

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;

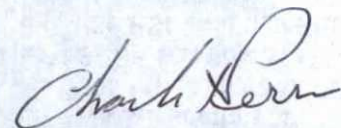
Operator Encana, Well Name and Number Escrito D20 2409 #4 H

API# 30-045-35710, Section 20, 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 

RECEIVED

Form 3160-3
(March 2012)

NOV 19 2015

JUL 31 2015

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Farmington Field Office
Bureau of Land Management
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☒ DRILL ☐ REENTER		5. Lease Serial No. NMNM 10755
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		8. Lease Name and Well No. Escrito D20-2409 04H
3b. Phone No. (include area code) 720-876-5919		9. API Well No. 30-045-35710
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface 1,270' FNL, 264' FWL, Section 20, T24N, R9W At proposed prod. zone 1,980' FNL, 330' FEL, Section 20, T24N, R9W		10. Field and Pool, or Exploratory Bisti Lower-Gallup
14. Distance in miles and direction from nearest town or post office* +/- 34.2 miles South from the intersection of US HWY 64 & US HWY 550 in Bloomfield, NM		11. Sec., T. R. M. or Blk. and Survey or Area Section 20, T24N, R9W NMPM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) BHL is 330' FEL Section 20, T24N, R9W	16. No. of acres in lease NMNM 10755: 800 acres	17. Spacing Unit dedicated to this well 160 acres- S/2 N/2 of Sec. 20, T24N, R9W
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. SHL is +/- 30' South of Escrito D20-2409 03H	19. Proposed Depth 5,309' TVD; 10,364' MD	20. BLM/BIA Bond No. on file COB-000235
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6828' GL; 6844' KB	22. Approximate date work will start* 03/05/2016	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. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the BLM. |

25. Signature <i>Jillian McGrath</i>	Name (Printed/Typed) Jillian McGrath	Date 7/30/15
Title Regulatory Analyst		
Approved by (Signature) <i>[Signature]</i>	Name (Printed/Typed) AFN	Date 11/12/15
Title FEC		

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)

*(Instructions on page 2)

DRILLING OPERATIONS AUTHORIZED
ARE SUBJECT TO COMPLIANCE WITH
ATTACHED "GENERAL REQUIREMENTS"

NMOCD

PV

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

CONFIDENTIAL

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

RECEIVED

DISTRICT I
1825 N. French Dr., Hobbs, N.M. 88240
Phone: (505) 393-6161 Fax: (505) 393-0720

DISTRICT II
611 S. First St., Artesia, N.M. 88210
Phone: (505) 748-1283 Fax: (505) 748-0720

DISTRICT III
1000 Edo Briscoe Rd., Aztec, N.M. 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3482

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised August 1, 2011

Submit one copy to appropriate
District Office

OIL CONSERVATION DIVISION

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

Farmington Field Office
Bureau of Land Management

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-045-35710	*Pool Code 5890	*Pool Name BISTI LOWER-GALLUP
*Property Code 315679	*Property Name ESCRITO D20-2409	*Well Number 04H
*OGRID No. 282327	*Operator Name ENCANA OIL & GAS (USA) INC.	*Elevation 6827.5'

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
D	20	24N	9W		1270'	NORTH	264'	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
H	20	24N	9W		1980'	NORTH	330'	EAST	SAN JUAN

*Dedicated Acres 160.00 ACRES S/2 N/2 SEC. 20	*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

ALL CORNERS
FND 2 1/2" BC
GLO 1933

BOTTOM HOLE

LAT. 36.301362° N (NAD83)
LONG. 107.804646° W (NAD83)
LAT. 36.301350° N (NAD27)
LONG. 107.804031° W (NAD27)

ENTRY POINT

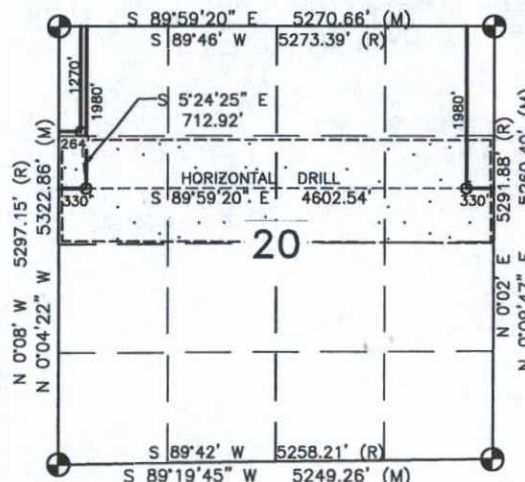
LAT. 36.301360° N (NAD83)
LONG. 107.820259° W (NAD83)
LAT. 36.301348° N (NAD27)
LONG. 107.819643° W (NAD27)

WELL FLAG

LAT. 36.303309° N (NAD83)
LONG. 107.820488° W (NAD83)
LAT. 36.303297° N (NAD27)
LONG. 107.819720° W (NAD27)

OIL CONS. DIV DIST. 3

NOV 19 2015



NORTHWEST CORNER SEC. 20
LAT. 36.306797° N (NAD83)
LONG. 107.821390° W (NAD83)
LAT. 36.306785° N (NAD27)
LONG. 107.820774° W (NAD27)

SOUTHWEST CORNER SEC. 20
LAT. 36.292181° N (NAD83)
LONG. 107.821359° W (NAD83)
LAT. 36.292217° N (NAD27)
LONG. 107.820244° W (NAD27)

NORTHEAST CORNER SEC. 20
LAT. 36.306799° N (NAD83)
LONG. 107.803508° W (NAD83)
LAT. 36.306787° N (NAD27)
LONG. 107.802893° W (NAD27)

SOUTHEAST CORNER SEC. 20
LAT. 36.292354° N (NAD83)
LONG. 107.803555° W (NAD83)
LAT. 36.292342° N (NAD27)
LONG. 107.802940° W (NAD27)

17 OPERATOR CERTIFICATION

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

Jillian McGrath 7/3/15
Signature Date

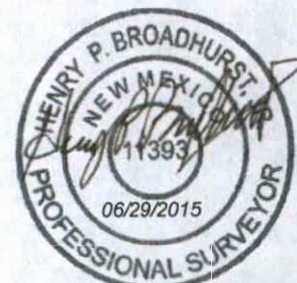
Jillian McGrath
Printed Name
Jillian.McGrath@encana.com
E-mail Address

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.

AUGUST 27, 2014

Date of Survey
Signature and Seal of Professional Surveyor:



Certificate Number

11393

Sheet A

Escrito D20-2409 04H
 SHL: 1270' FNL, 264' FWL, Sec 20, T24N, R9W
 BHL: 1980' FNL, 330' FEL, Sec 20, T24N, R9W
 San Juan, New Mexico
 Lease Number: NMNM 10755

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.	795
Kirtland Shale	947
Fruitland Coal	1,247
Pictured Cliffs Ss.	1,593
Lewis Shale	1,757
Cliffhouse Ss.	2,367
Menefee Fn.	3,205
Point Lookout Ss.	4,051
Mancos Shale	4,218
Mancos Silt	4,773
Gallup Fn.	5,026
Base Gallup	5,366

The referenced surface elevation is 6828', KB 6844'

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

Substance	Formation	Depth (TVD) units = feet
Water/Gas	Fruitland Coal	1,247
Oil/Gas	Pictured Cliffs Ss.	1,593
Oil/Gas	Cliffhouse Ss.	2,367
Gas	Menefee Fn.	3,205
Oil/Gas	Point Lookout Ss.	4,051
Oil/Gas	Mancos Shale	4,218
Oil/Gas	Mancos Silt	4,773
Oil/Gas	Gallup Fn.	5,026

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

Escrito D20-2409 04H

SHL: 1270' FNL, 264' FWL, Sec 20, T24N, R9W

BHL: 1980' FNL, 330' FEL, Sec 20, T24N, R9W

San Juan, New Mexico

Lease Number: NMNM 10755

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'-5763'	8 3/4"	7"	26#	J55, LTC New
Production Liner	5663'-10364'	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 D20-2409 04H

SHL: 1270' FNL, 264' FWL, Sec 20, T24N, R9W

BHL: 1980' FNL, 330' FEL, Sec 20, T24N, R9W

San Juan, New Mexico

Lease Number: NMNM 10755

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'-5763'	100% open hole excess Stage 1 Lead: 538 sks Stage 1 Tail: 408 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	5663'- 10364'	50% OH excess Stage 1 Blend Total: 267sks	Blend: Premium Lite High Strength FM + 0.7% bwoc R-3 + 3% bwow 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	5309'/10364'	Gallup

Escrito D20-2409 04H
SHL: 1270' FNL, 264' FWL, Sec 20, T24N, R9W
BHL: 1980' FNL, 330' FEL, Sec 20, T24N, R9W
San Juan, New Mexico
Lease Number: NMNM 10755

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'-5357'/5763'	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"	5357'/5763'- 5309'/10364'	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 +/- 2481 psi based on a 9.0 ppg at 5302' 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

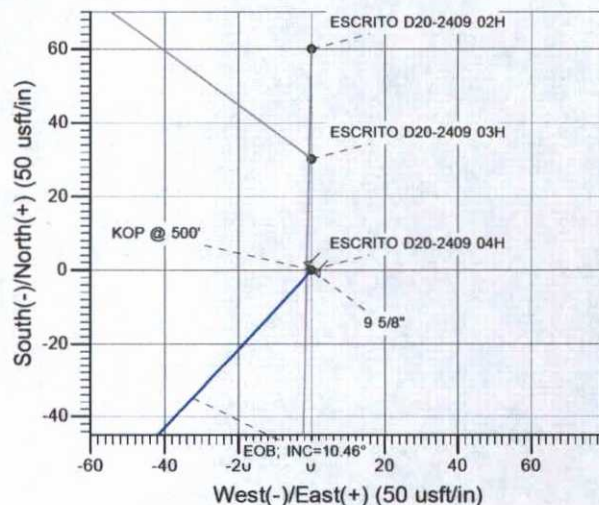
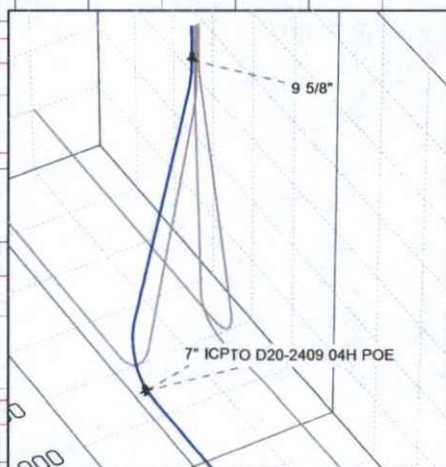
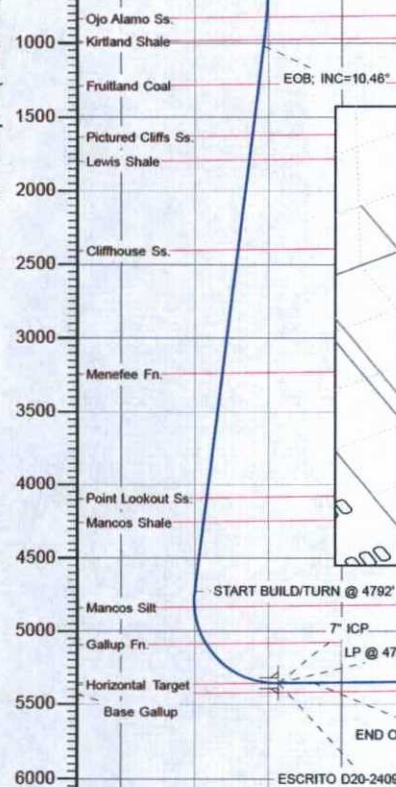
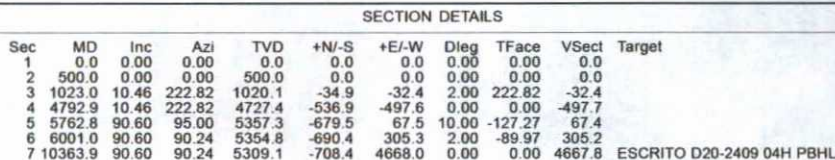
Drilling is estimated to commence on March 5, 2015. It is anticipated that completion operations will begin within 30 days after the well has been drilled depending on fracture treatment schedules with various pumping service companies.

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

LOC: 1270' FNL, 264' FWL, Sec 20, T24N, R9W County: San Juan WELL: Escrito D20-2409 04H			Encana Oil & Gas (USA) Inc.			ENG: 0 RIG: Unassigned GLE: 6827.5 RKBE: 6843.5			7/30/15
WELL SUMMARY									
MWD	OPEN HOLE	FORM	DEPTH			HOLE SIZE	CASING SPECS	MW MUD TYPE	DEVIATION INFORMATION
LWD	LOGGING		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.	0			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	Nacimiento Fn. 9 5/8" Csg	surface 500	500.00		8 3/4	7" 26ppf J55 LTC TOC @ surface (100% OH excess - 70% Lead 30% Tail) Stage 1 Total: 946sks Stage 1 Lead: 538 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: 408 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	Ojo Alamo Ss. Kirtland Shale Fruitland Coal Pictured Cliffs Ss. Lewis Shale Cliffhouse Ss. Menefee Fn. Point Lookout Ss. Mancos Shale KOP Mancos Silt Gallup Fn. 7" Csg	795 947 1,247 1,583 1,757 2,367 3,205 4,051 4,218 500 4,773 5,026 5,357						
Surveys every stand to TD unless directed otherwise by Geologist	No OH Logs	Horizontal Target TD Base Gallup	5,302 5,309 5,366	10,364		6 1/8	100' overlap at liner top 4601' Drilled Lateral 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 2.83 cuft/sk.	WBM 8.3-10	Horz Inc/TVD 90.6deg/5301.5ft TD = 10363.9 MD
MWD Gamma Directional									

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 holesize
- 5) Start curve at 10deg/100' build rate
- 6) Drill to csg point of 5763' MD
- 7) R&C 7" csg, circ cmt to surface
- 8) Land at ~55 deg, drill lateral to 10364' run 4 1/2 inch cemented liner



Azimuths to True North
Magnetic North: 9.22°
Magnetic Field
Strength: 49906.0snT
Dip Angle: 62.95°
Date: 6/30/2015
Model: HDGM

Vertical Section at 89.99° (1250 usft/in)

WELL DETAILS: ESCRITO D20-2409 04H

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1929704.55	2726876.55	36.303309	-107.820488	



NOV 19 2015

Database: USA EDM 5000 Multi Users DB
 Company: EnCana Oil & Gas (USA) Inc
 Project: San Juan County, NM
 Site: S20-T24N-R9W
 Well: ESCRITO D20-2409 04H
 Wellbore: OH
 Design: PLAN #1

Local Co-ordinate Reference: Well ESCRITO D20-2409 04H
 TVD Reference: 16' KB @ 6844.0usft
 MD Reference: 16' KB @ 6844.0usft
 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: S20-T24N-R9W

Site Position: Northing: 1,929,794.46 usft Latitude: 36.303556
 From: Lat/Long Easting: 2,726,876.54 usft Longitude: -107.820488
 Position Uncertainty: 0.0 usft Slot Radius: 13-3/16" Grid Convergence: 0.01 °

Well: ESCRITO D20-2409 04H

Well Position +N/-S 0.0 usft Northing: 1,929,704.55 usft Latitude: 36.303309
 +E/-W 0.0 usft Easting: 2,726,876.55 usft Longitude: -107.820488
 Position Uncertainty 0.0 usft Wellhead Elevation: 0.0 usft Ground Level: 6,828.0 usft

Wellbore: OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	6/30/2015	9.22	62.95	49,906

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	89.99

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	
1,023.0	10.46	222.82	1,020.1	-34.9	-32.4	2.00	2.00	0.00	222.82	
4,792.9	10.46	222.82	4,727.4	-536.9	-497.6	0.00	0.00	0.00	0.00	
5,762.8	90.60	95.00	5,357.3	-679.5	67.5	10.00	8.26	-13.18	-127.27	
6,001.0	90.60	90.24	5,354.8	-690.4	305.3	2.00	0.00	-2.00	-89.97	
10,363.9	90.60	90.24	5,309.1	-708.4	4,668.0	0.00	0.00	0.00	0.00	ESCRITO D20-2409 (

Planning Report

Database: USA EDM 5000 Multi Users DB
 Company: EnCana Oil & Gas (USA) Inc
 Project: San Juan County, NM
 Site: S20-T24N-R9W
 Well: ESCRITO D20-2409 04H
 Wellbore: OH
 Design: PLAN #1

Local Co-ordinate Reference: Well ESCRITO D20-2409 04H
 TVD Reference: 16' KB @ 6844.0usft
 MD Reference: 16' KB @ 6844.0usft
 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
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	222.82	600.0	-1.3	-1.2	-1.2	2.00	2.00	
700.0	4.00	222.82	699.8	-5.1	-4.7	-4.7	2.00	2.00	
800.0	6.00	222.82	799.5	-11.5	-10.7	-10.7	2.00	2.00	
825.8	6.52	222.82	825.1	-13.6	-12.6	-12.6	2.00	2.00	Ojo Alamo Ss.
900.0	8.00	222.82	898.7	-20.4	-19.0	-19.0	2.00	2.00	
979.5	9.59	222.82	977.3	-29.4	-27.2	-27.2	2.00	2.00	Kirtland Shale
1,000.0	10.00	222.82	997.5	-31.9	-29.6	-29.6	2.00	2.00	
1,023.0	10.46	222.82	1,020.1	-34.9	-32.4	-32.4	2.00	2.00	EOB; INC=10.46°
1,100.0	10.46	222.82	1,095.8	-45.2	-41.9	-41.9	0.00	0.00	
1,200.0	10.46	222.82	1,194.2	-58.5	-54.2	-54.2	0.00	0.00	
1,284.9	10.46	222.82	1,277.7	-69.8	-64.7	-64.7	0.00	0.00	Fruitland Coal
1,300.0	10.46	222.82	1,292.5	-71.8	-66.5	-66.6	0.00	0.00	
1,400.0	10.46	222.82	1,390.8	-85.1	-78.9	-78.9	0.00	0.00	
1,500.0	10.46	222.82	1,489.2	-98.4	-91.2	-91.2	0.00	0.00	
1,600.0	10.46	222.82	1,587.5	-111.7	-103.6	-103.6	0.00	0.00	
1,637.2	10.46	222.82	1,624.1	-116.7	-108.2	-108.2	0.00	0.00	Pictured Cliffs Ss.
1,700.0	10.46	222.82	1,685.9	-125.1	-115.9	-115.9	0.00	0.00	
1,800.0	10.46	222.82	1,784.2	-138.4	-128.2	-128.3	0.00	0.00	
1,804.2	10.46	222.82	1,788.3	-138.9	-128.8	-128.8	0.00	0.00	Lewis Shale
1,900.0	10.46	222.82	1,882.5	-151.7	-140.6	-140.6	0.00	0.00	
2,000.0	10.46	222.82	1,980.9	-165.0	-152.9	-153.0	0.00	0.00	
2,100.0	10.46	222.82	2,079.2	-178.3	-165.3	-165.3	0.00	0.00	
2,200.0	10.46	222.82	2,177.5	-191.6	-177.6	-177.6	0.00	0.00	
2,300.0	10.46	222.82	2,275.9	-204.9	-189.9	-190.0	0.00	0.00	
2,400.0	10.46	222.82	2,374.2	-218.3	-202.3	-202.3	0.00	0.00	
2,425.4	10.46	222.82	2,399.2	-221.6	-205.4	-205.5	0.00	0.00	Cliffhouse Ss.
2,500.0	10.46	222.82	2,472.6	-231.6	-214.6	-214.7	0.00	0.00	
2,600.0	10.46	222.82	2,570.9	-244.9	-227.0	-227.0	0.00	0.00	
2,700.0	10.46	222.82	2,669.2	-258.2	-239.3	-239.3	0.00	0.00	
2,800.0	10.46	222.82	2,767.6	-271.5	-251.6	-251.7	0.00	0.00	
2,900.0	10.46	222.82	2,865.9	-284.8	-264.0	-264.0	0.00	0.00	
3,000.0	10.46	222.82	2,964.3	-298.1	-276.3	-276.4	0.00	0.00	
3,100.0	10.46	222.82	3,062.6	-311.5	-288.7	-288.7	0.00	0.00	
3,200.0	10.46	222.82	3,160.9	-324.8	-301.0	-301.1	0.00	0.00	
3,278.6	10.46	222.82	3,238.3	-335.2	-310.7	-310.8	0.00	0.00	Menefee Fn.
3,300.0	10.46	222.82	3,259.3	-338.1	-313.3	-313.4	0.00	0.00	
3,400.0	10.46	222.82	3,357.6	-351.4	-325.7	-325.7	0.00	0.00	
3,500.0	10.46	222.82	3,455.9	-364.7	-338.0	-338.1	0.00	0.00	
3,600.0	10.46	222.82	3,554.3	-378.0	-350.4	-350.4	0.00	0.00	
3,700.0	10.46	222.82	3,652.6	-391.3	-362.7	-362.8	0.00	0.00	
3,800.0	10.46	222.82	3,751.0	-404.7	-375.0	-375.1	0.00	0.00	
3,900.0	10.46	222.82	3,849.3	-418.0	-387.4	-387.5	0.00	0.00	
4,000.0	10.46	222.82	3,947.6	-431.3	-399.7	-399.8	0.00	0.00	
4,100.0	10.46	222.82	4,046.0	-444.6	-412.1	-412.1	0.00	0.00	
4,140.1	10.46	222.82	4,085.4	-449.9	-417.0	-417.1	0.00	0.00	Point Lookout Ss.
4,200.0	10.46	222.82	4,144.3	-457.9	-424.4	-424.5	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: S20-T24N-R9W
 Well: ESCRITO D20-2409 04H
 Wellbore: OH
 Design: PLAN #1

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

Well ESCRITO D20-2409 04H
 16' KB @ 6844.0usft
 16' KB @ 6844.0usft
 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
4,300.0	10.46	222.82	4,242.6	-471.2	-436.7	-436.8	0.00	0.00	
4,310.1	10.46	222.82	4,252.6	-472.6	-438.0	-438.1	0.00	0.00	Mancos Shale
4,400.0	10.46	222.82	4,341.0	-484.6	-449.1	-449.2	0.00	0.00	
4,500.0	10.46	222.82	4,439.3	-497.9	-461.4	-461.5	0.00	0.00	
4,600.0	10.46	222.82	4,537.7	-511.2	-473.8	-473.9	0.00	0.00	
4,700.0	10.46	222.82	4,636.0	-524.5	-486.1	-486.2	0.00	0.00	
4,792.9	10.46	222.82	4,727.4	-536.9	-497.6	-497.7	0.00	0.00	START BUILD/TURN @ 4792' MD
4,800.0	10.05	219.60	4,734.3	-537.8	-498.4	-498.5	10.00	-5.84	
4,900.0	9.36	157.44	4,833.2	-552.1	-500.9	-500.9	10.00	-0.69	
4,901.1	9.41	156.85	4,834.2	-552.2	-500.8	-500.9	10.00	4.64	Mancos Silt
5,000.0	16.52	124.58	4,930.7	-567.7	-486.0	-486.1	10.00	7.19	
5,100.0	25.62	112.81	5,023.9	-584.2	-454.3	-454.4	10.00	9.11	
5,171.5	32.45	108.36	5,086.4	-596.2	-421.8	-421.9	10.00	9.54	Gallup Fn.
5,200.0	35.20	107.03	5,110.1	-601.1	-406.7	-406.8	10.00	9.66	
5,300.0	44.94	103.50	5,186.5	-617.8	-344.6	-344.7	10.00	9.74	
5,400.0	54.76	101.01	5,251.0	-633.9	-270.0	-270.1	10.00	9.82	
5,500.0	64.62	99.06	5,301.4	-648.8	-185.1	-185.2	10.00	9.86	
5,600.0	74.50	97.41	5,336.3	-662.2	-92.5	-92.6	10.00	9.88	
5,700.0	84.39	95.91	5,354.6	-673.5	5.1	4.9	10.00	9.89	
5,760.0	90.32	95.04	5,357.3	-679.3	64.7	64.6	10.00	9.89	Horizontal Target
5,762.8	90.60	95.00	5,357.3	-679.5	67.5	67.4	9.96	9.85	LP @ 4727' TVD; 90.6° - 7" ICP
5,765.2	90.60	94.95	5,357.3	-679.7	69.9	69.8	2.00	0.00	ESCRITO D20-2409 04H POE
5,800.0	90.60	94.26	5,356.9	-682.5	104.6	104.4	2.00	0.00	
5,900.0	90.60	92.26	5,355.9	-688.2	204.4	204.3	2.00	0.00	
6,000.0	90.60	90.26	5,354.8	-690.4	304.4	304.2	2.00	0.00	
6,001.0	90.60	90.24	5,354.8	-690.4	305.3	305.2	2.00	0.00	END OF TURN @ 6001' MD
6,100.0	90.60	90.24	5,353.8	-690.8	404.4	404.2	0.00	0.00	
6,200.0	90.60	90.24	5,352.7	-691.2	504.3	504.2	0.00	0.00	
6,300.0	90.60	90.24	5,351.7	-691.6	604.3	604.2	0.00	0.00	
6,400.0	90.60	90.24	5,350.6	-692.0	704.3	704.2	0.00	0.00	
6,500.0	90.60	90.24	5,349.6	-692.4	804.3	804.2	0.00	0.00	
6,600.0	90.60	90.24	5,348.5	-692.8	904.3	904.2	0.00	0.00	
6,700.0	90.60	90.24	5,347.5	-693.3	1,004.3	1,004.2	0.00	0.00	
6,800.0	90.60	90.24	5,346.4	-693.7	1,104.3	1,104.2	0.00	0.00	
6,900.0	90.60	90.24	5,345.4	-694.1	1,204.3	1,204.2	0.00	0.00	
7,000.0	90.60	90.24	5,344.3	-694.5	1,304.3	1,304.2	0.00	0.00	
7,100.0	90.60	90.24	5,343.3	-694.9	1,404.3	1,404.2	0.00	0.00	
7,200.0	90.60	90.24	5,342.2	-695.3	1,504.3	1,504.2	0.00	0.00	
7,300.0	90.60	90.24	5,341.2	-695.7	1,604.3	1,604.2	0.00	0.00	
7,400.0	90.60	90.24	5,340.1	-696.1	1,704.3	1,704.1	0.00	0.00	
7,500.0	90.60	90.24	5,339.1	-696.6	1,804.3	1,804.1	0.00	0.00	
7,600.0	90.60	90.24	5,338.1	-697.0	1,904.3	1,904.1	0.00	0.00	
7,700.0	90.60	90.24	5,337.0	-697.4	2,004.3	2,004.1	0.00	0.00	
7,800.0	90.60	90.24	5,336.0	-697.8	2,104.2	2,104.1	0.00	0.00	
7,900.0	90.60	90.24	5,334.9	-698.2	2,204.2	2,204.1	0.00	0.00	
8,000.0	90.60	90.24	5,333.9	-698.6	2,304.2	2,304.1	0.00	0.00	
8,100.0	90.60	90.24	5,332.8	-699.0	2,404.2	2,404.1	0.00	0.00	
8,200.0	90.60	90.24	5,331.8	-699.4	2,504.2	2,504.1	0.00	0.00	
8,300.0	90.60	90.24	5,330.7	-699.9	2,604.2	2,604.1	0.00	0.00	
8,400.0	90.60	90.24	5,329.7	-700.3	2,704.2	2,704.1	0.00	0.00	
8,500.0	90.60	90.24	5,328.6	-700.7	2,804.2	2,804.1	0.00	0.00	
8,600.0	90.60	90.24	5,327.6	-701.1	2,904.2	2,904.1	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: S20-T24N-R9W
 Well: ESCRITO D20-2409 04H
 Wellbore: OH
 Design: PLAN #1

Local Co-ordinate Reference: Well ESCRITO D20-2409 04H
 TVD Reference: 16' KB @ 6844.0usft
 MD Reference: 16' KB @ 6844.0usft
 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
8,700.0	90.60	90.24	5,326.5	-701.5	3,004.2	3,004.1	0.00	0.00	
8,800.0	90.60	90.24	5,325.5	-701.9	3,104.2	3,104.1	0.00	0.00	
8,900.0	90.60	90.24	5,324.4	-702.3	3,204.2	3,204.1	0.00	0.00	
9,000.0	90.60	90.24	5,323.4	-702.7	3,304.2	3,304.0	0.00	0.00	
9,100.0	90.60	90.24	5,322.3	-703.2	3,404.2	3,404.0	0.00	0.00	
9,200.0	90.60	90.24	5,321.3	-703.6	3,504.2	3,504.0	0.00	0.00	
9,300.0	90.60	90.24	5,320.2	-704.0	3,604.1	3,604.0	0.00	0.00	
9,400.0	90.60	90.24	5,319.2	-704.4	3,704.1	3,704.0	0.00	0.00	
9,500.0	90.60	90.24	5,318.1	-704.8	3,804.1	3,804.0	0.00	0.00	
9,600.0	90.60	90.24	5,317.1	-705.2	3,904.1	3,904.0	0.00	0.00	
9,700.0	90.60	90.24	5,316.1	-705.6	4,004.1	4,004.0	0.00	0.00	
9,800.0	90.60	90.24	5,315.0	-706.1	4,104.1	4,104.0	0.00	0.00	
9,900.0	90.60	90.24	5,314.0	-706.5	4,204.1	4,204.0	0.00	0.00	
10,000.0	90.60	90.24	5,312.9	-706.9	4,304.1	4,304.0	0.00	0.00	
10,100.0	90.60	90.24	5,311.9	-707.3	4,404.1	4,404.0	0.00	0.00	
10,200.0	90.60	90.24	5,310.8	-707.7	4,504.1	4,504.0	0.00	0.00	
10,300.0	90.60	90.24	5,309.8	-708.1	4,604.1	4,604.0	0.00	0.00	
10,363.9	90.60	90.24	5,309.1	-708.4	4,668.0	4,667.8	0.00	0.00	TD at 10363.9 - ESCRITO D20-2409 04H PBHI

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 D20-2409 04H - plan hits target center - Point	0.00	0.00	5,309.1	-708.4	4,668.0	1,928,996.79	2,731,544.62	36.301362	-107.804646
ESCRITO D20-2409 04H - plan misses target center by 29.9usft at 5765.2usft MD (5357.3 TVD, -679.7 N, 69.9 E) - Point	0.00	0.00	5,357.3	-709.5	67.5	1,928,995.07	2,726,944.12	36.301360	-107.820259

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
5,762.8	5,357.3	7" ICP	0	0
500.0	500.0	9 5/8"	0	0

Planning Report

Database: USA EDM 5000 Multi Users DB
Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Site: S20-T24N-R9W
Well: ESCRITO D20-2409 04H
Wellbore: OH
Design: PLAN #1

Local Co-ordinate Reference: Well ESCRITO D20-2409 04H
TVD Reference: 16' KB @ 6844.0usft
MD Reference: 16' KB @ 6844.0usft
North Reference: True
Survey Calculation Method: Minimum Curvature

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
825.8	825.0	Ojo Alamo Ss.		-0.60	90.00
979.5	977.0	Kirtland Shale		-0.60	90.00
1,284.9	1,277.0	Fruitland Coal		-0.60	90.00
1,637.2	1,623.0	Pictured Cliffs Ss.		-0.60	90.00
1,804.2	1,787.0	Lewis Shale		-0.60	90.00
2,425.4	2,397.0	Cliffhouse Ss.		-0.60	90.00
3,278.6	3,235.0	Menefee Fn.		-0.60	90.00
4,140.1	4,081.0	Point Lookout Ss.		-0.60	90.00
4,310.1	4,248.0	Mancos Shale		-0.60	90.00
4,901.1	4,829.0	Mancos Silt		-0.60	90.00
5,171.5	5,082.0	Gallup Fn.		-0.60	90.00
5,760.0	5,358.0	Horizontal Target		-0.60	90.00

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
500.0	500.0	0.0	0.0	KOP @ 500'
1,023.0	1,020.1	-34.9	-32.4	EOB; INC=10.46°
4,792.9	4,727.4	-536.9	-497.6	START BUILD/TURN @ 4792' MD
5,762.8	5,357.3	-679.5	67.5	LP @ 4727' TVD; 90.6°
6,001.0	5,354.8	-690.4	305.3	END OF TURN @ 6001' MD
10,363.9	5,309.1	-708.4	4,668.0	TD at 10363.9



EnCana Oil & Gas (USA) Inc

San Juan County, NM

S20-T24N-R9W

ESCRITO D20-2409 04H

OH

PLAN #1

Anticollision Report

30 June, 2015

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well ESCRITO D20-2409 04H
Project:	San Juan County, NM	TVD Reference:	16' KB @ 6844.0usft
Reference Site:	S20-T24N-R9W	MD Reference:	16' KB @ 6844.0usft
Site Error:	0.0usft	North Reference:	True
Reference Well:	ESCRITO D20-2409 04H	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 6/30/2015			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	10,363.9	PLAN #1 (OH)	MWD	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						
S20-T24N-R9W						
ESCRITO D20-2409 01H - OH - PLAN #1	500.0	500.0	89.9	86.7	28.374	CC, ES
ESCRITO D20-2409 01H - OH - PLAN #1	800.0	788.3	116.9	111.5	21.613	SF
ESCRITO D20-2409 02H - OH - PLAN #1	500.0	500.0	60.1	56.9	18.954	CC
ESCRITO D20-2409 02H - OH - PLAN #1	5,350.9	5,381.1	71.7	31.3	1.775	ES, SF
ESCRITO D20-2409 03H - OH - PLAN #1	500.0	500.0	30.2	27.0	9.535	CC, ES
ESCRITO D20-2409 03H - OH - PLAN #1	10,363.9	10,308.2	1,320.0	1,009.4	4.250	SF

Anticollision Report

Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Reference Site: S20-T24N-R9W
Site Error: 0.0usft
Reference Well: ESCRITO D20-2409 04H
Well Error: 0.0usft
Reference Wellbore: OH
Reference Design: PLAN #1

Local Co-ordinate Reference: Well ESCRITO D20-2409 04H
TVD Reference: 16' KB @ 6844.0usft
MD Reference: 16' KB @ 6844.0usft
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

Offset Design S20-T24N-R9W - ESCRITO D20-2409 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		Total		Separation		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)	Uncertainty Axis	Factor	
0.0	0.0	0.0	0.0	0.0	0.0	0.00	89.9	0.0	89.9	89.6	0.30	298.604	
100.0	100.0	100.0	100.0	0.2	0.2	0.00	89.9	0.0	89.9	88.9	1.02	88.319	
200.0	200.0	200.0	200.0	0.5	0.5	0.00	89.9	0.0	89.9	88.2	1.74	51.824	
300.0	300.0	300.0	300.0	0.9	0.9	0.00	89.9	0.0	89.9	87.5	2.45	36.671	
400.0	400.0	400.0	400.0	1.2	1.2	0.00	89.9	0.0	89.9	86.7	3.17	28.374 CC, ES	
500.0	500.0	500.0	500.0	1.6	1.6	0.00	89.9	0.0	89.9	89.0	3.89	23.874	
600.0	600.0	596.9	596.8	1.9	1.9	137.81	91.6	-0.1	92.9	97.2	4.64	21.942	
700.0	699.8	693.1	693.0	2.3	2.3	139.46	96.4	-0.3	101.9	111.5	5.41	21.613 SF	
800.0	799.5	788.3	787.8	2.6	2.6	141.63	104.4	-0.6	116.9	131.4	6.12	22.465	
900.0	898.7	884.5	883.5	3.0	3.0	143.95	115.0	-1.0	137.5	154.5	6.80	23.705	
1,000.0	997.5	981.4	979.8	3.4	3.3	146.29	125.9	-1.4	161.3	179.8	7.49	24.995	
1,100.0	1,095.8	1,077.7	1,075.4	3.8	3.7	148.57	136.7	-1.8	187.3	205.5	8.19	26.102	
1,200.0	1,194.2	1,174.0	1,171.1	4.2	4.1	150.36	147.5	-2.2	213.7	231.3	8.89	27.031	
1,300.0	1,292.5	1,270.3	1,266.8	4.6	4.5	151.76	158.3	-2.6	240.2	257.2	9.59	27.820	
1,400.0	1,390.8	1,366.6	1,362.4	5.1	4.8	152.88	169.1	-3.1	266.8	283.2	10.30	28.496	
1,500.0	1,489.2	1,462.8	1,458.1	5.5	5.2	153.80	179.9	-3.5	293.5	309.3	11.01	29.080	
1,600.0	1,587.5	1,559.1	1,553.8	6.0	5.6	154.56	190.8	-3.9	320.3	335.3	11.73	29.591	
1,700.0	1,685.9	1,655.4	1,649.4	6.4	6.0	155.21	201.6	-4.3	347.1	361.5	12.45	30.039	
1,800.0	1,784.2	1,751.7	1,745.1	6.9	6.3	155.77	212.4	-4.7	373.9	387.6	13.17	30.436	
1,900.0	1,882.5	1,847.9	1,840.8	7.3	6.7	156.25	223.2	-5.2	400.8	413.8	13.89	30.790	
2,000.0	1,980.9	1,944.2	1,936.4	7.8	7.1	156.66	234.0	-5.6	427.6	439.9	14.61	31.107	
2,100.0	2,079.2	2,040.5	2,032.1	8.3	7.5	157.03	244.8	-6.0	454.6	466.1	15.34	31.393	
2,200.0	2,177.5	2,136.8	2,127.7	8.7	7.9	157.36	255.6	-6.4	481.5	492.3	16.06	31.652	
2,300.0	2,275.9	2,233.0	2,223.4	9.2	8.2	157.66	266.4	-6.8	508.4	518.6	16.79	31.887	
2,400.0	2,374.2	2,329.3	2,319.1	9.6	8.6	157.92	277.2	-7.3	535.3	544.8	17.52	32.102	
2,500.0	2,472.6	2,425.6	2,414.7	10.1	9.0	158.16	288.1	-7.7	562.3	571.0	18.24	32.299	
2,600.0	2,570.9	2,521.9	2,510.4	10.6	9.4	158.38	298.9	-8.1	589.3	597.3	18.97	32.480	
2,700.0	2,669.2	2,618.1	2,606.1	11.0	9.8	158.58	309.7	-8.5	616.2	623.5	19.70	32.647	
2,800.0	2,767.6	2,714.4	2,701.7	11.5	10.1	158.76	320.5	-8.9	643.2	649.8	20.43	32.802	
2,900.0	2,865.9	2,810.7	2,797.4	12.0	10.5	158.92	331.3	-9.4	670.2	676.0	21.16	32.946	
3,000.0	2,964.3	2,906.9	2,893.1	12.4	10.9	159.08	342.1	-9.8	697.2	702.3	21.89	33.080	
3,100.0	3,062.6	3,003.2	2,988.7	12.9	11.3	159.22	352.9	-10.2	724.2	728.5	22.62	33.204	
3,200.0	3,160.9	3,099.5	3,084.4	13.4	11.7	159.35	363.7	-10.6	751.2	754.8	23.35	33.321	
3,300.0	3,259.3	3,195.8	3,180.1	13.8	12.0	159.48	374.5	-11.0	778.1	781.1	24.08	33.430	
3,400.0	3,357.6	3,292.0	3,275.7	14.3	12.4	159.59	385.4	-11.4	805.1	807.3	24.82	33.533	
3,500.0	3,455.9	3,388.3	3,371.4	14.8	12.8	159.70	396.2	-11.9	832.2	833.6	25.55	33.630	
3,600.0	3,554.3	3,484.6	3,467.0	15.2	13.2	159.80	407.0	-12.3	859.2	859.9	26.28	33.721	
3,700.0	3,652.6	3,580.9	3,562.7	15.7	13.6	159.89	417.8	-12.7	886.2	886.2	27.01	33.806	
3,800.0	3,751.0	3,677.1	3,658.4	16.2	14.0	159.98	428.6	-13.1	913.2	912.4	27.74	33.888	
3,900.0	3,849.3	3,773.4	3,754.0	16.6	14.3	160.07	439.4	-13.5	940.2	938.7	28.48	33.965	
4,000.0	3,947.6	3,869.7	3,849.7	17.1	14.7	160.15	450.2	-14.0	967.2	965.0	29.21	34.037	
4,100.0	4,046.0	3,966.0	3,945.4	17.6	15.1	160.22	461.0	-14.4	994.2	991.3	29.94	34.107	
4,200.0	4,144.3	4,062.2	4,041.0	18.0	15.5	160.29	471.8	-14.8	1,021.2	1,017.6	30.68	34.172	
4,300.0	4,242.6	4,158.5	4,136.7	18.5	15.9	160.36	482.7	-15.2	1,048.2	1,043.9	31.41	34.235	
4,400.0	4,341.0	4,254.8	4,232.4	19.0	16.2	160.42	493.5	-15.6	1,075.3	1,070.1	32.14	34.295	
4,500.0	4,439.3	4,351.1	4,328.0	19.4	16.6	160.48	504.3	-16.1	1,102.3	1,096.4	32.87	34.352	
4,600.0	4,537.7	4,447.3	4,423.7	19.9	17.0	160.54	515.1	-16.5	1,129.3	1,122.7	33.61	34.406	
4,700.0	4,636.0	4,543.6	4,519.4	20.4	17.4	160.60	525.9	-16.9	1,156.3	1,149.0	34.34	34.458	
4,800.0	4,734.3	4,639.9	4,615.0	20.8	17.8	164.01	536.7	-17.3	1,183.3	1,170.8	35.71	33.782	
4,900.0	4,833.2	4,736.7	4,709.7	21.2	18.6	-133.98	558.7	-30.5	1,206.5	1,169.8	37.76	31.977	
5,000.0	4,930.7	5,189.6	5,109.1	21.5	20.0	-112.36	592.6	-203.3	1,207.5	1,204.9	38.93	30.951	
5,099.6	5,023.6	5,278.0	5,163.3	21.7	20.6	-105.57	598.8	-272.8	1,204.9	1,166.0			

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 D20-2409 04H
Project:	San Juan County, NM	TVD Reference:	16' KB @ 6844.0usft
Reference Site:	S20-T24N-R9W	MD Reference:	16' KB @ 6844.0usft
Site Error:	0.0usft	North Reference:	True
Reference Well:	ESCRITO D20-2409 04H	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 S20-T24N-R9W - ESCRITO D20-2409 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		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)					
5,100.0	5,023.9	5,278.1	5,163.3	21.7	20.6	-105.55	598.8	-272.9	1,204.9	1,166.0	38.93	30.948			
5,200.0	5,110.1	5,289.5	5,169.5	21.8	20.6	-100.73	599.5	-282.4	1,208.4	1,169.0	39.44	30.644			
5,300.0	5,186.5	5,273.2	5,160.6	21.9	20.5	-96.20	598.5	-268.8	1,218.9	1,179.4	39.54	30.828			
5,400.0	5,251.0	5,244.4	5,143.9	22.0	20.3	-91.62	596.6	-245.4	1,235.3	1,195.9	39.50	31.277			
5,500.0	5,301.4	5,208.9	5,121.8	22.0	20.1	-86.98	594.1	-217.7	1,256.2	1,216.7	39.55	31.761			
5,600.0	5,336.3	5,169.6	5,095.4	22.2	19.9	-82.44	591.1	-188.8	1,279.8	1,240.0	39.86	32.111			
5,700.0	5,354.6	5,127.9	5,065.3	23.1	19.7	-78.18	587.7	-160.2	1,304.5	1,264.0	40.46	32.239			
5,800.0	5,356.9	5,085.4	5,032.6	24.7	19.5	-75.25	584.0	-133.3	1,328.8	1,287.4	41.34	32.142			
5,900.0	5,355.9	5,050.0	5,003.9	26.6	19.4	-74.18	580.7	-112.9	1,354.5	1,312.0	42.45	31.911			
6,000.0	5,354.8	5,017.4	4,976.4	28.7	19.3	-73.18	577.6	-95.7	1,382.4	1,338.7	43.65	31.669			
6,100.0	5,353.8	5,000.0	4,961.3	31.0	19.2	-72.55	575.9	-87.1	1,414.2	1,369.2	45.00	31.425			
6,200.0	5,352.7	4,968.9	4,933.7	33.4	19.1	-71.38	572.8	-73.0	1,451.4	1,405.2	46.19	31.421			
6,300.0	5,351.7	4,950.0	4,916.7	35.9	19.0	-70.66	570.8	-65.2	1,493.7	1,446.3	47.42	31.498			

Anticollision Report

Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Reference Site: S20-T24N-R9W
Site Error: 0.0usft
Reference Well: ESCRITO D20-2409 04H
Well Error: 0.0usft
Reference Wellbore: OH
Reference Design: PLAN #1

Local Co-ordinate Reference: Well ESCRITO D20-2409 04H
TVD Reference: 16' KB @ 6844.0usft
MD Reference: 16' KB @ 6844.0usft
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

Offset Design S20-T24N-R9W - ESCRITO D20-2409 02H - OH - PLAN #1														Offset Site Error:	0.0 usft
Survey Program: 0-MWD														Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N-S (usft)	+E-W (usft)				Between Centres (usft)	Between Ellipses (usft)		
0.0	0.0	0.0	0.0	0.0	0.0	0.00	60.1	0.0	60.1						
100.0	100.0	100.0	100.0	0.2	0.2	0.00	60.1	0.0	60.1	59.8	0.30	199.472			
200.0	200.0	200.0	200.0	0.5	0.5	0.00	60.1	0.0	60.1	59.0	1.02	58.999			
300.0	300.0	300.0	300.0	0.9	0.9	0.00	60.1	0.0	60.1	58.3	1.74	34.619			
400.0	400.0	400.0	400.0	1.2	1.2	0.00	60.1	0.0	60.1	57.6	2.45	24.497			
500.0	500.0	500.0	500.0	1.6	1.6	0.00	60.1	0.0	60.1	56.9	3.17	18.954 CC			
600.0	600.0	600.0	600.0	1.9	1.9	138.27	60.1	0.0	61.4	57.5	3.87	15.847			
700.0	699.8	699.8	699.8	2.3	2.3	141.27	60.1	0.0	65.4	60.8	4.57	14.303			
800.0	799.5	799.5	799.5	2.6	2.7	145.51	60.1	0.0	72.4	67.1	5.28	13.718			
900.0	898.7	901.5	901.5	3.0	3.0	150.58	58.3	0.0	81.0	75.0	5.99	13.514			
1,000.0	997.5	1,003.7	1,003.5	3.4	3.3	156.28	52.8	-0.2	89.9	83.2	6.73	13.367			
1,100.0	1,095.8	1,106.0	1,105.4	3.8	3.7	162.24	43.7	-0.4	98.6	91.1	7.47	13.193			
1,200.0	1,194.2	1,208.6	1,207.2	4.2	4.1	168.16	31.0	-0.6	105.1	96.9	8.22	12.782			
1,300.0	1,292.5	1,311.0	1,308.3	4.6	4.4	174.42	14.6	-1.0	109.6	100.6	8.97	12.220			
1,400.0	1,390.8	1,410.4	1,406.1	5.1	4.8	-179.41	-3.2	-1.4	113.8	104.1	9.67	11.765			
1,500.0	1,489.2	1,509.6	1,503.6	5.5	5.2	-173.74	-21.0	-1.8	119.2	108.8	10.40	11.460			
1,600.0	1,587.5	1,608.7	1,601.2	6.0	5.6	-168.61	-38.8	-2.1	125.7	114.5	11.17	11.258			
1,700.0	1,685.9	1,707.9	1,698.8	6.4	6.0	-164.00	-56.5	-2.5	133.1	121.2	11.96	11.132			
1,800.0	1,784.2	1,807.1	1,796.4	6.9	6.5	-159.90	-74.3	-2.9	141.3	128.5	12.77	11.061			
1,900.0	1,882.5	1,906.3	1,893.9	7.3	6.9	-156.26	-92.1	-3.3	150.1	136.5	13.61	11.028			
2,000.0	1,980.9	2,005.5	1,991.5	7.8	7.3	-153.03	-109.9	-3.7	159.5	145.0	14.46	11.025			
2,100.0	2,079.2	2,104.6	2,089.1	8.3	7.8	-150.16	-127.7	-4.1	169.3	153.9	15.33	11.041			
2,200.0	2,177.5	2,203.8	2,186.6	8.7	8.2	-147.62	-145.4	-4.5	179.4	163.2	16.21	11.073			
2,300.0	2,275.9	2,303.0	2,284.2	9.2	8.6	-145.34	-163.2	-4.8	189.9	172.8	17.09	11.114			
2,400.0	2,374.2	2,402.2	2,381.8	9.6	9.1	-143.31	-181.0	-5.2	200.7	182.7	17.98	11.163			
2,500.0	2,472.6	2,501.4	2,479.4	10.1	9.5	-141.49	-198.8	-5.6	211.7	192.8	18.87	11.216			
2,600.0	2,570.9	2,600.5	2,576.9	10.6	10.0	-139.84	-216.6	-6.0	222.9	203.1	19.77	11.272			
2,700.0	2,669.2	2,699.7	2,674.5	11.0	10.4	-138.36	-234.3	-6.4	234.2	213.5	20.67	11.330			
2,800.0	2,767.6	2,798.9	2,772.1	11.5	10.9	-137.01	-252.1	-6.8	245.7	224.1	21.57	11.388			
2,900.0	2,865.9	2,898.1	2,869.6	12.0	11.3	-135.78	-269.9	-7.1	257.3	234.8	22.48	11.446			
3,000.0	2,964.3	2,997.3	2,967.2	12.4	11.8	-134.66	-287.7	-7.5	269.0	245.6	23.38	11.504			
3,100.0	3,062.6	3,096.4	3,064.8	12.9	12.2	-133.63	-305.5	-7.9	280.8	256.5	24.29	11.561			
3,200.0	3,160.9	3,195.6	3,162.4	13.4	12.7	-132.69	-323.2	-8.3	292.7	267.5	25.20	11.616			
3,300.0	3,259.3	3,294.8	3,259.9	13.8	13.1	-131.82	-341.0	-8.7	304.7	278.6	26.11	11.671			
3,400.0	3,357.6	3,394.0	3,357.5	14.3	13.6	-131.01	-358.8	-9.1	316.7	289.7	27.01	11.723			
3,500.0	3,455.9	3,493.2	3,455.1	14.8	14.0	-130.26	-376.6	-9.5	328.8	300.9	27.92	11.774			
3,600.0	3,554.3	3,592.3	3,552.7	15.2	14.5	-129.57	-394.4	-9.8	340.9	312.1	28.83	11.824			
3,700.0	3,652.6	3,691.5	3,650.2	15.7	15.0	-128.93	-412.1	-10.2	353.1	323.4	29.74	11.872			
3,800.0	3,751.0	3,790.7	3,747.8	16.2	15.4	-128.32	-429.9	-10.6	365.3	334.7	30.65	11.918			
3,900.0	3,849.3	3,889.9	3,845.4	16.6	15.9	-127.76	-447.7	-11.0	377.6	346.0	31.56	11.963			
4,000.0	3,947.6	3,989.0	3,942.9	17.1	16.3	-127.23	-465.5	-11.4	389.9	357.4	32.47	12.006			
4,100.0	4,046.0	4,088.2	4,040.5	17.6	16.8	-126.74	-483.3	-11.8	402.2	368.8	33.38	12.048			
4,200.0	4,144.3	4,187.4	4,138.1	18.0	17.2	-126.27	-501.0	-12.2	414.5	380.3	34.29	12.089			
4,300.0	4,242.6	4,286.6	4,235.7	18.5	17.7	-125.83	-518.8	-12.5	426.9	391.7	35.20	12.128			
4,400.0	4,341.0	4,385.8	4,333.2	19.0	18.2	-125.41	-536.6	-12.9	439.3	403.2	36.11	12.165			
4,500.0	4,439.3	4,484.9	4,430.8	19.4	18.6	-125.02	-554.4	-13.3	451.7	414.7	37.02	12.202			
4,600.0	4,537.7	4,584.1	4,528.4	19.9	19.1	-124.65	-572.2	-13.7	464.2	426.3	37.93	12.237			
4,700.0	4,636.0	4,683.3	4,625.9	20.4	19.5	-124.30	-589.9	-14.1	476.6	437.8	38.84	12.271			
4,800.0	4,734.3	4,831.9	4,772.0	20.8	20.2	-120.58	-616.5	-17.6	488.6	448.6	40.03	12.205			
4,900.0	4,833.2	5,286.9	5,153.9	21.2	22.2	-48.86	-686.6	-231.3	440.0	409.8	30.22	14.558			
5,000.0	4,930.7	5,410.9	5,218.8	21.5	22.8	11.88	-698.6	-336.0	350.2	324.9	25.26	13.863			
5,100.0	5,023.9	5,433.5	5,228.1	21.7	23.0	64.13	-700.3	-356.5	254.4	228.7	25.75	9.879			

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: S20-T24N-R9W
 Site Error: 0.0usft
 Reference Well: ESCRITO D20-2409 04H
 Well Error: 0.0usft
 Reference Wellbore: OH
 Reference Design: PLAN #1

Local Co-ordinate Reference: Well ESCRITO D20-2409 04H
 TVD Reference: 16' KB @ 6844.0usft
 MD Reference: 16' KB @ 6844.0usft
 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

Offset Design S20-T24N-R9W - ESCRITO D20-2409 02H - OH - PLAN #1														Offset Site Error:	0.0 usft
Survey Program: 0-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)					
5,200.0	5,110.1	5,422.6	5,223.7	21.8	22.9	86.24	-699.5	-346.6	161.9	132.3	29.61	5.468			
5,300.0	5,186.5	5,397.2	5,212.7	21.9	22.8	82.88	-697.5	-323.7	86.4	47.9	38.53	2.243			
5,350.9	5,221.0	5,381.1	5,205.2	21.9	22.7	73.33	-696.1	-309.6	71.7	31.3	40.42	1.775 ES, SF			
5,400.0	5,251.0	5,364.2	5,197.0	22.0	22.6	60.32	-694.5	-294.9	85.0	50.7	34.26	2.479			
5,500.0	5,301.4	5,326.9	5,177.2	22.0	22.4	33.37	-690.9	-263.5	152.7	124.5	28.22	5.413			
5,600.0	5,336.3	5,286.8	5,153.8	22.2	22.2	16.74	-686.5	-231.3	230.5	201.4	29.10	7.922			
5,700.0	5,354.6	5,250.0	5,130.4	23.1	22.0	8.43	-682.2	-203.2	306.0	274.5	31.55	9.702			
5,800.0	5,356.9	5,200.0	5,095.9	24.7	21.8	2.95	-675.9	-167.6	377.1	344.2	32.92	11.456			
5,900.0	5,355.9	5,164.0	5,069.2	26.6	21.6	-0.69	-671.0	-143.9	451.4	416.6	34.79	12.974			
6,000.0	5,354.8	5,130.8	5,043.4	28.7	21.5	-4.03	-666.2	-123.7	529.9	493.8	36.13	14.665			
6,100.0	5,353.8	5,100.0	5,018.4	31.0	21.4	-4.54	-661.6	-106.2	611.6	574.5	37.12	16.478			
6,200.0	5,352.7	5,077.0	4,999.1	33.4	21.3	-4.87	-658.1	-94.1	695.9	657.9	38.03	18.298			
6,300.0	5,351.7	5,050.0	4,976.0	35.9	21.2	-5.21	-653.8	-81.0	782.4	743.9	38.57	20.284			
6,400.0	5,350.6	5,050.0	4,976.0	38.4	21.2	-5.21	-653.8	-81.0	870.9	831.4	39.57	22.009			
6,500.0	5,349.6	5,018.9	4,948.6	41.1	21.0	-5.57	-648.8	-67.2	960.3	920.6	39.70	24.187			
6,600.0	5,348.5	5,000.0	4,931.6	43.7	21.0	-5.77	-645.7	-59.5	1,051.2	1,011.2	40.01	26.275			
6,700.0	5,347.5	5,000.0	4,931.6	46.5	21.0	-5.77	-645.7	-59.5	1,143.3	1,102.7	40.53	28.208			
6,800.0	5,346.4	4,978.2	4,911.7	49.3	20.9	-5.98	-642.1	-51.4	1,235.9	1,195.3	40.64	30.410			
6,900.0	5,345.4	4,950.0	4,885.5	52.1	20.7	-6.23	-637.3	-42.1	1,329.8	1,289.1	40.65	32.716			
7,000.0	5,344.3	4,950.0	4,885.5	54.9	20.7	-6.23	-637.3	-42.1	1,423.6	1,382.6	40.97	34.750			

Anticollision Report

Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Reference Site: S20-T24N-R9W
Site Error: 0.0usft
Reference Well: ESCRITO D20-2409 04H
Well Error: 0.0usft
Reference Wellbore: OH
Reference Design: PLAN #1

Local Co-ordinate Reference: Well ESCRITO D20-2409 04H
TVD Reference: 16' KB @ 6844.0usft
MD Reference: 16' KB @ 6844.0usft
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

Offset Design S20-T24N-R9W - ESCRITO D20-2409 03H - OH - PLAN #1														Offset Site Error:	0.0 usft
Survey Program: 0-MWD														Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)							
0.0	0.0	0.0	0.0	0.0	0.0	0.00	30.2	0.0	30.2						
100.0	100.0	100.0	100.0	0.2	0.2	0.00	30.2	0.0	30.2	29.9	0.30	100.340			
200.0	200.0	200.0	200.0	0.5	0.5	0.00	30.2	0.0	30.2	29.2	1.02	29.678			
300.0	300.0	300.0	300.0	0.9	0.9	0.00	30.2	0.0	30.2	28.5	1.74	17.414			
400.0	400.0	400.0	400.0	1.2	1.2	0.00	30.2	0.0	30.2	27.8	2.45	12.323			
500.0	500.0	500.0	500.0	1.6	1.6	0.00	30.2	0.0	30.2	27.0	3.17	9.535 CC, ES			
600.0	600.0	599.3	599.3	1.9	1.9	136.78	31.2	-1.4	32.5	28.6	3.88	8.386			
700.0	699.8	698.3	698.2	2.3	2.3	135.84	34.3	-5.5	39.4	34.8	4.60	8.579			
800.0	799.5	796.7	796.2	2.6	2.6	134.82	39.3	-12.4	50.9	45.6	5.34	9.547			
900.0	898.7	894.2	892.9	3.0	3.0	133.94	46.2	-21.8	67.0	60.9	6.09	10.999			
1,000.0	997.5	991.4	989.1	3.4	3.4	133.49	54.8	-33.4	87.2	80.4	6.84	12.756			
1,100.0	1,095.8	1,089.0	1,085.5	3.8	3.8	134.15	63.5	-45.3	109.2	101.7	7.58	14.422			
1,200.0	1,194.2	1,186.5	1,181.9	4.2	4.2	134.67	72.3	-57.2	131.4	123.0	8.33	15.778			
1,300.0	1,292.5	1,284.0	1,278.3	4.6	4.6	135.03	81.0	-69.1	153.5	144.4	9.09	16.887			
1,400.0	1,390.8	1,381.5	1,374.7	5.1	5.0	135.31	89.8	-81.0	175.6	165.8	9.86	17.808			
1,500.0	1,489.2	1,479.0	1,471.1	5.5	5.4	135.52	98.5	-92.9	197.8	187.1	10.64	18.582			
1,600.0	1,587.5	1,576.6	1,567.5	6.0	5.8	135.69	107.2	-104.8	219.9	208.5	11.43	19.241			
1,700.0	1,685.9	1,674.1	1,663.9	6.4	6.2	135.83	116.0	-116.7	242.0	229.8	12.22	19.808			
1,800.0	1,784.2	1,771.6	1,760.3	6.9	6.6	135.95	124.7	-128.6	264.2	251.2	13.01	20.300			
1,900.0	1,882.5	1,869.1	1,856.7	7.3	7.1	136.05	133.5	-140.5	286.3	272.5	13.81	20.731			
2,000.0	1,980.9	1,966.6	1,953.1	7.8	7.5	136.13	142.2	-152.4	308.5	293.9	14.61	21.111			
2,100.0	2,079.2	2,064.1	2,049.5	8.3	7.9	136.21	151.0	-164.3	330.6	315.2	15.41	21.449			
2,200.0	2,177.5	2,161.7	2,145.9	8.7	8.3	136.27	159.7	-176.2	352.8	336.5	16.22	21.751			
2,300.0	2,275.9	2,259.2	2,242.2	9.2	8.7	136.33	168.4	-188.1	374.9	357.9	17.02	22.022			
2,400.0	2,374.2	2,356.7	2,338.6	9.6	9.1	136.38	177.2	-200.0	397.0	379.2	17.83	22.268			
2,500.0	2,472.6	2,454.2	2,435.0	10.1	9.6	136.42	185.9	-211.9	419.2	400.5	18.64	22.490			
2,600.0	2,570.9	2,551.7	2,531.4	10.6	10.0	136.46	194.7	-223.8	441.3	421.9	19.45	22.693			
2,700.0	2,669.2	2,649.2	2,627.8	11.0	10.4	136.50	203.4	-235.7	463.5	443.2	20.26	22.879			
2,800.0	2,767.6	2,746.8	2,724.2	11.5	10.8	136.53	212.1	-247.6	485.6	464.5	21.07	23.049			
2,900.0	2,865.9	2,844.3	2,820.6	12.0	11.2	136.56	220.9	-259.5	507.8	485.9	21.88	23.207			
3,000.0	2,964.3	2,941.8	2,917.0	12.4	11.7	136.59	229.6	-271.4	529.9	507.2	22.69	23.352			
3,100.0	3,062.6	3,039.3	3,013.4	12.9	12.1	136.61	238.4	-283.3	552.1	528.5	23.51	23.487			
3,200.0	3,160.9	3,136.8	3,109.8	13.4	12.5	136.64	247.1	-295.2	574.2	549.9	24.32	23.612			
3,300.0	3,259.3	3,234.3	3,206.2	13.8	12.9	136.66	255.8	-307.1	596.3	571.2	25.13	23.728			
3,400.0	3,357.6	3,331.9	3,302.6	14.3	13.4	136.68	264.6	-319.0	618.5	592.5	25.95	23.837			
3,500.0	3,455.9	3,429.4	3,399.0	14.8	13.8	136.70	273.3	-330.9	640.6	613.9	26.76	23.939			
3,600.0	3,554.3	3,526.9	3,495.4	15.2	14.2	136.71	282.1	-342.8	662.8	635.2	27.58	24.035			
3,700.0	3,652.6	3,624.4	3,591.7	15.7	14.6	136.73	290.8	-354.7	684.9	656.5	28.39	24.125			
3,800.0	3,751.0	3,721.9	3,688.1	16.2	15.0	136.75	299.6	-366.6	707.1	677.9	29.21	24.210			
3,900.0	3,849.3	3,819.4	3,784.5	16.6	15.5	136.76	308.3	-378.5	729.2	699.2	30.02	24.290			
4,000.0	3,947.6	3,917.0	3,880.9	17.1	15.9	136.77	317.0	-390.4	751.4	720.5	30.84	24.365			
4,100.0	4,046.0	4,014.5	3,977.3	17.6	16.3	136.79	325.8	-402.3	773.5	741.9	31.65	24.437			
4,200.0	4,144.3	4,112.0	4,073.7	18.0	16.7	136.80	334.5	-414.2	795.7	763.2	32.47	24.504			
4,300.0	4,242.6	4,209.5	4,170.1	18.5	17.2	136.81	343.3	-426.1	817.8	784.5	33.29	24.568			
4,400.0	4,341.0	4,307.0	4,266.5	19.0	17.6	136.82	352.0	-437.9	839.9	805.8	34.10	24.629			
4,500.0	4,439.3	4,404.6	4,362.9	19.4	18.0	136.83	360.7	-449.8	862.1	827.2	34.92	24.687			
4,600.0	4,537.7	4,502.1	4,459.3	19.9	18.4	136.84	369.5	-461.7	884.2	848.5	35.74	24.743			
4,700.0	4,636.0	4,599.6	4,555.7	20.4	18.8	136.85	378.2	-473.6	906.4	869.8	36.55	24.795			
4,800.0	4,734.3	4,697.1	4,652.1	20.8	19.3	140.19	387.0	-485.5	928.5	891.2	37.37	24.846			
4,900.0	4,833.2	4,780.6	4,734.7	21.2	19.6	-156.36	394.8	-494.1	952.0	914.0	37.99	25.058			
5,000.0	4,930.7	4,850.0	4,803.6	21.5	19.9	-122.05	402.7	-493.2	978.7	940.4	38.33	25.533			
5,100.0	5,023.9	4,927.9	4,880.0	21.7	20.1	-108.82	413.2	-482.3	1,008.1	969.5	38.62	26.101			

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: S20-T24N-R9W
Site Error: 0.0usft
Reference Well: ESCRITO D20-2409 04H
Well Error: 0.0usft
Reference Wellbore OH
Reference Design: PLAN #1

Local Co-ordinate Reference: Well ESCRITO D20-2409 04H
TVD Reference: 16' KB @ 6844.0usft
MD Reference: 16' KB @ 6844.0usft
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

Offset Design S20-T24N-R9W - ESCRITO D20-2409 03H - OH - PLAN #1														Offset Site Error:	0.0 usft
Survey Program: 0-MWD														Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)				Between Centres (usft)	Between Ellipses (usft)		
5,200.0	5,110.1	5,000.0	4,948.6	21.8	20.2	-101.53	424.3	-463.2	1,039.6	1,000.7	38.84	26.766			
5,300.0	5,186.5	5,076.4	5,017.8	21.9	20.3	-96.62	437.4	-433.8	1,072.3	1,033.1	39.13	27.399			
5,400.0	5,251.0	5,150.0	5,080.0	22.0	20.4	-92.85	450.9	-397.0	1,105.5	1,065.9	39.57	27.934			
5,500.0	5,301.4	5,231.5	5,142.5	22.0	20.5	-90.03	466.8	-347.3	1,138.5	1,098.1	40.35	28.212			
5,600.0	5,336.3	5,314.0	5,197.8	22.2	20.6	-87.83	483.5	-288.4	1,170.5	1,129.0	41.53	28.186			
5,700.0	5,354.6	5,401.8	5,246.3	23.1	20.8	-86.29	501.5	-217.7	1,200.9	1,157.7	43.20	27.801			
5,800.0	5,356.9	5,497.3	5,285.9	24.7	21.2	-86.40	521.0	-133.1	1,228.8	1,183.4	45.44	27.044			
5,900.0	5,355.9	5,606.5	5,313.0	26.6	22.4	-87.85	542.4	-29.7	1,253.4	1,205.0	48.42	25.888			
6,000.0	5,354.8	5,735.5	5,319.6	28.7	24.3	-88.29	565.5	96.9	1,273.4	1,221.0	52.36	24.318			
6,100.0	5,353.8	5,914.6	5,317.4	31.0	27.7	-88.31	589.1	274.4	1,287.0	1,228.9	58.01	22.184			
6,200.0	5,352.7	6,096.1	5,315.2	33.4	31.7	-88.31	601.6	455.4	1,294.3	1,229.9	64.41	20.094			
6,300.0	5,351.7	6,240.4	5,313.5	35.9	35.2	-88.31	603.8	599.7	1,295.9	1,225.6	70.36	18.420			
6,400.0	5,350.6	6,340.4	5,312.2	38.4	37.7	-88.30	604.1	699.6	1,296.7	1,221.2	75.45	17.186			
6,500.0	5,349.6	6,440.4	5,311.0	41.1	40.3	-88.29	604.4	799.6	1,297.4	1,216.7	80.69	16.079			
6,600.0	5,348.5	6,540.4	5,309.8	43.7	43.0	-88.29	604.7	899.6	1,298.2	1,212.1	86.06	15.085			
6,700.0	5,347.5	6,640.4	5,308.6	46.5	45.7	-88.28	605.1	999.6	1,298.9	1,207.4	91.52	14.192			
6,800.0	5,346.4	6,740.4	5,307.4	49.3	48.4	-88.27	605.4	1,099.6	1,299.7	1,202.6	97.07	13.388			
6,900.0	5,345.4	6,840.4	5,306.2	52.1	51.2	-88.27	605.7	1,199.6	1,300.4	1,197.7	102.69	12.663			
7,000.0	5,344.3	6,940.4	5,305.0	54.9	54.1	-88.26	606.0	1,299.6	1,301.1	1,192.8	108.37	12.006			
7,100.0	5,343.3	7,040.4	5,303.8	57.8	56.9	-88.26	606.4	1,399.6	1,301.9	1,187.8	114.10	11.410			
7,200.0	5,342.2	7,140.4	5,302.5	60.7	59.8	-88.25	606.7	1,499.6	1,302.6	1,182.8	119.88	10.866			
7,300.0	5,341.2	7,240.4	5,301.3	63.6	62.7	-88.24	607.0	1,599.5	1,303.4	1,177.7	125.69	10.370			
7,400.0	5,340.1	7,340.4	5,300.1	66.5	65.6	-88.24	607.4	1,699.5	1,304.1	1,172.6	131.53	9.915			
7,500.0	5,339.1	7,440.4	5,298.9	69.4	68.5	-88.23	607.7	1,799.5	1,304.9	1,167.5	137.40	9.497			
7,600.0	5,338.1	7,540.4	5,297.7	72.4	71.4	-88.22	608.0	1,899.5	1,305.6	1,162.3	143.30	9.111			
7,700.0	5,337.0	7,640.4	5,296.5	75.3	74.4	-88.22	608.3	1,999.5	1,306.4	1,157.1	149.22	8.755			
7,800.0	5,336.0	7,740.4	5,295.3	78.3	77.4	-88.21	608.7	2,099.5	1,307.1	1,151.9	155.15	8.424			
7,900.0	5,334.9	7,840.4	5,294.1	81.3	80.3	-88.21	609.0	2,199.5	1,307.8	1,146.7	161.11	8.118			
8,000.0	5,333.9	7,940.3	5,292.8	84.3	83.3	-88.20	609.3	2,299.5	1,308.6	1,141.5	167.08	7.832			
8,100.0	5,332.8	8,040.3	5,291.6	87.3	86.3	-88.19	609.6	2,399.5	1,309.3	1,136.3	173.06	7.566			
8,200.0	5,331.8	8,140.3	5,290.4	90.3	89.3	-88.19	610.0	2,499.4	1,310.1	1,131.0	179.06	7.317			
8,300.0	5,330.7	8,240.3	5,289.2	93.3	92.3	-88.18	610.3	2,599.4	1,310.8	1,125.7	185.06	7.083			
8,400.0	5,329.7	8,344.4	5,287.9	96.3	95.4	-88.17	610.5	2,703.5	1,311.4	1,120.2	191.20	6.859			
8,500.0	5,328.6	8,444.4	5,286.7	99.3	98.4	-88.17	610.5	2,803.5	1,311.9	1,114.7	197.23	6.652			
8,600.0	5,327.6	8,544.4	5,285.5	102.3	101.4	-88.16	610.5	2,903.5	1,312.3	1,109.1	203.26	6.456			
8,700.0	5,326.5	8,644.4	5,284.3	105.3	104.4	-88.15	610.6	3,003.4	1,312.8	1,103.4	209.31	6.272			
8,800.0	5,325.5	8,744.4	5,283.1	108.4	107.5	-88.15	610.6	3,103.4	1,313.2	1,097.8	215.36	6.098			
8,900.0	5,324.4	8,844.4	5,281.8	111.4	110.5	-88.14	610.6	3,203.4	1,313.6	1,092.2	221.41	5.933			
9,000.0	5,323.4	8,944.4	5,280.6	114.4	113.5	-88.13	610.6	3,303.4	1,314.1	1,086.6	227.47	5.777			
9,100.0	5,322.3	9,044.4	5,279.4	117.4	116.5	-88.12	610.6	3,403.4	1,314.5	1,081.0	233.54	5.629			
9,200.0	5,321.3	9,144.4	5,278.2	120.5	119.6	-88.12	610.7	3,503.4	1,314.9	1,075.3	239.61	5.488			
9,300.0	5,320.2	9,244.4	5,276.9	123.5	122.6	-88.11	610.7	3,603.4	1,315.4	1,069.7	245.69	5.354			
9,400.0	5,319.2	9,344.4	5,275.7	126.6	125.6	-88.10	610.7	3,703.4	1,315.8	1,064.0	251.77	5.226			
9,500.0	5,318.1	9,444.4	5,274.5	129.6	128.7	-88.10	610.7	3,803.4	1,316.2	1,058.4	257.86	5.104			
9,600.0	5,317.1	9,544.4	5,273.3	132.6	131.7	-88.09	610.7	3,903.4	1,316.7	1,052.7	263.95	4.988			
9,700.0	5,316.1	9,644.4	5,272.1	135.7	134.8	-88.08	610.7	4,003.4	1,317.1	1,047.1	270.04	4.877			
9,800.0	5,315.0	9,744.4	5,270.8	138.7	137.8	-88.08	610.8	4,103.3	1,317.5	1,041.4	276.14	4.771			
9,900.0	5,314.0	9,844.4	5,269.6	141.8	140.9	-88.07	610.8	4,203.3	1,318.0	1,035.7	282.24	4.670			
10,000.0	5,312.9	9,944.4	5,268.4	144.8	143.9	-88.06	610.8	4,303.3	1,318.4	1,030.1	288.34	4.572			
10,100.0	5,311.9	10,044.4	5,267.2	147.9	147.0	-88.06	610.8	4,403.3	1,318.9	1,024.4	294.44	4.479			
10,200.0	5,310.8	10,144.4	5,266.0	151.0	150.0	-88.05	610.8	4,503.3	1,319.3	1,018.7	300.55	4.390			
10,300.0	5,309.8	10,244.4	5,264.7	154.0	153.1	-88.04	610.8	4,603.3	1,319.7	1,013.1	306.66	4.304			

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: S20-T24N-R9W
 Site Error: 0.0usft
 Reference Well: ESCRITO D20-2409 04H
 Well Error: 0.0usft
 Reference Wellbore: OH
 Reference Design: PLAN #1

Local Co-ordinate Reference: Well ESCRITO D20-2409 04H
 TVD Reference: 16' KB @ 6844.0usft
 MD Reference: 16' KB @ 6844.0usft
 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

Offset Design S20-T24N-R9W - ESCRITO D20-2409 03H - OH - PLAN #1													Offset Site Error:	0.0 usft
Survey Program: 0-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)				
10,363.9	5,309.1	10,308.2	5,264.0	156.0	155.0	-88.04	610.9	4,667.2	1,320.0	1,009.4	310.56	4.250 SF		

Anticollision Report

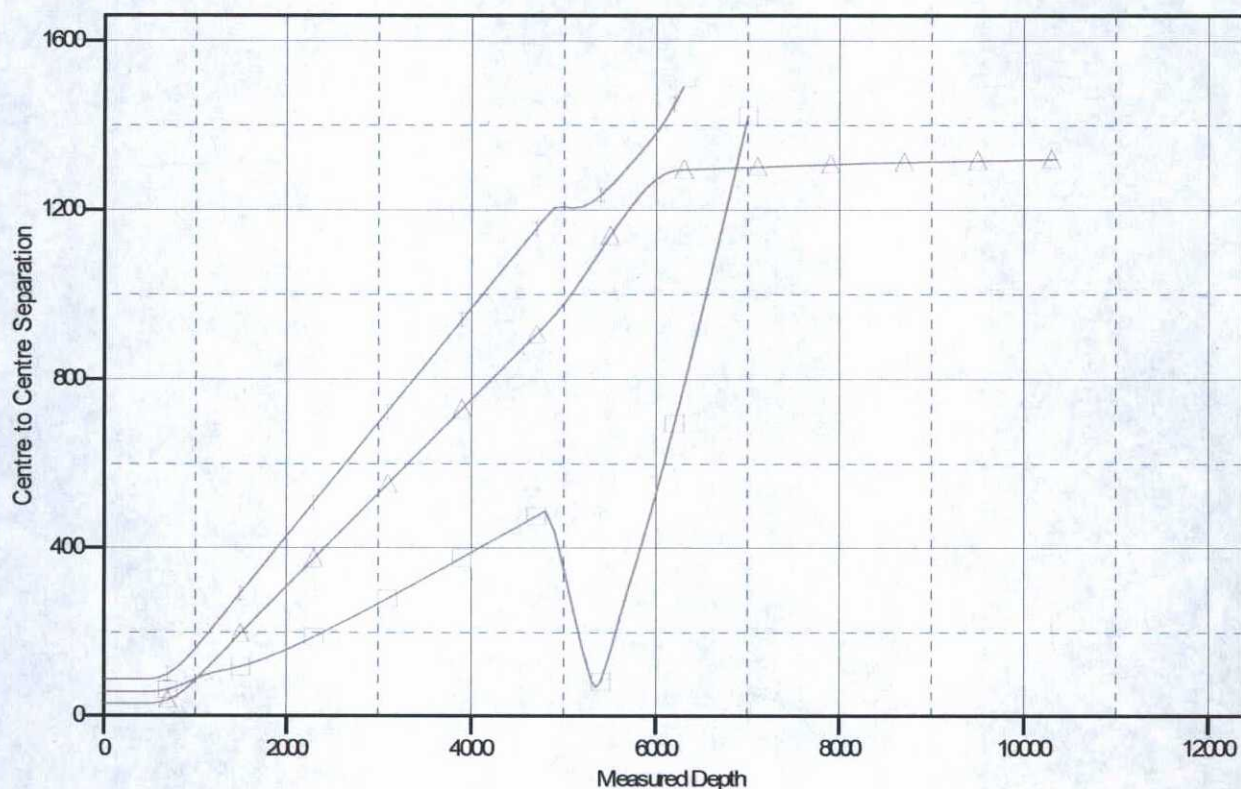
Company: EnCana Oil & Gas (USA) Inc
 Project: San Juan County, NM
 Reference Site: S20-T24N-R9W
 Site Error: 0.0usft
 Reference Well: ESCRITO D20-2409 04H
 Well Error: 0.0usft
 Reference Wellbore: OH
 Reference Design: PLAN #1

Local Co-ordinate Reference: Well ESCRITO D20-2409 04H
 TVD Reference: 16' KB @ 6844.0usft
 MD Reference: 16' KB @ 6844.0usft
 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 16' KB @ 6844.0usft
 Offset Depths are relative to Offset Datum
 Central Meridian is -107.833333°

Coordinates are relative to: ESCRITO D20-2409 04H
 Coordinate System is US State Plane 1983, New Mexico Western Zone
 Grid Convergence at Surface is: 0.01°

Ladder Plot



LEGEND

▲ ESCRITOD20-2409 03H, OH, PLAN#1V0 ◆ ESCRITOD20-2409 01H, OH, PLAN#1V0 ▣ ESCRITOD20-2409 02H, OH, PLAN#1V0

Escrito D20-2409 04H

**SHL: NWNW Section 20, T24N, R9W
1,270' FNL and 264' FWL**

**BHL: SENE Section 20, T24N, R9W
1,980' FNL and 330' FEL**

San Juan County, New Mexico

Lease Number: NMNM 10755

If the location becomes prone to wind or water erosion, Encana will take appropriate measures to prevent topsoil loss from wind. Such measures may include using tackifiers or water to wet the topsoil stockpile so that a crust is created across the exposed soil to prevent soil loss.

3. All construction materials for the well pad will consist of native borrow and subsoil accumulated during well pad construction. If additional fill or surfacing material is required, it will be obtained from existing permitted or private sources and will be hauled in by trucks over existing access roads.

The maximum cut will be approximately 14.4 feet on corner 2 and the maximum fill will be approximately 12.8 feet on corner 6.

4. As determined during the onsite on April 01, 2015, the following best management practices will be implemented:
 - a. Water will be diverted around the pad from corner 2 toward corner 6. Water will be diverted around the pad from corner 2 toward corner 3 and around to corner 5. Water will naturally fan out between corner 5 and corner 6.
 - b. One silt trap will be installed in EOD at corner 3.
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, operate, maintain and terminate a 5,740 foot, up to 6-inch buried, steel well connect pipeline that was submitted to the Bureau of Land Management concurrently with this 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.

ENCANA OIL & GAS (USA) INC.

ESCRITO D20-2409 #04H

1270' FNL & 264' FWL

LOCATED IN THE NW/4 NW/4 OF SECTION 20, 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 28.2 MILES TO HWY 57. (BLANCO TRADING POST, M.P. 123.4).
- 2) TURN RIGHT ONTO HWY 57 AND GO 2.3 MILES TO DIRT ROAD.
- 3) TURN LEFT ONTO DIRT ROAD AND GO 1.7 MILES TO PIPELINE CORRIDOR.
- 4) TURN RIGHT AND GO 1.7 MILES.
- 5) TURN RIGHT AND GO 0.3 MILES WHERE ACCESS IS STAKED ON RIGHT SIDE OF ROAD.

WELL FLAG LOCATED AT LAT. 36.303309° N, LONG. 107.820488° W (NAD 83).

WELLHEAD BLOWOUT CONTROL SYSTEM

encana

Well Name and Number:
Escrito D20-2409 04H

