

PATENT ASSIGNMENT

Electronic Version v1.1

Stylesheet Version v1.1

SUBMISSION TYPE:

NEW ASSIGNMENT

NATURE OF CONVEYANCE:

SECURITY AGREEMENT

CONVEYING PARTY DATA

Name	Execution Date
ALLIS-CHALMERS ENERGY INC	08/08/2006

RECEIVING PARTY DATA

Name:	ROYAL BANK OF CANADA
Street Address:	Royal Bank Plaza, South Tower, 12th Floor
Internal Address:	P.O. Box 50, 200 Bay Street
City:	Toronto, Ontario
State/Country:	CANADA
Postal Code:	M5J 2W7

PROPERTY NUMBERS Total: 8

Property Type	Number
Application Number:	10771265
Application Number:	10425844
Patent Number:	6386284
Patent Number:	6223629
Patent Number:	6213216
Patent Number:	6347665
Patent Number:	6715569
Patent Number:	6965230

CORRESPONDENCE DATA

Fax Number: (214)969-1751

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

Phone: (214) 969-1700

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Robert.Shearer@tklaw.com

Correspondent Name: THOMPSON & KNIGHT LLP

PATENT

500144469

REEL: 018184 FRAME: 0089

CH \$320.00 10771265

Address Line 1:	1700 Pacific Avenue
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Address Line 4:	Dallas, TEXAS 75201

ATTORNEY DOCKET NUMBER:	217569.134
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NAME OF SUBMITTER:	James J. Murphy
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Total Attachments: 9

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PATENT SECURITY AGREEMENT

THIS PATENT SECURITY AGREEMENT (herein referred to as this "**Security Agreement**") is executed as of August 8, 2006, by ALLIS-CHALMERS ENERGY INC., a Delaware corporation ("**Debtor**"), whose address is 5075 Westheimer, Suite 890, Houston, Texas 77056, for the benefit of ROYAL BANK OF CANADA (in its capacity as "Administrative Agent" and "Collateral Agent" for the Lenders (hereafter defined)), as "**Secured Party**," whose address is Royal Bank Plaza, P.O. Box 50, 200 Bay Street, 12th Floor, South Tower, Toronto, Ontario M5J 2W7.

RECITALS

WHEREAS, pursuant to that certain Amended and Restated Credit Agreement dated January 18, 2006 (as the same may hereafter be amended, supplemented and restated, the "**Credit Agreement**"), among Debtor, as borrower, the various financial institutions that are, or may from time to time become, parties thereto (individually a "**Lender**" and collectively the "**Lenders**") and Royal Bank of Canada, as administrative agent (in such capacity, the "**Administrative Agent**"), and as collateral agent (in such capacity, the "**Collateral Agent**"), the Lenders have agreed to make Loans for the account of the Debtor; and

WHEREAS, Debtor has agreed to secure its obligations under the Credit Agreement by the pledge of its assets and has entered into that certain Pledge and Security Agreement dated January 18, 2006 in favor of the Administrative Agent and Collateral Agent (as amended from time to time, the "**Omnibus Security Agreement**"); and

WHEREAS, the Debtor has duly authorized the execution, delivery and performance of this Security Agreement to specifically pledge the Patents; and

WHEREAS, this Security Agreement is integral to the transactions contemplated by the Loan Documents, and the execution and delivery of this Security Agreement is a condition precedent to the Lenders' obligations to extend credit under the Loan Documents.

ACCORDINGLY, for valuable consideration, the receipt and adequacy of which are hereby acknowledged, Debtor and Secured Party hereby agree as follows:

1. Definitions. All terms defined in the Recitals hereto or in the Credit Agreement that are not otherwise defined herein shall have the meanings given to them therein. In addition, the following terms have the meanings set forth below:

"**Obligations**" means each and every debt, liability and obligation of every type and description arising under or in connection with any Loan Document (as defined in the Credit Agreement) which Debtor may now or at any time hereafter owe to the Secured Party or any Lender, whether such debt, liability or obligation now exists or is hereafter created or incurred and whether it is or may be direct or indirect, due or to become due,

absolute or contingent, primary or secondary, liquidated or unliquidated, independent, joint, several or joint and several, and including specifically, but not limited to, the Obligations (as defined in the Credit Agreement).

“Patents” means all of the Debtor’s right, title and interest in and to all domestic and foreign patents and domestic and foreign applications for patents, fees or royalties with respect to each, and including without limitation the right to sue for past infringement and damages therefor, and licenses thereunder, all as presently existing or hereafter arising or acquired, including without limitation the patents listed on Exhibit A and any divisionals, continuations, continuations-in-part, or reissues thereof, or any related foreign patents or patent applications.

“Security Interest” has the meaning given in Section 2.

2. **Security Interest.** The Debtor hereby irrevocably pledges and assigns to, and grants the Secured Party, for the benefit of the Lenders, a security interest (the **“Security Interest”**) with power of sale to the extent permitted by law, in the Patents to secure payment of the Obligations. As set forth in the Credit Agreement, the Security Interest is coupled with a security interest in substantially all of the personal property of the Debtor. This Security Agreement grants only the Security Interest herein described, is not intended to and does not affect any present transfer of title of any trademark registration or application and makes no assignment and grants no right to assign or perform any other action with respect to any intent to use trademark application, unless such action is permitted under 15 U.S.C. § 1060.

3. **Representations, Warranties and Agreements.** The Debtor represents, warrants and agrees as follows:

(a) **Existence; Authority.** The Debtor is a corporation duly organized, validly existing and in good standing under the laws of its state of organization, and this Security Agreement has been duly and validly authorized by all necessary action on the part of the Debtor.

(b) **Patents.** Exhibit A accurately lists all Patents owned or controlled by the Debtor as of the date hereof, or to which the Debtor has a right as of the date hereof to have assigned to it, and accurately reflects the existence and status of applications and letters patent pertaining to the Patents as of the date hereof. If after the date hereof, the Debtor owns, controls or has a right to have assigned to it any Patents not listed on Exhibit A, or if Exhibit A ceases to accurately reflect the existence and status of applications and letters patent pertaining to the Patents, then the Debtor shall within 60 days provide written notice to the Secured Party with a replacement Exhibit A, which upon acceptance by the Secured Party shall become part of this Security Agreement.

(c) **Affiliates.** As of the date hereof, no Affiliate owns, controls, or has a right to have assigned to it any items that would, if such item were owned by the Debtor, constitute Patents. If after the date hereof any Affiliate owns, controls, or has a right to have assigned to it any such items, then the Debtor shall promptly either: (i) cause such

Affiliate to assign all of its rights in such item(s) to the Debtor; or (ii) notify the Secured Party of such item(s) and cause such Affiliate to execute and deliver to the Secured Party a patent security agreement substantially in the form of this Security Agreement.

(d) **Title.** The Debtor has absolute title to each Patent listed on Exhibit A, free and clear of all Liens except Permitted Liens. The Debtor (i) will have, at the time the Debtor acquires any rights in Patents hereafter arising, absolute title to each such Patent free and clear of all Liens except Permitted Liens, and (ii) will keep all Patents free and clear of all Liens except Permitted Liens.

(e) **No Sale.** Except as permitted in the Credit Agreement, the Debtor will not assign, transfer, encumber or otherwise dispose of the Patents, or any interest therein, without the Secured Party's prior written consent.

(f) **Defense.** The Debtor will at its own expense and using commercially reasonable efforts, protect and defend the Patents against all claims or demands of all Persons other than those holding Permitted Liens.

(g) **Maintenance.** The Debtor will at its own expense maintain the Patents to the extent reasonably advisable in its business including, but not limited to, filing all applications to obtain letters patent and all affidavits, maintenance fees, annuities, and renewals possible with respect to letters patent and applications therefor. The Debtor covenants that it will not abandon nor fail to pay any maintenance fee or annuity due and payable on any Patent, nor fail to file any required affidavit or renewal in support thereof, without first providing the Secured Party: (i) sufficient written notice, of at least 30 days, to allow the Secured Party to timely pay any such maintenance fees or annuities which may become due on any Patents, or to file any affidavit or renewal with respect thereto, and (ii) a separate written power of attorney or other authorization to pay such maintenance fees or annuities, or to file such affidavit or renewal, should such be necessary or desirable.

(h) **Secured Party's Right to Take Action.** If the Debtor fails to perform or observe any of its covenants or agreements set forth in this Section 3, and if such failure continues for a period of ten (10) calendar days after the Secured Party gives the Debtor written notice thereof (or, in the case of the agreements contained in subsection (g), immediately upon the occurrence of such failure, without notice or lapse of time), or if the Debtor notifies the Secured Party that it intends to abandon a Patent, the Secured Party may (but need not) perform or observe such covenant or agreement or take steps to prevent such intended abandonment on behalf and in the name, place and stead of the Debtor (or, at the Secured Party's option, in the Secured Party's own name) and may (but need not) take any and all other actions which the Secured Party may reasonably deem necessary to cure or correct such failure or prevent such intended abandonment.

(i) **Costs and Expenses.** Except to the extent that the effect of such payment would be to render any loan or forbearance of money usurious or otherwise illegal under any applicable law, the Debtor shall pay the Secured Party on demand the amount of all

moneys expended and all costs and expenses (including reasonable attorneys' fees and disbursements) incurred by the Secured Party in connection with or as a result of the Secured Party's taking action under subsection (h) or exercising its rights under Section 6, together with interest thereon from the date expended or incurred by the Secured Party at the Default Rate.

(j) **Power of Attorney.** To facilitate the Secured Party's taking action under subsection (h) and exercising its rights under Section 6, the Debtor hereby irrevocably appoints (which appointment is coupled with an interest) the Secured Party, or its delegate, as the attorney-in-fact of the Debtor with the right (but not the duty) from time to time to create, prepare, complete, execute, deliver, endorse or file, in the name and on behalf of the Debtor, any and all instruments, documents, applications, financing statements, and other agreements and writings required to be obtained, executed, delivered or endorsed by the Debtor under this Section 3, or, necessary for the Secured Party, after an Event of Default, to enforce or use the Patents or to grant or issue any exclusive or non-exclusive license under the Patents to any third party, or to sell, assign, transfer, pledge, encumber or otherwise transfer title in or dispose of the Patents to any third party. The Debtor hereby ratifies all that such attorney shall lawfully do or cause to be done by virtue hereof. The power of attorney granted herein shall terminate upon the termination of the Credit Agreement as provided therein and the payment and performance of all Obligations.

4. **Debtor's Use of the Patents.** The Debtor shall be permitted to control and manage the Patents, including the right to exclude others from making, using or selling items covered by the Patents and any licenses thereunder, in the same manner and with the same effect as if this Security Agreement had not been entered into, so long as no Event of Default occurs and remains uncured.

5. **Events of Default.** Each of the following occurrences shall constitute an event of default under this Security Agreement (herein called "**Event of Default**"): (a) an Event of Default, as defined in the Credit Agreement, shall occur; or (b) the Debtor shall fail promptly to observe or perform any covenant or agreement herein binding on it; or (c) any of the representations or warranties contained in Section 3 shall prove to have been incorrect in any material respect when made.

6. **Remedies.** Upon the occurrence of an Event of Default and at any time thereafter, the Secured Party may, at its option, take any or all of the following actions:

(a) The Secured Party may exercise any or all remedies available under the Credit Agreement.

(b) The Secured Party may sell, assign, transfer, pledge, encumber or otherwise dispose of the Patents.

(c) The Secured Party may license (exclusively or non-exclusively) the Patents or patent applications, to the extent allowable by any existing licenses.

(c) The Secured Party may enforce the Patents and any licenses thereunder, and if Secured Party shall commence any suit for such enforcement, the Debtor shall, at the request of Secured Party, do any and all lawful acts and execute any and all proper documents required by Secured Party in aid of such enforcement.

7. Miscellaneous. This Security Agreement can be waived, modified, amended, terminated or discharged, and the Security Interest can be released, only explicitly in a writing signed by the Secured Party. A waiver signed by the Secured Party shall be effective only in the specific instance and for the specific purpose given. Mere delay or failure to act shall not preclude the exercise or enforcement of any of the Secured Party's rights or remedies. All rights and remedies of the Secured Party shall be cumulative and may be exercised singularly or concurrently, at the Secured Party's option, and the exercise or enforcement of any one such right or remedy shall neither be a condition to nor bar the exercise or enforcement of any other. All notices to be given to Debtor under this Security Agreement shall be given in the manner and with the effect provided in the Credit Agreement. The Secured Party shall not be obligated to preserve any rights the Debtor may have against prior parties, to realize on the Patents at all or in any particular manner or order, or to apply any cash proceeds of Patents in any particular order of application. This Security Agreement shall be binding upon and inure to the benefit of the Debtor and the Secured Party and their respective participants, successors and assigns and shall take effect when signed by the Debtor and delivered to the Secured Party, and the Debtor waives notice of the Secured Party's acceptance hereof. The Secured Party may execute this Security Agreement if appropriate for the purpose of filing, but the failure of the Secured Party to execute this Security Agreement shall not affect or impair the validity or effectiveness of this Security Agreement. A carbon, photographic or other reproduction of this Security Agreement or of any financing statement signed by the Debtor shall have the same force and effect as the original for all purposes of a financing statement. This Security Agreement shall be governed by the internal law of Texas without regard to conflicts of law provisions. If any provision or application of this Security Agreement is held unlawful or unenforceable in any respect, such illegality or unenforceability shall not affect other provisions or applications which can be given effect and this Security Agreement shall be construed as if the unlawful or unenforceable provision or application had never been contained herein or prescribed hereby. All representations and warranties contained in this Security Agreement shall survive the execution, delivery and performance of this Security Agreement and the creation and payment of the Obligations. In the event of any conflict between the terms of this Security Agreement and the Omnibus Security Agreement, the terms of the Omnibus Security Agreement shall control.

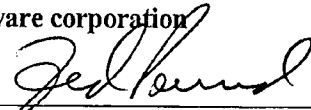
THE PARTIES WAIVE ANY RIGHT TO TRIAL BY JURY IN ANY ACTION OR PROCEEDING BASED ON OR PERTAINING TO THIS AGREEMENT.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the parties have executed this Patent Security Agreement as of the date written above.

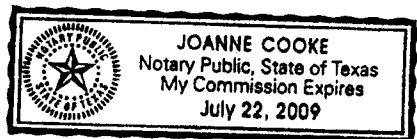
Allis-Chalmers Energy Inc.
5075 Westheimer, Suite 890
Houston, Texas 77056
Telecopier: (713) 369-0555
Attention: Theodore F. Pound, III
e-mail: tpound@alchenergy.com

ALLIS-CHALMERS ENERGY INC., a
Delaware corporation

By: 
Theodore F. Pound, III
Secretary

STATE OF TEXAS)
)
COUNTY OF HARRIS)

The foregoing instrument was acknowledged before me this 4th day of August, 2006, by Theodore F. Pound, III, Secretary of Allis-Chalmers Energy Inc., a Delaware corporation, on behalf of such corporation.



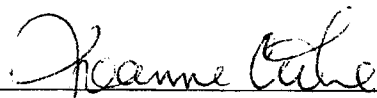

Notary Public in and for the State of Texas

EXHIBIT A

UNITED STATES ISSUED PATENTS

<u>Title</u>	<u>Patent Number</u>	<u>Issue Date</u>
Snubbing Unit Drilling System	6386284	5/14/02
Closed-Head Power Tongs	6223629	5/01/01
Snubbing Unit Tong Apparatus	6213216	4/10/01
Snubbing Unit Tong Apparatus	6347665	2/19/02
Boom Tong Power Tong Positioner	6715569	4/06/04
Apparatus and Method for Determining the Position of the End of a Threaded Connection, and for Positioning a Power Tong Relative Thereto	6965230	11/15/05

UNITED STATES PATENT APPLICATIONS

<u>Title</u>	<u>Serial Number</u>	<u>Filing Date</u>
Tong Assembly	10771265	2/03/04
Power Positioner for Power Tong Units	10425844	4/29/03

FOREIGN ISSUED PATENTS

<u>Title</u>	<u>Country</u>	<u>Patent Number</u>	<u>Issue Date</u>
NONE			

UNITED STATES PATENT APPLICATIONS

<u>Title</u>	<u>Serial Number</u>	<u>Filing Date</u>
NONE		