



**Company:** EnCana Oil & Gas (USA) Inc  
**Project:** Sandoval County, NM  
**Site:** GCU  
**Well:** GCU M27-2306 01H  
**Wellbore:** Hz  
**Design:** FINAL

**Local Co-ordinate Reference:** Well GCU M27-2306 01H  
**TVD Reference:** WELL @ 7148.0ft (Original Well Elev)  
**MD Reference:** WELL @ 7148.0ft (Original Well Elev)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** USA EDM 5000 Multi Users DB

#### Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
13,226.0	90.80	136.40	5,571.0	-5,902.2	5,375.8	1,885,372.46	1,287,555.20	36.175631	-107.445616
<b>Last Cathedral Survey @ 13,226' MD</b>									
13,271.0	90.80	136.40	5,570.4	-5,934.8	5,406.8	1,885,339.49	1,287,585.82	36.175542	-107.445510
<b>Projection to Bit @ 13,271' - GCU M27-2306 01H PBHL P3</b>									

#### Design Targets

##### Target Name

- hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
GCU M27-2306 01H PB	0.00	0.00	5,569.8	-5,960.8	5,421.6	1,885,313.21	1,287,600.30	36.175470	-107.445460
- actual wellpath misses target center by 30.0ft at 13271.0ft MD (5570.4 TVD, -5934.8 N, 5406.8 E)									
- Point									
GCU M27-2306 01H PO	0.00	0.00	5,602.9	-1,330.4	1,114.9	1,889,997.14	1,283,351.85	36.188190	-107.460050
- actual wellpath misses target center by 8.3ft at 6973.5ft MD (5604.9 TVD, -1336.1 N, 1109.1 E)									
- Point									

#### Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
13,226.0	5,571.0	-5,902.2	5,375.8	Last Cathedral Survey @ 13,226' MD
13,271.0	5,570.4	-5,934.8	5,406.8	Projection to Bit @ 13,271'

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_

Amended RECEIVED

Form 3160-3  
(August 2010)**CONFIDENTIAL**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

MAR 19 2014

FORM APPROVED  
OMB No. 1004-0137  
Expires: July 31, 2010**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 118128  
6. 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)

720-876-3007

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

SHL: Sec 27, T23N, R6W 99' FSL and 186' FWL  
BHL: Sec 35, T23N, R6W 359' FSL and 324' FWL7. If Unit of CA/Agreement, Name and/or No.  
N/A8. Well Name and No.  
Gallo Canyon Unit M27-2306 01H9. API Well No.  
30-043-2117910. Field and Pool or Exploratory Area  
Counselors Gallup/Dakota11. Country or Parish, State  
Sandoval

## 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"/> Fracture Treat	<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 <u>Completion</u>	
	<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.)

Please see attached amended sheet detailing completion operations occurring between 02/05/2014 and 02/11/2014

RCVD MAR 19 '14  
OIL CONS. DIV.

DIST. 3

ACCEPTED FOR RECORD

MAR 19 2014

FARMINGTON FIELD OFFICE  
BY: TL Salvors

14. I hereby certify that the foregoing is true and correct.

Name (Printed/Typed)

Amie Weis

Title Operating Engineer

Signature

Date 03/18/2014

## THIS 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)

NMOCDA

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**02/05/2014**

Pumped frac treatment using 70 quality foam on stage 1 perfs from 12840' to 13225' (36 holes) as follows:

3506bbls fluid, 6799mscf N2, 516218# 20/40, Brown sand, and 50120# 12/20, Brown sand. Pumped 75 bio-balls to seal off mid-stage 1.

Pumped frac treatment using 70 quality foam on stage 2 perfs from 12377' to 12719' (36 holes) as follows:

3290bbls fluid, 6101mscf N2, 548969# 20/40, Brown sand, and 51005# 12/20, Brown sand. Pumped 75 bio-balls to seal off mid-stage 2. Set frac plug at 12300'.

**02/06/2014**

Pumped frac treatment using 70 quality foam on stage 3 perfs from 11890' to 12274' (36 holes) as follows:

3167bbls fluid, 5835mscf N2, 533010# 20/40, Brown sand, and 48040# 12/20, Brown sand. Pumped 75 bio-balls to seal off mid-stage 3. Set frac plug at 11820'.

Pumped frac treatment using 70 quality foam on stage 4 perfs from 11401' to 11792' (36 holes) as follows:

3279bbls fluid, 6197mscf N2, 550400# 20/40, Brown sand, and 50782# 12/20, Brown sand. Pumped 75 bio-balls to seal off mid-stage 4. Set frac plug at 11340'.

**02/07/2014**

Pumped frac treatment using 70 quality foam on stage 5 perfs from 11190' to 11310' (60 holes) as follows:

1590bbls fluid, 2951mscf N2, 271900# 20/40, Brown sand, and 26277# 12/20, Brown sand. No frac plug.

Pumped 75 bio-balls to seal off stage 5. Pumped frac treatment using 70 quality foam on stage 6 perfs from 10929' to 11049' (36 holes) as follows:

1678bbls fluid, 2561mscf N2, 273480# 20/40, Brown sand, and 21283# 12/20, Brown sand. Set frac plug at 10850'.

Pumped frac treatment using 70 quality foam on stage 7 perfs from 10710' to 10830' (36 holes) as follows:

1677bbls fluid, 2664mscf N2, 280080# 20/40, Brown sand, and 25339# 12/20, Brown sand. No frac plug.

**02/08/2014**

Pumped 75 bio-balls to seal off stage 7. Pumped frac treatment using 70 quality foam on stage 8 perfs from 10440' to 10568' (36 holes) as follows:

1645bbls fluid, 2665mscf N2, 268980# 20/40, Brown sand, and 30698# 12/20, Brown sand. Set frac plug at 10370'.

Pumped frac treatment using 70 quality foam on stage 9 perfs from 10220' to 10345' (36 holes) as follows:

1598bbls fluid, 2706mscf N2, 283560# 20/40, Brown sand, and 17902# 12/20, Brown sand. No frac plug.

# CONFIDENTIAL

Pumped 75 bio-balls to seal off stage 9. Pumped frac treatment using 70 quality foam on stage 10 perfs from 9960' to 10085' (36 holes) as follows:  
1652bbbls fluid, 2991mscf N2, 274840# 20/40, Brown sand, and 20854# 12/20, Brown sand. Set frac plug at 9800'.

## 02/09/2014

Pumped frac treatment using 70 quality foam on stage 11 perfs from 9595' to 9755' (36 holes) as follows:  
1569bbbls fluid, 2893mscf N2, 275040# 20/40, Brown sand, and 27647# 12/20, Brown sand. No frac plug.

Pumped 75 bio-balls to seal off stage 11. Pumped frac treatment using 70 quality foam on stage 12 perfs from 9256' to 9436' (36 holes) as follows:  
1626bbbls fluid, 2649mscf N2, 277020# 20/40, Brown sand, and 21633# 12/20, Brown sand. Set frac plug at 9140'.

Pumped frac treatment using 70 quality foam on stage 13 perfs from 8946' to 9101' (36 holes) as follows:  
1573bbbls fluid, 2750mscf N2, 277920# 20/40, Brown sand, and 26543# 12/20, Brown sand. No frac plug.

## 02/10/2014

Pumped 75 bio-balls to seal off stage 13. Pumped frac treatment using 70 quality foam on stage 14 perfs from 8590' to 8780' (36 holes) as follows:  
1600bbbls fluid, 2744mscf N2, 277980# 20/40, Brown sand, and 23537# 12/20, Brown sand. Set frac plug at 8490'.

Pumped frac treatment using 70 quality foam on stage 15 perfs from 8288' to 8444' (36 holes) as follows:  
1604bbbls fluid, 2658mscf N2, 275240# 20/40, Brown sand, and 26651# 12/20, Brown sand. No frac plug.

Pumped 75 bio-balls to seal off stage 15. Pumped frac treatment using 70 quality foam on stage 16 perfs from 7945' to 8129' (36 holes) as follows:  
1549bbbls fluid, 2515mscf N2, 267160# 20/40, Brown sand, and 22689# 12/20, Brown sand. Set frac plug at 7840'.

## 02/11/2014

Pumped frac treatment using 70 quality foam on stage 17 perfs from 7644' to 7798' (36 holes) as follows:  
1646bbbls fluid, 3007mscf N2, 276920# 20/40, Brown sand, and 23281# 12/20, Brown sand. No frac plug.

Pumped 75 bio-balls to seal off stage 17. Pumped frac treatment using 70 quality foam on stage 18 perfs from 7300' to 7488' (36 holes) as follows:  
1497bbbls fluid, 2629mscf N2, 276129# 20/40, Brown sand, and 24679# 12/20, Brown sand. Set frac plug at 7207'.

Pumped frac treatment using 70 quality foam on stage 19 perfs from 7067' to 7182' (36 holes) as follows:  
1212bbbls fluid, 2431mscf N2, 269800# 20/40, Brown sand, and 26200# 12/20, Brown sand. Set bridge plug at 5020'.

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**02/15/2014**

Drilled out bridge plug at 5020'.

**02/16/2014**

Drilled out plugs at 7207', 7840', 8490', 9140', 9800', 10370', 10850'.

**02/17/2014**

Drilled out plug at 11340', 11820', 12300'

**02/20/2014**

2 7/8" 6.5# J55 tubing set at 5938'. Seat nipple at 5477'

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0137  
Expires: October 31, 2014

**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.**

**SUBMIT IN TRIPLICATE – Other instructions on page 2.**

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator  
Encana Oil & Gas (USA) Inc.

3a. Address  
370 17th Street, Suite 1700  
Denver, CO 80202

3b. Phone No. (include area code)  
720-876-3437

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
SHL: 990' FSL and 186' FWL, Section 27, T23N, R6W  
BHL: 359' FSL and 324' FWL Section 35, T23N, R6W

5. Lease Serial No.  
NMNM 118128

6. If Indian, Allottee or Tribe Name

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

8. Well Name and No.  
Gallo Canyon Unit M27-2306 01H

9. API Well No.  
30043-21179

10. Field and Pool or Exploratory Area  
Counselors Gallup-Dakota

11. County or Parish, State  
Sandoval, 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
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Please see attached sheet detailing completion operations conducted between 02/05/2014 and 02/11/2014.

OIL CONS. DIV DIST. 3  
MAR 14 2014

ACCEPTED FOR RECORD

MAR 14 2014

FARMINGTON FIELD OFFICE  
BY: William Tambekou

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

Vy Nguyen

Title Engineering Technologist

Signature

Date 02/28/2014

**THIS 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.

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(Instructions on page 2)

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**CONFIDENTIAL**

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Pumped frac treatment using 70 quality foam on stage 2 perfs from 12377' to 12719' (36 holes) as follows:

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**02/06/2014**

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#### 02/10/2014

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?

Pumped frac treatment using 70 quality foam on stage 15 perfs from 8946' to 9101' (36 holes) as follows:  
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?

#### 02/11/2014

Pumped frac treatment using 70 quality foam on stage 17 perfs from 7945' to 8129' (36 holes) as follows:  
1646bbbls fluid, 3007mscf N2, 276920# 20/40, Brown sand, and 23281# 12/20, Brown sand. No frac plug.

Pumped 75 bio-balls to seal off stage 17. Pumped frac treatment using 70 quality foam on stage 18 perfs from 7300' to 7488' (36 holes) as follows:  
1497bbbls fluid, 2629mscf N2, 276129# 20/40, Brown sand, and 24679# 12/20, Brown sand. Set frac plug at 7207'.

Pumped frac treatment using 70 quality foam on stage 19 perfs from 7067' to 7182' (36 holes) as follows:  
1212bbbls fluid, 2431mscf N2, 269800# 20/40, Brown sand, and 26200# 12/20, Brown sand. Set bridge plug at 5020'.



✓ **02/15/2014**

Drilled out bridge plug at 5020'.

**02/16/2014**

Drilled out plugs at 7207', 7840', 8490', 9140', 9800', 10370', 10850'.

**02/17/2014**

Drilled out plug at 11340', 11820', 12300'

**02/20/2014**

2 7/8" 6.5# J55 tubing set at 5938'. Seat nipple at 5477'