
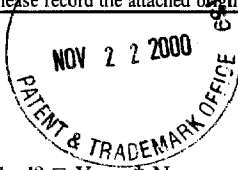
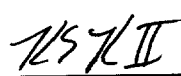


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| FORM PTO-1565 <div style="text-align: right; margin-top: -20px;">MRD 11-22-00 R</div> | 12-14-2000  101552054 | <div style="text-align: center; font-size: 2em; margin-bottom: 10px;">DS</div> EET U.S. DEPARTMENT OF COMMERCE Patent and Trademark Office |
| To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof. | | |
| 1. Name of conveying party(ies): <u>PERF-O-LOG, INC.</u> Additional names(s) of conveying party(ies) attached? <input type="checkbox"/> Yes * No | <div style="text-align: center; margin-bottom: 10px;">  </div> 2. Name and address of receiving party(ies): <u>WELLS FARGO BANK TEXAS, N.A., as administrative agent</u> Internal Address: _____ Street Address: <u>1000 Louisiana Street</u> City: <u>Houston</u> State: <u>TX</u> ZIP: <u>77002</u> Additional name(s) & address(es) attached? <input type="checkbox"/> Yes * No | |
| 3. Nature of conveyance: <input type="checkbox"/> Assignment <input type="checkbox"/> Merger <input checked="" type="checkbox"/> Security Agreement <input type="checkbox"/> Change of Name Other _____ Execution Date: <u>October 16, 2000</u> | | |
| 4. Application number(s) or patent number(s): If this document is being filed together with a new application, the execution date of the application is: _____ <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <u>Application Numbers:</u> SEE ATTACHMENT "A" </div> <div style="width: 45%;"> <u>Registration Numbers:</u> SEE ATTACHMENT "A" </div> </div> <div style="text-align: center; margin-top: 10px;"> Additional numbers attached? <input type="checkbox"/> Yes <input type="checkbox"/> No </div> | | |
| 5. Name and address of party to whom correspondence concerning document should be mailed: Name: <u>Robert E. Rude II</u> Internal Address: <u>Mayer, Brown & Platt</u> Street Address: <u>1909 K Street, NW</u> City: <u>Washington</u> State: <u>D.C.</u> ZIP: <u>20006</u> | 6. Total number of applications and patents involved: 2 7. Total fee (37 CFR 3.41) <u>\$80.00</u> <input checked="" type="checkbox"/> Enclosed (Check No) 18864 <input type="checkbox"/> Authorized to be charged to deposit account 8. Deposit account number: _____ (Attach duplicate copy of this page if paying by deposit account) | |
| DO NOT USE THIS SPACE | | |
| 9. Statement and signature. <i>To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.</i> <div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div style="width: 30%;"> <u>Robert E. Rude II</u> Name of Person Signing </div> <div style="width: 30%; text-align: center;">  Signature </div> <div style="width: 30%; text-align: right;"> <u>November 22, 2000</u> Date </div> </div> <div style="text-align: center; margin-top: 10px;"> Total number of pages including cover sheet, attachments and documents : 7 </div> | | |

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PATENT SECURITY AGREEMENT

This PATENT SECURITY AGREEMENT (this "Agreement"), dated as of October 16, 2000, is made between PERF-O-LOG, INC., a Texas corporation (the "Grantor"), and WELLS FARGO BANK TEXAS, N.A., as administrative agent (together with any successor(s) thereto in such capacity, the "Administrative Agent") for each of the Secured Parties;

W I T N E S S E T H :

WHEREAS, pursuant to a Credit Agreement, dated as of October 16, 2000 (as amended, supplemented, amended and restated or otherwise modified from time to time, the "Credit Agreement"), among W-H Energy Services, Inc., a Texas corporation (the "Borrower"), the various financial institutions as are, or may from time to time become, parties thereto (each, individually, a "Lender", and collectively, the "Lenders"), DLJ Capital Funding, Inc., as the Syndication Agent, Bank One, NA, as the Documentation Agent, and Wells Fargo Bank Texas, N.A., as the Administrative Agent, the Lenders and the Issuer have extended Commitments to make Credit Extensions to the Borrower;

WHEREAS, in connection with the Credit Agreement, the Grantor has executed and delivered a Subsidiary Security Agreement, dated as of October 16, 2000 (as amended, supplemented, amended and restated or otherwise modified from time to time, the "Security Agreement");

WHEREAS, as a condition precedent to the making of the Credit Extensions (including the initial Credit Extension) under the Credit Agreement, the Grantor is required to execute and deliver this Agreement and to grant to the Administrative Agent a continuing security interest in all of the Patent Collateral (as defined below) to secure all Secured Obligations;

WHEREAS, each Grantor is a Subsidiary of the Borrower;

WHEREAS, the Grantor has duly authorized the execution, delivery and performance of this Agreement; and

WHEREAS, it is in the best interests of the Grantor to execute this Security Agreement inasmuch as the Grantor will derive substantial direct and indirect benefits from the Credit Extensions made from time to time to the Borrower by the Lenders pursuant to the Credit Agreement;

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, and in order to induce the Lenders and the Issuer to make Credit Extensions (including the initial Credit Extension) to the Borrower pursuant to the Credit Agreement, the Grantor agrees, for the benefit of each Secured Party, as follows:

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, and in order to induce the Lenders and the Issuer to make Credit Extensions (including the initial Credit Extension) to the Borrower pursuant to the Credit Agreement, the Grantor agrees, for the benefit of each Secured Party, as follows:

SECTION 1. Definitions. Unless otherwise defined herein or the context otherwise requires, terms used in this Agreement, including its preamble and recitals, have the meanings provided (or incorporated by reference) in the Security Agreement.

SECTION 2. Grant of Security Interest. For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, to secure all of the Secured Obligations, the Grantor does hereby mortgage, pledge and hypothecate to the Administrative Agent, and grant to the Administrative Agent a security interest in, for its benefit and the benefit of each Secured Party, all of the following property (the "Patent Collateral"), whether now owned or hereafter acquired or existing by it:

(a) all letters patent and applications for letters patent throughout the world, including all patent applications in preparation for filing anywhere in the world and including each patent and patent application referred to in Item A of Attachment 1 attached hereto;

(b) all reissues, divisions, continuations, continuations-in-part, extensions, renewals and reexaminations of any of the items described in clause (a);

(c) all patent licenses, including each patent license referred to in Item B of Attachment 1 attached hereto; and

(d) all proceeds of, and rights associated with, the foregoing (including license royalties and proceeds of infringement suits), the right to sue third parties for past, present or future infringements of any patent or patent application, including any patent or patent application referred to in Item A of Attachment 1 attached hereto, and for breach or enforcement of any patent license, including any patent license referred to in Item B of Attachment 1 attached hereto, and all rights corresponding thereto throughout the world.

SECTION 3. Security Agreement. This Agreement has been executed and delivered by the Grantor for the purpose of registering the security interest of the Administrative Agent in the Patent Collateral with the United States Patent and Trademark Office and corresponding offices in other countries of the world. The security interest granted hereby has been granted as a supplement to, and not in limitation of, the security interest granted to the Administrative Agent for its benefit and the benefit of each Secured Party under the Security Agreement. The Security Agreement (and all rights and remedies of the Administrative Agent and each Secured Party thereunder) shall remain in full force and effect in accordance with its terms.

SECTION 4. Release of Security Interest. Upon payment in full in cash of all Secured Obligations, the termination or expiry of all Letters of Credit and the termination of all Commitments, the Administrative Agent shall, at the Grantor's expense, execute and deliver to the Grantor all instruments and other documents as may be necessary or proper to release the lien on and security interest in the Patent Collateral which has been granted hereunder.


SECTION 5. Acknowledgment. The Grantor does hereby further acknowledge and affirm that the rights and remedies of the Administrative Agent with respect to the security interest in the Patent Collateral granted hereby are more fully set forth in the Security Agreement, the terms and provisions of which (including the remedies provided for therein) are incorporated by reference herein as if fully set forth herein.

SECTION 6. Loan Document, etc. This Agreement is a Loan Document executed pursuant to the Credit Agreement and shall (unless otherwise expressly indicated herein) be construed, administered and applied in accordance with the terms and provisions of the Credit Agreement.

SECTION 7. Counterparts. This Agreement may be executed by the parties hereto in several counterparts, each of which shall be deemed to be an original and all of which shall constitute together but one and the same agreement.

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

PERF-O-LOG, INC.

By  _____
Name:

Title: **Jeffrey L. Tepera**
Vice President &
Chief Financial Officer

WELLS FARGO BANK TEXAS, N.A.,
as Administrative Agent

By _____

Name:
Title:

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

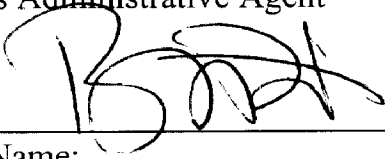
PERF-O-LOG, INC.

By _____

Name:

Title:

WELLS FARGO BANK TEXAS, N.A.,
as Administrative Agent

By  _____

Name:

Title:

Perf-O-Log, Inc.
Issued Patents

| <u>Country</u> | <u>Patent#</u> | <u>Issue Date</u> | <u>Inventor(s)</u> | <u>Title</u> |
|----------------|----------------|-------------------|--------------------------------------|---|
| United States | 5,033,549 | 07/23/91 | Glenn Champeaux & James V. Carisella | Method For Placing a Gravel Pack in an Oil Well with an Electric Wireline |
| United States | 5,115,860 | 05/26/92 | Glenn Champeaux & James V. Carisella | Gravel Pack Apparatus Run with an Electric Wireline |



Attachment "A"