

## PATENT ASSIGNMENT

Electronic Version v1.1  
 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT														
NATURE OF CONVEYANCE:	ASSIGNMENT														
CONVEYING PARTY DATA															
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Yan Wang</td> <td>08/26/2013</td> </tr> <tr> <td>Demin Wang</td> <td>08/26/2013</td> </tr> <tr> <td>Rongjie Zhu</td> <td>08/26/2013</td> </tr> <tr> <td>Rong Zhong</td> <td>08/26/2013</td> </tr> <tr> <td>Hongyan Wang</td> <td>08/26/2013</td> </tr> <tr> <td>Long Ren</td> <td>08/26/2013</td> </tr> </tbody> </table>		Name	Execution Date	Yan Wang	08/26/2013	Demin Wang	08/26/2013	Rongjie Zhu	08/26/2013	Rong Zhong	08/26/2013	Hongyan Wang	08/26/2013	Long Ren	08/26/2013
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<table border="1"> <tr> <td>Name:</td> <td>PetroChina Company Limited</td> </tr> <tr> <td>Street Address:</td> <td>No. 9 Dongzhimen North Street</td> </tr> <tr> <td>City:</td> <td>Beijing</td> </tr> <tr> <td>State/Country:</td> <td>CHINA</td> </tr> <tr> <td>Postal Code:</td> <td>100007</td> </tr> </table>		Name:	PetroChina Company Limited	Street Address:	No. 9 Dongzhimen North Street	City:	Beijing	State/Country:	CHINA	Postal Code:	100007				
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CORRESPONDENCE DATA															
Fax Number:	3176377561														
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>															
Phone:	317-634-3456														
Email:	docketdept@uspatent.com														

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Correspondent Name: Woodard Emhardt Moriarty McNett & Henry  
Address Line 1: 111 Monument Circle  
Address Line 4: Indianapolis, INDIANA 46204

ATTORNEY DOCKET NUMBER: 24199-4

NAME OF SUBMITTER: Sandra G. Henry

Signature: /Sandra G. Henry/

Date: 09/09/2013

Total Attachments: 5  
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## ASSIGNMENT

### **1. DEFINITIONS**

- 1.1 **ASSIGNOR** means the one or more parties identified in the assignor signature section at the bottom of this assignment.
- 1.2 **ASSIGNEE(S)** means:
- a) **PetroChina Company Limited**, a corporation of China having a principal place of business at No. 9 Dongzhimen North Street, Dongcheng District, Beijing 100007, China and
  - b) Daqing Oilfield Co., Ltd, having a principal place of business at Ranghulu District, Daqing City, Heilongjiang Province, China 163453, as well as its successors and/or assigns.
- 1.3 **PATENT APPLICATION** means the U.S. national phase of International Patent Cooperation Treaty (PCT) Application Serial No. PCT/CN2011/001640 with the title of CROWN-SHAPED SEPARATION DEVICE FOR SEPARATING OIL AND WATER IN WELL, which was filed on \_\_ September 9, \_\_, 2013 as U.S. Patent Application Serial No. \_\_ 14/020,942 \_\_. (Assignors authorize the law firm of Woodard, Emhardt, Moriarty, McNett and Henry LLP to fill in the filing date and US serial number when known);
- 1.4 **INVENTION** means concepts, ideas, discoveries, solutions to problems, improvements, processes, machines, articles of manufacture, and/or anything else which is disclosed, claimed, illustrated, and/or otherwise described in the PATENT APPLICATION and/or any invention disclosure material associated with the PATENT APPLICATION.
- 1.5 **RELATED PATENT CASES** includes, and is not limited to, any and all patent applications, patents, and/or patent proceedings:
- a. disclosing, illustrating, claiming, and/or otherwise describing the INVENTION, such as (but not limited to) statutory invention registrations, petty, provisional, non-provisional, utility, plant, design, and/or international applications;
  - b. claiming directly or indirectly priority to and/or from the PATENT APPLICATION, under domestic laws, the Paris Convention, PCT, and/or otherwise, such as (but not limited to) divisional, continuation, continuation-in-part, substitute, international, national phase, and/or regional phase applications; and/or
  - c. subject to, part of, resulting from, and/or otherwise associated with any and all pre-grant, post grant, and/or other patent related proceedings either directly or indirectly related to the INVENTION and/or the PATENT APPLICATION, such as (but not limited to) opposition, protest, reissue, extensions, reexamination, interference, and/or cancellation proceedings.
- 1.6 **RELATED INTELLECTUAL PROPERTY** includes, but is not limited to, copyrights, trademarks, service marks, trade dress, good will, trade secrets, mask works, and know-how developed and/or related to the INVENTION, PATENT APPLICATION, and/or RELATED PATENT CASES.
- 1.7 **TRANSFERRED RIGHTS** includes, but is not limited to, any and all rights, title, and/or interests assigned or otherwise transferred in this assignment.
- 1.8 **GEOGRAPHIC SCOPE** means worldwide including, but not limited to, member nations of the PCT and non-member nations of the PCT as well as their territories.
- 1.9 **EFFECTIVE DATE** means the earlier of the conception date of the INVENTION, the filing date of the PATENT APPLICATION, the filing date of the RELATED PATENT CASES, and/or the date of this assignment is first signed by at least one of the parties.

### **2. ASSIGNMENT OF RIGHTS**

- 2.1 **Consideration.** The ASSIGNOR hereby acknowledges receipt of good, valuable, and sufficient consideration from the ASSIGNEE(S) for this assignment.
- 2.2 **Intellectual Property.** The ASSIGNOR hereby assigns to the ASSIGNEE(S) all rights, title, and interest in and/or to the INVENTION, PATENT APPLICATION, RELATED PATENT CASES, and RELATED INTELLECTUAL PROPERTY.
- 2.3 **Future Improvements.** The ASSIGNOR hereby assigns, and agrees this assignment hereby automatically assigns in the future, to the ASSIGNEE(S) all right, title, and interest in future improvements in and/or to the INVENTION, PATENT APPLICATION, RELATED PATENT CASES, and RELATED INTELLECTUAL PROPERTY.
- 2.4 **Right to Claim Priority.** The ASSIGNOR hereby assigns to the ASSIGNEE(S) all right, title, and interest to claim priority to and/or from the PATENT APPLICATION and the RELATED PATENT CASES.

2.5 Infringement and Misappropriation. The ASSIGNOR hereby assigns to the ASSIGNEE(S) all past, present and future causes of action for infringement and/or misappropriation of the INVENTION, PATENT APPLICATION, RELATED PATENT CASES and/or RELATED INTELLECTUAL PROPERTY, whether the infringement and/or misappropriation is committed and/or the cause of action comes into existence before, during, or after the EFFECTIVE DATE.

2.6 Remedies. The ASSIGNOR hereby assigns to the ASSIGNEE(S) all past, present and future remedies for infringement and/or misappropriation, including damages, royalties, and profits.

2.7 Scope. All assignments and/or other transfers of rights and/or title, both legal and equitable, made herein are to the full extent of the GEOGRAPHIC SCOPE such that no right, title, and interest remain with the ASSIGNOR.

### **3. FUTURE PERFORMANCE**

3.1 Communicate Information. The ASSIGNOR hereby agrees to and will communicate all facts and/or information known to the ASSIGNOR with respect to the TRANSFERRED RIGHTS to the ASSIGNEE(S) and/or its legal representatives.

3.2 Sign Documents. The ASSIGNOR hereby agrees to and will sign and return any and all documents that ASSIGNEE(S) desires to be signed that are directly or indirectly related to the TRANSFERRED RIGHTS. These documents can include, but are not limited to, assignments, oaths, declarations, affidavits, and powers of attorney.

3.3 Legal Proceedings. The ASSIGNOR hereby agrees to and will truthfully testify and/or participate in any legal and/or quasi-legal proceedings regarding any facts and/or information known to the ASSIGNOR related to the TRANSFERRED RIGHTS at the request of the ASSIGNEE(S) and/or its legal representatives

3.4 Generally Protect Assignee's Rights. The ASSIGNOR hereby agrees to and will do everything reasonable to help in securing, maintaining, and/or enforcing rights to the TRANSFERRED RIGHTS for the ASSIGNEE.

3.5 No Additional Consideration Required. The ASSIGNOR agrees to and will perform the acts mentioned herein without the requirement of any additional consideration.

### **4. ATTORNEY CLIENT PRIVILEGE**

4.1 Assignment of Attorney-Client Privilege. The ASSIGNOR hereby assigns to the ASSIGNEE(S) all past, present and future rights and privileges related to any attorney-client privilege and/or work product of the ASSIGNOR in relation to the TRANSFERRED RIGHTS.

4.2 Prevent Waiver of Attorney Client Privilege. The ASSIGNOR hereby agrees to not engage in any acts resulting in the intentional or unintentional waiver of the attorney client privilege, work product, and/or common interest without the express written authorization from the ASSIGNEE and/or its legal representatives.

4.3 Partial Waiver of Attorney-Client Privilege. The ASSIGNOR hereby agrees that any partial waiver of the attorney-client privilege and/or work product of the ASSIGNOR does not constitute total waiver.

### **5. COVENANTS AND WARRANTIES**

5.1 Authority to Convey. The ASSIGNOR hereby covenants and warrants that the ASSIGNOR has the full right and authority to convey the TRANSFERRED RIGHTS assigned by this assignment.

5.2 No Conflicts. The ASSIGNOR hereby covenants and warrants that the ASSIGNOR has not executed and will not execute any documents and/or perform any acts conflicting with this assignment.

### **6. MISCELLANEOUS**



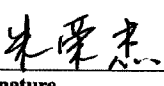
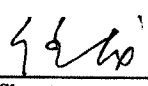
6.1 Insert Application Number and Filing Date. The ASSIGNOR and ASSIGNEE(S) hereby authorize and request the firm of Woodard, Emhardt, Moriarty, McNett & Henry LLP, its successor in interest, or designee to insert the application number and/or filing date in part 1.3 of this assignment once known.

6.2 Issue Patent to Assignee. The ASSIGNOR hereby authorizes and requests that any and all patents based on the PATENT APPLICATION and/or RELATED PATENT CASES issue to the ASSIGNEE(S), its successors in interest, its assigns, and/or its legal representatives.

6.3 Severability. If any provision of this assignment is ruled invalid and/or unenforceable by a court, such decision shall not affect the validity and/or enforceability of the remaining provisions this assignment.

6.4 Choice of Law. This assignment shall be interpreted and controlled by the laws of the United States, and in particular in accordance with the laws of the State of Indiana, without reference to the conflict of law principles thereof. It is further understood that Assignor consents to the courts of Indiana in connection with any dispute arising under the assignment.

6.5 Effective Date. This assignment is hereby made effective as of the EFFECTIVE DATE as defined above.

ASSIGNOR(S) SIGNATURE(S)	
<b>Yan Wang</b> Ranghulu District, Daqing City 163453 Heilongjiang Province, China	<div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">   Assignor Signature </div> <div style="text-align: center;"> 08/26/2013  Assignor Date </div> </div> <div style="margin-top: 10px;"> <div style="display: flex; justify-content: space-between;"> <div style="width: 20%;"> Notarial Stamp/Seal </div> <div style="width: 80%;"> SUBSCRIBED and SWORN to before me by <u>Yan Wang</u>  this ____ day of _____, 20__, in the county of _____  in the State of _____. </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 60%;"> Notary Public (Signature) </div> <div style="width: 40%;"> (Printed Name) </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div style="width: 60%;"> Resident of _____ County </div> <div style="width: 40%;"> My Commission Expires _____ </div> </div> </div>
<b>Demin Wang</b> Ranghulu District Daqing City 163453 Heilongjiang Province China	<div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">   Assignor Signature </div> <div style="text-align: center;"> 08/26/2013  Assignor Date </div> </div> <div style="margin-top: 10px;"> <div style="display: flex; justify-content: space-between;"> <div style="width: 20%;"> Notarial Stamp/Seal </div> <div style="width: 80%;"> SUBSCRIBED and SWORN to before me by <u>Demin Wang</u>  this ____ day of _____, 20__, in the county of _____  in the State of _____. </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 60%;"> Notary Public (Signature) </div> <div style="width: 40%;"> (Printed Name) </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div style="width: 60%;"> Resident of _____ County </div> <div style="width: 40%;"> My Commission Expires _____ </div> </div> </div>
<b>Rongjie Zhu</b> Ranghulu District Daqing City 163453 Heilongjiang Province China	<div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">   Assignor Signature </div> <div style="text-align: center;"> 08/26/2013  Assignor Date </div> </div> <div style="margin-top: 10px;"> <div style="display: flex; justify-content: space-between;"> <div style="width: 20%;"> Notarial Stamp/Seal </div> <div style="width: 80%;"> SUBSCRIBED and SWORN to before me by <u>Rongjie Zhu</u>  this ____ day of _____, 20__, in the county of _____  in the State of _____. </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 60%;"> Notary Public (Signature) </div> <div style="width: 40%;"> (Printed Name) </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div style="width: 60%;"> Resident of _____ County </div> <div style="width: 40%;"> My Commission Expires _____ </div> </div> </div>
<b>Long Ren</b> Ranghulu District Daqing City 163453 Heilongjiang Province China	<div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">   Assignor Signature </div> <div style="text-align: center;"> 08/26/2013  Assignor Date </div> </div> <div style="margin-top: 10px;"> <div style="display: flex; justify-content: space-between;"> <div style="width: 20%;"> Notarial Stamp/Seal </div> <div style="width: 80%;"> SUBSCRIBED and SWORN to before me by <u>Long Ren</u>  this ____ day of _____, 20__, in the county of _____  in the State of _____. </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 60%;"> Notary Public (Signature) </div> <div style="width: 40%;"> (Printed Name) </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div style="width: 60%;"> Resident of _____ County </div> <div style="width: 40%;"> My Commission Expires _____ </div> </div> </div>

**ASSIGNOR(S) SIGNATURE(S)**

Rong Zhong  
Ranghulu District  
Daqing City  
163453 Heilongjiang  
Province  
China

  
Assignor Signature

08/26/2013  
Assignor Date

Notarial Stamp/Seal

SUBSCRIBED and SWORN to before me by Rong Zhong  
this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, in the county of \_\_\_\_\_  
in the State of \_\_\_\_\_.

Notary Public (Signature)

(Printed Name)

Resident of \_\_\_\_\_ County

My Commission Expires \_\_\_\_\_

Hongyan Wang  
Ranghulu District  
Daqing City  
163453 Heilongjiang  
Province  
China

  
Assignor Signature

08/26/2013  
Assignor Date

Notarial Stamp/Seal

SUBSCRIBED and SWORN to before me by Hongyan Wang  
this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, in the county of \_\_\_\_\_  
in the State of \_\_\_\_\_.

Notary Public (Signature)

(Printed Name)

Resident of \_\_\_\_\_ County

My Commission Expires \_\_\_\_\_

**Assignee:**

Assignee hereby accepts the sale, transfer, and assignment of the TRANSFERRED RIGHTS.

王力戎  
Assignee Signature

Printed Name: Lirong Wang

Title: IP Manager

Company: PetroChina Company Limited

Date: 5 day of September, 20 13

孙志  
Assignee Signature

Printed Name: Zhi Sun

Title: IP Manager

Company: Daqing Oilfield Co., Ltd

Date: 2 day of September, 20 13