

PATENT ASSIGNMENT

Electronic Version v1.1
 Stylesheet Version v1.1

| SUBMISSION TYPE: | NEW ASSIGNMENT | | | | | | | | |
|---|-----------------------------------|---------------|----------------|---------------------|------------|--------------------|------------|----------------|------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT | | | | | | | | |
| CONVEYING PARTY DATA | | | | | | | | | |
| <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:70%;">Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Mahsa Memarzadeh</td> <td>03/30/2005</td> </tr> <tr> <td>Wallace R. Gardner</td> <td>03/16/2005</td> </tr> <tr> <td>Don H. Johnson</td> <td>03/23/2005</td> </tr> </tbody> </table> | | Name | Execution Date | Mahsa Memarzadeh | 03/30/2005 | Wallace R. Gardner | 03/16/2005 | Don H. Johnson | 03/23/2005 |
| Name | Execution Date | | | | | | | | |
| Mahsa Memarzadeh | 03/30/2005 | | | | | | | | |
| Wallace R. Gardner | 03/16/2005 | | | | | | | | |
| Don H. Johnson | 03/23/2005 | | | | | | | | |
| RECEIVING PARTY DATA | | | | | | | | | |
| Name: | Halliburton Energy Services, Inc. | | | | | | | | |
| Street Address: | 10200 Bellaire Boulevard | | | | | | | | |
| City: | Houston | | | | | | | | |
| State/Country: | TEXAS | | | | | | | | |
| Postal Code: | 77072 | | | | | | | | |
| PROPERTY NUMBERS Total: 1 | | | | | | | | | |
| <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:30%;">Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>11093120</td> </tr> </tbody> </table> | | Property Type | Number | Application Number: | 11093120 | | | | |
| Property Type | Number | | | | | | | | |
| Application Number: | 11093120 | | | | | | | | |
| CORRESPONDENCE DATA | | | | | | | | | |
| Fax Number: | (713)238-8008 | | | | | | | | |
| <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i> | | | | | | | | | |
| Phone: | 7132388000 | | | | | | | | |
| Email: | dkrueger@conleyrose.com | | | | | | | | |
| Correspondent Name: | Daniel J. Krueger | | | | | | | | |
| Address Line 1: | P. O. Box 3267 | | | | | | | | |
| Address Line 4: | Houston, TEXAS 77253-3267 | | | | | | | | |
| NAME OF SUBMITTER: | Daniel J. Krueger | | | | | | | | |
| Total Attachments: 4 source=ASSIGNMENT#page1.tif source=ASSIGNMENT#page2.tif source=ASSIGNMENT#page3.tif source=ASSIGNMENT#page4.tif | | | | | | | | | |

CH \$40.00 11093120

ASSIGNMENT

IN CONSIDERATION OF TEN DOLLARS (\$10.00) cash in hand paid to me by **HALLIBURTON ENERGY SERVICES, INC.**, and other valuable consideration, the receipt and sufficiency of which is hereby acknowledged, **Mahsa Memarzadeh, Wallace R. Gardner, and Don H. Johnson** ("ASSIGNOR"), having made an invention in "**JOINT SOURCE-CHANNEL CODING FOR MULTICARRIER MODULATION**" while in the employ either as an employee or consultant of HALLIBURTON ENERGY SERVICES, INC., a corporation organized and existing under the laws of the State of Delaware, doing business at Houston, Texas (sometimes hereinafter called "ASSIGNEE"), do hereby ASSIGN, SELL and CONVEY to said ASSIGNEE, its successors and assigns, the entire right, title and interest throughout the world in and to:

1. Said invention in "in **JOINT SOURCE-CHANNEL CODING FOR MULTICARRIER MODULATION**";
2. United States of America patent application on said invention, filed concurrently herewith or as U.S. Patent Application No. _____ filed _____ (Attorney's File No. 1391-57701; attorney is authorized to fill in the application number and filing date after assignment by the U.S. Patent and Trademark Office), entitled "in **JOINT SOURCE-CHANNEL CODING FOR MULTICARRIER MODULATION**";
3. All applications for patent or like protection on said invention that have now been or may in the future be made by us or our legal representatives, including any continuation, continuation-in-part and any other utility applications that may be based on this invention, whether in the United States of America or any other place anywhere in the world;
4. All patents and like protection that have now been or may in the future be granted on said invention to me or my legal representatives, whether in the United States of America or in any other country or place anywhere in the world;
5. All substitutions for and divisions, continuations, continuations-in-part, renewals, reissues, extensions, and the like of said applications and patents and like grants, including without limitations, those obtained or permissible under past, present and future law and statutes;

6. All rights of action on account of past, present and future unauthorized use of said invention for infringement of said patents and like protection;
7. The right to ASSIGNEE to file in its name applications for patents and like protection for said invention in any country or countries foreign to the United States; and
8. All international rights of priority associated with said invention, applications, patents and like protection;

and we covenant that we, and our heirs, legal representatives, assigns, administrators, and executors, will, at the expense of ASSIGNEE, its successors and assigns, execute all papers and perform such other acts as may be reasonably necessary to give ASSIGNEE, its successors and assigns, the full benefit of this Assignment.

EXECUTED at the place and on the date indicated below, opposite my signature.

3130 | 2005
Date

Mahsa Memarzadeh
Mahsa Memarzadeh

Place: Houston, Texas

THE STATE OF TEXAS §
 §
COUNTY OF HARRIS §

BEFORE ME, the undersigned authority, on this day personally appeared, **Mahsa Memarzadeh** known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and consideration therein expressed.

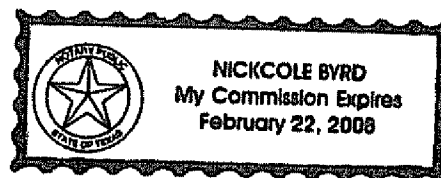
GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 30 day of March 2005.



[SEAL]

My Commission Expires: February 22, 2008

Nickcole Byrd
Notary Public in and for
The State of TEXAS



EXECUTED at the place and on the date indicated below, opposite my signature.

March 16, 2005
Date

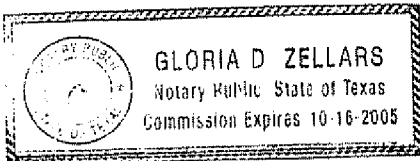
Wallace R. Gardner
Wallace R. Gardner

Place: Houston, Texas

THE STATE OF TEXAS §
 §
COUNTY OF HARRIS §

BEFORE ME, the undersigned authority, on this day personally appeared, **Wallace R. Gardner** known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and consideration therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 16th day of March 2005.



Gloria D. Zellars
Notary Public in and for
The State of TEXAS

[SEAL]

My Commission Expires: Oct. 16, 2005

EXECUTED at the place and on the date indicated below, opposite my signature.

Date

Don H. Johnson

Place: Houston, Texas

THE STATE OF TEXAS §
 §
COUNTY OF HARRIS §

BEFORE ME, the undersigned authority, on this day personally appeared, **Don H. Johnson** known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and consideration therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the ____ day of _____ 2005.

Notary Public in and for
The State of TEXAS

[SEAL]

My Commission Expires: _____

EXECUTED at the place and on the date indicated below, opposite my signature.

Date **Wallace R. Gardner**

Place: Houston, Texas

THE STATE OF TEXAS §
 §
COUNTY OF HARRIS §

BEFORE ME, the undersigned authority, on this day personally appeared, **Wallace R. Gardner** known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and consideration therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the _____ day of _____ 2005.

Notary Public in and for
The State of TEXAS

[S E A L]

My Commission Expires: _____

EXECUTED at the place and on the date indicated below, opposite my signature.

3/23/2005
Date

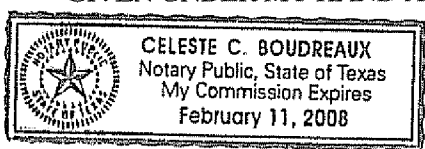
Don H. Johnson
Don H. Johnson

Place: Houston, Texas

THE STATE OF TEXAS §
 §
COUNTY OF HARRIS §

BEFORE ME, the undersigned authority, on this day personally appeared, **Don H. Johnson** known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and consideration therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 23rd day of March 2005.



Celeste C. Boudreaux
Notary Public in and for
The State of TEXAS

[S E A L]

My Commission Expires: 2-11-08