

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: 4/3/14

Well information;

Operator ENCANA, Well Name and Number Escrito 214-2408 H2H

API# 20-045-35532, Section 14, Township 24 NS, Range 8 E/W

Conditions of Approval:

(See the below checked and handwritten conditions)

- ☒ Notify Aztec OCD 24hrs prior to casing & cement.
- ☒ Hold C-104 for directional survey & "As Drilled" Plat
- ☒ Hold C-104 for NSL NSP, DHC
- ☐ Spacing rule violation. Operator must follow up with change of status notification on other well to be shut in or abandoned
- ☐ Regarding the use of a pit, closed loop system or below grade tank, the operator must comply with the following as applicable:
 - A pit requires a complete C-144 be submitted and approved prior to the construction or use of the pit, pursuant to 19.15.17.8.A
 - A closed loop system requires notification prior to use, pursuant to 19.15.17.9.A
 - A below grade tank requires a registration be filed prior to the construction or use of the below grade tank, pursuant to 19.15.17.8.C
- ☐ Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
- ☒ 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 X. Harris
NMOCD Approved by Signature

7-29-2014
Date

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

CONFIDENTIAL

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

Farmington Field Office

Bureau of Land Management

1a. Type of work: ☒ DRILL

☐ REENTER

1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other

☒ Single Zone ☐ Multiple Zone

2. Name of Operator Encana Oil & Gas (USA) Inc.

5. Lease Serial No.
NM 16580, NMNM 1409

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 L14-2408 02H

9. API Well No.
30-045-35532

3a. Address 370 17th Street, Suite 1700, Denver, CO
80202

3b. Phone No. (include area code)
720-876-3533

10. Field and Pool, or Exploratory
Escrito-Gallup (associated)

4. Location of Well (Report location clearly and in accordance with any State requirements.)*

At surface 1399' FSL and 58' FWL in Section 14, T24N, R8W

At proposed prod. zone 430' FSL and 330' FEL in Section 14, T24N, R8W

11. Sec., T. R. M. or Blk. and Survey or Area
Section 14, T24N, R8W NMPM

14. Distance in miles and direction from nearest town or post office*

+/- 47.1 miles from the intersection of US Hwy 64 & US Hwy 550 in Bloomfield, NM

12. County or Parish
San Juan

13. State
NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)
SHL is 58' from West lease line

16. No. of acres in lease
NM 16589- 1480 acres
NMNM 1409- 629.79 acres

17. Spacing Unit dedicated to this well
320 acres S/2 Section 14

OIL CONS. DIV DIST. 3

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
Escrito L14-2408 03H is +/- 30' W of SHL

19. Proposed Depth
5709' TVD/ 10528' MD

20. BLM/BIA Bond No. on file
COB-000235

JUL 18 2014

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
GL 6896' KB 6912'

22. Approximate date work will start*
09/28/2014

23. Estimated duration
20 Days

24. Attachments

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

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
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).

4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the BLM.

25. Signature

Katie Wegner

Name (Printed/Typed)
Katie Wegner

Date
4/3/14

Title

Regulatory Analyst

Approved by (Signature)

[Signature]
AFM

Name (Printed/Typed)

Office

FFO

Date

7/17/14

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 unlawful 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, or to furnish any information which is false, fictitious or fraudulent.
This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4

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

NMCCDA

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

DISTRICT I
1628 N. Franklin Dr., Santa Fe, NM 87505
Phone: (505) 959-0101 Fax: (505) 959-0770

DISTRICT II
311 N. First St., Artesia, NM 87010
Phone: (505) 740-1155 Fax: (505) 740-0770

DISTRICT III
1000 E. Broadway Blvd., Santa Fe, NM 87505
Phone: (505) 634-6173 Fax: (505) 634-6170

DISTRICT IV
1550 S. Alameda Dr., Santa Fe, NM 87505
Phone: (505) 470-3400 Fax: (505) 470-0400

State of New Mexico
Energy, Minerals & Natural Resources Department

RECEIVED

Form C-102
Revised August 1, 2011

APR 14 2014 Submit one copy to appropriate District Office

OIL CONSERVATION DIVISION

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

Farmington Field Office
Bureau of Land Management
AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045-35532	² Pool Code 22610	³ Pool Name ESCRITO-GALLUP (ASSOCIATED)
⁴ Property Code 313514	⁵ Property Name ESCRITO L14-2408	⁶ Well Number 02M
⁷ GRID No. 282327	⁸ Operator Name ENCANA OIL & GAS (USA) INC.	⁹ Elevation 8698.0'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	14	24N	8W	1399	1589'	SOUTH	86'	58'	SAN JUAN

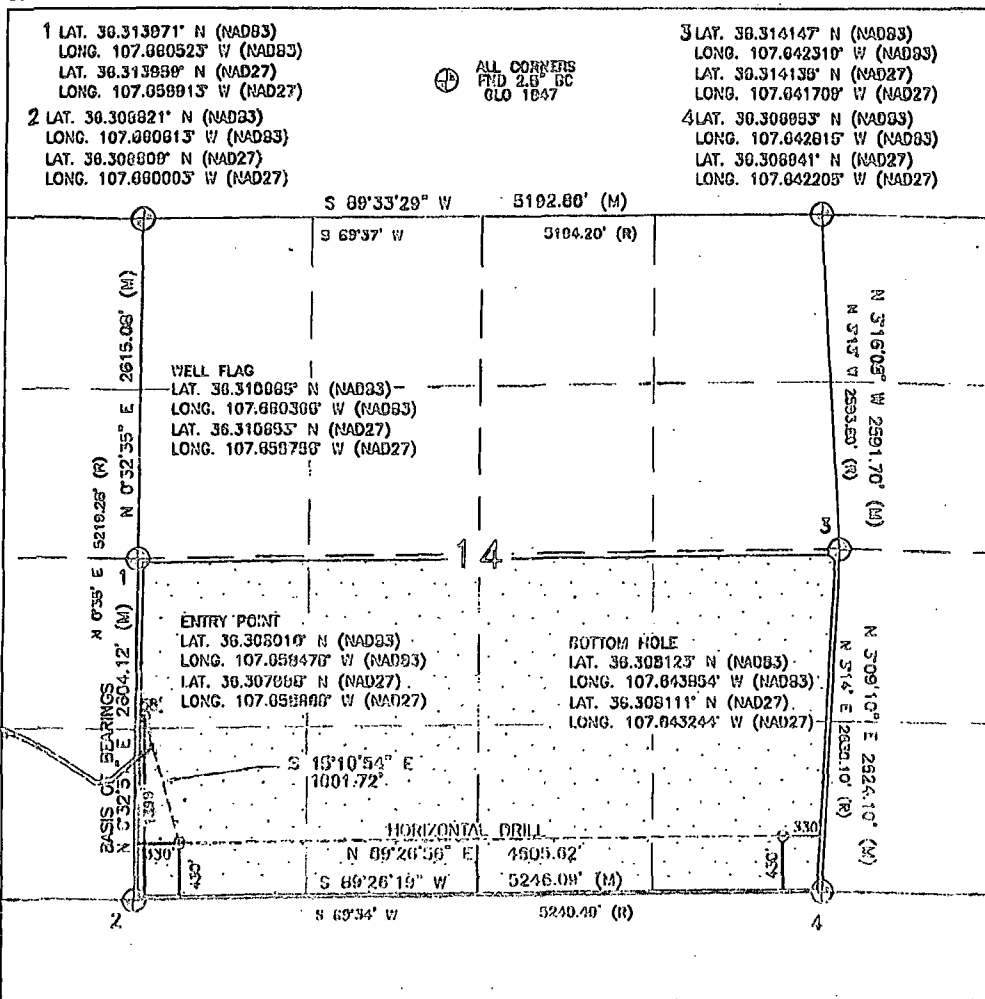
¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	14	24N	8W		430'	SOUTH	330'	EAST	SAN JUAN

¹² Dedicated Acres 320.00 ACRES - S/2 SEC. 14	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

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¹⁷ OPERATOR CERTIFICATION

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

Katie Wegner 4/2/14
Signature Date
Katie Wegner

Printed Name
Katie.Wegner@encana.com

E-mail Address

SURVEYOR CERTIFICATION

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

DECEMBER 3, 2013

Date of Survey

Signature and Seal of Professional Surveyor:

David B. Russell
DAVID B. RUSSELL
REGISTERED
NEW MEXICO
10201
Certificate Number

Escrito L14-2408 02H
SHL: NW SW 14 24N 8W
1399 FSL 58 FWL
BHL: SE SE 14 24N 8W
430 FSL 330 FEL
San Juan, New Mexico

**Encana Oil & Gas (USA) Inc.
Drilling Plan**

1. ESTIMATED TOPS OF GEOLOGICAL MARKERS (TVD)

The estimated tops of important geologic markers are as follows:

Formation	Depth (TVD) units = feet
Ojo Alamo Ss.	1,339
Kirtland Shale	1,548
Fruitland Coal	1,707
Pictured Cliffs Ss.	2,057
Lewis Shale	2,166
Cliffhouse Ss.	2,922
Menefee Fn.	3,629
Point Lookout Ss.	4,374
Mancos Shale	4,592
Mancos Silt	5,214
Gallup Fn.	5,432
Horizontal Target	5,717

The referenced surface elevation is 6896', KB 6912'

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

Substance	Formation	Depth (TVD) units = feet
Water/Gas	Fruitland Coal	1,707
Oil/Gas	Pictured Cliffs Ss.	2,057
Oil/Gas	Cliffhouse Ss.	2,922
Gas	Menefee Fn.	3,629
Oil/Gas	Point Lookout Ss.	4,374
Oil/Gas	Mancos Shale	4,592
Oil/Gas	Mancos Silt	5,214
Oil/Gas	Gallup Fn.	5,432

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 L14-2408 02H
 SHL: NW SW 14 24N 8W
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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'-6031'	8 3/4"	7"	26#	J55, LTC New
Production Liner	5831'-10528'	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.

Escrito L14-2408 02H
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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'-6031'	30% open hole excess Stage 1 Lead: 397 sks Stage 1 Tail: 313 sks Stage 2 Lead: 197 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	5831'-10528'	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 3000'. Directional plans are attached.

Description	Proposed Depth (TVD/MD)	Formation
Horizontal Lateral TD	5709'/10528'	Gallup

6. DRILLING FLUIDS PROGRAM

a) Surface through Intermediate Casing Point:

Hole Size (in)	Depth (TVD/MD)	Mud Type	Density (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
30"	0-60'/60'	Fresh Water	8.3-9.2	38-100	4-28
12 1/4"	0'-500'/500'	Fresh Water	8.4-8.6	60-70	NC
8 3/4"	500'/500'-5686'/6031'	Fresh Water LSND	9.5-8.8	40-50	8-10

Escrito L14-2408 02H
SHL: NW SW 14 24N 8W
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San Juan, 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"	5686'/6031'- 5709'/10528'	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 +/- 2676 psi based on a 9.0 ppg at 5717' TVD of the horizontal lateral target. No abnormal pressure or temperatures are anticipated.

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

9. ANTICIPATED START DATE AND DURATION OF OPERATIONS

Drilling is estimated to commence on November 2, 2014. It is anticipated that completion operations will begin within 30 days after the well has been drilled depending on fracture treatment schedules with various pumping service companies.

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

LOC: SW/4 SW/4 14 24N 8W 430 FSL 330			Encana Natural Gas				ENG: S Kuykendall RIG: Aztec 850 GLE: 6896 RKBE: 6912		4/3/14		
County: San Juan			WELL SUMMARY								
WELL: Escrito L14-2408 02H											
MWD	OPEN HOLE		DEPTH			HOLE	CASING	MW	DEVIATION		
LWD	LOGGING	FORM	TVD	MD		SIZE	SPECS	MUD TYPE	INFORMATION		
			60	60'		30	20" 94# 100sx Type I Neat 16.0ppg cmt	Fresh wtr 8.3-9.2			
Multi-Well pad - take survey every stand and run anti- collision report prior to spud	None	Nacimiento 9 5/8" Csg	0 500	500.00		12 1/4	9 5/8" 36ppf J55 STC TOC Surface - 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. Menelee Fn. Point Lookout Ss. Mancos Shale	1,339 1,548 1,707 2,057 2,166 2,922 3,629 4,374 4,592		Stage tool @ ~ 2,216	8 3/4	7" 26ppf J55 LTC TOC @ surface - 30% OH excess: 711 sksTotal. Stage 1 Lead: 397 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: 313 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. 197 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	3,000 5,214 5,432 5,686	3,000 6,031'							
Surveys every stand to TD unless directed otherwise by Geologist	No OH Logs	Horizontal Target TD Base Gallup	5,717 5,709 5,767	10,528		6 1/8	200' overlap at liner top 4497' Drilled Lateral	Horizontal Inclination Horizontal TVD 8.6-9.0 OBM	Horz Inc/TVD /90.1 TD = 10527.9 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 KOP of 3000', 8 3/4 inch holesize
- 5) PU directional tools and start curve at 10deg/100' build rate
- 6) Drill to csg point of 6031' MD
- 7) R&C 7" csg, circ cmt to surface, switch to OBM
- 8) Land at 90 deg, drill lateral to 10528' 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

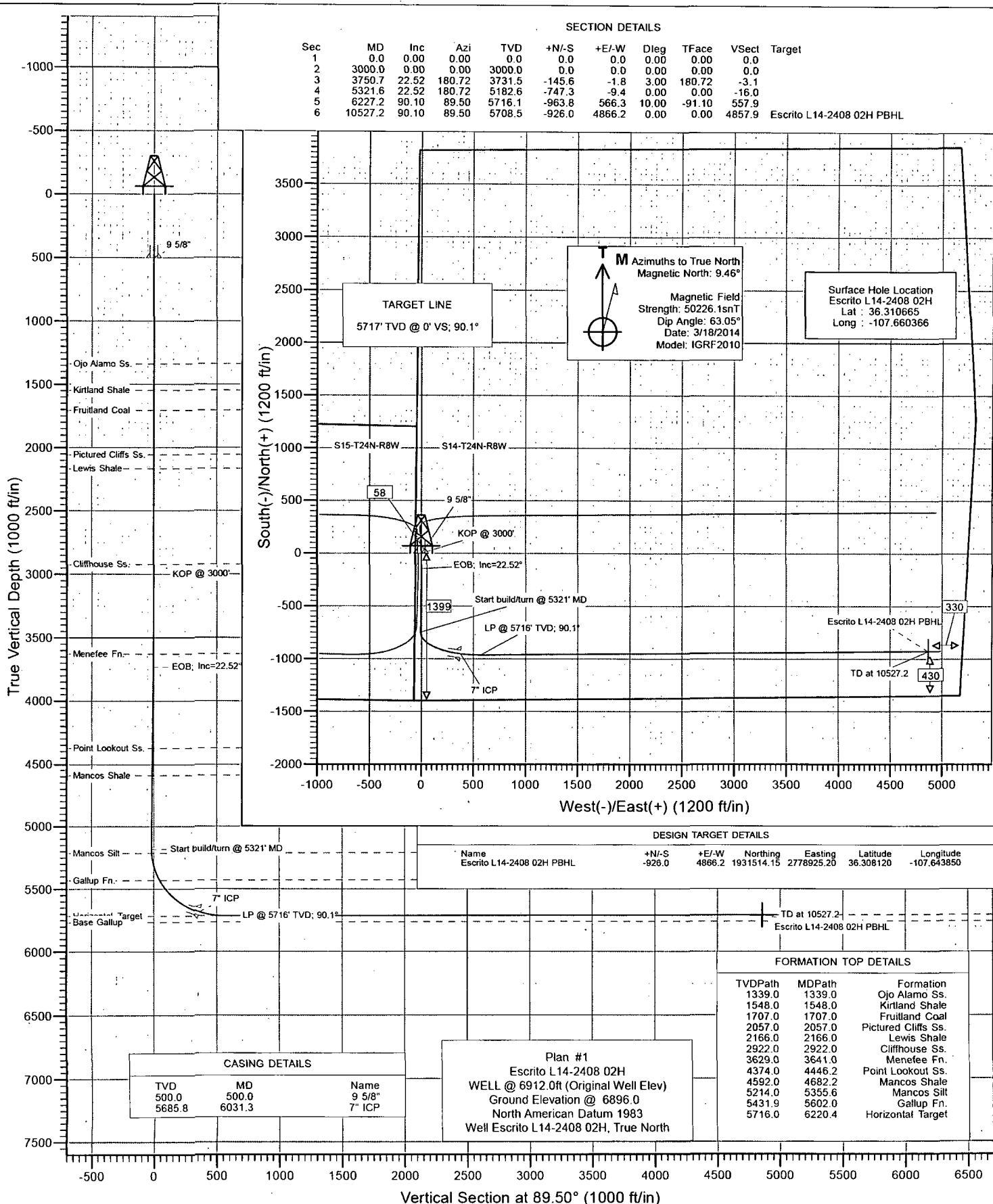
Minimum Make-up Torque (ft-lbs)	_____	1,640
Nominal Make-up Torque (ft-lbs)	_____	2,190
Maximum Make-up Torque (ft-lbs)	_____	2,740

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
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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	3000.0	0.00	0.00	3000.0	0.0	0.0	0.00	0.00	0.0	
3	3750.7	22.52	180.72	3731.5	-145.6	-1.8	3.00	180.72	-3.1	
4	5321.6	22.52	180.72	5182.6	-747.3	-9.4	0.00	0.00	-16.0	
5	6227.2	90.10	89.50	5716.1	-963.8	566.3	10.00	-91.10	557.9	
6	10527.2	90.10	89.50	5708.5	-926.0	4866.2	0.00	0.00	4857.9	Escrito L14-2408 02H PBHL



Database: USA EDM 5000 Multi Users DB
Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Site: S14-T24N-R8W
Well: Escrito L14-2408 02H
Wellbore: HZ
Design: Plan #1

Local Co-ordinate Reference: Well Escrito L14-2408 02H
TVD Reference: WELL @ 6912.0ft (Original Well Elev)
MD Reference: WELL @ 6912.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

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

Site	S14-T24N-R8W				
Site Position:		Northing:	1,932,462.42 ft	Latitude:	36.310750
From:	Lat/Long	Easting:	2,774,050.25 ft	Longitude:	-107.660390
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.10 °

Well	Escrito L14-2408 02H					
Well Position	+N/-S	0.0 ft	Northing:	1,932,431.49 ft	Latitude:	36.310665
	+E/-W	0.0 ft	Easting:	2,774,057.38 ft	Longitude:	-107.660366
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	6,896.0 ft

Wellbore	HZ					
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength	
			(°)	(°)	(nT)	
	IGRF2010	3/18/2014	9.46	63.05	50,226	

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	89.50

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	
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,750.7	22.52	180.72	3,731.5	-145.6	-1.8	3.00	3.00	0.00	180.72	
5,321.6	22.52	180.72	5,182.6	-747.3	-9.4	0.00	0.00	0.00	0.00	
6,227.2	90.10	89.50	5,716.1	-963.8	566.3	10.00	7.46	-10.07	-91.10	
10,527.2	90.10	89.50	5,708.5	-926.0	4,866.2	0.00	0.00	0.00	0.00	Escrito L14-2408 02H

Planning Report

Database: USA EDM 5000 Multi Users DB
Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Site: S14-T24N-R8W
Well: Escrito L14-2408 02H
Wellbore: HZ
Design: Plan #1

Local Co-ordinate Reference: Well Escrito L14-2408 02H
TVD Reference: WELL @ 6912.0ft (Original Well Elev)
MD Reference: WELL @ 6912.0ft (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"
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	
1,339.0	0.00	0.00	1,339.0	0.0	0.0	0.0	0.00	0.00	Ojo Alamo Ss.
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	
1,548.0	0.00	0.00	1,548.0	0.0	0.0	0.0	0.00	0.00	Kirtland Shale
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	
1,707.0	0.00	0.00	1,707.0	0.0	0.0	0.0	0.00	0.00	Fruitland Coal
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	
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	
2,057.0	0.00	0.00	2,057.0	0.0	0.0	0.0	0.00	0.00	Pictured Cliffs Ss.
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	
2,166.0	0.00	0.00	2,166.0	0.0	0.0	0.0	0.00	0.00	Lewis 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	
2,400.0	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	
2,700.0	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	
2,922.0	0.00	0.00	2,922.0	0.0	0.0	0.0	0.00	0.00	Cliffhouse Ss.
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	KOP @ 3000'
3,100.0	3.00	180.72	3,100.0	-2.6	0.0	-0.1	3.00	3.00	
3,200.0	6.00	180.72	3,199.6	-10.5	-0.1	-0.2	3.00	3.00	
3,300.0	9.00	180.72	3,298.8	-23.5	-0.3	-0.5	3.00	3.00	
3,400.0	12.00	180.72	3,397.1	-41.7	-0.5	-0.9	3.00	3.00	
3,500.0	15.00	180.72	3,494.3	-65.1	-0.8	-1.4	3.00	3.00	
3,600.0	18.00	180.72	3,590.2	-93.5	-1.2	-2.0	3.00	3.00	
3,641.0	19.23	180.72	3,629.0	-106.5	-1.3	-2.3	3.00	3.00	Menefee Fn.
3,700.0	21.00	180.72	3,684.4	-126.8	-1.6	-2.7	3.00	3.00	
3,750.7	22.52	180.72	3,731.5	-145.6	-1.8	-3.1	3.00	3.00	EOB; Inc=22.52°
3,800.0	22.52	180.72	3,777.1	-164.5	-2.1	-3.5	0.00	0.00	
3,900.0	22.52	180.72	3,869.4	-202.8	-2.6	-4.3	0.00	0.00	
4,000.0	22.52	180.72	3,961.8	-241.1	-3.0	-5.2	0.00	0.00	
4,100.0	22.52	180.72	4,054.2	-279.4	-3.5	-6.0	0.00	0.00	
4,200.0	22.52	180.72	4,146.6	-317.7	-4.0	-6.8	0.00	0.00	
4,300.0	22.52	180.72	4,238.9	-356.0	-4.5	-7.6	0.00	0.00	

Planning Report

Database: USA EDM 5000 Multi Users DB
Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Site: S14-T24N-R8W
Well: Escrito L14-2408 02H
Wellbore: HZ
Design: Plan #1

Local Co-ordinate Reference: Well Escrito L14-2408 02H
TVD Reference: WELL @ 6912.0ft (Original Well Elev)
MD Reference: WELL @ 6912.0ft (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
4,400.0	22.52	180.72	4,331.3	-394.3	-5.0	-8.4	0.00	0.00	
4,446.2	22.52	180.72	4,374.0	-412.0	-5.2	-8.8	0.00	0.00	Point Lookout Ss.
4,500.0	22.52	180.72	4,423.7	-432.6	-5.5	-9.2	0.00	0.00	
4,600.0	22.52	180.72	4,516.0	-470.9	-6.0	-10.1	0.00	0.00	
4,682.2	22.52	180.72	4,592.0	-502.4	-6.4	-10.7	0.00	0.00	Mancos Shale
4,700.0	22.52	180.72	4,608.4	-509.2	-6.4	-10.9	0.00	0.00	
4,800.0	22.52	180.72	4,700.8	-547.5	-6.9	-11.7	0.00	0.00	
4,900.0	22.52	180.72	4,793.2	-585.8	-7.4	-12.5	0.00	0.00	
5,000.0	22.52	180.72	4,885.5	-624.1	-7.9	-13.3	0.00	0.00	
5,100.0	22.52	180.72	4,977.9	-662.4	-8.4	-14.2	0.00	0.00	
5,200.0	22.52	180.72	5,070.3	-700.7	-8.9	-15.0	0.00	0.00	
5,300.0	22.52	180.72	5,162.7	-739.0	-9.3	-15.8	0.00	0.00	
5,321.6	22.52	180.72	5,182.6	-747.3	-9.4	-16.0	0.00	0.00	Start build/turn @ 5321' MD
5,350.0	22.64	173.32	5,208.8	-758.2	-8.9	-15.5	10.01	0.41	
5,355.6	22.70	171.87	5,214.0	-760.3	-8.6	-15.2	10.00	1.12	Mancos Silt
5,400.0	23.64	160.83	5,254.8	-777.2	-4.5	-11.2	10.00	2.11	
5,450.0	25.54	149.70	5,300.3	-796.0	4.3	-2.7	10.00	3.81	
5,500.0	28.17	140.26	5,345.0	-814.4	17.3	10.2	10.00	5.25	
5,550.0	31.34	132.45	5,388.4	-832.2	34.4	27.1	10.00	6.33	
5,600.0	34.89	126.01	5,430.3	-849.4	55.6	48.2	10.00	7.12	
5,602.0	35.04	125.77	5,431.9	-850.1	56.5	49.1	10.00	7.44	Gallup Fn.
5,650.0	38.73	120.66	5,470.3	-865.8	80.6	73.1	10.00	7.69	
5,700.0	42.78	116.15	5,508.2	-881.3	109.3	101.6	10.00	8.09	
5,750.0	46.98	112.30	5,543.6	-895.7	141.5	133.7	10.00	8.39	
5,800.0	51.29	108.95	5,576.3	-909.0	176.9	169.0	10.00	8.62	
5,850.0	55.68	105.98	5,606.1	-921.0	215.2	207.2	10.00	8.79	
5,900.0	60.14	103.31	5,632.6	-931.7	256.2	248.1	10.00	8.92	
5,950.0	64.65	100.87	5,655.8	-941.0	299.5	291.3	10.00	9.02	
6,000.0	69.20	98.60	5,675.4	-948.7	344.8	336.5	10.00	9.09	
6,031.3	72.06	97.25	5,685.8	-952.8	374.1	365.7	10.00	9.14	7" ICP
6,050.0	73.77	96.47	5,691.3	-954.9	391.8	383.5	10.00	9.16	
6,100.0	78.36	94.44	5,703.3	-959.5	440.1	431.7	10.00	9.19	
6,150.0	82.97	92.47	5,711.4	-962.5	489.4	480.9	10.00	9.22	
6,200.0	87.59	90.54	5,715.5	-963.8	539.1	530.7	10.00	9.23	
6,220.4	89.48	89.76	5,716.0	-963.9	559.6	551.1	10.00	9.24	Horizontal Target
6,227.2	90.10	89.50	5,716.1	-963.8	566.3	557.9	10.00	9.24	LP @ 5716' TVD; 90.1°
6,300.0	90.10	89.50	5,715.9	-963.2	639.1	630.7	0.00	0.00	
6,400.0	90.10	89.50	5,715.8	-962.3	739.1	730.7	0.00	0.00	
6,500.0	90.10	89.50	5,715.6	-961.4	839.1	830.7	0.00	0.00	
6,600.0	90.10	89.50	5,715.4	-960.5	939.1	930.7	0.00	0.00	
6,700.0	90.10	89.50	5,715.2	-959.7	1,039.1	1,030.7	0.00	0.00	
6,800.0	90.10	89.50	5,715.1	-958.8	1,139.1	1,130.7	0.00	0.00	
6,900.0	90.10	89.50	5,714.9	-957.9	1,239.1	1,230.7	0.00	0.00	
7,000.0	90.10	89.50	5,714.7	-957.0	1,339.1	1,330.7	0.00	0.00	
7,100.0	90.10	89.50	5,714.5	-956.1	1,439.1	1,430.7	0.00	0.00	
7,200.0	90.10	89.50	5,714.4	-955.3	1,539.1	1,530.7	0.00	0.00	
7,300.0	90.10	89.50	5,714.2	-954.4	1,639.1	1,630.7	0.00	0.00	
7,400.0	90.10	89.50	5,714.0	-953.5	1,739.1	1,730.7	0.00	0.00	
7,500.0	90.10	89.50	5,713.8	-952.6	1,839.1	1,830.7	0.00	0.00	
7,600.0	90.10	89.50	5,713.6	-951.8	1,939.1	1,930.7	0.00	0.00	
7,700.0	90.10	89.50	5,713.5	-950.9	2,039.1	2,030.7	0.00	0.00	
7,800.0	90.10	89.50	5,713.3	-950.0	2,139.1	2,130.7	0.00	0.00	

Planning Report

Database: USA EDM 5000 Multi Users DB
 Company: EnCana Oil & Gas (USA) Inc
 Project: San Juan County, NM
 Site: S14-T24N-R8W
 Well: Escrito L14-2408 02H
 Wellbore: HZ
 Design: Plan #1

Local Co-ordinate Reference: Well Escrito L14-2408 02H
 TVD Reference: WELL @ 6912.0ft (Original Well Elev)
 MD Reference: WELL @ 6912.0ft (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
7,900.0	90.10	89.50	5,713.1	-949.1	2,239.1	2,230.7	0.00	0.00	
8,000.0	90.10	89.50	5,712.9	-948.2	2,339.1	2,330.7	0.00	0.00	
8,100.0	90.10	89.50	5,712.8	-947.4	2,439.1	2,430.7	0.00	0.00	
8,200.0	90.10	89.50	5,712.6	-946.5	2,539.1	2,530.7	0.00	0.00	
8,300.0	90.10	89.50	5,712.4	-945.6	2,639.1	2,630.7	0.00	0.00	
8,400.0	90.10	89.50	5,712.2	-944.7	2,739.1	2,730.7	0.00	0.00	
8,500.0	90.10	89.50	5,712.1	-943.8	2,839.0	2,830.7	0.00	0.00	
8,600.0	90.10	89.50	5,711.9	-943.0	2,939.0	2,930.7	0.00	0.00	
8,700.0	90.10	89.50	5,711.7	-942.1	3,039.0	3,030.7	0.00	0.00	
8,800.0	90.10	89.50	5,711.5	-941.2	3,139.0	3,130.7	0.00	0.00	
8,900.0	90.10	89.50	5,711.4	-940.3	3,239.0	3,230.7	0.00	0.00	
9,000.0	90.10	89.50	5,711.2	-939.5	3,339.0	3,330.7	0.00	0.00	
9,100.0	90.10	89.50	5,711.0	-938.6	3,439.0	3,430.7	0.00	0.00	
9,200.0	90.10	89.50	5,710.8	-937.7	3,539.0	3,530.7	0.00	0.00	
9,300.0	90.10	89.50	5,710.7	-936.8	3,639.0	3,630.7	0.00	0.00	
9,400.0	90.10	89.50	5,710.5	-935.9	3,739.0	3,730.7	0.00	0.00	
9,500.0	90.10	89.50	5,710.3	-935.1	3,839.0	3,830.7	0.00	0.00	
9,600.0	90.10	89.50	5,710.1	-934.2	3,939.0	3,930.7	0.00	0.00	
9,700.0	90.10	89.50	5,710.0	-933.3	4,039.0	4,030.7	0.00	0.00	
9,800.0	90.10	89.50	5,709.8	-932.4	4,139.0	4,130.7	0.00	0.00	
9,900.0	90.10	89.50	5,709.6	-931.5	4,239.0	4,230.7	0.00	0.00	
10,000.0	90.10	89.50	5,709.4	-930.7	4,339.0	4,330.7	0.00	0.00	
10,100.0	90.10	89.50	5,709.3	-929.8	4,439.0	4,430.7	0.00	0.00	
10,200.0	90.10	89.50	5,709.1	-928.9	4,539.0	4,530.7	0.00	0.00	
10,300.0	90.10	89.50	5,708.9	-928.0	4,639.0	4,630.7	0.00	0.00	
10,400.0	90.10	89.50	5,708.7	-927.2	4,739.0	4,730.7	0.00	0.00	
10,500.0	90.10	89.50	5,708.5	-926.3	4,839.0	4,830.7	0.00	0.00	
10,527.2	90.10	89.50	5,708.5	-926.0	4,866.2	4,857.9	0.00	0.00	TD at 10527.2

Targets

Target Name

- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- Shape									
Escrito L14-2407 02H PI	0.00	0.00	5,716.6	-966.5	261.0	1,931,465.46	2,774,320.15	36.308010	-107.659480
- plan misses target center by 76.3ft at 5949.6ft MD (5655.6 TVD, -940.9 N, 299.1 E)									
- Point									
Escrito L14-2408 02H PI	0.00	0.00	5,708.5	-926.0	4,866.2	1,931,514.15	2,778,925.20	36.308120	-107.643850
- plan hits target center									
- Point									

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
6,031.3	5,685.8	7" ICP	0.000	0.000
500.0	500.0	9 5/8"	0.000	0.000

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MD Reference: WELL @ 6912.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,339.0	1,339.0	Ojo Alamo Ss.		-0.10	89.50
1,548.0	1,548.0	Kirtland Shale		-0.10	89.50
1,707.0	1,707.0	Fruiland Coal		-0.10	89.50
2,057.0	2,057.0	Pictured Cliffs Ss.		-0.10	89.50
2,166.0	2,166.0	Lewis Shale		-0.10	89.50
2,922.0	2,922.0	Cliffhouse Ss.		-0.10	89.50
3,641.0	3,629.0	Menefee Fn.		-0.10	89.50
4,446.2	4,374.0	Point Lookout Ss.		-0.10	89.50
4,682.2	4,592.0	Mancos Shale		-0.10	89.50
5,355.6	5,214.0	Mancos Silt		-0.10	89.50
5,602.0	5,432.0	Gallup Fn.		-0.10	89.50
6,220.4	5,717.0	Horizontal Target		-0.10	89.50

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
3,000.0	3,000.0	0.0	0.0	KOP @ 3000'
3,750.7	3,731.5	-145.6	-1.8	EOB; Inc=22.52°
5,321.6	5,182.6	-747.3	-9.4	Start build/turn @ 5321' MD
6,227.2	5,716.1	-963.8	566.3	LP @ 5716' TVD; 90.1°
10,527.2	5,708.5	-926.0	4,866.2	TD at 10527.2



EnCana Oil & Gas (USA) Inc

San Juan County, NM

S14-T24N-R8W

Escrito L14-2408 02H

HZ

Plan #1

Anticollision Report

31 March, 2014



Anticollision Report

Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Reference Site: S14-T24N-R8W
Site Error: 0.0ft
Reference Well: Escrito L14-2408 02H
Well Error: 0.0ft
Reference Wellbore: HZ
Reference Design: Plan #1

Local Co-ordinate Reference: Well Escrito L14-2408 02H
TVD Reference: WELL @ 6912.0ft (Original Well Elev)
MD Reference: WELL @ 6912.0ft (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:	Stations
Depth Range:	Unlimited
Results Limited by:	Maximum center-center distance of 1,550.0ft
Warning Levels Evaluated at:	2.00 Sigma
Error Model:	Systematic Ellipse
Scan Method:	Closest Approach 3D
Error Surface:	Elliptical Conic

Survey Tool Program	Date	3/31/2014
From (ft)	To (ft)	Survey (Wellbore)
0.0	10,527.2	Plan #1 (HZ)
		Tool Name
		Geolink MWD
		Description
		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						
S14-T24N-R8W						
Escrito L14-2408 01H - HZ - Plan #1	3,000.0	3,000.0	30.2	19.8	2.898	CC, ES, SF
Escrito L14-2408 03H - HZ - Plan #1	3,158.3	3,158.2	29.4	18.4	2.678	CC, ES
Escrito L14-2408 03H - HZ - Plan #1	5,400.0	5,429.8	66.0	38.7	2.417	SF
Escrito L14-2408 03H - Pilot Hole - Plan #1	3,158.3	3,158.2	29.4	18.4	2.678	CC, ES
Escrito L14-2408 03H - Pilot Hole - Plan #1	3,200.0	3,199.6	29.6	18.5	2.666	SF
Escrito L14-2408 04H - HZ - Plan #1	3,000.0	3,000.0	42.6	32.2	4.089	CC, ES, SF



Anticollision Report

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Reference Well: Escrito L14-2408 02H
Well Error: 0.0ft
Reference Wellbore: HZ
Reference Design: Plan #1

Local Co-ordinate Reference: Well Escrito L14-2408 02H
TVD Reference: WELL @ 6912.0ft (Original Well Elev)
MD Reference: WELL @ 6912.0ft (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 S14-T24N-R8W - Escrito L14-2408 01H - 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			
0.0	0.0	0.0	0.0	0.0	0.0	-12.40	29.5	-6.5	30.2						
100.0	100.0	100.0	100.0	0.1	0.1	-12.40	29.5	-6.5	30.2	29.9	0.29	102.963			
200.0	200.0	200.0	200.0	0.3	0.3	-12.40	29.5	-6.5	30.2	29.5	0.64	47.005			
300.0	300.0	300.0	300.0	0.5	0.5	-12.40	29.5	-6.5	30.2	29.2	0.99	30.454			
400.0	400.0	400.0	400.0	0.7	0.7	-12.40	29.5	-6.5	30.2	28.8	1.34	22.523			
500.0	500.0	500.0	500.0	0.8	0.8	-12.40	29.5	-6.5	30.2	28.5	1.69	17.870			
600.0	600.0	600.0	600.0	1.0	1.0	-12.40	29.5	-6.5	30.2	28.2	2.04	14.810			
700.0	700.0	700.0	700.0	1.2	1.2	-12.40	29.5	-6.5	30.2	27.8	2.39	12.645			
800.0	800.0	800.0	800.0	1.4	1.4	-12.40	29.5	-6.5	30.2	27.5	2.74	11.032			
900.0	900.0	900.0	900.0	1.5	1.5	-12.40	29.5	-6.5	30.2	27.1	3.09	9.784			
1,000.0	1,000.0	1,000.0	1,000.0	1.7	1.7	-12.40	29.5	-6.5	30.2	26.8	3.43	8.790			
1,100.0	1,100.0	1,100.0	1,100.0	1.9	1.9	-12.40	29.5	-6.5	30.2	26.4	3.78	7.979			
1,200.0	1,200.0	1,200.0	1,200.0	2.1	2.1	-12.40	29.5	-6.5	30.2	26.1	4.13	7.305			
1,300.0	1,300.0	1,300.0	1,300.0	2.2	2.2	-12.40	29.5	-6.5	30.2	25.7	4.48	6.736			
1,400.0	1,400.0	1,400.0	1,400.0	2.4	2.4	-12.40	29.5	-6.5	30.2	25.4	4.83	6.249			
1,500.0	1,500.0	1,500.0	1,500.0	2.6	2.6	-12.40	29.5	-6.5	30.2	25.0	5.18	5.828			
1,600.0	1,600.0	1,600.0	1,600.0	2.8	2.8	-12.40	29.5	-6.5	30.2	24.7	5.53	5.460			
1,700.0	1,700.0	1,700.0	1,700.0	2.9	2.9	-12.40	29.5	-6.5	30.2	24.3	5.88	5.136			
1,800.0	1,800.0	1,800.0	1,800.0	3.1	3.1	-12.40	29.5	-6.5	30.2	24.0	6.23	4.848			
1,900.0	1,900.0	1,900.0	1,900.0	3.3	3.3	-12.40	29.5	-6.5	30.2	23.6	6.58	4.591			
2,000.0	2,000.0	2,000.0	2,000.0	3.5	3.5	-12.40	29.5	-6.5	30.2	23.3	6.93	4.359			
2,100.0	2,100.0	2,100.0	2,100.0	3.6	3.6	-12.40	29.5	-6.5	30.2	22.9	7.27	4.150			
2,200.0	2,200.0	2,200.0	2,200.0	3.8	3.8	-12.40	29.5	-6.5	30.2	22.6	7.62	3.960			
2,300.0	2,300.0	2,300.0	2,300.0	4.0	4.0	-12.40	29.5	-6.5	30.2	22.2	7.97	3.787			
2,400.0	2,400.0	2,400.0	2,400.0	4.2	4.2	-12.40	29.5	-6.5	30.2	21.9	8.32	3.628			
2,500.0	2,500.0	2,500.0	2,500.0	4.3	4.3	-12.40	29.5	-6.5	30.2	21.5	8.67	3.482			
2,600.0	2,600.0	2,600.0	2,600.0	4.5	4.5	-12.40	29.5	-6.5	30.2	21.2	9.02	3.347			
2,700.0	2,700.0	2,700.0	2,700.0	4.7	4.7	-12.40	29.5	-6.5	30.2	20.8	9.37	3.222			
2,800.0	2,800.0	2,800.0	2,800.0	4.9	4.9	-12.40	29.5	-6.5	30.2	20.5	9.72	3.107			
2,900.0	2,900.0	2,900.0	2,900.0	5.0	5.0	-12.40	29.5	-6.5	30.2	20.1	10.07	2.999			
3,000.0	3,000.0	3,000.0	3,000.0	5.2	5.2	-12.40	29.5	-6.5	30.2	19.8	10.42	2.898 CC, ES, SF			
3,100.0	3,100.0	3,100.0	3,100.0	5.4	5.4	167.90	29.5	-6.5	32.7	22.0	10.76	3.044			
3,200.0	3,199.6	3,199.6	3,199.6	5.6	5.6	170.19	29.5	-6.5	40.4	29.4	11.08	3.652			
3,300.0	3,298.8	3,298.8	3,298.8	5.8	5.7	172.53	29.5	-6.5	53.4	42.0	11.37	4.692			
3,400.0	3,397.1	3,397.1	3,397.1	6.0	5.9	174.37	29.5	-6.5	71.5	59.8	11.65	6.137			
3,500.0	3,494.3	3,494.3	3,494.3	6.2	6.1	175.70	29.5	-6.5	94.7	82.8	11.90	7.964			
3,600.0	3,590.2	3,584.7	3,584.6	6.5	6.2	176.61	31.4	-6.5	125.1	113.0	12.11	10.328			
3,700.0	3,684.4	3,670.0	3,669.8	6.9	6.4	177.22	37.0	-6.7	164.6	152.3	12.29	13.392			
3,750.7	3,731.5	3,711.2	3,710.8	7.1	6.5	177.44	41.1	-6.8	188.0	175.6	12.37	15.196			
3,800.0	3,777.1	3,750.1	3,749.4	7.3	6.5	177.65	45.8	-7.0	212.2	199.7	12.52	16.944			
3,900.0	3,869.4	3,831.5	3,829.9	7.8	6.7	177.96	57.7	-7.3	263.5	250.7	12.84	20.528			
4,000.0	3,961.8	3,917.1	3,914.5	8.3	6.9	178.18	70.5	-7.7	315.2	302.1	13.16	23.962			
4,100.0	4,054.2	4,002.7	3,999.1	8.8	7.0	178.33	83.3	-8.1	366.9	353.5	13.47	27.234			
4,200.0	4,146.6	4,088.2	4,083.8	9.4	7.2	178.45	96.2	-8.5	418.7	404.9	13.79	30.355			
4,300.0	4,238.9	4,173.8	4,168.4	9.9	7.4	178.55	109.0	-8.8	470.4	456.3	14.11	33.336			
4,400.0	4,331.3	4,259.4	4,253.0	10.5	7.6	178.62	121.8	-9.2	522.1	507.7	14.43	36.187			
4,500.0	4,423.7	4,345.0	4,337.6	11.1	7.8	178.68	134.7	-9.6	573.8	559.1	14.75	38.915			
4,600.0	4,516.0	4,430.6	4,422.2	11.7	8.0	178.73	147.5	-10.0	625.5	610.5	15.06	41.529			
4,700.0	4,608.4	4,516.2	4,506.8	12.3	8.2	178.78	160.3	-10.4	677.2	661.9	15.38	44.035			
4,800.0	4,700.8	4,601.8	4,591.5	12.9	8.4	178.81	173.2	-10.7	729.0	713.3	15.70	46.440			
4,900.0	4,793.2	4,687.3	4,676.1	13.6	8.6	178.84	186.0	-11.1	780.7	764.7	16.01	48.751			
5,000.0	4,885.5	4,772.9	4,760.7	14.2	8.9	178.87	198.9	-11.5	832.4	816.1	16.33	50.972			

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



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Output errors are at 2.00 sigma
Database: USA EDM 5000 Multi Users DB
Offset TVD Reference: Offset Datum

Offset Design S14-T24N-R8W - Escrito L14-2408 01H - 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			
5,100.0	4,977.9	4,858.5	4,845.3	14.8	9.1	178.90	211.7	-11.9	884.1	867.5	16.65	53.109			
5,200.0	5,070.3	4,944.1	4,929.9	15.5	9.3	178.92	224.5	-12.3	935.8	918.9	16.96	55.167			
5,300.0	5,162.7	5,029.7	5,014.6	16.1	9.5	178.94	237.4	-12.6	987.6	970.3	17.28	57.150			
5,321.6	5,182.6	5,048.2	5,032.8	16.3	9.6	178.94	240.1	-12.7	998.7	981.4	17.35	57.568			
5,350.0	5,208.8	5,072.5	5,056.9	16.4	9.6	-172.55	243.8	-12.8	1,013.4	996.0	17.44	58.095			
5,400.0	5,254.8	5,115.1	5,099.0	16.8	9.7	-158.34	250.2	-13.0	1,039.2	1,021.5	17.69	58.741			
5,450.0	5,300.3	5,157.2	5,140.6	17.1	9.9	-145.80	256.5	-13.2	1,064.7	1,046.6	18.03	59.062			
5,500.0	5,345.0	5,198.6	5,181.5	17.4	10.0	-135.23	262.7	-13.4	1,089.8	1,071.4	18.43	59.123			
5,550.0	5,388.4	5,241.6	5,224.0	17.7	10.1	-126.52	269.1	-11.8	1,114.5	1,095.7	18.89	58.989			
5,600.0	5,430.3	5,286.0	5,267.6	18.0	10.2	-119.34	275.8	-6.9	1,138.7	1,119.2	19.40	58.687			
5,650.0	5,470.3	5,332.1	5,312.4	18.4	10.3	-113.43	282.7	1.9	1,162.0	1,142.0	19.94	58.286			
5,700.0	5,508.2	5,380.4	5,358.3	18.7	10.5	-108.57	289.7	15.0	1,184.4	1,163.9	20.49	57.801			
5,750.0	5,543.6	5,431.0	5,405.1	19.0	10.6	-104.57	297.0	32.8	1,205.7	1,184.6	21.06	57.237			
5,800.0	5,576.3	5,484.5	5,452.7	19.4	10.8	-101.29	304.4	56.1	1,225.7	1,204.0	21.67	56.567			
5,850.0	5,606.1	5,541.3	5,500.5	19.8	11.1	-98.63	312.0	85.7	1,244.3	1,222.0	22.32	55.737			
5,900.0	5,632.6	5,601.7	5,548.0	20.2	11.4	-96.49	319.5	122.2	1,261.2	1,238.1	23.07	54.664			
5,950.0	5,655.8	5,666.1	5,594.2	20.6	11.8	-94.81	326.9	166.4	1,276.3	1,252.3	23.98	53.226			
6,000.0	5,675.4	5,734.7	5,637.5	21.0	12.3	-93.52	333.9	219.0	1,289.4	1,264.3	25.10	51.380			
6,050.0	5,691.3	5,807.5	5,676.4	21.5	13.1	-92.59	340.4	280.1	1,300.2	1,273.7	26.49	49.092			
6,100.0	5,703.3	5,884.1	5,708.8	22.0	14.1	-91.95	345.9	349.3	1,308.6	1,280.4	28.20	46.402			
6,150.0	5,711.4	5,964.1	5,732.5	22.6	15.3	-91.56	350.2	425.5	1,314.4	1,284.2	30.23	43.485			
6,200.0	5,715.5	6,046.3	5,745.7	23.1	16.7	-91.39	352.9	506.6	1,317.5	1,285.0	32.51	40.529			
6,227.2	5,716.1	6,091.6	5,748.0	23.5	17.6	-91.39	353.7	551.8	1,318.0	1,284.1	33.82	38.965			
6,300.0	5,715.9	6,167.6	5,747.9	24.4	19.1	-91.39	354.3	627.8	1,318.0	1,281.1	36.89	35.729			
6,400.0	5,715.8	6,267.6	5,747.7	25.9	21.1	-91.39	355.2	727.8	1,317.9	1,276.8	41.15	32.026			
6,500.0	5,715.6	6,367.6	5,747.5	27.5	23.3	-91.39	356.1	827.8	1,317.9	1,272.4	45.56	28.930			
6,600.0	5,715.4	6,467.6	5,747.4	29.3	25.5	-91.39	356.9	927.7	1,317.9	1,267.9	50.06	26.326			
6,700.0	5,715.2	6,567.6	5,747.2	31.2	27.7	-91.39	357.8	1,027.7	1,317.9	1,263.3	54.64	24.118			
6,800.0	5,715.1	6,667.6	5,747.0	33.2	30.0	-91.39	358.7	1,127.7	1,317.9	1,258.6	59.29	22.230			
6,900.0	5,714.9	6,767.6	5,746.8	35.2	32.3	-91.39	359.5	1,227.7	1,317.9	1,253.9	63.97	20.601			
7,000.0	5,714.7	6,867.6	5,746.7	37.3	34.7	-91.39	360.4	1,327.7	1,317.9	1,249.2	68.70	19.184			
7,100.0	5,714.5	6,967.6	5,746.5	39.5	37.0	-91.39	361.3	1,427.7	1,317.9	1,244.4	73.45	17.942			
7,200.0	5,714.4	7,067.6	5,746.3	41.7	39.4	-91.39	362.2	1,527.7	1,317.9	1,239.6	78.23	16.847			
7,300.0	5,714.2	7,167.6	5,746.2	43.9	41.8	-91.39	363.0	1,627.7	1,317.8	1,234.8	83.02	15.873			
7,400.0	5,714.0	7,267.6	5,746.0	46.2	44.2	-91.39	363.9	1,727.7	1,317.8	1,230.0	87.84	15.003			
7,500.0	5,713.8	7,367.6	5,745.8	48.5	46.6	-91.39	364.8	1,827.7	1,317.8	1,225.2	92.67	14.221			
7,600.0	5,713.6	7,467.6	5,745.6	50.8	49.0	-91.39	365.6	1,927.7	1,317.8	1,220.3	97.51	13.515			
7,700.0	5,713.5	7,567.6	5,745.5	53.1	51.4	-91.39	366.5	2,027.7	1,317.8	1,215.4	102.36	12.875			
7,800.0	5,713.3	7,667.6	5,745.3	55.4	53.8	-91.39	367.4	2,127.7	1,317.8	1,210.6	107.22	12.291			
7,900.0	5,713.1	7,767.6	5,745.1	57.8	56.2	-91.39	368.2	2,227.7	1,317.8	1,205.7	112.08	11.757			
8,000.0	5,712.9	7,867.6	5,744.9	60.2	58.7	-91.39	369.1	2,327.7	1,317.8	1,200.8	116.96	11.267			
8,100.0	5,712.8	7,967.6	5,744.8	62.5	61.1	-91.39	370.0	2,427.7	1,317.8	1,195.9	121.83	10.816			
8,200.0	5,712.6	8,067.6	5,744.6	64.9	63.5	-91.39	370.8	2,527.7	1,317.7	1,191.0	126.72	10.399			
8,300.0	5,712.4	8,167.6	5,744.4	67.3	66.0	-91.39	371.7	2,627.7	1,317.7	1,186.1	131.61	10.013			
8,400.0	5,712.2	8,267.6	5,744.2	69.7	68.4	-91.39	372.6	2,727.7	1,317.7	1,181.2	136.50	9.653			
8,500.0	5,712.1	8,367.6	5,744.1	72.1	70.9	-91.39	373.4	2,827.7	1,317.7	1,176.3	141.40	9.319			
8,600.0	5,711.9	8,467.6	5,743.9	74.5	73.3	-91.39	374.3	2,927.7	1,317.7	1,171.4	146.30	9.007			
8,700.0	5,711.7	8,567.6	5,743.7	76.9	75.8	-91.39	375.2	3,027.7	1,317.7	1,166.5	151.20	8.715			
8,800.0	5,711.5	8,667.6	5,743.5	79.3	78.2	-91.39	376.0	3,127.7	1,317.7	1,161.6	156.11	8.441			
8,900.0	5,711.4	8,767.6	5,743.4	81.7	80.7	-91.39	376.9	3,227.7	1,317.7	1,156.7	161.02	8.183			
9,000.0	5,711.2	8,867.6	5,743.2	84.1	83.1	-91.39	377.8	3,327.7	1,317.7	1,151.7	165.93	7.941			
9,100.0	5,711.0	8,967.6	5,743.0	86.6	85.6	-91.39	378.6	3,427.7	1,317.7	1,146.8	170.84	7.713			

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: San Juan County, NM
Reference Site: S14-T24N-R8W
Site Error: 0.0ft
Reference Well: Escrito L14-2408 02H
Well Error: 0.0ft
Reference Wellbore: HZ
Reference Design: Plan #1

Local Co-ordinate Reference: Well Escrito L14-2408 02H
TVD Reference: WELL @ 6912.0ft (Original Well Elev)
MD Reference: WELL @ 6912.0ft (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 S14-T24N-R8W - Escrito L14-2408 01H - 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			
9,200.0	5,710.8	9,067.6	5,742.9	89.0	88.0	-91.39	379.5	3,527.6	1,317.6	1,141.9	175.76	7.497			
9,300.0	5,710.7	9,167.6	5,742.7	91.4	90.5	-91.39	380.4	3,627.6	1,317.6	1,137.0	180.68	7.293			
9,400.0	5,710.5	9,267.6	5,742.5	93.8	92.9	-91.39	381.2	3,727.6	1,317.6	1,132.0	185.60	7.099			
9,500.0	5,710.3	9,367.6	5,742.3	96.3	95.4	-91.39	382.1	3,827.6	1,317.6	1,127.1	190.52	6.916			
9,600.0	5,710.1	9,467.6	5,742.2	98.7	97.8	-91.39	383.0	3,927.6	1,317.6	1,122.2	195.44	6.742			
9,700.0	5,710.0	9,567.6	5,742.0	101.2	100.3	-91.39	383.8	4,027.6	1,317.6	1,117.2	200.36	6.576			
9,800.0	5,709.8	9,667.6	5,741.8	103.6	102.8	-91.39	384.7	4,127.6	1,317.6	1,112.3	205.28	6.418			
9,900.0	5,709.6	9,767.6	5,741.6	106.0	105.2	-91.39	385.6	4,227.6	1,317.6	1,107.4	210.21	6.268			
10,000.0	5,709.4	9,867.6	5,741.5	108.5	107.7	-91.39	386.4	4,327.6	1,317.6	1,102.4	215.13	6.124			
10,100.0	5,709.3	9,967.6	5,741.3	110.9	110.1	-91.39	387.3	4,427.6	1,317.5	1,097.5	220.06	5.987			
10,200.0	5,709.1	10,067.6	5,741.1	113.4	112.6	-91.39	388.2	4,527.6	1,317.5	1,092.5	224.99	5.856			
10,300.0	5,708.9	10,167.6	5,740.9	115.8	115.1	-91.39	389.1	4,627.6	1,317.5	1,087.6	229.92	5.730			
10,400.0	5,708.7	10,267.6	5,740.8	118.3	117.5	-91.39	389.9	4,727.6	1,317.5	1,082.7	234.85	5.610			
10,500.0	5,708.5	10,367.6	5,740.6	120.7	120.0	-91.39	390.8	4,827.6	1,317.5	1,077.7	239.78	5.495			
10,527.2	5,708.5	10,394.8	5,740.5	121.4	120.7	-91.39	391.0	4,854.8	1,317.5	1,076.4	241.12	5.464			
10,527.9	5,708.5	10,395.5	5,740.5	121.4	120.7	-91.39	391.0	4,855.5	1,317.5	1,076.3	241.15	5.463			

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Project: San Juan County, NM
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Reference Wellbore: HZ
Reference Design: Plan #1

Local Co-ordinate Reference: Well Escrito L14-2408 02H
TVD Reference: WELL @ 6912.0ft (Original Well Elev)
MD Reference: WELL @ 6912.0ft (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 S14-T24N-R8W - Escrito L14-2408 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		Highside Toolface (°)	Distance		Between Centres (ft)	Between Ellipses (ft)	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)							
0.0	0.0	0.0	0.0	0.0	0.0	-101.86	-6.2	-29.5	30.1						
100.0	100.0	100.0	100.0	0.1	0.1	-101.86	-6.2	-29.5	30.1	29.8	0.29	102.673			
200.0	200.0	200.0	200.0	0.3	0.3	-101.86	-6.2	-29.5	30.1	29.5	0.64	46.873			
300.0	300.0	300.0	300.0	0.5	0.5	-101.86	-6.2	-29.5	30.1	29.1	0.99	30.368			
400.0	400.0	400.0	400.0	0.7	0.7	-101.86	-6.2	-29.5	30.1	28.8	1.34	22.460			
500.0	500.0	500.0	500.0	0.8	0.8	-101.86	-6.2	-29.5	30.1	28.4	1.69	17.819			
600.0	600.0	600.0	600.0	1.0	1.0	-101.86	-6.2	-29.5	30.1	28.1	2.04	14.768			
700.0	700.0	700.0	700.0	1.2	1.2	-101.86	-6.2	-29.5	30.1	27.7	2.39	12.609			
800.0	800.0	800.0	800.0	1.4	1.4	-101.86	-6.2	-29.5	30.1	27.4	2.74	11.001			
900.0	900.0	900.0	900.0	1.5	1.5	-101.86	-6.2	-29.5	30.1	27.0	3.09	9.756			
1,000.0	1,000.0	1,000.0	1,000.0	1.7	1.7	-101.86	-6.2	-29.5	30.1	26.7	3.43	8.765			
1,100.0	1,100.0	1,100.0	1,100.0	1.9	1.9	-101.86	-6.2	-29.5	30.1	26.3	3.78	7.956			
1,200.0	1,200.0	1,200.0	1,200.0	2.1	2.1	-101.86	-6.2	-29.5	30.1	26.0	4.13	7.284			
1,300.0	1,300.0	1,300.0	1,300.0	2.2	2.2	-101.86	-6.2	-29.5	30.1	25.6	4.48	6.717			
1,400.0	1,400.0	1,400.0	1,400.0	2.4	2.4	-101.86	-6.2	-29.5	30.1	25.3	4.83	6.232			
1,500.0	1,500.0	1,500.0	1,500.0	2.6	2.6	-101.86	-6.2	-29.5	30.1	24.9	5.18	5.812			
1,600.0	1,600.0	1,600.0	1,600.0	2.8	2.8	-101.86	-6.2	-29.5	30.1	24.6	5.53	5.445			
1,700.0	1,700.0	1,700.0	1,700.0	2.9	2.9	-101.86	-6.2	-29.5	30.1	24.2	5.88	5.121			
1,800.0	1,800.0	1,800.0	1,800.0	3.1	3.1	-101.86	-6.2	-29.5	30.1	23.9	6.23	4.834			
1,900.0	1,900.0	1,900.0	1,900.0	3.3	3.3	-101.86	-6.2	-29.5	30.1	23.5	6.58	4.578			
2,000.0	2,000.0	2,000.0	2,000.0	3.5	3.5	-101.86	-6.2	-29.5	30.1	23.2	6.93	4.347			
2,100.0	2,100.0	2,100.0	2,100.0	3.6	3.6	-101.86	-6.2	-29.5	30.1	22.8	7.27	4.138			
2,200.0	2,200.0	2,200.0	2,200.0	3.8	3.8	-101.86	-6.2	-29.5	30.1	22.5	7.62	3.949			
2,300.0	2,300.0	2,300.0	2,300.0	4.0	4.0	-101.86	-6.2	-29.5	30.1	22.1	7.97	3.776			
2,400.0	2,400.0	2,400.0	2,400.0	4.2	4.2	-101.86	-6.2	-29.5	30.1	21.8	8.32	3.618			
2,500.0	2,500.0	2,500.0	2,500.0	4.3	4.3	-101.86	-6.2	-29.5	30.1	21.4	8.67	3.472			
2,600.0	2,600.0	2,600.0	2,600.0	4.5	4.5	-101.86	-6.2	-29.5	30.1	21.1	9.02	3.338			
2,700.0	2,700.0	2,700.0	2,700.0	4.7	4.7	-101.86	-6.2	-29.5	30.1	20.7	9.37	3.213			
2,800.0	2,800.0	2,800.0	2,800.0	4.9	4.9	-101.86	-6.2	-29.5	30.1	20.4	9.72	3.098			
2,900.0	2,900.0	2,900.0	2,900.0	5.0	5.0	-101.86	-6.2	-29.5	30.1	20.0	10.07	2.990			
3,000.0	3,000.0	3,000.0	3,000.0	5.2	5.2	-101.86	-6.2	-29.5	30.1	19.7	10.42	2.890			
3,100.0	3,100.0	3,100.0	3,100.0	5.4	5.4	82.37	-6.2	-29.5	29.6	18.9	10.77	2.754			
3,158.3	3,158.2	3,158.2	3,158.2	5.5	5.5	90.00	-6.2	-29.5	29.4	18.4	10.97	2.678 CC, ES			
3,200.0	3,199.6	3,199.6	3,199.6	5.6	5.6	97.52	-6.2	-29.5	29.6	18.5	11.12	2.666			
3,300.0	3,298.8	3,298.8	3,298.8	5.8	5.7	119.68	-6.2	-29.5	33.9	22.5	11.46	2.960			
3,400.0	3,397.1	3,397.1	3,397.1	6.0	5.9	139.50	-6.2	-29.5	45.8	34.1	11.74	3.903			
3,500.0	3,494.3	3,497.2	3,497.1	6.2	6.1	151.80	-8.7	-29.5	63.4	51.4	11.99	5.284			
3,600.0	3,590.2	3,598.5	3,598.1	6.5	6.3	158.59	-16.5	-29.7	82.5	70.3	12.22	6.748			
3,700.0	3,684.4	3,701.0	3,699.7	6.9	6.5	162.74	-29.8	-30.1	102.2	89.8	12.44	8.216			
3,750.7	3,731.5	3,753.4	3,751.4	7.1	6.6	164.26	-38.8	-30.4	112.4	99.8	12.55	8.953			
3,800.0	3,777.1	3,804.8	3,801.8	7.3	6.7	165.48	-48.9	-30.6	121.6	108.9	12.73	9.555			
3,900.0	3,869.4	3,910.5	3,904.5	7.8	6.9	167.05	-74.0	-31.3	136.6	123.5	13.10	10.426			
4,000.0	3,961.8	4,017.8	4,007.1	8.3	7.3	167.79	-105.2	-32.2	146.2	132.7	13.49	10.840			
4,100.0	4,054.2	4,125.9	4,108.6	8.8	7.7	167.95	-142.4	-33.2	150.3	136.4	13.89	10.823			
4,200.0	4,146.6	4,234.2	4,207.9	9.4	8.2	167.58	-185.4	-34.4	149.0	134.6	14.32	10.405			
4,300.0	4,238.9	4,340.1	4,302.6	9.9	8.7	166.66	-232.7	-35.7	142.3	127.5	14.77	9.630			
4,400.0	4,331.3	4,439.7	4,391.0	10.5	9.3	165.52	-278.7	-36.9	134.0	118.7	15.25	8.788			
4,500.0	4,423.7	4,539.3	4,479.4	11.1	9.9	164.23	-324.7	-38.2	125.8	110.0	15.76	7.982			
4,600.0	4,516.0	4,638.9	4,567.7	11.7	10.5	162.77	-370.7	-39.4	117.7	101.3	16.32	7.208			
4,700.0	4,608.4	4,738.6	4,656.1	12.3	11.2	161.09	-416.6	-40.7	109.6	92.7	16.96	6.466			
4,800.0	4,700.8	4,838.2	4,744.5	12.9	11.9	159.14	-462.6	-42.0	101.7	84.0	17.68	5.753			
4,900.0	4,793.2	4,937.8	4,832.8	13.6	12.6	156.87	-508.6	-43.2	93.9	75.4	18.52	5.070			

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

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Offset Design S14-T24N-R8W - Escrito L14-2408 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		Highside Tooface (°)	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)					
5,000.0	4,885.5	5,037.4	4,921.2	14.2	13.3	154.20	-554.6	-44.5	86.3	66.8	19.53	4.418			
5,100.0	4,977.9	5,137.1	5,009.6	14.8	14.0	151.01	-600.6	-45.7	78.9	58.1	20.75	3.802			
5,200.0	5,070.3	5,236.7	5,097.9	15.5	14.7	147.19	-646.5	-47.0	71.8	49.5	22.25	3.226			
5,300.0	5,162.7	5,336.3	5,186.3	16.1	15.5	142.55	-692.5	-48.2	65.1	41.0	24.11	2.699			
5,321.6	5,182.6	5,357.8	5,205.4	16.3	15.6	141.42	-702.4	-48.5	63.7	39.1	24.56	2.593			
5,350.0	5,208.8	5,384.4	5,229.0	16.4	15.8	145.91	-714.7	-49.3	62.7	37.4	25.30	2.478			
5,351.0	5,209.8	5,385.3	5,229.8	16.5	15.8	146.04	-715.1	-49.4	62.7	37.4	25.33	2.475			
5,400.0	5,254.8	5,429.8	5,269.0	16.8	16.2	149.95	-735.5	-53.6	66.0	38.7	27.29	2.417 SF			
5,450.0	5,300.3	5,472.3	5,306.2	17.1	16.5	151.16	-754.8	-60.8	77.2	47.9	29.28	2.637			
5,500.0	5,345.0	5,510.6	5,339.3	17.4	16.8	152.09	-771.9	-69.9	97.1	66.6	30.49	3.186			
5,550.0	5,388.4	5,544.0	5,367.6	17.7	17.0	153.66	-786.5	-79.9	124.8	94.0	30.85	4.047			
5,600.0	5,430.3	5,572.0	5,391.0	18.0	17.3	155.82	-798.5	-89.7	158.9	128.3	30.57	5.197			
5,650.0	5,470.3	5,600.0	5,413.8	18.4	17.5	157.62	-810.3	-100.7	197.9	168.0	29.92	6.614			
5,700.0	5,508.2	5,612.8	5,424.1	18.7	17.6	161.28	-815.6	-106.2	240.5	211.8	28.68	8.385			
5,750.0	5,543.6	5,626.3	5,434.9	19.0	17.7	164.79	-821.1	-112.2	286.0	258.8	27.21	10.512			
5,800.0	5,576.3	5,635.8	5,442.3	19.4	17.7	169.64	-824.9	-116.7	333.5	308.1	25.35	13.156			
5,850.0	5,606.1	5,650.0	5,453.4	19.8	17.8	175.00	-830.6	-123.5	382.4	359.1	23.28	16.424			
5,900.0	5,632.6	5,650.0	5,453.4	20.2	17.8	-164.61	-830.6	-123.5	431.9	412.0	19.87	21.739			
5,950.0	5,655.8	5,650.0	5,453.4	20.6	17.8	-97.69	-830.6	-123.5	481.8	458.4	23.36	20.622			
6,000.0	5,675.4	5,650.0	5,453.4	21.0	17.8	-51.84	-830.6	-123.5	531.6	508.4	23.16	22.949			
6,050.0	5,691.3	5,650.0	5,453.4	21.5	17.8	-38.84	-830.6	-123.5	581.0	560.3	20.75	28.003			
6,100.0	5,703.3	5,633.6	5,440.6	22.0	17.7	-32.72	-824.0	-115.6	629.4	610.7	18.75	33.579			
6,150.0	5,711.4	5,626.5	5,435.0	22.6	17.7	-29.96	-821.1	-112.3	677.0	659.7	17.34	39.053			
6,200.0	5,715.5	5,618.1	5,428.3	23.1	17.6	-28.33	-817.7	-108.5	723.4	707.0	16.39	44.143			
6,227.2	5,716.1	5,600.0	5,413.8	23.5	17.5	-27.72	-810.3	-100.7	748.3	732.2	16.05	46.635			
6,300.0	5,715.9	5,600.0	5,413.8	24.4	17.5	-27.72	-810.3	-100.7	813.6	796.9	16.73	48.638			
6,400.0	5,715.8	5,583.3	5,400.3	25.9	17.3	-27.69	-803.3	-94.0	904.9	887.3	17.67	51.210			
6,500.0	5,715.6	5,568.9	5,388.4	27.5	17.2	-27.66	-797.2	-88.5	997.3	978.6	18.65	53.474			
6,600.0	5,715.4	5,550.0	5,372.6	29.3	17.1	-27.64	-789.1	-81.9	1,090.5	1,070.9	19.64	55.515			
6,700.0	5,715.2	5,550.0	5,372.6	31.2	17.1	-27.64	-789.1	-81.9	1,184.5	1,163.8	20.69	57.237			
6,800.0	5,715.1	5,550.0	5,372.6	33.2	17.1	-27.64	-789.1	-81.9	1,279.4	1,257.6	21.76	58.792			
6,900.0	5,714.9	5,525.0	5,351.6	35.2	16.9	-27.61	-778.2	-74.0	1,374.2	1,351.4	22.79	60.286			
7,000.0	5,714.7	5,500.0	5,330.2	37.3	16.7	-27.59	-767.2	-67.1	1,470.2	1,446.3	23.84	61.669			



Anticollision Report

Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Reference Site: S14-T24N-R8W
Site Error: 0.0ft
Reference Well: Escrito L14-2408 02H
Well Error: 0.0ft
Reference Wellbore: HZ
Reference Design: Plan #1

Local Co-ordinate Reference: Well Escrito L14-2408 02H
TVD Reference: WELL @ 6912.0ft (Original Well Elev)
MD Reference: WELL @ 6912.0ft (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 S14-T24N-R8W - Escrito L14-2408 03H - Pilot Hole - 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					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)	Total Uncertainty Axis			
0.0	0.0	0.0	0.0	0.0	0.0	-101.86	-6.2	-29.5	30.1					
100.0	100.0	100.0	100.0	0.1	0.1	-101.86	-6.2	-29.5	30.1	29.8	0.29	102.673		
200.0	200.0	200.0	200.0	0.3	0.3	-101.86	-6.2	-29.5	30.1	29.5	0.64	46.873		
300.0	300.0	300.0	300.0	0.5	0.5	-101.86	-6.2	-29.5	30.1	29.1	0.99	30.368		
400.0	400.0	400.0	400.0	0.7	0.7	-101.86	-6.2	-29.5	30.1	28.8	1.34	22.460		
500.0	500.0	500.0	500.0	0.8	0.8	-101.86	-6.2	-29.5	30.1	28.4	1.69	17.819		
600.0	600.0	600.0	600.0	1.0	1.0	-101.86	-6.2	-29.5	30.1	28.1	2.04	14.768		
700.0	700.0	700.0	700.0	1.2	1.2	-101.86	-6.2	-29.5	30.1	27.7	2.39	12.609		
800.0	800.0	800.0	800.0	1.4	1.4	-101.86	-6.2	-29.5	30.1	27.4	2.74	11.001		
900.0	900.0	900.0	900.0	1.5	1.5	-101.86	-6.2	-29.5	30.1	27.0	3.09	9.756		
1,000.0	1,000.0	1,000.0	1,000.0	1.7	1.7	-101.86	-6.2	-29.5	30.1	26.7	3.43	8.765		
1,100.0	1,100.0	1,100.0	1,100.0	1.9	1.9	-101.86	-6.2	-29.5	30.1	26.3	3.78	7.956		
1,200.0	1,200.0	1,200.0	1,200.0	2.1	2.1	-101.86	-6.2	-29.5	30.1	26.0	4.13	7.284		
1,300.0	1,300.0	1,300.0	1,300.0	2.2	2.2	-101.86	-6.2	-29.5	30.1	25.6	4.48	6.717		
1,400.0	1,400.0	1,400.0	1,400.0	2.4	2.4	-101.86	-6.2	-29.5	30.1	25.3	4.83	6.232		
1,500.0	1,500.0	1,500.0	1,500.0	2.6	2.6	-101.86	-6.2	-29.5	30.1	24.9	5.18	5.812		
1,600.0	1,600.0	1,600.0	1,600.0	2.8	2.8	-101.86	-6.2	-29.5	30.1	24.6	5.53	5.445		
1,700.0	1,700.0	1,700.0	1,700.0	2.9	2.9	-101.86	-6.2	-29.5	30.1	24.2	5.88	5.121		
1,800.0	1,800.0	1,800.0	1,800.0	3.1	3.1	-101.86	-6.2	-29.5	30.1	23.9	6.23	4.834		
1,900.0	1,900.0	1,900.0	1,900.0	3.3	3.3	-101.86	-6.2	-29.5	30.1	23.5	6.58	4.578		
2,000.0	2,000.0	2,000.0	2,000.0	3.5	3.5	-101.86	-6.2	-29.5	30.1	23.2	6.93	4.347		
2,100.0	2,100.0	2,100.0	2,100.0	3.6	3.6	-101.86	-6.2	-29.5	30.1	22.8	7.27	4.138		
2,200.0	2,200.0	2,200.0	2,200.0	3.8	3.8	-101.86	-6.2	-29.5	30.1	22.5	7.62	3.949		
2,300.0	2,300.0	2,300.0	2,300.0	4.0	4.0	-101.86	-6.2	-29.5	30.1	22.1	7.97	3.776		
2,400.0	2,400.0	2,400.0	2,400.0	4.2	4.2	-101.86	-6.2	-29.5	30.1	21.8	8.32	3.618		
2,500.0	2,500.0	2,500.0	2,500.0	4.3	4.3	-101.86	-6.2	-29.5	30.1	21.4	8.67	3.472		
2,600.0	2,600.0	2,600.0	2,600.0	4.5	4.5	-101.86	-6.2	-29.5	30.1	21.1	9.02	3.338		
2,700.0	2,700.0	2,700.0	2,700.0	4.7	4.7	-101.86	-6.2	-29.5	30.1	20.7	9.37	3.213		
2,800.0	2,800.0	2,800.0	2,800.0	4.9	4.9	-101.86	-6.2	-29.5	30.1	20.4	9.72	3.098		
2,900.0	2,900.0	2,900.0	2,900.0	5.0	5.0	-101.86	-6.2	-29.5	30.1	20.0	10.07	2.990		
3,000.0	3,000.0	3,000.0	3,000.0	5.2	5.2	-101.86	-6.2	-29.5	30.1	19.7	10.42	2.890		
3,100.0	3,100.0	3,100.0	3,100.0	5.4	5.4	82.37	-6.2	-29.5	29.6	18.9	10.77	2.754		
3,158.3	3,158.2	3,158.2	3,158.2	5.5	5.5	90.00	-6.2	-29.5	29.4	18.4	10.97	2.678 CC, ES		
3,200.0	3,199.6	3,199.6	3,199.6	5.6	5.6	97.52	-6.2	-29.5	29.6	18.5	11.12	2.666 SF		
3,300.0	3,298.8	3,298.8	3,298.8	5.8	5.7	119.68	-6.2	-29.5	33.9	22.5	11.46	2.960		
3,400.0	3,397.1	3,397.1	3,397.1	6.0	5.9	139.50	-6.2	-29.5	45.8	34.1	11.74	3.903		
3,500.0	3,494.3	3,494.3	3,494.3	6.2	6.1	152.53	-6.2	-29.5	65.5	53.5	11.98	5.465		
3,600.0	3,590.2	3,590.2	3,590.2	6.5	6.2	160.43	-6.2	-29.5	91.7	79.6	12.19	7.525		
3,700.0	3,684.4	3,684.4	3,684.4	6.9	6.4	165.34	-6.2	-29.5	123.8	111.4	12.38	10.000		
3,750.7	3,731.5	3,731.5	3,731.5	7.1	6.5	167.12	-6.2	-29.5	142.2	129.7	12.47	11.401		
3,800.0	3,777.1	3,777.1	3,777.1	7.3	6.6	168.62	-6.2	-29.5	160.7	148.1	12.63	12.725		
3,900.0	3,869.4	3,869.4	3,869.4	7.8	6.7	170.79	-6.2	-29.5	198.5	185.5	12.95	15.322		
4,000.0	3,961.8	3,961.8	3,961.8	8.3	6.9	172.28	-6.2	-29.5	236.4	223.1	13.28	17.799		
4,100.0	4,054.2	4,054.2	4,054.2	8.8	7.0	173.35	-6.2	-29.5	274.5	260.8	13.61	20.161		
4,200.0	4,146.6	4,146.6	4,146.6	9.4	7.2	174.16	-6.2	-29.5	312.6	298.6	13.94	22.415		
4,300.0	4,238.9	4,238.9	4,238.9	9.9	7.4	174.80	-6.2	-29.5	350.7	336.4	14.28	24.565		
4,400.0	4,331.3	4,331.3	4,331.3	10.5	7.5	175.31	-6.2	-29.5	388.9	374.3	14.61	26.619		
4,500.0	4,423.7	4,423.7	4,423.7	11.1	7.7	175.73	-6.2	-29.5	427.1	412.2	14.94	28.583		
4,600.0	4,516.0	4,516.0	4,516.0	11.7	7.9	176.08	-6.2	-29.5	465.3	450.0	15.28	30.462		
4,700.0	4,608.4	4,608.4	4,608.4	12.3	8.0	176.38	-6.2	-29.5	503.6	487.9	15.61	32.262		
4,800.0	4,700.8	4,700.8	4,700.8	12.9	8.2	176.64	-6.2	-29.5	541.8	525.9	15.94	33.987		
4,900.0	4,793.2	4,793.2	4,793.2	13.6	8.3	176.86	-6.2	-29.5	580.1	563.8	16.27	35.642		

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: San Juan County, NM
Reference Site: S14-T24N-R8W
Site Error: 0.0ft
Reference Well: Escrito L14-2408 02H
Well Error: 0.0ft
Reference Wellbore: HZ
Reference Design: Plan #1

Local Co-ordinate Reference: Well Escrito L14-2408 02H
TVD Reference: WELL @ 6912.0ft (Original Well Elev)
MD Reference: WELL @ 6912.0ft (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 S14-T24N-R8W - Escrito L14-2408 03H - Pilot Hole - 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)							
5,000.0	4,885.5	4,885.5	4,885.5	14.2	8.5	177.05	-6.2	-29.5	618.3	601.7	16.61	37.231			
5,100.0	4,977.9	4,977.9	4,977.9	14.8	8.7	177.22	-6.2	-29.5	656.6	639.6	16.94	38.758			
5,200.0	5,070.3	5,070.3	5,070.3	15.5	8.8	177.38	-6.2	-29.5	694.8	677.6	17.27	40.227			
5,300.0	5,162.7	5,162.7	5,162.7	16.1	9.0	177.51	-6.2	-29.5	733.1	715.5	17.61	41.641			
5,321.6	5,182.6	5,182.6	5,182.6	16.3	9.0	177.54	-6.2	-29.5	741.4	723.7	17.68	41.939			
5,350.0	5,208.8	5,208.8	5,208.8	16.4	9.1	-174.47	-6.2	-29.5	752.3	734.5	17.76	42.364			
5,400.0	5,254.8	5,254.8	5,254.8	16.8	9.1	-161.21	-6.2	-29.5	771.4	753.5	17.94	43.009			
5,450.0	5,300.3	5,300.3	5,300.3	17.1	9.2	-149.64	-6.2	-29.5	790.5	772.4	18.16	43.532			
5,500.0	5,345.0	5,345.0	5,345.0	17.4	9.3	-140.07	-6.2	-29.5	809.5	791.1	18.42	43.952			
5,550.0	5,388.4	5,388.4	5,388.4	17.7	9.4	-132.36	-6.2	-29.5	828.5	809.8	18.71	44.285			
5,600.0	5,430.3	5,430.3	5,430.3	18.0	9.4	-126.22	-6.2	-29.5	847.5	828.5	19.03	44.543			
5,650.0	5,470.3	5,470.3	5,470.3	18.4	9.5	-121.32	-6.2	-29.5	866.7	847.3	19.38	44.724			
5,700.0	5,508.2	5,508.2	5,508.2	18.7	9.6	-117.34	-6.2	-29.5	886.1	866.3	19.77	44.821			
5,750.0	5,543.6	5,543.6	5,543.6	19.0	9.6	-114.04	-6.2	-29.5	905.8	885.6	20.21	44.822			
5,800.0	5,576.3	5,576.3	5,576.3	19.4	9.7	-111.21	-6.2	-29.5	926.1	905.4	20.71	44.715			
5,850.0	5,606.1	5,606.1	5,606.1	19.8	9.8	-108.68	-6.2	-29.5	947.0	925.7	21.28	44.494			
5,900.0	5,632.6	5,632.6	5,632.6	20.2	9.8	-106.32	-6.2	-29.5	968.6	946.7	21.93	44.165			
5,950.0	5,655.8	5,655.8	5,655.8	20.6	9.8	-104.02	-6.2	-29.5	991.0	968.3	22.65	43.747			
6,000.0	5,675.4	5,675.4	5,675.4	21.0	9.9	-101.71	-6.2	-29.5	1,014.1	990.7	23.43	43.276			
6,050.0	5,691.3	5,691.3	5,691.3	21.5	9.9	-99.32	-6.2	-29.5	1,038.1	1,013.8	24.26	42.798			
6,100.0	5,703.3	5,703.3	5,703.3	22.0	9.9	-96.82	-6.2	-29.5	1,062.7	1,037.6	25.08	42.369			
6,150.0	5,711.4	5,711.4	5,711.4	22.6	9.9	-94.20	-6.2	-29.5	1,088.0	1,062.1	25.88	42.046			
6,200.0	5,715.5	5,715.5	5,715.5	23.1	9.9	-91.46	-6.2	-29.5	1,113.7	1,087.1	26.59	41.881			
6,227.2	5,716.1	5,716.1	5,716.1	23.5	9.9	-89.94	-6.2	-29.5	1,127.8	1,100.9	26.93	41.875			
6,300.0	5,715.9	5,715.9	5,715.9	24.4	9.9	-89.93	-6.2	-29.5	1,167.4	1,139.0	28.43	41.068			
6,400.0	5,715.8	5,715.8	5,715.8	25.9	9.9	-89.92	-6.2	-29.5	1,226.7	1,196.2	30.56	40.146			
6,500.0	5,715.6	5,715.6	5,715.6	27.5	9.9	-89.91	-6.2	-29.5	1,291.1	1,258.3	32.76	39.414			
6,600.0	5,715.4	5,715.4	5,715.4	29.3	9.9	-89.90	-6.2	-29.5	1,359.8	1,324.7	35.01	38.840			
6,700.0	5,715.2	5,715.2	5,715.2	31.2	9.9	-89.89	-6.2	-29.5	1,432.1	1,394.8	37.30	38.396			
6,800.0	5,715.1	5,715.1	5,715.1	33.2	9.9	-89.88	-6.2	-29.5	1,507.7	1,468.0	39.62	38.054			



Anticollision Report

Company: EnCana Oil & Gas (USA) Inc
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Reference Site: S14-T24N-R8W
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Local Co-ordinate Reference: Well Escrito L14-2408 02H
TVD Reference: WELL @ 6912.0ft (Original Well Elev)
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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 S14-T24N-R8W - Escrito L14-2408 04H - 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					Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty Axis		Separation Factor
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)			
0.0	0.0	0.0	0.0	0.0	0.0	-56.83	23.3	-35.6	42.6				
100.0	100.0	100.0	100.0	0.1	0.1	-56.83	23.3	-35.6	42.6	42.3	0.29	145.242	
200.0	200.0	200.0	200.0	0.3	0.3	-56.83	23.3	-35.6	42.6	41.9	0.64	66.306	
300.0	300.0	300.0	300.0	0.5	0.5	-56.83	23.3	-35.6	42.6	41.6	0.99	42.959	
400.0	400.0	400.0	400.0	0.7	0.7	-56.83	23.3	-35.6	42.6	41.2	1.34	31.772	
500.0	500.0	500.0	500.0	0.8	0.8	-56.83	23.3	-35.6	42.6	40.9	1.69	25.207	
600.0	600.0	600.0	600.0	1.0	1.0	-56.83	23.3	-35.6	42.6	40.5	2.04	20.891	
700.0	700.0	700.0	700.0	1.2	1.2	-56.83	23.3	-35.6	42.6	40.2	2.39	17.837	
800.0	800.0	800.0	800.0	1.4	1.4	-56.83	23.3	-35.6	42.6	39.9	2.74	15.562	
900.0	900.0	900.0	900.0	1.5	1.5	-56.83	23.3	-35.6	42.6	39.5	3.09	13.801	
1,000.0	1,000.0	1,000.0	1,000.0	1.7	1.7	-56.83	23.3	-35.6	42.6	39.2	3.43	12.399	
1,100.0	1,100.0	1,100.0	1,100.0	1.9	1.9	-56.83	23.3	-35.6	42.6	38.8	3.78	11.255	
1,200.0	1,200.0	1,200.0	1,200.0	2.1	2.1	-56.83	23.3	-35.6	42.6	38.5	4.13	10.304	
1,300.0	1,300.0	1,300.0	1,300.0	2.2	2.2	-56.83	23.3	-35.6	42.6	38.1	4.48	9.502	
1,400.0	1,400.0	1,400.0	1,400.0	2.4	2.4	-56.83	23.3	-35.6	42.6	37.8	4.83	8.815	
1,500.0	1,500.0	1,500.0	1,500.0	2.6	2.6	-56.83	23.3	-35.6	42.6	37.4	5.18	8.221	
1,600.0	1,600.0	1,600.0	1,600.0	2.8	2.8	-56.83	23.3	-35.6	42.6	37.1	5.53	7.702	
1,700.0	1,700.0	1,700.0	1,700.0	2.9	2.9	-56.83	23.3	-35.6	42.6	36.7	5.88	7.245	
1,800.0	1,800.0	1,800.0	1,800.0	3.1	3.1	-56.83	23.3	-35.6	42.6	36.4	6.23	6.839	
1,900.0	1,900.0	1,900.0	1,900.0	3.3	3.3	-56.83	23.3	-35.6	42.6	36.0	6.58	6.476	
2,000.0	2,000.0	2,000.0	2,000.0	3.5	3.5	-56.83	23.3	-35.6	42.6	35.7	6.93	6.149	
2,100.0	2,100.0	2,100.0	2,100.0	3.6	3.6	-56.83	23.3	-35.6	42.6	35.3	7.27	5.854	
2,200.0	2,200.0	2,200.0	2,200.0	3.8	3.8	-56.83	23.3	-35.6	42.6	35.0	7.62	5.586	
2,300.0	2,300.0	2,300.0	2,300.0	4.0	4.0	-56.83	23.3	-35.6	42.6	34.6	7.97	5.342	
2,400.0	2,400.0	2,400.0	2,400.0	4.2	4.2	-56.83	23.3	-35.6	42.6	34.3	8.32	5.118	
2,500.0	2,500.0	2,500.0	2,500.0	4.3	4.3	-56.83	23.3	-35.6	42.6	33.9	8.67	4.912	
2,600.0	2,600.0	2,600.0	2,600.0	4.5	4.5	-56.83	23.3	-35.6	42.6	33.6	9.02	4.722	
2,700.0	2,700.0	2,700.0	2,700.0	4.7	4.7	-56.83	23.3	-35.6	42.6	33.2	9.37	4.546	
2,800.0	2,800.0	2,800.0	2,800.0	4.9	4.9	-56.83	23.3	-35.6	42.6	32.9	9.72	4.382	
2,900.0	2,900.0	2,900.0	2,900.0	5.0	5.0	-56.83	23.3	-35.6	42.6	32.5	10.07	4.230	
3,000.0	3,000.0	3,000.0	3,000.0	5.2	5.2	-56.83	23.3	-35.6	42.6	32.2	10.42	4.089 CC, ES, SF	
3,100.0	3,100.0	3,100.0	3,100.0	5.4	5.4	125.28	23.3	-35.6	44.0	33.3	10.76	4.093	
3,200.0	3,199.6	3,199.6	3,199.6	5.6	5.6	132.67	23.3	-35.6	49.0	37.9	11.10	4.415	
3,300.0	3,298.8	3,298.8	3,298.8	5.8	5.7	141.87	23.3	-35.6	58.7	47.2	11.41	5.139	
3,400.0	3,397.1	3,397.1	3,397.1	6.0	5.9	150.36	23.3	-35.6	73.9	62.2	11.70	6.316	
3,500.0	3,494.3	3,494.3	3,494.3	6.2	6.1	157.06	23.3	-35.6	95.0	83.0	11.96	7.945	
3,600.0	3,590.2	3,590.2	3,590.2	6.5	6.2	162.00	23.3	-35.6	121.7	109.6	12.18	9.994	
3,700.0	3,684.4	3,684.4	3,684.4	6.9	6.4	165.58	23.3	-35.6	154.0	141.6	12.38	12.435	
3,750.7	3,731.5	3,731.5	3,731.5	7.1	6.5	167.00	23.3	-35.6	172.3	159.8	12.47	13.815	
3,800.0	3,777.1	3,777.1	3,777.1	7.3	6.6	168.27	23.3	-35.6	190.8	178.2	12.63	15.105	
3,900.0	3,869.4	3,869.4	3,869.4	7.8	6.7	170.22	23.3	-35.6	228.5	215.6	12.96	17.635	
4,000.0	3,961.8	3,961.8	3,961.8	8.3	6.9	171.62	23.3	-35.6	266.4	253.1	13.29	20.048	
4,100.0	4,054.2	4,054.2	4,054.2	8.8	7.0	172.67	23.3	-35.6	304.4	290.8	13.62	22.350	
4,200.0	4,146.6	4,146.6	4,146.6	9.4	7.2	173.48	23.3	-35.6	342.5	328.5	13.95	24.546	
4,300.0	4,238.9	4,232.5	4,232.5	9.9	7.4	174.10	23.6	-35.7	380.9	366.6	14.27	26.685	
4,400.0	4,331.3	4,300.0	4,300.0	10.5	7.5	174.52	25.9	-35.7	422.5	408.0	14.57	29.004	
4,500.0	4,423.7	4,380.0	4,379.7	11.1	7.6	174.97	31.8	-35.9	467.5	452.6	14.88	31.420	
4,600.0	4,516.0	4,449.6	4,448.9	11.7	7.7	175.31	39.6	-36.0	515.8	500.6	15.17	33.999	
4,700.0	4,608.4	4,516.4	4,514.9	12.3	7.9	175.60	49.4	-36.3	567.2	551.8	15.46	36.694	
4,800.0	4,700.8	4,580.4	4,577.9	12.9	8.0	175.85	61.0	-36.6	621.6	605.8	15.74	39.490	
4,900.0	4,793.2	4,641.6	4,637.7	13.6	8.1	176.07	74.1	-36.9	678.6	662.6	16.02	42.372	
5,000.0	4,885.5	4,714.2	4,708.1	14.2	8.3	176.29	91.4	-37.3	737.8	721.5	16.31	45.238	

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: San Juan County, NM
 Reference Site: S14-T24N-R8W
 Site Error: 0.0ft
 Reference Well: Escrito L14-2408 02H
 Well Error: 0.0ft
 Reference Wellbore: HZ
 Reference Design: Plan #1

Local Co-ordinate Reference: Well Escrito L14-2408 02H
 TVD Reference: WELL @ 6912.0ft (Original Well Elev)
 MD Reference: WELL @ 6912.0ft (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 S14-T24N-R8W - Escrito L14-2408 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 (°)	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)		
5,100.0	4,977.9	4,794.6	4,786.2	14.8	8.5	176.50	110.8	-37.7	797.1	780.5	16.61	47.981			
5,200.0	5,070.3	4,875.1	4,864.3	15.5	8.7	176.69	130.1	-38.2	856.5	839.6	16.92	50.625			
5,300.0	5,162.7	4,955.5	4,942.4	16.1	9.0	176.85	149.5	-38.7	915.8	898.6	17.22	53.175			
5,321.6	5,182.6	4,972.9	4,959.3	16.3	9.0	176.88	153.6	-38.8	928.6	911.4	17.29	53.714			
5,350.0	5,208.8	4,995.8	4,981.5	16.4	9.1	-174.20	159.1	-38.9	945.5	928.2	17.35	54.506			
5,400.0	5,254.8	5,035.8	5,020.4	16.8	9.2	-159.29	168.8	-39.1	975.2	957.6	17.56	55.543			
5,450.0	5,300.3	5,075.4	5,058.8	17.1	9.3	-146.07	178.3	-39.4	1,004.7	986.8	17.90	56.143			
5,500.0	5,345.0	5,114.2	5,096.5	17.4	9.4	-134.86	187.6	-39.6	1,033.9	1,015.6	18.34	56.385			
5,550.0	5,388.4	5,152.0	5,133.1	17.7	9.5	-125.57	196.7	-39.8	1,062.7	1,043.9	18.85	56.370			
5,600.0	5,430.3	5,188.4	5,168.4	18.0	9.6	-117.92	205.4	-40.0	1,091.1	1,071.7	19.42	56.193			
5,650.0	5,470.3	5,221.6	5,200.7	18.4	9.7	-111.51	213.4	-40.2	1,119.0	1,099.0	20.01	55.912			
5,700.0	5,508.2	5,250.0	5,228.2	18.7	9.8	-106.06	220.3	-41.4	1,146.5	1,125.9	20.63	55.578			
5,750.0	5,543.6	5,267.9	5,245.5	19.0	9.9	-101.04	224.6	-42.9	1,173.9	1,152.6	21.28	55.166			
5,800.0	5,576.3	5,285.3	5,262.4	19.4	9.9	-96.66	228.8	-44.9	1,201.0	1,179.0	21.91	54.809			
5,850.0	5,606.1	5,300.0	5,276.4	19.8	10.0	-92.69	232.3	-46.9	1,227.8	1,205.3	22.52	54.519			
5,900.0	5,632.6	5,309.8	5,285.8	20.2	10.0	-88.95	234.6	-48.5	1,254.4	1,231.3	23.10	54.314			
5,950.0	5,655.8	5,317.4	5,293.0	20.6	10.1	-85.49	236.5	-49.8	1,280.6	1,257.0	23.61	54.247			
6,000.0	5,675.4	5,322.2	5,297.7	21.0	10.1	-82.27	237.6	-50.7	1,306.4	1,282.3	24.04	54.335			
6,050.0	5,691.3	5,324.8	5,300.1	21.5	10.1	-79.28	238.2	-51.2	1,331.5	1,307.1	24.39	54.588			
6,100.0	5,703.3	5,325.2	5,300.5	22.0	10.1	-76.53	238.3	-51.3	1,356.0	1,331.3	24.65	55.001			
6,150.0	5,711.4	5,323.9	5,299.3	22.6	10.1	-74.03	238.0	-51.1	1,379.6	1,354.7	24.83	55.561			
6,200.0	5,715.5	5,321.0	5,296.5	23.1	10.1	-71.79	237.3	-50.5	1,402.1	1,377.2	24.93	56.239			
6,227.2	5,716.1	5,318.8	5,294.4	23.5	10.1	-70.68	236.8	-50.1	1,414.0	1,389.0	24.96	56.647			
6,300.0	5,715.9	5,300.0	5,276.4	24.4	10.0	-69.86	232.3	-46.9	1,446.7	1,420.5	26.24	55.142			
6,400.0	5,715.8	5,300.0	5,276.4	25.9	10.0	-69.86	232.3	-46.9	1,496.0	1,467.7	28.25	52.952			



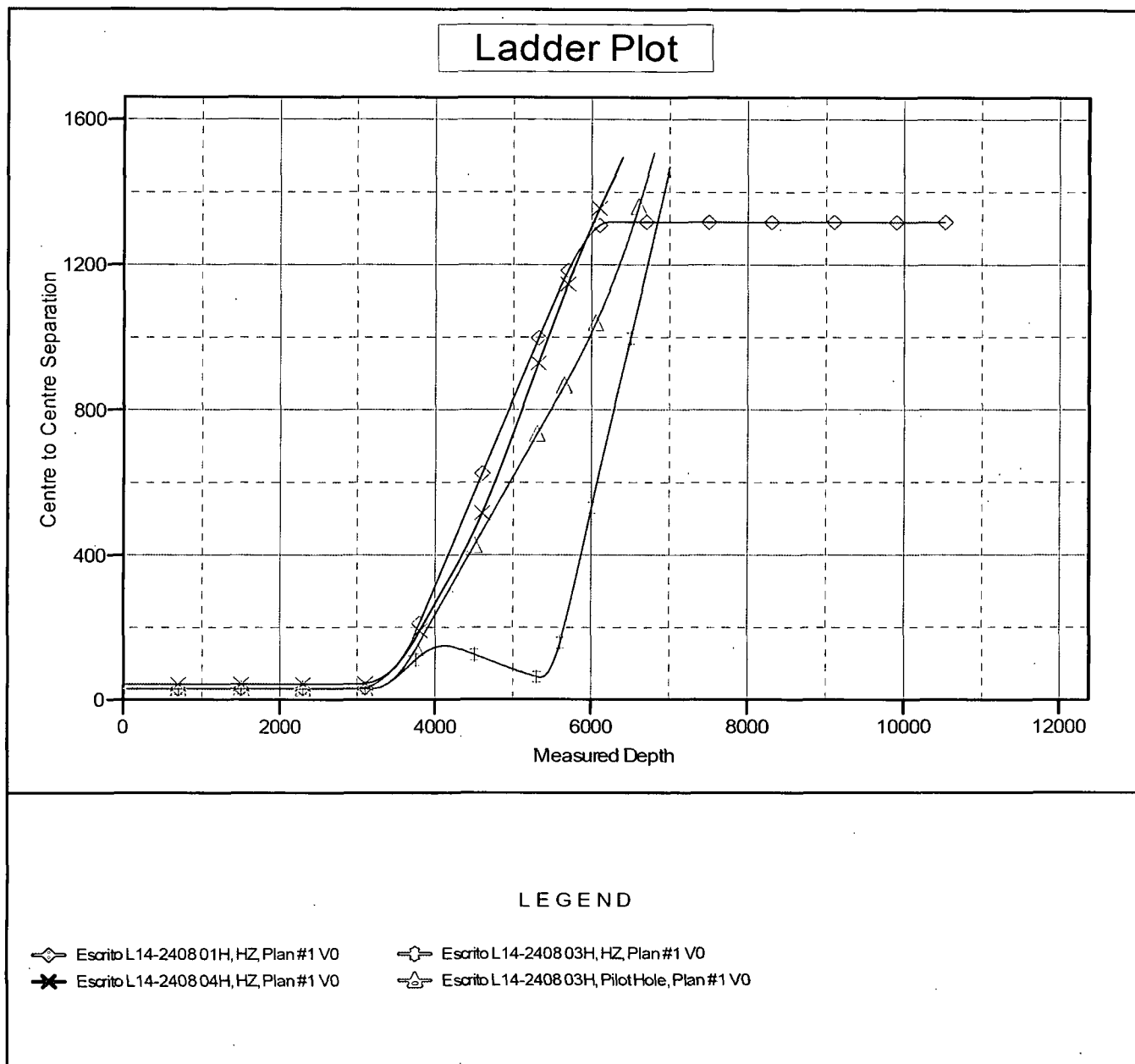
Anticollision Report

Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Reference Site: S14-T24N-R8W
Site Error: 0.0ft
Reference Well: Escrito L14-2408 02H
Well Error: 0.0ft
Reference Wellbore: HZ
Reference Design: Plan #1

Local Co-ordinate Reference: Well Escrito L14-2408 02H
TVD Reference: WELL @ 6912.0ft (Original Well Elev)
MD Reference: WELL @ 6912.0ft (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 @ 6912.0ft (Original Well Elev)
 Offset Depths are relative to Offset Datum
 Central Meridian is -107.833333 °

Coordinates are relative to: Escrito L14-2408 02H
 Coordinate System is US State Plane 1983, New Mexico Western Zone
 Grid Convergence at Surface is: 0.10°



ENCANA OIL & GAS (USA) INC.
ESCRITO L14-2408 #02H
1399' FSL & 58' FWL
LOCATED IN THE NW/4 SW/4 OF SECTION 14,
T24N, R8W, N.M.P.M.,
SAN JUAN 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 (MP 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 0.2 MILES TO ROAD THAT IS TO BE UPGRADED ON RIGHT.
- 5) FOLLOW ROAD FOR 0.5 MILES TO EXISTING PAD WHERE ACCESS IS STAKED ON NORTHEAST CORNER OF PAD.

WELL FLAG LOCATED AT LAT. 36.310665° N, LONG. 107.660366° W (NAD 83).



encana

SAN JUAN COUNTY,
NEW MEXICO

- ⊗ Abandoned
- ⊗ Abandoned Gas
- ⊗ Abandoned Oil
- ⊗ Dry Hole
- ⊗ GAS
- ⊗ Injection
- OIL

Basin Mancos
Gas Pool

1 inch = 2,000 feet

ROAD RUNNER 1

2

**DUFERS POINT
GALLUP
DAKOTA
POOL**

1

Escrito E07-2407 01H
Escrito E07-2407 02H
Escrito E07-2407 03H
Escrito E07-2407 04H

NO NAME 1

WILD HARE 1

FEDERAL-C 1

FEDERAL A 3

10

11

AKE 1-11

12

NANCY 4
NANCY 4

NANCY 5

NANCY 6

NANCY 3
NANCY 3
NANCY-FEDERAL 3
LOCO 5
LOCO 5

NANCY-FEDERAL 2

NANCY-FEDERAL 1

Escrito M10-2408 01H

HORSEFLY 1

**ESCRITO GALLUP
POOL**

SHOO FLY 3

MOUNTAIN 2

SHOO FLY 2

SHOO FLY 1

SMITH 5

FEDERAL 2

SMITH 4

ESCRITO GALLUP 21

13

FEDERAL 1
UNIT 19

14

Escrito L14-2408 02H

Escrito L14-2408 01H
Escrito L14-2408 03H
Escrito L14-2408 04H

MOUNTAIN 4

MOUNTAIN 1

MOUNTAIN 3

BLANCO COAL
SOUTH 2 1

SOUTH BLANCO 1

22

BLANCO SOUTH
FEDERA 22-3

BLANCO SOUTH
FEDERA 22-4

BLANCO SOUTH
FEDERA 23-5

BLANCO SOUTH
FEDERA 23-6

23

BLANCO SOUTH
FEDERA 23-8

24

**LYBROOK
GALLUP
POOL**

ANDERSON 1

ANDERSON 2

BLANCO SOUTH
FEDERA 5

SOUTH BLANCO 1

BLANCO SOUTH
FEDERA 23-2

BLANCO SOUTH
FEDERA 23-7

BLANCO SOUTH
FEDERA 23-4

SOUTH BLANCO 2

BLANCO SOUTH
FEDERA 23-3

BLANCO SOUTH
FEDERA 25-8

BLANCO SOUTH
FEDERA 25-11

BLANCO SOUTH
FEDERA 25-12

GOVT-LOWNDES 1

0 0.125 0.25 0.5 Miles

encana

Well Name and Number:
Escrito L14-2408 02H

