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PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3322326

SUBMISSION TYPE:		NEW ASSIGNMENT		
NATURE OF CONVEYANCE:		ASSIGNMENT		
CONVEYING PARTY I	DATA			
		Name		Execution Date
HYDROCARBON TEC	HNOLOGIES,	INC.		10/26/2006
RECEIVING PARTY D	ΑΤΑ			
Name:	HEADWAT	ERS CTL, LLC		
Street Address:	10701 SOU	10701 SOUTH RIVER FRONT PARKWAY		
Internal Address:	SUITE 300			
City:	SOUTH JO	RDAN		
State/Country:	UTAH			
Postal Code:	84095			
PROPERTY NUMBER	S Total: 9			
Property Type	•	Number		
Patent Number:	587 ⁻	1638		
Patent Number:	6139	9723		
Patent Number:	6190)542		
Patent Number:	626	5451		
Patent Number:	6277	7895		
Patent Number:	6906	6000		
Patent Number:	6777	7452		
Patent Number:	6586	6480		
Patent Number:	6903	3141		
CORRESPONDENCE				
Fax Number:)328-1707		
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<i>using a fax number, i</i> Email:	be sent to the f provided; if t dock	e-mail address first; if that is that is unsuccessful, it will be ceting@wnlaw.com		
<i>using a fax number, i</i> Email: Correspondent Name	be sent to the f provided; if t dock : JOH	e-mail address first; if that is that is unsuccessful, it will be keting@wnlaw.com IN M. GUYNN		
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NAME OF SUBMITTER:	JOHN M. GUYNN			
SIGNATURE:	/John M. Guynn, 36,153/			
DATE SIGNED:	04/22/2015			
Total Attachments: 11				
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ASSIGNMENT

HYDROCARBON TECHNOLOGIES, INC., a Utah corporation having a principal place of business at 10701 South River Front Parkway, Suite 300, South Jordan, Utah 84095, is the assignee of record at the United States Patent and Trademark Office of the entire right, title and interest in and to the following United States patents and the inventions described therein (hereafter "Subject Patents"):

5871638	6139723	6190542
6265451	6277895	6906000
6777452	6586480	6903141

On October 26, 2006, HYDROCARBON TECHNOLOGIES, INC. was converted into HEADWATERS CTL, LLC, a Utah limited liability company having a principal place of business at 10701 South River Front Parkway, Suite 300, South Jordan, Utah 84095, as evidenced by the documents attached hereto at Exhibit A, such that HEADWATERS CTL, LLC is now the successor-in-interest to:

The entire right, title and interest in the Subject Patents and the inventions described therein, and in all divisions, continuations and continuations-in-part of the Subject Patents, and in any reissues or extensions of Letters Patent or Patents granted thereon, an in all corresponding applications filed in countries foreign to the United States, and in all patents issuing thereon in the United States and Foreign countries, as well as the right to sue for past infringement and damages under any and all such patents.

The right to file foreign patent applications on said inventions in its own name, wherever such right may be legally exercised, including the right to claim the benefits of the International Convention for such applications.

This assignment and agreement shall be binding upon HEADWATERS CTL, LLC, its successors,

assigns and legal representatives.

Dated this 22° day of April 2015.

HYDROCARBON TECHNOLOGIES, INC.

By: Harlan M. Hatfield Vice President

HEADWATERS CTL, LLC

By: Harlan M. Hatfield) Vice President

Act Cake ; ss. STATE OF COUNTY OF

On this <u>M</u> day of April 2015, before me personally appeared HARLAN M. HATFIELD, known to me to be the person described and who signed the foregoing Assignment in my presence and acknowledged under oath before me that he have read the same and know the contents thereof and that they executed the same as their free act and deed and for the purposes set forth therein.



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ARTICLES OF CONVERSION

Utah Div. Of Corp. & Comm. Code

HYDROCARBON TECHNOLOGIES, INC. a Utab Corporation

OF

INTO

HEADWATERS CTL, LLC a Utah Limited Liability Company

Hydrocarbon Technologies, Inc., a Utah corporation, duly organized and existing under the laws of the State of Utah (the "Corporation"), does hereby convert into Headwaters CTL, LLC, a Utah limited liability company (the "LLC") in accordance with the Utah Revised Uniform Limited Liability Company Act, Section 48-2c-1401 *et seq.*, Utah Code Annotated, as follows:

FIRST: The Corporation was created on the 18th day of September, 2003, in and under the laws of the State of Utah. The Corporation was a Utah Corporation immediately prior to the filing of these Articles of Conversion.

SECOND: The name of the Corporation immediately prior to the filing of these Articles of Conversion was: Hydrocarbon Technologies, Inc.

THIRD: The name of the LLC into which the Corporation is converting is:

Headwaters CTL, LLC.

FOURTH: The conversion of the Corporation into the LLC shall be effective upon the filing of these Articles of Conversion and the Articles of Organization for the LLC, which are filed contemporaneous with these Articles of Conversion.

FIFTH: The conversion of the Corporation into the LLC was duly approved by the sole shareholder of the Corporation, Headwaters Energy Services Corp., a Utah corporation.

IN WITNESS WHEREOF, the Corporation has executed these Articles of

Conversion this 19th day of October, 2006.

HYDROCARBON TECHNOLOGIES, INC.

By: Scott K. Sorensen Its: Chief Financial Officer

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ARTICLES OF ORGANIZATION OF HEADWATERS CTL, LLC

The undersigned person hereby establishes a Utah limited liability company pursuant to the Utah Revised Limited Liability Company Act, Chapter 2c of Title 48 of the Utah Code of 1953, as amended (hereinafter the "Act").

ARTICLE I NAME

The name of the limited liability company is Headwaters CTL, LLC (hereinafter the "Company").

ARTICLE II PERIOD OF DURATION

The Company's duration shall continue through December 31, 2100, unless earlier terminated by law or pursuant to the Company's Operating Agreement.

ARTICLE III PURPOSES

The Company is organized for any legal and lawful purpose of engaging in any lawful act or activity for which limited liability companies may be organized under the Utah Revised Limited Liability Company Act.

ARTICLE IV REGISTERED AGENT AND OFFICE

The Company's registered office shall be at 50 West Broadway, Salt Lake City, UT 84101, and the name of the initial registered agent at such address shall be CT Corporation System. The director of the Division is appointed the agent of the Company for service of process if the Company's registered agent has resigned, his authority has been revoked, or he cannot be found or served with the exercise of reasonable diligence.

ARTICLE V

DESIGNATED OFFICE

The street address of the Company's designated office is 10653 South River Front Parkway, Suite 300, South Jordan, Utah 84095.

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ARTICLE VI ORGANIZER

The name and street address of the Organizer of the Company is Jason T. Day, 10653 South River Front Parkway, Suite 300, South Jordan, Utah 84095.

ARTICLE VII MANAGEMENT

The business and affairs of the Company shall be managed by a manager. The name and address of the initial manager of the Company is:

Scott K. Sorensen 10653 South River Front Parkway, Suite 300 South Jordan, Utah 84109

ARTICLE VIII INDEMNIFICATION

The Company shall indemnify to the fullest extent permitted by the Utah Limited Liability Company Act any person or entity who was or is a party or is threatened to be made a party to any threat, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative by reason of the fact that he, she or it is or was a Member or Officer of the Company.

IN WITNESS WHEREOF, the undersigned have duly executed these Articles of Organization on the 19th day of October, 2006, in accordance with the requirements of Section 48-2c-409(4)(a) to be filed with the Division

-2-

Jason T. Day, Organizer

ACCEPTANCE AS REGISTERED AGENT:

CT CORPORATION SYSTEM

und By: Hiedi Liesch

Assistant Secretary

893914



ARTICLES OF INCORPORATION OF HYDROCARBON TECHNOLOGIES, INC.



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The undersigned natural person of the age of 18 years or older, acting as incorporator of a

corporation under the Utah Revised Business Corporation Act (as it may be amended from time to

time, the "Act"), adopts the following Articles of Incorporation for such corporation:

ARTICLE I - NAME

The name of this corporation is "HYDROCARBON TECHNOLOGIES, INC." (the "Corporation").

ARTICLE II – PURPOSE

The Corporation is organized to engage in any lawful act or activity for which corporations may be organized under the Act.

ARTICLE III - AUTHORIZED CAPITAL

The total Number of shares the Corporation is authorized to Issue is One Hundred (100) Common Shares, with no par value per share.

The preferences, limitation and relative rights of each class of shares (to the extent established hereby), and the express grant of authority to the board of directors to amend these Articles of Incorporation to divide the Stock into series or classes, to establish and modify the preferences, limitations and relative rights of the shares of Stock, and to otherwise make changes affecting the capitalization of the Corporation, subject to the limitations and procedures set forth in section 16-10a-602 of the Act, are as follows:

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A. Common Shares.

 Each outstanding Common Share shall be entitled to one vote on each matter to be voted on by the shareholders of the Corporation.

2. Upon dissolution the holders of Common Shares then outstanding shall be entitled to receive the net assets of the Corporation. Such net assets shall be divided among and paid to the holders of Common Shares, on a pro-rata basis, according to the number of Common Shares held by them.

3. Dividends may be paid on the outstanding Common Shares if, as and when declared by the board of directors, out of funds legally available therefor.

4. All rights accruing to the outstanding shares of the Corporation not expressly provided for to the contrary herein or in the Corporation's bylaws or in any amendment hereto or thereto shall be vested in the Common Shares.

ARTICLE IV - REGISTERED OFFICE AND AGENT

The street address of the initial registered office of the Corporation is 1675 Broadway, Suite 1200, Denver, CO 80202. The name of the Corporation's initial registered agent at that address is CT Corporation System.

ARTICLE V - INITIAL BOARD OF DIRECTORS

The number of directors on the Corporation's board shall be set by the Corporation's bylaws. The corporation's initial board of directors shall consist of the individuals, whose names and addresses are as follows:

2

*Kirk A. Benson	10653 S. River Front Parkway, Suite 300 South Jordan, Utah 84095
Steven G. Stewart	10653 S. River Front Parkway, Suite 300 South Jordan, Utah 84095
L.K. (Theo) Lee	1501 New York Avenue Lawrenceville, NJ 08648
Craig R. Hickman	10653 S. River Front Parkway, Suite 300 South Jordan, Utah 84095
*Chairman	

ARTICLE VI – LIMITATION OF LIABILITY OF DIRECTORS

To the fullest extent permitted by the Act or any other applicable law as now in effect or as may hereafter be amended, a director of this Corporation shall not be personally liable to the Corporation or its shareholders for monetary damages for any action taken or any failure to take any action as a director. No amendment to or repeal of this Article VI shall apply to or have any effect on the liability or alleged liability of any director of this Corporation for or with respect to any action or failure to act by such director occurring prior to such amendment or repeal.

ARTICLE VII - INDEMNIFICATION AND ADVANCEMENT OF EXPENSES

The Corporation shall to the fullest extent permitted by the Act, as the same may be amended and supplemented, indemnify all directors, officers, employees, and agents of the Corporation whom it shall have the power to indemnify hereunder from and against any and all the expenses, liabilities, and other matters referred to herein or covered hereby. The Corporation shall have the right to advance expenses to its directors, officers, employees and agents to the full extent permitted by the Act, as the same may be amended or supplemented. Such right to indemnification or advancement

of expenses shall continue and to a person who has ceased to be a director, officer, employee or agent of the Corporation and shall inure to the benefit of the heirs, executors and administrators of such persons. The indemnification and advancement of expenses provided herein shall not be deemed exclusive of any other rights to which those seeking indemnification or advancement may be entitled under bylaw, agreement, vote of shareholders, vote of disinterested directors or otherwise. The Corporation shall have the right to purchase and maintain insurance on behalf of its directors, officers, employees or agents to the full extent permitted by the Act, as the same may be amended or supplemented.

ARTICLE VIII – BYLAWS

The board of directors is authorized to alter or amend the bylaws of the corporation, except the board of directors may not amend any bylaw adopted by the shareholders if the shareholders resolution expressly gives the exclusive right of amendment to the shareholders.

ARTICLE IX - INCORPORATOR

The name and address of the incorporator is Jason T. Day, Esq., 10653 S. River Front Parkway, Suite 300, South Jordan, Utah 84095.

DATED this 18th day of September, 2003

Jason T. Day, Esq.

ACKNOWLEDGMENT OF REGISTERED AGENT

The undersigned hereby accepts and acknowledges appointment as initial registered agent of the corporation named above.

Hied M. Liesch, Asst. Say.

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PATENT REEL: 035473 FRAME: 0928

RECORDED: 04/22/2015