

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary

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

David R. Catanach Division Director
Oil Conservation Division



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

Operator Signature Date: 7-30-15

Well information;

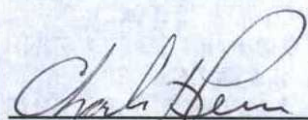
Operator Enrona, Well Name and Number Escrito E22 2409 #2H

API# 30-045 35706, Section 22, Township 24 N/S, Range 9 E/W

Conditions of Approval:

(See the below checked and handwritten conditions)

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



NMOCD Approved by Signature

11-30-2015
Date

KC

OIL CONS. DIV DIST. 3

NOV 19 2015

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JUL 31 2015

Form 3160-3
(March 2012)FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFarmington Field Office
Bureau of Land Management

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☒ DRILL ☐ REENTER		5. Lease Serial No. NMNM 36474
1b. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone		6. If Indian, Allottee or Tribe Name N/A
2. Name of Operator Encana Oil & Gas (USA) Inc.		7. If Unit or CA Agreement, Name and No. N/A
3a. Address 370 17th Street, Suite 1700 Denver, CO 80202	3b. Phone No. (include area code) 720-876-5919	8. Lease Name and Well No. Escrito E22-2409 02H
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface 1,430' FNL, 266' FWL, Section 22, T24N, R9W At proposed prod. zone 2,070' FNL, 330' FWL, Section 21, T24N, R9W		9. API Well No. 30-045-35706
14. Distance in miles and direction from nearest town or post office* +/- 33 miles South from the intersection of US HWY 64 & US HWY 550 in Bloomfield, NM		10. Field and Pool, or Exploratory Bisti Lower-Gallup & Basin Mancos Gas
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drg. unit line, if any) BHL is 330' FWL Section 21, T24N, R9W	16. No. of acres in lease NMNM 36474: 320 acres	11. Sec., T. R. M. or Blk. and Survey or Area Section 22, T24N, R9W NMPM Sec 21, T24N, R9W
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. SHL is +/- 30' East of Escrito E22-2409 01H	19. Proposed Depth 5,424' TVD; 10,507' MD	12. County or Parish San Juan
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6,814' GL; 6,830' KB	22. Approximate date work will start* 03/15/2016	13. State NM
17. Spacing Unit dedicated to this well 80 acres- S/2 NW/4 of Sec. 21, T24N, R9W 80 acres- S/2 NE/4 of Sec. 21, T24N, R9W		20. BLM/BIA Bond No. on file COB-000235
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 <i>Jillian McGrath</i>	Name (Printed/Typed) Jillian McGrath	Date 7/30/15
Title Regulatory Analyst		
Approved by (Signature) <i>D. Mankie</i>	Name (Printed/Typed)	Date 11/17/15
Title AFM	Office FFO	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 2)
This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4

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

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

NMOCD PV

DISTRICT I
1625 N. French Dr., Hobbs, N.M. 88240
Phone: (575) 393-8161 Fax: (575) 393-9720

DISTRICT II
811 S. First St., Artesia, N.M. 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410
Phone: (505) 334-8178 Fax: (505) 334-8170

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 478-3480 Fax: (505) 478-3488

State of New Mexico
Energy, Minerals & Natural Resources Department

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Form C-102
Revised August 1, 2011

JUL 31 2015

Submit one copy to appropriate
District Office

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Farmington Field Office ☐ AMENDED REPORT
Bureau of Land Management

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045-35706	² Pool Code 97232 / 5890	³ Pool Name BASIN MANCOS / BISTI LOWER GALLUP
⁴ Property Code 315078	⁵ Property Name ESCRITO E22-2409	⁶ Well Number 02H
⁷ OGRID No. 282327	⁸ Operator Name ENCANA OIL & GAS (USA) INC.	⁹ Elevation 6813.9'

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
E	22	24N	9W		1430'	NORTH	266'	WEST	SAN JUAN

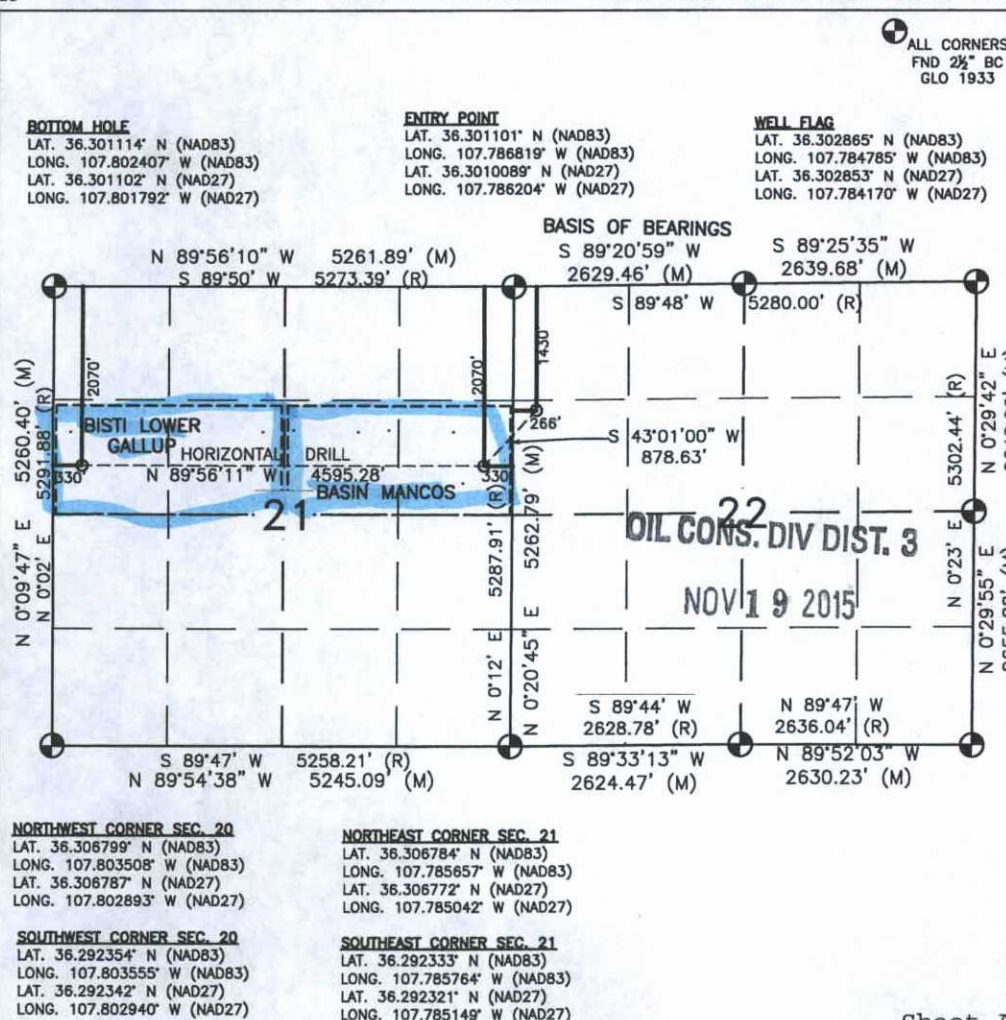
¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	21	24N	9W		2070'	NORTH	330'	WEST	SAN JUAN

¹² Dedicated Acres 80.00 ACRES S/2 NW/4 SEC. 21 (BISTI LOWER GALLUP) 80.00 ACRES S/2 NE/4 SEC. 21 (BASIN MANCOS) 100.00 ACRES	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.

Jillian McGrath
Signature
Date
Jillian McGrath
Printed Name
Jillian.McGrath@encana.com
E-mail Address

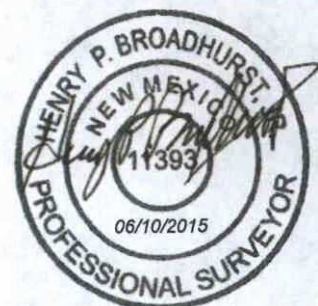
SURVEYOR CERTIFICATION

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.

MAY 19, 2014

Date of Survey

Signature and Seal of Professional Surveyor:



Escrito E22-2409 02H

SHL: 1430' FNL, 266' FWL, Sec 22, 24N, 9W

BHL: 2070' FNL, 330' FWL, Sec 21, 24N, 9W

San Juan, New Mexico

Lease Number: NMNM 36474

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

1. ESTIMATED TOPS OF GEOLOGICAL MARKERS (TVD)

The estimated tops of important geologic markers are as follows:

Formation	Depth (TVD) units = feet
San Jose Fn.	n/a
Nacimiento Fn.	surface
Ojo Alamo Ss.	880
Kirtland Shale	1,072
Fruitland Coal	1,372
Pictured Cliffs Ss.	1,649
Lewis Shale	1,796
Cliffhouse Ss.	2,489
Menefee Fn.	3,213
Point Lookout Ss.	4,107
Mancos Shale	4,266
Mancos Silt	4,858
Gallup Fn.	5,111
Base Gallup	5,432

The referenced surface elevation is 6814', KB 6830'

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

Substance	Formation	Depth (TVD) units = feet
Water/Gas	Fruitland Coal	1,372
Oil/Gas	Pictured Cliffs Ss.	1,649
Oil/Gas	Cliffhouse Ss.	2,489
Gas	Menefee Fn.	3,213
Oil/Gas	Point Lookout Ss.	4,107
Oil/Gas	Mancos Shale	4,266
Oil/Gas	Mancos Silt	4,858
Oil/Gas	Gallup Fn.	5,111

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

Escrito E22-2409 02H

SHL: 1430' FNL, 266' FWL, Sec 22, 24N, 9W

BHL: 2070' FNL, 330' FWL, Sec 21, 24N, 9W

San Juan, New Mexico

Lease Number: NMNM 36474

3. PRESSURE CONTROL

- a) Pressure control equipment and configuration will be designed to meet 2M standards.
- b) Working pressure on rams and BOPE will be 3,000 psi.
- c) Function test and visual inspection of the BOP will be conducted daily and noted in the IADC Daily Drilling Report.
- d) The Annular BOP will be pressure tested to a minimum of 50 percent of its rated working pressure.
- e) Blind and Pipe Rams/BOP will be tested against a test plug to 100 percent of rated working pressure.
- f) Pressure tests are required before drilling out from under all casing strings set and cemented in place.
- g) BOP controls must be installed prior to drilling the surface casing plug and will remain in use until the well is completed or abandoned.
- h) BOP testing procedures and testing frequency will conform to Onshore Order No. 2.
- i) BOP remote controls shall be located on the rig floor at a location readily accessible to the driller. Master controls shall be on the ground at the accumulator and shall have the capability to function all preventers.
- j) The kill line shall be 2-inch minimum and contain two kill line valves, one of which shall be a check valve.
- k) The choke line shall be a 2-inch minimum and contain two choke line valves (2-inch minimum).
- l) The choke and manifold shall contain two adjustable chokes.
- m) Hand wheels shall be installed on all ram preventers.
- n) Safety valves and wrenches (with subs for drill string connections) shall be available on the rig floor at all times.
- o) Inside BOP or float sub shall also be available on the rig floor at all times.

Proposed BOP and choke manifold arrangements are attached.

4. CASING & CEMENTING PROGRAM

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

- a) The proposed casing design is as follows:

Casing	Depth (MD)	Hole Size	Csg Size	Weight	Grade
Conductor	0'-60'	26"	16"	42.09#	
Surface	0'-500'	12 1/4"	9 5/8"	36#	J55, STC New
Intermediate	0'-5914'	8 3/4"	7"	26#	J55, LTC New
Production Liner	5814'-10507'	6 1/8"	4 1/2"	11.6#	B80*, LTC New

Casing String				Casing Strength Properties			Minimum Design Factors		
Size	Weight (ppf)	Grade	Connection	Collapse (psi)	Burst (psi)	Tensile (1000lbs)	Collapse	Burst	Tension
9 5/8"	36	J55	STC	2020	3520	394	1.125	1.1	1.5
7"	26	J55	LTC	4320	4980	367	1.125	1.1	1.5
4.5"	11.6	B80	LTC	6350	7780	201	1.125	1.1	1.5

*B80 pipe specifications are attached.

Casing design is subject to revision based on geologic conditions encountered.

Escrito E22-2409 02H

SHL: 1430' FNL, 266' FWL, Sec 22, 24N, 9W

BHL: 2070' FNL, 330' FWL, Sec 21, 24N, 9W

San Juan, New Mexico

Lease Number: NMNM 36474

All casing strings below the conductor shall be pressure tested to 0.22 psi per foot of casing string length or 1,500 psi, whichever is greater, but not to exceed 70 percent of the minimum internal yield. If pressure declines more than 10 percent in 30 minutes, corrective action shall be taken.

b) The proposed cementing program is as follows:

Casing	Depth (MD)	Cement Volume (sacks)	Cement Type & Yield	Designed TOC	Centralizers
Conductor	0'-60'	100 sks	Type I Neat 16 ppg	Surface	None
Surface	0'-500'	228 sks	Type III Cement + 1% bwoc Calcium Chloride + 0.25 lbs/sack Cello Flake + 0.2% bwoc FL-52A + 58.9% Fresh Water	Surface	1 per joint on bottom 3 joints
Intermediate	0'-5914'	100% open hole excess Stage 1 Lead: 553 sks Stage 1 Tail: 418 sks	Lead: PremLite + 3% CaCl + 0.25lb/sk CelloFlake + 5lb/sk LCM, 12.1ppg 2.13cuft/sk Tail: Type III Cmt + 1% CaCl + 0.25lb/sk Cello Flake 14.5ppg 1.38cuft/sk	Surface	1 every 3 joints through water bearing zones
Production Liner	5814'- 10507'	50% OH excess Stage 1 Blend Total: 267sks	Blend: Premium Lite High Strength FM + 0.7% bwoc R-3 + 3% bwoc Potassium Chloride + 0.25lbs/sack Cello Flake + 0.5% bwoc CD-32 + 1.15% bwoc FL- 52A + 60 lbs/sack Calcium Carbonate + 124.4% Fresh Water. Yield 2.63 cuft/sk	Liner Hanger	N/A

Actual volumes will be calculated and determined by conditions onsite. All cement slurries will meet or exceed minimum BLM and New Mexico Oil Conservation Division requirements. Slurries used will be the slurries listed above or equivalent slurries depending on service provider selected. Cement yields may change depending on slurries selected.

All waiting on cement times shall be a minimum of 8 hours or adequate to achieve minimum of 500 psi compressive strength at the casing shoe prior to drilling out.

5. WELL PLAN & DIRECTIONAL DRILLING PROGRAM

The proposed horizontal well will have a kick off point of 500'. Directional plans are attached.

Description	Proposed Depth (TVD/MD)	Formation
Horizontal Lateral TD	5424'/10507'	Gallup

Escrito E22-2409 02H

SHL: 1430' FNL, 266' FWL, Sec 22, 24N, 9W

BHL: 2070' FNL, 330' FWL, Sec 21, 24N, 9W

San Juan, New Mexico

Lease Number: NMNM 36474

6. DRILLING FLUIDS PROGRAM

a) Surface through Intermediate Casing Point:

Hole Size (in)	Depth (TVD/MD)	Mud Type	Density (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
30"	0-60'/60'	Fresh Water	8.3-9.2	38-100	4-28
12 1/4"	0'-500'/500'	Fresh Water	8.3-10	60-70	NC
8 3/4"	500'/500'-5456'/5914'	Fresh Water LSND	8.3-10	40-50	8-10

b) Intermediate Casing Point to TD:

Hole Size (in)	Depth (TVD/MD)	Mud Type	Density (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
6 1/8"	5456'/5914'- 5424'/10507'	Fresh Water LSND	8.3-10	15-25	<15

c) There will be sufficient mud on location to control a blowout should one occur. Mud flow and volume will be monitored both visually and with electronic pit volume totalizers. Mud tests shall be performed every 24 hours after mudding up to determine, as applicable: density, viscosity, gel strength, filtration, and pH.

✓d) A closed-loop system will be used to recover drilling fluid and dry cuttings in both phases of the well and on all hole intervals. Above-ground tanks will be utilized to hold cuttings and fluids for rig operations. A frac tank will be on location to store fresh water. Waste will be disposed of properly at an EPA-approved hazardous waste facility. Fresh water cuttings will be disposed of at Basin Disposal, Inc. and/or Industrial Ecosystems, Inc. The location will be lined in accordance with the Surface Use Plan of Operations.

7. TESTING, CORING, & LOGGING

- a) Drill Stem Testing - None anticipated.
- b) Coring - None anticipated.
- c) Mudd Logging - Mud loggers will be on location from kick off point to TD.
- d) Logging - See below.

Cased Hole:

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

8. ABNORMAL PRESSURES & HYDROGEN SULFIDE

The anticipated bottom hole pressure is +/- 2521 psi based on a 9.0 ppg at 5387' 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 March 15, 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: 1430' FNL, 266' FWL, Sec 22, 24N, 9W County: San Juan WELL: Escrito E22-2409 02H			Encana Oil & Gas (USA) Inc. WELL SUMMARY			ENG: 0 RIG: Unassigned GLE: 6813.9 RKBE: 6829.9		7/30/15			
MWD LWD	OPEN HOLE LOGGING	FORM	DEPTH			HOLE SIZE	CASING SPECS	MW MUD TYPE	DEVIATION INFORMATION		
			TVD	MD							
			60	60'		26	16" 42.09# 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	San Jose Fn. Nacimiento Fn. 9 5/8" Csg	0 surface 500	 500.00		12 1/4	9 5/8" 36ppf J55 LTC TOC Surface with 100% OH Excess: 228 sks Type III Cement + 1% bwoc Calcium Chloride + 0.25 lbs/sack Cello Flake + 0.2% bwoc FL-52A + 58.9% Fresh Water.	Fresh wtr 8.3-10	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 Fruiland Coal Pictured Cliffs Ss. Lewis Shale Cliffhouse Ss. Menefee Fn. Point Lookout Ss. Mancos Shale	880 1,072 1,372 1,649 1,796 2,489 3,213 4,107 4,266			8 3/4	7" 26ppf J55 LTC TOC @ surface (100% OH excess - 70% Lead 30% Tail) Stage 1 Total: 971sks Stage 1 Lead: 553 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: 418 sks Type III Cement + 1% CaCl2 + 0.25#/sk Cello Flake + 0.2% FL-52A. Mixed at 14.6 ppg. Yield 1.38 cuft/sk.	Fresh Wtr 8.3-10	Vertical <1°		
Surveys every 30' through the curve	Mud logger onsite	KOP Mancos Silt Gallup Fn. 7" Csg	500 4,858 5,111 5,456			500 5,914'	6 1/8	100' overlap at liner top 4593' Drilled Lateral		Horz Inc/TVD 90.42deg/5386.9ft TD = 10507.3 MD	
Surveys every stand to TD unless directed otherwise by Geologist	No OH Logs	Horizontal Target TD Base Gallup	5,387 5,424 5,432			10,507					
MWD Gamma Directional								4 1/2" 11.6ppf SB80 LTC TOC @ hanger (50% OH excess) Stage 1 Total: 267sks Stage 1 Blend: 267 sks Premium Lite High Strength FM + 0.7% bwoc R-3 + 3% bwoc Potassium Chloride + 0.25lbs/sack Cello Flake + 0.5% bwoc CD-32 + 1.15% bwoc FL-52A + 60 lbs/sack Calcium Carbonate + 124.4% Fresh Water. Yield 2.63 cuft/sk.	WBM 8.3-10		

NOTES:

- 1) Drill with 26" bit to 60', set 16" 42.09ppf conductor pipe
- 2) Drill surface to 500', R&C 9 5/8" casing
- 3) N/U BOP and surface equipment
- 4) Drill to KOP of 500', 8 3/4 inch holedsize
- 5) Start curve at 10deg/100' build rate
- 6) Drill to csg point of 5914' MD
- 7) R&C 7" csg, circ cmt to surface
- 8) Land at ~55 deg, drill lateral to 10507' run 4 1/2 inch cemented liner

NOV 19 2015

Planning Report

Database: USA EDM 5000 Multi Users DB
 Company: EnCana Oil & Gas (USA) Inc
 Project: San Juan County, NM
 Site: S22-T24N-R9W
 Well: ESCRITO E22-2409 02H
 Wellbore: OH
 Design: PLAN #1

Local Co-ordinate Reference: Well ESCRITO E22-2409 02H
 TVD Reference: KB @ 6830.0usft
 MD Reference: KB @ 6830.0usft
 North Reference: True
 Survey Calculation Method: Minimum Curvature

Project: San Juan County, NM

Map System: US State Plane 1983
 Geo Datum: North American Datum 1983
 Map Zone: New Mexico Western Zone
 System Datum: Mean Sea Level

Site: S22-T24N-R9W

Site Position: Northing: 1,927,518.97 usft Latitude: 36.297296
 From: Lat/Long Easting: 2,737,354.54 usft Longitude: -107.784931
 Position Uncertainty: 0.0 usft Slot Radius: 13-3/16" Grid Convergence: 0.03 °

Well: ESCRITO E22-2409 02H

Well Position: +N/-S 0.0 usft Northing: 1,929,546.26 usft Latitude: 36.302865
 +E/-W 0.0 usft Easting: 2,737,396.54 usft Longitude: -107.784785
 Position Uncertainty: 0.0 usft Wellhead Elevation: 0.0 usft Ground Level: 6,814.0 usft

Wellbore: OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	6/30/2015	9.36	62.99	50,080

Design: PLAN #1

Audit Notes:

Version: Phase: PLAN Tie On Depth: 0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	270.06

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.00	0.00	0.00	0.00	
893.7	7.87	167.39	892.5	-26.4	5.9	2.00	2.00	0.00	167.39	
4,762.5	7.87	167.39	4,724.8	-543.6	121.6	0.00	0.00	0.00	0.00	
5,914.0	90.40	270.06	5,455.8	-642.1	-599.3	8.00	7.17	8.92	102.50	ESCRITO E22-2409 (
10,507.3	90.40	270.06	5,423.7	-636.9	-5,192.5	0.00	0.00	0.00	0.00	ESCRITO E22-2409 (

Planning Report

Database: USA EDM 5000 Multi Users DB
Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Site: S22-T24N-R9W
Well: ESCRITO E22-2409 02H
Wellbore: OH
Design: PLAN #1

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

Well ESCRITO E22-2409 02H
KB @ 6830.0usft
KB @ 6830.0usft
True
Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100u)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	KOP @ 500' - 9 5/8"
600.0	2.00	167.39	600.0	-1.7	0.4	-0.4	2.00	2.00	
700.0	4.00	167.39	699.8	-6.8	1.5	-1.5	2.00	2.00	
800.0	6.00	167.39	799.5	-15.3	3.4	-3.4	2.00	2.00	
893.7	7.87	167.39	892.5	-26.4	5.9	-5.9	2.00	2.00	EOB; INC=7.87°
900.0	7.87	167.39	898.7	-27.2	6.1	-6.1	0.00	0.00	
930.8	7.87	167.39	929.2	-31.3	7.0	-7.0	0.00	0.00	Ojo Alamo Ss.
1,000.0	7.87	167.39	997.8	-40.6	9.1	-9.1	0.00	0.00	
1,100.0	7.87	167.39	1,096.8	-53.9	12.1	-12.1	0.00	0.00	
1,124.8	7.87	167.39	1,121.4	-57.3	12.8	-12.9	0.00	0.00	Kirtland Shale
1,200.0	7.87	167.39	1,195.9	-67.3	15.1	-15.1	0.00	0.00	
1,300.0	7.87	167.39	1,294.9	-80.7	18.0	-18.1	0.00	0.00	
1,400.0	7.87	167.39	1,394.0	-94.1	21.0	-21.1	0.00	0.00	
1,428.0	7.87	167.39	1,421.7	-97.8	21.9	-22.0	0.00	0.00	Fruitland Coal
1,500.0	7.87	167.39	1,493.0	-107.4	24.0	-24.1	0.00	0.00	
1,600.0	7.87	167.39	1,592.1	-120.8	27.0	-27.1	0.00	0.00	
1,700.0	7.87	167.39	1,691.2	-134.2	30.0	-30.2	0.00	0.00	
1,707.9	7.87	167.39	1,698.9	-135.2	30.2	-30.4	0.00	0.00	Pictured Cliffs Ss.
1,800.0	7.87	167.39	1,790.2	-147.5	33.0	-33.2	0.00	0.00	
1,856.4	7.87	167.39	1,846.1	-155.1	34.7	-34.8	0.00	0.00	Lewis Shale
1,900.0	7.87	167.39	1,889.3	-160.9	36.0	-36.2	0.00	0.00	
2,000.0	7.87	167.39	1,988.3	-174.3	39.0	-39.2	0.00	0.00	
2,100.0	7.87	167.39	2,087.4	-187.6	42.0	-42.2	0.00	0.00	
2,200.0	7.87	167.39	2,186.4	-201.0	45.0	-45.2	0.00	0.00	
2,300.0	7.87	167.39	2,285.5	-214.4	48.0	-48.2	0.00	0.00	
2,400.0	7.87	167.39	2,384.6	-227.7	50.9	-51.2	0.00	0.00	
2,500.0	7.87	167.39	2,483.6	-241.1	53.9	-54.2	0.00	0.00	
2,556.7	7.87	167.39	2,539.7	-248.7	55.6	-55.9	0.00	0.00	Cliffhouse Ss.
2,600.0	7.87	167.39	2,582.7	-254.5	56.9	-57.2	0.00	0.00	
2,700.0	7.87	167.39	2,681.7	-267.9	59.9	-60.2	0.00	0.00	
2,800.0	7.87	167.39	2,780.8	-281.2	62.9	-63.2	0.00	0.00	
2,900.0	7.87	167.39	2,879.8	-294.6	65.9	-66.2	0.00	0.00	
3,000.0	7.87	167.39	2,978.9	-308.0	68.9	-69.2	0.00	0.00	
3,100.0	7.87	167.39	3,078.0	-321.3	71.9	-72.2	0.00	0.00	
3,200.0	7.87	167.39	3,177.0	-334.7	74.9	-75.2	0.00	0.00	
3,288.2	7.87	167.39	3,264.4	-346.5	77.5	-77.9	0.00	0.00	Menefee Fn.
3,300.0	7.87	167.39	3,276.1	-348.1	77.9	-78.2	0.00	0.00	
3,400.0	7.87	167.39	3,375.1	-361.4	80.9	-81.2	0.00	0.00	
3,500.0	7.87	167.39	3,474.2	-374.8	83.8	-84.2	0.00	0.00	
3,600.0	7.87	167.39	3,573.2	-388.2	86.8	-87.2	0.00	0.00	
3,700.0	7.87	167.39	3,672.3	-401.6	89.8	-90.2	0.00	0.00	
3,800.0	7.87	167.39	3,771.4	-414.9	92.8	-93.2	0.00	0.00	
3,900.0	7.87	167.39	3,870.4	-428.3	95.8	-96.3	0.00	0.00	
4,000.0	7.87	167.39	3,969.5	-441.7	98.8	-99.3	0.00	0.00	
4,100.0	7.87	167.39	4,068.5	-455.0	101.8	-102.3	0.00	0.00	
4,191.6	7.87	167.39	4,159.3	-467.3	104.5	-105.0	0.00	0.00	Point Lookout Ss.
4,200.0	7.87	167.39	4,167.6	-468.4	104.8	-105.3	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well ESCRITO E22-2409 02H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB @ 6830.0usft
Project:	San Juan County, NM	MD Reference:	KB @ 6830.0usft
Site:	S22-T24N-R9W	North Reference:	True
Well:	ESCRITO E22-2409 02H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100u)	Comments / Formations
4,300.0	7.87	167.39	4,266.6	-481.8	107.8	-108.3	0.00	0.00	
4,352.3	7.87	167.39	4,318.4	-488.8	109.3	-109.8	0.00	0.00	Mancos Shale
4,400.0	7.87	167.39	4,365.7	-495.1	110.8	-111.3	0.00	0.00	
4,500.0	7.87	167.39	4,464.8	-508.5	113.7	-114.3	0.00	0.00	
4,600.0	7.87	167.39	4,563.8	-521.9	116.7	-117.3	0.00	0.00	
4,700.0	7.87	167.39	4,662.9	-535.3	119.7	-120.3	0.00	0.00	
4,762.5	7.87	167.39	4,724.8	-543.6	121.6	-122.2	0.00	0.00	Start DLS 8.00 TFO 102.50
4,800.0	7.79	189.51	4,761.9	-548.6	121.7	-122.3	8.00	-0.22	
4,900.0	12.03	230.72	4,860.5	-561.9	112.5	-113.1	8.00	4.24	
4,976.9	17.20	244.17	4,935.0	-572.0	96.1	-96.7	8.00	6.72	Mancos Slit
5,000.0	18.87	246.75	4,956.9	-574.9	89.6	-90.2	8.00	7.21	
5,100.0	26.35	254.20	5,049.2	-587.4	53.3	-53.9	8.00	7.48	
5,200.0	34.06	258.49	5,135.5	-599.0	4.4	-5.1	8.00	7.71	
5,265.7	39.18	260.48	5,188.2	-606.1	-34.1	33.4	8.00	7.80	Gallup Fn.
5,300.0	41.87	261.35	5,214.3	-609.6	-56.1	55.5	8.00	7.83	
5,400.0	49.72	263.44	5,284.0	-619.0	-127.1	126.4	8.00	7.86	
5,500.0	57.61	265.10	5,343.2	-627.0	-207.2	206.5	8.00	7.89	
5,600.0	65.52	266.49	5,390.8	-633.4	-294.8	294.2	8.00	7.91	
5,700.0	73.44	267.71	5,425.8	-638.1	-388.3	387.6	8.00	7.92	
5,800.0	81.36	268.84	5,447.6	-641.1	-485.7	485.1	8.00	7.92	
5,900.0	89.29	269.91	5,455.8	-642.1	-585.3	584.7	8.00	7.93	
5,914.0	90.40	270.06	5,455.8	-642.1	-599.3	598.7	8.00	7.93	LP @ 5455' TVD; 90.4° - 7" ICP
6,000.0	90.40	270.06	5,455.2	-642.0	-685.3	684.6	0.00	0.00	
6,100.0	90.40	270.06	5,454.5	-641.9	-785.3	784.6	0.00	0.00	
6,200.0	90.40	270.06	5,453.8	-641.8	-885.3	884.6	0.00	0.00	
6,300.0	90.40	270.06	5,453.1	-641.7	-985.3	984.6	0.00	0.00	
6,400.0	90.40	270.06	5,452.4	-641.6	-1,085.3	1,084.6	0.00	0.00	
6,500.0	90.40	270.06	5,451.7	-641.5	-1,185.3	1,184.6	0.00	0.00	
6,600.0	90.40	270.06	5,451.0	-641.4	-1,285.3	1,284.6	0.00	0.00	
6,700.0	90.40	270.06	5,450.3	-641.2	-1,385.3	1,384.6	0.00	0.00	
6,800.0	90.40	270.06	5,449.6	-641.1	-1,485.3	1,484.6	0.00	0.00	
6,900.0	90.40	270.06	5,448.9	-641.0	-1,585.3	1,584.6	0.00	0.00	
7,000.0	90.40	270.06	5,448.2	-640.9	-1,685.3	1,684.6	0.00	0.00	
7,100.0	90.40	270.06	5,447.5	-640.8	-1,785.3	1,784.6	0.00	0.00	
7,200.0	90.40	270.06	5,446.8	-640.7	-1,885.3	1,884.6	0.00	0.00	
7,300.0	90.40	270.06	5,446.1	-640.6	-1,985.3	1,984.6	0.00	0.00	
7,400.0	90.40	270.06	5,445.4	-640.5	-2,085.3	2,084.6	0.00	0.00	
7,500.0	90.40	270.06	5,444.7	-640.3	-2,185.3	2,184.6	0.00	0.00	
7,600.0	90.40	270.06	5,444.0	-640.2	-2,285.3	2,284.6	0.00	0.00	
7,700.0	90.40	270.06	5,443.3	-640.1	-2,385.3	2,384.6	0.00	0.00	
7,800.0	90.40	270.06	5,442.6	-640.0	-2,485.3	2,484.6	0.00	0.00	
7,900.0	90.40	270.06	5,441.9	-639.9	-2,585.3	2,584.6	0.00	0.00	
8,000.0	90.40	270.06	5,441.2	-639.8	-2,685.3	2,684.6	0.00	0.00	
8,100.0	90.40	270.06	5,440.5	-639.7	-2,785.3	2,784.6	0.00	0.00	
8,200.0	90.40	270.06	5,439.8	-639.5	-2,885.3	2,884.6	0.00	0.00	
8,300.0	90.40	270.06	5,439.2	-639.4	-2,985.3	2,984.6	0.00	0.00	
8,400.0	90.40	270.06	5,438.5	-639.3	-3,085.3	3,084.6	0.00	0.00	
8,500.0	90.40	270.06	5,437.8	-639.2	-3,185.3	3,184.6	0.00	0.00	
8,600.0	90.40	270.06	5,437.1	-639.1	-3,285.3	3,284.6	0.00	0.00	
8,700.0	90.40	270.06	5,436.4	-639.0	-3,385.3	3,384.6	0.00	0.00	
8,800.0	90.40	270.06	5,435.7	-638.9	-3,485.3	3,484.6	0.00	0.00	
8,900.0	90.40	270.06	5,435.0	-638.8	-3,585.2	3,584.6	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: S22-T24N-R9W
 Well: ESCRITO E22-2409 02H
 Wellbore: OH
 Design: PLAN #1

Local Co-ordinate Reference: Well ESCRITO E22-2409 02H
 TVD Reference: KB @ 6830.0usft
 MD Reference: KB @ 6830.0usft
 North Reference: True
 Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100u)	Comments / Formations
9,000.0	90.40	270.06	5,434.3	-638.6	-3,685.2	3,684.6	0.00	0.00	
9,100.0	90.40	270.06	5,433.6	-638.5	-3,785.2	3,784.6	0.00	0.00	
9,200.0	90.40	270.06	5,432.9	-638.4	-3,885.2	3,884.6	0.00	0.00	
9,300.0	90.40	270.06	5,432.2	-638.3	-3,985.2	3,984.6	0.00	0.00	
9,400.0	90.40	270.06	5,431.5	-638.2	-4,085.2	4,084.6	0.00	0.00	
9,500.0	90.40	270.06	5,430.8	-638.1	-4,185.2	4,184.6	0.00	0.00	
9,600.0	90.40	270.06	5,430.1	-638.0	-4,285.2	4,284.6	0.00	0.00	
9,700.0	90.40	270.06	5,429.4	-637.9	-4,385.2	4,384.6	0.00	0.00	
9,800.0	90.40	270.06	5,428.7	-637.7	-4,485.2	4,484.6	0.00	0.00	
9,900.0	90.40	270.06	5,428.0	-637.6	-4,585.2	4,584.6	0.00	0.00	
10,000.0	90.40	270.06	5,427.3	-637.5	-4,685.2	4,684.6	0.00	0.00	
10,100.0	90.40	270.06	5,426.6	-637.4	-4,785.2	4,784.5	0.00	0.00	
10,200.0	90.40	270.06	5,425.9	-637.3	-4,885.2	4,884.5	0.00	0.00	
10,300.0	90.40	270.06	5,425.2	-637.2	-4,985.2	4,984.5	0.00	0.00	
10,400.0	90.40	270.06	5,424.5	-637.1	-5,085.2	5,084.5	0.00	0.00	
10,500.0	90.40	270.06	5,423.8	-636.9	-5,185.2	5,184.5	0.00	0.00	
10,507.3	90.40	270.06	5,423.7	-636.9	-5,192.5	5,191.8	0.00	0.00	TD at 10507.3

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
ESCRITO E22-2409 02H - plan hits target center - Point	0.00	0.00	5,455.8	-642.1	-599.3	1,928,903.82	2,736,797.53	36.301101	-107.786819
ESCRITO E22-2409 02H - plan hits target center - Point	0.00	0.00	5,423.7	-636.9	-5,192.5	1,928,906.71	2,732,204.38	36.301114	-107.802407

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
500.0	500.0	9 5/8"	0	0
5,914.0	5,455.8	7" ICP	0	0

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well ESCRITO E22-2409 02H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB @ 6830.0usft
Project:	San Juan County, NM	MD Reference:	KB @ 6830.0usft
Site:	S22-T24N-R9W	North Reference:	True
Well:	ESCRITO E22-2409 02H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
930.8	929.0	Ojo Alamo Ss.		-0.40		
1,124.8	1,121.0	Kirtland Shale		-0.40		
1,428.0	1,421.0	Fruitland Coal		-0.40		
1,707.9	1,698.0	Pictured Cliffs Ss.		-0.40		
1,856.4	1,845.0	Lewis Shale		-0.40		
2,556.7	2,538.0	Cliffhouse Ss.		-0.40		
3,288.2	3,262.0	Menefee Fn.		-0.40		
4,191.6	4,156.0	Point Lookout Ss.		-0.40		
4,352.3	4,315.0	Mancos Shale		-0.40		
4,976.9	4,931.0	Mancos Slit		-0.40		
5,265.7	5,184.0	Gallup Fn.		-0.40		

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
500.0	500.0	0.0	0.0	KOP @ 500'	
893.7	892.5	-26.4	5.9	EOB; INC=7.87°	
4,762.5	4,724.8	-543.6	121.6	Start DLS 8.00 TFO 102.50	
5,914.0	5,455.8	-642.1	-599.3	LP @ 5455' TVD; 90.4°	
10,507.3	5,423.7	-636.9	-5,192.5	TD at 10507.3	



EnCana Oil & Gas (USA) Inc

San Juan County, NM

S22-T24N-R9W

ESCRITO E22-2409 02H

OH

PLAN #1

Anticollision Report

01 July, 2015

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well ESCRITO E22-2409 02H
Project:	San Juan County, NM	TVD Reference:	KB @ 6830.0usft
Reference Site:	S22-T24N-R9W	MD Reference:	KB @ 6830.0usft
Site Error:	0.0usft	North Reference:	True
Reference Well:	ESCRITO E22-2409 02H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	PLAN #1	Offset TVD Reference:	Offset Datum

Reference	PLAN #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0usft	Error Model:	Systematic Ellipse
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,500.0usft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program	Date 7/1/2015	
From (usft)	To (usft)	Survey (Wellbore)
0.0	10,507.3	PLAN #1 (OH)
		Tool Name
		MWD
		Description
		MWD - Standard

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
S22-T24N-R9W						
ESCRITO E22-2409 01H - OH - PLAN #1	500.0	500.0	30.0	26.9	9.478	CC, ES
ESCRITO E22-2409 01H - OH - PLAN #1	10,507.3	10,393.5	1,409.6	1,091.4	4.430	SF
NAGEEZI UNIT 101H - OH - PLAN #1	10,507.3	10,357.8	967.1	679.8	3.366	CC, ES, SF
NAGEEZI UNIT 102H - OH - PLAN #1						Out of range
NAGEEZI UNIT 103H - OH - PLAN #1						Out of range

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well ESCRITO E22-2409 02H
Project:	San Juan County, NM	TVD Reference:	KB @ 6830.0usft
Reference Site:	S22-T24N-R9W	MD Reference:	KB @ 6830.0usft
Site Error:	0.0usft	North Reference:	True
Reference Well:	ESCRITO E22-2409 02H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	PLAN #1	Offset TVD Reference:	Offset Datum

Offset Design S22-T24N-R9W - ESCRITO E22-2409 01H - OH - PLAN #1													Offset Site Error: 0.0 usft		
Survey Program: 0-MWD														Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis			Distance								
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	-68.69	10.9	-28.0	30.0						
100.0	100.0	100.0	100.0	0.2	0.2	-68.69	10.9	-28.0	30.0	29.7	0.30	99.747			
200.0	200.0	200.0	200.0	0.5	0.5	-68.69	10.9	-28.0	30.0	29.0	1.02	29.503			
300.0	300.0	300.0	300.0	0.9	0.9	-68.69	10.9	-28.0	30.0	28.3	1.74	17.311			
400.0	400.0	400.0	400.0	1.2	1.2	-68.69	10.9	-28.0	30.0	27.6	2.45	12.250			
500.0	500.0	500.0	500.0	1.6	1.6	-68.69	10.9	-28.0	30.0	26.9	3.17	9.478 CC, ES			
600.0	600.0	599.6	599.6	1.9	1.9	129.50	12.6	-27.9	31.7	27.8	3.87	8.179			
700.0	699.8	698.4	698.3	2.3	2.3	142.74	17.8	-27.5	38.0	33.4	4.59	8.279			
800.0	799.5	795.9	795.4	2.6	2.7	156.19	26.1	-26.8	51.5	46.1	5.36	9.596			
900.0	898.7	891.4	890.2	3.0	3.0	165.93	37.5	-25.9	72.7	66.6	6.16	11.813			
1,000.0	997.8	985.7	983.4	3.4	3.4	172.19	51.7	-24.9	99.4	92.5	6.89	14.423			
1,100.0	1,096.8	1,081.4	1,077.8	3.7	3.8	176.00	66.9	-23.7	127.4	119.9	7.55	16.869			
1,200.0	1,195.9	1,177.1	1,172.3	4.1	4.1	178.43	82.1	-22.5	155.8	147.6	8.23	18.943			
1,300.0	1,294.9	1,272.8	1,266.8	4.5	4.5	-179.88	97.3	-21.4	184.4	175.5	8.90	20.717			
1,400.0	1,394.0	1,368.5	1,361.3	4.9	4.9	-178.65	112.4	-20.2	213.1	203.5	9.58	22.240			
1,500.0	1,493.0	1,464.2	1,455.8	5.4	5.3	-177.71	127.6	-19.1	241.8	231.6	10.27	23.557			
1,600.0	1,592.1	1,559.9	1,550.3	5.8	5.7	-176.97	142.8	-17.9	270.6	259.7	10.95	24.706			
1,700.0	1,691.2	1,655.6	1,644.8	6.2	6.1	-176.37	158.0	-16.7	299.4	287.8	11.65	25.713			
1,800.0	1,790.2	1,751.4	1,739.3	6.6	6.5	-175.88	173.1	-15.6	328.3	316.0	12.34	26.604			
1,900.0	1,889.3	1,847.1	1,833.8	7.0	6.9	-175.47	188.3	-14.4	357.2	344.1	13.04	27.395			
2,000.0	1,988.3	1,942.8	1,928.3	7.4	7.4	-175.11	203.5	-13.3	386.0	372.3	13.74	28.103			
2,100.0	2,087.4	2,038.5	2,022.8	7.9	7.8	-174.81	218.7	-12.1	414.9	400.5	14.44	28.739			
2,200.0	2,186.4	2,134.2	2,117.3	8.3	8.2	-174.55	233.8	-10.9	443.8	428.7	15.14	29.314			
2,300.0	2,285.5	2,229.9	2,211.8	8.7	8.6	-174.32	249.0	-9.8	472.8	456.9	15.84	29.836			
2,400.0	2,384.6	2,325.6	2,306.3	9.1	9.0	-174.11	264.2	-8.6	501.7	485.1	16.55	30.312			
2,500.0	2,483.6	2,421.3	2,400.8	9.5	9.4	-173.93	279.4	-7.5	530.6	513.3	17.26	30.747			
2,600.0	2,582.7	2,517.1	2,495.3	10.0	9.8	-173.77	294.5	-6.3	559.5	541.6	17.96	31.146			
2,700.0	2,681.7	2,612.8	2,589.8	10.4	10.2	-173.62	309.7	-5.1	588.5	569.8	18.67	31.514			
2,800.0	2,780.8	2,708.5	2,684.3	10.8	10.6	-173.49	324.9	-4.0	617.4	598.0	19.38	31.854			
2,900.0	2,879.8	2,804.2	2,778.8	11.2	11.1	-173.36	340.1	-2.8	646.3	626.2	20.09	32.170			
3,000.0	2,978.9	2,899.9	2,873.3	11.6	11.5	-173.25	355.2	-1.7	675.3	654.5	20.80	32.462			
3,100.0	3,078.0	2,995.6	2,967.8	12.1	11.9	-173.15	370.4	-0.5	704.2	682.7	21.51	32.735			
3,200.0	3,177.0	3,091.3	3,062.2	12.5	12.3	-173.06	385.6	0.7	733.2	710.9	22.22	32.990			
3,300.0	3,276.1	3,187.1	3,156.7	12.9	12.7	-172.97	400.8	1.8	762.1	739.2	22.94	33.228			
3,400.0	3,375.1	3,282.8	3,251.2	13.3	13.1	-172.89	415.9	3.0	791.0	767.4	23.65	33.451			
3,500.0	3,474.2	3,378.5	3,345.7	13.8	13.5	-172.82	431.1	4.1	820.0	795.6	24.36	33.661			
3,600.0	3,573.2	3,474.2	3,440.2	14.2	14.0	-172.75	446.3	5.3	848.9	823.9	25.07	33.859			
3,700.0	3,672.3	3,569.9	3,534.7	14.6	14.4	-172.68	461.5	6.5	877.9	852.1	25.79	34.045			
3,800.0	3,771.4	3,665.6	3,629.2	15.0	14.8	-172.62	476.6	7.6	906.8	880.3	26.50	34.221			
3,900.0	3,870.4	3,761.3	3,723.7	15.4	15.2	-172.56	491.8	8.8	935.8	908.6	27.21	34.387			
4,000.0	3,969.5	3,857.0	3,818.2	15.9	15.6	-172.51	507.0	9.9	964.7	936.8	27.93	34.545			
4,100.0	4,068.5	3,952.8	3,912.7	16.3	16.0	-172.46	522.2	11.1	993.7	965.1	28.64	34.695			
4,200.0	4,167.6	4,048.5	4,007.2	16.7	16.4	-172.41	537.4	12.3	1,022.7	993.3	29.36	34.837			
4,300.0	4,266.6	4,144.2	4,101.7	17.1	16.9	-172.37	552.5	13.4	1,051.6	1,021.5	30.07	34.972			
4,400.0	4,365.7	4,239.9	4,196.2	17.6	17.3	-172.32	567.7	14.6	1,080.6	1,049.8	30.79	35.100			
4,500.0	4,464.8	4,335.6	4,290.7	18.0	17.7	-172.28	582.9	15.7	1,109.5	1,078.0	31.50	35.223			
4,600.0	4,563.8	4,431.3	4,385.2	18.4	18.1	-172.24	598.1	16.9	1,138.5	1,106.3	32.22	35.340			
4,700.0	4,662.9	4,527.0	4,479.7	18.8	18.5	-172.21	613.2	18.1	1,167.4	1,134.5	32.93	35.452			
4,800.0	4,761.9	4,622.7	4,574.2	19.3	18.9	165.06	628.4	19.2	1,196.3	1,162.7	33.64	35.558			
4,900.0	4,860.5	4,717.9	4,668.1	19.7	19.4	122.71	643.5	20.4	1,224.2	1,189.8	34.33	35.657			
5,000.0	4,959.6	4,806.7	4,755.7	20.0	19.7	106.12	657.6	20.3	1,250.7	1,215.8	34.95	35.788			
5,100.0	5,049.2	4,892.1	4,839.6	20.3	20.1	98.28	671.1	11.4	1,276.5	1,240.9	35.53	35.926			

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	Local Co-ordinate Reference:	Well ESCRITO E22-2409 02H
Project:	San Juan County, NM	TVD Reference:	KB @ 6830.0usft
Reference Site:	S22-T24N-R9W	MD Reference:	KB @ 6830.0usft
Site Error:	0.0usft	North Reference:	True
Reference Well:	ESCRITO E22-2409 02H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	PLAN #1	Offset TVD Reference:	Offset Datum

Offset Design S22-T24N-R9W- ESCRITO E22-2409 01H - OH - PLAN #1														Offset Site Error: 0.0 usft	
Survey Program: 0-MWD														Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor			
5,200.0	5,135.5	4,980.7	4,924.8	20.6	20.5	93.80	684.8	-8.3	1,301.1	1,264.9	36.16	35.980			
5,300.0	5,214.3	5,072.9	5,010.2	20.9	20.8	90.98	698.6	-40.1	1,324.1	1,287.2	36.91	35.877			
5,400.0	5,284.0	5,169.7	5,094.7	21.2	21.2	89.17	712.2	-85.1	1,345.3	1,307.4	37.87	35.527			
5,500.0	5,343.2	5,271.8	5,176.5	21.6	21.6	88.06	725.5	-144.5	1,364.2	1,325.0	39.16	34.832			
5,600.0	5,390.8	5,380.0	5,253.1	22.2	22.0	87.51	737.9	-219.7	1,380.3	1,339.3	40.95	33.710			
5,700.0	5,425.8	5,494.9	5,321.3	23.3	22.7	87.41	749.1	-311.4	1,393.3	1,349.9	43.36	32.130			
5,800.0	5,447.6	5,617.0	5,377.0	24.9	23.9	87.72	758.2	-419.6	1,402.6	1,356.1	46.55	30.130			
5,900.0	5,455.8	5,746.3	5,415.2	26.7	25.6	88.37	764.6	-542.7	1,408.0	1,357.4	50.53	27.884			
6,000.0	5,455.2	5,882.5	5,431.1	28.8	28.0	89.02	767.4	-677.7	1,409.7	1,354.4	55.24	25.519			
6,100.0	5,454.5	5,988.3	5,430.9	31.0	30.2	89.04	767.6	-783.6	1,409.7	1,349.9	59.77	23.586			
6,200.0	5,453.8	6,088.3	5,430.3	33.4	32.4	89.05	767.7	-883.6	1,409.7	1,345.2	64.47	21.867			
6,300.0	5,453.1	6,188.3	5,429.8	35.9	34.7	89.05	767.8	-983.6	1,409.7	1,340.3	69.39	20.315			
6,400.0	5,452.4	6,288.3	5,429.3	38.5	37.2	89.06	767.9	-1,083.6	1,409.7	1,335.2	74.50	18.922			
6,500.0	5,451.7	6,388.3	5,428.8	41.1	39.7	89.07	768.0	-1,183.6	1,409.7	1,329.9	79.76	17.674			
6,600.0	5,451.0	6,488.3	5,428.2	43.8	42.3	89.07	768.2	-1,283.6	1,409.7	1,324.6	85.14	16.558			
6,700.0	5,450.3	6,588.3	5,427.7	46.5	45.0	89.08	768.3	-1,383.6	1,409.7	1,319.1	90.62	15.557			
6,800.0	5,449.6	6,688.3	5,427.2	49.3	47.7	89.09	768.4	-1,483.6	1,409.7	1,313.5	96.18	14.657			
6,900.0	5,448.9	6,788.3	5,426.7	52.1	50.5	89.10	768.5	-1,583.6	1,409.7	1,307.9	101.81	13.847			
7,000.0	5,448.2	6,888.3	5,426.1	55.0	53.3	89.10	768.6	-1,683.6	1,409.7	1,302.2	107.49	13.114			
7,100.0	5,447.5	6,988.3	5,425.6	57.9	56.1	89.11	768.7	-1,783.6	1,409.7	1,296.5	113.23	12.450			
7,200.0	5,446.8	7,088.3	5,425.1	60.7	58.9	89.12	768.8	-1,883.6	1,409.7	1,290.7	119.01	11.845			
7,300.0	5,446.1	7,188.3	5,424.6	63.7	61.8	89.12	768.9	-1,983.6	1,409.7	1,284.9	124.82	11.293			
7,400.0	5,445.4	7,288.3	5,424.0	66.6	64.7	89.13	769.1	-2,083.6	1,409.7	1,279.0	130.67	10.788			
7,500.0	5,444.7	7,388.3	5,423.5	69.5	67.6	89.14	769.2	-2,183.6	1,409.7	1,273.1	136.54	10.324			
7,600.0	5,444.0	7,488.3	5,423.0	72.5	70.5	89.15	769.3	-2,283.6	1,409.7	1,267.2	142.44	9.897			
7,700.0	5,443.3	7,588.3	5,422.5	75.4	73.5	89.15	769.4	-2,383.6	1,409.7	1,261.3	148.36	9.502			
7,800.0	5,442.6	7,688.3	5,422.0	78.4	76.4	89.16	769.5	-2,483.6	1,409.7	1,255.4	154.30	9.136			
7,900.0	5,441.9	7,788.3	5,421.4	81.4	79.4	89.17	769.6	-2,583.6	1,409.7	1,249.4	160.25	8.797			
8,000.0	5,441.2	7,888.3	5,420.9	84.3	82.4	89.17	769.7	-2,683.6	1,409.7	1,243.4	166.22	8.481			
8,100.0	5,440.5	7,988.3	5,420.4	87.3	85.3	89.18	769.9	-2,783.6	1,409.7	1,237.5	172.20	8.188			
8,200.0	5,439.8	8,088.3	5,419.9	90.3	88.3	89.19	770.0	-2,883.6	1,409.7	1,231.5	178.20	7.911			
8,300.0	5,439.2	8,188.3	5,419.3	93.3	91.3	89.19	770.1	-2,983.6	1,409.7	1,225.5	184.20	7.653			
8,400.0	5,438.5	8,288.3	5,418.8	96.3	94.3	89.20	770.2	-3,083.6	1,409.7	1,219.4	190.22	7.411			
8,500.0	5,437.8	8,388.3	5,418.3	99.4	97.3	89.21	770.3	-3,183.6	1,409.6	1,213.4	196.24	7.183			
8,600.0	5,437.1	8,488.3	5,417.8	102.4	100.3	89.22	770.4	-3,283.6	1,409.6	1,207.4	202.27	6.969			
8,700.0	5,436.4	8,588.3	5,417.2	105.4	103.3	89.22	770.5	-3,383.6	1,409.6	1,201.3	208.31	6.767			
8,800.0	5,435.7	8,688.3	5,416.7	108.4	106.3	89.23	770.6	-3,483.6	1,409.6	1,195.3	214.36	6.576			
8,900.0	5,435.0	8,788.3	5,416.2	111.4	109.3	89.24	770.8	-3,583.6	1,409.6	1,189.2	220.41	6.396			
9,000.0	5,434.3	8,888.3	5,415.7	114.5	112.4	89.24	770.9	-3,683.6	1,409.6	1,183.2	226.47	6.224			
9,100.0	5,433.6	8,988.3	5,415.1	117.5	115.4	89.25	771.0	-3,783.6	1,409.6	1,177.1	232.53	6.062			
9,200.0	5,432.9	9,088.3	5,414.6	120.5	118.4	89.26	771.1	-3,883.6	1,409.6	1,171.0	238.60	5.908			
9,300.0	5,432.2	9,188.3	5,414.1	123.6	121.4	89.27	771.2	-3,983.6	1,409.6	1,165.0	244.67	5.761			
9,400.0	5,431.5	9,288.3	5,413.6	126.6	124.5	89.27	771.3	-4,083.5	1,409.6	1,158.9	250.75	5.622			
9,500.0	5,430.8	9,388.3	5,413.1	129.6	127.5	89.28	771.4	-4,183.5	1,409.6	1,152.8	256.83	5.489			
9,600.0	5,430.1	9,488.3	5,412.5	132.7	130.5	89.29	771.5	-4,283.5	1,409.6	1,146.7	262.91	5.362			
9,700.0	5,429.4	9,588.3	5,412.0	135.7	133.6	89.29	771.7	-4,383.5	1,409.6	1,140.6	269.00	5.240			
9,800.0	5,428.7	9,688.3	5,411.5	138.8	136.6	89.30	771.8	-4,483.5	1,409.6	1,134.5	275.09	5.124			
9,900.0	5,428.0	9,788.3	5,411.0	141.8	139.7	89.31	771.9	-4,583.5	1,409.6	1,128.4	281.18	5.013			
10,000.0	5,427.3	9,888.3	5,410.4	144.9	142.7	89.31	772.0	-4,683.5	1,409.6	1,122.3	287.28	4.907			
10,100.0	5,426.6	9,988.3	5,409.9	147.9	145.8	89.32	772.1	-4,783.5	1,409.6	1,116.2	293.38	4.805			
10,200.0	5,425.9	10,088.3	5,409.4	151.0	148.8	89.33	772.2	-4,883.5	1,409.6	1,110.1	299.48	4.707			
10,300.0	5,425.2	10,188.3	5,408.9	154.0	151.8	89.34	772.3	-4,983.5	1,409.6	1,104.0	305.58	4.613			

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	Local Co-ordinate Reference:	Well ESCRITO E22-2409 02H
Project:	San Juan County, NM	TVD Reference:	KB @ 6830.0usft
Reference Site:	S22-T24N-R9W	MD Reference:	KB @ 6830.0usft
Site Error:	0.0usft	North Reference:	True
Reference Well:	ESCRITO E22-2409 02H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	PLAN #1	Offset TVD Reference:	Offset Datum

Offset Design S22-T24N-R9W - ESCRITO E22-2409 01H - OH - PLAN #1													Offset Site Error:	0.0 usft
Survey Program: 0-MWD													Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Total Uncertainty Axis	Separation Factor	Warning	
Reference	Offset	Reference	Offset	(usft)	(usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
10,400.0	5,424.5	10,288.3	5,408.3	157.1	154.9	89.34	772.5	-5,083.5	1,409.6	1,097.9	311.69	4.523		
10,500.0	5,423.8	10,388.3	5,407.8	160.1	157.9	89.35	772.6	-5,183.5	1,409.6	1,091.8	317.79	4.436		
10,505.2	5,423.8	10,393.5	5,407.8	160.3	158.1	89.35	772.6	-5,188.7	1,409.6	1,091.5	318.11	4.431		
10,507.3	5,423.7	10,393.5	5,407.8	160.3	158.1	89.35	772.6	-5,188.7	1,409.6	1,091.4	318.17	4.430 SF		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well ESCRITO E22-2409 02H
Project:	San Juan County, NM	TVD Reference:	KB @ 6830.0usft
Reference Site:	S22-T24N-R9W	MD Reference:	KB @ 6830.0usft
Site Error:	0.0usft	North Reference:	True
Reference Well:	ESCRITO E22-2409 02H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	PLAN #1	Offset TVD Reference:	Offset Datum

Offset Design S22-T24N-R9W - NAGEEZI UNIT 101H - OH - PLAN #1													Offset Site Error: 0.0 usft	
Survey Program: O-Geolink MWD													Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
3,100.0	3,078.0	3,228.5	3,216.3	12.1	7.2	13.38	-1,795.1	59.5	1,479.8	1,463.1	16.72	88.521		
3,200.0	3,177.0	3,326.0	3,313.3	12.5	7.4	13.35	-1,786.4	63.4	1,457.6	1,440.4	17.26	84.437		
3,300.0	3,276.1	3,423.5	3,410.4	12.9	7.7	13.32	-1,777.6	67.2	1,435.4	1,417.6	17.81	80.603		
3,400.0	3,375.1	3,521.0	3,507.4	13.3	7.9	13.29	-1,768.9	71.1	1,413.2	1,394.8	18.35	76.995		
3,500.0	3,474.2	3,618.5	3,604.4	13.8	8.1	13.26	-1,760.1	75.0	1,391.0	1,372.1	18.90	73.596		
3,600.0	3,573.2	3,716.0	3,701.4	14.2	8.4	13.23	-1,751.4	78.8	1,368.8	1,349.3	19.45	70.386		
3,700.0	3,672.3	3,813.5	3,798.5	14.6	8.6	13.20	-1,742.6	82.7	1,346.6	1,326.6	19.99	67.351		
3,800.0	3,771.4	3,911.0	3,895.5	15.0	8.9	13.16	-1,733.9	86.5	1,324.3	1,303.8	20.54	64.477		
3,900.0	3,870.4	4,008.5	3,992.5	15.4	9.1	13.13	-1,725.1	90.4	1,302.1	1,281.0	21.09	61.752		
4,000.0	3,969.5	4,106.0	4,089.6	15.9	9.3	13.09	-1,716.4	94.3	1,279.9	1,258.3	21.63	59.164		
4,100.0	4,068.5	4,203.5	4,186.6	16.3	9.6	13.06	-1,707.6	98.1	1,257.7	1,235.5	22.18	56.703		
4,200.0	4,167.6	4,301.0	4,283.6	16.7	9.8	13.02	-1,698.9	102.0	1,235.5	1,212.8	22.73	54.361		
4,300.0	4,266.6	4,398.5	4,380.6	17.1	10.0	12.98	-1,690.2	105.9	1,213.3	1,190.0	23.28	52.128		
4,400.0	4,365.7	4,496.0	4,477.7	17.6	10.3	12.94	-1,681.4	109.7	1,191.1	1,167.3	23.82	49.998		
4,500.0	4,464.8	4,593.5	4,574.7	18.0	10.5	12.89	-1,672.7	113.6	1,168.9	1,144.5	24.37	47.963		
4,600.0	4,563.8	4,691.0	4,671.7	18.4	10.7	13.07	-1,663.9	113.1	1,146.7	1,121.8	24.88	46.096		
4,700.0	4,662.9	4,785.9	4,765.3	18.8	10.9	13.89	-1,655.4	100.3	1,124.6	1,099.3	25.31	44.426		
4,800.0	4,761.9	4,875.6	4,851.4	19.3	11.0	-7.31	-1,647.6	76.8	1,103.2	1,077.4	25.75	42.847		
4,900.0	4,860.5	4,961.7	4,930.8	19.7	11.1	-48.27	-1,640.4	44.2	1,082.6	1,056.4	26.20	41.327		
5,000.0	4,956.9	5,045.6	5,003.8	20.0	11.2	-64.06	-1,633.8	3.5	1,063.1	1,036.4	26.69	39.829		
5,100.0	5,049.2	5,127.8	5,070.3	20.3	11.4	-71.24	-1,627.7	-44.3	1,045.0	1,017.7	27.29	38.293		
5,200.0	5,135.5	5,208.5	5,129.8	20.6	11.6	-75.24	-1,622.2	-98.5	1,028.4	1,000.3	28.06	36.656		
5,300.0	5,214.3	5,288.2	5,182.2	20.9	12.0	-77.76	-1,617.4	-158.2	1,013.6	984.5	29.06	34.882		
5,400.0	5,284.0	5,367.0	5,227.3	21.2	12.6	-79.45	-1,613.2	-222.7	1,000.6	970.3	30.38	32.942		
5,500.0	5,343.2	5,450.0	5,266.8	21.6	13.4	-80.60	-1,609.5	-295.5	989.8	957.6	32.16	30.779		
5,600.0	5,390.8	5,523.0	5,294.4	22.2	14.3	-81.47	-1,606.9	-363.0	981.1	946.8	34.25	28.642		
5,700.0	5,425.8	5,600.0	5,316.0	23.3	15.5	-82.04	-1,604.8	-436.9	974.7	937.8	36.88	26.430		
5,800.0	5,447.6	5,677.7	5,329.7	24.9	16.9	-82.38	-1,603.4	-513.3	970.6	930.6	39.97	24.281		
5,900.0	5,455.8	5,754.9	5,335.0	26.7	18.3	-82.54	-1,602.8	-590.3	968.9	925.5	43.41	22.320		
5,947.8	5,456.1	5,798.3	5,334.9	27.7	19.2	-82.51	-1,602.8	-633.7	968.8	923.5	45.32	21.378		
6,000.0	5,455.2	5,850.5	5,334.6	28.8	20.3	-82.55	-1,602.7	-685.9	968.8	921.3	47.55	20.375		
6,100.0	5,454.5	5,950.5	5,334.1	31.0	22.4	-82.56	-1,602.6	-785.9	968.8	916.8	52.01	18.627		
6,200.0	5,453.8	6,050.5	5,333.6	33.4	24.6	-82.57	-1,602.4	-885.9	968.8	912.1	56.65	17.102		
6,300.0	5,453.1	6,150.5	5,333.1	35.9	26.8	-82.58	-1,602.3	-985.9	968.7	907.3	61.42	15.771		
6,400.0	5,452.4	6,250.5	5,332.5	38.5	29.1	-82.59	-1,602.2	-1,085.9	968.7	902.4	66.31	14.608		
6,500.0	5,451.7	6,350.5	5,332.0	41.1	31.4	-82.60	-1,602.1	-1,185.9	968.6	897.4	71.29	13.588		
6,600.0	5,451.0	6,450.5	5,331.5	43.8	33.7	-82.61	-1,601.9	-1,285.9	968.6	892.3	76.34	12.689		
6,700.0	5,450.3	6,550.5	5,331.0	46.5	36.1	-82.62	-1,601.8	-1,385.9	968.6	887.1	81.44	11.893		
6,800.0	5,449.6	6,650.5	5,330.4	49.3	38.5	-82.63	-1,601.7	-1,485.9	968.5	881.9	86.60	11.184		
6,900.0	5,448.9	6,750.5	5,329.9	52.1	40.8	-82.64	-1,601.5	-1,585.9	968.5	876.7	91.79	10.551		
7,000.0	5,448.2	6,850.5	5,329.4	55.0	43.2	-82.65	-1,601.4	-1,685.9	968.4	871.4	97.03	9.981		
7,100.0	5,447.5	6,950.5	5,328.9	57.9	45.6	-82.66	-1,601.3	-1,785.9	968.4	866.1	102.29	9.468		
7,200.0	5,446.8	7,050.5	5,328.3	60.7	48.0	-82.67	-1,601.1	-1,885.9	968.4	860.8	107.57	9.002		
7,300.0	5,446.1	7,150.5	5,327.8	63.7	50.4	-82.68	-1,601.0	-1,985.9	968.3	855.5	112.88	8.579		
7,400.0	5,445.4	7,250.5	5,327.3	66.6	52.9	-82.69	-1,600.9	-2,085.9	968.3	850.1	118.20	8.192		
7,500.0	5,444.7	7,350.5	5,326.8	69.5	55.3	-82.70	-1,600.8	-2,185.9	968.3	844.7	123.55	7.837		
7,600.0	5,444.0	7,450.5	5,326.2	72.5	57.7	-82.71	-1,600.6	-2,285.9	968.2	839.3	128.90	7.511		
7,700.0	5,443.3	7,550.5	5,325.7	75.4	60.2	-82.72	-1,600.5	-2,385.9	968.2	833.9	134.27	7.211		
7,800.0	5,442.6	7,650.5	5,325.2	78.4	62.6	-82.73	-1,600.4	-2,485.9	968.1	828.5	139.65	6.933		
7,900.0	5,441.9	7,750.5	5,324.7	81.4	65.0	-82.74	-1,600.2	-2,585.9	968.1	823.1	145.04	6.675		
8,000.0	5,441.2	7,850.5	5,324.2	84.3	67.5	-82.75	-1,600.1	-2,685.9	968.1	817.6	150.44	6.435		
8,100.0	5,440.5	7,950.5	5,323.6	87.3	69.9	-82.76	-1,600.0	-2,785.9	968.0	812.2	155.85	6.211		

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	Local Co-ordinate Reference:	Well ESCRITO E22-2409 02H
Project:	San Juan County, NM	TVD Reference:	KB @ 6830.0usft
Reference Site:	S22-T24N-R9W	MD Reference:	KB @ 6830.0usft
Site Error:	0.0usft	North Reference:	True
Reference Well:	ESCRITO E22-2409 02H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	PLAN #1	Offset TVD Reference:	Offset Datum

Offset Design S22-T24N-R9W - NAGEEZI UNIT 101H - OH - PLAN #1													Offset Site Error:	0.0 usft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
8,200.0	5,439.8	8,050.5	5,323.1	90.3	72.4	-82.77	-1,599.9	-2,885.9	968.0	806.7	161.26	6.003		
8,300.0	5,439.2	8,150.5	5,322.6	93.3	74.8	-82.78	-1,599.7	-2,985.9	968.0	801.3	166.69	5.807		
8,400.0	5,438.5	8,250.5	5,322.1	96.3	77.3	-82.79	-1,599.6	-3,085.9	967.9	795.8	172.11	5.624		
8,500.0	5,437.8	8,350.5	5,321.5	99.4	79.7	-82.81	-1,599.5	-3,185.9	967.9	790.3	177.55	5.451		
8,600.0	5,437.1	8,450.5	5,321.0	102.4	82.2	-82.82	-1,599.3	-3,285.9	967.8	784.9	182.99	5.289		
8,700.0	5,436.4	8,550.5	5,320.5	105.4	84.6	-82.83	-1,599.2	-3,385.9	967.8	779.4	188.43	5.136		
8,800.0	5,435.7	8,650.5	5,320.0	108.4	87.1	-82.84	-1,599.1	-3,485.9	967.8	773.9	193.88	4.962		
8,900.0	5,435.0	8,750.5	5,319.4	111.4	89.5	-82.85	-1,599.0	-3,585.9	967.7	768.4	199.33	4.855		
9,000.0	5,434.3	8,850.5	5,318.9	114.5	92.0	-82.86	-1,598.8	-3,685.9	967.7	762.9	204.78	4.725		
9,100.0	5,433.6	8,950.5	5,318.4	117.5	94.4	-82.87	-1,598.7	-3,785.9	967.7	757.4	210.24	4.603		
9,200.0	5,432.9	9,050.5	5,317.9	120.5	96.9	-82.88	-1,598.6	-3,885.9	967.6	751.9	215.70	4.486		
9,300.0	5,432.2	9,150.5	5,317.3	123.6	99.4	-82.89	-1,598.4	-3,985.9	967.6	746.4	221.16	4.375		
9,400.0	5,431.5	9,250.5	5,316.8	126.6	101.8	-82.90	-1,598.3	-4,085.8	967.5	740.9	226.63	4.269		
9,500.0	5,430.8	9,350.5	5,316.3	129.6	104.3	-82.91	-1,598.2	-4,185.8	967.5	735.4	232.10	4.168		
9,600.0	5,430.1	9,450.5	5,315.8	132.7	106.7	-82.92	-1,598.0	-4,285.8	967.5	729.9	237.57	4.072		
9,700.0	5,429.4	9,550.5	5,315.2	135.7	109.2	-82.93	-1,597.9	-4,385.8	967.4	724.4	243.05	3.980		
9,800.0	5,428.7	9,650.5	5,314.7	138.8	111.7	-82.94	-1,597.8	-4,485.8	967.4	718.9	248.52	3.893		
9,900.0	5,428.0	9,750.5	5,314.2	141.8	114.1	-82.95	-1,597.7	-4,585.8	967.4	713.4	254.00	3.808		
10,000.0	5,427.3	9,850.5	5,313.7	144.9	116.6	-82.96	-1,597.5	-4,685.8	967.3	707.8	259.48	3.728		
10,100.0	5,426.6	9,950.5	5,313.2	147.9	119.1	-82.97	-1,597.4	-4,785.8	967.3	702.3	264.96	3.651		
10,200.0	5,425.9	10,050.5	5,312.6	151.0	121.5	-82.98	-1,597.3	-4,885.8	967.2	696.8	270.45	3.576		
10,300.0	5,425.2	10,150.5	5,312.1	154.0	124.0	-82.99	-1,597.1	-4,985.8	967.2	691.3	275.93	3.505		
10,400.0	5,424.5	10,250.5	5,311.6	157.1	126.5	-83.00	-1,597.0	-5,085.8	967.2	685.8	281.42	3.437		
10,500.0	5,423.8	10,350.5	5,311.1	160.1	128.9	-83.01	-1,596.9	-5,185.8	967.1	680.2	286.91	3.371		
10,507.3	5,423.7	10,357.8	5,311.0	160.3	129.1	-83.01	-1,596.9	-5,193.1	967.1	679.8	287.31	3.366	CC, ES, SF	

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

Anticollision Report

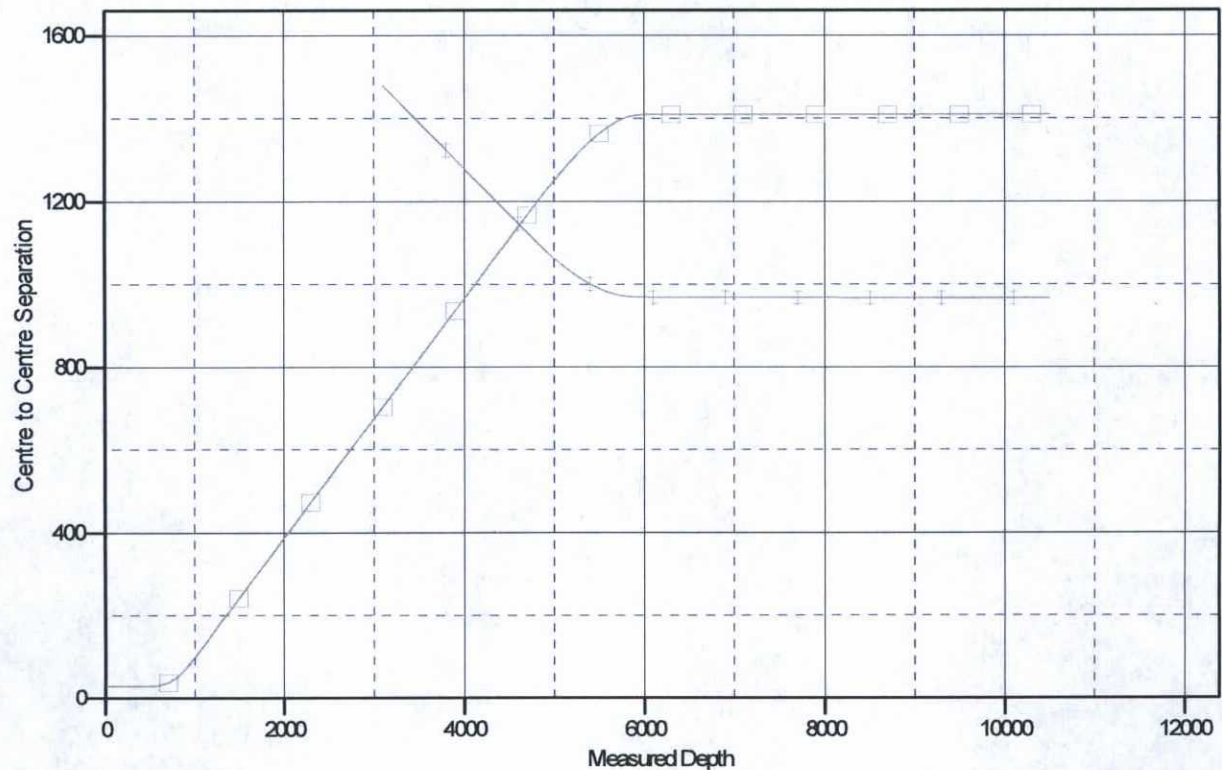
Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Reference Site: S22-T24N-R9W
Site Error: 0.0usft
Reference Well: ESCRITO E22-2409 02H
Well Error: 0.0usft
Reference Wellbore: OH
Reference Design: PLAN #1

Local Co-ordinate Reference: Well ESCRITO E22-2409 02H
TVD Reference: KB @ 6830.0usft
MD Reference: KB @ 6830.0usft
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 KB @ 6830.0usft
 Offset Depths are relative to Offset Datum
 Central Meridian is -107.833333 °

Coordinates are relative to: ESCRITO E22-2409 02H
 Coordinate System is US State Plane 1983, New Mexico Western Zone
 Grid Convergence at Surface is: 0.03°

Ladder Plot



LEGEND

ESCRITO E22-2409 01H, OH, PLAN#1 V0
 NAGEEZI UNIT 101H, OH, PLAN#1 V0

Escrito E22-2409 02H

SHL: SWNW Section 22, T24N, R9W
1,430' FNL and 266' FWL

BHL: SWNW Section 21, T24N, R9W
2,070' FNL and 330' FWL

San Juan County, New Mexico

Lease Number: NMNM 36474

5. Construction equipment may include chain saws, a brush hog, scraper, maintainer, excavator, and dozer. Construction for the access road and well pad will take approximately 2 to 4 weeks.

C. Pipeline

See the Plan of Development submitted with the final modifications to the Standard Form 299 Application for authorization to construct, maintain and terminate a 892 foot, up to 6-inch outside diameter, buried steel well connect pipeline that was submitted to the BLM concurrently with the APD.

7. METHODS FOR HANDLING WASTE

A. Cuttings

1. A closed-loop system will be used. Cuttings will be moved through a shaker system on the drill rig that separates drilling fluids from the cuttings. Cuttings will be stored onsite in above-ground storage tanks. Cuttings will be pulled from the storage tanks, mixed with saw dust or similar absorbent material, and disposed of at the Envirotech, Inc. and/or Industrial Ecosystem, Inc. waste disposal facilities.
2. The closed-loop system storage tanks will be adequately sized to ensure confinement of all fluids and will provide sufficient freeboard to prevent uncontrolled releases.
3. A 20-mil liner will be installed under tanks, pumps, ancillary facilities, and truck loading/unloading areas associated with the closed-loop system.

B. Drilling Fluids

1. A closed-loop system will be used. Drilling fluids will be stored onsite in above-ground storage tanks. Upon termination of drilling operations, the drilling fluids will be recycled and transferred to other permitted closed-loop systems or returned to the vendor for reuse, as practical. Residual fluids will be vacuumed from the storage tanks and disposed of at Basin Disposal, Inc. and/or Industrial Ecosystem, Inc. waste disposal facilities.
2. The closed-loop system storage tanks will be adequately sized to ensure confinement of all fluids and will provide sufficient freeboard to prevent uncontrolled releases.
3. The closed-loop system storage tanks will be placed in bermed secondary containment sized to accommodate a minimum of 110 percent of the volume of the largest storage tank.
4. A 20-mil liner will be installed under tanks, pumps, ancillary facilities, and truck loading/unloading areas associated with the closed-loop system.

C. Flowback Water

1. The water-based solution that flows back to the surface during and after completion operations will be placed in storage tanks on the location.
2. Flowback water will be confined to a storage tank for a period not to exceed 90 days after initial production and will be disposed of at Basin Disposal, Inc. and/or Industrial Ecosystem, Inc. waste disposal facilities.

- D. Spills – any spills of non-freshwater fluids will be immediately cleaned up and removed to an approved disposal site. Encana will also notify the BLM within 24 hours of any spill.

ENCANA OIL & GAS (USA) INC.

ESCRITO E22-2409 #02H

1430' FNL & 266' FWL

LOCATED IN THE SW/4 NW/4 OF SECTION 22, T24N, R9W, N.M.P.M.,
SAN JUAN COUNTY, NEW MEXICO

DIRECTIONS

- 1) FROM THE INTERSECTION OF HWY 64 & HWY 550 IN BLOOMFIELD, TRAVEL SOUTH FOR 32.0 MILES. (M.P. 119.6).
- 2) TURN RIGHT ON DIRT ROAD AND GO 1.0 MILE TO WHERE ACCESS IS STAKED ON RIGHT SIDE OF ROAD.

WELL FLAG LOCATED AT LAT. 36.302865° N, LONG. 107.784785° W (NAD 83).

JOB No.: ENC208
DATE: 09/19/2014
DRAWN BY: TWT



CCI

CHENAULT CONSULTING INC.

4800 COLLEGE BLVD.
SUITE 201
FARMINGTON, NM 87402
(505) 325-7707

WELLHEAD BLOWOUT CONTROL SYSTEM

encana

Well Name and Number:
Escrito E22-2409 02H

