

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT5170745

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT	
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT	
<b>CONVEYING PARTY DATA</b>		
	<b>Name</b>	<b>Execution Date</b>
	DAN LEE DRAY	10/31/2016
	BRYAN ANTHONY CROWE	10/31/2016
	DAVID ABRAHAM FITCH	10/31/2016
	WILLIAM LEE SPROWLS	10/31/2016
	JOHN CHARLES MOLLENKOPF	10/31/2016
	DUSTIN MICHAEL HOWELL	10/31/2016
<b>RECEIVING PARTY DATA</b>		
<b>Name:</b>	MARKWEST ENERGY PARTNERS, L.P.	
<b>Street Address:</b>	1515 ARAPAHOE STREET, TOWER 1	
<b>Internal Address:</b>	SUITE 1600	
<b>City:</b>	DENVER	
<b>State/Country:</b>	COLORADO	
<b>Postal Code:</b>	80202	
<b>PROPERTY NUMBERS Total: 1</b>		
<b>Property Type</b>	<b>Number</b>	
<b>Application Number:</b>	16150454	
<b>CORRESPONDENCE DATA</b>		
<b>Fax Number:</b>		
<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>	713-632-1400	
<b>Email:</b>	hlusdocketing@hoganlovells.com	
<b>Correspondent Name:</b>	HOGAN LOVELLS US LLP	
<b>Address Line 1:</b>	609 MAIN STREET	
<b>Address Line 2:</b>	SUITE 4200	
<b>Address Line 4:</b>	HOUSTON, TEXAS 77002	
<b>ATTORNEY DOCKET NUMBER:</b>	019561.000084	
<b>NAME OF SUBMITTER:</b>	JEFFREY S. WHITTLE	
<b>SIGNATURE:</b>	/Jeffrey S. Whittle/	
<b>DATE SIGNED:</b>	10/03/2018	

PATENT

**Total Attachments: 7**

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## ASSIGNMENT

WHEREAS, We, Danny Lee Dray, Bryan Anthony Crowe, David Abraham Fitch, William Lee Sprowls, John Charles Mollenkopf and Dustin Michael Howell (hereafter "Assignors"), citizens of the United States of America, are the sole inventors of an invention for a PIG RAMP SYSTEM AND METHOD for which an application for United States Letters Patent is filed herewith; and

WHEREAS, MarkWest Energy Partners, L.P., with a business address of 1515 Arapahoe Street, Tower 1, Suite 1600, Denver, CO 80202 (hereafter "Assignee"), is desirous of acquiring the entire right, title, and interest in and to the aforesaid inventions throughout the world, and all right, title, and interest in, to and under any and all Letters Patent of the United States and all other countries throughout the world;

NOW, THEREFORE, be it known that, for good and valuable consideration, the adequacy, receipt, and legal sufficiency of which from Assignee are each hereby acknowledged, We, as Assignors, sell, assign, transfer, and set over to Assignee, all right, title, and interest in and to the said inventions throughout the world, and said application for U.S. Letters Patent, and any and all additional provisionals, non-provisionals, divisions, continuations, continuations-in-part, reissues, extensions, reexaminations, post-grant proceeding, derivations, or other inter-parties review proceedings thereof, and any and all Letters Patent of the United States and foreign countries which may be granted therefor, the same to be held and enjoyed by them for their own use and benefit, and for the use and benefit of their successors, assigns, or other legal representatives, to the end of the term or terms for which said Letters Patent of the United States or foreign countries are or may be granted, reexamined, or reissued, as fully and entirely as the same would have been held and enjoyed by us if this assignment and sale had not been made.

And We hereby authorize and request the Commissioner of Patents and Trademarks to issue any and all Letters Patent of the United States and any foreign patent offices on said inventions or resulting from said applications and from any and all additional provisional, non-provisionals, divisions, continuations, continuations-in-part, reissues, extensions, reexaminations, post-grant proceeding, derivations, or other inter-parties review proceedings thereof, to Assignee, as assignee of my entire interest, and hereby covenant that we have the full right to convey the entire interest herein assigned, and that we have not executed and will not execute any agreement in conflict herewith.

And We further hereby covenant and agree that we will, at any time, upon request, execute and deliver any and all papers that may be necessary or desirable to perfect the title of said inventions and to such Letters Patent as may be granted therefor, to Assignee or its successors, assigns, or other legal representatives and that if Assignee or its successors, assigns, or other legal representatives shall desire to file any additional provisional, non-provisional, divisional, continuation, continuation-in-part, or extension applications or to secure an ex parte or inter partes reexamination, reissue, post grant proceeding, or derivation proceeding of such Letters Patent, or to file a disclaimer relating thereto, will, upon request, sign all papers, make all rightful oaths, and do all lawful acts requisite for the filing of such divisional or continuation application, or such application for reissue and the procuring thereof, and for the filing of such disclaimer, without further compensation but at the expense of Assignee or its successors, assigns, or other legal representatives.

And We do further covenant and agree that we will, at any time upon request, communicate to Assignee or its successors, assigns, or other legal representatives, such facts relating to said inventions and Letters Patent or the file history thereof as may be known to us, and testify as to the same in any interference, litigation, or other proceeding when requested so to do, without further compensation but at the expense of Assignee or its successors, assigns, or other legal representatives.

EXECUTED THIS \_\_\_\_\_ day of \_\_\_\_\_, 2016.

Danny Lee Dray  
(Assignor)

Date: 10-31-2016

Signature: Danny Lee Dray

On this 31 day of OCT, before me, Brittney Corey, the undersigned Notary Public, personally appeared Danny Lee Dray, ASSIGNOR, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he executed the same. WITNESS my hand and official seal in Harrison County of Ohio on the date set forth in this certificate.

Brittney Corey  
Notary Public



BRITTNEY COREY  
NOTARY PUBLIC  
FOR THE  
STATE OF OHIO  
My Commission Expires  
June 8, 2020

Bryan Anthony Crowe  
(Assignor)

Date: 10/31/16

Signature: [Signature]

On this 31 day of OCT, before me, Brittney Corey, the undersigned Notary Public, personally appeared Bryan Anthony Crowe, ASSIGNOR, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he executed the same. WITNESS my hand and official seal in Harrison County of Ohio on the date set forth in this certificate.

[Signature]  
Notary Public



BRITTNEY COREY  
NOTARY PUBLIC  
FOR THE  
STATE OF OHIO

My Commission Expires June 8, 2020 David Abraham Fitch  
(Assignor)

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

On this \_\_\_\_\_ day of \_\_\_\_\_, before me, \_\_\_\_\_, the undersigned Notary Public, personally appeared \_\_\_\_\_, ASSIGNOR, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he executed the same. WITNESS my hand and official seal in \_\_\_\_\_ County of \_\_\_\_\_ on the date set forth in this certificate.

\_\_\_\_\_  
Notary Public

Bryan Anthony Crowe  
(Assignor)

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

On this \_\_\_\_\_ day of \_\_\_\_\_, before me, \_\_\_\_\_, the undersigned Notary Public, personally appeared \_\_\_\_\_, ASSIGNOR, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he executed the same. WITNESS my hand and official seal in \_\_\_\_\_ County of \_\_\_\_\_ on the date set forth in this certificate.

\_\_\_\_\_  
Notary Public

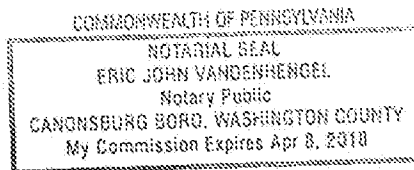
David Abraham Fitch  
(Assignor)

Date: 11/31/2016

Signature: [Signature]

On this 31<sup>st</sup> day of October 2016, before me, Eric John Vandenhengel, the undersigned Notary Public, personally appeared David Abraham Fitch, ASSIGNOR, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he executed the same. WITNESS my hand and official seal in Washington County of Pennsylvania on the date set forth in this certificate.

[Signature]  
Notary Public



William Lee Sprowls  
(Assignor)

Date: 10/21/2016

Signature: William Lee Sprowls

On this 21 day of OCT, before me, Brittney Corey, the undersigned Notary Public, personally appeared William Lee Sprowls, ASSIGNOR, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he executed the same. WITNESS my hand and official seal in Harrison County of Ohio on the date set forth in this certificate.

Brittney Corey  
Notary Public



BRITTNEY COREY  
NOTARY PUBLIC  
FOR THE  
STATE OF OHIO  
My Commission Expires  
June 8, 2020

John Charles Mollenkopf  
(Assignor)

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

On this \_\_\_\_\_ day of \_\_\_\_\_, before me, \_\_\_\_\_, the undersigned Notary Public, personally appeared \_\_\_\_\_, ASSIGNOR, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he executed the same. WITNESS my hand and official seal in \_\_\_\_\_ County of \_\_\_\_\_ on the date set forth in this certificate.

\_\_\_\_\_  
Notary Public

William Lee Sprowls  
(Assignor)

Date: \_\_\_\_\_

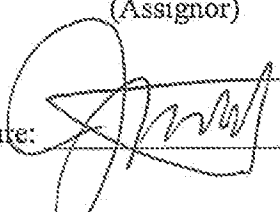
Signature: \_\_\_\_\_

On this \_\_\_\_\_ day of \_\_\_\_\_, before me, \_\_\_\_\_, the undersigned Notary Public, personally appeared \_\_\_\_\_, ASSIGNOR, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he executed the same. WITNESS my hand and official seal in \_\_\_\_\_ County of \_\_\_\_\_ on the date set forth in this certificate.

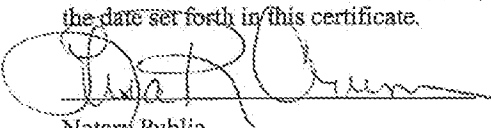
\_\_\_\_\_  
Notary Public

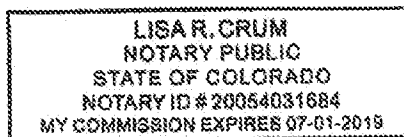
John Charles Mollenkopf  
(Assignor)

Date: 10/31/16

Signature: 

On this 31 day of October, before me, Lisa R. Crum, the undersigned Notary Public, personally appeared John Charles Mollenkopf, ASSIGNOR, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he executed the same. WITNESS my hand and official seal in Colorado County of Denver on the date set forth in this certificate.

  
Notary Public





Dustin Michael Howell  
(Assignor)

Date: 10/31/2016

Signature: [Signature]

On this 31 day of October, before me, Brittney Corey, the undersigned Notary Public, personally appeared Dustin Howell, ASSIGNOR, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he executed the same. WITNESS my hand and official seal in Hansen County of Ohio on the date set forth in this certificate.

[Signature]  
Notary Public



BRITTNEY COREY  
NOTARY PUBLIC  
FOR THE  
STATE OF OHIO  
My Commission Expires  
June 8, 2020

Mark West Energy Partners, L.P.  
(Assignee)

Date: 11-2-2016

Signature: [Signature]  
Title: Executive VP & General Counsel

On this 2nd day of November, 2016, before me, Cheryl Hertel, the undersigned Notary Public, personally appeared C. Corwin Bromley, ASSIGNEE, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he executed the same. WITNESS my hand and official seal in Denver County of Colorado on the date set forth in this certificate.

[Signature]  
Notary Public

