

RECEIVED

RCVD APR 2 '13
OIL CONS. DIV.

DIST. 3

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

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

NOV 01 2012

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	3b. Phone No. (include area code) 720-876-5331	8. Lease Name and Well No. Escrito E07-2409 01H
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface 1640' FNL and 262' FWL Section 7, T24N, R9W At proposed prod. zone 890' FNL and 2265' FEL Section 11, T24N, R10W		9. API Well No. 30-045-35432
14. Distance in miles and direction from nearest town or post office* +/- 30.5 miles southwest from intersection of US HWY 64 & US HWY 550, in Bloomfield, NM		10. Field and Pool, or Exploratory Bisti Lower - Gallup
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	11. Sec., T. R. M. or Blk. and Survey or Area 5# Section 7, T24N, R9W NMNM 8# Sec 11, T24N R10W
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. The TSAH TAH 12 2 is 29' north of the wellbore	19. Proposed Depth 5415' TVD/13307' MD	12. County or Parish San Juan
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6876' GL, 6889' KB	22. Approximate date work will start* 01/01/2013	13. State NM
20. BLM/BIA Bond No. on file COB-000235		
23. Estimated duration 25 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:

- 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 <i>Holly Hill</i>	Name (Printed/Typed) Holly Hill	Date 10/30/12
Title Regulatory Analyst		
Approved by (Signature) <i>[Signature]</i>	Name (Printed/Typed) AFM	Date 3/29/13
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)

A COMPLETE C-144 MUST BE SUBMITTED TO AND APPROVED BY THE NMOCDF FOR: A PIT, CLOSED LOOP SYSTEM, BELOW GRADE TANK, OR PROPOSED ALTERNATIVE METHOD, PURSUANT TO NMOCDF PART 19.15.17, PRIOR TO THE USE OR CONSTRUCTION OF THE ABOVE APPLICATIONS.

*(Instructions on page 2)

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

NMOCDF
AV

Hold C104

for Directional Survey
and "As Drilled" plat

CONFIDENTIAL

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

APR 10 2013 ca

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

NOTIFY AZTEC OCD 24 HRS.
PRIOR TO CASING & CEMENT?

Hold C104
for Directional Survey
and "As Drilled" plat

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

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

☐ AMENDED REPORT
 NOV 01 2012

Farmington Field Office
Bureau of Land Management.

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-045-35432	*Pool Code 5890	*Pool Name BISTI LOWER - GALLUP
*Property Code 39809	*Property Name ESCRITO E07-2409	*Well Number 01H
*OGRID No. 282327	*Operator Name ENCANA OIL & GAS (USA) INC.	*Elevation 6876'

10 Surface Location

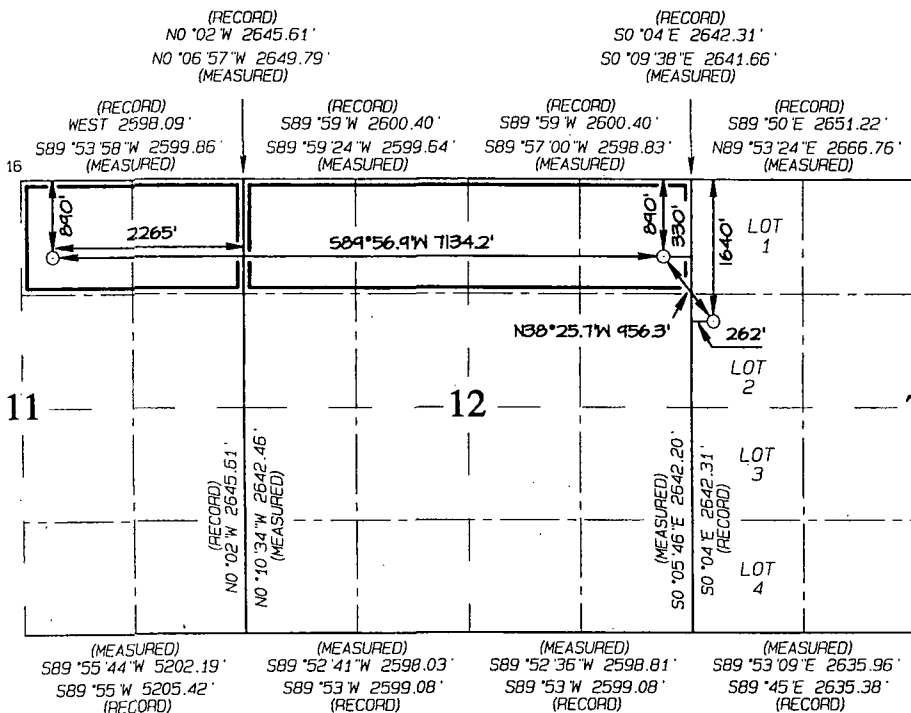
UL or lot no.	Section	Township	Range	Lot Id	Feet from the	North/South line	Feet from the	East/West line	County
E	7	24N	9W	2	1640	NORTH	262	WEST	SAN JUAN

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
B	11	24N	10W		890	NORTH	2265	EAST	SAN JUAN

12 Dedicated Acres 240 Acres	N/2 NE/4 - Section 11 N/2 N/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
890' FNL 2265' FEL
SECTION 11, T24N, R10W
LAT: 36.33334°N
LONG: 107.86401°W
DATUM: NAD1927

LAT: 36.33335 °N
LONG: 107.86463 °W
DATUM: NAD1983

POINT-OF-ENTRY
890' FNL 330' FEL
SECTION 12, T24N, R10W
LAT: 36.33336°N
LONG: 107.83979°W
DATUM: NAD1927

LAT: 36.33337°N
LONG: 107.84041°W
DATUM: NAD1983

SURFACE LOCATION
1640' FNL 262' FWL
SECTION 7, T24N, R9W
LAT: 36.33131°N
LONG: 107.83777°W
DATUM: NAD1927

LAT: 36.33132°N
LONG: 107.83839°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.

Brenda R. Linster 10:30

Signature _____ Date _____

Brenda R. Linster

Printed Name _____

brenda.linster@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.
Date of Survey: JULY 9, 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 E07-2409 01H

1640' FNL & 262' FWL, Section 7, T24N, R9W, N.M.P.M., San Juan County, NM

Latitude: 36.33132°N Longitude: 107.83839°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 0.25 miles to new access on right-hand side of existing roadway which continues for 225' to staked location.

Escrito E07-2409 01H
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1640 FNL and 262 FWL
BHL: NWNE Section 11, T24N, R10W
890 FNL and 2265 FEL
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	942'
Kirtland	1120'
Fruitland Coal	1530'
Pictured Cliffs	1778'
Lewis	1922'
Cliffhouse	2606'
Menefee	3315'
Point Lookout	4242'
Mancos	4452'
Gallup	5247'

The referenced surface elevation is 6876', KB 6889'

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

<u>Substance</u>	<u>Formation</u>	<u>Depth (TVD)</u>
Water	Ojo Alamo	942'
Gas	Fruitland Coal	1530'
Gas	Pictured Cliffs	1778'
Gas	Cliffhouse	2606'
Gas	Point Lookout	4242'
Oil/Gas	Mancos	4452'

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 E07-2409 01H

SHL: SWNW Section 7, T24N, R9W
1640 FNL and 262 FWL

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890 FNL and 2265 FEL

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'-6070'MD	8 1/2"	7"	26#	J55, LTC New
Production Liner	5870'-13307'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.

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Casing	Depth	Cement Volume (sacks)	Cement Type&Yield	Designed TOC	Centralizers
Conductor	60'	100sk	Type I Neat 14.8ppg	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 turbolizer per joint on bottom 3 joints
Intermediate	5473'TVD/ 6070'MD	30% open hole excess Lead: 155sk Tail: 475sk	Lead: PremLite + 3% CaCl + 0.25lb/sk CelloFlake + 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*	5870'MD- 13307'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 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 well will be drilled in two phases. A pilot hole will be drilled in the first phase, followed by kicking off a horizontal lateral in the existing wellbore in the second phase. The intent of drilling a pilot hole is to obtain open hole log data. The intent of the second phase of the well is to plug back the pilot hole with cement to the kick off point. After plugging back, the plan is to drill a horizontal lateral from the kick off point in the existing wellbore to the proposed bottom hole location.

Directional plans are attached.

Well Phase	Description	Proposed Depth (TVD/MD)	Formation
1	Vertical Pilot Hole	5753'/5753'	Gallup
2	Horizontal Lateral	5415'/13307'	Gallup

Escrito E07-2409 01H

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San Juan County, New Mexico

Lease Number: NMNM 112955

Proposed Plug Back Procedure:

KOP 4700'

Set kick plug at KOP

1. Spot 300' kick plug from 4600' – 4900'
 - a. 91sx of Class A cement with salt (1.3ft³/sk yield)
 - b. Spot tuned spacer
2. Pull uphole and reverse out
3. Pump bottoms up 2 times, pull uphole
4. Tag plug, drill ahead to KOP when cement is solid

6. DRILLING FLUIDS PROGRAM

a) Vertical Pilot Hole:

Hole Size (in)	TVD (ft)	Mud Type	Density (lb/gal)	Viscosity (sec/qt)	Fluid Loss (cc)
30"	0-60'	Fresh Water	8.3-9.2	38-100	4-28
12 1/4"	0-500'	Fresh Water	8.4-8.6	60-70	NC
8 1/2"	500-5753'	Fresh Water LSND	8.5-8.8	40-50	8-10

b) Kick off Point to Intermediate Casing Point:

Hole Size (in)	TVD (ft)	Mud Type	Density (lb/gal)	Viscosity (sec/qt)	Fluid Loss (cc)
8 1/2"	4700' (KOP)- 5473' (6070'MD)	Fresh Water LSND	8.5-8.8	40-50	8-10

c) Intermediate Casing Point to TD:

Hole Size (in)	Depth (ft)	Mud Type	Density (lb/gal)	Viscosity (sec/qt)	Fluid Loss (cc)
6 1/8"	5870'MD- 13307'MD	Synthetic Oil Based Mud	8.6-9.0	15-25	<15

- d) 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.
- e) 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.

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San Juan County, New Mexico

Lease Number: NMNM 112955

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

Open Hole:

Triple combo with Spectral Gamma TD to surface casing
Specialty logs will be decided real time by onsite geologists

Cased Hole:

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

8. ABNORMAL PRESSURES & HYDROGEN SULFIDE

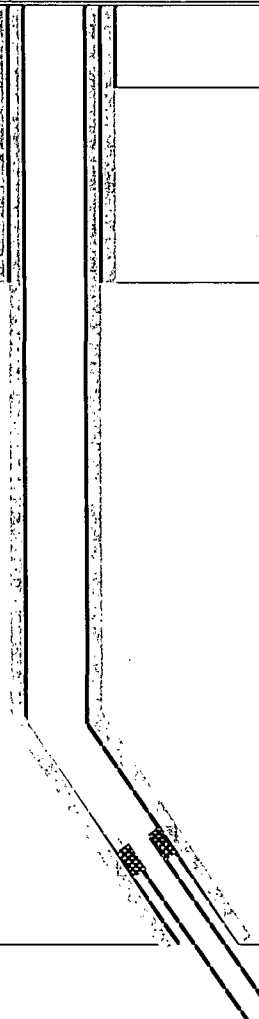
The anticipated bottom hole pressure is +/- 2,692 psi based on a 9.0 ppg at 5753' TVD of the vertical pilot hole. No abnormal pressure or temperatures are anticipated.

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

9. ANTICIPATED START DATE AND DURATION OF OPERATIONS

Drilling is estimated to commence on January 1, 2013. 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 E07-2409 01H			Encana Natural Gas WELL SUMMARY				encana™ natural gas		ENG: J. Fox/ A. 10/30/12 RIG: GLE: 6876 RKBE: 6889	
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					12 1/4	9 5/8" 36ppf J55 STC TOC @ surface 178 sks Type III Cmt	Fresh wtr 8.4-8.6	Vertical <1°	
			500	500						
Surveys every 500'	No OH logs	Ojo Alamo Kirtland	942 1,120			8 1/2	7" 26ppf J55 LTC TOC @ surface 30% OH excess: 630 sks Lead 155 sks Tail 475sks	Fresh Wtr 8.5-8.8	Vertical <1°	
		Fruitland Coal	1530							
	Pictured Cliffs Ss Lewis Shale	1778 1922								
	Cliffhouse Ss Menefee Fn Point Lookout Ss Mancos Sh	2606 3315 4242 4452								
	KICK OFF PT	4700								
	Mancos Silt	5045								
	Gallup Top	5247								
		5473	6070							
	No OH Logs	horz target	5477	6173	6 1/8	200' overlap at liner top			.25deg updip 5415'TVD TD = 13307' MD	
Base Gallup Pilot Hole TD		5553 5753		7135' Lateral	8.6-9.0 OBM					
		4 1/2" 11.6ppf SB80 LTC Running external swellable csg packers for isolation of prod string	Switch to OBM 8.6-9.0							

NOTES:

- 1) Drill with 30" bit to 60', set 20" 94# conductor pipe
- 2) Drill surface to 500', R&C 9 5/8" casing
- 3) N/U BOP and surface equipment
- 4) Drill to pilot hole TD of 5753' and run OH logs.
- 5) Spot cement kick plug
- 6) Kick off at 4700' and start curve at 10deg/100' build rate
- 7) Drill to casing point of 6070' MD
- 8) R&C 7" casing, circ cmt to surface, switch to OBM
- 9) Land at 90deg, drill 7135' lateral to 13307', 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

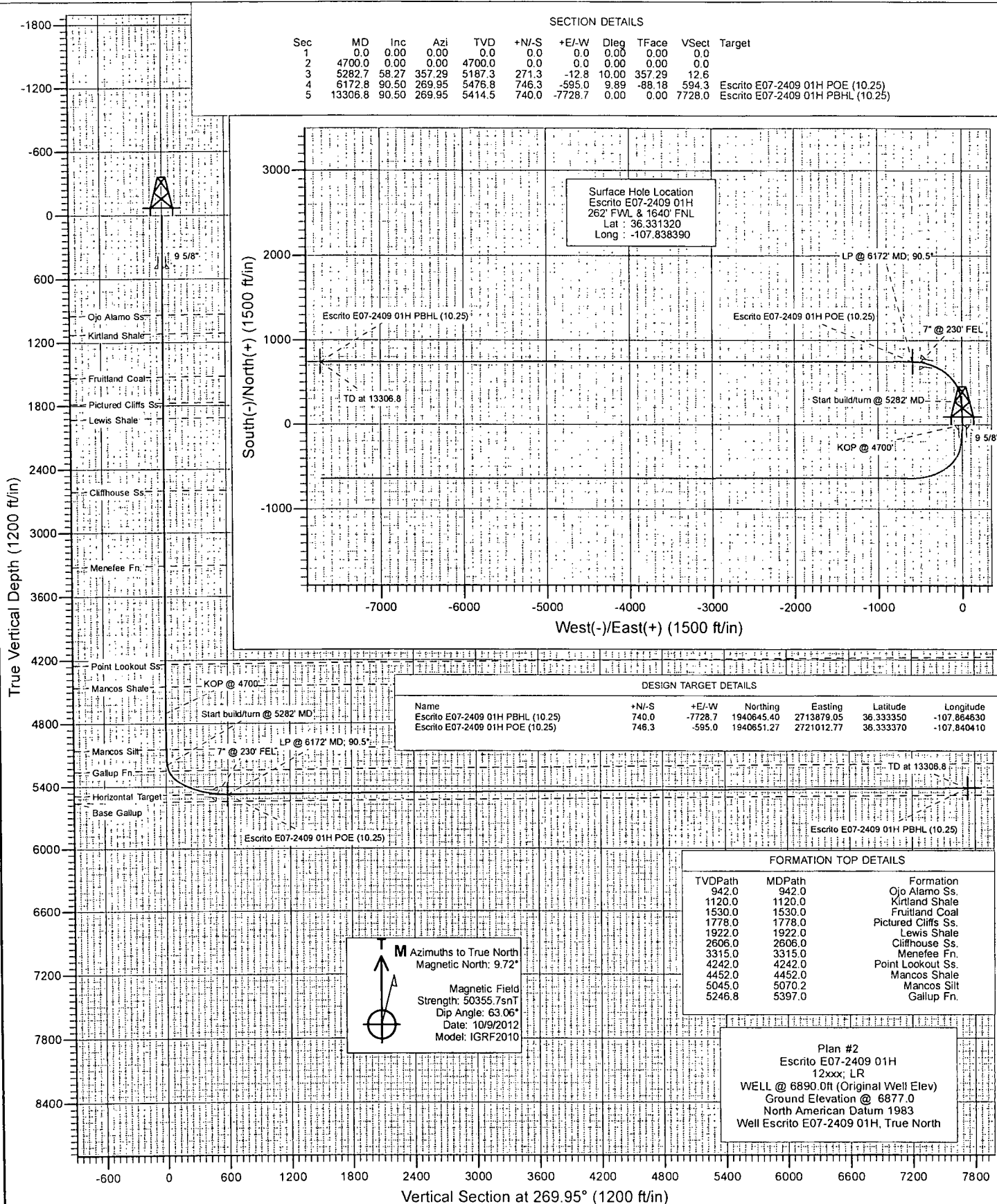
Drilling Mud Weight (ppg)	_____	9.625
Tension Safety Factor	_____	1.80
Maximum Tension Length (ft)	_____	9,630
Internal Yield Safety Factor	_____	1.10
Maximum Depth for Internal Yield (ft)	_____	14,150
Collapse Safety Factor	_____	1.125
Maximum Collapse Depth (ft)	_____	11,290

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	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	4700.0	0.00	0.00	4700.0	0.0	0.0	0.00	0.00	0.0	
3	5282.7	58.27	357.29	5187.3	271.3	-12.8	10.00	357.29	12.6	Escrito E07-2409 01H POE (10.25)
4	6172.8	90.50	269.95	5476.8	746.3	-595.0	9.89	-88.18	594.3	Escrito E07-2409 01H PBHL (10.25)
5	13306.8	90.50	269.95	5414.5	740.0	-7728.7	0.00	0.00	7728.0	



Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Escrito E07-2409 01H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 6890.0ft (Original Well Elev)
Project:	San Juan Co, NM	MD Reference:	WELL @ 6890.0ft (Original Well Elev)
Site:	S7- T24N-R9W	North Reference:	True
Well:	Escrito E07-2409 01H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #2		

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

Well:	Escrito E07-2409 01H					
Well Position	+N-S	0.0 ft	Northing:	1,939,904.96 ft	Latitude:	36.331320
	+E-W	0.0 ft	Easting:	2,721,607.69 ft	Longitude:	-107.838390
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	6,877.0 ft

Wellbore	Hz				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF2010	10/9/2012	(°)	(°)	(nT)
			9.72	63.06	50,356

Design:	Plan #2			
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	269.95

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	
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.00	0.00	0.00	0.00	
5,282.7	58.27	357.29	5,187.3	271.3	-12.8	10.00	10.00	0.00	357.29	
6,172.8	90.50	269.95	5,476.8	746.3	-595.0	9.89	3.62	-9.81	-88.18	Escrito E07-2409 01H-
13,306.8	90.50	269.95	5,414.5	740.0	-7,728.7	0.00	0.00	0.00	0.00	Escrito E07-2409 01H-

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Escrito E07-2409 01H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 6890.0ft (Original Well Elev)
Project:	San Juan Co, NM	MD Reference:	WELL @ 6890.0ft (Original Well Elev)
Site:	S7- T24N-R9W	North Reference:	True
Well:	Escrito E07-2409 01H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	9 5/8"
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	
942.0	0.00	0.00	942.0	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	
1,120.0	0.00	0.00	1,120.0	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	
1,530.0	0.00	0.00	1,530.0	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	
1,778.0	0.00	0.00	1,778.0	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	
1,922.0	0.00	0.00	1,922.0	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	
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	
2,606.0	0.00	0.00	2,606.0	0.0	0.0	0.0	0.00	0.00	Cliffhouse Ss.
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	
3,315.0	0.00	0.00	3,315.0	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	
4,242.0	0.00	0.00	4,242.0	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 E07-2409 01H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 6890.0ft (Original Well Elev)
Project:	San Juan Co, NM	MD Reference:	WELL @ 6890.0ft (Original Well Elev)
Site:	S7- T24N-R9W	North Reference:	True
Well:	Escrito E07-2409 01H	Survey Calculation Method:	Minimum Curvature
Wellbore:	H2		
Design:	Plan #2		

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	
4,452.0	0.00	0.00	4,452.0	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	
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	KOP @ 4700'
4,800.0	10.00	357.29	4,799.5	8.7	-0.4	0.4	10.00	10.00	
4,900.0	20.00	357.29	4,896.0	34.5	-1.6	1.6	10.00	10.00	
5,000.0	30.00	357.29	4,986.5	76.7	-3.6	3.6	10.00	10.00	
5,070.2	37.02	357.29	5,045.0	115.3	-5.5	5.4	10.00	10.00	Mancos Silt
5,100.0	40.00	357.29	5,068.3	133.9	-6.3	6.2	10.00	10.00	
5,200.0	50.00	357.29	5,138.9	204.4	-9.7	9.5	10.00	10.00	
5,282.7	58.27	357.29	5,187.3	271.3	-12.8	12.6	10.00	10.00	Start build/turn @ 5282' MD
5,300.0	58.34	355.28	5,196.4	286.0	-13.8	13.5	9.89	0.41	
5,397.0	59.30	344.12	5,246.8	367.5	-28.6	28.3	9.89	1.00	Gallup Fn.
5,400.0	59.35	343.78	5,248.3	369.9	-29.3	29.0	9.89	1.51	
5,500.0	61.35	332.63	5,297.9	450.4	-61.6	61.2	9.89	2.00	
5,600.0	64.22	321.99	5,343.7	525.0	-109.6	109.2	9.89	2.87	
5,700.0	67.82	311.91	5,384.4	591.6	-171.9	171.4	9.89	3.60	
5,800.0	72.01	302.37	5,418.8	648.1	-246.8	246.2	9.89	4.19	
5,900.0	76.64	293.29	5,445.9	692.9	-331.8	331.2	9.89	4.63	
6,000.0	81.58	284.57	5,464.8	724.7	-424.6	424.0	9.89	4.94	
6,070.0	85.16	278.61	5,472.9	738.6	-492.7	492.0	9.89	5.11	7" @ 230' FEL
6,100.0	86.71	276.07	5,475.0	742.5	-522.3	521.7	9.89	5.17	
6,172.8	90.50	269.95	5,476.8	746.3	-595.0	594.3	9.89	5.20	LP @ 6172' MD; 90.5° - Escrito E07-2409 01H I
6,200.0	90.50	269.95	5,476.6	746.3	-622.2	621.5	0.00	0.00	
6,300.0	90.50	269.95	5,475.7	746.2	-722.2	721.5	0.00	0.00	
6,400.0	90.50	269.95	5,474.8	746.1	-822.2	821.5	0.00	0.00	
6,500.0	90.50	269.95	5,473.9	746.0	-922.2	921.5	0.00	0.00	
6,600.0	90.50	269.95	5,473.1	745.9	-1,022.2	1,021.5	0.00	0.00	
6,700.0	90.50	269.95	5,472.2	745.8	-1,122.2	1,121.5	0.00	0.00	
6,800.0	90.50	269.95	5,471.3	745.7	-1,222.2	1,221.5	0.00	0.00	
6,900.0	90.50	269.95	5,470.5	745.6	-1,322.1	1,321.5	0.00	0.00	
7,000.0	90.50	269.95	5,469.6	745.6	-1,422.1	1,421.5	0.00	0.00	
7,100.0	90.50	269.95	5,468.7	745.5	-1,522.1	1,521.5	0.00	0.00	
7,200.0	90.50	269.95	5,467.8	745.4	-1,622.1	1,621.5	0.00	0.00	
7,300.0	90.50	269.95	5,467.0	745.3	-1,722.1	1,721.5	0.00	0.00	
7,400.0	90.50	269.95	5,466.1	745.2	-1,822.1	1,821.5	0.00	0.00	
7,500.0	90.50	269.95	5,465.2	745.1	-1,922.1	1,921.5	0.00	0.00	
7,600.0	90.50	269.95	5,464.3	745.0	-2,022.1	2,021.5	0.00	0.00	
7,700.0	90.50	269.95	5,463.5	744.9	-2,122.1	2,121.5	0.00	0.00	
7,800.0	90.50	269.95	5,462.6	744.9	-2,222.1	2,221.5	0.00	0.00	
7,900.0	90.50	269.95	5,461.7	744.8	-2,322.1	2,321.5	0.00	0.00	
8,000.0	90.50	269.95	5,460.9	744.7	-2,422.1	2,421.5	0.00	0.00	
8,100.0	90.50	269.95	5,460.0	744.6	-2,522.1	2,521.5	0.00	0.00	
8,200.0	90.50	269.95	5,459.1	744.5	-2,622.1	2,621.4	0.00	0.00	
8,300.0	90.50	269.95	5,458.2	744.4	-2,722.1	2,721.4	0.00	0.00	
8,400.0	90.50	269.95	5,457.4	744.3	-2,822.1	2,821.4	0.00	0.00	
8,500.0	90.50	269.95	5,456.5	744.2	-2,922.1	2,921.4	0.00	0.00	
8,600.0	90.50	269.95	5,455.6	744.2	-3,022.1	3,021.4	0.00	0.00	
8,700.0	90.50	269.95	5,454.7	744.1	-3,122.1	3,121.4	0.00	0.00	
8,800.0	90.50	269.95	5,453.9	744.0	-3,222.1	3,221.4	0.00	0.00	
8,900.0	90.50	269.95	5,453.0	743.9	-3,322.1	3,321.4	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Escrito E07-2409 01H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 6890.0ft (Original Well Elev)
Project:	San Juan Co, NM	MD Reference:	WELL @ 6890.0ft (Original Well Elev)
Site:	S7- T24N-R9W	North Reference:	True
Well:	Escrito E07-2409 01H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #2		

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
9,000.0	90.50	269.95	5,452.1	743.8	-3,422.1	3,421.4	0.00	0.00	
9,100.0	90.50	269.95	5,451.3	743.7	-3,522.1	3,521.4	0.00	0.00	
9,200.0	90.50	269.95	5,450.4	743.6	-3,622.1	3,621.4	0.00	0.00	
9,300.0	90.50	269.95	5,449.5	743.5	-3,722.1	3,721.4	0.00	0.00	
9,400.0	90.50	269.95	5,448.6	743.5	-3,822.1	3,821.4	0.00	0.00	
9,500.0	90.50	269.95	5,447.8	743.4	-3,922.0	3,921.4	0.00	0.00	
9,600.0	90.50	269.95	5,446.9	743.3	-4,022.0	4,021.4	0.00	0.00	
9,700.0	90.50	269.95	5,446.0	743.2	-4,122.0	4,121.4	0.00	0.00	
9,800.0	90.50	269.95	5,445.1	743.1	-4,222.0	4,221.4	0.00	0.00	
9,900.0	90.50	269.95	5,444.3	743.0	-4,322.0	4,321.4	0.00	0.00	
10,000.0	90.50	269.95	5,443.4	742.9	-4,422.0	4,421.4	0.00	0.00	
10,100.0	90.50	269.95	5,442.5	742.8	-4,522.0	4,521.4	0.00	0.00	
10,200.0	90.50	269.95	5,441.7	742.8	-4,622.0	4,621.4	0.00	0.00	
10,300.0	90.50	269.95	5,440.8	742.7	-4,722.0	4,721.4	0.00	0.00	
10,400.0	90.50	269.95	5,439.9	742.6	-4,822.0	4,821.4	0.00	0.00	
10,500.0	90.50	269.95	5,439.0	742.5	-4,922.0	4,921.4	0.00	0.00	
10,600.0	90.50	269.95	5,438.2	742.4	-5,022.0	5,021.4	0.00	0.00	
10,700.0	90.50	269.95	5,437.3	742.3	-5,122.0	5,121.4	0.00	0.00	
10,800.0	90.50	269.95	5,436.4	742.2	-5,222.0	5,221.3	0.00	0.00	
10,900.0	90.50	269.95	5,435.6	742.1	-5,322.0	5,321.3	0.00	0.00	
11,000.0	90.50	269.95	5,434.7	742.1	-5,422.0	5,421.3	0.00	0.00	
11,100.0	90.50	269.95	5,433.8	742.0	-5,522.0	5,521.3	0.00	0.00	
11,200.0	90.50	269.95	5,432.9	741.9	-5,622.0	5,621.3	0.00	0.00	
11,300.0	90.50	269.95	5,432.1	741.8	-5,722.0	5,721.3	0.00	0.00	
11,400.0	90.50	269.95	5,431.2	741.7	-5,822.0	5,821.3	0.00	0.00	
11,500.0	90.50	269.95	5,430.3	741.6	-5,922.0	5,921.3	0.00	0.00	
11,600.0	90.50	269.95	5,429.4	741.5	-6,022.0	6,021.3	0.00	0.00	
11,700.0	90.50	269.95	5,428.6	741.4	-6,122.0	6,121.3	0.00	0.00	
11,800.0	90.50	269.95	5,427.7	741.4	-6,222.0	6,221.3	0.00	0.00	
11,900.0	90.50	269.95	5,426.8	741.3	-6,322.0	6,321.3	0.00	0.00	
12,000.0	90.50	269.95	5,426.0	741.2	-6,422.0	6,421.3	0.00	0.00	
12,100.0	90.50	269.95	5,425.1	741.1	-6,521.9	6,521.3	0.00	0.00	
12,200.0	90.50	269.95	5,424.2	741.0	-6,621.9	6,621.3	0.00	0.00	
12,300.0	90.50	269.95	5,423.3	740.9	-6,721.9	6,721.3	0.00	0.00	
12,400.0	90.50	269.95	5,422.5	740.8	-6,821.9	6,821.3	0.00	0.00	
12,500.0	90.50	269.95	5,421.6	740.7	-6,921.9	6,921.3	0.00	0.00	
12,600.0	90.50	269.95	5,420.7	740.7	-7,021.9	7,021.3	0.00	0.00	
12,700.0	90.50	269.95	5,419.8	740.6	-7,121.9	7,121.3	0.00	0.00	
12,800.0	90.50	269.95	5,419.0	740.5	-7,221.9	7,221.3	0.00	0.00	
12,900.0	90.50	269.95	5,418.1	740.4	-7,321.9	7,321.3	0.00	0.00	
13,000.0	90.50	269.95	5,417.2	740.3	-7,421.9	7,421.3	0.00	0.00	
13,100.0	90.50	269.95	5,416.4	740.2	-7,521.9	7,521.3	0.00	0.00	
13,200.0	90.50	269.95	5,415.5	740.1	-7,621.9	7,621.3	0.00	0.00	
13,300.0	90.50	269.95	5,414.6	740.0	-7,721.9	7,721.3	0.00	0.00	
13,306.8	90.50	269.95	5,414.5	740.0	-7,728.7	7,728.0	0.00	0.00	TD at 13306.8 - Escrito E07-2409 01H PBHL (1

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Escrito E07-2409 01H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 6890.0ft (Original Well Elev)
Project:	San Juan Co, NM	MD Reference:	WELL @ 6890.0ft (Original Well Elev)
Site:	S7- T24N-R9W	North Reference:	True
Well:	Escrito E07-2409 01H	Survey Calculation Method:	Minimum Curvature
Wellbore:	H2		
Design:	Plan #2		

Targets									
Target Name	hit/miss target Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N-S (ft)	+E-W (ft)	Northing (ft)	Easting (ft)	Latitude Longitude
Escrito E07-2409 01H P	- plan hits target center - Point	0.00	0.00	5,414.5	740.0	-7,728.7	1,940,645.40	2,713,879.05	36.333350 -107.864630
Escrito E07-2409 01H P	- plan hits target center - Point	0.00	0.00	5,476.8	746.3	-595.0	1,940,651.27	2,721,012.77	36.333370 -107.840410

Casing Points				
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
500.0	500.0	9 5/8"	9.625	12.250
6,070.0	5,472.9	7" @ 230' FEL	7.000	7.500

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
942.0	942.0	Ojo Alamo Ss.		-0.50	269.95
1,120.0	1,120.0	Kirtland Shale		-0.50	269.95
1,530.0	1,530.0	Fruitland Coal		-0.50	269.95
1,778.0	1,778.0	Pictured Cliffs Ss.		-0.50	269.95
1,922.0	1,922.0	Lewis Shale		-0.50	269.95
2,606.0	2,606.0	Cliffhouse Ss.		-0.50	269.95
3,315.0	3,315.0	Menefee Fn.		-0.50	269.95
4,242.0	4,242.0	Point Lookout Ss.		-0.50	269.95
4,452.0	4,452.0	Mancos Shale		-0.50	269.95
5,070.2	5,045.0	Mancos Silt		-0.50	269.95
5,397.0	5,247.0	Gallup Fn.		-0.50	269.95

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N-S (ft)	+E-W (ft)	
4,700.0	4,700.0	0.0	0.0	KOP @ 4700'
5,282.7	5,187.3	271.3	-12.8	Start build/turn @ 5282' MD
6,172.8	5,476.8	746.3	-595.0	LP @ 6172' MD; 90.5°
13,306.8	5,414.5	740.0	-7,728.7	TD at 13306.8

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Escrito E07-2409 01H
Project:	San Juan Co, NM	TVD Reference:	WELL @ 6890.0ft (Original Well Elev)
Reference Site:	S7- T24N-R9W	MD Reference:	WELL @ 6890.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Escrito E07-2409 01H	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 #2	Offset TVD Reference:	Offset Datum

Reference Plan #2

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

Survey Tool Program Date 10/26/2012

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	13,306.8	Plan #2 (Hz)	MWD	Geolink MWD

Summary

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design S7- T24N-R9W						
Escrito E07-2409 02H - Hz - Plan #1	4,658.3	4,658.3	32.8	16.5	2.020	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 E07-2409 01H
 Well Error: 0.0ft
 Reference Wellbore: Hz
 Reference Design: Plan #2

Local Co-ordinate Reference: Well Escrito E07-2409 01H
 TVD Reference: WELL @ 6890.0ft (Original Well Elev)
 MD Reference: WELL @ 6890.0ft (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 E07-2409 02H - 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		Total		Separation		Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Tooface (")	Offset Wellbore Centre N-S (ft)	Offset Wellbore Centre E-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor	
0.0	0.0	0.0	0.0	0.0	0.0	180.00	-32.8	0.0	32.8				
100.0	100.0	100.0	100.0	0.2	0.2	180.00	-32.8	0.0	32.8	32.4	0.30	107.846	
200.0	200.0	200.0	200.0	0.3	0.3	180.00	-32.8	0.0	32.8	32.1	0.65	50.174	
300.0	300.0	300.0	300.0	0.5	0.5	180.00	-32.8	0.0	32.8	31.7	1.00	32.692	
400.0	400.0	400.0	400.0	0.7	0.7	180.00	-32.8	0.0	32.8	31.4	1.35	24.244	
500.0	500.0	500.0	500.0	0.8	0.8	180.00	-32.8	0.0	32.8	31.1	1.70	19.266	
600.0	600.0	600.0	600.0	1.0	1.0	180.00	-32.8	0.0	32.8	30.7	2.05	15.984	
700.0	700.0	700.0	700.0	1.2	1.2	180.00	-32.8	0.0	32.8	30.4	2.40	13.657	
800.0	800.0	800.0	800.0	1.4	1.4	180.00	-32.8	0.0	32.8	30.0	2.75	11.922	
900.0	900.0	900.0	900.0	1.5	1.5	180.00	-32.8	0.0	32.8	29.7	3.10	10.578	
1,000.0	1,000.0	1,000.0	1,000.0	1.7	1.7	180.00	-32.8	0.0	32.8	29.3	3.45	9.506	
1,100.0	1,100.0	1,100.0	1,100.0	1.9	1.9	180.00	-32.8	0.0	32.8	29.0	3.79	8.632	
1,200.0	1,200.0	1,200.0	1,200.0	2.1	2.1	180.00	-32.8	0.0	32.8	28.6	4.14	7.904	
1,300.0	1,300.0	1,300.0	1,300.0	2.2	2.2	180.00	-32.8	0.0	32.8	28.3	4.49	7.290	
1,400.0	1,400.0	1,400.0	1,400.0	2.4	2.4	180.00	-32.8	0.0	32.8	27.9	4.84	6.765	
1,500.0	1,500.0	1,500.0	1,500.0	2.6	2.6	180.00	-32.8	0.0	32.8	27.6	5.19	6.310	
1,600.0	1,600.0	1,600.0	1,600.0	2.8	2.8	180.00	-32.8	0.0	32.8	27.2	5.54	5.912	
1,700.0	1,700.0	1,700.0	1,700.0	2.9	2.9	180.00	-32.8	0.0	32.8	26.9	5.89	5.562	
1,800.0	1,800.0	1,800.0	1,800.0	3.1	3.1	180.00	-32.8	0.0	32.8	26.5	6.24	5.250	
1,900.0	1,900.0	1,900.0	1,900.0	3.3	3.3	180.00	-32.8	0.0	32.8	26.2	6.59	4.972	
2,000.0	2,000.0	2,000.0	2,000.0	3.5	3.5	180.00	-32.8	0.0	32.8	25.8	6.94	4.722	
2,100.0	2,100.0	2,100.0	2,100.0	3.6	3.6	180.00	-32.8	0.0	32.8	25.5	7.29	4.496	
2,200.0	2,200.0	2,200.0	2,200.0	3.8	3.8	180.00	-32.8	0.0	32.8	25.1	7.63	4.290	
2,300.0	2,300.0	2,300.0	2,300.0	4.0	4.0	180.00	-32.8	0.0	32.8	24.8	7.98	4.103	
2,400.0	2,400.0	2,400.0	2,400.0	4.2	4.2	180.00	-32.8	0.0	32.8	24.4	8.33	3.931	
2,500.0	2,500.0	2,500.0	2,500.0	4.3	4.3	180.00	-32.8	0.0	32.8	24.1	8.68	3.773	
2,600.0	2,600.0	2,600.0	2,600.0	4.5	4.5	180.00	-32.8	0.0	32.8	23.7	9.03	3.627	
2,700.0	2,700.0	2,700.0	2,700.0	4.7	4.7	180.00	-32.8	0.0	32.8	23.4	9.38	3.492	
2,800.0	2,800.0	2,800.0	2,800.0	4.9	4.9	180.00	-32.8	0.0	32.8	23.0	9.73	3.367	
2,900.0	2,900.0	2,900.0	2,900.0	5.0	5.0	180.00	-32.8	0.0	32.8	22.7	10.08	3.250	
3,000.0	3,000.0	3,000.0	3,000.0	5.2	5.2	180.00	-32.8	0.0	32.8	22.3	10.43	3.141	
3,100.0	3,100.0	3,100.0	3,100.0	5.4	5.4	180.00	-32.8	0.0	32.8	22.0	10.78	3.039	
3,200.0	3,200.0	3,200.0	3,200.0	5.6	5.6	180.00	-32.8	0.0	32.8	21.6	11.12	2.944	
3,300.0	3,300.0	3,300.0	3,300.0	5.7	5.7	180.00	-32.8	0.0	32.8	21.3	11.47	2.854	
3,400.0	3,400.0	3,400.0	3,400.0	5.9	5.9	180.00	-32.8	0.0	32.8	20.9	11.82	2.770	
3,500.0	3,500.0	3,500.0	3,500.0	6.1	6.1	180.00	-32.8	0.0	32.8	20.6	12.17	2.691	
3,600.0	3,600.0	3,600.0	3,600.0	6.3	6.3	180.00	-32.8	0.0	32.8	20.2	12.52	2.616	
3,700.0	3,700.0	3,700.0	3,700.0	6.4	6.4	180.00	-32.8	0.0	32.8	19.9	12.87	2.545	
3,800.0	3,800.0	3,800.0	3,800.0	6.6	6.6	180.00	-32.8	0.0	32.8	19.5	13.22	2.478	
3,900.0	3,900.0	3,900.0	3,900.0	6.8	6.8	180.00	-32.8	0.0	32.8	19.2	13.57	2.414	
4,000.0	4,000.0	4,000.0	4,000.0	7.0	7.0	180.00	-32.8	0.0	32.8	18.8	13.92	2.353	
4,100.0	4,100.0	4,100.0	4,100.0	7.1	7.1	180.00	-32.8	0.0	32.8	18.5	14.27	2.296	
4,200.0	4,200.0	4,200.0	4,200.0	7.3	7.3	180.00	-32.8	0.0	32.8	18.1	14.62	2.241	
4,300.0	4,300.0	4,300.0	4,300.0	7.5	7.5	180.00	-32.8	0.0	32.8	17.8	14.96	2.189	
4,400.0	4,400.0	4,400.0	4,400.0	7.7	7.7	180.00	-32.8	0.0	32.8	17.4	15.31	2.139	
4,500.0	4,500.0	4,500.0	4,500.0	7.8	7.8	180.00	-32.8	0.0	32.8	17.1	15.66	2.091	
4,600.0	4,600.0	4,600.0	4,600.0	8.0	8.0	180.00	-32.8	0.0	32.8	16.7	16.01	2.045	
4,658.3	4,658.3	4,658.3	4,658.3	8.1	8.1	180.00	-32.8	0.0	32.8	16.5	16.22	2.020 CC, ES, SF	
4,700.0	4,700.0	4,698.9	4,698.9	8.2	8.2	-179.95	-33.1	0.0	33.1	16.7	16.36	2.022	
4,800.0	4,799.5	4,790.1	4,789.4	8.4	8.3	-176.54	-43.3	-0.9	52.9	36.4	16.52	3.203	

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 E07-2409 01H
Well Error: 0.0ft
Reference Wellbore: Hz
Reference Design: Plan #2

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Output errors are at:
Database:
Offset TVD Reference:

Well Escrito E07-2409 01H
 WELL @ 6890.0ft (Original Well Elev)
 WELL @ 6890.0ft (Original Well Elev)
 True
 Minimum Curvature
 2.00 sigma
 USA EDM 5000 Multi Users DB
 Offset Datum

Reference Depths are relative to WELL @ 6890.0ft (Original Well Elev)

Offset Depths are relative to Offset Datum

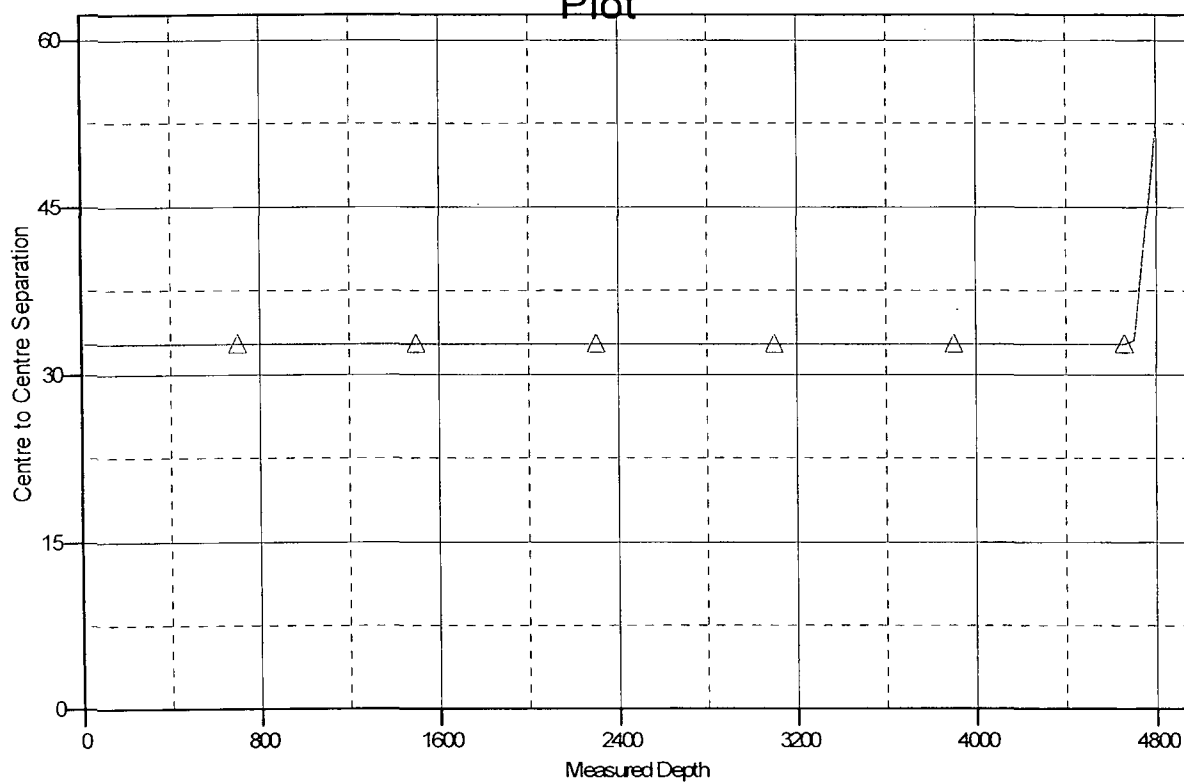
Central Meridian is -107.833333 °

Coordinates are relative to: Escrito E07-2409 01H

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

Grid Convergence at Surface is: 0.00°

Ladder Plot



LEGEND

Escrito E07-2409 02H, Hz, Plan #1 V0

WELLHEAD BLOWOUT CONTROL SYSTEM



Well name and number:

Escrito E07-2409 01H

