

RECEIVED

JUL 13 2017

Form 3160-5  
(June 2015)UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENTFORM APPROVED  
OMB No. 1004-0137  
Expires: January 31, 2018

## SUNDRY NOTICES AND REPORTS ON WELLS

**Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.**5. Lease Serial No.  
NMNM 123746. If Indian, Allottee or Tribe Name  
N/A

SUBMIT IN TRIPLICATE - Other instructions on page 2

## 1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

## 2. Name of Operator

Encana Oil &amp; Gas (USA) Inc.

## 3a. Address

370 17th Street, Suite 1700  
Denver, CO 80202

## 3b. Phone No. (include area code)

(720) 876-3533

## 4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

SHL: 2428' FSL and 345' FWL Section 27, T24N, R9W  
BHL: 2075' FSL and 186' FWL Section 35, T24N, R9W

## 7. If Unit of CA/Agreement, Name and/or No.

NMNM 132981A

## 8. Well Name and No.

Nageezi Unit 221H

## 9. API Well No.

30-045-35820

## 10. Field and Pool or Exploratory Area

Nageezi Unit; Mancos (Oil)

## 11. Country or Parish, State

San Juan County, NM

## 12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Hydraulic Fracturing	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other Completions Information
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

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 recompleat 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 performed 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 recompleat 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 determined that the site is ready for final inspection.)

Encana Oil & Gas (USA) Inc. performed completion operations from 06/04/2017 to 06/10/2017, which are detailed on the attachment enclosed.

Please note, this sundry is being resubmitted due to the Stage #1 perforation information being inadvertently omitted from the previous submittal. The updated report is attached showing the perfs that were completed on 06/01/2017.

OIL CONS. DIV DIST. 3

JUL 19 2017

ACCEPTED FOR RECORD

JUL 14 2017

FARMINGTON FIELD OFFICE  
BY: 

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)

Steven Merrell

Title Senior Regulatory Analyst

Signature



Date

07/13/2017

## THE SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

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)

NMOCD 

12

**Nageezi Unit 221H API: 30-045-35820 Completions Sundry Information dated 06/23/2017:**

**04/26/2017:**

- 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, Rig down

**06/01/2017:**

- Pressure test annuals to 2,000 psi, shut in pressure & monitor.
- Pressure test lines to 9,000 psi, test casing to 6062 psi. Bring pressure up to 6,231 psi to open toe sleeve. Pump 50 bbls to establish injection. 11 bpm @ 4,491 psi. Pump 24 bbl 7.5% acid @ 8 bpm @ 3,703 psi, flush with 187 bbls 2% KCL 12 bpm @ 4,479 psi, ISIP 1,293 psi.
- RU basin perforators wireline.
- Pressure test lubricator to 4,500 psi, good test.
- PU perf guns, RIH with wireline, pump down to depth, perf 12,785' to 12,845', 18 total holes. Log out of hole, laid gun down. All shots fired. Well shut in and secured.

**06/04/2017:**

- Frac Stage #1, Avg BH Rate-57.3 Bpm/Avg Slurry Rate-22 Bpm/Avg N2 Quality 71%/ Total N2-1,670,489 scf/Avg N2 Rate- 35,586 scfm/ Total 20/40 151,202 lbs/ Total 20# Water Frac 1272 bbls
- Pressure Test Lubricator to 4500 psi. RIH to set Frac Plug at 12,771'RIH to Perforate stage #2. Perforate 12,575' to 12,755', 30 holes. Plug set, no shots fired on gun.
- Rope socket good, collar locator good, Cut off 200' of line re-head. resume perforating.
- Pressure Test Lubricator to 4500 psi. RIH to Perforate stage #2 perforate 12,575' to 12755', 30 holes. TOO H all shots fired.
- Prime pumps, pressure test H2O, N2 lines to 9500 psi, Put 2000 psi on backside, monitor.
- Frac Stage #2, Avg BH Rate-58.5 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 69%/ Total N2-1,828,910 scf/Avg N2 Rate- 32,700 scfm/ Total 20/40 254,011 lbs/ Total 20# Water Frac 1640 bbls
- RIH to Set Frac Plug, Perforate stage #3. Set Frac Plug @ 12566'. Perforate 12,375' to 12,555', POOH, plug set all shots fired.
- Frac Stage # 3, Avg BH Rate-61.7 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 71%/ Total N2-2,340,365 scf/Avg N2 Rate- 35,811 scfm/ Total 20/40 250,022 lbs/ Total 20# Water Frac 1642 bbls
- RIH to Set Frac Plug, Perforate stage # 4. Set Frac Plug @ 12,358'. Perforate 12,175' to 12,348', POOH, plug set all shots fired.
- Frac Stage # 4, Avg BH Rate-60 Bpm/Avg Slurry Rate-25 Bpm/Avg N2 Quality 70%/ Total N2-2,214,123 scf/Avg N2 Rate- 35,572 scfm/ Total 20/40 249,900 lbs/ Total 20# Water Frac 1657 bbls
- RU and Test Lubricator to 1500 psi, test was not satisfactory. BOP was leaking, made several attempts to repair, retest lubricator, BOP still leaking.

**06/05/2017:**

- RIH to set Frac Plug at 12,166', RIH to Perforate Stage #5. Perforate 11,975' to 12,150', 30 holes.
- Frac Stage #5, Avg BH Rate-58.5 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 71%/ Total N2-1,733,360 scf/Avg N2 Rate- 34,754 scfm/ Total 20/40 264,102 lbs/ Total 20# Water Frac 1,432 bbls

- RIH to set Frac Plug at 11,966', RIH to Perforate Stage #6. Perforate 11,775' to 11,966', 30 holes.
- Frac Stage #6, Avg BH Rate-61.2 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2- 1,831,784 scf/Avg N2 Rate- 35,136 scfm/ Total 20/40 249,678 lbs/ Total 20# Water Frac 1,558 bbls
- RIH to set Frac Plug at 11,766', RIH to Perforate Stage #7 11,579' to 11,755', 30 holes.
- Short in gun. POOH check to see if plug set. Plug did not set.
- R & R with new plug and guns.
- Test Lubricator to 4550, test good.
- RIH to set Frac Plug at 11,766', RIH to Perforate Stage #7 11,579' to 11,755', 30 holes.
- POOH plug set all shot.
- Frac Stage # 7, Avg BH Rate-61.1 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2- 2,297,826 scf/Avg N2 Rate- 35,676 scfm/ Total 20/40 249,700 lbs/ Total 20# Water Frac 1,886 bbls
- RIH to set Frac Plug at 11,566', RIH to Perforate Stage # 8 11,375' to 11,555', 30 holes.
- POOH plug set all shot.
- Frac Stage # 8, Avg BH Rate-59.1 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 71%/ Total N2- 2,515,350 scf/Avg N2 Rate- 35,573 scfm/ Total 20/40 248,400 lbs/ Total 20# Water Frac 1,726 bbls

#### 06/06/2017:

- RIH to set Frac Plug at 11,365', RIH to Perforate Stage # 9 11,175' to 11,355', 30 holes.
- POOH plug set all shot.
- Frac Stage # 9, Avg BH Rate- 59.3 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2- 2,272,578 scf/Avg N2 Rate- 35,070 scfm/ Total 20/40 250,700 lbs/ Total 20# Water Frac 1,418 bbls
- Well pressured out during flush. Flushed 52 bbls before screen out.
- Flow back well starting on 16/64" choke up to 1". Flowed 353 bbls. 1011 psi. @ 1.5 to 2 bpm.
- Test pump down lines to 4500 psi. Pump in well: 2 bpm @ 1264, 3 bpm @ 962 psi, 6 bpm @ 1282 psi, 8 bpm @ 2630 psi for a total of 353 bbls.
- R/U halliburton to sweep csg. Pump 18 bpm @ 1026 psi, 24 bpm @ 3683 psi, 30 bpm @ 4342 psi, 42 @ 5263 psi. isip 1804. 190 bbls pumped. RU and Pressure Test Lubricator to 4500 psi. RIH to Set Frac Plug, Perforate stage #10
- R/U Halliburton to sweep csg. Pump 18 bpm @ 1026 psi, 24 bpm @ 3683 psi, 30 bpm @ 4342 psi, 42 @ 5263 psi. isip 1804. 190 bbls pumped.
- RU and Pressure Test Lubricator to 4500 psi.
- Pumped plug and gun to 9,100'. Halliburton pump died. Check engine light came on, tension on wireline went from 700# to 450#. Went to get tension back and pulled 2,200 #. Got pump running went to 3 bpm, 6 bpm, 9 bpm, pressure spiked to 4,000 psi.
- Surged well, moved 40'. Surged well again nothing moved. Tried surging, nothing moved. Pumped in to well 3 bpm, 5 bpm, 6 bpm, well pressured out. Scoped in boom and pulled 3,500#s.
- R/U Halliburton to pump 20 bbl 30# gel pill. Pump 20# bbl gel pill.
- R/U Halliburton to pump 20 bbl 30# gel pill. Pump 30# 20 bbl gel pill @ 15 bpm with no success on getting free on WL made several attempts with no success pumping multiple 30# gel pills
- Call was made to superintendent and orders were to set plug @ stuck depth and POOH with guns plug set @ 9,112' WLM POOH with guns disarm. Developed plan to drop ball and try to hit plug with aggressive rate and see if we could move plug to previous perfs on stage #9. Total fluid pump 660 bbls.

**06/07/2017:**

- RIH to set Frac Plug at 11,167', Perforate stage #10 from 10,975' to 11,155', 30 holes. All shots fired.
- Frac Stage #10, Avg BH Rate-62 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2- 2,260,898 scf/Avg N2 Rate- 34,053 scfm/ Total 20/40 250,400 lbs/ Total 20# Water Frac 1,300 bbls
- RIH to set Frac Plug at 10,966', Perforate stage #11 from 10,775' to 10,950', 30 holes. All shots fired.
- Frac Stage #11, Avg BH Rate-58.1 Bpm/Avg Slurry Rate-22 Bpm/Avg N2 Quality 70%/ Total N2- 2,040,981 scf/Avg N2 Rate- 33,585 scfm/ Total 20/40 250,400 lbs/ Total 20# Water Frac 1,643 bbls.
- RIH to Perforate stage #12 10,575' to 10,755', 30 holes. TOOH all shots fired.
- Frac Stage #12, Avg BH Rate-56 Bpm/Avg Slurry Rate-22 Bpm/Avg N2 Quality 70%/ Total N2- 2,060,320 scf/Avg N2 Rate- 33,494 scfm/ Total 20/40 250,401 lbs/ Total 20# Water Frac 1,616
- RIH to set Frac Plug at 10,566', RIH to Perforate stage stage #13 10,375' to 10,555', 30 holes. All shots fired.
- Frac Stage #13, Avg BH Rate-60 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2- 1,901,296 scf/Avg N2 Rate- 36,019 scfm/ Total 20/40 250,000 lbs/ Total 20# Water Frac 1,544
- RIH to set Frac Plug at 10,366', RIH to Perforate stage stage #14 10,175' to 10,366', 30 holes. All shots fired.
- Frac Stage #14, Avg BH Rate-60 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2- 1,833,731 scf/Avg N2 Rate- 35,822 scfm/ Total 20/40 250,000 lbs/ Total 20# Water Frac 1,484
- RIH to set Frac Plug at 10,166'. Perforate stage #15 9,975' to 10,155', 30 holes. All shots fired
- Frac Stage #15, Avg BH Rate-60 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2- 2,211,042 scf/Avg N2 Rate- 35,390 scfm/ Total 20/40 250,270 lbs/ Total 18# Water Frac 1,473 bbls.
- RIH to set Frac Plug at 9,966'. Perforate stage #16 9,777' to 9,955', 30 holes. All shots fired.
- Had to SD after seating ball due to hydration unit actuator valves did not open to start making gel. Fixed issue and began frac operations on stage #16
- Frac Stage #16, Avg BH Rate-60 Bpm/Avg Slurry Rate-25 Bpm/Avg N2 Quality 70%/ Total N2- 2,396,022 scf/Avg N2 Rate- 35,400 scfm/ Total 20/40 250,330 lbs/ Total 18# Water Frac 1,590 bbls.

**06/08/2017:**

- RIH to set Frac Plug at 9,766', Perforate stage #17 9,575' to 9,755', 30 holes. All shots fired.
- Frac Stage #17, Avg BH Rate-60 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2- 2,,098,414 scf/Avg N2 Rate- 35,313 scfm/ Total 20/40 249,580 lbs/ Total 18# Water Frac 1,411 bbls
- RIH to set Frac Plug at 9,560', Perforate stage #18 9,375' to 9,550', 30 holes. All shots fired.
- Frac Stage #18, Avg BH Rate-60 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2- 2,246,383 scf/Avg N2 Rate- 35,520 scfm/ Total 20/40 251,550 lbs/ Total 18# Water Frac 1,476 bbls
- RIH to set Frac Plug at 9,366'. RIH to Perforate stage #19 9,175' to 9,352', 30 holes. All shots fired.
- Maintenance on pump. Seats replaced.

- Frac Stage #19, Avg BH Rate-59 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2- 1,804,164 scf/Avg N2 Rate- 34,892 scfm/ Total 20/40 250,100 lbs/ Total 20# Water Frac 1,368 bbls.
- RIH to set Frac Plug at 9,166 RIH to Perforate stage stage #20 8,975' to 9,155', 30 holes. All shots fired.
- Frac Stage #20, Avg BH Rate-60 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2- 1,784,063 scf/Avg N2 Rate- 35,773 scfm/ Total 20/40 250,370 lbs/ Total 20# Water Frac 1,380 bbls.
- RIH to set Frac Plug at 8,955.
- RIH to Perforate stage #21 8,775' to 8,955', 30 holes. All shots fired.
- Frac Stage #21, Avg BH Rate-59.5 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2- 1,783,614 scf/Avg N2 Rate- 35,338 scfm/ Total 20/40 250,000 lbs/ Total 20# Water Frac 1,416 bbls
- RIH to set Frac Plug at 8,766' RIH to Perforate stage #22 8,575' to 8,755', 30 holes. All shots fired.
- Frac Stage #22, Avg BH Rate-61 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2- 2,167,910 scf/Avg N2 Rate- 34,603 scfm/ Total 20/40 250,350 lbs/ Total 15# Water Frac 1,383 bbls
- RIH to set Frac Plug at 8,566' RIH to Perforate stage #23 8,375' to 8,555', 30 holes. All shots fired.
- Frac Stage #23, Avg BH Rate-60 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2- 2,152,202 scf/Avg N2 Rate- 35,264 scfm/ Total 20/40 249,960 lbs/ Total 15# Water Frac 1,370 bbls
- RIH with plug and guns @ 250' lost CCL POOH cut 150' of line rehead and ran back in hole.
- RIH to set Frac Plug at 8,360' RIH to Perforate stage #24 8,175' to 8,350', 30 holes. All shots fired.
- Frac Stage #24, Avg BH Rate-61 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2- 2,260,603 scf/Avg N2 Rate- 36,033 scfm/ Total 20/40 250,200 lbs/ Total 15# Water Frac 1,412 bbls

#### **06/09/2017:**

- RIH to set Frac Plug at 8,166' RIH to Perforate stage #25 7,975' to 8,155' 30 holes. All shots fired.
- Frac Stage #25, Avg BH Rate-61 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2- 2,191,392 scf/Avg N2 Rate- 35,973 scfm/ Total 20/40 250,400 lbs/ Total 15# Water Frac 1,327 bbls
- Frac Stage #26, Avg BH Rate-60 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2- 1,840,085 scf/Avg N2 Rate- 35,996 scfm/ Total 20/40 250,500 lbs/ Total 15# Water Frac 1,325 bbls
- RIH to set Frac Plug at 8,566'. RIH to Perforate stage #27 7,75' to 7,755' 30 holes. All shots fired.
- Frac Stage #27, Avg BH Rate-59.7 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2- 1,789,065 scf/Avg N2 Rate- 35,303 scfm/ Total 20/40 250,100 lbs/ Total 15# Water Frac 1,323 bbls
- RIH to set Frac Plug at 7,566'. RIH to Perforate stage #28 7,375' to 7,555' 30 holes. All shots fired.
- Frac Stage #28, Avg BH Rate-60 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2- 1,755,469 scf/Avg N2 Rate- 35,151 scfm/ Total 20/40 250,300 lbs/ Total 15# Water Frac 1,266 bbls

- RIH to set Frac Plug at 7,366'. RIH to Perforate stage #29 7175' to 7,355', 30 holes. All shots fired.
- Frac Stage #29, Avg BH Rate-58 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2- 1,659,577 scf/Avg N2 Rate- 33,172 scfm/ Total 20/40 250,300 lbs/ Total 15# Water Frac 1,280 bbls
- RIH to set Frac Plug at 7,166'. RIH to Perforate stage #30 6,975' to 7,155' 30 holes. All shots fired.
- Frac Stage #30, Avg BH Rate-60 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2- 2,169,847 scf/Avg N2 Rate- 35,700 scfm/ Total 20/40 250,220 lbs/ Total 15# Water Frac 1,248 bbls
- RIH to set Frac Plug at 6,967'. RIH to Perforate stage #31 6,775' to 6,955', 30 holes. All shots fired.
- Frac Stage #31, Avg BH Rate-60 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2- 2,083,599 scf/Avg N2 Rate- 35,946 scfm/ Total 20/40 245,410 lbs/ Total 15# Water Frac 1,225 bbls
- RIH to set Halliburton Obsidian Frac Plug at 6,766' RIH to Perforate stage #32 6,539' to 6,755' 30 holes. all shots fired.

**06/10/17:**

- Frac Stage #32, Avg BH Rate-60 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2- 2,260,207 scf/Avg N2 Rate- 35,476 scfm/ Total 20/40 243,604 lbs/ Total 15# Water Frac 1,285 bbls
- Set Kill Plug @ 5,120' WLM. Bleed down pressure to 0 psi with no flow. Plug holding good. SWI and begin RD frac equipment. Pressure before set kill plug 1100 psi.
- Prepare location for drillouts.

RECEIVED

Form 3160-3  
(June 26/05)UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

JUN 26 2017

FORM APPROVED  
OMB No. 1004-0137  
Expires: January 31, 2018Farmington Field Office  
Bureau of Land Management  
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NMNM 12374

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Encana Oil &amp; Gas (USA) Inc.

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Denver, CO 80202

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(720) 876-3533

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NMNM 132981A

8. Well Name and No.

Nageezi Unit 221H

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Nageezi Unit; Mancos (Oil)

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San Juan County, NM

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TYPE OF SUBMISSION	TYPE OF ACTION			
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<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Hydraulic Fracturing	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
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ACCEPTED FOR RECORD

JUL 03 2017

FARMINGTON FIELD OFFICE  
BY: TL Salyers

OIL CONS. DIV DIST. 3

JUL 05 2017

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)

Katie Wegner

Title Senior Regulatory Analyst

Signature

Date

06/23/2017

## THE SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

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)

NMOCD

**Nageezi Unit 221H API: 30-045-35820 Completions Sundry Information dated 06/23/2017:**

**04/26/2017:**

- Hook pump up on annulars of 4 1/2" liner, press up to 1,500 psi, held for 30 min, good test, ND BOP, install night cap, secure well, Rig down

**06/04/2017:**

- Frac Stage #1, Avg BH Rate-57.3 Bpm/Avg Slurry Rate-22 Bpm/Avg N2 Quality 71%/ Total N2- 1,670,489 scf/Avg N2 Rate- 35,586 scfm/ Total 20/40 151,202 lbs/ Total 20# Water Frac 1272 bbls
- Pressure Test Lubricator to 4500 psi. RIH to set Frac Plug at 12,771'RIH to Perforate stage #2. Perforate 12,575' to 12,755', 30 holes. Plug set, no shots fired on gun.
- Rope socket good, collar locator good, Cut off 200' of line re-head. resume perforating.
- Pressure Test Lubricator to 4500 psi.RIH to Perforate stage #2 perforate 12,575' to 12755', 30 holes. TOOH all shots fired.
- Prime pumps, pressure test H2O, N2 lines to 9500 psi, Put 2000 psi on backside, monitor.
- Frac Stage #2, Avg BH Rate-58.5 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 69%/ Total N2- 1,828,910 scf/Avg N2 Rate- 32,700 scfm/ Total 20/40 254,011 lbs/ Total 20# Water Frac 1640 bbls
- RIH to Set Frac Plug, Perforate stage #3. Set Frac Plug @ 12566'. Perforate 12,375' to 12,555', POOH, plug set all shots fired.
- Frac Stage # 3, Avg BH Rate-61.7 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 71%/ Total N2- 2,340,365 scf/Avg N2 Rate- 35,811 scfm/ Total 20/40 250,022 lbs/ Total 20# Water Frac 1642 bbls
- RIH to Set Frac Plug, Perforate stage # 4. Set Frac Plug @ 12,358'. Perforate 12,175' to 12,348', POOH, plug set all shots fired.
- Frac Stage # 4, Avg BH Rate-60 Bpm/Avg Slurry Rate-25 Bpm/Avg N2 Quality 70%/ Total N2- 2,214,123 scf/Avg N2 Rate- 35,572 scfm/ Total 20/40 249,900 lbs/ Total 20# Water Frac 1657 bbls
- RU and Test Lubricator to 1500 psi, test was not satisfactory. BOP was leaking, made several attempts to repair, retest lubricator, BOP still leaking.

**06/05/2017:**

- RIH to set Frac Plug at 12,166', RIH to Perforate Stage #5. Perforate 11,975' to 12,150', 30 holes.
- Frac Stage #5, Avg BH Rate-58.5 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 71%/ Total N2- 1,733,360 scf/Avg N2 Rate- 34,754 scfm/ Total 20/40 264,102 lbs/ Total 20# Water Frac 1,432 bbls
- RIH to set Frac Plug at 11,966', RIH to Perforate Stage #6. Perforate 11,775' to 11,966', 30 holes.
- Frac Stage #6, Avg BH Rate-61.2 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2- 1,831,784 scf/Avg N2 Rate- 35,136 scfm/ Total 20/40 249,678 lbs/ Total 20# Water Frac 1,558 bbls
- RIH to set Frac Plug at 11,766', RIH to Perforate Stage #7 11,579' to 11,755', 30 holes.
- Short in gun. POOH check to see if plug set. Plug did not set.
- R & R with new plug and guns.
- Test Lubricator to 4550, test good.
- RIH to set Frac Plug at 11,766', RIH to Perforate Stage #7 11,579' to 11,755', 30 holes.
- POOH plug set all shot.

- Frac Stage # 7, Avg BH Rate-61.1 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2- 2,297,826 scf/Avg N2 Rate- 35,676 scfm/ Total 20/40 249,700 lbs/ Total 20# Water Frac 1,886 bbls
- RIH to set Frac Plug at 11,566', RIH to Perforate Stage # 8 11,375' to 11,555', 30 holes.
- POOH plug set all shot.
- Frac Stage # 8, Avg BH Rate-59.1 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 71%/ Total N2- 2,515,350 scf/Avg N2 Rate- 35,573 scfm/ Total 20/40 248,400 lbs/ Total 20# Water Frac 1,726 bbls

#### 06/06/2017:

- RIH to set Frac Plug at 11,365', RIH to Perforate Stage # 9 11,175' to 11,355', 30 holes.
- POOH plug set all shot.
- Frac Stage # 9, Avg BH Rate- 59.3 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2- 2,272,578 scf/Avg N2 Rate- 35,070 scfm/ Total 20/40 250,700 lbs/ Total 20# Water Frac 1,418 bbls
- Well pressured out during flush. Flushed 52 bbls before screen out.
- Flow back well starting on 16/64" choke up to 1". Flowed 353 bbls. 1011 psi. @ 1.5 to 2 bpm.
- Test pump down lines to 4500 psi. Pump in well: 2 bpm@ 1264, 3 bpm @ 962 psi, 6 bpm@ 1282 psi, 8 bpm @ 2630 psi for a total of 353 bbls.
- R/U halliburton to sweep csg. Pump 18 bpm @1026 psi, 24 bpm @ 3683 psi, 30 bpm @ 4342 psi, 42 @ 5263 psi. isip 1804. 190 bbls pumped. RU and Pressure Test Lubricator to 4500 psi. RIH to Set Frac Plug, Perforate stage #10
- R/U Halliburton to sweep csg. Pump 18 bpm @1026 psi, 24 bpm @ 3683 psi, 30 bpm @ 4342 psi, 42 @ 5263 psi. isip 1804. 190 bbls pumped.
- RU and Pressure Test Lubricator to 4500 psi.
- Pumped plug and gun to 9,100'. Halliburton pump died. Check engine light came on, tension on wireline went from 700# to 450#. Went to get tension back and pulled 2,200 #. Got pump running went to 3 bpm, 6 bpm, 9 bpm, pressure spiked to 4,000 psi.
- Surged well, moved 40'. Surged well again nothing moved. Tried surging, nothing moved. Pumped in to well 3 bpm, 5 bpm, 6 bpm, well pressured out. Scoped in boom and pulled 3,500#s.
- R/U Halliburton to pump 20 bbl 30# gel pill. Pump 20# bbl gel pill.
- R/U Halliburton to pump 20 bbl 30# gel pill. Pump 30# 20 bbl gel pill @ 15 bpm with no success on getting free on WL made several attempts with no success pumping multiple 30# gel pills
- Call was made to superintendent and orders were to set plug @ stuck depth and POOH with guns plug set @ 9,112' WLM POOH with guns disarm. Developed plan to drop ball and try to hit plug with aggressive rate and see if we could move plug to previous perfs on stage #9. Total fluid pump 660 bbls.

#### 06/07/2017:

- RIH to set Frac Plug at 11,167', Perforate stage #10 from 10,975' to 11,155', 30 holes. All shots fired.
- Frac Stage #10, Avg BH Rate-62 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2- 2,260,898 scf/Avg N2 Rate- 34,053 scfm/ Total 20/40 250,400 lbs/ Total 20# Water Frac 1,300 bbls
- RIH to set Frac Plug at 10,966', Perforate stage #11 from 10,775' to 10,950', 30 holes. All shots fired.

- Frac Stage #11, Avg BH Rate-58.1 Bpm/Avg Slurry Rate-22 Bpm/Avg N2 Quality 70%/ Total N2- 2,040,981 scf/Avg N2 Rate- 33,585 scfm/ Total 20/40 250,400 lbs/ Total 20# Water Frac 1,643 bbls.
- RIH to Perforate stage #12 10,575' to 10,755', 30 holes. TOOH all shots fired.
- Frac Stage #12, Avg BH Rate-56 Bpm/Avg Slurry Rate-22 Bpm/Avg N2 Quality 70%/ Total N2- 2,060,320 scf/Avg N2 Rate- 33,494 scfm/ Total 20/40 250,401 lbs/ Total 20# Water Frac 1,616
- RIH to set Frac Plug at 10,566', RIH to Perforate stage stage #13 10,375' to 10,555', 30 holes. All shots fired.
- Frac Stage #13, Avg BH Rate-60 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2- 1,901,296 scf/Avg N2 Rate- 36,019 scfm/ Total 20/40 250,000 lbs/ Total 20# Water Frac 1,544
- RIH to set Frac Plug at 10,366', RIH to Perforate stage stage #14 10,175' to 10,366', 30 holes. All shots fired.
- Frac Stage #14, Avg BH Rate-60 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2- 1,833,731 scf/Avg N2 Rate- 35,822 scfm/ Total 20/40 250,000 lbs/ Total 20# Water Frac 1,484
- RIH to set Frac Plug at 10,166'. Perforate stage #15 9,975' to 10,155', 30 holes. All shots fired
- Frac Stage #15, Avg BH Rate-60 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2- 2,211,042 scf/Avg N2 Rate- 35,390 scfm/ Total 20/40 250,270 lbs/ Total 18# Water Frac 1,473 bbls.
- RIH to set Frac Plug at 9,966'. Perforate stage #16 9,777' to 9,955', 30 holes. All shots fired.
- Had to SD after seating ball due to hydration unit actuator valves did not open to start making gel. Fixed issue and began frac operations on stage #16
- Frac Stage #16, Avg BH Rate-60 Bpm/Avg Slurry Rate-25 Bpm/Avg N2 Quality 70%/ Total N2- 2,396,022 scf/Avg N2 Rate- 35,400 scfm/ Total 20/40 250,330 lbs/ Total 18# Water Frac 1,590 bbls.

#### 06/08/2017:

- RIH to set Frac Plug at 9,766', Perforate stage #17 9,575' to 9,755', 30 holes. All shots fired.
- Frac Stage #17, Avg BH Rate-60 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2- 2,,098,414 scf/Avg N2 Rate- 35,313 scfm/ Total 20/40 249,580 lbs/ Total 18# Water Frac 1,411 bbls
- RIH to set Frac Plug at 9,560', Perforate stage #18 9,375' to 9,550', 30 holes. All shots fired.
- Frac Stage #18, Avg BH Rate-60 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2- 2,246,383 scf/Avg N2 Rate- 35,520 scfm/ Total 20/40 251,550 lbs/ Total 18# Water Frac 1,476 bbls
- RIH to set Frac Plug at 9,366'. RIH to Perforate stage #19 9,175' to 9,352', 30 holes. All shots fired.
- Maintenance on pump. Seats replaced.
- Frac Stage #19, Avg BH Rate-59 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2- 1,804,164 scf/Avg N2 Rate- 34,892 scfm/ Total 20/40 250,100 lbs/ Total 20# Water Frac 1,368 bbls.
- RIH to set Frac Plug at 9,166 RIH to Perforate stage stage #20 8,975' to 9,155', 30 holes. All shots fired.
- Frac Stage #20, Avg BH Rate-60 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2- 1,784,063 scf/Avg N2 Rate- 35,773 scfm/ Total 20/40 250,370 lbs/ Total 20# Water Frac 1,380 bbls.
- RIH to set Frac Plug at 8,955.
- RIH to Perforate stage #21 8,775' to 8,955', 30 holes. All shots fired.

- Frac Stage #21, Avg BH Rate-59.5 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2-1,783,614 scf/Avg N2 Rate- 35,338 scfm/ Total 20/40 250,000 lbs/ Total 20# Water Frac 1,416 bbls
- RIH to set Frac Plug at 8,766' RIH to Perforate stage #22 8,575' to 8,755', 30 holes. All shots fired.
- Frac Stage #22, Avg BH Rate-61 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2-2,167,910 scf/Avg N2 Rate- 34,603 scfm/ Total 20/40 250,350 lbs/ Total 15# Water Frac 1,383 bbls
- RIH to set Frac Plug at 8,566' RIH to Perforate stage #23 8,375' to 8,555', 30 holes. All shots fired.
- Frac Stage #23, Avg BH Rate-60 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2-2,152,202 scf/Avg N2 Rate- 35,264 scfm/ Total 20/40 249,960 lbs/ Total 15# Water Frac 1,370 bbls
- RIH with plug and guns @ 250' lost CCL POOH cut 150' of line rehead and ran back in hole.
- RIH to set Frac Plug at 8,360' RIH to Perforate stage #24 8,175' to 8,350', 30 holes. All shots fired.
- Frac Stage #24, Avg BH Rate-61 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2-2,260,603 scf/Avg N2 Rate- 36,033 scfm/ Total 20/40 250,200 lbs/ Total 15# Water Frac 1,412 bbls

**06/09/2017:**

- RIH to set Frac Plug at 8,166' RIH to Perforate stage #25 7,975' to 8,155' 30 holes. All shots fired.
- Frac Stage #25, Avg BH Rate-61 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2-2,191,392 scf/Avg N2 Rate- 35,973 scfm/ Total 20/40 250,400 lbs/ Total 15# Water Frac 1,327 bbls
- Frac Stage #26, Avg BH Rate-60 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2-1,840,085 scf/Avg N2 Rate- 35,996 scfm/ Total 20/40 250,500 lbs/ Total 15# Water Frac 1,325 bbls
- RIH to set Frac Plug at 8,566'. RIH to Perforate stage #27 7,75' to 7,755' 30 holes. All shots fired.
- Frac Stage #27, Avg BH Rate-59.7 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2-1,789,065 scf/Avg N2 Rate- 35,303 scfm/ Total 20/40 250,100 lbs/ Total 15# Water Frac 1,323 bbls
- RIH to set Frac Plug at 7,566'. RIH to Perforate stage #28 7,375' to 7,555' 30 holes. All shots fired.
- Frac Stage #28, Avg BH Rate-60 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2-1,755,469 scf/Avg N2 Rate- 35,151 scfm/ Total 20/40 250,300 lbs/ Total 15# Water Frac 1,266 bbls
- RIH to set Frac Plug at 7,366'. RIH to Perforate stage #29 7,175' to 7,355', 30 holes. All shots fired.
- Frac Stage #29, Avg BH Rate-58 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2-1,659,577 scf/Avg N2 Rate- 33,172 scfm/ Total 20/40 250,300 lbs/ Total 15# Water Frac 1,280 bbls
- RIH to set Frac Plug at 7,166'. RIH to Perforate stage #30 6,975' to 7,155' 30 holes. All shots fired.
- Frac Stage #30, Avg BH Rate-60 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2-2,169,847 scf/Avg N2 Rate- 35,700 scfm/ Total 20/40 250,220 lbs/ Total 15# Water Frac 1,248 bbls

- RIH to set Frac Plug at 6,967'. RIH to Perforate stage #31 6,775' to 6,955', 30 holes. All shots fired.
- Frac Stage #31, Avg BH Rate-60 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2- 2,083,599 scf/Avg N2 Rate- 35,946 scfm/ Total 20/40 245,410 lbs/ Total 15# Water Frac 1,225 bbls
- RIH to set Halliburton Obsidian Frac Plug at 6,766' RIH to Perforate stage #32 6,539' to 6,755' 30 holes. all shots fired.

**06/10/17:**

- Frac Stage #32, Avg BH Rate-60 Bpm/Avg Slurry Rate-24 Bpm/Avg N2 Quality 70%/ Total N2- 2,260,207 scf/Avg N2 Rate- 35,476 scfm/ Total 20/40 243,604 lbs/ Total 15# Water Frac 1,285 bbls
- Set Kill Plug @ 5,120' WLM. Bleed down pressure to 0 psi with no flow. Plug holding good. SWI and begin RD frac equipment. Pressure before set kill plug 1100 psi.
- Prepare location for drillouts.