

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: 4/4/14

Well information;

Operator ENCONA, Well Name and Number Escrito E 07-2407 1H

API# 30-039-31233, Section 7, 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

*Pilot hole plug must cover
100' above + 100' below
tops of Mancos + Gallup*

- ☐ 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.

Charlie Herr
NMOCD Approved by Signature

7-29-2014
Date

CONFIDENTIAL
RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APR 14 2014

APPLICATION FOR PERMIT TO DRILL OR REENTER ON FIELD OFF

1a. Type of work: ☒ DRILL ☐ REENTER		5. Lease Serial No. NMNM 117566
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ 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		8. Lease Name and Well No. Escrito E07-2407 01H
3b. Phone No. (include area code) 720-876-3533		9. API Well No. 30-039-31233
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface E 1317' FNL and 13' FWL Section 7, T24N, R7W At proposed prod. zone A 430' FNL and 330' FEL Section 7, T24N, R7W		10. Field and Pool, or Exploratory Escrito Gallup (associated)
14. Distance in miles and direction from nearest town or post office* +/- 52.1 miles from the intersection of US Hwy 64 & US Hwy 550 in Bloomfield, NM		11. Sec., T. R. M. or Blk. and Survey or Area Section 7, T24N, R7W NMPM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) SHL is 13' from West lease line	16. No. of acres in lease NMNM 117566- 641.14 acres	12. County or Parish Rio Arriba
17. Spacing Unit dedicated to this well 320-acres N/2 Section 7 321.14	18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. Escrito E07-2407 04H is +/- 30' NW of SHL	13. State NM
19. Proposed Depth 6315' TVD/ 11205' MD	20. BLM/BIA Bond No. on file COB-000235	
21. Elevations (Show whether DJF, KDB, RT, GL, etc.) GL 7323', KB 7339'	22. Approximate date work will start* 09/28/2014	23. Estimated duration 20 Days

OIL CONS. DIV DIST. 3

JUL 18 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:

- | | |
|--|---|
| 1. Well plat certified by a registered surveyor. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification |
| 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). | 6. Such other site specific information and/or plans as may be required by the BLM. |

25. Signature: <i>Katie Wegner</i>	Name (Printed/Typed) Katie Wegner	Date 4/10/14
Title Regulatory Analyst		
Approved by (Signature): <i>AFM</i>	Name (Printed/Typed) AFM	Date 7/17/14
Title AFM	Office FFU	

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

*(Instructions on page 2)

NMOCD A

This action is subject to technical and procedural 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"

1820 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-9480 Fax: (505) 476-9483

RECEIVED

Revised August 1, 2011

Submit one copy to appropriate District Office

APR 14 2014

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

Farmington Field Office AMENDED REPORT
Bureau of Land Management

WELL LOCATION AND ACREAGE DEDICATION PLAT

°API Number 30-039- 31233		°Pool Code 22619	°Pool Name ESCRITO GALLUP
°Property Code 313515	°Property Name ESCRITO E07-2407		°Well Number 01H
°GRID No. 282327	°Operator Name ENCANA OIL & GAS (USA) INC.		°Elevation 7322.0'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	WEST/East line	County
E	7	24N	7W	2	1317'	NORTH	13'	WEST	RIO ARriba

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	WEST/East line	County
A	7	24N	7W		430'	NORTH	330'	EAST	RIO ARriba

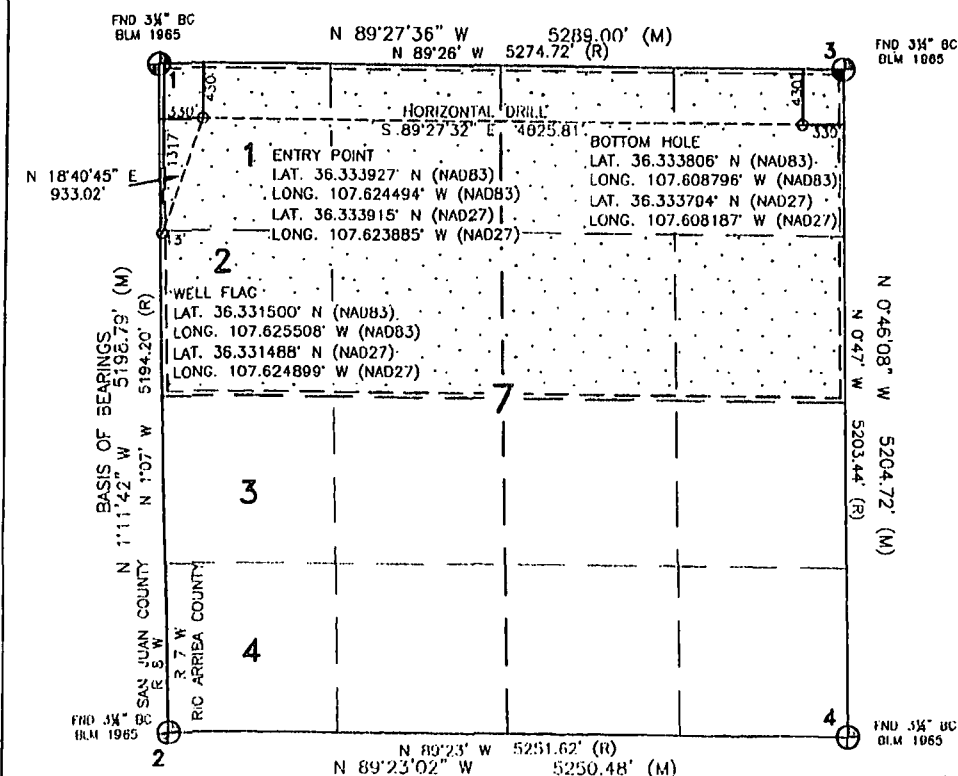
12 Dedicated Acres 321.14 cm 320.00 ACRES N/2 SEC. 7	13 Joint or Infill	14 Consolidation Code	15 Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16

1 LAT. 38.335116° N (NAD83)
LONG. 107.625644° W (NAD83)
LAT. 36.335104° N (NAD27)
LONG. 107.625035° W (NAD27)

3 LAT. 36.334978° N (NAD83)
LONG. 107.807695° W (NAD83)
LAT. 36.334966° N (NAD27)
LONG. 107.807086° W (NAD27)



2 LAT. 36.320844° N (NAD83)
LONG. 107.625276° W (NAD83)
LAT. 36.320832° N (NAD27)
LONG. 107.624867° W (NAD27)

4. LAT. 36.320688' N (NAD83)
LONG. 107.607461' W (NAD83)
LAT. 36.320676' N (NAD27)
LONG. 107.606852' W (NAD27)

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 Kate M. R. Date 4/21/14

Katie Wegner

Printed Name _____

Katie.Wegner@cncana.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.

DECEMBER 5, 2013

Date of Survey

Signature and Seal of Professional Surveyor

A circular professional seal for the State Board of Professional Licensure in New Mexico. The seal features a central circle with the number "10201". Surrounding this is a ring with the text "NEW MEXICO". The outermost ring contains the text "STATE BOARD OF PROFESSIONAL LICENSURE". The seal is stamped over a document with handwritten text, including "10201" and "NEW MEXICO".

DAVID RUSSELL

Certificate Number

10201

Escrito E07-2407 01H
SHL: SWNW 7 24N 7W
1317 FNL 13 FWL
BHL: NENE 7 24N 7W
430 FNL 330 FEL
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	509
Ojo Alamo Ss.	1,977
Kirtland Shale	2,146
Fruitland Coal	2,397
Pictured Cliffs Ss.	2,651
Lewis Shale	2,754
Cliffhouse Ss.	3,514
Menefee Fn.	4,241
Point Lookout Ss.	4,970
Mancos Shale	5,152
Mancos Silt	5,826
Gallup Fn.	6,040

The referenced surface elevation is 7323', KB 7339'

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

Substance	Formation	Depth (TVD) units = feet
Water/Gas	Fruitland Coal	2,397
Oil/Gas	Pictured Cliffs Ss.	2,651
Oil/Gas	Cliffhouse Ss.	3,514
Gas	Menefee Fn.	4,241
Oil/Gas	Point Lookout Ss.	4,970
Oil/Gas	Mancos Shale	5,152
Oil/Gas	Mancos Silt	5,826
Oil/Gas	Gallup Fn.	6,040

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.

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- 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'-6649'	8 3/4"	7"	26#	J55, LTC New
Production Liner	6449'-11205'	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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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'-6649'	30% open hole excess Stage 1 Lead: 506 sks Stage 1 Tail: 255 sks Stage 2 Lead: 251 sks	Lead (Stages 1 and 2): PremLite + 3% CaCl + 0.25lb/sk Cello Flake + 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	6449'-11205'	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 well will be drilled in two phases. A pilot hole will be drilled in the first phase, followed by kicking off a horizontal lateral in the existing wellbore in the second phase. The intent of drilling a pilot hole is to obtain open hole log data. The intent of the second phase of the well is to plug back the pilot hole with cement to the kick off point. After plugging back, the plan is to drill a horizontal lateral from the kick off point in the existing wellbore to the proposed bottom hole location.

Description	Proposed Depth (TVD/MD)	Formation
Vertical Pilot Hole	6600'/6600'	Gallup
Horizontal Lateral TD	6315'/11205'	Gallup

Proposed Plug Back Procedure: KOP 4200'

- a. Spot 500' kick plug from 3900' - 4400'
 - 209 sks of Clas A cement with salt (1.3 cuft/sk yield)
 - Spot tuned spacer

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- Pull uphole, reverse out, pump 2xBU
- Tag plug, drill ahead to KOP once cement is solid

6. DRILLING FLUIDS PROGRAM

a) Surface through Pilot Hole TD

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	8.4-8.6	60-70	NC
8 3/4"	500'/500'-6600'/6600'	Fresh Water LSND	9.5-8.8	40-50	8-10

b) KOP through Intermediate Casing Point

Hole Size (in)	Depth (TVD/MD)	Mud Type	Density (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
8 3/4"	4200'/4200'- 6291'/6649'	Fresh Water LSND	9.5-8.8	40-50	8-10

c) Intermediate Casing Point to TD:

Hole Size (in)	Depth (TVD/MD)	Mud Type	Density (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
6 1/8"	6291'/6649'- 6315'/11205'	Synthetic Oil Based Mud	8.6-9.0	15-25	<15

- d) 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.

- ✓ e) 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

Open Hole:

Triple combo with spectral Gamma TD to surface casing

Cased Hole:

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

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8. ABNORMAL PRESSURES & HYDROGEN SULFIDE

The anticipated bottom hole pressure is +/- 2960 psi based on a 9.0 ppg at 6324' 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 June 21, 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: NW/4 NW/4 7 24N 7W 430 FNL 330			Encana Natural Gas				ENG: S Kuykendall 4/2/14		
County: Rio Arriba			WELL SUMMARY				RIG: Aztec 950		
WELL: Escrito E07-2407 01H							GLE: 7322.9		
							RKBE: 7338.9		
MWD LWD	OPEN HOLE LOGGING	FORM	DEPTH TVD MD			HOLE SIZE	CASING SPECS	MW MUD TYPE	DEVIATION 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 anti- collision report prior to spud	None	Nacimiento 9 5/8" Csg	509 500	500.00		12 1/4	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	1,977 2,146 2,397 2,651 2,754 3,514 4,241 4,970 5,152		Stage tool @ ~ 2,804	8 3/4	7" 26ppf J55 LTC TOC @ surface 30% OH excess: 761 sksTotal. Stage 1 Lead: 506 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: 255 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	4,200 5,826 6,040 6,291	4,200					
Surveys every stand to TD unless directed otherwise by Geologist	No OH Logs	Horizontal Target TD Base Gallup Pilot Hole TD	6,324 6,315 6,381 6,600	11,205		6 1/8	200' overlap at liner top 4557' Drilled Lateral	Horizontal Inclination Horizontal TVD 8.6-9.0 OBM	Horz Inc/TVD /90.1 TD = 11205.4 MD
MWD Gamma Directional				6600			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 4200', at 10deg/100' build rate with 8 3/4 inch holesize
- 6) Drill to csg point of 6649' MD
- 7) R&C 7" csg, circ cmt to surface, switch to OBM
- 8) Land at 90 deg, drill lateral to 11205' 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

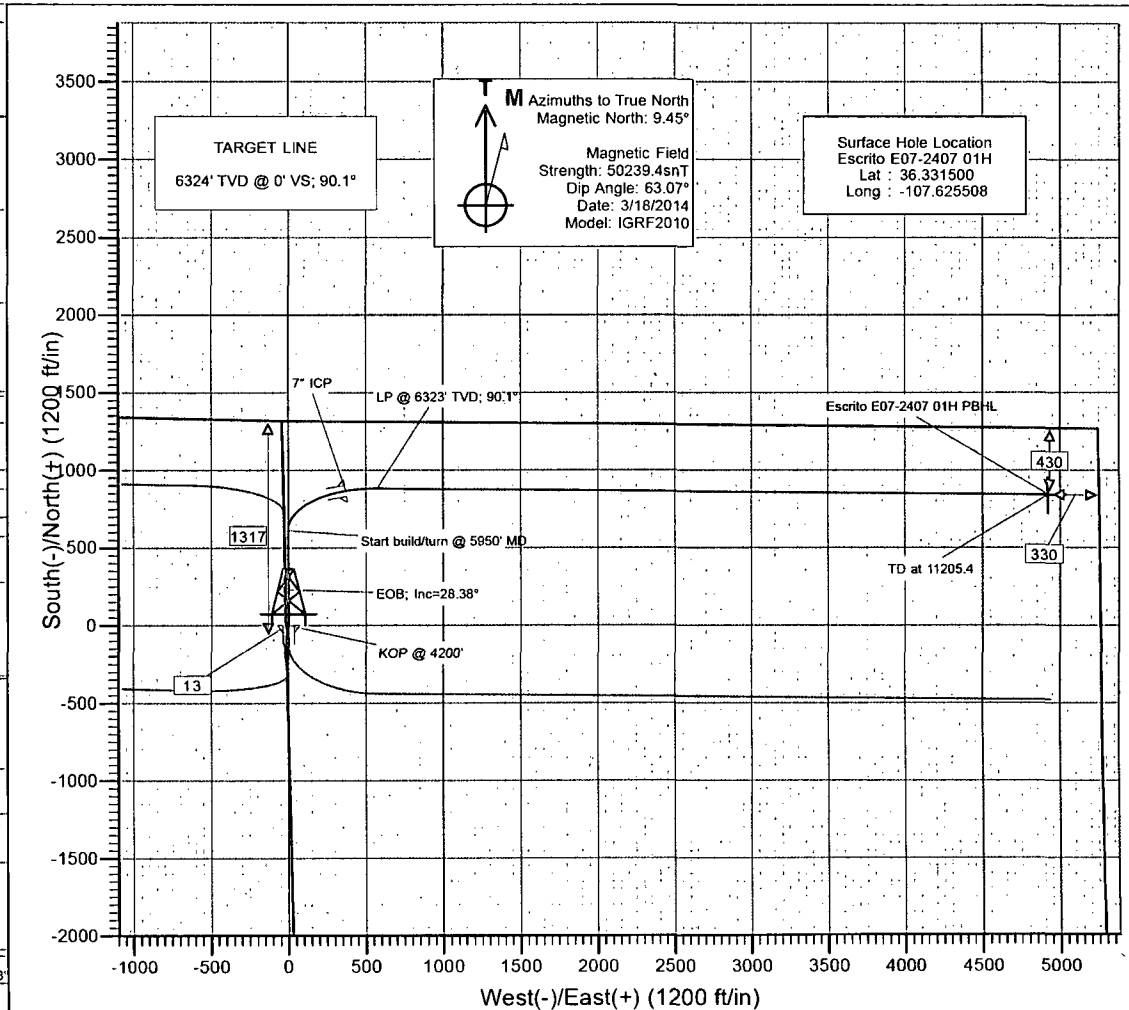
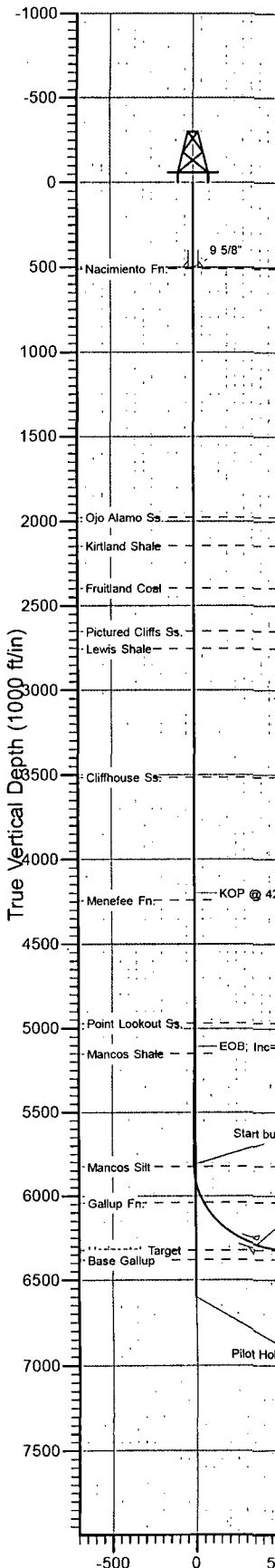
Drilling Mud Weight (ppg)	_____	9.625
Tension Safety Factor	_____	1.80
Maximum Tension Length (ft)	_____	9,630
Internal Yield Safety Factor	_____	1.10
Maximum Depth for Internal Yield (ft)	_____	14,150
Collapse Safety Factor	_____	1.125
Maximum Collapse Depth (ft)	_____	11,290

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

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSeal	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	4200.0	0.00	0.00	4200.0	0.0	0.0	0.00	0.00	0.0	
3	5145.9	28.38	359.71	5107.7	229.5	-1.2	3.00	359.71	-3.3	
4	5950.5	28.38	359.71	5815.7	611.9	-3.1	0.00	0.00	-8.8	
5	6855.4	90.10	90.54	6323.0	881.1	573.3	10.00	90.68	565.0	
6	11205.4	90.10	90.54	6315.4	840.0	4923.1	0.00	0.00	4915.0	Escrito E07-2407 01H PBHL



DESIGN TARGET DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Escrito E07-2407 01H PBHL	840.0	4923.1	1943589.64	1240200.43	36.333806	-107.608796

CASING DETAILS

TVD	MD	Name
500.0	500.0	9 5/8"
6290.9	6648.6	7" ICP

Plan #1
Escrito E07-2407 01H
WELL @ 7339.0ft (Original Well Elev)
Ground Elevation @ 7323.0
North American Datum 1983
Well Escrito E07-2407 01H, True North

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
509.0	509.0	Nacimiento Fn.
1977.0	1977.0	Ojo Alamo Ss.
2146.0	2146.0	Kirtland Shale
2397.0	2397.0	Fruitland Coal
2651.0	2651.0	Pictured Cliffs Ss.
2754.0	2754.0	Lewis Shale
3514.0	3514.0	Cliffhouse Ss.
4241.0	4241.0	Menefee Fn.
4970.0	4992.6	Point Lookout Ss.
5152.0	5196.3	Mancos Shale
5826.0	5962.3	Mancos Silt
6039.9	6214.3	Gallup Fn.
6323.0	6852.7	Horizontal Target



Planning Report

Database: USA EDM 5000 Multi Users DB
Company: EnCana Oil & Gas (USA) Inc
Project: Rio Arriba County, NM
Site: S7-T24N-R7W
Well: Escrito E07-2407 01H
Wellbore: HZ
Design: Plan #1

Local Co-ordinate Reference: Well Escrito E07-2407 01H
TVD Reference: WELL @ 7339.0ft (Original Well Elev)
MD Reference: WELL @ 7339.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

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

Site	S7-T24N-R7W			
Site Position:		Northing:	1,942,819.73 ft	Latitude: 36.331500
From:	Lat/Long	Easting:	1,235,265.85 ft	Longitude: -107.625508
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence: -0.82 °

Well	Escrito E07-2407 01H			
Well Position	+N/-S	0.0 ft	Northing:	1,942,819.73 ft
	+E/-W	0.0 ft	Easting:	1,235,265.85 ft
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft
			Ground Level:	7,323.0 ft

Wellbore	HZ				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010	3/18/2014	9.45	63.07	50,239

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN		Tie On Depth: 0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	90.54

Plan Sections										
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	
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.00	0.00	0.00	0.00	
5,145.9	28.38	359.71	5,107.7	229.5	-1.2	3.00	3.00	0.00	359.71	
5,950.5	28.38	359.71	5,815.7	611.9	-3.1	0.00	0.00	0.00	0.00	
6,855.4	90.10	90.54	6,323.0	881.1	573.3	10.00	6.82	10.04	90.68	
11,205.4	90.10	90.54	6,315.4	840.0	4,923.1	0.00	0.00	0.00	0.00	Escrito E07-2407 01H

Planning Report

Database: USA EDM 5000 Multi Users DB
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Project: Rio Arriba County, NM
Site: S7-T24N-R7W
Well: Escrito E07-2407 01H
Wellbore: HZ
Design: Plan #1

Local Co-ordinate Reference: Well Escrito E07-2407 01H
TVD Reference: WELL @ 7339.0ft (Original Well Elev)
MD Reference: WELL @ 7339.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

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	
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"
509.0	0.00	0.00	509.0	0.0	0.0	0.0	0.00	0.00	Nacimiento Fn.
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	
1,800.0	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	
1,977.0	0.00	0.00	1,977.0	0.0	0.0	0.0	0.00	0.00	Ojo Alamo Ss.
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	
2,146.0	0.00	0.00	2,146.0	0.0	0.0	0.0	0.00	0.00	Kirtland Shale
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	
2,397.0	0.00	0.00	2,397.0	0.0	0.0	0.0	0.00	0.00	Fruitland Coal
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	
2,651.0	0.00	0.00	2,651.0	0.0	0.0	0.0	0.00	0.00	Pictured Cliffs Ss.
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	
2,754.0	0.00	0.00	2,754.0	0.0	0.0	0.0	0.00	0.00	Lewis Shale
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	
3,400.0	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	
3,514.0	0.00	0.00	3,514.0	0.0	0.0	0.0	0.00	0.00	Cliffhouse Ss.
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	
4,100.0	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	KOP @ 4200'
4,241.0	1.23	359.71	4,241.0	0.4	0.0	0.0	3.00	3.00	Menefee Fn.
4,300.0	3.00	359.71	4,300.0	2.6	0.0	0.0	3.00	3.00	



Planning Report

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North Reference: True
Survey Calculation Method: Minimum Curvature

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	6.00	359.71	4,399.6	10.5	-0.1	-0.2	3.00	3.00	
4,500.0	9.00	359.71	4,498.8	23.5	-0.1	-0.3	3.00	3.00	
4,600.0	12.00	359.71	4,597.1	41.7	-0.2	-0.6	3.00	3.00	
4,700.0	15.00	359.71	4,694.3	65.1	-0.3	-0.9	3.00	3.00	
4,800.0	18.00	359.71	4,790.2	93.5	-0.5	-1.3	3.00	3.00	
4,900.0	21.00	359.71	4,884.4	126.9	-0.6	-1.8	3.00	3.00	
4,992.6	23.78	359.71	4,970.0	162.1	-0.8	-2.3	3.00	3.00	Point Lookout Ss.
5,000.0	24.00	359.71	4,976.8	165.1	-0.8	-2.4	3.00	3.00	
5,100.0	27.00	359.71	5,067.1	208.2	-1.0	-3.0	3.00	3.00	
5,145.9	28.38	359.71	5,107.7	229.5	-1.2	-3.3	3.00	3.00	EOB; Inc=28.38°
5,196.3	28.38	359.71	5,152.0	253.4	-1.3	-3.7	0.00	0.00	Mancos Shale
5,200.0	28.38	359.71	5,155.3	255.2	-1.3	-3.7	0.00	0.00	
5,300.0	28.38	359.71	5,243.3	302.7	-1.5	-4.4	0.00	0.00	
5,400.0	28.38	359.71	5,331.3	350.3	-1.8	-5.1	0.00	0.00	
5,500.0	28.38	359.71	5,419.3	397.8	-2.0	-5.7	0.00	0.00	
5,600.0	28.38	359.71	5,507.2	445.3	-2.2	-6.4	0.00	0.00	
5,700.0	28.38	359.71	5,595.2	492.8	-2.5	-7.1	0.00	0.00	
5,800.0	28.38	359.71	5,683.2	540.4	-2.7	-7.8	0.00	0.00	
5,900.0	28.38	359.71	5,771.2	587.9	-2.9	-8.5	0.00	0.00	
5,950.5	28.38	359.71	5,815.7	611.9	-3.1	-8.8	0.00	0.00	Start build/turn @ 5950' MD
5,962.3	28.39	2.19	5,826.0	617.5	-3.0	-8.8	10.00	0.07	Mancos Silt
6,000.0	28.71	10.05	5,859.1	635.4	-1.1	-7.0	10.00	0.86	
6,050.0	29.82	20.03	5,902.8	658.9	5.3	-0.9	10.00	2.22	
6,100.0	31.62	29.17	5,945.8	682.0	16.0	9.5	10.00	3.60	
6,150.0	34.00	37.30	5,987.8	704.6	30.8	24.2	10.00	4.77	
6,200.0	36.86	44.39	6,028.6	726.5	49.8	43.0	10.00	5.70	
6,214.3	37.74	46.23	6,039.9	732.5	55.9	49.0	10.00	6.20	Gallup Fn.
6,250.0	40.07	50.55	6,067.7	747.4	72.7	65.7	10.00	6.53	
6,300.0	43.58	55.90	6,105.0	767.3	99.5	92.2	10.00	7.01	
6,350.0	47.30	60.59	6,140.1	786.0	129.7	122.3	10.00	7.44	
6,400.0	51.19	64.74	6,172.7	803.4	163.4	155.8	10.00	7.78	
6,450.0	55.21	68.45	6,202.7	819.2	200.1	192.4	10.00	8.05	
6,500.0	59.34	71.81	6,229.7	833.5	239.7	231.8	10.00	8.25	
6,550.0	63.54	74.89	6,253.6	846.0	281.7	273.8	10.00	8.41	
6,600.0	67.81	77.76	6,274.2	856.8	326.0	317.9	10.00	8.53	
6,648.6	72.00	80.38	6,290.9	865.4	370.8	362.6	10.00	8.62	7" ICP
6,650.0	72.12	80.45	6,291.3	865.7	372.1	363.9	10.00	8.66	
6,700.0	76.47	83.02	6,304.9	872.6	419.7	411.5	10.00	8.70	
6,750.0	80.84	85.49	6,314.7	877.5	468.5	460.2	10.00	8.75	
6,800.0	85.23	87.90	6,320.8	880.3	518.0	509.7	10.00	8.78	
6,850.0	89.63	90.29	6,323.0	881.1	568.0	559.6	10.00	8.80	
6,852.7	89.87	90.42	6,323.0	881.1	570.7	562.4	10.00	8.80	Horizontal Target
6,855.4	90.10	90.54	6,323.0	881.1	573.3	565.0	10.00	8.80	LP @ 6323' TVD; 90.1°
6,900.0	90.10	90.54	6,322.9	880.6	618.0	609.6	0.00	0.00	
7,000.0	90.10	90.54	6,322.8	879.7	718.0	709.6	0.00	0.00	
7,100.0	90.10	90.54	6,322.6	878.8	817.9	809.6	0.00	0.00	
7,200.0	90.10	90.54	6,322.4	877.8	917.9	909.6	0.00	0.00	
7,300.0	90.10	90.54	6,322.2	876.9	1,017.9	1,009.6	0.00	0.00	
7,400.0	90.10	90.54	6,322.1	875.9	1,117.9	1,109.6	0.00	0.00	
7,500.0	90.10	90.54	6,321.9	875.0	1,217.9	1,209.6	0.00	0.00	
7,600.0	90.10	90.54	6,321.7	874.0	1,317.9	1,309.6	0.00	0.00	
7,700.0	90.10	90.54	6,321.5	873.1	1,417.9	1,409.6	0.00	0.00	



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Survey Calculation Method: Minimum Curvature

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
7,800.0	90.10	90.54	6,321.4	872.1	1,517.9	1,509.6	0.00	0.00	
7,900.0	90.10	90.54	6,321.2	871.2	1,617.9	1,609.6	0.00	0.00	
8,000.0	90.10	90.54	6,321.0	870.3	1,717.9	1,709.6	0.00	0.00	
8,100.0	90.10	90.54	6,320.8	869.3	1,817.9	1,809.6	0.00	0.00	
8,200.0	90.10	90.54	6,320.7	868.4	1,917.9	1,909.6	0.00	0.00	
8,300.0	90.10	90.54	6,320.5	867.4	2,017.9	2,009.6	0.00	0.00	
8,400.0	90.10	90.54	6,320.3	866.5	2,117.9	2,109.6	0.00	0.00	
8,500.0	90.10	90.54	6,320.1	865.5	2,217.9	2,209.6	0.00	0.00	
8,600.0	90.10	90.54	6,320.0	864.6	2,317.9	2,309.6	0.00	0.00	
8,700.0	90.10	90.54	6,319.8	863.7	2,417.9	2,409.6	0.00	0.00	
8,800.0	90.10	90.54	6,319.6	862.7	2,517.9	2,509.6	0.00	0.00	
8,900.0	90.10	90.54	6,319.4	861.8	2,617.9	2,609.6	0.00	0.00	
9,000.0	90.10	90.54	6,319.3	860.8	2,717.9	2,709.6	0.00	0.00	
9,100.0	90.10	90.54	6,319.1	859.9	2,817.9	2,809.6	0.00	0.00	
9,200.0	90.10	90.54	6,318.9	858.9	2,917.9	2,909.6	0.00	0.00	
9,300.0	90.10	90.54	6,318.7	858.0	3,017.8	3,009.6	0.00	0.00	
9,400.0	90.10	90.54	6,318.6	857.1	3,117.8	3,109.6	0.00	0.00	
9,500.0	90.10	90.54	6,318.4	856.1	3,217.8	3,209.6	0.00	0.00	
9,600.0	90.10	90.54	6,318.2	855.2	3,317.8	3,309.6	0.00	0.00	
9,700.0	90.10	90.54	6,318.0	854.2	3,417.8	3,409.6	0.00	0.00	
9,800.0	90.10	90.54	6,317.9	853.3	3,517.8	3,509.6	0.00	0.00	
9,900.0	90.10	90.54	6,317.7	852.3	3,617.8	3,609.6	0.00	0.00	
10,000.0	90.10	90.54	6,317.5	851.4	3,717.8	3,709.6	0.00	0.00	
10,100.0	90.10	90.54	6,317.3	850.4	3,817.8	3,809.6	0.00	0.00	
10,200.0	90.10	90.54	6,317.2	849.5	3,917.8	3,909.6	0.00	0.00	
10,300.0	90.10	90.54	6,317.0	848.6	4,017.8	4,009.6	0.00	0.00	
10,400.0	90.10	90.54	6,316.8	847.6	4,117.8	4,109.6	0.00	0.00	
10,500.0	90.10	90.54	6,316.6	846.7	4,217.8	4,209.6	0.00	0.00	
10,600.0	90.10	90.54	6,316.5	845.7	4,317.8	4,309.6	0.00	0.00	
10,700.0	90.10	90.54	6,316.3	844.8	4,417.8	4,409.6	0.00	0.00	
10,800.0	90.10	90.54	6,316.1	843.8	4,517.8	4,509.6	0.00	0.00	
10,900.0	90.10	90.54	6,315.9	842.9	4,617.8	4,609.6	0.00	0.00	
11,000.0	90.10	90.54	6,315.8	842.0	4,717.8	4,709.6	0.00	0.00	
11,100.0	90.10	90.54	6,315.6	841.0	4,817.8	4,809.6	0.00	0.00	
11,205.4	90.10	90.54	6,315.4	840.0	4,923.1	4,915.0	0.00	0.00	TD at 11205.4

Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
Escrito E07-2407 01H P	0.00	0.00	6,315.4	840.0	4,923.1	1,943,589.64	1,240,200.43	36.333806	-107.608796
- plan hits target center									
- Point									
Escrito E07-2407 01H P	0.00	0.00	6,323.5	883.7	298.7	1,943,699.05	1,235,577.10	36.333927	-107.624494
- plan misses target center by 62.4ft at 6600.0ft MD (6274.2 TVD, 856.8 N, 326.0 E)									
- Point									



Planning Report

Database: USA EDM 5000 Multi Users DB
Company: EnCana Oil & Gas (USA) Inc
Project: Rio Arriba County, NM
Site: S7-T24N-R7W
Well: Escrito E07-2407 01H
Wellbore: HZ
Design: Plan #1

Local Co-ordinate Reference: Well Escrito E07-2407 01H
TVD Reference: WELL @ 7339.0ft (Original Well Elev)
MD Reference: WELL @ 7339.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
500.0	500.0	9 5/8"	0.000	0.000
6,648.6	6,290.9	7" ICP	0.000	0.000

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
509.0	509.0	Nacimiento Fn.		-0.10	90.54
1,977.0	1,977.0	Ojo Alamo Ss.		-0.10	90.54
2,146.0	2,146.0	Kirtland Shale		-0.10	90.54
2,397.0	2,397.0	Fruitland Coal		-0.10	90.54
2,651.0	2,651.0	Pictured Cliffs Ss.		-0.10	90.54
2,754.0	2,754.0	Lewis Shale		-0.10	90.54
3,514.0	3,514.0	Cliffhouse Ss.		-0.10	90.54
4,241.0	4,241.0	Menefee Fn.		-0.10	90.54
4,992.6	4,970.0	Point Lookout Ss.		-0.10	90.54
5,196.3	5,152.0	Mancos Shale		-0.10	90.54
5,962.3	5,826.0	Mancos Silt		-0.10	90.54
6,214.3	6,040.0	Gallup Fn.		-0.10	90.54
6,852.7	6,324.0	Horizontal Target		-0.10	90.54

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
4,200.0	4,200.0	0.0	0.0	KOP @ 4200'
5,145.9	5,107.7	229.5	-1.2	EOB; Inc=28.38°
5,950.5	5,815.7	611.9	-3.1	Start build/turn @ 5950' MD
6,855.4	6,323.0	881.1	573.3	LP @ 6323' TVD; 90.1°
11,205.4	6,315.4	840.0	4,923.1	TD at 11205.4

EnCana Oil & Gas (USA) Inc

Rio Arriba County, NM

S7-T24N-R7W

Escrito E07-2407 01H

HZ

Plan #1

Anticollision Report

20 March, 2014

Anticollision Report

Company: EnCana Oil & Gas (USA) Inc
Project: Rio Arriba County, NM
Reference Site: S7-T24N-R7W
Site Error: 0.0ft
Reference Well: Escrito E07-2407 01H
Well Error: 0.0ft
Reference Wellbore: HZ
Reference Design: Plan #1

Local Co-ordinate Reference: Well Escrito E07-2407 01H
TVD Reference: WELL @ 7339.0ft (Original Well Elev)
MD Reference: WELL @ 7339.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: USA EDM 5000 Multi Users DB
Offset TVD Reference: Offset Datum

Reference	Plan #1
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria
Interpolation Method:	MD Interval 100.0ft
Depth Range:	Unlimited
Results Limited by:	Maximum center-center distance of 1,331.4ft
Warning Levels Evaluated at:	2.00 Sigma
Error Model:	Systematic Ellipse
Scan Method:	Closest Approach 3D
Error Surface:	Elliptical Conic

Survey Tool Program		Date 3/20/2014		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	11,205.4	Plan #1 (HZ)	Geolink MWD	Geolink MWD

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
S7-T24N-R7W						
Escrito E07-2407 02H - Hz - Plan #1	4,200.0	4,200.0	30.2	15.6	2.068	CC, ES, SF
Escrito E07-2407 03H - Hz - Plan #1	4,000.0	4,000.0	42.5	28.6	3.058	CC, ES
Escrito E07-2407 03H - Hz - Plan #1	4,100.0	4,099.7	42.9	28.6	3.008	SF
Escrito E07-2407 04H - Hz - Plan #1	3,000.0	3,000.0	30.0	19.6	2.878	CC, ES, SF

Anticollision Report

Company: EnCana Oil & Gas (USA) Inc
 Project: Rio Arriba County, NM
 Reference Site: S7-T24N-R7W
 Site Error: 0.0ft
 Reference Well: Escrito E07-2407 01H
 Well Error: 0.0ft
 Reference Wellbore: HZ
 Reference Design: Plan #1

Local Co-ordinate Reference: Well Escrito E07-2407 01H
 TVD Reference: WELL @ 7339.0ft (Original Well Elev)
 MD Reference: WELL @ 7339.0ft (Original Well Elev)
 North Reference: True
 Survey Calculation Method: Minimum Curvature
 Output errors are at 2.00 sigma
 Database: USA EDM 5000 Multi Users DB
 Offset TVD Reference: Offset Datum

Offset Design S7-T24N-R7W - Escrito E07-2407 02H - Hz - Plan #1														Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD														Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Total Uncertainty Axis	Separation Factor	Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)					
0.0	0.0	0.0	0.0	0.0	0.0	-147.55	-25.5	-16.2	30.2						
100.0	100.0	100.0	100.0	0.1	0.1	-147.55	-25.5	-16.2	30.2	29.9	0.29	102.998			
200.0	200.0	200.0	200.0	0.3	0.3	-147.55	-25.5	-16.2	30.2	29.6	0.64	47.021			
300.0	300.0	300.0	300.0	0.5	0.5	-147.55	-25.5	-16.2	30.2	29.2	0.99	30.464			
400.0	400.0	400.0	400.0	0.7	0.7	-147.55	-25.5	-16.2	30.2	28.9	1.34	22.531			
500.0	500.0	500.0	500.0	0.8	0.8	-147.55	-25.5	-16.2	30.2	28.5	1.69	17.876			
600.0	600.0	600.0	600.0	1.0	1.0	-147.55	-25.5	-16.2	30.2	28.2	2.04	14.815			
700.0	700.0	700.0	700.0	1.2	1.2	-147.55	-25.5	-16.2	30.2	27.8	2.39	12.649			
800.0	800.0	800.0	800.0	1.4	1.4	-147.55	-25.5	-16.2	30.2	27.5	2.74	11.036			
900.0	900.0	900.0	900.0	1.5	1.5	-147.55	-25.5	-16.2	30.2	27.1	3.09	9.787			
1,000.0	1,000.0	1,000.0	1,000.0	1.7	1.7	-147.55	-25.5	-16.2	30.2	26.8	3.43	8.793			
1,100.0	1,100.0	1,100.0	1,100.0	1.9	1.9	-147.55	-25.5	-16.2	30.2	26.4	3.78	7.981			
1,200.0	1,200.0	1,200.0	1,200.0	2.1	2.1	-147.55	-25.5	-16.2	30.2	26.1	4.13	7.307			
1,300.0	1,300.0	1,300.0	1,300.0	2.2	2.2	-147.55	-25.5	-16.2	30.2	25.7	4.48	6.738			
1,400.0	1,400.0	1,400.0	1,400.0	2.4	2.4	-147.55	-25.5	-16.2	30.2	25.4	4.83	6.251			
1,500.0	1,500.0	1,500.0	1,500.0	2.6	2.6	-147.55	-25.5	-16.2	30.2	25.0	5.18	5.830			
1,600.0	1,600.0	1,600.0	1,600.0	2.8	2.8	-147.55	-25.5	-16.2	30.2	24.7	5.53	5.462			
1,700.0	1,700.0	1,700.0	1,700.0	2.9	2.9	-147.55	-25.5	-16.2	30.2	24.3	5.88	5.138			
1,800.0	1,800.0	1,800.0	1,800.0	3.1	3.1	-147.55	-25.5	-16.2	30.2	24.0	6.23	4.850			
1,900.0	1,900.0	1,900.0	1,900.0	3.3	3.3	-147.55	-25.5	-16.2	30.2	23.6	6.58	4.592			
2,000.0	2,000.0	2,000.0	2,000.0	3.5	3.5	-147.55	-25.5	-16.2	30.2	23.3	6.93	4.361			
2,100.0	2,100.0	2,100.0	2,100.0	3.6	3.6	-147.55	-25.5	-16.2	30.2	22.9	7.27	4.152			
2,200.0	2,200.0	2,200.0	2,200.0	3.8	3.8	-147.55	-25.5	-16.2	30.2	22.6	7.62	3.961			
2,300.0	2,300.0	2,300.0	2,300.0	4.0	4.0	-147.55	-25.5	-16.2	30.2	22.2	7.97	3.788			
2,400.0	2,400.0	2,400.0	2,400.0	4.2	4.2	-147.55	-25.5	-16.2	30.2	21.9	8.32	3.629			
2,500.0	2,500.0	2,500.0	2,500.0	4.3	4.3	-147.55	-25.5	-16.2	30.2	21.5	8.67	3.483			
2,600.0	2,600.0	2,600.0	2,600.0	4.5	4.5	-147.55	-25.5	-16.2	30.2	21.2	9.02	3.348			
2,700.0	2,700.0	2,700.0	2,700.0	4.7	4.7	-147.55	-25.5	-16.2	30.2	20.8	9.37	3.223			
2,800.0	2,800.0	2,800.0	2,800.0	4.9	4.9	-147.55	-25.5	-16.2	30.2	20.5	9.72	3.108			
2,900.0	2,900.0	2,900.0	2,900.0	5.0	5.0	-147.55	-25.5	-16.2	30.2	20.1	10.07	3.000			
3,000.0	3,000.0	3,000.0	3,000.0	5.2	5.2	-147.55	-25.5	-16.2	30.2	19.8	10.42	2.899			
3,100.0	3,100.0	3,100.0	3,100.0	5.4	5.4	-147.55	-25.5	-16.2	30.2	19.4	10.77	2.805			
3,200.0	3,200.0	3,200.0	3,200.0	5.6	5.6	-147.55	-25.5	-16.2	30.2	19.1	11.11	2.717			
3,300.0	3,300.0	3,300.0	3,300.0	5.7	5.7	-147.55	-25.5	-16.2	30.2	18.7	11.46	2.635			
3,400.0	3,400.0	3,400.0	3,400.0	5.9	5.9	-147.55	-25.5	-16.2	30.2	18.4	11.81	2.557			
3,500.0	3,500.0	3,500.0	3,500.0	6.1	6.1	-147.55	-25.5	-16.2	30.2	18.0	12.16	2.483			
3,600.0	3,600.0	3,600.0	3,600.0	6.3	6.3	-147.55	-25.5	-16.2	30.2	17.7	12.51	2.414			
3,700.0	3,700.0	3,700.0	3,700.0	6.4	6.4	-147.55	-25.5	-16.2	30.2	17.3	12.86	2.348			
3,800.0	3,800.0	3,800.0	3,800.0	6.6	6.6	-147.55	-25.5	-16.2	30.2	17.0	13.21	2.286			
3,900.0	3,900.0	3,900.0	3,900.0	6.8	6.8	-147.55	-25.5	-16.2	30.2	16.6	13.56	2.228			
4,000.0	4,000.0	4,000.0	4,000.0	7.0	7.0	-147.55	-25.5	-16.2	30.2	16.3	13.91	2.172			
4,100.0	4,100.0	4,100.0	4,100.0	7.1	7.1	-147.55	-25.5	-16.2	30.2	15.9	14.26	2.118			
4,200.0	4,200.0	4,200.0	4,200.0	7.3	7.3	-147.55	-25.5	-16.2	30.2	15.6	14.60	2.068 CC, ES, SF			
4,300.0	4,300.0	4,300.0	4,300.0	7.5	7.5	-149.73	-25.5	-16.2	32.4	17.5	14.94	2.170			
4,400.0	4,399.6	4,399.6	4,399.6	7.7	7.7	-155.40	-25.5	-16.2	39.4	24.2	15.26	2.583			
4,500.0	4,498.8	4,498.8	4,498.8	7.8	7.8	-161.33	-25.5	-16.2	51.6	36.0	15.54	3.319			
4,600.0	4,597.1	4,597.1	4,597.1	8.1	8.0	-166.04	-25.5	-16.2	69.1	53.3	15.79	4.377			
4,700.0	4,694.3	4,694.3	4,694.3	8.3	8.2	-169.42	-25.5	-16.2	91.9	75.9	16.00	5.746			
4,800.0	4,790.2	4,790.2	4,790.2	8.6	8.3	-171.78	-25.5	-16.2	120.0	103.8	16.18	7.414			
4,900.0	4,884.4	4,884.4	4,884.4	8.9	8.5	-173.45	-25.5	-16.2	153.1	136.8	16.33	9.375			
5,000.0	4,976.8	4,976.8	4,976.8	9.3	8.7	-174.64	-25.5	-16.2	191.2	174.8	16.45	11.623			
5,100.0	5,067.1	5,067.1	5,067.1	9.7	8.8	-175.51	-25.5	-16.2	234.1	217.6	16.54	14.157			

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company: EnCana Oil & Gas (USA) Inc
Project: Rio Arriba County, NM
Reference Site: S7-T24N-R7W
Site Error: 0.0ft
Reference Well: Escrito E07-2407 01H
Well Error: 0.0ft
Reference Wellbore: HZ
Reference Design: Plan #1

Local Co-ordinate Reference: Well Escrito E07-2407 01H
TVD Reference: WELL @ 7339.0ft (Original Well Elev)
MD Reference: WELL @ 7339.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: USA EDM 5000 Multi Users DB
Offset TVD Reference: Offset Datum

Offset Design S7-T24N-R7W - Escrito E07-2407 02H - Hz - Plan #1														Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD														Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning				
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)				Between Centres (ft)	Between Ellipses (ft)		
5,200.0	5,155.3	5,155.3	5,155.3	10.3	9.0	-176.22	-25.5	-16.2	281.1	264.3	16.74	16.787			
5,300.0	5,243.3	5,243.3	5,243.3	10.8	9.1	-176.76	-25.5	-16.2	328.5	311.5	17.07	19.246			
5,400.0	5,331.3	5,331.3	5,331.3	11.4	9.3	-177.17	-25.5	-16.2	376.0	358.6	17.40	21.612			
5,500.0	5,419.3	5,419.3	5,419.3	12.1	9.4	-177.49	-25.5	-16.2	423.5	405.8	17.73	23.892			
5,600.0	5,507.2	5,507.2	5,507.2	12.7	9.6	-177.74	-25.5	-16.2	471.0	452.9	18.05	26.090			
5,700.0	5,595.2	5,570.5	5,570.5	13.4	9.7	-177.91	-26.1	-16.1	519.7	501.4	18.34	28.338			
5,800.0	5,683.2	5,613.6	5,613.4	14.1	9.8	-178.07	-29.8	-15.7	574.6	556.0	18.59	30.900			
5,900.0	5,771.2	5,650.0	5,649.4	14.8	9.8	-178.23	-35.4	-14.9	635.2	616.3	18.84	33.721			
6,000.0	5,859.1	5,700.0	5,698.0	15.5	9.9	168.26	-46.7	-13.5	700.9	681.8	19.14	36.626			
6,100.0	5,945.8	5,718.9	5,716.1	16.3	10.0	142.74	-52.1	-12.8	769.7	749.7	20.00	38.481			
6,200.0	6,028.6	5,750.0	5,745.5	17.0	10.0	121.85	-62.2	-11.5	840.1	818.7	21.44	39.188			
6,300.0	6,105.0	5,769.8	5,763.9	17.7	10.1	105.14	-69.4	-10.6	910.3	887.2	23.03	39.528			
6,400.0	6,172.7	5,800.0	5,791.5	18.5	10.2	92.94	-81.7	-9.0	979.0	954.7	24.31	40.278			
6,500.0	6,229.7	5,800.0	5,791.5	19.4	10.2	82.04	-81.7	-9.0	1,044.8	1,019.6	25.20	41.458			
6,600.0	6,274.2	5,817.9	5,807.5	20.3	10.2	74.74	-89.7	-8.0	1,106.9	1,081.3	25.61	43.224			
6,700.0	6,304.9	5,827.0	5,815.5	21.4	10.2	68.96	-93.9	-7.5	1,164.5	1,138.8	25.67	45.371			
6,800.0	6,320.8	5,832.8	5,820.6	22.6	10.3	64.73	-96.7	-7.1	1,216.7	1,191.2	25.52	47.681			
6,900.0	6,322.9	5,850.0	5,835.5	23.9	10.3	63.77	-105.1	-6.1	1,264.4	1,238.1	26.36	47.968			
7,000.0	6,322.8	5,850.0	5,835.5	25.4	10.3	63.77	-105.1	-6.1	1,315.9	1,287.7	28.21	46.644			
7,100.0	6,322.6	6,990.5	6,305.6	27.0	24.0	89.26	-440.3	805.4	1,319.3	1,273.5	45.72	28.852			
7,200.0	6,322.4	7,090.5	6,305.4	28.8	26.1	89.26	-441.3	905.4	1,319.3	1,269.1	50.12	26.320			
7,300.0	6,322.2	7,190.5	6,305.2	30.7	28.3	89.26	-442.2	1,005.4	1,319.3	1,264.7	54.62	24.155			
7,400.0	6,322.1	7,290.5	6,305.0	32.7	30.5	89.26	-443.2	1,105.4	1,319.3	1,260.1	59.18	22.292			
7,500.0	6,321.9	7,390.5	6,304.8	34.7	32.7	89.26	-444.1	1,205.4	1,319.3	1,255.5	63.81	20.676			
7,600.0	6,321.7	7,490.5	6,304.7	36.9	35.0	89.26	-445.1	1,305.4	1,319.3	1,250.8	68.47	19.267			
7,700.0	6,321.5	7,590.5	6,304.5	39.0	37.3	89.26	-446.0	1,405.4	1,319.3	1,246.1	73.18	18.028			
7,800.0	6,321.4	7,690.5	6,304.3	41.2	39.7	89.26	-447.0	1,505.4	1,319.3	1,241.4	77.91	16.932			
7,900.0	6,321.2	7,790.5	6,304.1	43.5	42.0	89.26	-447.9	1,605.4	1,319.3	1,236.6	82.68	15.957			
8,000.0	6,321.0	7,890.5	6,304.0	45.7	44.4	89.26	-448.8	1,705.4	1,319.3	1,231.8	87.46	15.085			
8,100.0	6,320.8	7,990.5	6,303.8	48.0	46.7	89.26	-449.8	1,805.4	1,319.3	1,227.0	92.26	14.300			
8,200.0	6,320.7	8,090.5	6,303.6	50.3	49.1	89.26	-450.7	1,905.4	1,319.3	1,222.2	97.07	13.591			
8,300.0	6,320.5	8,190.5	6,303.4	52.6	51.5	89.26	-451.7	2,005.4	1,319.3	1,217.4	101.90	12.947			
8,400.0	6,320.3	8,290.5	6,303.3	55.0	53.9	89.26	-452.6	2,105.4	1,319.3	1,212.6	106.73	12.361			
8,500.0	6,320.1	8,390.5	6,303.1	57.3	56.3	89.26	-453.6	2,205.4	1,319.3	1,207.7	111.58	11.824			
8,600.0	6,320.0	8,490.5	6,302.9	59.7	58.7	89.26	-454.5	2,305.4	1,319.3	1,202.9	116.44	11.330			
8,700.0	6,319.8	8,590.5	6,302.7	62.0	61.1	89.26	-455.5	2,405.4	1,319.3	1,198.0	121.30	10.876			
8,800.0	6,319.6	8,690.5	6,302.6	64.4	63.5	89.26	-456.4	2,505.4	1,319.3	1,193.1	126.17	10.456			
8,900.0	6,319.4	8,790.5	6,302.4	66.8	66.0	89.26	-457.4	2,605.4	1,319.3	1,188.2	131.05	10.067			
9,000.0	6,319.3	8,890.5	6,302.2	69.2	68.4	89.26	-458.3	2,705.4	1,319.3	1,183.4	135.93	9.706			
9,100.0	6,319.1	8,990.5	6,302.0	71.6	70.8	89.26	-459.2	2,805.4	1,319.3	1,178.5	140.81	9.369			
9,200.0	6,318.9	9,090.5	6,301.9	74.0	73.2	89.26	-460.2	2,905.4	1,319.3	1,173.6	145.70	9.055			
9,300.0	6,318.7	9,190.5	6,301.7	76.4	75.7	89.26	-461.1	3,005.3	1,319.3	1,168.7	150.60	8.760			
9,400.0	6,318.6	9,290.5	6,301.5	78.8	78.1	89.26	-462.1	3,105.3	1,319.3	1,163.8	155.50	8.485			
9,500.0	6,318.4	9,390.5	6,301.3	81.2	80.6	89.26	-463.0	3,205.3	1,319.3	1,158.9	160.40	8.225			
9,600.0	6,318.2	9,490.5	6,301.2	83.7	83.0	89.26	-464.0	3,305.3	1,319.3	1,154.0	165.30	7.981			
9,700.0	6,318.0	9,590.5	6,301.0	86.1	85.4	89.26	-464.9	3,405.3	1,319.3	1,149.1	170.21	7.751			
9,800.0	6,317.9	9,690.5	6,300.8	88.5	87.9	89.26	-465.9	3,505.3	1,319.3	1,144.2	175.11	7.534			
9,900.0	6,317.7	9,790.5	6,300.6	90.9	90.3	89.26	-466.8	3,605.3	1,319.3	1,139.3	180.02	7.329			
10,000.0	6,317.5	9,890.5	6,300.5	93.4	92.8	89.26	-467.8	3,705.3	1,319.3	1,134.4	184.94	7.134			
10,100.0	6,317.3	9,990.5	6,300.3	95.8	95.2	89.26	-468.7	3,805.3	1,319.3	1,129.5	189.85	6.949			
10,200.0	6,317.2	10,090.5	6,300.1	98.2	97.7	89.26	-469.6	3,905.3	1,319.3	1,124.6	194.77	6.774			
10,300.0	6,317.0	10,190.5	6,299.9	100.7	100.1	89.26	-470.6	4,005.3	1,319.3	1,119.6	199.69	6.607			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company: EnCana Oil & Gas (USA) Inc
Project: Rio Arriba County, NM
Reference Site: S7-T24N-R7W
Site Error: 0.0ft
Reference Well: Escrito E07-2407 01H
Well Error: 0.0ft
Reference Wellbore: HZ
Reference Design: Plan #1

Local Co-ordinate Reference: Well Escrito E07-2407 01H
TVD Reference: WELL @ 7339.0ft (Original Well Elev)
MD Reference: WELL @ 7339.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: USA EDM 5000 Multi Users DB
Offset TVD Reference: Offset Datum

Offset Design S7-T24N-R7W - Escrito E07-2407 02H - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
10,400.0	6,316.8	10,290.5	6,299.8	103.1	102.6	89.26	-471.5	4,105.3	1,319.3	1,114.7	204.60	6.448		
10,500.0	6,316.6	10,390.5	6,299.6	105.5	105.1	89.26	-472.5	4,205.3	1,319.3	1,109.8	209.53	6.297		
10,600.0	6,316.5	10,490.5	6,299.4	108.0	107.5	89.26	-473.4	4,305.3	1,319.3	1,104.9	214.45	6.152		
10,700.0	6,316.3	10,590.5	6,299.2	110.4	110.0	89.26	-474.4	4,405.3	1,319.3	1,100.0	219.37	6.014		
10,800.0	6,316.1	10,690.5	6,299.1	112.9	112.4	89.26	-475.3	4,505.3	1,319.3	1,095.0	224.29	5.882		
10,900.0	6,315.9	10,790.5	6,298.9	115.3	114.9	89.26	-476.3	4,605.3	1,319.3	1,090.1	229.22	5.756		
11,000.0	6,315.8	10,890.5	6,298.7	117.8	117.3	89.26	-477.2	4,705.3	1,319.3	1,085.2	234.15	5.635		
11,100.0	6,315.6	10,990.5	6,298.5	120.2	119.8	89.26	-478.2	4,805.3	1,319.3	1,080.3	239.07	5.519		
11,200.0	6,315.4	11,090.5	6,298.4	122.7	122.3	89.26	-479.1	4,905.3	1,319.3	1,075.3	244.00	5.407		
11,205.4	6,315.4	11,095.8	6,298.4	122.8	122.4	89.26	-479.1	4,910.6	1,319.3	1,075.1	244.26	5.401		

Anticollision Report

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 Project: Rio Arriba County, NM
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 Site Error: 0.0ft
 Reference Well: Escrito E07-2407 01H
 Well Error: 0.0ft
 Reference Wellbore: HZ
 Reference Design: Plan #1

Local Co-ordinate Reference: Well Escrito E07-2407 01H
 TVD Reference: WELL @ 7339.0ft (Original Well Elev)
 MD Reference: WELL @ 7339.0ft (Original Well Elev)
 North Reference: True
 Survey Calculation Method: Minimum Curvature
 Output errors are at 2.00 sigma
 Database: USA EDM 5000 Multi Users DB
 Offset TVD Reference: Offset Datum

Offset Design S7-T24N-R7W - Escrito E07-2407 03H - Hz - Plan #1													Offset Site Error: 0.0 ft	
Survey Program: O-Geolink MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance			Total Uncertainty Axis	Separation Factor	Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)				Between Ellipses (ft)	
0.0	0.0	0.0	0.0	0.0	0.0	-102.36	-9.1	-41.5	42.5					
100.0	100.0	100.0	100.0	0.1	0.1	-102.36	-9.1	-41.5	42.5	42.2	0.29	145.025		
200.0	200.0	200.0	200.0	0.3	0.3	-102.36	-9.1	-41.5	42.5	41.9	0.64	66.207		
300.0	300.0	300.0	300.0	0.5	0.5	-102.36	-9.1	-41.5	42.5	41.5	0.99	42.895		
400.0	400.0	400.0	400.0	0.7	0.7	-102.36	-9.1	-41.5	42.5	41.2	1.34	31.724		
500.0	500.0	500.0	500.0	0.8	0.8	-102.36	-9.1	-41.5	42.5	40.8	1.69	25.170		
600.0	600.0	600.0	600.0	1.0	1.0	-102.36	-9.1	-41.5	42.5	40.5	2.04	20.860		
700.0	700.0	700.0	700.0	1.2	1.2	-102.36	-9.1	-41.5	42.5	40.1	2.39	17.810		
800.0	800.0	800.0	800.0	1.4	1.4	-102.36	-9.1	-41.5	42.5	39.8	2.74	15.538		
900.0	900.0	900.0	900.0	1.5	1.5	-102.36	-9.1	-41.5	42.5	39.4	3.09	13.781		
1,000.0	1,000.0	1,000.0	1,000.0	1.7	1.7	-102.36	-9.1	-41.5	42.5	39.1	3.43	12.380		
1,100.0	1,100.0	1,100.0	1,100.0	1.9	1.9	-102.36	-9.1	-41.5	42.5	38.7	3.78	11.238		
1,200.0	1,200.0	1,200.0	1,200.0	2.1	2.1	-102.36	-9.1	-41.5	42.5	38.4	4.13	10.289		
1,300.0	1,300.0	1,300.0	1,300.0	2.2	2.2	-102.36	-9.1	-41.5	42.5	38.0	4.48	9.488		
1,400.0	1,400.0	1,400.0	1,400.0	2.4	2.4	-102.36	-9.1	-41.5	42.5	37.7	4.83	8.802		
1,500.0	1,500.0	1,500.0	1,500.0	2.6	2.6	-102.36	-9.1	-41.5	42.5	37.3	5.18	8.209		
1,600.0	1,600.0	1,600.0	1,600.0	2.8	2.8	-102.36	-9.1	-41.5	42.5	37.0	5.53	7.691		
1,700.0	1,700.0	1,700.0	1,700.0	2.9	2.9	-102.36	-9.1	-41.5	42.5	36.6	5.88	7.234		
1,800.0	1,800.0	1,800.0	1,800.0	3.1	3.1	-102.36	-9.1	-41.5	42.5	36.3	6.23	6.829		
1,900.0	1,900.0	1,900.0	1,900.0	3.3	3.3	-102.36	-9.1	-41.5	42.5	35.9	6.58	6.466		
2,000.0	2,000.0	2,000.0	2,000.0	3.5	3.5	-102.36	-9.1	-41.5	42.5	35.6	6.93	6.140		
2,100.0	2,100.0	2,100.0	2,100.0	3.6	3.6	-102.36	-9.1	-41.5	42.5	35.2	7.27	5.846		
2,200.0	2,200.0	2,200.0	2,200.0	3.8	3.8	-102.36	-9.1	-41.5	42.5	34.9	7.62	5.578		
2,300.0	2,300.0	2,300.0	2,300.0	4.0	4.0	-102.36	-9.1	-41.5	42.5	34.6	7.97	5.334		
2,400.0	2,400.0	2,400.0	2,400.0	4.2	4.2	-102.36	-9.1	-41.5	42.5	34.2	8.32	5.110		
2,500.0	2,500.0	2,500.0	2,500.0	4.3	4.3	-102.36	-9.1	-41.5	42.5	33.9	8.67	4.904		
2,600.0	2,600.0	2,600.0	2,600.0	4.5	4.5	-102.36	-9.1	-41.5	42.5	33.5	9.02	4.714		
2,700.0	2,700.0	2,700.0	2,700.0	4.7	4.7	-102.36	-9.1	-41.5	42.5	33.2	9.37	4.539		
2,800.0	2,800.0	2,800.0	2,800.0	4.9	4.9	-102.36	-9.1	-41.5	42.5	32.8	9.72	4.376		
2,900.0	2,900.0	2,900.0	2,900.0	5.0	5.0	-102.36	-9.1	-41.5	42.5	32.5	10.07	4.224		
3,000.0	3,000.0	3,000.0	3,000.0	5.2	5.2	-102.36	-9.1	-41.5	42.5	32.1	10.42	4.082		
3,100.0	3,100.0	3,100.0	3,100.0	5.4	5.4	-102.36	-9.1	-41.5	42.5	31.8	10.77	3.950		
3,200.0	3,200.0	3,200.0	3,200.0	5.6	5.6	-102.36	-9.1	-41.5	42.5	31.4	11.11	3.826		
3,300.0	3,300.0	3,300.0	3,300.0	5.7	5.7	-102.36	-9.1	-41.5	42.5	31.1	11.46	3.710		
3,400.0	3,400.0	3,400.0	3,400.0	5.9	5.9	-102.36	-9.1	-41.5	42.5	30.7	11.81	3.600		
3,500.0	3,500.0	3,500.0	3,500.0	6.1	6.1	-102.36	-9.1	-41.5	42.5	30.4	12.16	3.497		
3,600.0	3,600.0	3,600.0	3,600.0	6.3	6.3	-102.36	-9.1	-41.5	42.5	30.0	12.51	3.399		
3,700.0	3,700.0	3,700.0	3,700.0	6.4	6.4	-102.36	-9.1	-41.5	42.5	29.7	12.86	3.307		
3,800.0	3,800.0	3,800.0	3,800.0	6.6	6.6	-102.36	-9.1	-41.5	42.5	29.3	13.21	3.219		
3,900.0	3,900.0	3,900.0	3,900.0	6.8	6.8	-102.36	-9.1	-41.5	42.5	29.0	13.56	3.136		
4,000.0	4,000.0	4,000.0	4,000.0	7.0	7.0	-102.36	-9.1	-41.5	42.5	28.6	13.91	3.058 CC, ES		
4,100.0	4,100.0	4,099.7	4,099.6	7.1	7.1	-105.82	-11.7	-41.3	42.9	28.6	14.26	3.008 SF		
4,200.0	4,200.0	4,198.8	4,198.4	7.3	7.3	-115.61	-19.4	-40.4	44.9	30.3	14.61	3.071		
4,300.0	4,300.0	4,296.4	4,295.2	7.5	7.5	-130.96	-31.9	-39.1	52.4	37.4	14.95	3.501		
4,400.0	4,399.6	4,391.3	4,388.6	7.7	7.7	-146.93	-48.8	-37.3	70.8	55.6	15.27	4.639		
4,500.0	4,498.8	4,485.9	4,481.3	7.8	7.9	-157.72	-67.4	-35.2	99.0	83.4	15.54	6.371		
4,600.0	4,597.1	4,578.7	4,572.3	8.1	8.1	-164.21	-85.6	-33.3	133.9	118.1	15.76	8.492		
4,700.0	4,694.3	4,669.4	4,661.2	8.3	8.3	-168.31	-103.4	-31.4	174.5	158.5	15.96	10.934		
4,800.0	4,790.2	4,757.8	4,747.9	8.6	8.5	-171.03	-120.8	-29.5	220.3	204.2	16.11	13.670		
4,900.0	4,884.4	4,843.7	4,832.0	8.9	8.8	-172.91	-137.6	-27.7	271.0	254.7	16.24	16.687		
5,000.0	4,976.8	4,926.7	4,913.4	9.3	9.0	-174.26	-153.9	-25.9	326.2	309.9	16.33	19.982		
5,100.0	5,067.1	5,006.7	4,991.9	9.7	9.2	-175.26	-169.6	-24.2	385.9	369.5	16.38	23.557		

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company: EnCana Oil & Gas (USA) Inc
Project: Rio Arriba County, NM
Reference Site: S7-T24N-R7W
Site Error: 0.0ft
Reference Well: Escrito E07-2407 01H
Well Error: 0.0ft
Reference Wellbore: HZ
Reference Design: Plan #1

Local Co-ordinate Reference: Well Escrito E07-2407 01H
TVD Reference: WELL @ 7339.0ft (Original Well Elev)
MD Reference: WELL @ 7339.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: USA EDM 5000 Multi Users DB
Offset TVD Reference: Offset Datum

Offset Design S7-T24N-R7W - Escrito E07-2407 03H - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,200.0	5,155.3	5,084.0	5,067.6	10.3	9.4	-176.11	-184.8	-22.6	449.2	432.6	16.56	27.126		
5,300.0	5,243.3	5,160.9	5,143.0	10.8	9.6	-176.82	-199.9	-20.9	512.9	496.1	16.86	30.425		
5,400.0	5,331.3	5,237.8	5,218.4	11.4	9.9	-177.37	-215.0	-19.3	576.7	559.5	17.16	33.609		
5,500.0	5,419.3	5,314.7	5,293.8	12.1	10.1	-177.81	-230.1	-17.7	640.5	623.0	17.46	36.685		
5,600.0	5,507.2	5,391.6	5,369.2	12.7	10.3	-178.17	-245.2	-16.0	704.3	686.6	17.76	39.657		
5,700.0	5,595.2	5,468.5	5,444.6	13.4	10.6	-178.48	-260.3	-14.4	768.2	750.1	18.06	42.531		
5,800.0	5,683.2	5,545.5	5,520.0	14.1	10.8	-178.73	-275.4	-12.8	832.0	813.7	18.36	45.311		
5,900.0	5,771.2	5,622.4	5,595.4	14.8	11.0	-178.95	-290.5	-11.2	895.9	877.2	18.66	48.002		
6,000.0	5,859.1	5,699.3	5,670.8	15.5	11.3	167.84	-305.7	-9.5	959.7	940.7	19.01	50.498		
6,100.0	5,945.8	5,775.4	5,745.4	16.3	11.5	144.28	-320.6	-8.2	1,022.7	1,002.9	19.85	51.530		
6,200.0	6,028.6	5,843.1	5,811.6	17.0	11.7	126.26	-333.7	-12.8	1,084.0	1,062.9	21.04	51.512		
6,300.0	6,105.0	5,894.5	5,861.3	17.7	11.9	112.67	-343.5	-21.7	1,143.6	1,121.2	22.39	51.068		
6,400.0	6,172.7	5,928.6	5,893.7	18.5	12.0	101.80	-349.7	-30.0	1,202.0	1,178.2	23.80	50.509		
6,500.0	6,229.7	5,950.0	5,913.8	19.4	12.1	92.80	-353.6	-36.3	1,259.0	1,234.0	25.04	50.278		
6,600.0	6,274.2	5,950.0	5,913.8	20.3	12.1	84.68	-353.6	-36.3	1,313.9	1,287.9	26.00	50.533		

Anticollision Report

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 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: USA EDM 5000 Multi Users DB
 Offset TVD Reference: Offset Datum

Offset Design S7-T24N-R7W - Escrito E07-2407 04H - Hz - Plan #1													Offset Site Error: 0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error: 0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Total Uncertainty Axis	Separation Factor	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)			
0.0	0.0	0.0	0.0	0.0	0.0	-57.69	16.0	-25.3	30.0				
100.0	100.0	100.0	100.0	0.1	0.1	-57.69	16.0	-25.3	30.0	29.7	0.29	102.229	
200.0	200.0	200.0	200.0	0.3	0.3	-57.69	16.0	-25.3	30.0	29.3	0.64	46.670	
300.0	300.0	300.0	300.0	0.5	0.5	-57.69	16.0	-25.3	30.0	29.0	0.99	30.237	
400.0	400.0	400.0	400.0	0.7	0.7	-57.69	16.0	-25.3	30.0	28.6	1.34	22.363	
500.0	500.0	500.0	500.0	0.8	0.8	-57.69	16.0	-25.3	30.0	28.3	1.69	17.742	
600.0	600.0	600.0	600.0	1.0	1.0	-57.69	16.0	-25.3	30.0	27.9	2.04	14.704	
700.0	700.0	700.0	700.0	1.2	1.2	-57.69	16.0	-25.3	30.0	27.6	2.39	12.554	
800.0	800.0	800.0	800.0	1.4	1.4	-57.69	16.0	-25.3	30.0	27.2	2.74	10.953	
900.0	900.0	900.0	900.0	1.5	1.5	-57.69	16.0	-25.3	30.0	26.9	3.09	9.714	
1,000.0	1,000.0	1,000.0	1,000.0	1.7	1.7	-57.69	16.0	-25.3	30.0	26.5	3.43	8.727	
1,100.0	1,100.0	1,100.0	1,100.0	1.9	1.9	-57.69	16.0	-25.3	30.0	26.2	3.78	7.922	
1,200.0	1,200.0	1,200.0	1,200.0	2.1	2.1	-57.69	16.0	-25.3	30.0	25.8	4.13	7.253	
1,300.0	1,300.0	1,300.0	1,300.0	2.2	2.2	-57.69	16.0	-25.3	30.0	25.5	4.48	6.688	
1,400.0	1,400.0	1,400.0	1,400.0	2.4	2.4	-57.69	16.0	-25.3	30.0	25.1	4.83	6.205	
1,500.0	1,500.0	1,500.0	1,500.0	2.6	2.6	-57.69	16.0	-25.3	30.0	24.8	5.18	5.787	
1,600.0	1,600.0	1,600.0	1,600.0	2.8	2.8	-57.69	16.0	-25.3	30.0	24.4	5.53	5.421	
1,700.0	1,700.0	1,700.0	1,700.0	2.9	2.9	-57.69	16.0	-25.3	30.0	24.1	5.88	5.099	
1,800.0	1,800.0	1,800.0	1,800.0	3.1	3.1	-57.69	16.0	-25.3	30.0	23.7	6.23	4.813	
1,900.0	1,900.0	1,900.0	1,900.0	3.3	3.3	-57.69	16.0	-25.3	30.0	23.4	6.58	4.558	
2,000.0	2,000.0	2,000.0	2,000.0	3.5	3.5	-57.69	16.0	-25.3	30.0	23.0	6.93	4.328	
2,100.0	2,100.0	2,100.0	2,100.0	3.6	3.6	-57.69	16.0	-25.3	30.0	22.7	7.27	4.121	
2,200.0	2,200.0	2,200.0	2,200.0	3.8	3.8	-57.69	16.0	-25.3	30.0	22.4	7.62	3.932	
2,300.0	2,300.0	2,300.0	2,300.0	4.0	4.0	-57.69	16.0	-25.3	30.0	22.0	7.97	3.760	
2,400.0	2,400.0	2,400.0	2,400.0	4.2	4.2	-57.69	16.0	-25.3	30.0	21.7	8.32	3.602	
2,500.0	2,500.0	2,500.0	2,500.0	4.3	4.3	-57.69	16.0	-25.3	30.0	21.3	8.67	3.457	
2,600.0	2,600.0	2,600.0	2,600.0	4.5	4.5	-57.69	16.0	-25.3	30.0	21.0	9.02	3.323	
2,700.0	2,700.0	2,700.0	2,700.0	4.7	4.7	-57.69	16.0	-25.3	30.0	20.6	9.37	3.199	
2,800.0	2,800.0	2,800.0	2,800.0	4.9	4.9	-57.69	16.0	-25.3	30.0	20.3	9.72	3.085	
2,900.0	2,900.0	2,900.0	2,900.0	5.0	5.0	-57.69	16.0	-25.3	30.0	19.9	10.07	2.978	
3,000.0	3,000.0	3,000.0	3,000.0	5.2	5.2	-57.69	16.0	-25.3	30.0	19.6	10.42	2.878 CC, ES, SF	
3,100.0	3,100.0	3,099.1	3,099.0	5.4	5.4	-53.76	18.6	-25.4	31.5	20.7	10.76	2.923	
3,200.0	3,200.0	3,197.6	3,197.2	5.6	5.6	-44.13	26.2	-25.4	36.7	25.5	11.11	3.298	
3,300.0	3,300.0	3,295.1	3,293.9	5.7	5.7	-33.42	38.8	-25.6	46.8	35.4	11.46	4.087	
3,400.0	3,400.0	3,391.1	3,388.3	5.9	6.0	-24.75	55.9	-25.8	62.7	50.9	11.81	5.307	
3,500.0	3,500.0	3,485.1	3,479.9	6.1	6.2	-18.60	77.3	-26.0	84.0	71.8	12.15	6.914	
3,600.0	3,600.0	3,579.4	3,570.7	6.3	6.5	-14.37	102.6	-26.3	109.9	97.4	12.49	8.801	
3,700.0	3,700.0	3,675.5	3,663.2	6.4	6.8	-11.64	128.9	-26.6	136.7	123.9	12.83	10.656	
3,800.0	3,800.0	3,771.7	3,755.7	6.6	7.1	-9.81	155.3	-26.9	163.7	150.5	13.17	12.429	
3,900.0	3,900.0	3,867.9	3,848.2	6.8	7.4	-8.50	181.6	-27.1	190.8	177.3	13.51	14.122	
4,000.0	4,000.0	3,964.1	3,940.7	7.0	7.8	-7.51	208.0	-27.4	218.0	204.1	13.85	15.736	
4,100.0	4,100.0	4,060.2	4,033.2	7.1	8.1	-6.75	234.3	-27.7	245.2	231.0	14.19	17.276	
4,200.0	4,200.0	4,156.4	4,125.7	7.3	8.5	-6.13	260.7	-28.0	272.5	258.0	14.54	18.746	
4,300.0	4,300.0	4,253.3	4,218.8	7.5	8.9	-5.32	287.2	-28.3	297.3	282.4	14.88	19.974	
4,400.0	4,399.6	4,351.3	4,313.1	7.7	9.3	-4.96	314.0	-28.6	316.9	301.7	15.21	20.845	
4,500.0	4,498.8	4,450.2	4,408.2	7.8	9.7	-4.74	341.1	-28.9	331.5	316.0	15.51	21.380	
4,600.0	4,597.1	4,549.7	4,504.0	8.1	10.2	-4.61	368.4	-29.2	340.9	325.1	15.78	21.601	
4,700.0	4,694.3	4,649.6	4,600.0	8.3	10.6	-4.57	395.7	-29.5	345.1	329.0	16.03	21.523	
4,800.0	4,790.2	4,749.6	4,696.2	8.6	11.0	-4.61	423.1	-29.8	344.0	327.8	16.26	21.160	
4,900.0	4,884.4	4,849.4	4,792.2	8.9	11.5	-4.74	450.5	-30.1	337.8	321.3	16.46	20.522	
5,000.0	4,976.8	4,948.7	4,887.7	9.3	12.0	-4.97	477.7	-30.4	326.4	309.7	16.64	19.617	
5,100.0	5,067.1	5,047.3	4,982.5	9.7	12.4	-5.31	504.7	-30.7	309.7	293.0	16.79	18.450	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company: EnCana Oil & Gas (USA) Inc
Project: Rio Arriba County, NM
Reference Site: S7-T24N-R7W
Site Error: 0.0ft
Reference Well: Escrito E07-2407 01H
Well Error: 0.0ft
Reference Wellbore: HZ
Reference Design: Plan #1

Local Co-ordinate Reference: Well Escrito E07-2407 01H
TVD Reference: WELL @ 7339.0ft (Original Well Elev)
MD Reference: WELL @ 7339.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: USA EDM 5000 Multi Users DB
Offset TVD Reference: Offset Datum

Offset Design S7-T24N-R7W - Escrito E07-2407 04H - Hz - Plan #1												Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,155.3	5,145.1	5,076.5	10.3	12.9	-5.76	531.4	-31.0	288.8	271.7	17.05	16.933	
5,300.0	5,243.3	5,242.7	5,170.4	10.8	13.3	-6.26	558.2	-31.3	267.3	249.9	17.44	15.331	
5,400.0	5,331.3	5,340.4	5,264.3	11.4	13.8	-6.84	584.9	-31.5	245.8	228.0	17.82	13.793	
5,500.0	5,419.3	5,438.0	5,358.2	12.1	14.2	-7.54	611.7	-31.8	224.4	206.2	18.23	12.314	
5,600.0	5,507.2	5,535.6	5,452.1	12.7	14.7	-8.39	638.4	-32.1	203.0	184.4	18.64	10.890	
5,700.0	5,595.2	5,633.3	5,546.1	13.4	15.2	-9.43	665.2	-32.4	181.7	162.6	19.09	9.518	
5,800.0	5,683.2	5,730.9	5,640.0	14.1	15.6	-10.75	691.9	-32.7	160.4	140.8	19.58	8.193	
5,900.0	5,771.2	5,828.5	5,733.9	14.8	16.1	-12.47	718.6	-33.0	139.3	119.1	20.15	6.913	
6,000.0	5,859.1	5,922.8	5,824.5	15.5	16.5	-26.67	744.5	-35.6	119.6	98.3	21.33	5.608	
6,068.1	5,918.4	5,981.8	5,880.5	16.0	16.8	-48.77	760.7	-44.1	113.7	90.1	23.65	4.809	
6,100.0	5,945.8	6,007.1	5,904.2	16.3	17.0	-59.52	767.6	-49.5	115.5	90.4	25.05	4.610	
6,200.0	6,028.6	6,073.6	5,965.2	17.0	17.3	-87.64	785.4	-69.0	147.0	118.7	28.32	5.191	
6,300.0	6,105.0	6,119.4	6,005.7	17.7	17.5	-103.49	797.4	-86.7	213.1	184.2	28.85	7.385	
6,400.0	6,172.7	6,150.0	6,032.0	18.5	17.7	-108.99	805.2	-100.3	298.9	271.0	27.87	10.724	
6,500.0	6,229.7	6,150.0	6,032.0	19.4	17.7	-89.37	805.2	-100.3	394.3	368.6	25.76	15.310	
6,600.0	6,274.2	6,150.0	6,032.0	20.3	17.7	-32.47	805.2	-100.3	493.0	473.5	19.50	25.282	
6,700.0	6,304.9	6,150.0	6,032.0	21.4	17.7	1.47	805.2	-100.3	591.1	575.0	16.12	36.667	
6,800.0	6,320.8	6,150.0	6,032.0	22.6	17.7	12.52	805.2	-100.3	686.6	671.5	15.04	45.654	
6,900.0	6,322.9	6,119.3	6,005.7	23.9	17.5	15.77	797.4	-86.6	777.2	762.0	15.19	51.159	
7,000.0	6,322.8	6,100.0	5,988.7	25.4	17.4	15.79	792.3	-78.8	868.3	852.6	15.72	55.245	
7,100.0	6,322.6	6,100.0	5,988.7	27.0	17.4	15.79	792.3	-78.8	960.7	944.5	16.28	58.999	
7,200.0	6,322.4	6,074.3	5,965.8	28.8	17.3	15.82	785.6	-69.3	1,053.7	1,036.8	16.84	62.560	
7,300.0	6,322.2	6,050.0	5,943.8	30.7	17.2	15.84	779.1	-61.3	1,147.8	1,130.4	17.42	65.903	
7,400.0	6,322.1	6,050.0	5,943.8	32.7	17.2	15.84	779.1	-61.3	1,242.1	1,224.1	18.03	68.911	

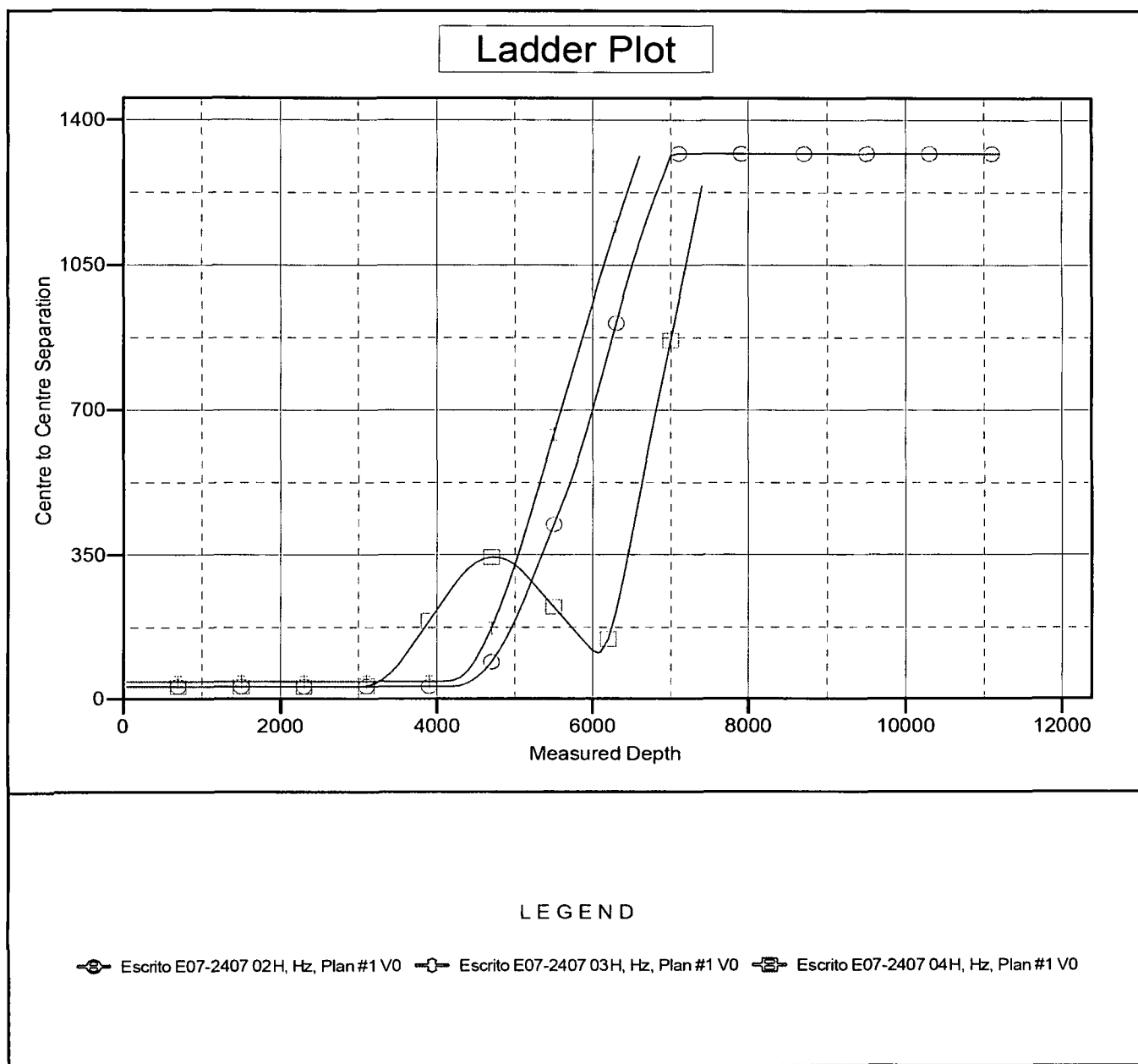
Anticollision Report

Company: EnCana Oil & Gas (USA) Inc
Project: Rio Arriba County, NM
Reference Site: S7-T24N-R7W
Site Error: 0.0ft
Reference Well: Escrito E07-2407 01H
Well Error: 0.0ft
Reference Wellbore: HZ
Reference Design: Plan #1

Local Co-ordinate Reference: Well Escrito E07-2407 01H
TVD Reference: WELL @ 7339.0ft (Original Well Elev)
MD Reference: WELL @ 7339.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: USA EDM 5000 Multi Users DB
Offset TVD Reference: Offset Datum

Reference Depths are relative to WELL @ 7339.0ft (Original Well Elev)
 Offset Depths are relative to Offset Datum
 Central Meridian is -106.250000 °

Coordinates are relative to: Escrito E07-2407 01H
 Coordinate System is US State Plane 1983, New Mexico Central Zone
 Grid Convergence at Surface is: -0.82°



ENCANA OIL & GAS (USA) INC.
ESCRITO E07-2407 #01H
1317' FNL & 13' FWL
LOCATED IN THE SW/4 NW/4 OF SECTION 7,
T24N, R7W, N.M.P.M.,
RIO ARriba COUNTY, NEW MEXICO

DIRECTIONS

- 1) FROM THE INTERSECTION OF HWY 64 & HWY 550 IN BLOOMFIELD, GO SOUTH ON HWY 550, 42.6 MILES TO CR 7997 (M.P. 120.7).
- 2) TURN LEFT AND GO 3.1 MILES TO "Y" INTERSECTION.
- 3) TURN RIGHT AND GO 1.2 MILES TO GATE.
- 4) CONTINUE THROUGH GATE AND GO 0.7 MILES TO "Y" INTERSECTION.
- 5) TURN LEFT AND GO 2.4 MILES TO "Y" INTERSECTION.
- 6) CONTINUE LEFT AND GO 2.1 MILES WHERE ACCESS IS STAKED ON RIGHT SIDE OF ROAD.

WELL FLAG LOCATED AT LAT. 36.331500° N, LONG. 107.625508° W (NAD 83).



encana

**RIO ARriba COUNTY,
NEW MEXICO**

- ⊗ Abandoned
 - ⊗ Abandoned Gas
 - ⊗ Abandoned Oil
 - ⊗ Dry Hole
 - ⊗ GAS
 - ⊗ Injection
 - OIL
 - Basin Mancos Gas Pool
- 1 inch = 2,000 feet

Escrito L30-2507 01H
Escrito L30-2507 02H

25N

7W

BOOMER 1
OTHEL STATE 1

31

32

Escrito M36-2508 01H

Escrito M36A-2508 01H

PALLUCHE-STATE 1

24N
8W

**DUFERS POINT
GALLUP
DAKOTA
POOL**

GRAND GULCH 2

**BASIN DAKOTA
GAS POOL
(out)**

24N
7W

5

6

MEXICAN HAT 1

GRAND GULCH 1

Escrito E07-2407 01H

Escrito E07-2407 02H
Escrito E07-2407 03H
Escrito E07-2407 04H

1000'

FEDERAL 1-8

7

8

NANCY 4, NANCY 4
NANCY 4

NANCY 5

NANCY 3
NANCY 3
FEDERAL 3
LOCO 6
LOCO 5

NANCY-FEDERAL 2

NANCY-FEDERAL 1

FEDERAL 2-7

FEDERAL 1-7
FEDERAL 1-7

OSLICKHORN GULCH 2
SLICKHORN GULCH 1

SMITH 5

SMITH 4

FEDERAL 2

ESCRITO-GALLUP 21

ELIZABETH-FEDERAL 2

ELIZABETH-FEDERAL 3

18

ELIZABETH-FEDERAL 4

ELIZABETH-FEDERAL 1

**ESCRITO GALLUP
POOL**

17

0 0.125 0.25 0.5 Miles

WELLHEAD BLOWOUT CONTROL SYSTEM

encana

Well Name and Number:
Escrito E07-2407 01H

