CONFIDENTIAL

Form 3160-5
(March 2012)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SEP 19 2014

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<br>☑ Oil Well ☐ Gas Well ☐ Other | 5. Lease Serial No.<br>NMNM12374 |
| | 6. If Indian, Allottee or Tribe Name<br>N/A |
| | 7. If Unit of CA/Agreement, Name and/or No.<br>N/A |
| | 8. Well Name and No.<br>Escrito M27-2409 02H |
| 2. Name of Operator<br>Encana Oil & Gas (USA) Inc. | 9. API Well No.<br>3004535479 |
| 3a. Address<br>370 17th Street, Suite 1700 Denver, CO 80202<br>3b. Phone No. *(include area code)*<br>720-876-5867 | 10. Field and Pool or Exploratory Area<br>Bisti Lower-Gallup/Basin Mancos Gas |
| 4. Location of Well *(Footage, Sec., T.,R.,M., or Survey Description)*<br>SHL: 1255' FSL and 371' FWL Section 27, T24N, R9W<br>BHL: 880' FSL and 330'FWL Section 28, T24N, R10W | 11. County or Parish, State<br>San Juan County |

RCVD SEP 26 '14
OIL CONS. DIV.
DIST. 3

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

| TYPE OF SUBMISSION | TYPE OF ACTION | | | |
|---|---|---|---|---|
| ☐ Notice of Intent | ☐ Acidize | ☐ Deepen | ☐ Production (Start/Resume) | ☐ Water Shut-Off |
| | ☐ Alter Casing | ☐ Fracture Treat | ☐ Reclamation | ☐ Well Integrity |
| ☑ Subsequent Report | ☐ Casing Repair | ☐ New Construction | ☐ Recomplete | ☑ Other Correction to previously submitted Production Sundry |
| | ☐ Change Plans | ☐ Plug and Abandon | ☐ Temporarily Abandon | |
| ☐ Final Abandonment Notice | ☐ Convert to Injection | ☐ Plug Back | ☐ 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 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 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 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 determined that the site is ready for final inspection.)

Attached is a revised Production Sundry for the Escrito M27-2409 02H, correcting the MD and TVD from 10,282'MD/5307'TVD to 10,338'MD/5305'TVD. ✓
A corrected Final Directional is also attached.

ACCEPTED FOR RECORD

SEP 24 2014

FARMINGTON FIELD OFFICE
BY: William Tambekou

| | |
|---|---|
| 14. I hereby certify that the foregoing is true and correct. Name *(Printed/Typed)*<br>Cristi Bauer | Title Operations Technician |
| Signature Cristi Bauer | Date 9/18/14 |

**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)

NMOCD

Form 3160-5
(March 2012)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

AMENDED

CONFIDENTIAL

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

## SUNDRY NOTICES AND REPORTS ON WELLS

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

RCVD SEP 26 '14
OIL CONS. DIV.
DIST. 3

| | |
|---|---|
| 1. Type of Well<br>☑ Oil Well ☐ Gas Well ☐ Other | 5. Lease Serial No.<br>NMNM12374 |
| | 6. If Indian, Allottee or Tribe Name<br>N/A |
| | 7. If Unit of CA/Agreement, Name and/or No.<br>N/A |
| | 8. Well Name and No.<br>Escrito M27-2409 02H |
| 2. Name of Operator<br>Encana Oil & Gas (USA) Inc. | 9. API Well No.<br>3004535479 |
| 3a. Address<br>370 17th Street, Suite 1700 Denver, CO 80202<br>3b. Phone No. *(include area code)*<br>720-876-5867 | 10. Field and Pool or Exploratory Area<br>Bisti Lower-Gallup/Basin Mancos Gas |
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| | ☐ Alter Casing | ☐ Fracture Treat | ☐ Reclamation | ☐ Well Integrity |
| ☑ Subsequent Report | ☐ Casing Repair | ☐ New Construction | ☐ Recomplete | ☑ Other Production Liner/Packers |
| | ☐ Change Plans | ☐ Plug and Abandon | ☐ Temporarily Abandon | |
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Utilized high performance water based mud from intermediate casing point (5620'MD) to TD of lateral.

Kicked off lateral at 4894' on 8/01/14. Landed lateral at 5870' on 8/05/14. Length of lateral: 4412'. TD of 10,338'MD/5305'TVD reached 8/06/14. Set production liner 8/8/14.

Hole diameter: 6.125", production string diameter: 4.5", production string weight and grade: 11.6# SB80 LTC. Depth of 6.125" hole from 5709'-10,338'MD. Float shoe at 10,336'MD. Float collar at 10,293'MD. Production liner set from 5374'-10,338'MD.

Set 20 external swellable casing packers for isolation of production string at the following depths: (1) 10,113' (2) 9892' (3) 9627' (4) 9401' (5) 9180' (6) 8917' (7) 8695' (8) 8474' (9) 8205' (10) 7983' (11) 7761' (12) 7536' (13) 7273' (14) 7051' (15) 6787' (16) 6566' (17) 6303' (18) 6081' (19) 5859' (20) 5374'

Rig released 8/8/14

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

Cristi Bauer — Title Operations Technician

Signature Cristi Bauer — Date 9/18/14

## 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 | |

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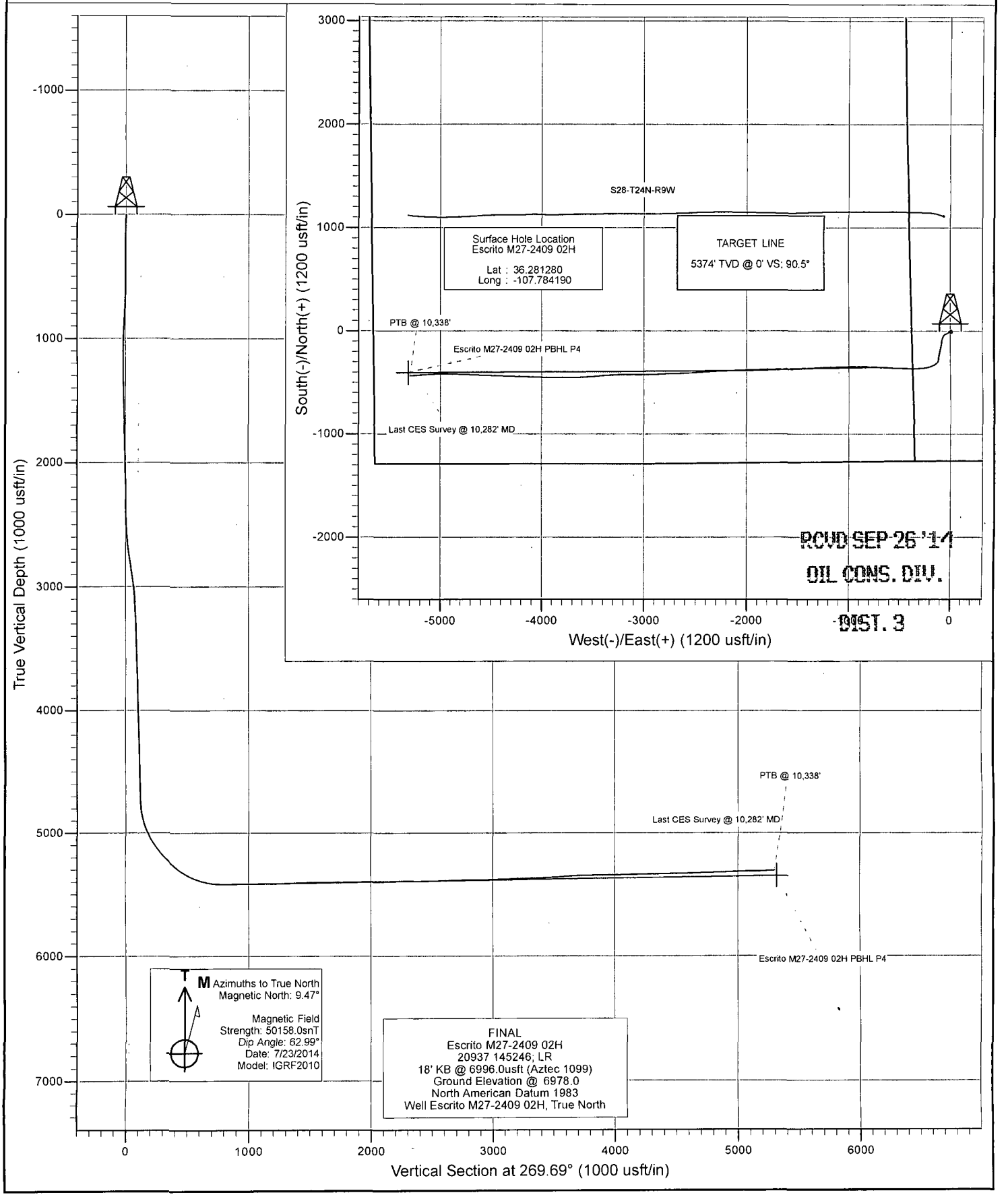
(Instructions on page 2)

FV

encana natural gas

Project: San Juan County, NM
Site: S27-T24N-R9W
Well: Escrito M27-2409 02H
Wellbore: Hz
Design: FINAL

CATHEDRAL

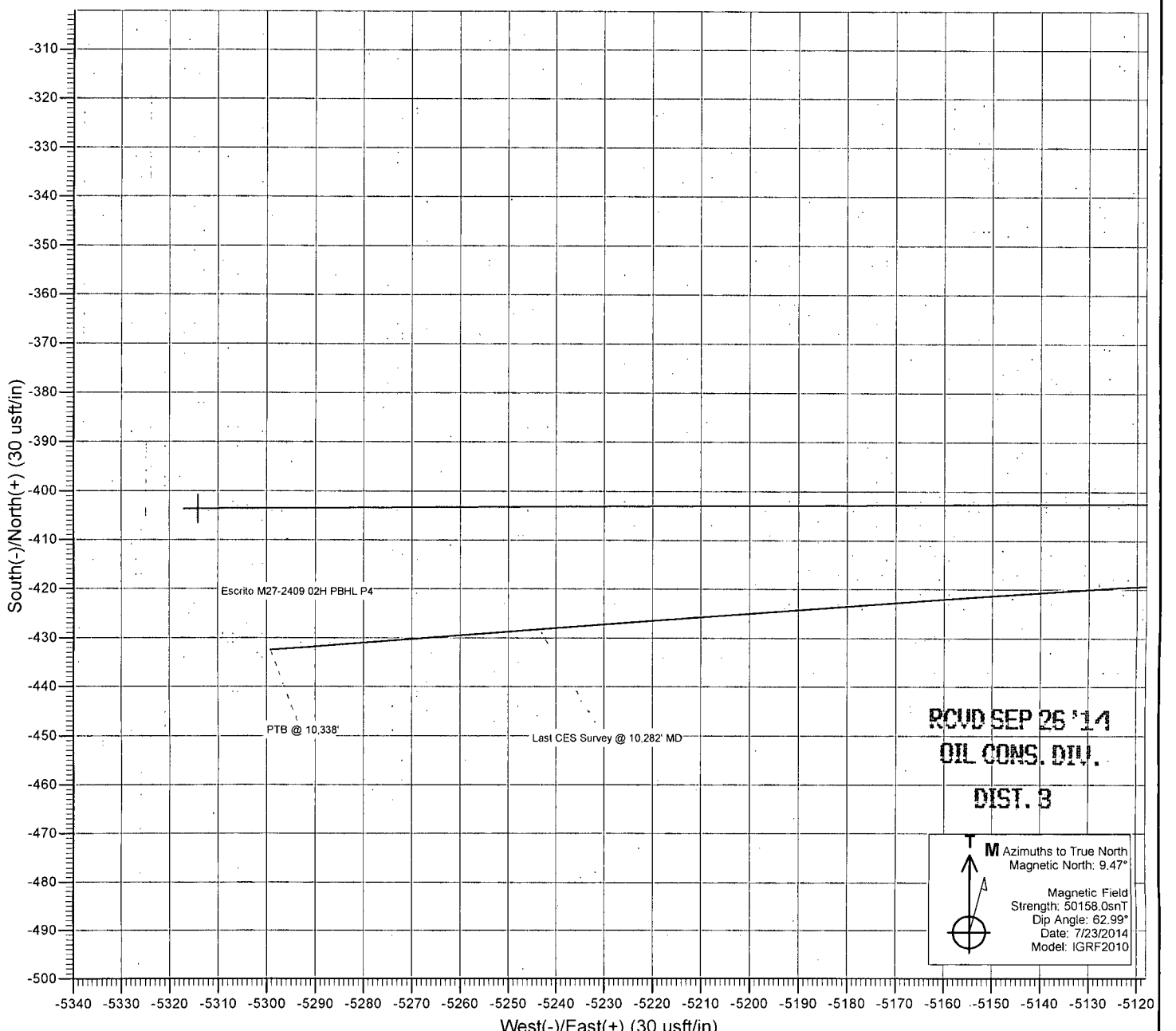



RCVD SEP 26 '14
OIL CONS. DIV.
DIST. 3

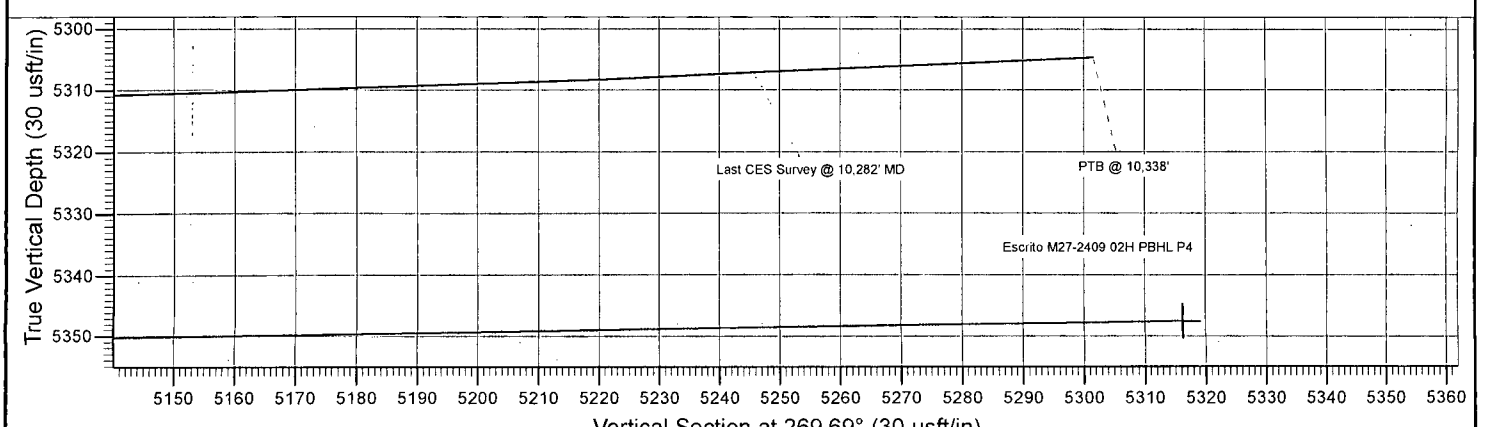
encana natural gas

Project: San Juan County, NM
Site: S27-T24N-R9W
Well: Escrito M27-2409 02H
Wellbore: Hz
Design: FINAL

CATHEDRAL





# Survey Report

| | | | |
|---|---|---|---|
| **Company:** | EnCana Oil & Gas (USA) Inc | **Local Co-ordinate Reference:** | Well Escrito M27-2409 02H |
| **Project:** | San Juan County, NM | **TVD Reference:** | 18' KB @ 6996.0usft (Aztec 1099) |
| **Site:** | S27-T24N-R9W | **MD Reference:** | 18' KB @ 6996.0usft (Aztec 1099) |
| **Well:** | Escrito M27-2409 02H | **North Reference:** | True |
| **Wellbore:** | Hz | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | FINAL | **Database:** | USA EDM 5000 Multi Users DB |

| | | | |
|---|---|---|---|
| **Project** | San Juan County, NM | | |
| **Map System:** | US State Plane 1983 | **System Datum:** | Mean Sea Level |
| **Geo Datum:** | North American Datum 1983 | | |
| **Map Zone:** | New Mexico Western Zone | | |

| | | | | | |
|---|---|---|---|---|---|
| **Site** | S27-T24N-R9W | | | | |
| **Site Position:** | | **Northing:** | 1,922,835.50 usft | **Latitude:** | 36.284430 |
| **From:** | Lat/Long | **Easting:** | 2,737,510.43 usft | **Longitude:** | -107.784410 |
| **Position Uncertainty:** | 0.0 usft | **Slot Radius:** | 13-3/16" | **Grid Convergence:** | 0.03 ° |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Well** | Escrito M27-2409 02H | | | | | |
| **Well Position** | **+N/-S** | 0.0 usft | **Northing:** | 1,921,688.85 usft | **Latitude:** | 36.281280 |
| | **+E/-W** | 0.0 usft | **Easting:** | 2,737,575.85 usft | **Longitude:** | -107.784190 |
| **Position Uncertainty** | | 0.0 usft | **Wellhead Elevation:** | usft | **Ground Level:** | 6,978.0 usft |

| | | | | | |
|---|---|---|---|---|---|
| **Wellbore** | Hz | | | | |
| **Magnetics** | **Model Name** | **Sample Date** | **Declination (°)** | **Dip Angle (°)** | **Field Strength (nT)** |
| | IGRF2010 | 7/23/2014 | 9.47 | 62.99 | 50,158 |

| | | | | | |
|---|---|---|---|---|---|
| **Design** | FINAL | | | | |
| **Audit Notes:** | | | | | |
| **Version:** | 1.0 | **Phase:** | ACTUAL | **Tie On Depth:** | 0.0 |
| **Vertical Section:** | **Depth From (TVD) (usft)** | **+N/-S (usft)** | **+E/-W (usft)** | **Direction (°)** | |
| | 0.0 | 0.0 | 0.0 | 269.69 | |

| | | | | |
|---|---|---|---|---|
| **Survey Program** | **Date** 9/18/2014 | | | |
| **From (usft)** | **To (usft)** | **Survey (Wellbore)** | **Tool Name** | **Description** |
| 563.0 | 10,338.0 | Survey #1 (Hz) | Geolink MWD | Geolink MWD |

**Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usf | Build Rate (°/100u | Formations / Comments |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | |
| 563.0 | 1.80 | 172.30 | 562.9 | -8.8 | 1.2 | -1.1 | 0.32 | 0.32 | |
| 627.0 | 2.00 | 161.40 | 626.9 | -10.8 | 1.7 | -1.6 | 0.64 | 0.31 | |
| 690.0 | 1.60 | 169.40 | 689.8 | -12.7 | 2.2 | -2.1 | 0.75 | -0.63 | |
| 753.0 | 3.30 | 104.00 | 752.8 | -14.0 | 4.1 | -4.0 | 4.78 | 2.70 | |
| 816.0 | 4.20 | 106.10 | 815.7 | -15.1 | 8.1 | -8.0 | 1.44 | 1.43 | |
| 880.0 | 3.20 | 119.20 | 879.5 | -16.6 | 11.9 | -11.8 | 2.04 | -1.56 | |
| 943.0 | 2.80 | 97.30 | 942.4 | -17.7 | 15.0 | -14.9 | 1.91 | -0.63 | |
| 1,006.0 | 2.00 | 78.20 | 1,005.4 | -17.7 | 17.6 | -17.5 | 1.78 | -1.27 | |
| 1,069.0 | 1.30 | 46.90 | 1,068.4 | -16.9 | 19.2 | -19.1 | 1.77 | -1.11 | |
| 1,133.0 | 1.20 | 35.70 | 1,132.3 | -15.9 | 20.1 | -20.0 | 0.41 | -0.16 | |
| 1,196.0 | 2.20 | 4.00 | 1,195.3 | -14.2 | 20.5 | -20.5 | 2.12 | 1.59 | |
| 1,259.0 | 2.60 | 6.90 | 1,258.3 | -11.5 | 20.8 | -20.7 | 0.66 | 0.63 | |

# Survey Report

| | | | |
|---|---|---|---|
| **Company:** | EnCana Oil & Gas (USA) Inc | **Local Co-ordinate Reference:** | Well Escrito M27-2409 02H |
| **Project:** | San Juan County, NM | **TVD Reference:** | 18' KB @ 6996.0usft (Aztec 1099) |
| **Site:** | S27-T24N-R9W | **MD Reference:** | 18' KB @ 6996.0usft (Aztec 1099) |
| **Well:** | Escrito M27-2409 02H | **North Reference:** | True |
| **Wellbore:** | Hz | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | FINAL | **Database:** | USA EDM 5000 Multi Users DB |

**Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usf | Build Rate (°/100u | Formations / Comments |
|---|---|---|---|---|---|---|---|---|---|
| 1,322.0 | 4.10 | 344.90 | 1,321.2 | -7.9 | 20.4 | -20.3 | 3.09 | 2.38 | |
| 1,385.0 | 5.20 | 345.30 | 1,383.9 | -3.0 | 19.1 | -19.1 | 1.75 | 1.75 | |
| 1,449.0 | 4.30 | 336.70 | 1,447.7 | 2.0 | 17.4 | -17.4 | 1.79 | -1.41 | |
| 1,512.0 | 4.00 | 336.70 | 1,510.6 | 6.2 | 15.6 | -15.6 | 0.48 | -0.48 | |
| 1,575.0 | 3.30 | 326.80 | 1,573.4 | 9.7 | 13.7 | -13.8 | 1.49 | -1.11 | |
| 1,639.0 | 2.20 | 289.10 | 1,637.4 | 11.7 | 11.6 | -11.6 | 3.22 | -1.72 | |
| 1,702.0 | 1.90 | 259.80 | 1,700.3 | 11.9 | 9.4 | -9.5 | 1.71 | -0.48 | |
| 1,765.0 | 1.90 | 270.90 | 1,763.3 | 11.7 | 7.3 | -7.4 | 0.58 | 0.00 | |
| 1,828.0 | 1.40 | 247.60 | 1,826.3 | 11.4 | 5.6 | -5.6 | 1.31 | -0.79 | |
| 1,891.0 | 1.50 | 222.00 | 1,889.2 | 10.5 | 4.3 | -4.4 | 1.03 | 0.16 | |
| 1,955.0 | 1.30 | 213.00 | 1,953.2 | 9.3 | 3.3 | -3.4 | 0.46 | -0.31 | |
| 2,018.0 | 1.60 | 210.00 | 2,016.2 | 7.9 | 2.5 | -2.6 | 0.49 | 0.48 | |
| 2,081.0 | 1.50 | 212.20 | 2,079.2 | 6.5 | 1.6 | -1.7 | 0.18 | -0.16 | |
| 2,144.0 | 1.80 | 223.00 | 2,142.2 | 5.1 | 0.5 | -0.5 | 0.68 | 0.48 | |
| 2,207.0 | 0.90 | 193.70 | 2,205.1 | 3.9 | -0.3 | 0.3 | 1.76 | -1.43 | |
| 2,271.0 | 0.80 | 164.40 | 2,269.1 | 2.9 | -0.3 | 0.3 | 0.69 | -0.16 | |
| 2,334.0 | 1.10 | 158.50 | 2,332.1 | 2.0 | 0.1 | -0.1 | 0.50 | 0.48 | |
| 2,397.0 | 1.40 | 188.70 | 2,395.1 | 0.6 | 0.2 | -0.2 | 1.13 | 0.48 | |
| 2,461.0 | 2.50 | 217.30 | 2,459.1 | -1.3 | -0.8 | 0.8 | 2.24 | 1.72 | |
| 2,524.0 | 4.40 | 224.80 | 2,522.0 | -4.1 | -3.3 | 3.3 | 3.09 | 3.02 | |
| 2,587.0 | 6.10 | 228.90 | 2,584.7 | -8.0 | -7.6 | 7.6 | 2.76 | 2.70 | |
| 2,650.0 | 7.40 | 234.60 | 2,647.3 | -12.5 | -13.4 | 13.4 | 2.32 | 2.06 | |
| 2,714.0 | 9.20 | 242.80 | 2,710.6 | -17.3 | -21.3 | 21.4 | 3.36 | 2.81 | |
| 2,777.0 | 9.40 | 245.90 | 2,772.8 | -21.7 | -30.5 | 30.6 | 0.86 | 0.32 | |
| 2,840.0 | 9.50 | 245.10 | 2,834.9 | -26.0 | -39.9 | 40.0 | 0.26 | 0.16 | |
| 2,904.0 | 11.00 | 236.80 | 2,897.9 | -31.5 | -49.8 | 50.0 | 3.28 | 2.34 | |
| 2,967.0 | 11.30 | 230.00 | 2,959.7 | -38.8 | -59.5 | 59.7 | 2.14 | 0.48 | |
| 3,030.0 | 9.50 | 211.50 | 3,021.7 | -47.2 | -67.0 | 67.2 | 5.99 | -2.86 | |
| 3,093.0 | 9.30 | 203.30 | 3,083.8 | -56.3 | -71.7 | 72.0 | 2.15 | -0.32 | |
| 3,156.0 | 9.50 | 195.20 | 3,146.0 | -66.0 | -75.1 | 75.5 | 2.12 | 0.32 | |
| 3,220.0 | 9.20 | 194.00 | 3,209.1 | -76.0 | -77.7 | 78.1 | 0.56 | -0.47 | |
| 3,283.0 | 9.10 | 194.70 | 3,271.3 | -85.7 | -80.2 | 80.7 | 0.24 | -0.16 | |
| 3,346.0 | 8.90 | 188.20 | 3,333.6 | -95.4 | -82.2 | 82.7 | 1.64 | -0.32 | |
| 3,409.0 | 9.20 | 187.00 | 3,395.8 | -105.2 | -83.5 | 84.0 | 0.56 | 0.48 | |
| 3,472.0 | 9.20 | 184.40 | 3,458.0 | -115.2 | -84.5 | 85.1 | 0.66 | 0.00 | |
| 3,536.0 | 8.30 | 192.10 | 3,521.2 | -124.9 | -85.8 | 86.5 | 2.31 | -1.41 | |
| 3,599.0 | 8.80 | 190.70 | 3,583.5 | -134.0 | -87.7 | 88.4 | 0.86 | 0.79 | |
| 3,662.0 | 8.70 | 193.80 | 3,645.8 | -143.4 | -89.7 | 90.5 | 0.77 | -0.16 | |
| 3,725.0 | 8.20 | 191.90 | 3,708.1 | -152.4 | -91.8 | 92.6 | 0.91 | -0.79 | |
| 3,789.0 | 8.20 | 193.10 | 3,771.5 | -161.3 | -93.7 | 94.6 | 0.27 | 0.00 | |
| 3,852.0 | 8.00 | 194.20 | 3,833.8 | -170.0 | -95.8 | 96.8 | 0.40 | -0.32 | |
| 3,915.0 | 7.60 | 195.10 | 3,896.2 | -178.2 | -98.0 | 99.0 | 0.66 | -0.63 | |
| 3,978.0 | 8.20 | 193.00 | 3,958.6 | -186.6 | -100.1 | 101.1 | 1.06 | 0.95 | |
| 4,041.0 | 8.50 | 188.40 | 4,021.0 | -195.6 | -101.8 | 102.8 | 1.16 | 0.48 | |
| 4,072.0 | 7.90 | 187.90 | 4,051.7 | -200.0 | -102.4 | 103.5 | 1.95 | -1.94 | |
| 4,135.0 | 7.90 | 193.80 | 4,114.1 | -208.5 | -104.0 | 105.2 | 1.29 | 0.00 | |
| 4,199.0 | 8.30 | 194.70 | 4,177.4 | -217.2 | -106.3 | 107.4 | 0.66 | 0.62 | |
| 4,262.0 | 8.00 | 196.30 | 4,239.8 | -225.8 | -108.6 | 109.9 | 0.60 | -0.48 | |
| 4,325.0 | 8.10 | 191.50 | 4,302.2 | -234.4 | -110.8 | 112.0 | 1.08 | 0.16 | |
| 4,388.0 | 7.50 | 183.10 | 4,364.6 | -242.8 | -111.9 | 113.2 | 2.04 | -0.95 | |
| 4,451.0 | 7.60 | 183.60 | 4,427.0 | -251.1 | -112.4 | 113.7 | 0.19 | 0.16 | |
| 4,515.0 | 7.40 | 180.20 | 4,490.5 | -259.4 | -112.6 | 114.0 | 0.76 | -0.31 | |
| 4,578.0 | 6.70 | 181.50 | 4,553.0 | -267.2 | -112.7 | 114.2 | 1.14 | -1.11 | |

# Survey Report

| | | | |
|---|---|---|---|
| **Company:** | EnCana Oil & Gas (USA) Inc | **Local Co-ordinate Reference:** | Well Escrito M27-2409 02H |
| **Project:** | San Juan County, NM | **TVD Reference:** | 18' KB @ 6996.0usft (Aztec 1099) |
| **Site:** | S27-T24N-R9W | **MD Reference:** | 18' KB @ 6996.0usft (Aztec 1099) |
| **Well:** | Escrito M27-2409 02H | **North Reference:** | True |
| **Wellbore:** | Hz | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | FINAL | **Database:** | USA EDM 5000 Multi Users DB |

**Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usf | Build Rate (°/100u | Formations / Comments |
|---|---|---|---|---|---|---|---|---|---|
| 4,641.0 | 7.30 | 192.80 | 4,615.5 | -274.8 | -113.7 | 115.2 | 2.38 | 0.95 | |
| 4,705.0 | 7.40 | 198.50 | 4,679.0 | -282.6 | -115.9 | 117.5 | 1.15 | 0.16 | |
| 4,768.0 | 7.30 | 193.20 | 4,741.5 | -290.4 | -118.1 | 119.7 | 1.09 | -0.16 | |
| 4,831.0 | 8.80 | 212.60 | 4,803.9 | -298.3 | -121.6 | 123.3 | 4.89 | 2.38 | |
| 4,894.0 | 15.20 | 232.00 | 4,865.5 | -307.5 | -130.8 | 132.4 | 11.87 | 10.16 | |
| 4,957.0 | 21.80 | 234.00 | 4,925.2 | -319.5 | -146.8 | 148.5 | 10.52 | 10.48 | |
| 5,021.0 | 26.50 | 243.40 | 4,983.6 | -332.9 | -169.2 | 171.0 | 9.47 | 7.34 | |
| 5,079.0 | 30.50 | 253.10 | 5,034.6 | -342.9 | -194.8 | 196.7 | 10.53 | 6.90 | |
| 5,142.0 | 34.00 | 259.20 | 5,087.9 | -350.9 | -227.5 | 229.4 | 7.58 | 5.56 | |
| 5,205.0 | 38.00 | 263.20 | 5,138.9 | -356.5 | -264.0 | 266.0 | 7.36 | 6.35 | |
| 5,268.0 | 42.60 | 266.50 | 5,186.9 | -360.1 | -304.6 | 306.5 | 8.05 | 7.30 | |
| 5,332.0 | 46.10 | 270.20 | 5,232.7 | -361.3 | -349.3 | 351.3 | 6.80 | 5.47 | |
| 5,395.0 | 50.40 | 270.50 | 5,274.6 | -361.0 | -396.3 | 398.2 | 6.83 | 6.83 | |
| 5,426.0 | 53.00 | 271.00 | 5,293.8 | -360.7 | -420.6 | 422.6 | 8.48 | 8.39 | |
| 5,458.0 | 55.80 | 270.80 | 5,312.4 | -360.3 | -446.6 | 448.6 | 8.76 | 8.75 | |
| 5,490.0 | 58.50 | 271.10 | 5,329.8 | -359.9 | -473.5 | 475.4 | 8.47 | 8.44 | |
| 5,521.0 | 61.60 | 271.70 | 5,345.3 | -359.2 | -500.4 | 502.3 | 10.14 | 10.00 | |
| 5,553.0 | 64.70 | 272.20 | 5,359.7 | -358.2 | -528.9 | 530.8 | 9.79 | 9.69 | |
| 5,584.0 | 67.50 | 273.10 | 5,372.3 | -356.9 | -557.2 | 559.1 | 9.41 | 9.03 | |
| 5,616.0 | 70.70 | 273.10 | 5,383.7 | -355.3 | -587.0 | 589.0 | 10.00 | 10.00 | |
| 5,648.0 | 73.40 | 273.50 | 5,393.6 | -353.6 | -617.4 | 619.3 | 8.52 | 8.44 | |
| 5,686.0 | 76.90 | 273.90 | 5,403.3 | -351.2 | -654.1 | 656.0 | 9.27 | 9.21 | |
| 5,717.0 | 80.90 | 272.80 | 5,409.3 | -349.4 | -684.4 | 686.3 | 13.36 | 12.90 | |
| 5,747.0 | 83.50 | 271.90 | 5,413.3 | -348.2 | -714.1 | 716.0 | 9.16 | 8.67 | |
| 5,778.0 | 85.60 | 269.70 | 5,416.3 | -347.8 | -745.0 | 746.9 | 9.79 | 6.77 | |
| 5,808.0 | 88.50 | 268.40 | 5,417.8 | -348.3 | -774.9 | 776.8 | 10.59 | 9.67 | |
| 5,870.0 | 91.30 | 268.20 | 5,417.9 | -350.1 | -836.9 | 838.8 | 4.53 | 4.52 | |
| 5,931.0 | 91.70 | 268.00 | 5,416.3 | -352.1 | -897.9 | 899.7 | 0.73 | 0.66 | |
| 5,992.0 | 91.00 | 268.30 | 5,414.9 | -354.1 | -958.8 | 960.7 | 1.25 | -1.15 | |
| 6,053.0 | 91.60 | 268.90 | 5,413.5 | -355.6 | -1,019.8 | 1,021.7 | 1.39 | 0.98 | |
| 6,115.0 | 91.10 | 269.50 | 5,412.1 | -356.4 | -1,081.7 | 1,083.7 | 1.26 | -0.81 | |
| 6,175.0 | 90.40 | 269.20 | 5,411.3 | -357.1 | -1,141.7 | 1,143.6 | 1.27 | -1.17 | |
| 6,237.0 | 91.40 | 269.70 | 5,410.3 | -357.7 | -1,203.7 | 1,205.6 | 1.80 | 1.61 | |
| 6,298.0 | 90.50 | 269.60 | 5,409.3 | -358.1 | -1,264.7 | 1,266.6 | 1.48 | -1.48 | |
| 6,360.0 | 90.50 | 268.50 | 5,408.7 | -359.1 | -1,326.7 | 1,328.6 | 1.77 | 0.00 | |
| 6,421.0 | 91.30 | 269.10 | 5,407.8 | -360.4 | -1,387.7 | 1,389.6 | 1.64 | 1.31 | |
| 6,483.0 | 91.80 | 268.60 | 5,406.1 | -361.6 | -1,449.6 | 1,451.6 | 1.14 | 0.81 | |
| 6,544.0 | 90.80 | 267.30 | 5,404.7 | -363.8 | -1,510.6 | 1,512.5 | 2.69 | -1.64 | |
| 6,605.0 | 91.80 | 267.50 | 5,403.3 | -366.6 | -1,571.5 | 1,573.5 | 1.67 | 1.64 | |
| 6,667.0 | 91.10 | 267.90 | 5,401.8 | -369.1 | -1,633.4 | 1,635.4 | 1.30 | -1.13 | |
| 6,727.0 | 90.30 | 268.20 | 5,401.0 | -371.1 | -1,693.4 | 1,695.4 | 1.42 | -1.33 | |
| 6,789.0 | 90.80 | 268.40 | 5,400.4 | -373.0 | -1,755.4 | 1,757.4 | 0.87 | 0.81 | |
| 6,851.0 | 89.70 | 268.00 | 5,400.2 | -374.9 | -1,817.3 | 1,819.3 | 1.89 | -1.77 | |
| 6,912.0 | 90.00 | 267.80 | 5,400.3 | -377.1 | -1,878.3 | 1,880.3 | 0.59 | 0.49 | |
| 6,974.0 | 92.00 | 269.00 | 5,399.3 | -378.9 | -1,940.3 | 1,942.3 | 3.76 | 3.23 | |
| 7,035.0 | 91.80 | 270.10 | 5,397.2 | -379.3 | -2,001.2 | 2,003.2 | 1.83 | -0.33 | |
| 7,098.0 | 91.50 | 268.70 | 5,395.4 | -380.0 | -2,064.2 | 2,066.2 | 2.27 | -0.48 | |
| 7,162.0 | 90.10 | 267.70 | 5,394.5 | -382.0 | -2,128.1 | 2,130.2 | 2.69 | -2.19 | |
| 7,225.0 | 91.00 | 268.10 | 5,393.9 | -384.3 | -2,191.1 | 2,193.1 | 1.56 | 1.43 | |
| 7,288.0 | 90.70 | 268.40 | 5,393.0 | -386.3 | -2,254.1 | 2,256.1 | 0.67 | -0.48 | |
| 7,351.0 | 89.80 | 268.00 | 5,392.7 | -388.2 | -2,317.0 | 2,319.1 | 1.56 | -1.43 | |
| 7,414.0 | 89.50 | 266.10 | 5,393.1 | -391.5 | -2,379.9 | 2,382.0 | 3.05 | -0.48 | |
| 7,477.0 | 90.90 | 265.60 | 5,392.9 | -396.0 | -2,442.8 | 2,444.9 | 2.36 | 2.22 | |

# Survey Report

| | | | |
|---|---|---|---|
| **Company:** | EnCana Oil & Gas (USA) Inc | **Local Co-ordinate Reference:** | Well Escrito M27-2409 02H |
| **Project:** | San Juan County, NM | **TVD Reference:** | 18' KB @ 6996.0usft (Aztec 1099) |
| **Site:** | S27-T24N-R9W | **MD Reference:** | 18' KB @ 6996.0usft (Aztec 1099) |
| **Well:** | Escrito M27-2409 02H | **North Reference:** | True |
| **Wellbore:** | Hz | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | FINAL | **Database:** | USA EDM 5000 Multi Users DB |

**Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usf | Build Rate (°/100u | Formations / Comments |
|---|---|---|---|---|---|---|---|---|---|
| 7,541.0 | 91.90 | 265.10 | 5,391.3 | -401.2 | -2,506.5 | 2,508.7 | 1.75 | 1.56 | |
| 7,604.0 | 92.70 | 266.60 | 5,388.8 | -405.8 | -2,569.3 | 2,571.5 | 2.70 | 1.27 | |
| 7,667.0 | 92.10 | 268.80 | 5,386.1 | -408.3 | -2,632.2 | 2,634.4 | 3.62 | -0.95 | |
| 7,730.0 | 92.20 | 269.40 | 5,383.8 | -409.3 | -2,695.2 | 2,697.3 | 0.96 | 0.16 | |
| 7,793.0 | 90.80 | 268.60 | 5,382.1 | -410.4 | -2,758.1 | 2,760.3 | 2.56 | -2.22 | |
| 7,856.0 | 89.80 | 267.10 | 5,381.8 | -412.8 | -2,821.1 | 2,823.3 | 2.86 | -1.59 | |
| 7,920.0 | 90.40 | 266.60 | 5,381.7 | -416.3 | -2,885.0 | 2,887.2 | 1.22 | 0.94 | |
| 7,983.0 | 91.40 | 267.90 | 5,380.7 | -419.3 | -2,947.9 | 2,950.1 | 2.60 | 1.59 | |
| 8,046.0 | 92.10 | 269.70 | 5,378.8 | -420.6 | -3,010.9 | 3,013.1 | 3.06 | 1.11 | |
| 8,109.0 | 91.70 | 270.30 | 5,376.7 | -420.6 | -3,073.8 | 3,076.1 | 1.14 | -0.63 | |
| 8,172.0 | 92.20 | 270.10 | 5,374.5 | -420.4 | -3,136.8 | 3,139.0 | 0.85 | 0.79 | |
| 8,236.0 | 92.60 | 269.50 | 5,371.9 | -420.6 | -3,200.7 | 3,203.0 | 1.13 | 0.62 | |
| 8,299.0 | 91.50 | 267.40 | 5,369.6 | -422.3 | -3,263.7 | 3,265.9 | 3.76 | -1.75 | |
| 8,362.0 | 92.70 | 268.00 | 5,367.3 | -424.8 | -3,326.6 | 3,328.8 | 2.13 | 1.90 | |
| 8,425.0 | 91.80 | 265.70 | 5,364.8 | -428.3 | -3,389.4 | 3,391.7 | 3.92 | -1.43 | |
| 8,487.0 | 91.70 | 263.60 | 5,362.9 | -434.1 | -3,451.1 | 3,453.4 | 3.39 | -0.16 | |
| 8,550.0 | 94.40 | 264.20 | 5,359.6 | -440.8 | -3,513.7 | 3,516.0 | 4.39 | 4.29 | |
| 8,614.0 | 94.90 | 267.00 | 5,354.4 | -445.7 | -3,577.3 | 3,579.6 | 4.43 | 0.78 | |
| 8,677.0 | 93.60 | 269.20 | 5,349.7 | -447.7 | -3,640.0 | 3,642.4 | 4.05 | -2.06 | |
| 8,740.0 | 91.50 | 270.60 | 5,346.9 | -447.8 | -3,703.0 | 3,705.3 | 4.00 | -3.33 | |
| 8,803.0 | 91.30 | 269.80 | 5,345.4 | -447.6 | -3,766.0 | 3,768.3 | 1.31 | -0.32 | |
| 8,867.0 | 91.20 | 270.70 | 5,344.0 | -447.3 | -3,829.9 | 3,832.3 | 1.41 | -0.16 | |
| 8,930.0 | 91.30 | 270.50 | 5,342.6 | -446.7 | -3,892.9 | 3,895.3 | 0.35 | 0.16 | |
| 8,993.0 | 92.10 | 270.40 | 5,340.7 | -446.2 | -3,955.9 | 3,958.3 | 1.28 | 1.27 | |
| 9,056.0 | 90.90 | 271.70 | 5,339.1 | -445.0 | -4,018.9 | 4,021.2 | 2.81 | -1.90 | |
| 9,119.0 | 90.50 | 271.70 | 5,338.3 | -443.2 | -4,081.8 | 4,084.2 | 0.63 | -0.63 | |
| 9,183.0 | 91.20 | 271.20 | 5,337.4 | -441.6 | -4,145.8 | 4,148.1 | 1.34 | 1.09 | |
| 9,246.0 | 91.80 | 270.70 | 5,335.7 | -440.5 | -4,208.8 | 4,211.1 | 1.24 | 0.95 | |
| 9,309.0 | 90.80 | 272.40 | 5,334.3 | -438.8 | -4,271.7 | 4,274.0 | 3.13 | -1.59 | |
| 9,372.0 | 91.10 | 272.40 | 5,333.3 | -436.2 | -4,334.7 | 4,337.0 | 0.48 | 0.48 | |
| 9,435.0 | 92.00 | 272.10 | 5,331.5 | -433.7 | -4,397.6 | 4,399.9 | 1.51 | 1.43 | |
| 9,498.0 | 90.60 | 272.40 | 5,330.1 | -431.2 | -4,460.5 | 4,462.8 | 2.27 | -2.22 | |
| 9,562.0 | 90.40 | 272.20 | 5,329.6 | -428.7 | -4,524.5 | 4,526.7 | 0.44 | -0.31 | |
| 9,625.0 | 91.30 | 272.00 | 5,328.6 | -426.3 | -4,587.4 | 4,589.7 | 1.46 | 1.43 | |
| 9,688.0 | 92.20 | 272.30 | 5,326.7 | -424.0 | -4,650.3 | 4,652.6 | 1.51 | 1.43 | |
| 9,751.0 | 92.80 | 272.20 | 5,324.0 | -421.5 | -4,713.2 | 4,715.4 | 0.97 | 0.95 | |
| 9,814.0 | 92.10 | 272.50 | 5,321.3 | -418.9 | -4,776.1 | 4,778.3 | 1.21 | -1.11 | |
| 9,877.0 | 91.40 | 271.10 | 5,319.3 | -417.0 | -4,839.1 | 4,841.2 | 2.48 | -1.11 | |
| 9,941.0 | 91.40 | 271.40 | 5,317.8 | -415.6 | -4,903.0 | 4,905.2 | 0.47 | 0.00 | |
| 10,004.0 | 92.20 | 270.00 | 5,315.8 | -414.8 | -4,966.0 | 4,968.2 | 2.56 | 1.27 | |
| 10,067.0 | 91.80 | 268.60 | 5,313.6 | -415.6 | -5,028.9 | 5,031.1 | 2.31 | -0.63 | |
| 10,130.0 | 91.50 | 267.20 | 5,311.8 | -417.9 | -5,091.9 | 5,094.1 | 2.27 | -0.48 | |
| 10,194.0 | 91.10 | 265.90 | 5,310.3 | -421.7 | -5,155.7 | 5,157.9 | 2.12 | -0.62 | |
| 10,257.0 | 92.60 | 265.70 | 5,308.3 | -426.3 | -5,218.5 | 5,220.8 | 2.40 | 2.38 | |
| 10,282.0 | 92.60 | 265.70 | 5,307.2 | -428.2 | -5,243.4 | 5,245.7 | 0.00 | 0.00 | **Last CES Survey @ 10,282' MD** |
| 10,338.0 | 92.60 | 265.70 | 5,304.6 | -432.4 | -5,299.2 | 5,301.5 | 0.00 | 0.00 | **PTB @ 10,338'** |

# Survey Report

| | | | |
|---|---|---|---|
| **Company:** | EnCana Oil & Gas (USA) Inc | **Local Co-ordinate Reference:** | Well Escrito M27-2409 02H |
| **Project:** | San Juan County, NM | **TVD Reference:** | 18' KB @ 6996.0usft (Aztec 1099) |
| **Site:** | S27-T24N-R9W | **MD Reference:** | 18' KB @ 6996.0usft (Aztec 1099) |
| **Well:** | Escrito M27-2409 02H | **North Reference:** | True |
| **Wellbore:** | Hz | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | FINAL | **Database:** | USA EDM 5000 Multi Users DB |

**Targets**

| Target Name - hit/miss target - Shape | Dip Angle (°) | Dip Dir. (°) | TVD (usft) | +N/-S (usft) | +E/-W (usft) | Northing (usft) | Easting (usft) | Latitude | Longitude |
|---|---|---|---|---|---|---|---|---|---|
| Escrito M27-2409 02H P | 0.00 | 0.00 | 5,347.5 | -403.6 | -5,314.1 | 1,921,282.58 | 2,732,261.94 | 36.280170 | -107.802220 |
| - survey misses target center by 53.8usft at 10338.0usft MD (5304.6 TVD, -432.4 N, -5299.2 E) | | | | | | | | | |
| - Point | | | | | | | | | |
| Escrito M27-2409 02H P | 0.00 | 0.00 | 5,367.9 | -378.6 | -692.6 | 1,921,309.93 | 2,736,883.41 | 36.280240 | -107.786540 |
| - survey misses target center by 51.3usft at 5715.4usft MD (5409.0 TVD, -349.5 N, -682.9 E) | | | | | | | | | |
| - Point | | | | | | | | | |
| Escrito M27-2409 02H P | 0.00 | 0.00 | 5,327.6 | -403.6 | -5,314.1 | 1,921,282.58 | 2,732,261.94 | 36.280170 | -107.802220 |
| - survey misses target center by 39.8usft at 10338.0usft MD (5304.6 TVD, -432.4 N, -5299.2 E) | | | | | | | | | |
| - Point | | | | | | | | | |
| Escrito M27-2409 02H P | 0.00 | 0.00 | 5,393.9 | -378.6 | -692.6 | 1,921,309.93 | 2,736,883.41 | 36.280240 | -107.786540 |
| - survey misses target center by 33.7usft at 5721.8usft MD (5410.0 TVD, -349.2 N, -689.2 E) | | | | | | | | | |
| - Point | | | | | | | | | |
| Escrito M27-2409 02H P | 0.00 | 0.00 | 5,304.3 | -403.6 | -5,314.1 | 1,921,282.58 | 2,732,261.94 | 36.280170 | -107.802220 |
| - survey misses target center by 32.4usft at 10338.0usft MD (5304.6 TVD, -432.4 N, -5299.2 E) | | | | | | | | | |
| - Point | | | | | | | | | |
| Escrito M27-2409 02H P | 0.00 | 0.00 | 5,420.1 | -378.6 | -692.6 | 1,921,309.93 | 2,736,883.41 | 36.280240 | -107.786540 |
| - survey misses target center by 31.1usft at 5725.4usft MD (5410.5 TVD, -349.0 N, -692.7 E) | | | | | | | | | |
| - Point | | | | | | | | | |
| Escrito M27-2409 02H P | 0.00 | 0.00 | 5,353.6 | -403.6 | -5,314.1 | 1,921,282.58 | 2,732,261.94 | 36.280170 | -107.802220 |
| - survey misses target center by 58.8usft at 10338.0usft MD (5304.6 TVD, -432.4 N, -5299.2 E) | | | | | | | | | |
| - Point | | | | | | | | | |
| Escrito M27-2409 02H P | 0.00 | 0.00 | 5,352.7 | -378.6 | -692.6 | 1,921,309.93 | 2,736,883.41 | 36.280240 | -107.786540 |
| - survey misses target center by 64.2usft at 5712.5usft MD (5408.5 TVD, -349.6 N, -680.0 E) | | | | | | | | | |
| - Point | | | | | | | | | |

**Survey Annotations**

| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates +N/-S (usft) | Local Coordinates +E/-W (usft) | Comment |
|---|---|---|---|---|
| 10,282.0 | 5,307.2 | -428.2 | -5,243.4 | Last CES Survey @ 10,282' MD |
| 10,338.0 | 5,304.6 | -432.4 | -5,299.2 | PTB @ 10,338' |

Checked By: _____ Approved By: _____ Date: _____