Memorial Resource Development Corp. Form SC 13D/A November 24, 2014

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

SCHEDULE 13D/A

Under the Securities Exchange Act of 1934

(Amendment No. 1)

Memorial Resource Development Corp.

(Name of Issuer)

Common stock, par value \$0.01 per share

(Title of Class of Securities)

58605Q 109

(CUSIP Number)

Kyle N. Roane

Memorial Resource Development Corp.

500 Dallas Street, Suite 1800

Houston, Texas 77002

(713) 588-8300

(Name, Address and Telephone Number of Person Authorized to Receive Notices and Communications)

November 18, 2014

(Date of Event which Requires Filing of this Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this
Schedule 13D, and is filing this schedule because of §§ 240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the
following box. "

Note: Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. *See* § 240.13d-7(b) for other parties to whom copies are to be sent.

* The remainder of this cover page shall be filled out for a reporting person s initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be filed for the purpose of Section 18 of the Securities Exchange Act of 1934 (Act) or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, *see* the Notes).

CUSIP Number 58605Q 109

1	Names of Reporting Persons				
2	MRD Holdco LLC Check the Appropriate Box if a Member of a Group (<i>See</i> Instructions) (a) x (b) "				
3	SEC U	se O	nly		
4	Source of Funds (See Instructions)				
5	AF/OO(1) Check if Disclosure of Legal Proceedings is Required Pursuant to Items 2(d) or 2(e)				
6	6 Citizenship or Place of Organization				
	Delawanber of		Sole Voting Power:		
Beneficially		0	74,407,005 Shared Vertice Powers		
Owi	ned by	8	Shared Voting Power:		
Е	ach		34,550,915(2)		
Rep	orting	9	Sole Dispositive Power:		
Pe	erson				
V	Vith	10	74,407,005 Shared Dispositive Power:		

0

11	Aggregate Amount Beneficiall	y Owned by Each I	Reporting Person

108,957,920

- 12 Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions)
- 13 Percent of Class Represented by Amount in Row (11)

56.3% (3)

14 Type of Reporting Person (See Instructions)

OO (Limited Liability Company)

- (1) See Item 3 for additional information.
- (2) As further described in Item 3, the Reporting Persons (as defined below) may be deemed to beneficially own the shares of Common Stock (as defined below) of the Issuer beneficially owned by the Other Persons (as defined below) pursuant to the Voting Agreement (as defined below).
- (3) See Item 5 for additional information.

1	Names	of F	Reporting Persons
2			s Partners VIII, L.P. Appropriate Box if a Member of a Group (<i>See</i> Instructions)
	(a) x	(b) "
3	SEC U	se O	only
4	Source	of F	Funds (See Instructions)
5	OO Check	if Di	isclosure of Legal Proceedings is Required Pursuant to Items 2(d) or 2(e)
6	 Citizen	ıship	or Place of Organization
Nun	Delawa	are 7	Sole Voting Power:
Sł	nares		0
Bene	eficially	8	Shared Voting Power:
Owi	ned by		
Е	lach	9	108,957,920 (1)(2) Sole Dispositive Power:
Rep	orting		
Pe	erson		0
V	Vith	10	Shared Dispositive Power:
11	Aggreg	gate .	74,407,005(1)(2) Amount Beneficially Owned by Each Reporting Person

12	108,957,920 (1)(2) Check if the Aggregate Amount in Row (11) Excludes Certain Shares (<i>See</i> Instructions)
13	Percent of Class Represented by Amount in Row (11)
	56.3% (1)(2)(3)
14	Type of Reporting Person (See Instructions)
	PN

- (1) MRD Holdco LLC (MRD Holdco) is controlled by Natural Gas Partners VIII, L.P. (NGP VIII), Natural Gas Partners IX, L.P. (NGP IX) and NGP IX Offshore Holdings, L.P. (NGP IX Offshore). NGP VIII controls an approximate 50.3% membership interest in MRD Holdco and, together with NGP IX and NGP IX Offshore, appoints all of the managers to the board of managers of MRD Holdco. NGP VIII may be deemed to share voting and dispositive power over the reported securities of MRD Holdco; thus, NGP VIII may also be deemed to be the beneficial owner of the reported securities of MRD Holdco. NGP VIII disclaims beneficial ownership of the reported securities of MRD Holdco in excess of its pecuniary interest in the securities.
- (2) As further described in Item 3, the Reporting Persons (as defined below) may be deemed to beneficially own the shares of Common Stock (as defined below) of the Issuer beneficially owned by the Other Persons (as defined below) pursuant to the Voting Agreement (as defined below).
- (3) See Item 5 for additional information.

1	Names	of F	Reporting Persons
2			s Partners IX, L.P. Appropriate Box if a Member of a Group (<i>See</i> Instructions)
	(a) x	(b) "
3	SEC U	se O	only
4	Source	of F	Funds (See Instructions)
5	OO Check	if Di	isclosure of Legal Proceedings is Required Pursuant to Items 2(d) or 2(e)
6	 Citizen	ship	or Place of Organization
Nun	Delawa	are 7	Sole Voting Power:
Sł	nares		0
Bene	eficially	8	Shared Voting Power:
Owi	ned by		
Е	Each	9	108,957,920 (1)(2) Sole Dispositive Power:
Rep	orting		
Pe	erson		0
V	Vith	10	Shared Dispositive Power:
11	Aggreg	gate .	74,407,005(1)(2) Amount Beneficially Owned by Each Reporting Person

12	108,957,920 (1)(2) Check if the Aggregate Amount in Row (11) Excludes Certain Shares (<i>See</i> Instructions)
13	Percent of Class Represented by Amount in Row (11)
14	56.3% (1)(2)(3) Type of Reporting Person (<i>See</i> Instructions)
	PN

- (1) MRD Holdco is controlled by NGP VIII, NGP IX and NGP IX Offshore. NGP IX controls an approximate 47.2% membership interest in MRD Holdco and, together with NGP IX and NGP IX Offshore, appoints all of the managers to the board of managers of MRD Holdco. NGP IX may be deemed to share voting and dispositive power over the reported securities of MRD Holdco; thus, NGP IX may also be deemed to be the beneficial owner of the reported securities of MRD Holdco. NGP IX disclaims beneficial ownership of the reported securities of MRD Holdco in excess of its pecuniary interest in the securities.
- (2) As further described in Item 3, the Reporting Persons (as defined below) may be deemed to beneficially own the shares of Common Stock (as defined below) of the Issuer beneficially owned by the Other Persons (as defined below) pursuant to the Voting Agreement (as defined below).
- (3) See Item 5 for additional information.

1	Names	of F	Reporting Persons
2			fshore Holdings, L.P. Appropriate Box if a Member of a Group (<i>See</i> Instructions)
	(a) x	(b) "
3	SEC U	se O	nly
4	Source	of F	Funds (See Instructions)
5	OO Check	if Di	sclosure of Legal Proceedings is Required Pursuant to Items 2(d) or 2(e)
6	 Citizen	ıship	or Place of Organization
Nun	Delawa	are 7	Sole Voting Power:
Sł	nares		0
Bene	eficially	8	Shared Voting Power:
Owi	ned by		
Е	Each	9	108,957,920 (1)(2) Sole Dispositive Power:
Rep	orting		
Pe	erson		0
V	Vith	10	Shared Dispositive Power:
11	Aggreg	gate .	74,407,005(1)(2) Amount Beneficially Owned by Each Reporting Person

12	108,957,920 (1)(2) Check if the Aggregate Amount in Row (11) Excludes Certain Shares (<i>See</i> Instructions)
13	Percent of Class Represented by Amount in Row (11)
14	56.3% (1)(2)(3) Type of Reporting Person (<i>See</i> Instructions)
	PN

- (1) MRD Holdco is controlled by NGP VIII, NGP IX and NGP IX Offshore. NGP IX Offshore controls an approximate 2.4% membership interest in MRD Holdco and, together with NGP VIII and NGP IX, appoints all of the managers to the board of managers of MRD Holdco. NGP IX Offshore may be deemed to share voting and dispositive power over the reported securities of MRD Holdco; thus, NGP IX Offshore may also be deemed to be the beneficial owner of the reported securities of MRD Holdco. NGP IX Offshore disclaims beneficial ownership of the reported securities of MRD Holdco in excess of its pecuniary interest in the securities.
- (2) As further described in Item 3, the Reporting Persons (as defined below) may be deemed to beneficially own the shares of Common Stock (as defined below) of the Issuer beneficially owned by the Other Persons (as defined below) pursuant to the Voting Agreement (as defined below).
- (3) See Item 5 for additional information.

1	Names	of I	Reporting Persons
2		the .	L.L.C. Appropriate Box if a Member of a Group (<i>See</i> Instructions) b) "
3	SEC U	se C	Only
4	Source	of I	Funds (See Instructions)
5	OO Check	if D	isclosure of Legal Proceedings is Required Pursuant to Items 2(d) or 2(e)
6	 Citizen	ıship	or Place of Organization
Nun	Delawa	are 7	Sole Voting Power:
Sł	hares		
	eficially	8	0 Shared Voting Power:
Ow	ned by		
E	Each	9	108,957,920 (1)(2) Sole Dispositive Power:
Rep	oorting		
Pe	erson		0
V	With	10	Shared Dispositive Power:
11	Aggreg	gate	74,407,005(1)(2) Amount Beneficially Owned by Each Reporting Person

12	108,957,920 (1)(2) Check if the Aggregate Amount in Row (11) Excludes Certain Shares (<i>See</i> Instructions)
13	Percent of Class Represented by Amount in Row (11)
14	56.3% (1)(2)(3) Type of Reporting Person (<i>See</i> Instructions)
	OO (Limited Liability Company)

- (1) MRD Holdco is controlled by NGP VIII, NGP IX and NGP IX Offshore. NGP VIII, NGP IX and NGP IX Offshore collectively control an 100% membership interest in MRD Holdco and collectively appoint all of the managers to the board of managers of MRD Holdco. GFW VIII, L.L.C. (GFW VIII) is the sole general partner of G.F.W. Energy VIII, L.P. (GFW Energy VIII), which is the general partner of NGP VIII. Accordingly, GFW VIII may be deemed to share voting and dispositive power over the reported securities, and as a result may also be deemed to be the beneficial owner of these securities. GFW VIII disclaims beneficial ownership of the reported securities in excess of such entity s pecuniary interest in the securities.
- (2) As further described in Item 3, the Reporting Persons (as defined below) may be deemed to beneficially own the shares of Common Stock (as defined below) of the Issuer beneficially owned by the Other Persons (as defined below) pursuant to the Voting Agreement (as defined below).
- (3) See Item 5 for additional information.

1	Names	of F	Reporting Persons
2			ergy VIII, L.P. Appropriate Box if a Member of a Group (<i>See</i> Instructions)
	(a) x	(b) "
3	SEC U	se O	only
4	Source	of F	Funds (See Instructions)
5	OO Check	if Di	isclosure of Legal Proceedings is Required Pursuant to Items 2(d) or 2(e)
6	 Citizen	ship	or Place of Organization
Nun	Delawa	are 7	Sole Voting Power:
Sł	nares		0
Bene	eficially	8	Shared Voting Power:
Ow	ned by		
Е	lach	9	108,957,920 (1)(2) Sole Dispositive Power:
Rep	orting		
Pe	erson		0
V	Vith	10	Shared Dispositive Power:
11	Aggreg	gate .	74,407,005(1)(2) Amount Beneficially Owned by Each Reporting Person

12	108,957,920 (1)(2) Check if the Aggregate Amount in Row (11) Excludes Certain Shares (<i>See</i> Instructions)
13	Percent of Class Represented by Amount in Row (11)
14	56.3% (1)(2)(3) Type of Reporting Person (<i>See</i> Instructions)
	PN

- (1) MRD Holdco is controlled by NGP VIII, NGP IX and NGP IX Offshore. NGP VIII, NGP IX and NGP IX Offshore collectively control an 100% membership interest in MRD Holdco and collectively appoint all of the managers to the board of managers of MRD Holdco. GFW Energy VIII is the general partner of NGP VIII. Accordingly, GFW Energy VIII may be deemed to share voting and dispositive power over the reported securities, and as a result may also be deemed to be the beneficial owner of these securities. GFW Energy VIII disclaims beneficial ownership of the reported securities in excess of such entity s pecuniary interest in the securities.
- (2) As further described in Item 3, the Reporting Persons (as defined below) may be deemed to beneficially own the shares of Common Stock (as defined below) of the Issuer beneficially owned by the Other Persons (as defined below) pursuant to the Voting Agreement (as defined below).
- (3) See Item 5 for additional information.

1	Names	s of F	Reporting Persons
2	GFW I		L.C. Appropriate Box if a Member of a Group (See Instructions)
	(a) x	(b) "
3	SEC U	Jse C	Only
4	Source	of F	Funds (See Instructions)
5	OO Check	if D	isclosure of Legal Proceedings is Required Pursuant to Items 2(d) or 2(e)
6	 Citizer	nship	or Place of Organization
Nun	Delawanber of	are 7	Sole Voting Power:
Sł	nares		0
Bene	eficially	8	Shared Voting Power:
Owi	ned by		
Е	Each	9	108,957,920 (1)(2) Sole Dispositive Power:
Rep	orting		
Pe	erson		0
V	Vith	10	Shared Dispositive Power:
11	Aggreg	gate	74,407,005(1)(2) Amount Beneficially Owned by Each Reporting Person

12	108,957,920 (1)(2) Check if the Aggregate Amount in Row (11) Excludes Certain Shares (<i>See</i> Instructions)
13	Percent of Class Represented by Amount in Row (11)
14	56.3% (1)(2)(3) Type of Reporting Person (See Instructions)
	OO (Limited Liability Company)

- (1) MRD Holdco is controlled by NGP VIII, NGP IX and NGP IX Offshore. NGP VIII, NGP IX and NGP IX Offshore collectively control an 100% membership interest in MRD Holdco and collectively appoint all of the managers to the board of managers of MRD Holdco. GFW IX, L.L.C. (GFW IX) is the sole general partner of G.F.W. Energy IX, L.P. (GFW Energy IX), which is the general partner of NGP IX and NGP IX Offshore. Accordingly, GFW IX may be deemed to share voting and dispositive power over the reported securities, and as a result may also be deemed to be the beneficial owner of these securities. GFW IX disclaims beneficial ownership of the reported securities in excess of such entity s pecuniary interest in the securities.
- (2) As further described in Item 3, the Reporting Persons (as defined below) may be deemed to beneficially own the shares of Common Stock (as defined below) of the Issuer beneficially owned by the Other Persons (as defined below) pursuant to the Voting Agreement (as defined below).
- (3) See Item 5 for additional information.

1	Names	of F	Reporting Persons
2			ergy IX, L.P. Appropriate Box if a Member of a Group (See Instructions)
	(a) x	(b) "
3	SEC U	se O	only
4	Source	of F	Funds (See Instructions)
5	OO Check	if Di	isclosure of Legal Proceedings is Required Pursuant to Items 2(d) or 2(e)
6	 Citizen	ship	or Place of Organization
Nun	Delawa	are 7	Sole Voting Power:
Sł	nares		0
Bene	eficially	8	Shared Voting Power:
Ow	ned by		
Е	Each	9	108,957,920 (1)(2) Sole Dispositive Power:
Rep	orting		
Pe	erson		0
V	Vith	10	Shared Dispositive Power:
11	Aggreg	gate .	74,407,005(1)(2) Amount Beneficially Owned by Each Reporting Person

12	108,957,920 (1)(2) Check if the Aggregate Amount in Row (11) Excludes Certain Shares (<i>See</i> Instructions)
13	Percent of Class Represented by Amount in Row (11)
	56.20(.(1)(2)(2)
14	56.3% (1)(2)(3) Type of Reporting Person (<i>See</i> Instructions)
	PN

- (1) MRD Holdco is controlled by NGP VIII, NGP IX and NGP IX Offshore. NGP VIII, NGP IX and NGP IX Offshore collectively control an 100% membership interest in MRD Holdco and collectively appoint all of the managers to the board of managers of MRD Holdco. GFW Energy IX is the general partner of NGP IX and NGP IX Offshore. Accordingly, GFW Energy IX may be deemed to share voting and dispositive power over the reported securities, and as a result may also be deemed to be the beneficial owner of these securities. GFW Energy IX disclaims beneficial ownership of the reported securities in excess of such entity s pecuniary interest in the securities.
- (2) As further described in Item 3, the Reporting Persons (as defined below) may be deemed to beneficially own the shares of Common Stock (as defined below) of the Issuer beneficially owned by the Other Persons (as defined below) pursuant to the Voting Agreement (as defined below).
- (3) See Item 5 for additional information.

1	Names	of F	Reporting Persons
2	Check	the A	gy Capital Management, L.L.C. Appropriate Box if a Member of a Group (<i>See</i> Instructions)
	(a) x	(b) "
3	SEC U	lse O	Only
4	Source	of F	Funds (See Instructions)
5	OO Check	if D	isclosure of Legal Proceedings is Required Pursuant to Items 2(d) or 2(e)
6	 Citizer	nship	or Place of Organization
Nun	Texas	7	Sole Voting Power:
Sł	nares		0
Bene	eficially	8	Shared Voting Power:
Owi	ned by		
Е	Each	9	108,957,920 (1)(2) Sole Dispositive Power:
Rep	orting		
Pe	erson		0
V	Vith	10	Shared Dispositive Power:
11	Aggres	gate .	74,407,005(1)(2) Amount Beneficially Owned by Each Reporting Person

12	108,957,920 (1)(2) Check if the Aggregate Amount in Row (11) Excludes Certain Shares (<i>See</i> Instructions)
13	Percent of Class Represented by Amount in Row (11)
14	56.3% (1)(2)(3) Type of Reporting Person (<i>See</i> Instructions)
	OO (Limited Liability Company)

- (1) MRD Holdco is controlled by NGP VIII, NGP IX and NGP IX Offshore. NGP VIII, NGP IX and NGP IX Offshore collectively control an 100% membership interest in MRD Holdco and collectively appoint all of the managers to the board of managers of MRD Holdco. GFW VIII has delegated full power and authority to manage NGP VIII, and GFW IX has delegated full power and authority to manage NGP IX and NGP IX Offshore, respectively, to NGP Energy Capital Management, L.L.C. (NGP ECM) and accordingly, NGP ECM may be deemed to share voting and dispositive power over these securities, and as result may be deemed to beneficially own these reported securities. NGP ECM disclaims beneficial ownership of the reported securities in excess of such entity s pecuniary interest in the securities.
- (2) As further described in Item 3, the Reporting Persons (as defined below) may be deemed to beneficially own the shares of Common Stock (as defined below) of the Issuer beneficially owned by the Other Persons (as defined below) pursuant to the Voting Agreement (as defined below).
- (3) See Item 5 for additional information.

EXPLANATORY NOTE

This amendment No. 1 (this Amendment) to Schedule 13D amends and supplements the Schedule 13D originally filed by the Reporting Persons (as defined below) on June 27, 2014 (the Previous Schedule 13D), relating to shares of common stock, par value \$0.01 (Common Stock), of Memorial Resource Development Corp., a Delaware corporation (the Issuer). The total number of shares of Common Stock reported as beneficially owned in this Amendment is 108,957,920, which constitutes approximately 56.3% of the total number of shares of Common Stock outstanding. The beneficial ownership of the Reporting Persons reported in this Amendment is calculated based on the outstanding number of shares of Common Stock on November 12, 2014, as reported by the Issuer in its prospectus filed pursuant to Rule 424(b)(1) of the Securities Act of 1933, as amended, filed with the Securities and Exchange Commission (the Commission) on November 14, 2014. The Previous Schedule 13D is hereby amended and supplemented by the Reporting Persons as set forth below in this Amendment. Unless set forth below, all previous Items of the Previous Schedule 13D are unchanged. Capitalized terms used herein but not defined herein shall have the meaning ascribed to them in the Previous Schedule 13D. The Previous Schedule 13D, as amended and supplemented by this Amendment, is referred to herein as this Schedule 13D/A.

Item 1. Security and Issuer.

This Item 1 shall be deemed to amend and restate Item 1 of the Previous Schedule 13D in its entirety.

This Schedule 13D/A relates to Common Stock of the Issuer. The principal executive offices of the Issuer are located at 500 Dallas Street, Suite 1800, Houston, Texas 77002. The total number of shares of Common Stock reported as beneficially owned in this Schedule 13D/A is 108,957,920, which constitutes approximately 56.3% of the total number of shares of Common Stock outstanding. The beneficial ownership of the Reporting Persons reported in this Schedule 13D/A is calculated based on the outstanding number of shares of Common Stock on November 12, 2014, as reported by the Issuer in its prospectus filed pursuant to Rule 424(b)(1) of the Securities Act of 1933, as amended, filed with the Commission on November 14, 2014.

Item 2. Identity and Background.

This Item 2 shall be deemed to amend and supplement Item 2 of the Previous Schedule 13D as set forth below.

(b) The address of the principal business office of each of MRD Holdco, NGP VIII, NGP IX, NGP IX Offshore, GFW VIII, GFW Energy VIII, GFW Energy IX, GFW IX and NGP ECM (collectively, the Reporting Persons) is as follows:

MRD Holdco

500 Dallas Street, Suite 1800, Houston, Texas
77002

NGP VIII, NGP IX, NGP IX Offshore, GFW VIII,
GFW Energy VIII, GFW Energy IX, GFW IX and
NGP ECM

500 Dallas Street, Suite 1800, Houston, Texas
77002

See The Street, Suite 1800, Houston, Texas
77002

See The Street, Suite 1800, Houston, Texas
77002

Item 3. Source and Amount of Funds or Other Consideration

This Item 3 shall be deemed to amend and supplement Item 3 of the Previous Schedule 13D as set forth below.

In connection with the consummation of the Issuer s initial public offering (the Offering) of 49,220,000 shares of Common Stock on June 18, 2014, MRD Holdco entered into a Voting Agreement (the Voting Agreement) with the Issuer, WHR Incentive LLC (WHR Incentive) and certain former management members (the WHR Stockholders) of WildHorse Resources, LLC (WHR). Pursuant to the Voting Agreement, WHR Incentive and the WHR Stockholders agreed to vote all of their shares of Common Stock as directed by MRD Holdco. The Voting Agreement also provides MRD Holdco with the right to designate up to three nominees to the Issuer's board of directors, subject to the limitations and conditions set forth therein, including the ownership of a specified percentage of the outstanding shares of Common Stock. The Voting Agreement requires the stockholders party thereto to take all necessary actions, including voting their shares of Common Stock, to cause the election of the nominees designated by MRD Holdco. As a result, the parties thereto may be deemed to be members of a group for the purposes of Section 13(d)(3) of the Exchange Act (the Group) and MRD Holdco may be deemed to beneficially own the 34,550,915 shares of Common Stock of the Issuer collectively beneficially owned as of the date of this Schedule 13D/A by WHR Incentive and the WHR Stockholders (together, the Other Persons).

Item 4. Purpose of Transaction.

This Item 4 shall be deemed to amend and supplement Item 4 of the Previous Schedule 13D as set forth below.

The information set forth in or incorporated by reference in Item 2, Item 3 and Item 5 of this Schedule 13D/A is incorporated by reference in its entirety into this Item 4.

On November 12, 2014, MRD Holdco and certain of the WHR Stockholders (together, the Selling Stockholders), and the Issuer entered into an underwriting agreement (the Underwriting Agreement) with Citigroup Global Markets Inc. and Barclays Capital Inc., as representatives of the several underwriters named therein (the Underwriters), providing for the offer and sale of 30,000,000 shares of Common Stock and up to 4,500,000 additional shares of Common Stock by the Selling Stockholders at a price of \$23.00 per share of Common Stock (the Secondary Offering). On November 18, 2014, the Selling Stockholders sold and delivered 30,000,000 shares of Common Stock to the Underwriters. On November 18, 2014, the Underwriters exercised their option pursuant to the Underwriting Agreement to purchase an additional 4,322,080 shares of Common Stock from the Selling Stockholders at a price of \$23.00 per share (the Option Purchase). The Option Purchase closed on November 21, 2014.

The description of the Underwriting Agreement set forth in this Item 4 does not purport to be complete and is qualified in its entirety by reference to the full text of the Underwriting Agreement, which is incorporated by reference as Exhibit G.

Item 5. Interest in Securities of the Issuer.

This Item 5 shall be deemed to amend and restate Item 5 of the Previous Schedule 13D in its entirety.

The information contained in rows 7, 8, 9, 10, 11 and 13 on the cover page of this Schedule 13D/A and the information set forth or incorporated by reference in Items 2, 3, 4 and 6 are hereby incorporated by reference.

- (a) (b) The aggregate number and percentage of shares of Common Stock beneficially owned by the Reporting Persons (on the basis of a total of 193,559,211 shares of Common Stock issued and outstanding) are as follows:
- (i) MRD Holdco is the sole record owner of, and has the sole power to vote and dispose of 74,407,005 (38.4%) shares of Common Stock (the Direct Shares). Pursuant to Rule 13d-3 of the Act and as a result of the Voting Agreement, MRD Holdco may also be deemed to beneficially own 34,550,915 (17.8%) shares of Common Stock (the Indirect Shares) owned by the Other Persons. MRD Holdco may be deemed to have shared voting power over the Indirect Shares. In total, MRD Holdco may be deemed to beneficially own 108,957,920 (56.3%) shares of Common Stock
- (ii) NGP VIII, NGP IX, NGP IX Offshore, GFW VIII, GFW Energy VIII, GFW Energy IX, GFW IX and NGP ECM do not directly own any shares of Common Stock. NGP VIII, NGP IX and NGP IX Offshore control an approximate 50.3%, 47.2% and 2.4% interest, respectively, in MRD Holdco. By virtue of controlling MRD Holdco, each of NGP VIII, NGP IX and NGP IX Offshore may be deemed to (i) beneficially own those shares beneficially owned by MRD Holdco, representing 108,957,920 (56.3%) shares of Common Stock, (ii) possess shared voting and dispositive powers with respect to the Direct Shares, and (iii) possess shared voting powers with respect to the Indirect Shares. By virtue of their respective control over NGP VIII, NGP IX and NGP IX Offshore, GFW VIII, GFW Energy VIII, GFW Energy IX, GFW IX and NGP ECM may be deemed to beneficially own those shares beneficially owned by MRD Holdco, representing 108,957,920 (56.3%) shares of Common Stock.

The Reporting Persons disclaim beneficial ownership of the reported securities except to the extent of their pecuniary interests therein, and this report shall not be deemed an admission that the reporting persons are the beneficial owner of the reported securities for purposes of Section 16 or for any other purpose.

Together, the Other Persons beneficially own 34,550,915 (17.8%) shares of Common Stock. Each such Other Person has the sole power to vote and dispose of the shares of Common Stock for which it is the record owner.

(c) On November 12, 2014, the Selling Stockholders and the Issuer entered into the Underwriting Agreement in connection with the Secondary Offering. On November 18, 2014, the Selling Stockholders sold and delivered 30,000,000 shares of Common Stock to the Underwriters. On November 18, 2014, the Underwriters exercised the Option Purchase for an additional 4,322,080 shares of Common Stock, which closed on November 21, 2014.

The description of the Underwriting Agreement set forth in this Item 5 does not purport to be complete and is qualified in its entirety by reference to the full text of the Underwriting Agreement, which is incorporated by reference as Exhibit G.

- (d) The Reporting Persons have the right to receive distributions from, and the proceeds from the sale of, the respective shares of Common Stock reported by such persons on the cover pages of this Schedule 13D/A and in this Item 5. See Schedule A for the information applicable to the Listed Persons. Except for the foregoing, no other person is known by the Reporting Persons to have the right to receive or the power to direct the receipt of distributions from, or the proceeds from the sale of, shares of Common Stock beneficially owned by the Reporting Persons or, to the Reporting Persons knowledge, the Listed Persons.
- (e) Not applicable.

Item 6. Contracts, Arrangements, Understandings or Relationships With Respect to Securities of the Issuer. This Item 6 shall be deemed to amend and supplement Item 6 of the Previous Schedule 13D as set forth below.

The information set forth or incorporated in Item 3 is hereby incorporated herein by reference.

In connection with the Secondary Offering, MRD Holdco, the Selling Stockholders, WHR Incentive and the Issuer s directors and executive officers have entered into lock-up agreements (the Lock-Up Agreements) with respect to their shares of Common Stock, pursuant to which they are subject to certain resale restrictions for a period of 60 days following November 12, 2014, the date of the prospectus relating to the Secondary Offering.

The description of the Lock-Up Agreements set forth in this Item 6 does not purport to be complete and is qualified in its entirety by reference to the full text of the form of Lock-Up Agreement, which is incorporated by reference as Exhibit H.

To the Reporting Persons knowledge, there are no other contracts, arrangements, understandings or relationships (legal or otherwise) among the persons named in Item 2 and between such persons and any person with respect to any securities of the Issuer.

Item 7. Material to be filed as Exhibits.

Exhibit A Joint Filing Agreement among the Reporting Persons, dated June 27, 2014 (incorporated by reference to Exhibit A to the Reporting Persons Schedule 13D filed June 27, 2014 (File No. 005-88202))

- Exhibit B Voting Agreement among Memorial Resource Development Corp., MRD Holdco LLC and certain former management members of WildHorse Resources, LLC (attached as Exhibit 10.2 to the Issuer s Current Report on Form 8-K (File No. 001-36490) filed with the Commission on June 24, 2014 and incorporated herein in its entirety by reference)
- Exhibit C Contribution Agreement by and among Memorial Resource Development Corp., Memorial Resource Development LLC and MRD Holdco LLC (attached as Exhibit 10.5 to the Issuer's Current Report on Form 8-K (File No. 001-36490) filed with the Commission on June 24, 2014 and incorporated herein in its entirety by reference)
- Exhibit D Contribution Agreement by and among Memorial Resource Development Corp. and the former management members of WildHorse Resources, LLC (attached as Exhibit 10.6 to the Issuer s Current Report on Form 8-K (File No. 001-36490) filed with the Commission on June 24, 2014 and incorporated herein in its entirety by reference)
- Exhibit E Registration Rights Agreement dated as of June 18, 2014 between Memorial Resource Development Corp. and certain stockholders (attached as Exhibit 10.4 to the Issuer s Current Report on Form 8-K (File No. 001-36490) filed with the Commission on June 24, 2014 and incorporated herein in its entirety by reference)
- Exhibit F Form of Lock-Up Agreement (attached as Exhibit A to Exhibit 1.1 to the Issuer s Current Report on Form 8-K (File No. 001-36490) filed with the Commission on June 18, 2014 and incorporated herein in its entirety by reference)
- Exhibit G Underwriting Agreement dated as of November 12, 2014 by and among Memorial Resource Development Corp., MRD Holdco LLC, the other selling stockholders named therein and Citigroup Global Markets Inc. and Barclays Capital Inc., as representatives of the several underwriters named therein (attached as Exhibit 1.1 to the Issuer s Current Report on Form 8-K (File No. 001-36490) filed with the Commission on November 18, 2014 and incorporated herein in its entirety by reference)
- Exhibit H Form of Lock-Up Agreement (attached as Exhibit A to Exhibit 1.1 to the Issuer s Current Report on Form 8-K (File No. 001-36490) filed with the Commission on November 18, 2014 and incorporated herein in its entirety by reference)

SIGNATURES

After reasonable inquiry and to the best of each of the undersigned sknowledge and belief, each of the undersigned hereby certifies that the information set forth in this statement is true, complete and correct.

Dated: November 24, 2014

MRD HOLDCO LLC

/s/ Kyle N. Roane

Name: Kyle N. Roane

Title: Vice President, General Counsel &

Corporate Secretary

NATURAL GAS PARTNERS VIII, L.P.

By: G.F.W. Energy VIII, L.P., its general

partner

By: GFW VIII, L.L.C., its general partner

/s/ Kenneth A. Hersh

Name: Kenneth A. Hersh Title Authorized Member

G.F.W. ENERGY VIII, L.P.

By: GFW VIII, L.L.C., its general partner

/s/ Kenneth A. Hersh

Name: Kenneth A. Hersh Title Authorized Member

GFW VIII, L.L.C.

/s/ Kenneth A. Hersh

Name: Kenneth A. Hersh Title Authorized Member

NGP IX OFFSHORE HOLDINGS, L.P.

By: G.F.W. Energy IX, L.P., its general

partner

By: GFW IX, L.L.C., its general partner

/s/ Kenneth A. Hersh

Name: Kenneth A. Hersh Title Authorized Member

NATURAL GAS PARTNERS IX, L.P.

By: G.F.W. Energy IX, L.P., its general

partner

By: GFW IX, L.L.C., its general partner

/s/ Kenneth A. Hersh
Name: Kenneth A. Hersh
Title Authorized Member

Title Tutilonized Memori

G.F.W. ENERGY IX, L.P.

By: GFW IX, L.L.C., its general partner

/s/ Kenneth A. Hersh
Name: Kenneth A. Hersh
Title Authorized Member

GFW IX, L.L.C.

/s/ Kenneth A. Hersh
Name: Kenneth A. Hersh
Title Authorized Member

NGP ENERGY CAPITAL MANAGEMENT, L.L.C.

/s/ Kenneth A. Hersh
Name: Kenneth A. Hersh
Title Chief Executive Officer