

State of New Mexico  
Energy, Minerals and Natural Resources Department

Susana Martinez  
Governor

David Martin  
Cabinet Secretary-Designate

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

Jami Bailey, 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: 4/2/14

Well information;

Operator ENCANA, Well Name and Number Escrito D 14-2407 1H

API# 30-039-31231, Section 14, Township 24 NS, Range 7 EW

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

\* Prior to spud, provide plan for vertical pilot hole and playback of pilot hole

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

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.

Charles P. ...  
NMOCD Approved by Signature

7-29-2014  
Date

**CONFIDENTIAL**  
**RECEIVED**

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

**APPLICATION FOR PERMIT TO DRILL OR REENTER**

APR 14 2014

5. Lease Serial No. NMNM 117567
6. If Indian, Allottee or Tribe Name N/A
7. If Unit or CA Agreement, Name and No. Pending
8. Lease Name and Well No. Escrito D14-2407 01H
9. API Well No. <b>30-039-31231</b>
10. Field and Pool, or Exploratory Escrito Gallup (associated)
11. Sec., T. R. M. or Blk. and Survey or Area Section 14, T24N, R7W NMPM
12. County or Parish Rio Arriba
13. State NM
17. Spacing Unit dedicated to this well 320 acres N/2 Section 15
20. BLM/BIA Bond No. on file COB-000235
23. Estimated duration 20 days

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER	
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	
2. Name of Operator Encana Oil & Gas (USA) Inc.	
3a. Address 370 17th Street, Suite 1700, Denver, CO 80202	3b. Phone No. (include area code) 720-876-3533
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface <b>D</b> 471' FNL and 564' FWL Section 14, T24N, R7W At proposed prod. zone <b>D</b> 450' FNL 330' FWL Section 15, T24N, R7W	
14. Distance in miles and direction from nearest town or post office* +/- 65.3 miles from intersection of US Hwy 550 & US Hwy 64 in Bloomfield, NM	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) BHL is 330' FWL Section 15, T24N, R7W	16. No. of acres in lease NMNM 117567- 1722.45 acres
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. Escrito D14-2407 02H is +/- 30' SW of SHL	19. Proposed Depth 5846'TVD, 11102'MD
21. Elevations (Show whether DF, KDB, RT, GL, etc.) GL 7029' KB 7045'	22. Approximate date work will start* 09/27/2014

24. Attachments

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

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>1. Well plat certified by a registered surveyor.</li> <li>2. A Drilling Plan.</li> <li>3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).</li> </ul> | <ul style="list-style-type: none"> <li>4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).</li> <li>5. Operator certification</li> <li>6. Such other site specific information and/or plans as may be required by the BLM.</li> </ul> |
|---|---|

25. Signature	Name (Printed/Typed) Katie Wegner	Date 4/2/14
Title Regulatory Analyst		
Approved by (Signature)	Name (Printed/Typed) AFM	Date 7/16/14
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.

**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**

(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

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

NMOCDA

District I  
1625 N. French Drive, Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720

District II  
811 S. First Street, Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720

District III  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-5178 Fax: (505) 334-6170

District IV  
1220 S. St. Francis Drive, Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

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 Drive  
Santa Fe, NM 87505

RECEIVED

APR 14 2014

WELL LOCATION AND ACREAGE DEDICATION PLAT, Farmington Field Office  
Bureau of Land Management

*API Number <b>30-039-31231</b>	*Pool Code 22619	*Pool Name ESCRITO GALLUP (ASSOCIATED)
*Property Code <b>313510</b>	*Property Name ESCRITO D14-2407	*Well Number 01H
*GRID No. 282327	*Operator Name ENCANA OIL & GAS (USA) INC.	*Elevation 7029'

10 Surface Location

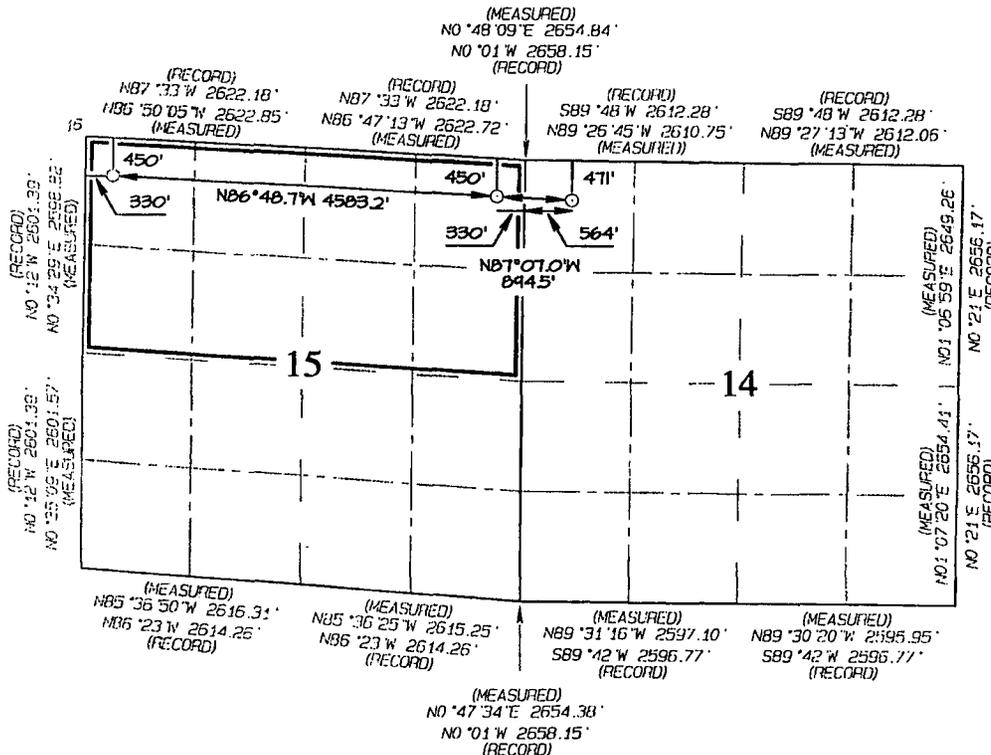
U. or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	14	24N	7W		471	NORTH	564	WEST	RIO ARRIBA

11 Bottom Hole Location If Different From Surface

U. or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	15	24N	7W		450	NORTH	330	WEST	RIO ARRIBA

*Undivided Acres 320.0 Acres N/2 - Section 15	*Joint or Infill	*Consolidation Code	*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: *Katie Wegner* Date: 4/2/14  
Printed Name: Katie.Wegner@encana.com

E-mail Address: \_\_\_\_\_

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.

Date Revised: MARCH 13, 2014  
Date of Survey: JULY 3, 2012  
Signature and Seal of Professional Surveyor



JASON C. EDWARDS  
Certificate Number 15269

END-OF-LATERAL  
450' FNL 330' FWL  
SECTION 15, T24N, R7W  
LAT: 36.31950° N  
LONG: 107.57020° W  
DATUM: NAD1927

POINT-OF-ENTRY  
450' FNL 330' FWL  
SECTION 15, T24N, R7W  
LAT: 36.31897° N  
LONG: 107.55465° W  
DATUM: NAD1927

SURFACE LOCATION  
471' FNL 564' FWL  
SECTION 14, T24N, R7W  
LAT: 36.31888° N  
LONG: 107.55162° W  
DATUM: NAD1927

Escrito D14-2407 01H  
 SHL: NW NW 14 24N 7W  
 471 FNL 564 FWL  
 BHL: NW NW 15 24N 7W  
 450 FNL 330 FWL  
 Rio Arriba, 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
Nacimiento	355
Ojo Alamo Ss.	1,795
Kirtland Shale	1,985
Fruitland Coal	2,215
Pictured Cliffs Ss.	2,445
Lewis Shale	2,545
Cliffhouse Ss.	3,305
Menefee Fn.	4,057
Point Lookout Ss.	4,740
Mancos Shale	4,915
Mancos Silt	5,590
Gallup Fn.	5,785

The referenced surface elevation is 7029', KB 7045'

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

Substance	Formation	Depth (TVD) units = feet
Water/Gas	Fruitland Coal	2,215
Oil/Gas	Pictured Cliffs Ss.	2,445
Oil/Gas	Cliffhouse Ss.	3,305
Gas	Menefee Fn.	4,057
Oil/Gas	Point Lookout Ss.	4,740
Oil/Gas	Mancos Shale	4,915
Oil/Gas	Mancos Silt	5,590
Oil/Gas	Gallup Fn.	5,785

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.

**Escrito D14-2407 01H**  
**SHL: NW NW 14 24N 7W**  
**471 FNL 564 FWL**  
**BHL: NW NW 15 24N 7W**  
**450 FNL 330 FWL**  
**Rio Arriba, 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#	H40, STC New
Surface	0'-500'	12 1/4"	9 5/8"	36#	J55, STC New
Intermediate	0'-6423'	8 3/4"	7"	26#	J55, LTC New
Production Liner	6223'-11102'	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.

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 Rio Arriba, 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'	201 sks	Type III Cement + 1% CaCl + 0.25lb/sk Cello Flake + 0.2% FL, 16ppg, 1.38cuf/sk	Surface	1 per joint on bottom 3 joints
Intermediate	0'-6423'	30% open hole excess Stage 1 Lead: 468 sks Stage 1 Tail: 275 sks Stage 2 Lead: 232 sks	Lead (Stages 1 and 2): PremLite + 3% CaCl + 0.25lb/sk CelloFlake + 5lb/sk LCM, 12.1ppg 2.13cuf/sk Tail (Stage 1): Type III Cmt + 1% CaCl + 0.25lb/sk Cello Flake 14.5ppg 1.38cuf/sk	Surface	1 every 3 joints through water bearing zones
Production Liner	6223'-11102'	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 5299'. Directional plans are attached.

Description	Proposed Depth (TVD/MD)	Formation
Horizontal Lateral TD	5846'/11102'	Gallup

**6. DRILLING FLUIDS PROGRAM**

a) Surface through Intermediate Casing Point:

Holie 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	8.4-8.6	60-70	NC
8 3/4"	500'/500'-5871'/6423'	Fresh Water LSND	9.5-8.8	40-50	8-10

Escrito D14-2407 01H  
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 Rio Arriba, New Mexico

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"	5871'/6423'- 5846'/11102'	Synthetic Oil Based Mud	8.6-9.0	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, including fresh water and oil-based operations. 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 +/- 2750 psi based on a 9.0 ppg at 5875' TVD of the horizontal lateral target. No abnormal pressure or temperatures are anticipated.

No hydrogen sulfide gas is anticipated, however, if H<sub>2</sub>S 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 January 1, 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: NE/4 NE/4 15 24N 7W 450 FNL 330		Encana Natural Gas				ENG: S Kuykendall 4/2/14		
County: Rio Arriba		WELL SUMMARY				RIG: Aztec 950		
WELL: Escrito D14-2407 01H						GLE: 7029		
						RKBE: 7045		
MWD	OPEN HOLE	FORM	DEPTH		HOLE SIZE	CASING SPECS	MW MUD TYPE	DEVIATION INFORMATION
LWD	LOGGING		TVD	MD				
			60	60'		20" 94# 100sx Type I Neat 16.0ppg cmt	Fresh wtr 8.3-9.2	
Multi-Well pad - take survey every stand and run anti-collision report prior to spud	None	Nacimiento 9 5/8" Csg	355 500	500.00		9 5/8" 36ppf J55 STC  TOC Surface - 201 sks of Type III Cement	Fresh wtr 8.4-8.6	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	1,795 1,985  2,215  2,445 2,545  3,305 4,057  4,740 4,915		Stage tool @ ~ 2,595	7" 26ppf J55 LTC  TOC @ surface 30% OH excess: 742 sks Total.  Stage 1 Lead: 468 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: 275 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.  Stage 2: 168 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.	Fresh Wtr 8.5-8.8	Vertical <1°
Surveys every 30' through the curve	Mud logger onsite	KOP  Mancos Silt  Gallup Fn.  7" Csg	5,299  5,590  5,785 5,871	5,299  6,423'		8 3/4		
Surveys every stand to TD unless directed otherwise by Geologist	No OH Logs	Horizontal Target TD  Base Gallup  Pilot Hole TD	5,875 5,846 6,100 6,400	11,102  8400		6 1/8  4679' Drilled Lateral	200' overlap at liner top  Horizontal Inclination Horizontal TVD 8.6-9.0 OBM	Horz Inc/TVD /90.3  TD = 11102.1 MD
MWD Gamma Directional						4 1/2" 11.6ppf SB80 LTC  Running external swellable csg packers for isolation of prod string Plan on setting top packer within 100' of intermediate casing shoe	Switch to OBM 8.6-9.0	

**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 Pilot Hole TD, 8 3/4 inch hole size
- 5) PU directional tools and drill from KOP of 5299', at 10deg/100' build rate with 8 3/4 inch holesize
- 6) Drill to csg point of 6423' MD
- 7) R&C 7" csg, circ cmt to surface, switch to OBM
- 8) Land at 90 deg, drill lateral to 11102' run 4 1/2 inch liner with external swellable csg packers



# Boomerang Tube LLC

## CASING (OR) TUBING DESCRIPTION AND PERFORMANCE PROPERTIES

Pipe Outside Diameter (ins)	_____	4.500
Pipe Wall Thickness (ins)	_____	0.250
Nominal Weight Per Foot (lbs)	_____	11.60
Thread Name	_____	Long Thread CSG
Grade Name	_____	SB-80
Pipe Minimum Yield (psi)	_____	80,000
Pipe Minimum Ultimate (psi)	_____	90,000
Coupling Minimum Yield (psi)	_____	80,000
Coupling Minimum Ultimate (psi)	_____	100,000
Coupling or Joint Outside Diameter (ins)	_____	5.000
Drift Diameter (ins)	_____	3.875
Plain End Weight per Foot (lbs)	_____	11.36
Joint Strength (lbs)	_____	201,000
Internal Yield (psi)	_____	7,780
Collapse Rating (psi)	_____	6,350

## MAXIMUM DEPTH/LENGTH BASED ON MUD WTS & SAFETY FACTORS

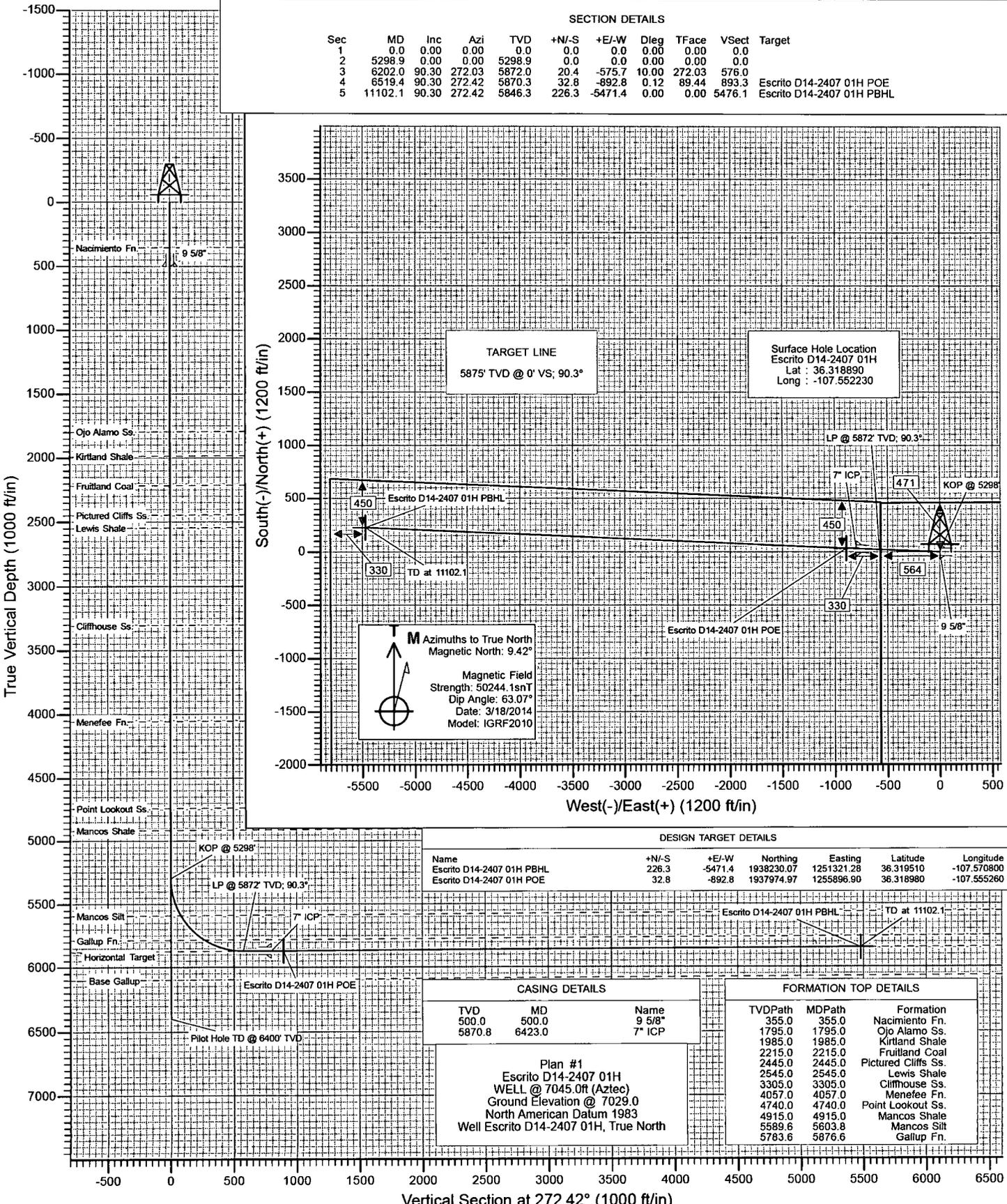
Drilling Mud Weight (ppg)	_____	9.625
Tension Safety Factor	_____	1.80
Maximum Tension Length (ft)	_____	9,630
Internal Yield Safety Factor	_____	1.10
Maximum Depth for Internal Yield (ft)	_____	14,150
Collapse Safety Factor	_____	1.125
Maximum Collapse Depth (ft)	_____	11,290

## API RELATED VALUES and INTERMEDIATE CALCULATION RESULTS

Coupling Thread Fracture Strength	_____	464,000
Pipe Thread Fracture Strength (lbs)	_____	201,000
Pipe Body Plain End Yield (lbs)	_____	267,000
Round Thread Pull-Out (lbs)	_____	219,000
Minimum Make-up Torque (ft-lbs)	_____	1,640
Nominal Make-up Torque (ft-lbs)	_____	2,190
Maximum Make-up Torque (ft-lbs)	_____	2,740
Coupling Internal Yield (psi)	_____	10,660
Pipe Body Internal Yield (psi)	_____	7,780
Leak @ E1 or E7 plane (psi)	_____	17,920
Pipe Hydrostatic Test Pressure @ 80 % SMYS	_____	7,100



Project: Rio Arriba County, NM  
 Site: S14-T24N-R7W  
 Well: Escrito D14-2407 01H  
 Wellbore: HZ  
 Design: Plan #1



**SECTION DETAILS**

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	5298.9	0.00	0.00	5298.9	0.0	0.0	0.00	0.00	0.0	
3	6202.0	90.30	272.03	5872.0	20.4	-575.7	10.00	272.03	576.0	Escrito D14-2407 01H POE
4	6519.4	90.30	272.42	5870.3	32.8	-892.8	0.12	89.44	893.3	Escrito D14-2407 01H PBHL
5	11102.1	90.30	272.42	5846.3	226.3	-5471.4	0.00	0.00	5476.1	

**DESIGN TARGET DETAILS**

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Escrito D14-2407 01H PBHL	226.3	-5471.4	1938230.07	1251321.28	36.319510	-107.570800
Escrito D14-2407 01H POE	32.8	-892.8	1937974.97	1255896.90	36.318980	-107.555260

**CASING DETAILS**

TVD	MD	Name
500.0	500.0	9 5/8"
5870.8	6423.0	7" ICP

**FORMATION TOP DETAILS**

TVDPath	MDPath	Formation
355.0	355.0	Nacimiento Fn.
1795.0	1795.0	Ojo Alamo Ss.
1985.0	1985.0	Kirtland Shale
2215.0	2215.0	Fruitland Coal
2445.0	2445.0	Pictured Cliffs Ss.
2545.0	2545.0	Lewis Shale
3305.0	3305.0	Cliffhouse Ss.
4057.0	4057.0	Menefee Fn.
4740.0	4740.0	Point Lookout Ss.
4915.0	4915.0	Mancos Shale
5589.6	5603.8	Mancos Silt
5783.6	5876.6	Gallup Fn.

Plan #1  
 Escrito D14-2407 01H  
 WELL @ 7045.0ft (Aztec)  
 Ground Elevation @ 7029.0  
 North American Datum 1983  
 Well Escrito D14-2407 01H, True North

Vertical Section at 272.42° (1000 ft/in)

Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Escrito D14-2407 01H
<b>Company:</b>	EnCana Oil & Gas (USA) Inc.	<b>TVD Reference:</b>	WELL @ 7045.0ft (Aztec)
<b>Project:</b>	Rio Arriba County, NM	<b>MD Reference:</b>	WELL @ 7045.0ft (Aztec)
<b>Site:</b>	S14-T24N-R7W	<b>North Reference:</b>	True
<b>Well:</b>	Escrito D14-2407 01H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	HZ		
<b>Design:</b>	Plan #1		

<b>Project</b>	Rio Arriba County, NM		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	New Mexico Central Zone		

<b>Site</b>	S14-T24N-R7W				
<b>Site Position:</b>		<b>Northing:</b>	1,937,930.17 ft	<b>Latitude:</b>	36.318890
<b>From:</b>	Lat/Long	<b>Easting:</b>	1,256,789.12 ft	<b>Longitude:</b>	-107.552230
<b>Position Uncertainty:</b>	0.0 ft	<b>Slot Radius:</b>	13.200in	<b>Grid Convergence:</b>	-0.77 °

<b>Well</b>	Escrito D14-2407 01H					
<b>Well Position</b>	<b>+N/-S</b>	0.0 ft	<b>Northing:</b>	1,937,930.17 ft	<b>Latitude:</b>	36.318890
	<b>+E/-W</b>	0.0 ft	<b>Easting:</b>	1,256,789.12 ft	<b>Longitude:</b>	-107.552230
<b>Position Uncertainty</b>		0.0 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b>	7,029.0 ft

<b>Wellbore</b>	HZ				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination</b>	<b>Dip Angle</b>	<b>Field Strength</b>
			(°)	(°)	(nT)
	IGRF2010	3/18/2014	9.42	63.07	50,244

<b>Design</b>	Plan #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	272.42

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
5,298.9	0.00	0.00	5,298.9	0.0	0.0	0.00	0.00	0.00	0.00	
6,202.0	90.30	272.03	5,872.0	20.4	-575.7	10.00	10.00	0.00	272.03	
6,519.4	90.30	272.42	5,870.3	32.8	-892.8	0.12	0.00	0.12	89.44	Escrito D14-2407 01H
11,102.1	90.30	272.42	5,846.3	226.3	-5,471.4	0.00	0.00	0.00	0.00	Escrito D14-2407 01H

Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Escrito D14-2407 01H
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	WELL @ 7045.0ft (Aztec)
<b>Project:</b>	Rio Arriba County, NM	<b>MD Reference:</b>	WELL @ 7045.0ft (Aztec)
<b>Site:</b>	S14-T24N-R7W	<b>North Reference:</b>	True
<b>Well:</b>	Escrito D14-2407 01H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	HZ		
<b>Design:</b>	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	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	
355.0	0.00	0.00	355.0	0.0	0.0	0.0	0.00	0.00	Nacimiento Fn.
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	
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	
1,400.0	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	
1,795.0	0.00	0.00	1,795.0	0.0	0.0	0.0	0.00	0.00	Ojo Alamo 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	
1,985.0	0.00	0.00	1,985.0	0.0	0.0	0.0	0.00	0.00	Kirtland 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	
2,215.0	0.00	0.00	2,215.0	0.0	0.0	0.0	0.00	0.00	Fruitland Coal
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	
2,445.0	0.00	0.00	2,445.0	0.0	0.0	0.0	0.00	0.00	Pictured Cliffs Ss.
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	
2,545.0	0.00	0.00	2,545.0	0.0	0.0	0.0	0.00	0.00	Lewis Shale
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	
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	
3,305.0	0.00	0.00	3,305.0	0.0	0.0	0.0	0.00	0.00	Cliffhouse Ss.
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	
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	
4,057.0	0.00	0.00	4,057.0	0.0	0.0	0.0	0.00	0.00	Menefee Fn.
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	

Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Escrito D14-2407 01H
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	WELL @ 7045.0ft (Aztec)
<b>Project:</b>	Rio Arriba County, NM	<b>MD Reference:</b>	WELL @ 7045.0ft (Aztec)
<b>Site:</b>	S14-T24N-R7W	<b>North Reference:</b>	True
<b>Well:</b>	Escrito D14-2407 01H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	HZ		
<b>Design:</b>	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	
4,740.0	0.00	0.00	4,740.0	0.0	0.0	0.0	0.00	0.00	Point Lookout Ss.
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	
4,915.0	0.00	0.00	4,915.0	0.0	0.0	0.0	0.00	0.00	Mancos Shale
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	
5,298.9	0.00	0.00	5,298.9	0.0	0.0	0.0	0.00	0.00	KOP @ 5298'
5,300.0	0.11	272.03	5,300.0	0.0	0.0	0.0	10.00	10.00	
5,400.0	10.11	272.03	5,399.5	0.3	-8.9	8.9	10.00	10.00	
5,500.0	20.11	272.03	5,495.9	1.2	-34.9	34.9	10.00	10.00	
5,600.0	30.10	272.03	5,586.3	2.7	-77.3	77.3	10.00	10.00	
5,603.8	30.48	272.03	5,589.6	2.8	-79.1	79.2	10.00	10.00	Mancos Silt
5,700.0	40.10	272.03	5,668.0	4.8	-134.6	134.7	10.00	10.00	
5,800.0	50.10	272.03	5,738.5	7.3	-205.3	205.5	10.00	10.00	
5,876.6	57.76	272.03	5,783.6	9.5	-267.2	267.3	10.00	10.00	Gallup Fn.
5,900.0	60.10	272.03	5,795.7	10.2	-287.2	287.4	10.00	10.00	
6,000.0	70.10	272.03	5,837.7	13.4	-377.7	378.0	10.00	10.00	
6,100.0	80.10	272.03	5,863.4	16.8	-474.2	474.5	10.00	10.00	
6,200.0	90.09	272.03	5,872.0	20.4	-573.6	574.0	10.00	10.00	
6,202.0	90.30	272.03	5,872.0	20.4	-575.7	576.0	10.00	10.00	LP @ 5872' TVD; 90.3°
6,300.0	90.30	272.15	5,871.4	24.0	-673.6	674.0	0.12	0.00	
6,400.0	90.30	272.27	5,870.9	27.9	-773.5	774.0	0.12	0.00	
6,423.0	90.30	272.30	5,870.8	28.8	-796.5	797.0	0.12	0.00	7" ICP
6,500.0	90.30	272.40	5,870.4	32.0	-873.4	874.0	0.12	0.00	
6,519.4	90.30	272.42	5,870.3	32.8	-892.8	893.3	0.12	0.00	
6,600.0	90.30	272.42	5,869.9	36.2	-973.3	974.0	0.00	0.00	
6,700.0	90.30	272.42	5,869.4	40.4	-1,073.2	1,074.0	0.00	0.00	
6,800.0	90.30	272.42	5,868.8	44.6	-1,173.1	1,174.0	0.00	0.00	
6,900.0	90.30	272.42	5,868.3	48.9	-1,273.0	1,274.0	0.00	0.00	
7,000.0	90.30	272.42	5,867.8	53.1	-1,373.0	1,374.0	0.00	0.00	
7,100.0	90.30	272.42	5,867.3	57.3	-1,472.9	1,474.0	0.00	0.00	
7,200.0	90.30	272.42	5,866.7	61.5	-1,572.8	1,574.0	0.00	0.00	
7,300.0	90.30	272.42	5,866.2	65.7	-1,672.7	1,674.0	0.00	0.00	
7,400.0	90.30	272.42	5,865.7	70.0	-1,772.6	1,774.0	0.00	0.00	
7,500.0	90.30	272.42	5,865.2	74.2	-1,872.5	1,874.0	0.00	0.00	
7,600.0	90.30	272.42	5,864.6	78.4	-1,972.4	1,974.0	0.00	0.00	
7,700.0	90.30	272.42	5,864.1	82.6	-2,072.3	2,074.0	0.00	0.00	
7,800.0	90.30	272.42	5,863.6	86.8	-2,172.2	2,174.0	0.00	0.00	
7,900.0	90.30	272.42	5,863.1	91.1	-2,272.1	2,274.0	0.00	0.00	
8,000.0	90.30	272.42	5,862.5	95.3	-2,372.1	2,374.0	0.00	0.00	
8,100.0	90.30	272.42	5,862.0	99.5	-2,472.0	2,474.0	0.00	0.00	
8,200.0	90.30	272.42	5,861.5	103.7	-2,571.9	2,574.0	0.00	0.00	
8,300.0	90.30	272.42	5,861.0	108.0	-2,671.8	2,674.0	0.00	0.00	
8,400.0	90.30	272.42	5,860.5	112.2	-2,771.7	2,774.0	0.00	0.00	
8,500.0	90.30	272.42	5,859.9	116.4	-2,871.6	2,874.0	0.00	0.00	
8,600.0	90.30	272.42	5,859.4	120.6	-2,971.5	2,974.0	0.00	0.00	
8,700.0	90.30	272.42	5,858.9	124.8	-3,071.4	3,074.0	0.00	0.00	

Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Escrito D14-2407 01H
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	WELL @ 7045.0ft (Aztec)
<b>Project:</b>	Rio Arriba County, NM	<b>MD Reference:</b>	WELL @ 7045.0ft (Aztec)
<b>Site:</b>	S14-T24N-R7W	<b>North Reference:</b>	True
<b>Well:</b>	Escrito D14-2407 01H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	HZ		
<b>Design:</b>	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
8,800.0	90.30	272.42	5,858.4	129.1	-3,171.3	3,173.9	0.00	0.00	
8,900.0	90.30	272.42	5,857.8	133.3	-3,271.2	3,273.9	0.00	0.00	
9,000.0	90.30	272.42	5,857.3	137.5	-3,371.1	3,373.9	0.00	0.00	
9,100.0	90.30	272.42	5,856.8	141.7	-3,471.1	3,473.9	0.00	0.00	
9,200.0	90.30	272.42	5,856.3	145.9	-3,571.0	3,573.9	0.00	0.00	
9,300.0	90.30	272.42	5,855.7	150.2	-3,670.9	3,673.9	0.00	0.00	
9,400.0	90.30	272.42	5,855.2	154.4	-3,770.8	3,773.9	0.00	0.00	
9,500.0	90.30	272.42	5,854.7	158.6	-3,870.7	3,873.9	0.00	0.00	
9,600.0	90.30	272.42	5,854.2	162.8	-3,970.6	3,973.9	0.00	0.00	
9,700.0	90.30	272.42	5,853.6	167.1	-4,070.5	4,073.9	0.00	0.00	
9,800.0	90.30	272.42	5,853.1	171.3	-4,170.4	4,173.9	0.00	0.00	
9,900.0	90.30	272.42	5,852.6	175.5	-4,270.3	4,273.9	0.00	0.00	
10,000.0	90.30	272.42	5,852.1	179.7	-4,370.2	4,373.9	0.00	0.00	
10,100.0	90.30	272.42	5,851.5	183.9	-4,470.2	4,473.9	0.00	0.00	
10,200.0	90.30	272.42	5,851.0	188.2	-4,570.1	4,573.9	0.00	0.00	
10,300.0	90.30	272.42	5,850.5	192.4	-4,670.0	4,673.9	0.00	0.00	
10,400.0	90.30	272.42	5,850.0	196.6	-4,769.9	4,773.9	0.00	0.00	
10,500.0	90.30	272.42	5,849.5	200.8	-4,869.8	4,873.9	0.00	0.00	
10,600.0	90.30	272.42	5,848.9	205.1	-4,969.7	4,973.9	0.00	0.00	
10,700.0	90.30	272.42	5,848.4	209.3	-5,069.6	5,073.9	0.00	0.00	
10,800.0	90.30	272.42	5,847.9	213.5	-5,169.5	5,173.9	0.00	0.00	
10,900.0	90.30	272.42	5,847.4	217.7	-5,269.4	5,273.9	0.00	0.00	
11,000.0	90.30	272.42	5,846.8	221.9	-5,369.3	5,373.9	0.00	0.00	
11,100.0	90.30	272.42	5,846.3	226.2	-5,469.2	5,473.9	0.00	0.00	
11,102.1	90.30	272.42	5,846.3	226.3	-5,471.3	5,476.0	0.00	0.00	TD at 11102.1

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Escrito D14-2407 01H P - hit/miss target - Shape - Point	0.00	0.00	5,846.3	226.3	-5,471.4	1,938,230.07	1,251,321.28	36.319510	-107.570800
Escrito D14-2407 01H P - plan hits target center - Point	0.00	0.00	5,870.3	32.8	-892.8	1,937,974.97	1,255,896.90	36.318980	-107.555260

Casing Points				
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
6,423.0	5,870.8	7" ICP	0.000	0.000
500.0	500.0	9 5/8"	0.000	0.000

Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Escrito D14-2407 01H
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	WELL @ 7045.0ft (Aztec)
<b>Project:</b>	Rio Arriba County, NM	<b>MD Reference:</b>	WELL @ 7045.0ft (Aztec)
<b>Site:</b>	S14-T24N-R7W	<b>North Reference:</b>	True
<b>Well:</b>	Escrito D14-2407 01H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	HZ		
<b>Design:</b>	Plan #1		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
355.0	355.0	Nacimiento Fn.		-0.30	272.42	
1,795.0	1,795.0	Ojo Alamo Ss.		-0.30	272.42	
1,985.0	1,985.0	Kirtland Shale		-0.30	272.42	
2,215.0	2,215.0	Fruitland Coal		-0.30	272.42	
2,445.0	2,445.0	Pictured Cliffs Ss.		-0.30	272.42	
2,545.0	2,545.0	Lewis Shale		-0.30	272.42	
3,305.0	3,305.0	Cliffhouse Ss.		-0.30	272.42	
4,057.0	4,057.0	Menefee Fn.		-0.30	272.42	
4,740.0	4,740.0	Point Lookout Ss.		-0.30	272.42	
4,915.0	4,915.0	Mancos Shale		-0.30	272.42	
5,603.8	5,590.0	Mancos Silt		-0.30	272.42	
5,876.6	5,785.0	Gallup Fn.		-0.30	272.42	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
5,298.9	5,298.9	0.0	0.0	KOP @ 5298'	
6,202.0	5,872.0	20.4	-575.7	LP @ 5872' TVD; 90.3°	
11,102.1	5,846.3	32.8	-892.8	TD at 11102.1	

**Directions from the Intersection of US Hwy 550 & US Hwy 64**  
**in Bloomfield, NM to Encana Oil & Gas (USA) Inc. Escrito D14-2407 01H**  
**471' FNL & 564' FWL, Section 14, T24N, R7W, N.M.P.M., Rio Arriba County, NM**

**Latitude: 36.31889°N Longitude: 107.55223°W Datum: NAD1983**

From the intersection of US Hwy 550 & US Hwy 64 in Bloomfield, NM, travel Southerly on US Hwy 550 for 48.3 miles to Mile Marker 102.9;

Go Left (Northerly) for 1.1 miles to fork in roadway;

Go Left (North-westerly) for 0.4 miles down Rocky Berry hill to fork in roadway at bottom of hill;

Go Right (North-easterly) for 2.3 miles to fork in roadway;

Go Right (North-easterly) which is straight for 6.1 miles to fork in roadway;

Go Left (Northerly) which is straight for 0.4 miles to fork in roadway;

Go Left (South-westerly) for 2.1 miles to fork in roadway;

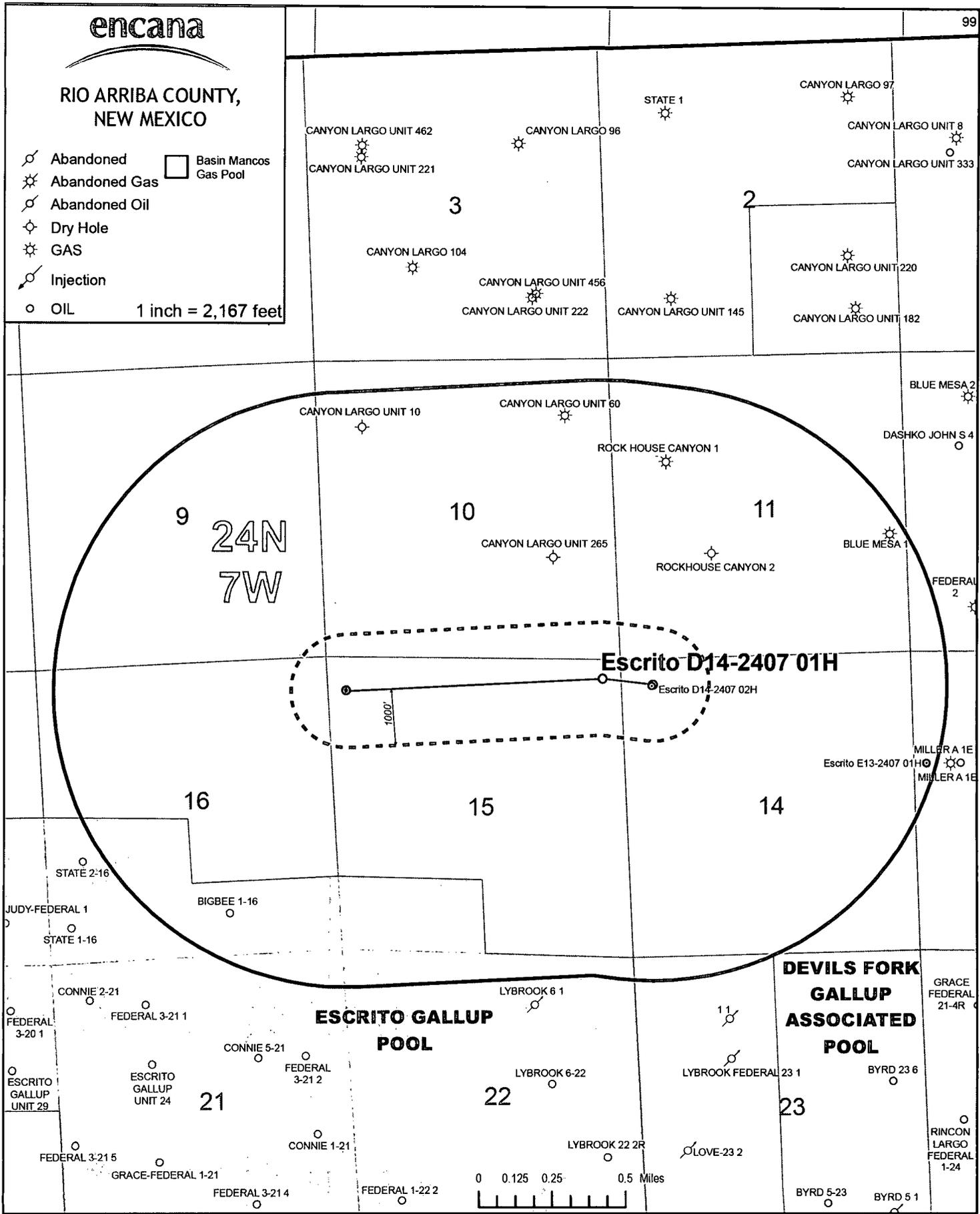
Go Left (Southerly) up hill for 2.1 miles to fork in roadway;

Go Left (Westerly) which is straight for 1.9 miles to fork in roadway;

Go Left (South-westerly) which is straight for 0.6 miles to new access on right-hand side of existing roadway which continues for 238' to staked Encana Escrito D14-2407 01H location.

RIO ARRIBA COUNTY, NEW MEXICO

- ⊗ Abandoned
  - ⊗ Abandoned Gas
  - ⊗ Abandoned Oil
  - ⊗ Dry Hole
  - ⊗ GAS
  - ⊗ Injection
  - OIL
  - Basin Mancos Gas Pool
- 1 inch = 2,167 feet



**DEVILS FORK GALLUP ASSOCIATED POOL**

**ESCRITO GALLUP POOL**

WELLHEAD BLOWOUT CONTROL SYSTEM

encana

Well Name and Number:  
Escrito D14-2407 01H

