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Form 3160-3
(August 2007)

JUN 09 2014

FORM APPROVED
OMB No. 1004-0137
Expires July 31, 2010

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Farmington Field Office
Bureau of Land Management

APPLICATION FOR PERMIT TO DRILL OR REENTER
OIL CONS. DIV. DIST. 3

| | | | | | |
|--|--|---|--|--|--|
| 1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER | | AUG 14 2014 | | 5. Lease Serial No. NM 104606, NMNM-100805 & 100806 | |
| 1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other | | <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone | | 6. If Indian, Allottee or Tribe Name N/A | |
| 2. Name of Operator Encana Oil & Gas (USA) Inc. | | | | 7. If Unit or CA Agreement, Name and No. PENDING | |
| 3a. Address 370 17th Street, Suite 1700 Denver, CO 80202 | | 3b. Phone No. (include area code) 720-876-3533 | | 8. Lease Name and Well No. Pifion Unit M03-2410 01H | |
| 4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface 235' FSL and 1232' FWL Section 3, T24N, R10W SWSW BHL At proposed prod. zone 410' FSL and 485' FEL Section 10, T24N, R10W SESE SHL | | | | 9. API Well No. 30-045-35560 | |
| 14. Distance in miles and direction from nearest town or post office* +/- 34.7 miles southwest of the intersection of US Hwy 550 & US Hwy 64 in Bloomfield, NM | | | | 10. Field and Pool, or Exploratory PENDING Pifion Unit H2(Oil) | |
| 15. Distance from proposed* location to nearest property or lease line, ft. EP is 330' from north lease line Section 10, T24N, R10W (Also to nearest drig. unit line, if any) | | 16. No. of acres in lease NM104606 - 1120 ac. NMNM100805 - 160 ac. NMNM100806 - 160 ac. | | 17. Spacing Unit dedicated to this well 640 acres - ALL of Section 10, T24N, R10W | |
| 18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. USA Rutter A W 1 +/- 29' of wellbore | | 19. Proposed Depth 5,448' TVD/12,370' MD | | 20. BLM/BIA Bond No. on file COB-000235 | |
| 21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6,953' GL, 6,969' KB | | 22. Approximate date work will start* 11/04/2014 | | 23. Estimated duration 20 days | |

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, must be attached to this form:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification
- Such other site specific information and/or plans as may be required by the BLM.

| | | | | | |
|---|--|--|--|-----------------|--|
| 25. Signature <i>Steven Merrill</i> | | Name (Printed/Typed) Katie Wegner STEVEN MERRELL | | Date 6-5-14 | |
| Title Regulatory Analyst | | | | | |
| Approved by (Signature) <i>D. Mankiewicz</i> | | Name (Printed/Typed) | | Date 8/12/14 | |
| Title AFM | | Office FFO | | | |

Application approval 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.
Conditions of approval, if any, are attached.

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.

(Continued on page 2)

*(Instructions on page 2)

BLM'S APPROVAL OR ACCEPTANCE OF THIS ACTION DOES NOT RELIEVE THE LESSEE AND OPERATOR FROM OBTAINING ANY OTHER AUTHORIZATION REQUIRED FOR OPERATIONS ON FEDERAL AND INDIAN LANDS

NMOCDF

This action is subject to technical and financial review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4

DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS"

DISTRICT I
1835 N. French Dr., Hobbs, N.M. 88240
Phone: (505) 838-0101 Fax: (505) 838-0780

DISTRICT II
511 E. First St., Artesia, N.M. 88210
Phone: (505) 748-1253 Fax: (505) 748-0780

DISTRICT III
1000 Rio Grande Rd., Aztec, N.M. 87410
Phone: (505) 834-5175 Fax: (505) 834-5170

DISTRICT IV
1820 S. El. French Dr., Santa Fe, NM 87505
Phone: (505) 478-8400 Fax: (505) 478-8452

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised August 1, 2011

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Submit one copy to appropriate
District Office

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

JUN 09 2014

Farmington Field Office ☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

| | | |
|-----------------------------|---|-----------------------------------|
| *API Number 30-045-35560 | *Pool Code PENDING 98102 | *Pool Name Pinon Unit H2 (oil) |
| *Property Code 313879 | *Property Name PINON UNIT M03-2410 | *Well Number 01H |
| *GRID No. 282327 | *Operator Name ENCANA OIL & GAS (USA) INC. | *Elevation 6952.6' |

¹⁰ Surface Location

| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|----------|
| M | 3 | 24N | 10W | | 235' | SOUTH | 1232' | WEST | SAN JUAN |

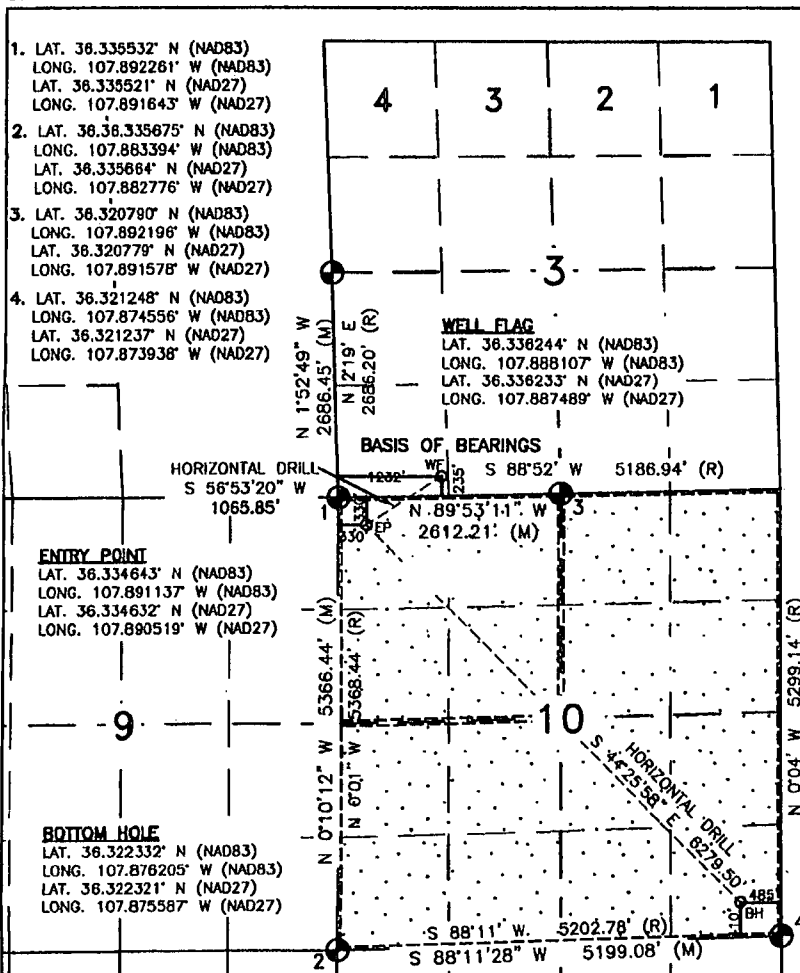
¹¹ Bottom Hole Location If Different From Surface

| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|----------|
| P | 10 | 24N | 10W | | 410' | SOUTH | 485' | EAST | SAN JUAN |

| | | | |
|---|------------------|---------------------|-----------------------|
| *Dedicated Acres 7,845.44 acres of W2 of Sec 4, Sec 5-10, 15-18, 21, N2 of Sec 22 & 28 - UNDIVIDED UNIT Penetrated Spacing Unit: All of Sec 10 (640 acres) | *Joint or Infill | *Consolidation Code | *Order No. PENDING |
|---|------------------|---------------------|-----------------------|

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16



17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Katie Wegner 6/5/14
Signature Date
Katie Wegner

Printed Name
Katie.wegner@encana.com

E-mail Address

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

OCTOBER 29, 2012

Date of Survey

Signature and Seal of Professional Surveyor:

David Russell
DAVID R. RUSSELL
REGISTERED PROFESSIONAL LAND SURVEYOR
NEW MEXICO
1020
DAVID RUSSELL
Certificate Number 10201

1625 N. French Dr., Hobbs, N.M. 88240
Phone: (505) 523-0161 Fax: (505) 523-0720

511 E. First St., Artesia, N.M. 88210
Phone: (505) 746-1838 Fax: (505) 746-9720

1000 Rio Brazos Rd., Austin, TX 78740
Phone: (505) 534-6175 Fax: (505) 534-6170

1820 E. St. Francis Dr., Santa Fe, NM 87506
Phone: (505) 476-8480 Fax: (505) 476-8482

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised August 1, 2011

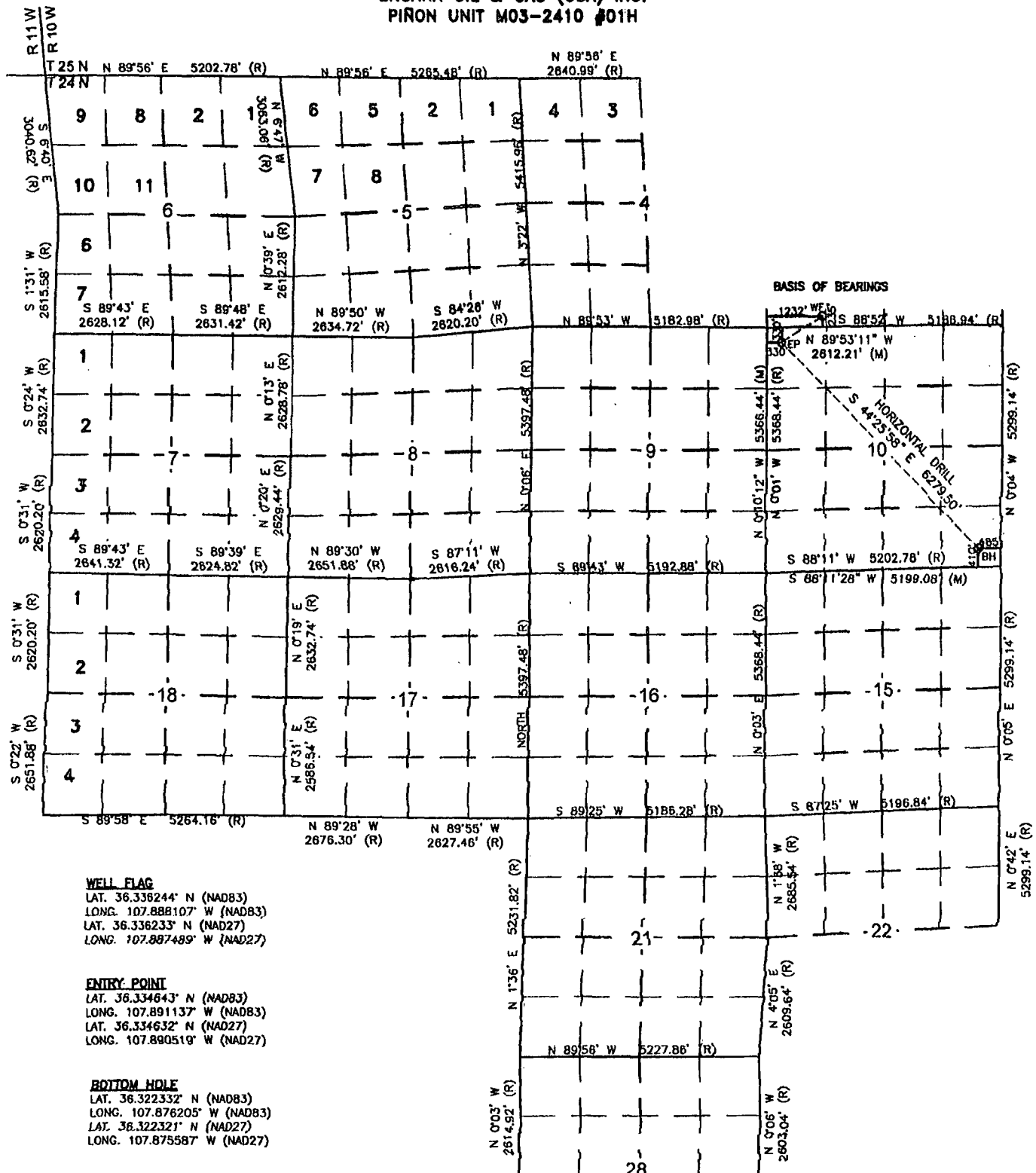
Submit one copy to appropriate
District Office

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, NM 87505

☐ AMENDED REPORT

ENCANA OIL & GAS (USA) INC.
PINON UNIT M03-2410 401H



Pinon Unit M03-2410 01H
 SHL: SWSW Section 3, T24N, R10W
 235' FSL and 1232' FWL
 BHL: SESE Section 10, T24N, R10W
 410' FSL and 485' FEL
 San Juan, New Mexico

Encana Oil & Gas (USA) Inc. Drilling Plan

1. ESTIMATED TOPS OF GEOLOGICAL MARKERS (TVD)

The estimated tops of important geologic markers are as follows:

| Formation | Depth (TVD) units = feet |
|---------------------|--------------------------|
| Ojo Alamo Ss. | 848 |
| Kirtland Shale | 991 |
| Fruitland Coal | 1,392 |
| Pictured Cliffs Ss. | 1,709 |
| Lewis Shale | 1,870 |
| Cliffhouse Ss. | 2,496 |
| Menefee Fn. | 3,244 |
| Point Lookout Ss. | 4,188 |
| Mancos Shale | 4,366 |
| Mancos Silt | 4,960 |
| Gallup Fn. | 5,204 |

The referenced surface elevation is 6953', KB 6969'

2. ESTIMATED DEPTH OF POTENTIAL WATER, OIL, GAS, & OTHER MINERAL BEARING FORMATIONS

| Substance | Formation | Depth (TVD) units = feet |
|-----------|---------------------|--------------------------|
| Water/Gas | Fruitland Coal | 1,392 |
| Oil/Gas | Pictured Cliffs Ss. | 1,709 |
| Oil/Gas | Cliffhouse Ss. | 2,496 |
| Gas | Menefee Fn. | 3,244 |
| Oil/Gas | Point Lookout Ss. | 4,188 |
| Oil/Gas | Mancos Shale | 4,366 |
| Oil/Gas | Mancos Silt | 4,960 |
| Oil/Gas | Gallup Fn. | 5,204 |

All shows of fresh water and minerals will be reported and protected.

3. PRESSURE CONTROL

- a) Pressure control equipment and configuration will be designed to meet 2M standards.
- b) Working pressure on rams and BOPE will be 3,000 psi.
- c) Function test and visual inspection of the BOP will be conducted daily and noted in the IADC Daily Drilling Report.
- d) The Annular BOP will be pressure tested to a minimum of 50 percent of its rated working pressure.
- e) Blind and Pipe Rams/BOP will be tested against a test plug to 100 percent of rated working pressure.
- f) Pressure tests are required before drilling out from under all casing strings set and cemented in place.

Pinon Unit M03-2410 01H

SHL: SWSW Section 3, T24N, R10W

235' FSL and 1232' FWL

BHL: SESE Section 10, T24N, R10W

410' FSL and 485' FEL

San Juan, New Mexico

- g) BOP controls must be installed prior to drilling the surface casing plug and will remain in use until the well is completed or abandoned.
- h) BOP testing procedures and testing frequency will conform to Onshore Order No. 2.
- i) BOP remote controls shall be located on the rig floor at a location readily accessible to the driller. Master controls shall be on the ground at the accumulator and shall have the capability to function all preventers.
- j) The kill line shall be 2-inch minimum and contain two kill line valves, one of which shall be a check valve.
- k) The choke line shall be a 2-inch minimum and contain two choke line valves (2-inch minimum).
- l) The choke and manifold shall contain two adjustable chokes.
- m) Hand wheels shall be installed on all ram preventers.
- n) Safety valves and wrenches (with subs for drill string connections) shall be available on the rig floor at all
- o) Inside BOP or float sub shall also be available on the rig floor at all times.

Proposed BOP and choke manifold arrangements are attached.

4. CASING & CEMENTING PROGRAM

The proposed casing and cementing program has been designed to protect and/or isolate all usable water zones, potentially productive zones, lost circulation zones, abnormally pressured zones, and any prospectively valuable deposits of minerals. Any isolating medium other than cement shall receive approval prior to use. The casing setting depth shall be calculated to position the casing seat opposite a competent formation which will contain the maximum pressure to which it will be exposed during normal drilling operations. All indications of useable water shall be reported.

- a) The proposed casing design is as follows:

| Casing | Depth (MD) | Hole Size | Csg Size | Weight | Grade |
|------------------|-------------------|------------------|-----------------|---------------|---------------|
| Conductor | 0'-60' | 30" | 20" | 94# | |
| Surface | 0'-500' | 12 1/4" | 9 5/8" | 36# | J55, STC New |
| Intermediate | 0'-5970' | 8 3/4" | 7" | 26# | J55, LTC New |
| Production Liner | 5770'-12370' | 6 1/8" | 4 1/2" | 11.6# | B80*, LTC New |

| Casing String | | | | Casing Strength Properties | | | Minimum Design Factors | | |
|----------------------|---------------------|--------------|-------------------|-----------------------------------|--------------------|--------------------------|-------------------------------|--------------|----------------|
| Size | Weight (ppf) | Grade | Connection | Collapse (psi) | Burst (psi) | Tensile (1000lbs) | Collapse | Burst | Tension |
| 9 5/8" | 36 | J55 | STC | 2020 | 3520 | 394 | 1.125 | 1.1 | 1.5 |
| 7" | 26 | J55 | LTC | 4320 | 4980 | 367 | 1.125 | 1.1 | 1.5 |
| 4.5" | 11.6 | B80 | LTC | 6350 | 7780 | 201 | 1.125 | 1.1 | 1.5 |

*B80 pipe specifications are attached

Casing design is subject to revision based on geologic conditions encountered

All casing strings below the conductor shall be pressure tested to 0.22 psi per foot of casing string length or 1,500 psi, whichever is greater, but not to exceed 70 percent of the minimum internal yield. If pressure declines more than 10 percent in 30 minutes, corrective action shall be taken.

Pinon Unit M03-2410 01H

SHL: SWSW Section 3, T24N, R10W

235' FSL and 1232' FWL

BHL: SESE Section 10, T24N, R10W

410' FSL and 485' FEL

San Juan, New Mexico

b) The proposed cementing program is as follows

| Casing | Depth (MD) | Cement Volume (sacks) | Cement Type & Yield | Designed TOC | Centralizers |
|------------------|--------------|---|--|--------------|--|
| Conductor | 0'-60' | 100 sks | Type I Neat 16 ppg | Surface | None |
| Surface | 0'-500' | 314 sks | HALCEM™ SYSTEM + 2% CaCl2 + 0.125lbm/sk Poly-E-Flake. 15.8 ppg, 1.174 cuft/sk | Surface | 1 per joint on bottom 3 joints |
| Intermediate | 0'-5970' | 30% open hole excess Stage 1 Lead: 374 sks Stage 1 Tail: 399 sks Stage 2 Lead: 186 sks | Stage 1 Lead: HALCEM™ SYSTEM + 0.2% HR-5 + 5lbm/sk Kol-Seal + 0.125lbm/sk Poly-E-Flake. 12.3 ppg, 1.948 cuft/sk Stage 1 Tail: VARICEM™ CEMENT + .15% CFR-3 + 5lbm/sk Kol-Seal + 0.125% Poly-E-Flake. 13.5 ppg, 1.308 cuft/sk. Stage 2 Contingency: HALCEM™ SYSTEM + 5lbm/sk Kol-Seal + 0.125lbm/sk Poly-E-Flake. 12.3 ppg, | Surface | 1 every 3 joints through water bearing zones |
| Production Liner | 5770'-12370' | None - External Casing Packers | N/A | N/A | N/A |

*Production liner clarification: Utilizing external swell casing packer system for zonal isolation will not use cement in the production liner

Actual volumes will be calculated and determined by conditions onsite. All cement slurries will meet or exceed minimum BLM and New Mexico Oil Conservation Division requirements. Slurries used will be the slurries listed above or equivalent slurries depending on service provider selected. Cement yields may change depending on slurries selected

All waiting on cement times shall be a minimum of 8 hours or adequate to achieve minimum of 500 psi compressive strength at the casing shoe prior to drilling out.

5. WELL PLAN & DIRECTIONAL DRILLING PROGRAM

The proposed horizontal well will have a kick off point of 2000'. Directional plans are attached.

| Description | Proposed Depth (TVD/MD) | Formation |
|-----------------------|-------------------------|-----------|
| Horizontal Lateral TD | 5448'/12370' | Gallup |

Pinon Unit M03-2410 01H**SHL: SWSW Section 3, T24N, R10W****235' FSL and 1232' FWL****BHL: SESE Section 10, T24N, R10W****410' FSL and 485' FEL****San Juan, New Mexico****6. DRILLING FLUIDS PROGRAM**

a) Surface through Intermediate Casing Point:

| Hole Size (in) | Depth (TVD/MD) | Mud Type | Density (ppg) | Viscosity (sec/qt) | Fluid Loss (cc) |
|----------------|-----------------------|------------------|---------------|--------------------|-----------------|
| 30" | 0-60'/60' | Fresh Water | 8.3-9.2 | 38-100 | 4-28 |
| 12 1/4" | 0'-500'/500' | Fresh Water | 8.3-10 | 60-70 | NC |
| 8 3/4" | 500'/500'-5458'/5970' | Fresh Water LSND | 8.3-10 | 40-50 | 8-10 |

b) Intermediate Casing Point to TD:

| Hole Size (in) | Depth (TVD/MD) | Mud Type | Density (ppg) | Viscosity (sec/qt) | Fluid Loss (cc) |
|----------------|------------------------------|------------------|---------------|--------------------|-----------------|
| 6 1/8" | 5458'/5970'- 5448'/12370' | Fresh Water LSND | 8.3-10 | 15-25 | <15 |

c) There will be sufficient mud on location to control a blowout should one occur. Mud flow and volume will be monitored both visually and with electronic pit volume totalizers. Mud tests shall be performed every 24 hours after mudding up to determine, as applicable: density, viscosity, gel strength, filtration, and pH.

✓d) A closed-loop system will be used to recover drilling fluid and dry cuttings in both phases of the well and on all hole intervals. Above-ground tanks will be utilized to hold cuttings and fluids for rig operations. A frac tank will be on location to store fresh water. Waste will be disposed of properly at an EPA-approved hazardous waste facility. Fresh water cuttings will be disposed of at Basin Disposal, Inc. and/or Industrial Ecosystems, Inc. The location will be lined in accordance with the Surface Use Plan of Operations.

7. TESTING, CORING, & LOGGING

- a) Drill Stem Testing - None anticipated.
- b) Coring - None anticipated.
- c) Mudd Logging - Mud loggers will be on location from kick off point to TD.
- d) Logging - See below

Cased Hole:

CBL/CCL/GR/VDL will be run as needed for perforating control

8. ABNORMAL PRESSURES & HYDROGEN SULFIDE

The anticipated bottom hole pressure is +/- 2559 psi based on a 9.0 ppg at 5469' TVD of the horizontal lateral target. No abnormal pressure or temperatures are anticipated.

No hydrogen sulfide gas is anticipated, however, if H₂S is encountered, the guidelines in Onshore Order No. 6 will be followed.

Pinon Unit M03-2410 01H

SHL: SWSW Section 3, T24N, R10W

235' FSL and 1232' FWL

BHL: SESE Section 10, T24N, R10W

410' FSL and 485' FEL

San Juan, New Mexico

9. ANTICIPATED START DATE AND DURATION OF OPERATIONS

Drilling is estimated to commence on November 18, 2014. It is anticipated that completion operations will begin within 30 days after the well has been drilled depending on fracture treatment schedules with various pumping service companies.

It is anticipated that the drilling of this well will take approximately 20 days.

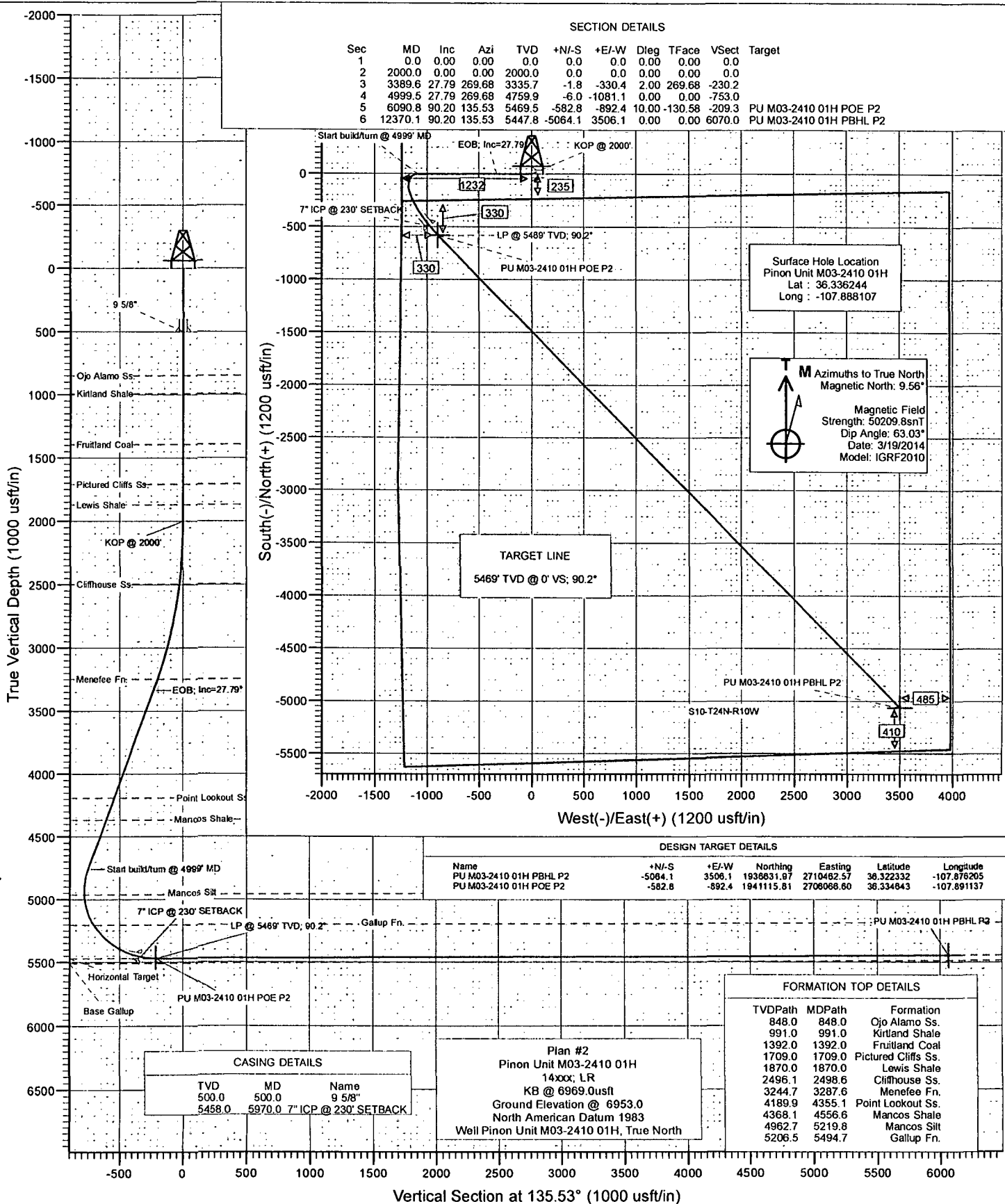
| LOC: NW/4 NW/4 10 24N 10W 330 FNL 400 | | | Encana Natural Gas | | | | ENG: Michael Sanci | | 6/5/14 |
|---|-------------------|---|---|-----------------------------|----------------------|--------|--|----------------------|-----------------------------------|
| County: San Juan | | | WELL SUMMARY | | | | RIG: Artec 950 | | |
| WELL: Pinon Unit M03-2410 01H | | | | | | | GLE: 6952.6 | | |
| | | | | | | | RKBE: 6968.6 | | |
| MWD | OPEN HOLE | FORM | DEPTH | | | HOLE | CASING | MW | DEVIATION |
| LWD | LOGGING | | TVD | MD | | SIZE | SPECS | MUD TYPE | INFORMATION |
| | | | 60 | 60' | | 30 | 20" 94# 100sx Type I Neat 16.0ppg cmt | Fresh wtr 8.3-9.2 | |
| Multi-Well pad - take survey every stand and run anticollision report prior to spud | None | Nacimiento 9 5/8" Csg | 0 500 | 500.00 | | 12 1/4 | 9 5/8" 36ppf J55 STC TOC Surface with 100% OH Excess: 314 sks of HALCEM™ SYSTEM + 2% CaCl2 + 0.125lbm/sk Poly-E-Flake. Mixed at 15.8 ppg. Yield 1.174 cuft/sk. | Fresh wtr 8.3-10 | Vertical <1° |
| Survey Every 60'-120', updating anticollision report after surveys. Stop operations and contact drilling engineer if separation factor approaches 1.5 | No OH logs | Ojo Alamo Ss. Kirtland Shale Fruitland Coal Pictured Cliffs Ss. Lewis Shale Cliffhouse Ss. Menefee Fn. Point Lookout Ss. Mancos Shale | 848 991 1,392 1,709 1,870 2,496 3,244 4,188 4,366 | | Stage tool @ ~ 1,920 | 8 3/4 | 7" 26ppf J55 LTC TOC @ surface (30% OH excess) Stage 1 Total: 774sks If necessary, Stage 2 Total: 186sks Stage 1 Lead: 375 sks HALCEM™ SYSTEM + 0.2% HR-5 + 5lbm/sk Kol-Seal + 0.125lbm/sk Poly-E-Flake. Mixed at 12.3 ppg. Yield 1.948 cuft/sk. Stage 1 Tail: 399 sks VARICEM™ CEMENT + .15% CFR-3 + 5lbm/sk Kol-Seal + 0.125% Poly-E-Flake. Mixed at 13.5 ppg. Yield 1.308 cuft/sk. Stage 2: 186 sks HALCEM™ SYSTEM + 5lbm/sk Kol-Seal + 0.125lbm/sk Poly-E-Flake. Mixed at 12.3 ppg. Yield 1.946 cuft/sk. | Fresh Wtr 8.3-10 | Vertical <1° |
| Surveys every 30' through the curve | Mud logger onsite | KOP Mancos Silt Gallup Fn. 7" Csg | 2,000 4,960 5,204 5,458 | 2,000 5,970' | | 6 1/8 | 200' overlap at liner top 6400' Drilled Lateral | | Horz Inc/TVD 90.2°deg/5468.6ft |
| Surveys every stand to TD unless directed otherwise by Geologist | No OH Logs | Horizontal Target TD Base Gallup | 5,469 5,448 5,508 | 12,370 | | | 4 1/2" 11.6ppf SB80 LTC Running external swellable csg packers for isolation of prod string | WBM 8.3-10 | TD = 12370.1 MD |
| MWD Gamma Directional | | | | | | | | | |

NOTES:

- 1) Drill with 30" bit to 60', set 20" 94# conductor pipe
- 2) Drill surface to 500', R&C 9 5/8" casing
- 3) N/U BOP and surface equipment
- 4) Drill to KOP of 2000', 8 3/4 inch holesize
- 5) Start curve at 10deg/100' build rate
- 6) Drill to csg point of 5970' MD
- 7) R&C 7" csg, circ cmt to surface, switch to WBM
- 8) Land at 90 deg, drill lateral to 12370' run 4 1/2 inch liner with external swellable csg packers



Project: San Juan County, NM
 Site: S3-T24N-R10W
 Well: Pinon Unit M03-2410 01H
 Wellbore: Hz
 Design: Plan #2



Planning Report

| | | | |
|------------------|-----------------------------|-------------------------------------|------------------------------|
| Database: | USA EDM 5000 Multi Users DB | Local Co-ordinate Reference: | Well Pinon Unit M03-2410 01H |
| Company: | EnCana Oil & Gas (USA) Inc | TVD Reference: | KB @ 6969.0usft |
| Project: | San Juan County, NM | MD Reference: | KB @ 6969.0usft |
| Site: | S3-T24N-R10W | North Reference: | True |
| Well: | Pinon Unit M03-2410 01H | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Hz | | |
| Design: | Plan #2 | | |

| | | | |
|--------------------|---------------------------|----------------------|----------------|
| 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 | S3-T24N-R10W | | |
| Site Position: | | Northing: | 1,941,698.10 usft |
| From: | Lat/Long | Easting: | 2,706,959.36 usft |
| Position Uncertainty: | 0.0 usft | Slot Radius: | 13-3/16" |
| | | Latitude: | 36.336244 |
| | | Longitude: | -107.888107 |
| | | Grid Convergence: | -0.03 ° |

| | | | |
|-----------------------------|-------------------------|----------------------------|------------------------------------|
| Well | Pinon Unit M03-2410 01H | | |
| Well Position | +N/-S | 0.0 usft | Northing: 1,941,698.10 usft |
| | +E/-W | 0.0 usft | Easting: 2,706,959.36 usft |
| Position Uncertainty | 0.0 usft | Wellhead Elevation: | usft |
| | | Latitude: | 36.336244 |
| | | Longitude: | -107.888107 |
| | | Ground Level: | 6,953.0 usft |

| | | | | | |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | Hz | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF2010 | 3/19/2014 | 9.56 | 63.03 | 50,210 |

| | | | | |
|--------------------------|--------------------------------|---------------------|----------------------|----------------------|
| Design | Plan #2 | | | |
| Audit Notes: | | | | |
| Version: | Phase: | PLAN | Tie On Depth: | 0.0 |
| Vertical Section: | Depth From (TVD) (usft) | +N/-S (usft) | +E/-W (usft) | Direction (°) |
| | 0.0 | 0.0 | 0.0 | 135.53 |

| Plan Sections | | | | | | | | | | |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|------------------------|-----------------------|---------|--------------------|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) | TFO (°) | Target |
| 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2,000.0 | 0.00 | 0.00 | 2,000.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 3,389.6 | 27.79 | 269.68 | 3,335.7 | -1.8 | -330.4 | 2.00 | 2.00 | 0.00 | 269.68 | |
| 4,999.5 | 27.79 | 269.68 | 4,759.9 | -6.0 | -1,081.1 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 6,090.8 | 90.20 | 135.53 | 5,469.5 | -582.8 | -892.4 | 10.00 | 5.72 | -12.29 | -130.58 | PU M03-2410 01H PC |
| 12,370.1 | 90.20 | 135.53 | 5,447.8 | -5,064.1 | 3,506.1 | 0.00 | 0.00 | 0.00 | 0.00 | PU M03-2410 01H PE |

Planning Report

| | | | |
|------------------|-----------------------------|-------------------------------------|------------------------------|
| Database: | USA EDM 5000 Multi Users DB | Local Co-ordinate Reference: | Well Pinon Unit M03-2410 01H |
| Company: | EnCana Oil & Gas (USA) Inc | TVD Reference: | KB @ 6969.0usft |
| Project: | San Juan County, NM | MD Reference: | KB @ 6969.0usft |
| Site: | S3-T24N-R10W | North Reference: | True |
| Well: | Pinon Unit M03-2410 01H | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Hz | | |
| Design: | Plan #2 | | |

| Planned Survey | | | | | | | | | |
|-----------------------------|--------------------|----------------|-----------------------------|-----------------|-----------------|-------------------------------|-------------------------------|---------------------------|--------------------------|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100u) | Comments / Formations |
| 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | |
| 100.0 | 0.00 | 0.00 | 100.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | |
| 200.0 | 0.00 | 0.00 | 200.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | |
| 300.0 | 0.00 | 0.00 | 300.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | |
| 400.0 | 0.00 | 0.00 | 400.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | |
| 500.0 | 0.00 | 0.00 | 500.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 9 5/8" |
| 600.0 | 0.00 | 0.00 | 600.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | |
| 700.0 | 0.00 | 0.00 | 700.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | |
| 800.0 | 0.00 | 0.00 | 800.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | |
| 848.0 | 0.00 | 0.00 | 848.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | Ojo Alamo Ss. |
| 900.0 | 0.00 | 0.00 | 900.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | |
| 991.0 | 0.00 | 0.00 | 991.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | Kirtland Shale |
| 1,000.0 | 0.00 | 0.00 | 1,000.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | |
| 1,100.0 | 0.00 | 0.00 | 1,100.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | |
| 1,200.0 | 0.00 | 0.00 | 1,200.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | |
| 1,300.0 | 0.00 | 0.00 | 1,300.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | |
| 1,392.0 | 0.00 | 0.00 | 1,392.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | Fruitland Coal |
| 1,400.0 | 0.00 | 0.00 | 1,400.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | |
| 1,500.0 | 0.00 | 0.00 | 1,500.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | |
| 1,600.0 | 0.00 | 0.00 | 1,600.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | |
| 1,700.0 | 0.00 | 0.00 | 1,700.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | |
| 1,709.0 | 0.00 | 0.00 | 1,709.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | Pictured Cliffs Ss. |
| 1,800.0 | 0.00 | 0.00 | 1,800.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | |
| 1,870.0 | 0.00 | 0.00 | 1,870.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | Lewis Shale |
| 1,900.0 | 0.00 | 0.00 | 1,900.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | |
| 2,000.0 | 0.00 | 0.00 | 2,000.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | KOP @ 2000' |
| 2,100.0 | 2.00 | 269.68 | 2,100.0 | 0.0 | -1.7 | -1.2 | 2.00 | 2.00 | |
| 2,200.0 | 4.00 | 269.68 | 2,199.8 | 0.0 | -7.0 | -4.9 | 2.00 | 2.00 | |
| 2,300.0 | 6.00 | 269.68 | 2,299.5 | -0.1 | -15.7 | -10.9 | 2.00 | 2.00 | |
| 2,400.0 | 8.00 | 269.68 | 2,398.7 | -0.2 | -27.9 | -19.4 | 2.00 | 2.00 | |
| 2,498.6 | 9.97 | 269.68 | 2,496.1 | -0.2 | -43.3 | -30.1 | 2.00 | 2.00 | Cliffhouse Ss. |
| 2,500.0 | 10.00 | 269.68 | 2,497.5 | -0.2 | -43.5 | -30.3 | 2.00 | 2.00 | |
| 2,600.0 | 12.00 | 269.68 | 2,595.6 | -0.3 | -62.6 | -43.6 | 2.00 | 2.00 | |
| 2,700.0 | 14.00 | 269.68 | 2,693.1 | -0.5 | -85.1 | -59.3 | 2.00 | 2.00 | |
| 2,800.0 | 16.00 | 269.68 | 2,789.6 | -0.6 | -111.0 | -77.3 | 2.00 | 2.00 | |
| 2,900.0 | 18.00 | 269.68 | 2,885.3 | -0.8 | -140.2 | -97.7 | 2.00 | 2.00 | |
| 3,000.0 | 20.00 | 269.68 | 2,979.8 | -1.0 | -172.8 | -120.3 | 2.00 | 2.00 | |
| 3,100.0 | 22.00 | 269.68 | 3,073.2 | -1.2 | -208.6 | -145.3 | 2.00 | 2.00 | |
| 3,200.0 | 24.00 | 269.68 | 3,165.2 | -1.4 | -247.7 | -172.5 | 2.00 | 2.00 | |
| 3,287.6 | 25.75 | 269.68 | 3,244.7 | -1.6 | -284.5 | -198.2 | 2.00 | 2.00 | Menefee Fn. |
| 3,300.0 | 26.00 | 269.68 | 3,255.8 | -1.6 | -289.9 | -202.0 | 2.00 | 2.00 | |
| 3,389.6 | 27.79 | 269.68 | 3,335.7 | -1.8 | -330.4 | -230.2 | 2.00 | 2.00 | EOB; Inc=27.79° |
| 3,400.0 | 27.79 | 269.68 | 3,344.9 | -1.9 | -335.3 | -233.6 | 0.00 | 0.00 | |
| 3,500.0 | 27.79 | 269.68 | 3,433.4 | -2.1 | -381.9 | -266.0 | 0.00 | 0.00 | |
| 3,600.0 | 27.79 | 269.68 | 3,521.9 | -2.4 | -428.6 | -298.5 | 0.00 | 0.00 | |
| 3,700.0 | 27.79 | 269.68 | 3,610.3 | -2.6 | -475.2 | -331.0 | 0.00 | 0.00 | |
| 3,800.0 | 27.79 | 269.68 | 3,698.8 | -2.9 | -521.8 | -363.5 | 0.00 | 0.00 | |
| 3,900.0 | 27.79 | 269.68 | 3,787.3 | -3.2 | -568.4 | -396.0 | 0.00 | 0.00 | |
| 4,000.0 | 27.79 | 269.68 | 3,875.7 | -3.4 | -615.1 | -428.4 | 0.00 | 0.00 | |
| 4,100.0 | 27.79 | 269.68 | 3,964.2 | -3.7 | -661.7 | -460.9 | 0.00 | 0.00 | |
| 4,200.0 | 27.79 | 269.68 | 4,052.7 | -3.9 | -708.3 | -493.4 | 0.00 | 0.00 | |
| 4,300.0 | 27.79 | 269.68 | 4,141.1 | -4.2 | -754.9 | -525.9 | 0.00 | 0.00 | |

Planning Report

| | | | |
|------------------|-----------------------------|-------------------------------------|------------------------------|
| Database: | USA EDM 5000 Multi Users DB | Local Co-ordinate Reference: | Well Pinon Unit M03-2410-01H |
| Company: | EnCana Oil & Gas (USA) Inc | TVD Reference: | KB @ 6969.0usft |
| Project: | San Juan County, NM | MD Reference: | KB @ 6969.0usft |
| Site: | S3-T24N-R10W | North Reference: | True |
| Well: | Pinon Unit M03-2410 01H | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Hz | | |
| Design: | Plan #2 | | |

| Planned Survey | | | | | | | | | |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|---------------------|-----------------------------|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100u) | Comments / Formations |
| 4,355.1 | 27.79 | 269.68 | 4,189.9 | -4.3 | -780.6 | -543.8 | 0.00 | 0.00 | Point Lookout Ss. |
| 4,400.0 | 27.79 | 269.68 | 4,229.6 | -4.5 | -801.6 | -558.3 | 0.00 | 0.00 | |
| 4,500.0 | 27.79 | 269.68 | 4,318.1 | -4.7 | -848.2 | -590.8 | 0.00 | 0.00 | |
| 4,556.6 | 27.79 | 269.68 | 4,368.1 | -4.9 | -874.6 | -609.2 | 0.00 | 0.00 | Mancos Shale |
| 4,600.0 | 27.79 | 269.68 | 4,406.5 | -5.0 | -894.8 | -623.3 | 0.00 | 0.00 | |
| 4,700.0 | 27.79 | 269.68 | 4,495.0 | -5.2 | -941.4 | -655.8 | 0.00 | 0.00 | |
| 4,800.0 | 27.79 | 269.68 | 4,583.5 | -5.5 | -988.1 | -688.2 | 0.00 | 0.00 | |
| 4,900.0 | 27.79 | 269.68 | 4,671.9 | -5.8 | -1,034.7 | -720.7 | 0.00 | 0.00 | |
| 4,999.5 | 27.79 | 269.68 | 4,759.9 | -6.0 | -1,081.1 | -753.0 | 0.00 | 0.00 | Start build/turn @ 4999' MD |
| 5,000.0 | 27.76 | 269.59 | 4,760.4 | -6.0 | -1,081.3 | -753.2 | 10.00 | -6.50 | |
| 5,100.0 | 22.48 | 249.39 | 4,851.1 | -12.9 | -1,122.6 | -777.2 | 10.00 | -5.28 | |
| 5,200.0 | 20.77 | 222.42 | 4,944.3 | -32.8 | -1,152.5 | -784.0 | 10.00 | -1.71 | |
| 5,219.8 | 20.96 | 216.89 | 4,962.7 | -38.2 | -1,157.0 | -783.3 | 10.00 | 0.97 | Mancos Silt |
| 5,300.0 | 23.42 | 196.55 | 5,037.1 | -65.0 | -1,170.2 | -773.4 | 10.00 | 3.07 | |
| 5,400.0 | 29.27 | 178.11 | 5,126.8 | -108.6 | -1,175.1 | -745.7 | 10.00 | 5.85 | |
| 5,494.7 | 36.40 | 166.52 | 5,206.5 | -159.2 | -1,167.7 | -704.4 | 10.00 | 7.52 | Gallup Fn. |
| 5,500.0 | 36.82 | 165.99 | 5,210.7 | -162.3 | -1,167.0 | -701.7 | 10.00 | 8.05 | |
| 5,600.0 | 45.22 | 157.68 | 5,286.1 | -224.3 | -1,146.2 | -642.9 | 10.00 | 8.40 | |
| 5,700.0 | 54.06 | 151.54 | 5,350.9 | -292.9 | -1,113.3 | -570.9 | 10.00 | 8.85 | |
| 5,800.0 | 63.16 | 146.66 | 5,402.9 | -366.0 | -1,069.4 | -488.0 | 10.00 | 9.09 | |
| 5,900.0 | 72.40 | 142.51 | 5,440.7 | -441.2 | -1,015.7 | -396.7 | 10.00 | 9.24 | |
| 5,970.0 | 78.91 | 139.87 | 5,458.0 | -494.0 | -973.3 | -329.2 | 10.00 | 9.31 | 7" ICP @ 230' SETBACK |
| 6,000.0 | 81.71 | 138.77 | 5,463.1 | -516.5 | -954.0 | -299.7 | 10.00 | 9.33 | |
| 6,090.8 | 90.20 | 135.53 | 5,469.5 | -582.8 | -892.4 | -209.3 | 10.00 | 9.35 | LP @ 5469' TVD; 90.2" |
| 6,100.0 | 90.20 | 135.53 | 5,469.5 | -589.4 | -886.0 | -200.1 | 0.00 | 0.00 | |
| 6,200.0 | 90.20 | 135.53 | 5,469.1 | -660.7 | -815.9 | -100.1 | 0.00 | 0.00 | |
| 6,300.0 | 90.20 | 135.53 | 5,468.8 | -732.1 | -745.9 | -0.1 | 0.00 | 0.00 | |
| 6,400.0 | 90.20 | 135.53 | 5,468.4 | -803.5 | -675.9 | 99.9 | 0.00 | 0.00 | |
| 6,500.0 | 90.20 | 135.53 | 5,468.1 | -874.8 | -605.8 | 199.9 | 0.00 | 0.00 | |
| 6,600.0 | 90.20 | 135.53 | 5,467.7 | -946.2 | -535.8 | 299.9 | 0.00 | 0.00 | |
| 6,700.0 | 90.20 | 135.53 | 5,467.4 | -1,017.6 | -465.7 | 399.9 | 0.00 | 0.00 | |
| 6,800.0 | 90.20 | 135.53 | 5,467.0 | -1,088.9 | -395.7 | 499.9 | 0.00 | 0.00 | |
| 6,900.0 | 90.20 | 135.53 | 5,466.7 | -1,160.3 | -325.6 | 599.9 | 0.00 | 0.00 | |
| 7,000.0 | 90.20 | 135.53 | 5,466.4 | -1,231.7 | -255.6 | 699.9 | 0.00 | 0.00 | |
| 7,100.0 | 90.20 | 135.53 | 5,466.0 | -1,303.0 | -185.5 | 799.9 | 0.00 | 0.00 | |
| 7,200.0 | 90.20 | 135.53 | 5,465.7 | -1,374.4 | -115.5 | 899.9 | 0.00 | 0.00 | |
| 7,300.0 | 90.20 | 135.53 | 5,465.3 | -1,445.8 | -45.4 | 999.9 | 0.00 | 0.00 | |
| 7,400.0 | 90.20 | 135.53 | 5,465.0 | -1,517.1 | 24.6 | 1,099.9 | 0.00 | 0.00 | |
| 7,500.0 | 90.20 | 135.53 | 5,464.6 | -1,588.5 | 94.7 | 1,199.9 | 0.00 | 0.00 | |
| 7,600.0 | 90.20 | 135.53 | 5,464.3 | -1,659.9 | 164.7 | 1,299.9 | 0.00 | 0.00 | |
| 7,700.0 | 90.20 | 135.53 | 5,463.9 | -1,731.2 | 234.8 | 1,399.9 | 0.00 | 0.00 | |
| 7,800.0 | 90.20 | 135.53 | 5,463.6 | -1,802.6 | 304.8 | 1,499.9 | 0.00 | 0.00 | |
| 7,900.0 | 90.20 | 135.53 | 5,463.2 | -1,874.0 | 374.9 | 1,599.9 | 0.00 | 0.00 | |
| 8,000.0 | 90.20 | 135.53 | 5,462.9 | -1,945.3 | 444.9 | 1,699.9 | 0.00 | 0.00 | |
| 8,100.0 | 90.20 | 135.53 | 5,462.6 | -2,016.7 | 515.0 | 1,799.9 | 0.00 | 0.00 | |
| 8,200.0 | 90.20 | 135.53 | 5,462.2 | -2,088.1 | 585.0 | 1,899.9 | 0.00 | 0.00 | |
| 8,300.0 | 90.20 | 135.53 | 5,461.9 | -2,159.4 | 655.1 | 1,999.9 | 0.00 | 0.00 | |
| 8,400.0 | 90.20 | 135.53 | 5,461.5 | -2,230.8 | 725.1 | 2,099.9 | 0.00 | 0.00 | |
| 8,500.0 | 90.20 | 135.53 | 5,461.2 | -2,302.2 | 795.1 | 2,199.9 | 0.00 | 0.00 | |
| 8,600.0 | 90.20 | 135.53 | 5,460.8 | -2,373.5 | 865.2 | 2,299.9 | 0.00 | 0.00 | |
| 8,700.0 | 90.20 | 135.53 | 5,460.5 | -2,444.9 | 935.2 | 2,399.9 | 0.00 | 0.00 | |
| 8,800.0 | 90.20 | 135.53 | 5,460.1 | -2,516.3 | 1,005.3 | 2,499.9 | 0.00 | 0.00 | |

Planning Report

| | | | |
|-----------|-----------------------------|------------------------------|------------------------------|
| Database: | USA EDM 5000 Multi Users DB | Local Co-ordinate Reference: | Well Pinon Unit M03-2410 01H |
| Company: | EnCana Oil & Gas (USA) Inc | TVD Reference: | KB @ 6969.0usft |
| Project: | San Juan County, NM | MD Reference: | KB @ 6969.0usft |
| Site: | S3-T24N-R10W | North Reference: | True |
| Well: | Pinon Unit M03-2410 01H | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Hz | | |
| Design: | Plan #2 | | |

| Planned Survey | | | | | | | | | |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|---------------------|-----------------------|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100u) | Comments / Formations |
| 8,900.0 | 90.20 | 135.53 | 5,459.8 | -2,587.6 | 1,075.3 | 2,599.9 | 0.00 | 0.00 | |
| 9,000.0 | 90.20 | 135.53 | 5,459.4 | -2,659.0 | 1,145.4 | 2,699.9 | 0.00 | 0.00 | |
| 9,100.0 | 90.20 | 135.53 | 5,459.1 | -2,730.4 | 1,215.4 | 2,799.9 | 0.00 | 0.00 | |
| 9,200.0 | 90.20 | 135.53 | 5,458.8 | -2,801.7 | 1,285.5 | 2,899.9 | 0.00 | 0.00 | |
| 9,300.0 | 90.20 | 135.53 | 5,458.4 | -2,873.1 | 1,355.5 | 2,999.9 | 0.00 | 0.00 | |
| 9,400.0 | 90.20 | 135.53 | 5,458.1 | -2,944.5 | 1,425.6 | 3,099.9 | 0.00 | 0.00 | |
| 9,500.0 | 90.20 | 135.53 | 5,457.7 | -3,015.8 | 1,495.6 | 3,199.9 | 0.00 | 0.00 | |
| 9,600.0 | 90.20 | 135.53 | 5,457.4 | -3,087.2 | 1,565.7 | 3,299.9 | 0.00 | 0.00 | |
| 9,700.0 | 90.20 | 135.53 | 5,457.0 | -3,158.6 | 1,635.7 | 3,399.9 | 0.00 | 0.00 | |
| 9,800.0 | 90.20 | 135.53 | 5,456.7 | -3,229.9 | 1,705.8 | 3,499.9 | 0.00 | 0.00 | |
| 9,900.0 | 90.20 | 135.53 | 5,456.3 | -3,301.3 | 1,775.8 | 3,599.9 | 0.00 | 0.00 | |
| 10,000.0 | 90.20 | 135.53 | 5,456.0 | -3,372.7 | 1,845.9 | 3,699.9 | 0.00 | 0.00 | |
| 10,100.0 | 90.20 | 135.53 | 5,455.6 | -3,444.0 | 1,915.9 | 3,799.9 | 0.00 | 0.00 | |
| 10,200.0 | 90.20 | 135.53 | 5,455.3 | -3,515.4 | 1,986.0 | 3,899.9 | 0.00 | 0.00 | |
| 10,300.0 | 90.20 | 135.53 | 5,455.0 | -3,586.8 | 2,056.0 | 3,999.9 | 0.00 | 0.00 | |
| 10,400.0 | 90.20 | 135.53 | 5,454.6 | -3,658.1 | 2,126.1 | 4,099.9 | 0.00 | 0.00 | |
| 10,500.0 | 90.20 | 135.53 | 5,454.3 | -3,729.5 | 2,196.1 | 4,199.9 | 0.00 | 0.00 | |
| 10,600.0 | 90.20 | 135.53 | 5,453.9 | -3,800.9 | 2,266.1 | 4,299.9 | 0.00 | 0.00 | |
| 10,700.0 | 90.20 | 135.53 | 5,453.6 | -3,872.2 | 2,336.2 | 4,399.9 | 0.00 | 0.00 | |
| 10,800.0 | 90.20 | 135.53 | 5,453.2 | -3,943.6 | 2,406.2 | 4,499.9 | 0.00 | 0.00 | |
| 10,900.0 | 90.20 | 135.53 | 5,452.9 | -4,015.0 | 2,476.3 | 4,599.9 | 0.00 | 0.00 | |
| 11,000.0 | 90.20 | 135.53 | 5,452.5 | -4,086.3 | 2,546.3 | 4,699.9 | 0.00 | 0.00 | |
| 11,100.0 | 90.20 | 135.53 | 5,452.2 | -4,157.7 | 2,616.4 | 4,799.9 | 0.00 | 0.00 | |
| 11,200.0 | 90.20 | 135.53 | 5,451.8 | -4,229.1 | 2,686.4 | 4,899.9 | 0.00 | 0.00 | |
| 11,300.0 | 90.20 | 135.53 | 5,451.5 | -4,300.4 | 2,756.5 | 4,999.9 | 0.00 | 0.00 | |
| 11,400.0 | 90.20 | 135.53 | 5,451.2 | -4,371.8 | 2,826.5 | 5,099.9 | 0.00 | 0.00 | |
| 11,500.0 | 90.20 | 135.53 | 5,450.8 | -4,443.2 | 2,896.6 | 5,199.9 | 0.00 | 0.00 | |
| 11,600.0 | 90.20 | 135.53 | 5,450.5 | -4,514.5 | 2,966.6 | 5,299.9 | 0.00 | 0.00 | |
| 11,700.0 | 90.20 | 135.53 | 5,450.1 | -4,585.9 | 3,036.7 | 5,399.9 | 0.00 | 0.00 | |
| 11,800.0 | 90.20 | 135.53 | 5,449.8 | -4,657.3 | 3,106.7 | 5,499.9 | 0.00 | 0.00 | |
| 11,900.0 | 90.20 | 135.53 | 5,449.4 | -4,728.6 | 3,176.8 | 5,599.9 | 0.00 | 0.00 | |
| 12,000.0 | 90.20 | 135.53 | 5,449.1 | -4,800.0 | 3,246.8 | 5,699.9 | 0.00 | 0.00 | |
| 12,100.0 | 90.20 | 135.53 | 5,448.7 | -4,871.4 | 3,316.9 | 5,799.9 | 0.00 | 0.00 | |
| 12,200.0 | 90.20 | 135.53 | 5,448.4 | -4,942.7 | 3,386.9 | 5,899.9 | 0.00 | 0.00 | |
| 12,300.0 | 90.20 | 135.53 | 5,448.0 | -5,014.1 | 3,457.0 | 5,999.9 | 0.00 | 0.00 | |
| 12,370.1 | 90.20 | 135.53 | 5,447.8 | -5,064.1 | 3,506.1 | 6,070.0 | 0.00 | 0.00 | TD at 12370.1 |

Planning Report

| | | | |
|------------------|-----------------------------|-------------------------------------|------------------------------|
| Database: | USA EDM 5000 Multi Users DB | Local Co-ordinate Reference: | Well Pinon Unit M03-2410 01H |
| Company: | EnCana Oil & Gas (USA) Inc | TVD Reference: | KB @ 6969.0usft |
| Project: | San Juan County, NM | MD Reference: | KB @ 6969.0usft |
| Site: | S3-T24N-R10W | North Reference: | True |
| Well: | Pinon Unit M03-2410 01H | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | H2 | | |
| Design: | Plan #2 | | |

| Targets | | | | | | | | | |
|---|------------------|-----------------|---------------|-----------------|-----------------|--------------------|-------------------|-----------|-------------|
| Target Name | Dip Angle (°) | Dip Dir. (°) | TVD (usft) | +N/-S (usft) | +E/-W (usft) | Northing (usft) | Easting (usft) | Latitude | Longitude |
| GT M03-2410 01H POE - plan misses target center by 123.4usft at 6193.5usft MD (5469.1 TVD, -656.1 N, -820.5 E) - Point | 0.00 | 0.00 | 5,464.8 | -569.7 | -732.5 | 1,941,128.82 | 2,706,226.54 | 36.334679 | -107.890594 |
| PU M03-2410 01H PBHI - plan hits target center - Point | 0.00 | 0.00 | 5,447.8 | -5,064.1 | 3,506.1 | 1,936,631.97 | 2,710,462.57 | 36.322332 | -107.876205 |
| PU M03-2410 01H POE - plan hits target center - Point | 0.00 | 0.00 | 5,469.5 | -582.8 | -892.4 | 1,941,115.81 | 2,706,066.60 | 36.334643 | -107.891137 |
| GT M03-2410 01H PBHI - plan misses target center by 3337.9usft at 9592.3usft MD (5457.4 TVD, -3081.7 N, 1560.3 E) - Point | 0.00 | 0.00 | 5,371.7 | -5,418.9 | -821.3 | 1,936,279.66 | 2,706,135.00 | 36.321358 | -107.890895 |

| Casing Points | | | | | |
|-----------------------------|-----------------------------|-----------------------|---------------------------|-------------------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Name | Casing Diameter (") | Hole Diameter (") | |
| 500.0 | 500.0 | 9 5/8" | 0 | 0 | |
| 5,970.0 | 5,458.0 | 7" ICP @ 230' SETBACK | 0 | 0 | |

| Formations | | | | | | |
|-----------------------------|-----------------------------|---------------------|-----------|------------|-------------------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Name | Lithology | Dip (°) | Dip Direction (°) | |
| 848.0 | 848.0 | Ojo Alamo Ss. | | -0.20 | 135.53 | |
| 991.0 | 991.0 | Kirtland Shale | | -0.20 | 135.53 | |
| 1,392.0 | 1,392.0 | Fruitland Coal | | -0.20 | 135.53 | |
| 1,709.0 | 1,709.0 | Pictured Cliffs Ss. | | -0.20 | 135.53 | |
| 1,870.0 | 1,870.0 | Lewis Shale | | -0.20 | 135.53 | |
| 2,498.6 | 2,496.0 | Cliffhouse Ss. | | -0.20 | 135.53 | |
| 3,287.6 | 3,244.0 | Menefee Fn. | | -0.20 | 135.53 | |
| 4,355.1 | 4,188.0 | Point Lookout Ss. | | -0.20 | 135.53 | |
| 4,556.6 | 4,366.0 | Mancos Shale | | -0.20 | 135.53 | |
| 5,219.8 | 4,960.0 | Mancos Silt | | -0.20 | 135.53 | |
| 5,494.7 | 5,204.0 | Gallup Fn. | | -0.20 | 135.53 | |

| Plan Annotations | | | | | |
|-----------------------------|-----------------------------|-------------------|-----------------|-----------------------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates | | Comment | |
| | | +N/-S (usft) | +E/-W (usft) | | |
| 2,000.0 | 2,000.0 | 0.0 | 0.0 | KOP @ 2000' | |
| 3,389.6 | 3,335.7 | -1.8 | -330.4 | EOB; Inc=27.79° | |
| 4,999.5 | 4,759.9 | -6.0 | -1,081.1 | Start build/turn @ 4999' MD | |
| 6,090.8 | 5,469.5 | -582.8 | -892.4 | LP @ 5469' TVD; 90.2° | |
| 12,370.1 | 5,447.8 | -5,064.1 | 3,506.1 | TD at 12370.1 | |

Piñon M03-2410 01H

**SHL: SWSW Section 3, T24N, R10W
235' FSL and 1232' FWL**

**BHL: SWSW Section 10, T24N, R10W
410' FSL and 485' FEL**

San Juan County, New Mexico

Lease Number: NMNM 100805 & NMNM 100806

If the location becomes prone to wind or water erosion, Encana will take appropriate measures to prevent topsoil loss from wind. Such measures may include using tackifiers or water to wet the topsoil stockpile so that a crust is created across the exposed soil to prevent soil loss.

3. All construction materials for the well pad will consist of native borrow and subsoil accumulated during well pad construction. If additional fill or surfacing material is required, it will be obtained from existing permitted or private sources and will be hauled in by trucks over existing access roads.

The maximum cut will be approximately 7.0 feet on the Northwest corner (corner 2) and the maximum fill will be approximately 5.7 feet on the Southeast corner (corner 5).

4. As determined during the onsite on February 5, 2014, the following best management practices will be implemented:
 - a. Water will be diverted around the pad and silt traps installed as needed upon interim reclamation.
5. Construction equipment may include chain saws, a brush hog, scraper, maintainer, excavator, and dozer. Construction for the access road and well pad will take approximately 2 weeks.
6. An existing fence line will be braced, cut and re-routed around the EOD at corner 5 (Southeast corner) for well pad construction. It will be re-built upon interim reclamation to BLM Gold Book standards in the original fence line. H-braces will be installed prior to cutting the fence. The H-braces will be constructed in accordance with the BLM Gold Book standard.

C. Pipeline

See the Plan of Development submitted with the final Standard SF-299 Application for authorization to construct, operate, maintain and terminate a 951 foot, up to 6-inch outside diameter, buried steel well connect pipeline that will be submitted to the BLM concurrently with the APD.

7. METHODS FOR HANDLING WASTE

A. Cuttings

1. A closed-loop system will be used. Cuttings will be moved through a shaker system on the drill rig that separates drilling fluids from the cuttings. Cuttings will be stored onsite in above-ground storage tanks. Cuttings will be pulled from the storage tanks, mixed with saw dust or similar absorbent material, and disposed of at the Envirotech, Inc. and/or Industrial Ecosystem, Inc. waste disposal facilities.
2. The closed-loop system storage tanks will be adequately sized to ensure confinement of all fluids and will provide sufficient freeboard to prevent uncontrolled releases.
3. A 20-mil liner will be installed under tanks, pumps, ancillary facilities, and truck loading/unloading areas associated with the closed-loop system.

B. Drilling Fluids

1. A closed-loop system will be used. Drilling fluids will be stored onsite in above-ground storage tanks. Upon termination of drilling operations, the drilling fluids will be recycled and

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transferred to other permitted closed-loop systems or returned to the vendor for reuse, as practical. Residual fluids will be vacuumed from the storage tanks and disposed of at Basin Disposal, Inc. and/or Industrial Ecosystem, Inc. waste disposal facilities.

2. The closed-loop system storage tanks will be adequately sized to ensure confinement of all fluids and will provide sufficient freeboard to prevent uncontrolled releases.
3. The closed-loop system storage tanks will be placed in bermed secondary containment sized to accommodate a minimum of 110 percent of the volume of the largest storage tank.
4. A 20-mil liner will be installed under tanks, pumps, ancillary facilities, and truck loading/unloading areas associated with the closed-loop system.

C. Flowback Water

1. The water-based solution that flows back to the surface during and after completion operations will be placed in storage tanks on the location.
2. Flowback water will be confined to a storage tank for a period not to exceed 90 days after initial production and will be disposed of at Basin Disposal, Inc. and/or Industrial Ecosystem, Inc. waste disposal facilities.

D. Spills – any spills of non-freshwater fluids will be immediately cleaned up and removed to an approved disposal site.

E. Sewage – self-contained, chemical toilets will be provided for human waste disposal. The toilet holding tanks will be pumped, as needed, and the contents thereof disposed of in an approved sewage disposal facility. The toilets will be onsite during all operations.

F. Garbage and other waste material – garbage, trash and other waste materials will be collected in a portable, self-contained and fully-enclosed trash container during drilling and completion operations. The accumulated trash will be removed, as needed, and will be disposed of at an authorized sanitary landfill. No trash will be buried or burned on location.

G. Immediately after removal of the drilling rig, all debris and other waste materials not contained in the trash container will be cleaned up and removed from the well location.

H. No chemicals subject to reporting under SARA Title III in an amount equal to or greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the drilling, testing or completing of this well.

I. No extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will be used, produced, stored, transported, or disposed of in association with the drilling, testing, or completing of this well.

8. ANCILLARY FACILITIES

A. Standard drilling operation equipment that will be on location includes: drilling rig with associated equipment, temporary office trailers equipped with sleeping quarters for essential company personnel, toilet facilities, and trash containers.

ENCANA OIL & GAS (USA) INC.
PIÑON UNIT M03-2410 #01H
235' FSL & 1232' FWL
LOCATED IN THE SW/4 SW/4 OF SECTION 3,
T24N, R10W, N.M.P.M.,
SAN JUAN COUNTY, NEW MEXICO

DIRECTIONS

- 1) FROM THE INTERSECTION OF HWY 550 AND HWY 64, TRAVEL SOUTH ON 550 FOR 28.2 MILES TO HWY 57.
- 2) TURN RIGHT ON HWY 57 AND GO 3.1 MILES TO CR 7610.
- 3) TURN RIGHT ONTO CR 7610 AND GO 2.6 MILES TO CR 7515.
- 4) TURN RIGHT AND GO 0.8 MILES WHERE ACCESS IS STAKED ON RIGHT SIDE OF ROAD NORTH OF POWER LINES.

WELL FLAG LOCATED AT LAT. 36.336244° N, LONG. 107.888107° W (NAD 83).



encana

Well Name and Number:
Pinon Unit M03-2410 01H

