

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT5018382

<b>SUBMISSION TYPE:</b>	CORRECTIVE ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	Corrective Assignment to correct the CORRECT THE DOCKET NUMBER ON THE NOTARIZATION PAGE FOR INVENTOR BAISHALI ROY IN THE ASSIGNMENT DOCUMENT previously recorded on Reel 043575 Frame 0451. Assignor(s) hereby confirms the ASSIGNMENT.
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
KYLE R. KRUEGER	06/09/2017
GE JIN	06/09/2017
CHARLES C. MOSHER	08/25/2017
HERBERT W. SWAN	06/09/2017
BAISHALI ROY	06/12/2017
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	CONOCOPHILLIPS COMPANY
<b>Street Address:</b>	600 N. DAIRY ASHFORD
<b>Internal Address:</b>	LEGAL TECHNOLOGY & IP DEPT ATTN DOCKETING
<b>City:</b>	HOUSTON
<b>State/Country:</b>	TEXAS
<b>Postal Code:</b>	77079
<b>PROPERTY NUMBERS Total: 2</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15453584
<b>PCT Number:</b>	US1721681
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(281)293-4689
<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>	281-293-1460
<b>Email:</b>	Legal-IP@conocophillips.com
<b>Correspondent Name:</b>	CONOCOPHILLIPS COMPANY
<b>Address Line 1:</b>	600 N. DAIRY ASHFORD
<b>Address Line 2:</b>	LEGAL TECHNOLOGY & IP DEPT ATTN DOCKETING
<b>Address Line 4:</b>	HOUSTON, TEXAS 77079
<b>ATTORNEY DOCKET NUMBER:</b>	42469US01
<b>NAME OF SUBMITTER:</b>	SANDRA ANDRESS

PATENT

<b>SIGNATURE:</b>	/Sandra Andress/
<b>DATE SIGNED:</b>	06/21/2018
<b>Total Attachments: 9</b> source=42469US01_20180621_Corrective_Assignment#page1.tif source=42469US01_20180621_Corrective_Assignment#page2.tif source=42469US01_20180621_Corrective_Assignment#page3.tif source=42469US01_20180621_Corrective_Assignment#page4.tif source=42469US01_20180621_Corrective_Assignment#page5.tif source=42469US01_20180621_Corrective_Assignment#page6.tif source=42469US01_20180621_Corrective_Assignment#page7.tif source=42469US01_20180621_Corrective_Assignment#page8.tif source=42469US01_20180621_Corrective_Assignment#page9.tif	

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT4592294

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
KYLE R. KRUEGER	06/09/2017
GE JIN	06/09/2017
CHARLES C. MOSHER	08/25/2017
HERBERT W. SWAN	06/09/2017
BAISHALI ROY	06/12/2017
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	CONOCOPHILLIPS COMPANY
<b>Street Address:</b>	600 N. DAIRY ASHFORD
<b>Internal Address:</b>	LEGAL TECHNOLOGY & IP DEPT ATTN DOCKETING
<b>City:</b>	HOUSTON
<b>State/Country:</b>	TEXAS
<b>Postal Code:</b>	77079
<b>PROPERTY NUMBERS Total: 2</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15453584
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<b>Fax Number:</b>	(281)293-4689
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<b>Phone:</b>	281-293-1460
<b>Email:</b>	legal-ip@conocophillips.com
<b>Correspondent Name:</b>	CONOCOPHILLIPS COMPANY
<b>Address Line 1:</b>	600 N. DAIRY ASHFORD
<b>Address Line 2:</b>	LEGAL TECHNOLOGY & IP DEPT ATTN DOCKETING
<b>Address Line 4:</b>	HOUSTON, TEXAS 77079
<b>ATTORNEY DOCKET NUMBER:</b>	42469US01
<b>NAME OF SUBMITTER:</b>	SANDRA ANDRESS
<b>SIGNATURE:</b>	/SANDRA ANDRESS/
<b>DATE SIGNED:</b>	09/13/2017

**Assignment of Rights, Title and Interest in Invention****Docket No.:**  
**42469US01**

As the below named inventor(s), I/we declare that this is an Assignment of the rights, title and interest in the following invention:

- ☒ *Rights, title and interest in the invention including United States applications and patents*  
☒ *United States*  
*Provisional Patent Application Serial No. 62/305,758 filed 2016/03/09 and 62/305,777 filed 2016/03/09*  
☒ *United States Utility Patent Application Serial No. 15/453,584 filed March 8, 2017*  
*United States Patent No(s). \_\_\_\_\_*  
☒ *Foreign rights, title and interest in the invention including international applications and patents*  
☒ *International (PCT) Patent Application Serial No. PCT/US2017/021681 filed March 9, 2017*  
☐ *Other (specify) \_\_\_\_\_*

**Title of the Invention****LOW-FREQUENCY DAS SNR IMPROVEMENT**

Whereas, I/we, the below-identified Inventors, have invented certain new and useful improvements in the Invention identified above and described in the above-identified patent application(s) and/or patent(s) (hereinafter referred to as "Invention");

I/we desire to assign our above-identified rights, title and interest in the Invention to the below-identified Assignee;

Therefore, for valuable consideration, the receipt of which is acknowledged, I/we hereby assign, sell and transfer our above-identified rights, title and interest in said Invention, said application(s) as identified above, including any divisions, continuations, and continuations-in-part thereof, and any and all Letters Patent of the United States, and countries foreign thereto, which may be granted or have granted for said Invention, and in and to any and all reissues and reexaminations thereof, and in and to any and all priority rights, Convention rights, and other benefits accruing or to accrue to us with respect to the filing of applications for patents or securing of patents in the United States and countries foreign thereto, unto said Assignee;

I/we hereby authorize and request the Director of the United States Patent and Trademark Office to issue any United States Letters Patent which may issue for said Invention to said Assignee, as assignee of the whole right title and interest thereto;

I/we agree to sign and execute all necessary and lawful documents, including applications for foreign patents, for filing divisions, continuations and continuations-in-part of said application for patent, and/or, for obtaining any reissue or reissues of any Letters Patent which may be granted for my aforesaid Invention, as the Assignee or its Designee(s) may from time to time require and prepare at its own expense.

# Assignment of Rights, Title and Interest in Invention

Docket No.:

42469US01

I/we hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

## Assignors

First Inventor: <u>Kyle R. KRUEGER</u>	Address: <u>600 N. Dairy Ashford, Houston, TX 77079</u>
Signature: <u>[Signature]</u>	Citizenship: <u>US</u> Date: <u>6/9/17</u>
Second Inventor: <u>Ge JIN</u>	Address: <u>600 N. Dairy Ashford, Houston, TX 77079</u>
Signature: <u>[Signature]</u>	Citizenship: <u>CN</u> Date: <u>6/9/17</u>
Third Inventor: <u>Charles C. MOSHER</u>	Address: <u>600 N. Dairy Ashford, Houston, TX 77079</u>
Signature: <u>[Signature]</u>	Citizenship: <u>US</u> Date: <u>[Blank]</u>
Fourth Inventor: <u>Herbert W. SWAN</u>	Address: <u>600 N. Dairy Ashford, Houston, TX 77079</u>
Signature: <u>[Signature]</u>	Citizenship: <u>US</u> Date: <u>6/9/17</u>
Fifth Inventor: <u>Baishali ROY</u>	Address: <u>600 N. Dairy Ashford, Houston, TX 77079</u>
Signature: <u>[Signature]</u>	Citizenship: <u>US</u> Date: <u>6/12/17</u>

## Assignee

ConocoPhillips Company hereby accepts assignment of the above referenced patent application.

Name: ConocoPhillips Company

[Signature]

Patent [Attorney/Agent] and Attorney-in-Fact  
ConocoPhillips Company

Mailing Address:

600 North Dairy Ashford  
Houston, Texas 77079-1175  
United States of America

PATENT

REEL: 046425 FRAME: 0077

## Assignment of Rights, Title and Interest in Invention

Docket No.:  
42469US01

Notarization

Executed this 9th day of June in the year 2017.At Houston (city) Texas (State)State of TexasCounty of Harris

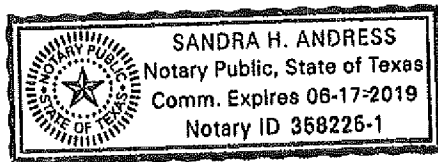
Before me personally appeared

GE JIN  
Kyle R. Krueger  
Herbert W. Swan

who acknowledged the foregoing instrument to be a free act and deed and also represented that  
he/she is authorized to execute the same this 9th day of June in the year 2017.

Sandra H. Andress  
(Notary Public)

[SEAL]



My Commission Expires:

June 17, 2019

Assignment of Rights, Title and Interest in Invention

Docket No.:

41410US02

Notarization

Executed this 12<sup>th</sup> day of June in the year 2017.

42469US01  
JA 6/21/18

At Houston (city Texas (State)

State of Texas

County of Harris

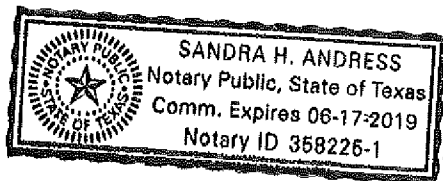
Before me personally appeared

Baishali Roy

who acknowledged the foregoing instrument to be a free act and deed and also represented that he/she is authorized to execute the same this 12<sup>th</sup> day of June in the year 2017.

Sandra H. Andress  
(Notary Public)

[SEAL]



My Commission Expires:

June 17, 2019

**Assignment of Rights, Title and Interest in Invention****Docket No.:****42469US01**

As the below named inventor(s), I/we declare that this is an Assignment of the rights, title and interest in the following invention:

- ☒ *Rights, title and interest in the invention including United States applications and patents*  
☒ *United States*  
*Provisional Patent Application Serial No. 62/305,758 filed 2016/03/09 and 62/305,777 filed 2016/03/09*  
☒ *United States Utility Patent Application Serial No. 15/453,584 filed March 8, 2017*  
*United States Patent No(s). \_\_\_\_\_*  
☒ *Foreign rights, title and interest in the invention including international applications and patents*  
☒ *International (PCT) Patent Application Serial No. PCT/US2017/021681 filed March 9, 2017*  
☐ *Other (specify) \_\_\_\_\_*

**Title of the Invention****LOW-FREQUENCY DAS SNR IMPROVEMENT**

Whereas, I/we, the below-identified Inventors, have invented certain new and useful improvements in the Invention identified above and described in the above-identified patent application(s) and/or patent(s) (hereinafter referred to as "Invention");

I/we desire to assign our above-identified rights, title and interest in the Invention to the below-identified Assignee;

Therefore, for valuable consideration, the receipt of which is acknowledged, I/we hereby assign, sell and transfer our above-identified rights, title and interest in said Invention, said application(s) as identified above, including any divisions, continuations, and continuations-in-part thereof, and any and all Letters Patent of the United States, and countries foreign thereto, which may be granted or have granted for said Invention, and in and to any and all reissues and reexaminations thereof, and in and to any and all priority rights, Convention rights, and other benefits accruing or to accrue to us with respect to the filing of applications for patents or securing of patents in the United States and countries foreign thereto, unto said Assignee;

I/we hereby authorize and request the Director of the United States Patent and Trademark Office to issue any United States Letters Patent which may issue for said Invention to said Assignee, as assignee of the whole right title and interest thereto;

I/we agree to sign and execute all necessary and lawful documents, including applications for foreign patents, for filing divisions, continuations and continuations-in-part of said application for patent, and/or, for obtaining any reissue or reissues of any Letters Patent which may be granted for my aforesaid Invention, as the Assignee or its Designee(s) may from time to time require and prepare at its own expense.

**PATENT****REEL: 046425 FRAME: 0080**



**Assignment of Rights, Title and Interest in Invention****Docket No.:****42469US01**

I/we hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

**Assignors**

<b>First Inventor:</b> <u>Kyle R. KRUEGER</u>	<b>Address:</b> <u>600 N. Dairy Ashford, Houston, TX 77079</u>
<b>Signature:</b> _____	<b>Citizenship:</b> <u>US</u> <b>Date:</b> _____
<b>Second Inventor:</b> <u>Ge JIN</u>	<b>Address:</b> <u>600 N. Dairy Ashford, Houston, TX 77079</u>
<b>Signature:</b> _____	<b>Citizenship:</b> <u>CN</u> <b>Date:</b> _____
<b>Third Inventor:</b> <u>Charles C. MOSHER</u>	<b>Address:</b> <u>600 N. Dairy Ashford, Houston, TX 77079</u>
<b>Signature:</b> <u>[Signature]</u>	<b>Citizenship:</b> <u>US</u> <b>Date:</b> <u>8/25/17</u>
<b>Fourth Inventor:</b> <u>Herbert W. SWAN</u>	<b>Address:</b> <u>600 N. Dairy Ashford, Houston, TX 77079</u>
<b>Signature:</b> _____	<b>Citizenship:</b> _____ <b>Date:</b> _____
<b>Fifth Inventor:</b> <u>Baishali ROY</u>	<b>Address:</b> <u>600 N. Dairy Ashford, Houston, TX 77079</u>
<b>Signature:</b> _____	<b>Citizenship:</b> <u>US</u> <b>Date:</b> _____

**Assignee**

ConocoPhillips Company hereby accepts assignment of the above referenced patent application.

<b>Name:</b> <u>ConocoPhillips Company</u> <u>[Signature]</u>	<b>Mailing Address:</b> <u>600 North Dairy Ashford</u> <u>Houston, Texas 77079-1175</u> <u>United States of America</u>
Patent <u>[Attorney/Agent]</u> and Attorney-in-Fact ConocoPhillips Company	

**PATENT****REEL: 046425 FRAME: 0081**

Assignment of Rights, Title and Interest in Invention

Docket No.:

42469US01

Notarization

Executed this 25 day of August in the year 2017.

At St. Paul (city) Minnesota (State)

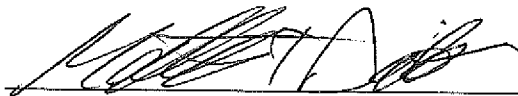
State of Minnesota

County of Ramsey

Before me personally appeared

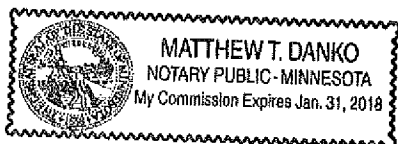
Charles C. Mosher

who acknowledged the foregoing instrument to be a free act and deed and also represented that he/she is authorized to execute the same this 25 day of August in the year 2017.



(Notary Public)

[SEAL]



My Commission Expires:

Jan. 31, 2018

PATENT

REEL: 046425 FRAME: 0082

Assignment of Rights, Title and Interest in Invention

Docket No.:  
42469US01

Notarization

Executed this 21<sup>st</sup> day of June in the year 2018.

At Houston (city Texas) (State)

State of Texas

County of Harris

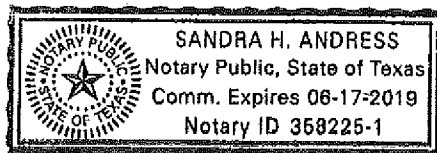
Before me personally appeared

Michael D. Berger

who acknowledged the foregoing instrument to be a free act and deed and also represented that he/she is authorized to execute the same this 21<sup>st</sup> day of June in the year 2018.

Sandra H. Address  
(Notary Public)

[SEAL]



My Commission Expires:

June 17, 2019