PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	

CONVEYING PARTY DATA

Name	Execution Date
SAUDI ARABIAN UPSTREAM TECHNOLOGY COMPANY	10/24/2019

RECEIVING PARTY DATA

Name:	SAUDI ARABIAN OIL COMPANY		
Street Address: 1 EASTERN AVENUE			
City: DHAHRAN			
State/Country:	SAUDI ARABIA		
Postal Code:	31311		

PROPERTY NUMBERS Total: 24

Property Type	Number
Application Number:	16380806
Application Number:	16392420
Application Number:	16395059
Application Number:	16397579
Application Number:	16397710
Application Number:	16410634
Application Number:	16433735
Application Number:	62824907
Application Number:	62832030
Application Number:	62854074
Application Number:	62854791
Application Number:	16108831
Application Number:	16152158
Application Number:	16252129
Application Number:	16284767
Application Number:	16286175
Application Number:	16355241
Application Number:	62670963
Application Number:	62781345
Application Number:	62819080

PATENT REEL: 050850 FRAME: 0981

505745986

Property Type	Number
Application Number:	16254227
Application Number:	16428185
Application Number:	62678790
Application Number:	62789912

CORRESPONDENCE DATA

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ATTORNEY DOCKET NUMBER:	38136-0001001
NAME OF SUBMITTER:	KIRSTIN MATTEO
SIGNATURE:	/kirstin matteo/
DATE SIGNED:	10/29/2019

Total Attachments: 6

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ASSIGNMENT

This PATENT ASSIGNMENT ("ASSIGNMENT"), dated as of October 24 , 2019 ("Effective Date"), is made and entered into by and between SAUDI ARABIAN UPSTREAM TECHNOLOGY COMPANY ("SAUTC" or "ASSIGNOR"), a Corporation organized and existing under the laws of Saudi Arabia and having a place of business at 1 Eastern Avenue Dhahran Saudi Arabia 31311, and SAUDI ARABIAN OIL COMPANY ("SAO" or "ASSIGNEE"), a Corporation organized and existing under the laws of Saudi Arabia and having a place of business at 1 Eastern Avenue Dhahran Saudi Arabia 31311.

WHEREAS, **SAUTC** is the sole owner of certain patent applications mentioned in Appendix A ("the Patent Applications"); and

WHEREAS, **SAUTC** is willing and able to sell, convey, assign, and transfer, to **SAO** on the Effective Date of this ASSIGNMENT, all right, title, and interest, worldwide, in the Patent Applications; and

WHEREAS, **SAO** is desirous of acquiring the Patent Applications, including all right, title, and interest in the Patent Applications in exchange for mutually agreed upon consideration.

NOW, THEREFORE, in consideration of the mutual covenants contained herein and other good and valuable consideration, the sufficiency of which is hereby acknowledged, the parties agree as follows:

1. CONVEYANCE OF THE PATENT APPLICATIONS

- a. SAUTC does hereby sell, assign and transfer to SAO, its successors, assigns and other legal representatives, and SAO does hereby accept, the entire right, title and interest, worldwide, in and to the Patent Applications, including, without limitation, the rights to: (i) file and prosecute, in its own name wherever so permitted by law or in the name of SAO wherever necessary, patent applications, including corresponding and continuing applications, reissues, re-examinations, certificates of invention, and the like, based on any of the Patent Applications; (ii) to claim priority to any of the Patent Applications pursuant to the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes; and (iii) to protect and enforce any of the foregoing, including, without limitation, all rights to income, royalties, damages and payments now due or hereafter due or payable in respect thereto, and all rights of recovery and of legal action for past or future infringements and of interference proceedings and reexaminations involving any of the foregoing. SAUTC acknowledges receipt of fair and adequate consideration for this Assignment.
- b. **SAUTC** shall, when requested by **SAO** and at no cost to **SAUTC**, (i) execute or cause to be executed all rightful oaths, assignments, and powers of attorney to **SAO** or to agents and legal representatives of **SAO**, and all other papers necessary and proper to carry out the intent and purpose of this Assignment, (ii) execute all papers necessary in connection with the Patent Applications, and any continuing, divisional, reissue, reexamination or other

corresponding application thereof or post-grant proceeding relating thereto and to execute any separate assignment in connection with any such application as **SAO** may deem necessary or expedient; and (iii) perform all affirmative acts that may be necessary to obtain a grant of a valid patent to **SAO** on any of the inventions claimed or disclosed in the Patent Applications.

c. **SAUTC** agrees that **SAO** may, at its discretion, record this Assignment with the United States Patent Office or a Patent Office in any other jurisdiction.

2. <u>REPRESENTATIONS AND WARRANTIES</u>

a. **SAUTC** represents that it is the owner of the Patent Applications, and of all foreign and domestic patents, patent applications, including continuation-in-part applications, reissues, re-examinations, certificates of invention, and the like that derive priority from, or claim the benefit of the filing date of, the Patent Applications and of all new and useful inventions and improvements that are disclosed in the Patent Applications.

3. PARAGRAPH HEADINGS

The paragraph headings are inserted only for purpose of reference. Such captions shall not affect the scope, meaning or intent of the provisions of this Assignment nor shall such headings otherwise be given any legal effect.

4. ASSIGNMENT BINDING

This Assignment shall bind the heirs, releases, personal representatives, successors and assigns of the Parties to this Assignment and inure to the benefit of their agents, directors, officers, employees, attorneys, successors and assigns, except as specifically excluded herein.

5. ENTIRE AGREEMENT

This Assignment contains the entire agreement between the Parties hereto and constitutes the complete, final and exclusive embodiment of their agreement with respect to the subject matters covered in this Assignment. All prior or contemporaneous agreements, understandings, representations, duties, obligations, and statements, oral or written, are merged into, terminated and/or superseded by this Assignment.

6. COUNTERPARTS

This Assignment may be executed in two or more counterparts. Facsimile signatures and electronic signatures shall be acceptable as original signatures.

7. SEVERABILITY

In the event that for any reason, one or more of the provisions of this Assignment or their application to any person or company, is held to be invalid, illegal, or unenforceable in any respect or to any extent, such provisions will, nevertheless remain valid, legal, and enforceable in all other respects and to such extent as may be permissible. In addition, any such invalidity, illegality, or unenforceability will not affect any other provision herein, but this Assignment will be construed as if such invalid, illegal, or unenforceable provision had never been contained herein.

8. AUTHORITY TO ENTER INTO ASSIGNMENT

The persons signing this Assignment each warrant and represent that they are duly authorized, with full authority to bind the Parties, and that no signature of any other person or entity is necessary to bind the Parties.

[ASSIGNMENT CONTINUES ON SIGNATURE PAGE]

Attorney Docket No. 38136-0001001 Assignment from Saudi Arabian Upstream Technology Company to Saudi Arabian Oil Company

SAUTC hereby executes this Assignment.

Assignor: Saudi Arabian Upstream Technology Company

Signature: 10da 1

Name: Ashraf M. Al-Tahini

Title: Chief Executive Officer

PATENT REEL: 050850 FRAME: 0986

Date: October 24, 2019

APPENDIX A

Country	Application No.	Filing Date	Title	Attorney Docket No.	Client reference
United					SA7716 /
States					ASC0339-US01-
	16/380.806	4/10/2019	Downhole Tool with CATR	38136-0662001	NP
United					SA7804/
States			Forming Mineral in Fractures in a		ASC0376-US01-
	16/392,420	4/23/2019	Geological Formation	38136-0747001	NP
United					SA7641 /
States			ALTERING WETTABILITY IN		ASC0197 / IP-18
	16/395,059	4/25/2019	SUBTERRANEAN FORMATION	38136-0623001	310
United					SA7802 /
States			METHOD FOR IMPROVING		ASC0359-US01-
	16/397,579	4/29/2019	CEMENT TOUGHNESS	38136-0772001	NP
United					SA7755 /
States			Forming Mineral in Fractures in a		ASC0354-US01-
	16/397,710	4/29/2019	Geological Formation	38136-0717001	NP
United			SYSTEM FOR PERFORMING		
States			MICROWAVE MEASUREMENTS		SA7518 / IP-18-
			OF SAMPLES UNDER		231 / ASC0298-
	16/410,634	5/13/2019	CONFINING PRESSURE	38136-0518001	US02-NP
United					SA7757 /
States					ASC0356-US01-
,5 6574 5	16/433,735	6/6/2019	Fracturing-Fluid Formula Workflow	38136-0719001	NP
United			Systems, Methods, and Devices for		
States			Determining Properties of Materials		
34445			for Oil Exploration and Production		SA7794 /
	62/824,907	3/27/2019	Using Quantum Sensors	38136-0752P01	ASC0372-US01-
United					SA7717/
States	62/832,030	4/10/2019	Cement Additives	38136-0684P01	ASC0340-US01-
United			Flow Synthesis of Polymer	***************************************	SA7754 /
States	62/854,074	5/29/2019	Nanoparticles	38136-0716P01	ASC0353-US01-
United			Polymers and Nanoparticles for		SA7801/
States	62/854,791	5/30/2019	Flooding	38136-0720P01	ASC0357-US01-
United					SA7562 / IP-18-
States			ROBUST ARRIVAL PICKING OF		229 / ASC0297-
	16/108,831	8/22/2018	SEISMIC VIBRATORY WAVES	38136-0569001	US01-NP
United			DATA STRUCTURE FOR FAST		SA7532 / IP-18-
States			INVASION PERCOLATION		219 / ASC0294-
	16/152,158	10/4/2018	MODELING SOFTWARE	38136-0522001	US01-NP
United			Method of estimating elastic		SA7582 / IP-18-
States			properties of Kerogen using multi-		292 / ASC0330-
	16/252,129	1/18/2019	scale data integration	38136-0573001	US01-NP
United					SA7528 / IP-18-
States					239 / ASC0300-
	16/284,767	2/25/2019	Pattern-Guided Dip Estimation	38136-0531001	US01-NP
United	1,31.1.1				SA7464 /
States					ASC0332-US01-
Jules	16/286,175	2/26/2019	WELL TREATMENT METHODS	38136-0473001	NP
United	10,200,110	2,20,2013	,,	23130 01/3001	SA7634 /
States			Determining Fracture Surface Area		ASC0334-US01-
Sumon	16/355,241	3/15/2019	a Well	38136-0620001	NP / IP-18-305

United			SYSTEM FOR PERFORMING		
States			MICROWAVE MEASUREMENTS		SA7518 / IP-18-
			OF SAMPLES UNDER		231 / ASC0298-
	62/670,963	5/14/2018	CONFINING PRESSURE	38136-0518P01	US01-P
United			Downhole Tool for Gas Kick		
States			Detection and Liquid		SA7676 /
			Characterization Using Coaxial		ASC0344-US01-
	62/781,345	12/18/2018	Resonators	38136-0663P01	/ IP-18-336
United			Bulk Synthesis of Janus		SA7719 /
States	62/819,080	3/15/2019	Nanomaterials	38136-0685P01	ASC0347-US01-
United			AVO IMAGING CONDITION IN		
States			ELASTIC REVERSE TIME		SA7581 / IP-18-
	16/254,227	1/22/2019	MIGRATION	38136-0572001	270
United			DETERMINING SAFE DRILLING		
States	16/428,185	5/31/2019	MUD WEIGHT	38136-0541001	SA7579
United			DETERMINING SAFE DRILLING		SA7579 / IP-18-
States	62/678,790	5/31/2018	MUD WEIGHT	38136-0541P01	241
United			IDENTIFYING FRACTURE		
States			BARRIERS FOR HYDRAULIC		SA7718/
	62/789,912	1/8/2019	FRACTURING	38136-0661P01	ASC0343-US01-

RECORDED: 10/29/2019