503177646 02/12/2015

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
FRANCK REY-BETHBEDER	12/19/2014
JUSTIN MARTIN	12/23/2014
THIERRY REESS	01/05/2015
ANTOINE SYLVESTRE DE FERRON	01/05/2015

RECEIVING PARTY DATA

Name:	TOTAL SA
Street Address:	2, PLACE JEAN MILLIER, LA DEFENSE 6
City:	COURBEVOIE
State/Country:	FRANCE
Postal Code:	92400

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14404181

CORRESPONDENCE DATA

Fax Number: (248)641-0270

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.

Phone: 248-641-1600 Email: prutter@hdp.com

Correspondent Name: HARNESS, DICKEY & PIERCE, P.L.C.

Address Line 1: P.O. BOX 828

Address Line 4: BLOOMFIELD HILLS, MICHIGAN 48303

ATTORNEY DOCKET NUMBER:	8674-000201-US-NP
NAME OF SUBMITTER:	MONTE L. FALCOFF
SIGNATURE:	/Monte L. Falcoff/
DATE SIGNED:	02/12/2015

Total Attachments: 4

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PATENT 503177646 REEL: 034950 FRAME: 0045

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PATENT REEL: 034950 FRAME: 0046

WHEREAS, the undersigned, hereinafter referred to collectively as Assignor, has invented:

IMPROVED ELECTRIC FRACTURING OF A RESERVOIR

WHEREAS, TOTAL SA, 2, Place Jean Millier, La Défense 6, 92400 Courbevoie, France, hereinafter referred to as Assignee, is desirous of acquiring all right, title, and interest therein:

International Application No. _____ and

NOW, THEREFORE, for good and valuable consideration, the receipt and adequacy whereof is hereby acknowledged, Assignor hereby confirms any prior assignment to Assignee, and to the extent that Assignor has not already done so, agrees to assign, and hereby does, sell, assign and transfer unto Assignee and its successors in interest, the full and exclusive right, title and interest in the United States of America and throughout the world, including the right to claim priority under the laws of the United States, the Paris Convention, and any foreign countries, to the inventions as described in the aforesaid application to the aforesaid application itself, and all divisions, continuations, continuations-in-part, or other applications claiming priority directly or indirectly from the aforesaid application, and any United States or foreign Letters Patent, utility model, or other similar rights which may be granted thereon, including reissues, reexaminations and extensions thereof, and all copyright rights throughout the world in the aforesaid application and the subject matter disclosed therein, these rights, title and interest to be held and enjoyed by Assignee to the full end of the term for which the Letters Patent, utility model, or other similar rights, are granted and any extensions thereof as fully and entirely as the same would have been held by Assignor had this assignment and sale not been made, and the right to sue for, and recover for past infringements of, or liabilities for, any of the rights relating to any of the applications, patents. utility models, or other similar rights, resulting therefrom, and the copyright rights

Assignor hereby covenants and agrees to execute all instruments or documents required or requested for the making and prosecution of any applications of any type for patent, utility model, or other similar rights, and for copyright, in the United States and in all foreign countries including, but not limited to, any provisional, continuation, continuation-in-part, divisional, renewal or substitute thereof, any derivation proceedings relating thereto, and as to Letters Patent any supplemental examination, derivation proceeding, opposition, post grant review, reissue, re-examination, inter-partes review, or extension thereof, and for litigation regarding, or for the purpose of defending the validity of or protecting title to the said invention, the United States application for patent, or Letters Patent therefor, and to testify in support thereof, for the benefit of Assignee and its successors in interest without further or other compensation than that above set forth.

Assignor hereby covenants that no assignment, sale, license, agreement or encumbrance has been or will be entered into which would conflict with this Assignment. Assignor further covenants not to challenge, or assist or participate in any third party challenge to, the assigned inventions, or any patent application or patent thereon, whether by litigation, post grant review, inter partes review, covered business method review, reexamination, or otherwise.

Assignor hereby requests the United States Patent and Trademark Office to issue the Letters Patent of the United States of America to Assignee, and requests that any official of any country or countries foreign to the United States, whose duty it is to issue or grant patents and applications as aforesaid, to issue the Letters Patent, Utility Model Registration or other similar right to Assignee.

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The undersigned hereby grant(s) the law firm of Harness, Dickey & Pierce, P.L.C. the power to insert on this Assignment any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office for recordation of this document.

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Franck REY-BETHBEDER	Witness
Dated	Witness
Justin MARTIN	LOM Aurélie SON Witness Bénenciae MARTIN BOLL
Dated 23/12/1014	Révenire MARTIN BOLL Witness
Thierry REESS	Witness
Dated	Witness
Antoine SYLVESTRE de FERRON	Witness
Dated	Witness

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Franck REY-BETHBEDER	Witness
Dated	Witness
Justin MARTIN	Witness
Dated	Witness
Thierry REESS 05/01/2015	Witness
Dated	Witness
Antoine SYLVESTRE de FERRON	Witness
Dated July	Witness

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