

<b>PATENT ASSIGNMENT COVER SHEET</b>
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Electronic Version v1.1  
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EPAS ID: PAT4391916

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
RICHARD THOMAS HAY	12/05/2014
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	HALLIBURTON ENERGY SERVICES, INC.
<b>Street Address:</b>	3000 N. SAM HOUSTON PARKWAY E.
<b>City:</b>	HOUSTON
<b>State/Country:</b>	TEXAS
<b>Postal Code:</b>	77032-3219
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15523459
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(713)229-2880
<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>	713 229-1234
<b>Email:</b>	susan.stewart@bakerbotts.com
<b>Correspondent Name:</b>	BAKER BOTTS L.L.P.
<b>Address Line 1:</b>	910 LOUISIANA STREET, ONE SHELL PLAZA
<b>Address Line 4:</b>	HOUSTON, TEXAS 77002
<b>ATTORNEY DOCKET NUMBER:</b>	063718.7216
<b>NAME OF SUBMITTER:</b>	SUSAN STEWART
<b>SIGNATURE:</b>	/Susan Stewart/
<b>DATE SIGNED:</b>	05/01/2017
<b>Total Attachments: 2</b>	
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## ASSIGNMENT

Whereas, I/We Richard Thomas Hay of Spring, Texas; have invented "WELLBORE TRAJECTORY VISUALIZATION AND RANGING MEASUREMENT LOCATION DETERMINATION" for which we have made application for Letters Patent of the International Bureau; and

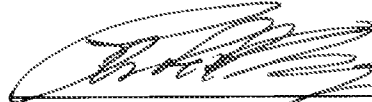
Whereas, HALLIBURTON ENERGY SERVICES, INC., a Delaware Corporation, having a place of business at 3000 N. Sam Houston Parkway E., Houston, Texas 77032-3219 is desirous of acquiring an interest therein;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I/We, by these presents do sell, assign and transfer and convey unto HALLIBURTON ENERGY SERVICES, INC., its successors and assigns, the full and exclusive right, for the United States of America and its territorial possessions and for any and all foreign countries, in and to the said invention, described in the Patent Application, and any divisional, continuing or reissue application based on the present application preparatory to obtaining Letters Patent of the United States therefor; said invention, application and any and all Letters Patent issuing therefor to be held and enjoyed by HALLIBURTON ENERGY SERVICES, INC., for its own use and behoof, and for its legal representatives, successors and assigns, to the full end of the term for which said Letters Patent may be granted, as fully and entirely as the same would have been held by me and had this assignment and sale not been made.

And I do further agree to sign all papers, make all rightful oaths and do all requisite acts for the filing of any disclaimer or for the filing and assignment of any divisional, continuing or reissue application or applications for patent based on the present application, as well as for any other U.S. or foreign application for patent which relates to the said invention.

And I do further agree to communicate to HALLIBURTON ENERGY SERVICES, INC., its successors, assign or other legal representatives, such facts relating to the invention disclosed in the present application or Letters Patent issuing thereon as may be known to me, and to testify as to such facts in any interference or other litigation.

Executed this 5 day of December, 2014.



Richard Thomas Hay

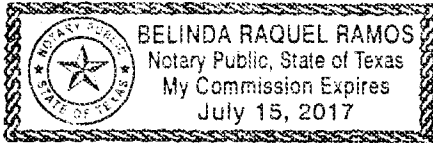
STATE OF TEXAS )

)

COUNTY OF HARRIS )

Before me personally appeared said Richard Thomas Hay and acknowledged the foregoing instrument to be his free act and deed this 5 day of December, 2014.

Seal



(Notary)