

**PATENT ASSIGNMENT**

Electronic Version v1.1  
 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
------------------	----------------

NATURE OF CONVEYANCE:	ASSIGNMENT
-----------------------	------------

CONVEYING PARTY DATA

Name	Execution Date
Vector Magnetics	05/11/2007

RECEIVING PARTY DATA

Name:	Halliburton Energy Services, Inc.
Street Address:	10200 Bellaire Boulevard
City:	Houston
State/Country:	TEXAS
Postal Code:	77072

PROPERTY NUMBERS Total: 9

Property Type	Number
Patent Number:	5074365
Patent Number:	5343152
Patent Number:	5923170
Patent Number:	RE36569
Patent Number:	5676212
Patent Number:	5515931
Patent Number:	5657826
Patent Number:	5589775
Patent Number:	5305212

CORRESPONDENCE DATA

Fax Number: (281)871-7830  
*Correspondence will be sent via US Mail when the fax attempt is unsuccessful.*

Phone: 281-871-7823  
 Email: rebecca.tanis@halliburton.com  
 Correspondent Name: Clive D. Menezes  
 Address Line 1: 3000 N. Sam Houston Parkway E.

CH \$360.00 5074365

Address Line 2: J3W36  
Address Line 4: Houston, TEXAS 77032

ATTORNEY DOCKET NUMBER: VECTOR MAGNETICS

NAME OF SUBMITTER: Clive D. Menezes

**Total Attachments: 11**

source=Vector Magnetcs Assignment#page1.tif  
source=Vector Magnetcs Assignment#page2.tif  
source=Vector Magnetcs Assignment#page3.tif  
source=Vector Magnetcs Assignment#page4.tif  
source=Vector Magnetcs Assignment#page5.tif  
source=Vector Magnetcs Assignment#page6.tif  
source=Vector Magnetcs Assignment#page7.tif  
source=Vector Magnetcs Assignment#page8.tif  
source=Vector Magnetcs Assignment#page9.tif  
source=Vector Magnetcs Assignment#page10.tif  
source=Vector Magnetcs Assignment#page11.tif

**PATENT ASSIGNMENT**

This Patent Assignment Agreement ("Assignment") is made and entered into on the 11th day of May, 2007, between Halliburton Energy Services, Inc., a Delaware corporation ("Assignee"), and Vector Magnetics Inc., a New York corporation ("Assignor").

WHEREAS Assignor has certain rights in and to patent assets identified in Schedule A hereto ("Patent Assets");

WHEREAS Assignee is desirous of acquiring all right, title, and interest in and to the Patent Assets;

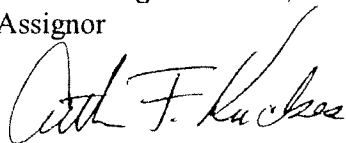
NOW THEREFORE, in consideration of good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, including the consideration associated with the Asset Purchase Agreement executed between Assignor and Assignee on this same date, Assignor does hereby assign, and agree to assign, to Assignee all right, title, and interest, throughout the world, in and to the Patent Assets, and all rights of action accrued under and by virtue thereof, including the right to sue and recover for past infringement.

Assignor agrees that it shall, without additional compensation, execute and deliver further instruments of conveyance, transfer and assignment as requested by Assignee, its successors, or assigns; reasonably cooperate and assist in providing information for making and completing regulatory and other filings; and take any and all other actions as Assignee, its successors, or assigns may reasonably require to effectively assign, convey, transfer, protect, enforce, and exploit the Patent Assets and all rights therein to Assignee, its successors, or assigns.

IN WITNESS WHEREOF, the parties have caused this Assignment to be executed by their duly authorized officers.

**Vector Magnetics Inc.,**

Assignor



By: Arthur Kuckes

Title: President

Date: May 11, 2007

HOU02:1102794.2

**Halliburton Energy Services, Inc.,**

Assignee

By: Brady Murphy

Title: Vice President, Sperry Drilling Services

Date: May 11, 2007

Exhibit 4.2(a)

PATENT ASSIGNMENT

This Patent Assignment Agreement ("Assignment") is made and entered into on the 11th day of May, 2007, between Halliburton Energy Services, Inc., a Delaware corporation ("Assignee"), and Vector Magnetics Inc., a New York corporation ("Assignor").

WHEREAS Assignor has certain rights in and to patent assets identified in Schedule A hereto ("Patent Assets");

WHEREAS Assignee is desirous of acquiring all right, title, and interest in and to the Patent Assets;

NOW THEREFORE, in consideration of good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, including the consideration associated with the Asset Purchase Agreement executed between Assignor and Assignee on this same date, Assignor does hereby assign, and agree to assign, to Assignee all right, title, and interest, throughout the world, in and to the Patent Assets, and all rights of action accrued under and by virtue thereof, including the right to sue and recover for past infringement.

Assignor agrees that it shall, without additional compensation, execute and deliver further instruments of conveyance, transfer and assignment as requested by Assignee, its successors, or assigns; reasonably cooperate and assist in providing information for making and completing regulatory and other filings; and take any and all other actions as Assignee, its successors, or assigns may reasonably require to effectively assign, convey, transfer, protect, enforce, and exploit the Patent Assets and all rights therein to Assignee, its successors, or assigns.

IN WITNESS WHEREOF, the parties have caused this Assignment to be executed by their duly authorized officers.

Vector Magnetics Inc.,  
Assignor

Halliburton Energy Services, Inc.,  
Assignee

By: Arthur Kuckas

  
By: Brady Murphy

Title: President

Title: Vice President, Sperry Drilling Services

Date: May 11, 2007

Date: May 11, 2007

HOU02:1102794.2

## SCHEDULE A

### Patents Assets

<b>United States Patent Number</b>	<b>Title</b>
5074365	Borehole Guidance System Having Target Wireline
5343152	Electromagnetic Homing System Using MWD and Current Having a Fundamental Wave Component and an Even Harmonic Wave Component Being Injected at a Target Well
5923170	Method and Apparatus for Near Field Electromagnetic Proximity Determination for Guidance of a Borehole Drill
Re. 36569	Method and Apparatus for Measuring Distance and Direction by Movable Magnetic Field Source
5676212	Downhole Electrode for Well Guidance System
5515931	Single Wire Guidance System for Drilling Boreholes
5657826	Guidance System for Drilling Boreholes
5589775	Rotating Magnet for Distance and Direction Measurements from a First Borehole to a Second Borehole
5305212	Alternating and Static Magnetic Field Gradient Measurements for Distance and Direction Determination

**BILL OF SALE AND ASSIGNMENT**

KNOW ALL MEN BY THESE PRESENTS that VECTOR MAGNETICS INC., a New York corporation ("Seller"), for and in consideration of the sum of One Million Nine Hundred and Eighty Thousand dollars (\$1,980,000) and other good and valuable consideration in hand paid to Seller (the receipt and sufficiency of which are hereby acknowledged), pursuant to an Asset Purchase Agreement (the "Agreement"), dated as of May 11, 2007, by and between HALLIBURTON ENERGY SERVICES, INC., a Delaware corporation ("Buyer"), Seller and the other parties thereto, has bargained, sold, conveyed, assigned, transferred and delivered, and does hereby by these presents bargain, sell, convey, assign, transfer and deliver, unto Buyer, its successors and assigns, free and clear of all liens, the following:

All of the right, title and interest of Seller in the Purchased Assets, as defined in the Agreement, as of the date hereof, including, without limitation, all of Seller's right, title and interest in and to all of the assets, rights and properties listed on *Annex 1* attached hereto; *provided, however*, that Seller is retaining all of its right, title and interest in the Excluded Assets, as defined in the Agreement.

TO HAVE AND TO HOLD, unto Buyer, its successors and assigns, FOREVER.

Seller hereby represents, warrants, covenants and agrees that it will arrange and defend the sale of said property and assets against each and every person or persons whomsoever claiming or asserting any claim against any or all of the same.

Seller covenants that it will from time to time at its expense make, execute and deliver, or cause to be made, executed and delivered, such instruments, acts, consents and assurances as Buyer may reasonably request to more effectively sell, convey, transfer to and vest in Buyer all of the aforesaid property or assets being sold, conveyed, assigned, transferred and delivered hereunder and to put Buyer in possession of any such property or assets being sold, conveyed, assigned, transferred and delivered hereunder. Without limiting the above covenant of Seller, Seller hereby appoints Buyer as its true and lawful attorney-in-fact, with full power of substitution, to make, execute and deliver, or cause to be made, executed and delivered, and to otherwise exercise all powers necessary to effectuate, such conveyance, transfer and vesting.

Seller further covenants and agrees that the covenants herein contained shall be binding upon its successors and assigns and shall inure to the benefit of the successors and assigns of Buyer.

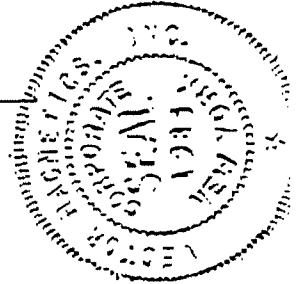
IN WITNESS WHEREOF, this BILL OF SALE AND ASSIGNMENT has been duly executed and delivered by VECTOR MAGNETICS INC. as of the 11th day of May, 2007.

VECTOR MAGNETICS INC.

By: Arthur F. Kuckes

Name: Arthur Kuckes

Title: President



COMMONWEALTH OF NEW YORK

§  
§  
§

COUNTY OF TOMPKINS

On May 11, 2007, before me appeared Arthur Kuckes, to me personally known, who being by me duly sworn did say that he is the President of VECTOR MAGNETICS INC., a New York corporation, that the seal affixed to this Bill of Sale and Assignment is the corporate seal of said corporation, and that this Bill of Sale and Assignment was signed and sealed on behalf of such corporation by authority of its Board of Directors; and said Arthur Kuckes acknowledged this Bill of Sale and Assignment to be the free act and deed of such corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal at my office in Ithaca, Tompkins County, New York, the day and year last written above.

Leon Richard Stuber  
Signature of Notary

Leon Richard Stuber  
Type or Print Name of Notary

My Commission Expires:

3/31/2010

LEON RICHARD STUBER  
Notary Public, State of New York  
Qualified in Tompkins Co. No. 4857640  
Commission Expires 3/31/10

**Annex 1**

*Terms used herein and not defined have the meanings set forth in the Asset Purchase Agreement (the "Agreement"), dated as of May 11, 2007, by and between Halliburton Energy Services, Inc., a Delaware corporation ("Buyer"), and Vector Magnetics Inc., a New York corporation ("Seller").*

(a) the following patents:

**US5074365:** Borehole Guidance System Having Target Wireline

**US5343152:** Electromagnetic Homing System Using MWD and Current Having a Fundamental Wave Component and an Even Harmonic Wave Component Being Injected at a Target Well

**US5923170:** Method and Apparatus for Near Field Electromagnetic Proximity Determination for Guidance of a Borehole Drill

**USRe. 36569:** Method and Apparatus for Measuring Distance and Direction by Movable Magnetic Field Source

**US5676212:** Downhole electrode for Well Guidance System

**US5515931:** Single Wire Guidance System for Drilling Boreholes

**US5657826:** Guidance System for Drilling Boreholes

**US5589775:** Rotating Magnet for Distance and Direction Measurements from a First Borehole to a Second Borehole

**US5305212:** Alternating and Static Magnetic Field Gradient Measurements for Distance and Direction Determination

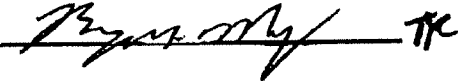
(b) all claims against third Persons relating primarily to the Assigned Patents, whether choate or inchoate, known or unknown, contingent or noncontingent.



**CERTIFICATE**

I, the undersigned, Sherry D. Williams, being a duly elected, qualified and acting Assistant Secretary of Halliburton Energy Services, Inc. Company (the "Company"), a Delaware corporation, do hereby certify as follows:

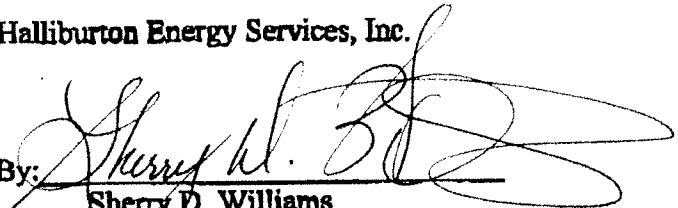
1. **Authority and Incumbency.** The following person is a duly elected, qualified and acting officer of the Company, holding the office as set forth opposite his name below, and such person is hereby authorized and empowered to execute and deliver any and all documents related to that certain Asset Purchase Agreement between Halliburton Energy, Services, Inc., and Vector Magnetics, Inc. dated May 11, 2007, and the signature of such person set forth opposite his name is the signature of such person.

<u>Name</u>	<u>Office</u>	<u>Specimen Signature</u>
Brady Murphy	Vice President - Sperry Drilling Services	

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the Company this 11<sup>th</sup> day of May, 2007.

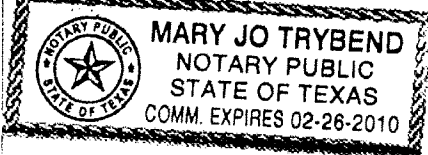
Halliburton Energy Services, Inc.

Corporate Seal

By:   
Sherry D. Williams  
Assistant Secretary

STATE OF TEXAS §  
COUNTY OF HARRIS §

SUBSCRIBED AND SWORN TO before me, the undersigned Notary Public by Sherry D. Williams, known to me to be the Assistant Secretary of Halliburton Energy Services, Inc., and who certified that she executed the foregoing instrument for and on behalf of said corporation, this 11<sup>th</sup> day of May, 2007.



  
Notary Public, State of TEXAS

**BILL OF SALE AND ASSIGNMENT**

KNOW ALL MEN BY THESE PRESENTS that VECTOR MAGNETICS LLC, a Delaware limited liability company ("Seller"), for and in consideration of the sum of Seventeen Million, Eight Hundred and Twenty Thousand dollars (\$17,820,000) and other good and valuable consideration in hand paid to Seller (the receipt and sufficiency of which are hereby acknowledged), pursuant to an Asset Purchase Agreement (the "Agreement"), dated as of May 11, 2007, by and between HALLIBURTON ENERGY SERVICES, INC., a Delaware corporation ("Buyer"), Seller and the other parties thereto, has bargained, sold, conveyed, assigned, transferred and delivered, and does hereby by these presents bargain, sell, convey, assign, transfer and deliver, unto Buyer, its successors and assigns, free and clear of all liens, the following:

All of the right, title and interest of Seller in the Purchased Assets, as defined in the Agreement, as of the date hereof, including, without limitation, all of Seller's right, title and interest in and to all of the assets, rights and properties listed on *Annex I* attached hereto; *provided, however*, that Seller is retaining all of its right, title and interest in the Excluded Assets, as defined in the Agreement.

TO HAVE AND TO HOLD, unto Buyer, its successors and assigns, FOREVER.

Seller hereby represents, warrants, covenants and agrees that it will arrange and defend the sale of said property and assets against each and every person or persons whomsoever claiming or asserting any claim against any or all of the same.

Seller covenants that it will from time to time at its expense make, execute and deliver, or cause to be made, executed and delivered, such instruments, acts, consents and assurances as Buyer may reasonably request to more effectively sell, convey, transfer to and vest in Buyer all of the aforesaid property or assets being sold, conveyed, assigned, transferred and delivered hereunder and to put Buyer in possession of any such property or assets being sold, conveyed, assigned, transferred and delivered hereunder. Without limiting the above covenant of Seller, Seller hereby appoints Buyer as its true and lawful attorney-in-fact, with full power of substitution, to make, execute and deliver, or cause to be made, executed and delivered, and to otherwise exercise all powers necessary to effectuate, such conveyance, transfer and vesting.

Seller further covenants and agrees that the covenants herein contained shall be binding upon its successors and assigns and shall inure to the benefit of the successors and assigns of Buyer.

IN WITNESS WHEREOF, this BILL OF SALE AND ASSIGNMENT has been duly executed and delivered by VECTOR MAGNETICS LLC as of the 11th day of May, 2007.

VECTOR MAGNETICS LLC

By: Arthur F. Kuckes

Name: Arthur Kuckes

Title: Managing Member

COMMONWEALTH OF NEW YORK

§

COUNTY OF TOMPKINS

§

§

On May 11, 2007, before me appeared Arthur Kuckes, to me personally known, who being by me duly sworn did say that he is the Managing Member of VECTOR MAGNETICS LLC, a Delaware limited liability company, and that this Bill of Sale and Assignment was signed on behalf of such company by authority of its Members; and said Arthur Kuckes acknowledged this Bill of Sale and Assignment to be the free act and deed of such company.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal at my office in Ithaca, Tompkins County, New York, the day and year last written above.

Leon Richard Stumba  
Signature of Notary

Leon Richard Stumba  
Type or Print Name of Notary

My Commission Expires:

3/30/2010

LEON RICHARD STUMBAK  
Notary Public, State of New York  
Qualified in Tompkins Co. No. 4857640  
Commission Expires March 30, 2010

*Annex 1*

*Terms used herein and not defined have the meanings set forth in the Asset Purchase Agreement (the "Agreement"), dated as of May 11, 2007, by and between Halliburton Energy Services, Inc., a Delaware corporation ("Buyer"), and Vector Magnetics LLC, a New York corporation ("Seller").*

- (a) all Intangible Assets;
- (b) all media; documentation (including training, technical and user manuals); databases; reports and records; service and warranty records and correspondence (other than with respect to Contracts that are not transferred to Buyer hereunder); studies and reports; drawings and specifications; and other documents and records, all of the foregoing relating primarily to (i) the Intangible Assets or (ii) the tangible assets specified in (c) below (collectively, "Materials");
- (c) the following tangible assets:
  - 8 RMRS Kits for SAGD, including all associated spare parts (as reasonably anticipated to be needed for six (6) months use), maintenance, calibration, and operating hardware other than general purpose tools
  - 14 MGT kits for SAGD, including all associated spare parts (as reasonably anticipated to be needed for six (6) months use), maintenance, calibration, and operating hardware other than general purpose tools.
- (d) all Future Intangible Assets;
- (e) Seller's Contracts with Weatherford Canada Partnership ("Weatherford Contract") and Directional Plus Ltd. ("Directional Contract") to provide RMRS and SAGD services; and
- (f) all claims against third Persons relating primarily to the aforementioned assets, whether choate or inchoate, known or unknown, contingent or noncontingent.

**CERTIFICATE**

I, the undersigned, Sherry D. Williams, being a duly elected, qualified and acting Assistant Secretary of Halliburton Energy Services, Inc. Company (the "Company"), a Delaware corporation, do hereby certify as follows:

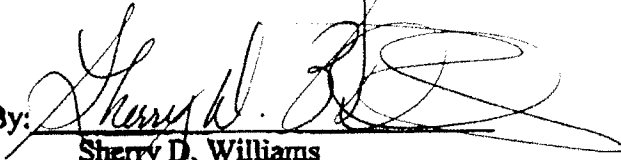
1. **Authority and Incumbency.** The following person is a duly elected, qualified and acting officer of the Company, holding the office as set forth opposite his name below, and such person is hereby authorized and empowered to execute and deliver any and all documents related to that certain Asset Purchase Agreement between Halliburton Energy Services, Inc., and Vector Magnetics, L.L.C. dated May 11, 2007, and the signature of such person set forth opposite his name is the signature of such person.

<u>Name</u>	<u>Office</u>	<u>Specimen Signature</u>
Brady Murphy	Vice President - Sperry Drilling Services	

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the Company this 11<sup>th</sup> day of May, 2007.

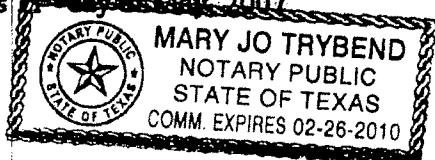
Halliburton Energy Services, Inc.

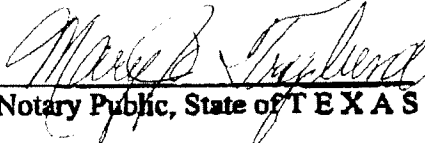
Corporate Seal

By:   
Sherry D. Williams  
Assistant Secretary

STATE OF TEXAS §  
COUNTY OF HARRIS §

SUBSCRIBED AND SWORN TO before me, the undersigned Notary Public by Sherry D. Williams, known to me to be the Assistant Secretary of Halliburton Energy Services, Inc., and who certified that she executed the foregoing instrument for and on behalf of said corporation, this 11<sup>th</sup> day of May, 2007.



  
Notary Public, State of TEXAS