# RECEIVED

Form 3160-5 (June 2015)

✓ Subsequent Report

Final Abandonment Notice

**UNITED STATES** R MAY 3 0 2017

FORM APPROVED OMB No. 1004-0137 Expires: January 31, 2018

Information

DEPARTMENT OF	THE INTERIOR MAT 3 U
<b>BUREAU OF LAND</b>	MANAGEMENT

5 Lease Serial No. **NMNM 16586** 

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an

Convert to Injection

Change Plans

6. If Indian, Allottee or Tribe Name

abandoned well.	Use Form 3160-3 (A	PD) for such proposals	gernent	IN/A	
SUBMIT IN TRIPLICATE - Other instructions on page 2		7. If Unit of CA/Agreement, Name and/or No.			
1. Type of Well				NMNM 135229X	
✓ Oil Well Gas	Well Other			8. Well Name and No. North Alamito Unit 30	6H (FKA Lybrook L34-2307 01H)
2. Name of Operator				9. API Well No.	
Encana Oil & Gas (USA) Inc.				30-043-21276	
3a. Address		3b. Phone No. (include area code	e)	10. Field and Pool or Ex	cploratory Area
370 17th Street, Suite 1700 Denver, CO 80202		(720) 876-5331		Alamito Mancos N (O	IL)
4. Location of Well (Footage, Sec., T.	R., M., or Survey Description)			11. Country or Parish, S	tate
SHL: 1404' FSL and 759' FWL Section 34, BHL: 693' FNL and 645' FWL Section 33, T				Sandoval County, NM	1
12. CH	ECK THE APPROPRIATE B	OX(ES) TO INDICATE NATURE	E OF NOTI	CE, REPORT OR OTHE	ER DATA
TYPE OF SUBMISSION		TY	PE OF ACT	TION	
Notice of Intent	Acidize	Deepen	Prod	uction (Start/Resume)	Water Shut-Off
	Alter Casing	Hydraulic Fracturing	Recla	amation	Well Integrity
C Subsequent Person	Casing Repair	New Construction	Reco	mplete	Other Amended Completions

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be perfonned or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has detennined that the site is ready for final inspection.)

Plug and Abandon

Plug Back

Encana Oil & Gas (USA) Inc. wishes to amend completions information for operations that were performed from 04/13/17 to 05/09/17; which are detailed on the attachment enclosed and now includes the sliding sleeve depths.

OIL CONS. DIV DIST. 3 MAY 3 0 2017

ACCEPTED FOR RECORD

Water Disposal

Temporarily Abandon

MAY 3 n 2017

FARMINGTON FIELD OFFICE
BY:

14.1 hereby certify that the foregoing is true and correct. Name (Printed/Typed)			
Steven Merrell	Title Field Operations Specialist		
Signature Sturn Herrell	Date	05/26/2017	
THE SPACE FOR FEDE	RAL OR STATE (	OFICE USE	
Approved by			131 poe
	Title	Date	
Conditions of approval, if any, are attached. Approval of this notice does not warrant certify that the applicant holds legal or equitable title to those rights in the subject lea which would entitle the applicant to conduct operations thereon.			
Tid- 10 H C C C - 4: - 1001 1 Tid- 42 H C C C - 4: - 1212 1- 4:	1	THE III	V '- 10

Title 18 U.S.C Section 1001 and Title 43 U.S.C Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

North Alamito Unit 306H API: 30-043-21276 Completions Sundry Information dated 05/11/2017:

#### 04/13/2017:

Hook pump up on annuals of 4 1/2" liner, press up to 1,500 psi, held for 30 min, good test, ND BOP, install night cap, secure well, RD Aztec Rig # 395

# 04/17/2017:

- Set sliding sleeve from 11,516' 11,519' TMD
- Stage #1: 11,427' to 11,488'; 24 shots fired.
- Avg BH Rate-60.6 Bpm/Avg Slurry Rate-25 Bpm/Avg N2 Quality 68%/ Total N2-1,288,561 scf/Avg N2 Rate- 36,695 scfm/ Total 20/40 152,001 lbs/ Total 20# Water Frac 636 bbls/15% HCL-1,000 bbls

# 04/27/2017:

- Ran in hole with WL assembly for stage #2. Set plug @ 11,413'. Shot perforations from 11,180-11,398'. 24 shots fired.

### 04/28/2017:

- Frac stage #2 Avg BH Rate-55.4 Bpm/Avg Slurry Rate-23 Bpm/Avg N2 Quality 69%/ Total N2-3,617,541 scf/Avg N2 Rate- 35,129 scfm/ Total 20/40 303,100 lbs/ Total 18# Water Frac 1,669 bbls.
- NU and pressure test lubricator to 3,000 psi. Equilize and open well.
- Perf stage 3. Set plug @ 11,165'. Shot perforations from 10,937-11,149'. 24 shots fired.
- Frac Stage #3 Avg BH Rate-59 Bpm/Avg Slurry Rate-23 Bpm/Avg N2 Quality 70%/ Total N2-2,754,890 scf/Avg N2 Rate- 36,479 scfm/ Total 20/40 300,045 lbs/ Total 15# Water Frac 1,614 bbls.
- Perf stage 4. Set plug @ 10,917'. Shot perforations from 10,684-10,901'. 24 shots fired.

#### 04/29/2017:

- Frac Stage #4 Avg BH Rate-60 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2-2,796,133 scf/Avg N2 Rate- 38,301 scfm/ Total 20/40 298,596 lbs/ Total 15# Water Frac 1655 bbls.
- Perf stage #5. Set plug @ 10,669'. Shot perforations from 10,436-10,653'. 24 shots fired.
- Frac Stage #5 Avg BH Rate-59 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2-2,829,562 scf/Avg N2 Rate- 37,913 scfm/ Total 20/40 300,237 lbs/ Total 16# Water Frac 1655 bbls.

#### 04/30/2017:

- Ran in hole with WL assembly for stage #6. Set plug @ 10,421'. Shot perforations from 10,188'-10,405'. 24 shots fired.
- Frac Stage #6 Avg BH Rate-62 Bpm/Avg Slurry Rate-25 Bpm/Avg N2 Quality 70%/ Total N2-2,757,078 scf/Avg N2 Rate- 37,900 scfm/ Total 20/40 300,081 lbs/ Total 16# Water Frac 1625 bbls
- Ran in hole with WL assembly for stage #7. Set plug @ 10,171'. Shot perforations from 9,940'-10,157'. 24 shots fired.

#### 05/01/2017:

- Pressure test frac lines to 9,000 psi good test bleed pressure down open well and begin fracing stage #7
- Frac Stage #7 Avg BH Rate-59.4 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2-2,353,814 scf/Avg N2 Rate- 37,775 scfm/ Total 20/40 300,300 lbs/ Total 16# Water Frac 1,633 bbls.
- Perf stage #7. Set plug @ 9'925'. Shot perforations from 9,909'-9,698'. 24 shots fired.
- Frac Stage 8 Avg BH Rate-59 Bpm/Avg Slurry Rate-24 Bpm/ Avg Pressure-6548 psi / Avg N2 Quality 70%/ Total N2- 2,361,397 scf/Avg N2 Rate- 38,807 scfm/ Total 20/40 298,200 lbs/ Total 16# Water Frac 1633 bbls.
- Perf stage #9. Set plug @ 9'677'. Shot perforations from 9,444'-9,661'. 24 shots fired.
- Frac Stage 9 Avg BH Rate-62 Bpm/Avg Slurry Rate-24 Bpm/ Avg Pressure-6519 psi / Avg N2 Quality 70%/ Total N2- 2,747,589 scf/Avg N2 Rate- 38,194 scfm/ Total 20/40 300,498 lbs/ Total 16# Water Frac 1582 bbls.
- Perf stage #10. Set plug @ 9'429'. Shot perforations from 9,203'-9,409'. 24 shots fired.

#### 05/02/2017:

- Frac Stage 10 Avg BH Rate-60 Bpm/Avg Slurry Rate-24 Bpm/ Avg Pressure-6218 psi / Avg N2 Quality 70%/ Total N2- 2,379,598 scf/Avg N2 Rate- 38,985 scfm/ Total 20/40 303,270 lbs/ Total 16# Water Frac 1436 bbls.
- Perf stage #11. Set plug @ 9'188'. Shot perforations from 8,963'-9,173'. 24 shots fired.

## 05/03/2017:

- Frac Stage 11 of 25 Avg BH Rate-60 Bpm/Avg Slurry Rate-24 Bpm/ Avg Pressure-6,117 psi / Avg N2 Quality 70%/ Total N2- 2,327,857 scf/Avg N2 Rate- 38,675 scfm/ Total 20/40 298,940 lbs/ Total 15# Water Frac 1,574 bbls.
- Perf stage #12 of 25. Set plug @ 8,949'. Shot perforations from 8,723'-8,933'. 24 shots fired
- Frac Stage 12 of 25 Avg BH Rate-60 Bpm/Avg Slurry Rate-24 Bpm/ Avg Pressure-6,083 psi / Avg N2 Quality 70%/ Total N2- 2,338,217 scf/Avg N2 Rate- 39,224 scfm/ Total 20/40 299,540 lbs/ Total 12# Water Frac 1,532 bbls.

#### 05/04/17:

- Perf stage #13 of 25. Set plug @ 8,714'. Shot perforations from 8,483'-8,693'. 24 shots fired.
- Frac Stage #13 of 25 Avg BH Rate- 60.6 Bpm/Avg Slurry Rate- 25 Bpm/Avg Preesure-6,393 psi/Avg N2 Quality 69%/ Total N2- 2,301,263 scf/Avg N2 Rate- 38,356 scfm/ Total 20/40 298,500 lbs/ Total 14# Water Frac 1,546 bbls.
- Perf stage #14 of 25. Set plug @ 8,469'. Shot perforations from 8,243'-8,453'. 24 shots fired.
- Frac Stage #14 of 25 Avg BH Rate- 59.7 Bpm/Avg Slurry Rate- 25 Bpm/Avg Preesure-5,810 psi/Avg N2 Quality 70%/ Total N2- 2,343,470 scf/Avg N2 Rate- 38,674 scfm/ Total 20/40 312,700 lbs/ Total 12# Water Frac 1,526 bbls.
- Perf stage #15 of 25. Set plug @ 8,229'. Shot perforations from 8,000'-8,213'. 24 shots fired
- Frac Stage #15 of 25 Avg BH Rate- 59.7 Bpm/Avg Slurry Rate- 24 Bpm/Avg Preesure- 6,046

#### 05/05/17:

- Frac Stage #16 of 25 Avg BH Rate- 60 Bpm/Avg Slurry Rate- 25 Bpm/Avg Preesure-5,697 psi/Avg N2 Quality 70%/ Total N2- 2,368,916 scf/Avg N2 Rate- 37,759 scfm/ Total 20/40 296,000 lbs/ Total 11# Water Frac 1,477 bbls.
- Perf stage #17 of 25. Set plug @ 7,749'. Shot perforations from 7,523'-7,733'. 24 shots fired.

## 05/06/17:

- Frac Stage #17 of 25 Avg BH Rate- 58.9 Bpm/Avg Slurry Rate- 24 Bpm/Avg Pressure- 5,981 psi/Avg N2 Quality 69%/ Total N2- 2,315,631 scf/Avg N2 Rate- 38,095 scfm/ Total 20/40 299,700 lbs/ Total 12# Water Frac 1,495 bbls.
- Perf stage #18 of 25. Set plug @ 7,507'. Shot perforations from 7,313'-7,493'. Last perf gun failed to shoot. Will shoot additional gun to cover interval on perf stage 19.
- Frac Stage #18 of 25 Avg BH Rate- 59.3 Bpm/Avg Slurry Rate- 24 Bpm/Avg Pressure- 6,051 psi/Avg N2 Quality 69%/ Total N2- 2,332,094 scf/Avg N2 Rate- 37,719 scfm/ Total 20/40 300,100 lbs/ Total 14# Water Frac 1,505 bbls.
- Perf stage #19 of 25. Ran in with 9 perforating guns and plug to shoot additional cluster from failed prior attempt. Set plug @ 7,303'. Shot perforations from 7,043'-7,283'. 24 shots fired.
- Frac Stage #19 of 25 Avg BH Rate- 60 Bpm/Avg Slurry Rate- 24 Bpm/Avg Pressure- 5,546 psi/Avg N2 Quality 70%/ Total N2- 2,309,671 scf/Avg N2 Rate- 38,671 scfm/ Total 20/40 305,000 lbs/ Total 11# Water Frac 1,400 bbls.
- Perf stage #20 of 25. Set plug @ 7,025'. Shot perforations from 6,803'-7,013'. 24 shots fired.

#### 05/07/17:

- Frac Stage #20 of 25 Avg BH Rate- 60.3 Bpm/Avg Slurry Rate- 24 Bpm/Avg Pressure- 5,838 psi/Avg N2 Quality 70%/ Total N2- 2,342,687 scf/Avg N2 Rate- 38,940 scfm/ Total 20/40 300,100 lbs/ Total 12# Water Frac 1,465 bbls.
- Perf stage #21 of 25. Set plug @ 6,789'. Shot perforations from 6,563'-6,773'. 24 shots fired.
- Frac Stage #21 of 25 Avg BH Rate- 60 Bpm/Avg Slurry Rate- 24 Bpm/Avg Pressure- 5,897 psi/Avg N2 Quality 70%/ Total N2- 2,372,783 scf/Avg N2 Rate- 39,072 scfm/ Total 20/40 301,000 lbs/ Total 10# Water Frac 1,398 bbls.
- Perf stage #22 of 25. Set plug @ 6,549'. Shot perforations from 6,327'-6533'. 24 shots fired.
- Frac Stage #22 of 25 Avg BH Rate- 62 Bpm/Avg Slurry Rate- 24 Bpm/Avg Pressure- 6,051 psi/Avg N2 Quality 70%/ Total N2- 2,332,094 scf/Avg N2 Rate- 37,719 scfm/ Total 20/40 300,100 lbs/ Total 10# Water Frac 1,505 bbls.
- Perf stage #23 of 25. Set plug @ 6,309'. Shot perforations from 6,083'-6,293'. 24 shots fired.

### 05/08/17:

Frac Stage #23 of 25 Avg BH Rate- 60.3 Bpm/Avg Slurry Rate- 24 Bpm/Avg Pressure- 5,516 psi/Avg N2 Quality 70%/ Total N2- 2,467,977 scf/Avg N2 Rate- 37,885 scfm/ Total 20/40 299,800 lbs/ Total 10# Water Frac 1,406 bbls.

- Perf stage #24 of 25. Set Halliburton Obsidian plug @ 6,069'. Shot perforations from 5,843'- 6,053'. 24 shots fired.
- Frac Stage #24 of 25 Avg BH Rate- 60.1 Bpm/Avg Slurry Rate- 24 Bpm/Avg Pressure- 5,397 psi/Avg N2 Quality 70%/ Total N2- 2,320,400 scf/Avg N2 Rate- 39,391 scfm/ Total 20/40 304,000 lbs/ Total 10# Water Frac 1,321 bbls.
- Perf stage #25 of 25. Set Halliburton Obsidian plug @ 5,289'. Shot perforations from 5,603'- 5,813'. 24 shots fired.
- Frac Stage #25 of 25 Avg BH Rate- 60 Bpm/Avg Slurry Rate- 24 Bpm/Avg Pressure- 5,316 psi/Avg N2 Quality 70%/ Total N2- 2,166,365 scf/Avg N2 Rate- 38,813 scfm/ Total 20/40 277,400 lbs/ Total 10# Water Frac 1,250 bbls.

# 05/09/17:

- RIH in hole with Kill plug and set @ 5,505' WLM---(pressure before set kill plug 1088 psi).
- Monitor flow and pressure for 5 minutes (okay). Shut in well.

Form 3160-5 (June 2015)

# UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FORM APPROVED OMB No. 1004-0137 Expires: January 31, 2018

5.	Lease	Serial	No.
N	MNM	16586	6

		NMNM 16586		
		6 If Indian, Allottee or Tribe Name		
	• •	PD) for such proposals.	N/A	
SUBMIT IN	TRIPLICATE - Other instru	uctions on page 2	7. If Unit of CA/Agreement, Name and/or No.	
1. Type of Well	1.00		NMNM 135229X	
Clost Well Con Well Color		8. Well Name and No. North Alamito Unit 306H (FKA Lybrook L34-2307 01H)		
		9. API Well No. 30-043-21276		
3a. Address		3b. Phone No. (include area code)	10. Field and Pool or Exploratory Area	
370 17th Street, Suite 1700 Denver, CO 80202		(720) 876-5331	Alamito Mancos N (OIL)	
4. Location of Well (Footage, Sec., T., F			11. Country or Parish, State	
SHL: 1404' FSL and 759' FWL Section 34, T23N, R7W BHL: 693' FNL and 645' FWL Section 33, T23N, R7W		Sandoval County, NM		
12. CHE	CK THE APPROPRIATE B	OX(ES) TO INDICATE NATURE OF NOT	ICE, REPORT OR OTHER DATA	
TYPE OF SUBMISSION		TYPE OF AC	TION	
Notice of Intent	Acidize Alter Casing		duction (Start/Resume) Water Shut-Off amation Well Integrity	
Subsequent Report	Casing Repair Change Plans		omplete	
Final Abandonment Notice	Convert to Injection	Plug Back Wate	er Disposal	
the proposal is to deepen directiona the Bond under which the work wil completion of the involved operation	ally or recomplete horizontall be performed or provide the ons. If the operation results in	ly, give subsurface locations and measured at e Bond No. on file with BLM/BIA. Required n a multiple completion or recompletion in a	ate of any proposed work and approximate duration thereof. If nd true vertical depths of all pertinent markers and zones. Attac subsequent reports must be filed within 30 days following new interval, a Form 3160-4 must be filed once testing has bee e been completed and the operator has detennined that the site	
Encana Oil & Gas (USA) Inc. p	erformed completion oper	rations from 04/13/17 to 05/09/17; which	are detailed on the attachment enclosed.	
lin.	cons. DIV DIST. 3	ACCEPTED FOR RECORD		

OIL CONS. DIV DIST. 3

MAY 1 7 2017

FARMINGTON FIELD OFFICE
BY:

**RECEIVED** 

MAY 1 6 2017

Farmington Field Office Bureau of Land Management

14. I hereby certify that the foregoing is true and correct. Name ( <i>Printed Typed</i> ) Holly Hill	Title Senior Regulatory Analyst		
Signature & Oly Alig	Date 05/11/2017		
THE SPACE FOR FEDI	ERAL OR STATE O	FICE USE	
Approved by			
	Title	Date	
Conditions of approval, if any, are attached. Approval of this notice does not warran certify that the applicant holds legal or equitable title to those rights in the subject le which would entitle the applicant to conduct operations thereon.			
Title 18 U.S.C Section 1001 and Title 43 U.S.C Section 1212, make it a crime for an any false, fictitious or fraudulent statements or representations as to any matter within		illfully to make to any department or agency of the United States	

(Instructions on page 2)



# North Alamito Unit 306H API: 30-043-21276 Completions Sundry Information dated 05/11/2017:

#### 04/13/2017:

Hook pump up on annuals of 4 1/2" liner, press up to 1,500 psi, held for 30 min, good test, ND BOP, install night cap, secure well, RD Aztec Rig # 395

#### 04/17/2017:

- Stage #1: 11,427' to 11,488'; 24 shots fired.
- Avg BH Rate-60.6 Bpm/Avg Slurry Rate-25 Bpm/Avg N2 Quality 68%/ Total N2-1,288,561 scf/Avg N2 Rate- 36,695 scfm/ Total 20/40 152,001 lbs/ Total 20# Water Frac 636 bbls/15% HCL-1,000 bbls

# 04/27/2017:

- Ran in hole with WL assembly for stage #2. Set plug @ 11,413'. Shot perforations from 11,180-11,398'. 24 shots fired.

#### 04/28/2017:

- Frac stage #2 Avg BH Rate-55.4 Bpm/Avg Slurry Rate-23 Bpm/Avg N2 Quality 69%/ Total N2-3,617,541 scf/Avg N2 Rate- 35,129 scfm/ Total 20/40 303,100 lbs/ Total 18# Water Frac 1,669 bbls
- NU and pressure test lubricator to 3,000 psi. Equilize and open well.
- Perf stage 3. Set plug @ 11,165'. Shot perforations from 10,937-11,149'. 24 shots fired.
- Frac Stage #3 Avg BH Rate-59 Bpm/Avg Slurry Rate-23 Bpm/Avg N2 Quality 70%/ Total N2-2,754,890 scf/Avg N2 Rate- 36,479 scfm/ Total 20/40 300,045 lbs/ Total 15# Water Frac 1,614 bbls.
- Perf stage 4. Set plug @ 10,917'. Shot perforations from 10,684-10,901'. 24 shots fired.

#### 04/29/2017:

- Frac Stage #4 Avg BH Rate-60 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2-2,796,133 scf/Avg N2 Rate- 38,301 scfm/ Total 20/40 298,596 lbs/ Total 15# Water Frac 1655 bbls.
- Perf stage #5. Set plug @ 10,669'. Shot perforations from 10,436-10,653'. 24 shots fired.
- Frac Stage #5 Avg BH Rate-59 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2-2,829,562 scf/Avg N2 Rate- 37,913 scfm/ Total 20/40 300,237 lbs/ Total 16# Water Frac 1655 bbls.

## 04/30/2017:

- Ran in hole with WL assembly for stage #6. Set plug @ 10,421'. Shot perforations from 10,188'-10,405'. 24 shots fired.
- Frac Stage #6 Avg BH Rate-62 Bpm/Avg Slurry Rate-25 Bpm/Avg N2 Quality 70%/ Total N2-2,757,078 scf/Avg N2 Rate- 37,900 scfm/ Total 20/40 300,081 lbs/ Total 16# Water Frac 1625 bbls.
- Ran in hole with WL assembly for stage #7. Set plug @ 10,171'. Shot perforations from 9,940'- 10,157'. 24 shots fired.

#### 05/01/2017:

- Pressure test frac lines to 9,000 psi good test bleed pressure down open well and begin fracing stage #7
- Frac Stage #7 Avg BH Rate-59.4 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2-2,353,814 scf/Avg N2 Rate- 37,775 scfm/ Total 20/40 300,300 lbs/ Total 16# Water Frac 1,633 bbls
- Perf stage #7. Set plug @ 9'925'. Shot perforations from 9,909'-9,698'. 24 shots fired.
- Frac Stage 8 Avg BH Rate-59 Bpm/Avg Slurry Rate-24 Bpm/ Avg Pressure-6548 psi / Avg N2 Quality 70%/ Total N2- 2,361,397 scf/Avg N2 Rate- 38,807 scfm/ Total 20/40 298,200 lbs/ Total 16# Water Frac 1633 bbls.
- Perf stage #9. Set plug @ 9'677'. Shot perforations from 9,444'-9,661'. 24 shots fired.
- Frac Stage 9 Avg BH Rate-62 Bpm/Avg Slurry Rate-24 Bpm/ Avg Pressure-6519 psi / Avg N2 Quality 70%/ Total N2- 2,747,589 scf/Avg N2 Rate- 38,194 scfm/ Total 20/40 300,498 lbs/ Total 16# Water Frac 1582 bbls.
- Perf stage #10. Set plug @ 9'429'. Shot perforations from 9,203'-9,409'. 24 shots fired.

#### 05/02/2017:

- Frac Stage 10 Avg BH Rate-60 Bpm/Avg Slurry Rate-24 Bpm/ Avg Pressure-6218 psi / Avg N2 Quality 70%/ Total N2- 2,379,598 scf/Avg N2 Rate- 38,985 scfm/ Total 20/40 303,270 lbs/ Total 16# Water Frac 1436 bbls.
- Perf stage #11. Set plug @ 9'188'. Shot perforations from 8,963'-9,173'. 24 shots fired.

# 05/03/2017:

- Frac Stage 11 of 25 Avg BH Rate-60 Bpm/Avg Slurry Rate-24 Bpm/ Avg Pressure-6,117 psi / Avg N2 Quality 70%/ Total N2- 2,327,857 scf/Avg N2 Rate- 38,675 scfm/ Total 20/40 298,940 lbs/ Total 15# Water Frac 1,574 bbls.
- Perf stage #12 of 25. Set plug @ 8,949'. Shot perforations from 8,723'-8,933'. 24 shots fired.
- Frac Stage 12 of 25 Avg BH Rate-60 Bpm/Avg Slurry Rate-24 Bpm/ Avg Pressure-6,083 psi / Avg N2 Quality 70%/ Total N2- 2,338,217 scf/Avg N2 Rate- 39,224 scfm/ Total 20/40 299,540 lbs/ Total 12# Water Frac 1,532 bbls.

#### 05/04/17:

- Perf stage #13 of 25. Set plug @ 8,714'. Shot perforations from 8,483'-8,693'. 24 shots fired.
- Frac Stage #13 of 25 Avg BH Rate- 60.6 Bpm/Avg Slurry Rate- 25 Bpm/Avg Preesure-6,393 psi/Avg N2 Quality 69%/ Total N2- 2,301,263 scf/Avg N2 Rate- 38,356 scfm/ Total 20/40 298,500 lbs/ Total 14# Water Frac 1,546 bbls.
- Perf stage #14 of 25. Set plug @ 8,469'. Shot perforations from 8,243'-8,453'. 24 shots fired.
- Frac Stage #14 of 25 Avg BH Rate- 59.7 Bpm/Avg Slurry Rate- 25 Bpm/Avg Preesure-5,810 psi/Avg N2 Quality 70%/ Total N2- 2,343,470 scf/Avg N2 Rate- 38,674 scfm/ Total 20/40 312,700 lbs/ Total 12# Water Frac 1,526 bbls.
- Perf stage #15 of 25. Set plug @ 8,229'. Shot perforations from 8,000'-8,213'. 24 shots fired.
- Frac Stage #15 of 25 Avg BH Rate- 59.7 Bpm/Avg Slurry Rate- 24 Bpm/Avg Preesure- 6,046

# 05/05/17:

- Frac Stage #16 of 25 Avg BH Rate- 60 Bpm/Avg Slurry Rate- 25 Bpm/Avg Preesure-5,697 psi/Avg N2 Quality 70%/ Total N2- 2,368,916 scf/Avg N2 Rate- 37,759 scfm/ Total 20/40 296,000 lbs/ Total 11# Water Frac 1,477 bbls.
- Perf stage #17 of 25. Set plug @ 7,749'. Shot perforations from 7,523'-7,733'. 24 shots fired.

# 05/06/17:

- Frac Stage #17 of 25 Avg BH Rate- 58.9 Bpm/Avg Slurry Rate- 24 Bpm/Avg Pressure- 5,981 psi/Avg N2 Quality 69%/ Total N2- 2,315,631 scf/Avg N2 Rate- 38,095 scfm/ Total 20/40 299,700 lbs/ Total 12# Water Frac 1,495 bbls.
- Perf stage #18 of 25. Set plug @ 7,507'. Shot perforations from 7,313'-7,493'. Last perf gun failed to shoot. Will shoot additional gun to cover interval on perf stage 19.
- Frac Stage #18 of 25 Avg BH Rate- 59.3 Bpm/Avg Slurry Rate- 24 Bpm/Avg Pressure- 6,051 psi/Avg N2 Quality 69%/ Total N2- 2,332,094 scf/Avg N2 Rate- 37,719 scfm/ Total 20/40 300,100 lbs/ Total 14# Water Frac 1,505 bbls.
- Perf stage #19 of 25. Ran in with 9 perforating guns and plug to shoot additional cluster from failed prior attempt. Set plug @ 7,303'. Shot perforations from 7,043'-7,283'. 24 shots fired.
- Frac Stage #19 of 25 Avg BH Rate- 60 Bpm/Avg Slurry Rate- 24 Bpm/Avg Pressure- 5,546 psi/Avg N2 Quality 70%/ Total N2- 2,309,671 scf/Avg N2 Rate- 38,671 scfm/ Total 20/40 305,000 lbs/ Total 11# Water Frac 1,400 bbls.
- Perf stage #20 of 25. Set plug @ 7,025'. Shot perforations from 6,803'-7,013'. 24 shots fired.

#### 05/07/17:

- Frac Stage #20 of 25 Avg BH Rate- 60.3 Bpm/Avg Slurry Rate- 24 Bpm/Avg Pressure- 5,838 psi/Avg N2 Quality 70%/ Total N2- 2,342,687 scf/Avg N2 Rate- 38,940 scfm/ Total 20/40 300,100 lbs/ Total 12# Water Frac 1,465 bbls.
- Perf stage #21 of 25. Set plug @ 6,789'. Shot perforations from 6,563'-6,773'. 24 shots fired.
- Frac Stage #21 of 25 Avg BH Rate- 60 Bpm/Avg Slurry Rate- 24 Bpm/Avg Pressure- 5,897 psi/Avg N2 Quality 70%/ Total N2- 2,372,783 scf/Avg N2 Rate- 39,072 scfm/ Total 20/40 301,000 lbs/ Total 10# Water Frac 1,398 bbls.
- Perf stage #22 of 25. Set plug @ 6,549'. Shot perforations from 6,327'-6533'. 24 shots fired.
- Frac Stage #22 of 25 Avg BH Rate- 62 Bpm/Avg Slurry Rate- 24 Bpm/Avg Pressure- 6,051 psi/Avg N2 Quality 70%/ Total N2- 2,332,094 scf/Avg N2 Rate- 37,719 scfm/ Total 20/40 300,100 lbs/ Total 10# Water Frac 1,505 bbls.
- Perf stage #23 of 25. Set plug @ 6,309'. Shot perforations from 6,083'-6,293'. 24 shots fired.

#### 05/08/17:

- Frac Stage #23 of 25 Avg BH Rate- 60.3 Bpm/Avg Slurry Rate- 24 Bpm/Avg Pressure- 5,516 psi/Avg N2 Quality 70%/ Total N2- 2,467,977 scf/Avg N2 Rate- 37,885 scfm/ Total 20/40 299,800 lbs/ Total 10# Water Frac 1,406 bbls.

- Perf stage #24 of 25. Set Halliburton Obsidian plug @ 6,069'. Shot perforations from 5,843'- 6,053'. 24 shots fired.
- Frac Stage #24 of 25 Avg BH Rate- 60.1 Bpm/Avg Slurry Rate- 24 Bpm/Avg Pressure- 5,397 psi/Avg N2 Quality 70%/ Total N2- 2,320,400 scf/Avg N2 Rate- 39,391 scfm/ Total 20/40 304,000 lbs/ Total 10# Water Frac 1,321 bbls.
- Perf stage #25 of 25. Set Halliburton Obsidian plug @ 5,289'. Shot perforations from 5,603'- 5,813'. 24 shots fired.
- Frac Stage #25 of 25 Avg BH Rate- 60 Bpm/Avg Slurry Rate- 24 Bpm/Avg Pressure- 5,316 psi/Avg N2 Quality 70%/ Total N2- 2,166,365 scf/Avg N2 Rate- 38,813 scfm/ Total 20/40 277,400 lbs/ Total 10# Water Frac 1,250 bbls.

### 05/09/17:

- RIH in hole with Kill plug and set @ 5,505' WLM---(pressure before set kill plug 1088 psi).
- Monitor flow and pressure for 5 minutes (okay). Shut in well.