

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

David R. Catanach, Division Director
Oil Conservation Division



New Mexico Oil Conservation Division approval and conditions listed below are made in accordance with OCD Rule 19.15.7.11 and are in addition to the actions approved by BLM on the following 3160-3 APD form.

Operator Signature Date: 3-10-15

Well information;

Operator Encana, Well Name and Number Escrito 206 2409 #1H

API# 36045-35663, Section 6, Township 24 N/S, Range 09 E/W

Conditions of Approval:

(See the below checked and handwritten conditions)

- ☒ Notify Aztec OCD 24hrs prior to casing & cement.
- ☒ Hold C-104 for directional survey & "As Drilled" Plat
- ☒ Hold C-104 for NSL, NSP, DHC
 - Spacing rule violation. Operator must follow up with change of status notification on other well to be shut in or abandoned
 - Regarding the use of a pit, closed loop system or below grade tank, the operator must comply with the following as applicable:
 - A pit requires a complete C-144 be submitted and approved prior to the construction or use of the pit, pursuant to 19.15.17.8.A
 - A closed loop system requires notification prior to use, pursuant to 19.15.17.9.A
 - A below grade tank requires a registration be filed prior to the construction or use of the below grade tank, pursuant to 19.15.17.8.C
 - Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
- ☒ Regarding Hydraulic Fracturing, review EPA Underground Injection Control Guidance 84
- ☒ Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.
- ☒ Well-bore communication is regulated under 19.15.29 NMAC. This requires well-bore Communication to be reported in accordance with 19.15.29.8.


NMOCD Approved by Signature

4-9-2015
Date

APR 07 2015

MAR 12 2015

FORM APPROVED
OMB No. 1004-0137
Expires July 31, 2010UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFarmington Field Office
Bureau of Land Management

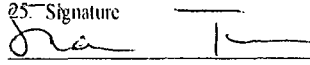
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NM 112955
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input 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. N/A
3a. Address 370 17th Street, Suite 1700 Denver, CO 80202	3b. Phone No. (include area code) 720-876-5994	8. Lease Name and Well No. Escrito L06-2409 01H
3a. Address 370 17th Street, Suite 1700 Denver, CO 80202		9. API Well No. 30-045-35663
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface L 2009' FSL and 265' FWL Section 6, T24N, R9W NWSW SHL At proposed prod. zone L 1500' FSL and 330' FWL Section 1, T24N, R10W NWSW BHL Sec 1, T24N, R10W		10. Field and Pool, or Exploratory Bisti Lower Gallup
14. Distance in miles and direction from nearest town or post office* +/- 30.6 miles south of the intersection of US Hwy 550 & US Hwy 64 in Bloomfield, NM		11. Sec., T. R. M. or Blk. and Survey or Area Section 6, T24N, R9W NMPM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) SHL is 265' from west lease line Section 6, T24N, R10W	16. No. of acres in lease NM 112955 -1761.69 ac.	17. Spacing Unit dedicated to this well 160.0 acres N/2S/2 Section 1
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. TSAH TAH 1 4 is +/-259' S of lateral	19. Proposed Depth 5487' TVD/ 10523' MD	20. BLM/BIA Bond No. on file COB-000235
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6832' GL, 6848' KB	22. Approximate date work will start* 11/05/2015	23. Estimated duration 20 days

24. Attachments

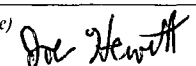
The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, must be attached to this form:

- 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 	Name (Printed Typed) Shawn Turk	Date 3/10/15
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Title

Regulatory Analyst

Approved by (Signature) 	Name (Printed Typed) JOE HEWITT	Date 4-1-15
Title Acting 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)
This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4

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

(Instructions on page 2)
DRILLING OPERATIONS
AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS"

NMOCD AV

District I
1625 N. French Dr., Hobbs, NM 88240
Phone (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

RECEIVED

MAR 12 2015

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

☐ AMENDED REPORT

Farmington Field Office
Bureau of Land Management

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045-35663		² Pool Code 5890	³ Pool Name BISTI LOWER GALLUP
⁴ Property Code 314744	⁵ Property Name ESCRITO L06-2409		⁶ Well Number 01H
⁷ OGRID No. 282327	⁸ Operator Name ENCANA OIL & GAS (USA) INC.		⁹ Elevation 6831.6'

¹⁰ Surface Location

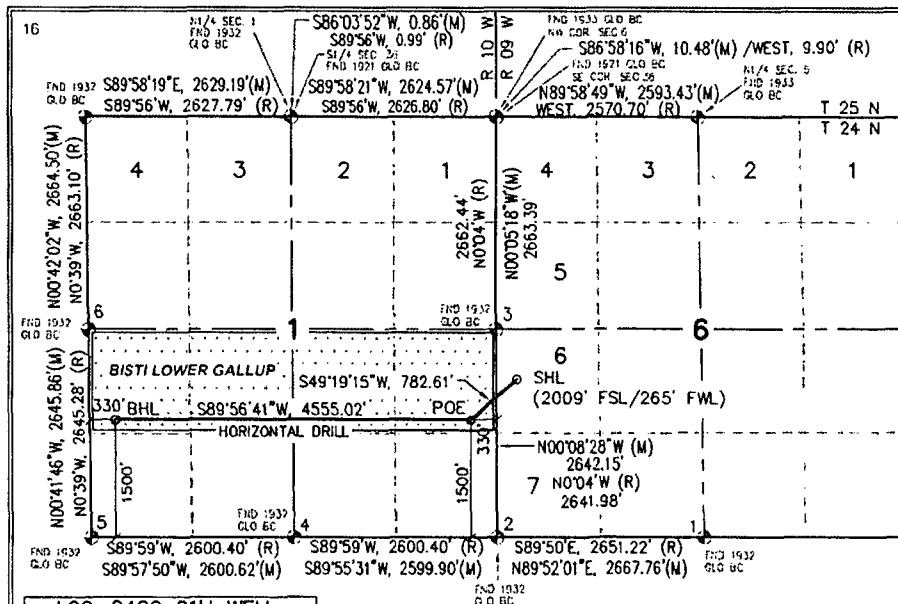
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West Line	County
L	6	24N	09W	6	2009	SOUTH	265	WEST	SAN JUAN

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
L	1	24N	10W		1500	SOUTH	330	WEST	SAN JUAN

¹² Dedicated Acres (RECORD) 160.00 ACRES	PROJECT AREA N/2 S/2 SECTION 1	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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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.



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.

Signature: *Shawn Turk* Date: 3/10/15

Printed Name: Shawn Turk

E-mail Address: shawn.turk@encana.com

¹⁸ 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.

July 31, 2014

Date of Survey

Signature and Seal of Professional Surveyor:

Richard L. Mulliken
RICHARD L. MULLIKEN
NEW MEXICO
16873
PROFESSIONAL SURVEYOR
3-10-15

RICHARD L. MULLIKEN

Certificate Number

16873

Escrito L06 2409 01H
 SHL: 2009' FSL & 265' FWL Sec 6 T24N R9W
 BHL: 1500' FSL & 330' FWL Sec 1 T24N R10W
 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
San Jose Fn.	n/a
Nacimiento Fn.	surface
Ojo Alamo Ss.	938
Kirtland Shale	1,110
Fruitland Coal	1,410
Pictured Cliffs Ss.	1,770
Lewis Shale	1,905
Cliffhouse Ss.	2,616
Menefee Fn.	3,312
Point Lookout Ss.	4,253
Mancos Shale	4,451
Mancos Silt	5,033
Gallup Fn.	5,261
Base Gallup	5,587

The referenced surface elevation is 6832', KB 6848'

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

Substance	Formation	Depth (TVD) units = feet
Water/Gas	Fruitland Coal	1,410
Oil/Gas	Pictured Cliffs Ss.	1,770
Oil/Gas	Cliffhouse Ss.	2,616
Gas	Menefee Fn.	3,312
Oil/Gas	Point Lookout Ss.	4,253
Oil/Gas	Mancos Shale	4,451
Oil/Gas	Mancos Silt	5,033
Oil/Gas	Gallup Fn.	5,261

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

Escrito L06 2409 01H
 SHL: 2009' FSL & 265' FWL Sec 6 T24N R9W
 BHL: 1500' FSL & 330' FWL Sec 1 T24N R10W
 San Juan, New Mexico

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.
- 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 times.
- 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'	26"	16"	42.09#	
Surface	0'-500'	12 1/4"	9 5/8"	36#	J55, STC New
Intermediate	0'-5552'	8 3/4"	7"	26#	J55, LTC New
Production Liner	5452'-10523'	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

Escrito L06 2409 01H

SHL: 2009' FSL & 265' FWL Sec 6 T24N R9W

BHL: 1500' FSL & 330' FWL Sec 1 T24N R10W

San Juan, New Mexico

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.

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'	228 sks	Type III Cement + 1% bwoc Calcium Chloride + 0.25 lbs/sack Cello Flake + 0.2% bwoc FL-52A + 58.9% Fresh Water	Surface	1 per joint on bottom 3 joints
Intermediate	0'-5552'	100% open hole excess Stage 1 Lead: 517 sks Stage 1 Tail: 394 sks	Lead: PremLite + 3% CaCl + 0.25lb/sk CelloFlake + 5lb/sk LCM, 12.1ppg 2.13cuft/sk Tail: Type III Cmt + 1% CaCl + 0.25lb/sk Cello Flake 14.5ppg 1.38cuft/sk	Surface	1 every 3 joints through water bearing zones
Production Liner	5452'-10523'	50% OH excess Stage 1 Blend Total: 287sks	Blend: Premium Lite High Strength FM + 0.7% bwoc R-3 + 3% bwoc Potassium Chloride + 0.25lbs/sack Cello Flake + 0.5% bwoc CD-32 + 1.15% bwoc FL- 52A + 60 lbs/sack Calcium Carbonate + 124.4% Fresh Water. Yield 2.63 cuft/sk	Liner Hanger	N/A

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 3500'. Directional plans are attached.

Description	Proposed Depth (TVD/MD)	Formation
Horizontal Lateral TD	5487'/10523'	Gallup

Escrito L06 2409 01H
SHL: 2009' FSL & 265' FWL Sec 6 T24N R9W
BHL: 1500' FSL & 330' FWL Sec 1 T24N R10W
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'-5404'/5552'	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"	5404'/5552'- 5487'/10523'	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 +/- 2589 psi based on a 9.0 ppg at 5532' 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.

9. ANTICIPATED START DATE AND DURATION OF OPERATIONS

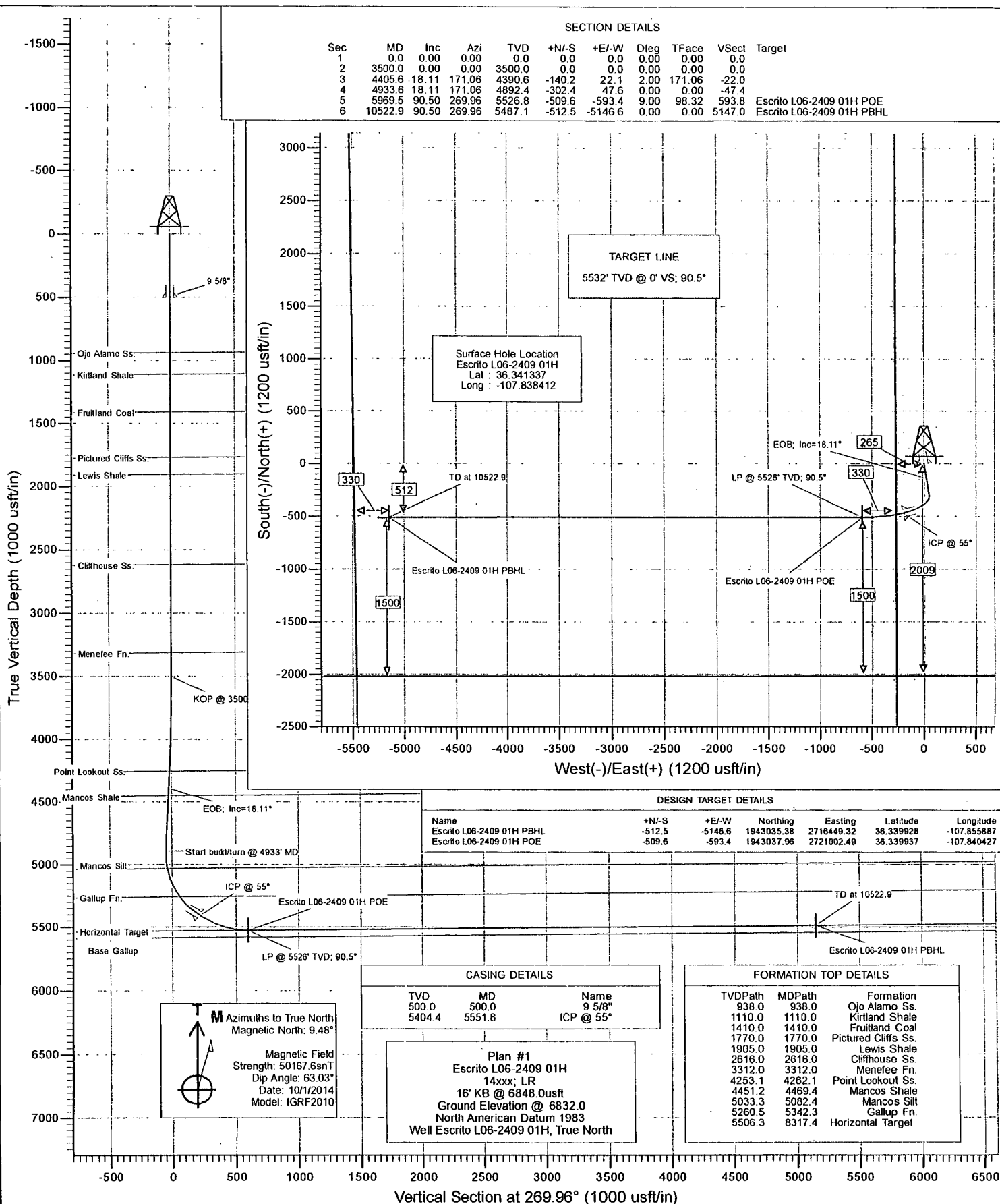
Drilling is estimated to commence on November 5, 2015. It is anticipated that completion operations will begin within 30 days after the well has been drilled depending on fracture treatment schedules with various pumping service companies.

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

LOC: 2009 FSL & 265' FWL Sec 6 24N 9W County: San Juan WELL: Escrito L06 2409 01H			Encana Natural Gas WELL SUMMARY				ENG: Michael Sancti RIG: Unassigned GLE: 6831.6 RKBE: 6847.6		3-3-15	
MWD LWD	OPEN HOLE LOGGING	FORM	DEPTH TVDMD				HOLE SIZE	CASING SPECS	MW MUD TYPE	DEVIATION INFORMATION
Multi-Well pad take survey every stand and run anti-collision report prior to spud	None	San Jose Fn.	60 0	60'			26	16" 42.09# 100sx Type I Neat 16.0ppg cmt	Fresh wtr 8.3-9.2	Vertical <1°
		Nacimiento Fn. 9 5/8" Csg	surface 500	500.00			12 1/4	9 5/8" 36ppf J55 LTC TOC Surface with 100% OH Excess: 228 sks Type III Cement + 1% bwoc Calcium Chloride + 0.25 lbs/sack Cello Flake + 0.2% bwoc FL-52A + 58.9% Fresh Water.	Fresh wtr 8.3-10	
		Ojo Alamo Ss. Kirtland Shale	938 1,110	3,500 3,500			8 3/4	7" 26ppf J55 LTC TOC @ surface (100% OH excess - 70% Lead 30% Tail) Stage 1 Total: 912sks Stage 1 Lead: 517 sks Premium Lite FM + 3% CaCl2 + 0.25/sk Cello Flake + 5#/sk LCM-1 + 8% Bentonite + 0.4% FL-52A + 0.4% Sodium Metasilicate. Mixed at 12.1 ppg. Yield 2.13 cuft/sk. Stage 1 Tail: 394 sks Type III Cement + 1% CaCl2 + 0.25#/sk Cello Flake + 0.2% FL-52A. Mixed at 14.6 ppg. Yield 1.38 cuft/sk.	Fresh Wtr 8.3-10	
Fruitland Coal	1,410									
Pictured Cliffs Ss. Lewis Shale	1,770 1,905									
Cliffhouse Ss. Menefee Fn.	2,616 3,312									
Point Lookout Ss. Mancos Shale	4,253 4,451									
Survey Every 60"-120", updating anticollision report after surveys. Stop operations and contact drilling engineer if separation factor approaches 1.5	Mud logger onsite	KOP	3,500	3,500						
		Mancos Silt	5,033							
		Gallup Fn.	5,261							
Surveys every 30' through the curve		7" Csg	5,404	5,552'						
		Horizontal Target TD	5,532 5,487	10,523						
Surveys every stand to TD unless directed otherwise by Geologist	No OH Logs	Base Gallup	5,587				6 1/8	100' overlap at liner top		Horz Inc/TVD 90.5deg/5531.6ft TD = 10522.9 MD
		4971' Drilled Lateral								
MWD Gamma Directional							4 1/2" 11.6ppf SB80 LTC TOC @ hanger (50% OH excess) Stage 1 Total: 287sks Stage 1 Blend: 287 sks Premium Lite High Strength FM + 0.7% bwoc R-3 + 3% bwow Potassium Chloride + 0.25lbs/sack Cello Flake + 0.5% bwoc CD-32 + 1.15% bwoc FL-52A + 60 lbs/sack Calcium Carbonate + 124.4% Fresh Water. Yield 2.63 cuft/sk.	WBM 8.3-10		

NOTES:

- 1) Drill with 26" bit to 60', set 16" 42.09ppf 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 3500', 8 3/4 inch holesize
- 5) Start curve at 10deg/100' build rate
- 6) Drill to csg point of 5552' MD
- 7) R&C 7" csg, circ cmt to surface
- 8) Land at ~55 deg, drill lateral to 10523' run 4 1/2 inch cemented liner



Planning Report

Database: USA EDM 5000 Multi Users DB
Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Site: S6-T24N-R9W
Well: Escrito L06-2409 01H
Wellbore: HZ
Design: Plan #1

Local Co-ordinate Reference: Well Escrito L06-2409 01H
TVD Reference: 16' KB @ 6848.0usft
MD Reference: 16' KB @ 6848.0usft
North Reference: True
Survey Calculation Method: Minimum Curvature

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

Site: S6-T24N-R9W
Site Position: Northing: 1,945,322.93 usft Latitude: 36.346214
From: Lat/Long Easting: 2,721,601.36 usft Longitude: -107.838394
Position Uncertainty: 0.0 usft Slot Radius: 13-3/16" Grid Convergence: 0.00 °

Well: Escrito L06-2409 01H
Well Position: +N/-S 0.0 usft Northing: 1,943,547.56 usft Latitude: 36.341337
+E/-W 0.0 usft Easting: 2,721,595.96 usft Longitude: -107.838412
Position Uncertainty: 0.0 usft Wellhead Elevation: 0.0 usft Ground Level: 6,832.0 usft

Wellbore: HZ
Magnetics: Model Name Sample Date Declination Dip Angle Field Strength
 IGRF2010 10/1/2014 (°) (°) (nT)
 9.48 63.03 50,168

Design: Plan #1
Audit Notes:
Version: Phase: PLAN Tie On Depth: 0.0
Vertical Section: Depth From (TVD) +N/-S +E/-W Direction
 (usft) (usft) (usft) (°)
 0.0 0.0 0.0 269.96

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	
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.00	0.00	0.00	0.00	
4,405.6	18.11	171.06	4,390.6	-140.2	22.1	2.00	2.00	0.00	171.06	
4,933.6	18.11	171.06	4,892.4	-302.4	47.6	0.00	0.00	0.00	0.00	
5,969.5	90.50	269.96	5,526.8	-509.6	-593.4	9.00	6.99	9.55	98.32	Escrito L06-2409 01H
10,522.9	90.50	269.96	5,487.1	-512.5	-5,146.6	0.00	0.00	0.00	0.00	Escrito L06-2409 01H

Planning Report

Database: USA EDM 5000 Multi Users DB
 Company: EnCana Oil & Gas (USA) Inc
 Project: San Juan County, NM
 Site: S6-T24N-R9W
 Well: Escrito L06-2409 01H
 Wellbore: HZ
 Design: Plan #1

Local Co-ordinate Reference: Well Escrito L06-2409 01H
 TVD Reference: 16' KB @ 6848.0usft
 MD Reference: 16' KB @ 6848.0usft
 North Reference: True
 Survey Calculation Method: Minimum Curvature

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	
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	
938.0	0.00	0.00	938.0	0.0	0.0	0.0	0.00	0.00	Ojo Alamo Ss.
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	
1,110.0	0.00	0.00	1,110.0	0.0	0.0	0.0	0.00	0.00	Kirtland Shale
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	
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	
1,410.0	0.00	0.00	1,410.0	0.0	0.0	0.0	0.00	0.00	Fruitland Coal
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	
1,770.0	0.00	0.00	1,770.0	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	
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	
1,905.0	0.00	0.00	1,905.0	0.0	0.0	0.0	0.00	0.00	Lewis Shale
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	
2,616.0	0.00	0.00	2,616.0	0.0	0.0	0.0	0.00	0.00	Cliffhouse Ss.
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	
3,312.0	0.00	0.00	3,312.0	0.0	0.0	0.0	0.00	0.00	Menefee Fn.
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	KOP @ 3500'
3,600.0	2.00	171.06	3,600.0	-1.7	0.3	-0.3	2.00	2.00	
3,700.0	4.00	171.06	3,699.8	-6.9	1.1	-1.1	2.00	2.00	
3,800.0	6.00	171.06	3,799.5	-15.5	2.4	-2.4	2.00	2.00	
3,900.0	8.00	171.06	3,898.7	-27.5	4.3	-4.3	2.00	2.00	
4,000.0	10.00	171.06	3,997.5	-43.0	6.8	-6.7	2.00	2.00	
4,100.0	12.00	171.06	4,095.6	-61.8	9.7	-9.7	2.00	2.00	
4,200.0	14.00	171.06	4,193.1	-84.1	13.2	-13.2	2.00	2.00	
4,262.1	15.24	171.06	4,253.1	-99.5	15.7	-15.6	2.00	2.00	Point Lookout Ss.
4,300.0	16.00	171.06	4,289.6	-109.6	17.3	-17.2	2.00	2.00	

Planning Report

Database: USA EDM 5000 Multi Users DB
 Company: EnCana Oil & Gas (USA) Inc
 Project: San Juan County, NM
 Site: S6-T24N-R9W
 Well: Escrito L06-2409 01H
 Wellbore: HZ
 Design: Plan #1

Local Co-ordinate Reference: Well Escrito L06-2409 01H
 TVD Reference: 16' KB @ 6848.0usft
 MD Reference: 16' KB @ 6848.0usft
 North Reference: True
 Survey Calculation Method: Minimum Curvature

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
4,400.0	18.00	171.06	4,385.3	-138.5	21.8	-21.7	2.00	2.00	
4,405.6	18.11	171.06	4,390.6	-140.2	22.1	-22.0	2.00	2.00	EOB; Inc=18.11°
4,469.4	18.11	171.06	4,451.2	-159.8	25.2	-25.0	0.00	0.00	Mancos Shale
4,500.0	18.11	171.06	4,480.3	-169.2	26.6	-26.5	0.00	0.00	
4,600.0	18.11	171.06	4,575.4	-199.9	31.5	-31.3	0.00	0.00	
4,700.0	18.11	171.06	4,670.4	-230.6	36.3	-36.1	0.00	0.00	
4,800.0	18.11	171.06	4,765.5	-261.3	41.1	-40.9	0.00	0.00	
4,900.0	18.11	171.06	4,860.5	-292.0	46.0	-45.8	0.00	0.00	
4,933.6	18.11	171.06	4,892.4	-302.4	47.6	-47.4	0.00	0.00	Start build/turn @ 4933' MD
5,000.0	18.20	190.31	4,955.6	-322.8	47.3	-47.1	9.00	0.13	
5,082.4	20.77	211.31	5,033.3	-347.9	37.4	-37.2	9.00	3.12	Mancos Silt
5,100.0	21.60	215.06	5,049.8	-353.3	33.9	-33.7	9.00	4.71	
5,200.0	27.54	231.48	5,140.8	-382.8	5.2	-5.0	9.00	5.94	
5,300.0	34.73	242.01	5,226.4	-410.6	-38.1	38.4	9.00	7.20	
5,342.3	37.99	245.35	5,260.5	-421.7	-60.6	60.9	9.00	7.69	Gallup Fn.
5,400.0	42.55	249.18	5,304.5	-436.0	-95.0	95.3	9.00	7.91	
5,500.0	50.70	254.46	5,373.1	-458.5	-164.0	164.3	9.00	8.15	
5,551.8	55.00	256.72	5,404.4	-468.7	-204.0	204.3	9.00	8.30	ICP @ 55°
5,600.0	59.03	258.62	5,430.6	-477.3	-243.5	243.8	9.00	8.37	
5,700.0	67.48	262.10	5,475.6	-492.2	-331.4	331.8	9.00	8.45	
5,800.0	76.00	265.18	5,506.9	-502.6	-425.7	426.1	9.00	8.51	
5,900.0	84.55	268.03	5,523.8	-508.4	-524.0	524.4	9.00	8.55	
5,969.5	90.50	269.96	5,526.8	-509.6	-593.4	593.8	9.00	8.56	LP @ 5526' TVD; 90.5° - Escrito L06-2409 01H
6,000.0	90.50	269.96	5,526.5	-509.7	-623.9	624.3	0.00	0.00	
6,100.0	90.50	269.96	5,525.7	-509.7	-723.9	724.3	0.00	0.00	
6,200.0	90.50	269.96	5,524.8	-509.8	-823.9	824.2	0.00	0.00	
6,300.0	90.50	269.96	5,523.9	-509.8	-923.9	924.2	0.00	0.00	
6,400.0	90.50	269.96	5,523.0	-509.9	-1,023.9	1,024.2	0.00	0.00	
6,500.0	90.50	269.96	5,522.2	-510.0	-1,123.9	1,124.2	0.00	0.00	
6,600.0	90.50	269.96	5,521.3	-510.0	-1,223.9	1,224.2	0.00	0.00	
6,700.0	90.50	269.96	5,520.4	-510.1	-1,323.9	1,324.2	0.00	0.00	
6,800.0	90.50	269.96	5,519.6	-510.1	-1,423.9	1,424.2	0.00	0.00	
6,900.0	90.50	269.96	5,518.7	-510.2	-1,523.9	1,524.2	0.00	0.00	
7,000.0	90.50	269.96	5,517.8	-510.3	-1,623.9	1,624.2	0.00	0.00	
7,100.0	90.50	269.96	5,516.9	-510.3	-1,723.9	1,724.2	0.00	0.00	
7,200.0	90.50	269.96	5,516.1	-510.4	-1,823.9	1,824.2	0.00	0.00	
7,300.0	90.50	269.96	5,515.2	-510.5	-1,923.9	1,924.2	0.00	0.00	
7,400.0	90.50	269.96	5,514.3	-510.5	-2,023.8	2,024.2	0.00	0.00	
7,500.0	90.50	269.96	5,513.5	-510.6	-2,123.8	2,124.2	0.00	0.00	
7,600.0	90.50	269.96	5,512.6	-510.6	-2,223.8	2,224.2	0.00	0.00	
7,700.0	90.50	269.96	5,511.7	-510.7	-2,323.8	2,324.2	0.00	0.00	
7,800.0	90.50	269.96	5,510.8	-510.8	-2,423.8	2,424.2	0.00	0.00	
7,900.0	90.50	269.96	5,510.0	-510.8	-2,523.8	2,524.2	0.00	0.00	
8,000.0	90.50	269.96	5,509.1	-510.9	-2,623.8	2,624.2	0.00	0.00	
8,100.0	90.50	269.96	5,508.2	-511.0	-2,723.8	2,724.2	0.00	0.00	
8,200.0	90.50	269.96	5,507.4	-511.0	-2,823.8	2,824.2	0.00	0.00	
8,300.0	90.50	269.96	5,506.5	-511.1	-2,923.8	2,924.2	0.00	0.00	
8,317.4	90.50	269.96	5,506.3	-511.1	-2,941.2	2,941.6	0.00	0.00	Horizontal Target
8,400.0	90.50	269.96	5,505.6	-511.1	-3,023.8	3,024.2	0.00	0.00	
8,500.0	90.50	269.96	5,504.7	-511.2	-3,123.8	3,124.2	0.00	0.00	
8,600.0	90.50	269.96	5,503.9	-511.3	-3,223.8	3,224.2	0.00	0.00	
8,700.0	90.50	269.96	5,503.0	-511.3	-3,323.8	3,324.2	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Escrito L06-2409 01H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	16' KB @ 6848.0usft
Project:	San Juan County, NM	MD Reference:	16' KB @ 6848.0usft
Site:	S6-T24N-R9W	North Reference:	True
Well:	Escrito L06-2409 01H	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #1		

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
8,800.0	90.50	269.96	5,502.1	-511.4	-3,423.8	3,424.2	0.00	0.00	
8,900.0	90.50	269.96	5,501.2	-511.4	-3,523.8	3,524.1	0.00	0.00	
9,000.0	90.50	269.96	5,500.4	-511.5	-3,623.8	3,624.1	0.00	0.00	
9,100.0	90.50	269.96	5,499.5	-511.6	-3,723.8	3,724.1	0.00	0.00	
9,200.0	90.50	269.96	5,498.6	-511.6	-3,823.8	3,824.1	0.00	0.00	
9,300.0	90.50	269.96	5,497.8	-511.7	-3,923.8	3,924.1	0.00	0.00	
9,400.0	90.50	269.96	5,496.9	-511.8	-4,023.8	4,024.1	0.00	0.00	
9,500.0	90.50	269.96	5,496.0	-511.8	-4,123.8	4,124.1	0.00	0.00	
9,600.0	90.50	269.96	5,495.1	-511.9	-4,223.8	4,224.1	0.00	0.00	
9,700.0	90.50	269.96	5,494.3	-511.9	-4,323.8	4,324.1	0.00	0.00	
9,800.0	90.50	269.96	5,493.4	-512.0	-4,423.8	4,424.1	0.00	0.00	
9,900.0	90.50	269.96	5,492.5	-512.1	-4,523.8	4,524.1	0.00	0.00	
10,000.0	90.50	269.96	5,491.7	-512.1	-4,623.7	4,624.1	0.00	0.00	
10,100.0	90.50	269.96	5,490.8	-512.2	-4,723.7	4,724.1	0.00	0.00	
10,200.0	90.50	269.96	5,489.9	-512.3	-4,823.7	4,824.1	0.00	0.00	
10,300.0	90.50	269.96	5,489.0	-512.3	-4,923.7	4,924.1	0.00	0.00	
10,400.0	90.50	269.96	5,488.2	-512.4	-5,023.7	5,024.1	0.00	0.00	
10,500.0	90.50	269.96	5,487.3	-512.4	-5,123.7	5,124.1	0.00	0.00	
10,522.9	90.50	269.96	5,487.1	-512.5	-5,146.6	5,147.0	0.00	0.00	TD at 10522.9 - Escrito L06-2409 01H PBHL

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Escrito L06-2409 01H PI	0.00	0.00	5,526.8	-509.6	-593.4	1,943,037.96	2,721,002.49	36.339937	-107.840427
- plan hits target center									
- Point									
Escrito L06-2409 01H PI	0.00	0.00	5,487.1	-512.5	-5,146.6	1,943,035.38	2,716,449.32	36.339928	-107.855887
- plan hits target center									
- Point									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
5,551.8	5,404.4	ICP @ 55°	0	0	
500.0	500.0	9 5/8"	0	0	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Escrito L06-2409 01H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	16' KB @ 6848.0usft
Project:	San Juan County, NM	MD Reference:	16' KB @ 6848.0usft
Site:	S6-T24N-R9W	North Reference:	True
Well:	Escrito L06-2409 01H	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #1		

938.0	938.0	Ojo Alamo Ss.	-0.50	269.96
1,110.0	1,110.0	Kirtland Shale	-0.50	269.96
1,410.0	1,410.0	Fruitland Coal	-0.50	269.96
1,770.0	1,770.0	Pictured Cliffs Ss.	-0.50	269.96
1,905.0	1,905.0	Lewis Shale	-0.50	269.96
2,616.0	2,616.0	Cliffhouse Ss.	-0.50	269.96
3,312.0	3,312.0	Menefee Fn.	-0.50	269.96
4,262.1	4,253.0	Point Lookout Ss.	-0.50	269.96
4,469.4	4,451.0	Mancos Shale	-0.50	269.96
5,082.4	5,033.0	Mancos Silt	-0.50	269.96
5,342.3	5,261.0	Gallup Fn.	-0.50	269.96
8,317.4	5,532.0	Horizontal Target	-0.50	269.96

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
3,500.0	3,500.0	0.0	0.0	KOP @ 3500'
4,405.6	4,390.6	-140.2	22.1	EOB; Inc=18.11°
4,933.6	4,892.4	-302.4	47.6	Start build/turn @ 4933' MD
5,969.5	5,526.8	-509.6	-593.4	LP @ 5526' TVD; 90.5°
10,522.9	5,487.1	-512.5	-5,146.6	TD at 10522.9

Escrito L06-2409 01H

SHL: NWSW Section 6, T24N, R9W
2009 FSL and 265 FWL

BHL: NWSW Section 1, T24N, R10W
1500 FSL and 330 FWL

San Juan County, New Mexico

Lease Number: NMNM 112955

C. Pipeline

See the Final Modification to the Standard SF-299 Application for authorization to construct, operate, maintain and terminate a 5468 foot, up to 6-inch outside diameter, buried steel well connect pipeline that was submitted to the BLM on March 4, 2015, concurrently with this 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 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. Encana will also notify the BLM within 24 hours of any spill.

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

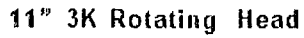
ENCANA OIL & GAS (USA) INC.
ESCRITO L06-2409 #01H
2009' FSL & 265' FWL
LOCATED IN THE NW/4 SW/4 (LOT 6) OF SECTION 6
T24N, R09W, N.M.P.M.
SAN JUAN COUNTY, NEW MEXICO
454' +/- OF NEW ACCESS ACROSS BLM LANDS

DIRECTIONS

- 1) FROM THE INTERSECTION OF HWY 64 & HWY 550 IN BLOOMFIELD, NEW MEXICO, TRAVEL SOUTH ON HWY 550 28.3 MILES TO HWY 57.
- 2) TURN RIGHT (SOUTHWEST) ON HWY 57 AND TRAVEL 2.0 MILES TO AN EXISTING ACCESS ROAD ON THE RIGHT (WEST).
- 3) TURN RIGHT (WEST) ON EXISTING ACCESS ROAD AND TRAVEL 0.2 MILES TO THE PROPOSED ESCRITO L06-2409 ACCESS ROAD TO THE LEFT (WEST).
- 4) TURN LEFT (WEST) ON NEW ACCESS ROAD AND TRAVEL 0.1 MILES TO THE WELL FLAG FOR THE PROPOSED L06-2409 WELL PAD.
- 5) WELL FLAG LOCATED AT : LATITUDE: 36.341337° N, LONGITUDE: 107.838412° W (NAD 83)

encana

Escrito L06 2409 01H



11" 3K Annular

3K Double Ram
Top: Pipe Ram
Bottom: Blind Ram
3" Outlets Below Ram

3K Mud Cross 3" gate valves

