

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: 4/10/14
Well information:
Operator ENCANA, Well Name and Number Escrito L 14-2408 HVM
API# 30-045-355, Section 15, 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 Perin
NMOCD Approved by Signature

7-30-2014
Date

CONFIDENTIAL

Form 3160-3
(March 2012)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

APPLICATION FOR PERMIT TO DRILL OR REENTER

APR 14 2014

5. Lease Serial No.
NM 16589

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 04H

9. API Well No.
30-045-35534

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

11. Sec., T. R. M. or Blk. and Survey or Area
Section 14, T24N, R8W NMPM
SHL
BHL Sec 15, T24N, R8W

12. County or Parish
San Juan

13. State
NM

1a. Type of work: ☒ DRILL ☐ REENTER

Farmington Field Office
Bureau of Land Management

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

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

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

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

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

At surface 1423' FSL and 23' FWL in Section 14, T24N, R8W

At proposed prod. zone 1750' FSL and 330' FWL in Section 15, T24N, R8W

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

15. Distance from proposed* location to nearest property or lease line, ft. in Section 14
(Also to nearest drig. unit line, if any)
SHL is 23' from West lease line

16. No. of acres in lease
NM 16589- 1480 acres

17. Spacing Unit dedicated to this well
320 acres S/2 Section 15

OIL CONS. DIV DIST. 3

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
Escrito L14-2408 01H is +/- 30' E of SHL

19. Proposed Depth
5716' TVD/ 10447' 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 4/10/14

Title
Regulatory Analyst

Approved by (Signature) *[Signature]*

Name (Printed/Typed)

Date 7/17/14

Title
AFM

Office
FFO

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212 make it 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 as to any matter within the jurisdiction of the agency.

(CORRELATING OPERATIONS
AUTHORIZED ARE SUBJECT TO
COMPLIANCE WITH ATTACHED
"GENERAL REQUIREMENTS"

THIS ACTION DOES NOT RELIEVE THE OPERATOR FROM OBTAINING ANY OTHER
AUTHORIZATION REQUIRED FOR OPERATIONS
ON FEDERAL AND INDIAN LANDS

*(Instructions on page 2)

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

NMOCDA

DISTRICT I
1625 N. French St., El Paso, NM 88501
Phone: (978) 553-0921 Fax: (978) 553-0770

DISTRICT II
311 S. First St., Artesia, NM 88201
Phone: (978) 765-1223 Fax: (978) 765-0770

DISTRICT III
1000 Las Lunas Rd., Aztec, NM 87410
Phone: (505) 834-0570 Fax: (505) 834-0170

DISTRICT IV
1650 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 478-8420 Fax: (505) 478-8420

State of New Mexico
Energy, Minerals & Natural Resources Department

RECEIVED

Form C-108
Revised August 1, 2011

APR 14 2014 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

API Number 30-045-35534		Pool Code 22670 19859	Pool Name Dufur Point
Property Code 313514	Property Name ESCRITO L14-2408		Well Number 04H
UGRD No. 282327	Operator Name ENCANA OIL & GAS (USA) INC.		Elevation 6096.0'

Surface Location

UL or lot no.	Section	Township	Range	Lot	Feet from the	North/South line	Feet from the	East/West line	County
L	14	24N	0W		1425'	SOUTH	23'	WEST	SAN JUAN

Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot	Feet from the	North/South line	Feet from the	East/West line	County
L	15	24N	8W		1750'	SOUTH	330'	WEST	SAN JUAN

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

16

1 LAT. 30.314265° N (NAD83) LONG. 107.878226° W (NAD83) LAT. 30.314273° N (NAD27) LONG. 107.877615° W (NAD27) 2 LAT. 30.307080° N (NAD83) LONG. 107.878376° W (NAD83) LAT. 30.307048° N (NAD27) LONG. 107.877767° W (NAD27) 3 LAT. 30.313071° N (NAD83) LONG. 107.868323° W (NAD83) LAT. 30.313058° N (NAD27) LONG. 107.868913° W (NAD27) 4 LAT. 30.308821° N (NAD83) LONG. 107.868813° W (NAD83) LAT. 30.308808° N (NAD27) LONG. 107.868003° W (NAD27) ALL CORNERS BY THE C.O. 1047 15 14 HORIZONTAL DRILL WELL FLAG LAT. 30.310728° N (NAD83) LONG. 107.860467° W (NAD83) LAT. 30.310838° N (NAD27) LONG. 107.859856° W (NAD27) ENTRY POINT LAT. 30.311041° N (NAD83) LONG. 107.861672° W (NAD83) LAT. 30.311029° N (NAD27) LONG. 107.861082° W (NAD27) BOTTOM HOLE LAT. 30.311849° N (NAD83) LONG. 107.877158° W (NAD83) LAT. 30.311837° N (NAD27) LONG. 107.876547° 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 I, as operator, own or have a working interest or undivided 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. <i>Katie Wegner</i> 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 Signature and Seal of Professional Surveyor: <i>David A. Russell</i> DAVID A. RUSSELL Professional Number 10201
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Escrito L14-2408 04H
SHL: NWSW 14 24N 8W
1423 FSL 23 FWL
BHL: NWSW 15 24N 8W
1750 FSL 330 FWL
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.	5,442
Horizontal Target	5,749

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.	5,442

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 04H
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 San Juan, New Mexico

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

Proposed BOP and choke manifold arrangements are attached.

4. CASING & CEMENTING PROGRAM

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

- a) The proposed casing design is as follows:

Casing	Depth (MD)	Hole Size	Csg Size	Weight	Grade
Conductor	0'-60'	30"	20"	94#	H40, STC New
Surface	0'-500'	12 1/4"	9 5/8"	36#	J55, STC New
Intermediate	0'-5924'	8 3/4"	7"	26#	J55, LTC New
Production Liner	5724'-10447'	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'-5924'	30% open hole excess Stage 1 Lead: 397 sks Stage 1 Tail: 298 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	5724'-10447'	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 4200'. Directional plans are attached.

Description	Proposed Depth (TVD/MD)	Formation
Horizontal Lateral TD	5716'/10447'	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'-600'/500'	Fresh Water	8.4-8.6	60-70	NC
8 3/4"	600'/500'-5716'/5924'	Fresh Water LSND	9.5-8.8	40-50	8-10

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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"	5716'/5924'- 5716'/10447'	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 +/- 2691 psi based on a 9.0 ppg at 5749' 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 January 1, 2015. It is anticipated that completion operations will begin within 30 days after the well has been drilled depending on fracture treatment schedules with various pumping service companies.

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

LOC: NE/4 SE/4 15 24N 8W 1750 FSL 330			Encana Natural Gas			ENG: S Kuykendall 4/3/14			
County: San Juan			WELL SUMMARY			RIG: Aztec 950			
WELL: Escrito L14-2408 04H						GLE: 6896			
						RKBE: 6912			
MWD	OPEN HOLE	FORM	DEPTH			HOLE	CASING	MW	DEVIATION
LWD	LOGGING		TVD	MD					
			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' 600	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: 695 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: 298 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	4,200 5,214 5,442 5,716	4,200 5,924'					
Surveys every stand to TD unless directed otherwise by Geologist	No OH Logs	Horizontal Target TD Base Gallup	5,749 5,716 5,790	10,447		6 1/8	200' overlap at liner top 4524' Drilled Lateral	Horizontal Inclination Horizontal TVD 8.6-9.0 OBM	Horz Inc/TVD 90.4/5749 TD = 10447.3 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 4200', 8 3/4 inch holesize
- 5) PU directional tools and start curve at 10deg/100' build rate
- 6) Drill to csg point of 5924' MD
- 7) R&C 7" csg, circ cmt to surface, switch to OBM
- 8) Land at 90 deg, drill lateral to 10447' run 4 1/2 inch liner with external swellable csg packers



Boomerang Tube LLC

CASING (OR) TUBING DESCRIPTION AND PERFORMANCE PROPERTIES

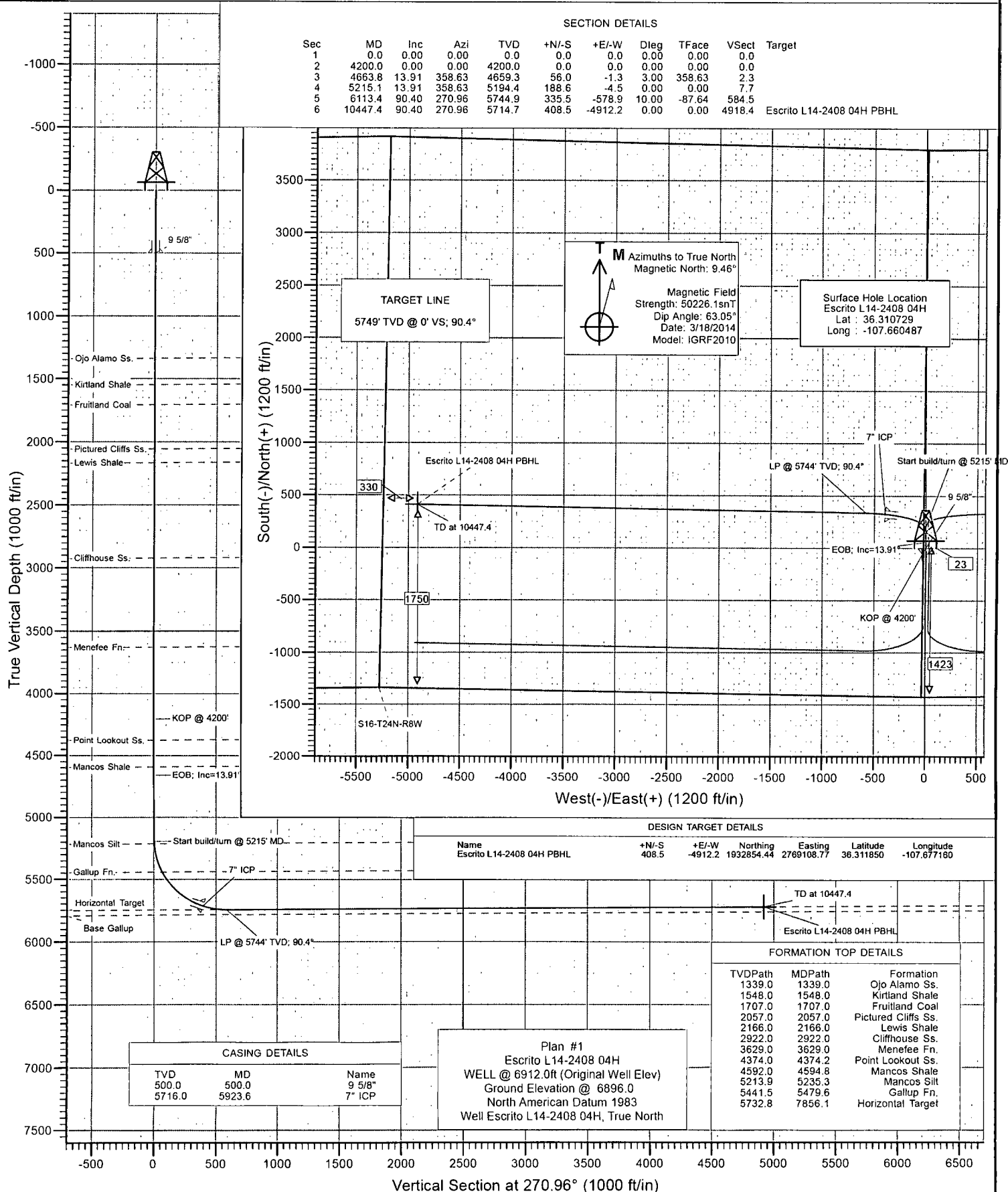
Pipe Outside Diameter (ins)	_____	4.500
Pipe Wall Thickness (ins)	_____	0.250
Nominal Weight Per Foot (lbs)	_____	11.60
Thread Name	_____	Long Thread CSG
Grade Name	_____	SB-80
Pipe Minimum Yield (psi)	_____	80,000
Pipe Minimum Ultimate (psi)	_____	90,000
Coupling Minimum Yield (psi)	_____	80,000
Coupling 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



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 04H
Wellbore: HZ
Design: Plan #1

Local Co-ordinate Reference: Well Escrito L14-2408 04H
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
From:	Lat/Long	Easting:	2,774,050.25 ft
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in
		Latitude:	36.310750
		Longitude:	-107.660390
		Grid Convergence:	0.10 °

Well	Escrito L14-2408 04H		
Well Position	+N/-S	0.0 ft	Northing: 1,932,454.72 ft
	+E/-W	0.0 ft	Easting: 2,774,021.69 ft
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft
		Latitude:	36.310729
		Longitude:	-107.660487
		Ground Level:	6,896.0 ft

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

Design	Plan #1		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(ft)	(ft)	(ft)
	0.0	0.0	0.0
		Direction	Direction
		(°)	(°)
		270.96	

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	
4,663.8	13.91	358.63	4,659.3	56.0	-1.3	3.00	3.00	0.00	358.63	
5,215.1	13.91	358.63	5,194.4	188.6	-4.5	0.00	0.00	0.00	0.00	
6,113.4	90.40	270.96	5,744.9	335.5	-578.9	10.00	8.51	-9.76	-87.64	
10,447.4	90.40	270.96	5,714.7	408.5	-4,912.2	0.00	0.00	0.00	0.00	Escrito L14-2408 04H



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 04H
Wellbore: HZ
Design: Plan #1

Local Co-ordinate Reference: Well Escrito L14-2408 04H
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	
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	
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	
3,629.0	0.00	0.00	3,629.0	0.0	0.0	0.0	0.00	0.00	Menefee Fn.
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'
4,300.0	3.00	358.63	4,300.0	2.6	-0.1	0.1	3.00	3.00	
4,374.2	5.23	358.63	4,374.0	7.9	-0.2	0.3	3.00	3.00	Point Lookout Ss.

Planning Report

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 Project: San Juan County, NM
 Site: S14-T24N-R8W
 Well: Escrito L14-2408 04H
 Wellbore: HZ
 Design: Plan #1

Local Co-ordinate Reference: Well Escrito L14-2408 04H
 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	6.00	358.63	4,399.6	10.5	-0.2	0.4	3.00	3.00	
4,500.0	9.00	358.63	4,498.8	23.5	-0.6	1.0	3.00	3.00	
4,594.8	11.84	358.63	4,592.0	40.6	-1.0	1.7	3.00	3.00	Mancos Shale
4,600.0	12.00	358.63	4,597.1	41.7	-1.0	1.7	3.00	3.00	
4,663.8	13.91	358.63	4,659.3	56.0	-1.3	2.3	3.00	3.00	EOB; Inc=13.91°
4,700.0	13.91	358.63	4,694.4	64.7	-1.5	2.6	0.00	0.00	
4,800.0	13.91	358.63	4,791.5	88.8	-2.1	3.6	0.00	0.00	
4,900.0	13.91	358.63	4,888.5	112.8	-2.7	4.6	0.00	0.00	
5,000.0	13.91	358.63	4,985.6	136.8	-3.3	5.6	0.00	0.00	
5,100.0	13.91	358.63	5,082.7	160.9	-3.8	6.5	0.00	0.00	
5,200.0	13.91	358.63	5,179.7	184.9	-4.4	7.5	0.00	0.00	
5,215.1	13.91	358.63	5,194.4	188.6	-4.5	7.7	0.00	0.00	Start build/turn @ 5215' MD
5,235.3	14.14	350.37	5,213.9	193.4	-5.0	8.2	9.98	1.11	Mancos Silt
5,250.0	14.48	344.56	5,228.2	197.0	-5.8	9.1	10.00	2.28	
5,300.0	16.55	327.46	5,276.4	209.0	-11.3	14.8	10.00	4.15	
5,350.0	19.68	314.85	5,324.0	220.9	-21.1	24.8	10.00	6.26	
5,400.0	23.45	305.86	5,370.5	232.7	-35.1	39.0	10.00	7.53	
5,450.0	27.59	299.34	5,415.6	244.2	-53.3	57.4	10.00	8.28	
5,479.6	30.16	296.28	5,441.5	250.9	-65.9	70.1	10.00	8.67	Gallup Fn.
5,500.0	31.96	294.44	5,459.0	255.4	-75.4	79.7	10.00	8.85	
5,550.0	36.48	290.62	5,500.3	266.1	-101.4	105.8	10.00	9.04	
5,600.0	41.10	287.55	5,539.3	276.3	-131.0	135.6	10.00	9.23	
5,650.0	45.78	285.00	5,575.6	285.9	-164.0	168.8	10.00	9.37	
5,700.0	50.51	282.83	5,608.9	294.8	-200.1	205.0	10.00	9.46	
5,750.0	55.28	280.94	5,639.1	303.0	-239.1	244.2	10.00	9.53	
5,800.0	60.07	279.26	5,665.8	310.4	-280.7	285.9	10.00	9.59	
5,850.0	64.88	277.73	5,688.9	316.9	-324.6	329.8	10.00	9.63	
5,900.0	69.71	276.31	5,708.2	322.6	-370.3	375.7	10.00	9.65	
5,923.6	71.99	275.68	5,716.0	324.9	-392.5	397.9	10.00	9.67	7" ICP
5,950.0	74.55	274.99	5,723.6	327.2	-417.7	423.1	10.00	9.68	
6,000.0	79.40	273.72	5,734.8	330.9	-466.2	471.7	10.00	9.69	
6,050.0	84.25	272.49	5,741.9	333.6	-515.6	521.2	10.00	9.70	
6,100.0	89.10	271.29	5,744.8	335.2	-565.5	571.1	10.00	9.71	
6,113.4	90.40	270.96	5,744.9	335.5	-578.9	584.5	10.00	9.71	LP @ 5744' TVD; 90.4°
6,200.0	90.40	270.96	5,744.3	337.0	-665.5	671.1	0.00	0.00	
6,300.0	90.40	270.96	5,743.6	338.7	-765.5	771.1	0.00	0.00	
6,400.0	90.40	270.96	5,742.9	340.3	-865.5	871.0	0.00	0.00	
6,500.0	90.40	270.96	5,742.2	342.0	-965.5	971.0	0.00	0.00	
6,600.0	90.40	270.96	5,741.5	343.7	-1,065.4	1,071.0	0.00	0.00	
6,700.0	90.40	270.96	5,740.8	345.4	-1,165.4	1,171.0	0.00	0.00	
6,800.0	90.40	270.96	5,740.1	347.1	-1,265.4	1,271.0	0.00	0.00	
6,900.0	90.40	270.96	5,739.4	348.8	-1,365.4	1,371.0	0.00	0.00	
7,000.0	90.40	270.96	5,738.7	350.4	-1,465.4	1,471.0	0.00	0.00	
7,100.0	90.40	270.96	5,738.0	352.1	-1,565.4	1,571.0	0.00	0.00	
7,200.0	90.40	270.96	5,737.3	353.8	-1,665.3	1,671.0	0.00	0.00	
7,300.0	90.40	270.96	5,736.6	355.5	-1,765.3	1,771.0	0.00	0.00	
7,400.0	90.40	270.96	5,735.9	357.2	-1,865.3	1,871.0	0.00	0.00	
7,500.0	90.40	270.96	5,735.2	358.9	-1,965.3	1,971.0	0.00	0.00	
7,600.0	90.40	270.96	5,734.5	360.5	-2,065.3	2,071.0	0.00	0.00	
7,700.0	90.40	270.96	5,733.8	362.2	-2,165.3	2,171.0	0.00	0.00	
7,800.0	90.40	270.96	5,733.1	363.9	-2,265.2	2,271.0	0.00	0.00	
7,856.1	90.40	270.96	5,732.8	364.9	-2,321.3	2,327.1	0.00	0.00	Horizontal Target

Planning Report

Database: USA EDM 5000 Multi Users DB
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 Wellbore: HZ
 Design: Plan #1

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 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	90.40	270.96	5,732.4	365.6	-2,365.2	2,371.0	0.00	0.00	
8,000.0	90.40	270.96	5,731.8	367.3	-2,465.2	2,471.0	0.00	0.00	
8,100.0	90.40	270.96	5,731.1	369.0	-2,565.2	2,571.0	0.00	0.00	
8,200.0	90.40	270.96	5,730.4	370.7	-2,665.2	2,671.0	0.00	0.00	
8,300.0	90.40	270.96	5,729.7	372.3	-2,765.2	2,771.0	0.00	0.00	
8,400.0	90.40	270.96	5,729.0	374.0	-2,865.1	2,871.0	0.00	0.00	
8,500.0	90.40	270.96	5,728.3	375.7	-2,965.1	2,971.0	0.00	0.00	
8,600.0	90.40	270.96	5,727.6	377.4	-3,065.1	3,071.0	0.00	0.00	
8,700.0	90.40	270.96	5,726.9	379.1	-3,165.1	3,171.0	0.00	0.00	
8,800.0	90.40	270.96	5,726.2	380.8	-3,265.1	3,271.0	0.00	0.00	
8,900.0	90.40	270.96	5,725.5	382.4	-3,365.1	3,371.0	0.00	0.00	
9,000.0	90.40	270.96	5,724.8	384.1	-3,465.0	3,471.0	0.00	0.00	
9,100.0	90.40	270.96	5,724.1	385.8	-3,565.0	3,571.0	0.00	0.00	
9,200.0	90.40	270.96	5,723.4	387.5	-3,665.0	3,671.0	0.00	0.00	
9,300.0	90.40	270.96	5,722.7	389.2	-3,765.0	3,771.0	0.00	0.00	
9,400.0	90.40	270.96	5,722.0	390.9	-3,865.0	3,871.0	0.00	0.00	
9,500.0	90.40	270.96	5,721.3	392.5	-3,965.0	3,971.0	0.00	0.00	
9,600.0	90.40	270.96	5,720.6	394.2	-4,064.9	4,071.0	0.00	0.00	
9,700.0	90.40	270.96	5,719.9	395.9	-4,164.9	4,171.0	0.00	0.00	
9,800.0	90.40	270.96	5,719.2	397.6	-4,264.9	4,271.0	0.00	0.00	
9,900.0	90.40	270.96	5,718.5	399.3	-4,364.9	4,371.0	0.00	0.00	
10,000.0	90.40	270.96	5,717.8	401.0	-4,464.9	4,471.0	0.00	0.00	
10,100.0	90.40	270.96	5,717.1	402.6	-4,564.9	4,571.0	0.00	0.00	
10,200.0	90.40	270.96	5,716.4	404.3	-4,664.8	4,671.0	0.00	0.00	
10,300.0	90.40	270.96	5,715.7	406.0	-4,764.8	4,771.0	0.00	0.00	
10,400.0	90.40	270.96	5,715.0	407.7	-4,864.8	4,871.0	0.00	0.00	
10,447.4	90.40	270.96	5,714.7	408.5	-4,912.2	4,918.4	0.00	0.00	TD at 10447.4

Targets

Target Name

- hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Escrito L14-2407 04H PI - plan misses target center by 44.6ft at 5895.8ft MD (5706.8 TVD, 322.1 N, -366.5 E) - Point	0.00	0.00	5,746.5	331.6	-348.5	1,932,785.73	2,773,672.56	36.311640	-107.661670
Horizontal Target (Escrito) - plan misses target center by 369.7ft at 5613.4ft MD (5549.3 TVD, 278.9 N, -139.5 E) - Rectangle (sides W5,000.0 H500.0 D50.0)	-0.40	270.96	5,749.0	0.4	-0.9	1,932,455.08	2,774,020.80	36.310730	-107.660490
Escrito L14-2408 04H PI - plan hits target center - Point	0.00	0.00	5,714.7	408.5	-4,912.2	1,932,854.44	2,769,108.77	36.311850	-107.677160

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
5,923.6	5,716.0	7" ICP	0.000	0.000
500.0	500.0	9 5/8"	0.000	0.000



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Wellbore: HZ
Design: Plan #1

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:

Well Escrito L14-2408 04H
 WELL @ 6912.0ft (Original Well Elev)
 WELL @ 6912.0ft (Original Well Elev)
 True
 Minimum Curvature

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,339.0	1,339.0	Ojo Alamo Ss.		-0.40	270.96
1,548.0	1,548.0	Kirtland Shale		-0.40	270.96
1,707.0	1,707.0	Fruitland Coal		-0.40	270.96
2,057.0	2,057.0	Pictured Cliffs Ss.		-0.40	270.96
2,166.0	2,166.0	Lewis Shale		-0.40	270.96
2,922.0	2,922.0	Cliffhouse Ss.		-0.40	270.96
3,629.0	3,629.0	Menefee Fn.		-0.40	270.96
4,374.2	4,374.0	Point Lookout Ss.		-0.40	270.96
4,594.8	4,592.0	Mancos Shale		-0.40	270.96
5,235.3	5,214.0	Mancos Silt		-0.40	270.96
5,479.6	5,442.0	Gallup Fn.		-0.40	270.96
7,856.1	5,749.0	Horizontal Target		-0.40	270.96

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'
4,663.8	4,659.3	56.0	-1.3	EOB: Inc=13.91°
5,215.1	5,194.4	188.6	-4.5	Start build/turn @ 5215' MD
6,113.4	5,744.9	335.5	-578.9	LP @ 5744' TVD; 90.4°
10,447.4	5,714.7	408.5	-4,912.2	TD at 10447.4



EnCana Oil & Gas (USA) Inc

San Juan County, NM

S14-T24N-R8W

Escrito L14-2408 04H

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 04H
Well Error: 0.0ft
Reference Wellbore: HZ
Reference Design: Plan #1

Local Co-ordinate Reference: Well Escrito L14-2408 04H
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)	Tool Name	Description
0.0	10,447.3	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						
S14-T24N-R8W						
Escrito L14-2408 01H - HZ - Plan #1	3,500.0	3,500.0	29.8	17.7	2.452 CC, ES	
Escrito L14-2408 01H - HZ - Plan #1	3,600.0	3,599.6	30.4	17.9	2.429 SF	
Escrito L14-2408 02H - HZ - Plan #1	3,000.0	3,000.0	42.6	32.2	4.089 CC, ES, SF	
Escrito L14-2408 03H - HZ - Plan #1	3,400.0	3,400.0	30.1	18.3	2.551 CC, ES, SF	
Escrito L14-2408 03H - Pilot Hole - Plan #1	4,200.0	4,200.0	30.1	15.5	2.063 CC, ES, SF	



Anticollision Report

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Well Error: 0.0ft
Reference Wellbore: HZ
Reference Design: Plan #1

Local Co-ordinate Reference: Well Escrito L14-2408 04H
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						
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
0.0	0.0	0.0	0.0	0.0	0.0	78.02	6.2	29.2	29.8				
100.0	100.0	100.0	100.0	0.1	0.1	78.02	6.2	29.2	29.8	29.5	0.29	101.690	
200.0	200.0	200.0	200.0	0.3	0.3	78.02	6.2	29.2	29.8	29.2	0.64	46.424	
300.0	300.0	300.0	300.0	0.5	0.5	78.02	6.2	29.2	29.8	28.8	0.99	30.077	
400.0	400.0	400.0	400.0	0.7	0.7	78.02	6.2	29.2	29.8	28.5	1.34	22.245	
500.0	500.0	500.0	500.0	0.8	0.8	78.02	6.2	29.2	29.8	28.1	1.69	17.649	
600.0	600.0	600.0	600.0	1.0	1.0	78.02	6.2	29.2	29.8	27.8	2.04	14.627	
700.0	700.0	700.0	700.0	1.2	1.2	78.02	6.2	29.2	29.8	27.4	2.39	12.488	
800.0	800.0	800.0	800.0	1.4	1.4	78.02	6.2	29.2	29.8	27.1	2.74	10.895	
900.0	900.0	900.0	900.0	1.5	1.5	78.02	6.2	29.2	29.8	26.7	3.09	9.663	
1,000.0	1,000.0	1,000.0	1,000.0	1.7	1.7	78.02	6.2	29.2	29.8	26.4	3.43	8.681	
1,100.0	1,100.0	1,100.0	1,100.0	1.9	1.9	78.02	6.2	29.2	29.8	26.0	3.78	7.880	
1,200.0	1,200.0	1,200.0	1,200.0	2.1	2.1	78.02	6.2	29.2	29.8	25.7	4.13	7.214	
1,300.0	1,300.0	1,300.0	1,300.0	2.2	2.2	78.02	6.2	29.2	29.8	25.3	4.48	6.653	
1,400.0	1,400.0	1,400.0	1,400.0	2.4	2.4	78.02	6.2	29.2	29.8	25.0	4.83	6.172	
1,500.0	1,500.0	1,500.0	1,500.0	2.6	2.6	78.02	6.2	29.2	29.8	24.6	5.18	5.756	
1,600.0	1,600.0	1,600.0	1,600.0	2.8	2.8	78.02	6.2	29.2	29.8	24.3	5.53	5.393	
1,700.0	1,700.0	1,700.0	1,700.0	2.9	2.9	78.02	6.2	29.2	29.8	23.9	5.88	5.072	
1,800.0	1,800.0	1,800.0	1,800.0	3.1	3.1	78.02	6.2	29.2	29.8	23.6	6.23	4.788	
1,900.0	1,900.0	1,900.0	1,900.0	3.3	3.3	78.02	6.2	29.2	29.8	23.2	6.58	4.534	
2,000.0	2,000.0	2,000.0	2,000.0	3.5	3.5	78.02	6.2	29.2	29.8	22.9	6.93	4.305	
2,100.0	2,100.0	2,100.0	2,100.0	3.6	3.6	78.02	6.2	29.2	29.8	22.5	7.27	4.099	
2,200.0	2,200.0	2,200.0	2,200.0	3.8	3.8	78.02	6.2	29.2	29.8	22.2	7.62	3.911	
2,300.0	2,300.0	2,300.0	2,300.0	4.0	4.0	78.02	6.2	29.2	29.8	21.8	7.97	3.740	
2,400.0	2,400.0	2,400.0	2,400.0	4.2	4.2	78.02	6.2	29.2	29.8	21.5	8.32	3.583	
2,500.0	2,500.0	2,500.0	2,500.0	4.3	4.3	78.02	6.2	29.2	29.8	21.1	8.67	3.439	
2,600.0	2,600.0	2,600.0	2,600.0	4.5	4.5	78.02	6.2	29.2	29.8	20.8	9.02	3.306	
2,700.0	2,700.0	2,700.0	2,700.0	4.7	4.7	78.02	6.2	29.2	29.8	20.4	9.37	3.183	
2,800.0	2,800.0	2,800.0	2,800.0	4.9	4.9	78.02	6.2	29.2	29.8	20.1	9.72	3.068	
2,900.0	2,900.0	2,900.0	2,900.0	5.0	5.0	78.02	6.2	29.2	29.8	19.8	10.07	2.962	
3,000.0	3,000.0	3,000.0	3,000.0	5.2	5.2	78.02	6.2	29.2	29.8	19.4	10.42	2.863	
3,100.0	3,100.0	3,100.0	3,100.0	5.4	5.4	78.02	6.2	29.2	29.8	19.1	10.77	2.770	
3,200.0	3,200.0	3,200.0	3,200.0	5.6	5.6	78.02	6.2	29.2	29.8	18.7	11.11	2.683	
3,300.0	3,300.0	3,300.0	3,300.0	5.7	5.7	78.02	6.2	29.2	29.8	18.4	11.46	2.601	
3,400.0	3,400.0	3,400.0	3,400.0	5.9	5.9	78.02	6.2	29.2	29.8	18.0	11.81	2.524	
3,500.0	3,500.0	3,500.0	3,500.0	6.1	6.1	78.02	6.2	29.2	29.8	17.7	12.16	2.452 CC, ES	
3,600.0	3,600.0	3,599.6	3,599.6	6.3	6.3	73.20	8.8	29.1	30.4	17.9	12.51	2.429 SF	
3,700.0	3,700.0	3,698.7	3,698.4	6.4	6.4	60.22	16.5	28.9	33.3	20.4	12.86	2.588	
3,800.0	3,800.0	3,796.9	3,795.7	6.6	6.6	44.30	29.2	28.5	41.0	27.8	13.21	3.103	
3,900.0	3,900.0	3,895.8	3,893.5	6.8	6.8	32.51	44.0	28.0	52.6	39.0	13.57	3.877	
4,000.0	4,000.0	3,994.6	3,991.2	7.0	7.0	25.14	58.8	27.6	65.6	51.7	13.91	4.713	
4,100.0	4,100.0	4,093.5	4,088.9	7.1	7.2	20.24	73.7	27.2	79.3	65.0	14.26	5.559	
4,200.0	4,200.0	4,192.4	4,186.7	7.3	7.5	16.81	88.5	26.7	93.4	78.8	14.61	6.392	
4,300.0	4,300.0	4,291.6	4,284.8	7.5	7.7	15.92	103.4	26.3	105.2	90.3	14.95	7.040	
4,400.0	4,399.6	4,391.3	4,383.4	7.7	7.9	14.82	118.3	25.8	112.2	96.9	15.27	7.346	
4,500.0	4,498.8	4,491.3	4,482.2	7.8	8.2	14.51	133.3	25.4	114.0	98.5	15.56	7.327	
4,600.0	4,597.1	4,591.2	4,581.0	8.1	8.4	14.92	148.3	25.0	110.9	95.0	15.84	6.999	
4,663.8	4,659.3	4,654.8	4,643.9	8.2	8.6	15.59	157.8	24.7	106.2	90.2	16.01	6.635	
4,700.0	4,694.4	4,690.9	4,679.6	8.3	8.6	16.07	163.2	24.5	103.0	86.8	16.14	6.380	
4,800.0	4,791.5	4,790.4	4,778.0	8.5	8.9	17.58	178.2	24.1	94.1	77.6	16.52	5.698	
4,900.0	4,888.5	4,890.0	4,876.5	8.8	9.2	19.39	193.1	23.6	85.4	68.5	16.91	5.047	
5,000.0	4,985.6	4,989.6	4,974.9	9.1	9.4	21.61	208.0	23.2	76.7	59.4	17.32	4.428	

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
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 Well Error: 0.0ft
 Reference Wellbore: HZ
 Reference Design: Plan #1

Local Co-ordinate Reference: Well Escrito L14-2408 04H
 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			
5,100.0	5,082.7	5,089.2	5,073.4	9.4	9.7	24.39	223.0	22.7	68.2	50.4	17.76	3.839			
5,200.0	5,179.7	5,188.7	5,171.8	9.7	9.9	27.96	237.9	22.3	59.9	41.6	18.24	3.281			
5,215.1	5,194.4	5,203.5	5,186.4	9.7	10.0	28.61	240.1	22.3	58.6	40.3	18.32	3.201			
5,250.0	5,228.2	5,236.5	5,219.0	9.8	10.1	45.91	245.1	23.5	57.0	38.4	18.62	3.064			
5,255.5	5,233.5	5,241.6	5,224.0	9.9	10.1	48.80	245.8	23.8	57.0	38.3	18.68	3.053			
5,300.0	5,276.4	5,282.3	5,264.0	10.0	10.2	72.42	252.0	28.2	59.7	40.5	19.21	3.106			
5,350.0	5,324.0	5,324.9	5,305.4	10.2	10.3	95.99	258.3	35.9	70.6	50.9	19.76	3.576			
5,400.0	5,370.5	5,362.9	5,341.7	10.3	10.4	113.63	263.9	45.4	91.0	71.0	20.02	4.545			
5,450.0	5,415.6	5,395.6	5,372.5	10.5	10.5	125.65	268.7	55.5	119.6	99.5	20.02	5.971			
5,500.0	5,459.0	5,422.9	5,397.7	10.8	10.6	133.56	272.6	65.3	154.5	134.6	19.84	7.785			
5,550.0	5,500.3	5,450.0	5,422.2	11.0	10.7	139.43	276.4	76.2	194.3	174.8	19.53	9.948			
5,600.0	5,539.3	5,462.0	5,432.9	11.3	10.7	141.39	278.1	81.4	237.6	218.4	19.22	12.361			
5,650.0	5,575.6	5,474.7	5,444.0	11.6	10.8	142.13	279.8	87.1	283.6	264.6	18.92	14.985			
5,700.0	5,608.9	5,483.4	5,451.6	12.0	10.8	140.08	281.0	91.2	331.4	312.6	18.83	17.603			
5,750.0	5,639.1	5,488.6	5,456.2	12.5	10.8	132.08	281.7	93.7	380.4	361.0	19.39	19.620			
5,800.0	5,665.8	5,500.0	5,466.0	13.0	10.9	115.19	283.2	99.3	430.3	409.3	21.02	20.474			
5,850.0	5,688.9	5,500.0	5,466.0	13.6	10.9	47.47	283.2	99.3	480.1	461.2	18.91	25.390			
5,900.0	5,708.2	5,500.0	5,466.0	14.3	10.9	11.13	283.2	99.3	529.9	515.9	14.02	37.809			
5,950.0	5,723.6	5,483.6	5,451.9	15.1	10.8	-0.82	281.0	91.3	578.8	565.7	13.11	44.167			
6,000.0	5,734.8	5,477.5	5,446.5	15.9	10.8	-4.63	280.2	88.5	627.2	614.4	12.78	49.065			
6,050.0	5,741.9	5,470.0	5,439.9	16.8	10.8	-6.72	279.1	85.0	674.5	661.9	12.61	53.482			
6,100.0	5,744.8	5,450.0	5,422.2	17.8	10.7	-8.09	276.4	76.2	720.7	708.1	12.58	57.309			
6,113.4	5,744.9	5,450.0	5,422.2	18.0	10.7	-8.36	276.4	76.2	732.7	720.1	12.60	58.171			
6,200.0	5,744.3	5,450.0	5,422.2	19.7	10.7	-8.36	276.4	76.2	810.9	798.0	12.91	62.795			
6,300.0	5,743.6	5,426.6	5,401.1	21.8	10.6	-8.42	273.1	66.7	902.3	889.1	13.26	68.024			
6,400.0	5,742.9	5,400.0	5,376.6	24.0	10.5	-8.47	269.3	57.0	995.1	981.5	13.62	73.071			
6,500.0	5,742.2	5,400.0	5,376.6	26.2	10.5	-8.47	269.3	57.0	1,088.3	1,074.3	14.00	77.743			
6,600.0	5,741.5	5,400.0	5,376.6	28.4	10.5	-8.47	269.3	57.0	1,182.6	1,168.3	14.38	82.229			
6,700.0	5,740.8	5,378.2	5,356.2	30.7	10.5	-8.50	266.1	49.9	1,277.2	1,262.5	14.75	86.576			
6,800.0	5,740.1	5,369.0	5,347.6	33.0	10.4	-8.52	264.8	47.2	1,372.5	1,357.4	15.14	90.684			
6,900.0	5,739.4	5,350.0	5,329.5	35.4	10.4	-8.54	262.0	41.9	1,468.4	1,452.9	15.51	94.657			



Anticollision Report

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Well Error: 0.0ft
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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 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			
0.0	0.0	0.0	0.0	0.0	0.0	123.17	-23.3	35.6	42.6						
100.0	100.0	100.0	100.0	0.1	0.1	123.17	-23.3	35.6	42.6	42.3	0.29	145.242			
200.0	200.0	200.0	200.0	0.3	0.3	123.17	-23.3	35.6	42.6	41.9	0.64	66.306			
300.0	300.0	300.0	300.0	0.5	0.5	123.17	-23.3	35.6	42.6	41.6	0.99	42.959			
400.0	400.0	400.0	400.0	0.7	0.7	123.17	-23.3	35.6	42.6	41.2	1.34	31.772			
500.0	500.0	500.0	500.0	0.8	0.8	123.17	-23.3	35.6	42.6	40.9	1.69	25.207			
600.0	600.0	600.0	600.0	1.0	1.0	123.17	-23.3	35.6	42.6	40.5	2.04	20.891			
700.0	700.0	700.0	700.0	1.2	1.2	123.17	-23.3	35.6	42.6	40.2	2.39	17.837			
800.0	800.0	800.0	800.0	1.4	1.4	123.17	-23.3	35.6	42.6	39.9	2.74	15.562			
900.0	900.0	900.0	900.0	1.5	1.5	123.17	-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	123.17	-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	123.17	-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	123.17	-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	123.17	-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	123.17	-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	123.17	-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	123.17	-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	123.17	-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	123.17	-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	123.17	-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	123.17	-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	123.17	-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	123.17	-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	123.17	-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	123.17	-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	123.17	-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	123.17	-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	123.17	-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	123.17	-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	123.17	-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	123.17	-23.3	35.6	42.6	32.2	10.42	4.089 CC, ES, SF			
3,100.0	3,100.0	3,098.7	3,098.7	5.4	5.4	125.97	-25.8	35.6	44.0	33.3	10.76	4.091			
3,200.0	3,200.0	3,196.9	3,196.6	5.6	5.6	133.27	-33.4	35.5	48.9	37.8	11.11	4.401			
3,300.0	3,300.0	3,294.1	3,292.9	5.7	5.7	142.39	-45.9	35.4	58.4	46.9	11.46	5.092			
3,400.0	3,400.0	3,389.8	3,387.1	5.9	6.0	150.81	-62.9	35.1	73.2	61.4	11.81	6.201			
3,500.0	3,500.0	3,483.5	3,478.3	6.1	6.2	157.49	-84.2	34.9	93.6	81.5	12.15	7.706			
3,600.0	3,600.0	3,574.9	3,566.2	6.3	6.5	162.43	-109.2	34.6	119.4	106.9	12.49	9.559			
3,700.0	3,700.0	3,633.7	3,650.4	6.4	6.8	166.02	-137.4	34.2	150.1	137.3	12.82	11.708			
3,800.0	3,800.0	3,750.7	3,731.5	6.6	7.1	168.68	-168.9	33.8	185.4	172.3	13.14	14.106			
3,900.0	3,900.0	3,841.8	3,815.7	6.8	7.5	170.70	-203.8	33.4	223.1	209.6	13.47	16.557			
4,000.0	4,000.0	3,934.2	3,901.0	7.0	8.0	172.16	-239.2	32.9	261.0	247.2	13.81	18.900			
4,100.0	4,100.0	4,026.5	3,986.3	7.1	8.4	173.26	-274.6	32.5	299.0	284.8	14.14	21.141			
4,200.0	4,200.0	4,118.9	4,071.7	7.3	8.9	174.10	-310.0	32.0	337.0	322.5	14.47	23.285			
4,300.0	4,300.0	4,210.2	4,156.0	7.5	9.4	176.08	-344.9	31.6	377.5	362.7	14.78	25.536			
4,400.0	4,399.6	4,299.3	4,238.3	7.7	9.9	176.59	-379.1	31.2	422.8	407.7	15.05	28.095			
4,500.0	4,498.8	4,385.9	4,318.3	7.8	10.4	177.03	-412.2	30.7	472.7	457.4	15.28	30.941			
4,600.0	4,597.1	4,469.7	4,395.7	8.1	10.9	177.40	-444.3	30.3	527.0	511.6	15.47	34.071			
4,663.8	4,659.3	4,521.7	4,443.7	8.2	11.2	177.60	-464.2	30.1	564.0	548.4	15.57	36.218			
4,700.0	4,694.4	4,550.8	4,470.6	8.3	11.4	177.74	-475.4	29.9	585.5	569.8	15.68	37.333			
4,800.0	4,791.5	4,631.3	4,544.9	8.5	11.9	178.07	-506.2	29.5	644.8	628.8	15.99	40.334			
4,900.0	4,888.5	4,711.7	4,619.3	8.8	12.4	178.35	-537.0	29.2	704.1	687.8	16.29	43.223			
5,000.0	4,985.6	4,792.2	4,693.6	9.1	12.9	178.58	-567.8	28.8	763.5	746.9	16.59	46.007			

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 04H
Well Error: 0.0ft
Reference Wellbore: HZ
Reference Design: Plan #1

Local Co-ordinate Reference: Well Escrito L14-2408 04H
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 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		
5,100.0	5,082.7	4,872.7	4,767.9	9.4	13.4	178.78	-598.6	28.4	822.8	805.9	16.90	48.691		
5,200.0	5,179.7	4,953.1	4,842.2	9.7	13.9	178.96	-629.5	28.0	882.1	864.9	17.20	51.280		
5,215.1	5,194.4	4,965.3	4,853.5	9.7	14.0	178.98	-634.1	27.9	891.1	873.9	17.25	51.664		
5,250.0	5,228.2	4,993.3	4,879.4	9.8	14.2	-164.83	-644.9	27.8	911.9	894.5	17.33	52.611		
5,300.0	5,276.4	5,033.3	4,916.3	10.0	14.4	-144.95	-660.2	27.6	941.6	924.1	17.54	53.680		
5,350.0	5,324.0	5,072.6	4,952.6	10.2	14.7	-129.89	-675.2	27.4	971.3	953.4	17.84	54.437		
5,400.0	5,370.5	5,111.1	4,988.2	10.3	14.9	-118.75	-690.0	27.2	1,000.7	982.5	18.21	54.942		
5,450.0	5,415.6	5,148.5	5,022.7	10.5	15.1	-110.34	-704.3	27.0	1,029.8	1,011.2	18.63	55.263		
5,500.0	5,459.0	5,184.4	5,055.9	10.8	15.4	-103.80	-718.1	26.9	1,058.5	1,039.5	19.09	55.454		
5,550.0	5,500.3	5,218.6	5,087.5	11.0	15.6	-98.54	-731.2	26.7	1,086.9	1,067.3	19.56	55.553		
5,600.0	5,539.3	5,250.9	5,117.3	11.3	15.8	-94.18	-743.5	26.5	1,114.9	1,094.8	20.06	55.584		
5,650.0	5,575.6	5,280.9	5,145.0	11.6	16.0	-90.46	-755.0	26.4	1,142.4	1,121.8	20.56	55.561		
5,700.0	5,608.9	5,308.5	5,170.5	12.0	16.2	-87.19	-765.6	26.3	1,169.6	1,148.5	21.08	55.492		
5,750.0	5,639.1	5,329.7	5,190.1	12.5	16.3	-84.09	-773.7	26.2	1,196.4	1,174.8	21.60	55.380		
5,800.0	5,665.8	5,343.8	5,203.1	13.0	16.4	-81.01	-779.1	26.5	1,222.9	1,200.8	22.13	55.267		
5,850.0	5,688.9	5,350.0	5,208.8	13.6	16.4	-77.85	-781.5	26.8	1,249.2	1,226.5	22.62	55.218		
5,900.0	5,708.2	5,362.6	5,220.4	14.3	16.5	-75.27	-786.3	27.5	1,275.0	1,251.9	23.11	55.160		
5,950.0	5,723.6	5,367.8	5,225.2	15.1	16.6	-72.59	-788.2	27.8	1,300.4	1,276.9	23.56	55.200		
6,000.0	5,734.8	5,370.6	5,227.9	15.9	16.6	-70.05	-789.3	28.1	1,325.3	1,301.3	23.97	55.293		
6,050.0	5,741.9	5,371.4	5,228.6	16.8	16.6	-67.66	-789.6	28.1	1,349.4	1,325.0	24.35	55.408		
6,100.0	5,744.8	5,370.4	5,227.7	17.8	16.6	-65.45	-789.3	28.0	1,372.7	1,348.0	24.73	55.503		
6,113.4	5,744.9	5,369.9	5,227.2	18.0	16.6	-64.89	-789.0	28.0	1,378.8	1,353.9	24.83	55.519		
6,200.0	5,744.3	5,366.2	5,223.8	19.7	16.5	-64.72	-787.7	27.7	1,420.0	1,393.5	26.43	53.721		
6,300.0	5,743.6	5,350.0	5,208.8	21.8	16.4	-63.97	-781.5	26.8	1,472.5	1,444.3	28.22	52.173		
6,400.0	5,742.9	5,350.0	5,208.8	24.0	16.4	-63.97	-781.5	26.8	1,529.6	1,499.4	30.22	50.618		

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 04H
 Well Error: 0.0ft
 Reference Wellbore: HZ
 Reference Design: Plan #1

Local Co-ordinate Reference: Well Escrito L14-2408 04H
 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		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	168.15	-29.5	6.2	30.1						
100.0	100.0	100.0	100.0	0.1	0.1	168.15	-29.5	6.2	30.1	29.8	0.29	102.752			
200.0	200.0	200.0	200.0	0.3	0.3	168.15	-29.5	6.2	30.1	29.5	0.64	46.908			
300.0	300.0	300.0	300.0	0.5	0.5	168.15	-29.5	6.2	30.1	29.1	0.99	30.391			
400.0	400.0	400.0	400.0	0.7	0.7	168.15	-29.5	6.2	30.1	28.8	1.34	22.477			
500.0	500.0	500.0	500.0	0.8	0.8	168.15	-29.5	6.2	30.1	28.4	1.69	17.833			
600.0	600.0	600.0	600.0	1.0	1.0	168.15	-29.5	6.2	30.1	28.1	2.04	14.779			
700.0	700.0	700.0	700.0	1.2	1.2	168.15	-29.5	6.2	30.1	27.7	2.39	12.619			
800.0	800.0	800.0	800.0	1.4	1.4	168.15	-29.5	6.2	30.1	27.4	2.74	11.009			
900.0	900.0	900.0	900.0	1.5	1.5	168.15	-29.5	6.2	30.1	27.0	3.09	9.764			
1,000.0	1,000.0	1,000.0	1,000.0	1.7	1.7	168.15	-29.5	6.2	30.1	26.7	3.43	8.772			
1,100.0	1,100.0	1,100.0	1,100.0	1.9	1.9	168.15	-29.5	6.2	30.1	26.3	3.78	7.962			
1,200.0	1,200.0	1,200.0	1,200.0	2.1	2.1	168.15	-29.5	6.2	30.1	26.0	4.13	7.290			
1,300.0	1,300.0	1,300.0	1,300.0	2.2	2.2	168.15	-29.5	6.2	30.1	25.6	4.48	6.722			
1,400.0	1,400.0	1,400.0	1,400.0	2.4	2.4	168.15	-29.5	6.2	30.1	25.3	4.83	6.236			
1,500.0	1,500.0	1,500.0	1,500.0	2.6	2.6	168.15	-29.5	6.2	30.1	24.9	5.18	5.816			
1,600.0	1,600.0	1,600.0	1,600.0	2.8	2.8	168.15	-29.5	6.2	30.1	24.6	5.53	5.449			
1,700.0	1,700.0	1,700.0	1,700.0	2.9	2.9	168.15	-29.5	6.2	30.1	24.3	5.88	5.125			
1,800.0	1,800.0	1,800.0	1,800.0	3.1	3.1	168.15	-29.5	6.2	30.1	23.9	6.23	4.838			
1,900.0	1,900.0	1,900.0	1,900.0	3.3	3.3	168.15	-29.5	6.2	30.1	23.6	6.58	4.581			
2,000.0	2,000.0	2,000.0	2,000.0	3.5	3.5	168.15	-29.5	6.2	30.1	23.2	6.93	4.350			
2,100.0	2,100.0	2,100.0	2,100.0	3.6	3.6	168.15	-29.5	6.2	30.1	22.9	7.27	4.142			
2,200.0	2,200.0	2,200.0	2,200.0	3.8	3.8	168.15	-29.5	6.2	30.1	22.5	7.62	3.952			
2,300.0	2,300.0	2,300.0	2,300.0	4.0	4.0	168.15	-29.5	6.2	30.1	22.2	7.97	3.779			
2,400.0	2,400.0	2,400.0	2,400.0	4.2	4.2	168.15	-29.5	6.2	30.1	21.8	8.32	3.620			
2,500.0	2,500.0	2,500.0	2,500.0	4.3	4.3	168.15	-29.5	6.2	30.1	21.5	8.67	3.475			
2,600.0	2,600.0	2,600.0	2,600.0	4.5	4.5	168.15	-29.5	6.2	30.1	21.1	9.02	3.340			
2,700.0	2,700.0	2,700.0	2,700.0	4.7	4.7	168.15	-29.5	6.2	30.1	20.8	9.37	3.216			
2,800.0	2,800.0	2,800.0	2,800.0	4.9	4.9	168.15	-29.5	6.2	30.1	20.4	9.72	3.100			
2,900.0	2,900.0	2,900.0	2,900.0	5.0	5.0	168.15	-29.5	6.2	30.1	20.1	10.07	2.993			
3,000.0	3,000.0	3,000.0	3,000.0	5.2	5.2	168.15	-29.5	6.2	30.1	19.7	10.42	2.892			
3,100.0	3,100.0	3,100.0	3,100.0	5.4	5.4	168.15	-29.5	6.2	30.1	19.4	10.77	2.799			
3,200.0	3,200.0	3,200.0	3,200.0	5.6	5.6	168.15	-29.5	6.2	30.1	19.0	11.11	2.711			
3,300.0	3,300.0	3,300.0	3,300.0	5.7	5.7	168.15	-29.5	6.2	30.1	18.7	11.46	2.628			
3,400.0	3,400.0	3,400.0	3,400.0	5.9	5.9	168.15	-29.5	6.2	30.1	18.3	11.81	2.551	CC, ES, SF		
3,500.0	3,500.0	3,498.4	3,498.4	6.1	6.1	169.18	-32.0	6.1	32.6	20.5	12.16	2.685			
3,600.0	3,600.0	3,596.3	3,595.9	6.3	6.3	171.50	-39.6	5.9	40.2	27.7	12.50	3.215			
3,700.0	3,700.0	3,693.1	3,692.0	6.4	6.4	173.87	-51.9	5.6	52.8	40.0	12.85	4.113			
3,800.0	3,800.0	3,788.5	3,785.8	6.6	6.6	175.76	-68.9	5.1	70.5	57.3	13.19	5.344			
3,900.0	3,900.0	3,881.9	3,876.8	6.8	6.9	177.12	-90.0	4.5	93.0	79.5	13.53	6.875			
4,000.0	4,000.0	3,973.1	3,964.5	7.0	7.1	178.08	-114.8	3.9	120.2	106.4	13.86	8.673			
4,100.0	4,100.0	4,061.6	4,048.5	7.1	7.4	178.76	-142.9	3.1	151.9	137.8	14.19	10.709			
4,200.0	4,200.0	4,147.3	4,128.4	7.3	7.8	179.26	-173.8	2.2	188.0	173.5	14.51	12.953			
4,300.0	4,300.0	4,228.9	4,203.1	7.5	8.1	-178.99	-206.5	1.3	230.4	215.6	14.81	15.565			
4,400.0	4,399.6	4,304.9	4,271.4	7.7	8.5	-178.71	-239.8	0.4	281.2	266.1	15.06	18.676			
4,500.0	4,498.8	4,385.0	4,342.5	7.8	9.0	-178.49	-276.8	-0.6	338.5	323.2	15.28	22.149			
4,600.0	4,597.1	4,463.8	4,412.4	8.1	9.4	-178.32	-313.1	-1.6	400.0	384.6	15.47	25.852			
4,663.8	4,659.3	4,512.4	4,455.5	8.2	9.7	-178.23	-335.5	-2.2	441.4	425.8	15.58	28.339			
4,700.0	4,694.4	4,539.5	4,479.6	8.3	9.9	-178.22	-348.1	-2.5	465.4	449.7	15.68	29.671			
4,800.0	4,791.5	4,614.6	4,546.1	8.5	10.4	-178.19	-382.7	-3.5	531.5	515.5	15.98	33.261			
4,900.0	4,888.5	4,689.6	4,612.6	8.8	10.9	-178.16	-417.3	-4.4	597.6	581.3	16.27	36.721			
5,000.0	4,985.6	4,764.6	4,679.2	9.1	11.4	-178.14	-451.9	-5.4	663.7	647.2	16.57	40.058			

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 04H
Well Error: 0.0ft
Reference Wellbore: HZ
Reference Design: Plan #1

Local Co-ordinate Reference: Well Escrito L14-2408 04H
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

Survey Program: 0-Geolink MWD

Offset Site Error: 0.0 ft

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		
5,100.0	5,082.7	4,839.6	4,745.7	9.4	11.9	-178.12	-486.6	-6.3	729.9	713.0	16.86	43.279			
5,200.0	5,179.7	4,914.6	4,812.2	9.7	12.4	-178.11	-521.2	-7.3	796.0	778.9	17.16	46.390			
5,215.1	5,194.4	4,926.0	4,822.3	9.7	12.5	-178.11	-526.4	-7.4	806.0	788.8	17.20	46.852			
5,250.0	5,228.2	4,952.1	4,845.5	9.8	12.7	-161.48	-538.5	-7.7	829.1	811.7	17.33	47.847			
5,300.0	5,276.4	4,989.4	4,878.6	10.0	12.9	-141.08	-555.7	-8.2	862.0	844.4	17.60	48.987			
5,350.0	5,324.0	5,026.1	4,911.2	10.2	13.2	-125.58	-572.7	-8.7	894.6	876.7	17.95	49.836			
5,400.0	5,370.5	5,062.1	4,943.1	10.3	13.5	-114.09	-589.3	-9.1	926.8	908.4	18.37	50.466			
5,450.0	5,415.6	5,097.1	4,974.1	10.5	13.7	-105.41	-605.4	-9.6	958.5	939.7	18.81	50.950			
5,500.0	5,459.0	5,130.7	5,003.9	10.8	14.0	-98.65	-620.9	-10.0	989.6	970.3	19.27	51.342			
5,550.0	5,500.3	5,162.7	5,032.3	11.0	14.2	-93.22	-635.7	-10.4	1,020.1	1,000.3	19.74	51.679			
5,600.0	5,539.3	5,193.0	5,059.2	11.3	14.4	-88.73	-649.7	-10.8	1,049.9	1,029.7	20.20	51.982			
5,650.0	5,575.6	5,221.1	5,084.2	11.6	14.6	-84.92	-662.7	-11.1	1,079.2	1,058.5	20.65	52.260			
5,700.0	5,608.9	5,247.1	5,107.2	12.0	14.8	-81.60	-674.6	-11.5	1,107.8	1,086.7	21.09	52.516			
5,750.0	5,639.1	5,270.5	5,128.0	12.5	15.0	-78.65	-685.5	-11.8	1,135.8	1,114.3	21.53	52.753			
5,800.0	5,665.8	5,291.4	5,146.4	13.0	15.1	-75.97	-695.1	-12.0	1,163.2	1,141.2	21.96	52.973			
5,850.0	5,688.9	5,309.4	5,162.4	13.6	15.3	-73.50	-703.4	-12.3	1,189.9	1,167.5	22.38	53.178			
5,900.0	5,708.2	5,324.5	5,175.8	14.3	15.4	-71.17	-710.4	-12.4	1,215.9	1,193.1	22.78	53.370			
5,950.0	5,723.6	5,336.5	5,186.5	15.1	15.5	-68.97	-715.9	-12.6	1,241.3	1,218.1	23.18	53.551			
6,000.0	5,734.8	5,345.4	5,194.4	15.9	15.5	-66.87	-720.0	-12.7	1,265.8	1,242.2	23.56	53.716			
6,050.0	5,741.9	5,351.1	5,199.5	16.8	15.6	-64.87	-722.7	-12.8	1,289.5	1,265.6	23.94	53.855			
6,100.0	5,744.8	5,353.6	5,201.6	17.8	15.6	-62.96	-723.8	-12.8	1,312.3	1,288.0	24.32	53.955			
6,113.4	5,744.9	6,268.6	5,712.8	18.0	23.9	-88.61	-982.2	-600.9	1,318.2	1,283.6	34.68	38.016			
6,200.0	5,744.3	6,355.2	5,712.2	19.7	25.1	-88.61	-980.7	-687.4	1,318.2	1,280.0	38.28	34.436			
6,300.0	5,743.6	6,455.2	5,711.5	21.8	26.6	-88.61	-979.0	-787.4	1,318.2	1,275.7	42.59	30.953			
6,400.0	5,742.9	6,555.2	5,710.8	24.0	28.3	-88.61	-977.3	-887.4	1,318.2	1,271.2	47.02	28.034			
6,500.0	5,742.2	6,655.2	5,710.1	26.2	30.1	-88.61	-975.7	-987.4	1,318.2	1,266.7	51.55	25.572			
6,600.0	5,741.5	6,755.2	5,709.4	28.4	32.1	-88.61	-974.0	-1,087.4	1,318.2	1,262.1	56.15	23.477			
6,700.0	5,740.8	6,855.2	5,708.7	30.7	34.1	-88.61	-972.3	-1,187.4	1,318.3	1,257.4	60.80	21.680			
6,800.0	5,740.1	6,955.2	5,708.0	33.0	36.1	-88.61	-970.6	-1,287.3	1,318.3	1,252.8	65.50	20.126			
6,900.0	5,739.4	7,055.2	5,707.4	35.4	38.2	-88.61	-968.9	-1,387.3	1,318.3	1,248.0	70.23	18.770			
7,000.0	5,738.7	7,155.2	5,706.7	37.7	40.4	-88.61	-967.2	-1,487.3	1,318.3	1,243.3	74.99	17.579			
7,100.0	5,738.0	7,255.2	5,706.0	40.1	42.6	-88.61	-965.6	-1,587.3	1,318.3	1,238.5	79.77	16.525			
7,200.0	5,737.3	7,355.2	5,705.3	42.5	44.9	-88.61	-963.9	-1,687.3	1,318.3	1,233.7	84.57	15.587			
7,300.0	5,736.6	7,455.2	5,704.6	44.9	47.1	-88.61	-962.2	-1,787.3	1,318.3	1,228.9	89.39	14.747			
7,400.0	5,735.9	7,555.2	5,703.9	47.3	49.4	-88.61	-960.5	-1,887.2	1,318.3	1,224.0	94.22	13.991			
7,500.0	5,735.2	7,655.2	5,703.2	49.7	51.7	-88.61	-958.8	-1,987.2	1,318.3	1,219.2	99.06	13.307			
7,600.0	5,734.5	7,755.2	5,702.5	52.1	54.1	-88.61	-957.2	-2,087.2	1,318.3	1,214.4	103.91	12.686			
7,700.0	5,733.8	7,855.2	5,701.8	54.5	56.4	-88.61	-955.5	-2,187.2	1,318.3	1,209.5	108.77	12.119			
7,800.0	5,733.1	7,955.2	5,701.1	56.9	58.7	-88.61	-953.8	-2,287.2	1,318.3	1,204.6	113.64	11.600			
7,900.0	5,732.4	8,055.2	5,700.4	59.4	61.1	-88.61	-952.1	-2,387.2	1,318.3	1,199.8	118.52	11.123			
8,000.0	5,731.8	8,155.2	5,699.7	61.8	63.5	-88.61	-950.4	-2,487.1	1,318.3	1,194.9	123.40	10.683			
8,100.0	5,731.1	8,255.2	5,699.0	64.2	65.8	-88.61	-948.7	-2,587.1	1,318.3	1,190.0	128.28	10.276			
8,200.0	5,730.4	8,355.2	5,698.3	66.7	68.2	-88.61	-947.1	-2,687.1	1,318.3	1,185.1	133.17	9.899			
8,300.0	5,729.7	8,455.2	5,697.6	69.1	70.6	-88.61	-945.4	-2,787.1	1,318.3	1,180.2	138.07	9.548			
8,400.0	5,729.0	8,555.2	5,696.9	71.6	73.0	-88.61	-943.7	-2,887.1	1,318.3	1,175.3	142.96	9.221			
8,500.0	5,728.3	8,655.2	5,696.2	74.0	75.4	-88.61	-942.0	-2,987.1	1,318.3	1,170.4	147.86	8.916			
8,600.0	5,727.6	8,755.2	5,695.5	76.4	77.8	-88.61	-940.3	-3,087.0	1,318.3	1,165.5	152.77	8.629			
8,700.0	5,726.9	8,855.2	5,694.8	78.9	80.2	-88.61	-938.6	-3,187.0	1,318.3	1,160.6	157.67	8.361			
8,800.0	5,726.2	8,955.2	5,694.1	81.3	82.7	-88.61	-937.0	-3,287.0	1,318.3	1,155.7	162.58	8.108			
8,900.0	5,725.5	9,055.2	5,693.4	83.8	85.1	-88.61	-935.3	-3,387.0	1,318.3	1,150.8	167.49	7.871			
9,000.0	5,724.8	9,155.2	5,692.7	86.3	87.5	-88.61	-933.6	-3,487.0	1,318.3	1,145.9	172.41	7.646			
9,100.0	5,724.1	9,255.2	5,692.0	88.7	89.9	-88.61	-931.9	-3,587.0	1,318.3	1,141.0	177.32	7.434			

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 04H
Well Error: 0.0ft
Reference Wellbore: HZ
Reference Design: Plan #1

Local Co-ordinate Reference: Well Escrito L14-2408 04H
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			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	5,723.4	9,355.2	5,691.3	91.2	92.3	-88.61	-930.2	-3,686.9	1,318.3	1,136.1	182.24	7.234		
9,300.0	5,722.7	9,455.2	5,690.6	93.6	94.8	-88.60	-928.6	-3,786.9	1,318.3	1,131.2	187.16	7,044		
9,400.0	5,722.0	9,555.2	5,689.9	96.1	97.2	-88.60	-926.9	-3,886.9	1,318.3	1,126.2	192.08	6,863		
9,500.0	5,721.3	9,655.2	5,689.2	98.5	99.6	-88.60	-925.2	-3,986.9	1,318.3	1,121.3	197.00	6,692		
9,600.0	5,720.6	9,755.2	5,688.5	101.0	102.1	-88.60	-923.5	-4,086.9	1,318.3	1,116.4	201.92	6,529		
9,700.0	5,719.9	9,855.2	5,687.8	103.5	104.5	-88.60	-921.8	-4,186.9	1,318.3	1,111.5	206.84	6,373		
9,800.0	5,719.2	9,955.2	5,687.1	105.9	107.0	-88.60	-920.1	-4,286.8	1,318.3	1,106.5	211.77	6,225		
9,900.0	5,718.5	10,055.2	5,686.4	108.4	109.4	-88.60	-918.5	-4,386.8	1,318.3	1,101.6	216.70	6,084		
10,000.0	5,717.8	10,155.2	5,685.7	110.8	111.8	-88.60	-916.8	-4,486.8	1,318.3	1,096.7	221.62	5,949		
10,100.0	5,717.1	10,255.2	5,685.0	113.3	114.3	-88.60	-915.1	-4,586.8	1,318.3	1,091.8	226.55	5,819		
10,200.0	5,716.4	10,355.2	5,684.3	115.8	116.7	-88.60	-913.4	-4,686.8	1,318.3	1,086.9	231.48	5,695		
10,300.0	5,715.7	10,455.2	5,683.6	118.2	119.2	-88.60	-911.7	-4,786.8	1,318.3	1,081.9	236.41	5,577		
10,400.0	5,715.0	10,555.2	5,682.9	120.7	121.6	-88.60	-910.1	-4,886.7	1,318.3	1,077.0	241.34	5,463		
10,424.8	5,714.9	10,580.1	5,682.7	121.3	122.2	-88.60	-909.6	-4,911.6	1,318.3	1,075.8	242.56	5,435		
10,447.4	5,714.7	10,601.8	5,682.6	121.9	122.8	-88.60	-909.3	-4,933.4	1,318.3	1,074.7	243.65	5,411		



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 04H
Well Error: 0.0ft
Reference Wellbore: HZ
Reference Design: Plan #1

Local Co-ordinate Reference: Well Escrito L14-2408 04H
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 (°)	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	168.15	-29.5	6.2	30.1				
100.0	100.0	100.0	100.0	0.1	0.1	168.15	-29.5	6.2	30.1	29.8	0.29	102.752	
200.0	200.0	200.0	200.0	0.3	0.3	168.15	-29.5	6.2	30.1	29.5	0.64	46.908	
300.0	300.0	300.0	300.0	0.5	0.5	168.15	-29.5	6.2	30.1	29.1	0.99	30.391	
400.0	400.0	400.0	400.0	0.7	0.7	168.15	-29.5	6.2	30.1	28.8	1.34	22.477	
500.0	500.0	500.0	500.0	0.8	0.8	168.15	-29.5	6.2	30.1	28.4	1.69	17.833	
600.0	600.0	600.0	600.0	1.0	1.0	168.15	-29.5	6.2	30.1	28.1	2.04	14.779	
700.0	700.0	700.0	700.0	1.2	1.2	168.15	-29.5	6.2	30.1	27.7	2.39	12.619	
800.0	800.0	800.0	800.0	1.4	1.4	168.15	-29.5	6.2	30.1	27.4	2.74	11.009	
900.0	900.0	900.0	900.0	1.5	1.5	168.15	-29.5	6.2	30.1	27.0	3.09	9.764	
1,000.0	1,000.0	1,000.0	1,000.0	1.7	1.7	168.15	-29.5	6.2	30.1	26.7	3.43	8.772	
1,100.0	1,100.0	1,100.0	1,100.0	1.9	1.9	168.15	-29.5	6.2	30.1	26.3	3.78	7.962	
1,200.0	1,200.0	1,200.0	1,200.0	2.1	2.1	168.15	-29.5	6.2	30.1	26.0	4.13	7.290	
1,300.0	1,300.0	1,300.0	1,300.0	2.2	2.2	168.15	-29.5	6.2	30.1	25.6	4.48	6.722	
1,400.0	1,400.0	1,400.0	1,400.0	2.4	2.4	168.15	-29.5	6.2	30.1	25.3	4.83	6.236	
1,500.0	1,500.0	1,500.0	1,500.0	2.6	2.6	168.15	-29.5	6.2	30.1	24.9	5.18	5.816	
1,600.0	1,600.0	1,600.0	1,600.0	2.8	2.8	168.15	-29.5	6.2	30.1	24.6	5.53	5.449	
1,700.0	1,700.0	1,700.0	1,700.0	2.9	2.9	168.15	-29.5	6.2	30.1	24.3	5.88	5.125	
1,800.0	1,800.0	1,800.0	1,800.0	3.1	3.1	168.15	-29.5	6.2	30.1	23.9	6.23	4.838	
1,900.0	1,900.0	1,900.0	1,900.0	3.3	3.3	168.15	-29.5	6.2	30.1	23.6	6.58	4.581	
2,000.0	2,000.0	2,000.0	2,000.0	3.5	3.5	168.15	-29.5	6.2	30.1	23.2	6.93	4.350	
2,100.0	2,100.0	2,100.0	2,100.0	3.6	3.6	168.15	-29.5	6.2	30.1	22.9	7.27	4.142	
2,200.0	2,200.0	2,200.0	2,200.0	3.8	3.8	168.15	-29.5	6.2	30.1	22.5	7.62	3.952	
2,300.0	2,300.0	2,300.0	2,300.0	4.0	4.0	168.15	-29.5	6.2	30.1	22.2	7.97	3.779	
2,400.0	2,400.0	2,400.0	2,400.0	4.2	4.2	168.15	-29.5	6.2	30.1	21.8	8.32	3.620	
2,500.0	2,500.0	2,500.0	2,500.0	4.3	4.3	168.15	-29.5	6.2	30.1	21.5	8.67	3.475	
2,600.0	2,600.0	2,600.0	2,600.0	4.5	4.5	168.15	-29.5	6.2	30.1	21.1	9.02	3.340	
2,700.0	2,700.0	2,700.0	2,700.0	4.7	4.7	168.15	-29.5	6.2	30.1	20.8	9.37	3.216	
2,800.0	2,800.0	2,800.0	2,800.0	4.9	4.9	168.15	-29.5	6.2	30.1	20.4	9.72	3.100	
2,900.0	2,900.0	2,900.0	2,900.0	5.0	5.0	168.15	-29.5	6.2	30.1	20.1	10.07	2.993	
3,000.0	3,000.0	3,000.0	3,000.0	5.2	5.2	168.15	-29.5	6.2	30.1	19.7	10.42	2.892	
3,100.0	3,100.0	3,100.0	3,100.0	5.4	5.4	168.15	-29.5	6.2	30.1	19.4	10.77	2.799	
3,200.0	3,200.0	3,200.0	3,200.0	5.6	5.6	168.15	-29.5	6.2	30.1	19.0	11.11	2.711	
3,300.0	3,300.0	3,300.0	3,300.0	5.7	5.7	168.15	-29.5	6.2	30.1	18.7	11.46	2.628	
3,400.0	3,400.0	3,400.0	3,400.0	5.9	5.9	168.15	-29.5	6.2	30.1	18.3	11.81	2.551	
3,500.0	3,500.0	3,500.0	3,500.0	6.1	6.1	168.15	-29.5	6.2	30.1	18.0	12.16	2.477	
3,600.0	3,600.0	3,600.0	3,600.0	6.3	6.3	168.15	-29.5	6.2	30.1	17.6	12.51	2.408	
3,700.0	3,700.0	3,700.0	3,700.0	6.4	6.4	168.15	-29.5	6.2	30.1	17.3	12.86	2.343	
3,800.0	3,800.0	3,800.0	3,800.0	6.6	6.6	168.15	-29.5	6.2	30.1	16.9	13.21	2.281	
3,900.0	3,900.0	3,900.0	3,900.0	6.8	6.8	168.15	-29.5	6.2	30.1	16.6	13.56	2.222	
4,000.0	4,000.0	4,000.0	4,000.0	7.0	7.0	168.15	-29.5	6.2	30.1	16.2	13.91	2.166	
4,100.0	4,100.0	4,100.0	4,100.0	7.1	7.1	168.15	-29.5	6.2	30.1	15.9	14.26	2.113	
4,200.0	4,200.0	4,200.0	4,200.0	7.3	7.3	168.15	-29.5	6.2	30.1	15.5	14.60	2.063 CC, ES, SF	
4,300.0	4,300.0	4,300.0	4,300.0	7.5	7.5	170.34	-29.5	6.2	32.7	17.8	14.94	2.189	
4,400.0	4,399.6	4,399.6	4,399.6	7.7	7.7	172.17	-29.5	6.2	40.5	25.2	15.25	2.653	
4,500.0	4,498.8	4,498.8	4,498.8	7.8	7.8	174.04	-29.5	6.2	53.4	37.9	15.53	3.441	
4,600.0	4,597.1	4,597.1	4,597.1	8.1	8.0	175.51	-29.5	6.2	71.6	55.8	15.77	4.538	
4,663.8	4,659.3	4,659.3	4,659.3	8.2	8.1	176.23	-29.5	6.2	85.8	69.9	15.91	5.394	
4,700.0	4,694.4	4,694.4	4,694.4	8.3	8.2	176.58	-29.5	6.2	94.5	78.5	16.04	5.894	
4,800.0	4,791.5	4,791.5	4,791.5	8.5	8.3	177.27	-29.5	6.2	118.5	102.2	16.38	7.236	
4,900.0	4,888.5	4,888.5	4,888.5	8.8	8.5	177.73	-29.5	6.2	142.6	125.8	16.73	8.524	
5,000.0	4,985.6	4,985.6	4,985.6	9.1	8.7	178.06	-29.5	6.2	166.6	149.5	17.07	9.761	

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

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 04H
Well Error: 0.0ft
Reference Wellbore: HZ
Reference Design: Plan #1

Local Co-ordinate Reference: Well Escrito L14-2408 04H
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							
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	
5,100.0	5,082.7	5,082.7	5,082.7	9.4	8.8	178.30	-29.5	6.2	190.6	173.2	17.41	10.948		
5,200.0	5,179.7	5,179.7	5,179.7	9.7	9.0	178.49	-29.5	6.2	214.7	196.9	17.76	12.090		
5,215.1	5,194.4	5,194.4	5,194.4	9.7	9.0	178.52	-29.5	6.2	218.3	200.5	17.81	12.260		
5,250.0	5,228.2	5,228.2	5,228.2	9.8	9.1	-167.19	-29.5	6.2	226.8	208.8	17.92	12.656		
5,300.0	5,276.4	5,276.4	5,276.4	10.0	9.2	-150.62	-29.5	6.2	239.1	221.0	18.08	13.228		
5,350.0	5,324.0	5,324.0	5,324.0	10.2	9.3	-139.37	-29.5	6.2	251.9	233.7	18.23	13.820		
5,400.0	5,370.5	5,370.5	5,370.5	10.3	9.3	-132.35	-29.5	6.2	265.4	247.1	18.37	14.453		
5,450.0	5,415.6	5,415.6	5,415.6	10.5	9.4	-128.19	-29.5	6.2	280.1	261.6	18.49	15.153		
5,500.0	5,459.0	5,459.0	5,459.0	10.8	9.5	-125.86	-29.5	6.2	296.3	277.7	18.59	15.941		
5,550.0	5,500.3	5,500.3	5,500.3	11.0	9.6	-124.60	-29.5	6.2	314.6	295.9	18.69	16.833		
5,600.0	5,539.3	5,539.3	5,539.3	11.3	9.6	-123.89	-29.5	6.2	335.1	316.4	18.79	17.832		
5,650.0	5,575.6	5,575.6	5,575.6	11.6	9.7	-123.36	-29.5	6.2	358.4	339.4	18.94	18.921		
5,700.0	5,608.9	5,608.9	5,608.9	12.0	9.8	-122.72	-29.5	6.2	384.4	365.2	19.16	20.059		
5,750.0	5,639.1	5,639.1	5,639.1	12.5	9.8	-121.74	-29.5	6.2	413.2	393.7	19.51	21.183		
5,800.0	5,665.8	5,665.8	5,665.8	13.0	9.9	-120.23	-29.5	6.2	444.8	424.8	20.02	22.213		
5,850.0	5,688.9	5,688.9	5,688.9	13.6	9.9	-118.00	-29.5	6.2	479.0	458.2	20.76	23.070		
5,900.0	5,708.2	5,708.2	5,708.2	14.3	9.9	-114.90	-29.5	6.2	515.5	493.7	21.75	23.703		
5,950.0	5,723.6	5,723.6	5,723.6	15.1	10.0	-110.76	-29.5	6.2	554.0	531.0	22.97	24.119		
6,000.0	5,734.8	5,734.8	5,734.8	15.9	10.0	-105.47	-29.5	6.2	594.2	569.9	24.36	24.395		
6,050.0	5,741.9	5,741.9	5,741.9	16.8	10.0	-99.00	-29.5	6.2	635.7	610.0	25.76	24.680		
6,100.0	5,744.8	5,744.8	5,744.8	17.8	10.0	-91.49	-29.5	6.2	678.1	651.2	26.94	25.174		
6,113.4	5,744.9	5,744.9	5,744.9	18.0	10.0	-89.34	-29.5	6.2	689.6	662.4	27.19	25.367		
6,200.0	5,744.3	5,744.3	5,744.3	19.7	10.0	-89.24	-29.5	6.2	765.2	736.2	28.98	26.400		
6,300.0	5,743.6	5,743.6	5,743.6	21.8	10.0	-89.13	-29.5	6.2	855.0	823.9	31.14	27.457		
6,400.0	5,742.9	5,742.9	5,742.9	24.0	10.0	-89.01	-29.5	6.2	946.9	913.5	33.36	28.385		
6,500.0	5,742.2	5,742.2	5,742.2	26.2	10.0	-88.90	-29.5	6.2	1,040.2	1,004.6	35.62	29.202		
6,600.0	5,741.5	5,741.5	5,741.5	28.4	10.0	-88.79	-29.5	6.2	1,134.7	1,096.8	37.92	29.924		
6,700.0	5,740.8	5,740.8	5,740.8	30.7	10.0	-88.68	-29.5	6.2	1,230.1	1,189.9	40.25	30.564		
6,800.0	5,740.1	5,740.1	5,740.1	33.0	10.0	-88.56	-29.5	6.2	1,326.2	1,283.6	42.59	31.135		
6,900.0	5,739.4	5,739.4	5,739.4	35.4	10.0	-88.45	-29.5	6.2	1,422.8	1,377.8	44.96	31.646		
7,000.0	5,738.7	5,738.7	5,738.7	37.7	10.0	-88.34	-29.5	6.2	1,519.8	1,472.5	47.34	32.107		



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 04H
Well Error: 0.0ft
Reference Wellbore: HZ
Reference Design: Plan #1

Local Co-ordinate Reference: Well Escrito L14-2408 04H
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

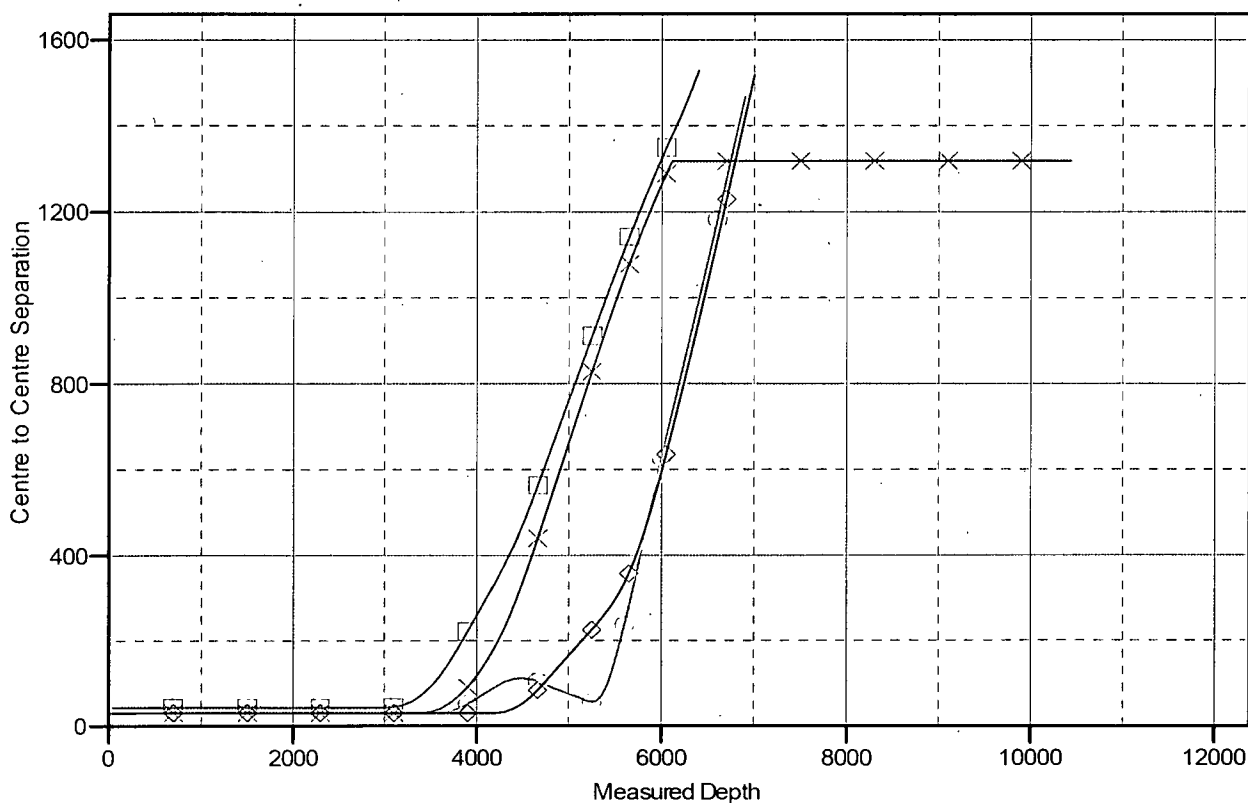
Central Meridian is -107.833333 °

Coordinates are relative to: Escrito L14-2408 04H

Coordinate System is US State Plane 1983, New Mexico Western Zone

Grid Convergence at Surface is: 0.10°

Ladder Plot



LEGEND

- Escrito L14-2408 02H, HZ, Plan #1 V0
- Escrito L14-2408 03H, HZ, Plan #1 V0
- Escrito L14-2408 01H, HZ, Plan #1 V0
- Escrito L14-2408 03H, Pilot Hole, Plan #1 V0

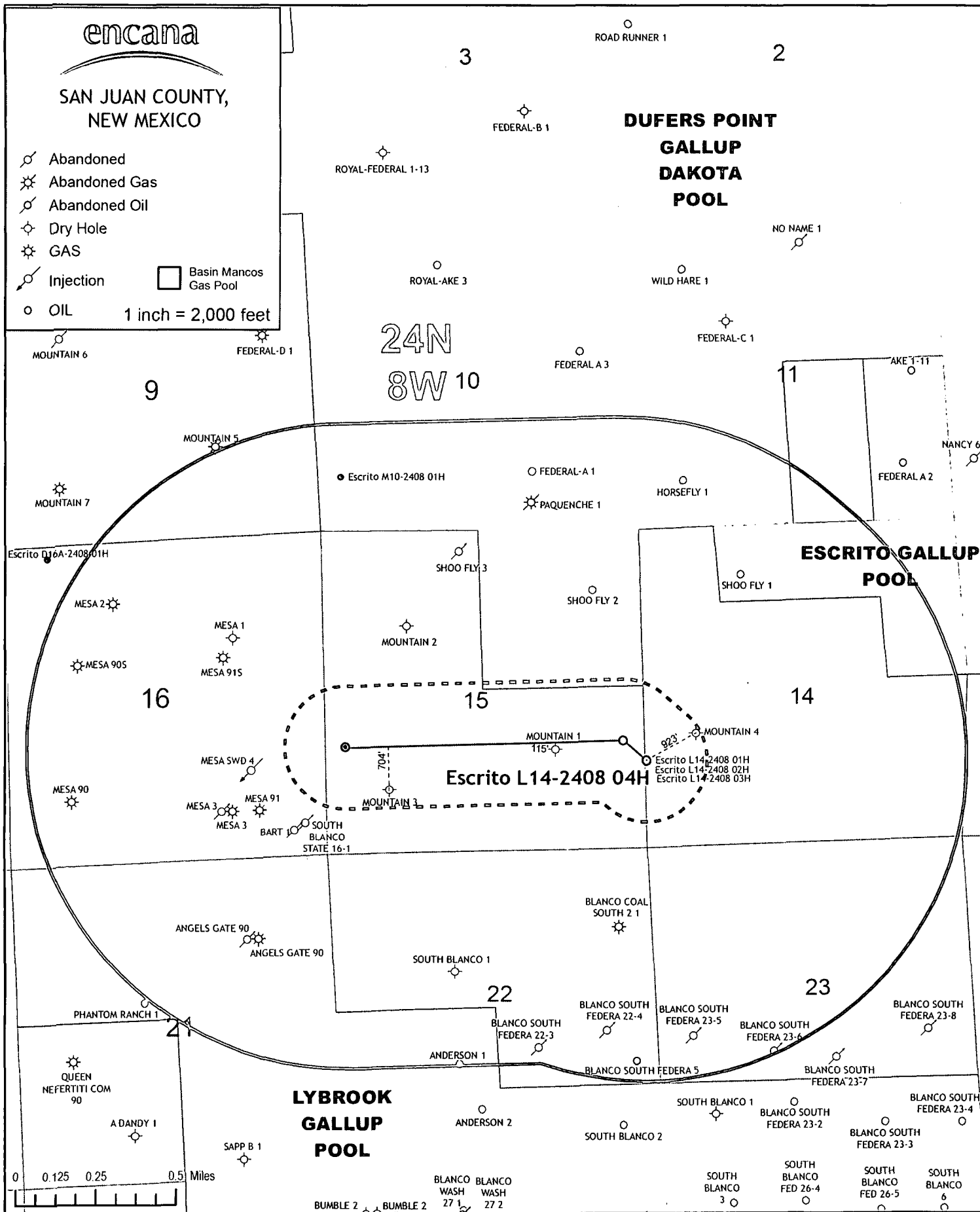
ENCANA OIL & GAS (USA) INC.
ESCRITO L14-2408 #04H
1423' FSL & 23' FWL
LOCATED IN THE NW/4 SW/4 OF SECTION 14,
T24N, R8W, N.M.P.M.,
SAN JUAN COUNTY, NEW MEXICO

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. 36.310729° N, LONG. 107.660487° W (NAD 83).





encana

Well Name and Number: Escrito L14-2408 04H

