the **Collateral**):

- (a) all present and future Canadian and foreign patents, design patents and certificates of invention that may be developed or acquired by or on behalf of such Grantor, or similar industrial property rights, and applications for any of the foregoing, including, but not limited to, the patents set forth in Schedule A hereto opposite the name of such Grantor, as Schedule A may be supplemented from time to time by supplements to the Security Agreement and this Agreement which shall be executed and delivered by such Grantor to the Collateral Trustee from time to time, and all reissues, divisions, continuations, continuations-in-part, renewals, extensions and reexaminations thereof and amendments thereto (the **Patents**);
- (b) all present and future Canadian and foreign trademarks, trade names, corporate names, company names, business names, fictitious business names, internet domain names, service marks, certification marks, collective marks, logos, other source or business identifiers, designs and general intangibles of a like nature, all registrations and applications for any of the foregoing including, but not limited to, the trademark and service mark registrations, applications, and licenses set forth in Schedule B hereto opposite the name of such Grantor, as Schedule B may be supplemented from time to time by supplements to the Security Agreement and this Agreement which shall be executed and delivered by such Grantor to the Collateral Trustee from time to time,

together with the goodwill connected with the use thereof and symbolized thereby and all extensions and renewals thereof (the **Trademarks**);

- (c) all present and future Canadian and foreign copyrights (including industrial designs and community designs), including but not limited to copyrights in software and databases, and all "topography" (as defined in the Integrated Circuit Topography Act (Canada)), whether registered or unregistered, including, without limitation, the registrations and applications and copyright licenses set forth in Schedule C hereto opposite the name of such Grantor, as Schedule C may be supplemented from time to time by supplements to the Security Agreement and this Agreement which shall be executed and delivered by such Grantor to the Collateral Trustee from time to time, and all extensions and renewals thereof (the **Copyrights**);
- (d) all rights of any kind whatsoever of such Grantor accruing under any of the foregoing provided by applicable law of any jurisdiction, by international treaties and conventions and otherwise throughout the world;
- (e) any and all royalties, fees, income, payments and other proceeds now or hereafter due or payable with respect to any and all of the foregoing; and
- (f) any and all claims and causes of action with respect to any of the foregoing, whether occurring before, on or after the date hereof, including all rights to and claims for damages, restitution and injunctive and other legal and equitable relief for past, present and future infringement, dilution, misappropriation, violation, misuse, breach or default, with the right but no obligation to sue for such legal and equitable relief and to collect, or otherwise recover, any such damages.

## **2 Security for Obligations**

This Agreement secures, and the Collateral is collateral security for, with respect to each Grantor, the prompt and complete payment and performance in full when due, whether at stated maturity, by required prepayment, declaration, acceleration, demand or otherwise of the Obligations (as such term is defined in the Security Agreement).

## **3 Scope of Security Interest**

To the extent that the creation of the security interest would result in the termination of any agreement, licence or permit of the Grantors (each, a **Restricted Asset**), the security interest will not attach to the Restricted Asset but each Grantor shall hold its interest in the Restricted Asset and its proceeds in trust for the Collateral Agent, and shall assign such Restricted Asset or the proceeds thereof to the Collateral Agent or as it may direct immediately upon obtaining the consent of the other party.

Each Grantor will use commercially reasonable efforts to (i) obtain all necessary consents to the assignment of such Restricted Asset to the Collateral Agent, and (ii) ensure that all agreements, licences or permits entered into or granted after the date of this Agreement expressly permit assignment to the Collateral Agent of the benefits of such agreements, licences or permits as Collateral.

## **4 Recordation**

Each Grantor authorizes and agrees that it will, at its own expense, cause this Agreement, and any supplements or amendments thereto, to be recorded at the Canadian Intellectual Property Office, the United States Trademark and Patent Office, the United States Copyright Office (and any successor office and any similar office in any United States state or other country) and at the

appropriate provincial personal property security registry. Each Grantor authorizes the United States Commissioner for Patents, the United States Commissioner for Trademarks and the United States Register of Copyrights and any other government officials to record and register this Agreement.

**5 Supplemental Security**

This Agreement is in addition to and without prejudice to all other security now held or which may hereafter be held by the Collateral Agent.

**6 Execution in Counterparts**

This Agreement may be executed in any number of 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.

**7 Grants, Rights and Remedies**

This Agreement has been entered into in conjunction with the provisions of the Security Agreement. Each Grantor does hereby acknowledge and confirm that the grant of the security interest hereunder to, and the rights and remedies of, the Collateral Trustee with respect to the Collateral are more fully set forth in the Security Agreement, the terms and provisions of which are incorporated herein by reference as if fully set forth herein.

**8 Governing Law**

This Agreement shall be governed by, and construed in accordance with, the laws of the Province of Alberta and the laws of Canada applicable therein, without regard to conflict of laws principles.

***[Signatures follow]***

IN WITNESS WHEREOF, the parties hereto have executed this Agreement by their duly authorized officers as of the day and year first above written.

TRICAN WELL SERVICE LTD., as a Grantor

Per: 

Name: Dale M. Dusterhoft

Title: Chief Executive Officer

Per: 

Name: Michael A. Baldwin

Title: Senior Vice President, Finance and  
Chief Financial Officer

BIRCHWOOD INDUSTRIES LTD., as a Grantor

Per: 

Name: Dale M. Dusterhoft

Title: Chief Executive Officer

Per: 

Name: Michael A. Baldwin

Title: Chief Financial Officer

CANADIAN OILFIELD STIMULATION SERVICES  
LTD., as a Grantor

Per: 

Name: Dale M. Dusterhoft

Title: Chief Executive Officer

Per: 

Name: Michael A. Baldwin

Title: Chief Financial Officer

NORTHLINE ENERGY LTD., as a Grantor

Per: 

Name: Dale M. Dusterhoff

Title: Chief Executive Officer

Per: 

Name: Michael A. Baldwin

Title: Chief Financial Officer

NORTHLINE ENERGY SERVICES INC., as a Grantor

Per: 

Name: Dale M. Dusterhoff

Title: Chief Executive Officer

Per: 

Name: Michael A. Baldwin

Title: Chief Financial Officer

TRICAN COMPLETION SOLUTIONS LTD., as a Grantor

Per: 

Name: Dale M. Dusterhoff

Title: Director

Per: 

Name: Michael A. Baldwin

Title: Director

TRICAN GEOLOGICAL SOLUTIONS LTD., as a  
Grantor

Per: 

Name: Dale M. Dusterhoft

Title: Chief Executive Officer

Per: 

Name: Michael A. Baldwin

Title: Chief Financial Officer

TRICAN PARTNERSHIP, as a Grantor, by and  
through its managing partner, TRICAN WELL  
SERVICE LTD.

Per: 

Name: Dale M. Dusterhoft

Title: Chief Executive Officer

Per: 

Name: Michael A. Baldwin

Title: Senior Vice President, Finance and  
Chief Financial Officer



COMPUTERSHARE TRUST COMPANY OF  
CANADA, as the Collateral Trustee

Per: 

Name: LAURA LEONG  
Title: CORPORATE TRUST OFFICER

Per: 

Name: STEPHEN D. GLOVER  
Title: VICE PRESIDENT, CORPORATE TRUST OFFICER

**Schedule A**  
**Patents And Patent Applications**

<b>Owner/Applicant</b>	<b>Patent</b>	<b>Registration/ Application No.</b>
Trican Well Service Ltd.	System for cementing tubulars comprising a mud motor	2,743,865
Trican Well Service Ltd.	Burst disk-actuated shaped charges, systems and methods of use	2,748,111
Trican Well Service Ltd.	Apparatus and method for stimulating subterranean formations	2,692,377
Trican Well Service Ltd.	Flow-actuated pressure equalization valve for a downhole tool	2,683,432
Trican Well Service Ltd.	Eccentric, coil-in-coil tubing	2,889,456
Trican Well Service Ltd.	Fluid displacement stimulation of deviated wellbores using a temporary conduit	2,877,036
Trican Well Service Ltd.	Bio-healing well cement systems	2,832,791
Trican Well Service Ltd.	Microbial-enhanced well cementing and remediation	2,871,202
Trican Well Service Ltd.	Gas separator	2,581,136
Trican Well Service Ltd.	Method and system for fracturing subterranean formations with a proppant and dry gas	2,531,444
Trican Well Service Ltd.	Method for making particulate slurries and particulate slurry compositions	2,545,563
Trican Well Service Ltd.	Fracturing fluid and method for fracturing subterranean formations	2,570,953
Trican Well Service Ltd.	Apparatus and method of fracturing	2,580,590
Trican Well Service Ltd.	Pressure containment devices and methods of using same	2,674,268
Trican Well Service Ltd.	Control of particulate entrainment by fluids	2,684,966

Trican Well Service Ltd.	Control of particulate entrainment by fluids	2,848,264
Trican Well Service Ltd.	Aqueous particulate slurry compositions and methods of making same	2,683,516
Trican Well Service Ltd.	Resin coated proppant slurry compositions and methods of making and using same	2,693,427
Trican Well Service Ltd.	Hydrocarbon fluid compositions and methods for using same	2,643,251
Trican Well Services Ltd.	Compositions and methods for enhancing fluid recovery for hydraulic fracturing treatments	2,690,768
Trican Well Service Ltd.	Compositions and methods for enhancing fluid recovery for hydraulic fracturing treatments	2,787,132
Trican Well Service Ltd.	Well service compositions and methods	2,772,833
Trican Well Service Ltd.	Smart fluid compositions and methods for well service operations	2,731,014
Trican Well Service Ltd.	Fracturing tool anchor	2,748,609
Trican Well Service Ltd.	Fracturing tool anchor	2,784,506
Trican Well Service Ltd.	Hydrocarbon-based fluid compositions and methods of using same	2,735,428
Trican Well Service Ltd.	Fracturing slurry compositions and methods for making same	2,845,069
Trican Well Service Ltd.	Fracturing slurry compositions and methods for making same	2,883,811
Trican Well Service Ltd.	Flowrider (HP/Amine)	2,889,374
Trican Well Service Ltd.	Aqueous slurry for particulates transportation	2,897,441
Trican Well Service Ltd.	Spray set-up for one the fly coating of proppants in a fracture application	2,877,025
Trican Well Service Ltd.	Composition and method of using polymerizable natural oils	2,880,646

	to treat proppants	
Trican Well Service Ltd.	Fracturing system	2,217,659
Trican Well Service Ltd.	Hanger assembly and system including hanger assembly and heater string	2,809,273
Trican Well Service Ltd.	Heater string and process of well heating	2,704,561
Trican Well Service Ltd.	Downhole chemical delivery for oil and gas wells	2,803,326
Trican Well Service Ltd.	Composite solids system to prepare polymer solutions for hydraulic fracturing treatments	2,814,286
Trican Well Service Ltd.	Composition and method to replace polysaccharides in hydraulic fracturing	2,822,279
Trican Well Service Ltd.	Viscous fluid systems from waste water	2,896,924

**Schedule B**  
**Trademarks And Trademark Applications**

<b>Owner/Applicant</b>	<b>Trademark</b>	<b>Registration/ Application No.</b>
Trican Well Service Ltd.	Trican 53280-135	TMA764,312
Trican Well Service Ltd.	Trican & Design 53280-137	TMA764,302
Trican Well Service Ltd.	Trican & Design (in reverse)	TMA842,081
Trican Well Service Ltd.	Trican Well Service Ltd.	TMA583,720
Trican Well Service Ltd.	Trican Well Service Ltd. & Design	TMA584,263
Trican Well Service Ltd.	Trican Well Service & Design	TMA824,649
Trican Well Service Ltd.	Trican Well Service & Design (in reverse)	TMA841,997
Trican Well Service Ltd.	Aquacheck 53280-105	TMA720,888
Trican Well Service Ltd.	Aquaplug 53280-101	TMA720,889
Trican Well Service Ltd.	Aquaseal 53280-116	TMA720,890
Trican Well Service Ltd.	BPS	TMA797,785
Trican Well Service Ltd.	BPS (Burst Port System)	TMA797,784
Trican Well Service Ltd.	Catalyst Frac System 53280-127	TMA758,278
Trican Well Service Ltd.	CBM Solutions 53280-139	TMA758,932
Trican Well Service Ltd.	DSA 53280-133	TMA753,462
Trican Well Service Ltd.	DSA (Dirty Sandstone Acid)	TMA794,192
Trican Well Service Ltd.	Ecoclean 53280-99	TMA739,894
Trican Well Service Ltd.	FlowRider	TMA797,787
Trican Well Service Ltd.	Gel-Pac-Frac 53280-103	TMA708,921
Trican Well Service Ltd.	Hydromill 53280-61	TMA627,254
Trican Well Service Ltd.	Hydrostim 53280-77	TMA658,379

Trican Well Service Ltd.	Nitricarbon Frac 53280-97	TMA706,476
Trican Well Service Ltd.	Nitrojet 53280-122	TMA743,513
Trican Well Service Ltd.	Proplock 53280-145	TMA782,736
Trican Well Service Ltd.	Polybore	TMA570,930
Trican Well Service Ltd.	SRVMAX	TMA789,405
Trican Well Service Ltd.	Triflex	
Trican Well Service Ltd.	Tri-Max	
Trican Well Service Ltd.	Trinet	TMA603,092
Trican Well Service Ltd.	Well-Sol 53280-108	TMA719,364
Trican Well Service Ltd.	Worldwide Knowledge Local Solutions	TMA845,843
Trican Well Service Ltd.	Worldwide Knowledge - Local Solutions	TMA845,835

**Schedule C**  
**Copyrights and Copyright Applications**

Nil.

**SCHEDULE A - SUPPLEMENTAL**  
**United States Patents and Patent Applications**

<b>Owner/Applicant</b>	<b>Registration or Application Number</b>	<b>Title</b>
Trican Well Service Ltd.	<del>5992522</del>	Process and seal for minimizing interzonal migration in boreholes
<del>Trican Well Service Ltd.</del>	<del>6904972</del>	Fracturing with viscoelastic surfactant based fluid
Trican Well Service Ltd.	<del>7735551</del>	Method and system for fracturing subterranean formations with a proppant and dry gas
Trican Well Service Ltd.	7677308	Gas separator
Trican Well Service Ltd.	7723274	Method for making particulate slurries and particulate slurry compositions
Trican Well Service Ltd.	8561687	Pressure containment devices and methods of using same
Trican Well Service Ltd.	8141638	Fracturing method and apparatus utilizing gelled isolation fluid
Trican Well Service Ltd.	8105986	Aqueous particulate slurry compositions and methods of making same
Trican Well Service Ltd.	8236738	Control of particulate entrainment by fluids
Trican Well Service Ltd.	7977285	Hydrocarbon fluid compositions and methods for using same
Trican Well Service Ltd.	8499835	Well service compositions for consolidation of particulates in subterranean coal seams
Trican Well Service Ltd.	12669178	Resin coated proppant slurry compositions and methods of making and using same
Trican Well Service Ltd.	8607897	Center discharge gas turbodrill
Trican Well Service Ltd.	8863850	Apparatus and method for stimulating subterranean formations
Trican Well Service Ltd.	9206659	Applications of smart fluids in well service operations
Trican Well Service Ltd.	8672030	System for cementing tubulars comprising a mud motor
Trican Well Service Ltd.	9139761	Aqueous particulate slurry compositions and methods of making same



<b>Owner/Applicant</b>	<b>Registration or Application Number</b>	<b>Title</b>
Trican Well Service Ltd.	13364156	Downhole Chemical Delivery For Oil And Gas Wells
Trican Well Service Ltd.	13460133	Composite Solids System to Prepare Polymer Solutions for Hydraulic Fracturing Treatments
Trican Well Service Ltd.	13492591	Composition and Method to Replace Polysaccharides in Hydraulic Fracturing
Trican Well Service Ltd.	13522679	Compositions and methods for enhancing fluid recovery for hydraulic fracturing treatments
Trican Well Service Ltd.	8800658	Control of particulate entrainment by fluids
Trican Well Service Ltd.	13569556	Fracturing Tool Anchor
Trican Well Service Ltd.	13734383	Viscous fluid systems from waste water
Trican Well Service Ltd.	13878055	Enzyme breakers and methods for fluid systems
Trican Well Service Ltd.	13934316	Mutual Solvent for Downhole Use
Trican Well Service Ltd.	14149057	Stability of viscous fluids in low salinity environments
Trican Well Service Ltd.	14564777	System for installing tubing encapsulated cable into coil tubing
Trican Well Service Ltd.	14564820	System for coating tubing encapsulated cable for insertion into coil tubing
Trican Well Service Ltd.	14564855	System for manufacturing a coil tubing with the tubing encapsulated cable incorporated into the coil tubing
Trican Well Service Ltd.	14564894	System for manufacturing a coil tubing with the tubing encapsulated cable incorporated into the coil tubing
Trican Well Service Ltd.	14569386	Tractor for installing tubing encapsulated cable into coil tubing
Trican Well Service Ltd.	14640720	Use of salts of polycarboxylates with lipophilic increments to control separation in cement containing latex

<b>Owner/Applicant</b>	<b>Registration or Application Number</b>	<b>Title</b>
Trican Well Service Ltd.	14641098	Fracturing slurry compositions and methods for making same
Trican Well Service Ltd.	14696125	Compositions and methods for making aqueous slurry
	14593040	Fluid displacement
	14644281	Controlling Degradation Rates of Diverting Agents
	14681681	System for Resealing Borehole Access
	14734954	Indexing Dart
	14793528	Controlling Solids Suspension in Slurry
	14794066	Encoding Dart
	14796637	Novel Viscous Fluids Systems from Produced and Flow Back Waters
	14801619	FlowRider(PIB/Amine)
	14849205	Treatment of Microbial influenced corrosion
	14851237	Distributed acoustic sensing to optimize coil tubing milling performance

**SCHEDULE B - SUPPLEMENTAL**  
**United States Trademarks and Trademark Applications**

<b>Owner/Applicant</b>	<b>Trademark</b>	<b>Registration/Application Nos.</b>
Trican Well Service Ltd.	CBM SOLUTIONS	RN: 3779691 SN: 77653507
Trican Well Service Ltd.	ECOCLEAN	RN: 3724145 SN: 77117335
Trican Well Service Ltd.	HYDROMILL	RN: 3022206 SN: 78345903
Trican Well Service Ltd.	NITROCARBON FRAC	RN: 3470261 SN: 77117324
Trican Well Service Ltd.	PROPLOC	RN: 3936202 SN: 77614114
Trican Well Service Ltd.	TRICAN	RN: 3906176 SN: 77649633
Trican Well Service Ltd.	TRICAN and Design	RN: 3906177 SN: 77649651
Trican Well Service Ltd.	TRICAN WELL SERVICE LTD and Design	RN: 3016562 SN: 76155475
Trican Well Service Ltd.	WORLDWIDE KNOWLEDGE – LOCAL SOLUTIONS	RN: 4729797 SN: 85578068