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FORM APPROVED
OMB No. 1004-0137
Expires July 31, 2010

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

NOV 01 2012

APPLICATION FOR PERMIT TO DRILL OR REENTER **Fortson Field Office**
Bureau of Land Management

1a. Type of work: ☒ DRILL ☐ REENTER		5. Lease Serial No. NMNM 112955
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 M07-2409 02H
3b. Phone No. (include area code) 720-876-5331		9. API Well No. 30-045-35434
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface 1017' FSL and 475' FWL Section 7, T24N, R9W At proposed prod. zone 660' FSL and 330' FWL Section 12, T24N, R10W		10. Field and Pool, or Exploratory Bisti Lower - Gallup
14. Distance in miles and direction from nearest town or post office* +/- 31 miles southwest from intersection of US HWY 64 & US HWY 550, in Bloomfield, NM		11. Sec., T. R. M. or Blk. and Survey or Area Section 7, T24N, R9W NMPM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) Point of entry is 330' from east lease line	16. No. of acres in lease NMNM 112955 - 1,761.69	17. Spacing Unit dedicated to this well 160 acres - S2S2 of Sec 12, T24N R10W
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. SIXTEEN GS 91 is +/- 299' from SHL	19. Proposed Depth 5423' TVD/10523' MVD	20. BLM/BIA Bond No. on file COB-000235
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6910' GL, 6923' KB	22. Approximate date work will start* 02/12/2014	23. Estimated duration 25 days

RCVD APR 8 '13
OIL CONS. DIV.

DIST. 3

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

24. Attachments

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

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

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification
- Such other site specific information and/or plans as may be required by the BLM.

25. Signature Holly Hill	Name (Printed/Typed) Holly Hill	Date 10/31/12
Title Regulatory Analyst		
Approved by (Signature) J. Mankiewicz	Name (Printed/Typed) J. Mankiewicz	Date 4/6/13
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)

*(Instructions on page 2)

NOTIFY AZTEC OCD 24 HRS.
PRIOR TO CASING & CEMENT

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

NMOCD
Ar

Hold C104

for Directional Survey
and "As Drilled" plat

CONFIDENTIAL

APR 10 2013 ca

Hold C104
for Directional Survey
and "As Drilled" plat

District I
1625 N. French Drive, Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

District II
811 S. First Street, Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

District IV
1220 S. St. Francis Drive, Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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 Drive
Santa Fe, NM 87505

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-045-35434		*Pool Code 5890	*Pool Name BISTI LOWER - GALLUP
*Property Code 39811	*Property Name ESCRITO M07-2409		*Well Number 02H
*OGRID No. 282327	*Operator Name ENCANA OIL & GAS (USA) INC.		*Elevation 6910'

¹⁰ Surface Location

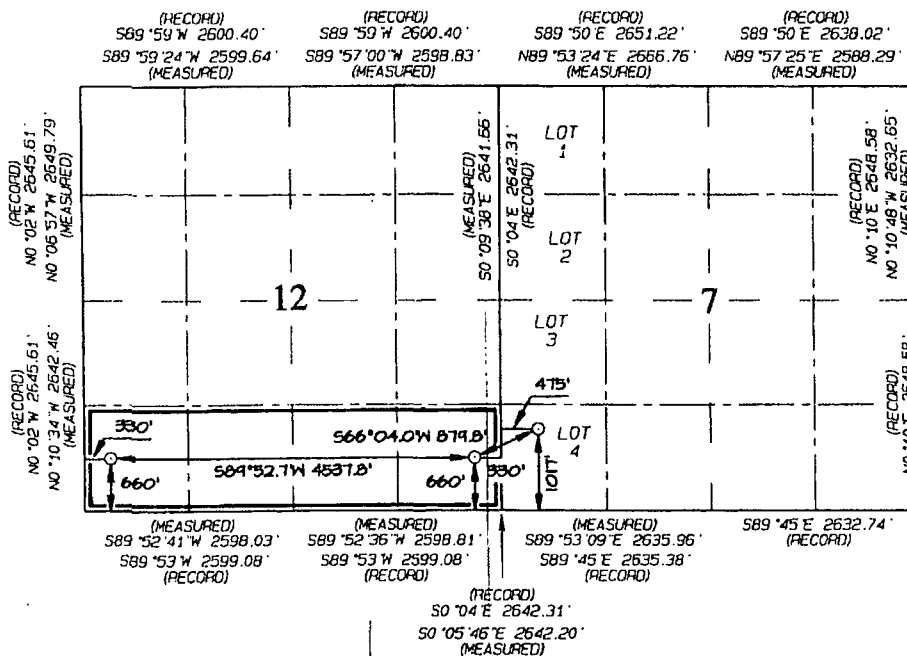
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	7	24N	9W	4	1017	SOUTH	475	WEST	SAN JUAN

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
M	12	24N	10W		660	SOUTH	330	WEST	SAN JUAN

¹² Dedicated Acres 160.0 Acres S/2 S/2 - Section 12	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



END-OF-LATERAL
660' FSL 330' FSL
SECTION 12, T24N, R10W
LAT: 36.32308°N
LONG: 107.85517°W
DATUM: NAD1927
LAT: 36.32309°N
LONG: 107.85579°W
DATUM: NAD1983

POINT-OF-ENTRY
660' FSL 330' FSL
SECTION 12, T24N, R10W
LAT: 36.32311°N
LONG: 107.83976°W
DATUM: NAD1927
LAT: 36.32312°N
LONG: 107.84038°W
DATUM: NAD1983

SURFACE LOCATION
1017' FSL 475' FSL
SECTION 7, T24N, R9W
LAT: 36.32409°N
LONG: 107.83703°W
DATUM: NAD1927
LAT: 36.32410°N
LONG: 107.83765°W
DATUM: NAD1983

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.

Holly Hill 10/31/2012
Signature Date

Printed Name
holly.hill@encana.com

E-mail Address

¹⁸ 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.

Survey Date: OCTOBER 10, 2012

Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number 15269

Directions from the Intersection of US Hwy 550 & US Hwy 64

in Bloomfield, NM to Encana Oil & Gas (USA) Inc. Escrito M07-2409 02H

1017' FSL & 475' FWL, Section 7, T24N, R9W, N.M.P.M., San Juan County, NM

Latitude: 36.32410°N Longitude: 107.83765°W Datum: NAD1983

From the intersection of US Hwy 550 & US Hwy 64 in Bloomfield, NM, travel Southerly on US Hwy 550 for 27.9 miles to State Hwy #57 @ Mile Marker 123.4;

Go right (South-westerly) on State Hwy #57 for 2.3 miles to fork in road;

Go left (Southerly) exiting State Hwy #57 for 0.4 miles to fork in road;

Go right which is straight (Southerly) for 0.1 miles to fork in road;

Go left which is straight (Southerly) for 0.3 miles to existing wellpad from which new access continues for 67' to Encana Escrito M07-2409 02H.

Escrito M07-2409 02H

SHL: SWSW Section 7, T24N, R9W
1017 FSL and 475 FWL

BHL: SWSW Section 12, T24N, R10W
660 FSL and 330 FWL

San Juan County, New Mexico

Lease Number: NMNM 112955

Encana Oil & Gas (USA) Inc. Drilling Plan

1. ESTIMATED TOPS OF GEOLOGICAL MARKERS (TVD)

The estimated tops of important geologic markers are as follows:

<u>Formation</u>	<u>Depth (TVD)</u>
Ojo Alamo Ss.	945'
Kirtland	1128'
Fruitland Coal	1508'
Pictured Cliffs	1775'
Lewis	1929'
Cliffhouse	2583'
Menefee	3303'
Point Lookout	4230'
Mancos Shale	4442'
Mancos Silt	5018'
Gallup	5223'

The referenced surface elevation is 6910', KB 6923'

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

<u>Substance</u>	<u>Formation</u>	<u>Depth (TVD)</u>
Gas	Fruitland Coal	1508'
Gas	Pictured Cliffs	1775'
Gas	Cliffhouse	2583'
Gas	Point Lookout	4230'
Oil/Gas	Mancos	4442'

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

3. PRESSURE CONTROL

- a) Pressure control equipment and configuration will be designed to meet 2M standards.
- b) Working pressure on rams and BOPE will be 3,000 psi
- c) Function test and visual inspection of the BOP will be conducted daily and noted in the IADC Daily Drilling Report.
- d) The Annular BOP will be pressure tested to a minimum of 50 percent of its rated working pressure.
- e) Blind and Pipe Rams/BOP will be tested against a test plug to 100 percent of rated working pressure.
- f) Pressure tests are required before drilling out from under all casing strings set and cemented in place.
- 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.

Escrito M07-2409 02H

SHL: SWSW Section 7, T24N, R9W
1017 FSL and 475 FWL

BHL: SWSW Section 12, T24N, R10W
660 FSL and 330 FWL

San Juan County, New Mexico

Lease Number: NMNM 112955

- 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	Hole Size	Csg Size	Weight	Grade
Conductor	0-60'	30"	20"	94#	H40, STC New
Surface	0'-500'	12 1/4"	9 5/8"	36#	J55, STC New
Intermediate	0'-5917'MD	8 1/2"	7"	26#	J55, LTC New
Production Liner	5717'-10523'MD	6 1/8"	4 1/2"	11.6#	B80*, LTC New

Casing String				Casing Strength Properties			Minimum Design Factors		
Size	Weight (lb/ft)	Grade	Connection	Collapse (psi)	Burst (psi)	Tensile (1000lb)	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 1/2"	11.6	B80	LTC	6350	7780	201	1.125	1.1	1.5

*B80 pipe specifications are attached

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

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

- b) The proposed cementing program is as follows:

Top plugs shall be used to reduce contamination of cement by displacement fluid. A bottom plug or other acceptable technique, such as a pre-flush fluid, inner string cement method, etc. shall be utilized to help isolate the cement from contamination by the mud fluid being displaced ahead of the cement slurry.

Escrito M07-2409 02H

SHL: SWSW Section 7, T24N, R9W
1017 FSL and 475 FWL

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660 FSL and 330 FWL

San Juan County, New Mexico

Lease Number: NMNM 112955

Casing	Depth	Cement Volume (sacks)	Cement Type&Yield	Designed TOC	Centralizers
Conductor	60'	100sk	Type I Neat 14.8 ppg	Surface	None
Surface	500'	178sk	Type III Cement + 1% CaCl + 0.25lb/sk Cello Flake + 0.2% FL, 14.6ppg, 1.38cuf/sk	Surface	1 per joint on bottom 3 joints
Intermediate	5917'MD	30% open hole excess Lead: 155sk Tail: 474sk	Lead: PremLite + 3% CaCl + 0.25lb/sk Cello Flake + 5lb/sk LCM, 12.1ppg 2.13cuf/sk Tail: Type III Cmt + 1% CaCl + 0.25lb/sk Cello Flake 14.5ppg 1.38cuf/sk	Surface	1 per joint for bottom 3 joints, 1 every 3 joints for remaining joints
Production Liner*	5717'MD-10523'MD	None – External casing packers	N/A	N/A	N/A

*Production liner clarification: Utilizing external swell casing packer system for zonal isolation will not use cement in the production liner.

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

All waiting on cement times shall be a minimum of 8 hours or adequate to achieve a 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 4650'. Directional plans are attached.

Description	Proposed Depth (TVD/MD)	Formation
Horizontal Lateral TD	5423'/10523'	Gallup

Escrito M07-2409 02H

SHL: SWSW Section 7, T24N, R9W
1017 FSL and 475 FWL

BHL: SWSW Section 12, T24N, R10W
660 FSL and 330 FWL

San Juan County, New Mexico

Lease Number: NMNM 112955

6. DRILLING FLUIDS PROGRAM

a) Surface through Intermediate Casing Point:

Hole Size (in)	Depth (ft)	Mud Type	Density (lb/gal)	Viscosity (sec/qt)	Fluid Loss (cc)
30"	0-60' TVD	Fresh Water	8.3-9.2	38-100	4-28
12 1/4"	0-500' TVD	Fresh Water	8.4-8.6	60-70	NC
8 1/2"	500'TVD- 5455'TVD/5917'MD	Fresh Water LSND	8.5-8.8	40-50	8-10

b) Intermediate Casing Point to TD:

Hole Size (in)	MD (ft)	Mud Type	Density (lb/gal)	Viscosity (sec/qt)	Fluid Loss (cc)
6 1/8"	5917'-10523'	Synthetic Oil Based Mud	8.6-9.0	15-25	<15

- c) There will be sufficient mud on location to control a blowout should one occur. Mud flow and volume will be monitored both visually and with electronic pit volume totalizers. Mud tests shall be performed every 24 hours after mudding up to determine, as applicable: density, viscosity, gel strength, filtration, and pH.
- d) A closed-loop system will be used to recover drilling fluid and dry cuttings in both phases of the well and on all hole intervals, including fresh water and oil-based operations. Above-ground tanks will be utilized to hold cuttings and fluids for rig operations. A frac tank will be on location to store fresh water. Waste will be disposed of properly at an EPA-approved hazardous waste facility. Fresh water cuttings will be disposed of at Basin Disposal, Inc. and/or Industrial Ecosystems, Inc. The location will be lined in accordance with the Surface Use Plan of Operations.

7. TESTING, CORING and LOGGING

- a) Drill Stem Testing – None anticipated
- b) Coring – None anticipated.
- c) Mud 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 +/- 2553 psi based on a 9.0 ppg at 5455' TVD of the landing point of the horizontal lateral. 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.

Escrito M07-2409 02H

SHL: SWSW Section 7, T24N, R9W
1017 FSL and 475 FWL

BHL: SWSW Section 12, T24N, R10W
660 FSL and 330 FWL

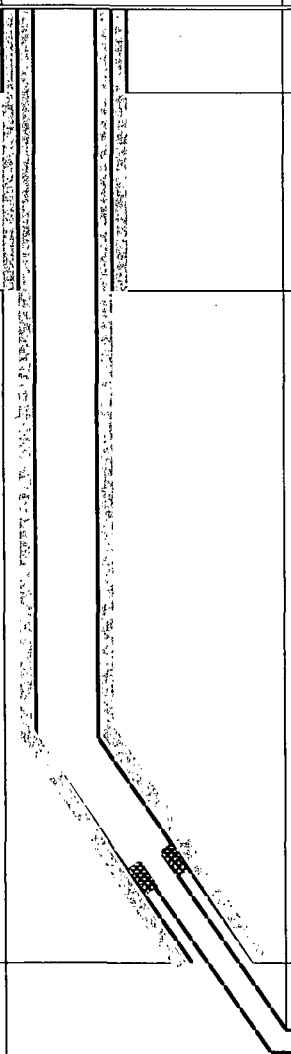
San Juan County, New Mexico

Lease Number: NMNM 112955

9. ANTICIPATED START DATE AND DURATION OF OPERATIONS

Drilling is estimated to commence on February 12, 2014. It is anticipated that completion operations will begin within 30 days after the well has been drilled depending on fracture treatment schedules with various pumping service companies.

It is anticipated that the drilling of this well will take approximately 25 days.

LOC: Sec 7-T24N-R9W County: San Juan WELL: Escrito M07-2409 02H			Encana Natural Gas WELL SUMMARY			encana™ natural gas		ENG: J. Fox/ A. RIG: GLE: 6910 RKBE: 6923		10/30/12
MWD LWD	OPEN HOLE LOGGING	FORM	DEPTH			HOLE SIZE	CASING SPECS	MW MUD TYPE	DEVIATION INFORMATION	
			TVD	MD						
			60	60'		30	20" 94# 100sx Type I Neat 48.8ppg cmt	Fresh wtr 8.3-9.2		
Surveys After csg is run	None		500	500		12 1/4	9 5/8" 36ppf J55 STC TOC @ surface 178 sks Type III Cmt	Fresh wtr 8.4-8.6	Vertical <1°	
Surveys every 500'	No OH logs Mud logger onsite	Ojo Alamo Kirtland Fruitland Coal Pictured Cliffs Ss Lewis Shale Cliffhouse Ss Menefee Fn Point Lookout Ss Mancos Sh KICK OFF PT Mancos Silt Gallup Top Base Gallup	945 1,128 1508 1775 1929 2583 3303 4230 4442 4650 5018 5223 5543 5455	 <						

NOTES:

- 1) Drill with 30" bit to 60', set 20" 94# conductor pipe
- 2) Drill surface to 500', R&C 9 5/8" casing
- 3) N/U BOP and surface equipment
- 4) Drill to KOP of 4650', 8 1/2" hole size,
- 5) PU directional tools and start curve at 10deg/100' build rate
- 6) Drill to casing point of 5917' MD
- 7) R&C 7" casing, circ cmt to surface, switch to OBM
- 8) Land at 90deg, drill 4606' lateral to 10523', run 4 1/2" liner with external swellable csg packers



Boomerang Tube LLC

CASING (OR) TUBING DESCRIPTION AND PERFORMANCE PROPERTIES

Pipe Outside Diameter (ins)	_____	4.500
Pipe Wall Thickness (ins)	_____	0.250
Nominal Weight Per Foot (lbs)	_____	11.60
Thread Name	_____	Long Thread CSG
Grade Name	_____	SB-80
Pipe Minimum Yield (psi)	_____	80,000
Pipe Minimum Ultimate (psi)	_____	90,000
Coupling Minimum Yield (psi)	_____	80,000
Coupling Minimum Ultimate (psi)	_____	100,000
Coupling or Joint Outside Diameter (ins)	_____	5.000
Drift Diameter (ins)	_____	3.875
Plain End Weight per Foot (lbs)	_____	11.36
Joint Strength (lbs)	_____	201,000
Internal Yield (psi)	_____	7,780
Collapse Rating (psi)	_____	6,350

MAXIMUM DEPTH/LENGTH BASED ON MUD WTS & SAFETY FACTORS

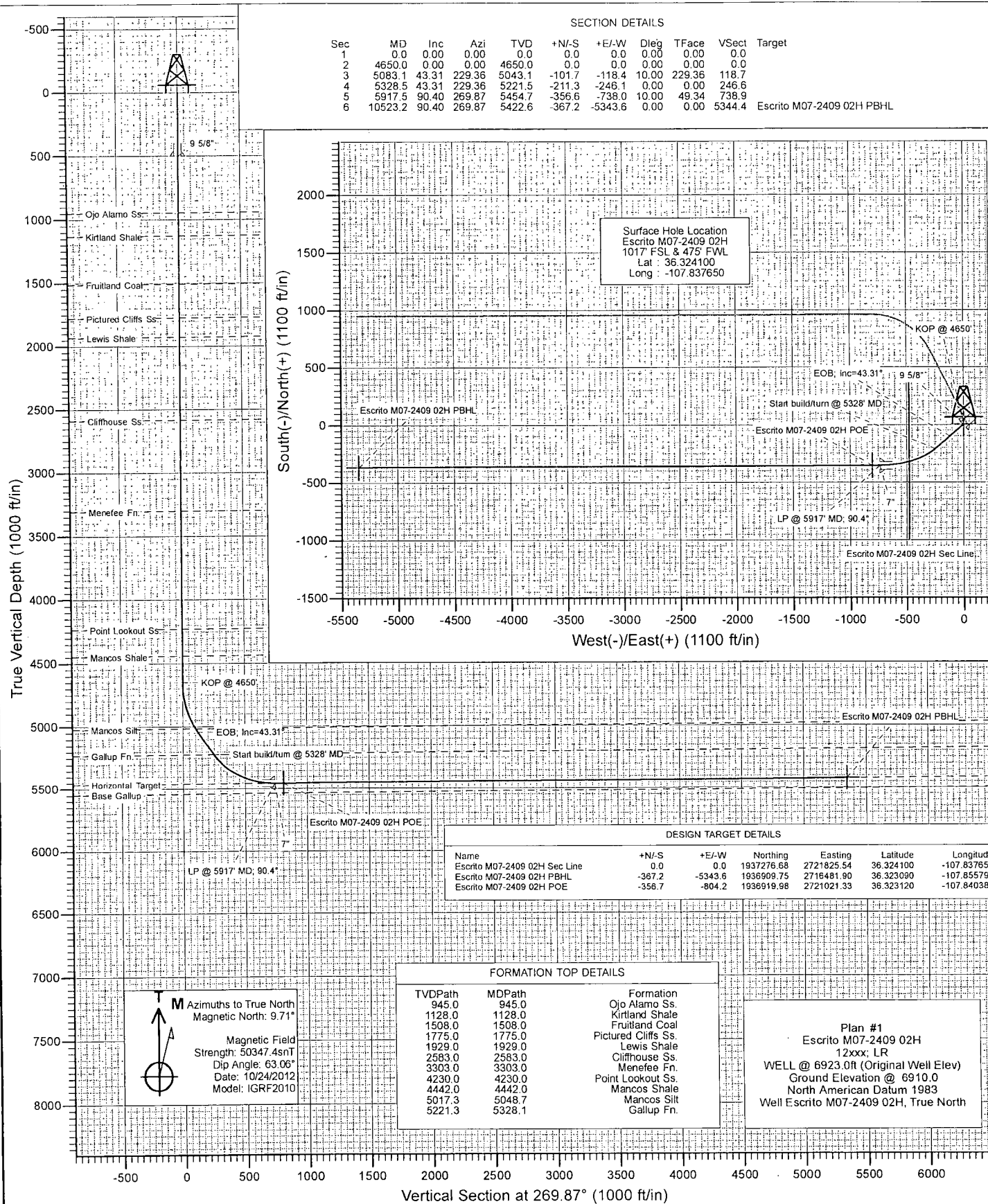
Drilling Mud Weight (ppg)	_____	9.625
Tension Safety Factor	_____	1.80
Maximum Tension Length (ft)	_____	9,630
Internal Yield Safety Factor	_____	1.10
Maximum Depth for Internal Yield (ft)	_____	14,150
Collapse Safety Factor	_____	1.125
Maximum Collapse Depth (ft)	_____	11,290

API RELATED VALUES and INTERMEDIATE CALCULATION RESULTS

Coupling Thread Fracture Strength	_____	464,000
Pipe Thread Fracture Strength (lbs)	_____	201,000
Pipe Body Plain End Yield (lbs)	_____	267,000
Round Thread Pull-Out (lbs)	_____	219,000
Minimum Make-up Torque (ft-lbs)	_____	1,640
Nominal Make-up Torque (ft-lbs)	_____	2,190
Maximum Make-up Torque (ft-lbs)	_____	2,740
Coupling Internal Yield (psi)	_____	10,660
Pipe Body Internal Yield (psi)	_____	7,780
Leak @ E1 or E7 plane (psi)	_____	17,920
Pipe Hydrostatic Test Pressure @ 80 % SMYS	_____	7,100

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	4650.0	0.00	0.00	4650.0	0.0	0.0	0.00	0.00	0.0	
3	5083.1	43.31	229.36	5043.1	-101.7	-118.4	10.00	229.36	118.7	
4	5328.5	43.31	229.36	5221.5	-211.3	-246.1	0.00	0.00	246.6	
5	5917.5	90.40	269.87	5454.7	-356.6	-738.0	10.00	49.34	738.9	
6	10523.2	90.40	269.87	5422.6	-367.2	-5343.6	0.00	0.00	5344.4	Escrito M07-2409 02H PBHL



Surface Hole Location
Escrito M07-2409 02H
1017' FSL & 475' FWL
Lat : 36.324100
Long : -107.837650

DESIGN TARGET DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Escrito M07-2409 02H Sec Line	0.0	0.0	1937276.68	2721825.54	36.324100	-107.837650
Escrito M07-2409 02H PBHL	-367.2	-5343.6	1936909.75	2716481.90	36.323090	-107.855790
Escrito M07-2409 02H POE	-356.7	-804.2	1936919.98	2721021.33	36.323120	-107.840380

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
945.0	945.0	Ojo Alamo Ss.
1128.0	1128.0	Kirtland Shale
1508.0	1508.0	Fruitland Coal
1775.0	1775.0	Pictured Cliffs Ss.
1929.0	1929.0	Lewis Shale
2583.0	2583.0	Cliffhouse Ss.
3303.0	3303.0	Menefee Fn.
4230.0	4230.0	Point Lookout Ss.
4442.0	4442.0	Mancos Shale
5017.3	5048.7	Mancos Silt
5221.3	5328.1	Gallup Fn.

Plan #1
Escrito M07-2409 02H
12xxx: LR
WELL @ 6923.0ft (Original Well Elev)
Ground Elevation @ 6910.0
North American Datum 1983
Well Escrito M07-2409 02H, True North

M Azimuths to True North
Magnetic North: 9.71°
Magnetic Field
Strength: 50347.4snT
Dip Angle: 63.06°
Date: 10/24/2012
Model: IGRF2010

Vertical Section at 269.87° (1000 ft/in)

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Escrito M07-2409 02H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 6923.0ft (Original Well Elev)
Project:	San Juan Co, NM	MD Reference:	WELL @ 6923.0ft (Original Well Elev)
Site:	S7- T24N-R9W	North Reference:	True
Well:	Escrito M07-2409 02H	Survey Calculation Method:	Minimum Curvature
Wellbore Design:	Hz Plan #1		

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

Site:	S7- T24N-R9W				
Site Position:		Northing:	1,939,904.96 ft	Latitude:	36.331320
From:	Lat/Long	Easting:	2,721,607.69 ft	Longitude:	-107.838390
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.00 °

Well:	Escrito M07-2409 02H				
Well Position	+N-S	0.0 ft	Northing:	1,937,276.68 ft	Latitude: 36.324100
	+E-W	0.0 ft	Easting:	2,721,825.54 ft	Longitude: -107.837650
Position Uncertainty	0.0 ft		Wellhead Elevation:	ft	Ground Level: 6,910.0 ft

Wellbore:	Hz				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF2010	10/24/2012	(°)	(°)	(nT)
			9.71	63.06	50,347

Design:	Plan #1				
Audit Notes:					
Version:		Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N-S	+E-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	0.0	0.0	0.0	269.87	

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N-S	+E-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(ft)	(ft)	Rate	Rate	Rate	(°)	
(ft)			(ft)			(°/100ft)	(°/100ft)	(°/100ft)		
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
4,650.0	0.00	0.00	4,650.0	0.0	0.0	0.00	0.00	0.00	0.00	
5,083.1	43.31	229.36	5,043.1	-101.7	-118.4	10.00	10.00	0.00	229.36	
5,328.5	43.31	229.36	5,221.5	-211.3	-246.1	0.00	0.00	0.00	0.00	
5,917.5	90.40	269.87	5,454.7	-356.6	-738.0	10.00	7.99	6.88	49.34	
10,523.2	90.40	269.87	5,422.6	-367.2	-5,343.6	0.00	0.00	0.00	0.00	Escrito M07-2409 02H

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Escrito M07-2409 02H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 6923.0ft (Original Well Elev)
Project:	San Juan Co, NM	MD Reference:	WELL @ 6923.0ft (Original Well Elev)
Site:	S7- T24N-R9W	North Reference:	True
Well:	Escrito M07-2409 02H	Survey Calculation Method:	Minimum Curvature
Wellbore:	H2		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	Escrito M07-2409 02H Sec Line
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	9 5/8"
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	
945.0	0.00	0.00	945.0	0.0	0.0	0.0	0.00	0.00	Ojo Alamo Ss.
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	
1,128.0	0.00	0.00	1,128.0	0.0	0.0	0.0	0.00	0.00	Kirtland Shale
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	
1,508.0	0.00	0.00	1,508.0	0.0	0.0	0.0	0.00	0.00	Fruitland Coal
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	
1,775.0	0.00	0.00	1,775.0	0.0	0.0	0.0	0.00	0.00	Pictured Cliffs Ss.
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	
1,929.0	0.00	0.00	1,929.0	0.0	0.0	0.0	0.00	0.00	Lewis Shale
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	
2,583.0	0.00	0.00	2,583.0	0.0	0.0	0.0	0.00	0.00	Cliffhouse Ss.
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	
3,303.0	0.00	0.00	3,303.0	0.0	0.0	0.0	0.00	0.00	Menefee Fn.
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	
4,230.0	0.00	0.00	4,230.0	0.0	0.0	0.0	0.00	0.00	Point Lookout Ss.
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Escrito M07-2409 02H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 6923.0ft (Original Well Elev)
Project:	San Juan Co, NM	MD Reference:	WELL @ 6923.0ft (Original Well Elev)
Site:	S7- T24N-R9W	North Reference:	True
Well:	Escrito M07-2409 02H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	
4,442.0	0.00	0.00	4,442.0	0.0	0.0	0.0	0.00	0.00	Mancos Shale
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	
4,650.0	0.00	0.00	4,650.0	0.0	0.0	0.0	0.00	0.00	KOP @ 4650'
4,700.0	5.00	229.36	4,699.9	-1.4	-1.7	1.7	10.00	10.00	
4,800.0	15.00	229.36	4,798.3	-12.7	-14.8	14.8	10.00	10.00	
4,900.0	25.00	229.36	4,892.1	-35.0	-40.7	40.8	10.00	10.00	
5,000.0	35.00	229.36	4,978.6	-67.5	-78.6	78.8	10.00	10.00	
5,048.7	39.87	229.36	5,017.3	-86.8	-101.1	101.3	10.00	10.00	Mancos Silt
5,083.1	43.31	229.36	5,043.1	-101.7	-118.4	118.7	10.00	10.00	EOB; Inc=43.31°
5,100.0	43.31	229.36	5,055.3	-109.2	-127.2	127.4	0.00	0.00	
5,200.0	43.31	229.36	5,128.1	-153.9	-179.2	179.6	0.00	0.00	
5,300.0	43.31	229.36	5,200.8	-198.6	-231.3	231.8	0.00	0.00	
5,328.1	43.31	229.36	5,221.3	-211.1	-245.9	246.4	0.00	0.00	Gallup Fn.
5,328.5	43.31	229.36	5,221.5	-211.3	-246.1	246.6	0.00	0.00	Start build/turn @ 5328' MD
5,400.0	48.22	236.63	5,271.5	-242.0	-287.1	287.6	10.00	6.86	
5,500.0	55.71	245.07	5,333.1	-280.0	-355.8	356.5	10.00	7.49	
5,600.0	63.68	252.08	5,383.6	-311.3	-436.1	436.8	10.00	7.97	
5,700.0	71.94	258.17	5,421.3	-334.9	-525.5	526.3	10.00	8.27	
5,800.0	80.38	263.70	5,445.3	-350.1	-621.3	622.1	10.00	8.44	
5,900.0	88.90	268.96	5,454.6	-356.4	-720.5	721.3	10.00	8.52	
5,917.5	90.40	269.87	5,454.7	-356.6	-738.0	738.8	10.00	8.54	LP @ 5917' MD; 90.4° - 7"
5,983.7	90.40	269.87	5,454.2	-356.7	-804.2	805.0	0.00	0.00	Escrito M07-2409 02H POE
6,000.0	90.40	269.87	5,454.1	-356.8	-820.5	821.3	0.00	0.00	
6,100.0	90.40	269.87	5,453.4	-357.0	-920.5	921.3	0.00	0.00	
6,200.0	90.40	269.87	5,452.7	-357.2	-1,020.5	1,021.3	0.00	0.00	
6,300.0	90.40	269.87	5,452.0	-357.5	-1,120.5	1,121.3	0.00	0.00	
6,400.0	90.40	269.87	5,451.3	-357.7	-1,220.5	1,221.3	0.00	0.00	
6,500.0	90.40	269.87	5,450.6	-357.9	-1,320.5	1,321.3	0.00	0.00	
6,600.0	90.40	269.87	5,449.9	-358.2	-1,420.5	1,421.3	0.00	0.00	
6,700.0	90.40	269.87	5,449.2	-358.4	-1,520.5	1,521.3	0.00	0.00	
6,800.0	90.40	269.87	5,448.5	-358.6	-1,620.5	1,621.3	0.00	0.00	
6,900.0	90.40	269.87	5,447.8	-358.8	-1,720.5	1,721.3	0.00	0.00	
7,000.0	90.40	269.87	5,447.1	-359.1	-1,820.5	1,821.3	0.00	0.00	
7,100.0	90.40	269.87	5,446.5	-359.3	-1,920.5	1,921.3	0.00	0.00	
7,200.0	90.40	269.87	5,445.8	-359.5	-2,020.5	2,021.3	0.00	0.00	
7,300.0	90.40	269.87	5,445.1	-359.8	-2,120.5	2,121.3	0.00	0.00	
7,400.0	90.40	269.87	5,444.4	-360.0	-2,220.5	2,221.3	0.00	0.00	
7,500.0	90.40	269.87	5,443.7	-360.2	-2,320.5	2,321.3	0.00	0.00	
7,600.0	90.40	269.87	5,443.0	-360.5	-2,420.5	2,421.3	0.00	0.00	
7,700.0	90.40	269.87	5,442.3	-360.7	-2,520.5	2,521.3	0.00	0.00	
7,800.0	90.40	269.87	5,441.6	-360.9	-2,620.5	2,621.3	0.00	0.00	
7,900.0	90.40	269.87	5,440.9	-361.1	-2,720.5	2,721.3	0.00	0.00	
8,000.0	90.40	269.87	5,440.2	-361.4	-2,820.5	2,821.3	0.00	0.00	
8,100.0	90.40	269.87	5,439.5	-361.6	-2,920.5	2,921.3	0.00	0.00	
8,200.0	90.40	269.87	5,438.8	-361.8	-3,020.5	3,021.3	0.00	0.00	
8,300.0	90.40	269.87	5,438.1	-362.1	-3,120.5	3,121.3	0.00	0.00	
8,400.0	90.40	269.87	5,437.4	-362.3	-3,220.5	3,221.3	0.00	0.00	
8,500.0	90.40	269.87	5,436.7	-362.5	-3,320.5	3,321.3	0.00	0.00	
8,600.0	90.40	269.87	5,436.0	-362.7	-3,420.5	3,421.3	0.00	0.00	
8,700.0	90.40	269.87	5,435.3	-363.0	-3,520.5	3,521.3	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Escrito M07-2409 02H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 6923.0ft (Original Well Elev)
Project:	San Juan Co, NM	MD Reference:	WELL @ 6923.0ft (Original Well Elev)
Site:	S7- T24N-R9W	North Reference:	True
Well:	Escrito M07-2409 02H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
8,800.0	90.40	269.87	5,434.6	-363.2	-3,620.5	3,621.3	0.00	0.00	
8,900.0	90.40	269.87	5,433.9	-363.4	-3,720.5	3,721.3	0.00	0.00	
9,000.0	90.40	269.87	5,433.2	-363.7	-3,820.5	3,821.3	0.00	0.00	
9,100.0	90.40	269.87	5,432.5	-363.9	-3,920.5	3,921.3	0.00	0.00	
9,200.0	90.40	269.87	5,431.8	-364.1	-4,020.5	4,021.3	0.00	0.00	
9,300.0	90.40	269.87	5,431.1	-364.4	-4,120.4	4,121.3	0.00	0.00	
9,400.0	90.40	269.87	5,430.4	-364.6	-4,220.4	4,221.3	0.00	0.00	
9,500.0	90.40	269.87	5,429.7	-364.8	-4,320.4	4,321.3	0.00	0.00	
9,600.0	90.40	269.87	5,429.0	-365.0	-4,420.4	4,421.3	0.00	0.00	
9,700.0	90.40	269.87	5,428.3	-365.3	-4,520.4	4,521.3	0.00	0.00	
9,800.0	90.40	269.87	5,427.6	-365.5	-4,620.4	4,621.3	0.00	0.00	
9,900.0	90.40	269.87	5,426.9	-365.7	-4,720.4	4,721.3	0.00	0.00	
10,000.0	90.40	269.87	5,426.2	-366.0	-4,820.4	4,821.2	0.00	0.00	
10,100.0	90.40	269.87	5,425.5	-366.2	-4,920.4	4,921.2	0.00	0.00	
10,200.0	90.40	269.87	5,424.9	-366.4	-5,020.4	5,021.2	0.00	0.00	
10,300.0	90.40	269.87	5,424.2	-366.7	-5,120.4	5,121.2	0.00	0.00	
10,400.0	90.40	269.87	5,423.5	-366.9	-5,220.4	5,221.2	0.00	0.00	
10,500.0	90.40	269.87	5,422.8	-367.1	-5,320.4	5,321.2	0.00	0.00	
10,523.2	90.40	269.87	5,422.6	-367.2	-5,343.6	5,344.4	0.00	0.00	TD at 10523.2 - Escrito M07-2409 02H PBHL

Targets									
Target Name	hit/miss target	Dip Angle (°)	Dip Dir (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude, Longitude
Escrito M07-2409 02H S		0.00	0.00	-5,455.0	0.0	0.0	1,937,276.68	2,721,825.54	36.324100 -107.837650
- plan misses target center by 5455.0ft at 0.0ft MD (0.0 TVD, 0.0 N, 0.0 E)									
- Polygon									
Point 1				-5,455.0	500.0	-475.0	1,937,776.70	2,721,350.56	
Point 2				-5,455.0	-1,000.0	-475.0	1,936,276.70	2,721,350.49	
Escrito M07-2409 02H P		0.00	0.00	5,422.6	-367.2	-5,343.6	1,936,909.75	2,716,481.90	36.323090 -107.855790
- plan hits target center									
- Point									
Escrito M07-2409 02H P		0.00	0.00	5,454.2	-356.7	-804.2	1,936,919.98	2,721,021.33	36.323120 -107.840380
- plan hits target center									
- Point									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
5,917.5	5,454.7	7"	0.000	0.000	
500.0	500.0	9 5/8"	0.000	0.000	

Planning Report

Database: USA EDM 5000 Multi Users DB
Company: EnCana Oil & Gas (USA) Inc
Project: San Juan Co, NM
Site: S7- T24N-R9W
Well: Escrito M07-2409 02H
Wellbore: Hz
Design: Plan #1

Local Co-ordinate Reference: Well Escrito M07-2409 02H
TVD Reference: WELL @ 6923.0ft (Original Well Elev)
MD Reference: WELL @ 6923.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction	
945.0	945.0	Ojo Alamo Ss.		-0.40	269.87	
1,128.0	1,128.0	Kirtland Shale		-0.40	269.87	
1,508.0	1,508.0	Fruitland Coal		-0.40	269.87	
1,775.0	1,775.0	Pictured Cliffs Ss.		-0.40	269.87	
1,929.0	1,929.0	Lewis Shale		-0.40	269.87	
2,583.0	2,583.0	Cliffhouse Ss.		-0.40	269.87	
3,303.0	3,303.0	Menefee Fn.		-0.40	269.87	
4,230.0	4,230.0	Point Lookout Ss.		-0.40	269.87	
4,442.0	4,442.0	Mancos Shale		-0.40	269.87	
5,048.7	5,018.0	Mancos Silt		-0.40	269.87	
5,328.1	5,223.0	Gallup Fn.		-0.40	269.87	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
4,650.0	4,650.0	0.0	0.0	KOP @ 4650'	
5,083.1	5,043.1	-101.7	-118.4	EOB; Inc=43.31°	
5,328.5	5,221.5	-211.3	-246.1	Start build/turn @ 5328' MD	
5,917.5	5,454.7	-356.6	-738.0	LP @ 5917' MD; 90.4°	
10,523.2	5,422.6	-367.2	-5,343.6	TD at 10523.2	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Escrito M07-2409 02H
Project:	San Juan Co, NM	TVD Reference:	WELL @ 6923.0ft (Original Well Elev)
Reference Site:	S7- T24N-R9W	MD Reference:	WELL @ 6923.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Escrito M07-2409 02H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at:	2.00 sigma
Reference Wellbore:	Hz	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 100.0ft
Depth Range:	Unlimited
Results Limited by:	Maximum center-center distance of 1,251.5ft
Warning Levels Evaluated at:	2.00 Sigma
Error Model:	Systematic Ellipse
Scan Method:	Closest Approach 3D
Error Surface:	Elliptical Conic

Survey Tool Program	Date	10/24/2012
From (ft)	To (ft)	Survey (Wellbore)
0.0	10,522.9	Plan #1 (Hz)
		Tool Name
		MWD
		Description
		Geolink MWD

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design	(ft)	(ft)	(ft)	(ft)		
S7- T24N-R9W						
Escrito M07-2409 01H - Hz - Plan #1	4,600.0	4,600.0	30.3	14.3	1.895	CC, ES, SF

Anticollision Report

Company: EnCana Oil & Gas (USA) Inc
 Project: San Juan Co, NM
 Reference Site: S7- T24N-R9W
 Site Error: 0.0ft
 Reference Well: Escrito M07-2409 02H
 Well Error: 0.0ft
 Reference Wellbore: Hz
 Reference Design: Plan #1

Local Co-ordinate Reference: Well Escrito M07-2409 02H
 TVD Reference: WELL @ 6923.0ft (Original Well Elev)
 MD Reference: WELL @ 6923.0ft (Original Well Elev)
 North Reference: True
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: USA EDM 5000 Multi Users DB
 Offset TVD Reference: Offset Datum

Offset Design S7- T24N-R9W- Escrito M07-2409 01H - Hz - Plan #1												Offset Site Error: 0.0 ft	
Survey Program: 0-MWD												Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis		Distance							
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre +N-S	Offset Wellbore Centre +E-W	Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor	Warning
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)			
0.0	0.0	0.0	0.0	0.0	0.0	76.12	7.3	29.5	30.3				
100.0	100.0	100.0	100.0	0.2	0.2	76.12	7.3	29.5	30.3	30.0	0.30	99.917	
200.0	200.0	200.0	200.0	0.3	0.3	76.12	7.3	29.5	30.3	29.7	0.65	46.486	
300.0	300.0	300.0	300.0	0.5	0.5	76.12	7.3	29.5	30.3	29.3	1.00	30.289	
400.0	400.0	400.0	400.0	0.7	0.7	76.12	7.3	29.5	30.3	29.0	1.35	22.462	
500.0	500.0	500.0	500.0	0.8	0.8	76.12	7.3	29.5	30.3	28.6	1.70	17.850	
600.0	600.0	600.0	600.0	1.0	1.0	76.12	7.3	29.5	30.3	28.3	2.05	14.809	
700.0	700.0	700.0	700.0	1.2	1.2	76.12	7.3	29.5	30.3	27.9	2.40	12.653	
800.0	800.0	800.0	800.0	1.4	1.4	76.12	7.3	29.5	30.3	27.6	2.75	11.046	
900.0	900.0	900.0	900.0	1.5	1.5	76.12	7.3	29.5	30.3	27.2	3.10	9.800	
1,000.0	1,000.0	1,000.0	1,000.0	1.7	1.7	76.12	7.3	29.5	30.3	26.9	3.45	8.807	
1,100.0	1,100.0	1,100.0	1,100.0	1.9	1.9	76.12	7.3	29.5	30.3	26.5	3.79	7.997	
1,200.0	1,200.0	1,200.0	1,200.0	2.1	2.1	76.12	7.3	29.5	30.3	26.2	4.14	7.323	
1,300.0	1,300.0	1,300.0	1,300.0	2.2	2.2	76.12	7.3	29.5	30.3	25.9	4.49	6.754	
1,400.0	1,400.0	1,400.0	1,400.0	2.4	2.4	76.12	7.3	29.5	30.3	25.5	4.84	6.267	
1,500.0	1,500.0	1,500.0	1,500.0	2.6	2.6	76.12	7.3	29.5	30.3	25.2	5.19	5.846	
1,600.0	1,600.0	1,600.0	1,600.0	2.8	2.8	76.12	7.3	29.5	30.3	24.8	5.54	5.478	
1,700.0	1,700.0	1,700.0	1,700.0	2.9	2.9	76.12	7.3	29.5	30.3	24.5	5.89	5.153	
1,800.0	1,800.0	1,800.0	1,800.0	3.1	3.1	76.12	7.3	29.5	30.3	24.1	6.24	4.864	
1,900.0	1,900.0	1,900.0	1,900.0	3.3	3.3	76.12	7.3	29.5	30.3	23.8	6.59	4.607	
2,000.0	2,000.0	2,000.0	2,000.0	3.5	3.5	76.12	7.3	29.5	30.3	23.4	6.94	4.375	
2,100.0	2,100.0	2,100.0	2,100.0	3.6	3.6	76.12	7.3	29.5	30.3	23.1	7.29	4.165	
2,200.0	2,200.0	2,200.0	2,200.0	3.8	3.8	76.12	7.3	29.5	30.3	22.7	7.63	3.975	
2,300.0	2,300.0	2,300.0	2,300.0	4.0	4.0	76.12	7.3	29.5	30.3	22.4	7.98	3.801	
2,400.0	2,400.0	2,400.0	2,400.0	4.2	4.2	76.12	7.3	29.5	30.3	22.0	8.33	3.642	
2,500.0	2,500.0	2,500.0	2,500.0	4.3	4.3	76.12	7.3	29.5	30.3	21.7	8.68	3.495	
2,600.0	2,600.0	2,600.0	2,600.0	4.5	4.5	76.12	7.3	29.5	30.3	21.3	9.03	3.360	
2,700.0	2,700.0	2,700.0	2,700.0	4.7	4.7	76.12	7.3	29.5	30.3	21.0	9.38	3.235	
2,800.0	2,800.0	2,800.0	2,800.0	4.9	4.9	76.12	7.3	29.5	30.3	20.6	9.73	3.119	
2,900.0	2,900.0	2,900.0	2,900.0	5.0	5.0	76.12	7.3	29.5	30.3	20.3	10.08	3.011	
3,000.0	3,000.0	3,000.0	3,000.0	5.2	5.2	76.12	7.3	29.5	30.3	19.9	10.43	2.910	
3,100.0	3,100.0	3,100.0	3,100.0	5.4	5.4	76.12	7.3	29.5	30.3	19.6	10.78	2.816	
3,200.0	3,200.0	3,200.0	3,200.0	5.6	5.6	76.12	7.3	29.5	30.3	19.2	11.12	2.728	
3,300.0	3,300.0	3,300.0	3,300.0	5.7	5.7	76.12	7.3	29.5	30.3	18.9	11.47	2.645	
3,400.0	3,400.0	3,400.0	3,400.0	5.9	5.9	76.12	7.3	29.5	30.3	18.5	11.82	2.567	
3,500.0	3,500.0	3,500.0	3,500.0	6.1	6.1	76.12	7.3	29.5	30.3	18.2	12.17	2.493	
3,600.0	3,600.0	3,600.0	3,600.0	6.3	6.3	76.12	7.3	29.5	30.3	17.8	12.52	2.423	
3,700.0	3,700.0	3,700.0	3,700.0	6.4	6.4	76.12	7.3	29.5	30.3	17.5	12.87	2.358	
3,800.0	3,800.0	3,800.0	3,800.0	6.6	6.6	76.12	7.3	29.5	30.3	17.1	13.22	2.295	
3,900.0	3,900.0	3,900.0	3,900.0	6.8	6.8	76.12	7.3	29.5	30.3	16.8	13.57	2.236	
4,000.0	4,000.0	4,000.0	4,000.0	7.0	7.0	76.12	7.3	29.5	30.3	16.4	13.92	2.180	
4,100.0	4,100.0	4,100.0	4,100.0	7.1	7.1	76.12	7.3	29.5	30.3	16.1	14.27	2.127	
4,200.0	4,200.0	4,200.0	4,200.0	7.3	7.3	76.12	7.3	29.5	30.3	15.7	14.62	2.076	
4,300.0	4,300.0	4,300.0	4,300.0	7.5	7.5	76.12	7.3	29.5	30.3	15.4	14.96	2.028	
4,400.0	4,400.0	4,400.0	4,400.0	7.7	7.7	76.12	7.3	29.5	30.3	15.0	15.31	1.981	
4,500.0	4,500.0	4,500.0	4,500.0	7.8	7.8	76.12	7.3	29.5	30.3	14.7	15.66	1.937	
4,600.0	4,600.0	4,600.0	4,600.0	8.0	8.0	76.12	7.3	29.5	30.3	14.3	16.01	1.895 CC, ES, SF	
4,645.1	4,645.1	4,645.4	4,645.3	8.1	8.1	-156.25	8.4	28.9	30.9	14.7	16.16	1.912	
4,700.0	4,699.9	4,700.2	4,699.9	8.2	8.2	-165.86	12.8	26.7	31.7	15.4	16.32	1.943	
4,800.0	4,798.3	4,795.0	4,793.1	8.4	8.4	169.89	28.0	19.1	53.2	36.9	16.35	3.255	
4,900.0	4,892.1	4,878.6	4,873.2	8.6	8.5	157.13	49.3	8.5	99.4	83.2	16.18	6.140	
5,000.0	4,978.6	4,950.0	4,939.4	9.0	8.7	149.78	73.2	-3.5	164.2	148.3	15.97	10.286	

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 Co, NM
Reference Site: S7- T24N-R9W
Site Error: 0.0ft
Reference Well: Escrito M07-2409 02H
Well Error: 0.0ft
Reference Wellbore: Hz
Reference Design: Plan #1

Local Co-ordinate Reference: Well Escrito M07-2409 02H
TVD Reference: WELL @ 6923.0ft (Original Well Elev)
MD Reference: WELL @ 6923.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: USA EDM 5000 Multi Users DB
Offset TVD Reference: Offset Datum

Offset Design S7- T24N-R9W - Escrito M07-2409 01H - Hz - Plan #1													Offset Site Error: 0.0 ft		
Survey Program: 0-MWD													Offset Well Error: 0.0 ft		
Reference				Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Footface (")	Offset Wellbore Centre +N-S (ft)	Offset Wellbore Centre +E-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
5,100.0	5,055.3	5,000.0	4,984.3	9.5	8.9	144.20	93.0	-13.4	242.6	226.6	15.98	15.179			
5,200.0	5,128.1	5,050.0	5,027.7	10.2	9.1	144.35	115.2	-24.5	326.2	309.7	16.48	19.800			
5,300.0	5,200.8	5,087.8	5,059.4	11.1	9.3	143.99	133.5	-33.6	411.5	394.4	17.04	24.149			
5,400.0	5,271.5	5,124.7	5,089.5	12.1	9.5	126.49	152.6	-43.2	498.3	479.4	18.86	26.416			
5,500.0	5,333.1	5,158.1	5,115.9	13.3	9.7	106.39	171.0	-52.4	585.4	564.0	21.40	27.349			
5,600.0	5,383.6	5,188.5	5,139.1	14.8	9.8	91.16	188.5	-61.1	670.9	647.5	23.48	28.575			
5,700.0	5,421.3	5,216.3	5,159.7	16.5	10.0	80.09	205.2	-69.5	753.7	728.8	24.96	30.198			
5,800.0	5,445.3	5,242.0	5,178.1	18.4	10.2	72.26	221.1	-77.5	832.7	806.7	26.00	32.029			
5,900.0	5,454.6	5,265.6	5,194.6	20.3	10.4	66.92	236.3	-85.0	907.0	880.3	26.77	33.879			
6,000.0	5,454.1	5,288.4	5,210.1	22.4	10.6	67.66	251.3	-92.5	979.4	950.6	28.85	33.944			
6,100.0	5,453.4	5,312.4	5,225.8	24.5	10.8	69.45	267.5	-100.6	1,055.5	1,024.2	31.32	33.699			
6,200.0	5,452.7	5,337.7	5,241.8	26.7	11.0	71.25	285.0	-109.4	1,134.5	1,100.7	33.86	33.505			
6,300.0	5,452.0	5,364.3	5,258.0	29.0	11.3	73.04	303.9	-118.9	1,215.9	1,179.5	36.46	33.351			

Anticollision Report

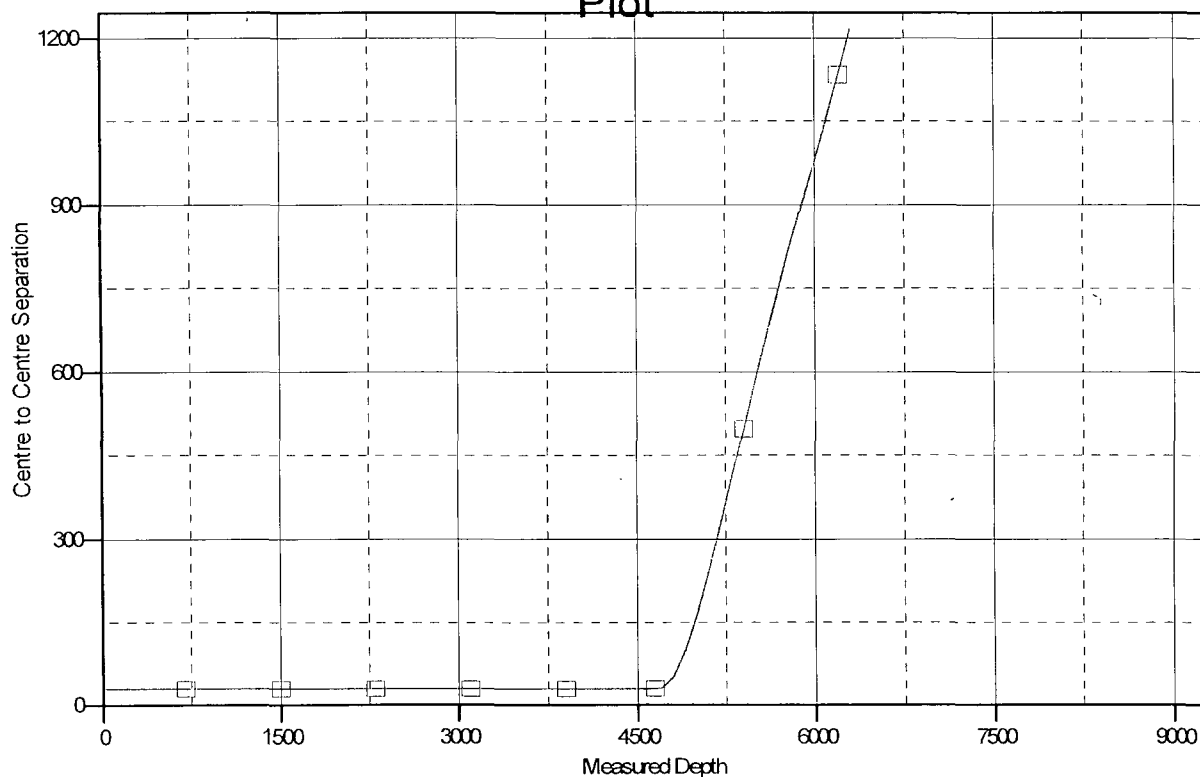
Company: EnCana Oil & Gas (USA) Inc
 Project: San Juan Co, NM
 Reference Site: S7- T24N-R9W
 Site Error: 0.0ft
 Reference Well: Escrito M07-2409 02H
 Well Error: 0.0ft
 Reference Wellbore: Hz
 Reference Design: Plan #1

Local Co-ordinate Reference: Well Escrito M07-2409 02H
 TVD Reference: WELL @ 6923.0ft (Original Well Elev)
 MD Reference: WELL @ 6923.0ft (Original Well Elev)
 North Reference: True
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: USA EDM 5000 Multi Users DB
 Offset TVD Reference: Offset Datum

Reference Depths are relative to WELL @ 6923.0ft (Original Well Elev)
 Offset Depths are relative to Offset Datum
 Central Meridian is -107.833333 °

Coordinates are relative to: Escrito M07-2409 02H
 Coordinate System is US State Plane 1983, New Mexico Western Zone
 Grid Convergence at Surface is: 0.00°

Ladder Plot



LEGEND

Escrito M07-2409 01H, Hz, Plan #1 V0

WELLHEAD BLOWOUT CONTROL SYSTEM



Well name and number:

Escrito M07-2409 02H

